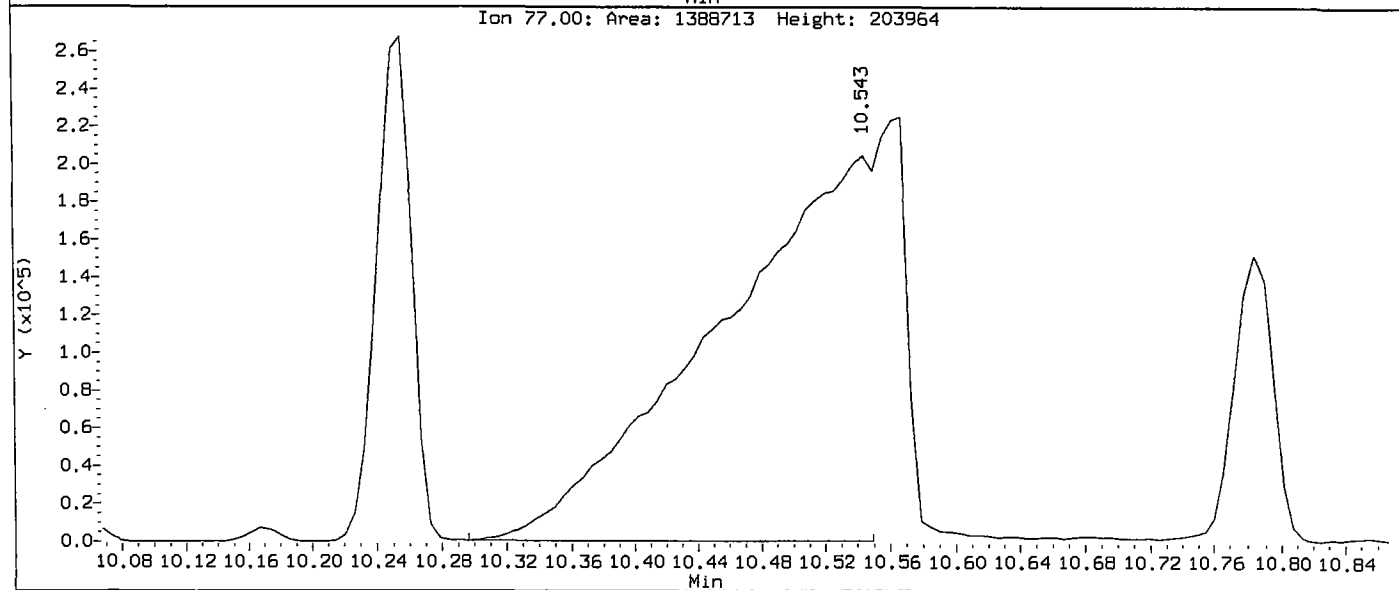
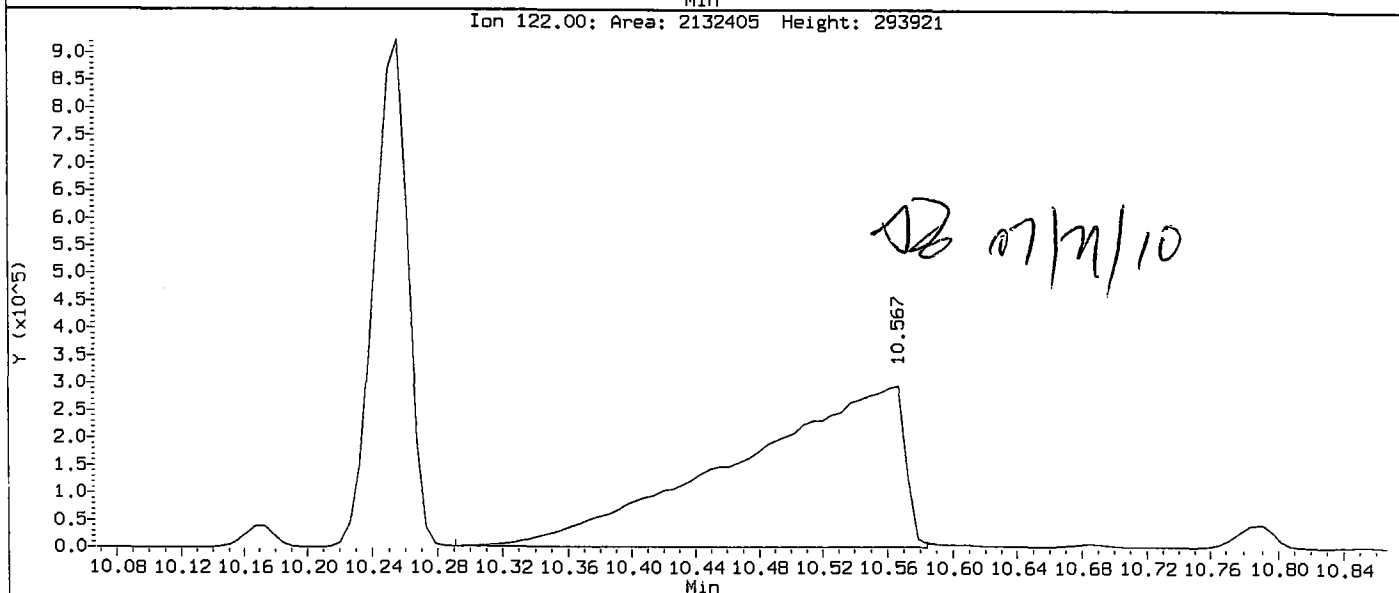
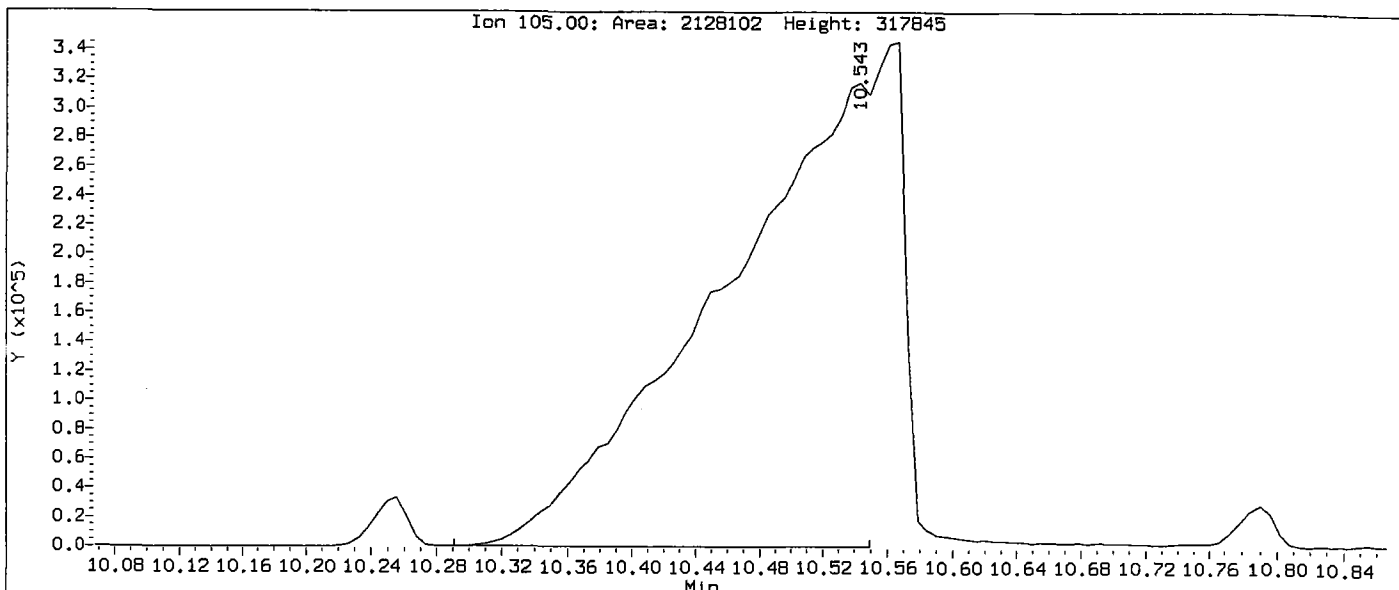
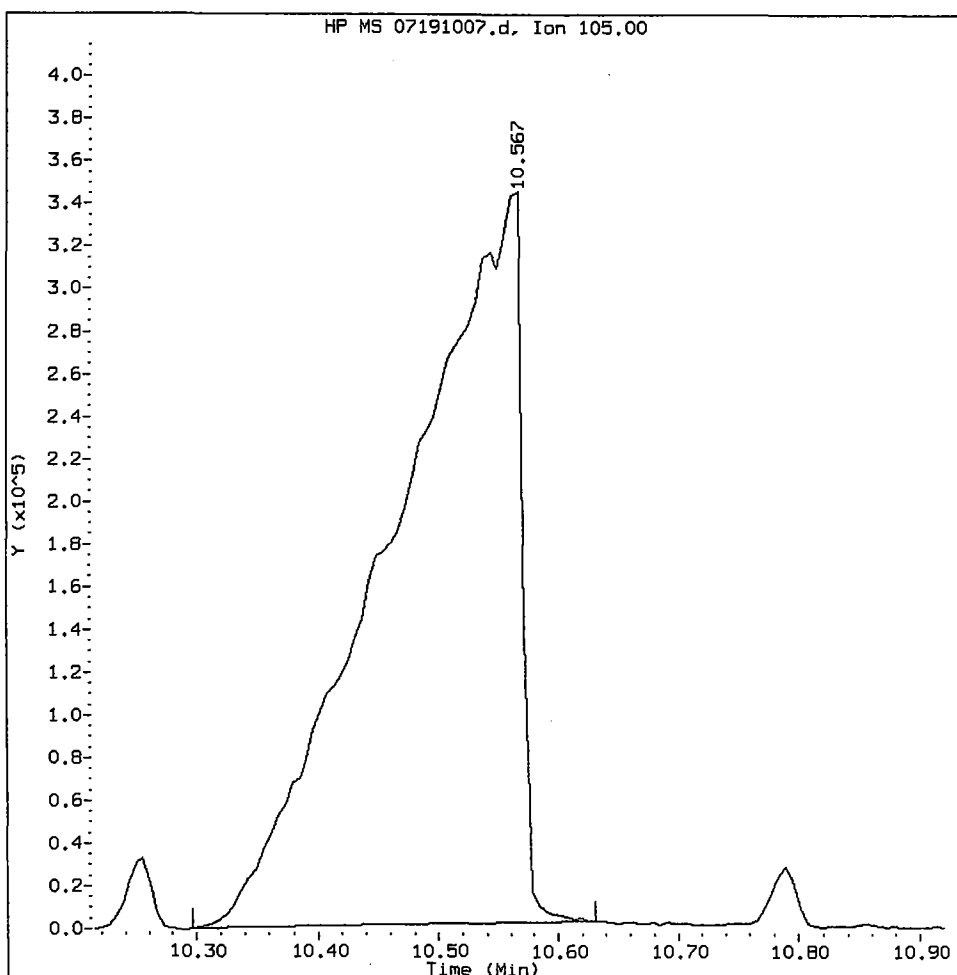


Data File: /chem3/nt4.i/20100719.b/07191007.d  
Injection Date: 19-JUL-2010 19:48  
Instrument: nt4.i  
Client Sample ID: IC800719

Compound: Benzoic acid  
CAS Number: 65-85-0



Benzoic acid Amount: 185.17 Area: 2519498



MANUAL INTEGRATION for Benzoic acid

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

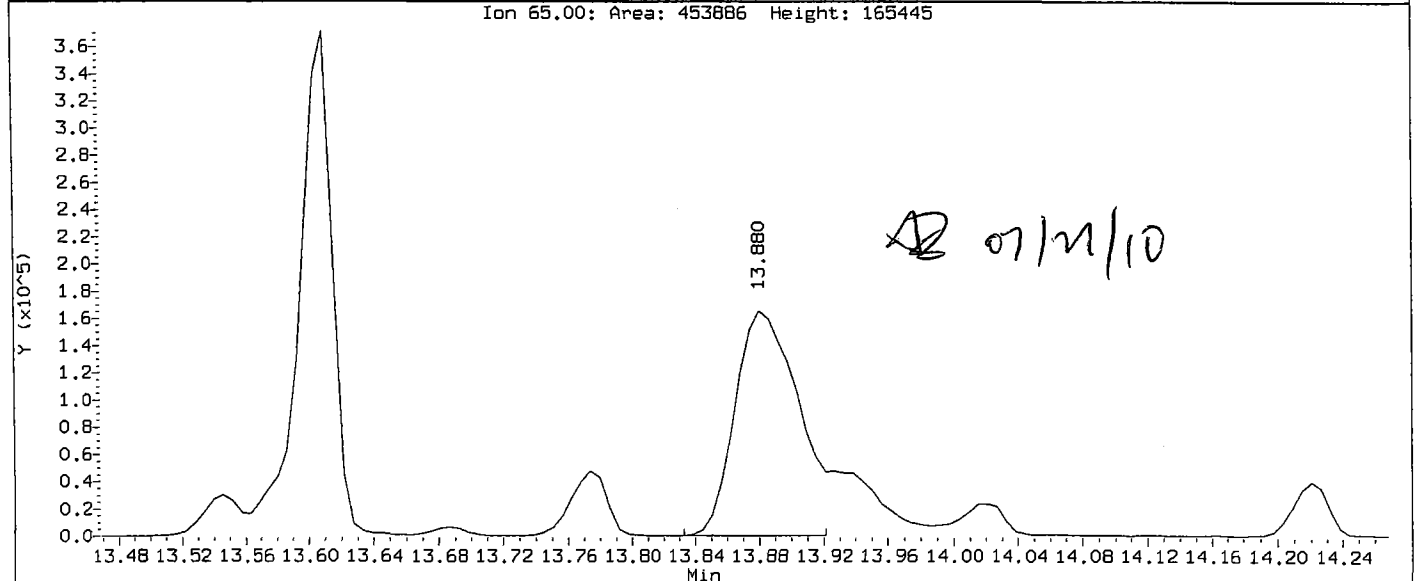
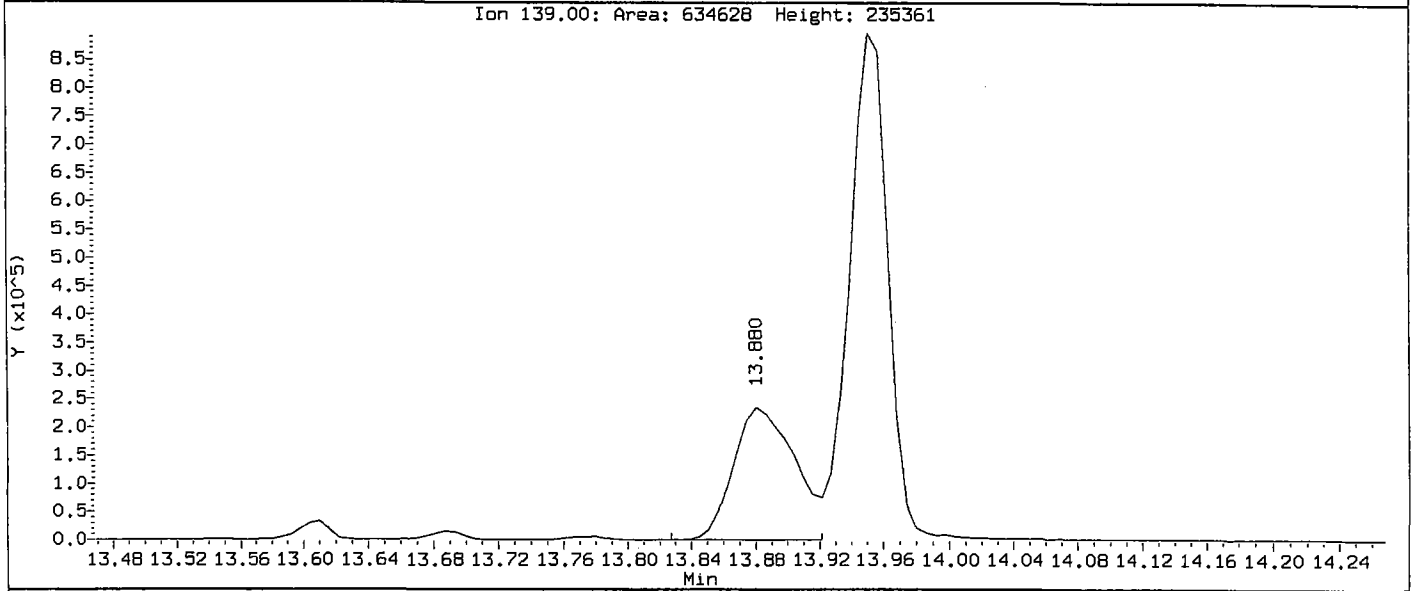
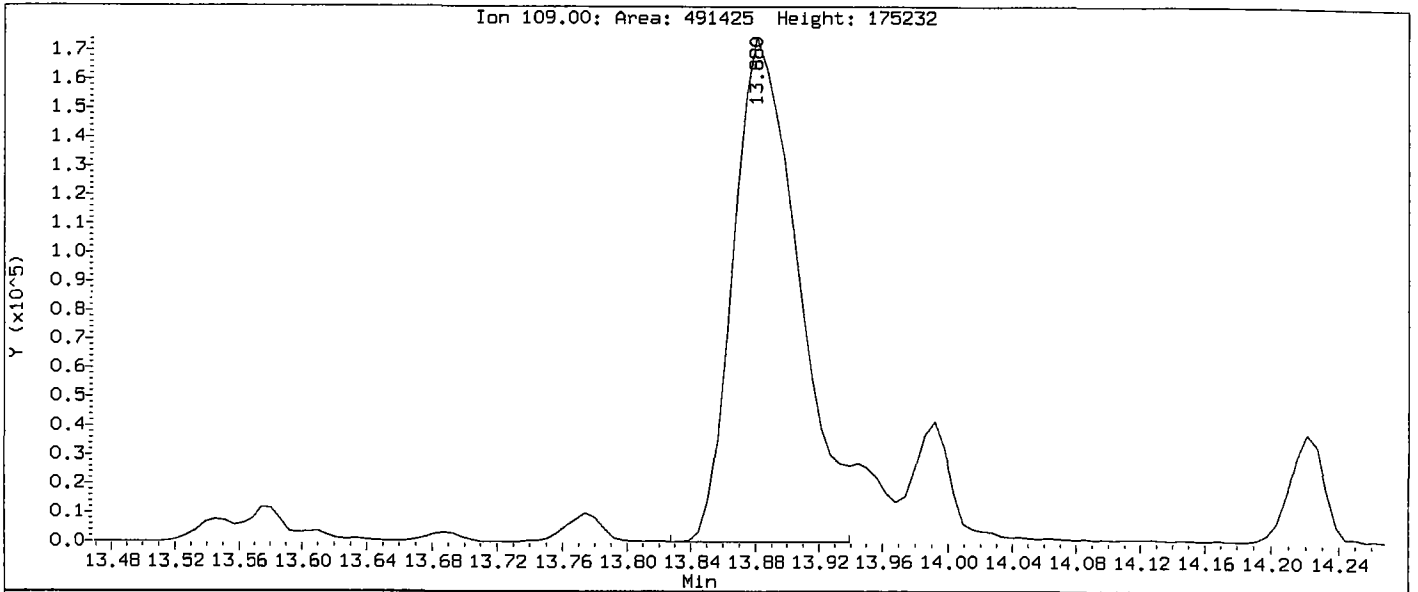
5. Other \_\_\_\_\_

Analyst: AD

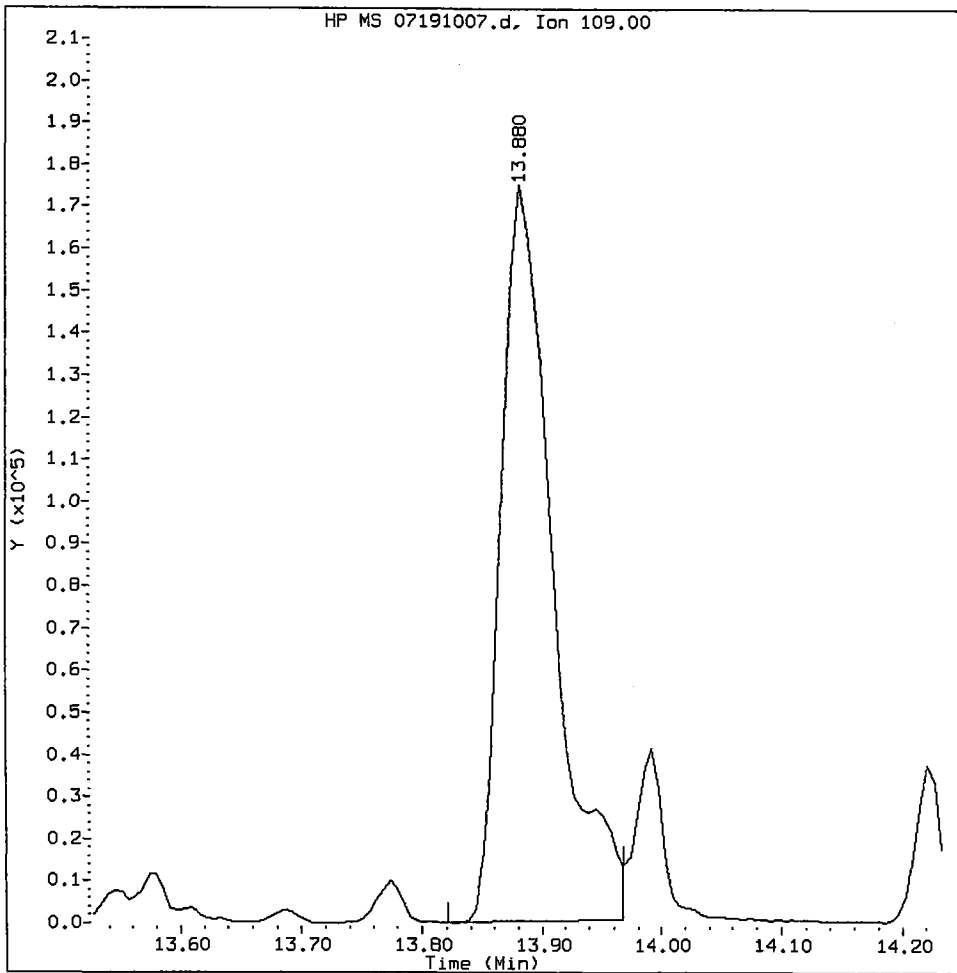
Date: 07/21/10

Data File: /chem3/nt4.i/20100719.b/07191007.d  
Injection Date: 19-JUL-2010 19:48  
Instrument: nt4.i  
Client Sample ID: IC800719

Compound: 4-Nitrophenol  
CAS Number: 100-02-7



4-Nitrophenol Amount: 84.96 Area: 524194



MANUAL INTEGRATION for 4-Nitrophenol

1. Baseline correction
- ②. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other \_\_\_\_\_

Analyst: AD

Date: 07/27/10

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100719.b/07191008.d  
 Lab Smp Id: ICV0719 Client Smp ID: ICV0719  
 Inj Date : 19-JUL-2010 20:21  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : ICV0719  
 Misc Info : 10-  
 Comment : 1ul Injection  
 Method : /chem3/nt4.i/20100719.b/SW846100719.m  
 Meth Date : 21-Jul-2010 18:42 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 8 QC Sample: LCS  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50  
 Compound Sublist: ICAL.sub

*B* 07/21/10

Compounds	QUANT	SIG	CONCENTRATIONS					
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)
\$ 1 2-Fluorophenol	112		6.728	6.737	(0.774)	396455	25.2478	25.25 (R)
\$ 2 Phenol-d5	99		8.214	8.229	(0.945)	401900	26.0189	26.02 (R)
3 Phenol	94		8.232	8.252	(0.947)	507383	25.3845	25.38
\$ 5 2-Chlorophenol-d4	132		8.384	8.393	(0.965)	425250	25.6577	25.66 (R)
4 Bis(2-Chloroethyl)ether	93		8.343	8.352	(0.960)	367789	24.6737	24.67
6 2-Chlorophenol	128		8.414	8.423	(0.968)	485433	25.5200	25.52
7 1,3-Dichlorobenzene	146		8.631	8.640	(0.993)	535892	24.7955	24.80
* 8 1,4-Dichlorobenzene-d4	152		8.690	8.699	(1.000)	289791	20.0000	
9 1,4-Dichlorobenzene	146		8.719	8.722	(1.003)	544224	24.9313	24.93
\$ 10 1,2-Dichlorobenzene-d4	152		8.995	8.998	(1.035)	312016	25.2369	25.24 (R)
12 1,2-Dichlorobenzene	146		9.013	9.022	(1.037)	511143	25.1418	25.14
11 Benzyl alcohol	108		8.948	8.969	(1.030)	285456	25.2005	25.20
14 2,2'-oxybis(1-Chloropropane)	45		9.207	9.216	(1.059)	354325	25.2878	25.29
13 2-Methylphenol	108		9.166	9.181	(1.055)	402997	26.3923	26.39
17 Hexachloroethane	117		9.506	9.509	(1.094)	201712	24.9488	24.95
16 N-Nitroso-di-n-propylamine	70		9.424	9.445	(1.084)	265210	25.3755	25.38
15 4-Methylphenol	108		9.395	9.415	(1.081)	414665	26.1633	26.16
\$ 18 Nitrobenzene-d5	82		9.618	9.627	(0.896)	428922	26.6141	26.61 (R)
19 Nitrobenzene	77		9.647	9.662	(0.898)	407643	25.5470	25.55
20 Isophorone	82		10.017	10.038	(0.933)	666101	25.1364	25.14
21 2-Nitrophenol	139		10.164	10.173	(0.946)	269470	27.0302	27.03
22 2,4-Dimethylphenol	107		10.241	10.256	(0.954)	462633	26.0654	26.07
23 Bis(2-Chloroethoxy)methane	93		10.393	10.408	(0.968)	459521	24.8796	24.88
24 Benzoic acid	105		10.446	10.567	(0.973)	697191	48.8442	48.84
25 2,4-Dichlorophenol	162		10.534	10.549	(0.981)	415496	26.6463	26.65
26 1,2,4-Trichlorobenzene	180		10.681	10.684	(0.995)	426723	24.5734	24.57
* 27 Naphthalene-d8	136		10.740	10.749	(1.000)	1041288	20.0000	

Compounds	QUANT SIG				CONCENTRATIONS		
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
=====	=====	==	=====	=====	=====	=====	=====
28 Naphthalene	128	10.775	10.784	(1.003)	1251278	25.3254	25.33
29 4-Chloroaniline	127	10.899	10.908	(1.015)	503039	25.5337	25.53
30 Hexachlorobutadiene	225	11.081	11.084	(1.032)	242046	24.5681	24.57
31 4-Chloro-3-methylphenol	107	11.692	11.701	(1.089)	388357	27.1596	27.16
32 2-Methylnaphthalene	142	11.897	11.906	(1.108)	831770	24.7718	24.77
33 Hexachlorocyclopentadiene	237	12.279	12.282	(0.901)	247661	26.7783	26.78
34 2,4,6-Trichlorophenol	196	12.402	12.411	(0.910)	296058	26.0188	26.02
35 2,4,5-Trichlorophenol	196	12.461	12.470	(0.915)	310779	26.8272	26.83
\$ 36 2-Fluorobiphenyl	172	12.532	12.541	(0.920)	972175	25.1079	25.11 (R)
37 2-Chloronaphthalene	162	12.684	12.699	(0.931)	857433	24.9410	24.94
38 2-Nitroaniline	65	12.908	12.923	(0.947)	185457	27.9414	27.94
39 Dimethylphthalate	163	13.266	13.287	(0.974)	1000711	24.7816	24.78
40 Acenaphthylene	152	13.372	13.381	(0.981)	1312841	25.3168	25.32
41 2,6-Dinitrotoluene	165	13.366	13.387	(0.981)	241057	26.5288	26.53
* 42 Acenaphthene-d10	164	13.624	13.633	(1.000)	632100	20.0000	
43 3-Nitroaniline	138	13.589	13.610	(0.997)	219280	27.3683	27.37
44 Acenaphthene	153	13.677	13.686	(1.004)	833956	24.7009	24.70
45 2,4-Dinitrophenol	184	13.754	13.780	(1.009)	289825	53.8946	53.89
46 Dibenzofuran	168	13.942	13.951	(1.023)	1139736	25.3251	25.33
47 4-Nitrophenol	109	13.865	13.880	(1.018)	152266	26.8847	26.88
48 2,4-Dinitrotoluene	165	14.006	14.021	(1.028)	322811	26.9428	26.94
50 Diethylphthalate	149	14.429	14.438	(1.059)	1070437	25.6257	25.63
49 Fluorene	166	14.500	14.514	(1.064)	1006902	25.8587	25.86
51 4-Chlorophenyl-phenylether	204	14.511	14.514	(1.065)	481921	25.5176	25.52
52 4-Nitroaniline	138	14.594	14.626	(1.071)	222189	25.5977	25.60
53 4,6-Dinitro-2-methylphenol	198	14.670	14.697	(0.915)	406459	55.7299	55.73
54 N-Nitrosodiphenylamine	169	14.711	14.732	(0.918)	754750	25.3136	25.31
\$ 55 2,4,6-Tribromophenol	330	14.928	14.937	(1.096)	122806	27.1681	27.17 (R)
56 4-Bromophenyl-phenylether	248	15.299	15.308	(0.955)	272268	25.1977	25.20
57 Hexachlorobenzene	284	15.539	15.548	(0.970)	272787	24.6474	24.65
58 Pentachlorophenol	266	15.827	15.842	(0.988)	198545	26.3285	26.33
* 59 Phenanthrene-d10	188	16.027	16.036	(1.000)	1057026	20.0000	
60 Phenanthrene	178	16.062	16.077	(1.002)	1373128	25.0764	25.08
61 Anthracene	178	16.139	16.153	(1.007)	1428848	25.5078	25.51
62 Carbazole	167	16.409	16.424	(1.024)	1270670	24.9632	24.96
63 Di-n-butylphthalate	149	17.084	17.093	(1.066)	1704804	26.2672	26.27
64 Fluoranthene	202	18.018	18.027	(1.124)	1449527	25.5494	25.55
65 Pyrene	202	18.383	18.397	(0.902)	1489120	24.8406	24.84
\$ 66 Terphenyl-d14	244	18.665	18.674	(0.916)	920765	25.1526	25.15 (R)
67 Butylbenzylphthalate	149	19.528	19.543	(0.958)	787143	25.8738	25.87
68 Benzo (a) anthracene	228	20.350	20.365	(0.999)	1389923	25.0808	25.08
* 69 Chrysene-d12	240	20.380	20.389	(1.000)	945392	20.0000	
70 3,3'-Dichlorobenzidine	252	20.339	20.348	(0.998)	460373	25.6856	25.69
71 Chrysene	228	20.421	20.436	(1.002)	1348854	24.8683	24.87
72 bis(2-Ethylhexyl) phthalate	149	20.515	20.518	(0.956)	1091697	26.3692	26.37
* 134 Di-n-octylphthalate-d4	153	21.449	21.458	(1.000)	1458222	20.0000	
73 Di-n-octylphthalate	149	21.461	21.470	(1.001)	1841837	25.4048	25.40

Compounds	QUANT SIG				RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT		ON-COLUMN (ug/mL)	FINAL (ug/mL)
=====	=====	==	=====	=====	=====	=====	=====
74 Benzo(b)fluoranthene	252	22.019	22.040	(0.976)	1372217	24.6520	24.65
75 Benzo(k)fluoranthene	252	22.054	22.075	(0.977)	1482389	26.2902	26.29
187 Total Benzofluoranthenes	252	22.054	22.075	(0.977)	2706497	51.2879	51.29
76 Benzo(a)pyrene	252	22.489	22.510	(0.996)	1275956	25.8408	25.84
* 77 Perylene-d12	264	22.571	22.580	(1.000)	894258	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	24.416	24.454	(1.082)	1345166	25.3704	25.37
79 Dibenzo(a,h)anthracene	278	24.439	24.477	(1.083)	1114931	26.1572	26.16
80 Benzo(g,h,i)perylene	276	24.944	24.989	(1.105)	1147098	25.3100	25.31
90 N-Nitrosodimethylamine	74	4.261	4.281	(0.490)	209520	24.8187	24.82
103 Pyridine	79	4.237	4.240	(0.488)	377090	25.9012	25.90
91 Aniline	93	8.237	8.252	(0.948)	518241	24.8402	24.84
105 1-methylnaphthalene	142	12.073	12.082	(1.124)	809992	24.6257	24.63
93 Benzidine	184	18.242	18.251	(0.895)	409767	23.6579	23.66
111 Azobenzene (1,2-DP-Hydrazine)	77	14.764	14.779	(1.084)	804253	25.7433	25.74
143 1,4-Dioxane	88	3.485	3.494	(0.401)	136073	24.3666	24.37
\$ 137 d8-1,4-Dioxane	96	3.415	3.424	(0.393)	142232	24.4844	24.48 (R)
151 1,2,4,5-Tetrachlorobenzene	216	12.238	12.247	(0.898)	410665	24.7046	24.70
120 2,3,4,6-Tetrachlorophenol	232	14.212	14.221	(1.043)	258011	26.9020	26.90
144 alpha-Terpineol	59	10.775	10.790	(1.003)	218542	25.0926	25.09
98 Retene	219	18.923	18.932	(0.928)	496626	24.7205	24.72
133 Butylatedhydroxytoluene	205	13.765	13.774	(1.010)	784653	26.0616	26.06
115 Tributyl Phosphate	99	14.776	14.802	(0.922)	1064967	26.5486	26.55
116 Dibutyl Phenyl Phosphate	175	16.526	16.535	(1.031)	868517	26.3522	26.35
117 Butyl Diphenyl Phosphate	94	18.236	18.245	(0.895)	245396	25.3828	25.38
118 Triphenyl Phosphate	326	19.857	19.866	(0.974)	242593	25.3227	25.32
123 Acetophenone	105	9.377	9.392	(0.873)	562165	25.4250	25.43
179 n-Decane	57	8.496	8.505	(0.978)	293017	25.2600	25.26
180 n-Octadecane	57	15.880	15.883	(0.991)	374396	25.7724	25.77
168 Pentachlorobenzene	250	13.983	13.992	(1.026)	321693	24.4279	24.43
113 Diphenyl Oxide	170	12.867	12.870	(0.944)	832301	24.4721	24.47
112 Biphenyl	154	12.673	12.682	(0.930)	983481	25.1520	25.15
110 Tetrachloroguaiacol	247	15.951	15.971	(0.995)	324626	52.6521	52.65
109 3,4,5-Trichloroguaiacol	213	14.306	14.315	(0.893)	168964	26.6531	26.65
181 3,4,6-Trichloroguaiacol	211	14.429	14.444	(0.900)	200402	26.8849	26.88
108 4,5,6-Trichloroguaiacol	213	15.340	15.349	(0.957)	171608	25.9247	25.92
184 3,4-Dichloroguaiacol	192	12.755	12.764	(0.936)	166207	25.4030	25.40
107 4,5-Dichloroguaiacol	192	13.530	13.545	(0.993)	227452	24.7186	24.72
182 4,6-Dichloroguaiacol	192	13.566	13.580	(0.996)	212467	26.1631	26.16
185 4-Chloroguaiacol	115	11.650	11.660	(1.341)	114163	13.0162	13.02
106 Guaiacol	124	9.636	9.645	(1.109)	392832	25.4304	25.43

QC Flag Legend

R - Spike/Surrogate failed recovery limits.



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt4.i  
 Lab File ID: 07191008.d  
 Lab Smp Id: ICV0719  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt4.i/20100719.b/SW846100719.m  
 Misc Info: 10-

Calibration Date: 19-JUL-2010  
 Calibration Time: 16:18  
 Client Smp ID: ICV0719  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	356478	178239	712956	289791	-18.71
27 Naphthalene-d8	1293412	646706	2586824	1041288	-19.49
42 Acenaphthene-d10	785897	392948	1571794	632100	-19.57
59 Phenanthrene-d10	1313990	656995	2627980	1057026	-19.56
69 Chrysene-d12	1155293	577646	2310586	945392	-18.17
134 Di-n-octylphthala	1825297	912648	3650594	1458222	-20.11
77 Perylene-d12	1146289	573144	2292578	894258	-21.99

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.70	8.20	9.20	8.69	-0.09
27 Naphthalene-d8	10.74	10.24	11.24	10.74	-0.02
42 Acenaphthene-d10	13.63	13.13	14.13	13.62	-0.02
59 Phenanthrene-d10	16.03	15.53	16.53	16.03	-0.01
69 Chrysene-d12	20.38	19.88	20.88	20.38	-0.01
134 Di-n-octylphthala	21.45	20.95	21.95	21.45	-0.01
77 Perylene-d12	22.58	22.08	23.08	22.57	-0.04

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20100719  
 Sample Matrix: NONE Fraction: SV  
 Lab Smp Id: ICV0719 Client Smp ID: ICV0719  
 Level: Operator: JZ  
 Data Type: MS DATA SampleType: LCS  
 SpikeList File: ICVS.spk Quant Type: ISTD  
 Sublist File: ICAL.sub  
 Method File: /chem3/nt4.i/20100719.b/SW846100719.m  
 Misc Info: 10-

SPIKE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
3 Phenol	25.00	25.38	101.54	
4 Bis(2-Chloroethyl)	25.00	24.67	98.69	
6 2-Chlorophenol	25.00	25.52	102.08	
7 1,3-Dichlorobenzen	25.00	24.80	99.18	
9 1,4-Dichlorobenzen	25.00	24.93	99.73	
11 Benzyl alcohol	25.00	25.20	100.80	
12 1,2-Dichlorobenzen	25.00	25.14	100.57	
13 2-Methylphenol	25.00	26.39	105.57	
14 2,2'-oxybis(1-Chlo	25.00	25.29	101.15	
15 4-Methylphenol	25.00	26.16	104.65	
16 N-Nitroso-di-n-pro	25.00	25.38	101.50	
17 Hexachloroethane	25.00	24.95	99.80	
19 Nitrobenzene	25.00	25.55	102.19	
20 Isophorone	25.00	25.14	100.55	
21 2-Nitrophenol	25.00	27.03	108.12	
22 2,4-Dimethylphenol	25.00	26.07	104.26	
23 Bis(2-Chloroethoxy	25.00	24.88	99.52	
24 Benzoic acid	50.00	48.84	97.69	
25 2,4-Dichlorophenol	25.00	26.65	106.59	
26 1,2,4-Trichloroben	25.00	24.57	98.29	
28 Naphthalene	25.00	25.33	101.30	
29 4-Chloroaniline	25.00	25.53	102.13	
30 Hexachlorobutadien	25.00	24.57	98.27	
31 4-Chloro-3-methylp	25.00	27.16	108.64	
32 2-Methylnaphthalen	25.00	24.77	99.09	
33 Hexachlorocyclopen	25.00	26.78	107.11	
34 2,4,6-Trichlorophe	25.00	26.02	104.08	
35 2,4,5-Trichlorophe	25.00	26.83	107.31	
37 2-Chloronaphthalen	25.00	24.94	99.76	
38 2-Nitroaniline	25.00	27.94	111.77	
39 Dimethylphthalate	25.00	24.78	99.13	
40 Acenaphthylene	25.00	25.32	101.27	
41 2,6-Dinitrotoluene	25.00	26.53	106.12	

SPIKE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
43 3-Nitroaniline	25.00	27.37	109.47	
44 Acenaphthene	25.00	24.70	98.80	
45 2,4-Dinitrophenol	50.00	53.89	107.79	
46 Dibenzofuran	25.00	25.33	101.30	
47 4-Nitrophenol	25.00	26.88	107.54	
48 2,4-Dinitrotoluene	25.00	26.94	107.77	
49 Fluorene	25.00	25.86	103.43	
50 Diethylphthalate	25.00	25.63	102.50	
51 4-Chlorophenyl-phe	25.00	25.52	102.07	
52 4-Nitroaniline	25.00	25.60	102.39	
53 4,6-Dinitro-2-meth	50.00	55.73	111.46	
54 N-Nitrosodiphenyla	25.00	25.31	101.25	
56 4-Bromophenyl-phen	25.00	25.20	100.79	
57 Hexachlorobenzene	25.00	24.65	98.59	
58 Pentachlorophenol	25.00	26.33	105.31	
60 Phenanthrene	25.00	25.08	100.31	
61 Anthracene	25.00	25.51	102.03	
63 Di-n-butylphthalat	25.00	26.27	105.07	
64 Fluoranthene	25.00	25.55	102.20	
65 Pyrene	25.00	24.84	99.36	
67 Butylbenzylphthala	25.00	25.87	103.50	
68 Benzo(a)anthracene	25.00	25.08	100.32	
70 3,3'-Dichlorobenzi	25.00	25.69	102.74	
71 Chrysene	25.00	24.87	99.47	
72 bis(2-Ethylhexyl)p	25.00	26.37	105.48	
73 Di-n-octylphthalat	25.00	25.40	101.62	
74 Benzo(b)fluoranthene	25.00	24.65	98.61	
75 Benzo(k)fluoranthene	25.00	26.29	105.16	
76 Benzo(a)pyrene	25.00	25.84	103.36	
78 Indeno(1,2,3-cd)py	25.00	25.37	101.48	
79 Dibenzo(a,h)anthra	25.00	26.16	104.63	
80 Benzo(g,h,i)perylene	25.00	25.31	101.24	
90 N-Nitrosodimethyla	25.00	24.82	99.27	
91 Aniline	25.00	24.84	99.36	
93 Benzidine	25.00	23.66	94.63	
105 1-methylnaphthalen	25.00	24.63	98.50	
120 2,3,4,6-Tetrachlor	25.00	26.90	107.61	
151 1,2,4,5-Tetrachlor	25.00	24.70	98.82	
110 Tetrachloroguaiacol	50.00	52.65	105.30	
109 3,4,5-Trichlorogua	25.00	26.65	106.61	
181 3,4,6-Trichlorogua	25.00	26.88	107.54	
108 4,5,6-Trichlorogua	25.00	25.92	103.70	
184 3,4-Dichloroguaiacol	25.00	25.40	101.61	
107 4,5-Dichloroguaiacol	25.00	24.72	98.87	
182 4,6-Dichloroguaiacol	25.00	26.16	104.65	
185 4-Chloroguaiacol	12.50	13.02	104.13	
106 Guaiacol	25.00	25.43	101.72	

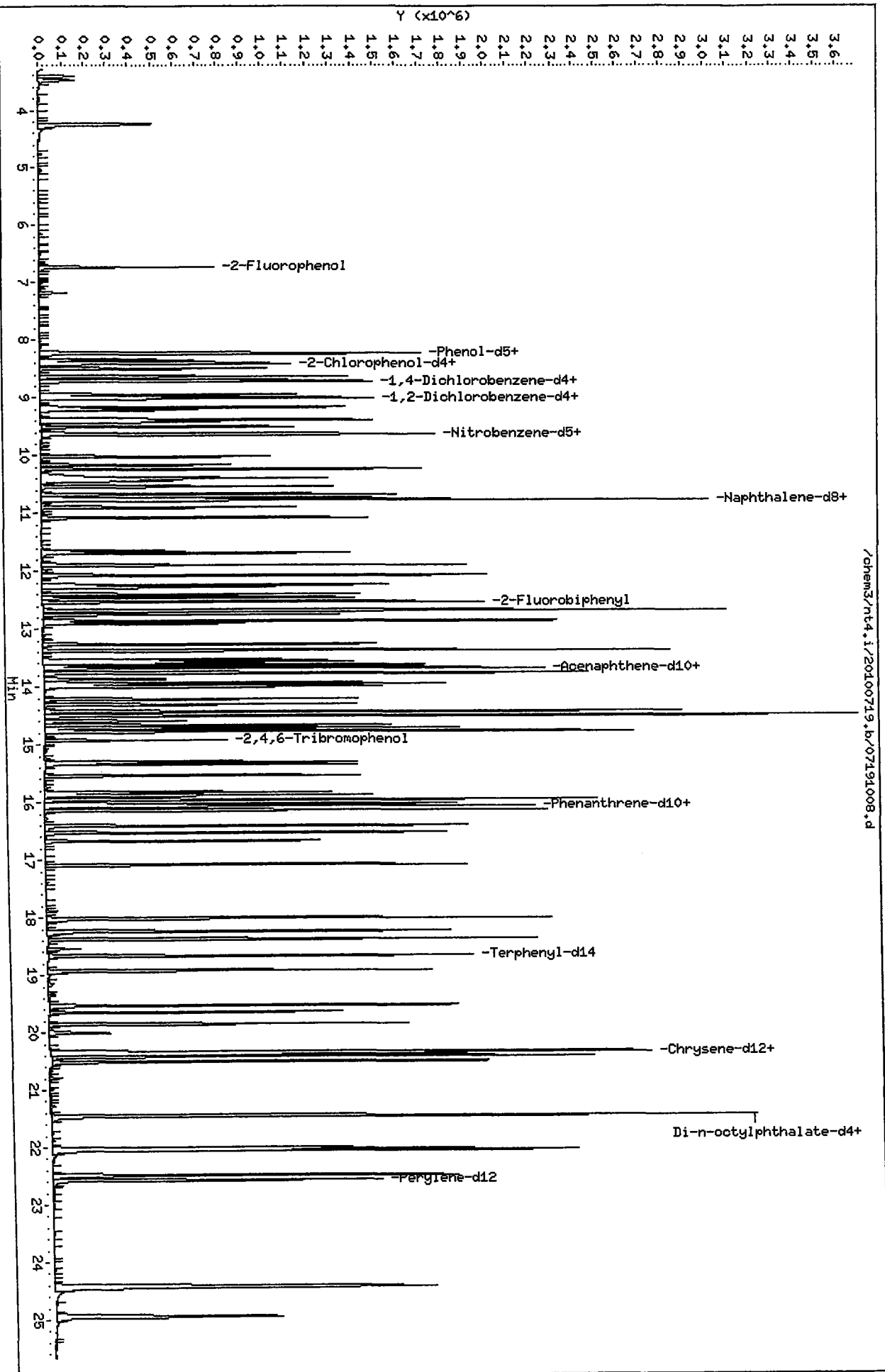
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20100719  
 Sample Matrix: NONE Fraction: SV  
 Lab Smp Id: ICV0719 Client Smp ID: ICV0719  
 Level: Operator: JZ  
 Data Type: MS DATA SampleType: LCS  
 SpikeList File: ICVS.spk Quant Type: ISTD  
 Sublist File: ICAL.sub  
 Method File: /chem3/nt4.i/20100719.b/SW846100719.m  
 Misc Info: 10-

SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	25.00	25.25	100.99	
\$ 2 Phenol-d5	25.00	26.02	104.08	
\$ 5 2-Chlorophenol-d4	25.00	25.66	102.63	
\$ 10 1,2-Dichlorobenzen	25.00	25.24	100.95	
\$ 18 Nitrobenzene-d5	25.00	26.61	106.46	
\$ 36 2-Fluorobiphenyl	25.00	25.11	100.43	
\$ 55 2,4,6-Tribromophen	25.00	27.17	108.67	
\$ 66 Terphenyl-d14	25.00	25.15	100.61	
\$ 137 d8-1,4-Dioxane	25.00	24.48	97.94	

/chem3/nt4.i/20100719.b/07191008.d



**Semivolatile PAH Raw Data  
Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: RG54**

# Analytical Resources Inc.: Organics Instrument Log

NT-6 Serial No.: GC=US00036167, MS=US81221575

Date: 8/12/10 Analysis: 8270 Analyst: AR  
 GC Program: AB11A Column No: 17227 Column Type: ZB-FMSI  
 Instrument Tune (.U or .CT.): 100629 EM Voltage: 1543  
 Calibration File: 08121001 Curve Date: 7/23/10

IS/SS	Ical/Ccal	LCS/ICV
<u>1762-1</u>	<u>1747-3, 1733-1</u>	
	<u>1735-1, 1736-1</u>	
	<u>1709, 1776-1</u> <u>AR 08/13/10</u>	
	<u>1753-1, 1754-1</u>	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt6.i/20100812.b

Time	Filename	LabID	ClientID	DF															
1	1142	08121001.D	CC0812	CC0812	1	7.25	170078	9.33	563656	12.20	331873	14.57	526027	18.89	597231	21.04	556523	20.13	727831
2	1214	08121002.D	RG51MBS1	RG51MBS1	1	9.32	654011	12.19	386336	14.56	624497	18.88	689136	21.04	618317				
3	1247	08121003.D	RG51LCSS1	RG51LCSS1	1	9.32	659808	12.19	376047	14.56	616996	18.89	660878	21.04	624348				
4	1319	08121004.D	RG51A	PSB12-0-0-5-	3	9.32	659613	12.20	380554	14.56	608779	18.88	710702	21.05	765720				
5	1352	08121005.D	RG51A	PSB12-0-0-5-	1	9.32	624298	12.19	363695	14.57	582400	18.89	758225	21.06	752564				
6	1425	08121006.D	RG51B	PSB12-1.5-2-	1	9.32	644085	12.20	378101	14.57	606153	18.89	727151	21.05	726625				
7	1457	08121007.D	RG51C	PSB12-2-4-07	1	9.32	675619	12.20	402393	14.57	645964	18.89	772569	21.06	779609				
8	1530	08121008.D	RG51E	PSB12-8-10-0	1	9.33	690383	12.20	400767	14.57	655503	18.89	758101	21.05	745929				
9	1603	08121009.D	RG51F	PSB12-14-17-	1	9.32	672234	12.20	389561	14.57	623192	18.89	771041	21.05	770890				
10	1636	08121010.D	RG51FMS	PSB12-14-17-	1	9.32	647337	12.20	368766	14.57	609818	18.89	724259	21.05	744130				
11	1708	08121011.D	RG51FMSD	PSB12-14-17-	1	9.32	684526	12.20	391450	14.57	646825	18.89	805012	21.05	809972				
12	1741	08121012.D	RG54A	PSB14-0-5-0	1	9.32	646802	12.19	372263	14.57	604870	18.89	792141	21.07	779443				
13	1814	08121013.D	RG54B	PSB14-1.5-2-	1	9.32	684688	12.20	394732	14.57	650726	18.89	791148	21.05	754770				
14	1846	08121014.D	RG54C	PSB14-2-4-07	1	9.32	697008	12.19	405526	14.57	659514	18.89	805472	21.05	768749				
15	1919	08121015.D	RG54E	PSB14-7-9-07	1	9.33	688034	12.20	406917	14.57	657807	18.89	815444	21.06	808589				
16	1951	08121016.D	RG54F	PSB14-12-14-	1	9.32	680198	12.20	399910	14.57	646609	18.89	802236	21.05	765842				
17	2024	08121017.D	RG54H	PSB17-0-0-5-	3	9.33	613119	12.20	357559	14.57	574005	18.89	789037	21.07	727276				
18	2056	08121018.D	RG54I	PSB17-1.5-2-	1	9.33	666015	12.20	391326	14.57	638836	18.89	777046	21.05	722521				
19	2129	08121019.D	RG54J	PSB17-2-4-07	1	9.33	675475	12.20	399146	14.57	666150	18.89	834140	21.05	744511				
20	2201	08121020.D	RG54L	PSB17-10-13-	1	9.32	673627	12.20	398471	14.57	658509	18.89	817846	21.05	755989				
21	2233	08121021.D	RG60A	PSB13-0-0-5-	1	9.32	635836	12.20	370489	14.57	618800	18.89	763836	21.05	732220				
22	2306	08121022.D	RG60B	PSB13-1.5-2-	1	9.33	672506	12.20	396547	14.57	662430	18.89	834468	21.06	779307				

AR 08/13/10

**Maintenance Verification** (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.



**GC/MS SVOA Analyst Notes / Corrective Action Log**

ARI Project ID: RG11, RG14, RG60 Client ID: Floyd/Smider

ARI SOP: 801S(SIM-PNA) 802S(Butyl Tins) 804S(SVOA-8270D) 805S(op-Pest)

Parameter(s): 8270

Instrument: NT-2 NT-4 NT-6 NT-8 NT11

Curve Date: 7/23/10 Analysis Start Date: 8/12, 8/13/10

DFTPP Tune Meets Criteria?	<u>YES</u> / NO	Internal Standard Meets Criteria?	<u>YES</u> / NO
DDT Breakdown <20%?	<u>YES</u> / NO / NA	Method Blank In Control?	<u>YES</u> / NO
Peak Tailing Factor ≤2?	<u>YES</u> / NO / NA	LCS / LCSD Recovery In Control?	<u>YES</u> / NO
ICal acceptable?	<u>YES</u> / NO	CCal acceptable?	<u>YES</u> / NO
Q flag applied?	YES / NO	Q flag applied?	YES / NO
Surrogate Recovery in Control?	<u>YES</u> <u>NO</u>	Special Analysis Criteria Met?	YES / NO / <u>NA</u>
Manual Integrations for ICal?	<u>YES</u> / NO	Manual Integrations for Samples?	Yes / <u>NO</u>

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

8/12: Samples RG11 A-F, RG14 A-F, I, J+D, RG60 A-D + MB/LCS+MS/MSD

8/13: Samples RG60 D-F, VC+RG14H + Diluted for RG14E

Sample RG14A & RG60A-C will be re-extracted for SS recovery out of QC limit.

Batch QC: RG11, RG14 & RG60

Forms included.

**Additional Details on Reverse: Yes / No**

Analyst: [Signature] Date: 8/16/10

Reviewer: [Signature] Date: 8/16/10



MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt6.i/20100812.b

ARI Job No.: CC08 Method: SW846072310.m Instrument: nt6.i Date: 12-AUG-2010

*12 08/13/10*

Time Filename LabID ClientId DF Manually Integrated Compounds

1142	08121001.D	CC0812	CC0812	1	NO MANUAL INTEGRATION
1214	08121002.D	RG51MBS1	RG51MBS1	1	NO MANUAL INTEGRATION
1247	08121003.D	RG51LCSS1	RG51LCSS1	1	NO MANUAL INTEGRATION
1319	08121004.D	RG51A	PSB12-0-0.	3	NO MANUAL INTEGRATION
1352	08121005.D	RG51A	PSB12-0-0.	1	NO MANUAL INTEGRATION
1425	08121006.D	RG51B	PSB12-1.5-	1	NO MANUAL INTEGRATION
1457	08121007.D	RG51C	PSB12-2-4-	1	NO MANUAL INTEGRATION
1530	08121008.D	RG51E	PSB12-8-10	1	NO MANUAL INTEGRATION
1603	08121009.D	RG51F	PSB12-14-1	1	NO MANUAL INTEGRATION
1636	08121010.D	RG51FMS	PSB12-14-1	1	NO MANUAL INTEGRATION
1708	08121011.D	RG51FMSD	PSB12-14-1	1	NO MANUAL INTEGRATION
1741	08121012.D	RG54A	PSB14-0-.5	1	NO MANUAL INTEGRATION
1814	08121013.D	RG54B	PSB14-1.5-	1	NO MANUAL INTEGRATION
1846	08121014.D	RG54C	PSB14-2-4-	1	NO MANUAL INTEGRATION
1919	08121015.D	RG54E	PSB14-7-9-	1	NO MANUAL INTEGRATION
2051	08121016.D	RG54F	PSB14-12-1	1	NO MANUAL INTEGRATION
2056	08121018.D	RG54I	PSB17-1.5-	1	NO MANUAL INTEGRATION
2129	08121019.D	RG54J	PSB17-2-4-	1	NO MANUAL INTEGRATION
2201	08121020.D	RG54L	PSB17-10-1	1	NO MANUAL INTEGRATION
2233	08121021.D	RG60A	PSB13-0-0.	1	NO MANUAL INTEGRATION
2306	08121022.D	RG60B	PSB13-1.5-	1	NO MANUAL INTEGRATION

*SS-0114*

*SS-0114*

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt6.i/20100812.b

Instrument: nt6.i Date: 12-AUG-2010 Method: SW846072310.m

INITIAL CAL: 23-JUL-2010

Compound	%RSD or R <sup>2</sup>
-----	
NO Q-FLAGS	
-----	

*QZ 08/12/10*

CONTINUING CAL: 12-AUG-2010

Compound	%D
-----	
4-Nitrophenol	-21.3
-----	

*NTC*

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i                      Injection Date: 12-AUG-2010 11:42  
 Lab File ID: 08121001.D                Init. Cal. Date(s): 23-JUL-2010 23-JUL-2010  
 Analysis Type:                            Init. Cal. Times: 15:01 18:38  
 Lab Sample ID: CC0812                    Quant Type: ISTD  
 Method: /chem1/nt6.i/20100812.b/SW846072310.m

*AZ 08/12/10*

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
\$ 1 2-Fluorophenol	1.32873	1.36015	1.36015	0.010	2.36473	20.00000	Averaged
\$ 2 Phenol-d5	1.53477	1.58504	1.58504	0.010	3.27538	20.00000	Averaged
3 Phenol	1.70453	1.81407	1.81407	0.010	6.42662	20.00000	Averaged
\$ 5 2-Chlorophenol-d4	1.29631	1.27373	1.27373	0.010	-1.74176	20.00000	Averaged
4 Bis(2-Chloroethyl)ether	1.30667	1.30646	1.30646	0.010	-0.01671	20.00000	Averaged
6 2-Chlorophenol	1.47378	1.47374	1.47374	0.010	-0.00240	20.00000	Averaged
7 1,3-Dichlorobenzene	1.71678	1.70605	1.70605	0.010	-0.62524	20.00000	Averaged
9 1,4-Dichlorobenzene	1.68189	1.68901	1.68901	0.010	0.42325	20.00000	Averaged
\$ 10 1,2-Dichlorobenzene-d4	0.89939	0.92374	0.92374	0.010	2.70681	20.00000	Averaged
12 1,2-Dichlorobenzene	1.56400	1.58891	1.58891	0.010	1.59249	20.00000	Averaged
11 Benzyl alcohol	0.80695	0.84277	0.84277	0.010	4.43854	20.00000	Averaged
14 2,2'-oxybis(1-Chloropropane	1.39331	1.53597	1.53597	0.010	10.23828	20.00000	Averaged
13 2-Methylphenol	1.27111	1.32428	1.32428	0.010	4.18307	20.00000	Averaged
17 Hexachloroethane	0.60757	0.61201	0.61201	0.010	0.73060	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	0.88368	0.91516	0.91516	0.005	3.56199	20.00000	Averaged
15 4-Methylphenol	1.25486	1.37272	1.37272	0.010	9.39255	20.00000	Averaged
\$ 18 Nitrobenzene-d5	0.38855	0.37846	0.37846	0.010	-2.59690	20.00000	Averaged
19 Nitrobenzene	0.43075	0.42915	0.42915	0.010	-0.37266	20.00000	Averaged
20 Isophorone	0.68600	0.70045	0.70045	0.010	2.10607	20.00000	Averaged
21 2-Nitrophenol	0.25274	0.26485	0.26485	0.010	4.79093	20.00000	Averaged
22 2,4-Dimethylphenol	0.41587	0.41933	0.41933	0.010	0.83287	20.00000	Averaged
23 Bis(2-Chloroethoxy)methane	0.47536	0.48770	0.48770	0.010	2.59644	20.00000	Averaged
24 Benzoic acid	0.30742	0.27413	0.27413	0.010	-10.82800	20.00000	Averaged
25 2,4-Dichlorophenol	0.36413	0.38860	0.38860	0.010	6.71955	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.39778	0.39873	0.39873	0.010	0.24031	20.00000	Averaged
28 Naphthalene	1.13038	1.14383	1.14383	0.010	1.19007	20.00000	Averaged
29 4-Chloroaniline	0.45282	0.46190	0.46190	0.010	2.00520	20.00000	Averaged
30 Hexachlorobutadiene	0.23198	0.23756	0.23756	0.010	2.40773	20.00000	Averaged
31 4-Chloro-3-methylphenol	0.35105	0.37133	0.37133	0.010	5.77685	20.00000	Averaged
32 2-Methylnaphthalene	0.62036	0.63833	0.63833	0.010	2.89812	20.00000	Averaged
33 Hexachlorocyclopentadiene	21.80335	25.00000	0.36265	0.010	-12.78660	20.00000	Linear
34 2,4,6-Trichlorophenol	0.45790	0.47899	0.47899	0.010	4.60750	20.00000	Averaged
35 2,4,5-Trichlorophenol	0.47246	0.48815	0.48815	0.010	3.31919	20.00000	Averaged
\$ 36 2-Fluorobiphenyl	1.40011	1.34441	1.34441	0.010	-3.97837	20.00000	Averaged
37 2-Chloronaphthalene	1.32938	1.31645	1.31645	0.010	-0.97226	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i                      Injection Date: 12-AUG-2010 11:42  
 Lab File ID: 08121001.D                Init. Cal. Date(s): 23-JUL-2010 23-JUL-2010  
 Analysis Type:                            Init. Cal. Times: 15:01 18:38  
 Lab Sample ID: CC0812                  Quant Type: ISTD  
 Method: /chem1/nt6.i/20100812.b/SW846072310.m

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
38 2-Nitroaniline	0.33095	0.32311	0.32311	0.010	-2.36967	20.00000	Averaged
39 Dimethylphthalate	1.50119	1.47831	1.47831	0.010	-1.52393	20.00000	Averaged
40 Acenaphthylene	2.05833	2.06862	2.06862	0.010	0.49975	20.00000	Averaged
41 2,6-Dinitrotoluene	0.35670	0.36971	0.36971	0.010	3.64800	20.00000	Averaged
43 3-Nitroaniline	0.31209	0.31287	0.31287	0.010	0.25126	20.00000	Averaged
44 Acenaphthene	1.28541	1.26570	1.26570	0.010	-1.53360	20.00000	Averaged
45 2,4-Dinitrophenol	40.86929	50.00000	0.23959	0.010	-18.26143	20.00000	Linear
46 Dibenzofuran	1.70738	1.71222	1.71222	0.010	0.28303	20.00000	Averaged
47 4-Nitrophenol	0.18552	0.14592	0.14592	0.010	-21.34275	20.00000	Averaged
48 2,4-Dinitrotoluene	0.45944	0.47456	0.47456	0.010	3.29055	20.00000	Averaged
50 Diethylphthalate	1.39533	1.28474	1.28474	0.010	-7.92563	20.00000	Averaged
49 Fluorene	1.45467	1.50756	1.50756	0.010	3.63616	20.00000	Averaged
51 4-Chlorophenyl-phenylether	0.71936	0.72537	0.72537	0.010	0.83446	20.00000	Averaged
52 4-Nitroaniline	0.34745	0.28499	0.28499	0.010	-17.97675	20.00000	Averaged
53 4,6-Dinitro-2-methylphenol	0.19806	0.19928	0.19928	0.010	0.61766	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.68493	0.69496	0.69496	0.010	1.46502	20.00000	Averaged
55 2,4,6-Tribromophenol	0.18223	0.20774	0.20774	0.010	13.99531	20.00000	Averaged
56 4-Bromophenyl-phenylether	0.29331	0.31410	0.31410	0.010	7.09053	20.00000	Averaged
57 Hexachlorobenzene	0.30899	0.34221	0.34221	0.010	10.75316	20.00000	Averaged
58 Pentachlorophenol	0.18262	0.16418	0.16418	0.010	-10.09774	20.00000	Averaged
60 Phenanthrene	1.24231	1.27488	1.27488	0.010	2.62167	20.00000	Averaged
61 Anthracene	1.28336	1.32078	1.32078	0.010	2.91608	20.00000	Averaged
62 Carbazole	1.19107	1.08977	1.08977	0.010	-8.50497	20.00000	Averaged
63 Di-n-butylphthalate	1.45976	1.49507	1.49507	0.010	2.41878	20.00000	Averaged
64 Fluoranthene	1.34612	1.46240	1.46240	0.010	8.63812	20.00000	Averaged
65 Pyrene	1.20453	1.24410	1.24410	0.010	3.28457	20.00000	Averaged
66 Terphenyl-d14	0.70850	0.76518	0.76518	0.010	7.99973	20.00000	Averaged
67 Butylbenzylphthalate	0.58237	0.60425	0.60425	0.010	3.75739	20.00000	Averaged
68 Benzo(a)anthracene	1.15615	1.24339	1.24339	0.010	7.54530	20.00000	Averaged
70 3,3'-Dichlorobenzidine	0.37517	0.39132	0.39132	0.010	4.30403	20.00000	Averaged
71 Chrysene	1.08220	1.10600	1.10600	0.010	2.19902	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.63407	0.67038	0.67038	0.010	5.72735	20.00000	Averaged
73 Di-n-octylphthalate	1.08410	1.08234	1.08234	0.010	-0.16280	20.00000	Averaged
74 Benzo(b)fluoranthene	1.33887	1.36666	1.36666	0.010	2.07496	20.00000	Averaged
75 Benzo(k)fluoranthene	1.38193	1.45418	1.45418	0.010	5.22836	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i                      Injection Date: 12-AUG-2010 11:42  
Lab File ID: 08121001.D                Init. Cal. Date(s): 23-JUL-2010 23-JUL-2010  
Analysis Type:                            Init. Cal. Times: 15:01                      18:38  
Lab Sample ID: CC0812                    Quant Type: ISTD  
Method: /chem1/nt6.i/20100812.b/SW846072310.m

COMPOUND	CCAL		MIN		MAX		CURVE TYPE
	RRF / AMOUNT	RF25	RRF25	RRF	%D / %DRIFT	%D / %DRIFT	
187 Total Benzofluoranthenes	1.28781	1.32168	1.32168	0.010	2.62966	20.00000	Averaged
76 Benzo(a)pyrene	1.26119	1.30073	1.30073	0.010	3.13588	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.68718	1.63050	1.63050	0.010	-3.35982	20.00000	Averaged
79 Dibenzo(a,h)anthracene	1.29650	1.28305	1.28305	0.010	-1.03803	20.00000	Averaged
80 Benzo(g,h,i)perylene	1.52194	1.45557	1.45557	0.010	-4.36116	20.00000	Averaged
90 N-Nitrosodimethylamine	0.86213	0.86684	0.86684	0.010	0.54588	20.00000	Averaged
103 Pyridine	1.54116	1.60538	1.60538	0.010	4.16675	20.00000	Averaged
91 Aniline	1.95218	1.95946	1.95946	0.010	0.37263	20.00000	Averaged
105 1-methylnaphthalene	0.64079	0.66198	0.66198	0.010	3.30809	20.00000	Averaged

Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100812.b/08121001.D  
Lab Smp Id: CC0812 Client Smp ID: CC0812  
Inj Date : 12-AUG-2010 11:42 Inst ID: nt6.i  
Operator : JZ  
Smp Info : CC0812  
Misc Info : 10-  
Comment : lul Injection  
Method : /chem1/nt6.i/20100812.b/SW846072310.m  
Meth Date : 12-Aug-2010 14:01 jianqing Quant Type: ISTD  
Cal Date : 23-JUL-2010 18:38 Cal File: 07231007.D  
Als bottle: 1 Continuing Calibration Sample  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: ICALS.sub  
Target Version: 3.50

*Handwritten:* 08/12/10

Compounds	QUANT SIG			AMOUNTS		
	MASS	RT	EXP RT REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
-----	----	--	-----	-----	-----	-----
\$ 1 2-Fluorophenol	112	5.227	5.227 (0.721)	289165	25.0000	25.59
\$ 2 Phenol-d5	99	6.909	6.909 (0.953)	336976	25.0000	25.82
3 Phenol	94	6.931	6.931 (0.956)	385667	25.0000	26.61
\$ 5 2-Chlorophenol-d4	132	6.957	6.957 (0.959)	270792	25.0000	24.56
4 Bis(2-Chloroethyl) ether	93	6.947	6.947 (0.958)	277750	25.0000	25.00
6 2-Chlorophenol	128	6.984	6.984 (0.963)	313315	25.0000	25.00
7 1,3-Dichlorobenzene	146	7.182	7.182 (0.990)	362702	25.0000	24.84
* 8 1,4-Dichlorobenzene-d4	152	7.251	7.251 (1.000)	170078	20.0000	
9 1,4-Dichlorobenzene	146	7.273	7.273 (1.003)	359080	25.0000	25.11
\$ 10 1,2-Dichlorobenzene-d4	152	7.550	7.550 (1.041)	196384	25.0000	25.68
12 1,2-Dichlorobenzene	146	7.572	7.572 (1.044)	337799	25.0000	25.40
11 Benzyl alcohol	108	7.582	7.582 (1.046)	179170	25.0000	26.11
14 2,2'-oxybis(1-Chloropropane)	45	7.839	7.839 (1.081)	326543	25.0000	27.56
13 2-Methylphenol	108	7.865	7.865 (1.085)	281538	25.0000	26.05
17 Hexachloroethane	117	8.063	8.063 (1.112)	130111	25.0000	25.18
16 N-Nitroso-di-n-propylamine	70	8.068	8.068 (1.113)	194560	25.0000	25.89
15 4-Methylphenol	108	8.111	8.111 (1.119)	291838	25.0000	27.35
\$ 18 Nitrobenzene-d5	82	8.213	8.213 (0.880)	266653	25.0000	24.35
19 Nitrobenzene	77	8.239	8.239 (0.883)	302365	25.0000	24.91
20 Isophorone	82	8.635	8.635 (0.926)	493517	25.0000	25.53
21 2-Nitrophenol	139	8.768	8.768 (0.940)	186604	25.0000	26.20
22 2,4-Dimethylphenol	107	8.939	8.939 (0.958)	295448	25.0000	25.21
23 Bis(2-Chloroethoxy)methane	93	9.062	9.062 (0.971)	343617	25.0000	25.65
24 Benzoic acid	105	9.238	9.238 (0.990)	386285	50.0000	44.59
25 2,4-Dichlorophenol	162	9.174	9.174 (0.983)	273793	25.0000	26.68
26 1,2,4-Trichlorobenzene	180	9.275	9.275 (0.994)	280935	25.0000	25.06
* 27 Naphthalene-d8	136	9.329	9.329 (1.000)	563656	20.0000	

Compounds	QUANT SIG			AMOUNTS			
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
28 Naphthalene	128	9.356	9.356	(1.003)	805910	25.0000	25.30
29 4-Chloroaniline	127	9.537	9.537	(1.022)	325441	25.0000	25.50
30 Hexachlorobutadiene	225	9.692	9.692	(1.039)	167381	25.0000	25.60
31 4-Chloro-3-methylphenol	107	10.408	10.408	(1.116)	261628	25.0000	26.44
32 2-Methylnaphthalene	141	10.493	10.493	(1.125)	449751	25.0000	25.72
33 Hexachlorocyclopentadiene	237	10.878	10.878	(0.892)	150443	25.0000	21.80
34 2,4,6-Trichlorophenol	196	11.038	11.038	(0.905)	198707	25.0000	26.15
35 2,4,5-Trichlorophenol	196	11.102	11.102	(0.910)	202503	25.0000	25.83
\$ 36 2-Fluorobiphenyl	172	11.156	11.156	(0.915)	557717	25.0000	24.01
37 2-Chloronaphthalene	162	11.268	11.268	(0.924)	546119	25.0000	24.76
38 2-Nitroaniline	65	11.529	11.529	(0.945)	134038	25.0000	24.41
39 Dimethylphthalate	163	11.925	11.925	(0.978)	613266	25.0000	24.62
40 Acenaphthylene	152	11.941	11.941	(0.979)	858150	25.0000	25.12
41 2,6-Dinitrotoluene	165	12.010	12.010	(0.985)	153371	25.0000	25.91
* 42 Acenaphthene-d10	164	12.197	12.197	(1.000)	331873	20.0000	
43 3-Nitroaniline	138	12.218	12.218	(1.002)	129792	25.0000	25.06
44 Acenaphthene	153	12.250	12.250	(1.004)	525064	25.0000	24.62
45 2,4-Dinitrophenol	184	12.389	12.389	(1.016)	198780	50.0000	40.87
46 Dibenzofuran	168	12.512	12.512	(1.026)	710299	25.0000	25.07
47 4-Nitrophenol	109	12.598	12.598	(1.033)	60535	25.0000	19.66
48 2,4-Dinitrotoluene	165	12.635	12.635	(1.036)	196868	25.0000	25.82
50 Diethylphthalate	149	13.089	13.089	(1.073)	532965	25.0000	23.02
49 Fluorene	166	13.068	13.068	(1.071)	625401	25.0000	25.91
51 4-Chlorophenyl-phenylether	204	13.116	13.116	(1.075)	300912	25.0000	25.21
52 4-Nitroaniline	138	13.217	13.217	(1.084)	118224	25.0000	20.51
53 4,6-Dinitro-2-methylphenol	198	13.292	13.292	(0.912)	262071	50.0000	50.31
54 N-Nitrosodiphenylamine	169	13.335	13.335	(0.915)	456960	25.0000	25.37
\$ 55 2,4,6-Tribromophenol	330	13.500	13.500	(1.107)	86178	25.0000	28.50
56 4-Bromophenyl-phenylether	248	13.896	13.896	(0.954)	206533	25.0000	26.77
57 Hexachlorobenzene	284	14.093	14.093	(0.967)	225016	25.0000	27.69
58 Pentachlorophenol	266	14.414	14.414	(0.989)	107953	25.0000	22.48
* 59 Phenanthrene-d10	188	14.568	14.568	(1.000)	526027	20.0000	
60 Phenanthrene	178	14.606	14.606	(1.003)	838279	25.0000	25.66
61 Anthracene	178	14.681	14.681	(1.008)	868458	25.0000	25.73
62 Carbazole	167	14.990	14.990	(1.029)	716561	25.0000	22.87
63 Di-n-butylphthalate	149	15.749	15.749	(1.081)	983058	25.0000	25.60
64 Fluoranthene	202	16.539	16.539	(1.135)	961581	25.0000	27.16
65 Pyrene	202	16.892	16.892	(0.894)	928768	25.0000	25.82
\$ 66 Terphenyl-d14	244	17.244	17.244	(0.913)	571237	25.0000	27.00
67 Butylbenzylphthalate	149	18.158	18.158	(0.961)	451096	25.0000	25.94
68 Benzo(a)anthracene	228	18.863	18.863	(0.999)	928236	25.0000	26.89
* 69 Chrysene-d12	240	18.889	18.889	(1.000)	597231	20.0000	
70 3,3'-Dichlorobenzidine	252	18.905	18.905	(1.001)	292136	25.0000	26.08
71 Chrysene	228	18.927	18.927	(1.002)	825673	25.0000	25.55
72 bis(2-Ethylhexyl)phthalate	149	19.188	19.188	(0.953)	609906	25.0000	26.43
* 134 Di-n-octylphthalate-d4	153	20.129	20.129	(1.000)	727831	20.0000	
73 Di-n-octylphthalate	149	20.134	20.134	(1.000)	984701	25.0000	24.96

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
===== 74 Benzo(b)fluoranthene	252	20.518	20.518	(0.975)	950719	25.0000	25.52
75 Benzo(k)fluoranthene	252	20.556	20.556	(0.977)	1011608	25.0000	26.31
187 Total Benzofluoranthenes	252	20.556	20.556	(0.977)	1838859	50.0000	51.31
76 Benzo(a)pyrene	252	20.962	20.962	(0.996)	904861	25.0000	25.78
* 77 Perylene-d12	264	21.042	21.042	(1.000)	556523	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	22.414	22.414	(1.065)	1134262	25.0000	24.16
79 Dibenzo(a,h)anthracene	278	22.441	22.441	(1.066)	892556	25.0000	24.74
80 Benzo(g,h,i)perylene	276	22.740	22.740	(1.081)	1012573	25.0000	23.91
90 N-Nitrosodimethylamine	74	2.305	2.305	(0.318)	184287	25.0000	25.14
103 Pyridine	79	2.273	2.273	(0.314)	341300	25.0000	26.04
91 Aniline	93	6.808	6.808	(0.939)	416577	25.0000	25.09
105 1-methylnaphthalene	141	10.659	10.659	(1.143)	466413	25.0000	25.83



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

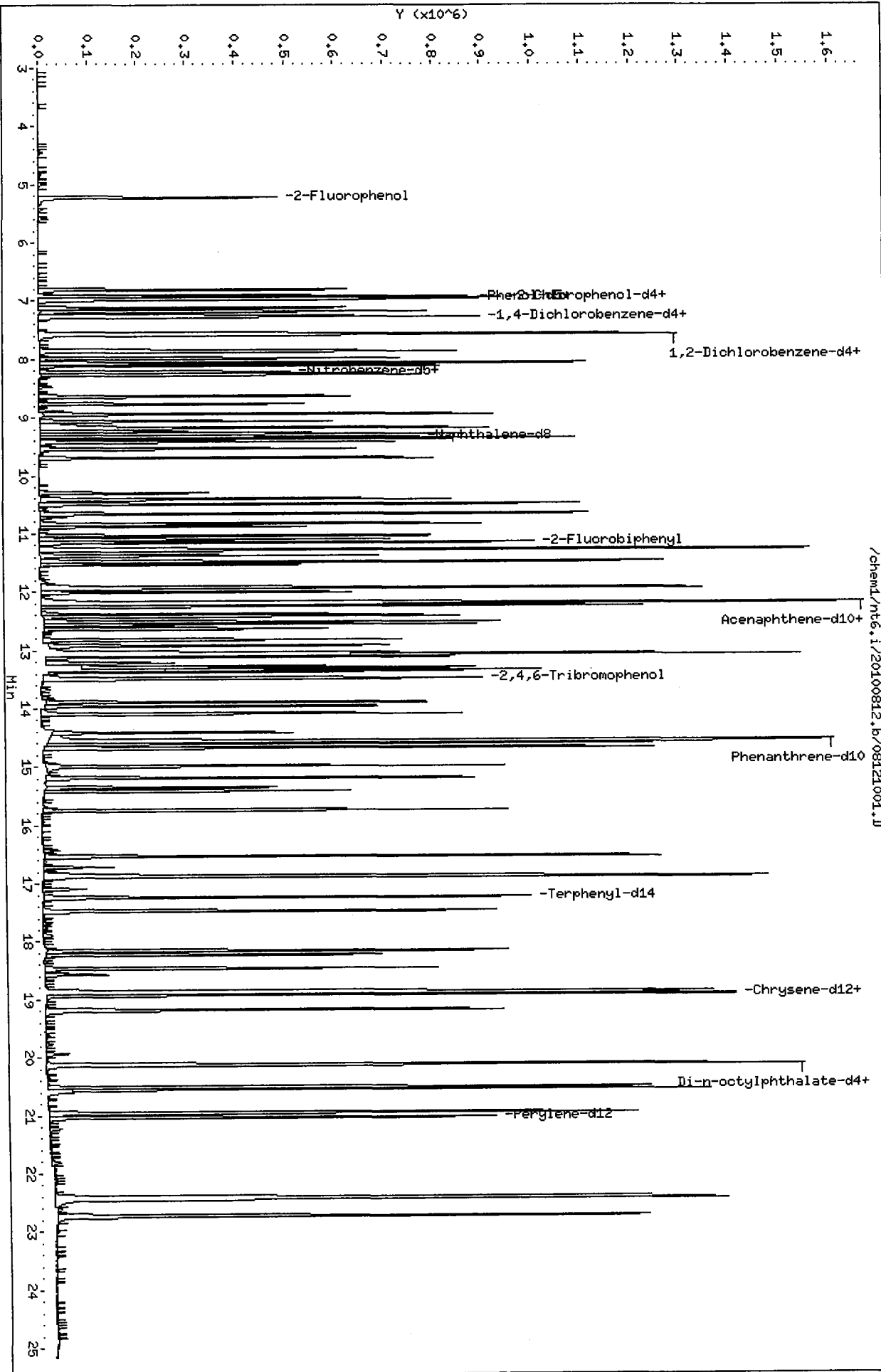
Instrument ID: nt6.i	Calibration Date: 12-AUG-2010
Lab File ID: 08121001.D	Calibration Time: 11:42
Lab Smp Id: CC0812	Client Smp ID: CC0812
Analysis Type: SV	Level:
Quant Type: ISTD	Sample Type:
Operator: JZ	
Method File: /chem1/nt6.i/20100812.b/SW846072310.m	
Misc Info: 10-	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	182786	91393	365572	170078	-6.95
27 Naphthalene-d8	584137	292068	1168274	563656	-3.51
42 Acenaphthene-d10	320442	160221	640884	331873	3.57
59 Phenanthrene-d10	503793	251896	1007586	526027	4.41
69 Chrysene-d12	532343	266172	1064686	597231	12.19
134 Di-n-octylphthala	719428	359714	1438856	727831	1.17
77 Perylene-d12	517269	258634	1034538	556523	7.59

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	7.25	6.75	7.75	7.25	0.00
27 Naphthalene-d8	9.33	8.83	9.83	9.33	0.00
42 Acenaphthene-d10	12.20	11.70	12.70	12.20	0.00
59 Phenanthrene-d10	14.57	14.07	15.07	14.57	0.00
69 Chrysene-d12	18.89	18.39	19.39	18.89	0.00
134 Di-n-octylphthala	20.13	19.63	20.63	20.13	0.00
77 Perylene-d12	21.04	20.54	21.54	21.04	0.00

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



Date : 12-AUG-2010 11:42

Client ID: DFTPP0812

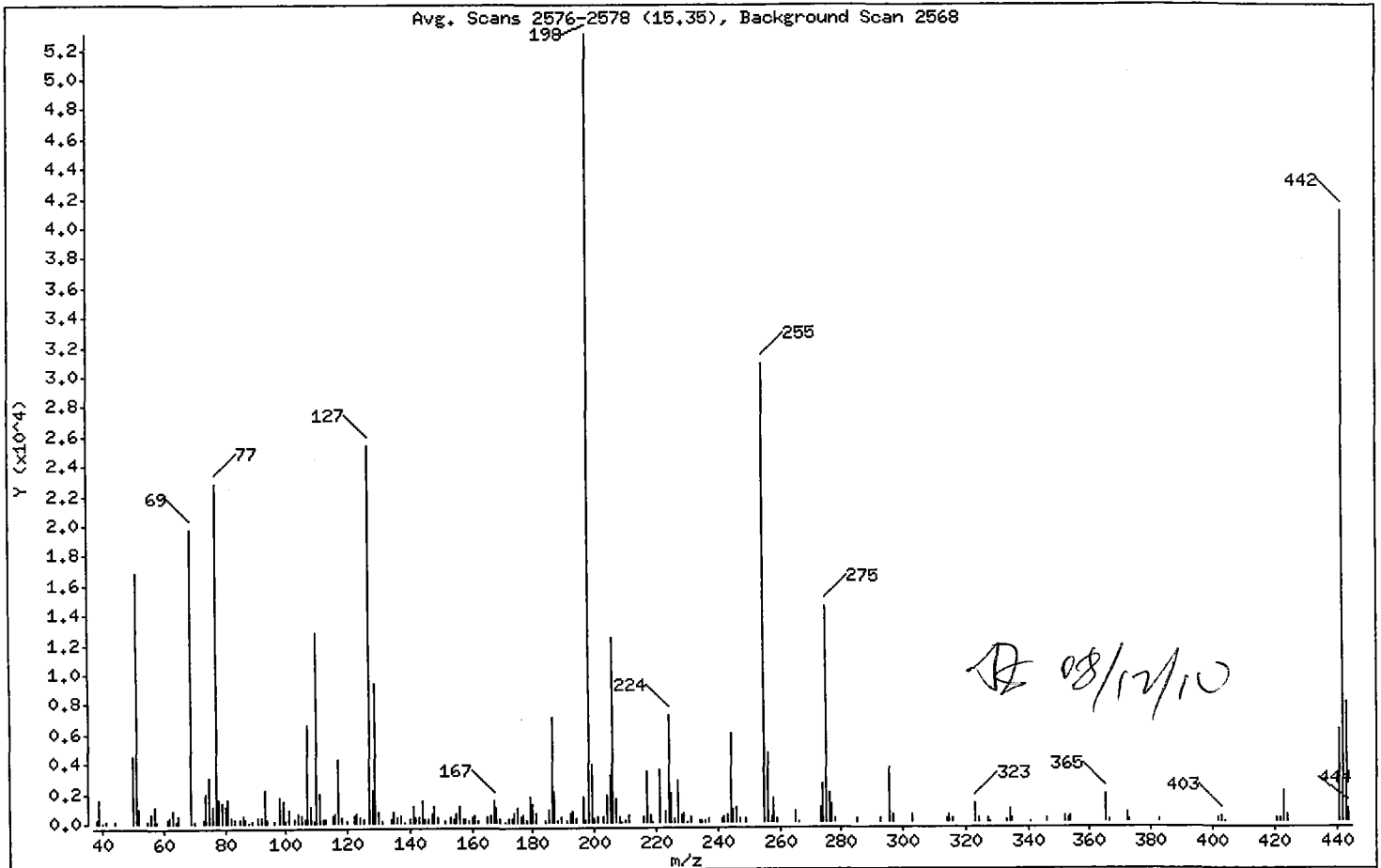
Instrument: nt6.i

Sample Info: DFTPP0812

Operator: JZ

Column phase: ZB-5msi  
1 dftpp

Column diameter: 0.25



*Handwritten signature and date: JZ 08/12/10*

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	31.63
68	Less than 2.00% of mass 69	0.00 ( 0.00)
69	Mass 69 relative abundance	37.29
70	Less than 2.00% of mass 69	0.21 ( 0.57)
127	10.00 - 80.00% of mass 198	47.81
197	Less than 2.00% of mass 198	0.23
199	5.00 - 9.00% of mass 198	7.25
275	10.00 - 60.00% of mass 198	27.39
365	Greater than 1.00% of mass 198	3.34
441	0.01 - 24.00% of mass 442	11.80 ( 15.21)
442	50.00 - 200.00% of mass 198	77.57
443	15.00 - 24.00% of mass 442	15.28 ( 19.70)

Date : 12-AUG-2010 11:42

Client ID: DFTPP0812

Instrument: nt6.i

Sample Info: DFTPP0812

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: 08121001.D

Spectrum: Avg. Scans 2576-2578 (15.35), Background Scan 2568

Location of Maximum: 198.00

Number of points: 211

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	283	112.00	218	177.00	495	246.00	1015
39.00	1561	113.00	208	178.00	61	247.00	204
40.00	55	115.00	439	179.00	1733	249.00	265
41.00	140	116.00	556	180.00	1261	255.00	30808
44.00	104	117.00	4328	181.00	555	256.00	4663
50.00	4465	118.00	361	184.00	107	257.00	329
51.00	16776	120.00	67	185.00	894	258.00	1572
52.00	946	122.00	527	186.00	7045	259.00	210
55.00	106	123.00	626	187.00	2023	265.00	686
56.00	551	124.00	360	188.00	174	266.00	50
57.00	1095	125.00	293	189.00	375	273.00	979
58.00	168	127.00	25360	191.00	113	274.00	2614
61.00	249	128.00	2137	192.00	598	275.00	14527
62.00	338	129.00	9398	193.00	687	276.00	1963
63.00	846	130.00	755	194.00	184	277.00	1163
64.00	104	131.00	179	196.00	1758	278.00	226
65.00	468	134.00	273	197.00	121	285.00	227
69.00	19776	135.00	675	198.00	53040	293.00	300
70.00	113	136.00	328	199.00	3847	296.00	3655
73.00	220	137.00	480	200.00	279	297.00	529
74.00	1960	138.00	53	201.00	362	303.00	454
75.00	3109	140.00	231	203.00	379	314.00	214
76.00	1105	141.00	1101	204.00	1793	315.00	444
77.00	22784	142.00	381	205.00	3192	316.00	229
78.00	1631	143.00	306	206.00	12390	323.00	1273
79.00	1358	144.00	1405	207.00	1572	324.00	244
80.00	1090	145.00	286	208.00	425	327.00	231
81.00	1574	146.00	246	209.00	50	328.00	60
82.00	416	147.00	619	210.00	150	333.00	123
83.00	304	148.00	1116	211.00	532	334.00	803
85.00	264	149.00	331	216.00	305	335.00	226
86.00	463	151.00	70	217.00	3414	341.00	58
87.00	259	153.00	341	218.00	477	346.00	238
88.00	53	154.00	278	219.00	52	352.00	367
89.00	126	155.00	667	221.00	3491	353.00	210

Date : 12-AUG-2010 11:42

Client ID: DFTPP0812

Instrument: nt6.i

Sample Info: DFTPP0812

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: 08121001.D

Spectrum: Avg. Scans 2576-2578 (15.35), Background Scan 2568

Location of Maximum: 198.00

Number of points: 211

m/z	Y	m/z	Y	m/z	Y	m/z	Y
91.00	409	156.00	1121	223.00	695	354.00	342
92.00	371	157.00	225	224.00	7189	365.00	1774
93.00	2179	158.00	210	225.00	1936	366.00	152
94.00	223	159.00	71	226.00	215	372.00	633
96.00	169	160.00	333	227.00	2782	373.00	116
98.00	1736	161.00	450	228.00	454	383.00	130
99.00	1408	162.00	120	229.00	666	402.00	250
100.00	108	165.00	368	230.00	58	403.00	330
101.00	872	166.00	458	231.00	333	404.00	51
103.00	289	167.00	1505	234.00	128	421.00	252
104.00	563	168.00	1012	235.00	138	422.00	190
105.00	542	169.00	207	236.00	161	423.00	2025
106.00	211	171.00	53	237.00	223	424.00	496
107.00	6542	172.00	235	241.00	189	441.00	6258
108.00	1077	173.00	251	242.00	419	442.00	41144
109.00	67	174.00	557	243.00	449	443.00	8106
110.00	12827	175.00	982	244.00	6000	444.00	834
111.00	1932	176.00	324	245.00	861		

Date : 12-AUG-2010 11:42

Client ID: DFTPP0812

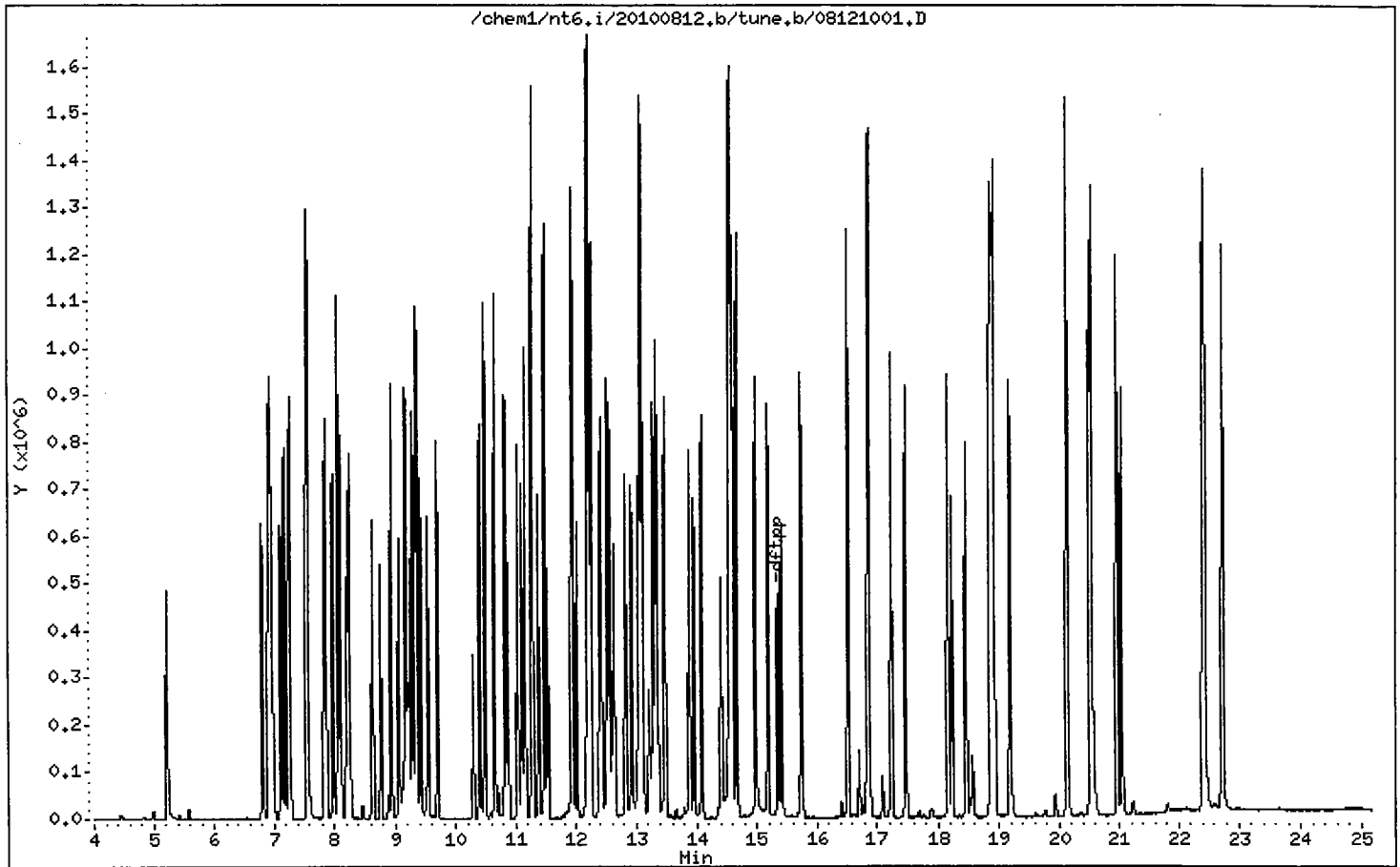
Instrument: nt6.i

Sample Info: DFTPP0812

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25



Analytical Resources Inc.  
ABN by sw846 8270C  
DDT Breakdown Report

Data file: /chem1/nt6.i/20100812.b/ddt.b/08121001.D    ARI ID: CC0812  
Method: /chem1/nt6.i/20100812.b/ddt.b/sw846ddt.m    Misc: 10-  
Analysis Date: 12-AUG-2010 11:42    Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	14.414	107953
Benzidine	16.833	62486
4,4'-DDE	----	----
4,4'-DDD	17.762	4422
4,4'-DDT	18.232	263983

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(0 + 4422) * 100}{(0 + 4422 + 263983)}$$

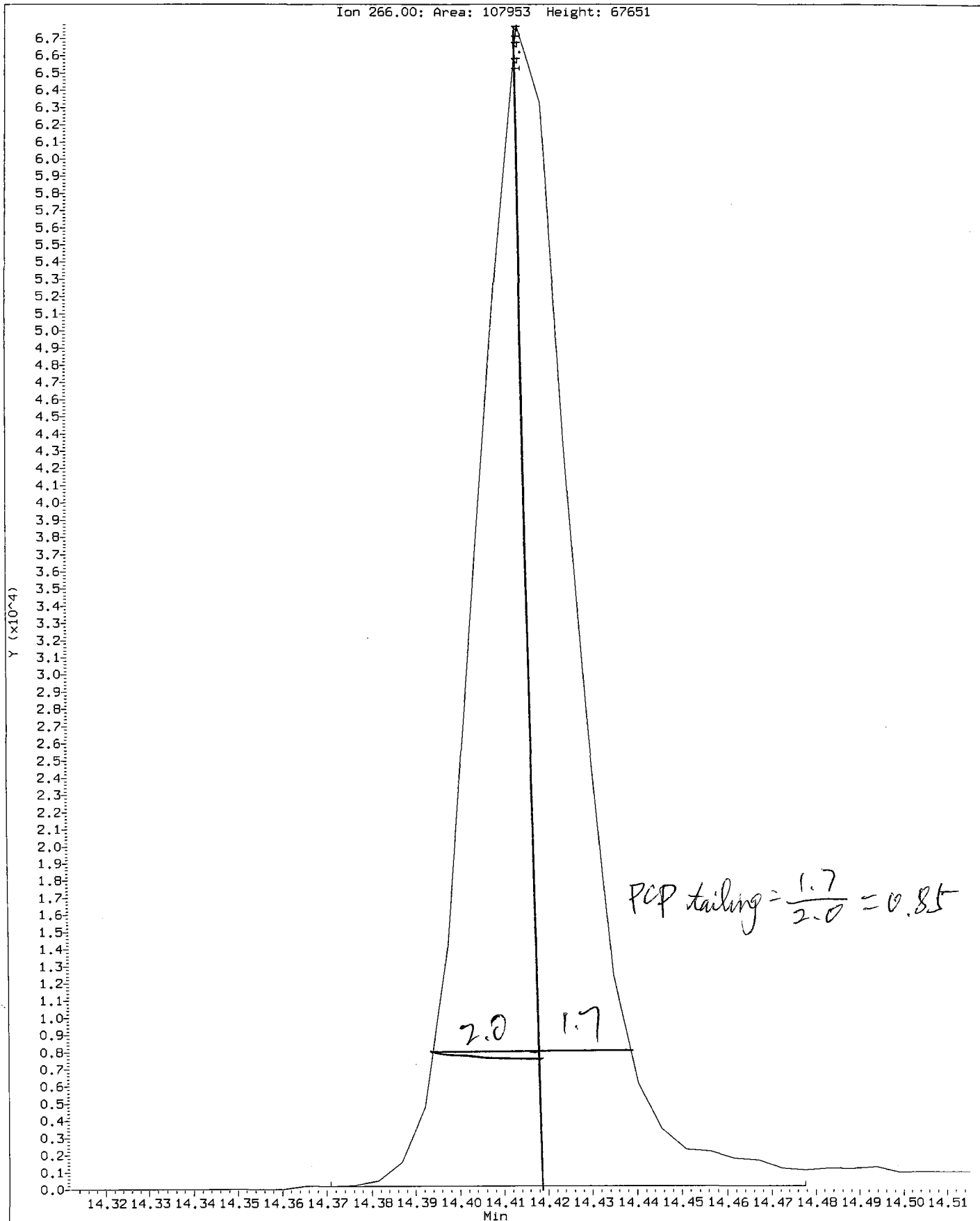
$$\text{DDT Percent Breakdown} = 1.6 \%$$

ok 8/12/10

Data File: /chem1/nt6.1/20100812.b/ddt.b/08121001.D  
Injection Date: 12-AUG-2010 11:42  
Instrument: nt6.i  
Client Sample ID: CC0812

Compound: Pentachlorophenol  
CAS Number: 87-86-5

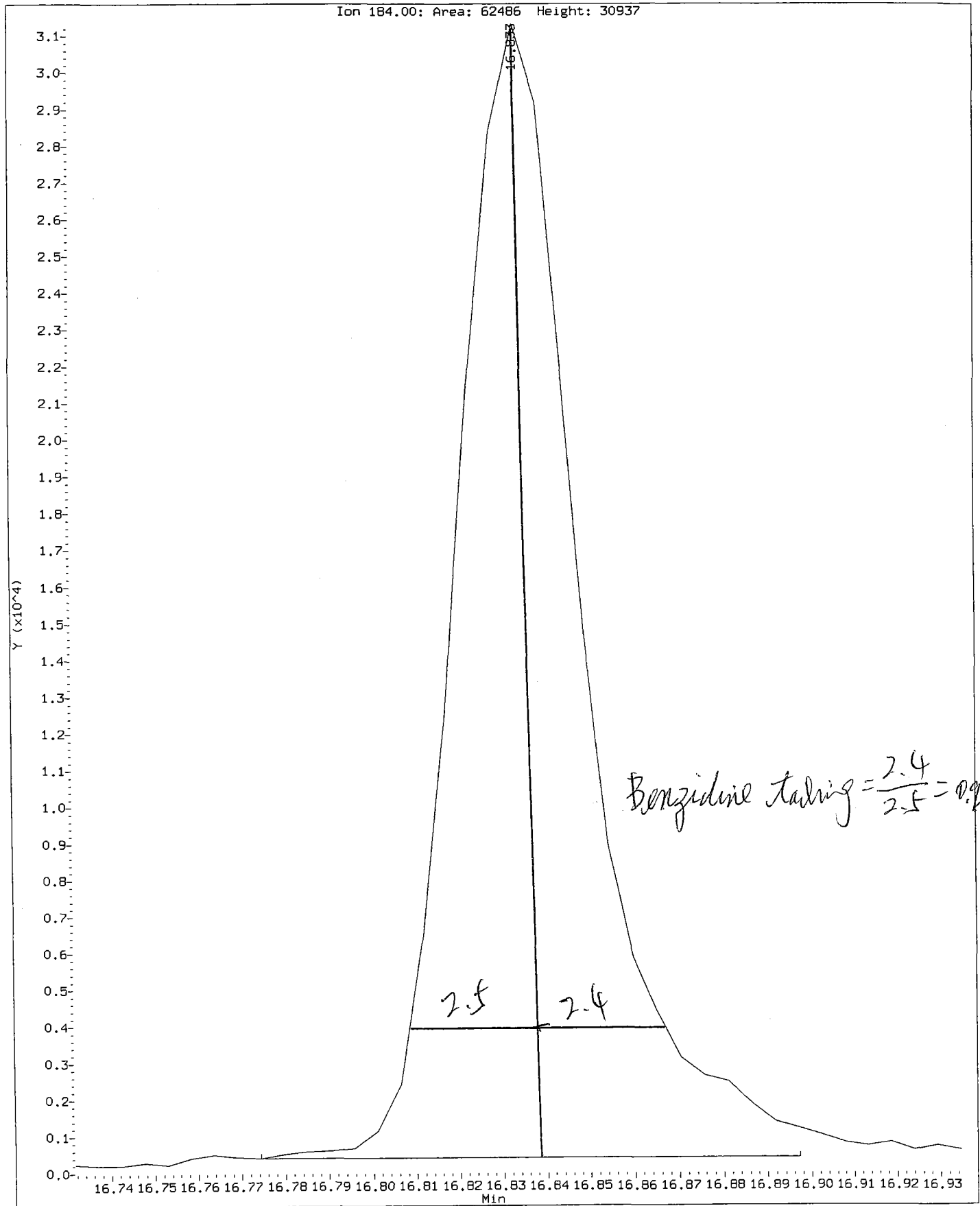
Ion 266.00: Area: 107953 Height: 67651





Data File: /chem1/nt6.i/20100812.b/ddt.b/08121001.D  
Injection Date: 12-AUG-2010 11:42  
Instrument: nt6.i  
Client Sample ID: CC0812

Compound: Benzidine  
CAS Number:



Analytical Resources, Inc.

Semivolatiles Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100812.b/08121002.D  
 Lab Smp Id: RG51MBS1 Client Smp ID: RG51MBS1  
 Inj Date : 12-AUG-2010 12:14 *RG51MBS1*  
 Operator : JZ Inst ID: nt6.i  
 Smp Info : RG51MBS1,  
 Misc Info : 10-18188  
 Comment : 1ul Injection *10-18202*  
 Method : /chem1/nt6.i/20100812.b/SW846072310.m  
 Meth Date : 12-Aug-2010 14:01 jianqing Quant Type: ISTD  
 Cal Date : 23-JUL-2010 18:38 Cal File: 07231007.D  
 Als bottle: 2 QC Sample: BLANK  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Vt / (Ws \* (100 - M) / 100) \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS					
		RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 27 Naphthalene-d8	136	9.318	9.329	(1.000)	654011	20.0000	
28 Naphthalene	128	Compound Not Detected.					
32 2-Methylnaphthalene	141	Compound Not Detected.					
105 1-methylnaphthalene	141	Compound Not Detected.					
\$ 36 2-Fluorobiphenyl	172	11.150	11.156	(0.915)	368602	13.6289	272.6
40 Acenaphthylene	152	Compound Not Detected.					
* 42 Acenaphthene-d10	164	12.191	12.197	(1.000)	386336	20.0000	
44 Acenaphthene	153	Compound Not Detected.					
46 Dibenzofuran	168	Compound Not Detected.					
49 Fluorene	166	Compound Not Detected.					
* 59 Phenanthrene-d10	188	14.563	14.568	(1.000)	624497	20.0000	
60 Phenanthrene	178	Compound Not Detected.					
61 Anthracene	178	Compound Not Detected.					
64 Fluoranthene	202	Compound Not Detected.					
65 Pyrene	202	Compound Not Detected.					

Compounds	QUANT SIG						CONCENTRATIONS		
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
=====	=====		==	=====	=====	=====	=====	=====	
\$ 66 Terphenyl-d14	244	17.238	17.244	(0.913)	453484	18.5757	371.5		
68 Benzo(a)anthracene	228	Compound Not Detected.							
* 69 Chrysene-d12	240	18.884	18.889	(1.000)	689136	20.0000			
71 Chrysene	228	Compound Not Detected.							
187 Total Benzofluoranthenes	252	Compound Not Detected.							
76 Benzo(a)pyrene	252	Compound Not Detected.							
* 77 Perylene-d12	264	21.036	21.042	(1.000)	618317	20.0000			
78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.							
79 Dibenzo(a,h)anthracene	278	Compound Not Detected.							
80 Benzo(g,h,i)perylene	276	Compound Not Detected.							

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt6.i  
 Lab File ID: 08121002.D  
 Lab Smp Id: RG51MBS1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem1/nt6.i/20100812.b/SW846072310.m  
 Misc Info: 10-18188

Calibration Date: 12-AUG-2010  
 Calibration Time: 11:42  
 Client Smp ID: RG51MBS1  
 Level: LOW  
 Sample Type: Solid

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	584137	292068	1168274	654011	11.96
42 Acenaphthene-d10	320442	160221	640884	386336	20.56
59 Phenanthrene-d10	503793	251896	1007586	624497	23.96
69 Chrysene-d12	532343	266172	1064686	689136	29.45
77 Perylene-d12	517269	258634	1034538	618317	19.53

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.33	8.83	9.83	9.32	-0.12
42 Acenaphthene-d10	12.20	11.70	12.70	12.19	-0.05
59 Phenanthrene-d10	14.57	14.07	15.07	14.56	-0.04
69 Chrysene-d12	18.89	18.39	19.39	18.88	-0.03
77 Perylene-d12	21.04	20.54	21.54	21.04	-0.03

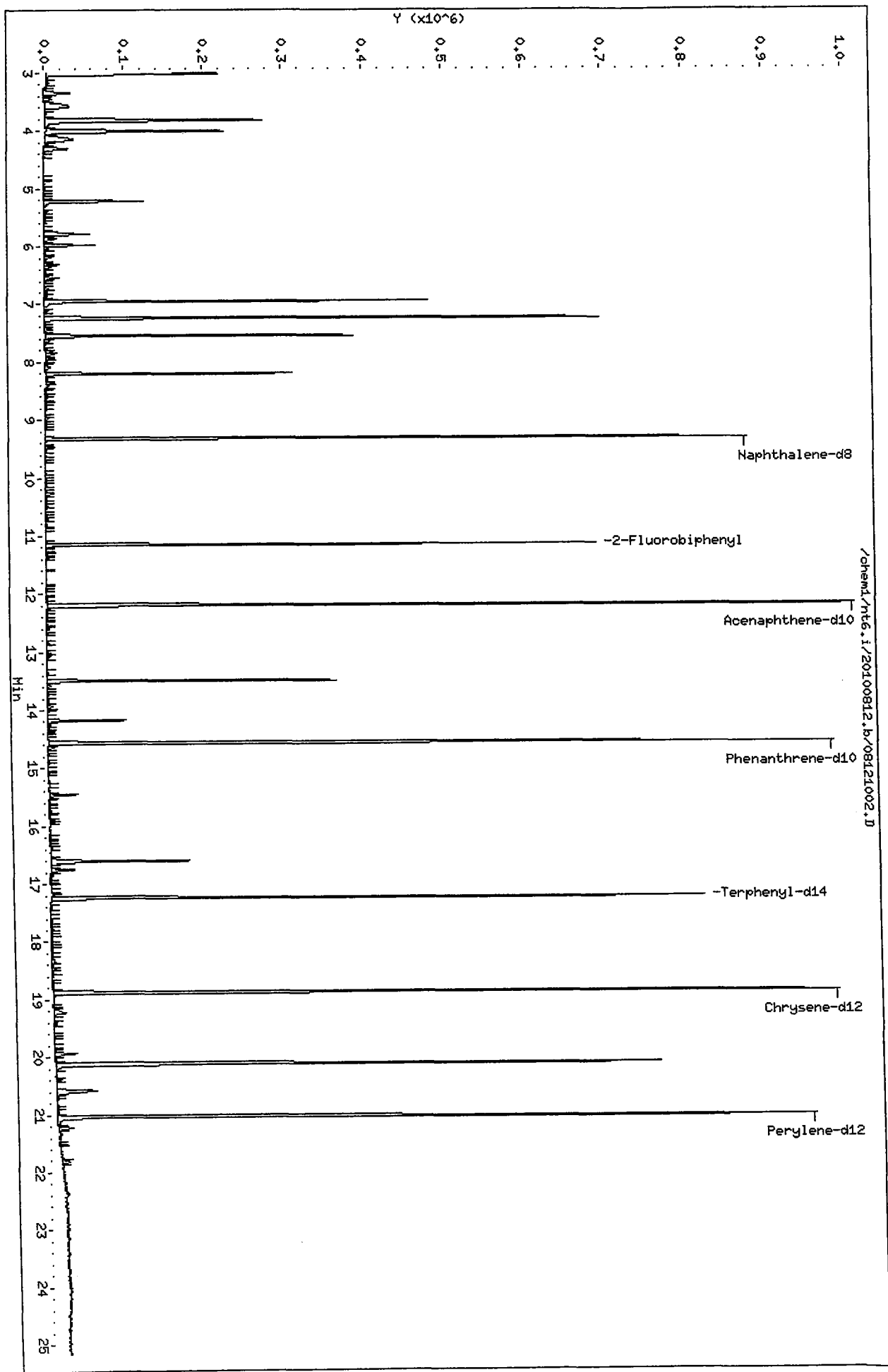
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd/Snider                      Client SDG: RG51  
Sample Matrix: SOLID                              Fraction: SV  
Lab Smp Id: RG51MBS1                              Client Smp ID: RG51MBS1  
Level: LOW    Operator: JZ  
Data Type: MS DATA                                SampleType: BLANK  
SpikeList File: pnaslcss.spk                      Quant Type: ISTD  
Sublist File: pnas.sub  
Method File: /chem1/nt6.i/20100812.b/SW846072310.m  
Misc Info: 10-18188

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	500.0	272.6	54.52	34-100
\$ 66 Terphenyl-d14	500.0	371.5	74.30	35-112



Report Date: 12-Aug-2010 14:04

Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100812.b/08121003.D  
 Lab Smp Id: RG51LCSS1  
 Inj Date : 12-AUG-2010 12:47 *RG51LCSS1* Client Smp ID: RG51LCSS1  
 Operator : JZ Inst ID: nt6.i  
 Smp Info : RG51LCSS1,  
 Misc Info : 10-18188 *10-18188*  
 Comment : 1ul Injection  
 Method : /chem1/nt6.i/20100812.b/SW846072310.m  
 Meth Date : 12-Aug-2010 14:01 jianqing Quant Type: ISTD  
 Cal Date : 23-JUL-2010 18:38 Cal File: 07231007.D  
 Als bottle: 3 QC Sample: LCS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Vt/(Ws \* (100 - M)/100) \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 27 Naphthalene-d8	136	9.325	9.329	(1.000)	659808	20.0000	
28 Naphthalene	128	9.351	9.356	(1.003)	493262	13.2271	264.5
32 2-Methylnaphthalene	141	10.489	10.493	(1.125)	297211	14.5223	290.4
105 1-methylnaphthalene	141	10.655	10.659	(1.143)	297531	14.0745	281.5
\$ 36 2-Fluorobiphenyl	172	11.151	11.156	(0.915)	426471	16.2000	324.0
40 Acenaphthylene	152	11.937	11.941	(0.979)	571973	14.7791	295.6
* 42 Acenaphthene-d10	164	12.193	12.197	(1.000)	376047	20.0000	
44 Acenaphthene	153	12.246	12.250	(1.004)	335803	13.8941	277.9
46 Dibenzofuran	168	12.508	12.512	(1.026)	514846	16.0374	320.7
49 Fluorene	166	13.064	13.068	(1.071)	435451	15.9207	318.4
* 59 Phenanthrene-d10	188	14.564	14.568	(1.000)	616996	20.0000	
60 Phenanthrene	178	14.602	14.606	(1.003)	625038	16.3088	326.2
61 Anthracene	178	14.677	14.681	(1.008)	634723	16.0319	320.6
64 Fluoranthene	202	16.541	16.539	(1.136)	775211	18.6674	373.3
65 Pyrene	202	16.888	16.892	(0.894)	759122	19.0722	381.4

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	=====	==	=====	=====	=====	=====	=====
\$ 66 Terphenyl-d14	244	17.246	17.244	(0.913)	544259	23.2473	464.9
68 Benzo (a) anthracene	228	18.864	18.863	(0.999)	745858	19.5231	390.5
* 69 Chrysene-d12	240	18.885	18.889	(1.000)	660878	20.0000	
71 Chrysene	228	18.923	18.927	(1.002)	685246	19.1622	383.2
187 Total Benzofluoranthenes	252	20.552	20.556	(0.977)	1512520	37.6229	752.5
76 Benzo (a) pyrene	252	20.963	20.962	(0.996)	662784	16.8344	336.7
* 77 Perylene-d12	264	21.043	21.042	(1.000)	624348	20.0000	
78 Indeno (1,2,3-cd) pyrene	276	22.416	22.414	(1.065)	925807	17.5777	351.6
79 Dibenzo (a,h) anthracene	278	22.442	22.441	(1.066)	719851	17.7857	355.7
80 Benzo (g,h,i) perylene	276	22.742	22.740	(1.081)	808181	17.0103	340.2



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt6.i  
 Lab File ID: 08121003.D  
 Lab Smp Id: RG51LCSS1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem1/nt6.i/20100812.b/SW846072310.m  
 Misc Info: 10-18188

Calibration Date: 12-AUG-2010  
 Calibration Time: 11:42  
 Client Smp ID: RG51LCSS1  
 Level: LOW  
 Sample Type: Solid

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	584137	292068	1168274	659808	12.95
42 Acenaphthene-d10	320442	160221	640884	376047	17.35
59 Phenanthrene-d10	503793	251896	1007586	616996	22.47
69 Chrysene-d12	532343	266172	1064686	660878	24.15
77 Perylene-d12	517269	258634	1034538	624348	20.70

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.33	8.83	9.83	9.32	-0.04
42 Acenaphthene-d10	12.20	11.70	12.70	12.19	-0.03
59 Phenanthrene-d10	14.57	14.07	15.07	14.56	-0.03
69 Chrysene-d12	18.89	18.39	19.39	18.89	-0.02
77 Perylene-d12	21.04	20.54	21.54	21.04	0.01

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd/Snider  
 Sample Matrix: SOLID  
 Lab Smp Id: RG51LCSS1  
 Level: LOW  
 Data Type: MS DATA  
 SpikeList File: pnaslcass.spk  
 Sublist File: pnas.sub  
 Method File: /chem1/nt6.i/20100812.b/SW846072310.m  
 Misc Info: 10-18188

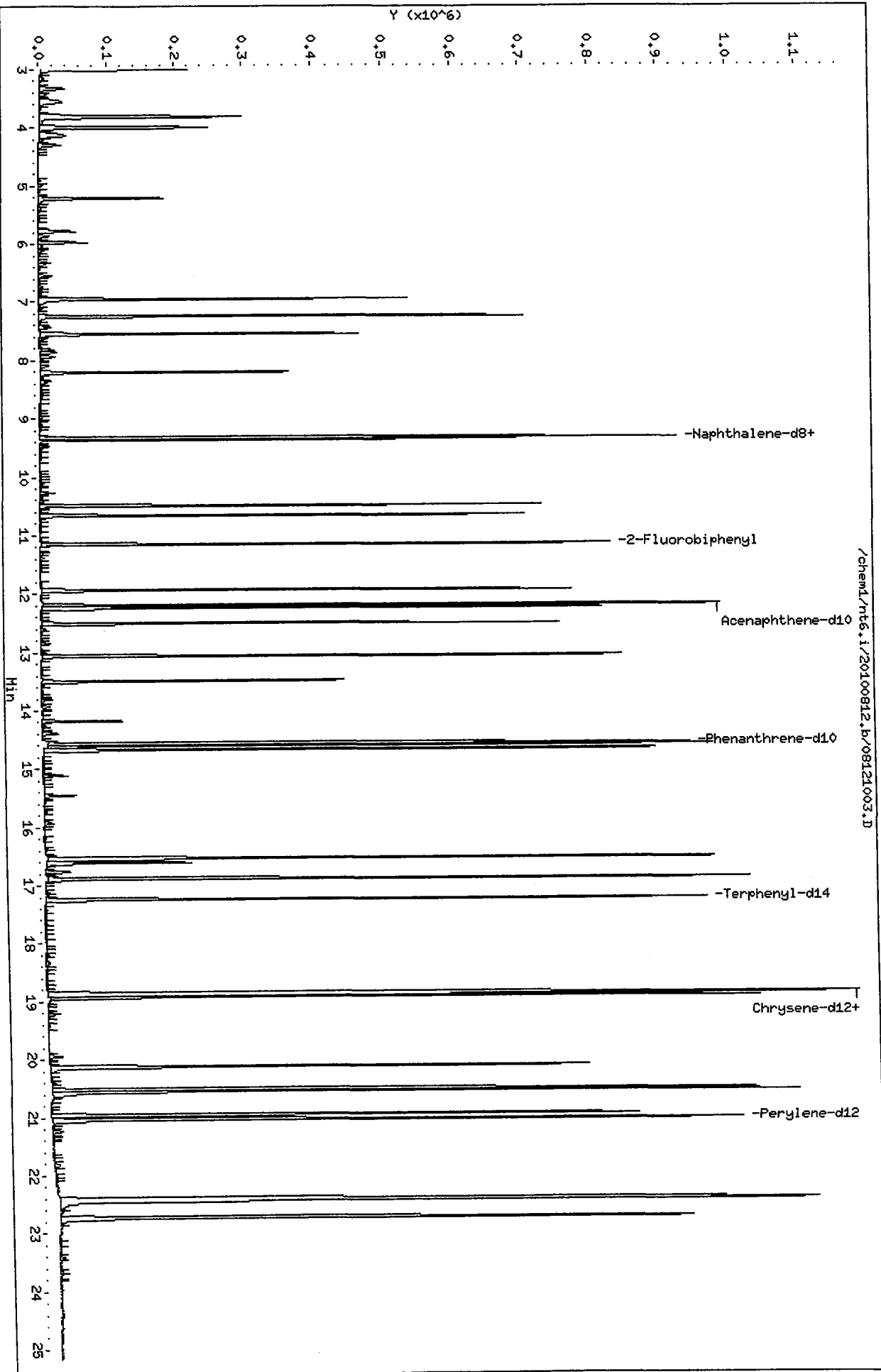
Client SDG: RG51  
 Fraction: SV  
 Client Smp ID: RG51LCSS1  
 Operator: JZ  
 SampleType: LCS  
 Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
28 Naphthalene	500.0	264.5	52.91	37-100
32 2-Methylnaphthalen	500.0	290.4	58.09	43-101
105 1-methylnaphthalen	500.0	281.5	56.30	39-100
40 Acenaphthylene	500.0	295.6	59.12	44-100
44 Acenaphthene	500.0	277.9	55.58	41-100
46 Dibenzofuran	500.0	320.7	64.15	44-100
49 Fluorene	500.0	318.4	63.68	49-100
60 Phenanthrene	500.0	326.2	65.24	48-100
61 Anthracene	500.0	320.6	64.13	50-100
64 Fluoranthene	500.0	373.3	74.67	54-100
65 Pyrene	500.0	381.4	76.29	41-105
68 Benzo (a) anthracene	500.0	390.5	78.09	49-100
71 Chrysene	500.0	383.2	76.65	50-100
187 Total Benzofluoran	1000	752.5	75.25	30-160
76 Benzo (a) pyrene	500.0	336.7	67.34	50-100
78 Indeno (1,2,3-cd) py	500.0	351.6	70.31	33-101
79 Dibenzo (a,h) anthra	500.0	355.7	71.14	37-104
80 Benzo (g,h,i) peryle	500.0	340.2	68.04	33-107

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	500.0	324.0	64.80	34-100
\$ 66 Terphenyl-d14	500.0	464.9	92.99	35-112

Data File: /chem1/nt6.i/20100812.b/08121003.D  
Date : 12-AUG-2010 12:47  
Client ID: RG5ILLSS1  
Sample Info: RG5ILLSS1,  
Volume Injected (uL): 1.0  
Column phase: ZB-Smsi

Instrument: nt6.i  
Operator: JZ  
Column diameter: 0.32



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100812.b/08121012.D  
 Lab Smp Id: RG54A Client Smp ID: PSB14-0-.5-072810  
 Inj Date : 12-AUG-2010 17:41  
 Operator : JZ Inst ID: nt6.i  
 Smp Info : RG54A  
 Misc Info : 10-18202  
 Comment : 1ul Injection  
 Method : /chem1/nt6.i/20100812.b/SW846072310.m  
 Meth Date : 13-Aug-2010 14:20 jianqing Quant Type: ISTD  
 Cal Date : 23-JUL-2010 18:38 Cal File: 07231007.D  
 Als bottle: 12  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*Handwritten:* 08/13/10

Concentration Formula:  $Amt * DF * Vt / (Ws * (100 - M) / 100) * CpndVariable$

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	28.80000	Weight of sample extracted (g)
M	7.60000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 27 Naphthalene-d8	136		9.321	9.329	(1.000)	646802	20.0000	
28 Naphthalene	128		Compound Not Detected.					
32 2-Methylnaphthalene	141		Compound Not Detected.					
105 1-methylnaphthalene	141		Compound Not Detected.					
\$ 36 2-Fluorobiphenyl	172		11.153	11.156	(0.915)	427792	16.4153	308.4
40 Acenaphthylene	152		Compound Not Detected.					
* 42 Acenaphthene-d10	164		12.195	12.197	(1.000)	372263	20.0000	
44 Acenaphthene	153		Compound Not Detected.					
46 Dibenzofuran	168		Compound Not Detected.					
49 Fluorene	166		Compound Not Detected.					
* 59 Phenanthrene-d10	188		14.566	14.568	(1.000)	604870	20.0000	
60 Phenanthrene	178		Compound Not Detected.					
61 Anthracene	178		Compound Not Detected.					
64 Fluoranthene	202		Compound Not Detected.					
65 Pyrene	202		Compound Not Detected.					

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	=====	==	=====	=====	=====	=====	=====
\$ 66 Terphenyl-d14	244	17.247	17.244	(0.913)	142796	5.08864	95.61 (R)
68 Benzo(a)anthracene	228	Compound Not Detected.					
* 69 Chrysene-d12	240	18.893	18.889	(1.000)	792141	20.0000	
71 Chrysene	228	18.925	18.927	(1.002)	23153	0.54016	10.15
187 Total Benzofluoranthenes	252	Compound Not Detected.					
76 Benzo(a)pyrene	252	Compound Not Detected.					
* 77 Perylene-d12	264	21.066	21.042	(1.000)	779443	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80 Benzo(g,h,i)perylene	276	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt6.i	Calibration Date: 12-AUG-2010
Lab File ID: 08121012.D	Calibration Time: 11:42
Lab Smp Id: RG54A	Client Smp ID: PSB14-0-.5-07281
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Soil
Operator: JZ	
Method File: /chem1/nt6.i/20100812.b/SW846072310.m	
Misc Info: 10-18202	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	584137	292068	1168274	646802	10.73
42 Acenaphthene-d10	320442	160221	640884	372263	16.17
59 Phenanthrene-d10	503793	251896	1007586	604870	20.06
69 Chrysene-d12	532343	266172	1064686	792141	48.80
77 Perylene-d12	517269	258634	1034538	779443	50.68

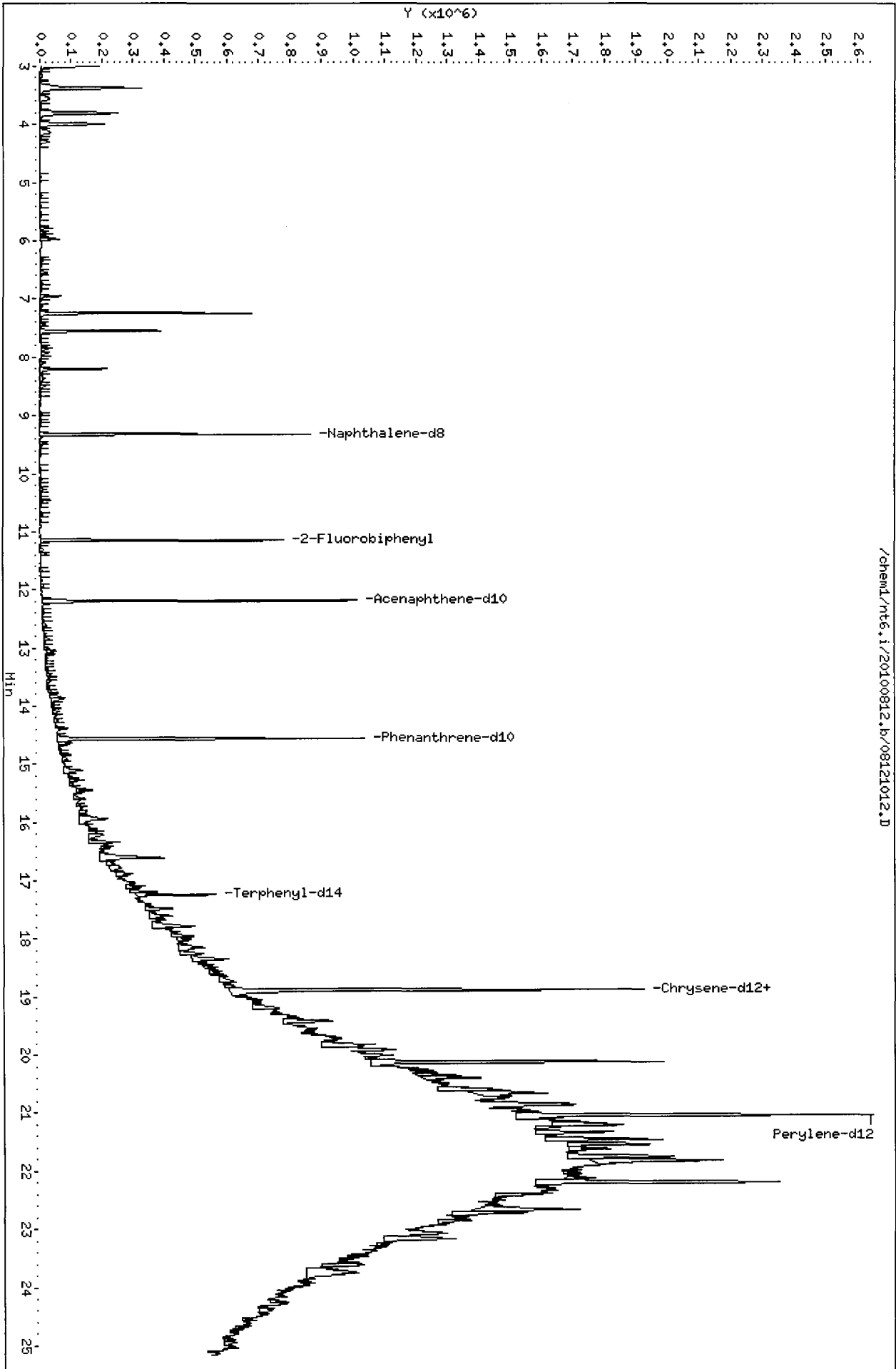
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.33	8.83	9.83	9.32	-0.08
42 Acenaphthene-d10	12.20	11.70	12.70	12.19	-0.02
59 Phenanthrene-d10	14.57	14.07	15.07	14.57	-0.02
69 Chrysene-d12	18.89	18.39	19.39	18.89	0.02
77 Perylene-d12	21.04	20.54	21.54	21.07	0.12

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



Data File: /chem1/nt6.i/20100812.b/08121012.D  
Date : 12-AUG-2010 17:41  
Client ID: PSB14-0-.5-072810  
Sample Info: RG54A  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt6.i  
Operator: JZ  
Column diameter: 0.32





Date : 12-AUG-2010 17:41

Client ID: PSB14-0-5-072810

Instrument: nt6.i

Sample Info: RG54A

Volume Injected (uL): 1.0

Operator: JZ

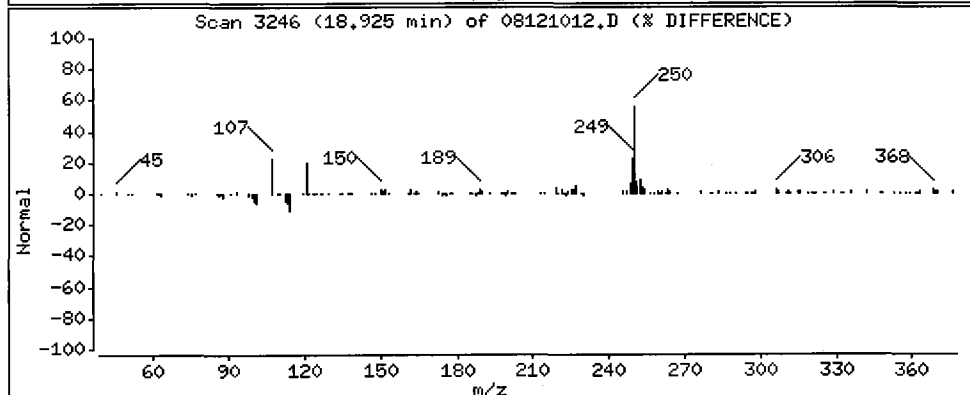
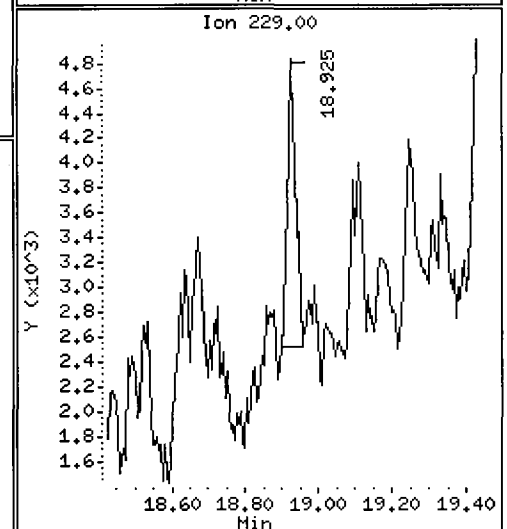
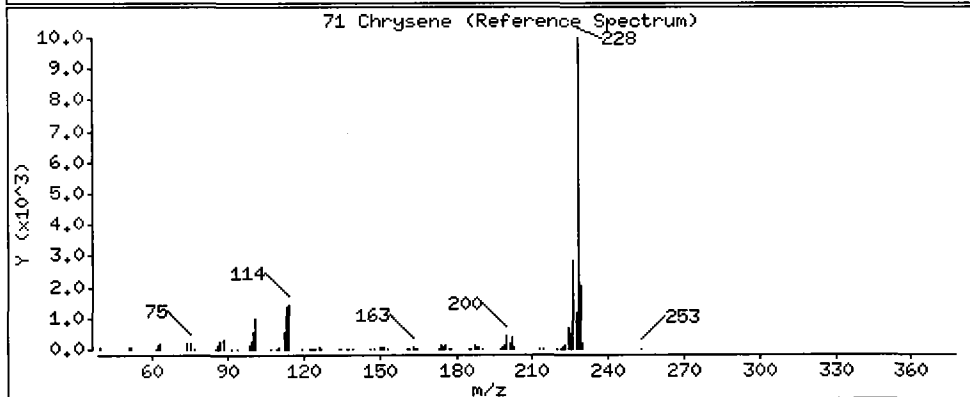
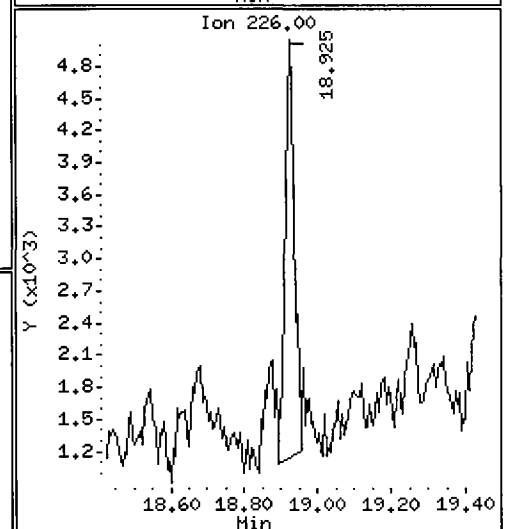
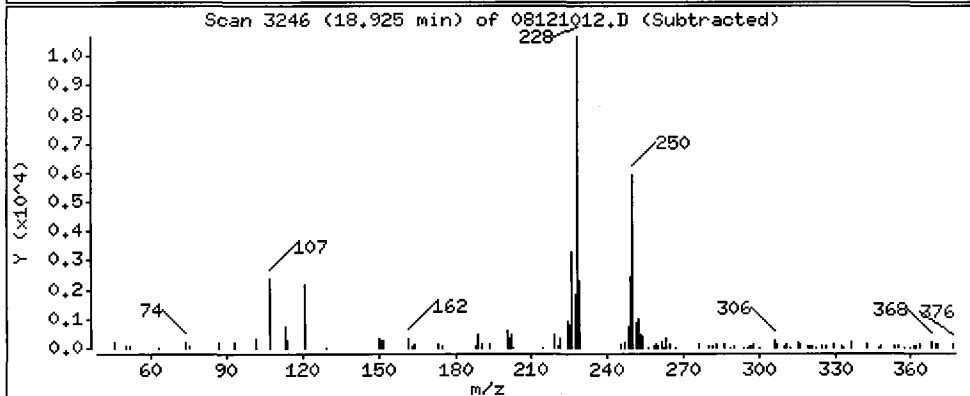
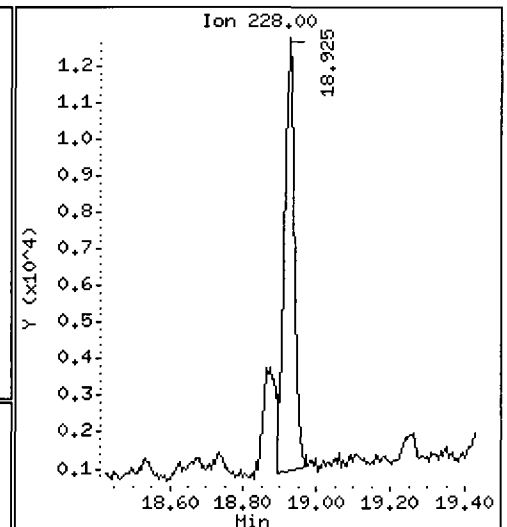
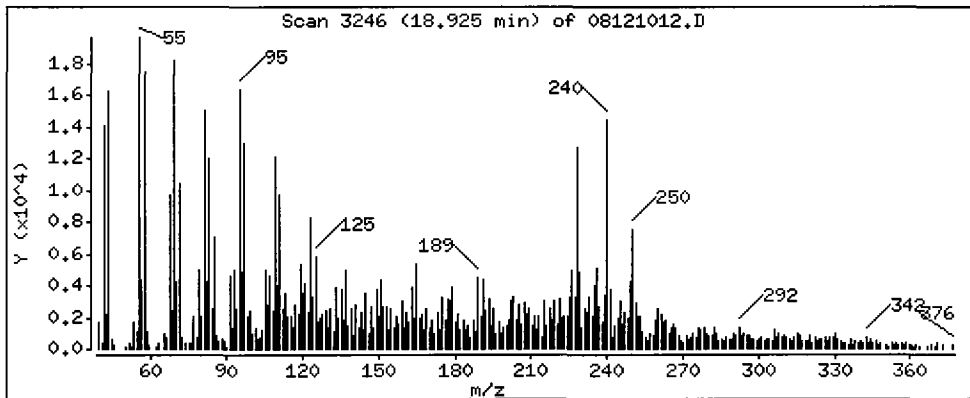
Column phase: ZB-5msi

Column diameter: 0.32

*JZ*

71 Chrysene

Concentration: 10,15 ug/kg



Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100812.b/08121013.D  
 Lab Smp Id: RG54B Client Smp ID: PSB14-1.5-2.0-07281  
 Inj Date : 12-AUG-2010 18:14  
 Operator : JZ Inst ID: nt6.i  
 Smp Info : RG54B  
 Misc Info : 10-18203  
 Comment : 1ul Injection  
 Method : /chem1/nt6.i/20100812.b/SW846072310.m  
 Meth Date : 13-Aug-2010 14:20 jianqing Quant Type: ISTD  
 Cal Date : 23-JUL-2010 18:38 Cal File: 07231007.D  
 Als bottle: 13  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*Q 08/13/10*

Concentration Formula:  $Amt * DF * Vt / (Ws * (100 - M) / 100) * CpndVariable$

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	28.10000	Weight of sample extracted (g)
M	8.50000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 27 Naphthalene-d8	136	9.321	9.329	(1.000)	684688	20.0000		
28 Naphthalene	128				Compound Not Detected.			
32 2-Methylnaphthalene	141				Compound Not Detected.			
105 1-methylnaphthalene	141				Compound Not Detected.			
\$ 36 2-Fluorobiphenyl	172	11.153	11.156	(0.914)	418691	15.1516	294.6	
40 Acenaphthylene	152				Compound Not Detected.			
* 42 Acenaphthene-d10	164	12.200	12.197	(1.000)	394732	20.0000		
44 Acenaphthene	153				Compound Not Detected.			
46 Dibenzofuran	168				Compound Not Detected.			
49 Fluorene	166				Compound Not Detected.			
* 59 Phenanthrene-d10	188	14.566	14.568	(1.000)	650726	20.0000		
60 Phenanthrene	178				Compound Not Detected.			
61 Anthracene	178				Compound Not Detected.			
64 Fluoranthene	202				Compound Not Detected.			
65 Pyrene	202				Compound Not Detected.			

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/kg)
\$ 66 Terphenyl-d14	244	17.242	17.244	(0.913)	271511	9.68765	188.4
68 Benzo(a)anthracene	228	Compound Not Detected.					
* 69 Chrysene-d12	240	18.887	18.889	(1.000)	791148	20.0000	
71 Chrysene	228	Compound Not Detected.					
187 Total Benzofluoranthenes	252	Compound Not Detected.					
76 Benzo(a)pyrene	252	Compound Not Detected.					
* 77 Perylene-d12	264	21.045	21.042	(1.000)	754770	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80 Benzo(g,h,i)perylene	276	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt6.i  
 Lab File ID: 08121013.D  
 Lab Smp Id: RG54B  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem1/nt6.i/20100812.b/SW846072310.m  
 Misc Info: 10-18203

Calibration Date: 12-AUG-2010  
 Calibration Time: 11:42  
 Client Smp ID: PSB14-1.5-2.0-07  
 Level: LOW  
 Sample Type: Soil

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	584137	292068	1168274	684688	17.21
42 Acenaphthene-d10	320442	160221	640884	394732	23.18
59 Phenanthrene-d10	503793	251896	1007586	650726	29.17
69 Chrysene-d12	532343	266172	1064686	791148	48.62
77 Perylene-d12	517269	258634	1034538	754770	45.91

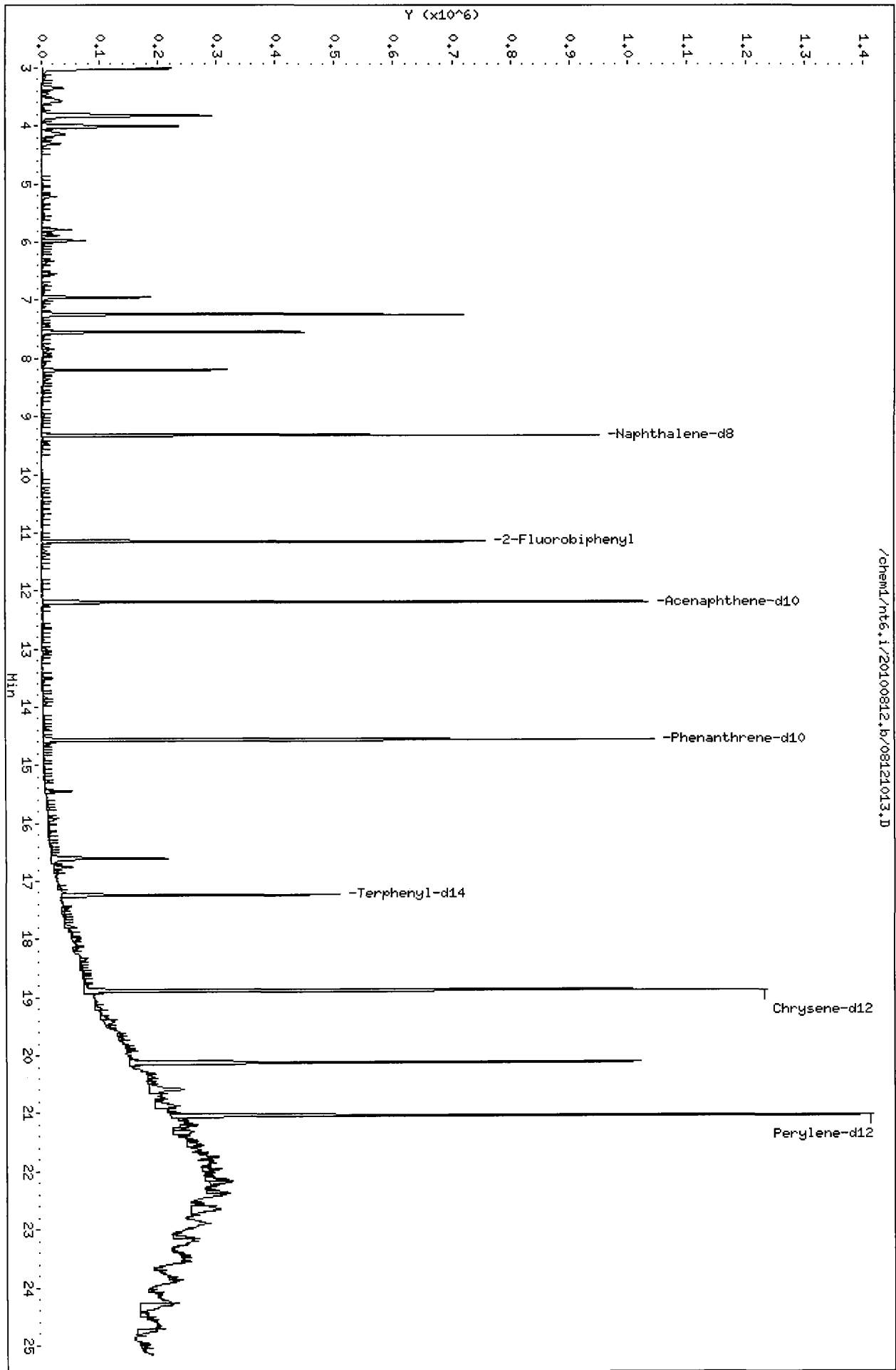
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.33	8.83	9.83	9.32	-0.08
42 Acenaphthene-d10	12.20	11.70	12.70	12.20	0.03
59 Phenanthrene-d10	14.57	14.07	15.07	14.57	-0.01
69 Chrysene-d12	18.89	18.39	19.39	18.89	-0.01
77 Perylene-d12	21.04	20.54	21.54	21.05	0.02

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



Data File: /chem1/nt6.i/20100812.b/08121013.D  
Date: 12-AUG-2010 18:14  
Client ID: PSB14-1.5-2.0-07281  
Sample Info: RG54B  
Volume Injected (uL): 1.0  
Column phase: ZB-5ms1

Instrument: nt6.i  
Operator: JZ  
Column diameter: 0.32



Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100812.b/08121014.D  
 Lab Smp Id: RG54C Client Smp ID: PSB14-2-4-072810  
 Inj Date : 12-AUG-2010 18:46  
 Operator : JZ Inst ID: nt6.i  
 Smp Info : RG54C  
 Misc Info : 10-18204  
 Comment : 1ul Injection  
 Method : /chem1/nt6.i/20100812.b/SW846072310.m  
 Meth Date : 13-Aug-2010 14:20 jianqing Quant Type: ISTD  
 Cal Date : 23-JUL-2010 18:38 Cal File: 07231007.D  
 Als bottle: 14  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*B 08/13/10*

Concentration Formula:  $Amt * DF * Vt / (Ws * (100 - M) / 100) * CpndVariable$

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	28.70000	Weight of sample extracted (g)
M	9.00000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS						
		RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
* 27 Naphthalene-d8	136	9.321	9.329	(1.000)	697008	20.0000		
28 Naphthalene	128	Compound Not Detected.						
32 2-Methylnaphthalene	141	Compound Not Detected.						
105 1-methylnaphthalene	141	Compound Not Detected.						
\$ 36 2-Fluorobiphenyl	172	11.153	11.156	(0.915)	456893	16.0940	308.1	
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	12.195	12.197	(1.000)	405526	20.0000		
44 Acenaphthene	153	Compound Not Detected.						
46 Dibenzofuran	168	Compound Not Detected.						
49 Fluorene	166	Compound Not Detected.						
* 59 Phenanthrene-d10	188	14.566	14.568	(1.000)	659514	20.0000		
60 Phenanthrene	178	Compound Not Detected.						
61 Anthracene	178	Compound Not Detected.						
64 Fluoranthene	202	Compound Not Detected.						
65 Pyrene	202	Compound Not Detected.						

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	=====	==	=====	=====	=====	=====	=====
\$ 66 Terphenyl-d14	244	17.247	17.244	(0.913)	546734	19.1608	366.8
68 Benzo(a)anthracene	228	Compound Not Detected.					
* 69 Chrysene-d12	240	18.892	18.889	(1.000)	805472	20.0000	
71 Chrysene	228	Compound Not Detected.					
187 Total Benzofluoranthenes	252	Compound Not Detected.					
76 Benzo(a)pyrene	252	Compound Not Detected.					
* 77 Perylene-d12	264	21.050	21.042	(1.000)	768749	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80 Benzo(g,h,i)perylene	276	Compound Not Detected.					



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt6.i	Calibration Date: 12-AUG-2010
Lab File ID: 08121014.D	Calibration Time: 11:42
Lab Smp Id: RG54C	Client Smp ID: PSB14-2-4-072810
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Soil
Operator: JZ	
Method File: /chem1/nt6.i/20100812.b/SW846072310.m	
Misc Info: 10-18204	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	584137	292068	1168274	697008	19.32
42 Acenaphthene-d10	320442	160221	640884	405526	26.55
59 Phenanthrene-d10	503793	251896	1007586	659514	30.91
69 Chrysene-d12	532343	266172	1064686	805472	51.31
77 Perylene-d12	517269	258634	1034538	768749	48.62

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.33	8.83	9.83	9.32	-0.08
42 Acenaphthene-d10	12.20	11.70	12.70	12.19	-0.02
59 Phenanthrene-d10	14.57	14.07	15.07	14.57	-0.02
69 Chrysene-d12	18.89	18.39	19.39	18.89	0.02
77 Perylene-d12	21.04	20.54	21.54	21.05	0.04

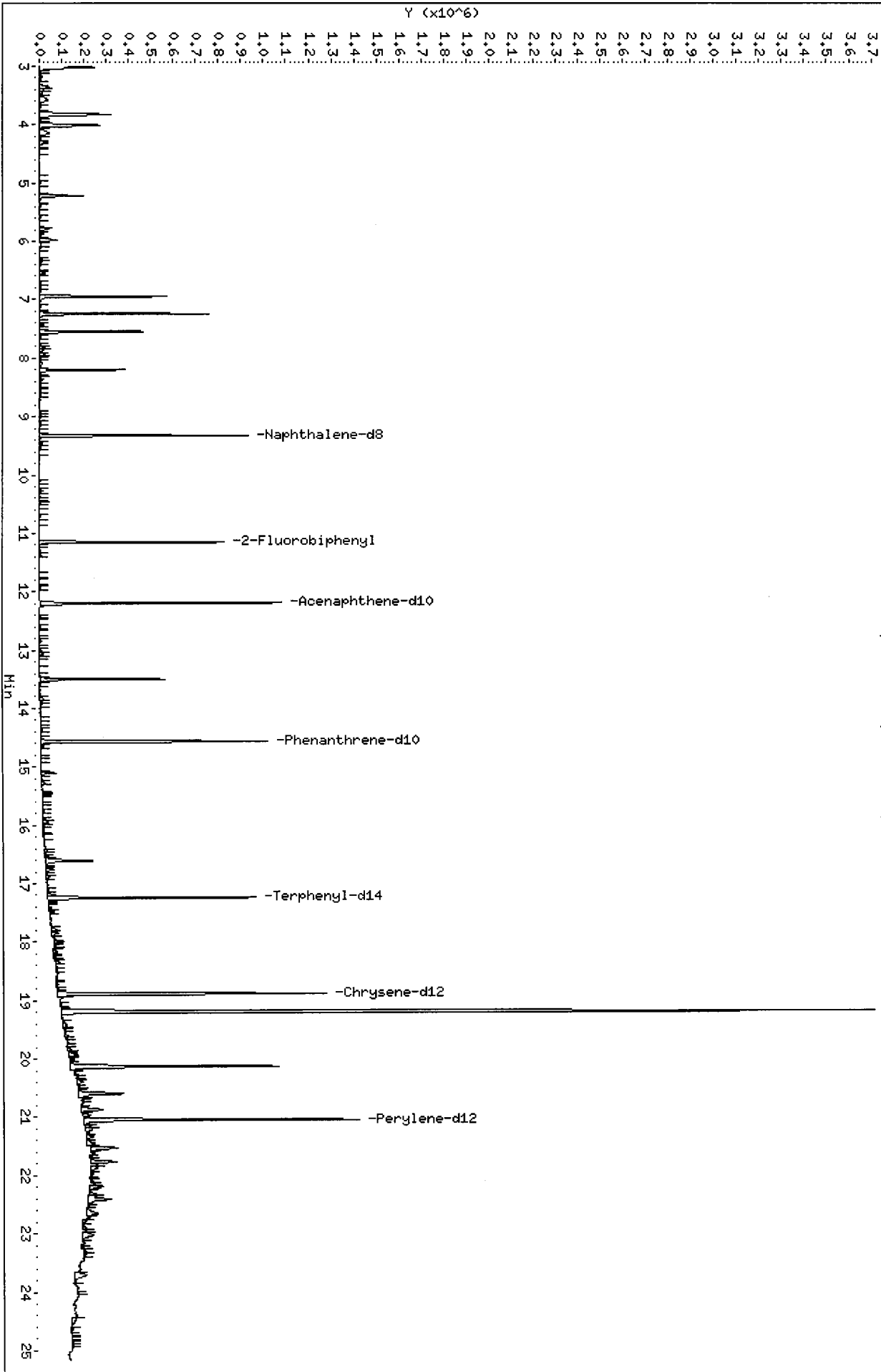
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: /chem1/nt6.i/20100812.b/08121014.D  
Date: 12-AUG-2010 18:46  
Client ID: PSB14-2-4-072810  
Sample Info: RG54C  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt6.i  
Operator: JZ  
Column diameter: 0.32

/chem1/nt6.i/20100812.b/08121014.D



Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100812.b/08121015.D  
 Lab Smp Id: RG54E Client Smp ID: PSB14-7-9-072810  
 Inj Date : 12-AUG-2010 19:19  
 Operator : JZ Inst ID: nt6.i  
 Smp Info : RG54E  
 Misc Info : 10-18206  
 Comment : 1ul Injection  
 Method : /chem1/nt6.i/20100812.b/SW846072310.m  
 Meth Date : 13-Aug-2010 14:20 jianqing Quant Type: ISTD  
 Cal Date : 23-JUL-2010 18:38 Cal File: 07231007.D  
 Als bottle: 15  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*B 08/13/10*

Concentration Formula:  $Amt * DF * Vt / (Ws * (100 - M) / 100) * CpndVariable$

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	29.30000	Weight of sample extracted (g)
M	10.90000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 27 Naphthalene-d8	136	9.327	9.329	(1.000)	688034	20.0000	
28 Naphthalene	128				Compound Not Detected.		
32 2-Methylnaphthalene	141				Compound Not Detected.		
105 1-methylnaphthalene	141				Compound Not Detected.		
\$ 36 2-Fluorobiphenyl	172	11.154	11.156	(0.915)	440112	15.4499	295.9
40 Acenaphthylene	152				Compound Not Detected.		
* 42 Acenaphthene-d10	164	12.195	12.197	(1.000)	406917	20.0000	
44 Acenaphthene	153				Compound Not Detected.		
46 Dibenzofuran	168				Compound Not Detected.		
49 Fluorene	166				Compound Not Detected.		
* 59 Phenanthrene-d10	188	14.567	14.568	(1.000)	657807	20.0000	
60 Phenanthrene	178				Compound Not Detected.		
61 Anthracene	178				Compound Not Detected.		
64 Fluoranthene	202				Compound Not Detected.		
65 Pyrene	202				Compound Not Detected.		

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/kg)
\$ 66 Terphenyl-d14	244	17.248	17.244	(0.913)	219351	7.59335	145.4 (R)
68 Benzo(a)anthracene	228	Compound Not Detected.					
* 69 Chrysene-d12	240	18.888	18.889	(1.000)	815444	20.0000	
71 Chrysene	228	Compound Not Detected.					
187 Total Benzofluoranthenes	252	Compound Not Detected.					
76 Benzo(a)pyrene	252	Compound Not Detected.					
* 77 Perylene-d12	264	21.056	21.042	(1.000)	808589	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80 Benzo(g,h,i)perylene	276	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt6.i  
 Lab File ID: 08121015.D  
 Lab Smp Id: RG54E  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem1/nt6.i/20100812.b/SW846072310.m  
 Misc Info: 10-18206

Calibration Date: 12-AUG-2010  
 Calibration Time: 11:42  
 Client Smp ID: PSB14-7-9-072810  
 Level: LOW  
 Sample Type: Soil

Test Mode:  
 Use Initial Calibration Level 4.

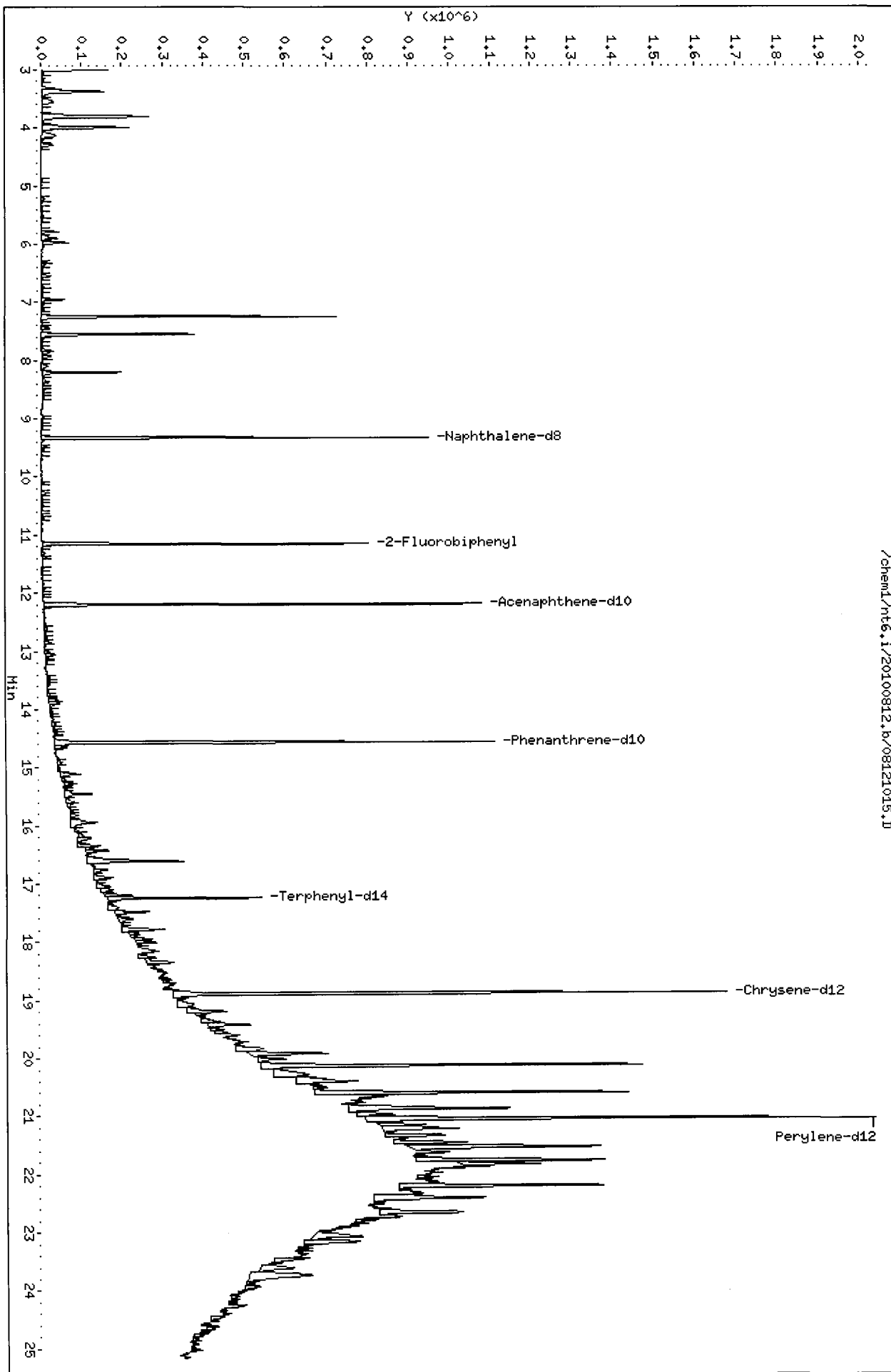
COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	584137	292068	1168274	688034	17.79
42 Acenaphthene-d10	320442	160221	640884	406917	26.99
59 Phenanthrene-d10	503793	251896	1007586	657807	30.57
69 Chrysene-d12	532343	266172	1064686	815444	53.18
77 Perylene-d12	517269	258634	1034538	808589	56.32

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.33	8.83	9.83	9.33	-0.02
42 Acenaphthene-d10	12.20	11.70	12.70	12.20	-0.01
59 Phenanthrene-d10	14.57	14.07	15.07	14.57	-0.01
69 Chrysene-d12	18.89	18.39	19.39	18.89	-0.01
77 Perylene-d12	21.04	20.54	21.54	21.06	0.07

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



/chem1/nt6.i/20100812.b/08121015.D





Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100812.b/08121016.D  
 Lab Smp Id: RG54F Client Smp ID: PSB14-12-14-072810  
 Inj Date : 12-AUG-2010 19:51  
 Operator : JZ Inst ID: nt6.i  
 Smp Info : RG54F  
 Misc Info : 10-18207  
 Comment : 1ul Injection  
 Method : /chem1/nt6.i/20100812.b/SW846072310.m  
 Meth Date : 13-Aug-2010 14:20 jianqing Quant Type: ISTD  
 Cal Date : 23-JUL-2010 18:38 Cal File: 07231007.D  
 Als bottle: 16  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*D 08/13/10*

Concentration Formula:  $Amt * DF * Vt / (Ws * (100 - M) / 100) * CpndVariable$

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	29.10000	Weight of sample extracted (g)
M	11.00000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ug/mL)	FINAL (ug/kg)	
* 27 Naphthalene-d8	136	9.322	9.329	(1.000)	680198	20.0000		
28 Naphthalene	128	Compound Not Detected.						
32 2-Methylnaphthalene	141	Compound Not Detected.						
105 1-methylnaphthalene	141	Compound Not Detected.						
\$ 36 2-Fluorobiphenyl	172	11.154	11.156	(0.914)	424875	15.1763	293.0	
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	12.201	12.197	(1.000)	399910	20.0000		
44 Acenaphthene	153	Compound Not Detected.						
46 Dibenzofuran	168	Compound Not Detected.						
49 Fluorene	166	Compound Not Detected.						
* 59 Phenanthrene-d10	188	14.567	14.568	(1.000)	646609	20.0000		
60 Phenanthrene	178	Compound Not Detected.						
61 Anthracene	178	Compound Not Detected.						
64 Fluoranthene	202	Compound Not Detected.						
65 Pyrene	202	Compound Not Detected.						

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/kg)
\$ 66 Terphenyl-d14	244	17.248	17.244	(0.913)	553986	19.4933	376.3
68 Benzo(a)anthracene	228	Compound Not Detected.					
* 69 Chrysene-d12	240	18.888	18.889	(1.000)	802236	20.0000	
71 Chrysene	228	Compound Not Detected.					
187 Total Benzofluoranthenes	252	Compound Not Detected.					
76 Benzo(a)pyrene	252	Compound Not Detected.					
* 77 Perylene-d12	264	21.051	21.042	(1.000)	765842	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80 Benzo(g,h,i)perylene	276	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt6.i  
 Lab File ID: 08121016.D  
 Lab Smp Id: RG54F  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem1/nt6.i/20100812.b/SW846072310.m  
 Misc Info: 10-18207

Calibration Date: 12-AUG-2010  
 Calibration Time: 11:42  
 Client Smp ID: PSB14-12-14-0728  
 Level: LOW  
 Sample Type: Soil

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	584137	292068	1168274	680198	16.44
42 Acenaphthene-d10	320442	160221	640884	399910	24.80
59 Phenanthrene-d10	503793	251896	1007586	646609	28.35
69 Chrysene-d12	532343	266172	1064686	802236	50.70
77 Perylene-d12	517269	258634	1034538	765842	48.05

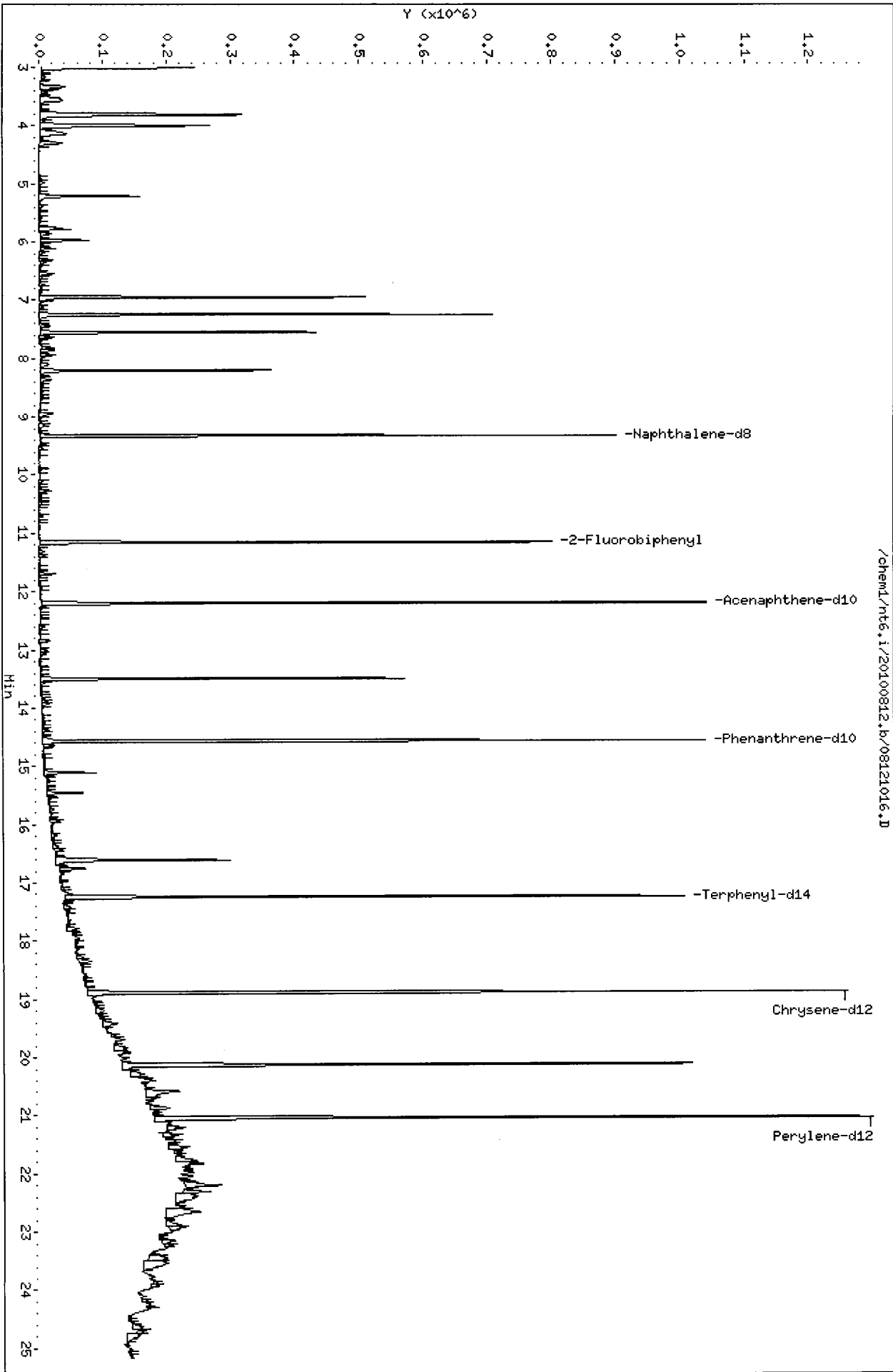
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.33	8.83	9.83	9.32	-0.08
42 Acenaphthene-d10	12.20	11.70	12.70	12.20	0.03
59 Phenanthrene-d10	14.57	14.07	15.07	14.57	-0.01
69 Chrysene-d12	18.89	18.39	19.39	18.89	-0.01
77 Perylene-d12	21.04	20.54	21.54	21.05	0.04

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



Data File: /chem1/nt6.i/20100812.b/08121016.D  
Date: 12-AUG-2010 19:51  
Client ID: PSB14-12-14-072810  
Sample Info: RG54F  
Volume Injected (ul): 1.0  
Column phase: ZB-5msi

Instrument: nt6.i  
Operator: JZ  
Column diameter: 0.32



Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100812.b/08121018.D  
 Lab Smp Id: RG54I Client Smp ID: PSB17-1.5-2-072810  
 Inj Date : 12-AUG-2010 20:56  
 Operator : JZ Inst ID: nt6.i  
 Smp Info : RG54I  
 Misc Info : 10-18210  
 Comment : 1ul Injection  
 Method : /chem1/nt6.i/20100812.b/SW846072310.m  
 Meth Date : 13-Aug-2010 14:20 jianqing Quant Type: ISTD  
 Cal Date : 23-JUL-2010 18:38 Cal File: 07231007.D  
 Als bottle: 18  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*Handwritten:* 08/13/10

Concentration Formula:  $Amt * DF * Vt / (Ws * (100 - M) / 100) * CpdVariable$

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	27.60000	Weight of sample extracted (g)
M	5.30000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG						CONCENTRATIONS	
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 27 Naphthalene-d8	136		9.328	9.329	(1.000)	666015	20.0000	
28 Naphthalene	128							
32 2-Methylnaphthalene	141							
105 1-methylnaphthalene	141							
\$ 36 2-Fluorobiphenyl	172		11.154	11.156	(0.915)	422515	15.4231	295.0
40 Acenaphthylene	152							
* 42 Acenaphthene-d10	164		12.196	12.197	(1.000)	391326	20.0000	
44 Acenaphthene	153							
46 Dibenzofuran	168							
49 Fluorene	166							
* 59 Phenanthrene-d10	188		14.573	14.568	(1.000)	638836	20.0000	
60 Phenanthrene	178							
61 Anthracene	178							
64 Fluoranthene	202							
65 Pyrene	202							

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ug/mL)	FINAL (ug/kg)	
\$ 66 Terphenyl-d14	244	17.249	17.244	(0.913)	536082	19.4748	372.5	
68 Benzo(a)anthracene	228	Compound Not Detected.						
* 69 Chrysene-d12	240	18.894	18.889	(1.000)	777046	20.0000		
71 Chrysene	228	Compound Not Detected.						
187 Total Benzofluoranthenes	252	Compound Not Detected.						
76 Benzo(a)pyrene	252	Compound Not Detected.						
* 77 Perylene-d12	264	21.051	21.042	(1.000)	722521	20.0000		
78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.						
79 Dibenzo(a,h)anthracene	278	Compound Not Detected.						
80 Benzo(g,h,i)perylene	276	Compound Not Detected.						

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt6.i  
 Lab File ID: 08121018.D  
 Lab Smp Id: RG54I  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem1/nt6.i/20100812.b/SW846072310.m  
 Misc Info: 10-18210

Calibration Date: 12-AUG-2010  
 Calibration Time: 11:42  
 Client Smp ID: PSB17-1.5-2-0728  
 Level: LOW  
 Sample Type: Soil

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	584137	292068	1168274	666015	14.02
42 Acenaphthene-d10	320442	160221	640884	391326	22.12
59 Phenanthrene-d10	503793	251896	1007586	638836	26.81
69 Chrysene-d12	532343	266172	1064686	777046	45.97
77 Perylene-d12	517269	258634	1034538	722521	39.68

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.33	8.83	9.83	9.33	-0.01
42 Acenaphthene-d10	12.20	11.70	12.70	12.20	-0.01
59 Phenanthrene-d10	14.57	14.07	15.07	14.57	0.03
69 Chrysene-d12	18.89	18.39	19.39	18.89	0.02
77 Perylene-d12	21.04	20.54	21.54	21.05	0.05

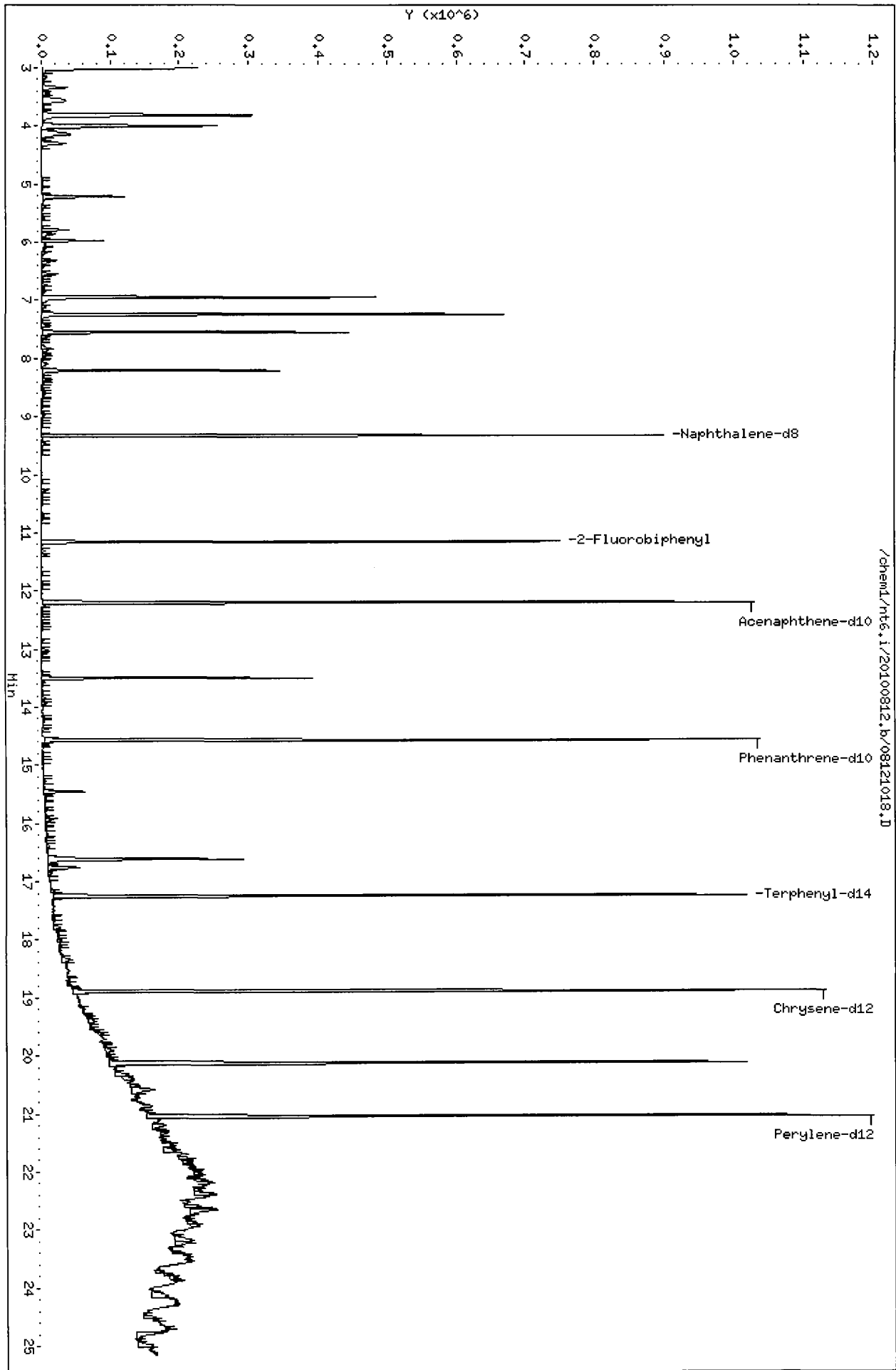
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.





Data File: /chem1/nt6.i/20100812.b/08121018.D  
Date: 12-AUG-2010 20:56  
Client ID: PSB17-1.5-2-072810  
Sample Infor: RG54I  
Volume Injected (uL): 1.0  
Column phase: ZB-5ms1

Instrument: nt6.i  
Operator: JZ  
Column diameter: 0.32



Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100812.b/08121019.D  
 Lab Smp Id: RG54J Client Smp ID: PSB17-2-4-072810  
 Inj Date : 12-AUG-2010 21:29  
 Operator : JZ Inst ID: nt6.i  
 Smp Info : RG54J  
 Misc Info : 10-18211  
 Comment : 1ul Injection  
 Method : /chem1/nt6.i/20100812.b/SW846072310.m  
 Meth Date : 13-Aug-2010 14:20 jianqing Quant Type: ISTD  
 Cal Date : 23-JUL-2010 18:38 Cal File: 07231007.D  
 Als bottle: 19  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*12 08/13/10*

Concentration Formula:  $Amt * DF * Vt / (Ws * (100 - M) / 100) * CpndVariable$

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	27.20000	Weight of sample extracted (g)
M	7.40000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 27 Naphthalene-d8	136	9.327	9.329	(1.000)	675475	20.0000		
28 Naphthalene	128				Compound Not Detected.			
32 2-Methylnaphthalene	141				Compound Not Detected.			
105 1-methylnaphthalene	141				Compound Not Detected.			
\$ 36 2-Fluorobiphenyl	172	11.154	11.156	(0.915)	393888	14.0964	279.8	
40 Acenaphthylene	152				Compound Not Detected.			
* 42 Acenaphthene-d10	164	12.195	12.197	(1.000)	399146	20.0000		
44 Acenaphthene	153				Compound Not Detected.			
46 Dibenzofuran	168				Compound Not Detected.			
49 Fluorene	166				Compound Not Detected.			
* 59 Phenanthrene-d10	188	14.572	14.568	(1.000)	666150	20.0000		
60 Phenanthrene	178				Compound Not Detected.			
61 Anthracene	178				Compound Not Detected.			
64 Fluoranthene	202				Compound Not Detected.			
65 Pyrene	202				Compound Not Detected.			

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ug/mL)	FINAL (ug/kg)	
§ 66 Terphenyl-d14	244	17.248	17.244	(0.913)	529557	17.9210	355.8	
68 Benzo(a)anthracene	228	Compound Not Detected.						
* 69 Chrysene-d12	240	18.888	18.889	(1.000)	834140	20.0000		
71 Chrysene	228	Compound Not Detected.						
187 Total Benzofluoranthenes	252	Compound Not Detected.						
76 Benzo(a)pyrene	252	Compound Not Detected.						
* 77 Perylene-d12	264	21.051	21.042	(1.000)	744511	20.0000		
78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.						
79 Dibenzo(a,h)anthracene	278	Compound Not Detected.						
80 Benzo(g,h,i)perylene	276	Compound Not Detected.						

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt6.i  
 Lab File ID: 08121019.D  
 Lab Smp Id: RG54J  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem1/nt6.i/20100812.b/SW846072310.m  
 Misc Info: 10-18211

Calibration Date: 12-AUG-2010  
 Calibration Time: 11:42  
 Client Smp ID: PSB17-2-4-072810  
 Level: LOW  
 Sample Type: Soil

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	584137	292068	1168274	675475	15.64
42 Acenaphthene-d10	320442	160221	640884	399146	24.56
59 Phenanthrene-d10	503793	251896	1007586	666150	32.23
69 Chrysene-d12	532343	266172	1064686	834140	56.69
77 Perylene-d12	517269	258634	1034538	744511	43.93

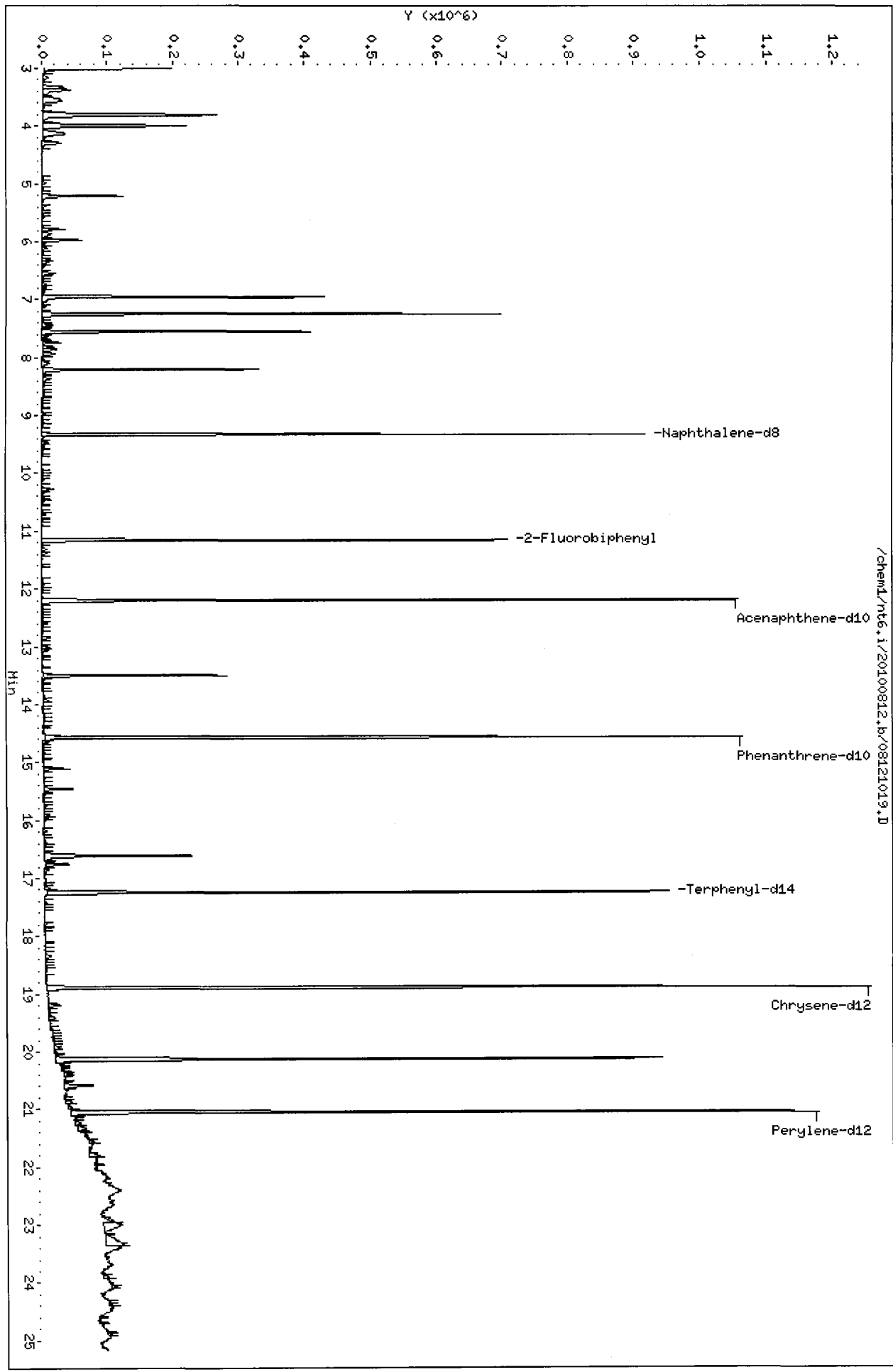
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.33	8.83	9.83	9.33	-0.02
42 Acenaphthene-d10	12.20	11.70	12.70	12.20	-0.01
59 Phenanthrene-d10	14.57	14.07	15.07	14.57	0.02
69 Chrysene-d12	18.89	18.39	19.39	18.89	-0.01
77 Perylene-d12	21.04	20.54	21.54	21.05	0.04

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



Data File: /chem1/nt6.i/20100812.b/08121019.D  
Date: 12-AUG-2010 21:29  
Client ID: PSB17-2-4-072810  
Sample Info: RG54J  
Volume Injected (uL): 1.0  
Column phase: ZB-5ms1

Instrument: nt6.i  
Operator: JZ  
Column diameter: 0.32



Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100812.b/08121020.D  
 Lab Smp Id: RG54L Client Smp ID: PSB17-10-13-072810  
 Inj Date : 12-AUG-2010 22:01  
 Operator : JZ Inst ID: nt6.i  
 Smp Info : RG54L  
 Misc Info : 10-18213  
 Comment : 1ul Injection  
 Method : /chem1/nt6.i/20100812.b/SW846072310.m  
 Meth Date : 13-Aug-2010 14:20 jianqing Quant Type: ISTD  
 Cal Date : 23-JUL-2010 18:38 Cal File: 07231007.D  
 Als bottle: 20  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*12 08/13/10*

Concentration Formula:  $Amt * DF * Vt / (Ws * (100 - M) / 100) * CpndVariable$

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	26.70000	Weight of sample extracted (g)
M	7.70000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS						
		RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
* 27 Naphthalene-d8	136	9.324	9.329	(1.000)	673627	20.0000		
28 Naphthalene	128	Compound Not Detected.						
32 2-Methylnaphthalene	141	Compound Not Detected.						
105 1-methylnaphthalene	141	Compound Not Detected.						
\$ 36 2-Fluorobiphenyl	172	11.156	11.156	(0.915)	423935	15.1974	308.3	
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	12.197	12.197	(1.000)	398471	20.0000		
44 Acenaphthene	153	Compound Not Detected.						
46 Dibenzofuran	168	Compound Not Detected.						
49 Fluorene	166	Compound Not Detected.						
* 59 Phenanthrene-d10	188	14.569	14.568	(1.000)	658509	20.0000		
60 Phenanthrene	178	Compound Not Detected.						
61 Anthracene	178	Compound Not Detected.						
64 Fluoranthene	202	Compound Not Detected.						
65 Pyrene	202	Compound Not Detected.						



Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ug/mL)	FINAL (ug/kg)	
§ 66 Terphenyl-d14	244	17.250	17.244	(0.913)	567803	19.5981	397.6	
68 Benzo(a)anthracene	228	Compound Not Detected.						
* 69 Chrysene-d12	240	18.890	18.889	(1.000)	817846	20.0000		
71 Chrysene	228	Compound Not Detected.						
187 Total Benzofluoranthenes	252	Compound Not Detected.						
76 Benzo(a)pyrene	252	Compound Not Detected.						
* 77 Perylene-d12	264	21.053	21.042	(1.000)	755989	20.0000		
78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.						
79 Dibenzo(a,h)anthracene	278	Compound Not Detected.						
80 Benzo(g,h,i)perylene	276	Compound Not Detected.						

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt6.i  
 Lab File ID: 08121020.D  
 Lab Smp Id: RG54L  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem1/nt6.i/20100812.b/SW846072310.m  
 Misc Info: 10-18213

Calibration Date: 12-AUG-2010  
 Calibration Time: 11:42  
 Client Smp ID: PSB17-10-13-0728  
 Level: LOW  
 Sample Type: Soil

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	584137	292068	1168274	673627	15.32
42 Acenaphthene-d10	320442	160221	640884	398471	24.35
59 Phenanthrene-d10	503793	251896	1007586	658509	30.71
69 Chrysene-d12	532343	266172	1064686	817846	53.63
77 Perylene-d12	517269	258634	1034538	755989	46.15

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.33	8.83	9.83	9.32	-0.05
42 Acenaphthene-d10	12.20	11.70	12.70	12.20	0.00
59 Phenanthrene-d10	14.57	14.07	15.07	14.57	0.00
69 Chrysene-d12	18.89	18.39	19.39	18.89	0.00
77 Perylene-d12	21.04	20.54	21.54	21.05	0.05

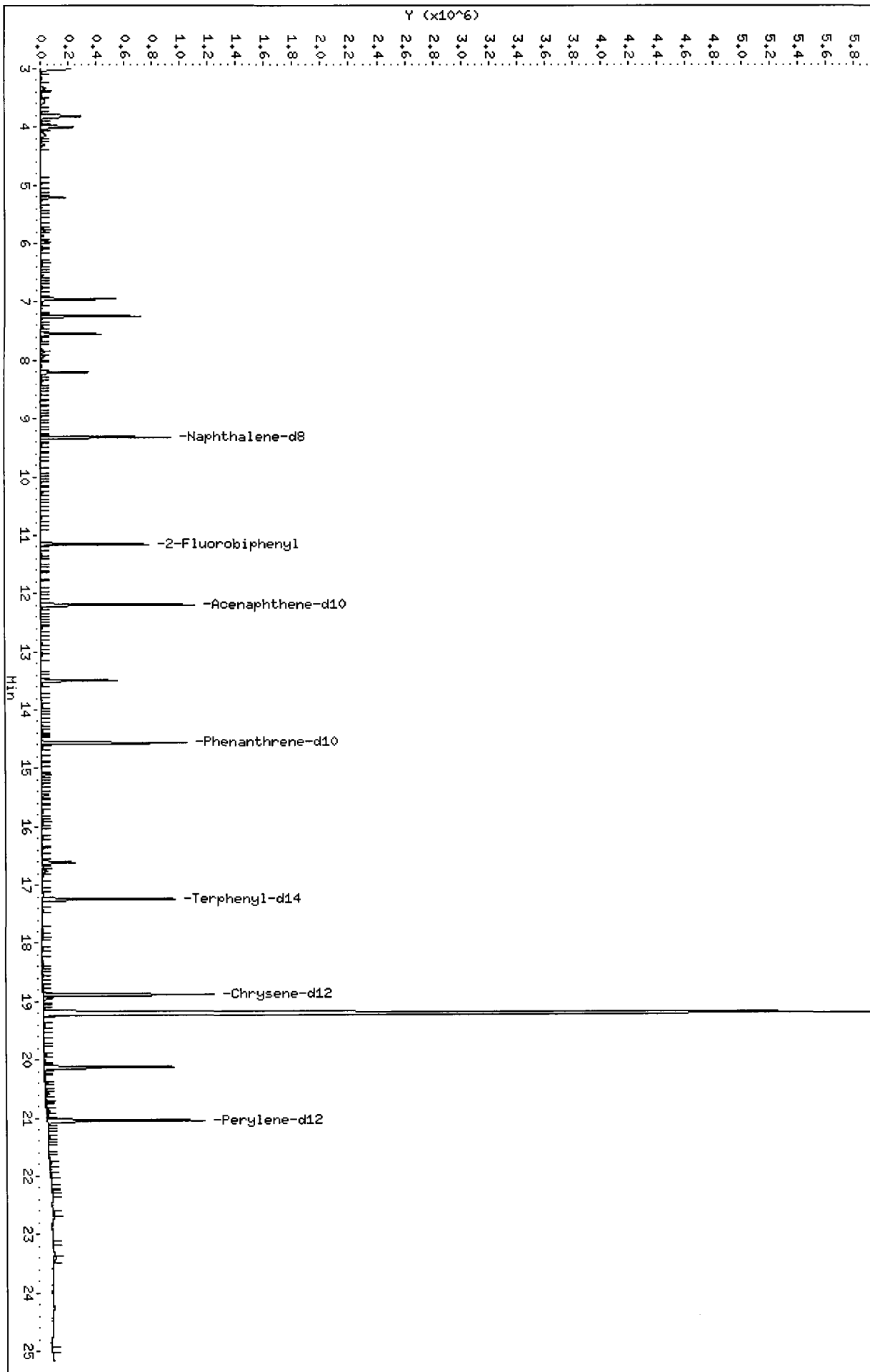
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: /chem1/nt6.i/20100812.b/08121020.D  
Date: 12-AUG-2010 22:01  
Client ID: PSB17-10-13-072810  
Sample Info: RG54L  
Volume Injected (uL): 1.0  
Column phase: ZB-5ms1

Instrument: nt6.i  
Operator: JZ  
Column diameter: 0.32

/chem1/nt6.i/20100812.b/08121020.D



**Analytical Resources Inc.: Organics Instrument Log**  
**NT-6 Serial No.:GC=US00036167, MS=US81221575**

Date: 8/13/10 Analysis: 8270 Analyst: JB  
 GC Program: MS/MS Column No: 172127 Column Type: 2B-MSi  
 Instrument Tune (.U or .CT.): 100629 EM Voltage: 1529  
 Calibration File: 08131001 Curve Date: 7/23/10

IS/SS	Ical/Ccal	LCS/ICV
<u>1752-1</u>	<u>1747-3, 1733-1</u>	
	<u>1735-1, 1736-1</u>	
	<u>15019 1753-5</u>	
	<u>1754-1</u>	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt6.i/20100813.b

Time	Filename	LabID	ClientId	DF															
1	1124	08131001.D	CC0813	CC0813	1	7.19	166565	9.25	550174	12.09	321882	14.44	505369	18.72	591540	20.85	590209	19.94	731396
2	1157	08131002.D	RG60D	PSB13-4-6-07	1	9.24	646607	12.09	380788	14.44	616103	18.71	683741	20.85	676003				
3	1230	08131003.D	RG60E	PSB13-11-13-	1	9.24	655374	12.08	389020	14.43	630919	18.71	730490	20.85	755660				
4	1303	08131004.D	RG60F	PSB13-14.5-1	1	9.24	657063	12.09	382063	14.43	634253	18.71	767749	20.86	788938				
5	1336	08131005.D	RG58MBS1	RG58MBS1	1	9.24	643814	12.09	381227	14.43	617258	18.71	707196	20.85	696194				
6	1409	08131006.D	RG54H	PSB17-0-0.5-	1	9.24	626035	12.09	374024	14.44	619985	18.73	848355	20.89	705991				
7	1442	08131007.D	RG60C	PSB13-2-4-07	1	9.25	667186	12.09	410669	14.44	703145	18.76	724927	20.94	307927				
8	1515	08131008.D	RG54A	PSB14-0-.5-0	3	9.25	634205	12.09	383288	14.44	653216	18.73	751746	20.87	415422				
9	1548	08131009.D	RG54E	PSB14-7-9-07	3	9.25	618067	12.09	371040	14.44	617674	18.73	707331	20.86	404040				
10	1621	08131010.D	RG60A	PSB13-0-0.5-	3	9.25	612885	12.09	372945	14.44	640690	18.72	722156	20.86	422464				
11	1654	08131011.D	RG60B	PSB13-1.5-2-	3	9.25	619334	12.09	378009	14.44	661220	18.72	750762	20.86	423011				
12	1727	08131012.D	RG60C	PSB13-2-4-07	3	9.25	625132	12.09	383283	14.44	658106	18.74	754752	20.90	343400				
13	1800	08131013.D	RG54A	PSB14-0-.5-0	10	9.25	576090	12.09	346489	14.44	610403	18.73	719037	20.86	429847				
14	1832	08131014.D	RG60A	PSB13-0-0.5-	10	9.25	603510	12.09	368541	14.44	648774	18.73	759155	20.86	432318				
15	1905	08131015.D	RG60B	PSB13-1.5-2-	10	9.25	596271	12.09	356001	14.44	632152	18.72	746182	20.86	406950				
16	1938	08131016.D	RG58LCSS1	RG58LCSS1	1	9.25	644270	12.09	383454	14.44	683157	18.73	756612	20.86	350289				
17	2011	08131017.D	RG58A	PSB22-0-0.5-	1	9.25	638478	12.09	383943	14.44	661888	18.72	755662	20.86	342124				
18	2044	08131018.D	RG58B	PSB22-1.5-2-	1	9.25	656447	12.09	398652	14.44	689410	18.72	788440	20.86	345872				
19	2116	08131019.D	RG58C	PSB22-2-4-07	1	9.24	637885	12.09	387188	14.44	668956	18.72	779291	20.86	339241				
20	2149	08131020.D	RG58D	PSB22-4-6-07	1	9.24	597978	12.09	360487	14.44	627772	18.72	730678	20.86	323824				
21	2222	08131021.D	RG58E	PSB22-17-19-	1	9.25	642738	12.09	386938	14.44	671130	18.72	790351	20.86	351433				
22	2255	08131022.D	RG58F	PSB22-19-20-	1	9.25	648070	12.09	387488	14.44	662734	18.72	789619	20.85	391639				

*SS out of RC  
Re-IA*

*JB 08/16/10*

**Maintenance Verification** (Identify ICal or CCal that demonstrates the instrument is in control):  
 Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt6.i/20100813.b

ARI Job No.: CC08 Method: SW846072310.m Instrument: nt6.i Date: 13-AUG-2010

*D 08/16/10*

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1124	08131001.D	CC0813	CC0813	1	NO MANUAL INTEGRATION
1157	08131002.D	RG60D	PSB13-4-6-	1	NO MANUAL INTEGRATION
1230	08131003.D	RG60E	PSB13-11-1	1	NO MANUAL INTEGRATION
1303	08131004.D	RG60F	PSB13-14.5	1	NO MANUAL INTEGRATION
1409	08131006.D	RG54H	PSB17-0-0.	1	NO MANUAL INTEGRATION
1442	08131007.D	RG60C	PSB13-2-4-	1	Perylene-d12,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt6.i/20100813.b

Instrument: nt6.i Date: 13-AUG-2010 Method: SW846072310.m

INITIAL CAL: 23-JUL-2010

Compound	%RSD or R <sup>2</sup>
-----	
NO Q-FLAGS	
-----	

~~18~~ 08/13/10

CONTINUING CAL: 13-AUG-2010

Compound	%D
-----	
2,4-Dinitrophenol	-26.8
4-Nitrophenol	-26.6
-----	

NYC

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i                      Injection Date: 13-AUG-2010 11:24  
 Lab File ID: 08131001.D                Init. Cal. Date(s): 23-JUL-2010 23-JUL-2010  
 Analysis Type:                            Init. Cal. Times: 15:01 18:38  
 Lab Sample ID: CC0813                    Quant Type: ISTD  
 Method: /chem1/nt6.i/20100813.b/SW846072310.m

*12 08/13/10*

COMPOUND	RF25		CCAL	MIN		MAX		CURVE TYPE
	RRF / AMOUNT	RF25	RRF25	RRF	%D / %DRIFT	%D / %DRIFT		
\$ 1 2-Fluorophenol	1.32873	1.34458	1.34458	0.010	1.19310	20.00000	Averaged	
\$ 2 Phenol-d5	1.53477	1.55860	1.55860	0.010	1.55237	20.00000	Averaged	
3 Phenol	1.70453	1.80401	1.80401	0.010	5.83646	20.00000	Averaged	
\$ 5 2-Chlorophenol-d4	1.29631	1.27010	1.27010	0.010	-2.02206	20.00000	Averaged	
4 Bis(2-Chloroethyl)ether	1.30667	1.30339	1.30339	0.010	-0.25134	20.00000	Averaged	
6 2-Chlorophenol	1.47378	1.48205	1.48205	0.010	0.56126	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.71678	1.70853	1.70853	0.010	-0.48080	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.68189	1.69904	1.69904	0.010	1.01956	20.00000	Averaged	
\$ 10 1,2-Dichlorobenzene-d4	0.89939	0.92351	0.92351	0.010	2.68139	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.56400	1.59078	1.59078	0.010	1.71236	20.00000	Averaged	
11 Benzyl alcohol	0.80695	0.83642	0.83642	0.010	3.65175	20.00000	Averaged	
14 2,2'-oxybis(1-Chloropropane	1.39331	1.55113	1.55113	0.010	11.32631	20.00000	Averaged	
13 2-Methylphenol	1.27111	1.31008	1.31008	0.010	3.06598	20.00000	Averaged	
17 Hexachloroethane	0.60757	0.62309	0.62309	0.010	2.55437	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.88368	0.91051	0.91051	0.005	3.03576	20.00000	Averaged	
15 4-Methylphenol	1.25486	1.35860	1.35860	0.010	8.26718	20.00000	Averaged	
\$ 18 Nitrobenzene-d5	0.38855	0.37825	0.37825	0.010	-2.65064	20.00000	Averaged	
19 Nitrobenzene	0.43075	0.42662	0.42662	0.010	-0.96081	20.00000	Averaged	
20 Isophorone	0.68600	0.69689	0.69689	0.010	1.58749	20.00000	Averaged	
21 2-Nitrophenol	0.25274	0.26907	0.26907	0.010	6.46006	20.00000	Averaged	
22 2,4-Dimethylphenol	0.41587	0.42090	0.42090	0.010	1.21013	20.00000	Averaged	
23 Bis(2-Chloroethoxy)methane	0.47536	0.48384	0.48384	0.010	1.78527	20.00000	Averaged	
24 Benzoic acid	0.30742	0.27350	0.27350	0.010	-11.03243	20.00000	Averaged	
25 2,4-Dichlorophenol	0.36413	0.38798	0.38798	0.010	6.55104	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.39778	0.40084	0.40084	0.010	0.77091	20.00000	Averaged	
28 Naphthalene	1.13038	1.14856	1.14856	0.010	1.60811	20.00000	Averaged	
29 4-Chloroaniline	0.45282	0.44052	0.44052	0.010	-2.71708	20.00000	Averaged	
30 Hexachlorobutadiene	0.23198	0.23713	0.23713	0.010	2.22215	20.00000	Averaged	
31 4-Chloro-3-methylphenol	0.35105	0.36850	0.36850	0.010	4.97178	20.00000	Averaged	
32 2-Methylnaphthalene	0.62036	0.63048	0.63048	0.010	1.63209	20.00000	Averaged	
33 Hexachlorocyclopentadiene	21.46967	25.00000	0.35710	0.010	-14.12134	20.00000	Linear	
34 2,4,6-Trichlorophenol	0.45790	0.49130	0.49130	0.010	7.29499	20.00000	Averaged	
35 2,4,5-Trichlorophenol	0.47246	0.49247	0.49247	0.010	4.23512	20.00000	Averaged	
\$ 36 2-Fluorobiphenyl	1.40011	1.35100	1.35100	0.010	-3.50766	20.00000	Averaged	
37 2-Chloronaphthalene	1.32938	1.32211	1.32211	0.010	-0.54704	20.00000	Averaged	



Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i                      Injection Date: 13-AUG-2010 11:24  
 Lab File ID: 08131001.D                Init. Cal. Date(s): 23-JUL-2010 23-JUL-2010  
 Analysis Type:                            Init. Cal. Times: 15:01 18:38  
 Lab Sample ID: CC0813                    Quant Type: ISTD  
 Method: /chem1/nt6.i/20100813.b/SW846072310.m

COMPOUND	RF25		CCAL	MIN	MAX		CURVE TYPE
	RRF / AMOUNT	RF25	RRF25	RRF	%D / %DRIFT	%D / %DRIFT	
38 2-Nitroaniline	0.33095	0.32537	0.32537	0.010	-1.68534	20.00000	Averaged
39 Dimethylphthalate	1.50119	1.45492	1.45492	0.010	-3.08228	20.00000	Averaged
40 Acenaphthylene	2.05833	2.07518	2.07518	0.010	0.81838	20.00000	Averaged
41 2,6-Dinitrotoluene	0.35670	0.36362	0.36362	0.010	1.94193	20.00000	Averaged
43 3-Nitroaniline	0.31209	0.29059	0.29059	0.010	-6.88889	20.00000	Averaged
44 Acenaphthene	1.28541	1.26024	1.26024	0.010	-1.95849	20.00000	Averaged
45 2,4-Dinitrophenol	36.61379	50.00000	0.21464	0.010	-26.77242	20.00000	Linear <-
46 Dibenzofuran	1.70738	1.72699	1.72699	0.010	1.14812	20.00000	Averaged
47 4-Nitrophenol	0.18552	0.13619	0.13619	0.010	-26.59188	20.00000	Averaged <-
48 2,4-Dinitrotoluene	0.45944	0.47660	0.47660	0.010	3.73407	20.00000	Averaged
50 Diethylphthalate	1.39533	1.28496	1.28496	0.010	-7.91011	20.00000	Averaged
49 Fluorene	1.45467	1.47127	1.47127	0.010	1.14142	20.00000	Averaged
51 4-Chlorophenyl-phenylether	0.71936	0.72650	0.72650	0.010	0.99224	20.00000	Averaged
52 4-Nitroaniline	0.34745	0.29874	0.29874	0.010	-14.01948	20.00000	Averaged
53 4,6-Dinitro-2-methylphenol	0.19806	0.19762	0.19762	0.010	-0.22147	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.68493	0.67944	0.67944	0.010	-0.80135	20.00000	Averaged
55 2,4,6-Tribromophenol	0.18223	0.21148	0.21148	0.010	16.05086	20.00000	Averaged
56 4-Bromophenyl-phenylether	0.29331	0.32118	0.32118	0.010	9.50451	20.00000	Averaged
57 Hexachlorobenzene	0.30899	0.34361	0.34361	0.010	11.20643	20.00000	Averaged
58 Pentachlorophenol	0.18262	0.17340	0.17340	0.010	-5.04645	20.00000	Averaged
60 Phenanthrene	1.24231	1.26762	1.26762	0.010	2.03743	20.00000	Averaged
61 Anthracene	1.28336	1.33594	1.33594	0.010	4.09746	20.00000	Averaged
62 Carbazole	1.19107	1.08535	1.08535	0.010	-8.87587	20.00000	Averaged
63 Di-n-butylphthalate	1.45976	1.51245	1.51245	0.010	3.60984	20.00000	Averaged
64 Fluoranthene	1.34612	1.47390	1.47390	0.010	9.49243	20.00000	Averaged
65 Pyrene	1.20453	1.23158	1.23158	0.010	2.24538	20.00000	Averaged
66 Terphenyl-d14	0.70850	0.75847	0.75847	0.010	7.05295	20.00000	Averaged
67 Butylbenzylphthalate	0.58237	0.59950	0.59950	0.010	2.94146	20.00000	Averaged
68 Benzo(a)anthracene	1.15615	1.24341	1.24341	0.010	7.54732	20.00000	Averaged
70 3,3'-Dichlorobenzidine	0.37517	0.41254	0.41254	0.010	9.95866	20.00000	Averaged
71 Chrysene	1.08220	1.13248	1.13248	0.010	4.64623	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.63407	0.66092	0.66092	0.010	4.23573	20.00000	Averaged
73 Di-n-octylphthalate	1.08410	1.08983	1.08983	0.010	0.52851	20.00000	Averaged
74 Benzo(b)fluoranthene	1.33887	1.30450	1.30450	0.010	-2.56759	20.00000	Averaged
75 Benzo(k)fluoranthene	1.38193	1.42502	1.42502	0.010	3.11814	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i                      Injection Date: 13-AUG-2010 11:24  
 Lab File ID: 08131001.D                Init. Cal. Date(s): 23-JUL-2010 23-JUL-2010  
 Analysis Type:                            Init. Cal. Times: 15:01 18:38  
 Lab Sample ID: CC0813                    Quant Type: ISTD  
 Method: /chem1/nt6.i/20100813.b/SW846072310.m

COMPOUND	RF		CCAL	MIN	MAX		CURVE TYPE
	RRF / AMOUNT	RF25	RRF25	RRF	%D / %DRIFT	%D / %DRIFT	
187 Total Benzofluoranthenes	1.28781	1.28100	1.28100	0.010	-0.52902	20.00000	Averaged
76 Benzo(a)pyrene	1.26119	1.26373	1.26373	0.010	0.20179	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.68718	1.65940	1.65940	0.010	-1.64688	20.00000	Averaged
79 Dibenzo(a,h)anthracene	1.29650	1.31145	1.31145	0.010	1.15252	20.00000	Averaged
80 Benzo(g,h,i)perylene	1.52194	1.47935	1.47935	0.010	-2.79855	20.00000	Averaged
90 N-Nitrosodimethylamine	0.86213	0.87274	0.87274	0.010	1.23023	20.00000	Averaged
103 Pyridine	1.54116	1.58906	1.58906	0.010	3.10793	20.00000	Averaged
91 Aniline	1.95218	1.92174	1.92174	0.010	-1.55968	20.00000	Averaged
105 1-methylnaphthalene	0.64079	0.65635	0.65635	0.010	2.42851	20.00000	Averaged

Analytical Resources, Inc.

Semivolatible Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100813.b/08131001.D  
 Lab Smp Id: CC0813 Client Smp ID: CC0813  
 Inj Date : 13-AUG-2010 11:24  
 Operator : JZ Inst ID: nt6.i  
 Smp Info : CC0813  
 Misc Info : 10-  
 Comment : 1ul Injection  
 Method : /chem1/nt6.i/20100813.b/SW846072310.m  
 Meth Date : 13-Aug-2010 15:21 jianqing Quant Type: ISTD  
 Cal Date : 23-JUL-2010 18:38 Cal File: 07231007.D  
 Als bottle: 1 Continuing Calibration Sample  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: ICALS.sub  
 Target Version: 3.50

*B* 08/13/10

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112	5.183	5.183	(0.721)	279951	25.0000	25.30
\$ 2 Phenol-d5	99	6.855	6.855	(0.953)	324510	25.0000	25.39
3 Phenol	94	6.871	6.871	(0.955)	375607	25.0000	26.46
\$ 5 2-Chlorophenol-d4	132	6.898	6.898	(0.959)	264442	25.0000	24.49
4 Bis(2-Chloroethyl) ether	93	6.892	6.892	(0.958)	271374	25.0000	24.94
6 2-Chlorophenol	128	6.924	6.924	(0.963)	308573	25.0000	25.14
7 1,3-Dichlorobenzene	146	7.122	7.122	(0.990)	355727	25.0000	24.88
* 8 1,4-Dichlorobenzene-d4	152	7.191	7.191	(1.000)	166565	20.0000	
9 1,4-Dichlorobenzene	146	7.213	7.213	(1.003)	353751	25.0000	25.25
\$ 10 1,2-Dichlorobenzene-d4	152	7.490	7.490	(1.042)	192280	25.0000	25.67
12 1,2-Dichlorobenzene	146	7.507	7.507	(1.044)	331212	25.0000	25.43
11 Benzyl alcohol	108	7.517	7.517	(1.045)	174147	25.0000	25.91
14 2,2'-oxybis(1-Chloropropane)	45	7.774	7.774	(1.081)	322955	25.0000	27.83
13 2-Methylphenol	108	7.800	7.800	(1.085)	272767	25.0000	25.77
17 Hexachloroethane	117	7.998	7.998	(1.112)	129731	25.0000	25.64
16 N-Nitroso-di-n-propylamine	70	7.998	7.998	(1.112)	189573	25.0000	25.76
15 4-Methylphenol	108	8.041	8.041	(1.118)	282870	25.0000	27.07
\$ 18 Nitrobenzene-d5	82	8.142	8.142	(0.880)	260131	25.0000	24.34
19 Nitrobenzene	77	8.169	8.169	(0.883)	293391	25.0000	24.76
20 Isophorone	82	8.559	8.559	(0.925)	479266	25.0000	25.40
21 2-Nitrophenol	139	8.692	8.692	(0.940)	185042	25.0000	26.62
22 2,4-Dimethylphenol	107	8.863	8.863	(0.958)	289460	25.0000	25.30
23 Bis(2-Chloroethoxy)methane	93	8.986	8.986	(0.972)	332746	25.0000	25.45
24 Benzoic acid	105	9.157	9.157	(0.990)	376181	50.0000	44.48
25 2,4-Dichlorophenol	162	9.098	9.098	(0.984)	266823	25.0000	26.64
26 1,2,4-Trichlorobenzene	180	9.200	9.200	(0.995)	275667	25.0000	25.19
* 27 Naphthalene-d8	136	9.248	9.248	(1.000)	550174	20.0000	

Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====	==	=====	=====	=====	=====	=====
28 Naphthalene	128	9.274	9.274	(1.003)	789884	25.0000	25.40
29 4-Chloroaniline	127	9.456	9.456	(1.023)	302952	25.0000	24.32
30 Hexachlorobutadiene	225	9.611	9.611	(1.039)	163081	25.0000	25.56
31 4-Chloro-3-methylphenol	107	10.316	10.316	(1.115)	253427	25.0000	26.24
32 2-Methylnaphthalene	141	10.401	10.401	(1.125)	433593	25.0000	25.41
33 Hexachlorocyclopentadiene	237	10.781	10.781	(0.892)	143681	25.0000	21.47
34 2,4,6-Trichlorophenol	196	10.935	10.935	(0.905)	197676	25.0000	26.82
35 2,4,5-Trichlorophenol	196	11.000	11.000	(0.910)	198147	25.0000	26.06
\$ 36 2-Fluorobiphenyl	172	11.058	11.058	(0.915)	543578	25.0000	24.12
37 2-Chloronaphthalene	162	11.170	11.170	(0.924)	531952	25.0000	24.86
38 2-Nitroaniline	65	11.432	11.432	(0.946)	130914	25.0000	24.58
39 Dimethylphthalate	163	11.817	11.817	(0.977)	585390	25.0000	24.23
40 Acenaphthylene	152	11.838	11.838	(0.979)	834954	25.0000	25.20
41 2,6-Dinitrotoluene	165	11.902	11.902	(0.985)	146305	25.0000	25.49
* 42 Acenaphthene-d10	164	12.089	12.089	(1.000)	321882	20.0000	
43 3-Nitroaniline	138	12.111	12.111	(1.002)	116919	25.0000	23.28
44 Acenaphthene	153	12.137	12.137	(1.004)	507059	25.0000	24.51
45 2,4-Dinitrophenol	184	12.281	12.281	(1.016)	172721	50.0000	36.61
46 Dibenzofuran	168	12.404	12.404	(1.026)	694858	25.0000	25.29
47 4-Nitrophenol	109	12.484	12.484	(1.033)	54794	25.0000	18.35
48 2,4-Dinitrotoluene	165	12.522	12.522	(1.036)	191761	25.0000	25.93
50 Diethylphthalate	149	12.970	12.970	(1.073)	517007	25.0000	23.02
49 Fluorene	166	12.954	12.954	(1.072)	591971	25.0000	25.29
51 4-Chlorophenyl-phenylether	204	12.997	12.997	(1.075)	292309	25.0000	25.25
52 4-Nitroaniline	138	13.099	13.099	(1.083)	120197	25.0000	21.50
53 4,6-Dinitro-2-methylphenol	198	13.173	13.173	(0.912)	249680	50.0000	49.89
54 N-Nitrosodiphenylamine	169	13.216	13.216	(0.915)	429208	25.0000	24.80
\$ 55 2,4,6-Tribromophenol	330	13.382	13.382	(1.107)	85090	25.0000	29.01
56 4-Bromophenyl-phenylether	248	13.766	13.766	(0.953)	202895	25.0000	27.38
57 Hexachlorobenzene	284	13.969	13.969	(0.967)	217064	25.0000	27.80
58 Pentachlorophenol	266	14.284	14.284	(0.989)	109541	25.0000	23.74
* 59 Phenanthrene-d10	188	14.439	14.439	(1.000)	505369	20.0000	
60 Phenanthrene	178	14.477	14.477	(1.003)	800773	25.0000	25.51
61 Anthracene	178	14.546	14.546	(1.007)	843930	25.0000	26.02
62 Carbazole	167	14.856	14.856	(1.029)	685630	25.0000	22.78
63 Di-n-butylphthalate	149	15.604	15.604	(1.081)	955435	25.0000	25.90
64 Fluoranthene	202	16.394	16.394	(1.135)	931083	25.0000	27.37
65 Pyrene	202	16.736	16.736	(0.894)	910663	25.0000	25.56
\$ 66 Terphenyl-d14	244	17.088	17.088	(0.913)	560835	25.0000	26.76
67 Butylbenzylphthalate	149	17.996	17.996	(0.961)	443285	25.0000	25.74
68 Benzo(a)anthracene	228	18.691	18.691	(0.999)	919410	25.0000	26.89
* 69 Chrysene-d12	240	18.717	18.717	(1.000)	591540	20.0000	
70 3,3'-Dichlorobenzidine	252	18.733	18.733	(1.001)	305040	25.0000	27.49
71 Chrysene	228	18.755	18.755	(1.002)	837389	25.0000	26.16
72 bis(2-Ethylhexyl)phthalate	149	19.006	19.006	(0.953)	604246	25.0000	26.06
* 134 Di-n-octylphthalate-d4	153	19.935	19.935	(1.000)	731396	20.0000	
73 Di-n-octylphthalate	149	19.946	19.946	(1.001)	996375	25.0000	25.13

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
74 Benzo (b) fluoranthene	252	20.336	20.336	(0.975)	962409	25.0000	24.36
75 Benzo (k) fluoranthene	252	20.368	20.368	(0.977)	1051326	25.0000	25.78
187 Total Benzofluoranthenes	252	20.368	20.368	(0.977)	1890144	50.0000	49.74
76 Benzo (a) pyrene	252	20.768	20.768	(0.996)	932332	25.0000	25.05
* 77 Perylene-d12	264	20.849	20.849	(1.000)	590209	20.0000	
78 Indeno (1,2,3-cd) pyrene	276	22.205	22.205	(1.065)	1224241	25.0000	24.59
79 Dibenzo (a,h) anthracene	278	22.227	22.227	(1.066)	967535	25.0000	25.29
80 Benzo (g,h,i) perylene	276	22.510	22.510	(1.080)	1091410	25.0000	24.30
90 N-Nitrosodimethylamine	74	2.278	2.278	(0.317)	181709	25.0000	25.31
103 Pyridine	79	2.246	2.246	(0.312)	330853	25.0000	25.78
91 Aniline	93	6.753	6.753	(0.939)	400118	25.0000	24.61
105 1-methylnaphthalene	141	10.567	10.567	(1.143)	451381	25.0000	25.61

Analytical Resources, Inc.  
 INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt6.i  
 Lab File ID: 08131001.D  
 Lab Smp Id: CC0813  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem1/nt6.i/20100813.b/SW846072310.m  
 Misc Info: 10-

Calibration Date: 13-AUG-2010  
 Calibration Time: 11:24  
 Client Smp ID: CC0813  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	182786	91393	365572	166565	-8.87
27 Naphthalene-d8	584137	292068	1168274	550174	-5.81
42 Acenaphthene-d10	320442	160221	640884	321882	0.45
59 Phenanthrene-d10	503793	251896	1007586	505369	0.31
69 Chrysene-d12	532343	266172	1064686	591540	11.12
134 Di-n-octylphthala	719428	359714	1438856	731396	1.66
77 Perylene-d12	517269	258634	1034538	590209	14.10

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	7.19	6.69	7.69	7.19	0.00
27 Naphthalene-d8	9.25	8.75	9.75	9.25	0.00
42 Acenaphthene-d10	12.09	11.59	12.59	12.09	0.00
59 Phenanthrene-d10	14.44	13.94	14.94	14.44	0.00
69 Chrysene-d12	18.72	18.22	19.22	18.72	0.00
134 Di-n-octylphthala	19.94	19.44	20.44	19.94	0.00
77 Perylene-d12	20.85	20.35	21.35	20.85	0.00

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

Data File: /chem1/nt6.i/20100813.b/08131001.D

Date: 13-AUG-2010 11:24

Client ID: CC0813

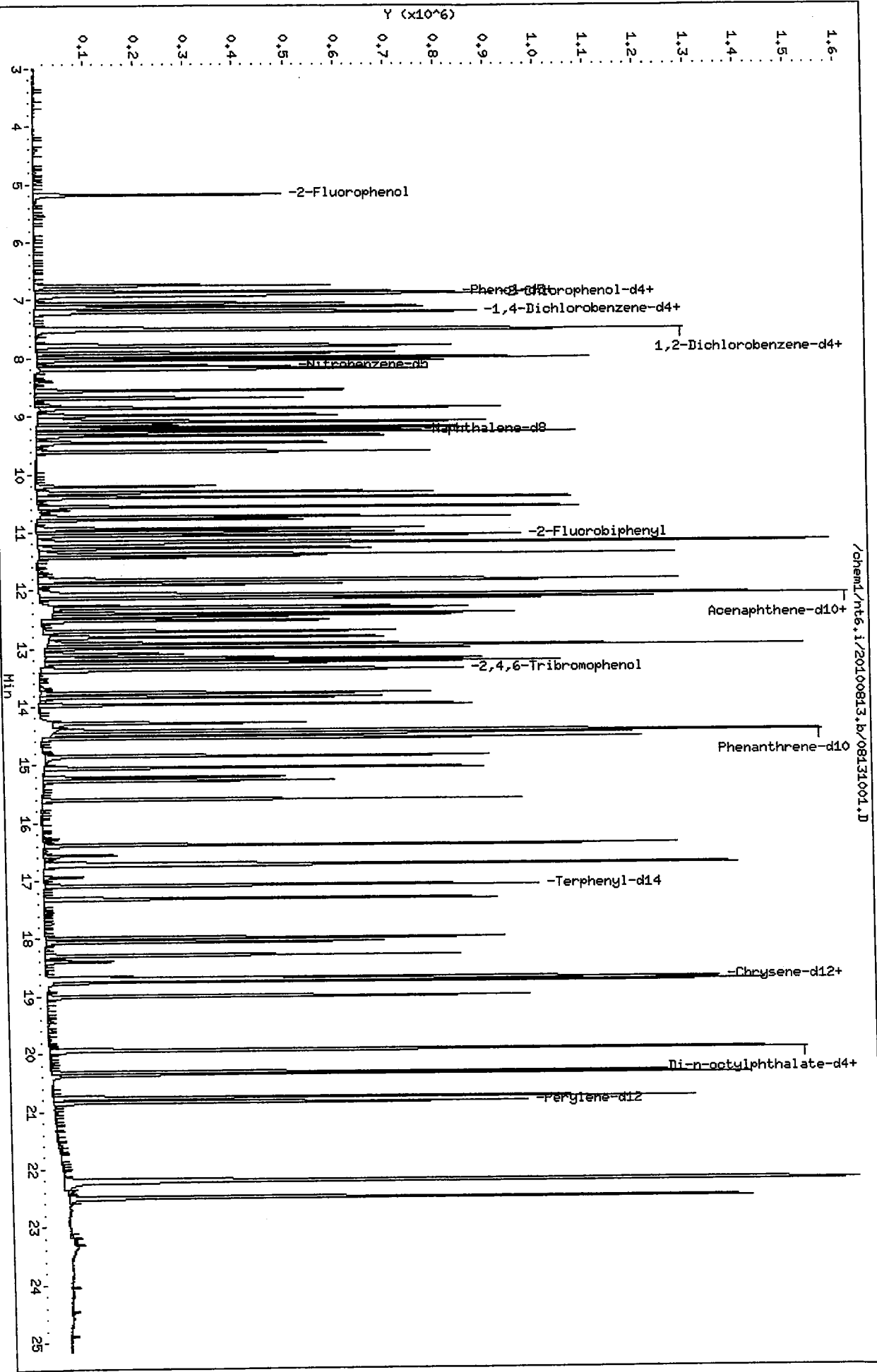
Sample Infol: CC0813

Column phase: ZB-5msi

Instrument: nt6.i

Operator: JZ

Column diameter: 0.32



Date : 13-AUG-2010 11:24

Client ID: DFTPP0813

Instrument: nt6.i

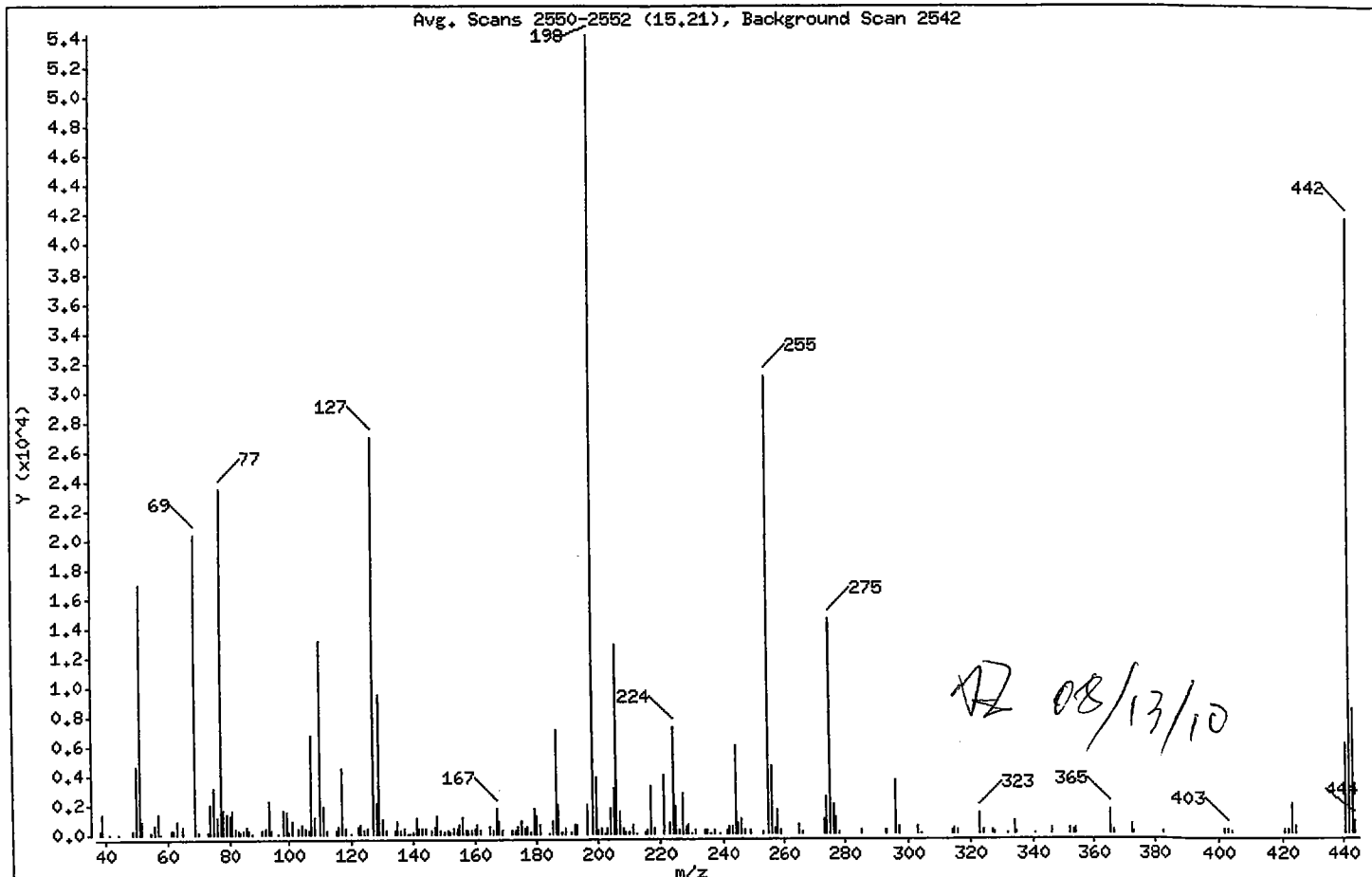
Sample Info: DFTPP0813

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	31.28
68	Less than 2.00% of mass 69	0.00 ( 0.00)
69	Mass 69 relative abundance	37.58
70	Less than 2.00% of mass 69	0.34 ( 0.91)
127	10.00 - 80.00% of mass 198	49.59
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	7.05
275	10.00 - 60.00% of mass 198	26.85
365	Greater than 1.00% of mass 198	2.89
441	0.01 - 24.00% of mass 442	11.21 ( 14.54)
442	50.00 - 200.00% of mass 198	77.11
443	15.00 - 24.00% of mass 442	15.56 ( 20.18)



Date : 13-AUG-2010 11:24

Client ID: DFTPP0813

Instrument: nt6.i

Sample Info: DFTPP0813

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: 08131001.D

Spectrum: Avg. Scans 2550-2552 (15.21), Background Scan 2542

Location of Maximum: 198.00

Number of points: 212

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	237	117.00	4445	181.00	655	255.00	31088
39.00	1357	118.00	321	184.00	50	256.00	4615
41.00	9	120.00	52	185.00	815	257.00	386
44.00	6	122.00	493	186.00	7116	258.00	1636
49.00	199	123.00	585	187.00	2036	259.00	244
50.00	4578	124.00	290	188.00	160	265.00	659
51.00	16984	125.00	355	189.00	367	266.00	177
52.00	877	127.00	26920	191.00	120	273.00	1043
55.00	78	128.00	2106	192.00	670	274.00	2537
56.00	578	129.00	9511	193.00	636	275.00	14577
57.00	1344	130.00	943	196.00	1940	276.00	2010
58.00	50	131.00	205	198.00	54288	277.00	1084
61.00	252	134.00	295	199.00	3830	278.00	180
62.00	294	135.00	815	200.00	281	285.00	198
63.00	864	136.00	275	201.00	316	293.00	298
65.00	486	137.00	435	202.00	61	296.00	3659
69.00	20400	138.00	52	203.00	376	297.00	462
70.00	185	139.00	25	204.00	1744	303.00	496
73.00	168	140.00	90	205.00	3070	304.00	56
74.00	1986	141.00	1155	206.00	12875	314.00	202
75.00	3165	142.00	389	207.00	1536	315.00	373
76.00	1107	143.00	315	208.00	377	316.00	264
77.00	23448	144.00	353	209.00	108	323.00	1311
78.00	1668	146.00	189	210.00	139	324.00	233
79.00	1398	147.00	545	211.00	586	327.00	258
80.00	1202	148.00	1288	212.00	60	328.00	112
81.00	1668	149.00	273	215.00	111	332.00	50
82.00	435	150.00	71	216.00	258	334.00	899
83.00	259	151.00	197	217.00	3273	335.00	182
84.00	151	152.00	120	218.00	424	341.00	59
85.00	275	153.00	424	221.00	3966	346.00	316
86.00	540	154.00	360	223.00	794	352.00	332
87.00	267	155.00	621	224.00	7294	353.00	308
88.00	50	156.00	1094	225.00	1835	354.00	411
91.00	305	157.00	264	226.00	249	365.00	1571

Date : 13-AUG-2010 11:24

Client ID: DFTPP0813

Instrument: nt6.i

Sample Info: DFTPP0813

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: 08131001.D  
Spectrum: Avg. Scans 2550-2552 (15,21), Background Scan 2542  
Location of Maximum: 198.00  
Number of points: 212

m/z	Y	m/z	Y	m/z	Y	m/z	Y
92.00	367	158.00	214	227.00	2800	366.00	235
93.00	2295	159.00	197	228.00	502	372.00	667
94.00	201	160.00	376	229.00	591	373.00	137
96.00	56	161.00	575	230.00	50	383.00	121
98.00	1599	162.00	221	231.00	306	402.00	241
99.00	1474	165.00	463	234.00	194	403.00	305
100.00	117	166.00	302	235.00	228	404.00	113
101.00	929	167.00	1750	236.00	53	421.00	287
103.00	315	168.00	860	237.00	287	422.00	253
104.00	608	169.00	248	239.00	56	423.00	1964
105.00	363	172.00	212	241.00	216	424.00	475
106.00	245	173.00	249	242.00	460	441.00	6086
107.00	6783	174.00	460	243.00	484	442.00	41864
108.00	1140	175.00	902	244.00	6015	443.00	8448
110.00	13050	176.00	339	245.00	791	444.00	843
111.00	1903	177.00	441	246.00	1052		
112.00	272	178.00	148	247.00	262		
115.00	197	179.00	1797	249.00	236		
116.00	492	180.00	1222	253.00	108		

Date : 13-AUG-2010 11:24

Client ID: DFTPP0813

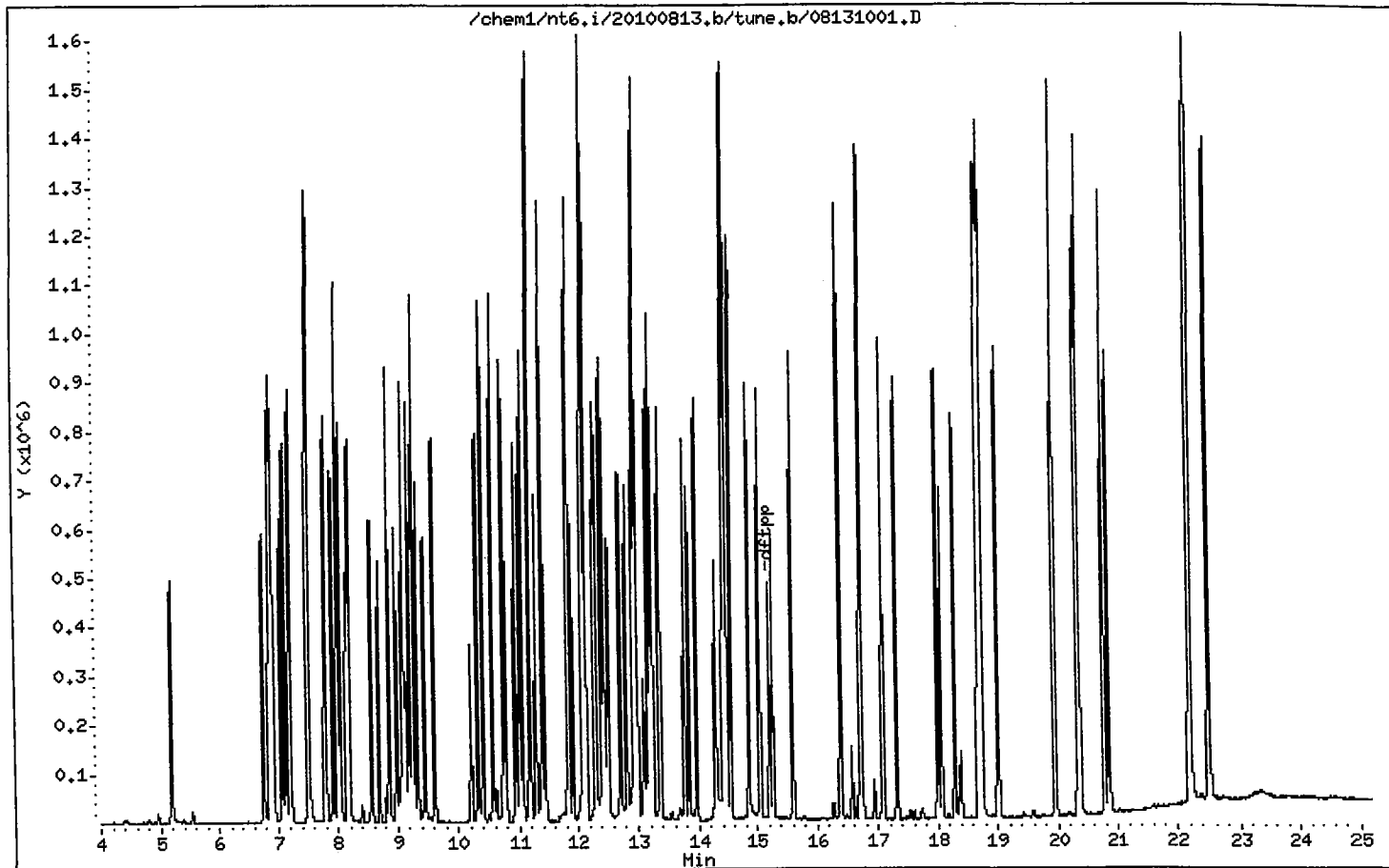
Instrument: nt6.i

Sample Info: DFTPP0813

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25



Analytical Resources Inc.  
ABN by sw846 8270C  
DDT Breakdown Report

Data file: /chem1/nt6.i/20100813.b/ddt.b/08131001.D    ARI ID: CC0813  
Method: /chem1/nt6.i/20100813.b/ddt.b/sw846ddt.m    Misc: 10-  
Analysis Date: 13-AUG-2010 11:24    Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	14.284	109541
Benzidine	16.682	61901
4,4'-DDE	----	----
4,4'-DDD	17.596	6052
4,4'-DDT	18.060	253360

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

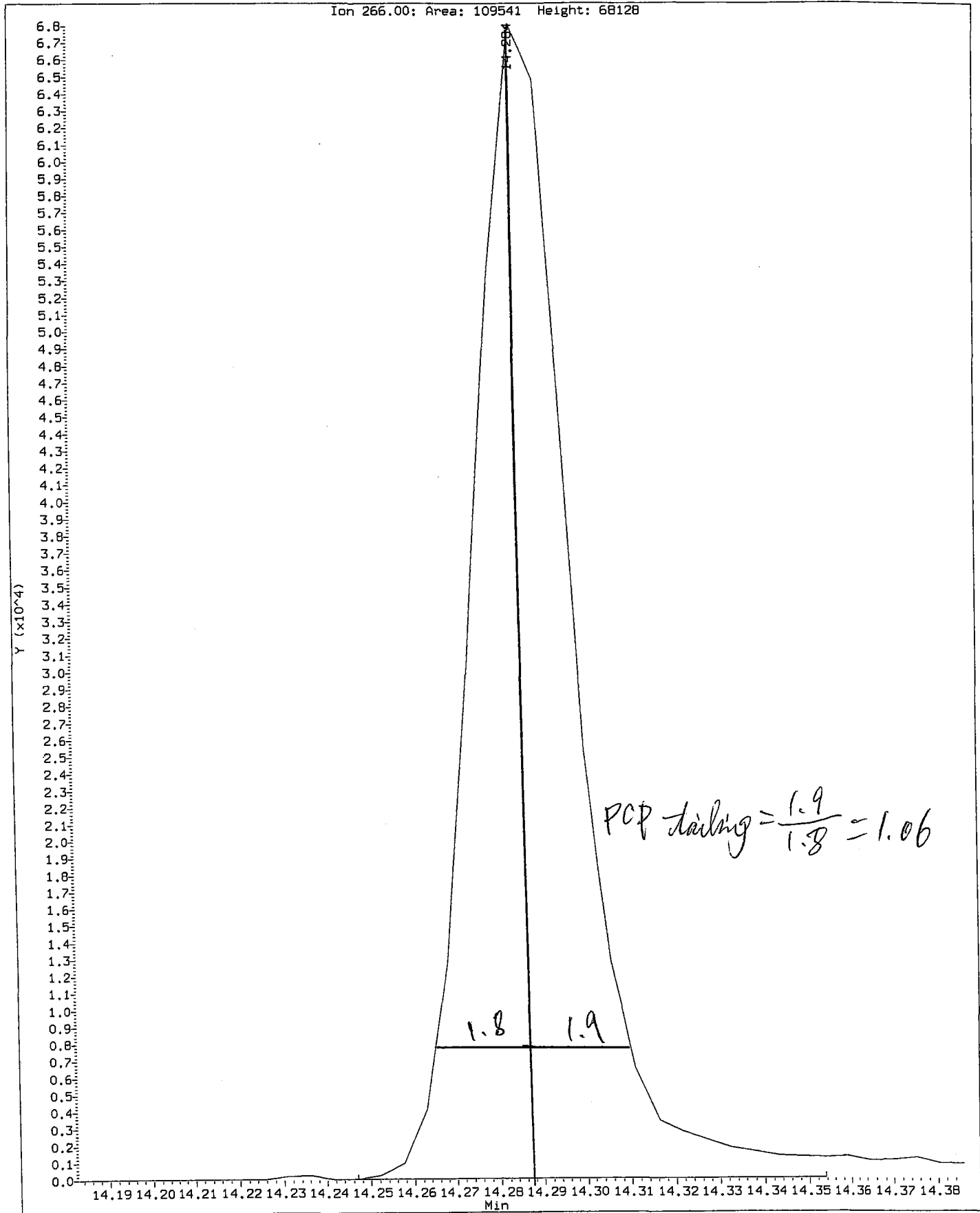
$$\text{DDT Percent Breakdown} = \frac{(0 + 6052) * 100}{(0 + 6052 + 253360)}$$

DDT Percent Breakdown = 2.3 %

*OK*      *8/13/10*

Data File: /chem1/nt6.i/20100813.b/ddt.b/08131001.D  
Injection Date: 13-AUG-2010 11:24  
Instrument: nt6.i  
Client Sample ID: CC0813

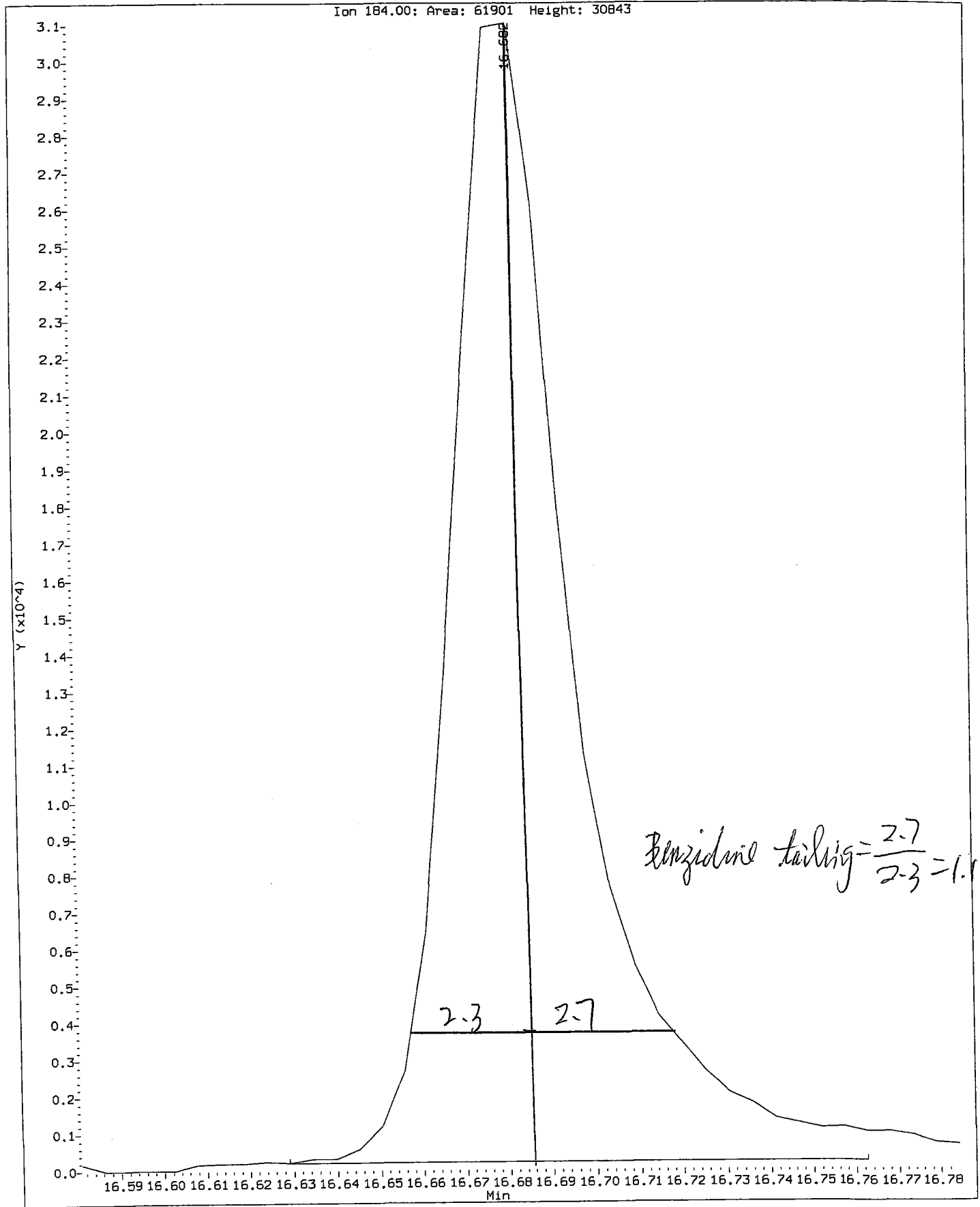
Compound: Pentachlorophenol  
CAS Number: 87-86-5



RG54 : 00753

Data File: /chem1/nt6.1/20100813.b/ddt.b/08131001.D  
Injection Date: 13-AUG-2010 11:24  
Instrument: nt6.1  
Client Sample ID: CC0813

Compound: Benzidine  
CAS Number:



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100813.b/08131006.D  
 Lab Smp Id: RG54H Client Smp ID: PSB17-0-0.5-072810  
 Inj Date : 13-AUG-2010 14:09  
 Operator : JZ Inst ID: nt6.i  
 Smp Info : RG54H  
 Misc Info : 10-18209  
 Comment : lul Injection  
 Method : /chem1/nt6.i/20100813.b/SW846072310.m  
 Meth Date : 13-Aug-2010 15:44 jianqing Quant Type: ISTD  
 Cal Date : 23-JUL-2010 18:38 Cal File: 07231007.D  
 Als bottle: 6  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*08/13/10*

Concentration Formula:  $Amt * DF * Vt / (Ws * (100 - M) / 100) * CpndVariable$

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	27.00000	Weight of sample extracted (g)
M	6.50000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)
* 27 Naphthalene-d8	136	9.241	9.248	(1.000)	626035	20.0000	
28 Naphthalene	128	Compound Not Detected.					
32 2-Methylnaphthalene	141	Compound Not Detected.					
105 1-methylnaphthalene	141	Compound Not Detected.					
\$ 36 2-Fluorobiphenyl	172	11.052	11.058	(0.914)	510279	19.4884	386.0
40 Acenaphthylene	152	Compound Not Detected.					
* 42 Acenaphthene-d10	164	12.088	12.089	(1.000)	374024	20.0000	
44 Acenaphthene	153	Compound Not Detected.					
46 Dibenzofuran	168	Compound Not Detected.					
49 Fluorene	166	Compound Not Detected.					
* 59 Phenanthrene-d10	188	14.438	14.439	(1.000)	619985	20.0000	
60 Phenanthrene	178	14.470	14.477	(1.002)	52671	1.36770	27.09
61 Anthracene	178	Compound Not Detected.					
64 Fluoranthene	202	Compound Not Detected.					
65 Pyrene	202	16.740	16.736	(0.894)	35173	0.68840	13.63

Compounds	QUANT SIG		CONCENTRATIONS					
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
=====	====	==	=====	=====	=====	=====	=====	
\$ 66 Terphenyl-d14	244	17.098	17.088	(0.913)	597771	19.8905	393.9	
68 Benzo (a) anthracene	228	Compound Not Detected.						
* 69 Chrysene-d12	240	18.732	18.717	(1.000)	848355	20.0000		
71 Chrysene	228	18.759	18.755	(1.001)	93495	2.03672	40.34	
187 Total Benzo(a)fluoranthenes	252	Compound Not Detected.						
76 Benzo (a) pyrene	252	Compound Not Detected.						
* 77 Perylene-d12	264	20.890	20.849	(1.000)	705991	20.0000		
78 Indeno (1,2,3-cd) pyrene	276	Compound Not Detected.						
79 Dibenzo (a,h) anthracene	278	Compound Not Detected.						
80 Benzo (g,h,i) perylene	276	Compound Not Detected.						

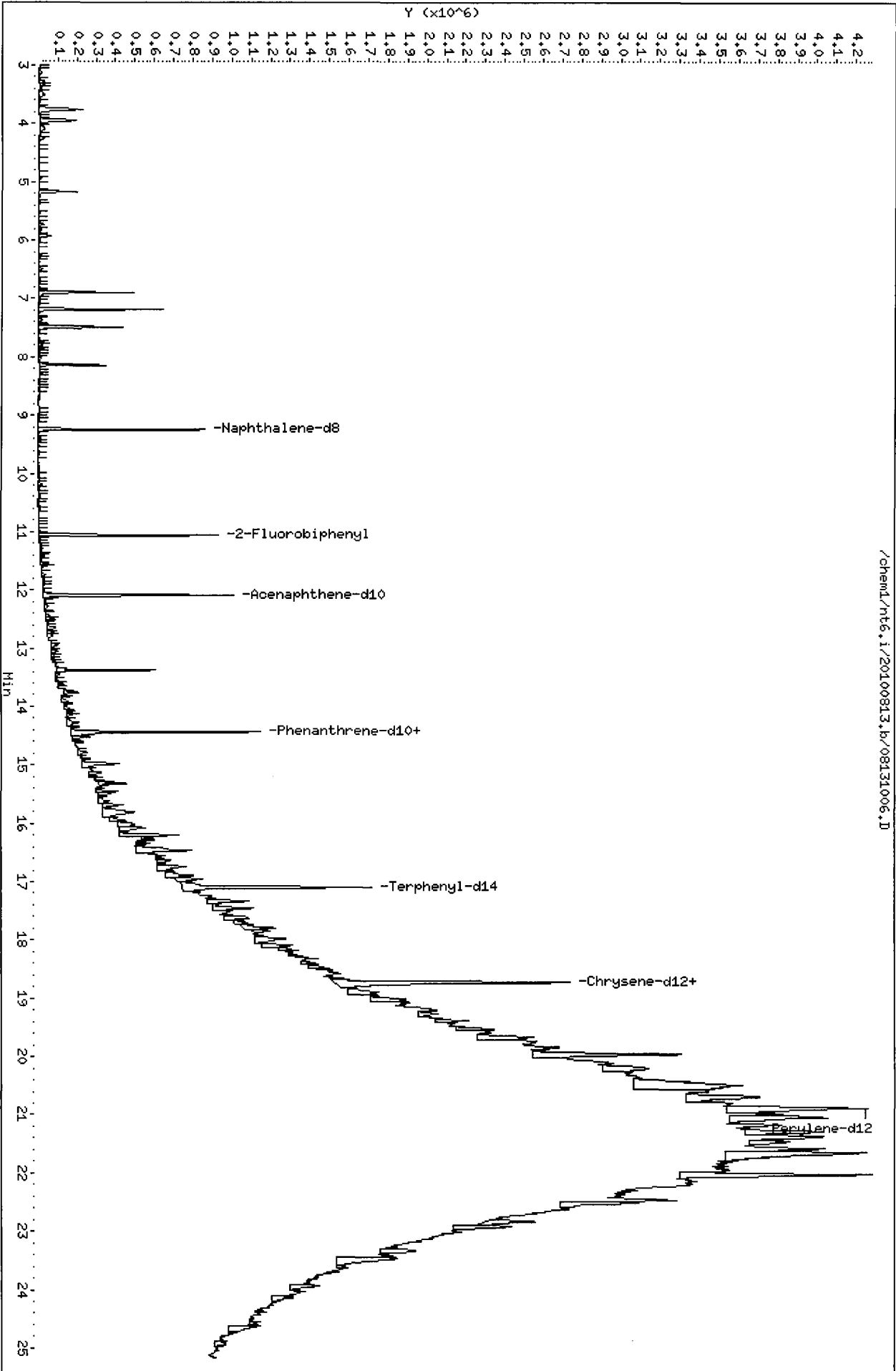






Data File: /chem1/nt6.i/20100813.b/08131006.D  
 Date: 13-AUG-2010 14:09  
 Client ID: PS817-0-0.5-072810  
 Sample Info: RG54H  
 Volume Injected (uL): 1.0  
 Column phase: ZB-Smsi

Instrument: nt6.i  
 Operator: JZ  
 Column diameter: 0.32



Date : 13-AUG-2010 14:09

Client ID: PSB17-0-0.5-072810

Instrument: nt6.i

Sample Info: RG54H

Volume Injected (uL): 1.0

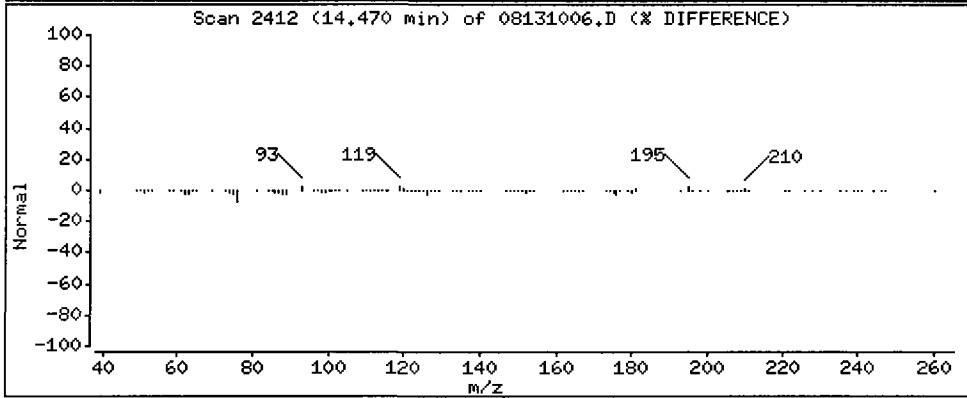
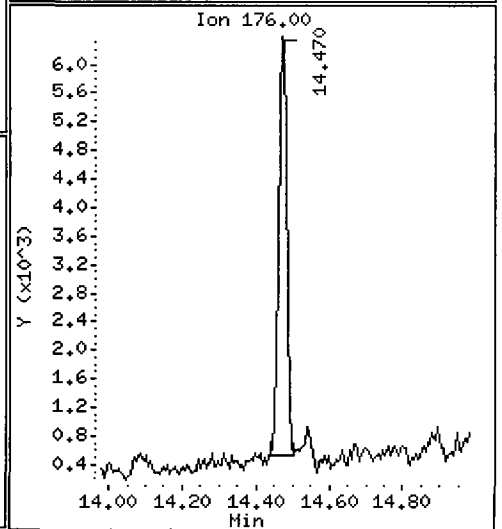
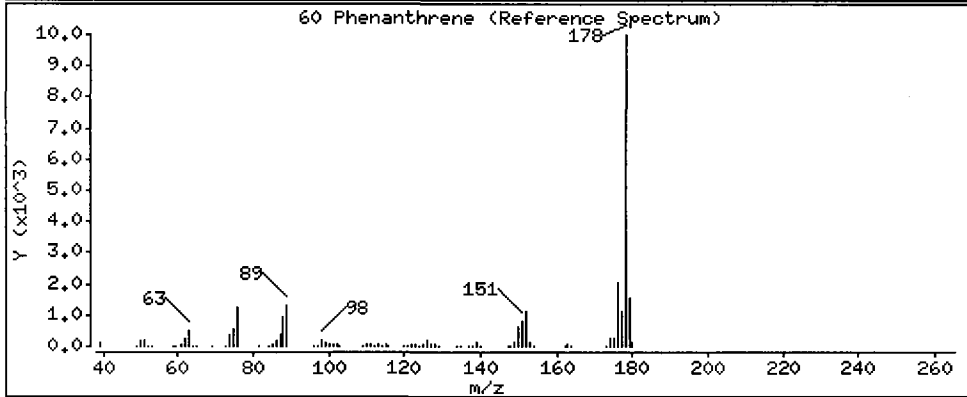
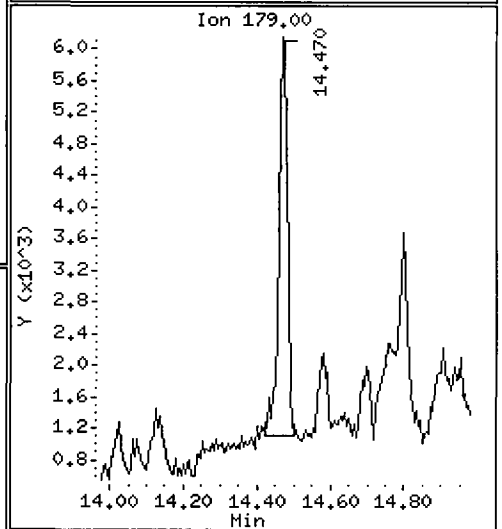
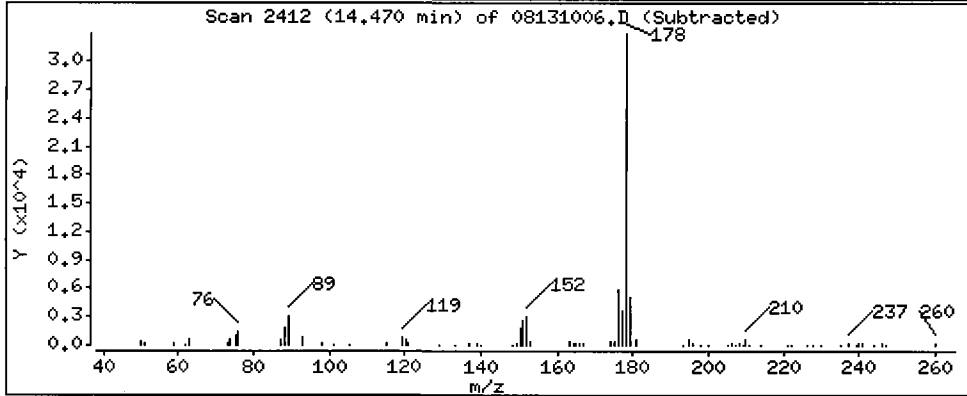
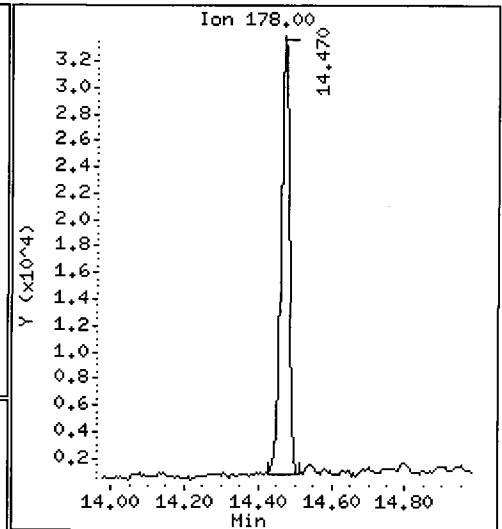
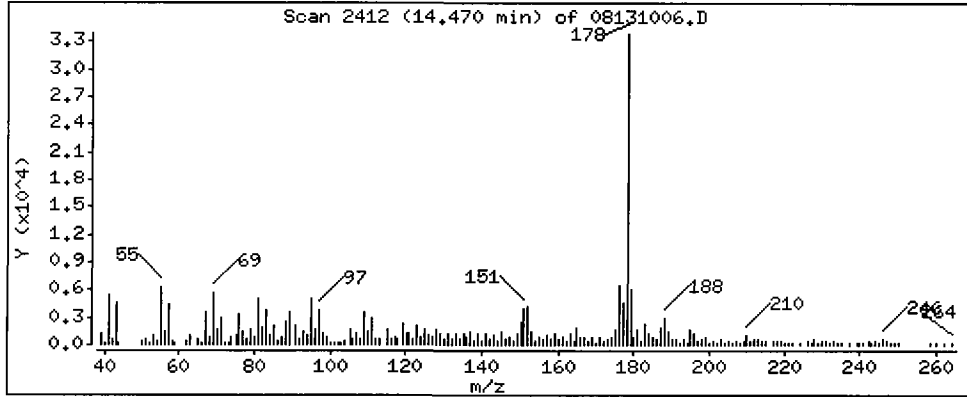
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

60 Phenanthrene

Concentration: 27.09 ug/kg



Date : 13-AUG-2010 14:09

Client ID: PSB17-0-0.5-072810

Instrument: nt6.i

Sample Info: RG54H

Volume Injected (uL): 1.0

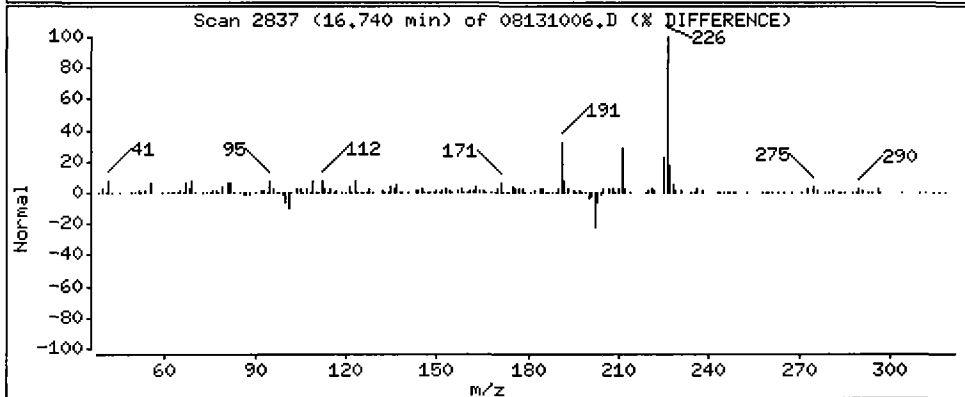
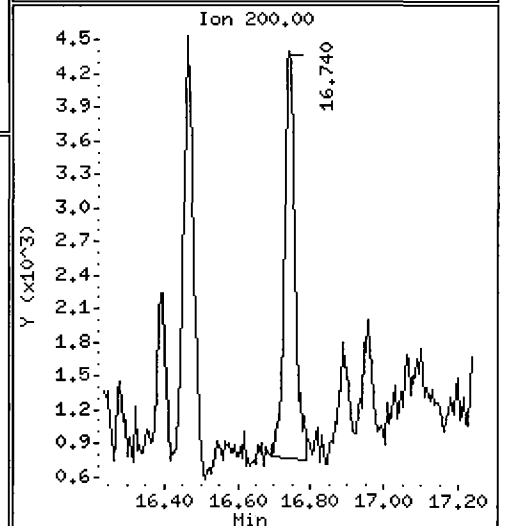
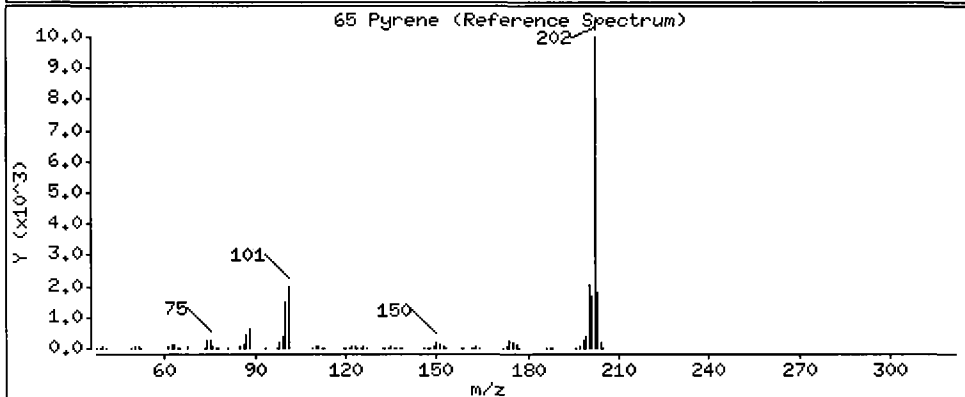
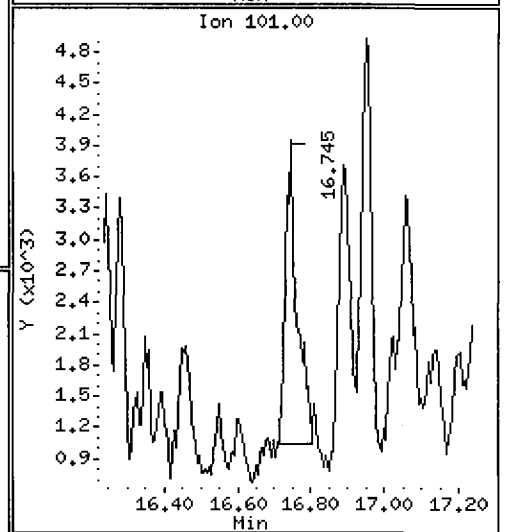
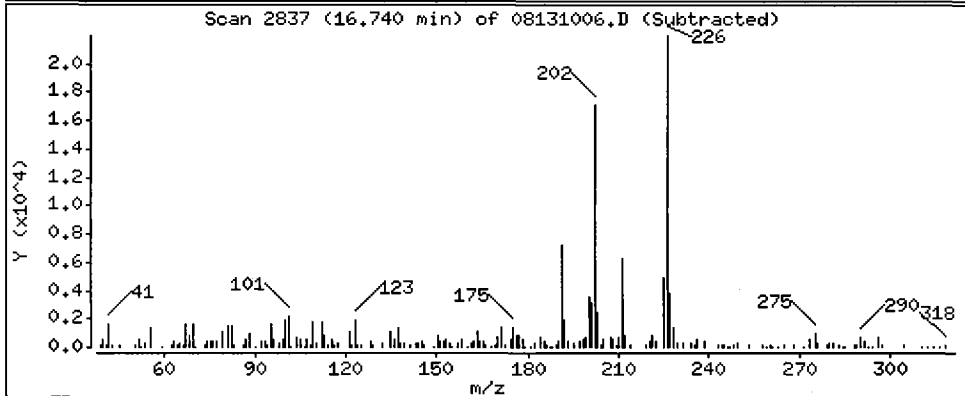
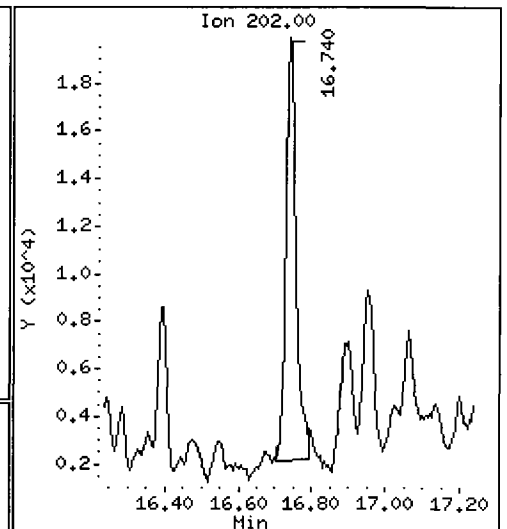
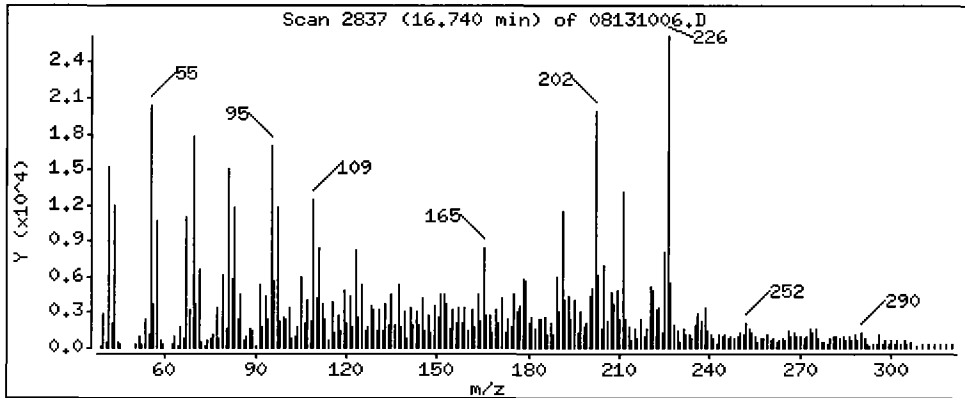
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

65 Pyrene

Concentration: 13.63 ug/kg



Date : 13-AUG-2010 14:09

Client ID: PSB17-0-0,5-072810

Instrument: nt6.i

Sample Info: RG54H

Volume Injected (uL): 1.0

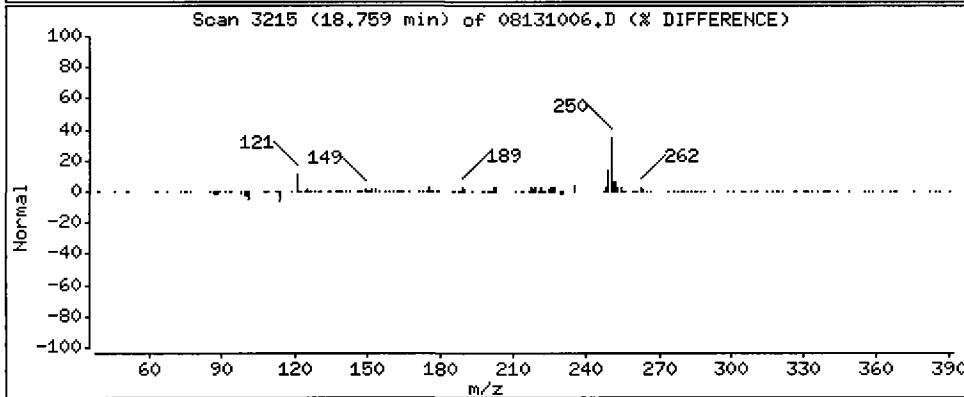
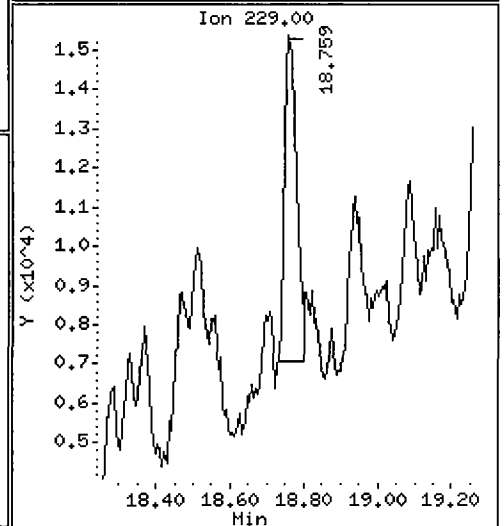
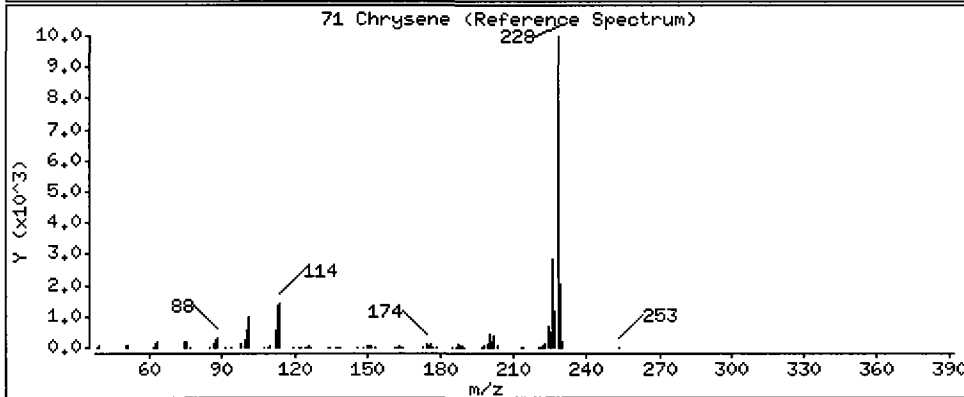
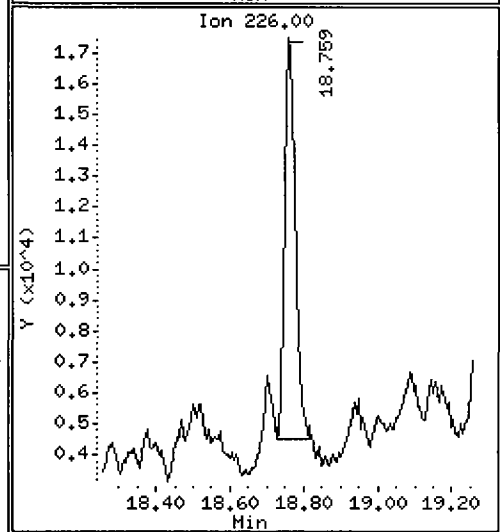
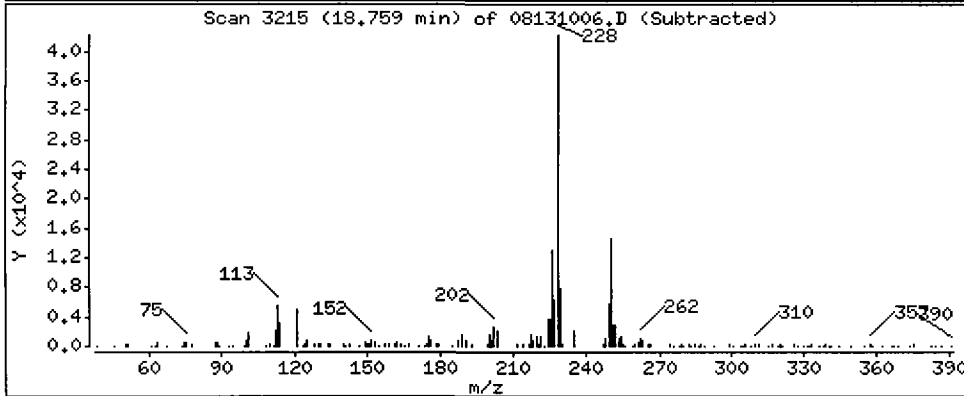
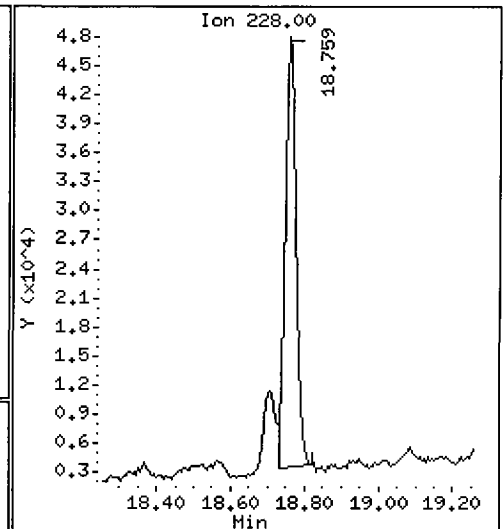
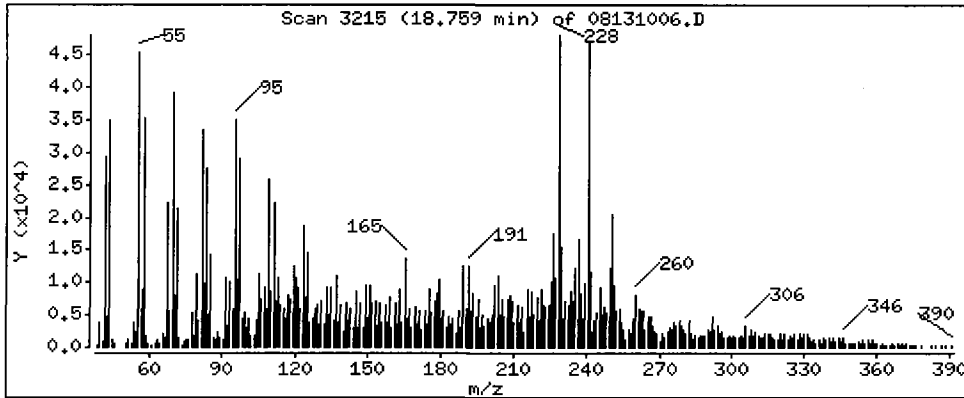
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0,32

71 Chrysene

Concentration: 40,34 ug/kg



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100813.b/08131009.D  
 Lab Smp Id: RG54E Client Smp ID: PSB14-7-9-072810  
 Inj Date : 13-AUG-2010 15:48  
 Operator : JZ Inst ID: nt6.i  
 Smp Info : RG54E,3,  
 Misc Info : 10-18206  
 Comment : lul Injection  
 Method : /chem1/nt6.i/20100813.b/SW846072310.m  
 Meth Date : 13-Aug-2010 15:44 jianqing Quant Type: ISTD  
 Cal Date : 23-JUL-2010 18:38 Cal File: 07231007.D  
 Als bottle: 9  
 Dil Factor: 3.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*12 08/13/10*

Concentration Formula:  $Amt * DF * Vt / (Ws * (100 - M) / 100) * CpndVariable$

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	29.30000	Weight of sample extracted (g)
M	10.90000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 27 Naphthalene-d8	136	9.248	9.248	(1.000)	618067	20.0000	
28 Naphthalene	128				Compound Not Detected.		
32 2-Methylnaphthalene	141				Compound Not Detected.		
105 1-methylnaphthalene	141				Compound Not Detected.		
\$ 36 2-Fluorobiphenyl	172	11.058	11.058	(0.914)	144874	5.57749	320.5
40 Acenaphthylene	152				Compound Not Detected.		
* 42 Acenaphthene-d10	164	12.094	12.089	(1.000)	371040	20.0000	
44 Acenaphthene	153				Compound Not Detected.		
46 Dibenzofuran	168				Compound Not Detected.		
49 Fluorene	166				Compound Not Detected.		
* 59 Phenanthrene-d10	188	14.444	14.439	(1.000)	617674	20.0000	
60 Phenanthrene	178				Compound Not Detected.		
61 Anthracene	178				Compound Not Detected.		
64 Fluoranthene	202				Compound Not Detected.		
65 Pyrene	202				Compound Not Detected.		

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	====	==	=====	=====	=====	=====	=====
\$ 66 Terphenyl-d14	244	17.094	17.088	(0.913)	73238	2.92285	167.9
68 Benzo(a)anthracene	228		Compound Not Detected.				
* 69 Chrysene-d12	240	18.728	18.717	(1.000)	707331	20.0000	
71 Chrysene	228		Compound Not Detected.				
187 Total Benzofluoranthenes	252		Compound Not Detected.				
76 Benzo(a)pyrene	252		Compound Not Detected.				
* 77 Perylene-d12	264	20.864	20.849	(1.000)	404040	20.0000	
78 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.				
79 Dibenzo(a,h)anthracene	278		Compound Not Detected.				
80 Benzo(g,h,i)perylene	276		Compound Not Detected.				



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt6.i  
 Lab File ID: 08131009.D  
 Lab Smp Id: RG54E  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem1/nt6.i/20100813.b/SW846072310.m  
 Misc Info: 10-18206

Calibration Date: 13-AUG-2010  
 Calibration Time: 11:24  
 Client Smp ID: PSB14-7-9-072810  
 Level: LOW  
 Sample Type: Soil

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	584137	292068	1168274	618067	5.81
42 Acenaphthene-d10	320442	160221	640884	371040	15.79
59 Phenanthrene-d10	503793	251896	1007586	617674	22.60
69 Chrysene-d12	532343	266172	1064686	707331	32.87
77 Perylene-d12	517269	258634	1034538	404040	-21.89

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.25	8.75	9.75	9.25	0.00
42 Acenaphthene-d10	12.09	11.59	12.59	12.09	0.04
59 Phenanthrene-d10	14.44	13.94	14.94	14.44	0.04
69 Chrysene-d12	18.72	18.22	19.22	18.73	0.06
77 Perylene-d12	20.85	20.35	21.35	20.86	0.08

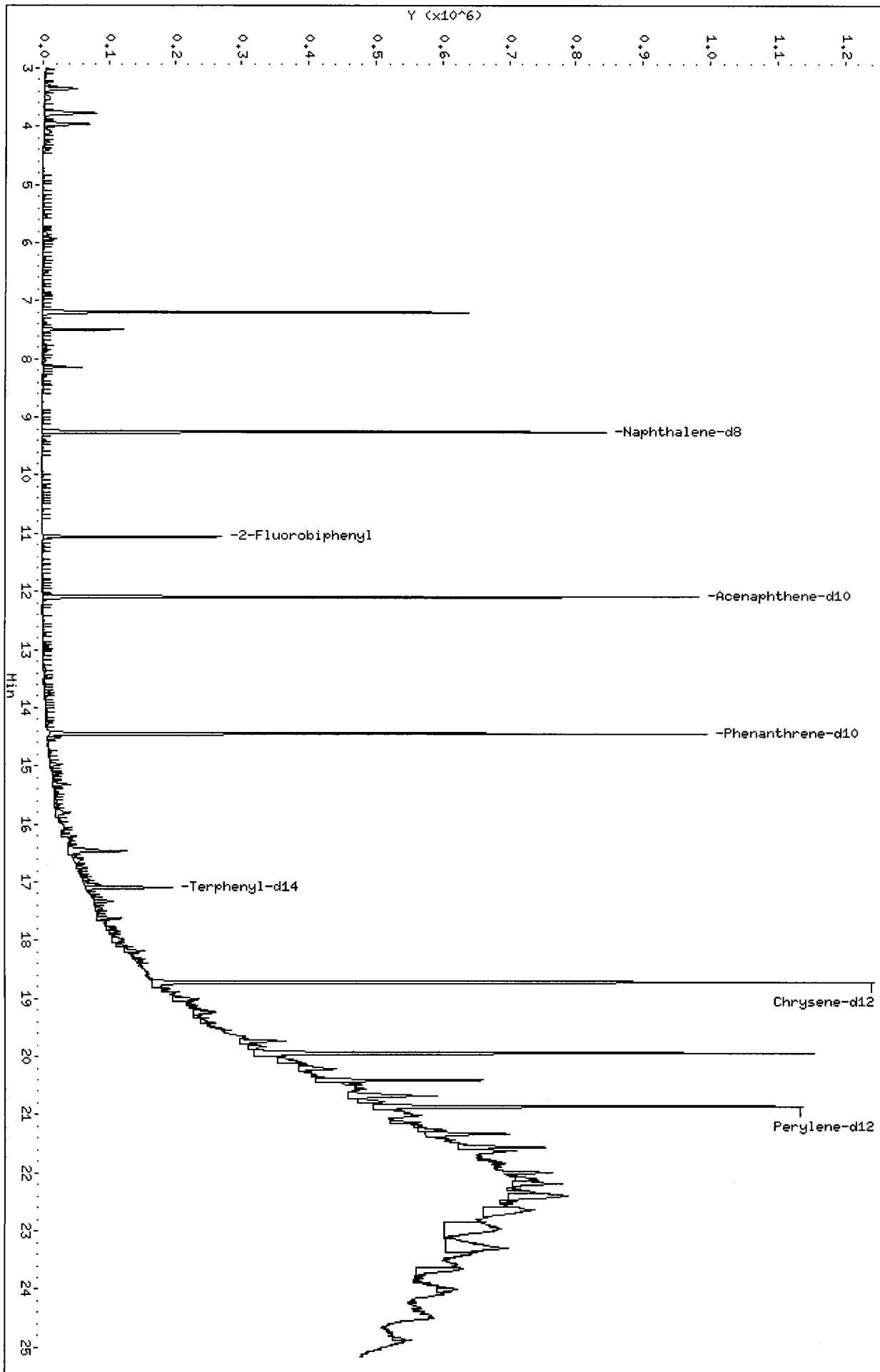
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: /chem1/nt6.1/20100813.b/08131009.D  
Date: 13-AUG-2010 15:48  
Client ID: PSB14-7-9-072810  
Sample Info: RG54E,3,  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt6.1  
Operator: JZ  
Column diameter: 0.32

/chem1/nt6.1/20100813.b/08131009.D





### GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: RG54 & RG60 (RZ) Client ID: Floyd / Sinder

ARI SOP: 801S(SIM-PNA) 802S(Butyl Tins) 804S(SVOA-8270D) 805S(op-Pest)

Parameter(s): 8270

Instrument: NT-2 NT-4 NT-6 NT-8 NT11

Curve Date: 7/19/10 Analysis Start Date: 8/9/10

DFTPP Tune Meets Criteria?	<input checked="" type="checkbox"/> YES / NO	Internal Standard Meets Criteria?	<input checked="" type="checkbox"/> YES / NO
DDT Breakdown <20%?	<input checked="" type="checkbox"/> YES / NO / NA	Method Blank In Control?	<input checked="" type="checkbox"/> YES / NO
Peak Tailing Factor ≤2?	<input checked="" type="checkbox"/> YES / NO / NA	LCS / LCSD Recovery In Control?	<input checked="" type="checkbox"/> YES / NO
ICal acceptable?	<input checked="" type="checkbox"/> YES / NO	CCal acceptable?	<input checked="" type="checkbox"/> YES / NO
Q flag applied?	<input checked="" type="checkbox"/> YES / NO	Q flag applied?	<input checked="" type="checkbox"/> YES / NO
Surrogate Recovery in Control?	<input checked="" type="checkbox"/> YES / NO	Special Analysis Criteria Met?	YES / NO / <input checked="" type="checkbox"/> NA
Manual Integrations for ICal?	<input checked="" type="checkbox"/> YES / NO	Manual Integrations for Samples?	Yes / <input checked="" type="checkbox"/> NO

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

Re-extraction for samples RG54A & RG60A-C + MB/LCS  
Forms included.

Based on: RG54 & RG60.

**Additional Details on Reverse: Yes / No**

Analyst: [Signature] Date: 8/20/10  
Reviewer: VTS Date: 8.20.10

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt4.i/20100819.b

ARI Job No.: CC08 Method: SW846100719.m Instrument: nt4.i Date: 19-AUG-2010

*AD 08/20/10*

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1340	08191001.d	CC0819	CC0819	1	Benzyl alcohol,
1556	08191005.d	RG54MBS2	RG54MBS2	1	NO MANUAL INTEGRATION
1630	08191006.d	RG54LCSS2	RG54LCSS2	1	NO MANUAL INTEGRATION
1703	08191007.d	RG54ARE	PSB14-0-.5	1	NO MANUAL INTEGRATION
1737	08191008.d	RG60ARE	PSB13-0-0.	1	NO MANUAL INTEGRATION
1811	08191009.d	RG60BRE	PSB13-1.5-	1	NO MANUAL INTEGRATION
2215	08191016.d	RG60CRE	PSB13-2-4-	5	NO MANUAL INTEGRATION

**Analytical Resources Inc.: Organics Instrument Log**  
**NT-4 Serial No.: GC = US00010849; MS = US72821113**

Date: 8/19/10 Analysis: 8270 Analyst: AB  
 GC Program: ABN Column No: 172294 Column Type: ZB-5MS  
 Instrument Tune (.U or .CT.): 100716 EM Voltage: 1247  
 Calibration File: 0819/001 Curve Date: 7/19/10

IS/SS	Ical/Ccal	LCS/ICV
<u>1752-1</u>	<u>1747-3, 1733-1</u>	
	<u>1735-1, 1736-1</u>	
	<u>17019, 1753-5</u>	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt4.i/20100819.b

Time	Filename	LabID	ClientID	DF															
1	1340	08191001.d	CC0819	CC0819	1	7.68	386792	9.72	1352410	12.57	840037	14.93	1383202	19.22	1161620	21.37	1257185	20.38	1834295
2	1415	08191002.d	RG79B	PSB11-1.5-2-	3														
3	1449	08191003.d	RG79C	PSB11-2-4-07	5	9.71	1283506	12.56	802848	14.92	1488857	19.26	414979	21.46	392234				
4	1523	08191004.d	RG79D	PSB11-2-4-07	5	9.72	1066649	12.57	641631	14.93	1097217	19.24	888111	21.43	486900				
5	1556	08191005.d	RG54MBS2	RG54MBS2	1	9.71	1015849	12.56	622493	14.92	1028403	19.21	991004	21.36	879245				
6	1630	08191006.d	RG54LCSS2	RG54LCSS2	1	9.72	1100384	12.56	664342	14.92	1115640	19.22	1048244	21.37	935470				
7	1703	08191007.d	RG54ARE	PSB14-0-.5-0	1	9.72	1332651	12.56	801090	14.92	1338340	19.22	1284700	21.37	959185				
8	1737	08191008.d	RG60ARE	PSB13-0-0-5-	1	9.71	1244824	12.56	755544	14.92	1241479	19.21	1145912	21.36	970947				
9	1811	08191009.d	RG60BRE	PSB13-1.5-2-	1	9.71	1233306	12.56	731833	14.92	1250218	19.21	1139194	21.36	923017				
10	1844	08191010.d	RG60CRE	PSB13-2-4-07	1	9.71	936247	12.55	311511	14.92	540526	19.21	524158	21.37	377039				
11	1918	08191011.d	RG790	PSB15-13-15-	3	9.72	1605673	12.56	993285	14.92	1633598	19.22	1528883	21.37	1121219				
12	2001	08191012.d	Rinse0817	Rinse0817	5														
13	2035	08191013.d	RG79B	PSB11-1.5-2-	10	9.72	1581290	12.56	966301	14.92	1688418	19.23	1521945	21.39	933504				
14	2108	08191014.d	RG79C	PSB11-2-4-07	10	9.72	1714387	12.56	1051836	14.92	1832866	19.24	1370983	21.42	624089				
15	2141	08191015.d	RG79D	PSB11-2-4-07	10	9.72	1588593	12.56	1023882	14.92	1770132	19.23	1525443	21.40	762859				
16	2215	08191016.d	RG60CRE	PSB13-2-4-07	5	9.72	1889642	12.56	1146096	14.92	1980045	19.22	1705384	21.37	895198				

*AB 08/20/10*

**Maintenance / Comments**

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**Maintenance Verification** (Identify ICal or CCal that demonstrates the instrument is in control):  
 Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt4.i/20100819.b

Instrument: nt4.i Date: 19-AUG-2010 Method: SW846100719.m

INITIAL CAL: 19-JUL-2010

Compound	%RSD or R <sup>2</sup>
-----	
NO Q-FLAGS	
-----	

*Q 08/19/10*

CONTINUING CAL: 19-AUG-2010

Compound	%D
-----	
Benzyl alcohol	-22.2
Hexachlorocyclopentadiene	-47.1
4-Nitrophenol	-26.2
Pentachlorophenol	-33.3
-----	

*} NTC*

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt4.i                      Injection Date: 19-AUG-2010 13:40  
 Lab File ID: 08191001.d                Init. Cal. Date(s): 19-JUL-2010 19-JUL-2010  
 Analysis Type:                            Init. Cal. Times: 16:18 19:48  
 Lab Sample ID: CC0819                    Quant Type: ISTD  
 Method: /chem3/nt4.i/20100819.b/SW846100719.m

*B 08/19/10*

COMPOUND	___		CCAL	MIN	MAX		CURVE TYPE
	RRF / AMOUNT	RF25			RRF25	RRF	
\$ 1 2-Fluorophenol	1.08371	1.08749	1.08749	0.010	0.34807	20.00000	Averaged
\$ 2 Phenol-d5	1.06604	1.09896	1.09896	0.010	3.08780	20.00000	Averaged
3 Phenol	1.37947	1.32545	1.32545	0.100	-3.91645	20.00000	Averaged
\$ 5 2-Chlorophenol-d4	1.14386	1.09799	1.09799	0.010	-4.01038	20.00000	Averaged
4 Bis(2-Chloroethyl) ether	1.02875	1.03375	1.03375	0.700	0.48543	20.00000	Averaged
6 2-Chlorophenol	1.31278	1.22941	1.22941	0.800	-6.35090	20.00000	Averaged
7 1,3-Dichlorobenzene	1.49159	1.41579	1.41579	0.010	-5.08147	20.00000	Averaged
9 1,4-Dichlorobenzene	1.50653	1.42105	1.42105	0.010	-5.67448	20.00000	Averaged
\$ 10 1,2-Dichlorobenzene-d4	0.85327	0.76584	0.76584	0.010	-10.24685	20.00000	Averaged
12 1,2-Dichlorobenzene	1.40311	1.29966	1.29966	0.010	-7.37252	20.00000	Averaged
11 Benzyl alcohol	0.78176	0.60825	0.60825	0.010	-22.19565	20.00000	Averaged <-
14 2,2'-oxybis(1-Chloropropane	0.96702	0.98920	0.98920	0.010	2.29369	20.00000	Averaged
13 2-Methylphenol	1.05383	1.03368	1.03368	0.700	-1.91219	20.00000	Averaged
17 Hexachloroethane	0.55799	0.50813	0.50813	0.300	-8.93645	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	0.72131	0.68768	0.68768	0.500	-4.66206	20.00000	Averaged
15 4-Methylphenol	1.09383	1.04854	1.04854	0.600	-4.14039	20.00000	Averaged
\$ 18 Nitrobenzene-d5	0.30955	0.29774	0.29774	0.010	-3.81252	20.00000	Averaged
19 Nitrobenzene	0.30648	0.29306	0.29306	0.200	-4.37809	20.00000	Averaged
20 Isophorone	0.50898	0.49093	0.49093	0.300	-3.54621	20.00000	Averaged
21 2-Nitrophenol	0.19148	0.20025	0.20025	0.100	4.58281	20.00000	Averaged
22 2,4-Dimethylphenol	0.34090	0.31720	0.31720	0.200	-6.95285	20.00000	Averaged
23 Bis(2-Chloroethoxy)methane	0.35475	0.35689	0.35689	0.050	0.60215	20.00000	Averaged
24 Benzoic acid	40.94960	50.00000	0.22453	0.010	-18.10080	20.00000	Linear
25 2,4-Dichlorophenol	0.29949	0.28485	0.28485	0.100	-4.88883	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.33353	0.30505	0.30505	0.010	-8.54071	20.00000	Averaged
28 Naphthalene	0.94898	0.92049	0.92049	0.100	-3.00254	20.00000	Averaged
29 4-Chloroaniline	0.37840	0.37075	0.37075	0.010	-2.01979	20.00000	Averaged
30 Hexachlorobutadiene	0.18923	0.16014	0.16014	0.010	-15.37373	20.00000	Averaged
31 4-Chloro-3-methylphenol	0.27464	0.28161	0.28161	0.200	2.53813	20.00000	Averaged
32 2-Methylnaphthalene	0.64492	0.61066	0.61066	0.300	-5.31276	20.00000	Averaged
33 Hexachlorocyclopentadiene	0.29263	0.15490	0.15490	0.001	-47.06517	20.00000	Averaged <-
34 2,4,6-Trichlorophenol	0.36003	0.33929	0.33929	0.200	-5.75927	20.00000	Averaged
35 2,4,5-Trichlorophenol	0.36654	0.35205	0.35205	0.200	-3.95322	20.00000	Averaged
\$ 36 2-Fluorobiphenyl	1.22512	1.10693	1.10693	0.010	-9.64675	20.00000	Averaged
37 2-Chloronaphthalene	1.08775	1.00362	1.00362	0.700	-7.73435	20.00000	Averaged



Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt4.i                      Injection Date: 19-AUG-2010 13:40  
 Lab File ID: 08191001.d                Init. Cal. Date(s): 19-JUL-2010 19-JUL-2010  
 Analysis Type:                            Init. Cal. Times: 16:18 19:48  
 Lab Sample ID: CC0819                    Quant Type: ISTD  
 Method: /chem3/nt4.i/20100819.b/SW846100719.m

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
38 2-Nitroaniline	0.21001	0.23445	0.23445	0.010	11.63627	20.00000	Averaged
39 Dimethylphthalate	1.27768	1.16830	1.16830	0.010	-8.56148	20.00000	Averaged
40 Acenaphthylene	1.64077	1.64542	1.64542	0.900	0.28347	20.00000	Averaged
41 2,6-Dinitrotoluene	0.28751	0.28135	0.28135	0.100	-2.14072	20.00000	Averaged
43 3-Nitroaniline	0.25351	0.24491	0.24491	0.010	-3.39259	20.00000	Averaged
44 Acenaphthene	1.06825	1.03124	1.03124	0.100	-3.46462	20.00000	Averaged
45 2,4-Dinitrophenol	48.78250	50.00000	0.16476	0.030	-2.43499	20.00000	Quadratic
46 Dibenzofuran	1.42396	1.38350	1.38350	0.800	-2.84122	20.00000	Averaged
47 4-Nitrophenol	0.17920	0.13233	0.13233	0.010	-26.15788	20.00000	Averaged <-
48 2,4-Dinitrotoluene	0.37910	0.37690	0.37690	0.200	-0.58017	20.00000	Averaged
50 Diethylphthalate	1.32169	1.12516	1.12516	0.010	-14.86928	20.00000	Averaged
49 Fluorene	1.23204	1.15978	1.15978	0.100	-5.86502	20.00000	Averaged
51 4-Chlorophenyl-phenylether	0.59756	0.54470	0.54470	0.100	-8.84488	20.00000	Averaged
52 4-Nitroaniline	0.27464	0.27565	0.27565	0.010	0.36778	20.00000	Averaged
53 4,6-Dinitro-2-methylphenol	0.13800	0.13213	0.13213	0.001	-4.24918	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.56415	0.50575	0.50575	0.010	-10.35158	20.00000	Averaged
\$ 55 2,4,6-Tribromophenol	0.14302	0.12575	0.12575	0.010	-12.07377	20.00000	Averaged
56 4-Bromophenyl-phenylether	0.20445	0.18417	0.18417	0.100	-9.91554	20.00000	Averaged
57 Hexachlorobenzene	0.20941	0.18938	0.18938	0.100	-9.56756	20.00000	Averaged
58 Pentachlorophenol	0.14268	0.09521	0.09521	0.010	-33.27295	20.00000	Averaged <-
60 Phenanthrene	1.03607	0.93394	0.93394	0.700	-9.85752	20.00000	Averaged
61 Anthracene	1.05988	0.97346	0.97346	0.700	-8.15356	20.00000	Averaged
62 Carbazole	0.96311	0.92265	0.92265	0.010	-4.20114	20.00000	Averaged
63 Di-n-butylphthalate	1.22802	1.17490	1.17490	0.010	-4.32575	20.00000	Averaged
64 Fluoranthene	1.07347	1.00657	1.00657	0.600	-6.23250	20.00000	Averaged
65 Pyrene	1.26819	1.23068	1.23068	0.600	-2.95799	20.00000	Averaged
\$ 66 Terphenyl-d14	0.77444	0.72782	0.72782	0.010	-6.01939	20.00000	Averaged
67 Butylbenzylphthalate	0.64359	0.63675	0.63675	0.010	-1.06330	20.00000	Averaged
68 Benzo(a)anthracene	1.17238	1.12008	1.12008	0.800	-4.46062	20.00000	Averaged
70 3,3'-Dichlorobenzidine	0.37917	0.40387	0.40387	0.010	6.51400	20.00000	Averaged
71 Chrysene	1.14746	1.09523	1.09523	0.700	-4.55143	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.56782	0.54664	0.54664	0.010	-3.72986	20.00000	Averaged
73 Di-n-octylphthalate	0.99436	0.92033	0.92033	0.010	-7.44503	20.00000	Averaged
74 Benzo(b)fluoranthene	1.24491	1.12486	1.12486	0.700	-9.64337	20.00000	Averaged
75 Benzo(k)fluoranthene	1.26106	1.16570	1.16570	0.700	-7.56188	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt4.i                      Injection Date: 19-AUG-2010 13:40  
 Lab File ID: 08191001.d                Init. Cal. Date(s): 19-JUL-2010 19-JUL-2010  
 Analysis Type:                            Init. Cal. Times: 16:18 19:48  
 Lab Sample ID: CC0819                    Quant Type: ISTD  
 Method: /chem3/nt4.i/20100819.b/SW846100719.m

COMPOUND	CCAL		MIN		MAX		CURVE TYPE
	RRF / AMOUNT	RF25	RRF25	RRF	%D / %DRIFT	%D / %DRIFT	
187 Total Benzofluoranthenes	1.18021	1.07624	1.07624	0.010	-8.80909	20.00000	Averaged
76 Benzo(a)pyrene	1.10432	1.03463	1.03463	0.700	-6.31116	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.18581	1.13041	1.13041	0.500	-4.67205	20.00000	Averaged
79 Dibenzo(a,h)anthracene	0.95329	0.92946	0.92946	0.400	-2.49970	20.00000	Averaged
80 Benzo(g,h,i)perylene	1.01362	0.93504	0.93504	0.500	-7.75264	20.00000	Averaged
90 N-Nitrosodimethylamine	0.58263	0.61339	0.61339	0.010	5.27942	20.00000	Averaged
103 Pyridine	1.00478	1.09000	1.09000	0.010	8.48201	20.00000	Averaged
91 Aniline	1.43987	1.36264	1.36264	0.010	-5.36339	20.00000	Averaged
105 1-methylnaphthalene	0.63176	0.60957	0.60957	0.010	-3.51181	20.00000	Averaged

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100819.b/08191001.d  
Lab Smp Id: CC0819 Client Smp ID: CC0819  
Inj Date : 19-AUG-2010 13:40  
Operator : JZ Inst ID: nt4.i  
Smp Info : CC0819,  
Misc Info : 10-  
Comment : 1ul Injection  
Method : /chem3/nt4.i/20100819.b/SW846100719.m  
Meth Date : 19-Aug-2010 18:01 jianqing Quant Type: ISTD  
Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
Als bottle: 2 Continuing Calibration Sample  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: ICALS.sub  
Target Version: 3.50

*Handwritten:* 08/19/10

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112	5.722	5.722	(0.745)	525789	25.0000	25.09
\$ 2 Phenol-d5	99	7.296	7.296	(0.950)	531337	25.0000	25.77
3 Phenol	94	7.320	7.320	(0.953)	640840	25.0000	24.02
\$ 5 2-Chlorophenol-d4	132	7.385	7.385	(0.962)	530865	25.0000	24.00
4 Bis(2-Chloroethyl) ether	93	7.361	7.361	(0.959)	499806	25.0000	25.12
6 2-Chlorophenol	128	7.414	7.414	(0.966)	594408	25.0000	23.41
7 1,3-Dichlorobenzene	146	7.614	7.614	(0.992)	684522	25.0000	23.73
* 8 1,4-Dichlorobenzene-d4	152	7.678	7.678	(1.000)	386792	20.0000	
9 1,4-Dichlorobenzene	146	7.702	7.702	(1.003)	687062	25.0000	23.58
\$ 10 1,2-Dichlorobenzene-d4	152	7.972	7.972	(1.038)	370274	25.0000	22.44
12 1,2-Dichlorobenzene	146	7.996	7.996	(1.041)	628374	25.0000	23.16
11 Benzyl alcohol	108	7.984	7.984	(1.040)	294081	25.0000	19.45 (M)
14 2,2'-oxybis(1-Chloropropane)	45	8.230	8.230	(1.072)	478269	25.0000	25.57
13 2-Methylphenol	108	8.236	8.236	(1.073)	499773	25.0000	24.52
17 Hexachloroethane	117	8.477	8.477	(1.104)	245675	25.0000	22.77
16 N-Nitroso-di-n-propylamine	70	8.454	8.454	(1.101)	332487	25.0000	23.83
15 4-Methylphenol	108	8.471	8.471	(1.103)	506961	25.0000	23.96
\$ 18 Nitrobenzene-d5	82	8.612	8.612	(0.886)	503341	25.0000	24.05
19 Nitrobenzene	77	8.642	8.642	(0.889)	495422	25.0000	23.91
20 Isophorone	82	9.024	9.024	(0.928)	829916	25.0000	24.11
21 2-Nitrophenol	139	9.159	9.159	(0.942)	338532	25.0000	26.15
22 2,4-Dimethylphenol	107	9.300	9.300	(0.956)	536232	25.0000	23.26
23 Bis(2-Chloroethoxy) methane	93	9.429	9.429	(0.970)	603320	25.0000	25.15
24 Benzoic acid	105	9.587	9.587	(0.986)	759148	50.0000	40.95
25 2,4-Dichlorophenol	162	9.558	9.558	(0.983)	481547	25.0000	23.78
26 1,2,4-Trichlorobenzene	180	9.670	9.670	(0.995)	515687	25.0000	22.86
* 27 Naphthalene-d8	136	9.723	9.723	(1.000)	1352410	20.0000	

Compounds	QUANT SIG			AMOUNTS			
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	====	==	=====	=====	=====	=====	=====
28 Naphthalene	128	9.752	9.752	(1.003)	1556095	25.0000	24.25
29 4-Chloroaniline	127	9.905	9.905	(1.019)	626764	25.0000	24.50
30 Hexachlorobutadiene	225	10.069	10.069	(1.036)	270714	25.0000	21.16
31 4-Chloro-3-methylphenol	107	10.745	10.745	(1.105)	476071	25.0000	25.63
32 2-Methylnaphthalene	142	10.868	10.868	(1.118)	1032322	25.0000	23.67
33 Hexachlorocyclopentadiene	237	11.244	11.244	(0.895)	162656	25.0000	13.23
34 2,4,6-Trichlorophenol	196	11.391	11.391	(0.906)	356271	25.0000	23.56
35 2,4,5-Trichlorophenol	196	11.456	11.456	(0.912)	369668	25.0000	24.01
\$ 36 2-Fluorobiphenyl	172	11.514	11.514	(0.916)	1162330	25.0000	22.59
37 2-Chloronaphthalene	162	11.638	11.638	(0.926)	1053851	25.0000	23.07
38 2-Nitroaniline	65	11.884	11.884	(0.946)	246181	25.0000	27.91
39 Dimethylphthalate	163	12.260	12.260	(0.976)	1226765	25.0000	22.86
40 Acenaphthylene	152	12.313	12.313	(0.980)	1727764	25.0000	25.07
41 2,6-Dinitrotoluene	165	12.354	12.354	(0.983)	295432	25.0000	24.46
* 42 Acenaphthene-d10	164	12.566	12.566	(1.000)	840037	20.0000	
43 3-Nitroaniline	138	12.566	12.566	(1.000)	257167	25.0000	24.15
44 Acenaphthene	153	12.613	12.613	(1.004)	1082852	25.0000	24.13
45 2,4-Dinitrophenol	184	12.736	12.736	(1.014)	346013	50.0000	48.78
46 Dibenzofuran	168	12.877	12.877	(1.025)	1452737	25.0000	24.29
47 4-Nitrophenol	109	12.924	12.924	(1.028)	138949	25.0000	18.46
48 2,4-Dinitrotoluene	165	12.977	12.977	(1.033)	395760	25.0000	24.85
50 Diethylphthalate	149	13.412	13.412	(1.067)	1181473	25.0000	21.28
49 Fluorene	166	13.429	13.429	(1.069)	1217820	25.0000	23.53
51 4-Chlorophenyl-phenylether	204	13.459	13.459	(1.071)	571965	25.0000	22.79
52 4-Nitroaniline	138	13.559	13.559	(1.079)	289447	25.0000	25.09
53 4,6-Dinitro-2-methylphenol	198	13.641	13.641	(0.914)	456921	50.0000	47.88
54 N-Nitrosodiphenylamine	169	13.676	13.676	(0.916)	874442	25.0000	22.41
\$ 55 2,4,6-Tribromophenol	330	13.852	13.852	(1.102)	132048	25.0000	21.98
56 4-Bromophenyl-phenylether	248	14.234	14.234	(0.954)	318439	25.0000	22.52
57 Hexachlorobenzene	284	14.451	14.451	(0.968)	327430	25.0000	22.61
58 Pentachlorophenol	266	14.757	14.757	(0.989)	164617	25.0000	16.68
* 59 Phenanthrene-d10	188	14.927	14.927	(1.000)	1383202	20.0000	
60 Phenanthrene	178	14.963	14.963	(1.002)	1614786	25.0000	22.54
61 Anthracene	178	15.033	15.033	(1.007)	1683120	25.0000	22.96
62 Carbazole	167	15.327	15.327	(1.027)	1595262	25.0000	23.95
63 Di-n-butylphthalate	149	16.049	16.049	(1.075)	2031400	25.0000	23.92
64 Fluoranthene	202	16.889	16.889	(1.131)	1740356	25.0000	23.44
65 Pyrene	202	17.236	17.236	(0.897)	1786977	25.0000	24.26
\$ 66 Terphenyl-d14	244	17.565	17.565	(0.914)	1056811	25.0000	23.50
67 Butylbenzylphthalate	149	18.452	18.452	(0.960)	924578	25.0000	24.73
68 Benzo(a)anthracene	228	19.192	19.192	(0.998)	1626387	25.0000	23.88
* 69 Chrysene-d12	240	19.221	19.221	(1.000)	1161620	20.0000	
70 3,3'-Dichlorobenzidine	252	19.210	19.210	(0.999)	586434	25.0000	26.63
71 Chrysene	228	19.263	19.263	(1.002)	1590308	25.0000	23.86
72 bis(2-Ethylhexyl)phthalate	149	19.456	19.456	(0.954)	1253377	25.0000	24.07
* 134 Di-n-octylphthalate-d4	153	20.385	20.385	(1.000)	1834295	20.0000	
73 Di-n-octylphthalate	149	20.396	20.396	(1.001)	2110188	25.0000	23.14

Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	====	==	=====	=====	=====	=====	
74 Benzo(b)fluoranthene	252	20.843	20.843	(0.976)	1767693	25.0000	22.59
75 Benzo(k)fluoranthene	252	20.878	20.878	(0.977)	1831875	25.0000	23.11
187 Total Benzofluoranthenes	252	20.878	20.878	(0.977)	3382596	50.0000	45.60
76 Benzo(a)pyrene	252	21.289	21.289	(0.996)	1625899	25.0000	23.42
* 77 Perylene-d12	264	21.366	21.366	(1.000)	1257185	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	22.770	22.770	(1.066)	1776414	25.0000	23.83
79 Dibenzo(a,h)anthracene	278	22.793	22.793	(1.067)	1460623	25.0000	24.38
80 Benzo(g,h,i)perylene	276	23.134	23.134	(1.083)	1469392	25.0000	23.06
90 N-Nitrosodimethylamine	74	2.873	2.873	(0.374)	296567	25.0000	26.32
103 Pyridine	79	2.844	2.844	(0.370)	527006	25.0000	27.12
91 Aniline	93	7.238	7.238	(0.943)	658823	25.0000	23.66
105 1-methylnaphthalene	142	11.038	11.038	(1.135)	1030493	25.0000	24.12

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt4.i  
 Lab File ID: 08191001.d  
 Lab Smp Id: CC0819  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt4.i/20100819.b/SW846100719.m  
 Misc Info: 10-

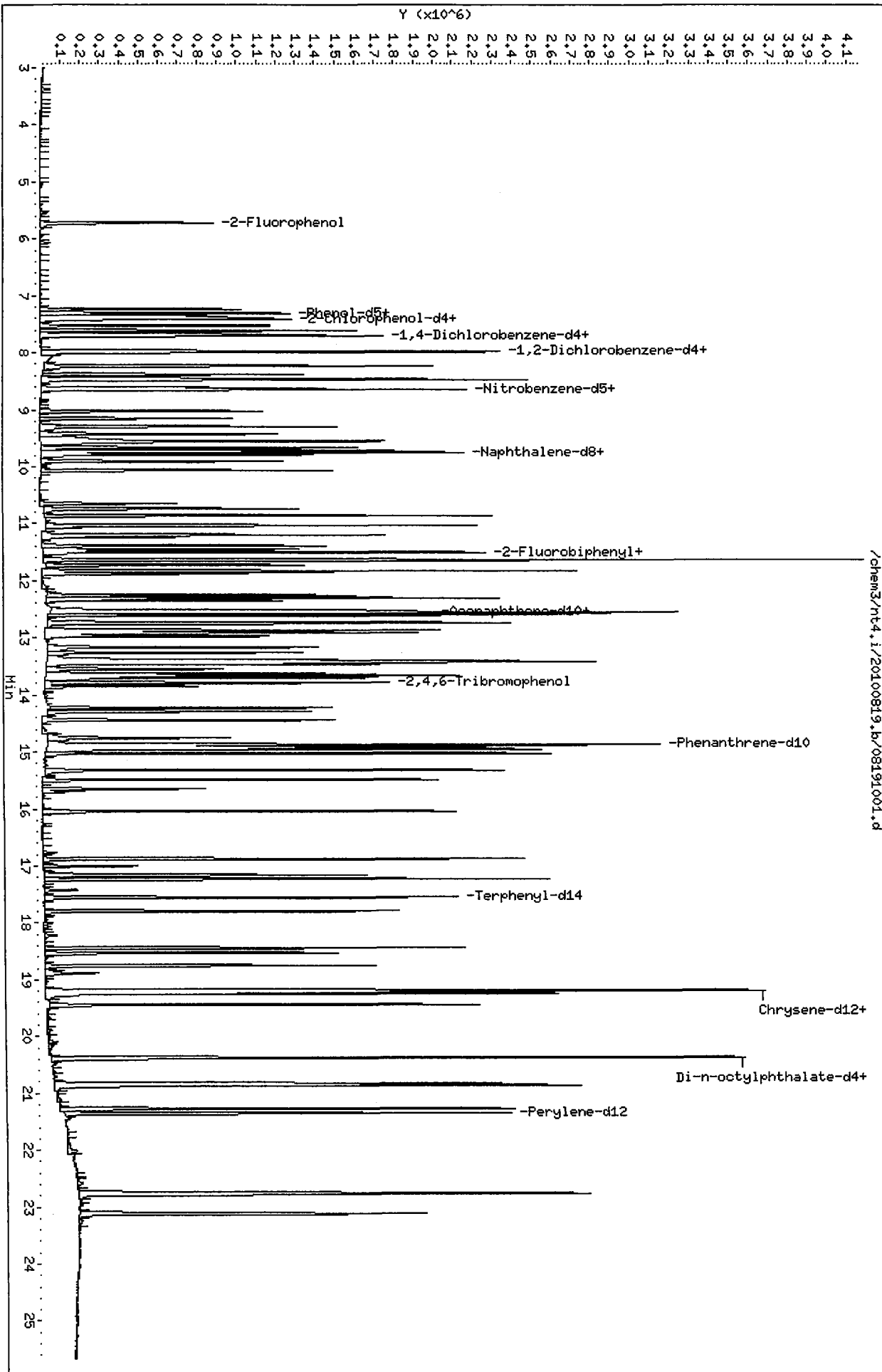
Calibration Date: 19-AUG-2010  
 Calibration Time: 13:40  
 Client Smp ID: CC0819  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	356478	178239	712956	386792	8.50
27 Naphthalene-d8	1293412	646706	2586824	1352410	4.56
42 Acenaphthene-d10	785897	392948	1571794	840037	6.89
59 Phenanthrene-d10	1313990	656995	2627980	1383202	5.27
69 Chrysene-d12	1155293	577646	2310586	1161620	0.55
134 Di-n-octylphthala	1825297	912648	3650594	1834295	0.49
77 Perylene-d12	1146289	573144	2292578	1257185	9.67

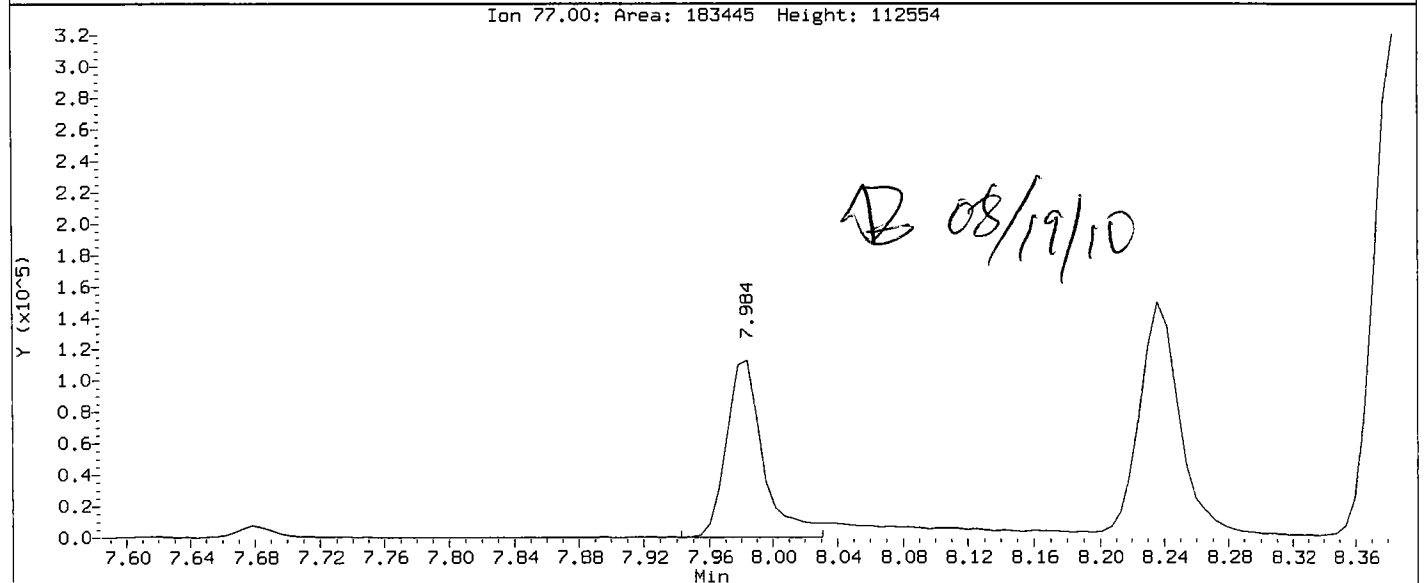
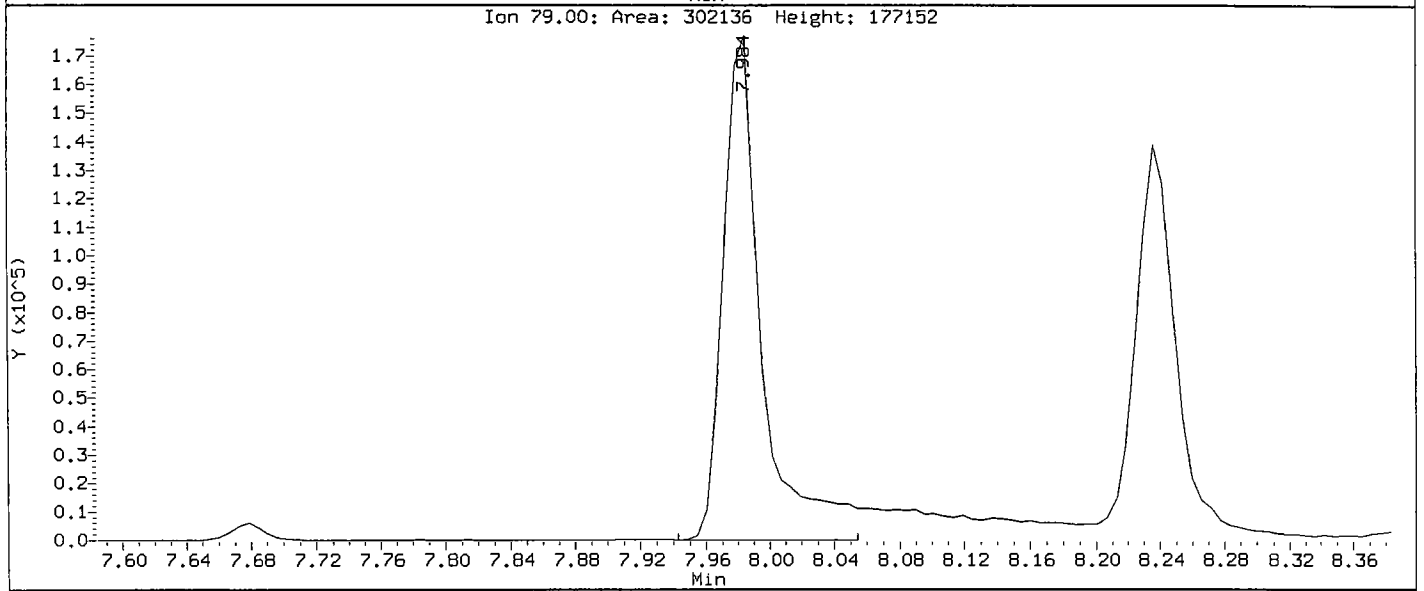
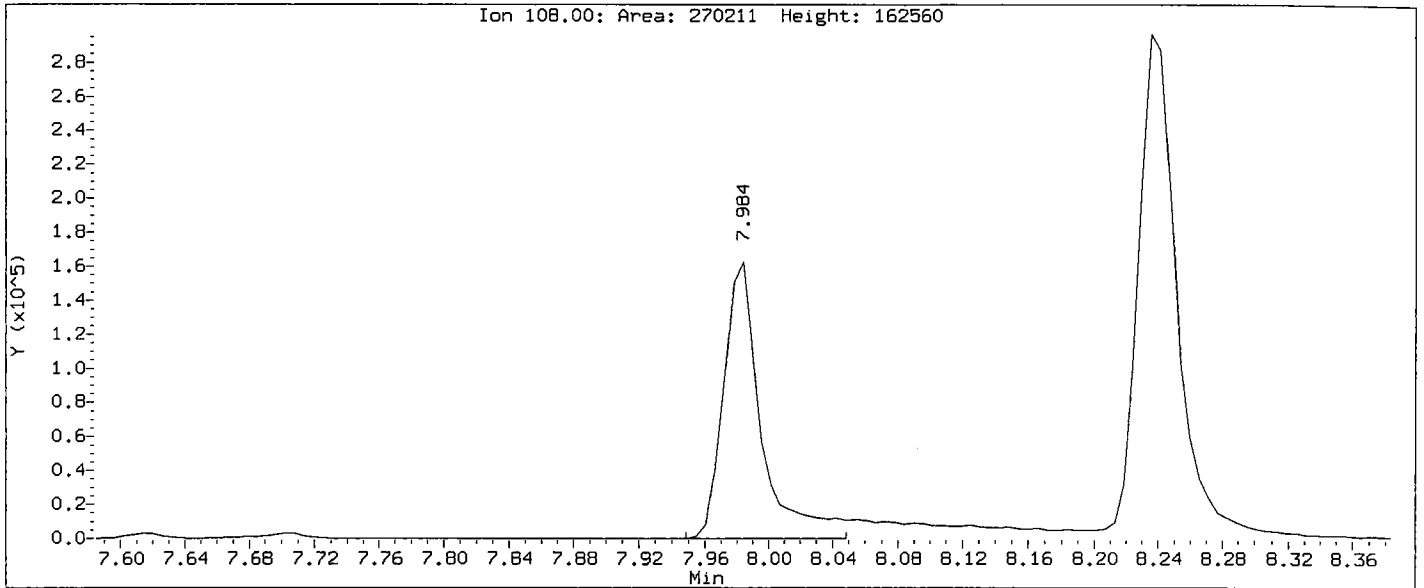
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	7.68	7.18	8.18	7.68	0.00
27 Naphthalene-d8	9.72	9.22	10.22	9.72	0.00
42 Acenaphthene-d10	12.57	12.07	13.07	12.57	0.00
59 Phenanthrene-d10	14.93	14.43	15.43	14.93	0.00
69 Chrysene-d12	19.22	18.72	19.72	19.22	0.00
134 Di-n-octylphthala	20.38	19.88	20.88	20.38	0.00
77 Perylene-d12	21.37	20.87	21.87	21.37	0.00

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



Data File: /chem3/nt4.i/20100819.b/08191001.d  
Injection Date: 19-AUG-2010 13:40  
Instrument: nt4.1  
Client Sample ID: CC0819

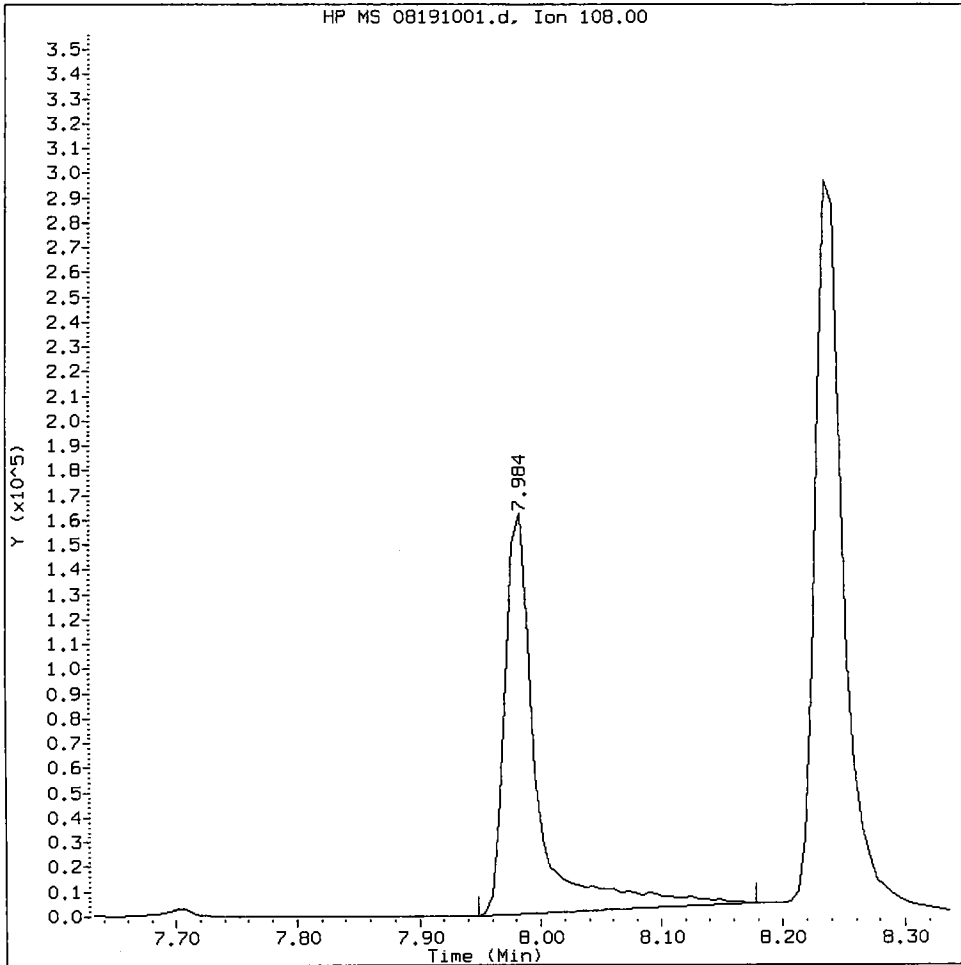
Compound: Benzyl alcohol  
CAS Number: 100-51-6



RG54: 00780



Benzyl alcohol Amount: 19.45 Area: 294081



MANUAL INTEGRATION for Benzyl alcohol

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other \_\_\_\_\_

Analyst: AR

Date 08/19/10

Date : 19-AUG-2010 13:40

Client ID: DFTPP0819

Instrument: nt4.i

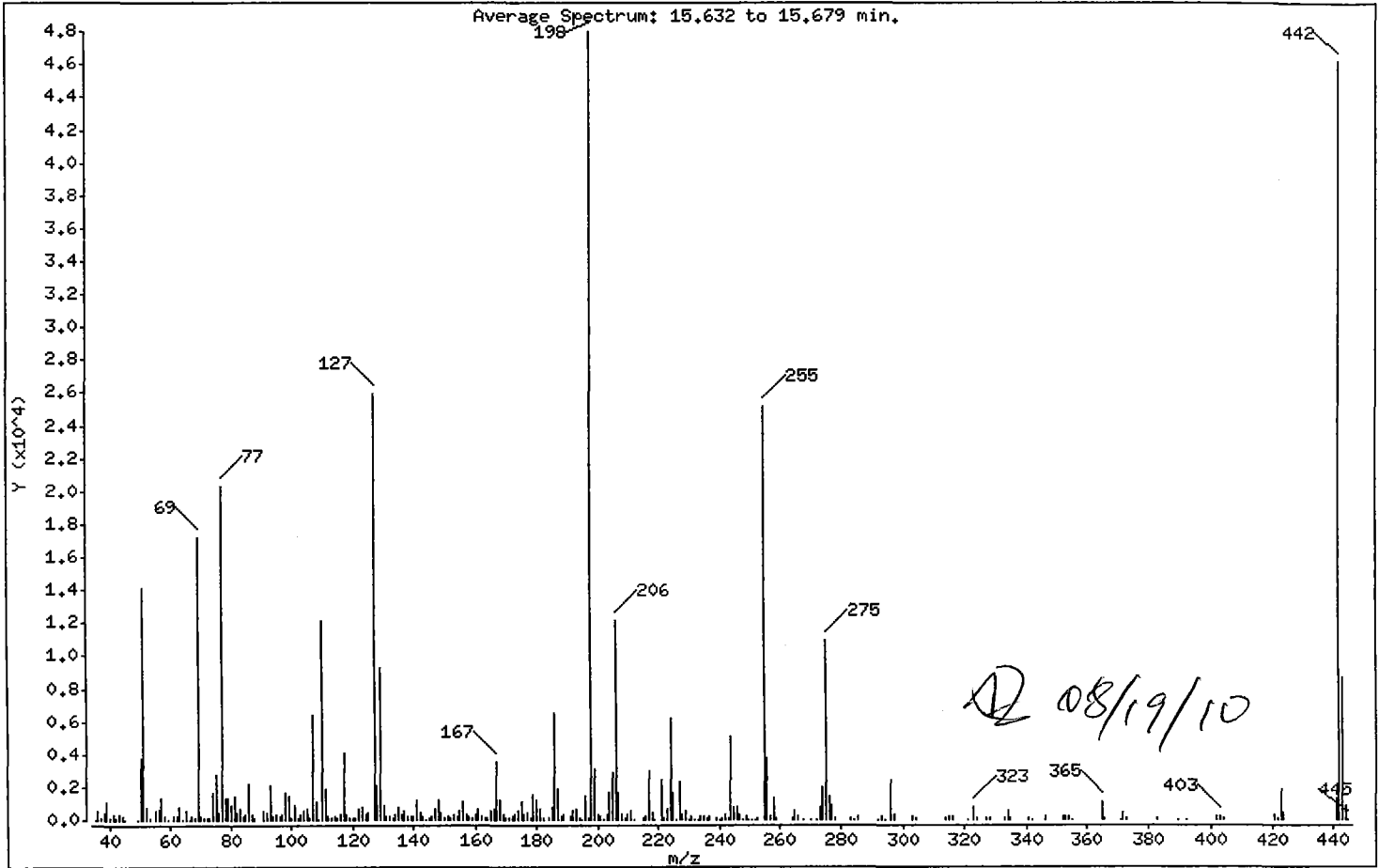
Sample Info: DFTPP0819,

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	29.44
68	Less than 2.00% of mass 69	0.12 ( 0.34)
69	Mass 69 relative abundance	35.77
70	Less than 2.00% of mass 69	0.52 ( 1.46)
127	10.00 - 80.00% of mass 198	53.99
197	Less than 2.00% of mass 198	0.22
199	5.00 - 9.00% of mass 198	6.52
275	10.00 - 60.00% of mass 198	22.81
365	Greater than 1.00% of mass 198	2.32
441	0.01 - 24.00% of mass 442	2.79 ( 2.89)
442	50.00 - 200.00% of mass 198	96.41
443	15.00 - 24.00% of mass 442	18.16 ( 18.84)

Date : 19-AUG-2010 13:40

Client ID: DFTPP0819

Instrument: nt4.i

Sample Info: DFTPP0819,

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: 08191001.d  
 Spectrum: Average Spectrum: 15.632 to 15.679 min.  
 Location of Maximum: 198.00  
 Number of points: 270

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	23	110.00	12185	179.00	1567	253.00	123
36.00	583	111.00	1878	180.00	1215	255.00	25176
37.00	82	112.00	202	181.00	619	256.00	3807
38.00	408	113.00	109	182.00	107	257.00	256
39.00	1133	114.00	174	184.00	151	258.00	1303
40.00	60	115.00	137	185.00	821	259.00	162
41.00	345	116.00	379	186.00	6544	264.00	69
42.00	111	117.00	4129	187.00	1896	265.00	523
43.00	342	118.00	356	188.00	217	266.00	180
44.00	219	119.00	56	189.00	312	268.00	20
45.00	18	120.00	76	191.00	213	270.00	45
49.00	50	121.00	111	192.00	550	272.00	18
50.00	3701	122.00	620	193.00	696	273.00	739
51.00	14138	123.00	775	194.00	112	274.00	1971
52.00	738	124.00	306	195.00	25	275.00	10957
53.00	109	125.00	395	196.00	1413	276.00	1384
55.00	554	127.00	25928	197.00	104	277.00	837
56.00	674	128.00	2065	198.00	48024	278.00	117
57.00	1285	129.00	9312	199.00	3133	283.00	72
58.00	199	130.00	919	200.00	338	284.00	17
59.00	21	131.00	243	201.00	275	285.00	184
61.00	196	132.00	190	202.00	22	292.00	23
62.00	274	133.00	85	203.00	329	293.00	236
63.00	726	134.00	314	204.00	1637	294.00	18
64.00	53	135.00	819	205.00	2906	296.00	2451
65.00	520	136.00	297	206.00	12099	297.00	346
66.00	21	137.00	500	207.00	1637	303.00	254
67.00	180	138.00	199	208.00	363	304.00	73
68.00	59	139.00	267	209.00	146	314.00	91
69.00	17176	140.00	240	210.00	280	315.00	274
70.00	250	141.00	1168	211.00	507	316.00	196
71.00	150	142.00	440	212.00	18	321.00	45
72.00	62	143.00	231	215.00	112	323.00	816
73.00	154	144.00	41	216.00	250	324.00	154
74.00	1694	145.00	82	217.00	2960	327.00	157

Date : 19-AUG-2010 13:40

Client ID: DFTPP0819

Instrument: nt4.i

Sample Info: DFTPP0819,

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: 08191001.d  
 Spectrum: Average Spectrum: 15.632 to 15.679 min.  
 Location of Maximum: 198.00  
 Number of points: 270

m/z	Y	m/z	Y	m/z	Y	m/z	Y
75.00	2708	146.00	242	218.00	437	328.00	58
76.00	393	147.00	655	219.00	52	333.00	64
77.00	20328	148.00	1223	221.00	2479	334.00	522
78.00	1366	149.00	389	222.00	84	335.00	142
79.00	1276	150.00	78	223.00	622	341.00	77
80.00	860	151.00	221	224.00	6232	342.00	21
81.00	1441	152.00	158	225.00	1607	346.00	171
82.00	486	153.00	365	226.00	17	352.00	261
83.00	662	154.00	272	227.00	2328	353.00	180
84.00	236	155.00	589	228.00	351	354.00	262
85.00	325	156.00	1093	229.00	500	355.00	17
86.00	2193	157.00	309	230.00	50	365.00	1112
87.00	345	158.00	188	231.00	218	366.00	125
88.00	88	159.00	139	232.00	27	371.00	35
91.00	520	160.00	369	233.00	18	372.00	480
92.00	450	161.00	626	234.00	168	373.00	146
93.00	2069	162.00	176	235.00	182	383.00	90
94.00	246	163.00	66	236.00	83	390.00	18
95.00	285	164.00	71	237.00	206	392.00	17
96.00	211	165.00	507	239.00	82	402.00	190
97.00	289	166.00	694	240.00	19	403.00	239
98.00	1626	167.00	3535	241.00	116	404.00	65
99.00	1385	168.00	1171	242.00	318	421.00	285
100.00	132	169.00	304	243.00	165	422.00	158
101.00	920	170.00	103	244.00	5066	423.00	1854
102.00	101	171.00	148	245.00	763	424.00	411
103.00	318	172.00	225	246.00	794	441.00	1339
104.00	551	173.00	279	247.00	286	442.00	46304
105.00	635	174.00	556	248.00	38	443.00	8722
106.00	90	175.00	1060	249.00	171	444.00	912
107.00	6351	176.00	369	250.00	20	445.00	39
108.00	1073	177.00	437	251.00	17		
109.00	22	178.00	149	252.00	55		

Date : 19-AUG-2010 13:40

Client ID: DFTPP0819

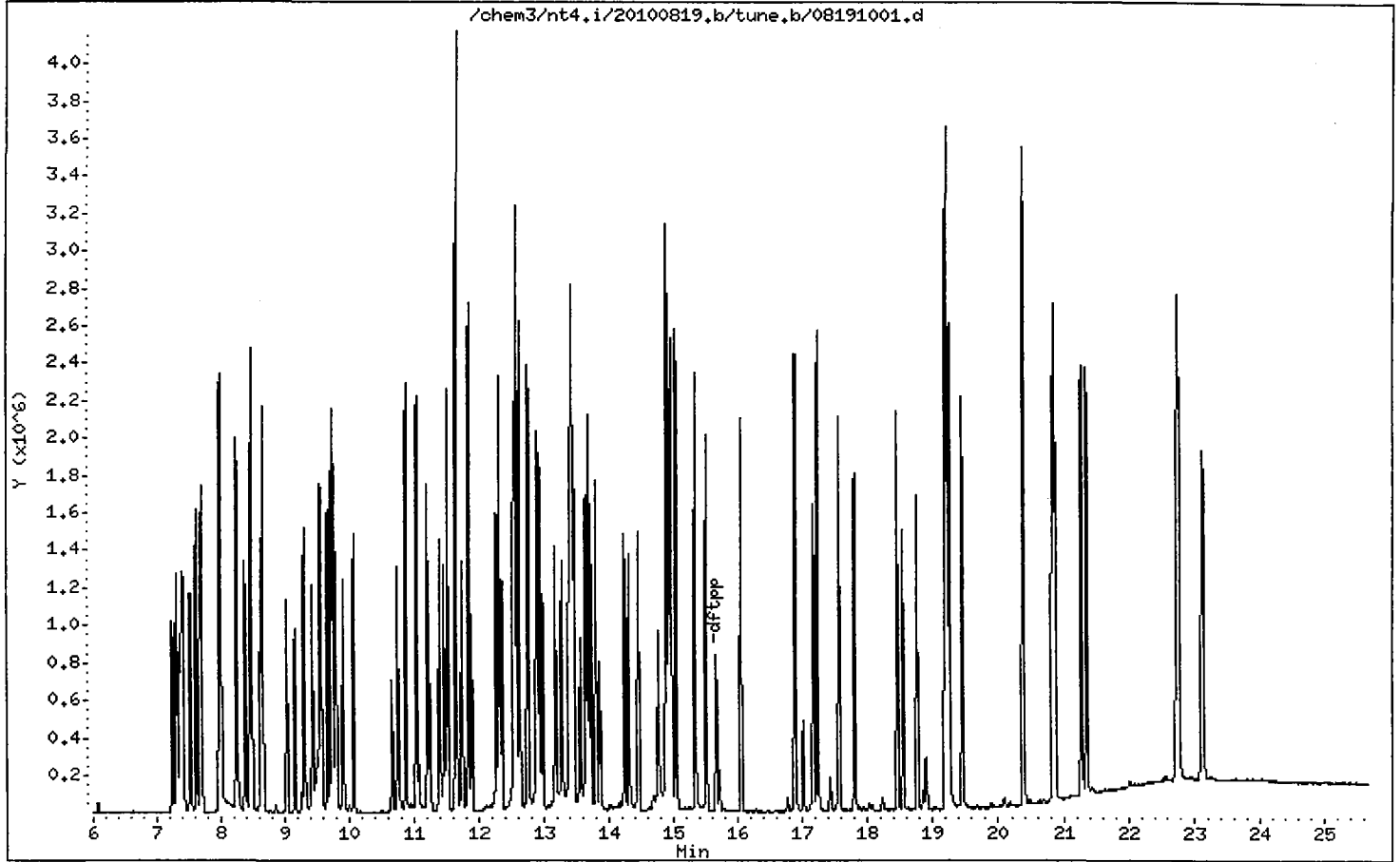
Instrument: nt4.i

Sample Info: DFTPP0819,

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0,25



Analytical Resources Inc.  
ABN by sw846 8270C  
DDT Breakdown Report

Data file: /chem3/nt4.i/20100819.b/ddt.b/08191001.d    ARI ID: CC0819  
Method: /chem3/nt4.i/20100819.b/ddt.b/sw846ddt.m    Misc: 10-  
Analysis Date: 19-AUG-2010 13:40    Instrument: nt4.i

COMPOUND	RT	AREA
Pentachlorophenol	14.757	164617
Benzidine	12.736	346013
4,4'-DDE	----	----
4,4'-DDD	18.064	8986
4,4'-DDT	18.534	456413

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

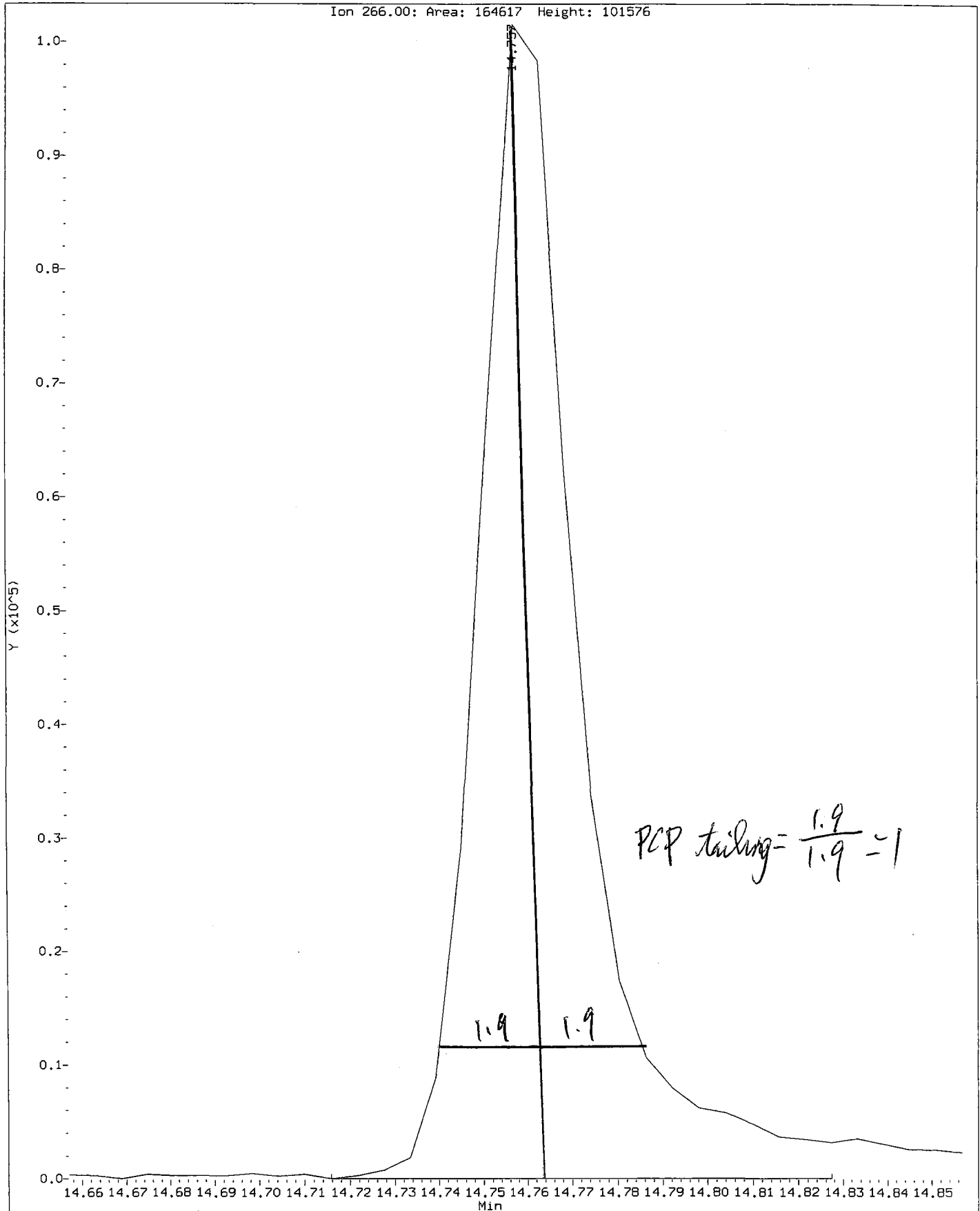
$$\text{DDT Percent Breakdown} = \frac{(0 + 8986) * 100}{(0 + 8986 + 456413)}$$

DDT Percent Breakdown = 1.9 % *o/g*

*D* 08/19/10

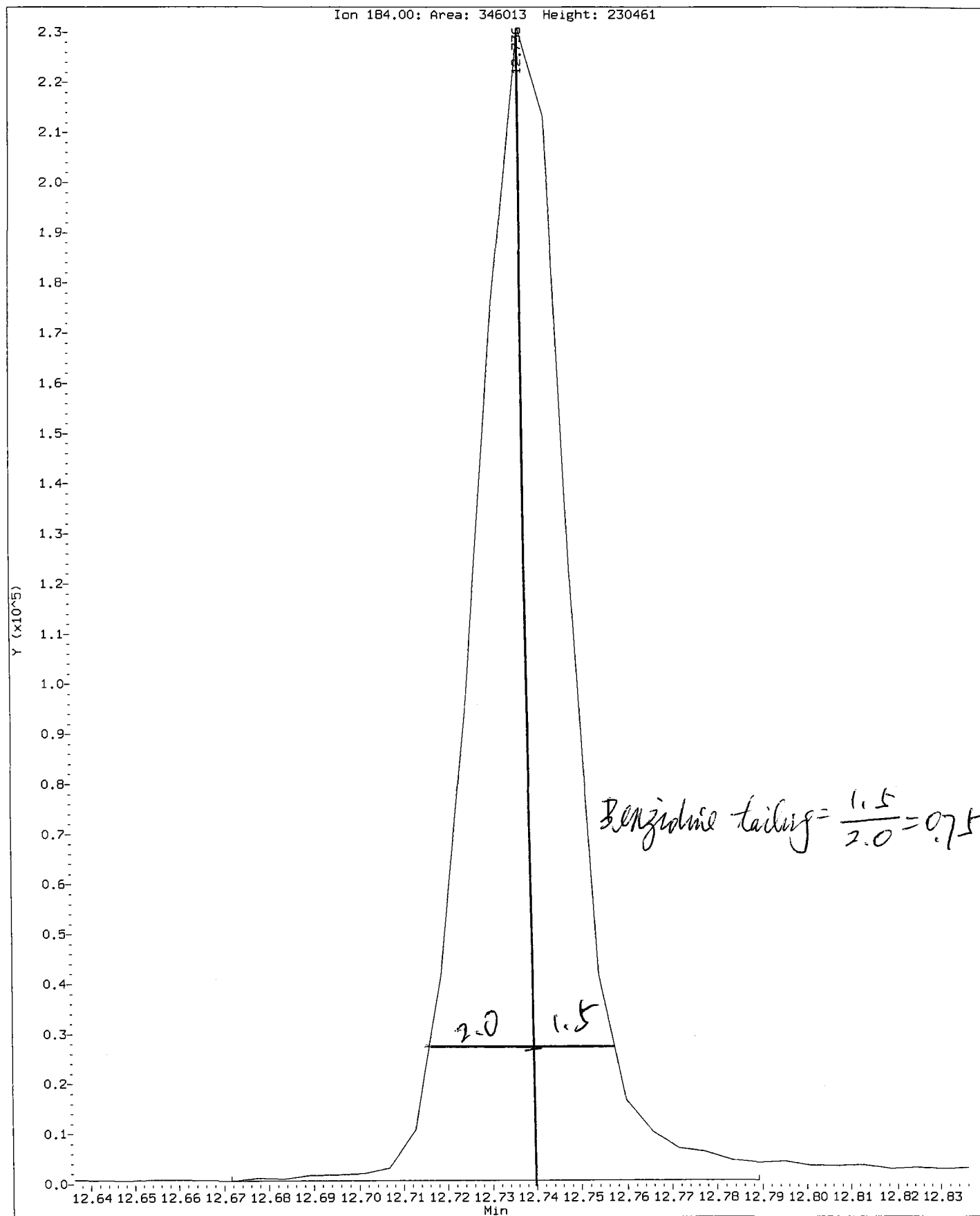
Data File: /chem3/nt4.i/20100819.b/ddt.b/08191001.d  
Injection Date: 19-AUG-2010 13:40  
Instrument: nt4.i  
Client Sample ID: CC0819

Compound: Pentachlorophenol  
CAS Number: 87-86-5



Data File: /chem3/nt4.i/20100819.b/ddt.b/08191001.d  
Injection Date: 19-AUG-2010 13:40  
Instrument: nt4.i  
Client Sample ID: CC0819

Compound: Benzidine  
CAS Number:



RG54 : 00788



Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100819.b/08191005.d  
 Lab Smp Id: RG54MBS2 Client Smp ID: RG54MBS2  
 Inj Date : 19-AUG-2010 15:56  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG54MBS2,  
 Misc Info : 10-18203  
 Comment : 1ul Injection  
 Method : /chem3/nt4.i/20100819.b/SW846100719.m  
 Meth Date : 20-Aug-2010 12:10 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 6 QC Sample: BLANK  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*B 08/11/10*

Concentration Formula:  $Amt * DF * Vt / (Ws * (100 - M) / 100) * CpndVariable$

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ug/mL)	FINAL (ug/kg)	
* 27 Naphthalene-d8	136	9.711	9.723	(1.000)	1015849	20.0000		
28 Naphthalene	128	Compound Not Detected.						
32 2-Methylnaphthalene	142	Compound Not Detected.						
105 1-methylnaphthalene	142	Compound Not Detected.						
\$ 36 2-Fluorobiphenyl	172	11.509	11.514	(0.916)	640949	16.8090	336.2	
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	12.560	12.566	(1.000)	622493	20.0000		
44 Acenaphthene	153	Compound Not Detected.						
46 Dibenzofuran	168	Compound Not Detected.						
49 Fluorene	166	Compound Not Detected.						
* 59 Phenanthrene-d10	188	14.916	14.927	(1.000)	1028403	20.0000		
60 Phenanthrene	178	Compound Not Detected.						
61 Anthracene	178	Compound Not Detected.						
64 Fluoranthene	202	Compound Not Detected.						
65 Pyrene	202	Compound Not Detected.						

Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)
=====	====	==	=====	=====	=====	=====	=====
\$ 66 Terphenyl-d14	244	17.560	17.565	(0.914)	808760	21.0761	421.5
68 Benzo(a)anthracene	228	Compound Not Detected.					
* 69 Chrysene-d12	240	19.210	19.221	(1.000)	991004	20.0000	
71 Chrysene	228	Compound Not Detected.					
187 Total Benzofluoranthenes	252	Compound Not Detected.					
76 Benzo(a)pyrene	252	Compound Not Detected.					
* 77 Perylene-d12	264	21.360	21.366	(1.000)	879245	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80 Benzo(g,h,i)perylene	276	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt4.i  
 Lab File ID: 08191005.d  
 Lab Smp Id: RG54MBS2  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt4.i/20100819.b/SW846100719.m  
 Misc Info: 10-18203

Calibration Date: 19-AUG-2010  
 Calibration Time: 13:40  
 Client Smp ID: RG54MBS2  
 Level: LOW  
 Sample Type: Solid

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1015849	-21.46
42 Acenaphthene-d10	785897	392948	1571794	622493	-20.79
59 Phenanthrene-d10	1313990	656995	2627980	1028403	-21.73
69 Chrysene-d12	1155293	577646	2310586	991004	-14.22
77 Perylene-d12	1146289	573144	2292578	879245	-23.30

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.72	9.22	10.22	9.71	-0.12
42 Acenaphthene-d10	12.57	12.07	13.07	12.56	-0.04
59 Phenanthrene-d10	14.93	14.43	15.43	14.92	-0.08
69 Chrysene-d12	19.22	18.72	19.72	19.21	-0.06
77 Perylene-d12	21.37	20.87	21.87	21.36	-0.02

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd/Snider  
Sample Matrix: SOLID  
Lab Smp Id: RG54MBS2  
Level: LOW  
Data Type: MS DATA  
SpikeList File: pnaslcass.spk  
Sublist File: pnas.sub  
Method File: /chem3/nt4.i/20100819.b/SW846100719.m  
Misc Info: 10-18203

Client SDG: RG54  
Fraction: SV  
Client Smp ID: RG54MBS2  
Operator: JZ  
SampleType: BLANK  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	500.0	336.2	67.24	34-100
\$ 66 Terphenyl-d14	500.0	421.5	84.30	35-112

Date: 19-AUG-2010 15:56

Client ID: RG54HBS2

Sample Info: RG54HBS2,

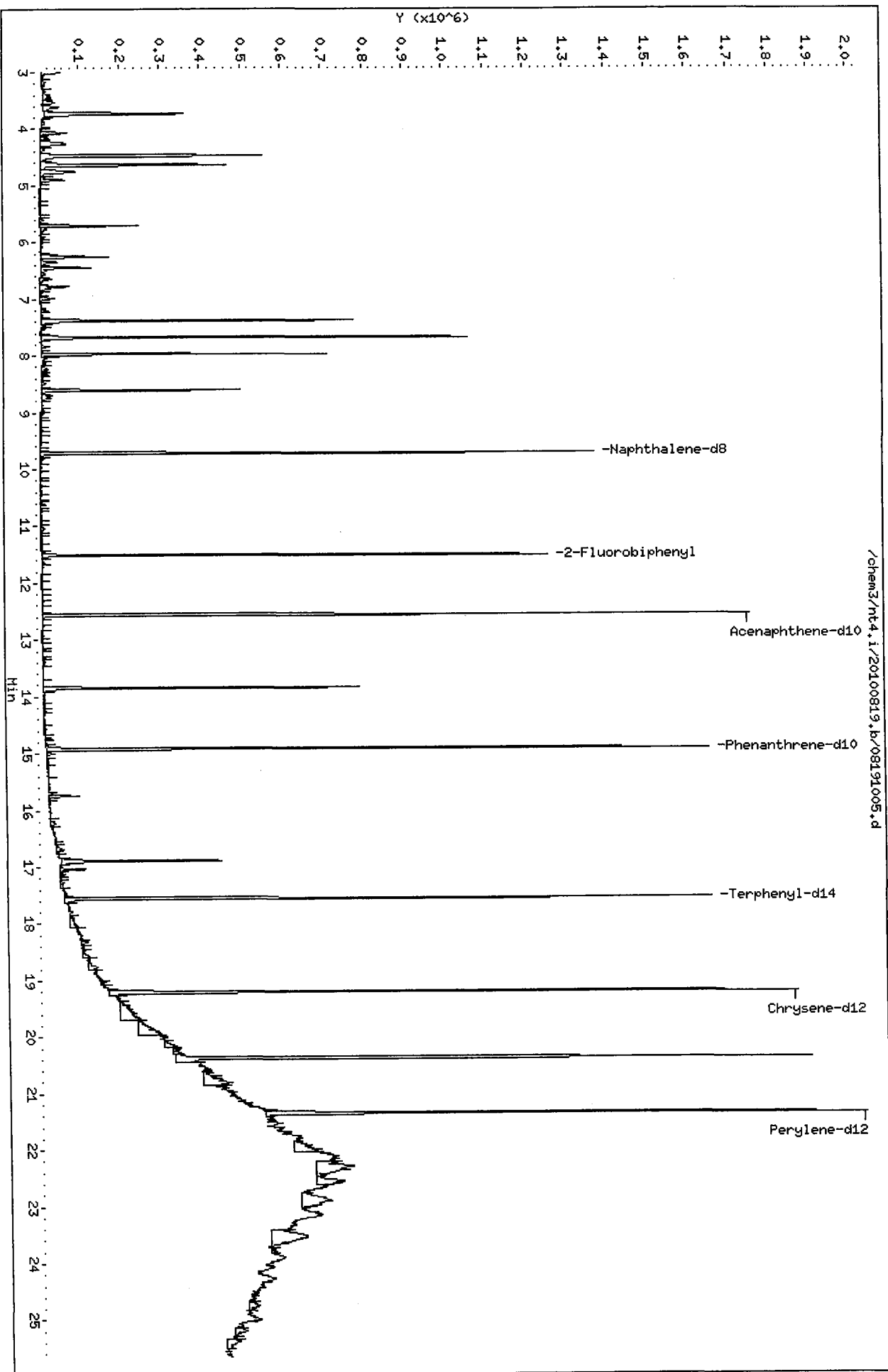
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt4.i

Operator: JZ

Column diameter: 0.32



Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100819.b/08191006.d  
 Lab Smp Id: RG54LCSS2 Client Smp ID: RG54LCSS2  
 Inj Date : 19-AUG-2010 16:30  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG54LCSS2,  
 Misc Info : 10-18203  
 Comment : lul Injection  
 Method : /chem3/nt4.i/20100819.b/SW846100719.m  
 Meth Date : 20-Aug-2010 12:08 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 7 QC Sample: LCS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*LB 08/20/10*

Concentration Formula: Amt \* DF \* Vt / (Ws \* (100 - M) / 100) \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	25.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable

Local Compound Variable

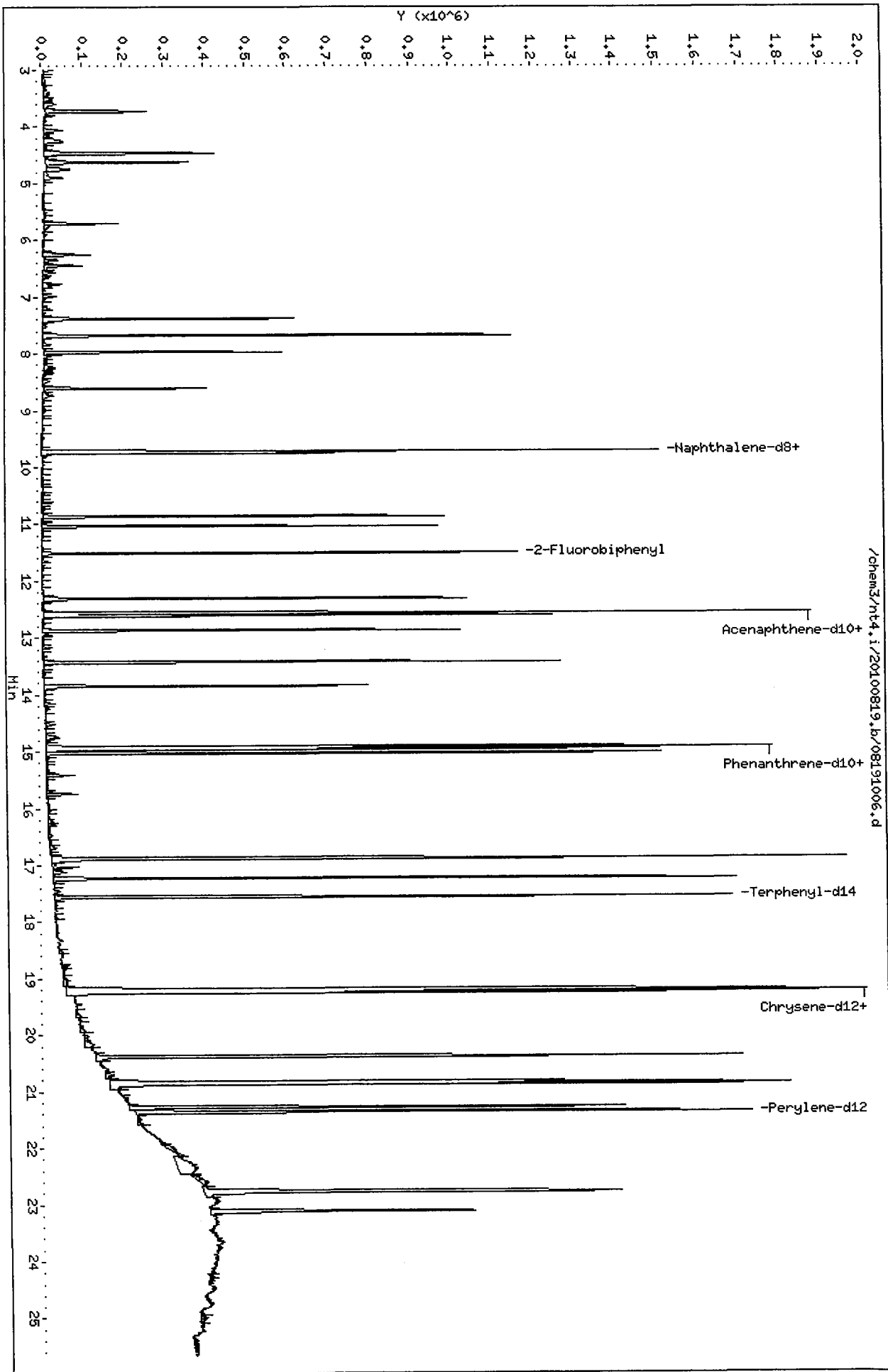
Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)
* 27 Naphthalene-d8	136	9.716	9.723	(1.000)	1100384	20.0000	
28 Naphthalene	128	9.746	9.752	(1.003)	607096	11.6275	232.5
32 2-Methylnaphthalene	142	10.862	10.868	(1.118)	432097	12.1776	243.6
105 1-methylnaphthalene	142	11.032	11.038	(1.135)	424706	12.2186	244.4
\$ 36 2-Fluorobiphenyl	172	11.508	11.514	(0.916)	568693	13.9746	279.5
40 Acenaphthylene	152	12.307	12.313	(0.980)	725615	13.3137	266.3
* 42 Acenaphthene-d10	164	12.560	12.566	(1.000)	664342	20.0000	
44 Acenaphthene	153	12.607	12.613	(1.004)	456271	12.8584	257.2
46 Dibenzofuran	168	12.871	12.877	(1.025)	704149	14.8870	297.7
49 Fluorene	166	13.423	13.429	(1.069)	604229	14.7644	295.3
* 59 Phenanthrene-d10	188	14.921	14.927	(1.000)	1115640	20.0000	
60 Phenanthrene	178	14.956	14.963	(1.002)	957390	16.5655	331.3
61 Anthracene	178	15.027	15.033	(1.007)	966742	16.3516	327.0
64 Fluoranthene	202	16.883	16.889	(1.131)	1136633	18.9817	379.6
65 Pyrene	202	17.230	17.236	(0.897)	1179788	17.7495	355.0

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
-----	----	==	=====	=====	-----	-----	-----
\$ 66 Terphenyl-d14	244	17.559	17.565	(0.914)	823195	20.2808	405.6
68 Benzo(a)anthracene	228	19.186	19.192	(0.998)	1131229	18.4099	368.2
* 69 Chrysene-d12	240	19.215	19.221	(1.000)	1048244	20.0000	
71 Chrysene	228	19.251	19.263	(1.002)	1086597	18.0675	361.4
187 Total Benzofluoranthenes	252	20.872	20.878	(0.977)	2195522	39.7721	795.4
76 Benzo(a)pyrene	252	21.283	21.289	(0.996)	870747	16.8576	337.2
* 77 Perylene-d12	264	21.365	21.366	(1.000)	935470	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	22.758	22.770	(1.065)	733421	13.2233	264.5
79 Dibenzo(a,h)anthracene	278	22.781	22.793	(1.066)	601614	13.4926	269.9
80 Benzo(g,h,i)perylene	276	23.122	23.134	(1.082)	547854	11.5555	231.1









Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100819.b/08191007.d  
 Lab Smp Id: RG54ARE Client Smp ID: PSB14-0-.5-072810  
 Inj Date : 19-AUG-2010 17:03  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG54ARE  
 Misc Info : 10-18202  
 Comment : 1ul Injection  
 Method : /chem3/nt4.i/20100819.b/SW846100719.m  
 Meth Date : 20-Aug-2010 12:10 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 8  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*D 08/20/10*

Concentration Formula:  $Amt * DF * Vt / (Ws * (100 - M) / 100) * CpndVariable$

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	7.47000	Weight of sample extracted (g)
M	7.60000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS					
		RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 27 Naphthalene-d8	136	9.717	9.723	(1.000)	1332651	20.0000	
28 Naphthalene	128	Compound Not Detected.					
32 2-Methylnaphthalene	142	Compound Not Detected.					
105 1-methylnaphthalene	142	Compound Not Detected.					
\$ 36 2-Fluorobiphenyl	172	11.508	11.514	(0.916)	837932	17.0758	1237
40 Acenaphthylene	152	Compound Not Detected.					
* 42 Acenaphthene-d10	164	12.560	12.566	(1.000)	801090	20.0000	
44 Acenaphthene	153	Compound Not Detected.					
46 Dibenzofuran	168	Compound Not Detected.					
49 Fluorene	166	Compound Not Detected.					
* 59 Phenanthrene-d10	188	14.922	14.927	(1.000)	1338340	20.0000	
60 Phenanthrene	178	Compound Not Detected.					
61 Anthracene	178	Compound Not Detected.					
64 Fluoranthene	202	Compound Not Detected.					
65 Pyrene	202	Compound Not Detected.					

Compounds	QUANT SIG		CONCENTRATIONS					
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
\$ 66 Terphenyl-d14	244	17.559	17.565	(0.914)	942570	18.9477	1373	
68 Benzo(a)anthracene	228	Compound Not Detected.						
* 69 Chrysene-d12	240	19.216	19.221	(1.000)	1284700	20.0000		
71 Chrysene	228	Compound Not Detected.						
187 Total Benzo(a)fluoranthenes	252	Compound Not Detected.						
76 Benzo(a)pyrene	252	Compound Not Detected.						
* 77 Perylene-d12	264	21.372	21.366	(1.000)	959185	20.0000		
78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.						
79 Dibenzo(a,h)anthracene	278	Compound Not Detected.						
80 Benzo(g,h,i)perylene	276	Compound Not Detected.						

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt4.i	Calibration Date: 19-AUG-2010
Lab File ID: 08191007.d	Calibration Time: 13:40
Lab Smp Id: RG54ARE	Client Smp ID: PSB14-0-.5-07281
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Soil
Operator: JZ	
Method File: /chem3/nt4.i/20100819.b/SW846100719.m	
Misc Info: 10-18202	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1332651	3.03
42 Acenaphthene-d10	785897	392948	1571794	801090	1.93
59 Phenanthrene-d10	1313990	656995	2627980	1338340	1.85
69 Chrysene-d12	1155293	577646	2310586	1284700	11.20
77 Perylene-d12	1146289	573144	2292578	959185	-16.32

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.72	9.22	10.22	9.72	-0.06
42 Acenaphthene-d10	12.57	12.07	13.07	12.56	-0.05
59 Phenanthrene-d10	14.93	14.43	15.43	14.92	-0.04
69 Chrysene-d12	19.22	18.72	19.72	19.22	-0.03
77 Perylene-d12	21.37	20.87	21.87	21.37	0.03

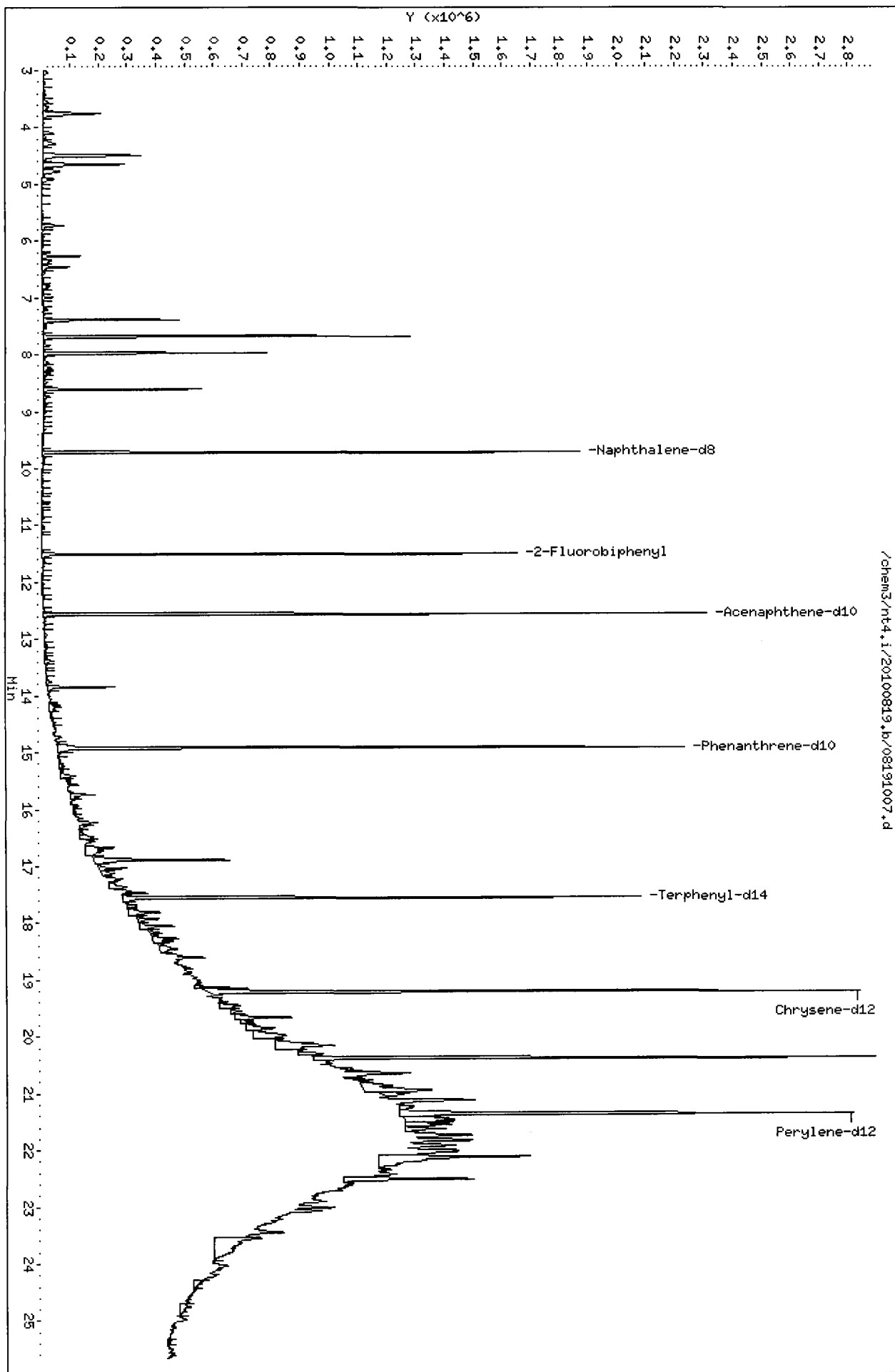
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



Data File: /chem3/nt4.i/20100819.b/08191007.d  
Date: 19-AUG-2010 17:03  
Client ID: PSB14-0-5-072810  
Sample Info: RG54ARE  
Volume Injected (uL): 1.0  
Column phase: ZB-5ms1

Instrument: nt4.i  
Operator: JZ  
Column diameter: 0.32

/chem3/nt4.i/20100819.b/08191007.d



**PCP/Chlorophenols Raw Data  
Extraction Bench Sheets and Notes**

**ARI Job ID: RG54**





Preparation Test PCP # 3

ARI Job No(s) RG 54 / RG 60

In-House (6.25ppb)  
Batch set up by: SP

Bottle #	Extraction Requirements	Verify Client ID	Volume Extracted (wet wt)	Sonic Horn ID	KD Exchange To Hexane (X 2)	Turbo Vap 1 2 3	Final Effective Volume	Volume to Lab	Derivitize	Comments
	RG 54 MB	Date 8/17/10	10.00g	1		T	25mL	1-2mL		
	SB	↓	↓	2			T	T		
2	A	Checked	10.09	3						
	AMS		10.42	4						
	AMS0		10.06	5						
	B		10.02	6						
	C		10.12	7						
	E		10.57	8						
	F		10.27	9						
	H		10.43	10						
	I		10.24	11						
	J		10.13	12						
	K		10.13	1						
↓	↓		10.11	2						
6	RG 60 A		10.08	3						
	B		10.04	4						
	C		10.38	5						
	D		10.46	6						
	E		10.38	7						
	F		10.12	8						
Analyst/Date		WC 8/17/10 (checked)			RR 8/17/10	08/11/10	08/11/10	08/11/10		

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	F	50µL	12/9/10	WC	AR
Spike	6	50µL	2/18/14	WC	AR
Extraction Time: 15:05		Balance ID: 24150193		Derivitized by:	
				Diazald ID:	

- SPECIAL INSTRUCTIONS: 1. Weigh into 100mL beakers. 2. Use neutral sulfate to dry samples.
3. Acidify all with ¼ pipet conc. Sulfuric Acid. 4. Add surr/spike. 5. Leave in DCM overnight. 6. Extract 3X DCM.
7. Pour directly into KD (NO Glasswool). 8. KD to 5mL at 80°. 9. Exchange (2 X with 20mL) Hexane at 100°.
10. \*Note: if filtering is necessary: Pre-rinse filter with 0.05% HCL in Acetone+Post Rinse with Hexane or centrifuge.
11. Turbo Vap to 1mL 11. Vial using a pipet into Herb Tubes with a Hexane rinse. 12. GC Analyst to Derivitize.

A. Need Total Solids Y (N) B. Archive / Freeze Y (N)



Analytical Resources,  
Incorporated  
Analytical Chemists and  
Consultants

# Organic Extractions Laboratory Analyst Notes

ARI Job No.: RG 54 / RG 60

Client ID: Floyd/Snyder

Parameter: PCP

Client Project: Lora Lake RI

Note problems, concerns, corrective actions	Analyst/Date
<b>Screens: Soil/Sediment/Solid/Other:</b>	
<input type="checkbox"/> No Anomalies (standard soil/sediment)	
<input type="checkbox"/> Wet sediment/sludge=	
<input type="checkbox"/> Standing Water Decanted=	
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=	
<input type="checkbox"/> Clay (Difficult to homogenize/Mixed with Kitchen Aid)=	
<input type="checkbox"/> Rocks/Organics=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input type="checkbox"/> Other (Details)=	
<b>Aqueous:</b>	
<input type="checkbox"/> No Anomalies	
<input type="checkbox"/> Turbid/Color=	
<input type="checkbox"/> Particulates=	
<input type="checkbox"/> Emulsions=	
<input type="checkbox"/> Other (Details)=	
<input type="checkbox"/> Other Notes/Comments=	

**PCP/Chlorophenols Raw Data  
Initial Calibration**

**ARI Job ID: RG54**



### GC Analyst Notes / Corrective Action Log

ARI Project ID: PCP Curve Client ID: ARI

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)  
**427S**(Dir Inj) **428S**(EPH) **432S**(EDB) **Other**

Parameter(s): \_\_\_\_\_

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

Dates: Curve: 8/9/2010 Analysis Start: 8/11/2010

Endrin/DDT Breakdown <15%?	YES / NO / <u>NA</u>	Method Blank In Control?	<u>YES</u> / NO / <u>NA</u>
ICal Meets RF & %RSD Criteria?	<u>YES</u> / NO	LCS/LCSD Recovery In Control?	<u>YES</u> / NO / <u>NA</u>
CCal Meets RF & %RSD Criteria?	<u>YES</u> / NO	Surrogate Recovery In Control?	<u>YES</u> / NO
Manual Integrations for ICal?	<u>YES</u> / NO	Manual Integrations for Samples?	<u>YES</u> / NO
Internal Standard Meets Criteria?	YES / NO / <u>NA</u>	Special Analysis Criteria Met?	YES / NO / <u>NA</u>

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

2nd col: Quadratic-forced: 2,4-Dichlorophenol, 2,4,5-Trichlorophenol, 2,3,4-Trichlorophenol  
1st col: Quadratic-forced: 2,4-Dichlorophenol, 2,4,6-TCP, 2,3,6-TCP, 2,3,4,5-Tetrachlorophenol, Pentachlorophenol & 2,4,6-Tribromophenol.

Additional Details on Reverse: Yes / No No

Analyst: \_\_\_\_\_ Date: 8/12/2010

Reviewer: B Date: 8/17/10

## GC LOG SUMMARY FOR DATABATCH - /chem2/ecdl.i/FPCP20100809.b/ical-1.b

	Inject	Date/Time	Filename	DF	LabID	ClientID
1	09-AUG-2010	12:23	0809A005.d	1	PCPD	
2	09-AUG-2010	12:43	0809A006.d	1	PCPA	
3	09-AUG-2010	13:03	0809A007.d	1	PCPB	
4	09-AUG-2010	13:23	0809A008.d	1	PCPC	
5	09-AUG-2010	13:43	0809A009.d	1	PCPE	
6	09-AUG-2010	14:03	0809A010.d	1	PCPF	
7	09-AUG-2010	14:23	0809A011.d	1	PCP ICV	

Report Date : 12-Aug-2010 19:59

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecdl.i/FPCP20100809.b/FPCP.m  
Batch File: /chem2/ecdl.i/FPCP20100809.b/ical-1.b  
Inst ID: ecdl.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
0809A005	0809A006	0809A007	0809A008	0809A009	0809A010	0809A011	0809A010	0809A010	0809A010	0809A010	0809A011
09-AUG-2010	09-AUG-2010	09-AUG-2010	09-AUG-2010	09-AUG-2010	09-AUG-2010	09-AUG-2010	09-AUG-2010	09-AUG-2010	09-AUG-2010	09-AUG-2010	09-AUG-2010
12:23	12:43	13:03	13:23	13:43	14:03	14:23	14:03	14:03	14:23	14:03	14:23
Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 2,4-Dichlorophenol	6.887	6.897	6.893	6.890	6.884	6.884	6.888	6.893	6.823-6.963	6.889	0.005
2 2,4,6-Trichlorophenol	7.261	7.263	7.264	7.263	7.259	7.260	7.262	7.264	7.194-7.334	7.262	0.002
3 2,3,6-Trichlorophenol	7.615	7.622	7.619	7.617	7.611	7.612	7.616	7.619	7.549-7.689	7.616	0.004
4 2,4,5-Trichlorophenol	8.221	8.253	8.242	8.232	8.212	8.209	8.230	8.242	8.172-8.312	8.228	0.016
5 2,3,4-Trichlorophenol	8.770	8.806	8.792	8.780	8.760	8.756	8.781	8.792	8.722-8.862	8.778	0.017
6 2,3,5,6-Tetrachlorophe	8.996	9.013	9.007	9.002	8.990	8.990	9.000	9.007	8.937-9.077	9.000	0.009
7 2,4,6-Tribromophenol (	9.990	10.010	10.002	9.996	9.984	9.983	9.997	10.002	9.932-10.072	9.995	0.010
8 2,3,4,5-Tetrachlorophe	10.397	10.421	10.413	10.406	10.389	10.387	10.405	10.413	10.343-10.483	10.402	0.012
9 Pentachlorophenol	11.212	11.225	11.219	11.215	11.206	11.206	11.215	11.219	11.149-11.289	11.214	0.007

Reviewer 1 AR Date: 8/12/2010  
 Reviewer 2 [Signature] Date: 8/12/10

Report Date : 12-Aug-2010 19:59

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecdl.i/FPCP20100809.b/FPCPB.m  
Batch File: /chem2/ecdl.i/FPCP20100809.b/ical-2.b  
Inst ID: ecd1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
FILENAME:	0809A005	0809A006	0809A007	0809A008	0809A009	0809A010	0809A011				
INJ. DATE:	09-AUG-2010	09-AUG-2010	09-AUG-2010	09-AUG-2010	09-AUG-2010	09-AUG-2010	09-AUG-2010				
INJ. TIME:	12:43	12:43	13:03	13:23	13:43	14:03	14:23				
Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 2,4-Dichlorophenol	7.156	7.166	7.163	7.160	7.153	7.153	7.158	7.166	7.096-7.236	7.158	0.005
2 2,4,6-Trichlorophenol	7.329	7.333	7.333	7.331	7.327	7.328	7.330	7.333	7.263-7.403	7.330	0.002
3 2,3,6-Trichlorophenol	7.858	7.864	7.862	7.860	7.855	7.856	7.859	7.864	7.794-7.934	7.859	0.003
4 2,4,5-Trichlorophenol	8.593	8.615	8.607	8.600	8.586	8.594	8.599	8.615	8.545-8.685	8.598	0.011
5 2,3,5,6-Tetrachlorophe	9.262	9.277	9.270	9.266	9.256	9.257	9.265	9.277	9.207-9.347	9.265	0.007
6 2,3,4-Trichlorophenol	9.359	9.380	9.373	9.365	9.351	9.349	9.365	9.380	9.310-9.450	9.363	0.011
7 2,4,6-Tribromophenol (	10.632	10.646	10.640	10.636	10.626	10.627	10.636	10.646	10.576-10.716	10.635	0.007
8 2,3,4,5-Tetrachlorophe	11.109	11.126	11.119	11.115	11.103	11.103	11.114	11.126	11.056-11.196	11.113	0.009
9 Pentachlorophenol	11.649	11.658	11.654	11.652	11.645	11.646	11.652	11.658	11.588-11.728	11.651	0.005

Reviewer 1 AR  
Reviewer 2 \_\_\_\_\_

Date: 8/12/2010  
Date: 8/12/10

MANUAL INTEGRATION SUMMARY FOR DATABASE - /chem2/ecdl.i/FPCP20100809.b/ical-1.b

ARI Job No.: PCPD Method: FPCP.m Instrument: ecd1.i Date: 09-AUG-2010

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1223	0809A005.d	PCPD		1	NO MANUAL INTEGRATION
1243	0809A006.d	PCPA		1	2,4,6-Trichlorophenol, 2,4,5-Trichlorophenol, 2,3,5,6-Tetrachlorophenol, 2,4-Dichlorophenol,
1303	0809A007.d	PCPB		1	2,3,5,6-Tetrachlorophenol, 2,4-Dichlorophenol,
1323	0809A008.d	PCPC		1	NO MANUAL INTEGRATION
1343	0809A009.d	PCPE		1	NO MANUAL INTEGRATION
1403	0809A010.d	PCPF		1	NO MANUAL INTEGRATION
1423	0809A011.d	PCP ICV		1	NO MANUAL INTEGRATION



MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd1.i/FPCP20100809.b/ical-2.b  
 ARI Job No.: PCPD Method: FPCPB.m Instrument: ecd1.i Date: 09-AUG-2010

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1223	0809A005.d	PCPD		1	NO MANUAL INTEGRATION
1243	0809A006.d	PCPA		1	2,4,6-Trichlorophenol, 2,3,5,6-Tetrachlorophenol,
1303	0809A007.d	PCPB		1	2,4,6-Trichlorophenol, 2,3,5,6-Tetrachlorophenol,
1323	0809A008.d	PCPC		1	NO MANUAL INTEGRATION
1343	0809A009.d	PCPE		1	NO MANUAL INTEGRATION
1403	0809A010.d	PCPF		1	NO MANUAL INTEGRATION
1423	0809A011.d	PCP ICV		1	2,3,4-Trichlorophenol,

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

AR 8/12/2010

Start Cal Date : 09-AUG-2010 12:23  
 End Cal Date : 09-AUG-2010 14:03  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecdl.i/FPCP20100809.b/FPCPB.m  
 Cal Date : 12-Aug-2010 18:59 aron  
 Curve Type : Average

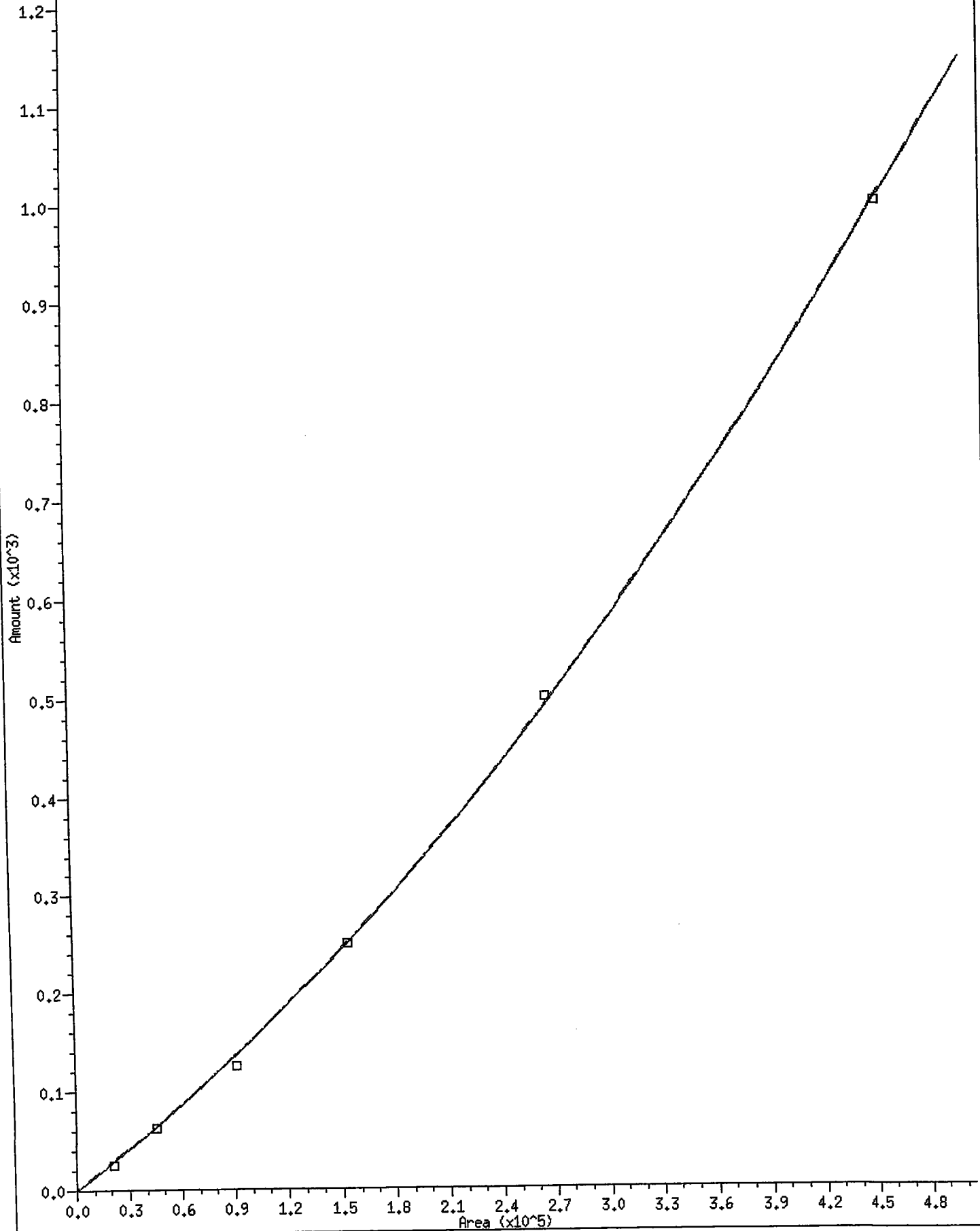
Calibration File Names:

Level 1: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A006.d/0809A006.cdf  
 Level 2: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A007.d/0809A007.cdf  
 Level 3: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A008.d  
 Level 4: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A005.d  
 Level 5: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A009.d  
 Level 6: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A010.d

Compound	2.500 Level 1	6.250 Level 2	12.500 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
1 2,4-Dichlorophenol	859	720	733	619	536	458	654	22.290 <-
2 2,4,6-Trichlorophenol	14811	12542	14020	12241	11222	10071	12485	13.991
3 2,3,6-Trichlorophenol	15358	13183	12610	12054	11138	10108	12409	14.584
4 2,4,5-Trichlorophenol	9451	7724	7152	6203	5568	4896	6832	24.049 <-
5 2,3,5,6-Tetrachlorophenol	22710	20100	18581	17733	16666	15298	18515	14.186
6 2,3,4-Trichlorophenol	13138	11714	9430	8408	7532	6669	9482	26.352 <-
8 2,3,4,5-Tetrachlorophenol	18414	16106	15136	13550	12798	11541	14591	17.013
9 Pentachlorophenol	28790	24995	23903	21206	20507	18368	22961	16.202
\$ 7 2,4,6-Tribromophenol (surr)	22648	19438	18816	17793	17226	16083	18667	12.211

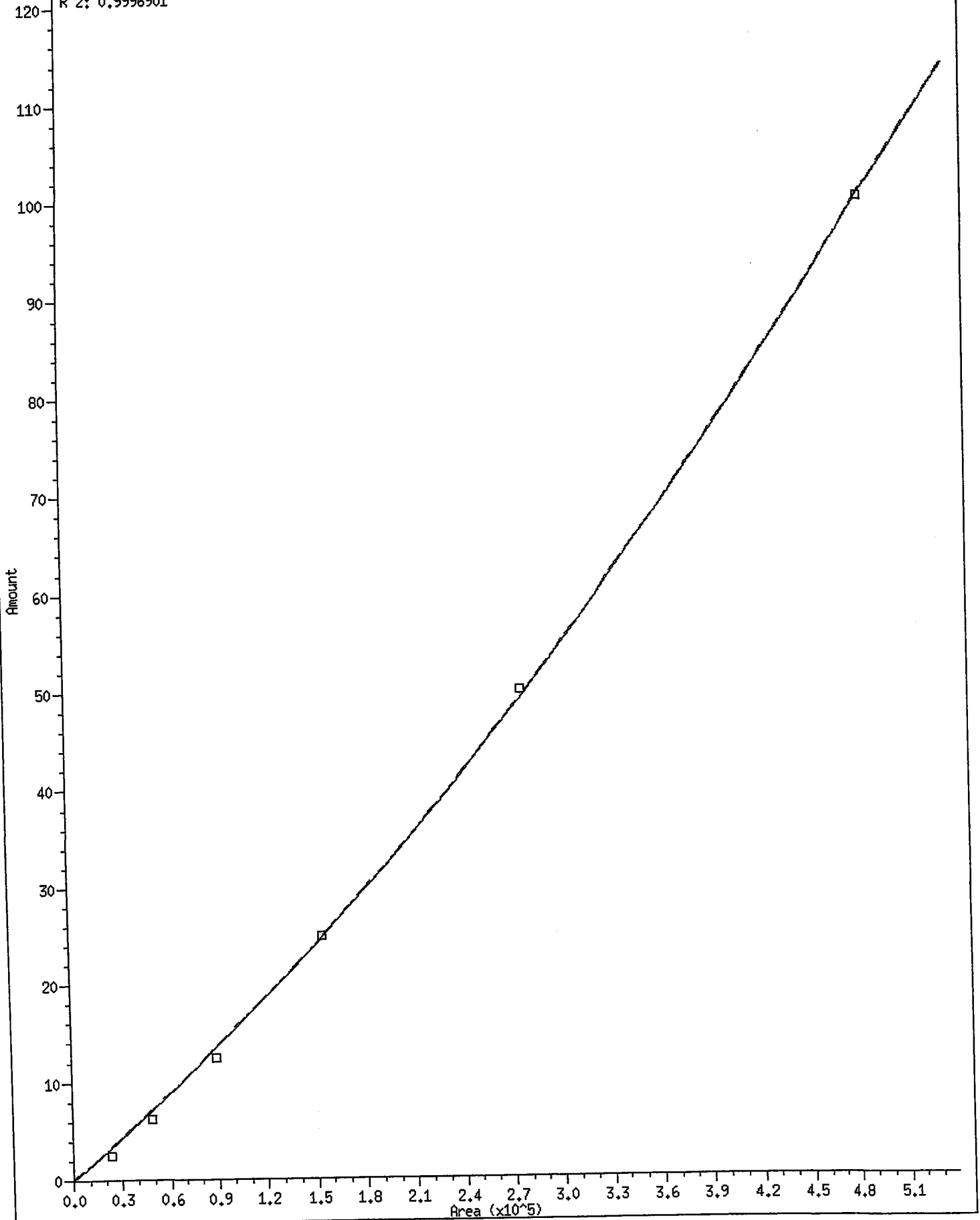
1 2,4-Dichlorophenol

Curve Type: Quadratic By-Response  
Amt = 0 + 0.001325809\*Rsp + 1.887688e-09\*Rsp^2  
R^2: 0.9996633



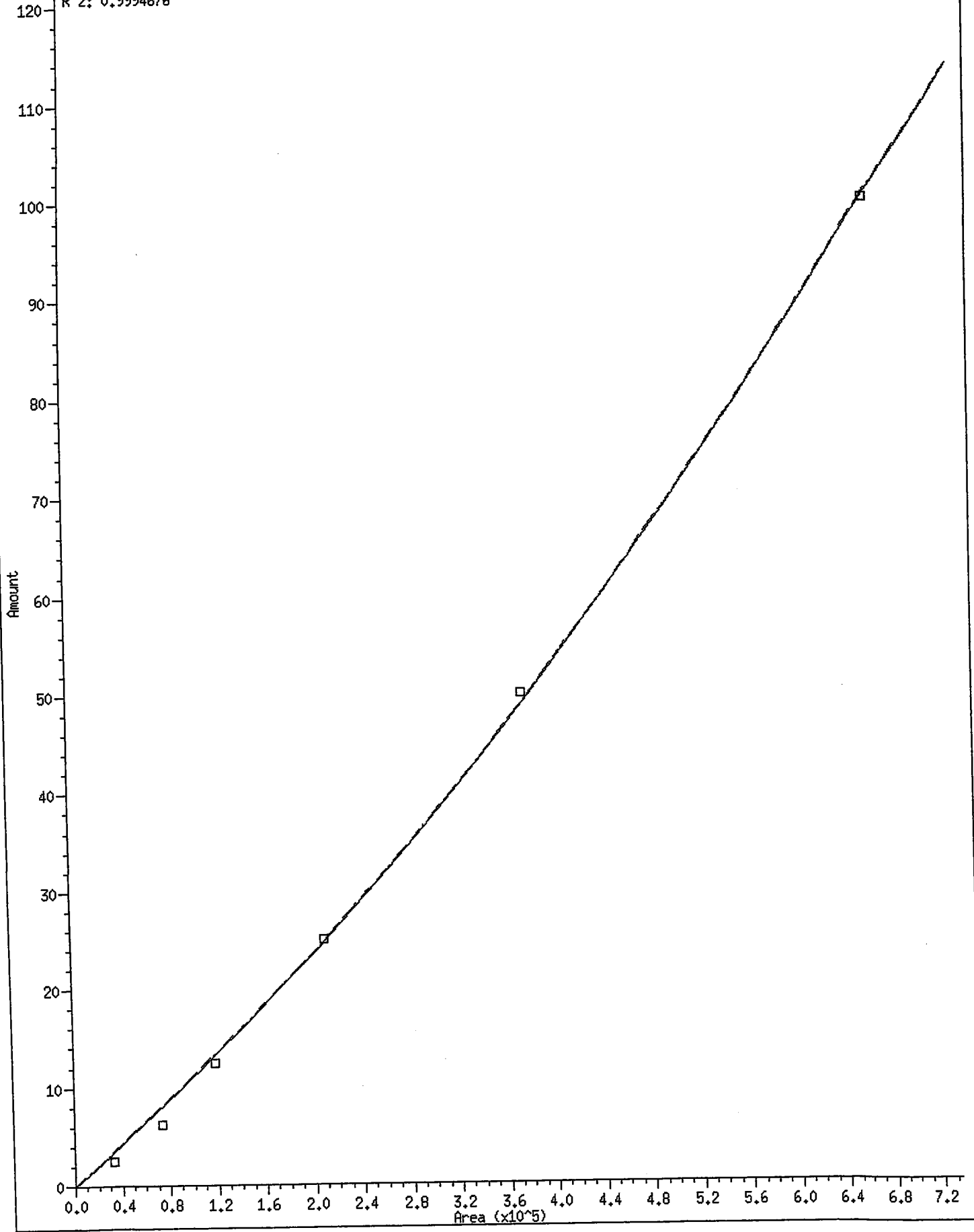
4 2,4,5-Trichlorophenol

Curve Type: Quadratic By-Response  
Amt = 0 + 0.0001390703\*Rsp + 1.342464e-10\*Rsp^2  
R^2: 0.9996901



6 2,3,4-Trichlorophenol

Curve Type: Quadratic By-Response  
Amt = 0 + 0.000103228\*Rsp + 7.075695e-11\*Rsp^2  
R^2: 0.9994676



Report Date : 12-Aug-2010 19:02

Analytical Resources, Inc.  
INITIAL CALIBRATION DATA

Start Cal Date : 09-AUG-2010 12:23  
End Cal Date : 09-AUG-2010 14:03  
Quant Method : ESTD  
Origin : Force  
Target Version : 3.50  
Integrator : HP Genie  
Method file : /chem2/ecdl.i/FPCP20100809.b/FPCPB.m  
Cal Date : 12-Aug-2010 18:59 aron

Calibration File Names:  
Level 1: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A006.d/0809A006.cdf  
Level 2: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A007.d/0809A007.cdf  
Level 3: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A008.d  
Level 4: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A005.d  
Level 5: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A009.d  
Level 6: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A010.d

Compound	Level						Level						Coefficients		%RSD or R^2
	2	6	12	25	50	100	6	12	25	50	100	b	m1	m2	
1 2,4-Dichlorophenol	21466	45023	91643	154741	267768	457854	QUAD	0.0006+00	0.00133	1.888e-09	0.99966				
2 2,4,6-Trichlorophenol	14811	12542	14020	12241	11222	10071	AVRG		12485		13.99132				
3 2,3,6-Trichlorophenol	15358	13183	12610	12054	11138	10108	AVRG		12409		14.58387				
4 2,4,5-Trichlorophenol	23627	48273	89400	155087	278412	489569	QUAD	0.000e+00	0.00014	1.342e-10	0.99969				
5 2,3,5,6-Tetrachlorophenol	22710	20100	18581	17733	16666	15298	AVRG		18515		14.18619				
6 2,3,4-Trichlorophenol	32846	73211	117878	210189	376624	666942	QUAD	0.000e+00	0.00010	7.076e-11	0.99947				
8 2,3,4,5-Tetrachlorophenol	18414	16106	15136	13550	12798	11541	AVRG		14591		17.01254				
9 Pentachlorophenol	28790	24995	23903	21206	20507	18368	AVRG		22961		16.20188				
7 2,4,6-Tribromophenol (surr)	22648	19438	18816	17793	17226	16083	AVRG		18667		12.21092				

Report Date : 12-Aug-2010 19:02

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-AUG-2010 12:23  
End Cal Date : 09-AUG-2010 14:03  
Quant Method : ESTD  
Origin : Force  
Target Version : 3.50  
Integrator : HP Genie  
Method file : /chem2/ecdl1.i/FPCP20100809.b/FPCPB.m  
Cal Date : 12-Aug-2010 18:59 aron

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-AUG-2010 12:23  
 End Cal Date : 09-AUG-2010 14:03  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd1.i/FPCP20100809.b/FPCP.m  
 Cal Date : 12-Aug-2010 19:13 aron  
 Curve Type : Average

Calibration File Names:

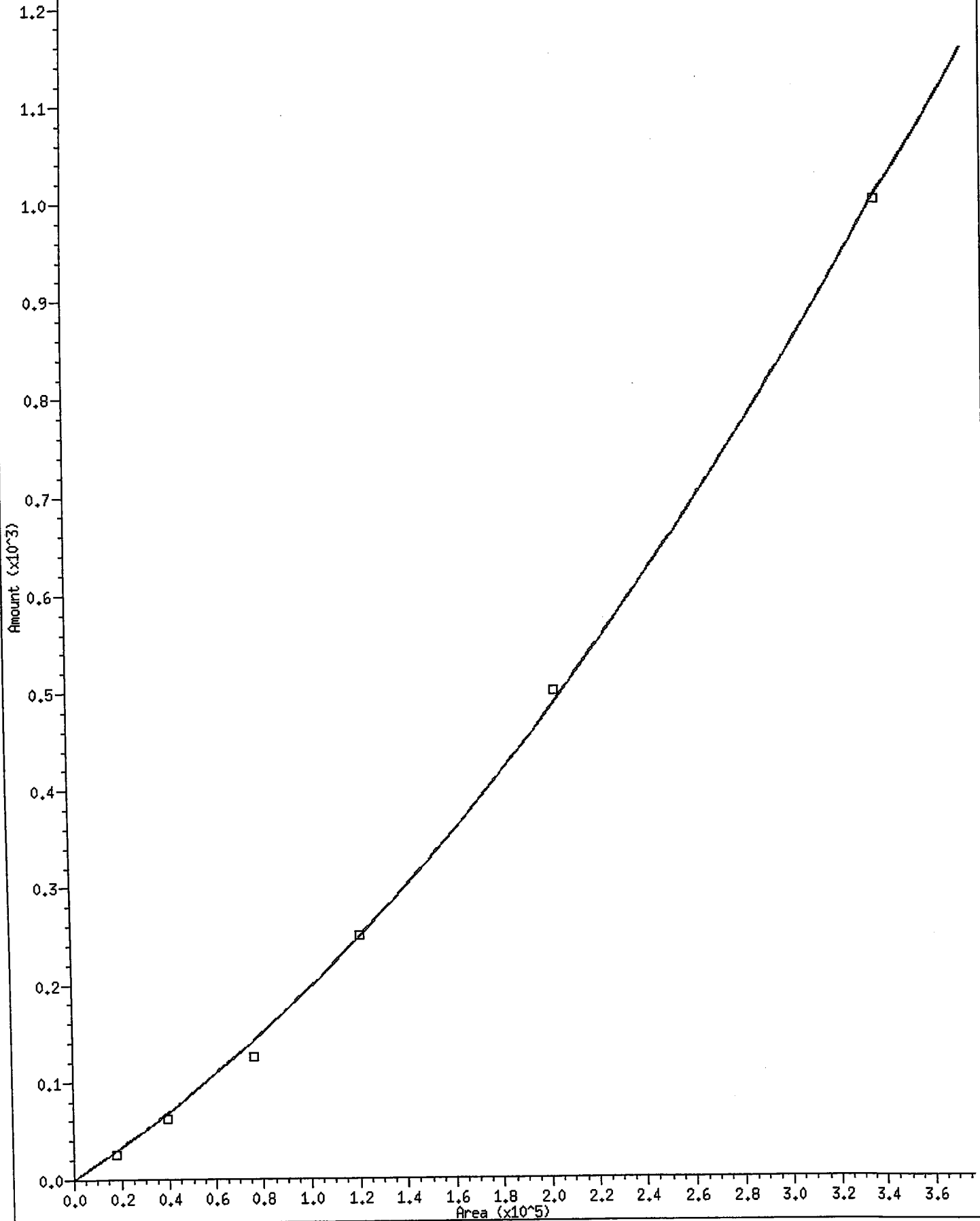
Level 1: /chem2/ecd1.i/FPCP20100809.b/ical-1.b/0809A006.d/0809A006.cdf  
 Level 2: /chem2/ecd1.i/FPCP20100809.b/ical-1.b/0809A007.d/0809A007.cdf  
 Level 3: /chem2/ecd1.i/FPCP20100809.b/ical-1.b/0809A008.d  
 Level 4: /chem2/ecd1.i/FPCP20100809.b/ical-1.b/0809A005.d/0809A005.cdf  
 Level 5: /chem2/ecd1.i/FPCP20100809.b/ical-1.b/0809A009.d  
 Level 6: /chem2/ecd1.i/FPCP20100809.b/ical-1.b/0809A010.d

Compound	2.500 Level 1	6.250 Level 2	12.500 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
1 2,4-Dichlorophenol	721	627	611	486	409	342	533	27.140 <-
2 2,4,6-Trichlorophenol	13540	10473	9560	8413	7539	6660	9364	26.271 <-
3 2,3,6-Trichlorophenol	12902	10500	9607	8801	8025	7161	9499	21.431 <-
4 2,4,5-Trichlorophenol	6404	5362	5688	4915	4290	3627	5048	19.727
5 2,3,4-Trichlorophenol	8393	7068	7135	7922	5475	5053	6841	19.373
6 2,3,5,6-Tetrachlorophenol	17905	15060	14996	14233	11882	10558	14106	18.400
8 2,3,4,5-Tetrachlorophenol	16324	13459	12294	10216	8895	7628	11469	27.892 <-
9 Pentachlorophenol	24528	19824	17830	15337	13686	11965	17195	26.550 <-
\$ 7 2,4,6-Tribromophenol (surr)	18561	14999	13969	12135	11200	9940	13467	22.982 <-



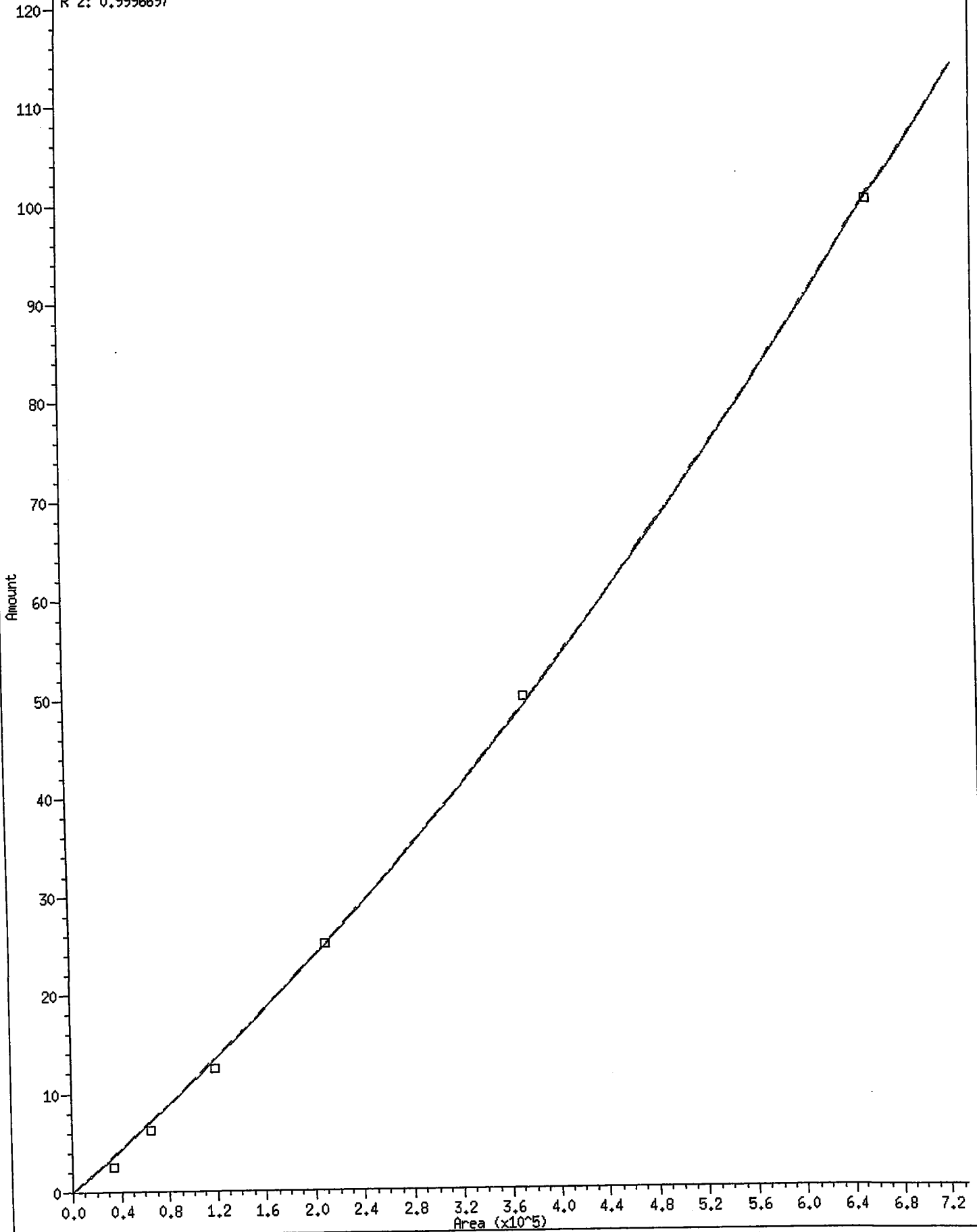
1 2,4-Dichlorophenol

Curve Type: Quadratic By-Response  
Amt = 0 + 0.00155001\*Rsp + 4.062816e-09\*Rsp^2  
R^2: 0.9993457



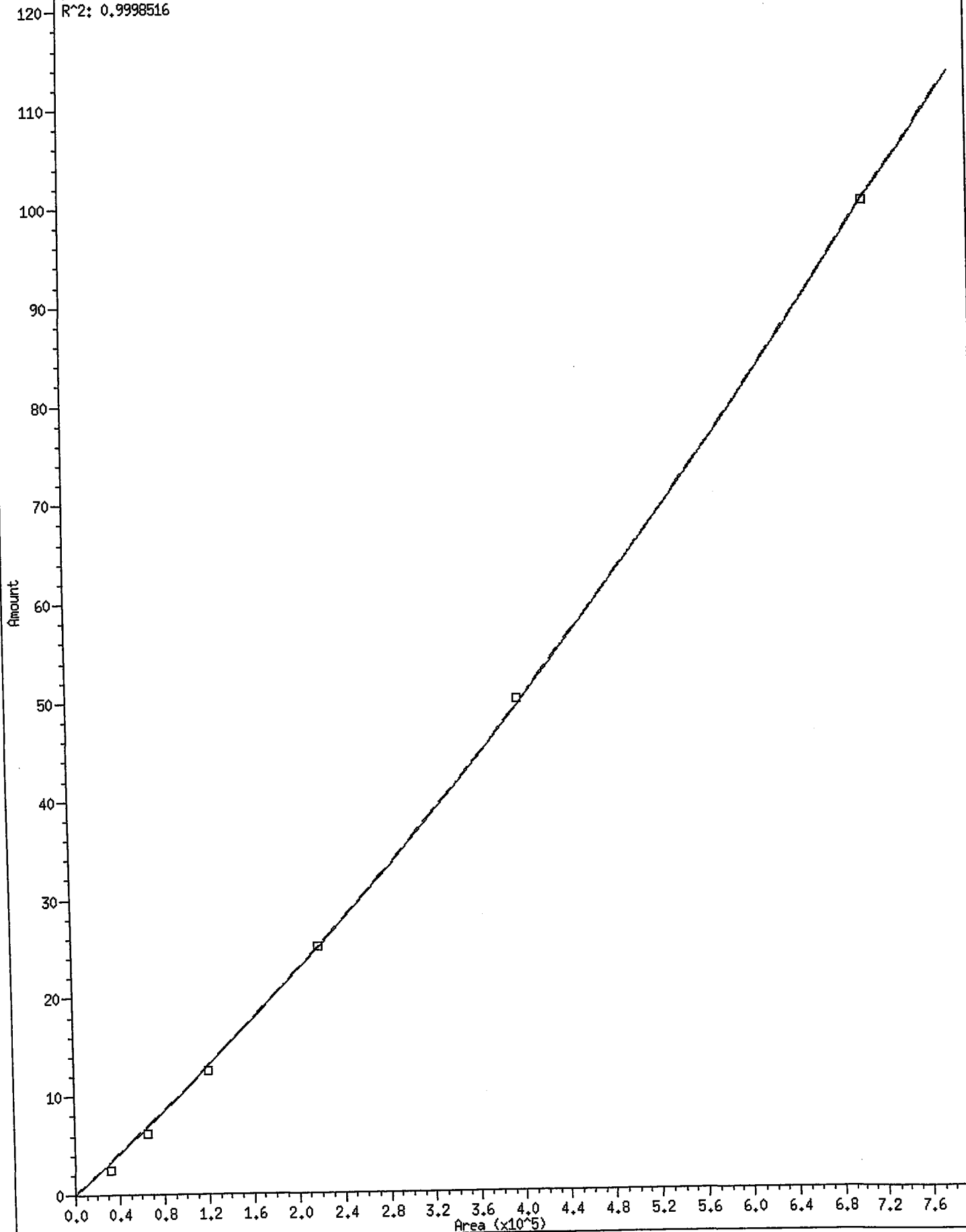
2 2,4,6-Trichlorophenol

Curve Type: Quadratic By-Response  
Amt = 0 + 0.0001034981\*Rsp + 7.067667e-11\*Rsp^2  
R^2: 0.9996697



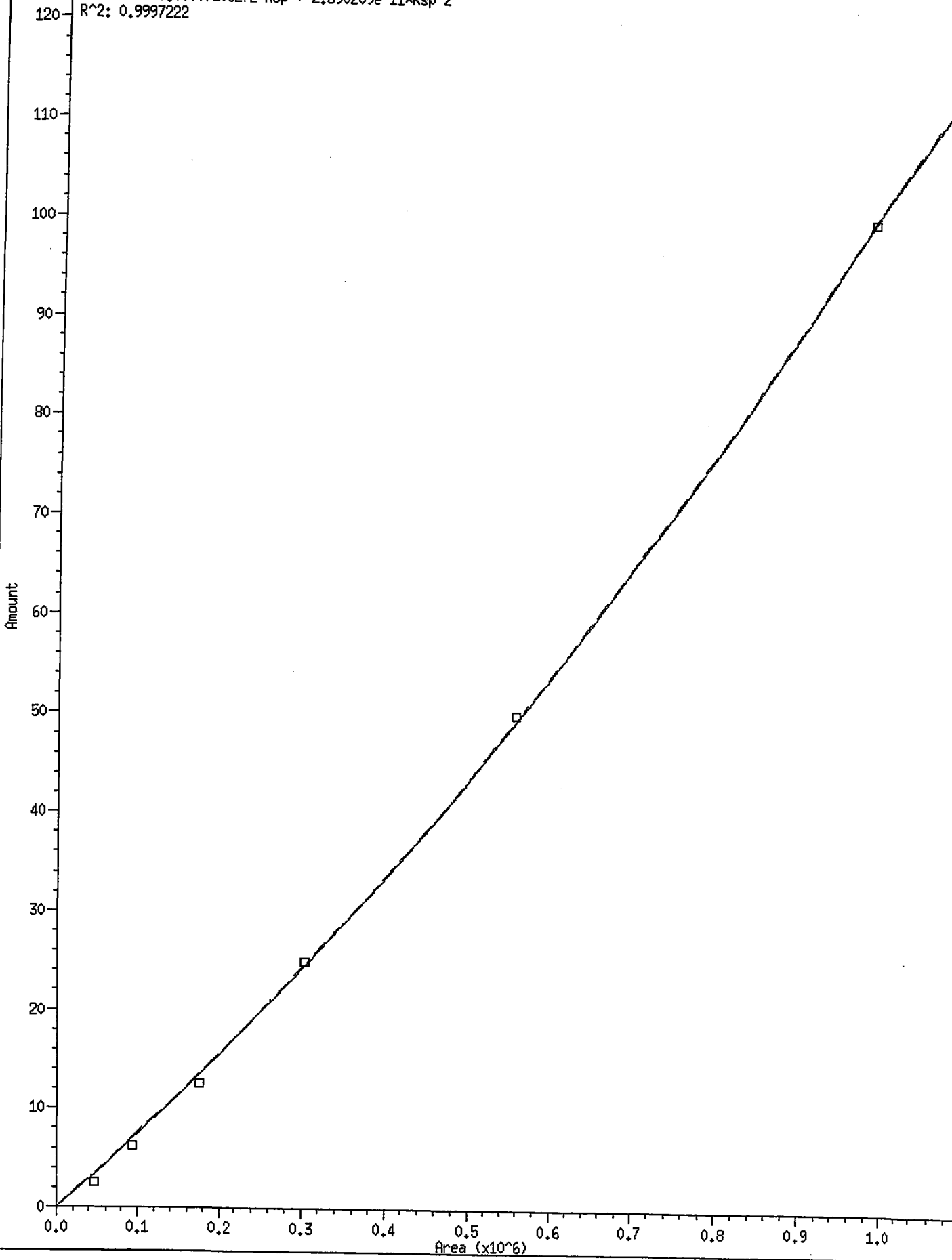
3 2,3,6-Trichlorophenol

Curve Type: Quadratic By-Response  
Amt = 0 + 0.0001017075\*Rsp + 5.332174e-11\*Rsp^2  
R^2: 0.9998516



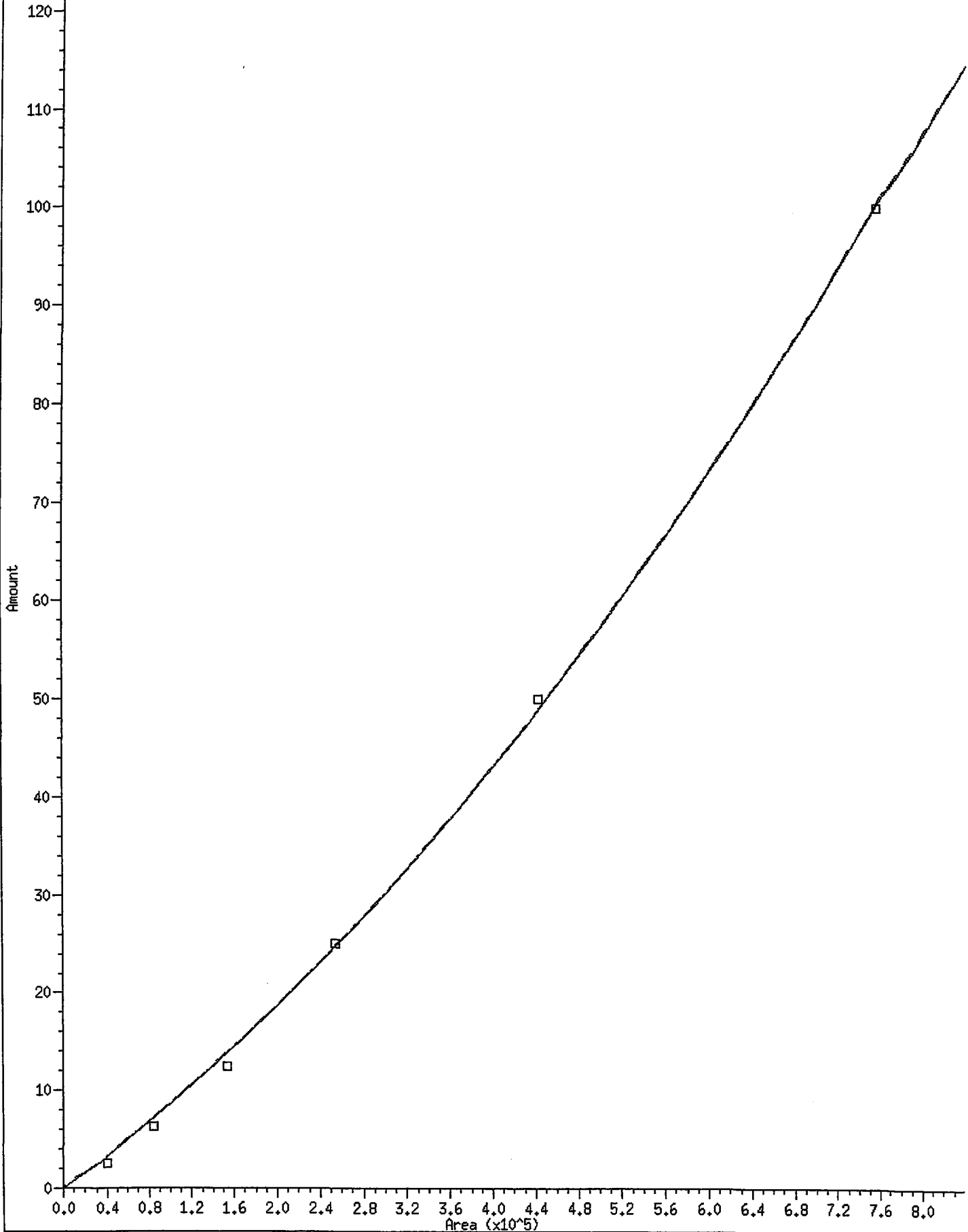
\* 7 2,4,6-Tribromophenol (surr)

Curve Type: Quadratic By-Response  
Amt = 0 + 0.00007206272\*Rsp + 2.890209e-11\*Rsp^2  
R^2: 0.9997222



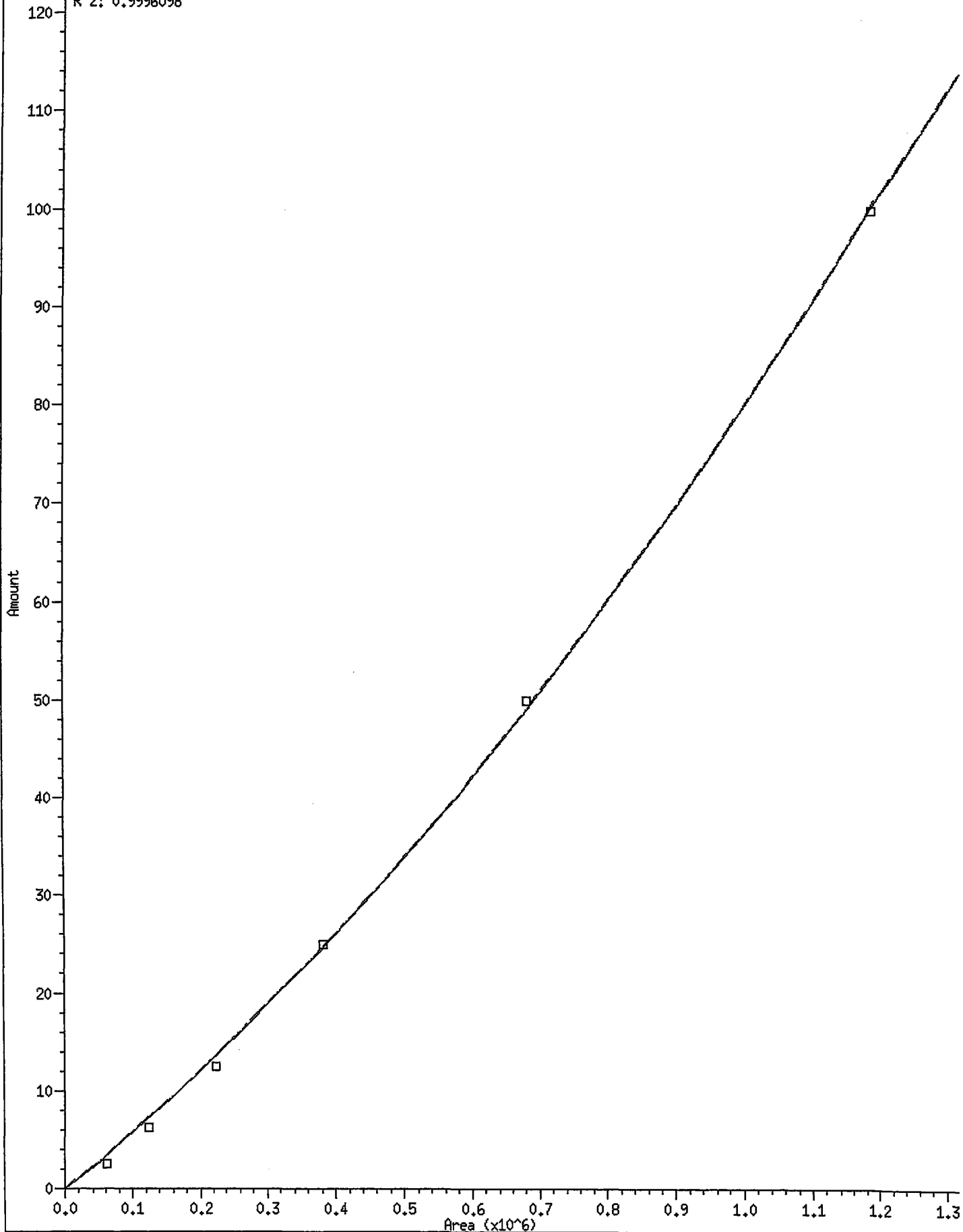
8 2,3,4,5-Tetrachlorophenol

Curve Type: Quadratic By-Response  
Amt = 0 + 0.00007935554\*Resp + 6.845903e-11\*Resp^2  
R^2: 0.9994890



9 Pentachlorophenol

Curve Type: Quadratic By-Response  
Amt = 0 + 0.00005540325\*Resp + 2.375022e-11\*Resp^2  
R^2: 0.9996098



Report Date : 12-Aug-2010 19:15

Analytical Resources, Inc.  
INITIAL CALIBRATION DATA

Start Cal Date : 09-AUG-2010 12:23  
 End Cal Date : 09-AUG-2010 14:03  
 Quant Method : ESTD  
 Origin : Force  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecdl1.i/FPCP20100809.b/FPCP.m  
 Cal Date : 12-Aug-2010 19:13 aron

Calibration File Names:  
 Level 1: /chem2/ecdl1.i/FPCP20100809.b/ical-1.b/0809A006.d/0809A006.cdf  
 Level 2: /chem2/ecdl1.i/FPCP20100809.b/ical-1.b/0809A007.d/0809A007.cdf  
 Level 3: /chem2/ecdl1.i/FPCP20100809.b/ical-1.b/0809A008.d  
 Level 4: /chem2/ecdl1.i/FPCP20100809.b/ical-1.b/0809A005.d/0809A005.cdf  
 Level 5: /chem2/ecdl1.i/FPCP20100809.b/ical-1.b/0809A009.d  
 Level 6: /chem2/ecdl1.i/FPCP20100809.b/ical-1.b/0809A010.d

Compound	Level						Coefficients			or R <sup>2</sup>	%RSD
	2	6	12	25	50	100	b	m1	m2		
1 2,4-Dichlorophenol	18020	39212	76337	121400	204471	341711	0.000e+00	0.00155	4.063e-09	0.99935	
2 2,4,6-Trichlorophenol	33851	65457	119503	210327	376941	665977	0.000e+00	0.00010	7.068e-11	0.99967	
3 2,3,6-Trichlorophenol	32256	65624	120087	220036	401238	716085	0.000e+00	0.00010	5.332e-11	0.99985	
4 2,4,5-Trichlorophenol	6404	5362	5688	4915	4290	3627	AVRG	5048		19.72715	
5 2,3,4-Trichlorophenol	8393	7068	7135	7922	5475	5053	AVRG	6841		19.37297	
6 2,3,5-Tetrachlorophenol	17905	15060	14996	14233	11882	10558	AVRG	14106		18.40050	
8 2,3,4,5-Tetrachlorophenol	40811	84118	153678	255392	444734	762767	QUAD	0.000e+00	6.846e-11	0.99949	
9 Pentachlorophenol	61320	123902	222874	383426	684285	1196534	QUAD	0.000e+00	2.375e-11	0.99961	
7 2,4,6-Tribromophenol (surr)	46402	93741	174610	303374	559983	994034	QUAD	0.000e+00	2.890e-11	0.99972	

Report Date : 12-Aug-2010 19:15

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-AUG-2010 12:23  
End Cal Date : 09-AUG-2010 14:03  
Quant Method : ESTD  
Origin : Force  
Target Version : 3.50  
Integrator : HP Genie  
Method file : /chem2/ecdl.i/FPCP20100809.b/FPCP.m  
Cal Date : 12-Aug-2010 19:13 aron

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response



Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

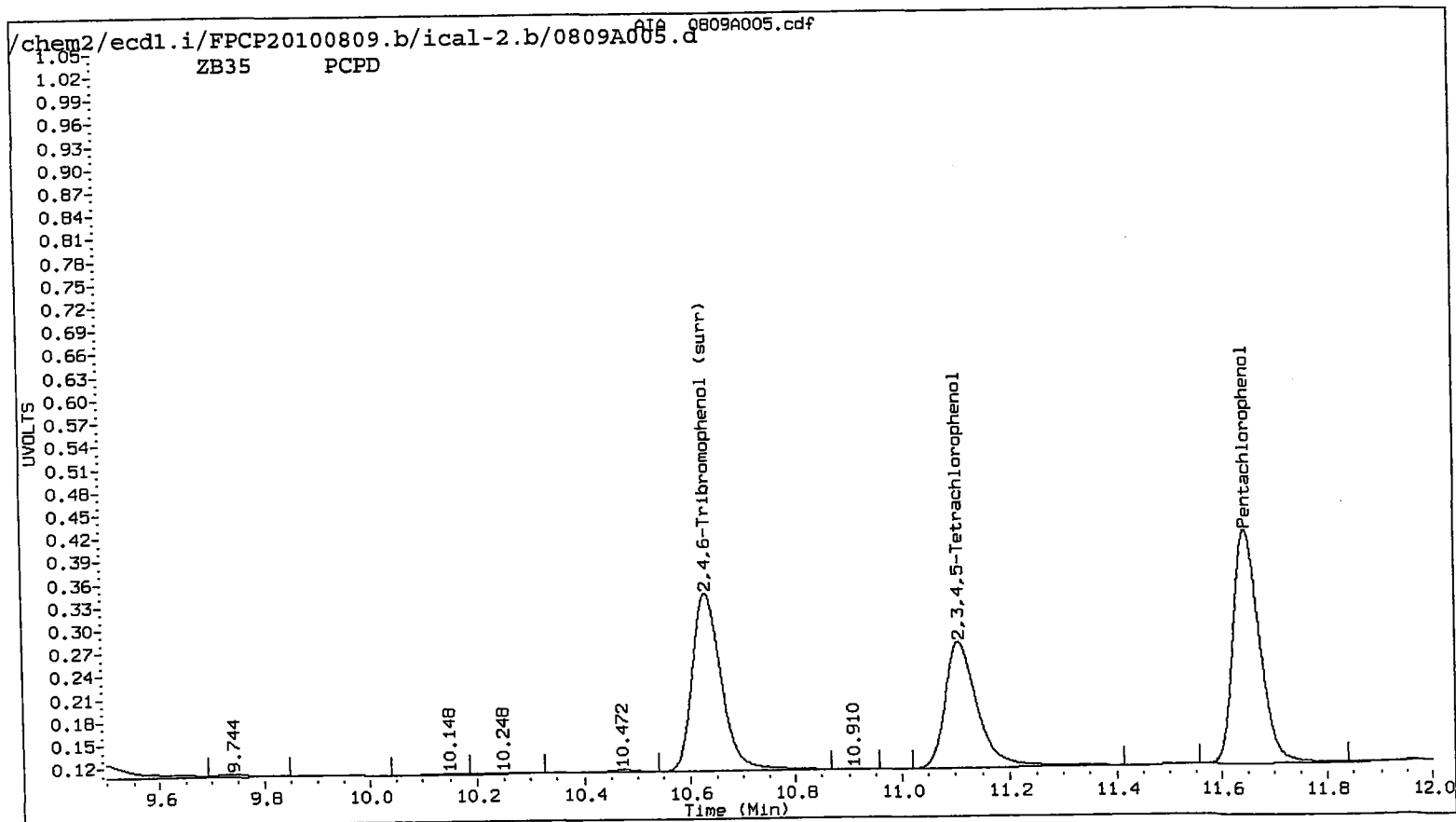
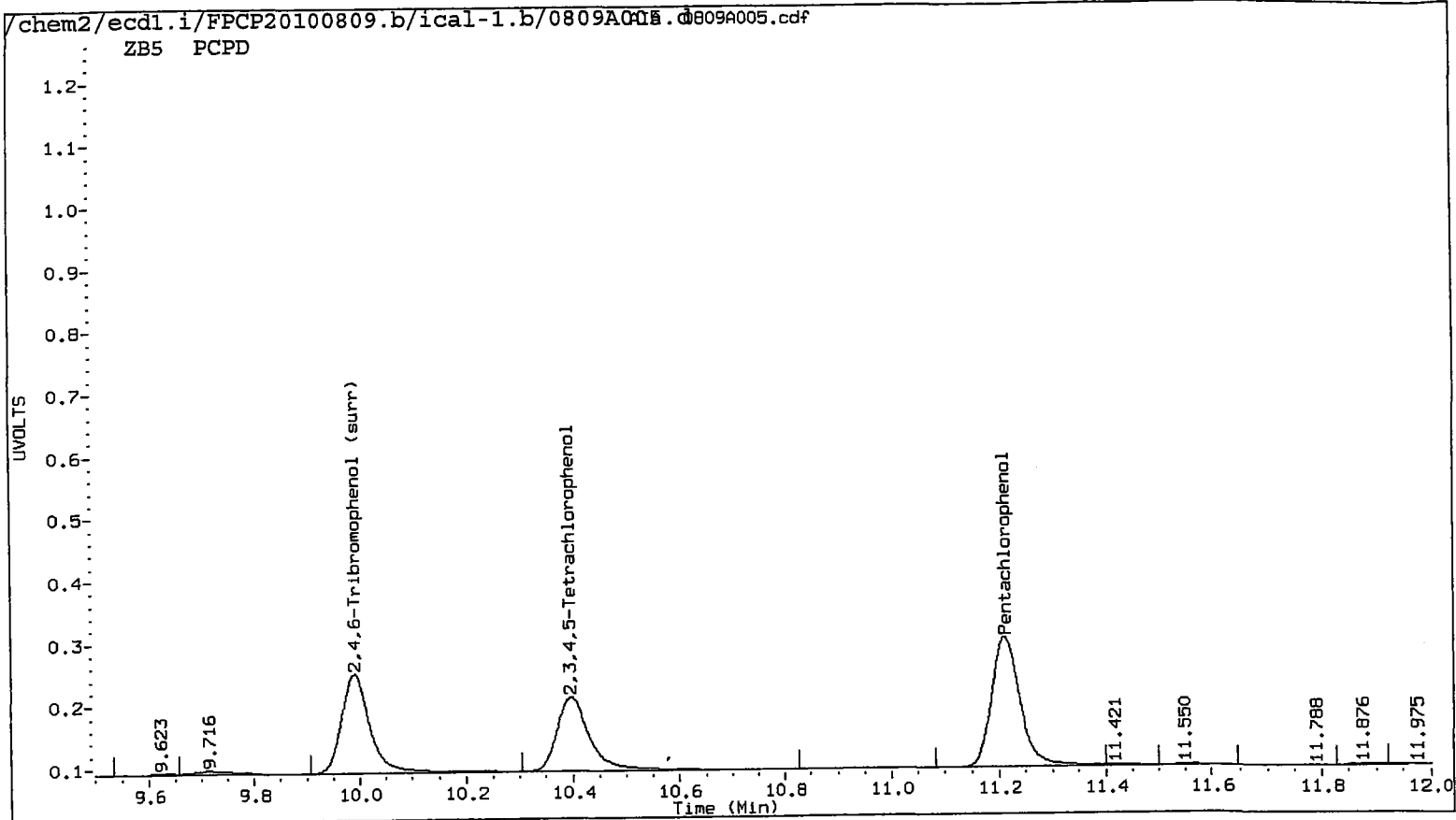
AR 8/12/2010

Data file 1: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A005.d ARI ID: PCPD  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A005.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 09-AUG-2010 12:23  
 Compound Sublist: all Report Date: 08/12/2010 19:15  
 Instrument: ecdl.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

RT	ZB-5 Col Shift Response	ZB35 Col Shift Response	ZB-5 on col	ZB35 on col	RPD	Compound
11.212	-0.007 383426	11.649 -0.009 530145	24.7347	23.0885	6.9	Pentachlorophenol
7.261	-0.003 210327	7.329 -0.004 306027	24.8950	24.5124	1.5	2,4,6-Trichlorophenol
7.615	-0.004 220036	7.858 -0.006 301362	24.9609	24.2867	2.7	2,3,6-Trichlorophenol
8.221	-0.021 122872	8.593 -0.022 155087	24.3430	24.7969	1.8	2,4,5-Trichlorophenol
8.770	-0.022 198058	9.359 -0.021 210189	28.9512	24.8234	15.4	2,3,4-Trichlorophenol
8.996	-0.011 355822	9.262 -0.015 443336	25.2255	23.9449	5.2	2,3,5,6-Tetrachlorophenol
10.397	-0.016 255392	11.109 -0.017 338740	24.7320	23.2161	6.3	2,3,4,5-Tetrachlorophenol
6.887	-0.006 121400	7.156 -0.010 154741	248.0488	250.3573	0.9	2,4-Dichlorophenol
9.990	-0.012 303374	10.632 -0.014 444822	24.5	23.8	2.9	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

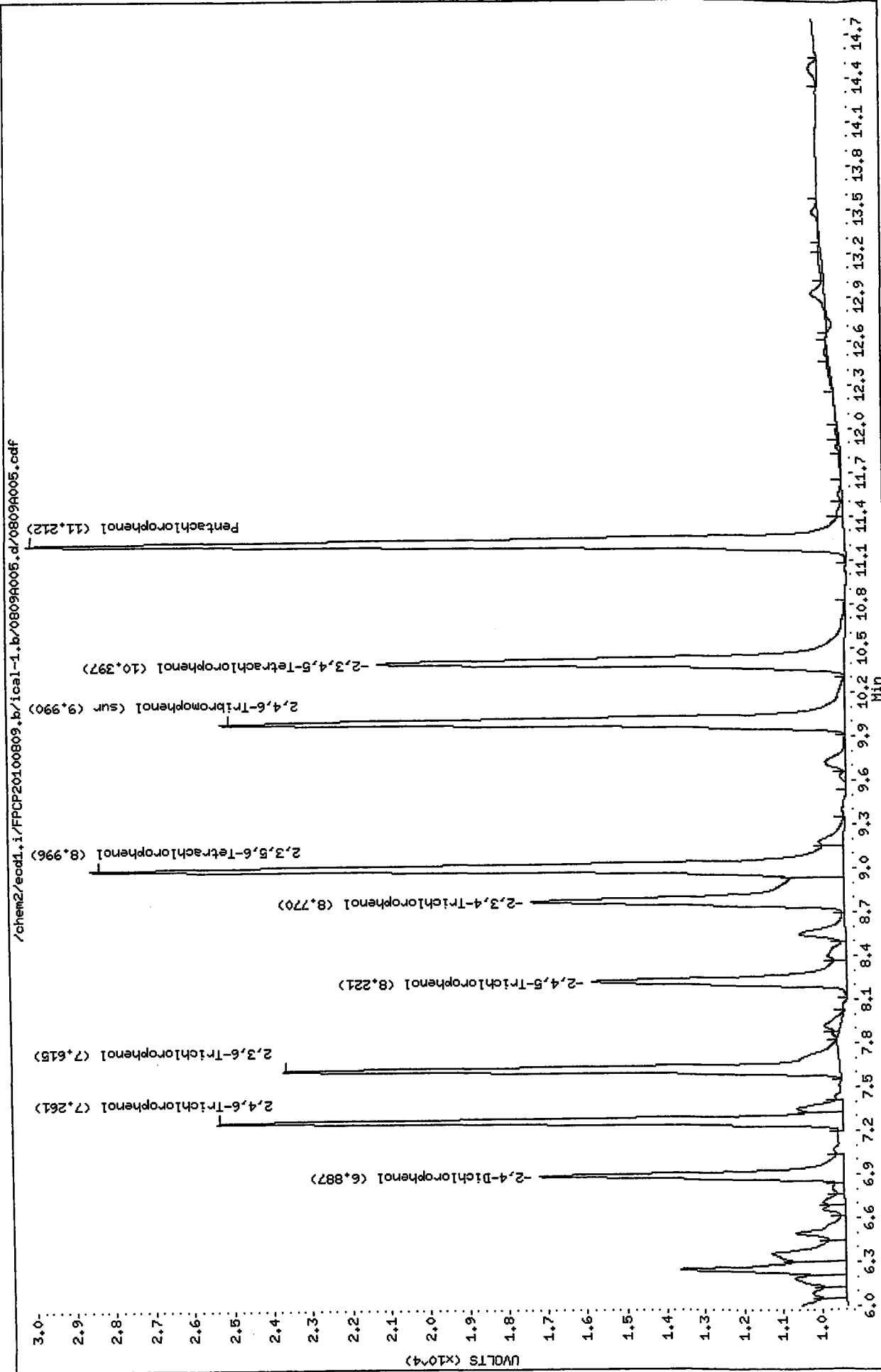
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	98.1	95.3



Data File: /chem2/eod1.1/FPCP20100809.b/ical-1.b/0809A005.d  
Date: 09-AUG-2010 12:23  
Client ID:  
Sample Info: PCPD  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: eod1.1

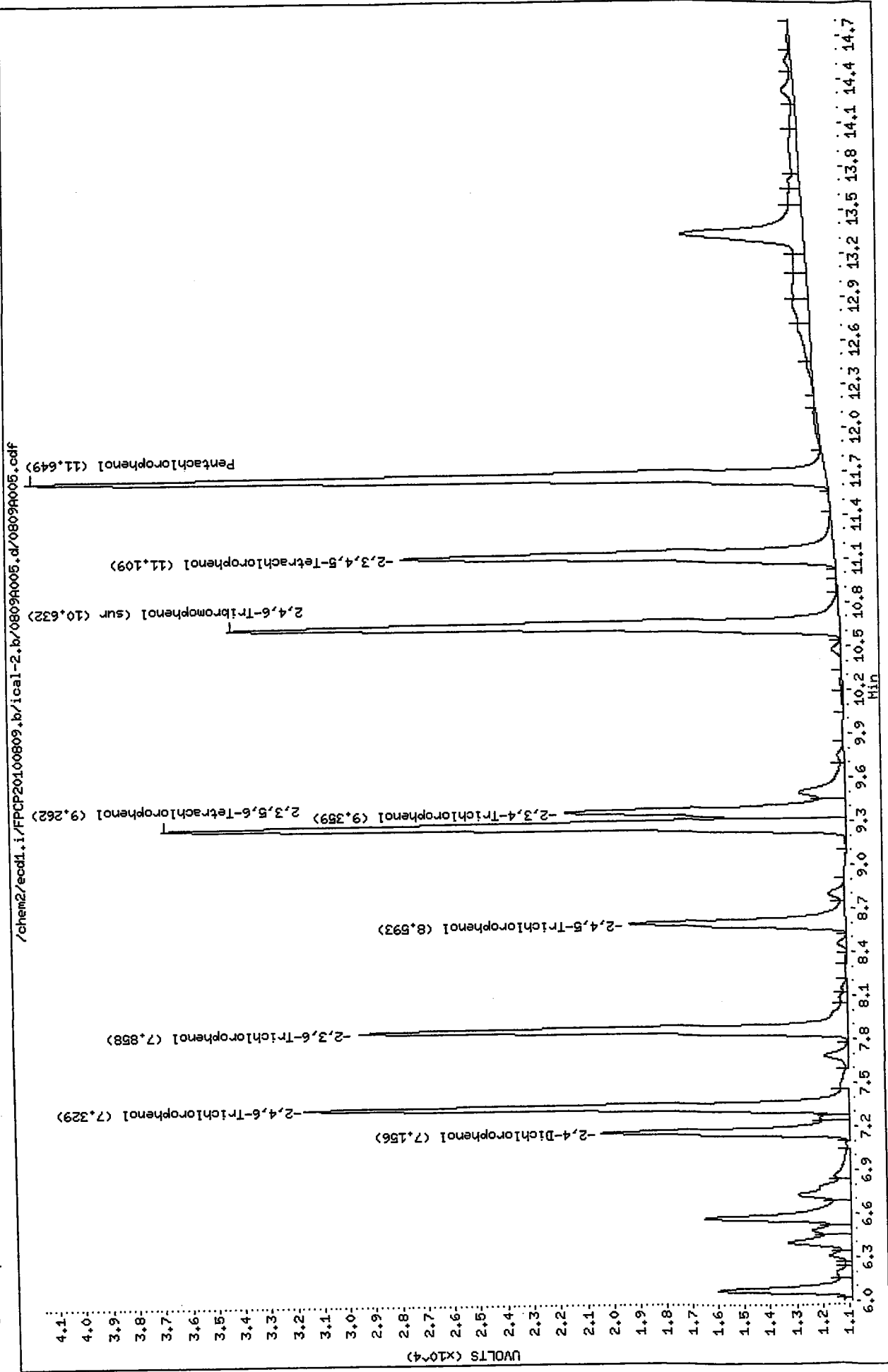
Operator: ar  
Column diameter: 0.53



Data File: /chem2/ecdl1.i/FPCP20100809.b/ical-2.b/0809A005.d  
Date : 09-AUG-2010 12:23  
Client ID:  
Sample Info: PCPD  
Purge Volume: 2.0  
Column phase: ZB35

Instrument: ecd1.i

Operator: ar  
Column diameter: 0.53



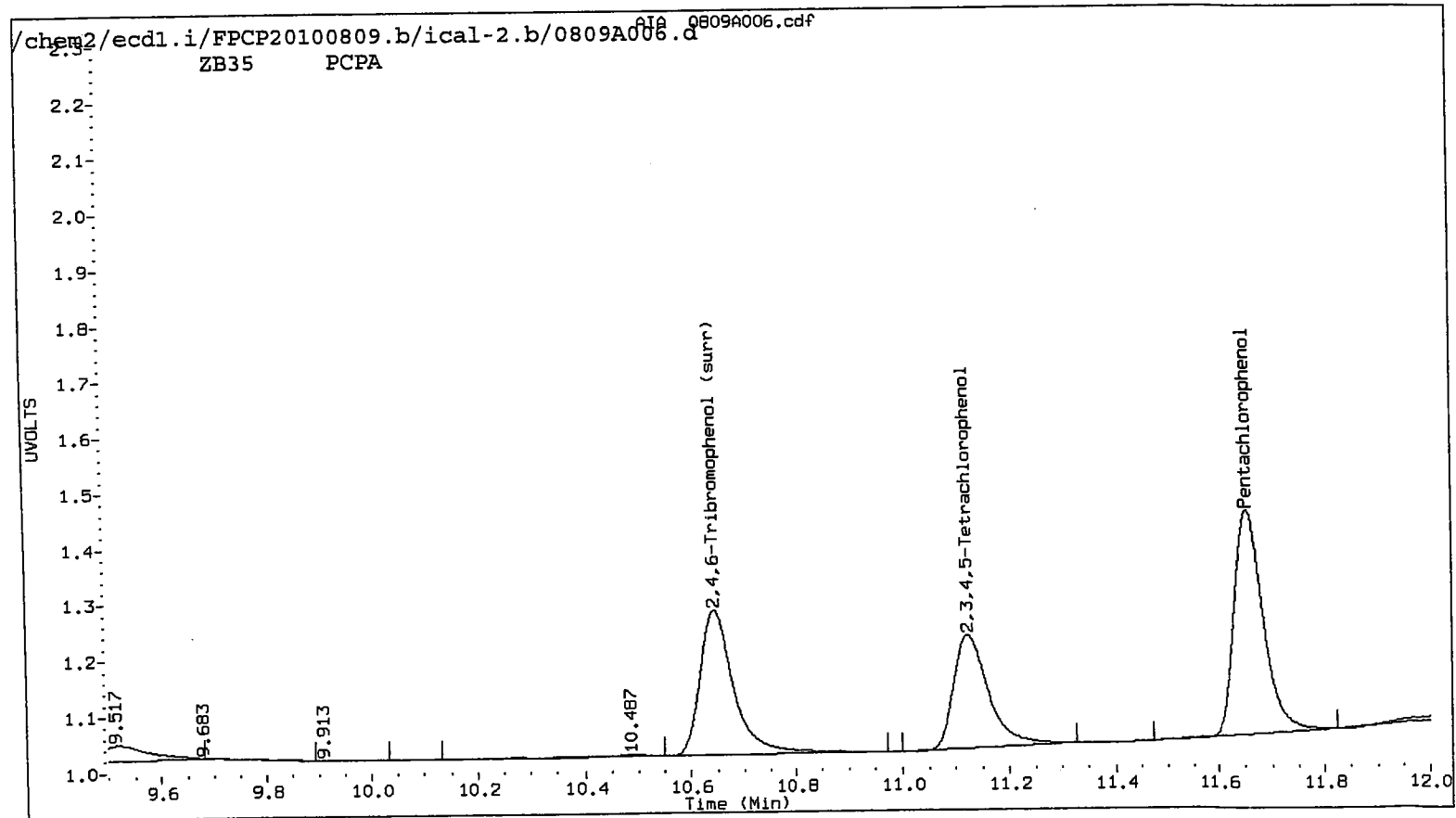
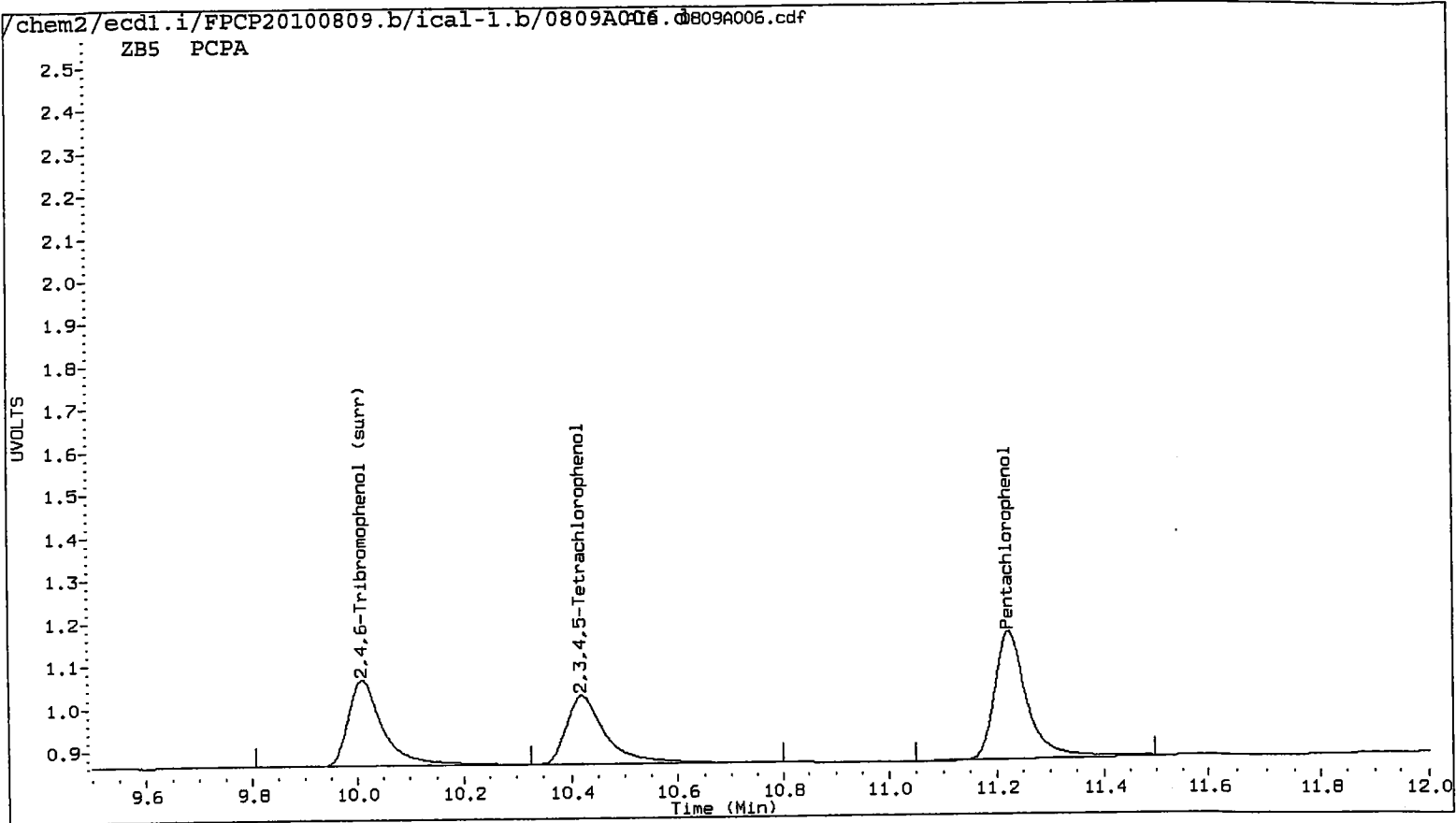
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A006.d    ARI ID: PCPA  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A006.d    Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m                      Injection Date: 09-AUG-2010 12:43  
 Compound Sublist: all    Report Date: 08/12/2010 19:15  
 Instrument: ecdl.i    Matrix: WATER  
 Operator: ar    Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.225	0.006	61320	11.658	0.000	71975	3.4866	3.1346	10.6	Pentachlorophenol
7.263	-0.001	33851	7.333	0.000	37028	3.5845	2.9659	18.9	2,4,6-Trichlorophenol
7.622	0.003	32256	7.864	0.000	38395	3.3362	3.0942	7.5	2,3,6-Trichlorophenol
8.253	0.011	16009	8.615	0.000	23627	3.1717	3.3608	5.8	2,4,5-Trichlorophenol
8.806	0.014	20983	9.380	0.000	32846	3.0672	3.4670	12.2	2,3,4-Trichlorophenol
9.013	0.006	44762	9.277	0.000	56775	3.1733	3.0665	3.4	2,3,5,6-Tetrachlorophenol
10.421	0.008	40811	11.126	0.000	46035	3.3526	3.1551	6.1	2,3,4,5-Tetrachlorophenol
6.897	0.004	18020	7.166	0.000	21466	29.2505	29.3296	0.3	2,4-Dichlorophenol
10.010	0.008	46402	10.646	0.000	56619	3.4	3.0	11.6	2,4,6-Tribromophenol (surr)

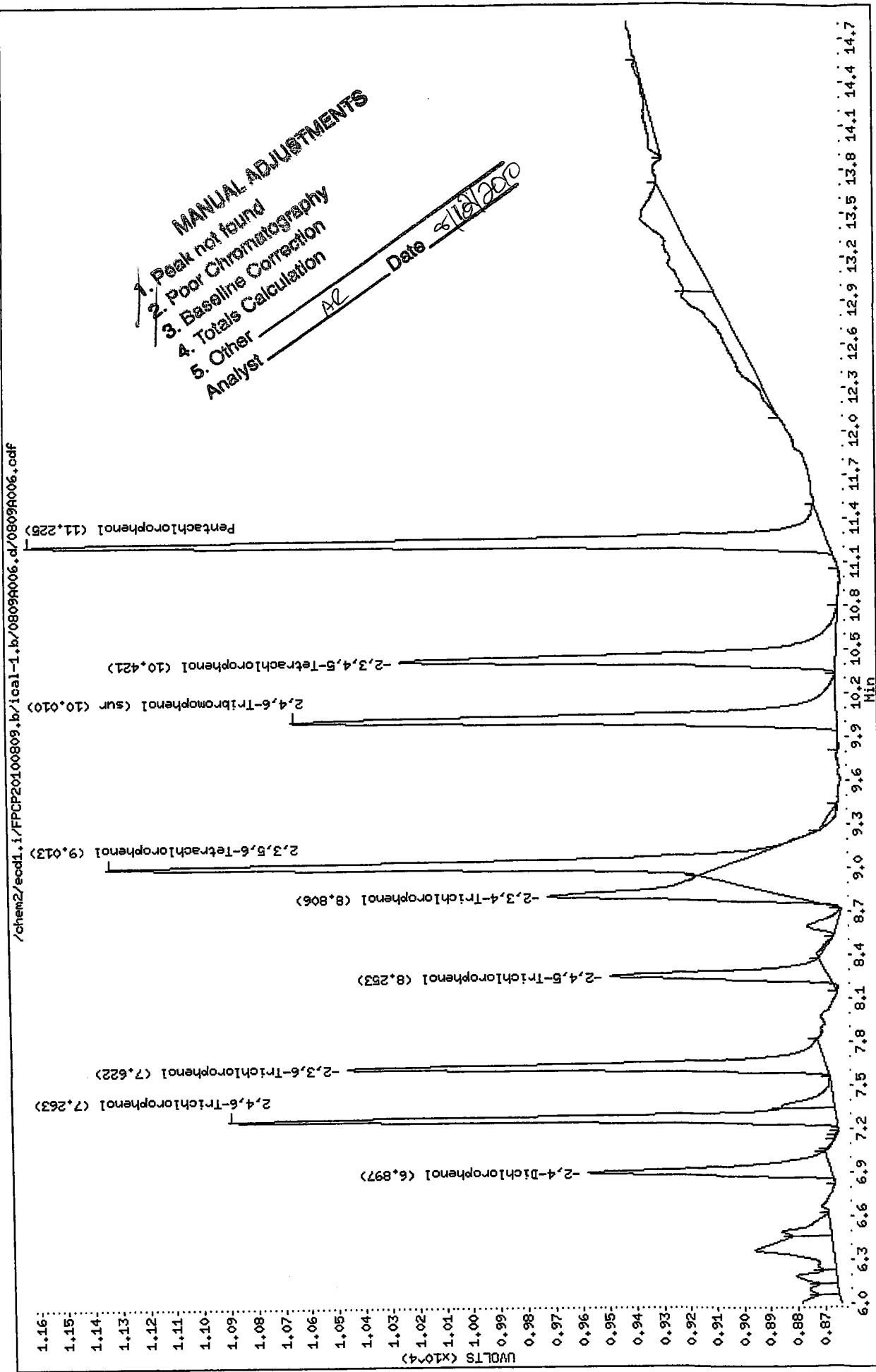
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	13.6	12.1

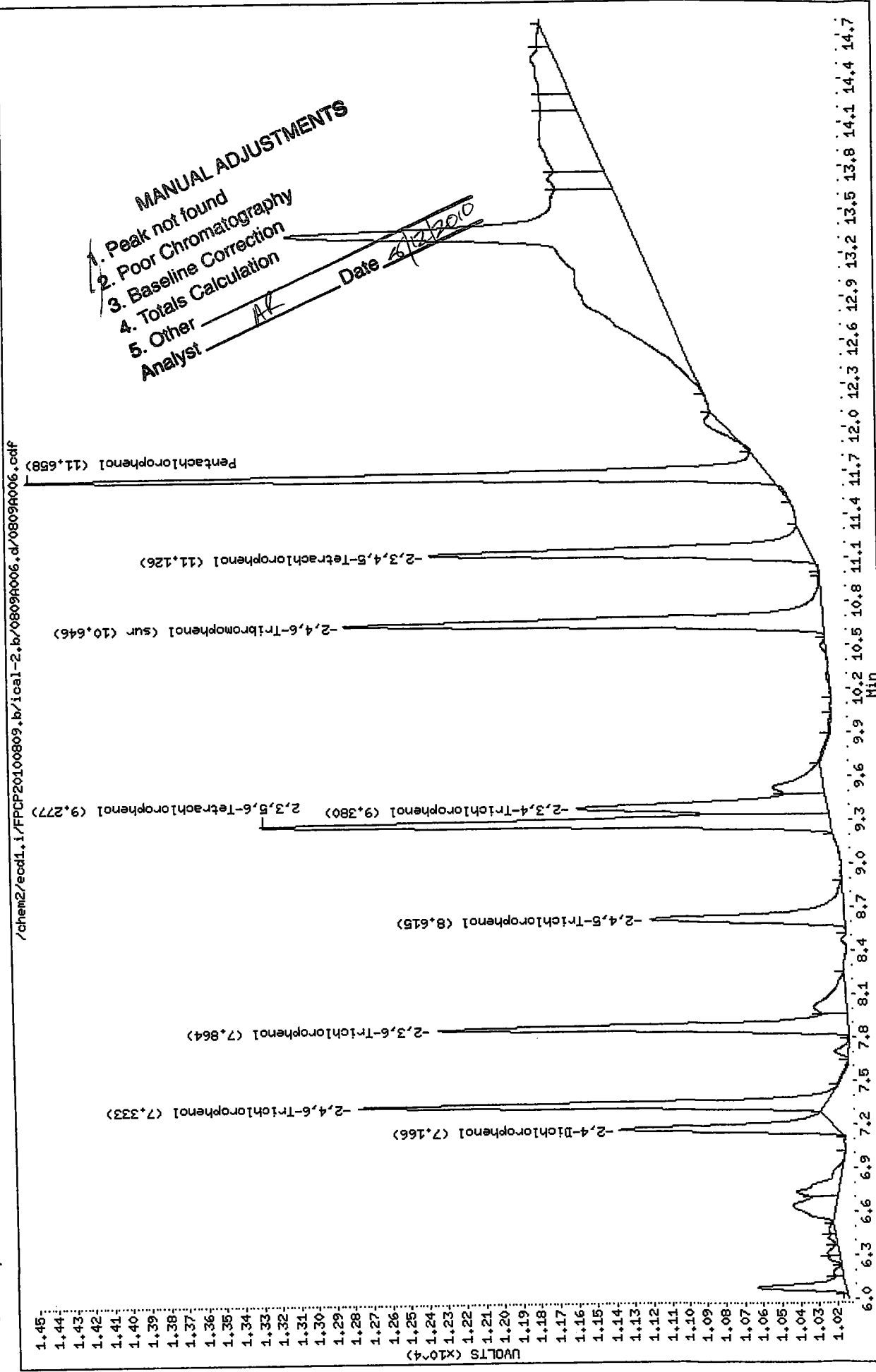


Data File: /chem2/ecd1.i/FPCP20100809.b/ical-1.b/0809A006.d  
Date: 09-AUG-2010 12:43  
Client ID:  
Sample Info: PCPA  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: ecd1.i  
Operator: ar  
Column diameter: 0.53



Data File: /chem2/eecd1.1/FPCP20100809.b/ical-2.b/0809A006.d  
 Date: 09-AUG-2010 12:43  
 Client ID:  
 Sample Info: PCPA  
 Purge Volume: 2.0  
 Column phase: ZB35  
 Instrument: eecd1.i  
 Operator: ar  
 Column diameter: 0.53

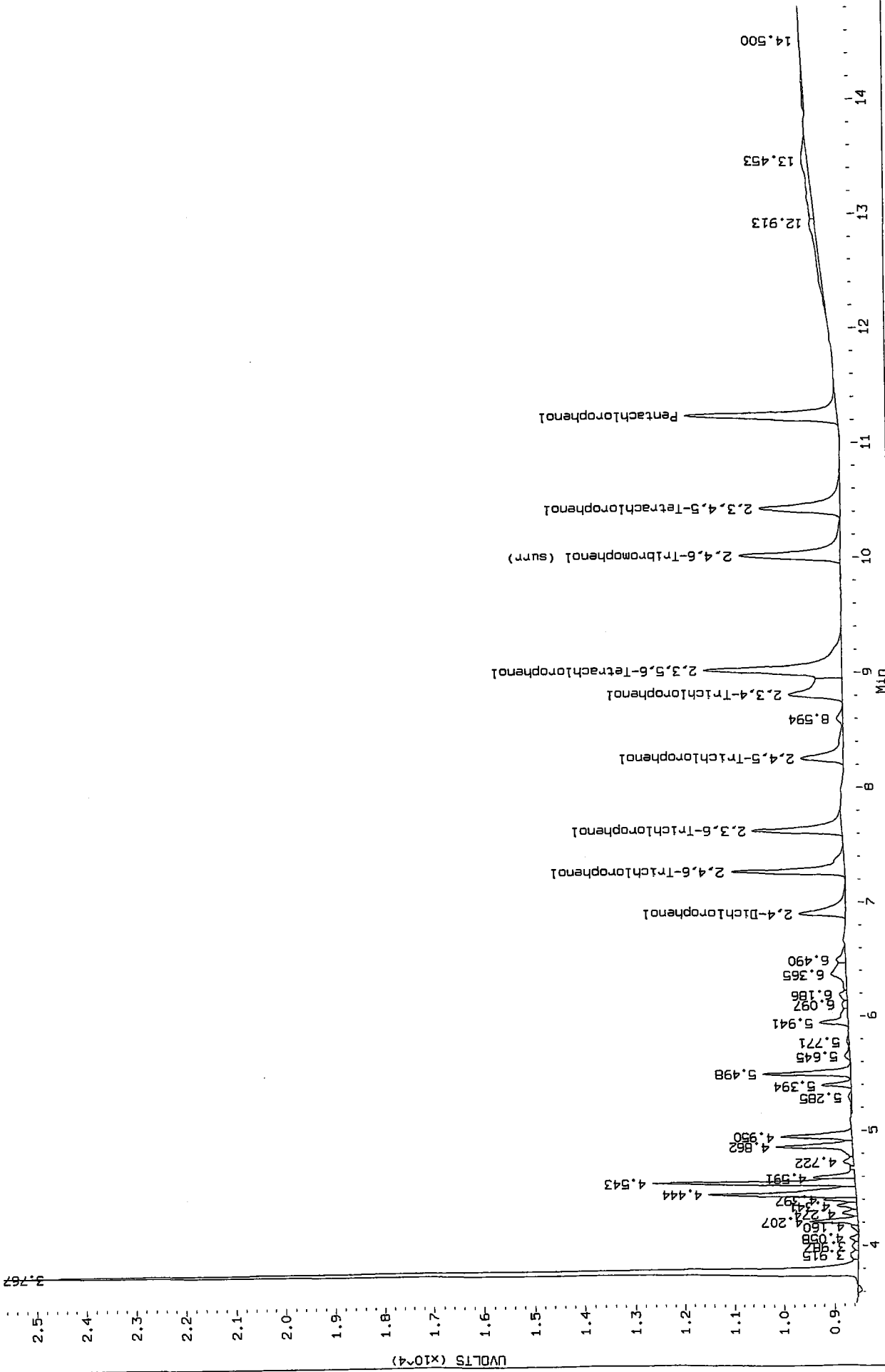




Data File: /chem2/ecdl.i/FFCP20100809.b/ical-1.b/0809A006.d/0809A006.cdf  
Injection Date: 09-AUG-2010 12:43  
Instrument: ecdl.i  
Client Sample ID:

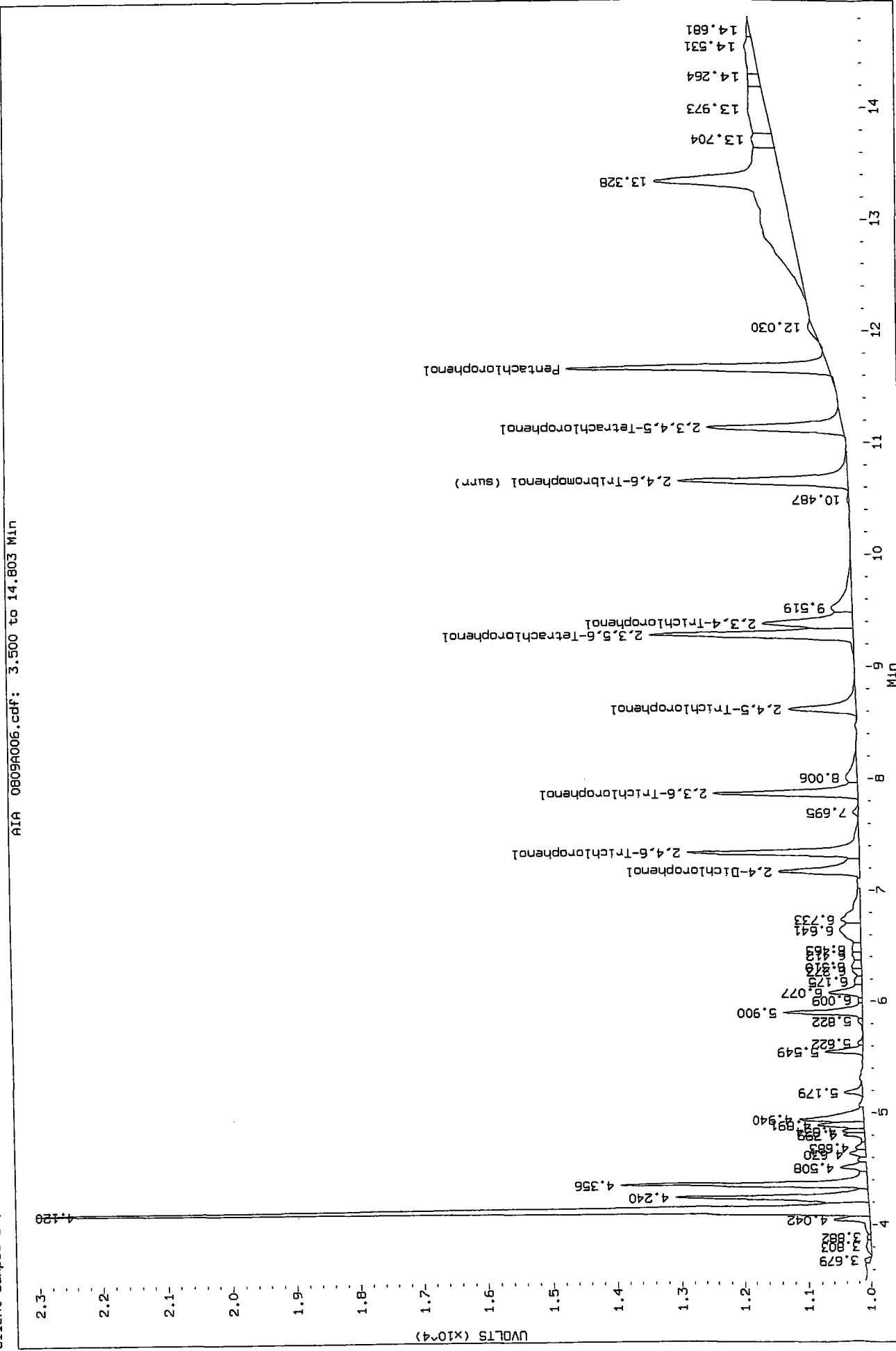
Before 08/12/2010

AIA 0809A006.cdf: 3.500 to 14.803 Min



Data File: /chem2/ecd1.1/FPCP20100809.b/ical-2.b/0809A006.d/0809A006.cdf  
 Injection Date: 09-AUG-2010 12:43  
 Instrument: ecd1.1  
 Client Sample ID:

Before AR 8/18/2010



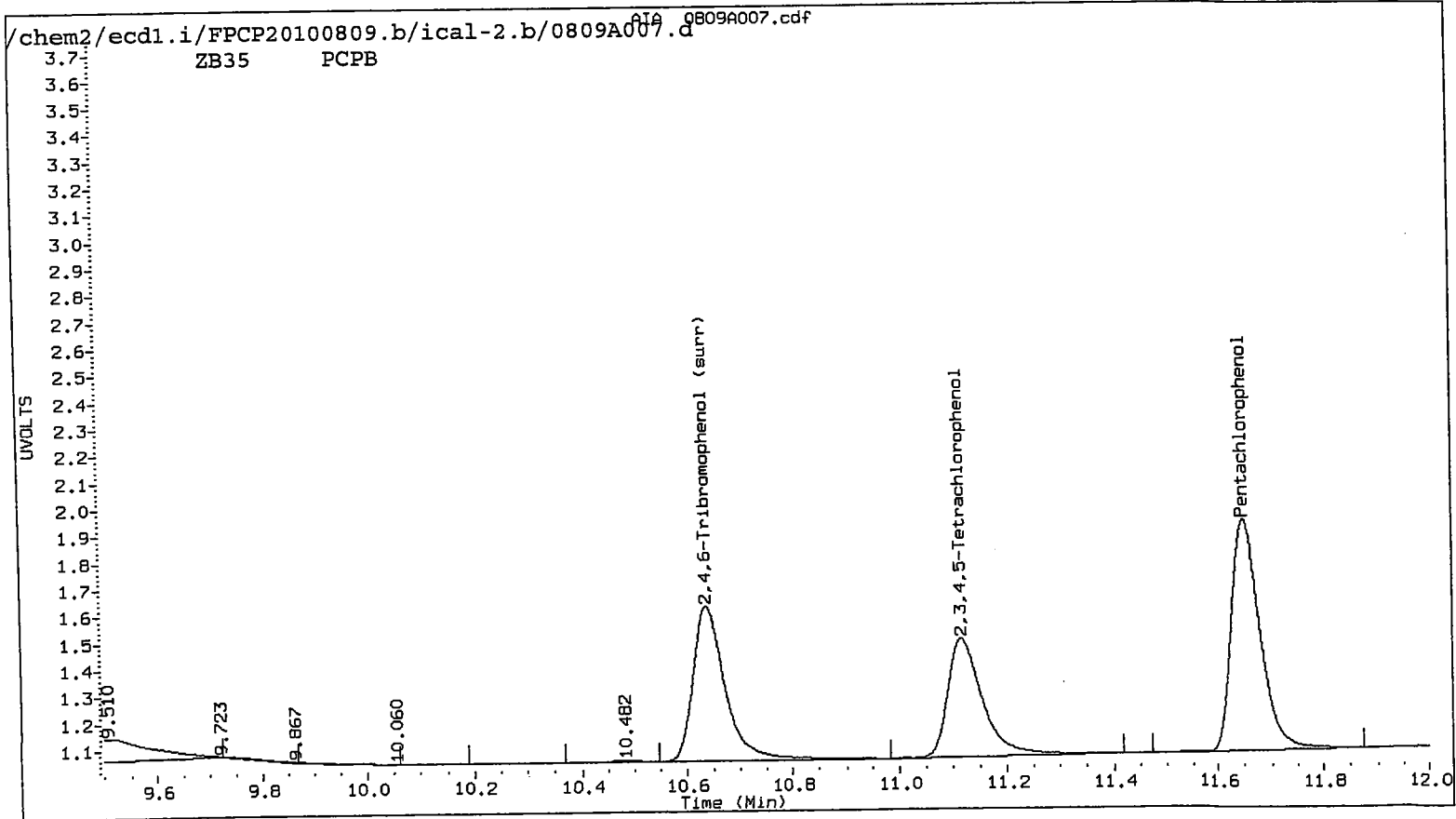
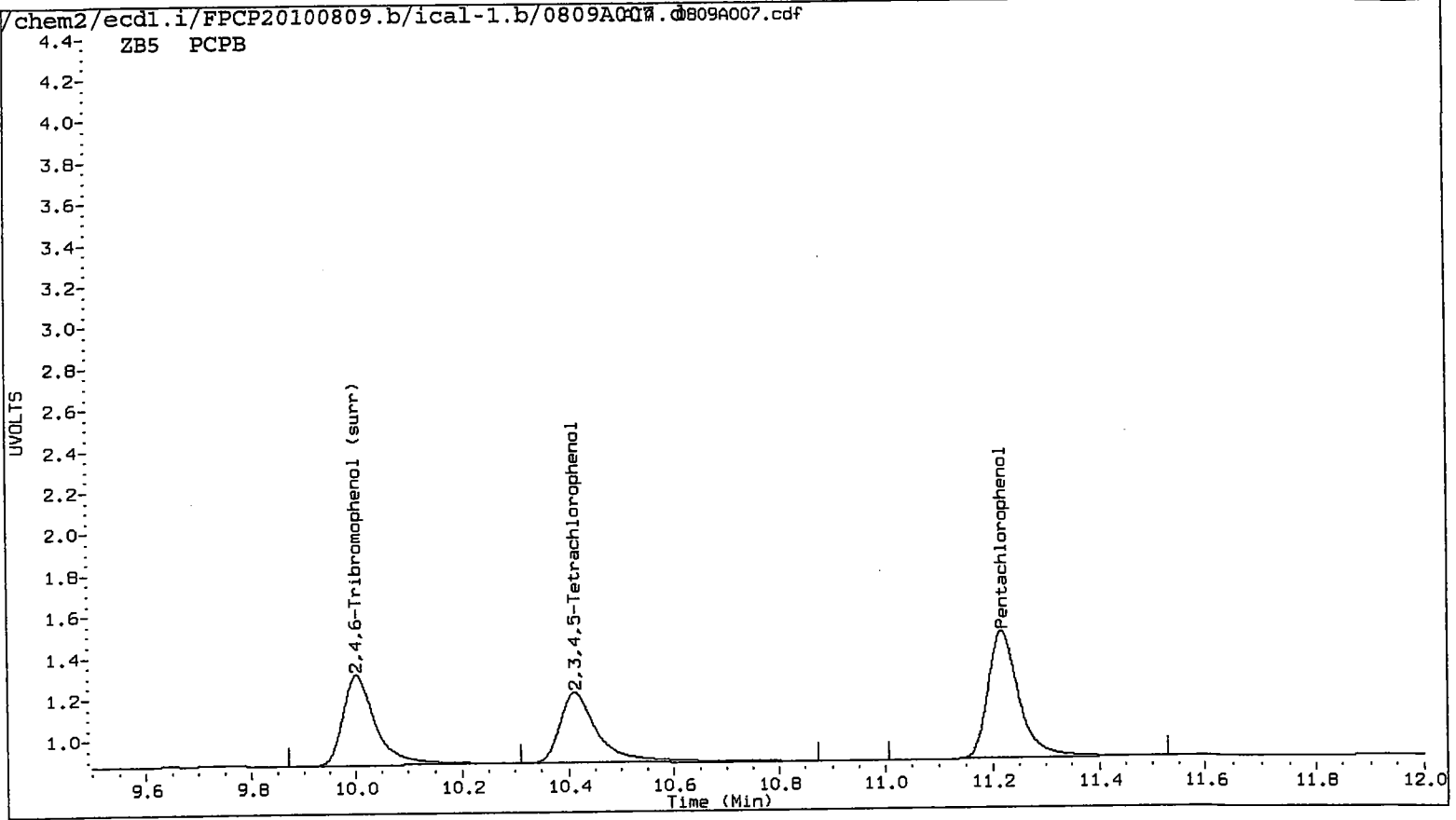
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A007.d    ARI ID: PCPB  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A007.d    Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m                      Injection Date: 09-AUG-2010 13:03  
 Compound Sublist: all    Report Date: 08/12/2010 19:15  
 Instrument: ecd1.i     Matrix: WATER  
 Operator: ar     Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.219	0.000	123902	11.654	-0.004	156217	7.2292	6.8035	6.1	Pentachlorophenol
7.264	0.000	65457	7.333	0.000	78390	7.0775	6.2789	12.0	2,4,6-Trichlorophenol
7.619	0.000	65624	7.862	-0.002	82392	6.9041	6.6399	3.9	2,3,6-Trichlorophenol
8.242	0.000	33512	8.607	-0.008	48273	6.6393	7.0262	5.7	2,4,5-Trichlorophenol
8.792	0.000	44178	9.373	-0.007	73211	6.4577	7.9367	20.5	2,3,4-Trichlorophenol
9.007	0.000	94127	9.270	-0.007	125627	6.6730	6.7852	1.7	2,3,5,6-Tetrachlorophenol
10.413	0.000	84118	11.119	-0.007	100660	7.1596	6.8989	3.7	2,3,4,5-Tetrachlorophenol
6.893	0.000	39212	7.163	-0.003	45023	67.0259	63.5184	5.4	2,4-Dichlorophenol
10.002	0.000	93741	10.640	-0.006	121487	7.0	6.5	7.4	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

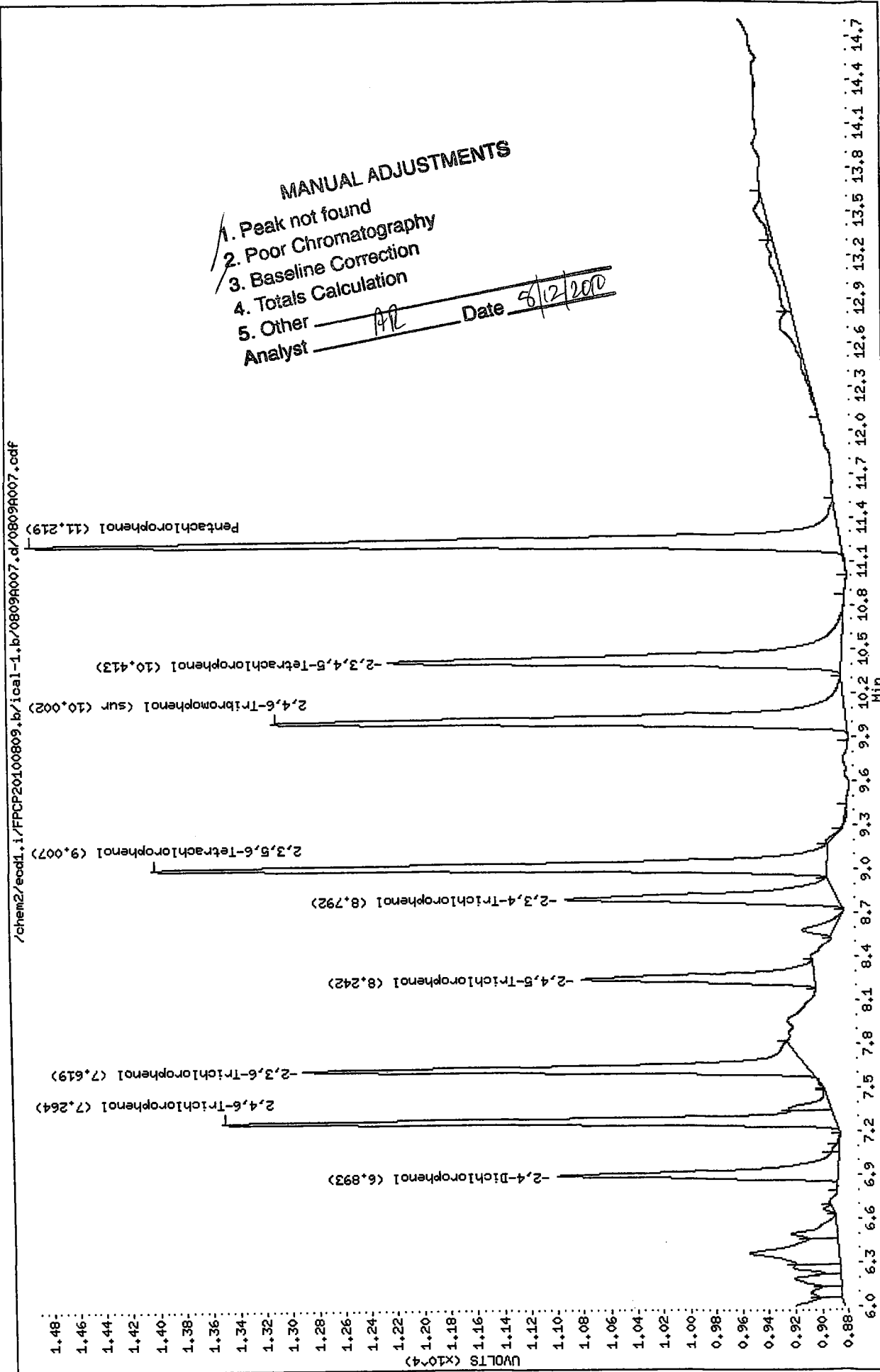
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	28.0	26.0



Data File: /chem2/eod1.i/FPCP20100809.b/ical-1.b/0809A007.d  
Date: 09-AUG-2010 13:03  
Client ID:  
Sample Info: PCPB  
Purge Volume: 2.0  
Column phase: ZB5

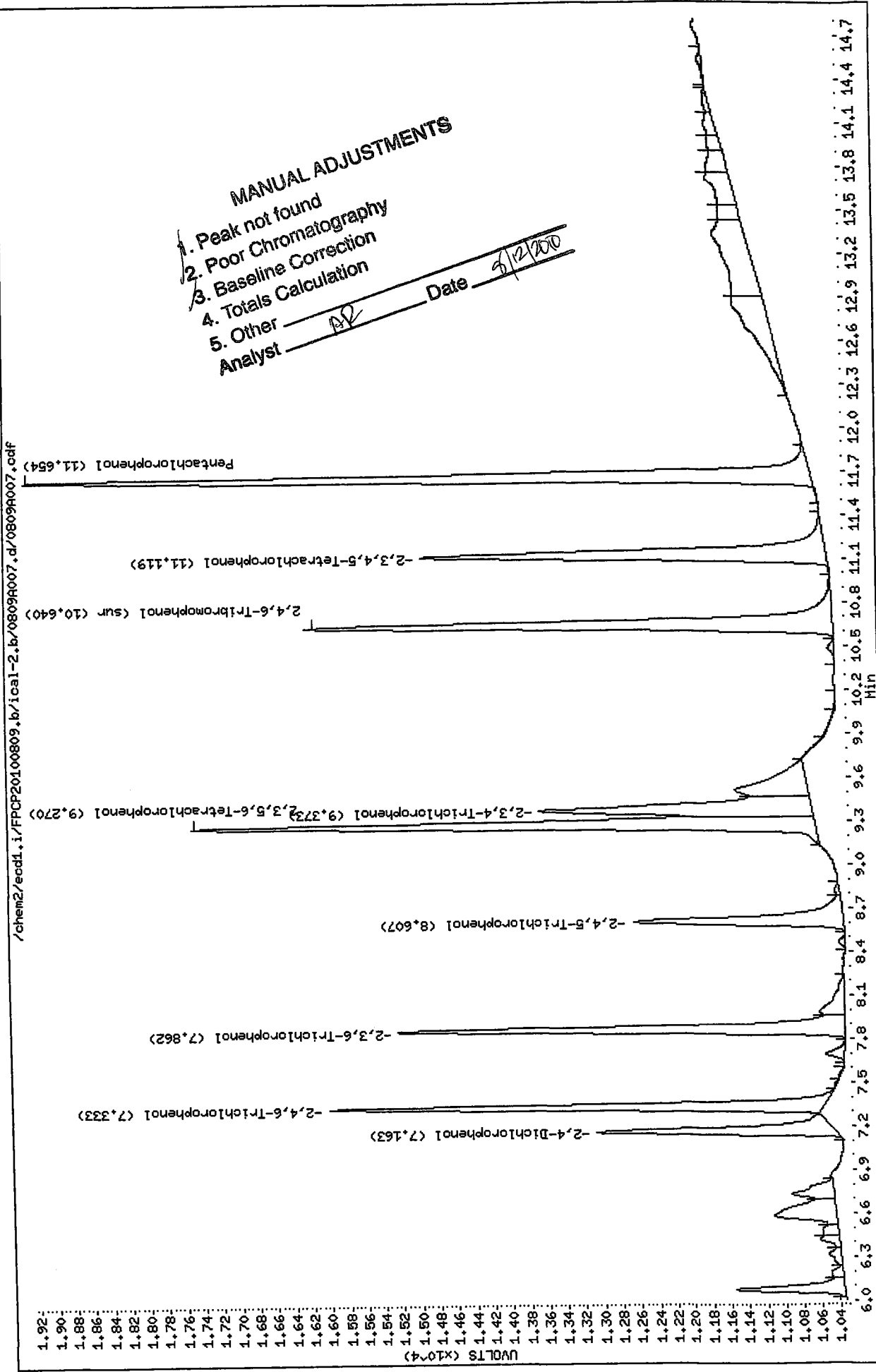
Instrument: eod1.i

Operator: ar  
Column diameter: 0.53



Data File: /chem2/eod1.1/FPCP20100809.b/ical-2.b/0809A007.d  
 Date : 09-AUG-2010 13:03  
 Client ID:  
 Sample Info: PCPB  
 Purge Volume: 2.0  
 Column phase: ZB35

Instrument: eod1.1  
 Operator: ar  
 Column diameter: 0.53

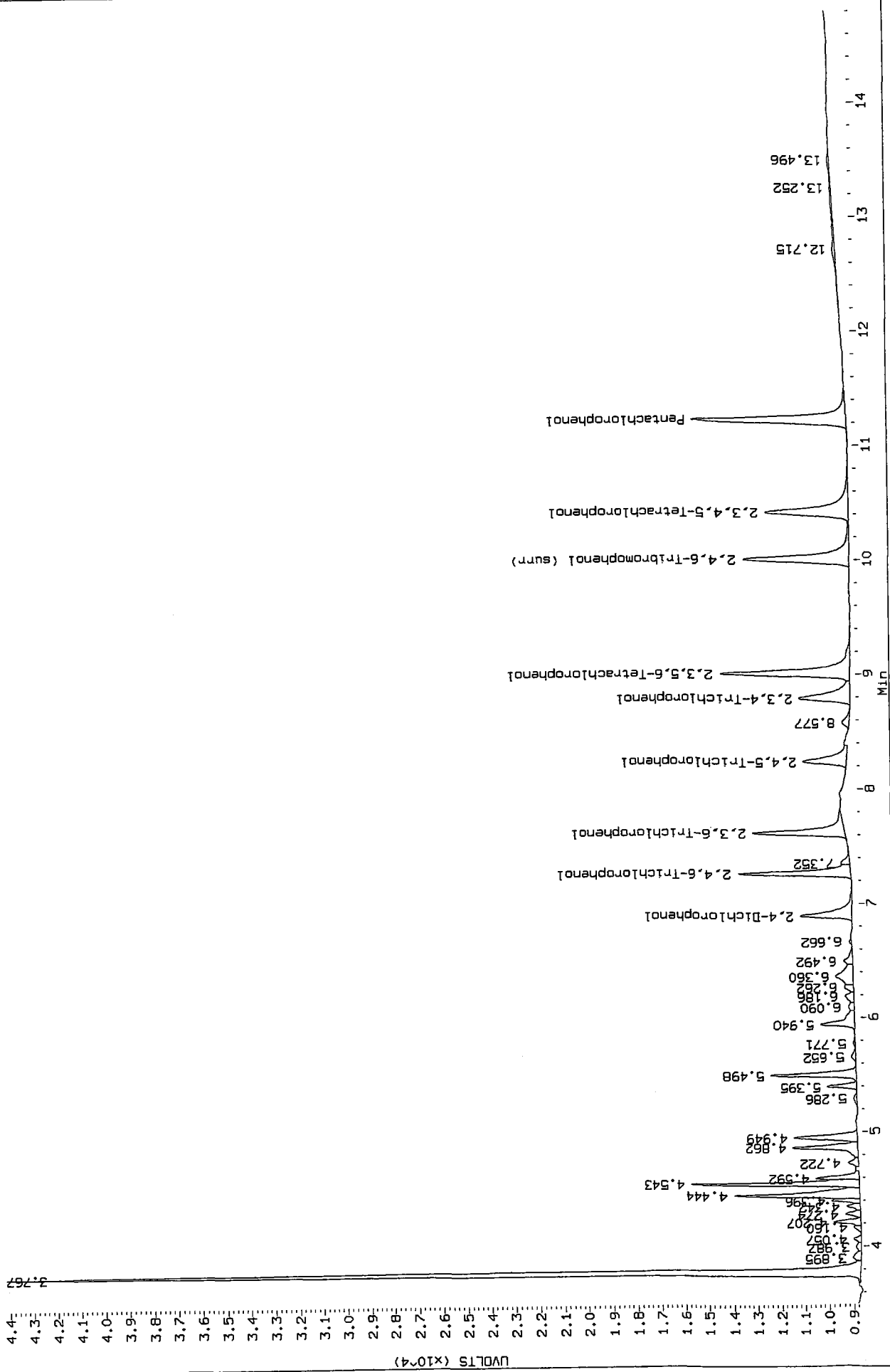


**MANUAL ADJUSTMENTS**  
 1. Peak not found  
 2. Poor Chromatography  
 3. Baseline Correction  
 4. Totals Calculation  
 5. Other \_\_\_\_\_  
 Analyst AR Date 8/12/2010

Data File: /chem2/ecd1.1/FPCF20100809.b/1cal-1.b/0809A007.d/0809A007.cdf  
 Injection Date: 09-AUG-2010 13:03  
 Instrument: ecd1.1  
 Client Sample ID:

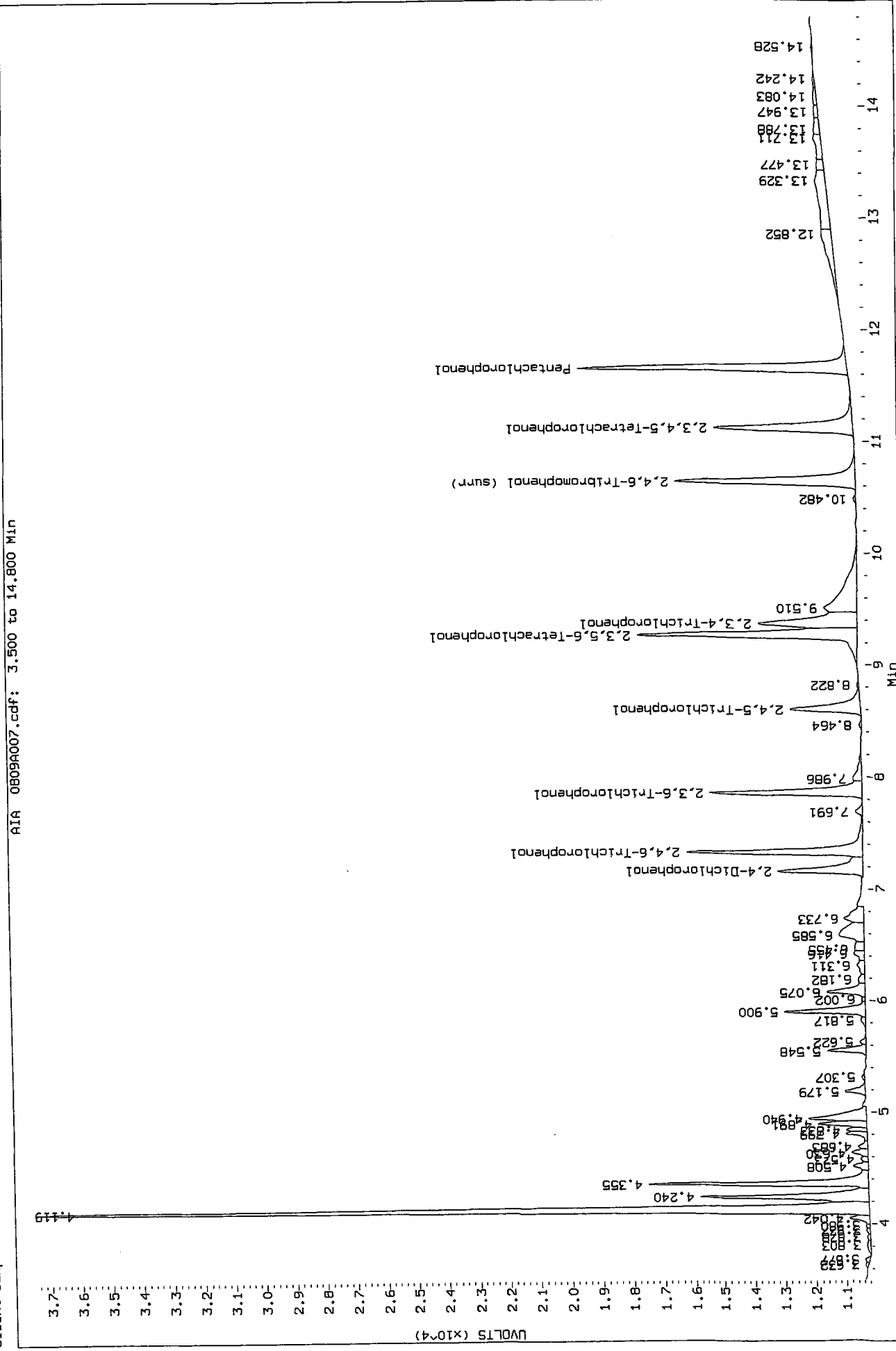
Before AR 8/18/2010

AIA 0809A007.cdf: 3.500 to 14.800 Min



Data File: /chem2/ecdl.1/FPCP20100809.b/1ca1-2.b/0809A007.d/0809A007.cdf  
 Injection Date: 09-AUG-2010 13:03  
 Instrument: eccl.1  
 Client Sample ID:

Before 8/12/2010





Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

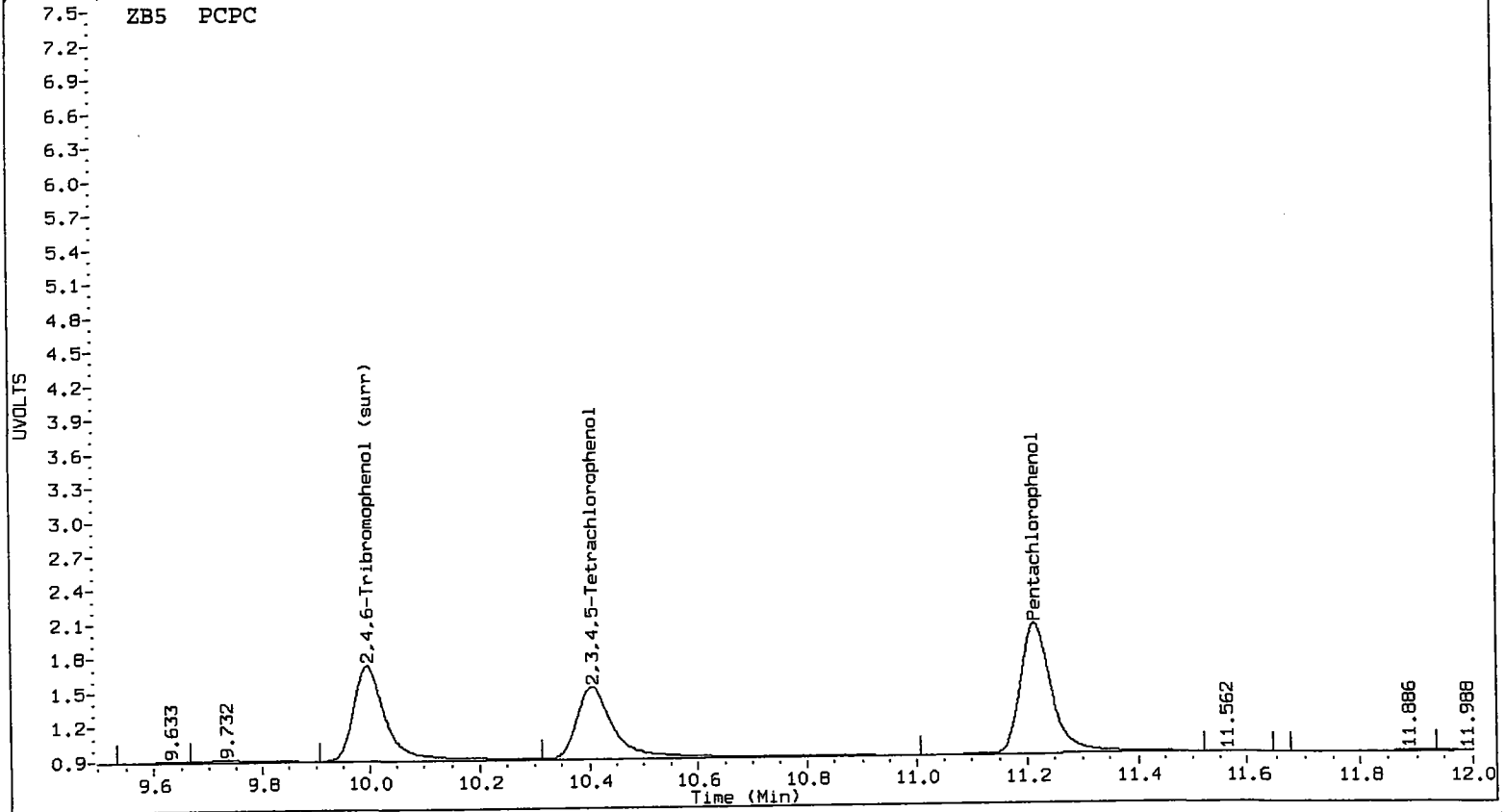
Data file 1: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A008.d    ARI ID: PCPC  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A008.d    Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m                      Injection Date: 09-AUG-2010 13:23  
 Compound Sublist: all    Report Date: 08/12/2010 19:15  
 Instrument: ecdl.i    Matrix: WATER  
 Operator: ar    Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.215	-0.004	222874	11.652	-0.006	298790	13.5277	13.0127	3.9	Pentachlorophenol
7.263	-0.001	119503	7.331	-0.002	175254	13.3777	14.0376	4.8	2,4,6-Trichlorophenol
7.617	-0.002	120087	7.860	-0.004	157630	12.9827	12.7034	2.2	2,3,6-Trichlorophenol
8.232	-0.010	71098	8.600	-0.015	89400	14.0857	13.5058	4.2	2,4,5-Trichlorophenol
8.780	-0.012	89192	9.365	-0.015	117878	13.0377	13.1515	0.9	2,3,4-Trichlorophenol
9.002	-0.005	187444	9.266	-0.011	232265	13.2886	12.5448	5.8	2,3,5,6-Tetrachlorophenol
10.406	-0.007	153678	11.115	-0.011	189199	13.8120	12.9671	6.3	2,3,4,5-Tetrachlorophenol
6.890	-0.003	76337	7.160	-0.006	91643	141.9985	137.3547	3.3	2,4-Dichlorophenol
9.996	-0.006	174610	10.636	-0.010	235194	13.5	12.6	6.6	2,4,6-Tribromophenol (surr)

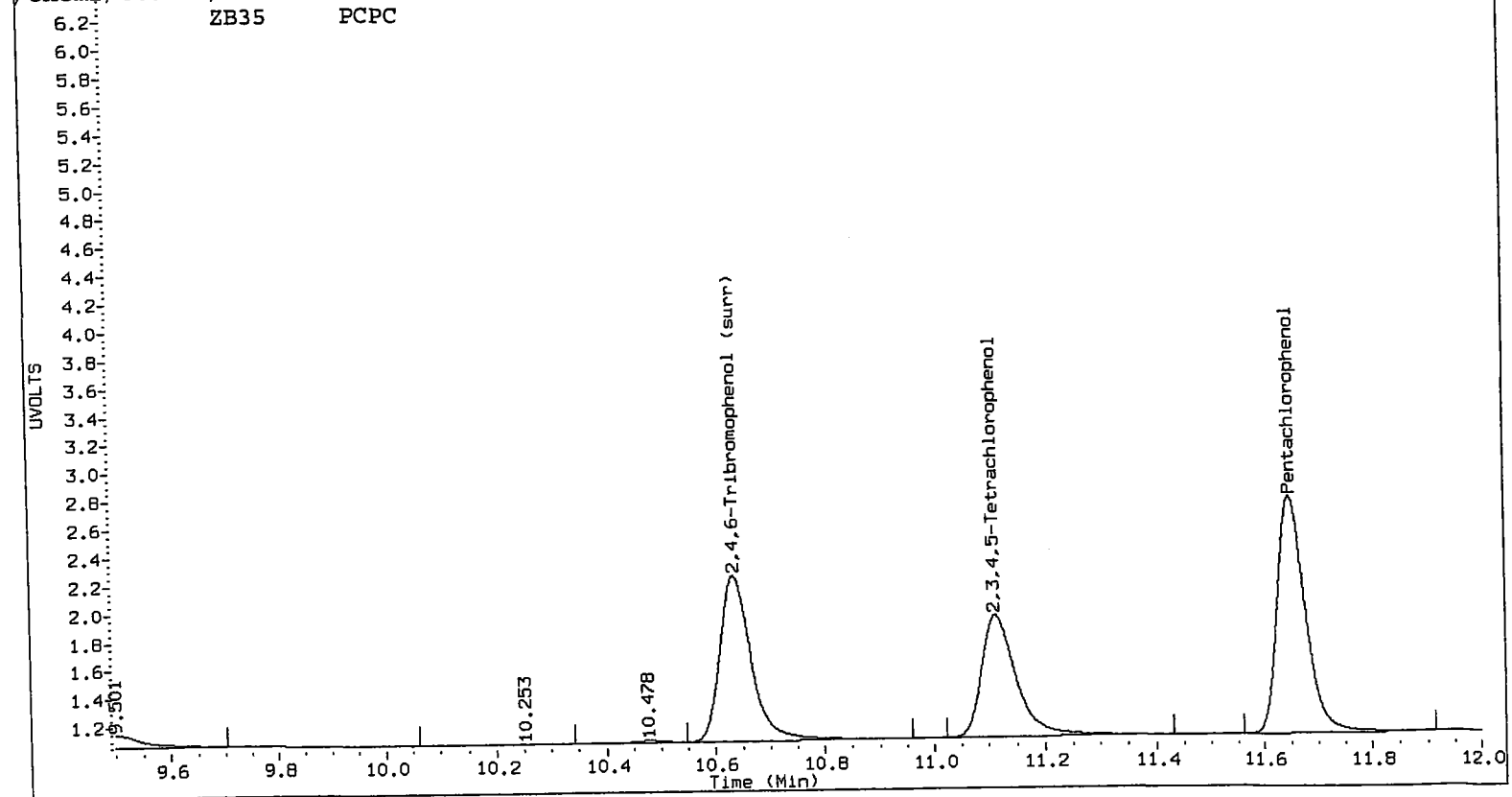
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	53.9	50.4

chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A008.d 0809A008.cdf



chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A008.d 0809A008.cdf

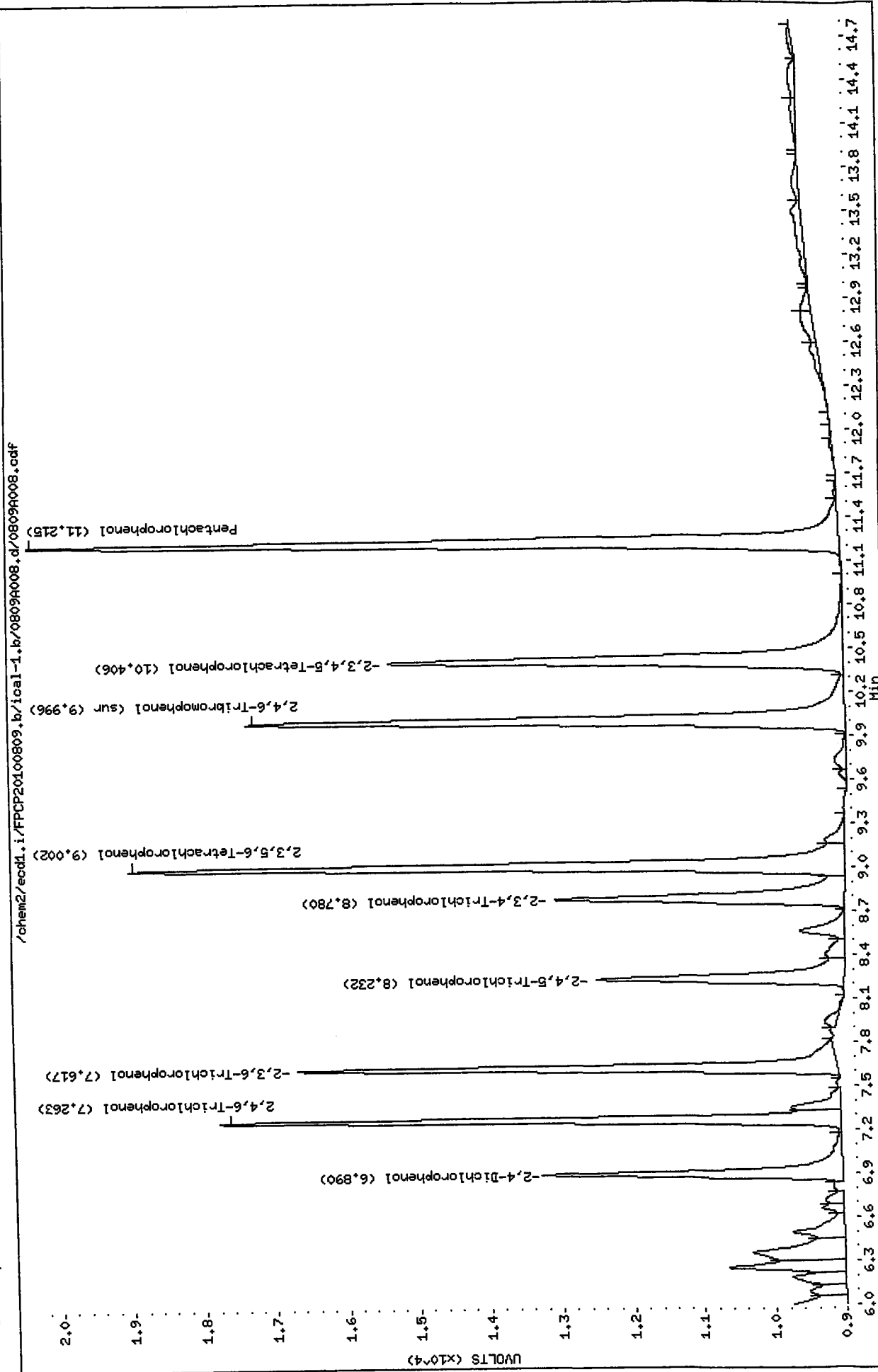


RG54 : 00846

Data File: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A008.d  
Date : 09-AUG-2010 13:23  
Client ID:  
Sample Info: PCPC  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: ecdl.i

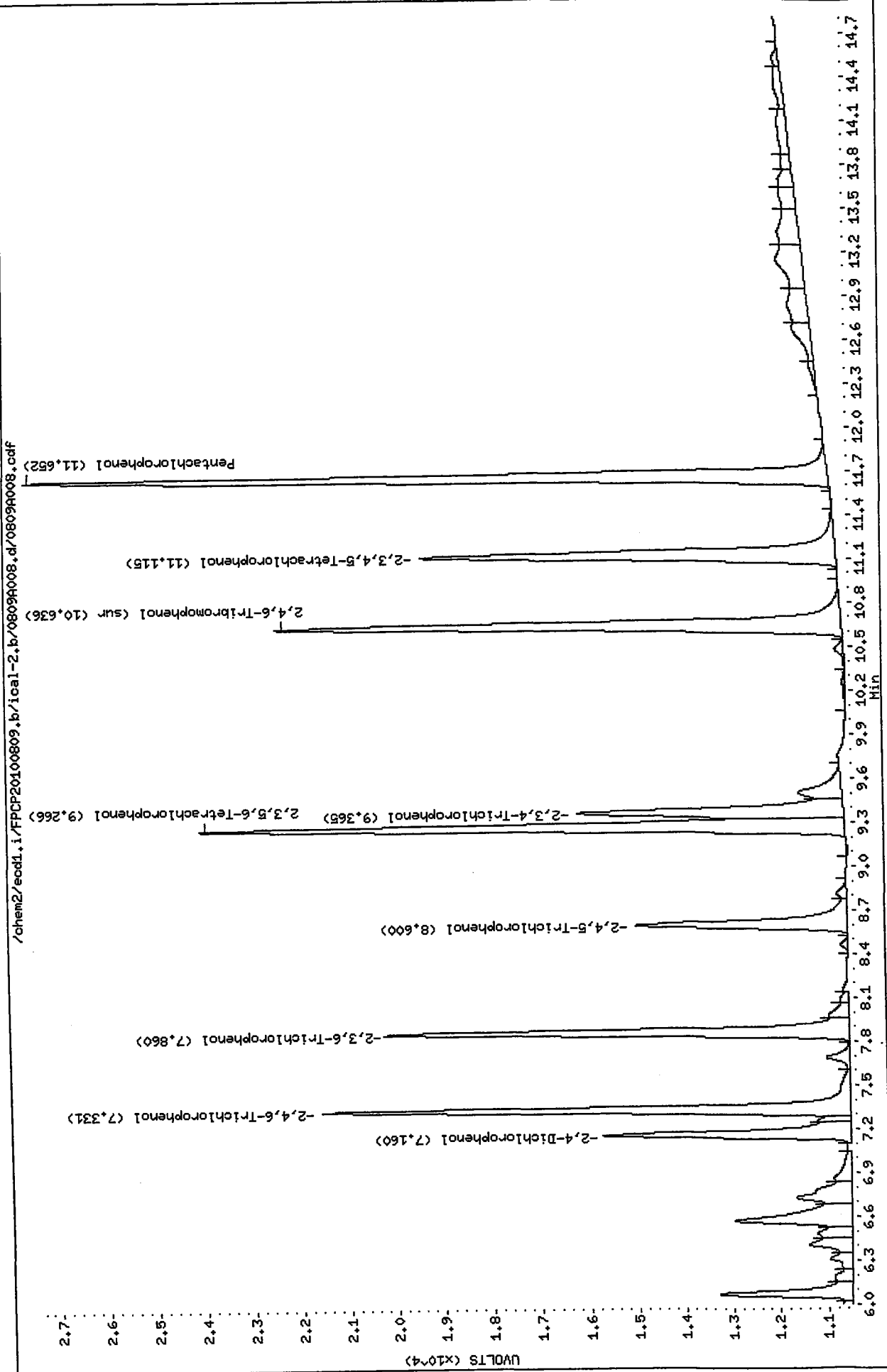
Operator: ar  
Column diameter: 0.53



Data File: /chem2/eod1.i/FPCP20100809.b/ical-2.b/0809A008.d  
Date : 09-AUG-2010 13:23  
Client ID:  
Sample Info: PCPC  
Purge Volume: 2.0  
Column phase: ZB35

Instrument: eod1.i

Operator: ar  
Column diameter: 0.53



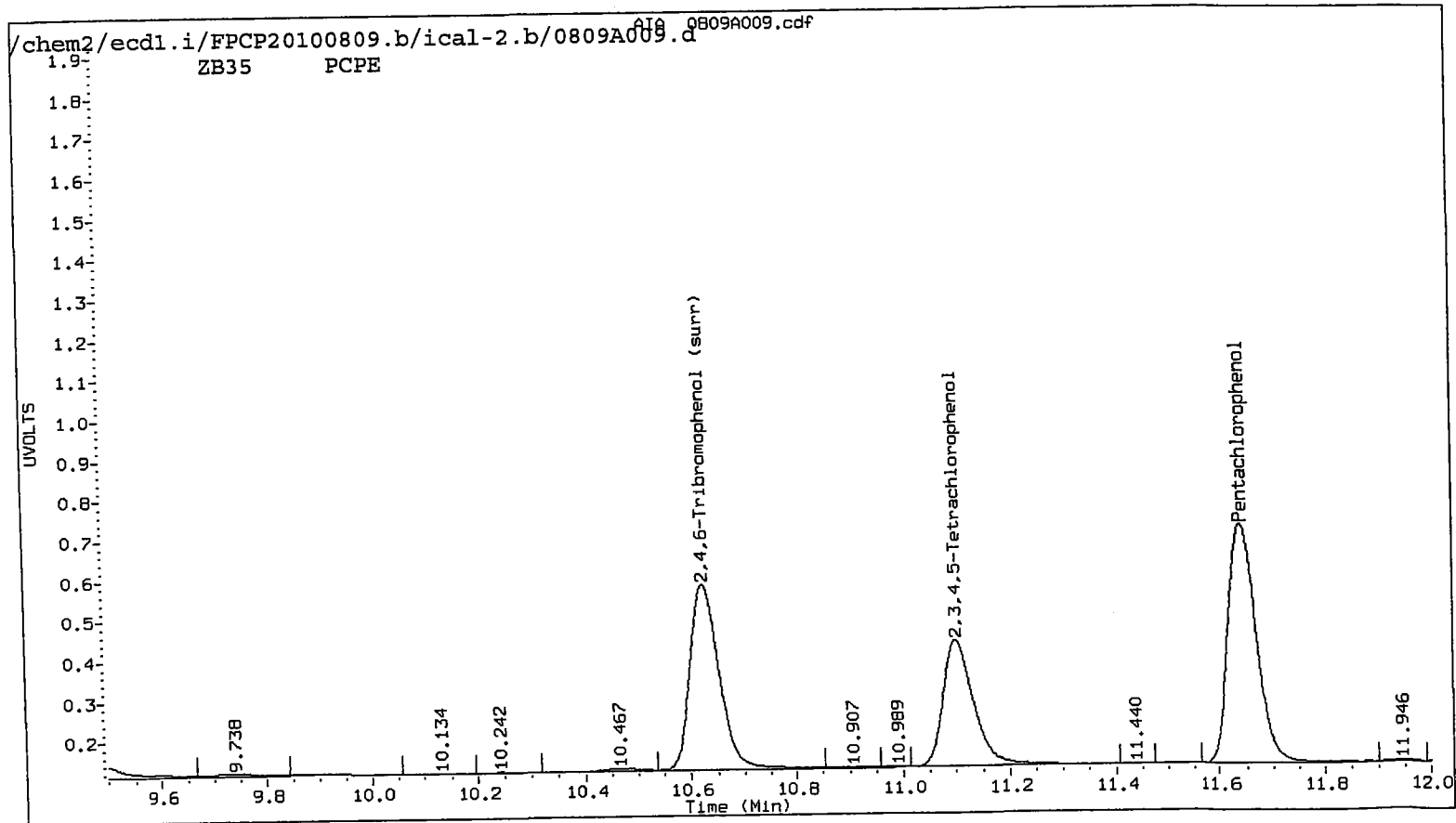
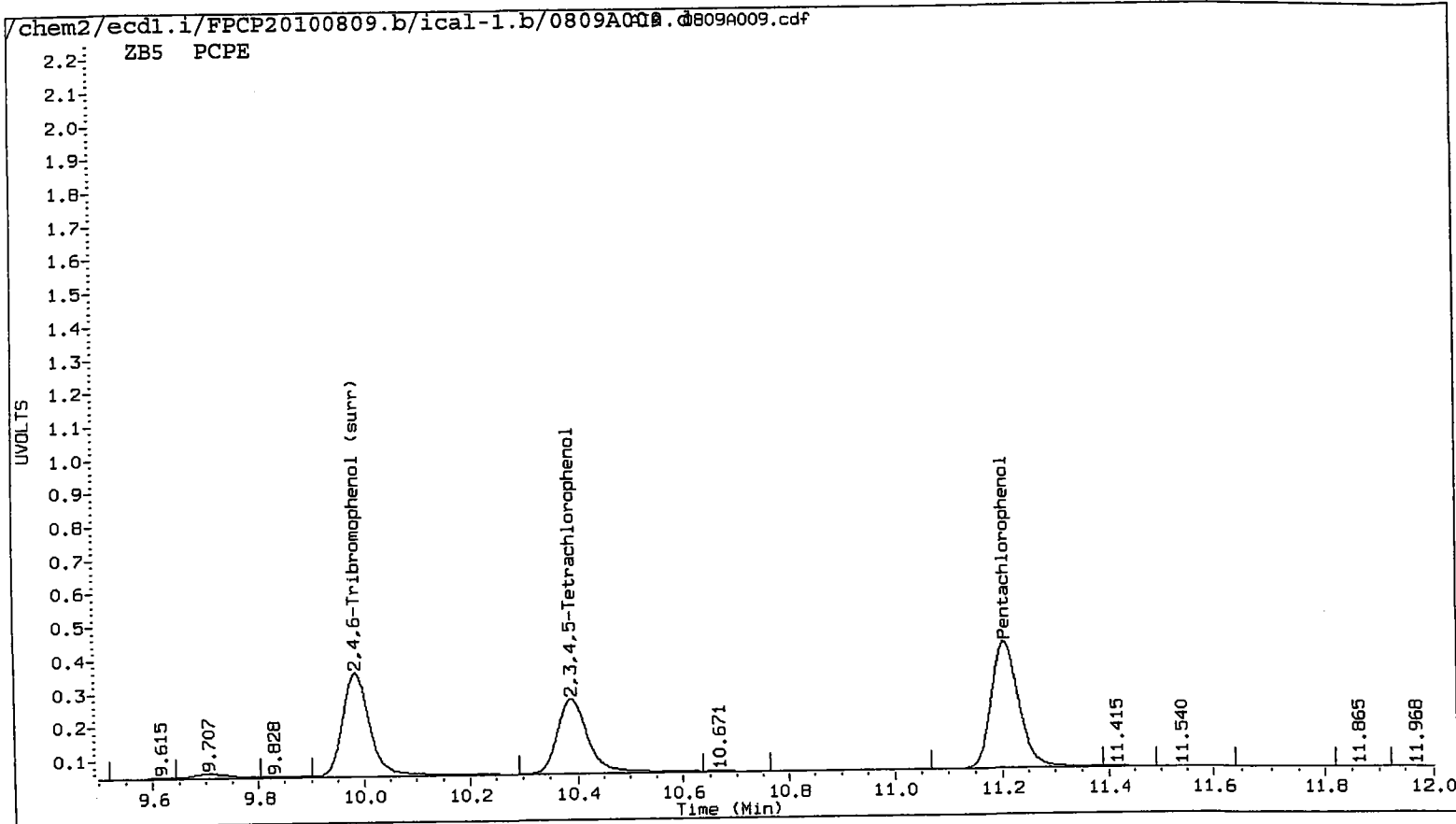
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A009.d    ARI ID: PCPE  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A009.d    Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m                      Injection Date: 09-AUG-2010 13:43  
 Compound Sublist: all    Report Date: 08/12/2010 19:15  
 Instrument: ecd1.i    Matrix: WATER  
 Operator: ar    Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.206	-0.013	684285	11.645	-0.013	1025332	49.0326	44.6545	9.3	Pentachlorophenol
7.259	-0.005	376941	7.327	-0.006	561100	49.0547	44.9434	8.7	2,4,6-Trichlorophenol
7.611	-0.008	401238	7.855	-0.009	556890	49.3933	44.8796	9.6	2,3,6-Trichlorophenol
8.212	-0.030	214503	8.586	-0.029	278412	42.4967	49.1247	14.5	2,4,5-Trichlorophenol
8.760	-0.032	273728	9.351	-0.029	376624	40.0123	48.9147	20.0	2,3,4-Trichlorophenol
8.990	-0.017	594124	9.256	-0.021	833297	42.1197	45.0070	6.6	2,3,5,6-Tetrachlorophenol
10.389	-0.024	444734	11.103	-0.023	639912	48.8325	43.8575	10.7	2,3,4,5-Tetrachlorophenol
6.884	-0.009	204471	7.153	-0.013	267768	486.7918	490.3559	0.7	2,4-Dichlorophenol
9.984	-0.018	559983	10.626	-0.020	861309	49.4	46.1	6.9	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

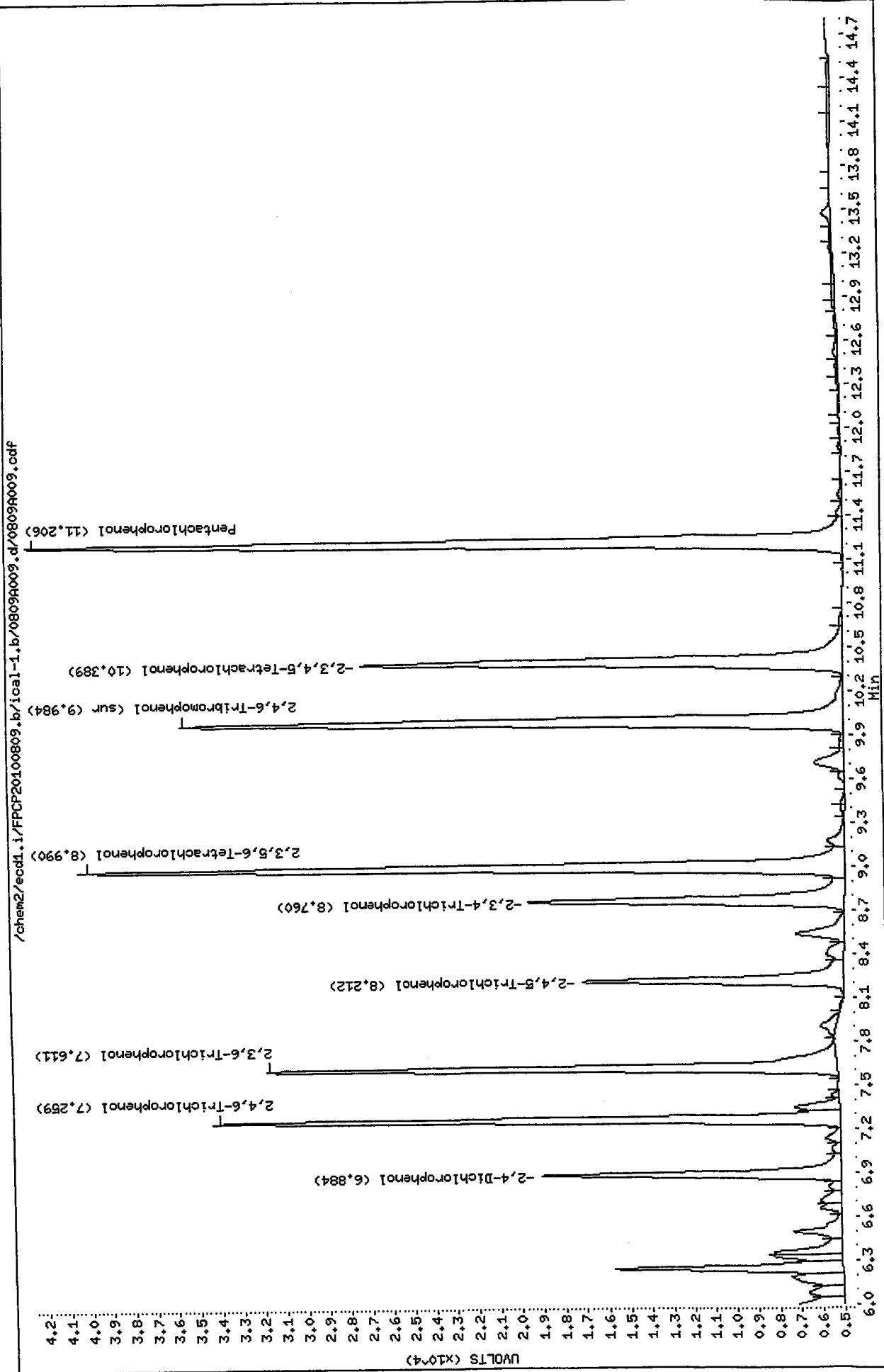
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	197.7	184.6



Data File: /chem2/ecdl1.i/FFCP20100809.b/ical-1.b/0809A009.d  
Date : 09-AUG-2010 13:43  
Client ID:  
Sample Info: PCPE  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: ecdl1.i

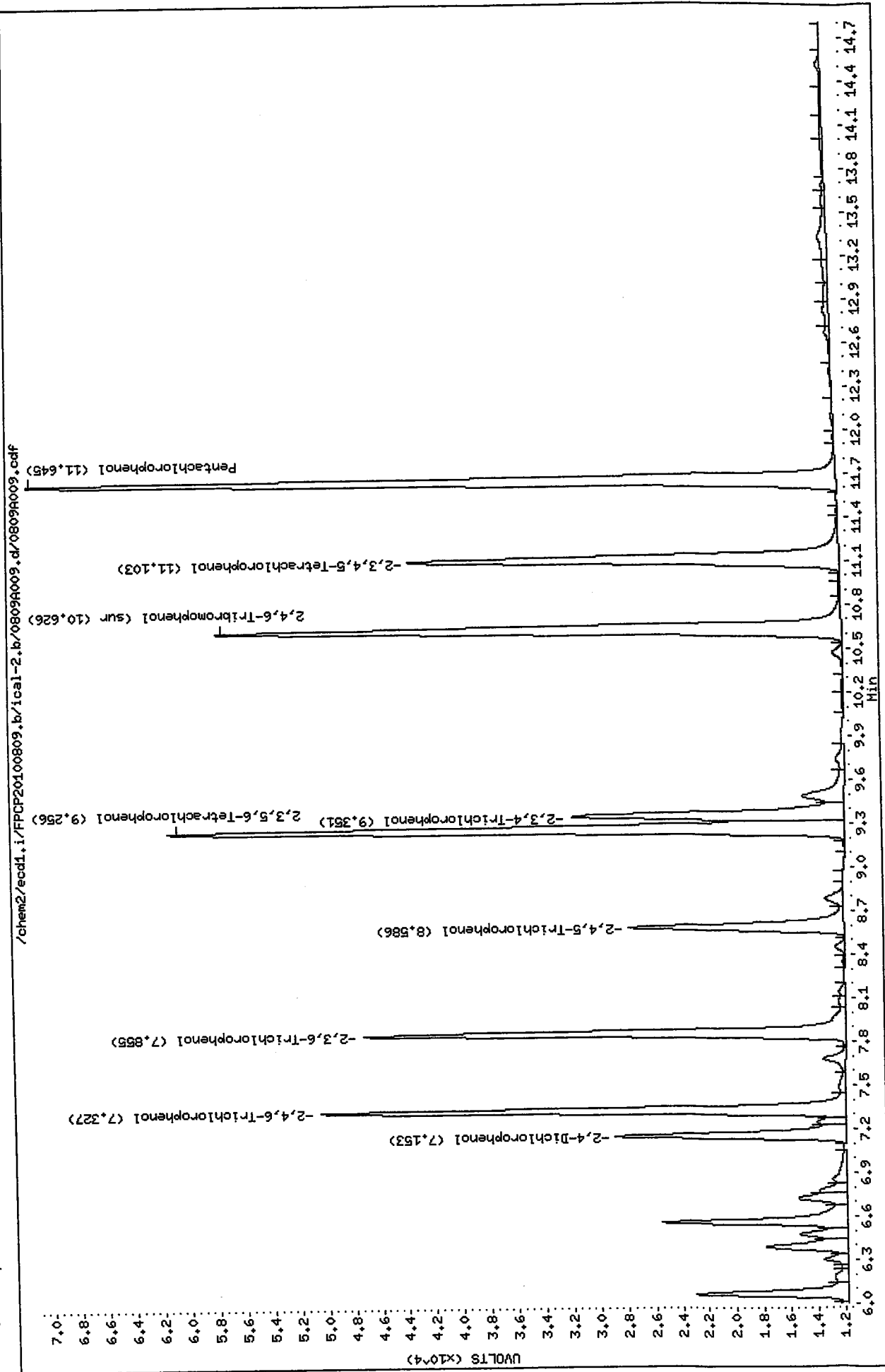
Operator: ar  
Column diameter: 0.53



Data File: /chem2/ecd1.i/FPCP20100809.b/ical-2.b/0809A009.d  
Date: 09-AUG-2010 13:43  
Client ID:  
Sample Info: PCPE  
Purge Volume: 2.0  
Column phase: ZB35

Instrument: ecd1.i

Operator: ar  
Column diameter: 0.53





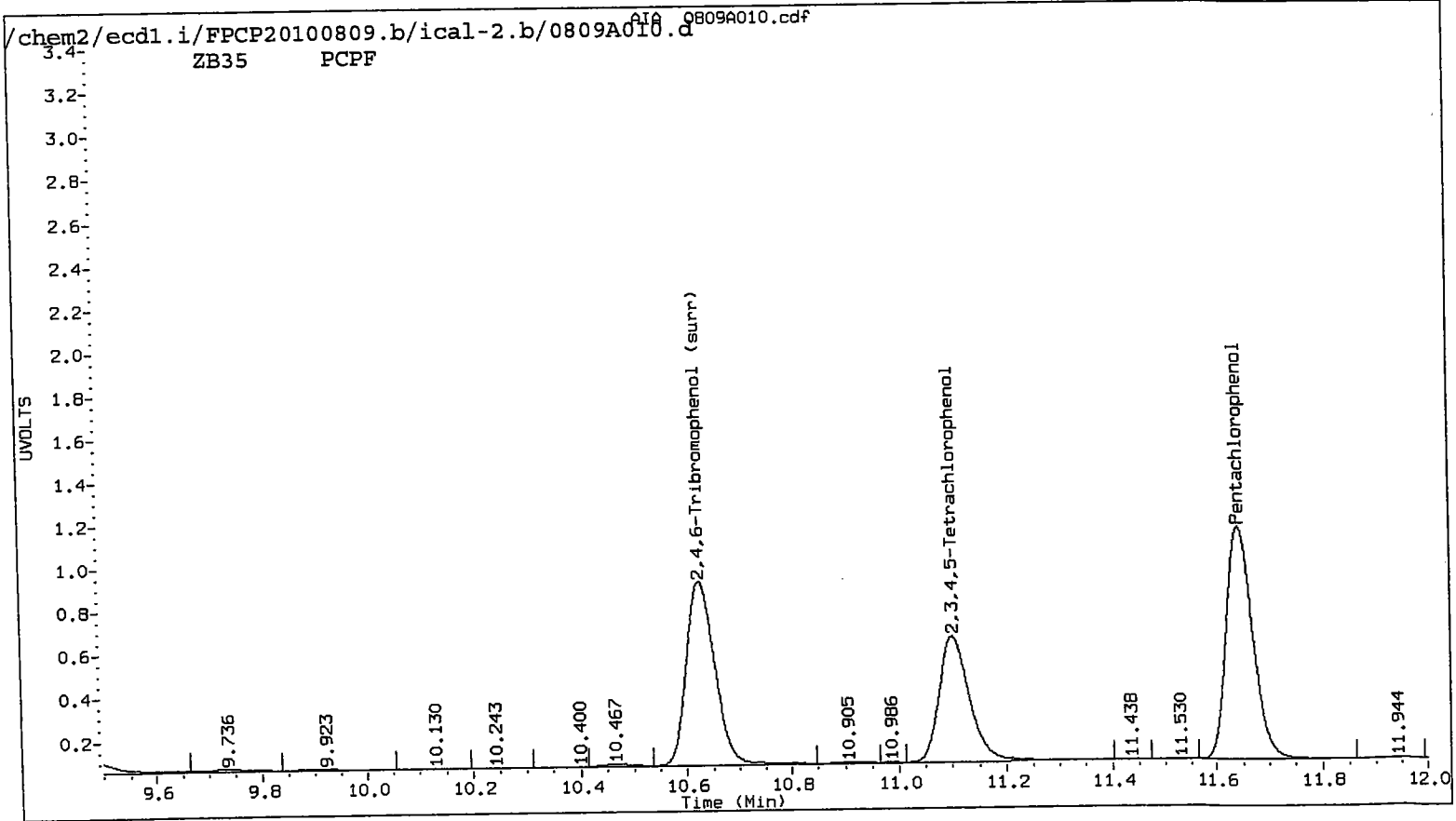
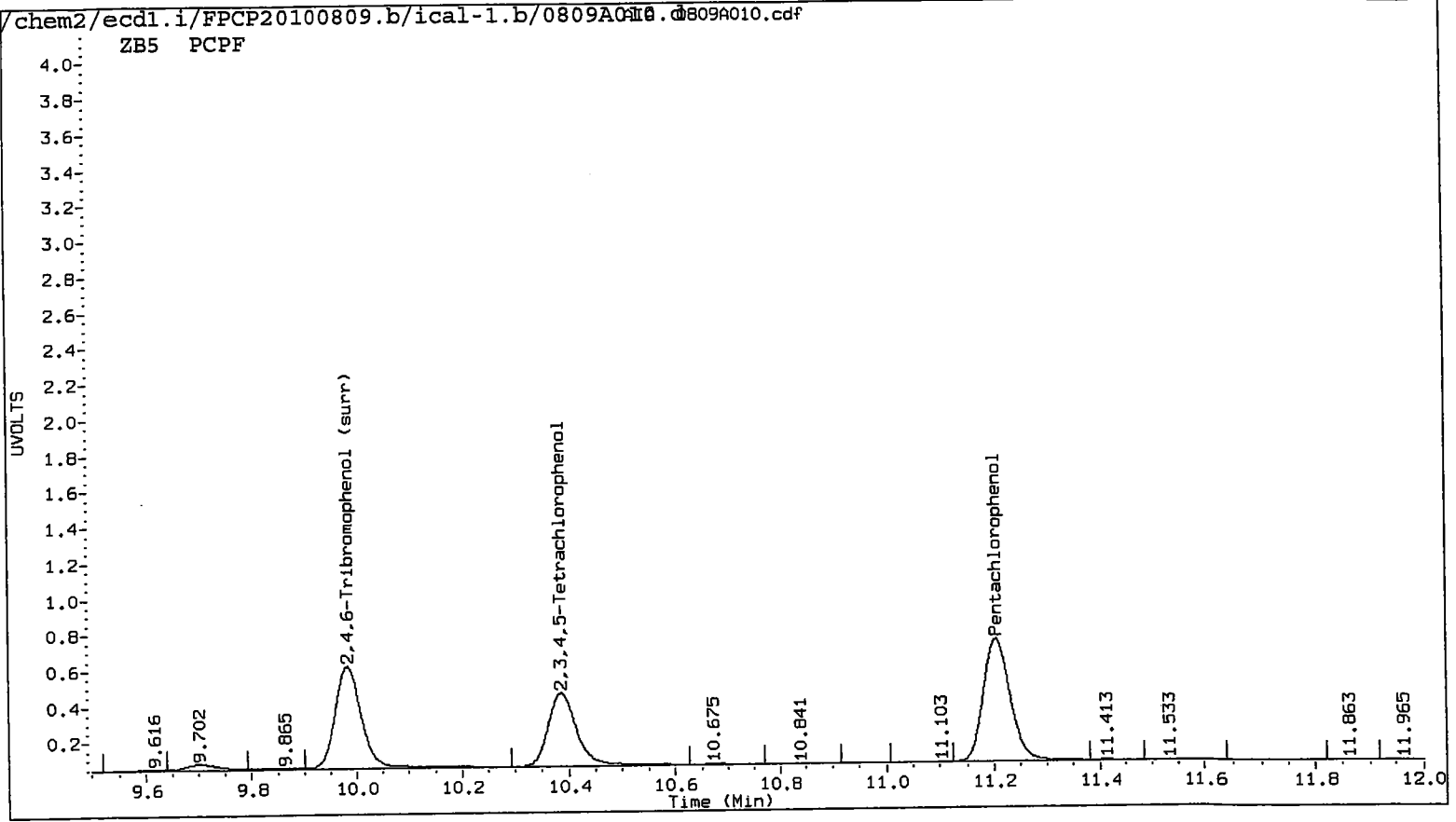
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A010.d ARI ID: PCPF  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A010.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 09-AUG-2010 14:03  
 Compound Sublist: all Report Date: 08/12/2010 19:15  
 Instrument: ecdl.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

RT	ZB-5 Col Shift Response	ZB35 Col Shift Response	ZB-5 on col	ZB35 on col	RPD	Compound
11.206	-0.013 1196534	11.646 -0.012 1836826	100.2949	79.9961	22.5	Pentachlorophenol
7.260	-0.004 665977	7.328 -0.005 1007057	100.2742	80.6640	21.7	2,4,6-Trichlorophenol
7.612	-0.007 716085	7.856 -0.008 1010769	100.1734	81.4576	20.6	2,3,6-Trichlorophenol
8.209	-0.033 362686	8.584 -0.031 489569	71.8542	100.2604	33.0	2,4,5-Trichlorophenol
8.756	-0.036 505263	9.349 -0.031 666942	73.8571	100.3206	30.4	2,3,4-Trichlorophenol
8.990	-0.017 1055773	9.257 -0.020 1529812	74.8477	82.6263	9.9	2,3,5,6-Tetrachloropheno
10.387	-0.026 762767	11.103 -0.023 1154091	100.3602	79.0976	23.7	2,3,4,5-Tetrachlorophenol
6.884	-0.009 341711	7.153 -0.013 457854	1004.0557	1002.7434	0.1	2,4-Dichlorophenol
9.983	-0.019 994034	10.627 -0.019 1608339	100.2	86.2	15.1	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

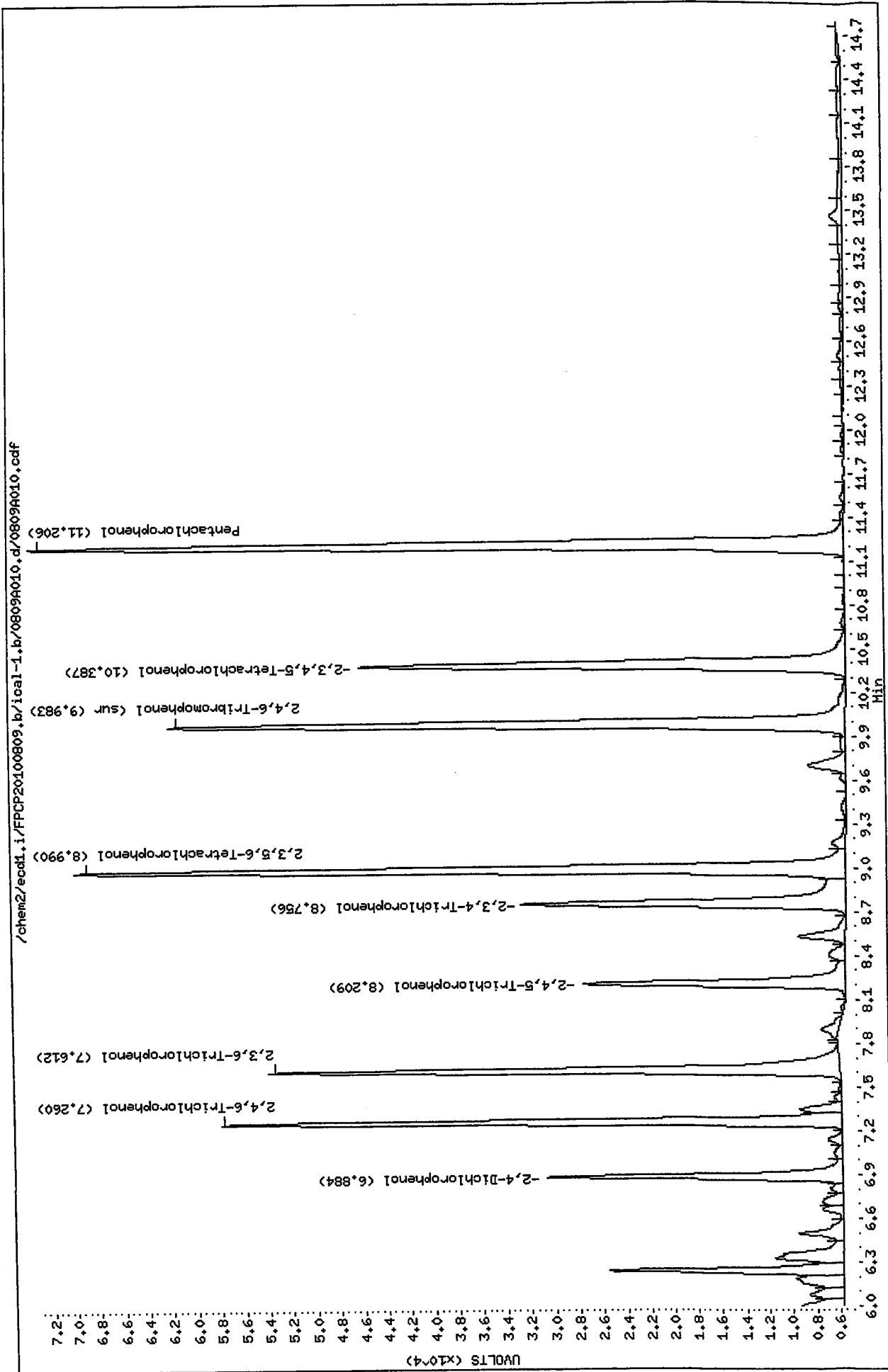
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	400.8	344.6



Data File: /chem2/eod1.1/FPCP20100809.b/ical-1.b/0809A010.d  
Date : 09-AUG-2010 14:03  
Client ID:  
Sample Info: PCPF  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: eod1.1

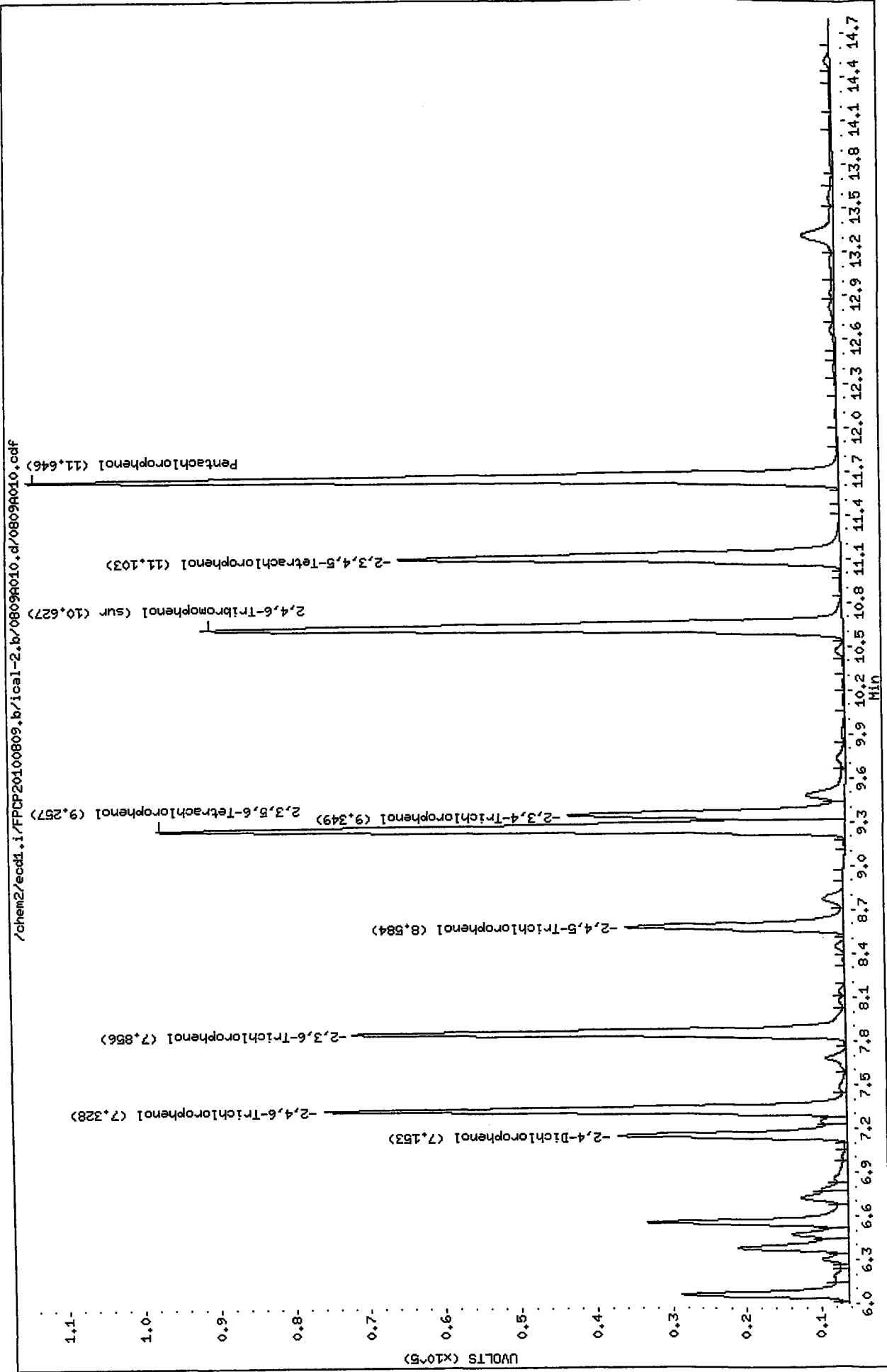
Operator: ar  
Column diameter: 0.53



Data File: /chem2/eod1.i/FFCP20100809.b/ical-2.b/0809A010.d  
Date : 09-AUG-2010 14:03  
Client ID:  
Sample Info: PCPF  
Purge Volume: 2.0  
Column phase: ZB35

Instrument: eod1.i

Operator: ar  
Column diameter: 0.53



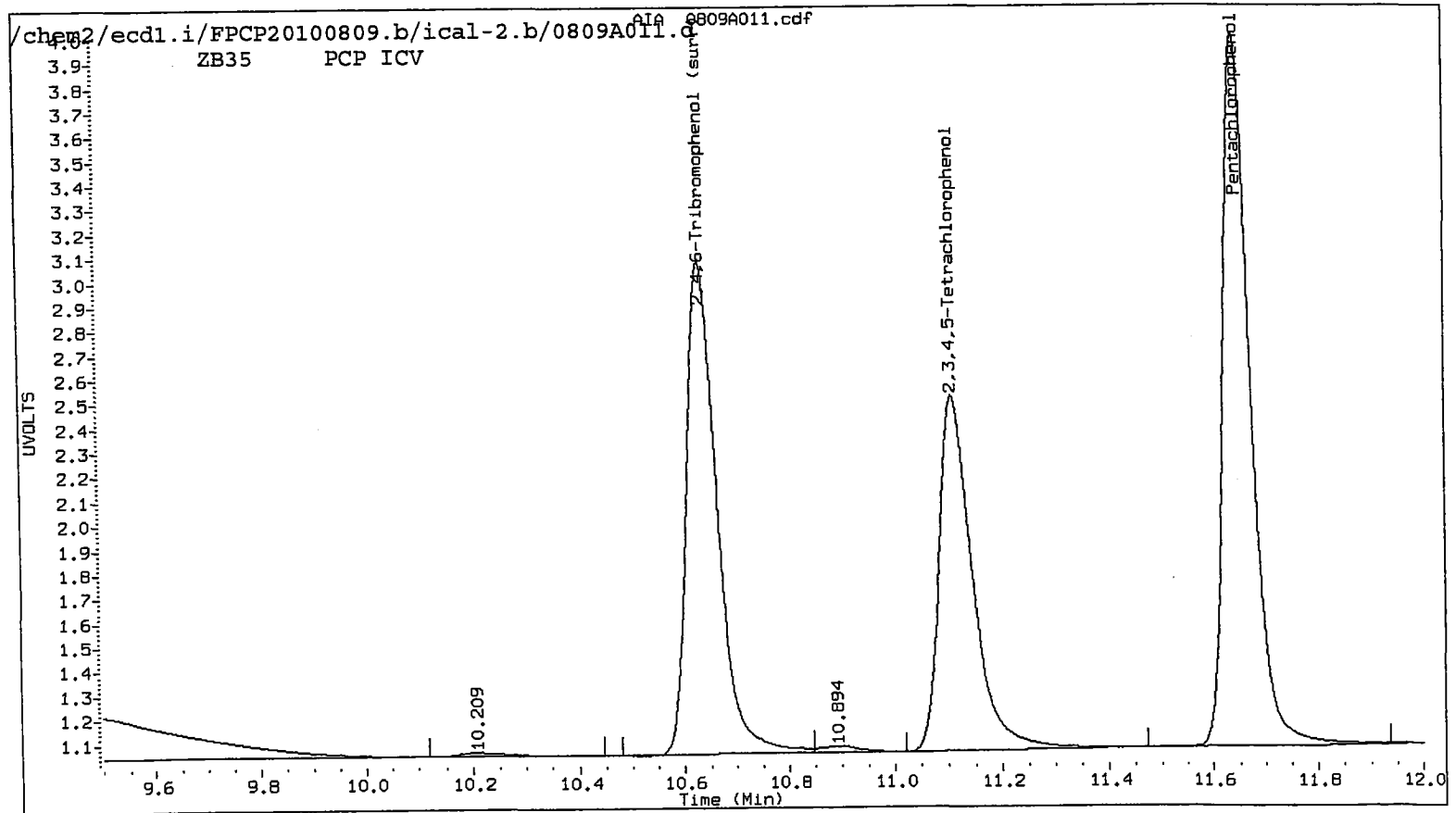
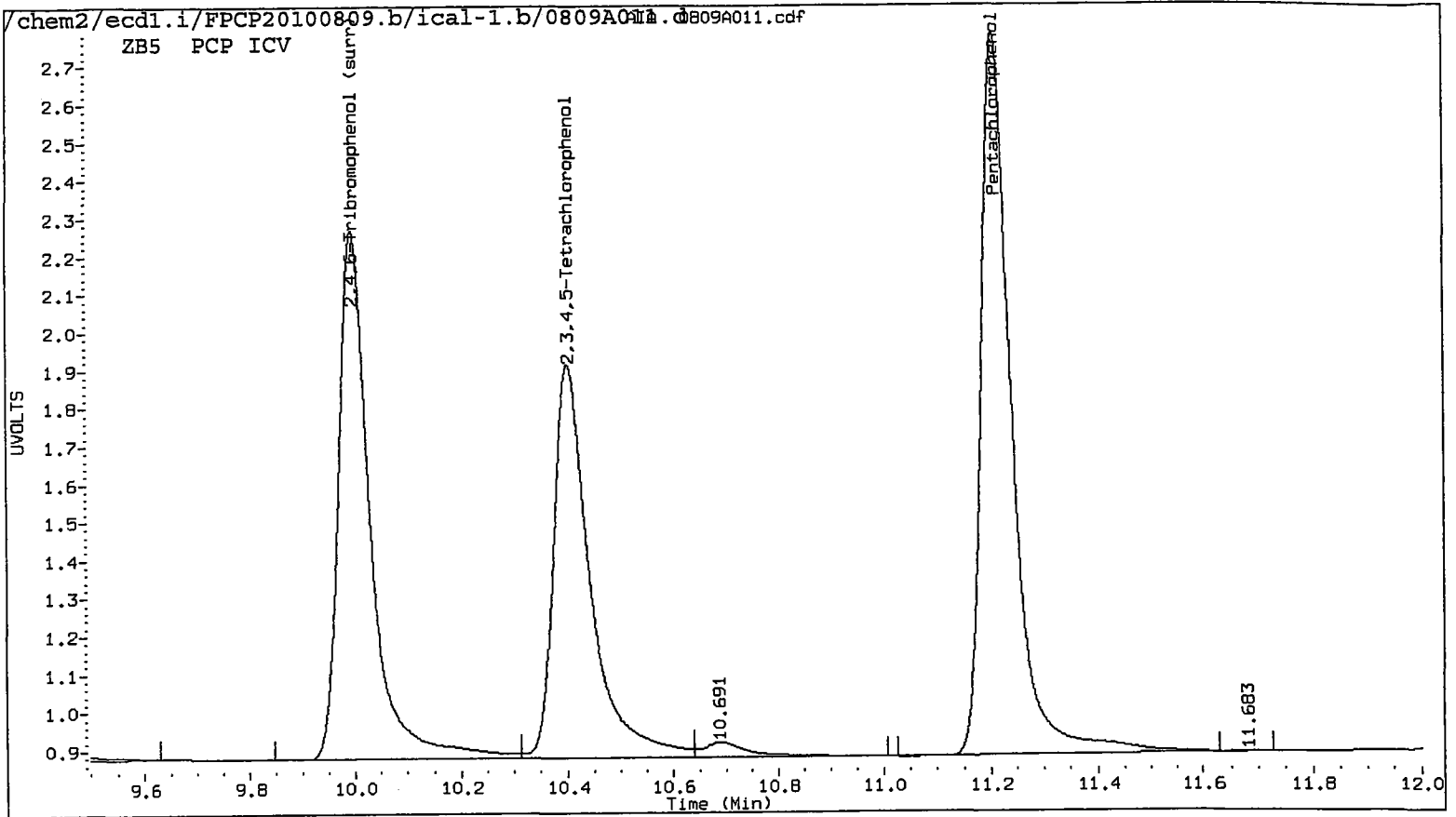
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A011.d ARI ID: PCP ICV  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A011.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 09-AUG-2010 14:23  
 Compound Sublist: all Report Date: 08/12/2010 19:15  
 Instrument: ecd1.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.215	-0.004	379790	11.652	-0.006	529883	24.4673	23.0771	5.8	Pentachlorophenol
7.262	-0.002	205092	7.330	-0.003	298811	24.1995	23.9344	1.1	2,4,6-Trichlorophenol
7.616	-0.003	218352	7.859	-0.005	286346	24.7503	23.0765	7.0	2,3,6-Trichlorophenol
8.230	-0.012	122402	8.599	-0.016	148542	24.2499	23.6199	2.6	2,4,5-Trichlorophenol
8.781	-0.011	146955	9.367	-0.013	237744	21.4812	28.5412	28.2	2,3,4-Trichlorophenol
9.000	-0.007	327277	9.265	-0.012	434865	23.2019	23.4874	1.2	2,3,5,6-Tetrachlorophenol
10.405	-0.008	246924	11.114	-0.012	318432	23.7688	21.8243	8.5	2,3,4,5-Tetrachlorophenol
6.888	-0.005	114813	7.158	-0.008	155429	231.5174	251.6722	8.3	2,4-Dichlorophenol
9.997	-0.005	292116	10.636	-0.010	411868	23.5	22.1	6.4	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

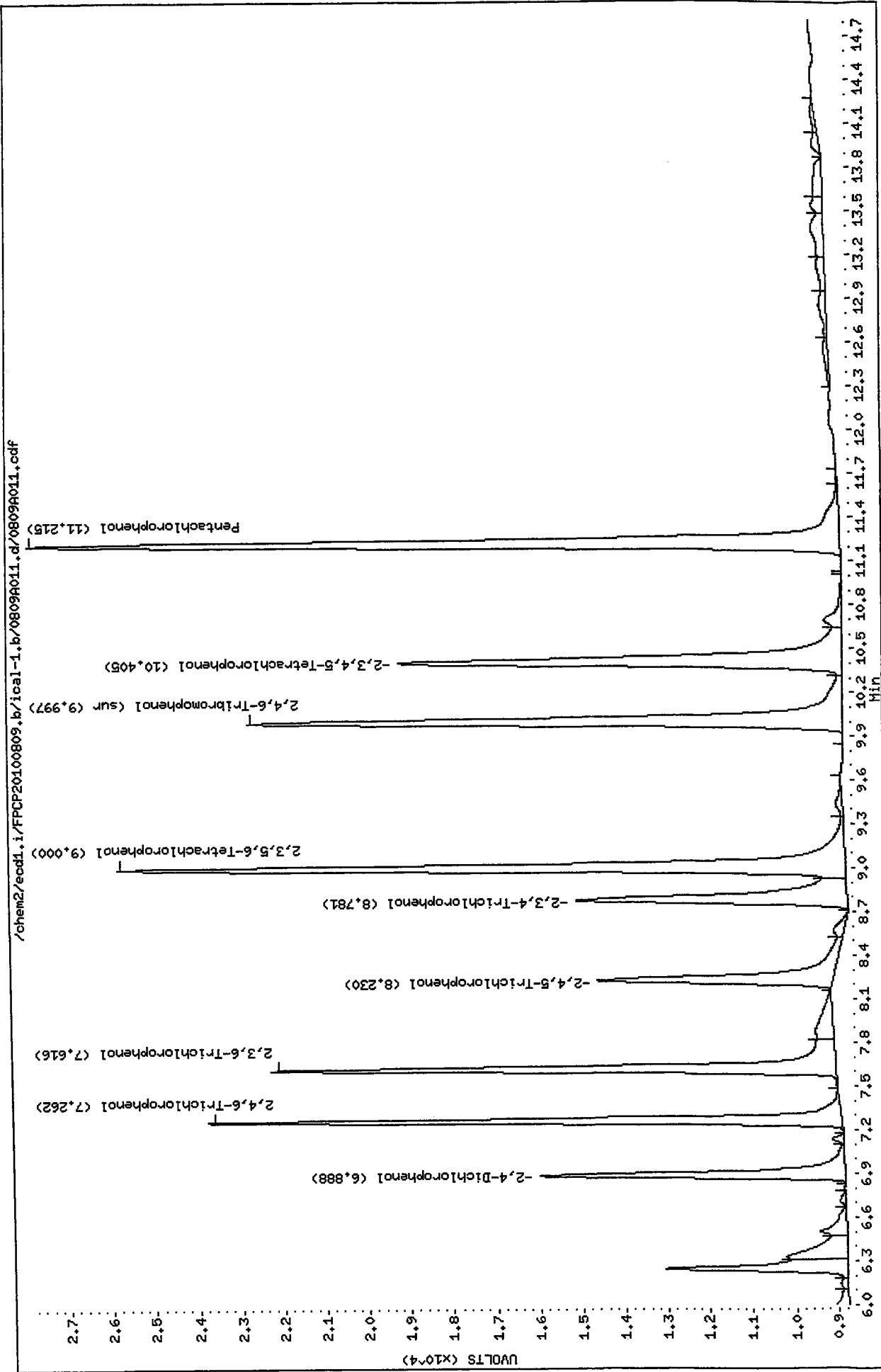
COMPOUND	Col1	Col2
Pentachlorophenol	97.9	92.3
2,4,6-Trichlorophenol	96.8	95.7
2,3,6-Trichlorophenol	99.0	92.3
2,4,5-Trichlorophenol	97.0	94.5
2,3,4-Trichlorophenol	85.9	114.2
2,3,5,6-Tetrachlorophenol	92.8	93.9
2,3,4,5-Tetrachlorophenol	95.1	87.3
2,4-Dichlorophenol	92.6	100.7
2,4,6-TBP (surr)	47.0	44.1



Data File: /chem2/ecd1.i/FPCP20100809.b/ical-1.b/0809A011.d  
Date: 09-AUG-2010 14:23  
Client ID:  
Sample Info: PCP ICV  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: ecd1.i

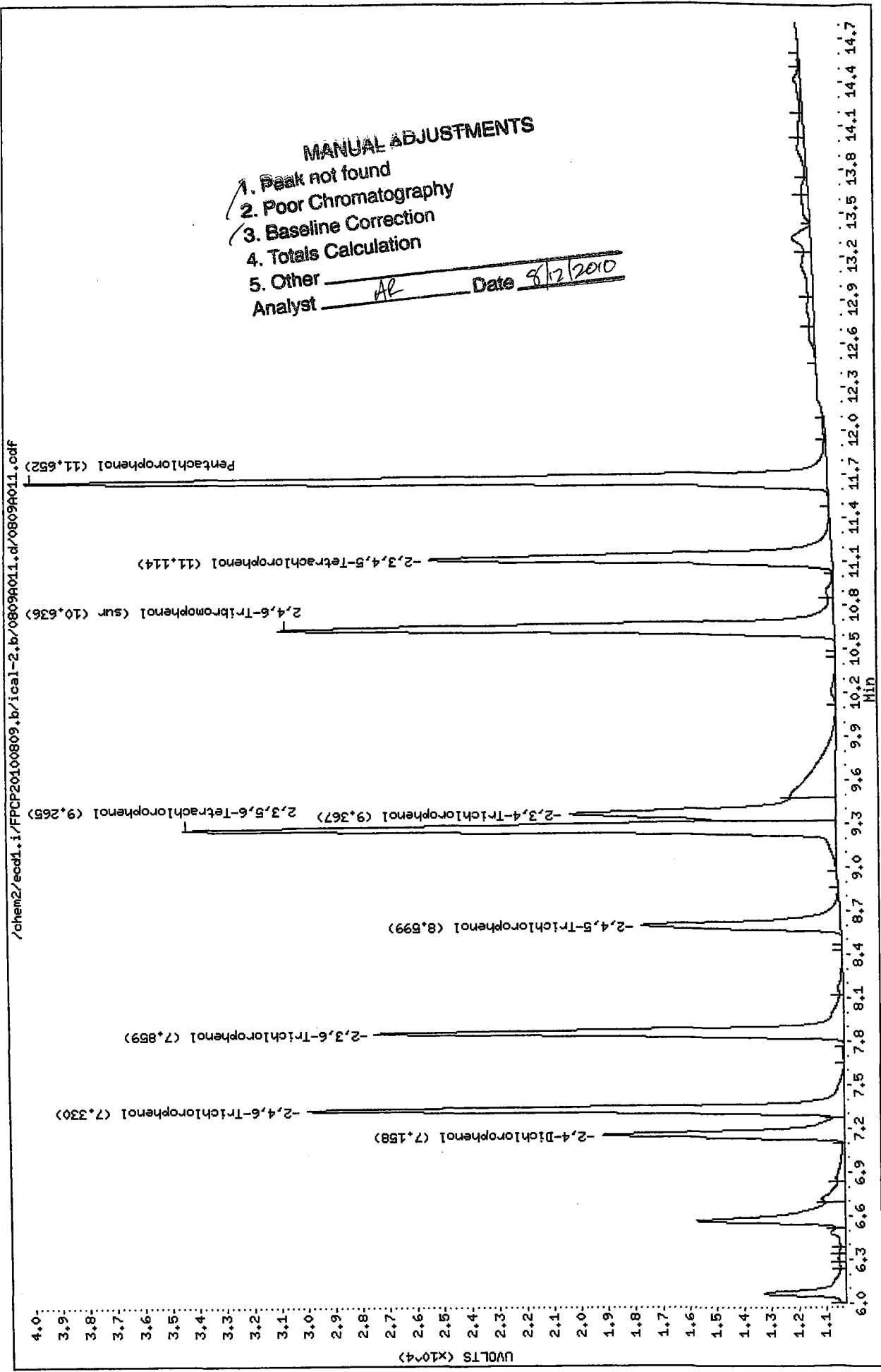
Operator: ar  
Column diameter: 0.53



Data File: /chem2/eod1.1/PCP20100809.b/ical-2.b/0809a011.d  
Date: 09-AUG-2010 14:23  
Client ID:  
Sample Info: PCP ICV  
Purge Volume: 2.0  
Column phase: ZB35

Instrument: eod1.1

Operator: ar  
Column diameter: 0.53

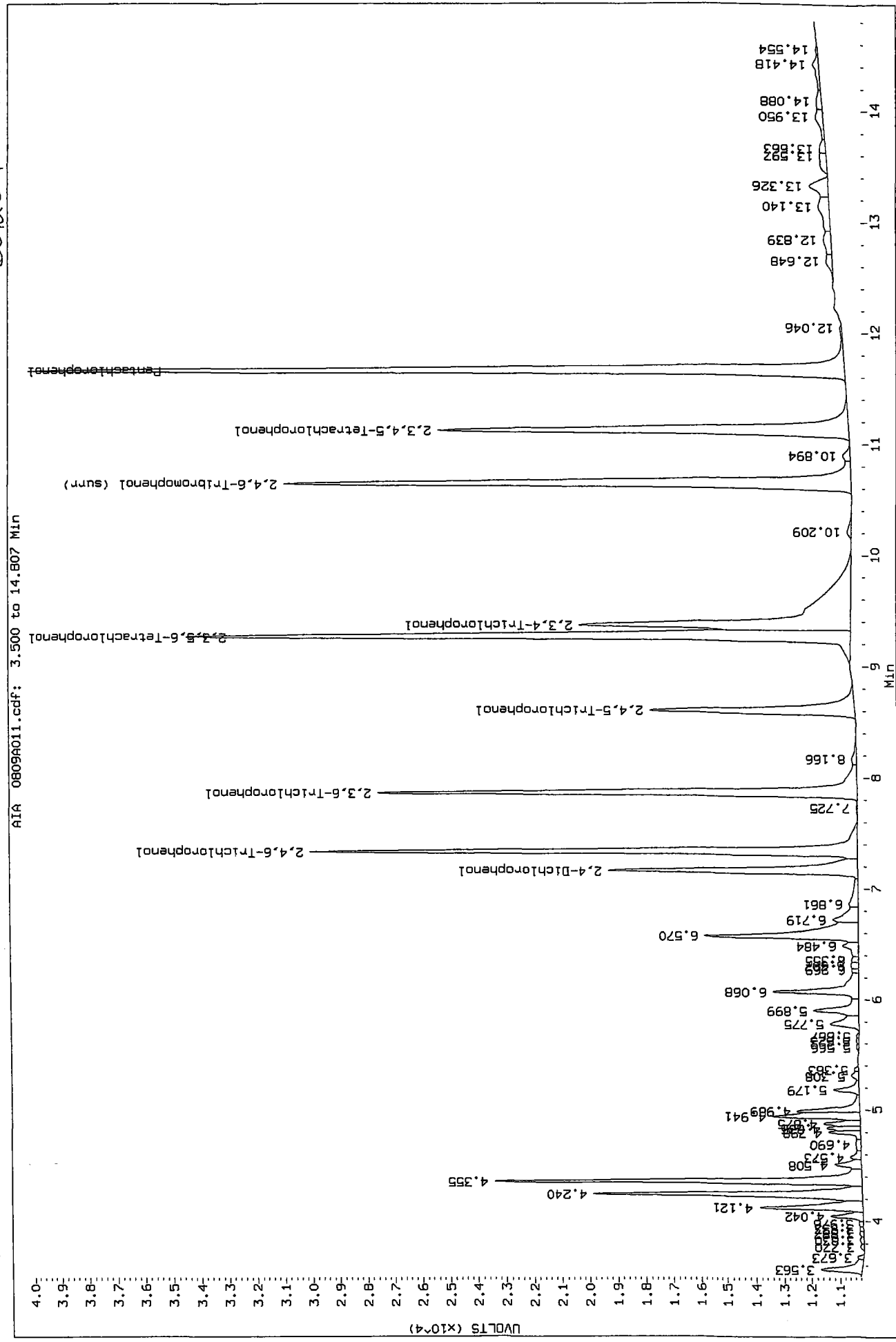


MANUAL ADJUSTMENTS  
1. Peak not found  
2. Poor Chromatography  
3. Baseline Correction  
4. Totals Calculation  
5. Other \_\_\_\_\_  
Analyst AR Date 8/12/2010



Data File: /chem2/ecdi.1/FPCP20100809.b/ical-2.b/0809A011.p/0809A011.cdf  
 Injection Date: 09-AUG-2010 14:23  
 Instrument: ecdi.1  
 Client Sample ID:

Before AF 8/12/2010



**PCP/Chlorophenols Raw Data  
Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: RG54**

# Analytical Resources Inc.: Organics Instrument Log

ECD1 Serial No.: 3410A39690

Date: 8/13/2010 Analysis: Cl. Phenols Analyst: AR  
 GC Program: PEFAST.M Column No: 150608/48146 Column Type: ZB 5/35  
 Instrument Tune (.U or .CT.): NA EM Voltage: NA  
 Calibration File: FPCP20100809.b <sup>AR</sup> <sub>5/13</sub> Curve Date: 8/9/2010

IS/SS	Ical/Ccal	LCS/ICV
S	1663-2	1703-2
	1739-1	1731-2

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd1.i/FPCP20100809.b/0813-1.b

Inject	Date/Time	Filename	DF	LabID	ClientID
1	13-AUG-2010 09:23	0813A001.d	1	PRIMER	
2	13-AUG-2010 09:43	0813A002.d	1	PRIMER	
3	13-AUG-2010 10:03	0813A003.d	1	PRIMER	
4	13-AUG-2010 10:23	0813A004.d	1	PRIMER	
5	13-AUG-2010 10:43	0813A005.d	1	PCP CCAL	
6	13-AUG-2010 11:03	0813A006.d	1	RG58MBS1	
7	13-AUG-2010 11:23	0813A007.d	1	RG58LCSS1	
8	13-AUG-2010 11:43	0813A008.d	1	RG58A	
9	13-AUG-2010 12:03	0813A009.d	1	RG58B	
10	13-AUG-2010 12:23	0813A010.d	1	RG58C	
11	13-AUG-2010 12:43	0813A011.d	1	RG58IMSD	
12	13-AUG-2010 13:03	0813A012.d	1	RG58J	
13	13-AUG-2010 13:23	0813A013.d	1	RG58K	
14	13-AUG-2010 13:44	0813A014.d	1	RG58L	
15	13-AUG-2010 14:04	0813A015.d	1	RG58M	
16	13-AUG-2010 14:24	0813A016.d	1	RG58N	
17	13-AUG-2010 14:44	0813A017.d	1	RG58O	
18	13-AUG-2010 15:04	0813A018.d	1	RG58P	
19	13-AUG-2010 15:24	0813A019.d	1	PCP	
20	13-AUG-2010 15:44	0813A020.d	1	PCP CCAL	
21	13-AUG-2010 16:04	0813A021.d	1	RG58Q	
22	13-AUG-2010 16:24	0813A022.d	1	RG58R	
23	13-AUG-2010 16:44	0813A023.d	1	RG58S	
24	13-AUG-2010 17:04	0813A024.d	1	PCP	
25	13-AUG-2010 17:24	0813A025.d	1	PCP CCAL	
26	13-AUG-2010 17:44	0813A026.d	1	RG54MBS1	
27	13-AUG-2010 18:04	0813A027.d	1	RG54LCSS1	
28	13-AUG-2010 18:24	0813A028.d	1	RG54A	
29	13-AUG-2010 18:44	0813A029.d	1	RG54AMS	
30	13-AUG-2010 19:04	0813A030.d	1	RG54AMSD	
31	13-AUG-2010 19:24	0813A031.d	1	RG54B	
32	13-AUG-2010 19:44	0813A032.d	1	RG54C	
33	13-AUG-2010 20:04	0813A033.d	1	RG54E	
34	13-AUG-2010 20:24	0813A034.d	1	RG54F	
35	13-AUG-2010 20:44	0813A035.d	1	RG54H	
36	13-AUG-2010 21:04	0813A036.d	1	PCP	
37	13-AUG-2010 21:24	0813A037.d	1	PCP CCAL	
38	13-AUG-2010 21:44	0813A038.d	1	RG54I	
39	13-AUG-2010 22:04	0813A039.d	1	RG54J	
40	13-AUG-2010 22:24	0813A040.d	1	RG54K	
41	13-AUG-2010 22:44	0813A041.d	1	RG54L	
42	13-AUG-2010 23:04	0813A042.d	1	RG60A	
43	13-AUG-2010 23:24	0813A043.d	1	RG60B	
44	13-AUG-2010 23:44	0813A044.d	1	RG60C	
45	14-AUG-2010 00:04	0813A045.d	1	RG60D	
46	14-AUG-2010 00:24	0813A046.d	1	RG60E	
47	14-AUG-2010 00:44	0813A047.d	1	RG60F	
48	14-AUG-2010 01:04	0813A048.d	1	PCP	
49	14-AUG-2010 01:24	0813A049.d	1	PCP CCAL	
50	14-AUG-2010 01:44	0813A050.d	1	RG51A	
51	14-AUG-2010 02:04	0813A051.d	1	RG51G	
52	14-AUG-2010 02:24	0813A052.d	1	PCP	
53	14-AUG-2010 02:44	0813A053.d	1	PCP CCAL	

Maintenance / Comments

AR 8/20/2010

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.



### GC Analyst Notes / Corrective Action Log

ARI Project ID: RG54 Client ID: Floyd / Snider

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)  
**427S**(Dir Inj) **428S**(EPH) **432S**(EDB) Other

Parameter(s): PCP

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

Dates: Curve: 08/09/10 Analysis Start: 08/13/10

Endrin/DDT Breakdown <15%?	YES / NO / <b>NA</b>	Method Blank In Control?	<b>YES</b> / NO
ICal Meets RF & %RSD Criteria?	<b>YES</b> / NO	LCS/LCSD Recovery In Control?	<b>YES</b> / NO
CCal Meets RF & %RSD Criteria?	<b>YES</b> / NO	Surrogate Recovery In Control?	<b>YES</b> / NO
Manual Integrations for ICal?	<b>YES</b> / NO	Manual Integrations for Samples?	YES / <b>NO</b>
Internal Standard Meets Criteria?	YES / NO / <b>NA</b>	Special Analysis Criteria Met?	<b>YES</b> / NO / NA

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

*PC passes at lower level of limits!*

Additional Details on Reverse: Yes / **No**

Analyst: YE Date: 8/18/10

Reviewer: RB Date: 8/18/10

Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

*YZ 8/18/10*

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A025.d    ARI ID: PCP CCAL  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A025.d    Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m                      Injection Date: 13-AUG-2010 17:24  
 Compound Sublist: all    Report Date: 08/17/2010 16:03  
 Instrument: ecdl.i    Matrix: NONE  
 Operator: ar    Dilution Factor: 1.000

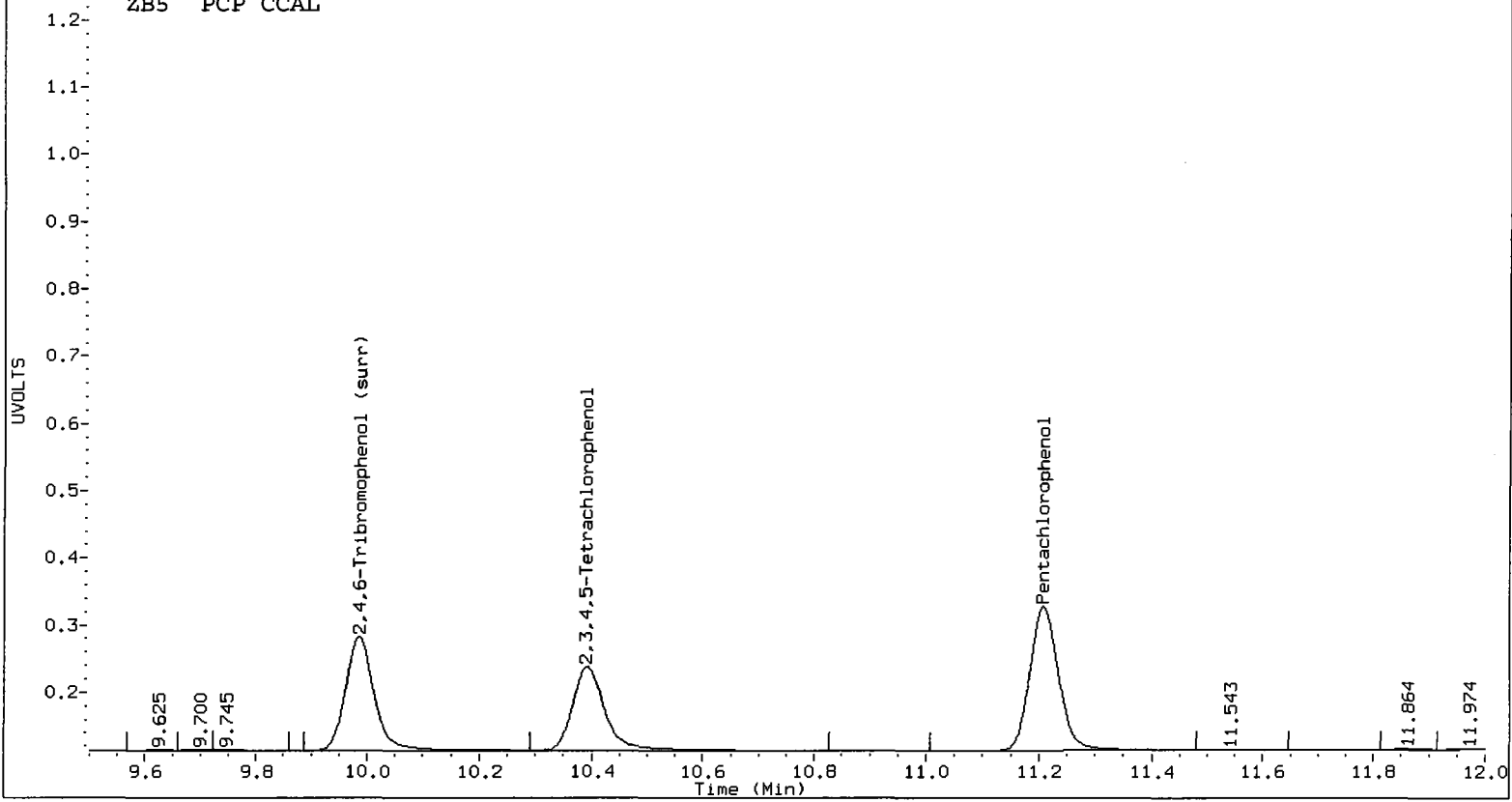
ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.208	-0.011	383226	11.645	-0.013	549843	24.7200	23.9464	3.2	Pentachlorophenol
7.259	-0.005	213750	7.327	-0.006	327596	25.3519	26.2400	3.4	2,4,6-Trichlorophenol
7.612	-0.007	204943	7.855	-0.009	301029	23.0838	24.2598	5.0	2,3,6-Trichlorophenol
8.214	-0.028	124918	8.587	-0.028	160813	24.7484	25.8360	4.3	2,4,5-Trichlorophenol
8.764	-0.028	160568	9.352	-0.028	210568	23.4711	24.8738	5.8	2,3,4-Trichlorophenol
8.991	-0.016	340347	9.257	-0.020	464958	24.1285	25.1127	4.0	2,3,5,6-Tetrachlorophenol
10.391	-0.022	254656	11.103	-0.023	343260	24.6479	23.5259	4.7	2,3,4,5-Tetrachlorophenol
6.884	-0.009	112964	7.154	-0.012	155473	226.9403	251.7564	10.4	2,4-Dichlorophenol
9.985	-0.017	306195	10.627	-0.019	460431	24.8	24.7	0.4	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	98.9	95.8
2,4,6-Trichlorophenol	101.4	105.0
2,3,6-Trichlorophenol	92.3	97.0
2,4,5-Trichlorophenol	99.0	103.3
2,3,4-Trichlorophenol	93.9	99.5
2,3,5,6-Tetrachlorophenol	96.5	100.5
2,3,4,5-Tetrachlorophenol	98.6	94.1
2,4-Dichlorophenol	90.8	100.7
2,4,6-TBP (surr)	99.1	98.7

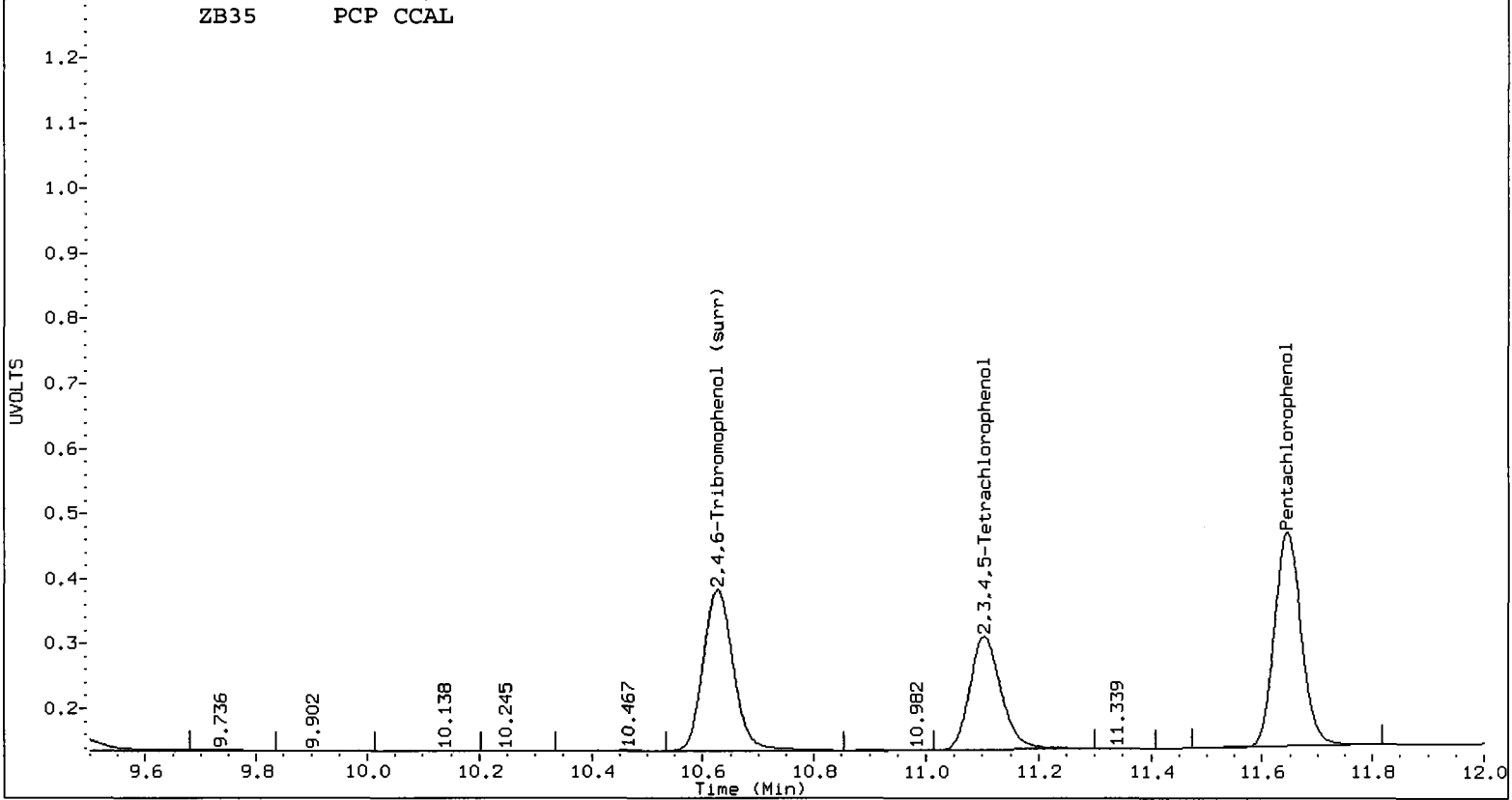
/chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A025.d

ZB5 PCP CCAL



/chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A025.d

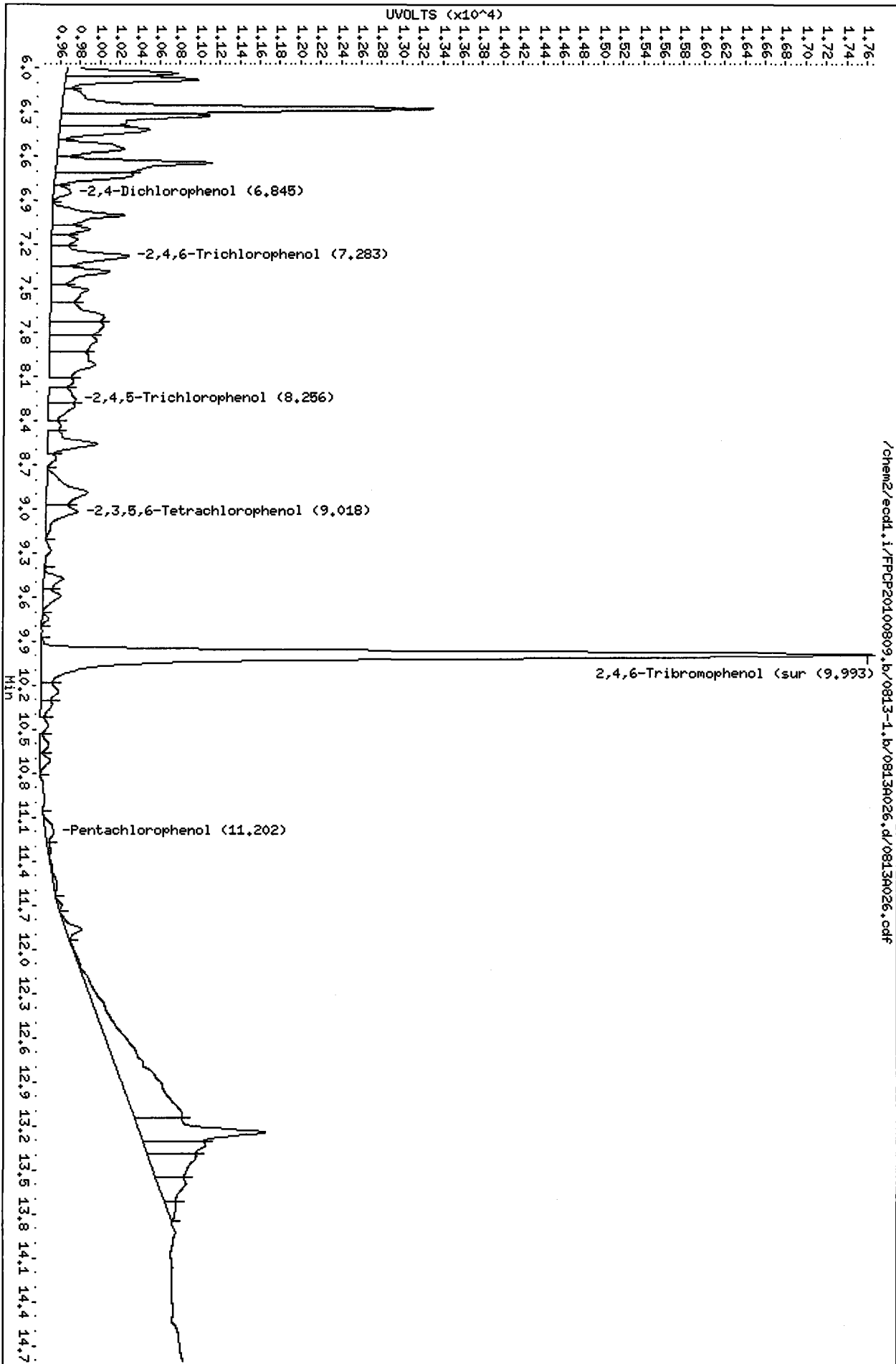
ZB35 PCP CCAL



RG54 : 00866

Data File: /chem2/eod1.i/PPCP20100809.b/0813-1.b/0813A026.d  
Date : 13-AUG-2010 17:44  
Client ID:  
Sample Info: RG54HBS1  
Purge Volume: 2.0  
Column phase: ZBS

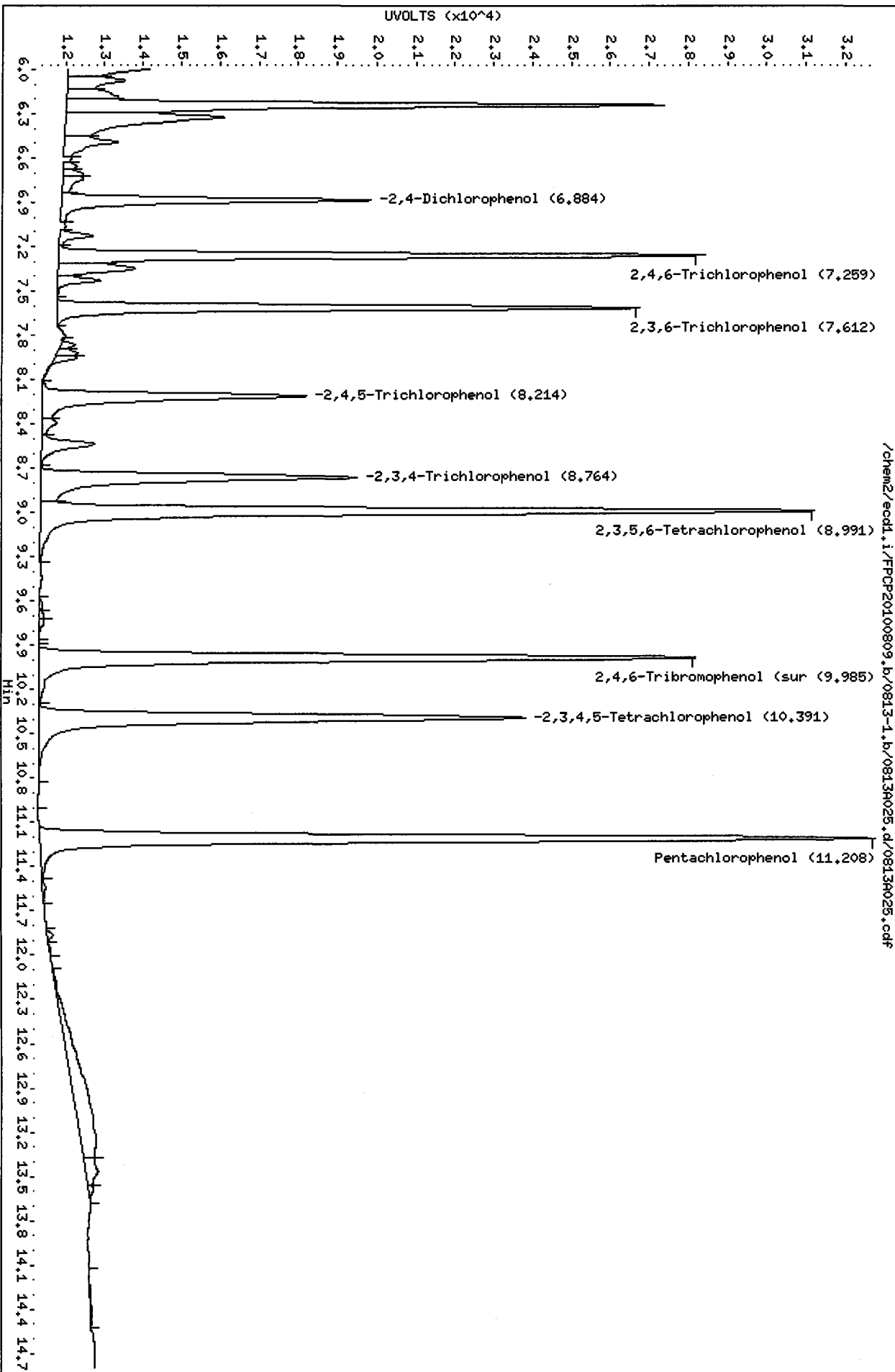
Instrument: eod1.i  
Operator: ar  
Column diameter: 0.53



/chem2/eod1.i/PPCP20100809.b/0813-1.b/0813A026.d/0813A026.cdf

Data File: /chem2/ecdd.i/FP020100809.b/0813-1.b/0813A025.d  
Date: 13-AUG-2010 17:24  
Client ID:  
Sample Info: PCP CCHL  
Column phase: ZB5

Instrument: ecdd.i  
Operator: ar  
Column diameter: 0.53





Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

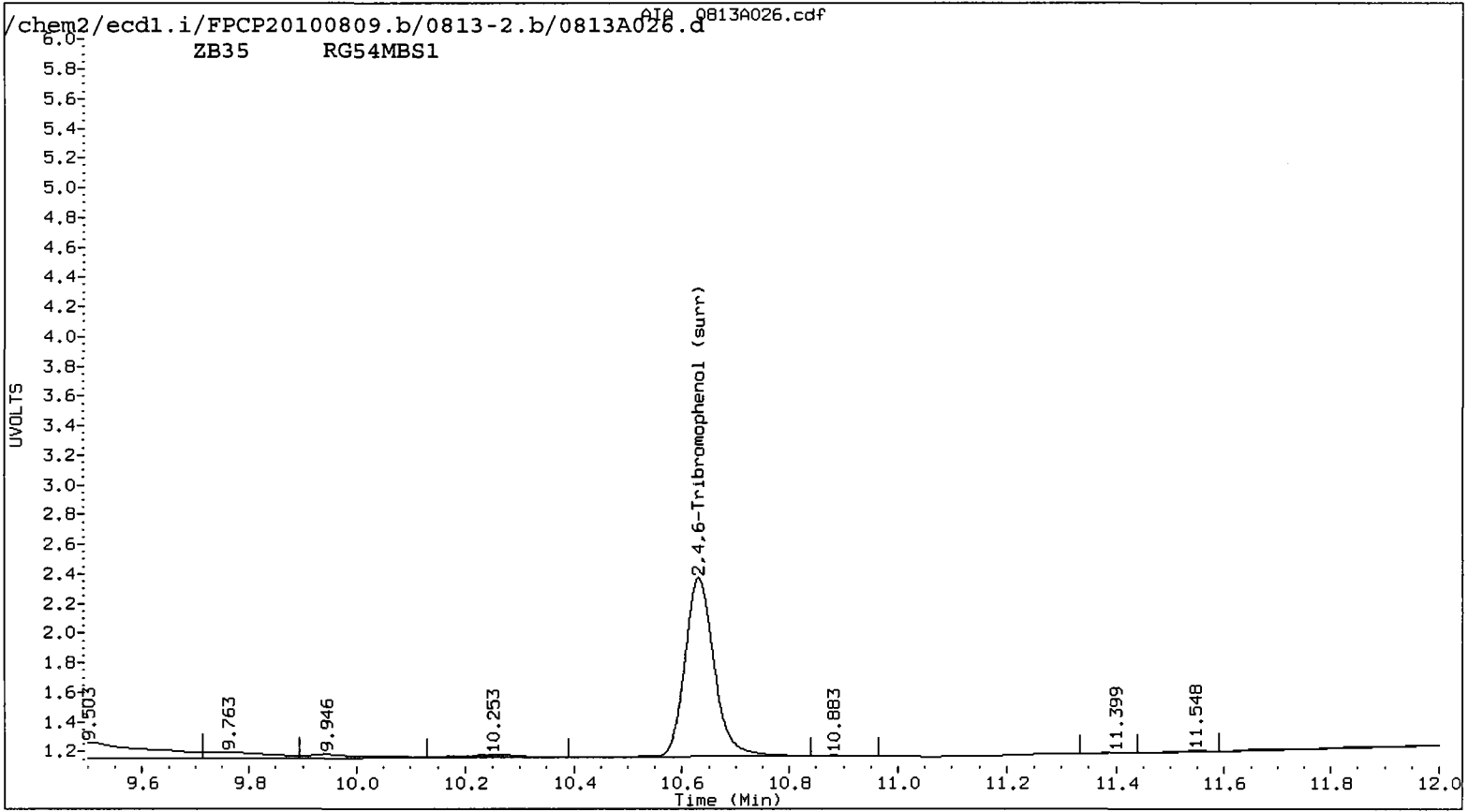
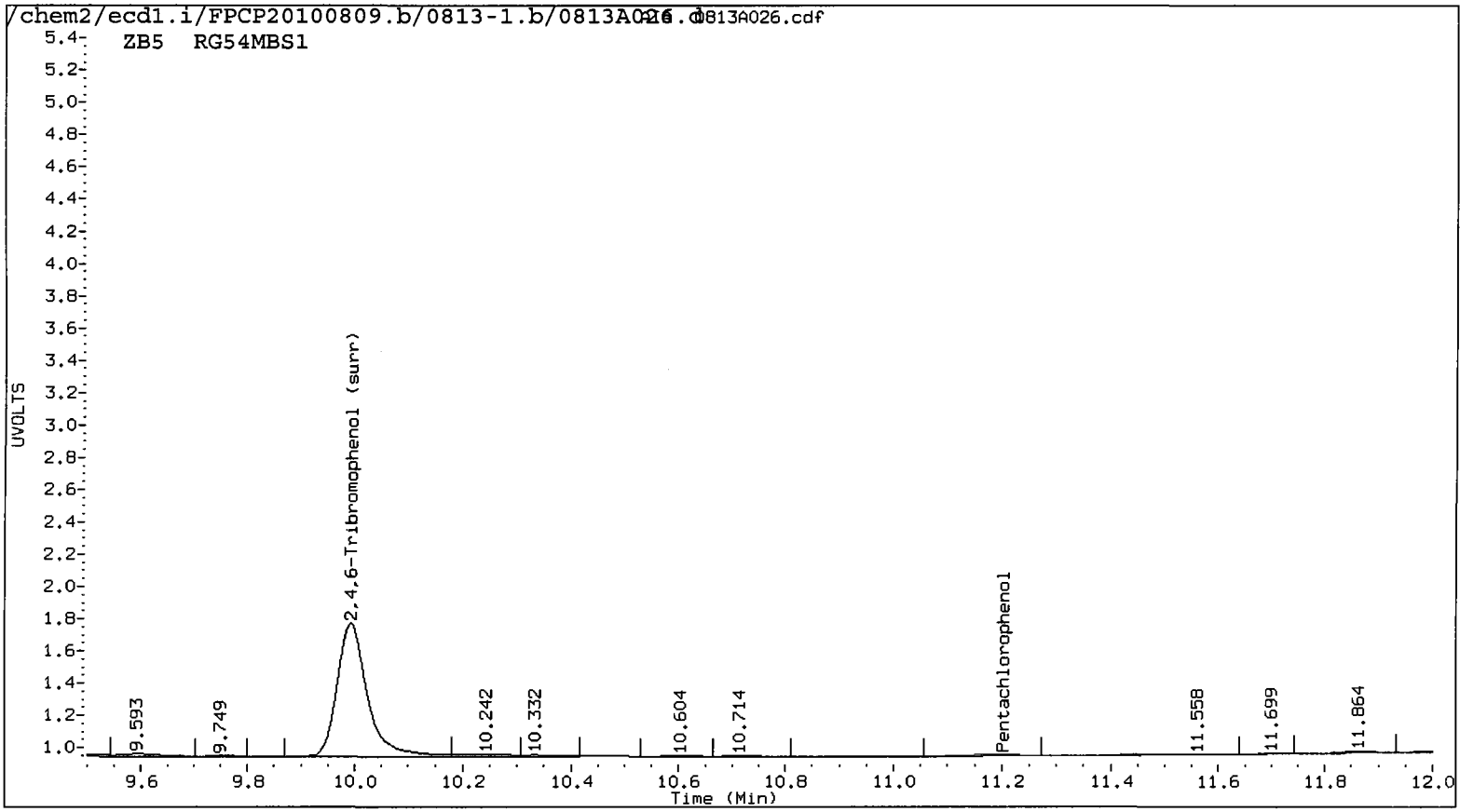
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 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A026.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 13-AUG-2010 17:44  
 Compound Sublist: all Report Date: 08/17/2010 16:03  
 Instrument: ecdl.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

YZ 8/18/10

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.202	-0.017	2952	----			<del>0.1638</del>	<del>0.0000</del>	---	Pentachlorophenol
7.283	0.019	17336	7.365	0.032	18965	1.8155	1.5191	17.8	2,4,6-Trichlorophenol
----			7.836	-0.027	4747	<del>0.0000</del>	<del>0.3826</del>	---	2,3,6-Trichlorophenol
8.256	0.014	7354	8.655	0.040	1007	1.4570	0.1402	164.9*	2,4,5-Trichlorophenol
----			----			<del>0.0000</del>	<del>0.0000</del>	---	2,3,4-Trichlorophenol
9.018	0.011	8292	9.258	-0.019	33974	0.5879	1.8350	102.9*	2,3,5,6-Tetrachlorophenol
----			----			<del>0.0000</del>	<del>0.0000</del>	---	2,3,4,5-Tetrachlorophenol
6.845	-0.048	3323	7.152	-0.014	8052	5.1955	10.7978	70.1*	2,4-Dichlorophenol
9.993	-0.009	163069	10.631	-0.015	230284	<u>12.5</u>	<u>12.3</u>	1.5	2,4,6-Tribromophenol (surr)

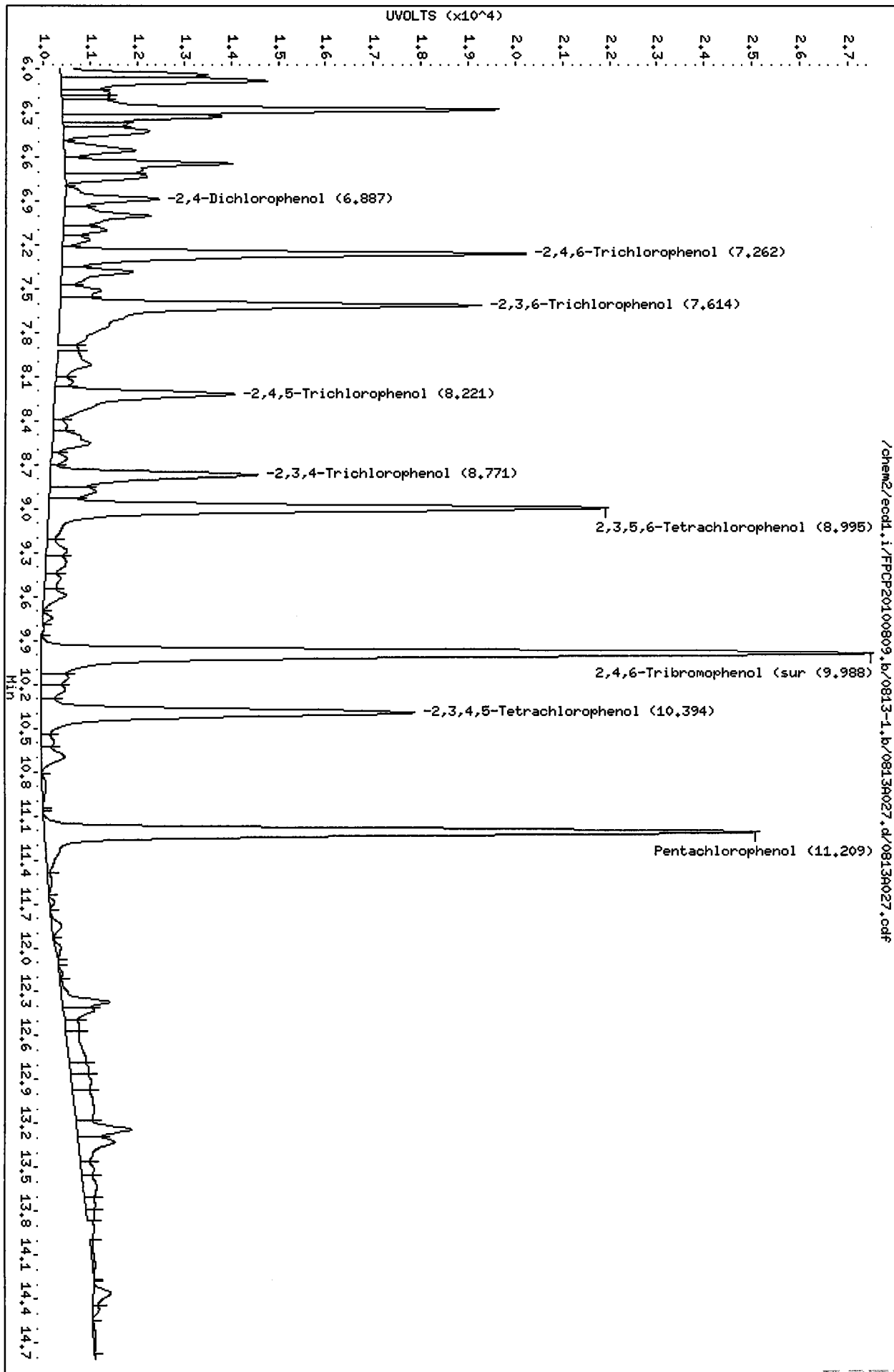
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	50.1	49.3



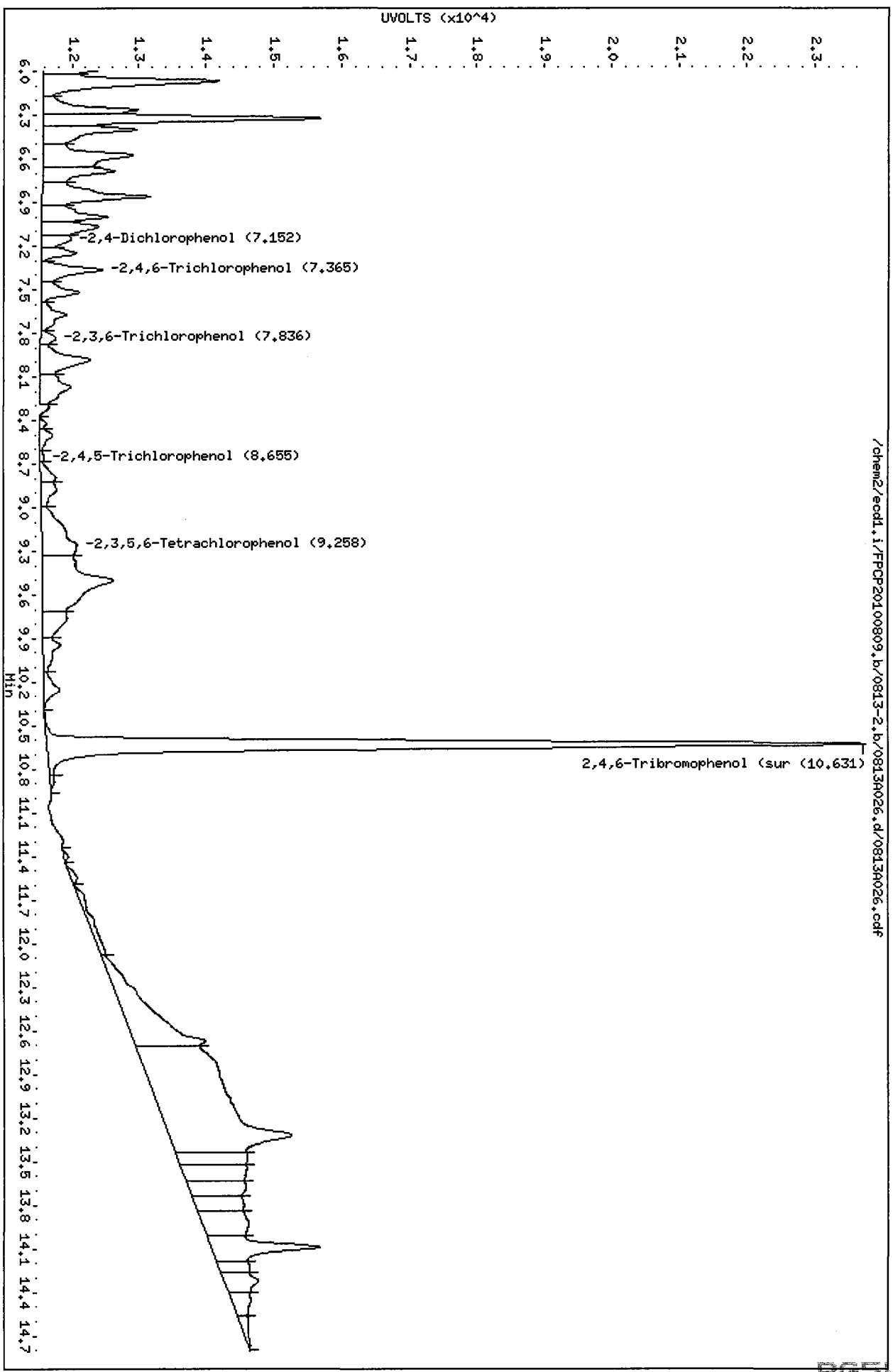
Data File: /chem2/eod1.i/FP20100809.b/0813-1.b/0813A027.d  
Date : 13-AUG-2010 18:04  
Client ID:  
Sample Info: RGS4LCSS1  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: eod1.i  
Operator: ar  
Column diameter: 0.53



Data File: /chem2/ecdl.i/FP20100809.b/0813-2.b/0813A026.d  
Date : 13-AUG-2010 17:44  
Client ID:  
Sample Info: R054MBS1  
Purge Volume: 2.0  
Column phase: ZB35

Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53



Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A027.d ARI ID: RG54LCSS1  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A027.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 13-AUG-2010 18:04  
 Compound Sublist: all Report Date: 08/17/2010 16:03  
 Instrument: ecd1.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

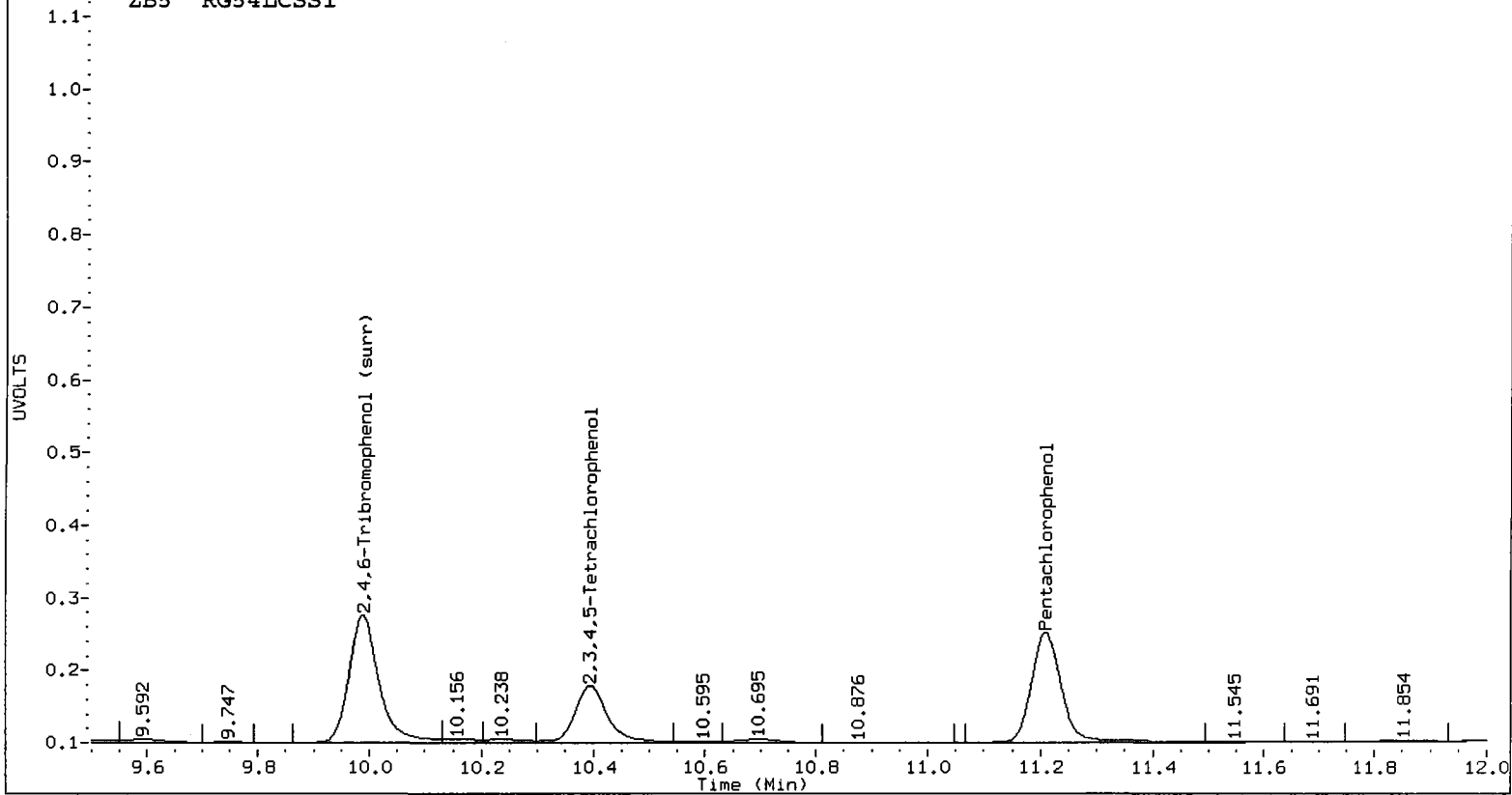
*YE 8/18/10*

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.209	-0.010	283300	11.646	-0.012	405237	17.6019	17.6486	0.3	Pentachlorophenol
7.262	-0.002	151208	7.329	-0.004	219771	17.2657	17.6034	1.9	2,4,6-Trichlorophenol
7.614	-0.005	199346	7.856	-0.008	194749	22.3939	15.6948	35.2	2,3,6-Trichlorophenol
8.221	-0.021	90833	8.591	-0.024	95544	17.9955	14.5128	21.4	2,4,5-Trichlorophenol
8.771	-0.021	86138	9.356	-0.024	135308	12.5913	15.2630	19.2	2,3,4-Trichlorophenol
8.995	-0.012	218345	9.260	-0.017	298670	15.4793	16.1314	4.1	2,3,5,6-Tetrachlorophenol
10.394	-0.019	164323	11.104	-0.022	210845	14.8885	14.4506	3.0	2,3,4,5-Tetrachlorophenol
6.887	-0.006	32731	7.157	-0.010	63043	55.0859	91.0854	49.3*	2,4-Dichlorophenol
9.988	-0.014	334995	10.629	-0.017	486585	27.4	26.1	4.9	2,4,6-Tribromophenol (surr)

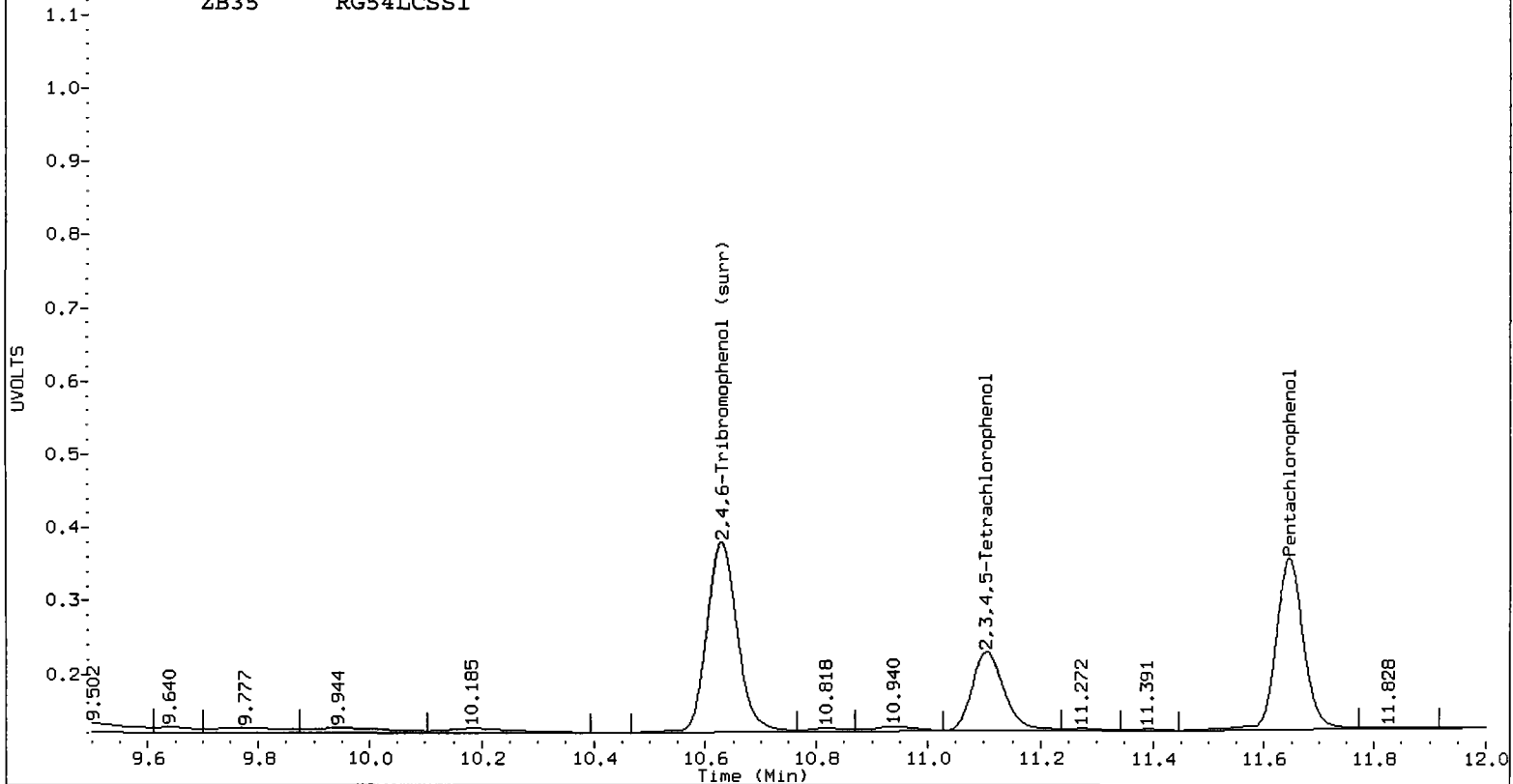
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	109.5	104.3

ZB5 RG54LCSS1

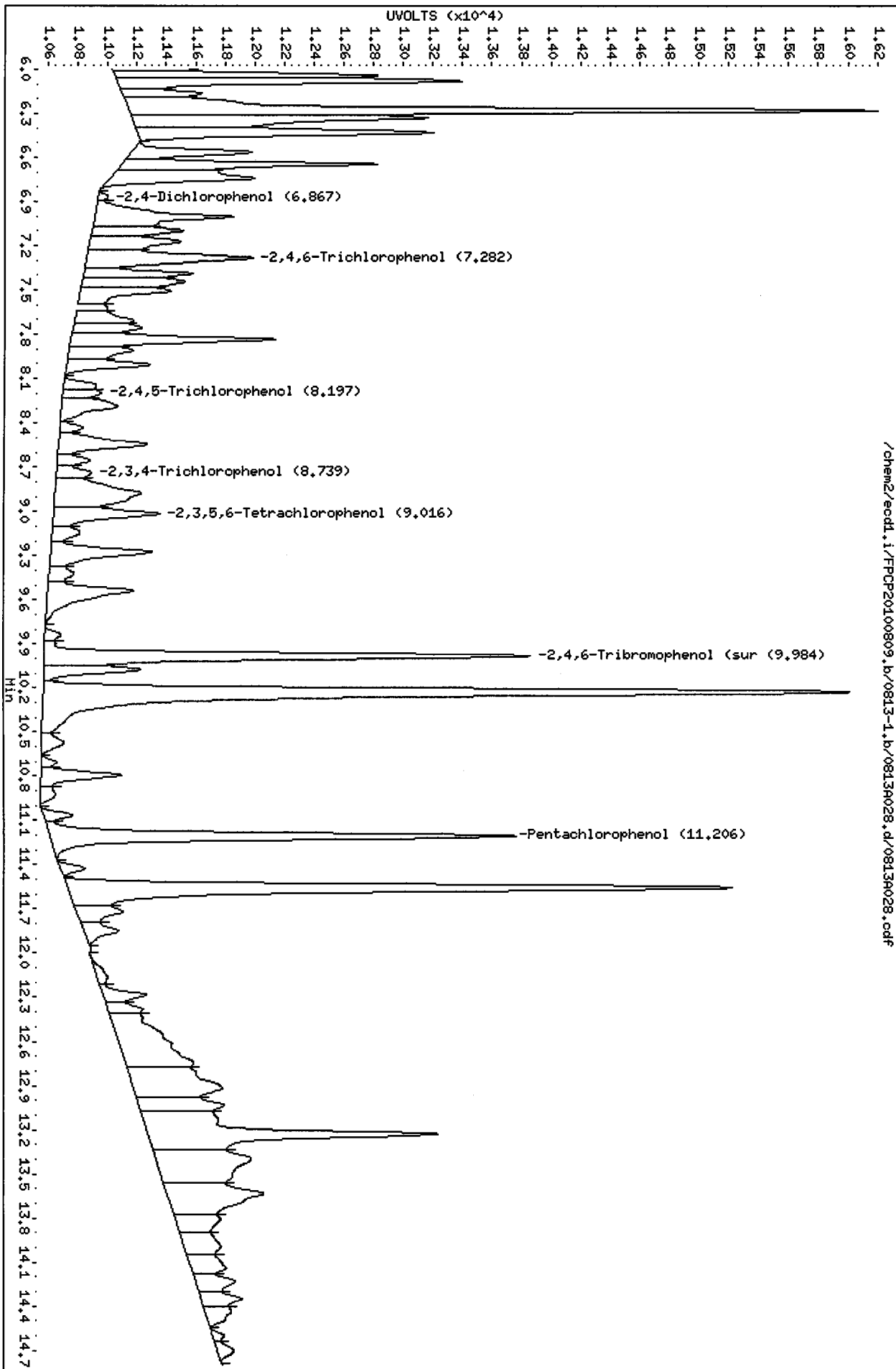


ZB35 RG54LCSS1



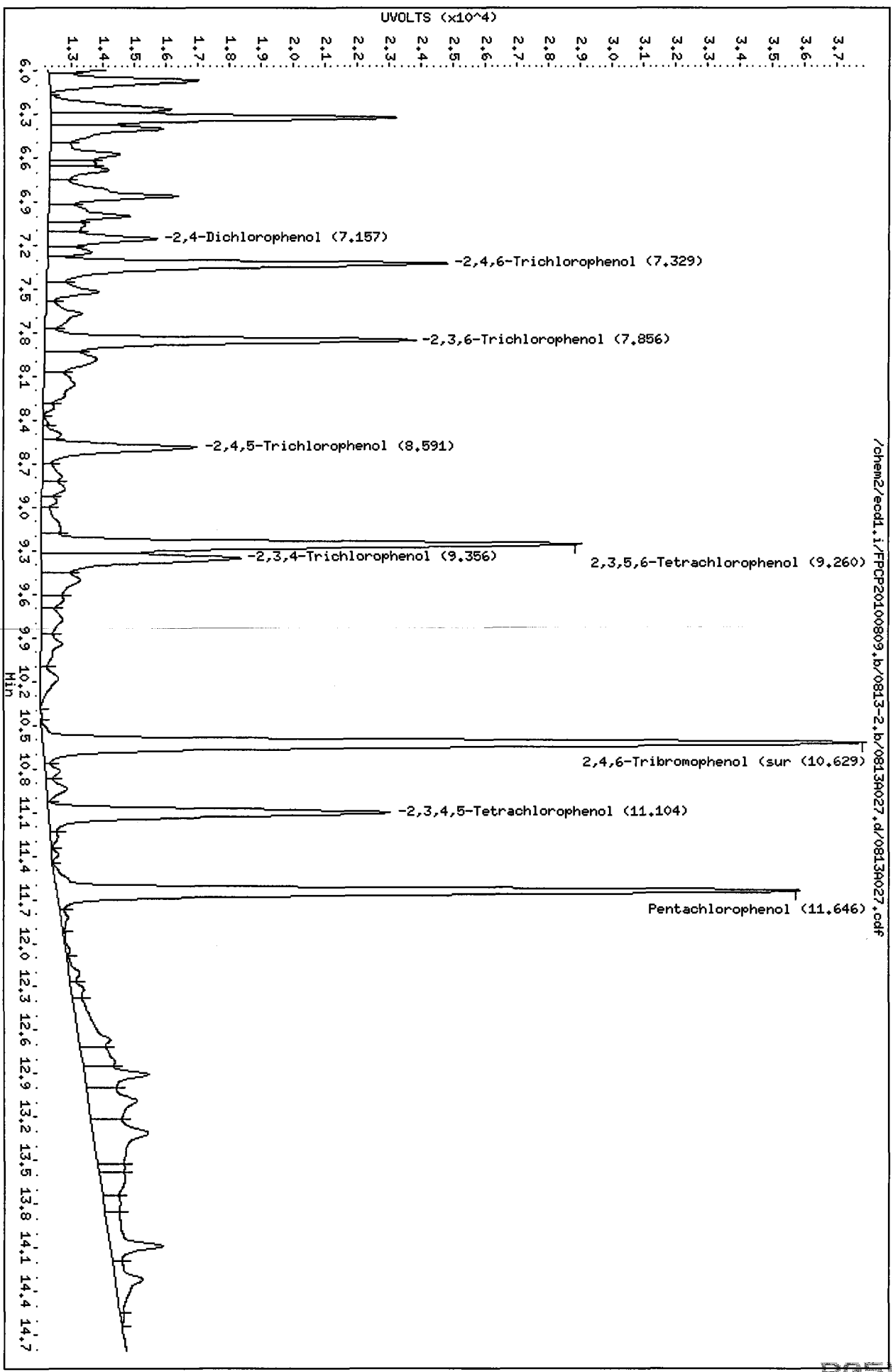
Data File: /chem2/eodl.i/FP020100809.b/0813-1.b/0813A028.d  
Date : 13-AUG-2010 18:24  
Client ID:  
Sample Info: R054A  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: eodl.i  
Operator: ar  
Column diameter: 0.53



Data File: /chem2/ecdl.i/FP20100809.b/0813-2.b/0813A027.d  
Date: 13-AUG-2010 18:04  
Client ID:  
Sample Info: R054LCSS1  
Purge Volume: 2.0  
Column phase: ZR35

Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53





Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

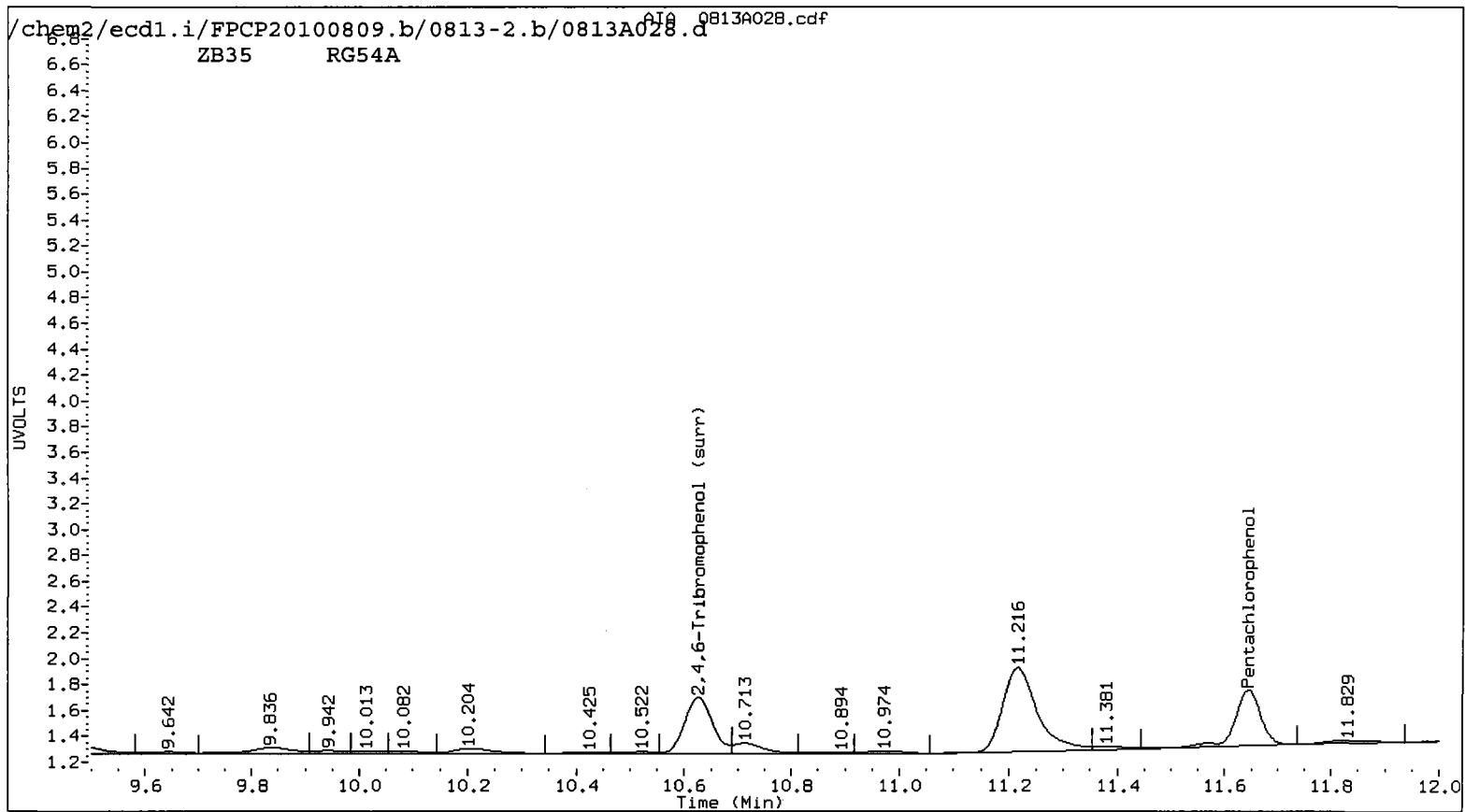
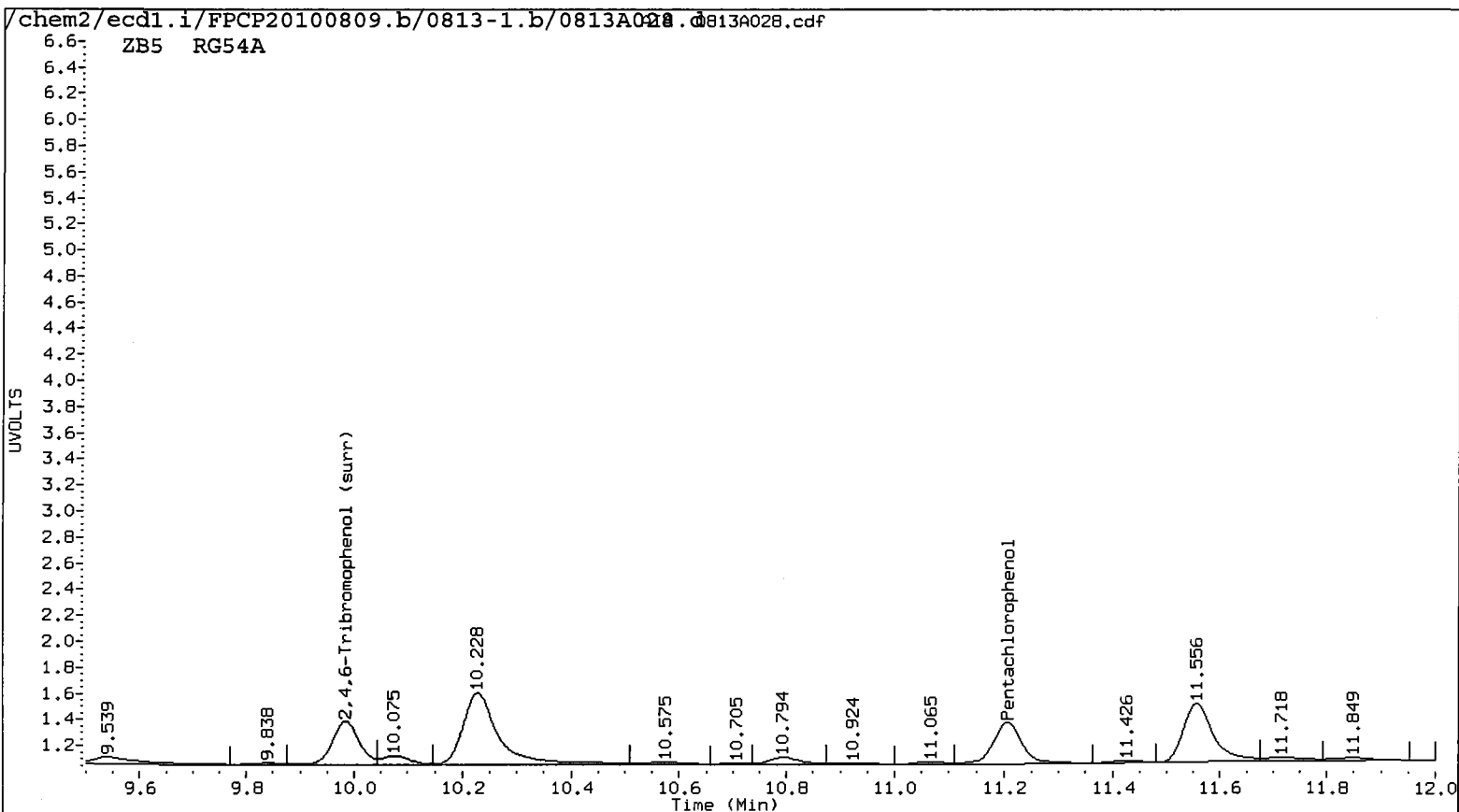
YZ 8/18/10

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A028.d ARI ID: RG54A  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A028.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 13-AUG-2010 18:24  
 Compound Sublist: all Report Date: 08/17/2010 16:03  
 Instrument: ecdl.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.206	-0.013	55984	11.645	-0.013	72751	<u>3.1761</u>	3.1684	0.2	Pentachlorophenol
7.282	0.018	24263	7.366	0.033	28544	2.5528	2.2863	11.0	2,4,6-Trichlorophenol
----			7.823	-0.041	7066	0.0000	0.5694	---	2,3,6-Trichlorophenol
8.197	-0.045	4041	8.675	0.060	8276	0.8006	1.1601	36.7	2,4,5-Trichlorophenol
8.739	-0.053	4541	----			0.6638	0.0000	---	2,3,4-Trichlorophenol
9.016	0.009	15865	9.277	0.000	13965	1.1247	0.7543	39.4	2,3,5,6-Tetrachlorophenol
----			----			0.0000	0.0000	---	2,3,4,5-Tetrachlorophenol
6.867	-0.026	863	7.166	0.000	2273	1.3407	3.0233	77.1*	2,4-Dichlorophenol
9.984	-0.018	56860	10.626	-0.020	78613	<u>4.2</u>	<u>4.2</u>	0.5	2,4,6-Tribromophenol (surr)

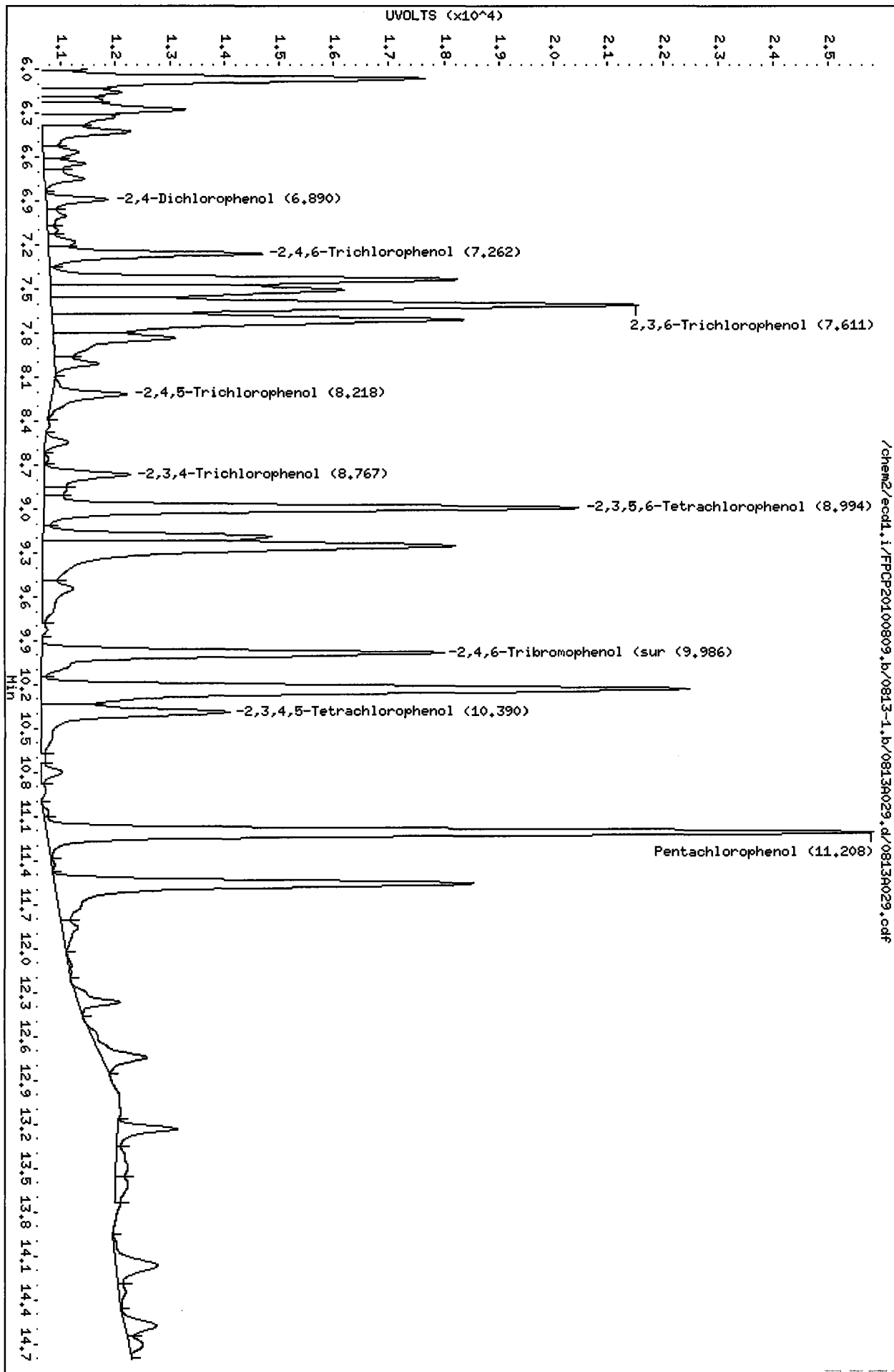
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	16.8	16.8



Data File: /chem2/eod1.i/FP020100809.b/0813-1.b/0813A029.d  
Date : 13-AUG-2010 18:44  
Client ID:  
Sample Info: R0549HS  
Purge Volume: 2.0  
Column phase: ZB5

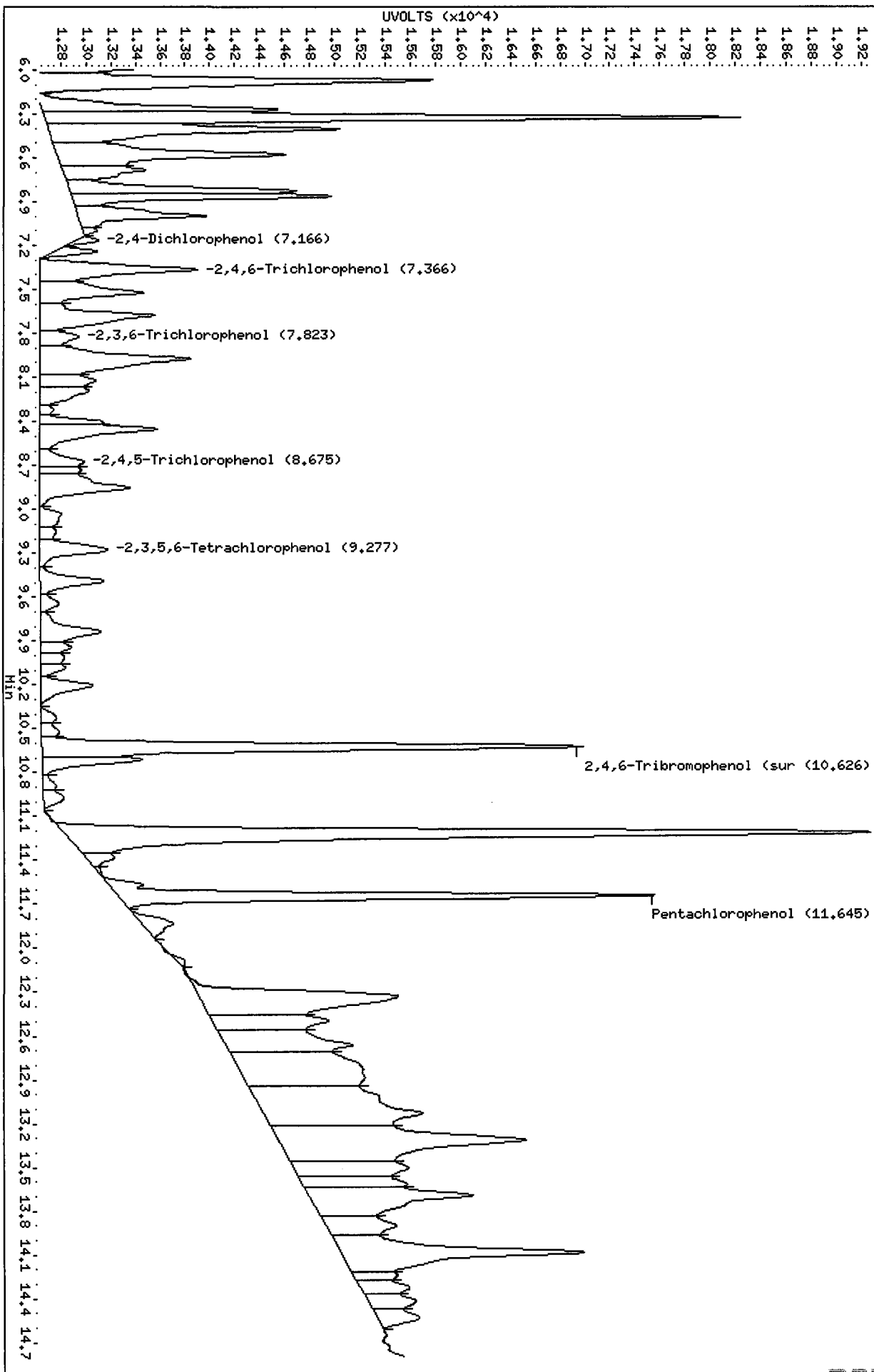
Instrument: eod1.i  
Operator: ar  
Column diameter: 0.53



Data File: /chem2/eod1.i/FPCP20100809.b/0813-2.b/08134028.d  
Date: 13-AUG-2010 18:24  
Client ID:  
Sample Info: RG54A  
Purge Volume: 2.0  
Column phase: ZB35

Instrument: eod1.i  
Operator: ar  
Column diameter: 0.53

/chem2/eod1.i/FPCP20100809.b/0813-2.b/08134028.d/08134028.cdf



Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

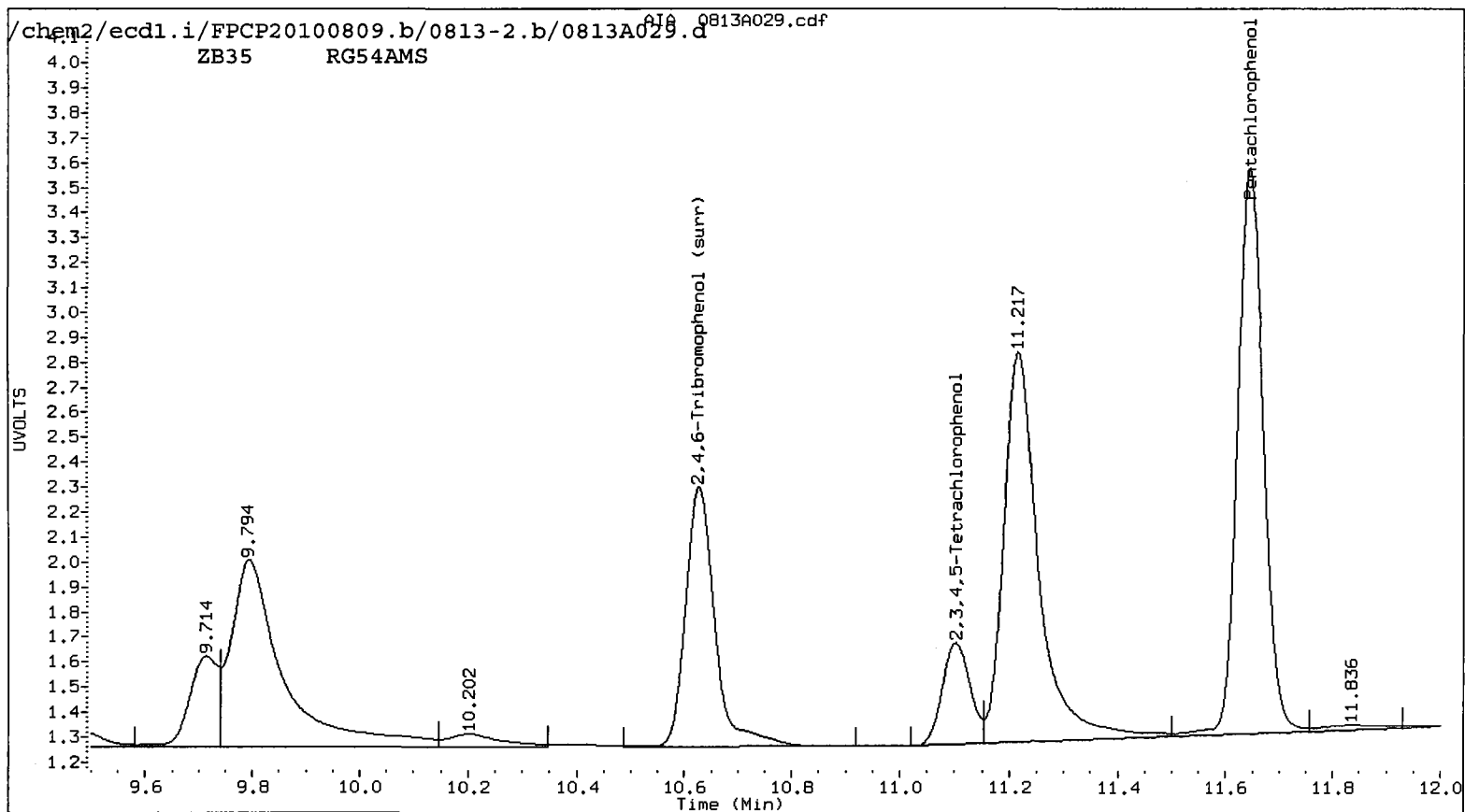
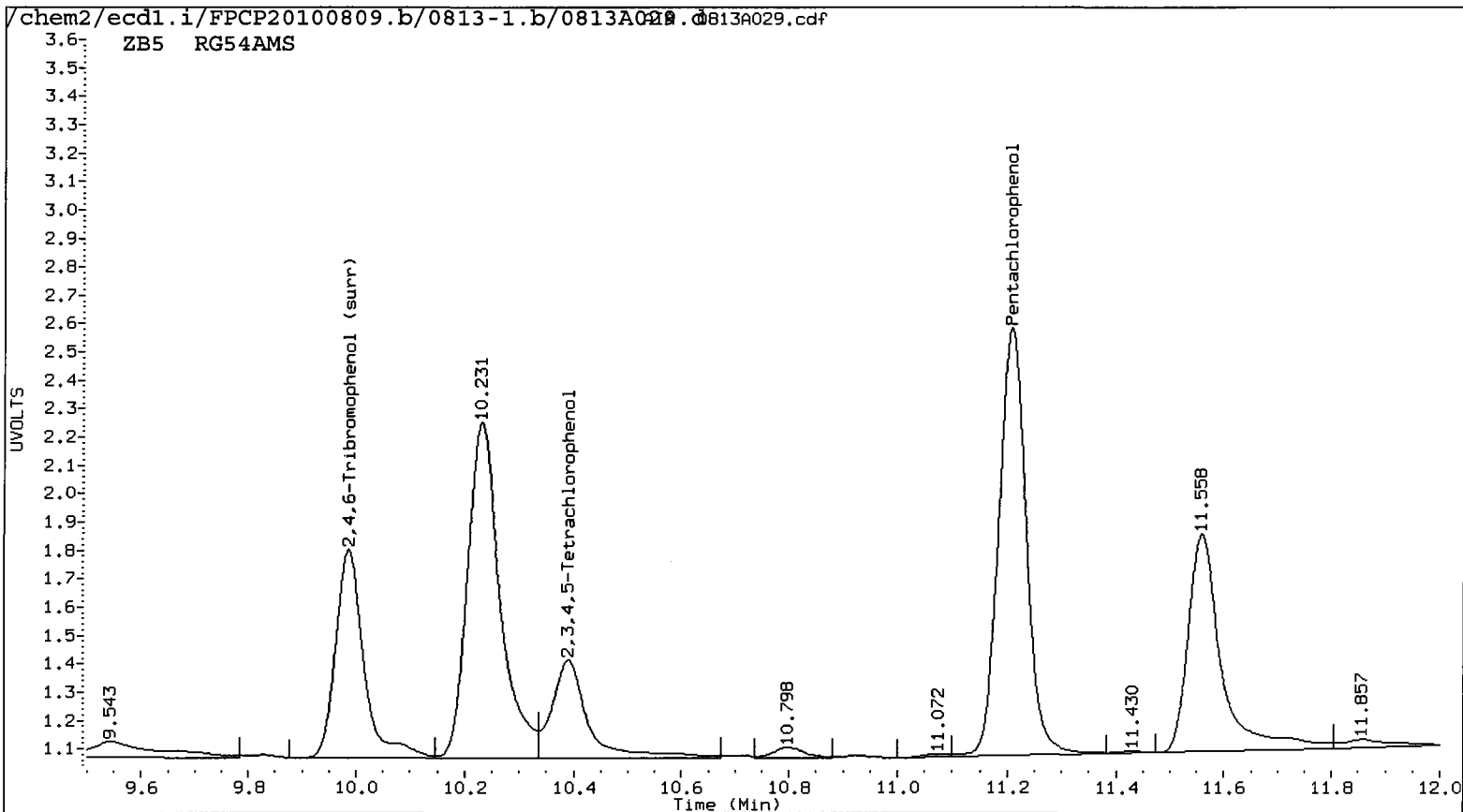
YZ 8/18/10

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 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 13-AUG-2010 18:44  
 Compound Sublist: all Report Date: 08/17/2010 16:03  
 Instrument: ecdl.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.208	-0.011	263648	11.646	-0.012	378795	16.2578	16.4970	1.5	Pentachlorophenol
7.262	-0.002	57941	7.330	-0.003	76998	6.2341	6.1674	1.1	2,4,6-Trichlorophenol
7.611	-0.008	193521	7.856	-0.008	107295	21.6795	8.6469	85.9*	2,3,6-Trichlorophenol
8.218	-0.024	30236	8.590	-0.025	34186	5.9903	4.9111	19.8	2,4,5-Trichlorophenol
8.767	-0.025	32604	9.353	-0.027	35316	4.7659	3.7338	24.3	2,3,4-Trichlorophenol
8.994	-0.013	165980	9.259	-0.018	224759	11.7669	12.1394	3.1	2,3,5,6-Tetrachlorophenol
10.390	-0.023	80539	11.103	-0.023	71035	6.8353	4.8685	33.6	2,3,4,5-Tetrachlorophenol
6.890	-0.003	17181	7.159	-0.007	31225	27.8300	43.2389	43.4*	2,4-Dichlorophenol
9.986	-0.016	133975	10.628	-0.018	196968	10.2	10.6	3.6	2,4,6-Tribromophenol (surr)

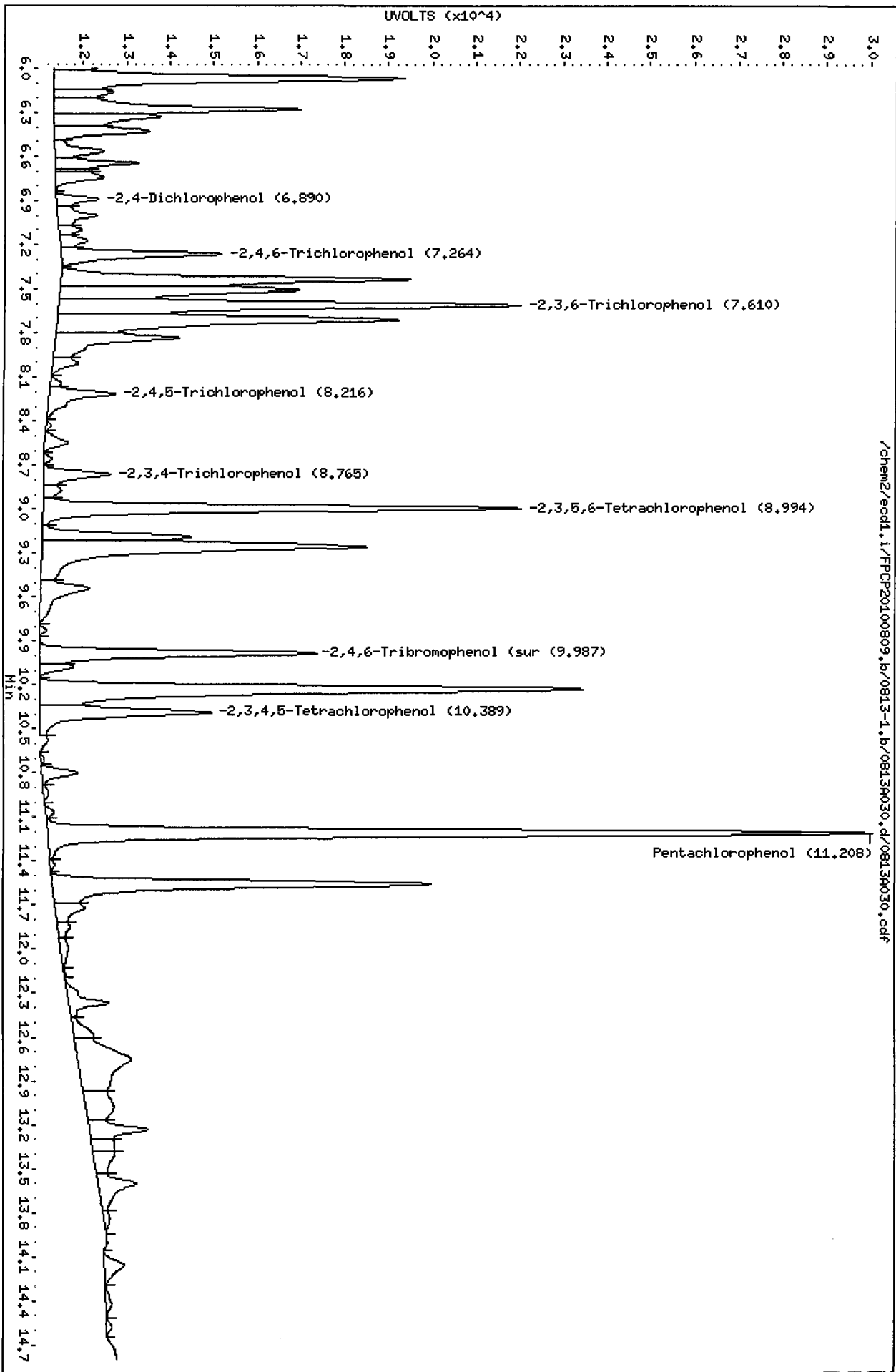
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	40.7	42.2



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Date : 13-AUG-2010 19:04  
Client ID:  
Sample Info: RCS40HSD  
Purge Volume: 2.0  
Column phase: ZB5

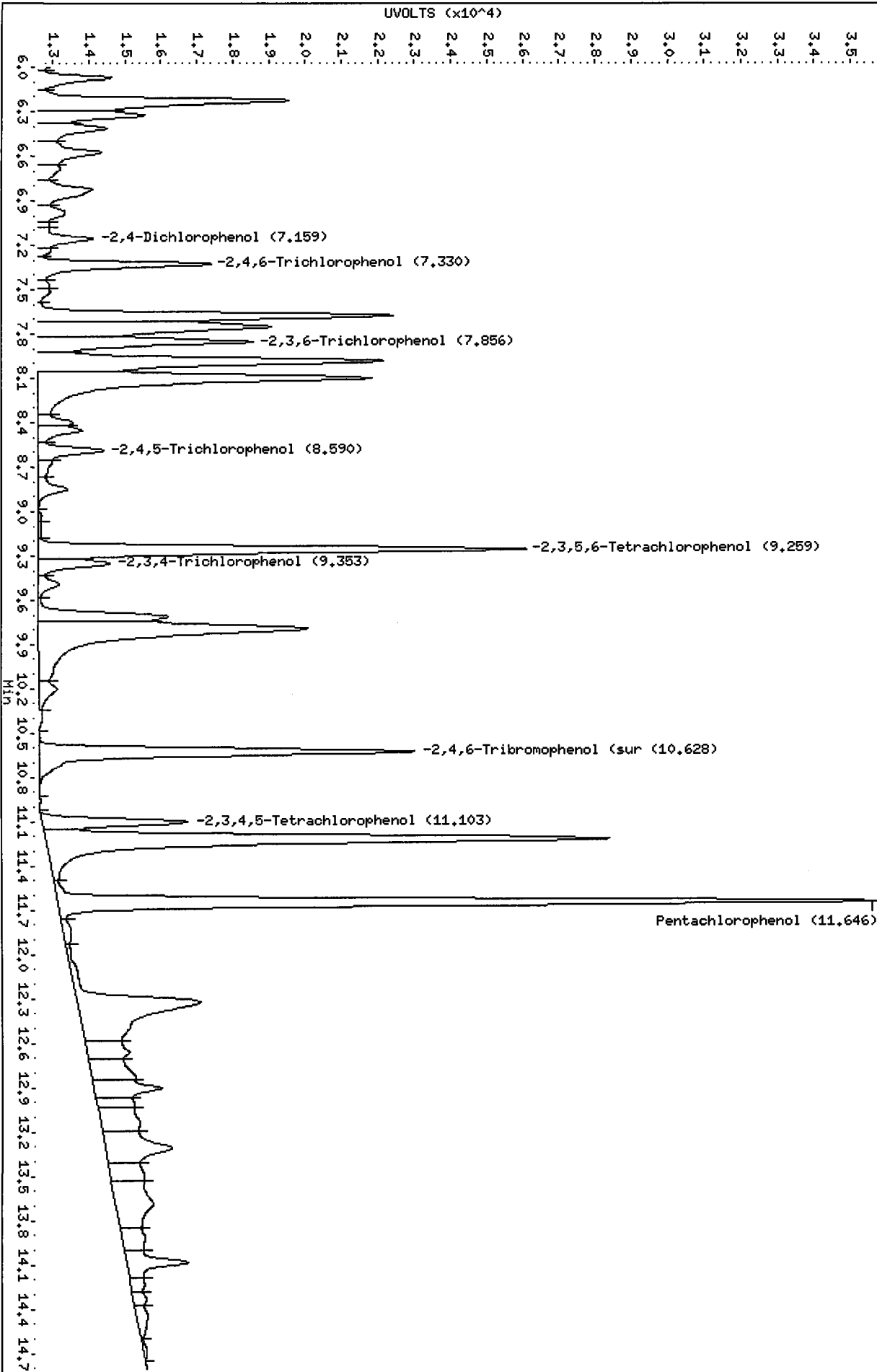
Instrument: eecd1.i  
Operator: ar  
Column diameter: 0.53



Data File: /chem2/ecdl.i/PPCP20100809.b/0813-2.b/0813R029.d  
Date : 13-AUG-2010 18:44  
Client ID:  
Sample Info: RGS54PHS  
Purge Volume: 2.0  
Column phase: ZB35

Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53

/chem2/ecdl.i/PPCP20100809.b/0813-2.b/0813R029.d/0813R029.cdf





Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

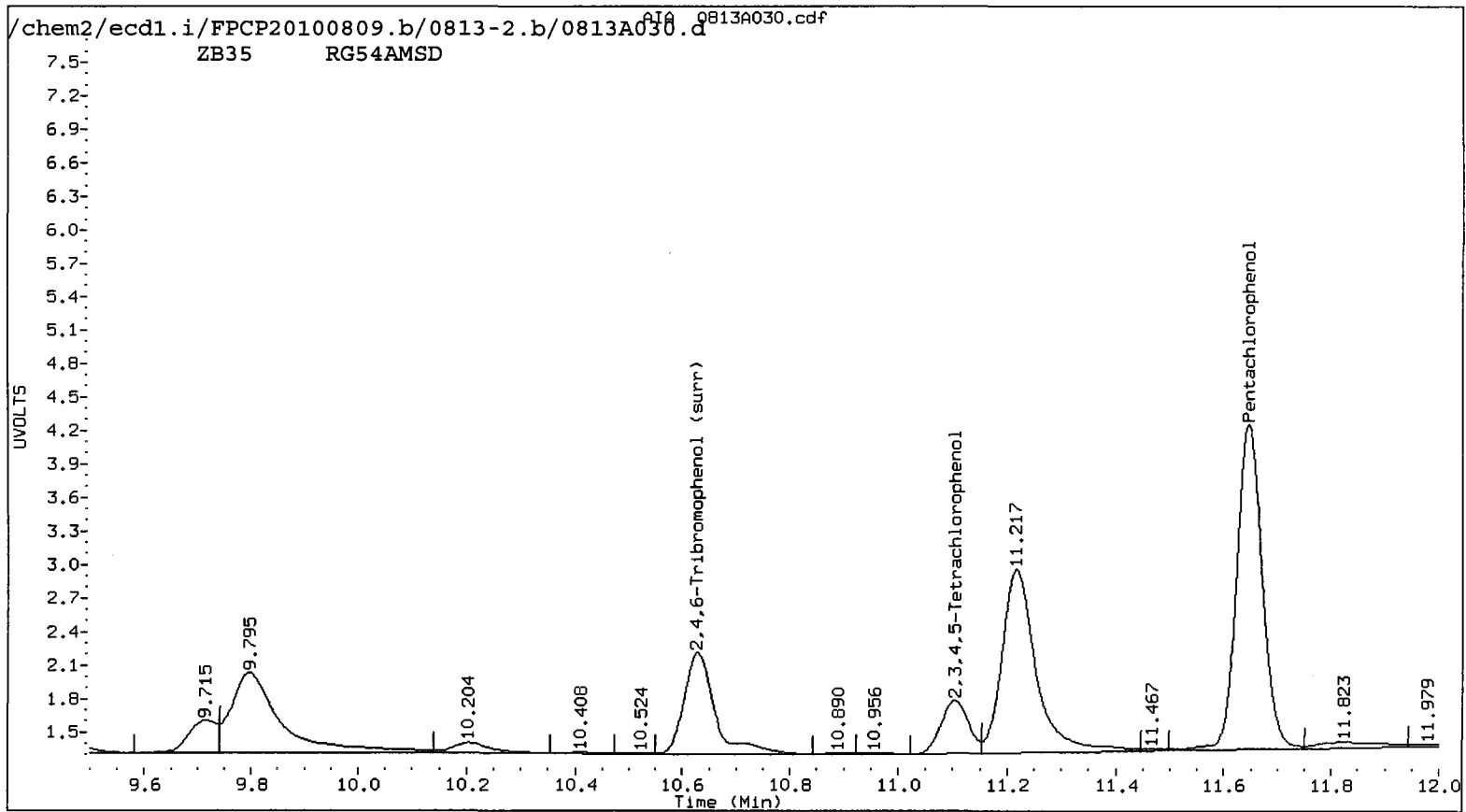
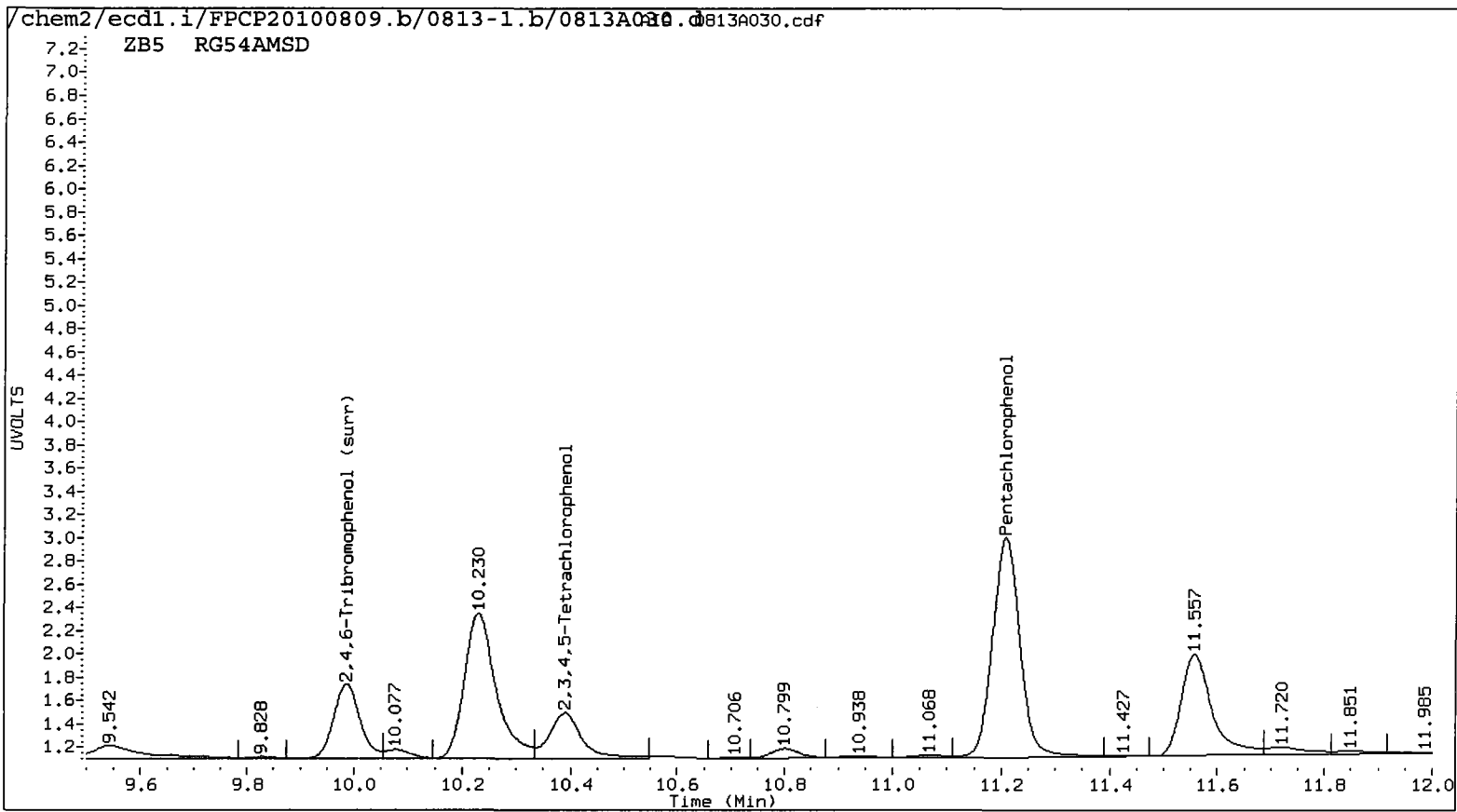
*YZ 8/18/10*

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A030.d ARI ID: RG54AMSD  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A030.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 13-AUG-2010 19:04  
 Compound Sublist: all Report Date: 08/17/2010 16:03  
 Instrument: ecdl.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.208	-0.011	329228	11.646	-0.012	484416	20.8146	<u>21.0969</u>	1.3	Pentachlorophenol
7.264	0.000	58174	7.330	-0.003	81704	6.2601	6.5444	4.4	2,4,6-Trichlorophenol
7.610	-0.009	189083	7.856	-0.008	101823	21.1375	8.2059	88.1*	2,3,6-Trichlorophenol
8.216	-0.026	34987	8.589	-0.026	40968	6.9315	5.9227	15.7	2,4,5-Trichlorophenol
8.765	-0.027	29754	9.353	-0.027	34164	4.3493	3.6093	18.6	2,3,4-Trichlorophenol
8.994	-0.013	181427	9.259	-0.018	260298	12.8620	14.0589	8.9	2,3,5,6-Tetrachlorophenol
10.389	-0.024	82393	11.103	-0.023	82818	7.0031	5.6761	20.9	2,3,4,5-Tetrachlorophenol
6.890	-0.003	14821	7.160	-0.006	25416	23.8651	34.9162	37.6	2,4-Dichlorophenol
9.987	-0.015	108171	10.628	-0.018	176868	<u>8.1</u>	<u>9.5</u>	15.2	2,4,6-Tribromophenol (surr)

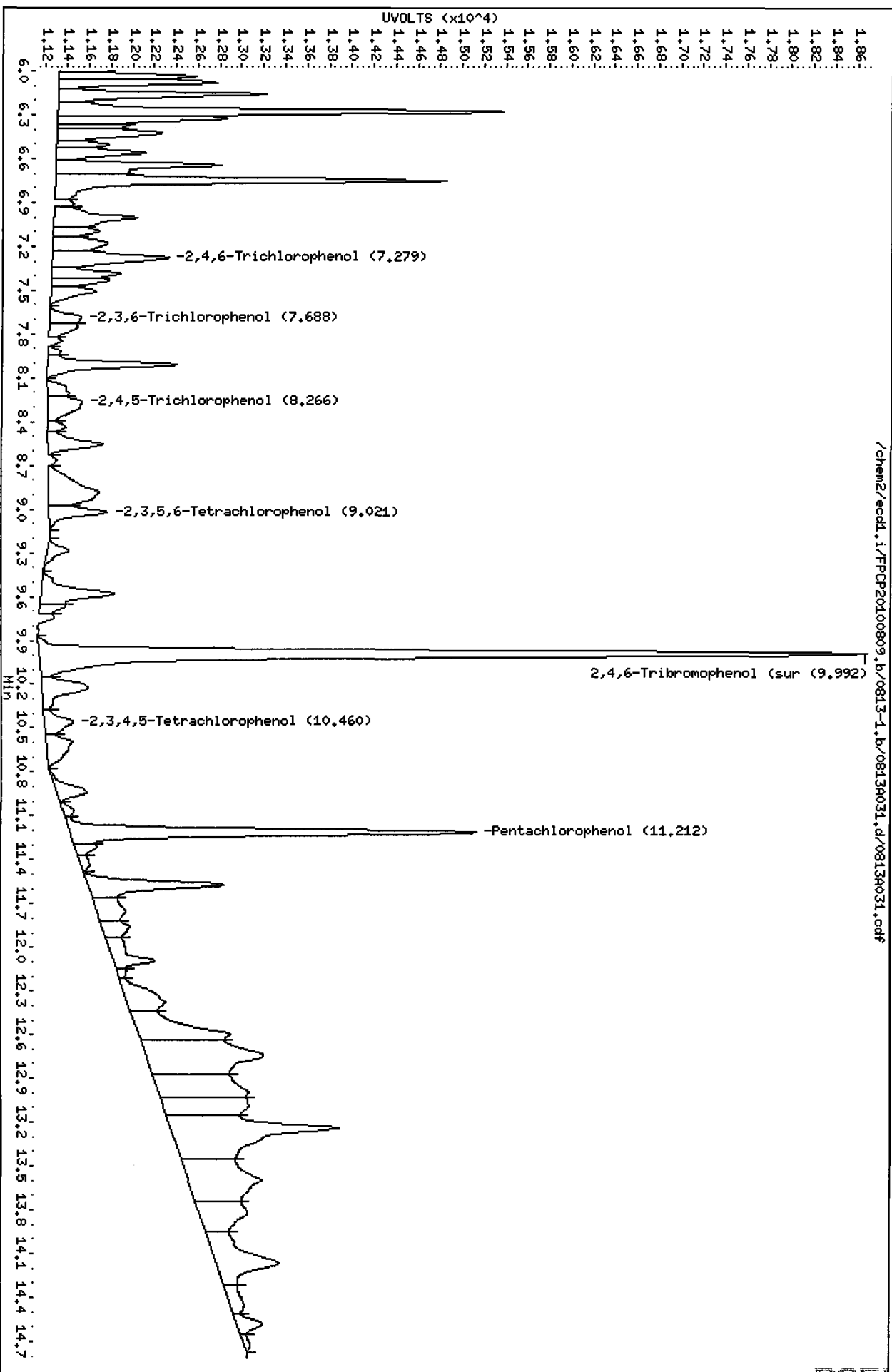
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	32.5	37.9



Data File: /chem2/ecdl.i/FPQP20100809.b/0813-1.b/0813R031.d  
 Date : 13-AUG-2010 19:24  
 Client ID:  
 Sample Infor: R054B  
 Purge Volume: 2.0  
 Column phase: ZB5

Instrument: ecdl.i  
 Operator: ar  
 Column diameter: 0.53





Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

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Data file 1: /chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A031.d ARI ID: RG54B  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A031.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 13-AUG-2010 19:24  
 Compound Sublist: all Report Date: 08/17/2010 16:03  
 Instrument: ecdl.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.212	-0.007	64776	11.648	-0.010	92102	3.6885	<u>4.0112</u>	8.4	Pentachlorophenol
7.279	0.015	23299	7.365	0.032	22174	2.4498	1.7761	31.9	2,4,6-Trichlorophenol
7.688	0.069	6193	7.837	-0.027	9116	0.6319	0.7347	15.0	2,3,6-Trichlorophenol
8.266	0.024	10905	8.683	0.068	3899	2.1605	0.5443	119.5*	2,4,5-Trichlorophenol
-----			-----			0.0000	0.0000	---	2,3,4-Trichlorophenol
9.021	0.014	10255	9.286	0.009	13803	0.7270	0.7455	2.5	2,3,5,6-Tetrachlorophenol
10.460	0.047	7884	-----			0.6299	0.0000	---	2,3,4,5-Tetrachlorophenol
-----			7.170	0.004	10041	0.0000	13.5028	---	2,4-Dichlorophenol
9.992	-0.010	141257	10.631	-0.015	204266	<u>10.8</u>	<u>10.9</u>	1.7	2,4,6-Tribromophenol (surr)

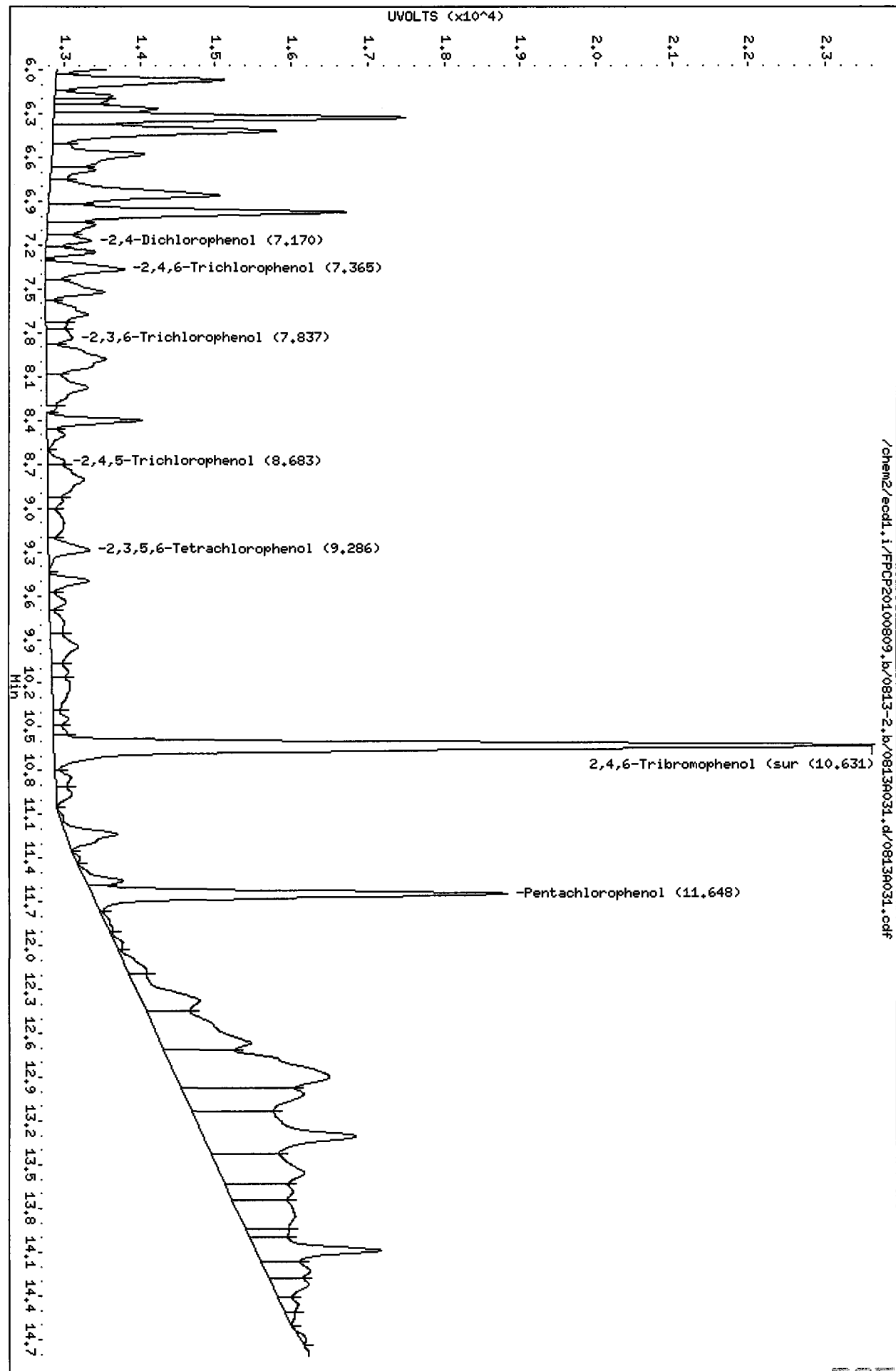
PERCENT RECOVERY

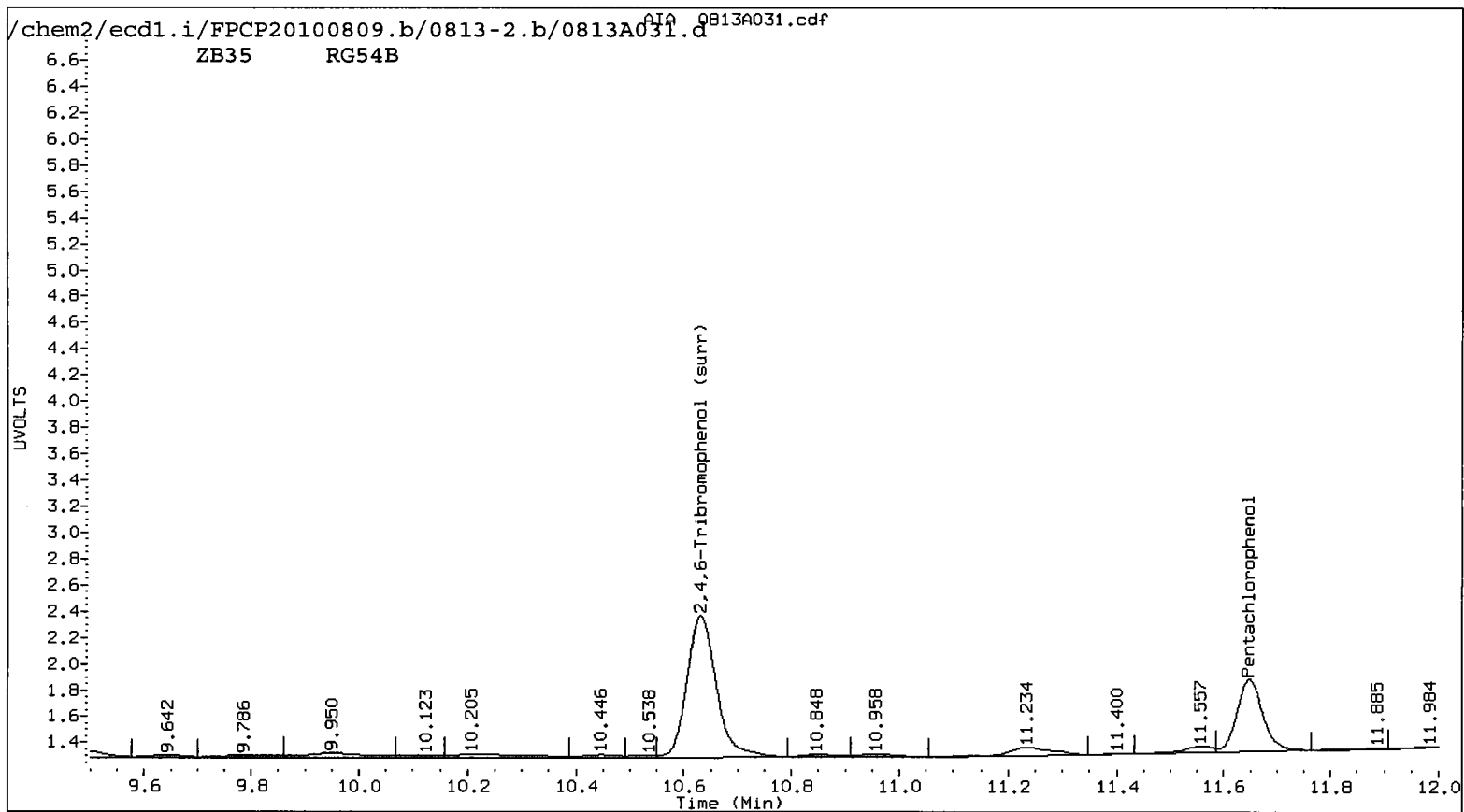
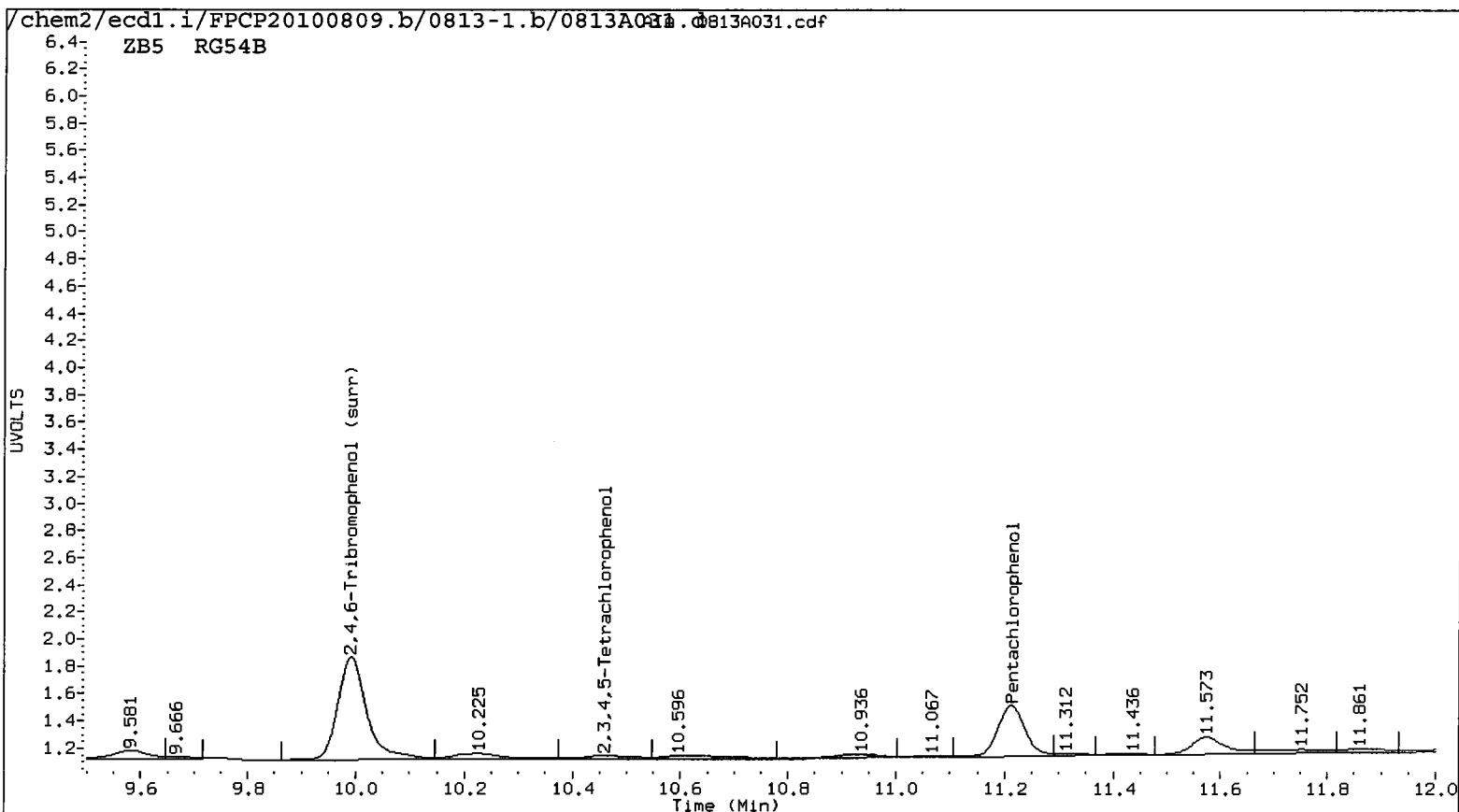
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	43.0	43.8

Data File: /chem2/eod1.i/FPCP20100809.b/0813-2.b/0813A031.d  
Date : 13-AUG-2010 19:24  
Client ID:  
Sample Info: R054B  
Purge Volume: 2.0  
Column phase: ZB35

Instrument: eod1.i  
Operator: ar  
Column diameter: 0.53

/chem2/eod1.i/FPCP20100809.b/0813-2.b/0813A031.d/0813A031.cdf



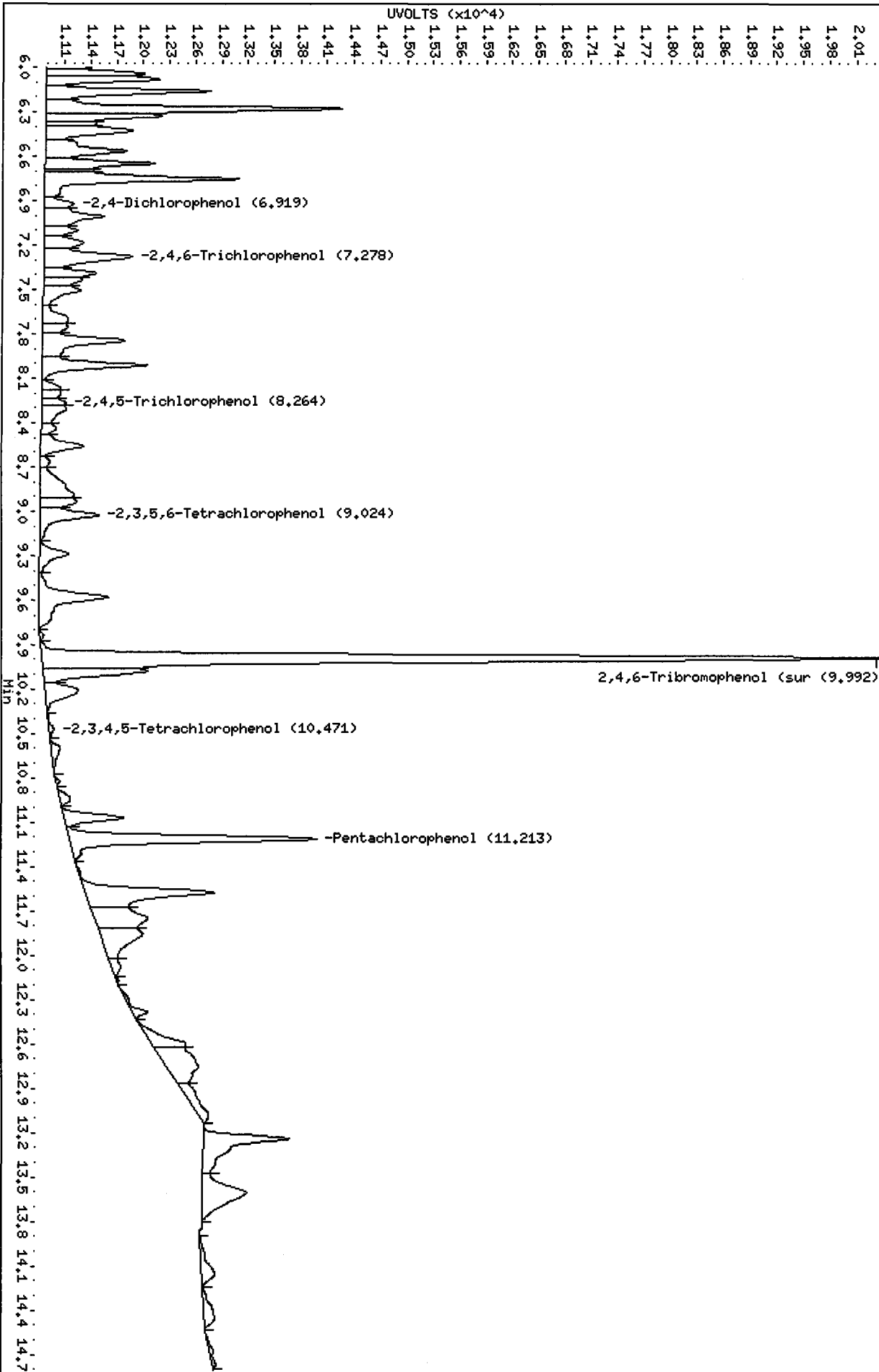


RG54 : 00891

Data File: /chem2/ecdd1.i/PPCP20100809.b/0813-1.b/0813A032.d  
Date : 13-AUG-2010 19:44  
Client ID:  
Sample Info: R054C  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: ecdd1.i  
Operator: ar  
Column diameter: 0.53

/chem2/ecdd1.i/PPCP20100809.b/0813-1.b/0813A032.d/0813A032.cdf



000002 : 000002



Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

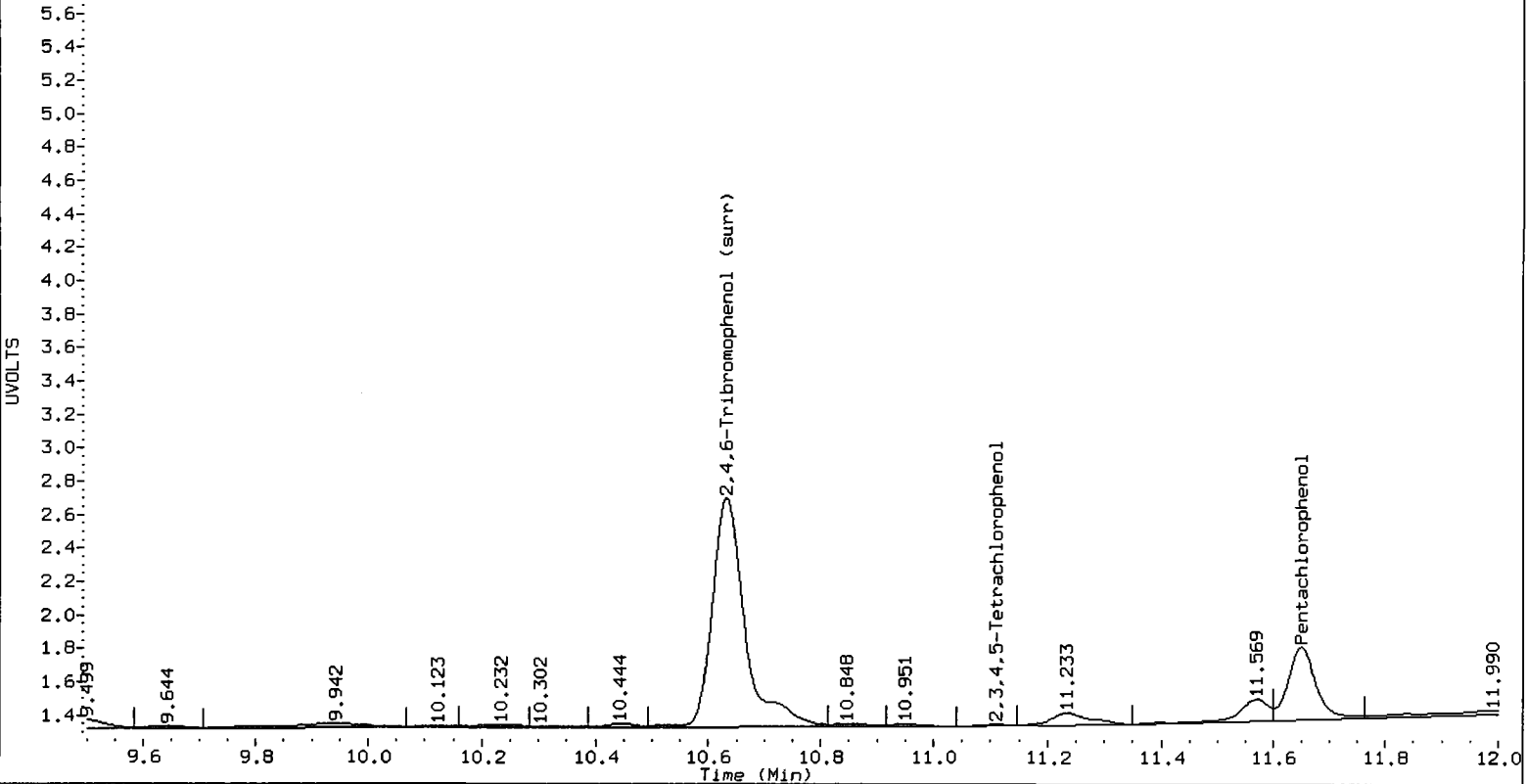
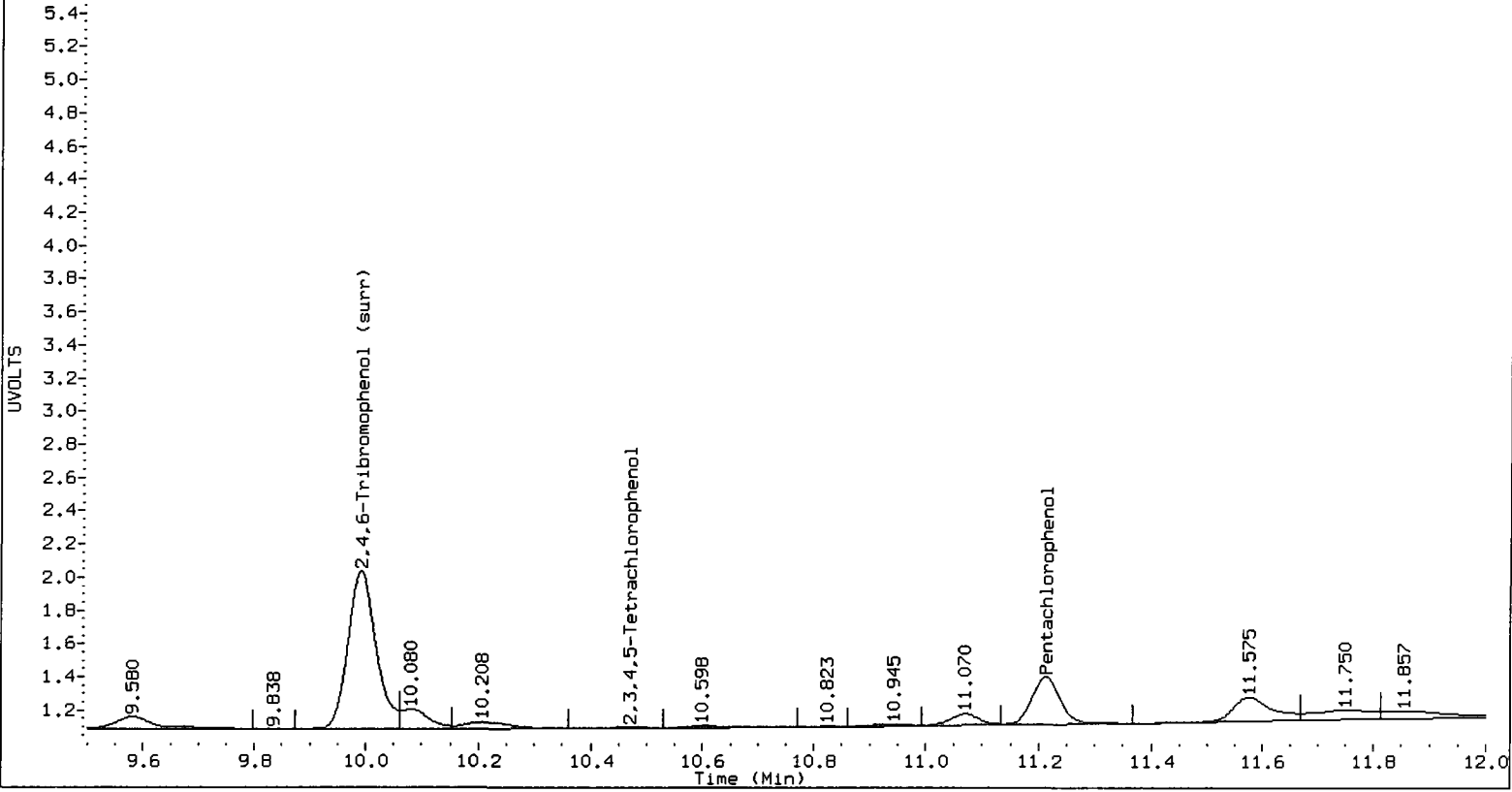
*YZ 8/18/10*

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 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 13-AUG-2010 19:44  
 Compound Sublist: all Report Date: 08/17/2010 16:03  
 Instrument: ecd1.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.213	-0.006	50233	11.650	-0.008	75677	2.8430	<u>3.2958</u>	14.8	Pentachlorophenol
7.278	0.014	22240	7.366	0.033	20830	2.3368	1.6685	33.4	2,4,6-Trichlorophenol
----	----	----	7.837	-0.027	6804	0.0000	0.5483	---	2,3,6-Trichlorophenol
8.264	0.022	3765	----	----	----	0.7459	0.0000	---	2,4,5-Trichlorophenol
----	----	----	----	----	----	0.0000	0.0000	---	2,3,4-Trichlorophenol
9.024	0.017	15120	9.285	0.008	16254	1.9719	9.8779	19.9	2,3,5,6-Tetrachlorophenol
10.471	0.058	1165	11.111	-0.015	1519	0.0925	0.1041	11.8	2,3,4,5-Tetrachlorophenol
6.919	0.026	4930	7.168	0.002	7001	7.7403	9.3745	19.1	2,4-Dichlorophenol
9.992	-0.010	168210	10.633	-0.013	277834	<u>12.9</u>	<u>14.9</u>	14.0	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

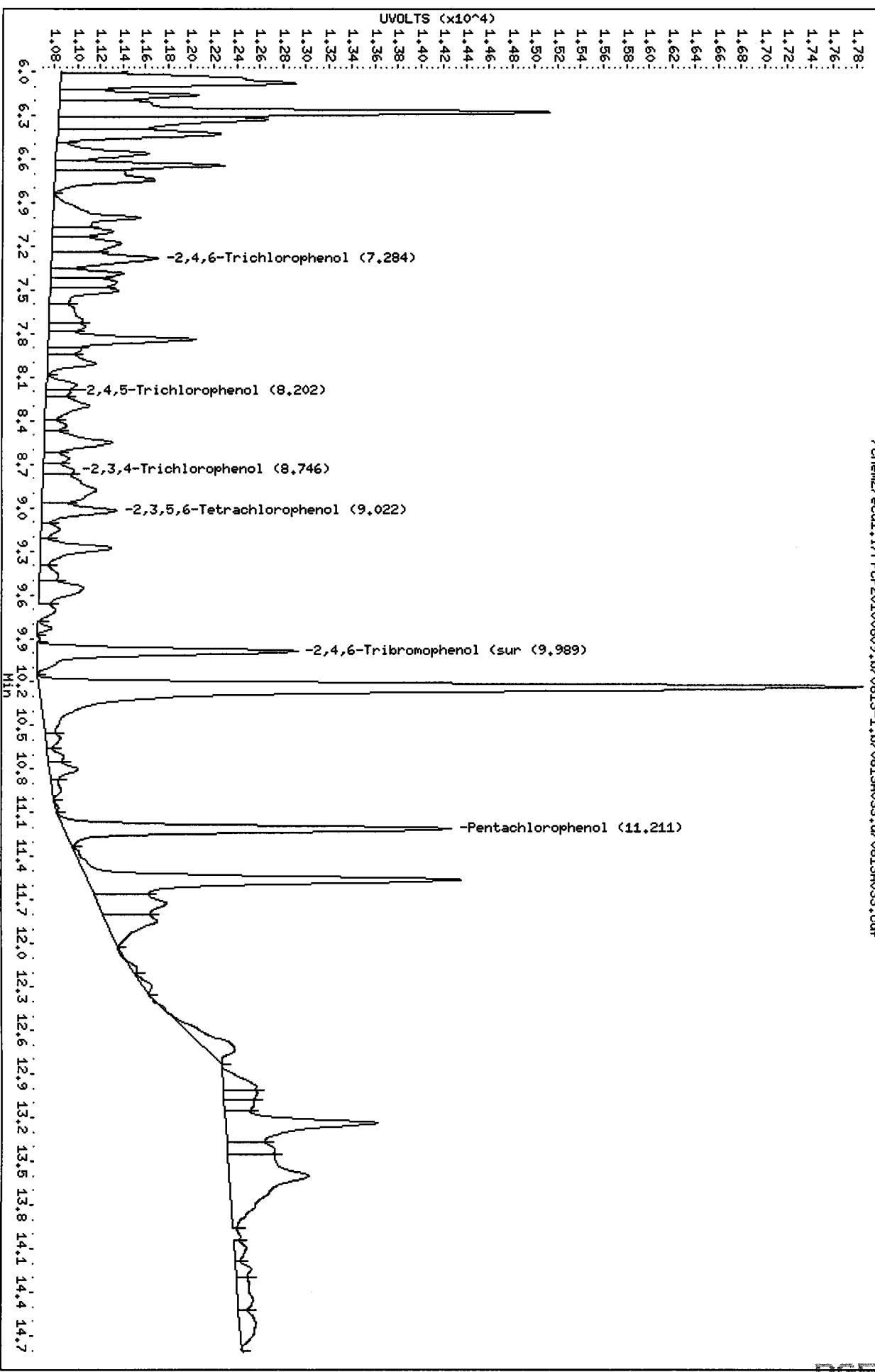
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	51.8	59.5



Data File: /chem2/ecdl.i/FPQP20100809.b/0813-1.b/0813A033.d  
Date: 13-AUG-2010 20:04  
Client ID:  
Sample Info: RCS54E  
Purge Volume: 2.0  
Column phase: ZB5

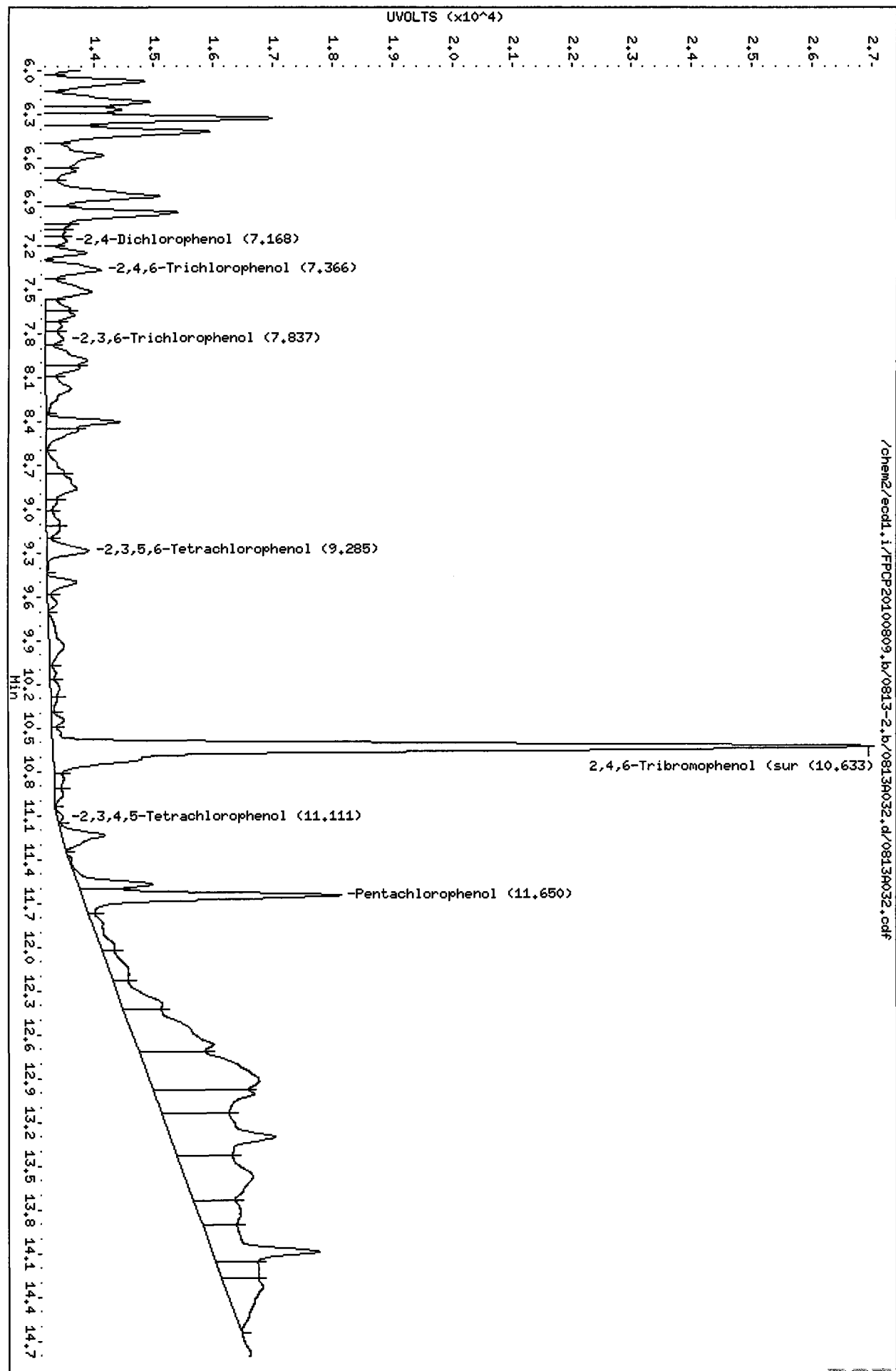
Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53

/chem2/ecdl.i/FPQP20100809.b/0813-1.b/0813A033.d/0813A033.cdf



Data File: /chem2/eodl.i/FPDP20100809.b/0813-2.b/0813A032.d  
Date: 13-AUG-2010 19:44  
Client ID:  
Sample Info: RC54C  
Purge Volume: 2.0  
Column Phase: ZB35

Instrument: eodl.i  
Operator: ar  
Column diameter: 0.53



RG54 : 000000

Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

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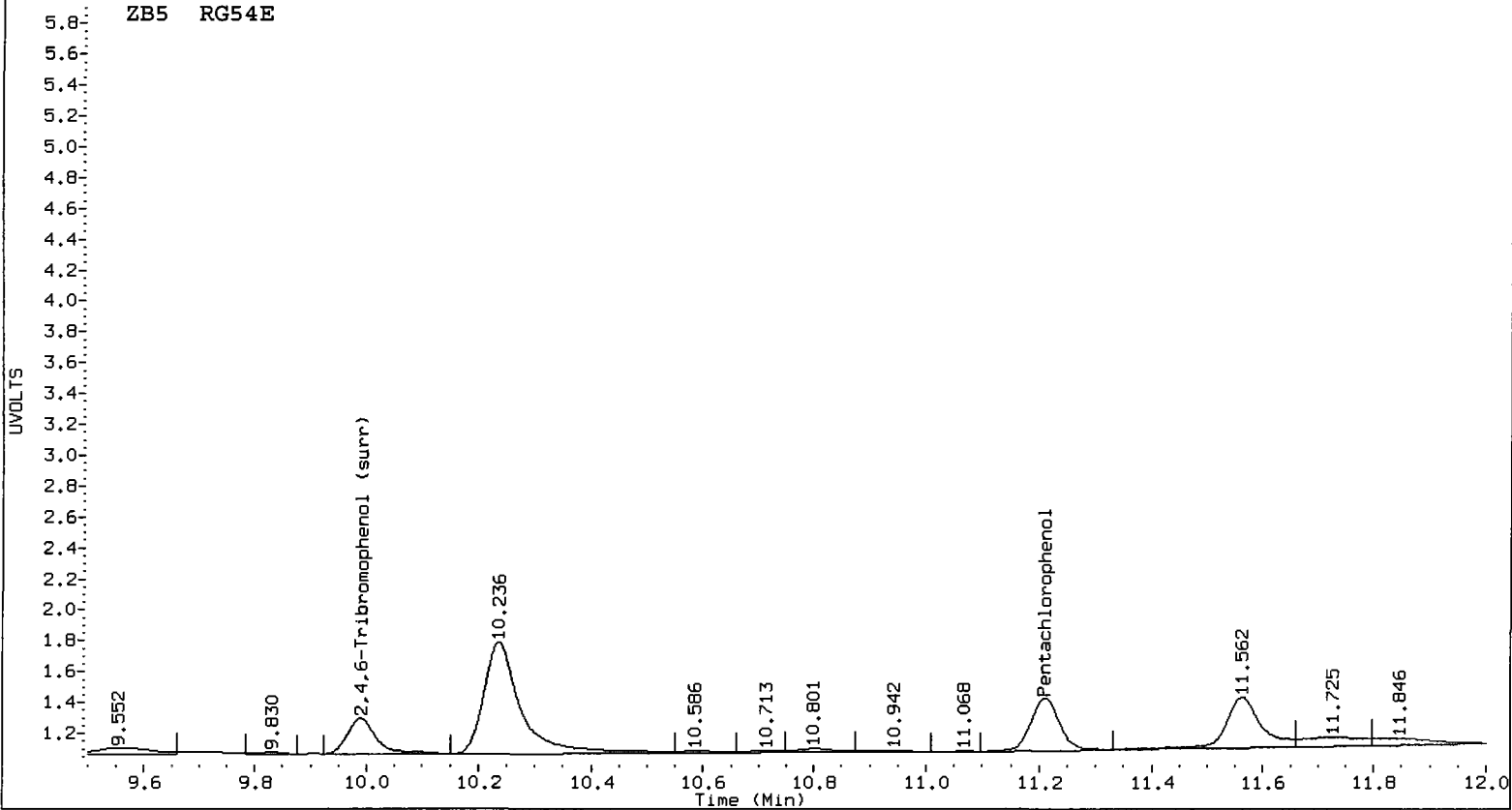
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 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 13-AUG-2010 20:04  
 Compound Sublist: all Report Date: 08/17/2010 16:03  
 Instrument: ecdl.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.211	-0.008	58598	11.649	-0.009	81375	3.3281	3.5440	6.3	Pentachlorophenol
7.284	0.020	20514	7.367	0.034	26925	2.1529	2.1567	0.2	2,4,6-Trichlorophenol
----			7.824	-0.040	8640	0.0000	0.6963	---	2,3,6-Trichlorophenol
8.202	-0.040	2450	----			0.4854	0.0000	---	2,4,5-Trichlorophenol
8.746	-0.046	5242	----			0.7563	0.0000	---	2,3,4-Trichlorophenol
9.022	0.015	13923	9.279	0.002	11833	0.9871	0.6391	42.8*	2,3,5,6-Tetrachlorophenol
----			11.106	-0.020	832	0.0000	0.0570	---	2,3,4,5-Tetrachlorophenol
----			7.166	0.000	10391	0.0000	13.9803	---	2,4-Dichlorophenol
9.989	-0.013	41382	10.630	-0.016	57850	3.0	3.1	2.2	2,4,6-Tribromophenol (surr)

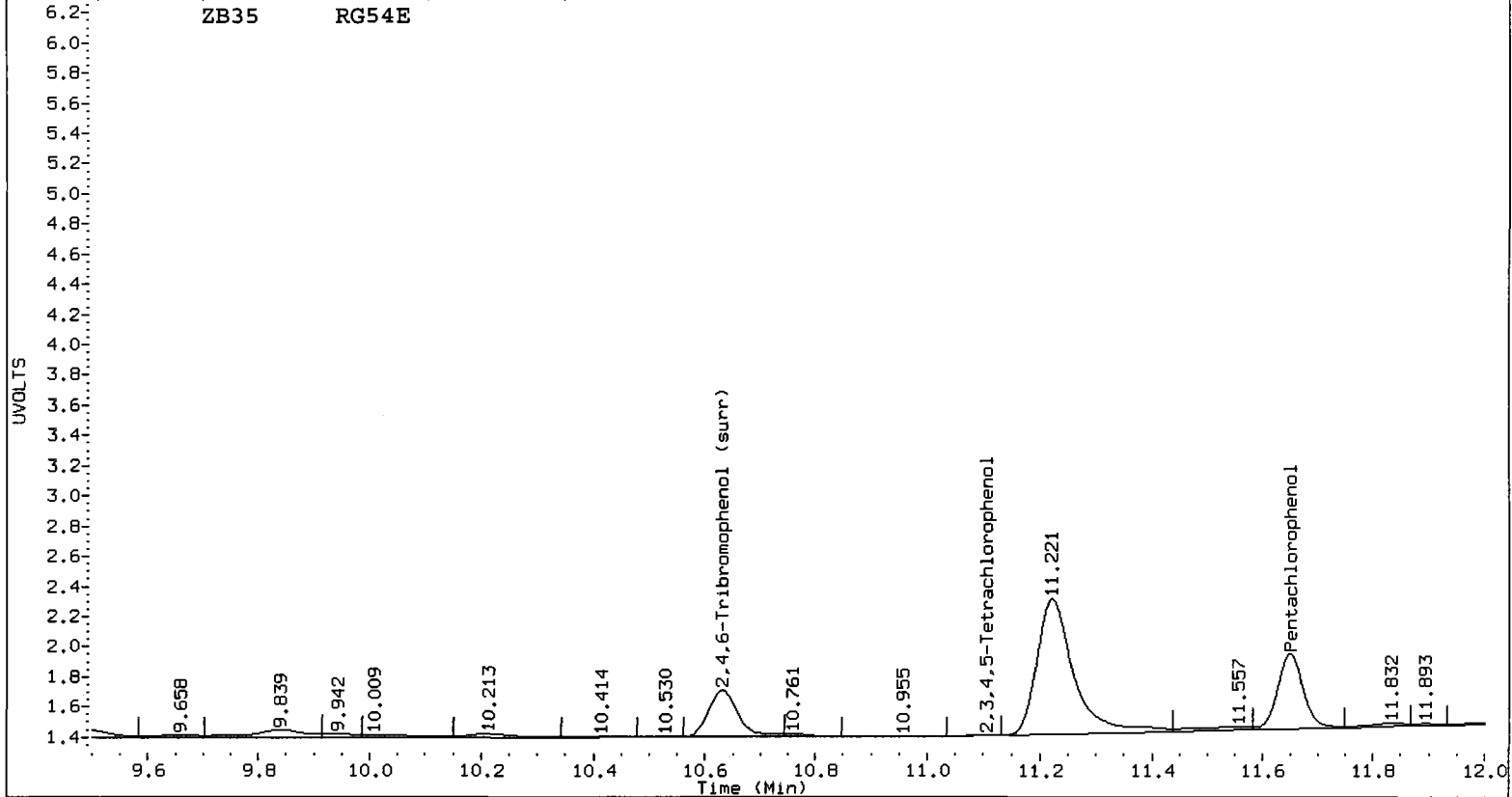
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	12.1	12.4

ZB5 RG54E



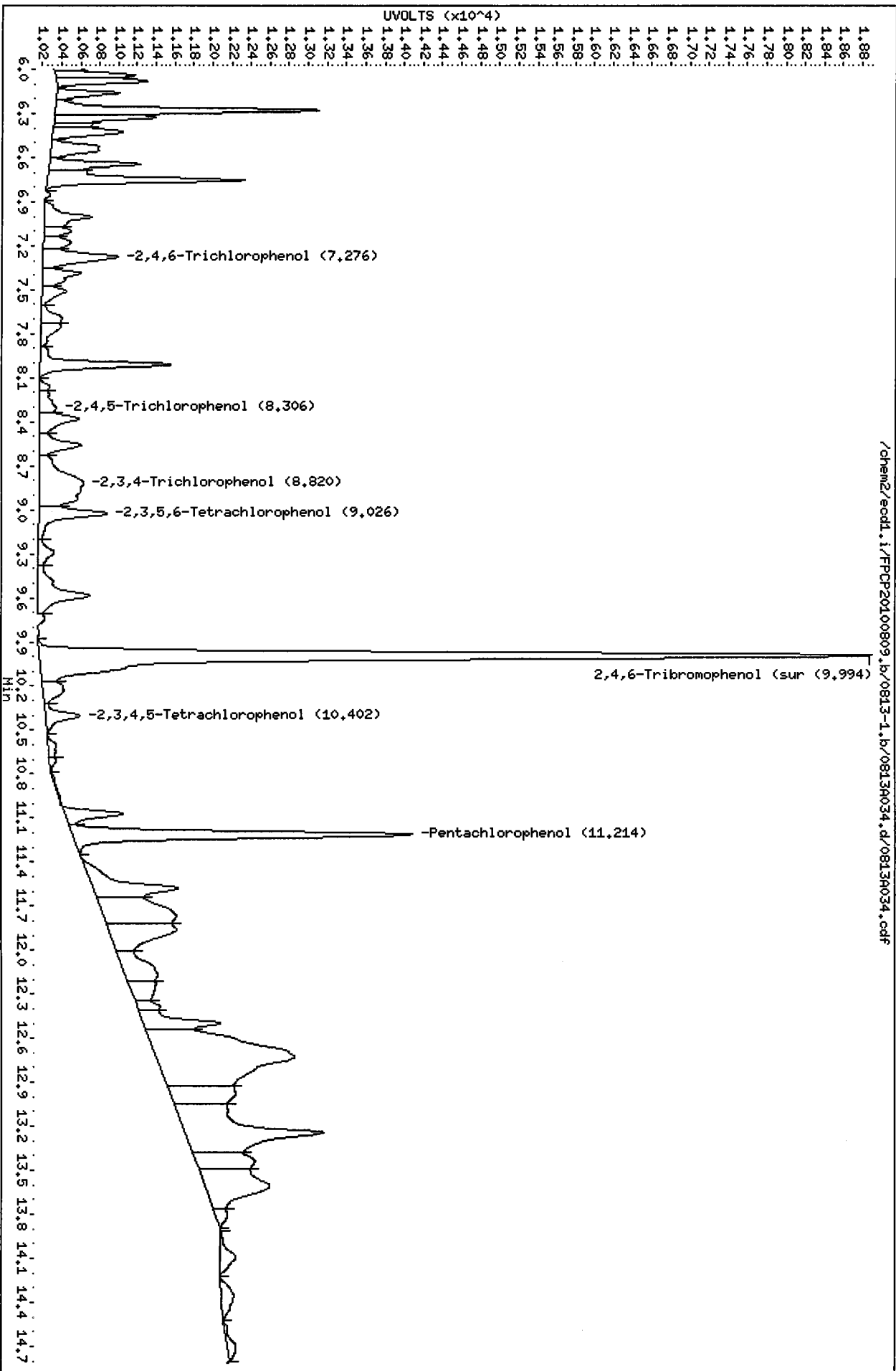
ZB35 RG54E



Data File: /chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A034.d  
 Date : 13-AUG-2010 20:24  
 Client ID:  
 Sample Info: RC54F  
 Purge Volume: 2.0  
 Column Phase: ZB5

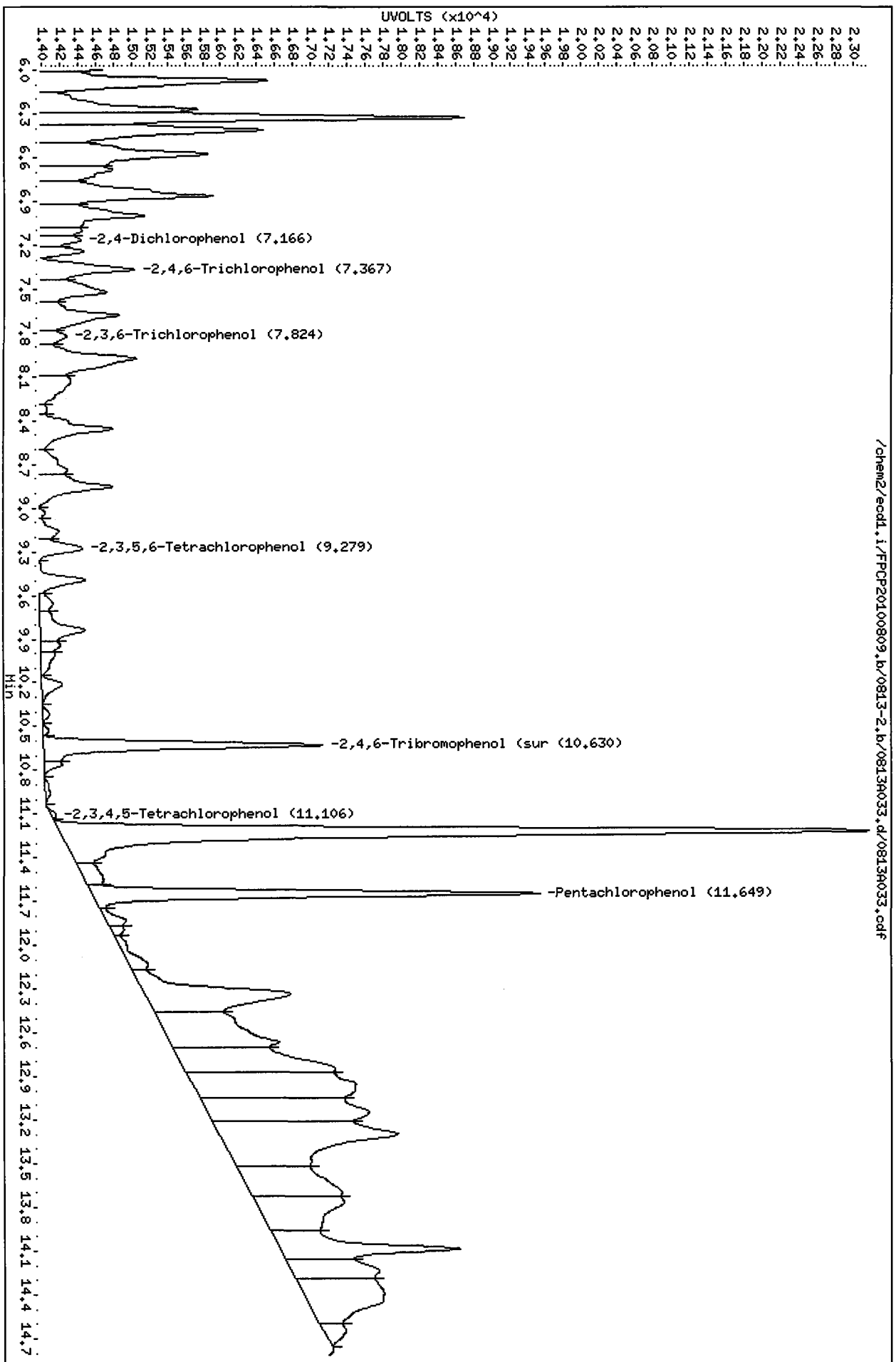
Instrument: ecdl.i  
 Operator: ar  
 Column diameter: 0.53

/chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A034.d/0813A034.cdf



Data File: /chem2/eodl.i/PPCP20100809.b/0813-2.b/0813A033.d  
 Date: 13-AUG-2010 20:04  
 Client ID:  
 Sample Info: R054E  
 Purge Volume: 2.0  
 Column phase: ZB35

Instrument: eodl.i  
 Operator: ar  
 Column diameter: 0.53





Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

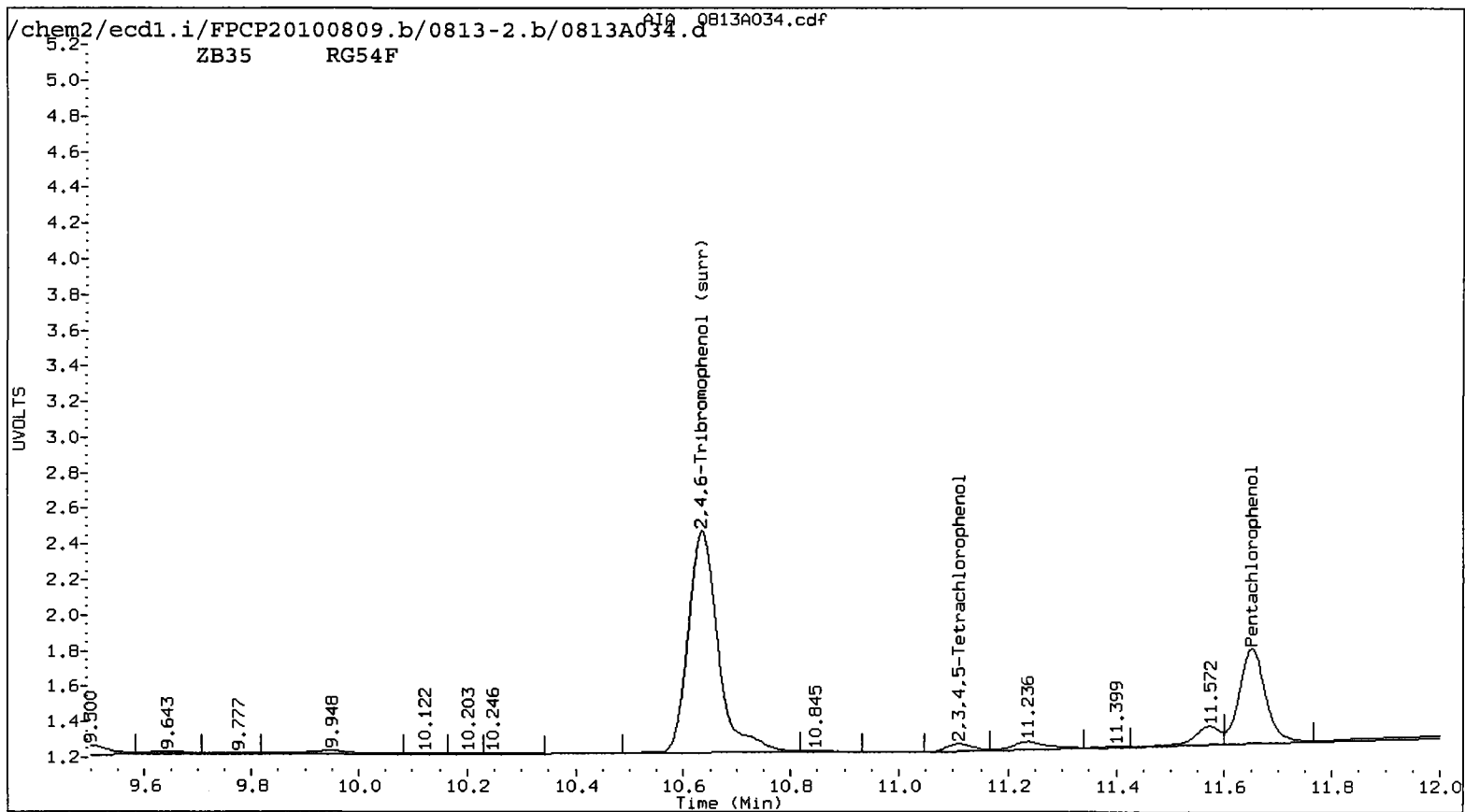
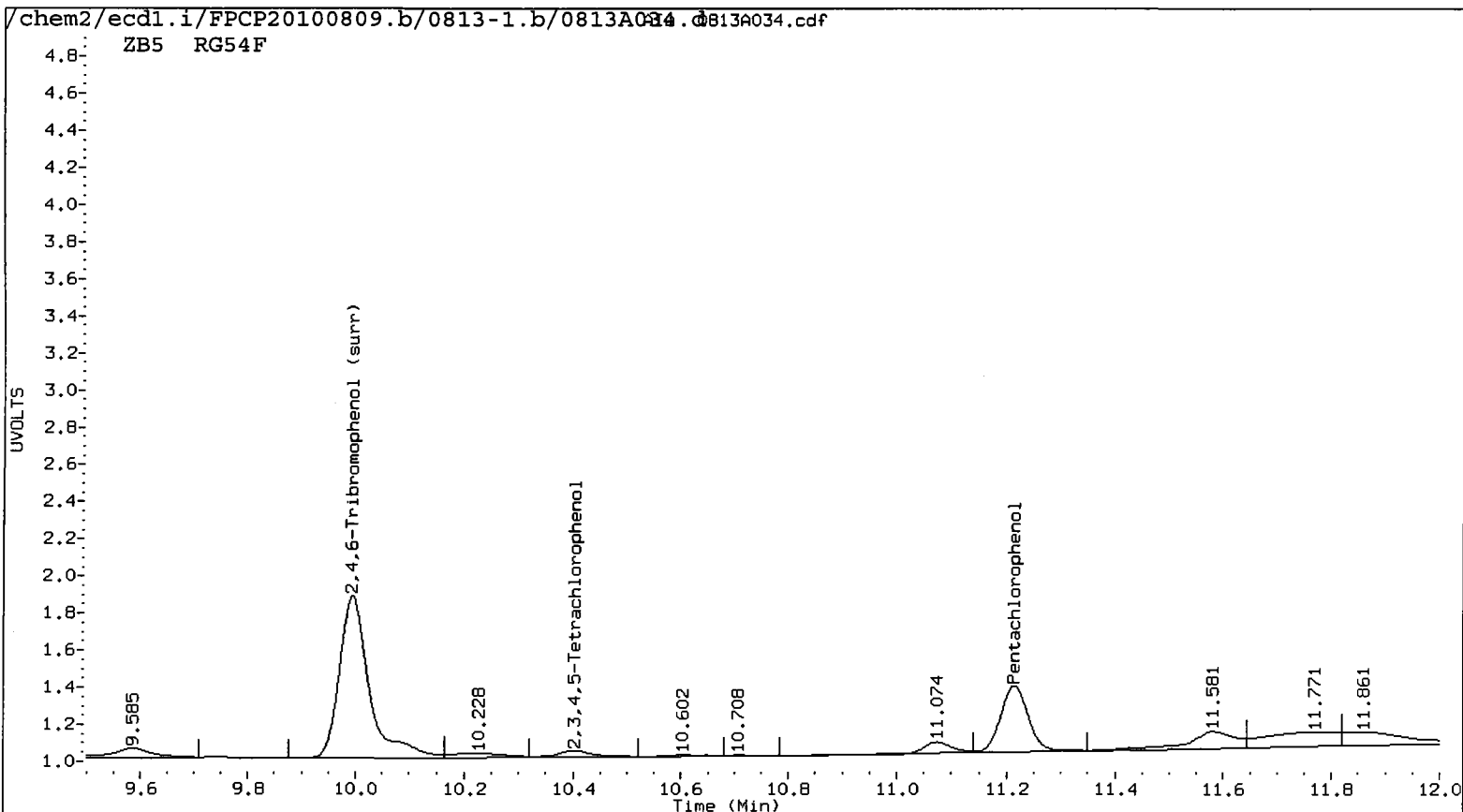
Data file 1: /chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A034.d ARI ID: RG54F  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A034.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 13-AUG-2010 20:24  
 Compound Sublist: all Report Date: 08/17/2010 16:03  
 Instrument: ecd1.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

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ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.214	-0.005	61749	11.651	-0.007	92332	3.5117	4.0212	13.5	Pentachlorophenol
7.276	0.012	16827	7.364	0.031	19089	1.7616	1.5290	14.1	2,4,6-Trichlorophenol
----			7.837	-0.027	4441	0.0000	0.3579	---	2,3,6-Trichlorophenol
8.306	0.064	5414	8.682	0.067	8604	1.0726	1.2065	11.7	2,4,5-Trichlorophenol
8.820	0.028	31783	----			4.6459	0.0000	---	2,3,4-Trichlorophenol
9.026	0.019	15829	9.286	0.009	18391	1.1222	0.9933	12.2	2,3,5,6-Tetrachlorophenol
10.402	-0.011	7975	11.111	-0.015	6856	0.6372	0.4699	30.2	2,3,4,5-Tetrachlorophenol
----			7.170	0.004	5687	0.0000	7.6009	---	2,4-Dichlorophenol
9.994	-0.008	170646	10.634	-0.012	241623	13.1	12.9	1.5	2,4,6-Tribromophenol (surr)

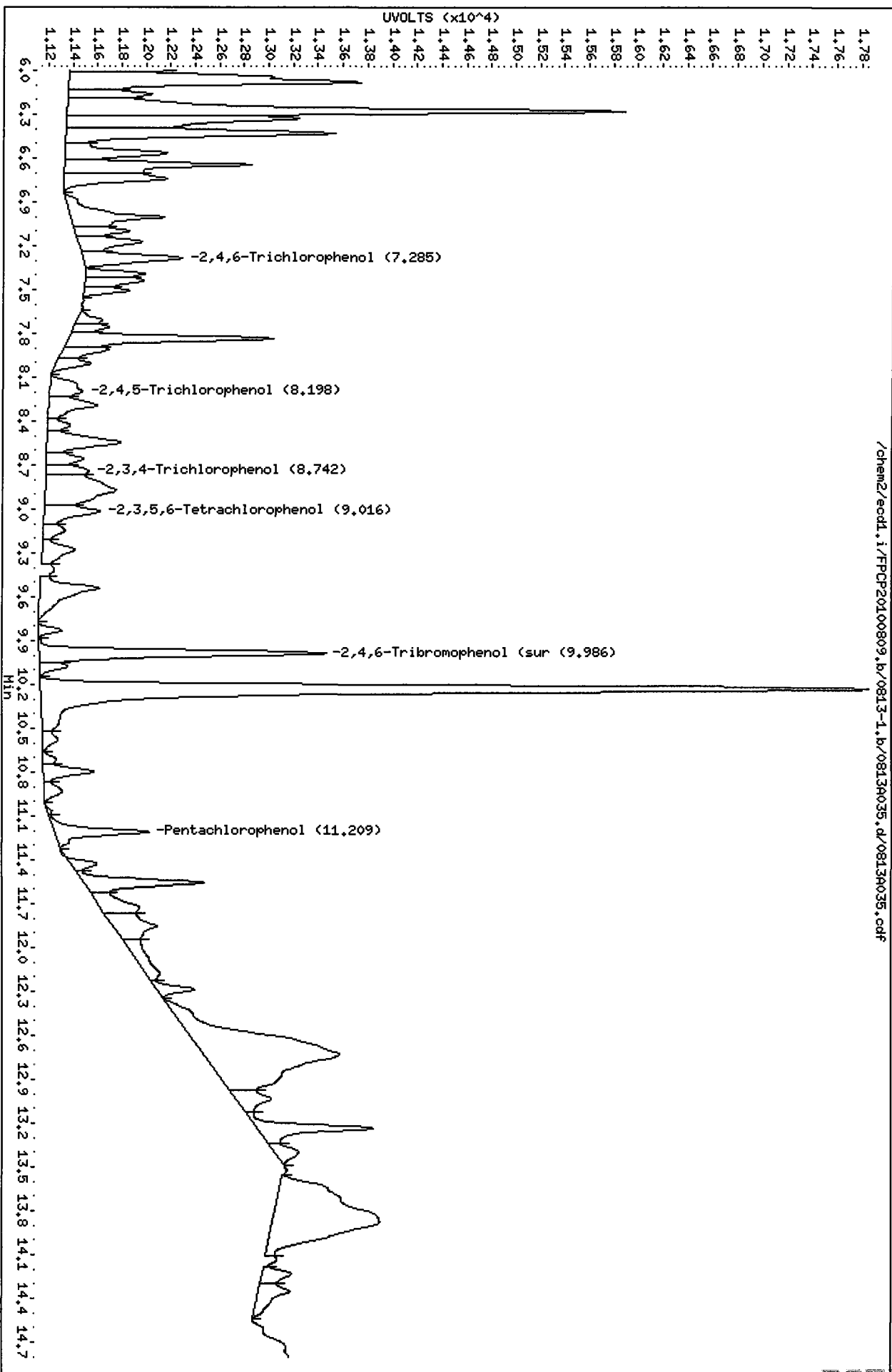
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	52.6	51.8



Data File: /chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A035.d  
Date : 13-AUG-2010 20:44  
Client ID:  
Sample Info: RCS4H  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53

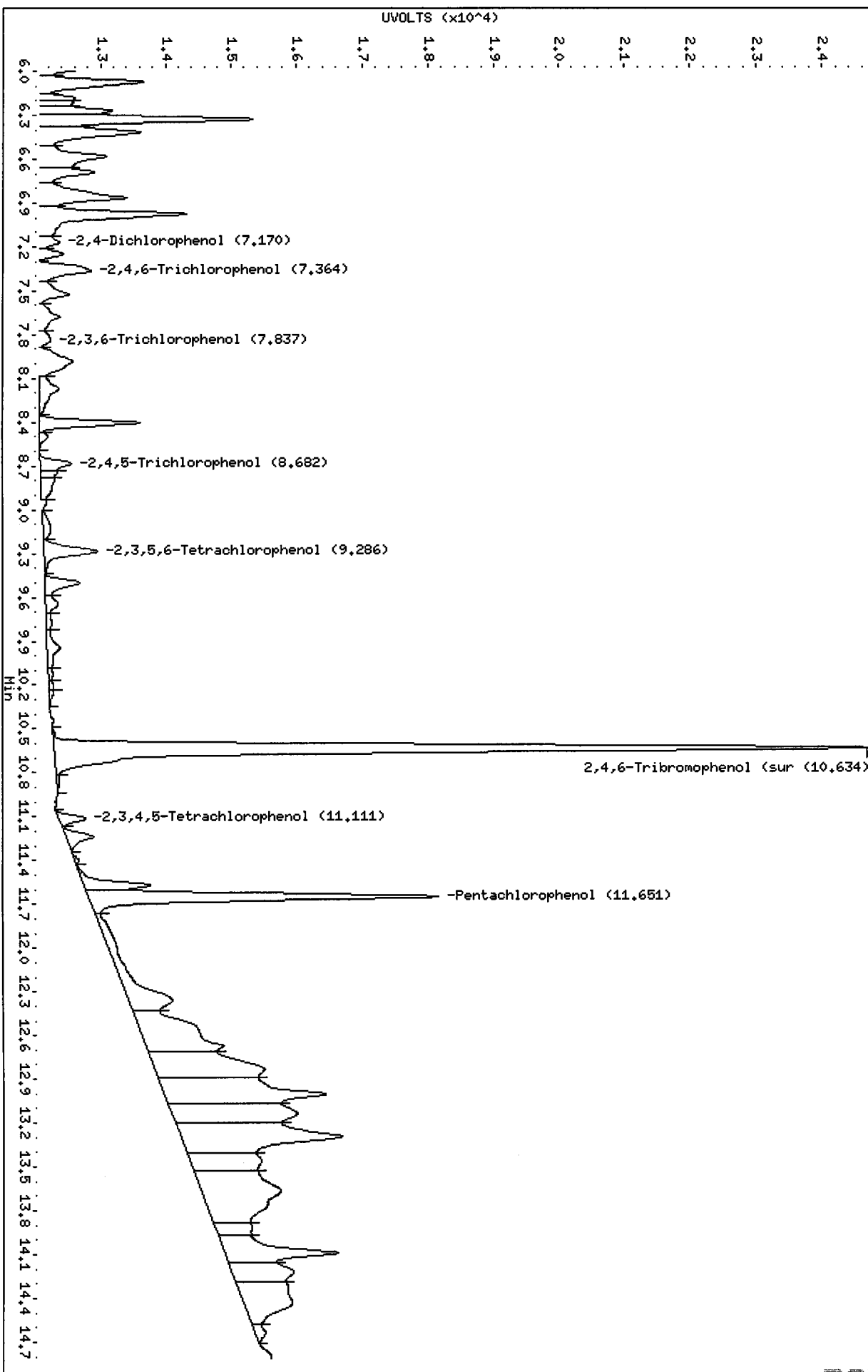


000000 : 1204

Data File: /chem2/ecdl.i/PPCP20100809.b/0813-2.b/0813A034.d  
Date: 13-AUG-2010 20:24  
Client ID:  
Sample Info: R054F  
Purge Volume: 2.0  
Column phase: ZB35

Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53

/chem2/ecdl.i/PPCP20100809.b/0813-2.b/0813A034.d/0813A034.cdf



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*YZ 8/18/10*

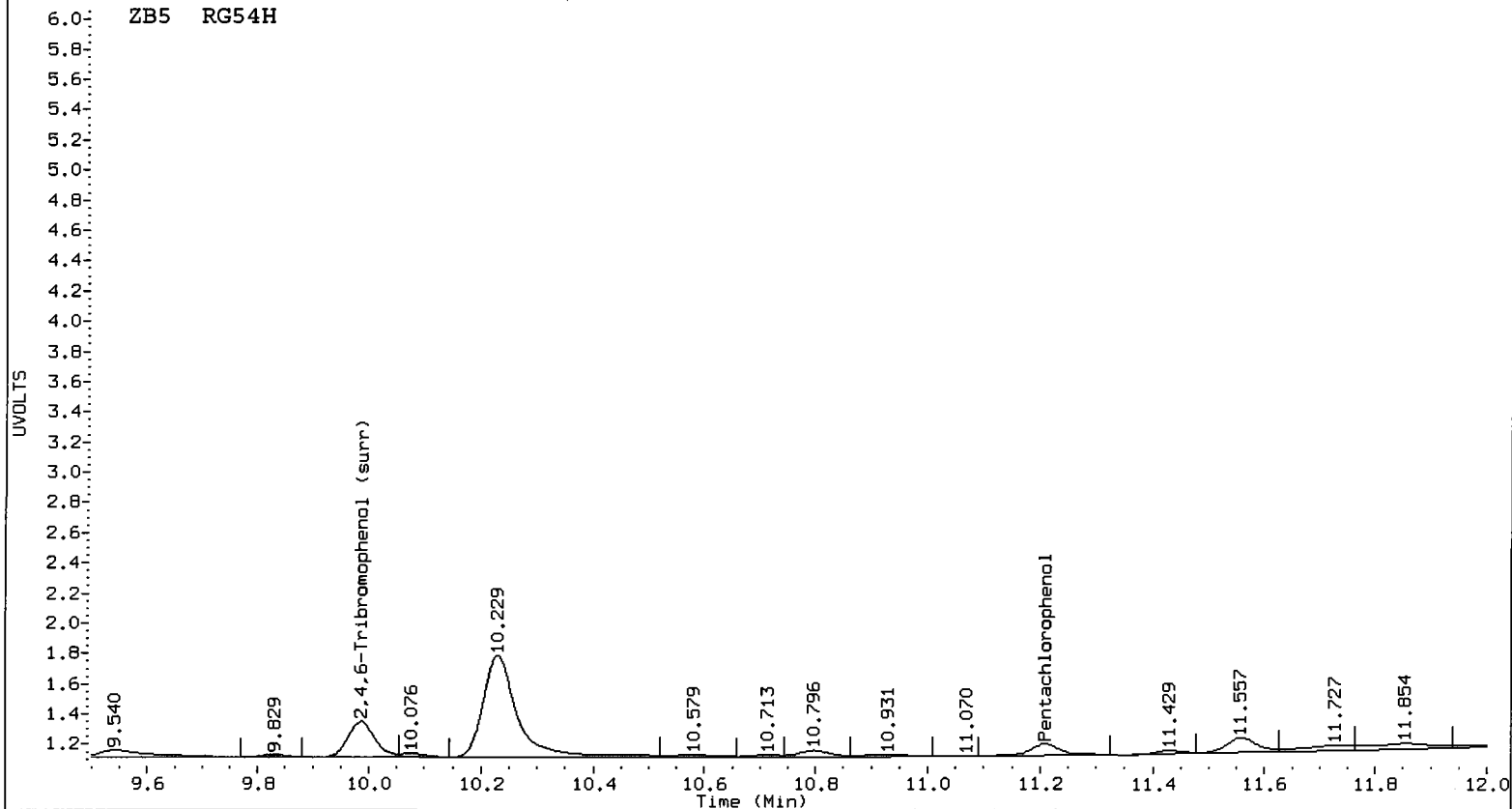
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 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A035.d    Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m                      Injection Date: 13-AUG-2010 20:44  
 Compound Sublist: all    Report Date: 08/17/2010 16:03  
 Instrument: ecdl.i    Matrix: WATER  
 Operator: ar    Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.209	-0.010	14566	11.648	-0.010	28584	<del>0.8120</del>	<del>1.2449</del> <i>42.1*</i>		Pentachlorophenol
7.285	0.021	14938	7.368	0.035	24920	1.5618	1.9961	24.4	2,4,6-Trichlorophenol
----			7.826	-0.038	5318	0.0000	0.4286	---	2,3,6-Trichlorophenol
8.198	-0.044	8014	8.674	0.059	8399	1.5877	1.1775	29.7	2,4,5-Trichlorophenol
8.742	-0.050	6886	----			1.0066	0.0000	---	2,3,4-Trichlorophenol
9.016	0.009	10723	9.253	-0.024	11065	0.7602	0.5976	23.9	2,3,5,6-Tetrachlorophenol
----			----			0.0000	0.0000	---	2,3,4,5-Tetrachlorophenol
----			7.166	0.000	7337	0.0000	9.8291	---	2,4-Dichlorophenol
9.986	-0.016	39209	10.629	-0.017	59408	<u>2.9</u>	<u>3.2</u>	10.3	2,4,6-Tribromophenol (surr)

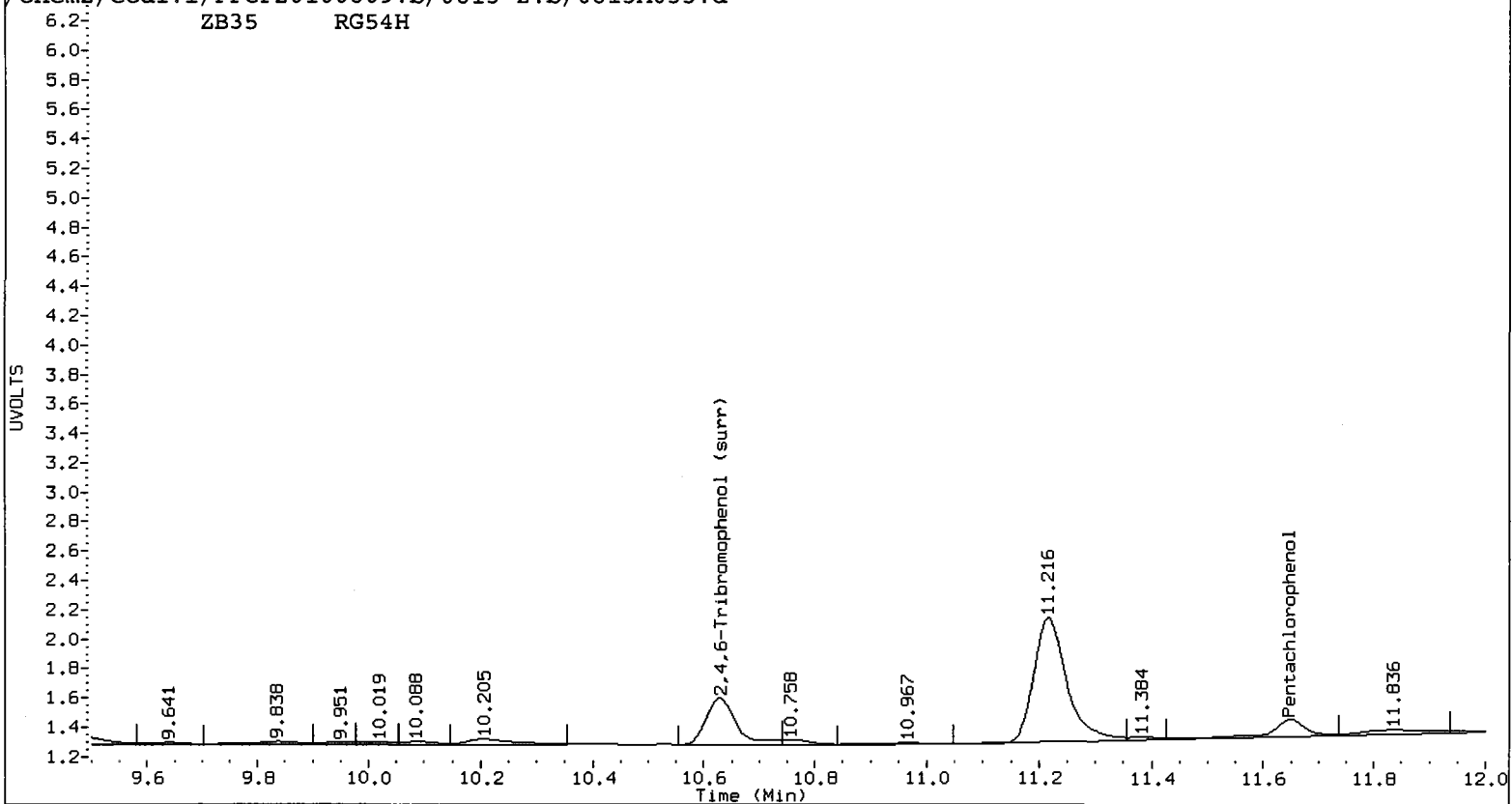
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	11.5	12.7

/chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A035.d 0813A035.cdf



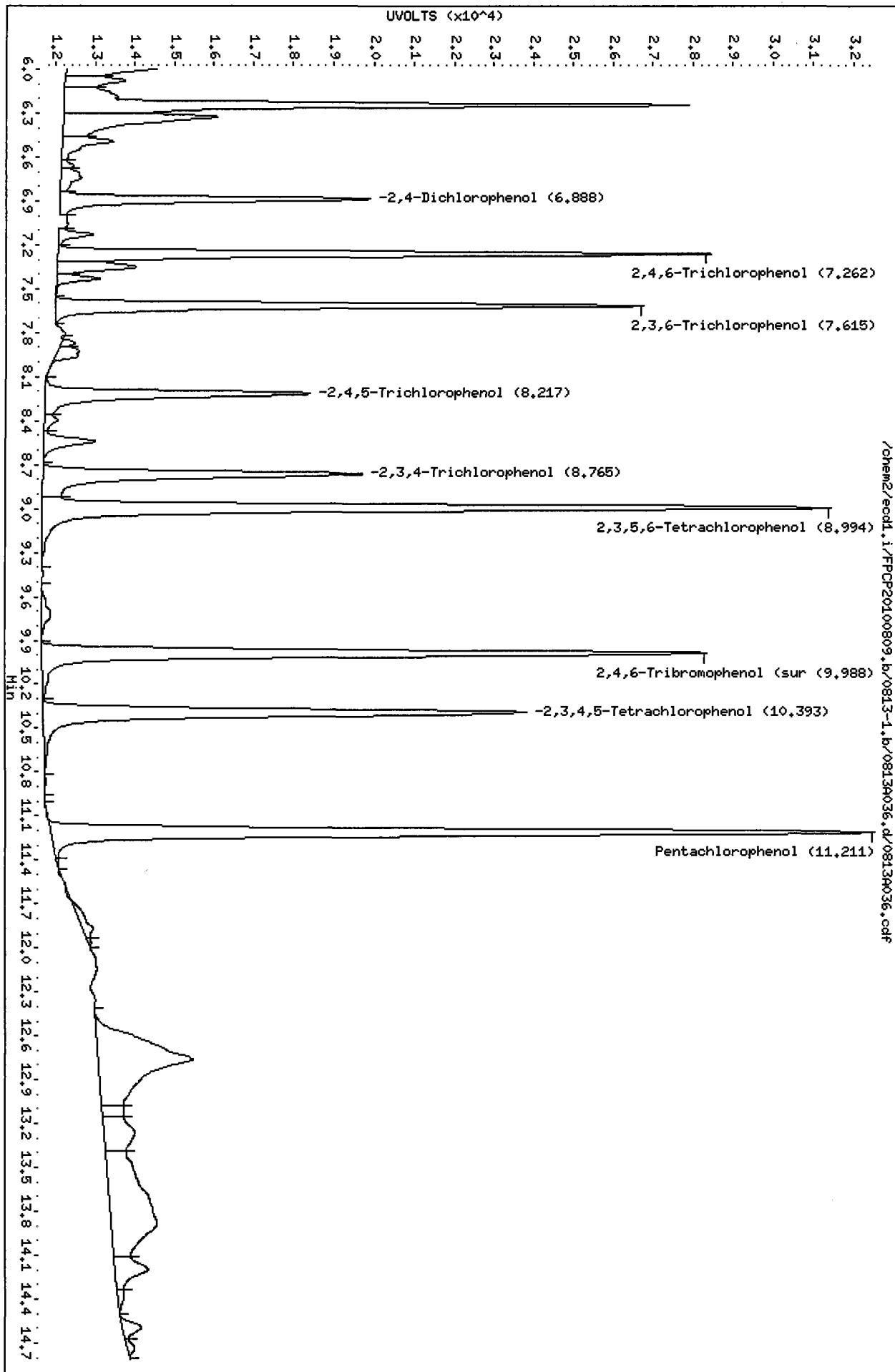
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RG54 : 00906

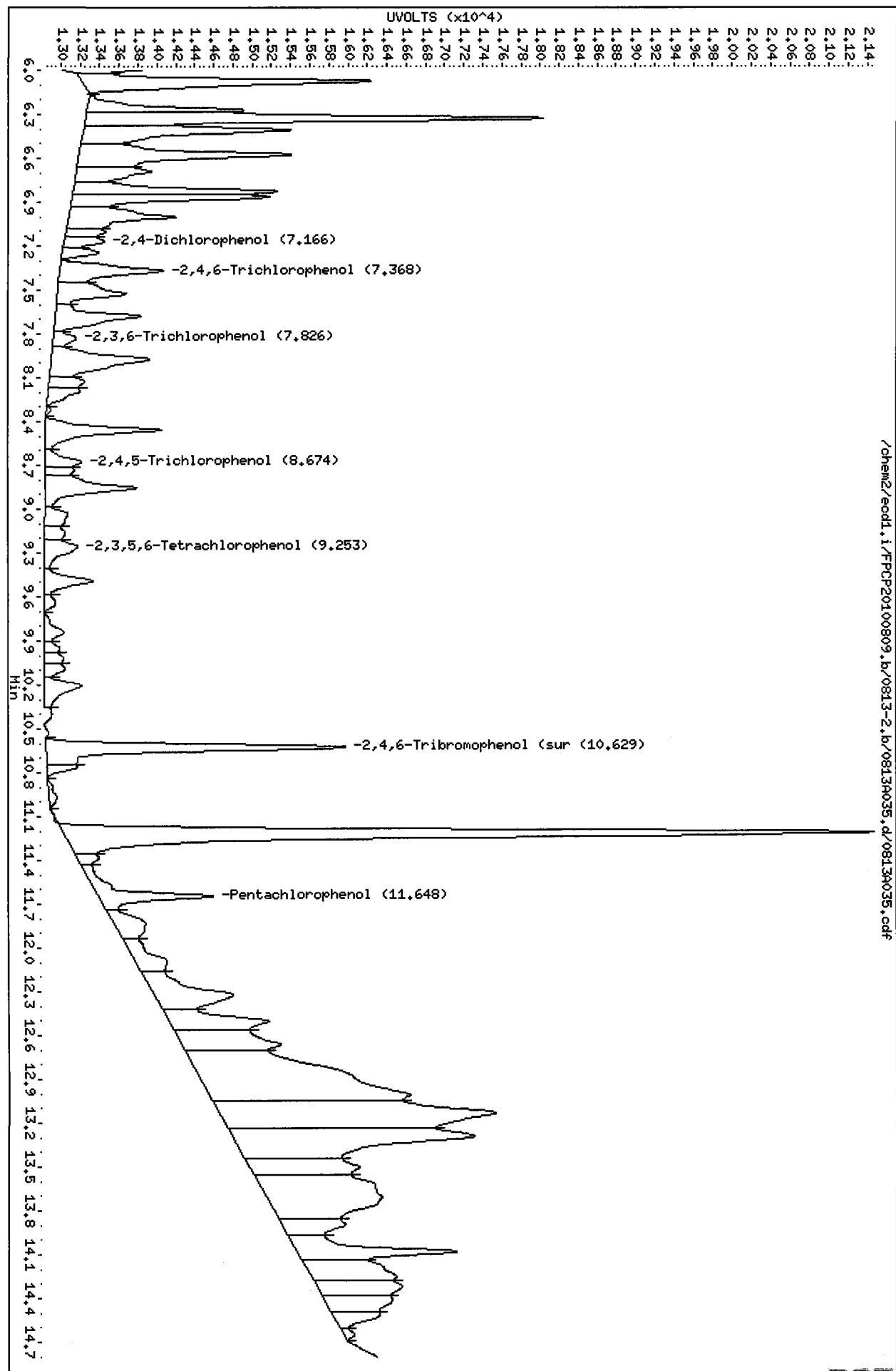
Data File: /chem2/ecdl.i/FPCP20100809.br/0813-1.b/0813A036.d  
Date: 13-AUG-2010 21:04  
Client ID:  
Sample Info: PCP  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53



Data File: /chem2/ecdl.i/PCP20100809.b/0813-2.b/0813A035.d  
 Date: 13-AUG-2010 20:44  
 Client ID:  
 Sample Info: RC54H  
 Purge Volume: 2.0  
 Column phase: ZB35

Instrument: ecdl.i  
 Operator: ar  
 Column diameter: 0.53





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Dual Column 8041 Chlorinated Phenols Quantitation Report

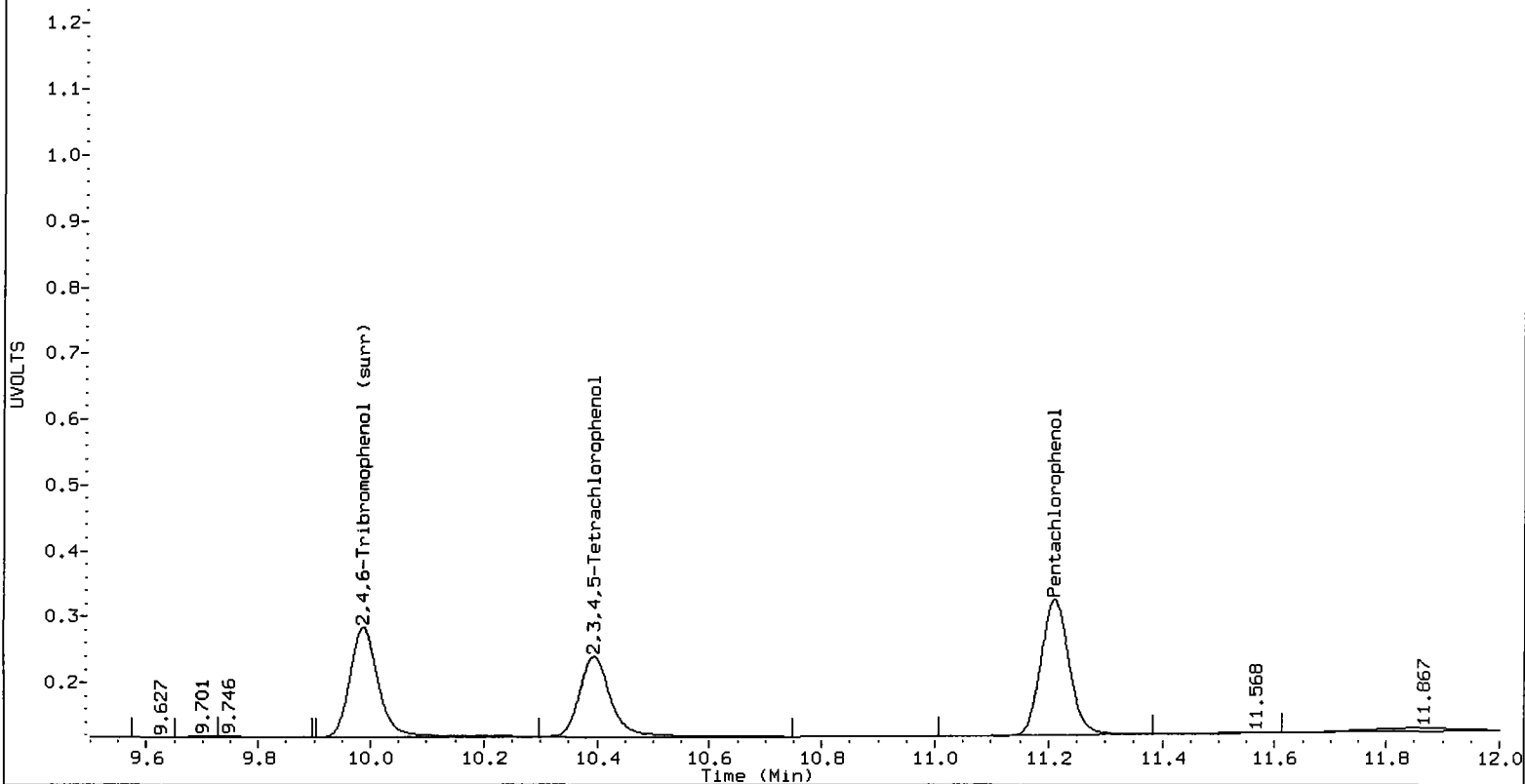
Data file 1: /chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A037.d    ARI ID: PCP CCAL    *YZ 8/18/10*  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A037.d    Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m    Injection Date: 13-AUG-2010 21:24  
 Compound Sublist: all    Report Date: 08/17/2010 16:03  
 Instrument: ecdl.i    Matrix: NONE  
 Operator: ar    Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.210	-0.009	355415	11.649	-0.009	512884	22.6913	22.3368	1.6	Pentachlorophenol
7.262	-0.002	210930	7.330	-0.003	330591	24.9754	26.4799	5.8	2,4,6-Trichlorophenol
7.615	-0.004	201845	7.858	-0.006	297067	22.7016	23.9405	5.3	2,3,6-Trichlorophenol
8.217	-0.025	119739	8.590	-0.025	154781	23.7223	24.7416	4.2	2,4,5-Trichlorophenol
8.765	-0.027	156273	9.354	-0.026	203718	22.8433	23.9659	4.8	2,3,4-Trichlorophenol
8.995	-0.012	332894	9.260	-0.017	455934	23.6001	24.6253	4.3	2,3,5,6-Tetrachlorophenol
10.394	-0.019	239247	11.106	-0.020	325037	22.9041	22.2770	2.8	2,3,4,5-Tetrachlorophenol
6.887	-0.006	112483	7.156	-0.010	154794	225.7542	250.4585	10.4	2,4-Dichlorophenol
9.988	-0.014	295105	10.630	-0.016	443855	23.8	23.8	0.0	2,4,6-Tribromophenol (surr)

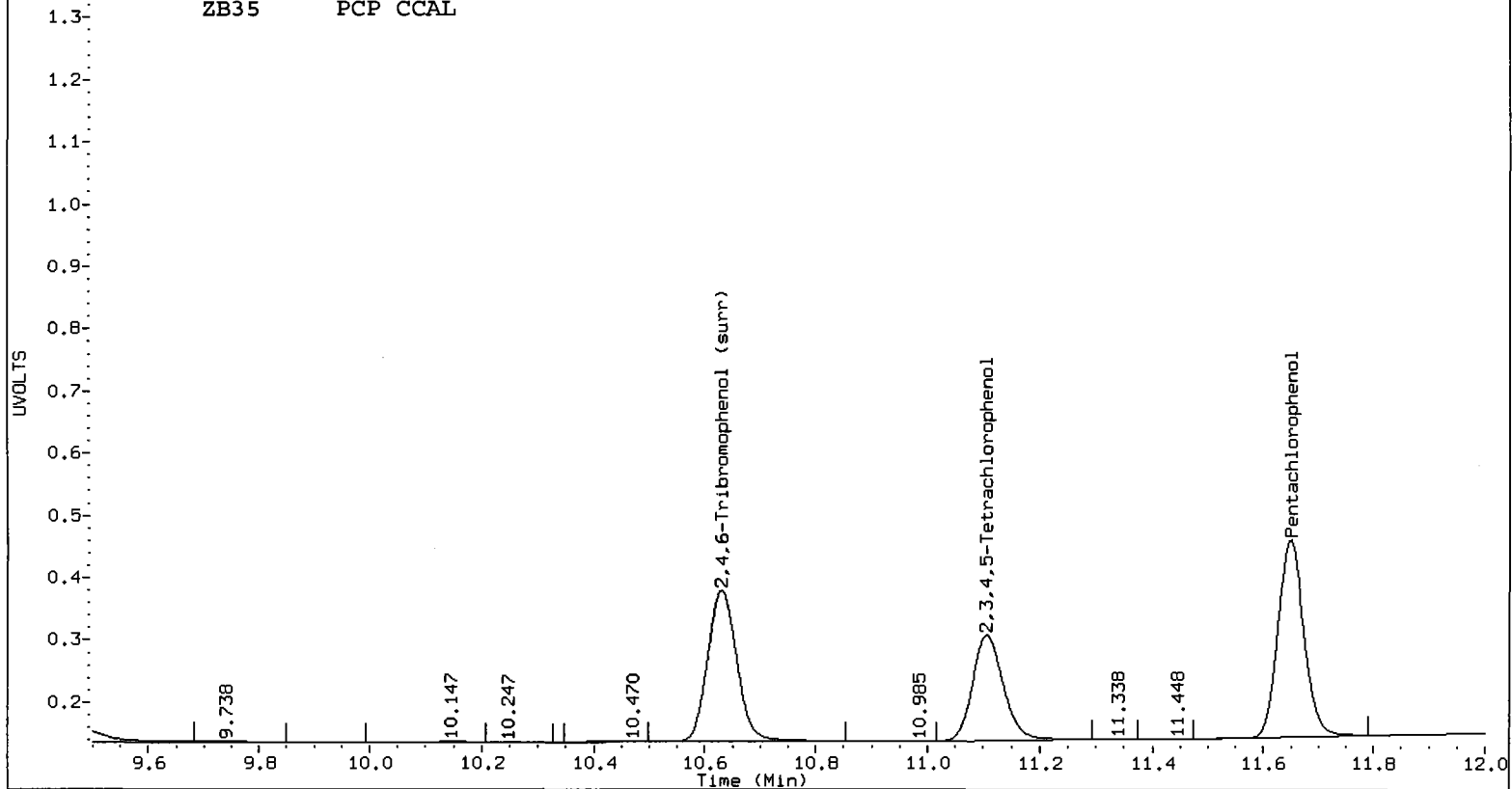
PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	90.8	89.3
2,4,6-Trichlorophenol	99.9	105.9
2,3,6-Trichlorophenol	90.8	95.8
2,4,5-Trichlorophenol	94.9	99.0
2,3,4-Trichlorophenol	91.4	95.9
2,3,5,6-Tetrachlorophenol	94.4	98.5
2,3,4,5-Tetrachlorophenol	91.6	89.1
2,4-Dichlorophenol	90.3	100.2
2,4,6-TBP (surr)	95.1	95.1

ZB5 PCP CCAL

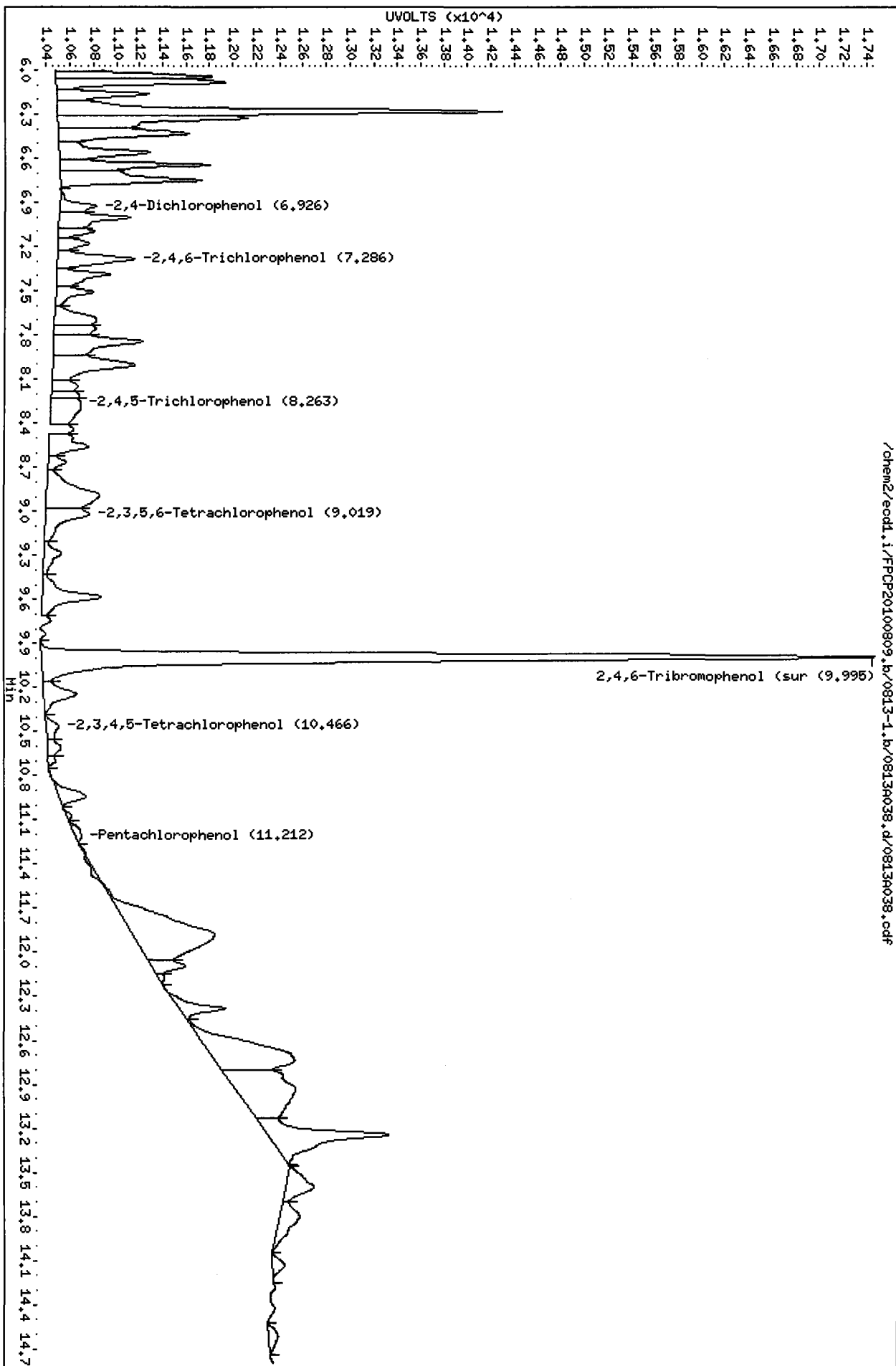


ZB35 PCP CCAL



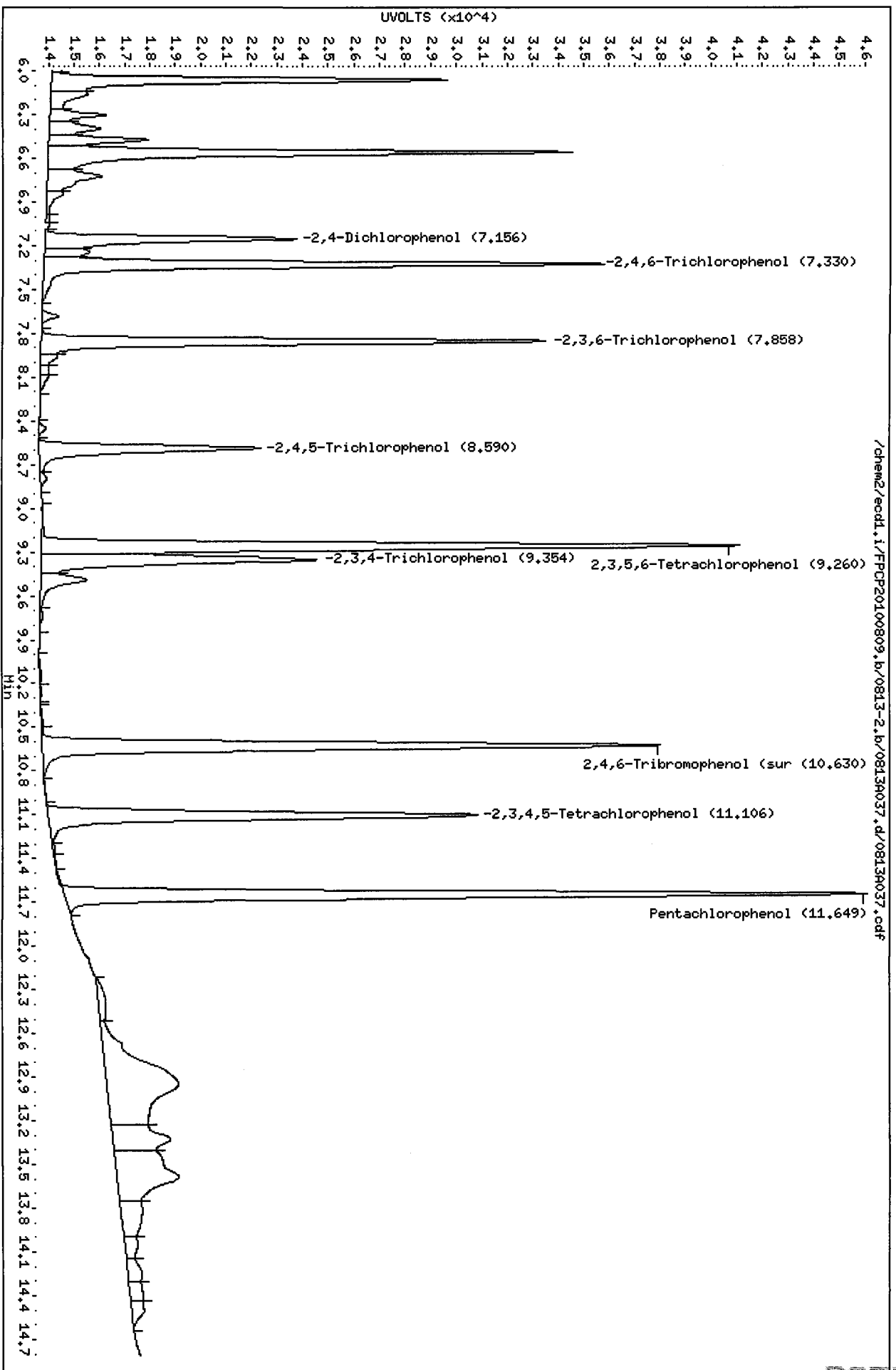
Data File: /chem2/eod1.i/FP020100809.b/0813-1.b/0813A038.d  
Date: 13-AUG-2010 21:44  
Client ID:  
Sample Info: R0541  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: eod1.i  
Operator: ar  
Column diameter: 0.53



Data File: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A037.d  
Date: 13-AUG-2010 21:24  
Client ID:  
Sample Info: PCP CCAL  
Column phase: ZB35

Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53



Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

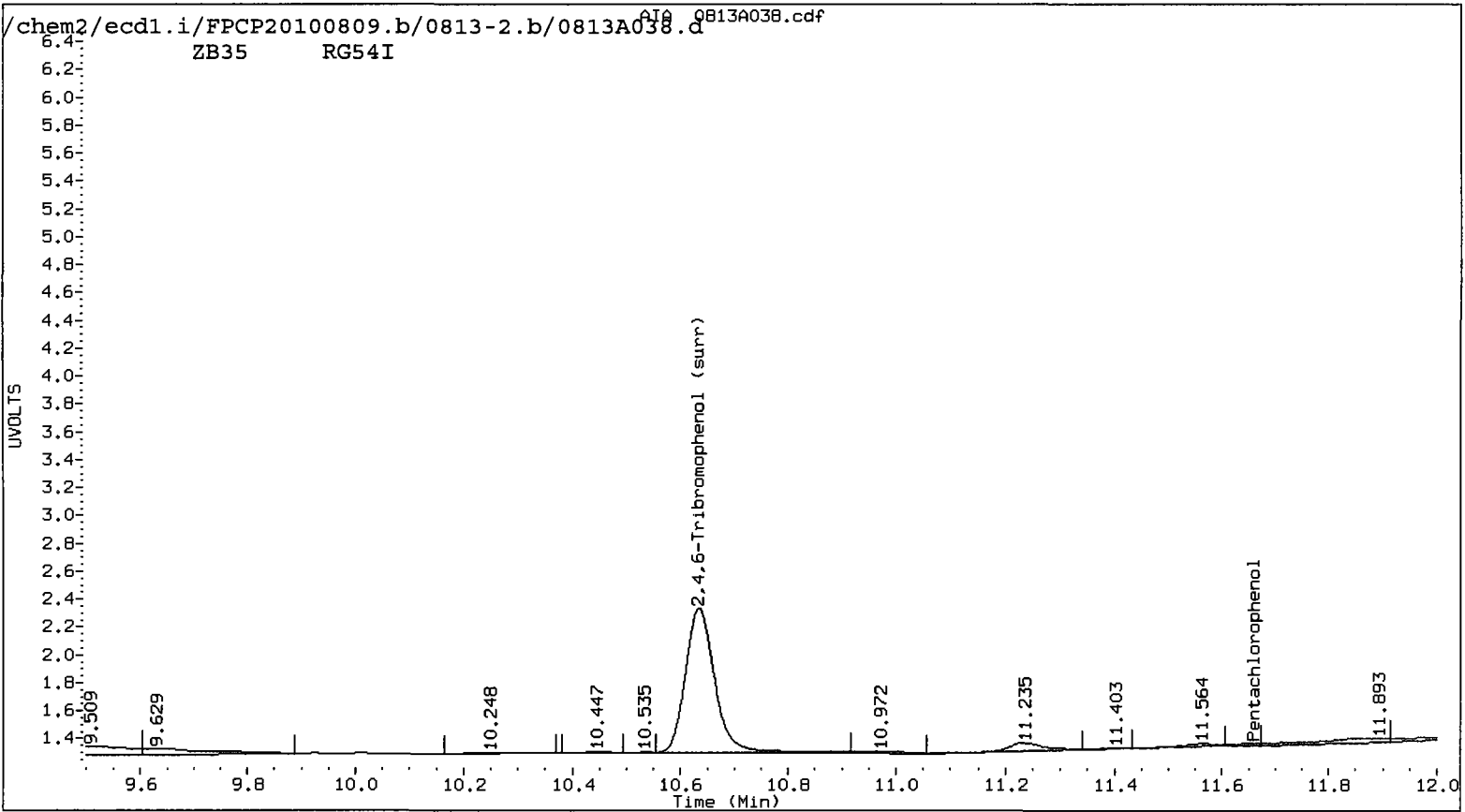
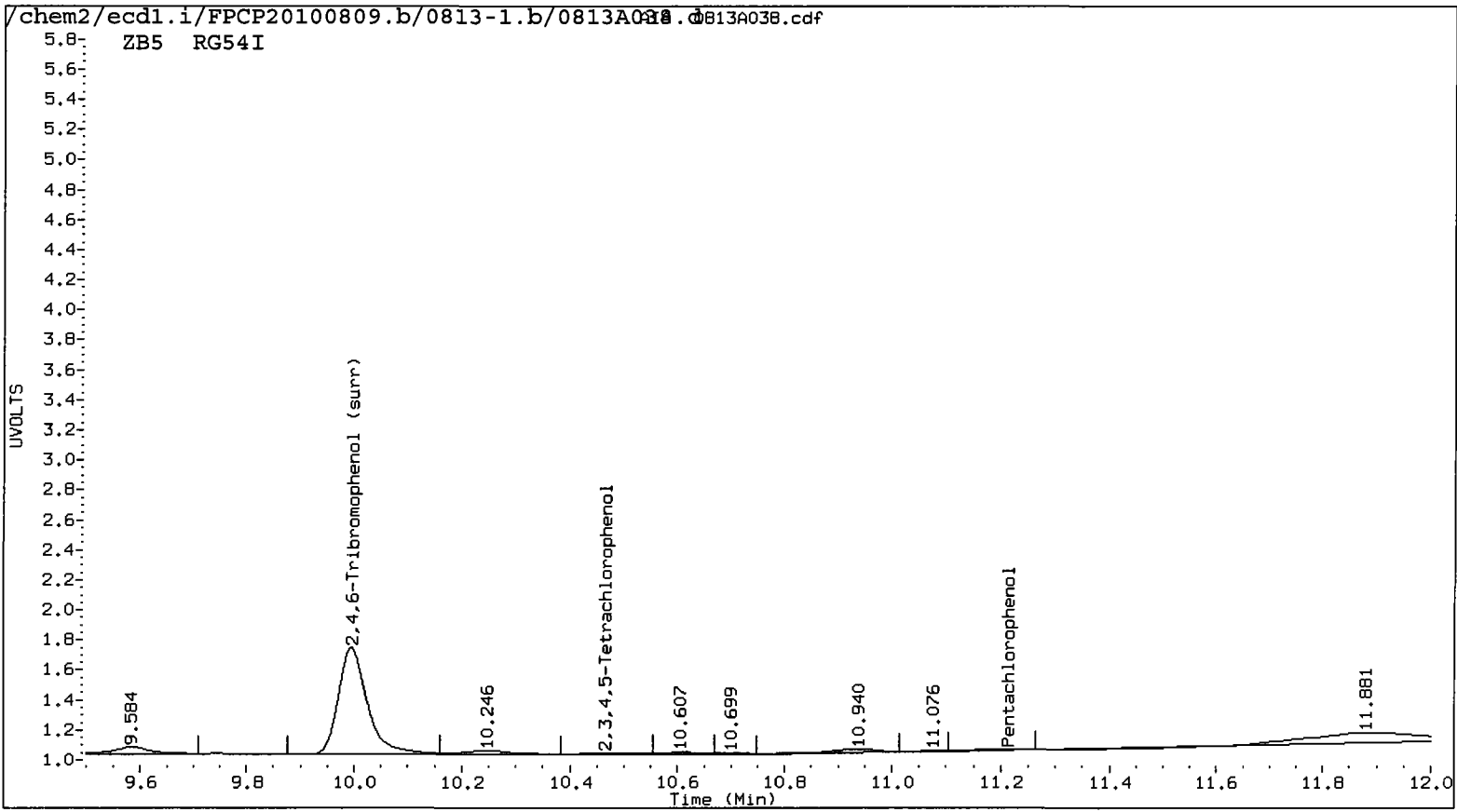
Data file 1: /chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A038.d    ARI ID: RG54I  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A038.d    Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m    Injection Date: 13-AUG-2010 21:44  
 Compound Sublist: all    Report Date: 08/17/2010 16:03  
 Instrument: ecdl.i    Matrix: WATER  
 Operator: ar    Dilution Factor: 1.000

*YZ 8/18/10*

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.212	-0.007	1813	11.658	0.000	2429	<del>0.1005</del>	<del>0.1058</del>	5.1	Pentachlorophenol
7.286	0.022	13124	7.368	0.035	15942	1.3705	1.2769	7.1	2,4,6-Trichlorophenol
----			7.835	-0.029	2835	0.0000	0.2285	---	2,3,6-Trichlorophenol
8.263	0.021	11393	8.676	0.061	1755	2.2571	0.2445	160.9*	2,4,5-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,4-Trichlorophenol
9.019	0.012	11774	9.296	0.019	12511	0.8347	0.6757	21.1	2,3,5,6-Tetrachlorophenol
10.466	0.053	3299	----			0.2625	0.0000	---	2,3,4,5-Tetrachlorophenol
6.926	0.033	5568	7.168	0.002	4800	8.7564	6.4074	31.0	2,4-Dichlorophenol
9.995	-0.007	134509	10.634	-0.012	200078	10.2	10.7	4.8	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

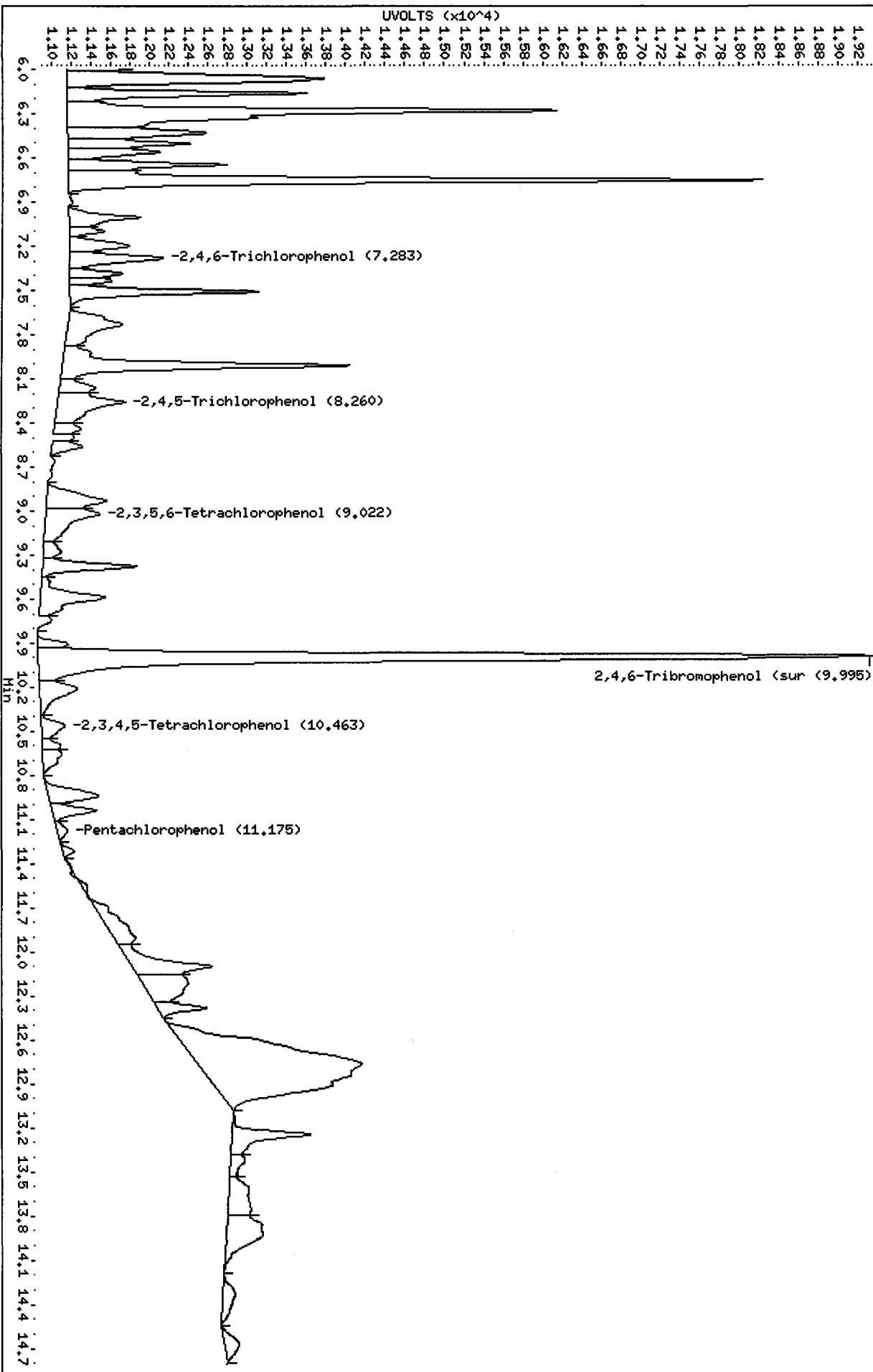
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	40.9	42.9



Data File: /chem2/eod1.i/FPCP20100809.b/0813-1.b/0813A039.d  
Date : 13-AUG-2010 22:04  
Client ID:  
Sample Info: RG54J  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: eod1.i  
Operator: ar  
Column diameter: 0.53

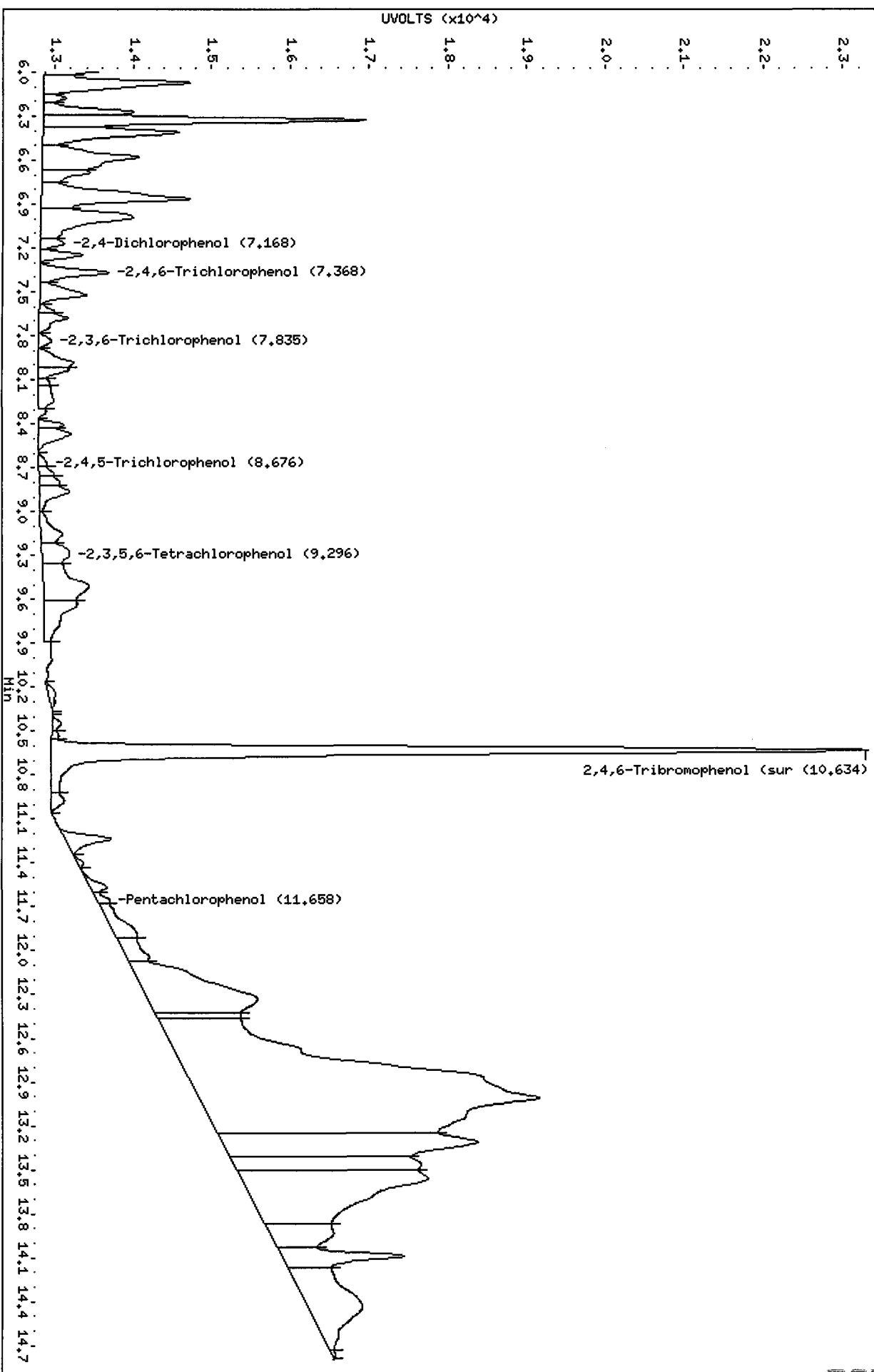
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Data File: /chem2/eodl.i/FP20100809.b/0813-2.b/0813A038.d  
Date : 13-AUG-2010 21:44  
Client ID:  
Sample Info: RC541  
Purge Volume: 2.0  
Column phase: ZB35

Instrument: eodl.i  
Operator: ar  
Column diameter: 0.53

/chem2/eodl.i/FP20100809.b/0813-2.b/0813A038.d/0813A038.cdf



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Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

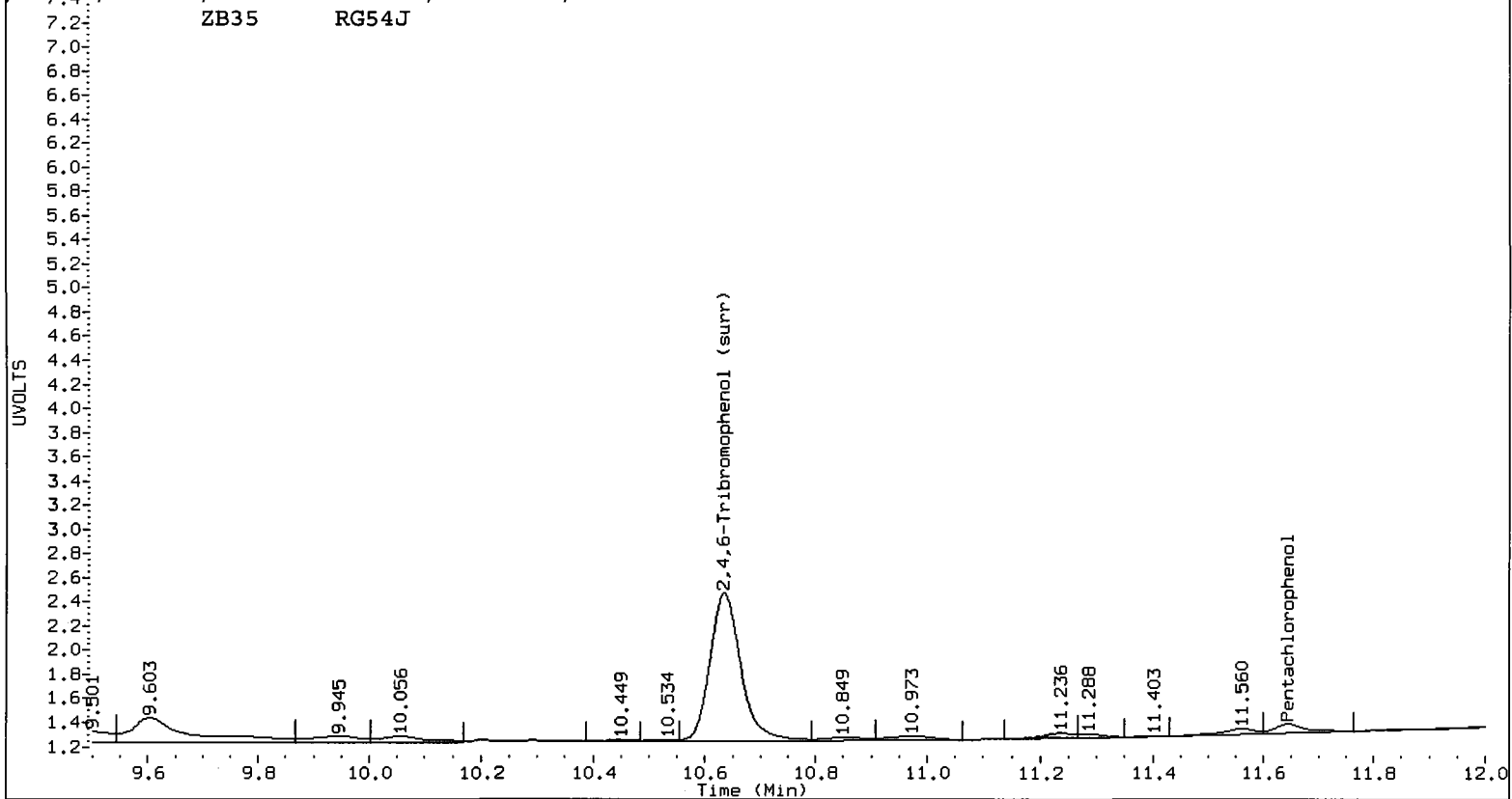
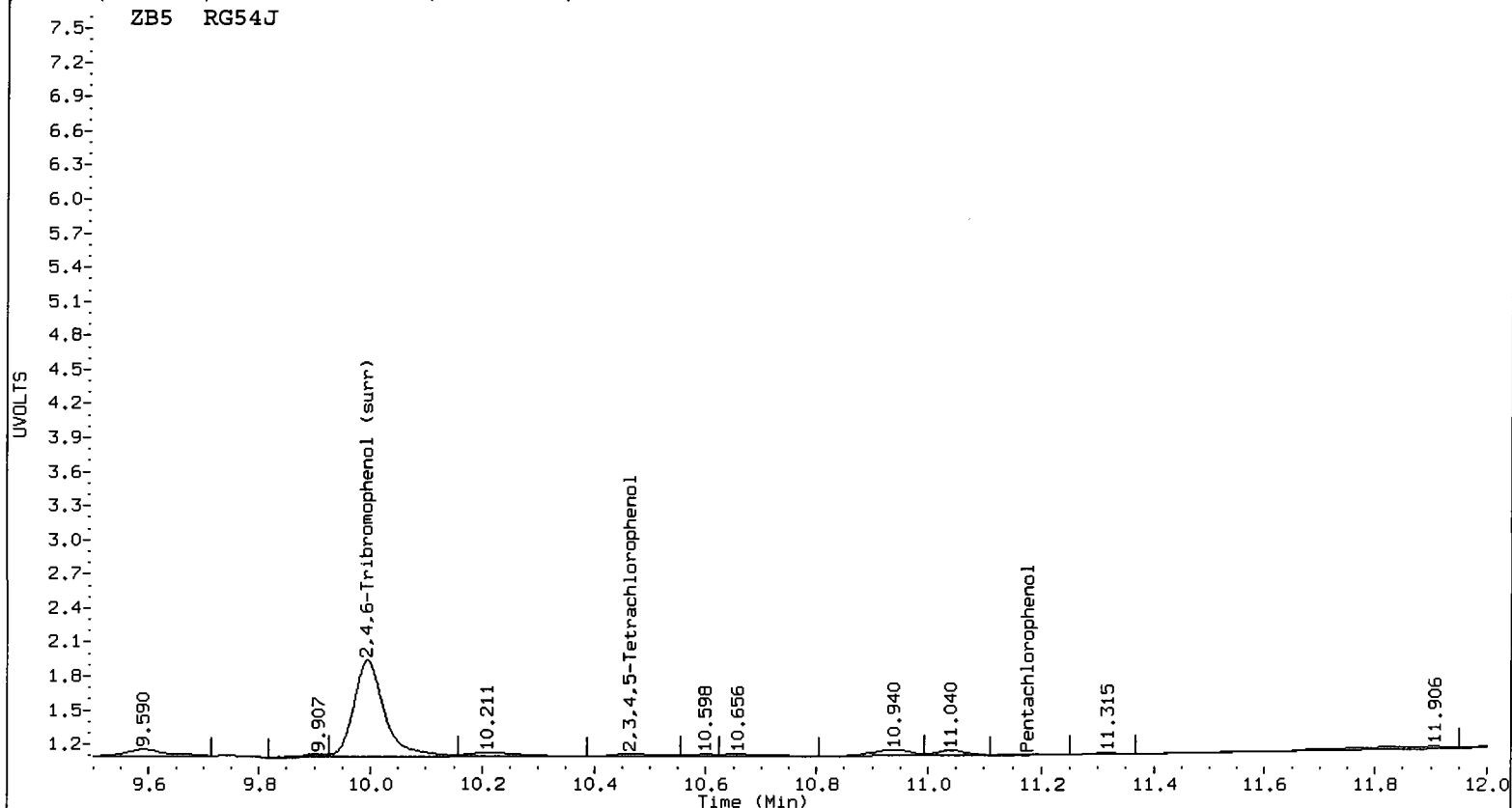
Data file 1: /chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A039.d ARI ID: RG54J  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A039.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 13-AUG-2010 22:04  
 Compound Sublist: all Report Date: 08/17/2010 16:03  
 Instrument: ecdl.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

*YE 8/18/10*

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.175	-0.044	2506	11.645	-0.013	14085	<del>0.1390</del>	<del>0.6134</del>	126.1*	Pentachlorophenol
7.283	0.019	17568	7.366	0.033	24934	<del>1.8401</del>	<del>1.9972</del>	8.2	2,4,6-Trichlorophenol
----			7.799	-0.065	14666	0.0000	1.1819	---	2,3,6-Trichlorophenol
8.260	0.018	23572	----			<del>4.6700</del>	<del>0.0000</del>	---	2,4,5-Trichlorophenol
----			9.385	0.005	4791	0.0000	0.4962	---	2,3,4-Trichlorophenol
9.022	0.015	20458	9.290	0.013	7562	<del>1.4593</del>	<del>0.4084</del>	112.1*	2,3,5,6-Tetrachlorophenol
10.463	0.050	6771	----			0.5405	0.0000	---	2,3,4,5-Tetrachlorophenol
----			7.172	0.006	11526	<del>0.0000</del>	<del>15.5321</del>	---	2,4-Dichlorophenol
9.995	-0.007	166112	10.634	-0.012	236411	12.8	12.7	0.8	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

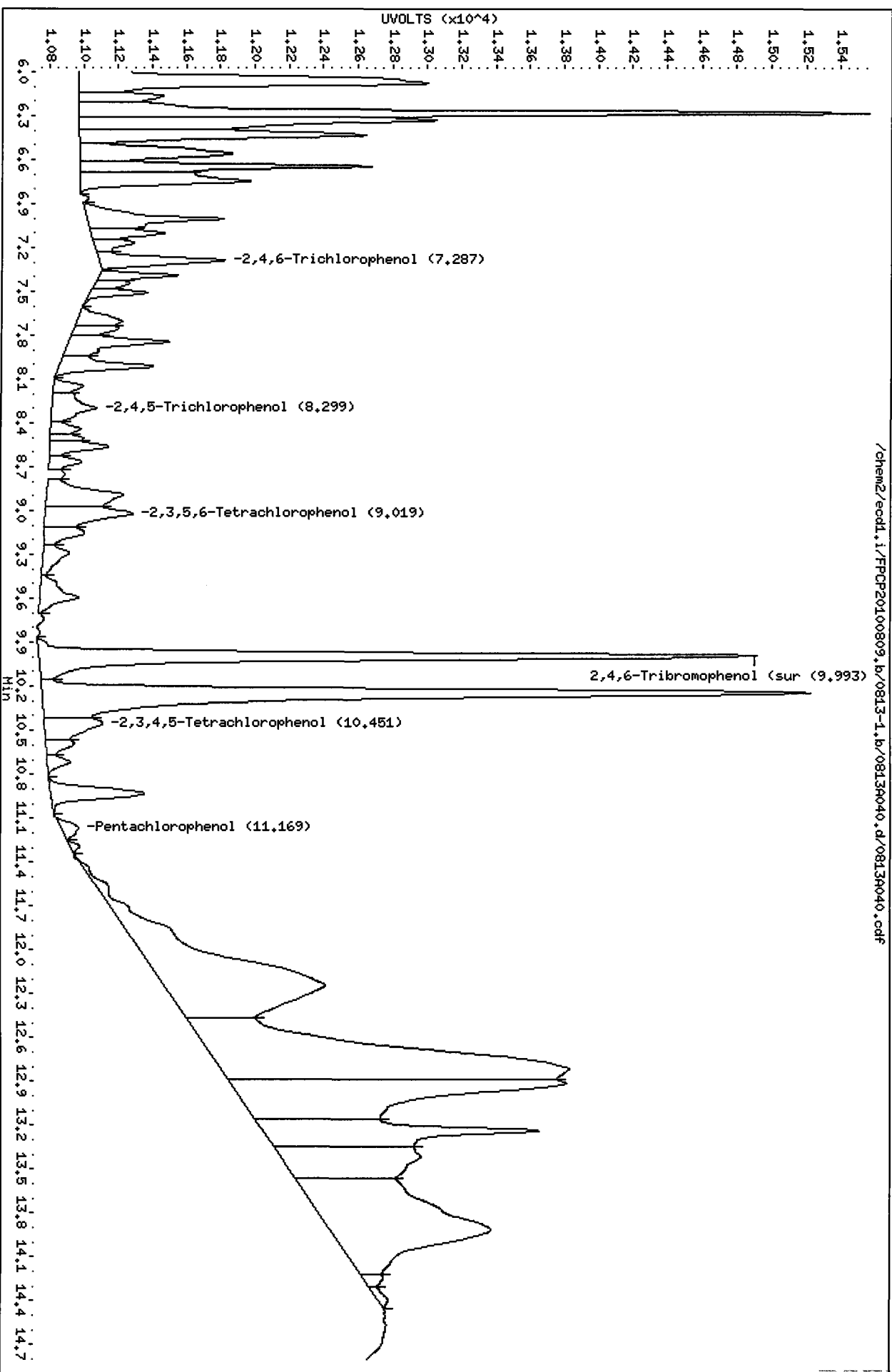
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	51.1	50.7



Data File: /chem2/ecdl.i/FPQP20100809.b/0813-1.b/0813R040.d  
Date : 13-AUG-2010 22:24  
Client ID:  
Sample Info: RGS4K  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53

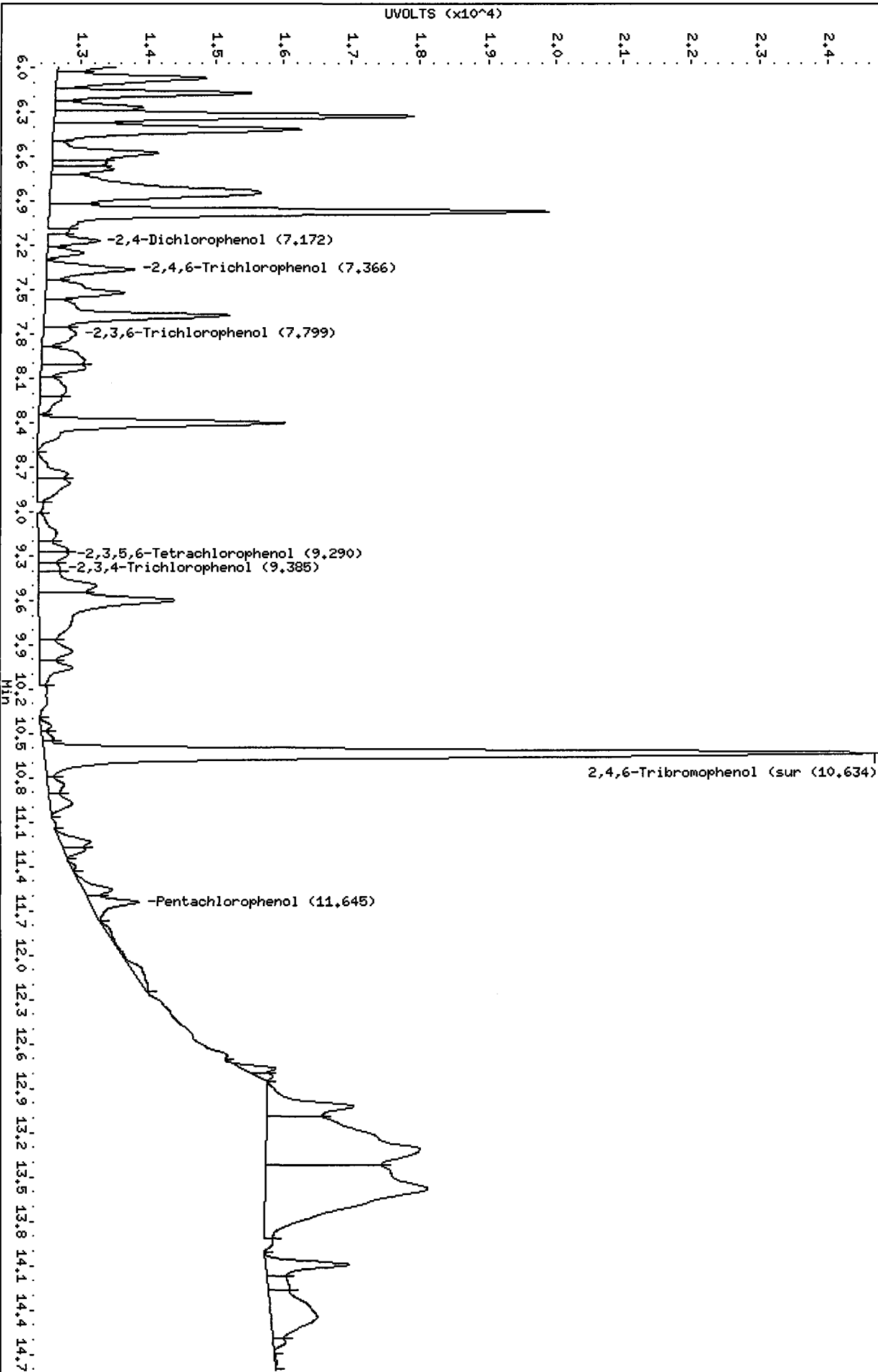
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Data File: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A039.d  
Date: 13-AUG-2010 22:04  
Client ID:  
Sample Info: R054J  
Purge Volume: 2.0  
Column phase: ZB35

Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53

/chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A039.d/0813A039.cdf



Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

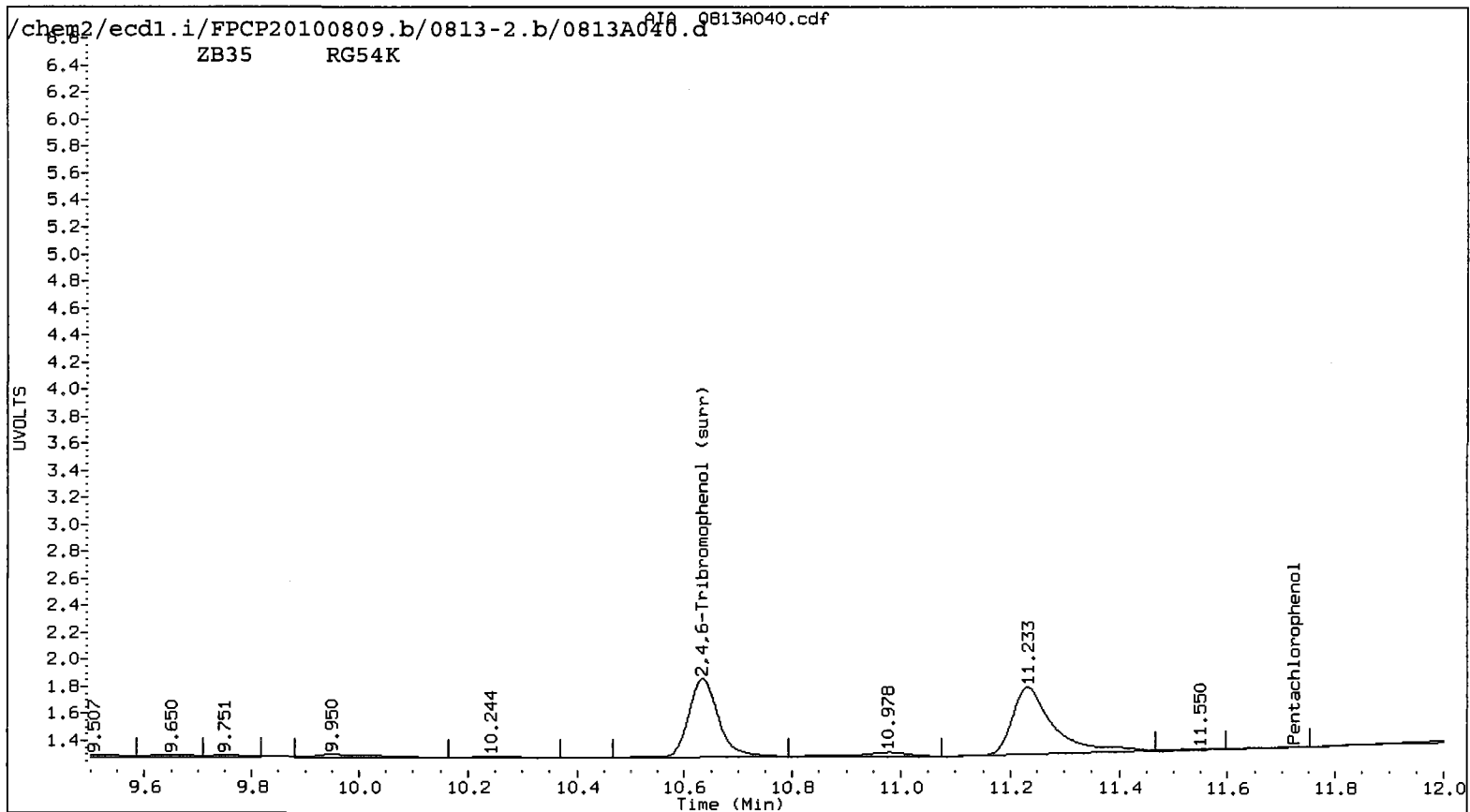
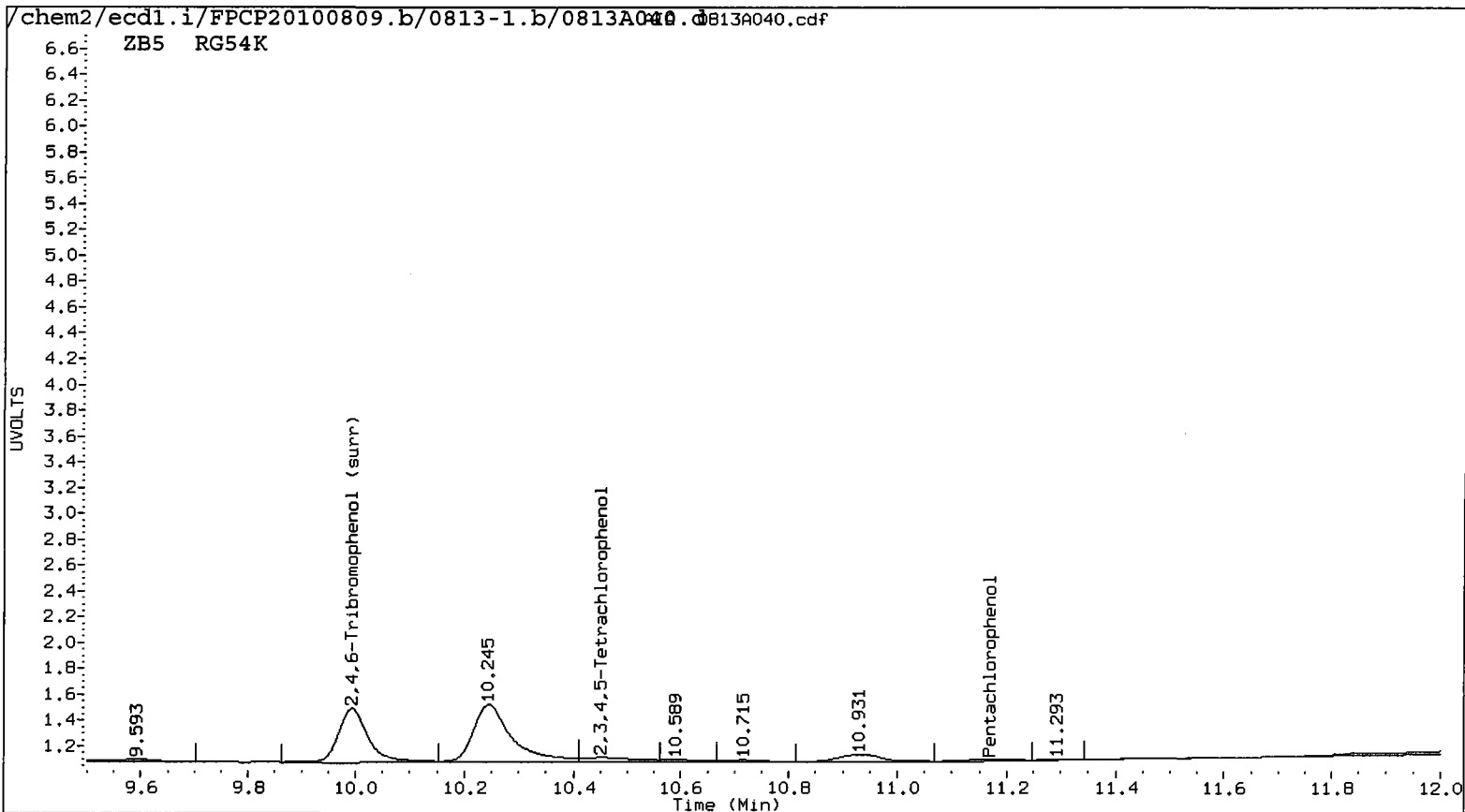
*YZ 8/18/10*

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A040.d ARI ID: RG54K  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A040.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 13-AUG-2010 22:24  
 Compound Sublist: all Report Date: 08/17/2010 16:03  
 Instrument: ecdl.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.169	-0.050	2739	11.722	0.064	2197	<del>0.1519</del>	<del>0.0957</del> <i>45.4*</i>	45.4*	Pentachlorophenol
7.287	0.022	13307	7.368	0.035	23210	1.3898	1.8591	28.9	2,4,6-Trichlorophenol
----			7.826	-0.038	4985	0.0000	0.4017	---	2,3,6-Trichlorophenol
8.299	0.057	9426	8.673	0.058	2469	1.8674	0.3442	137.8*	2,4,5-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,4-Trichlorophenol
9.019	0.012	15106	9.255	-0.022	9482	1.0709	0.5121	70.6*	2,3,5,6-Tetrachlorophenol
10.451	0.038	11621	----			0.9314	0.0000	---	2,3,4,5-Tetrachlorophenol
----			7.170	0.004	7878	0.0000	10.5619	---	2,4-Dichlorophenol
9.993	-0.009	80390	10.634	-0.012	112492	<u>6.0</u>	<u>6.0</u>	0.8	2,4,6-Tribromophenol (surr)

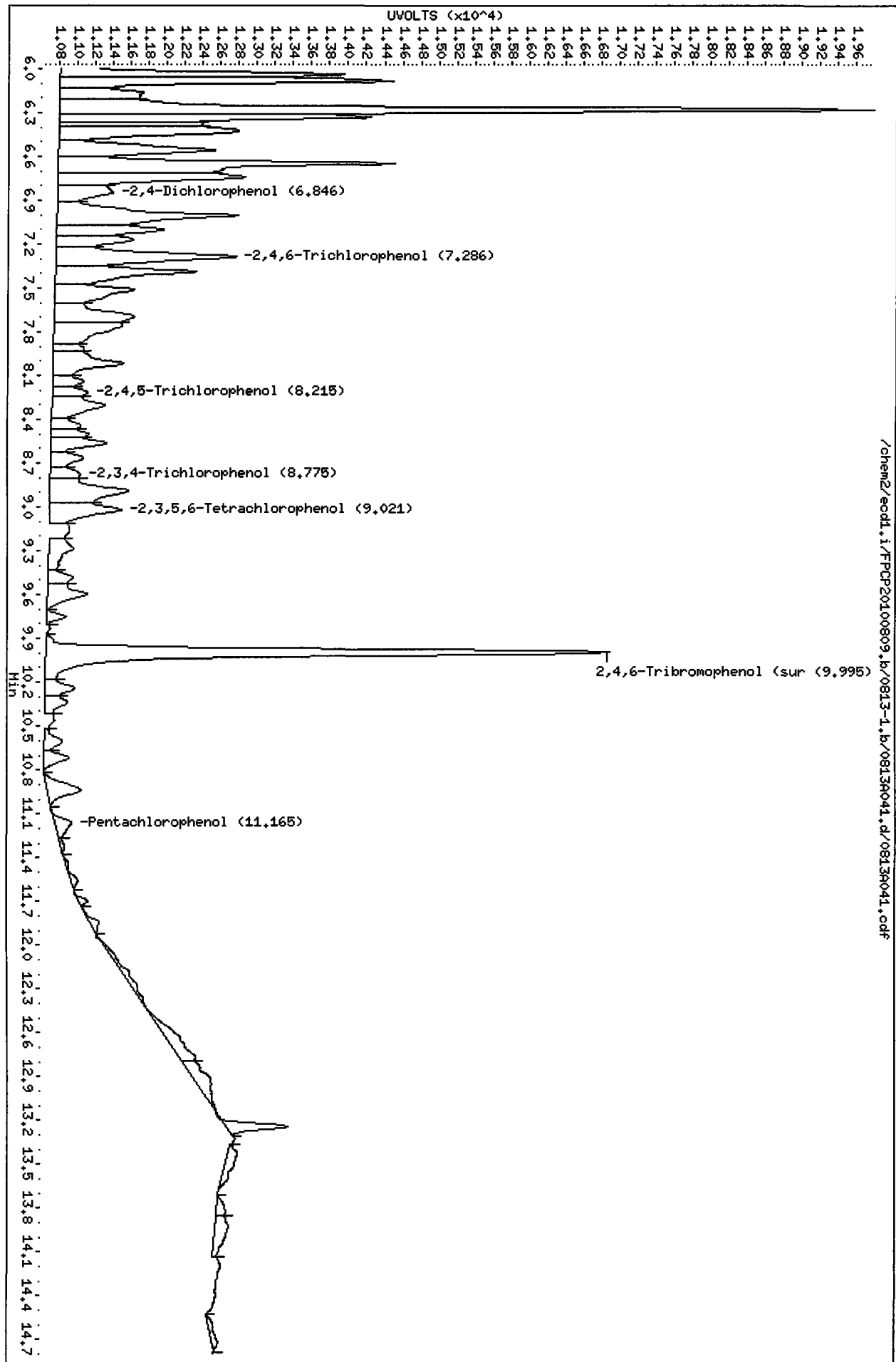
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	23.9	24.1



Data File: /chem2/ecdl.i/PCP20100809.b/0813-1.b/0813R041.d  
 Date : 13-AUG-2010 22:44  
 Client ID:  
 Sample Info: R054L  
 Purge Volume: 2.0  
 Column phase: ZB5

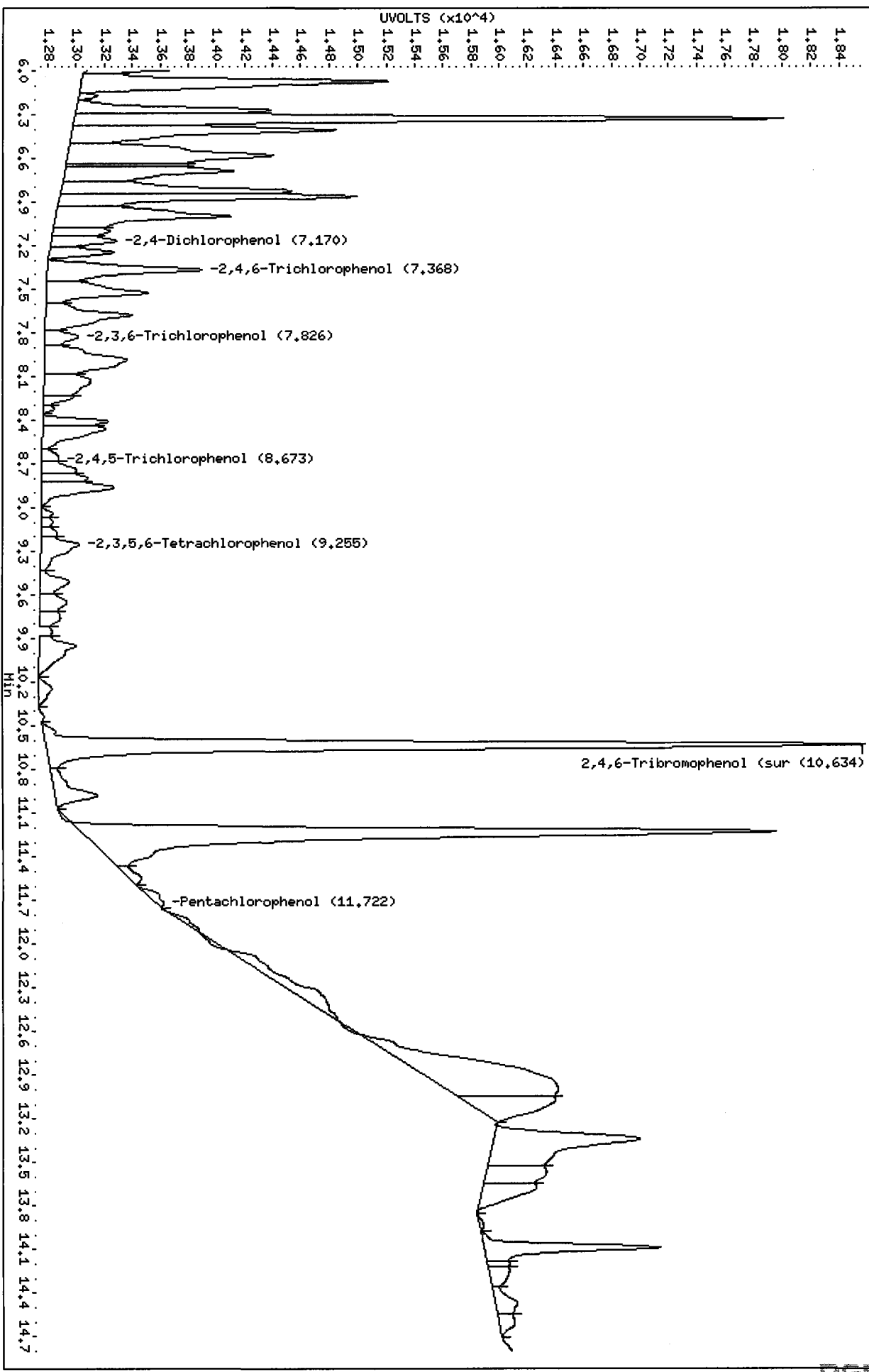
Instrument: ecdl.i  
 Operator: ar  
 Column diameter: 0.53



Data File: /chem2/ecdl.i/FP20100809.b/0813-2.b/0813A040.d  
Date: 13-AUG-2010 22:24  
Client ID:  
Sample Info: R054K  
Purge Volume: 2.0  
Column phase: ZB35

Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53

/chem2/ecdl.i/FP20100809.b/0813-2.b/0813A040.d/0813A040.cdf



RG04 : 00024



Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

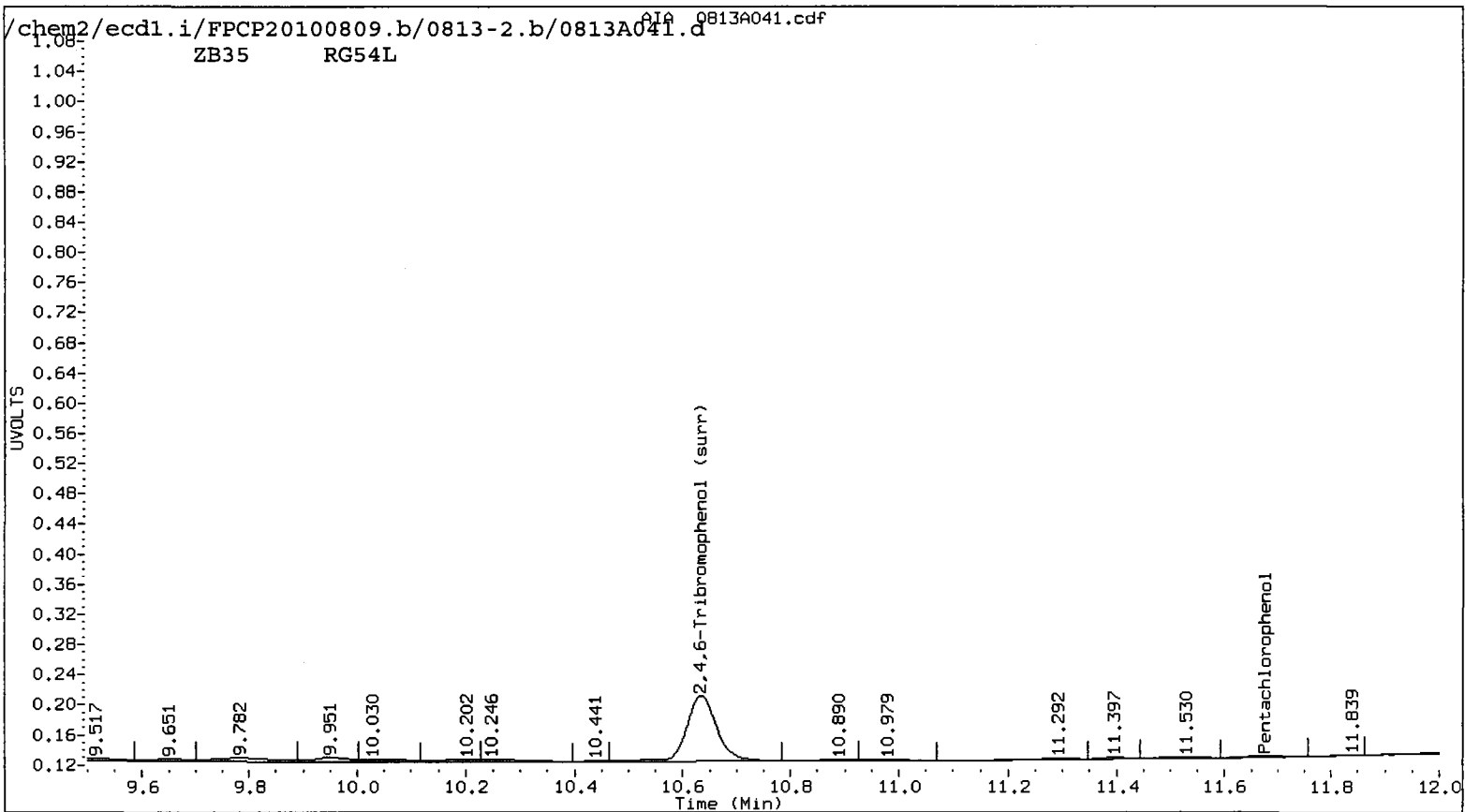
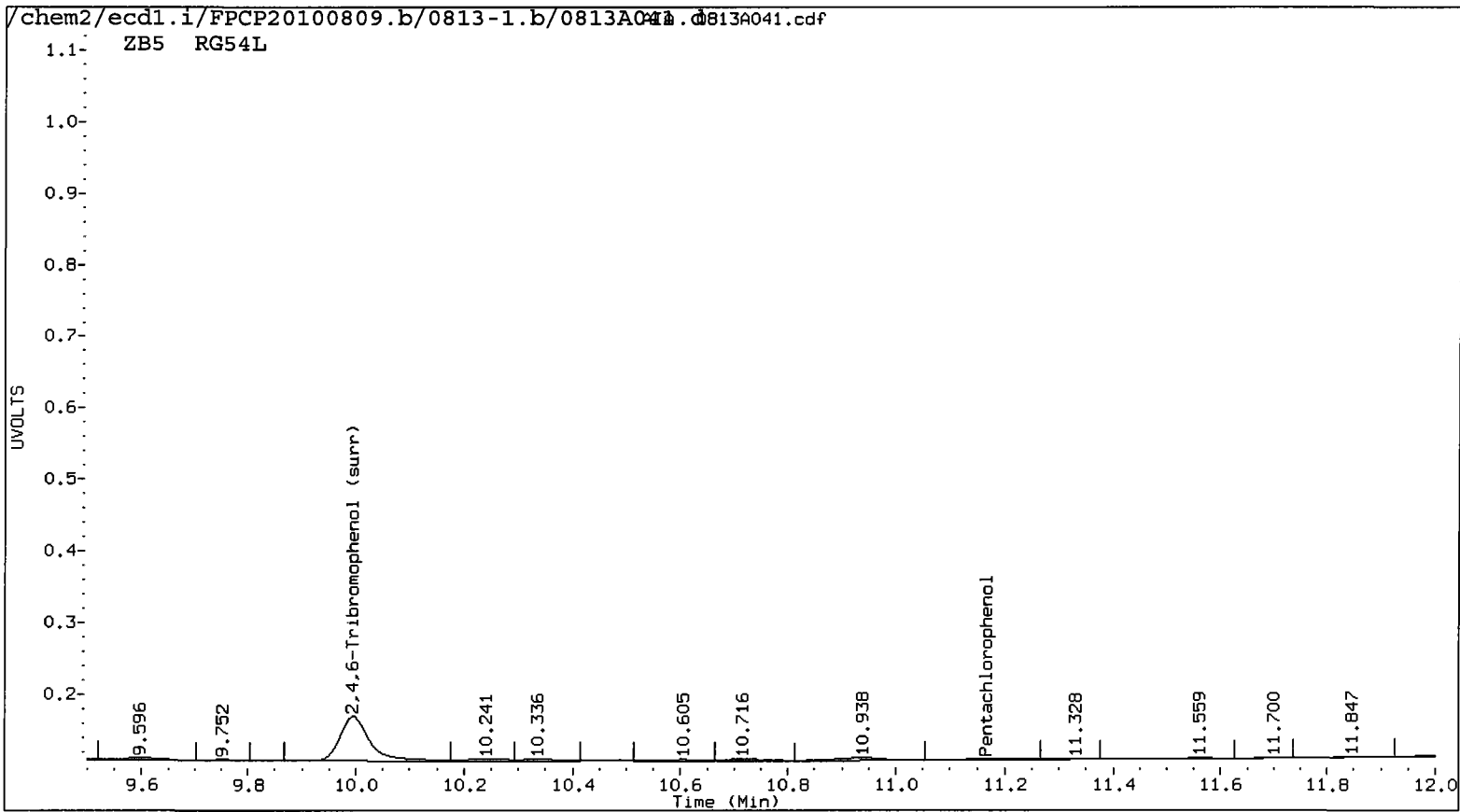
*YZ 8/18/10*

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A041.d ARI ID: RG54L  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A041.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 13-AUG-2010 22:44  
 Compound Sublist: all Report Date: 08/17/2010 16:03  
 Instrument: ecdl.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.165	-0.054	5275	11.676	0.018	3702	<del>0.2929</del>	<del>0.1612</del> <i>20</i>	58.0*	Pentachlorophenol
7.286	0.022	45056	7.367	0.034	52590	<del>4.8067</del>	<del>4.2124</del>	13.2	2,4,6-Trichlorophenol
----			7.840	-0.024	13743	0.0000	1.1075	---	2,3,6-Trichlorophenol
8.215	-0.027	6657	8.652	0.037	3184	<del>1.3189</del>	<del>0.4442</del>	99.2*	2,4,5-Trichlorophenol
8.775	-0.017	6380	----			0.9326	0.0000	---	2,3,4-Trichlorophenol
9.021	0.014	20488	9.260	-0.017	23894	<del>1.4525</del>	<del>1.2905</del>	11.8	2,3,5,6-Tetrachlorophenol
----			----			<del>0.0000</del>	<del>0.0000</del>	---	2,3,4,5-Tetrachlorophenol
6.846	-0.047	15669	7.160	-0.006	22079	<del>25.2846</del>	<del>30.1928</del>	17.7	2,4-Dichlorophenol
9.995	-0.007	121688	10.635	-0.011	169730	<u>9.2</u>	<u>9.1</u>	1.1	2,4,6-Tribromophenol (surr)

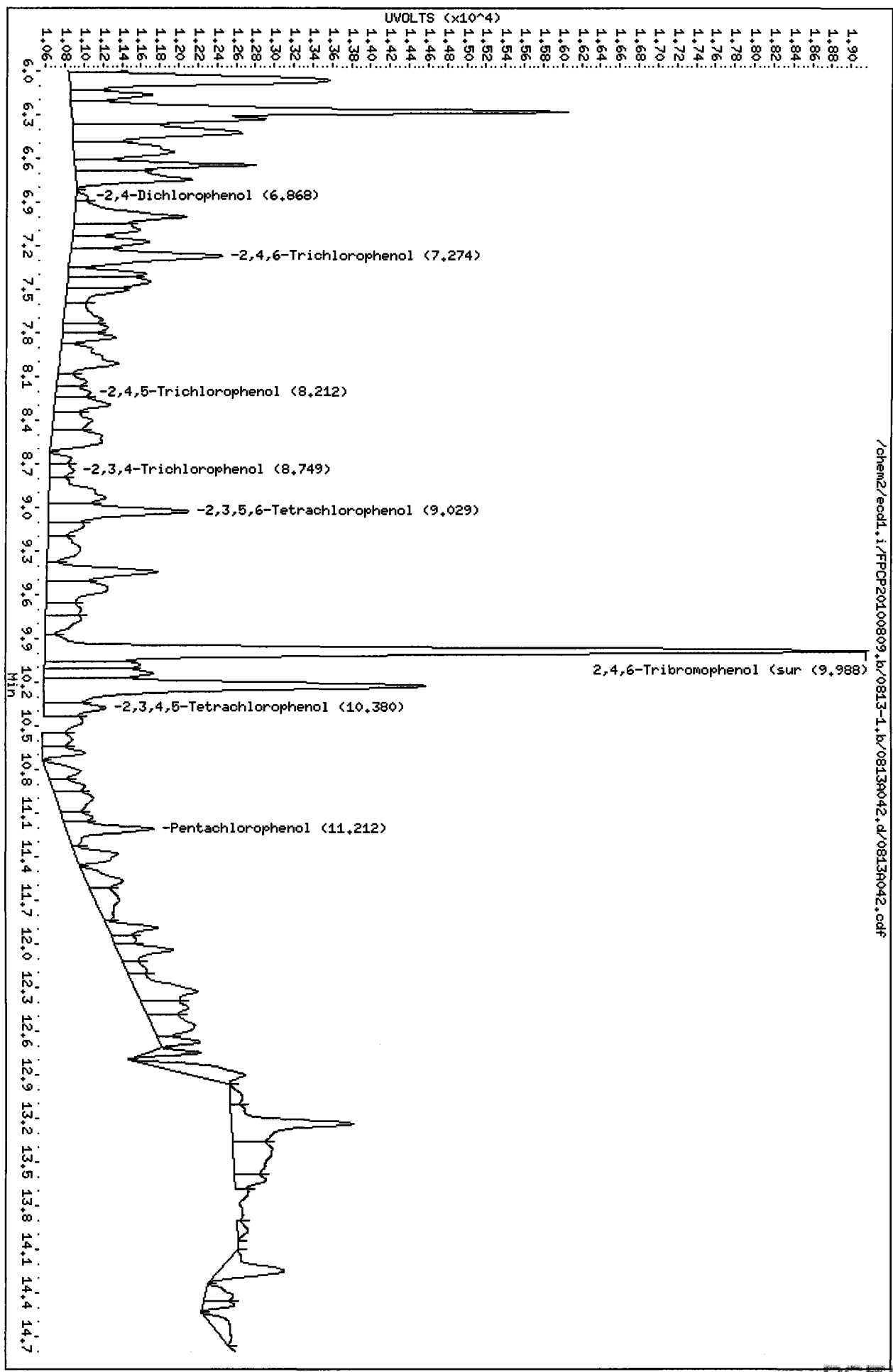
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	36.8	36.4



Data File: /chem2/eccd1.i/FP/CP20100809.b/0813-1.b/0813A042.d  
 Date: 13-AUG-2010 23:04  
 Client ID:  
 Sample Info: RG60A  
 Purge Volume: 2.0  
 Column phases: Z85

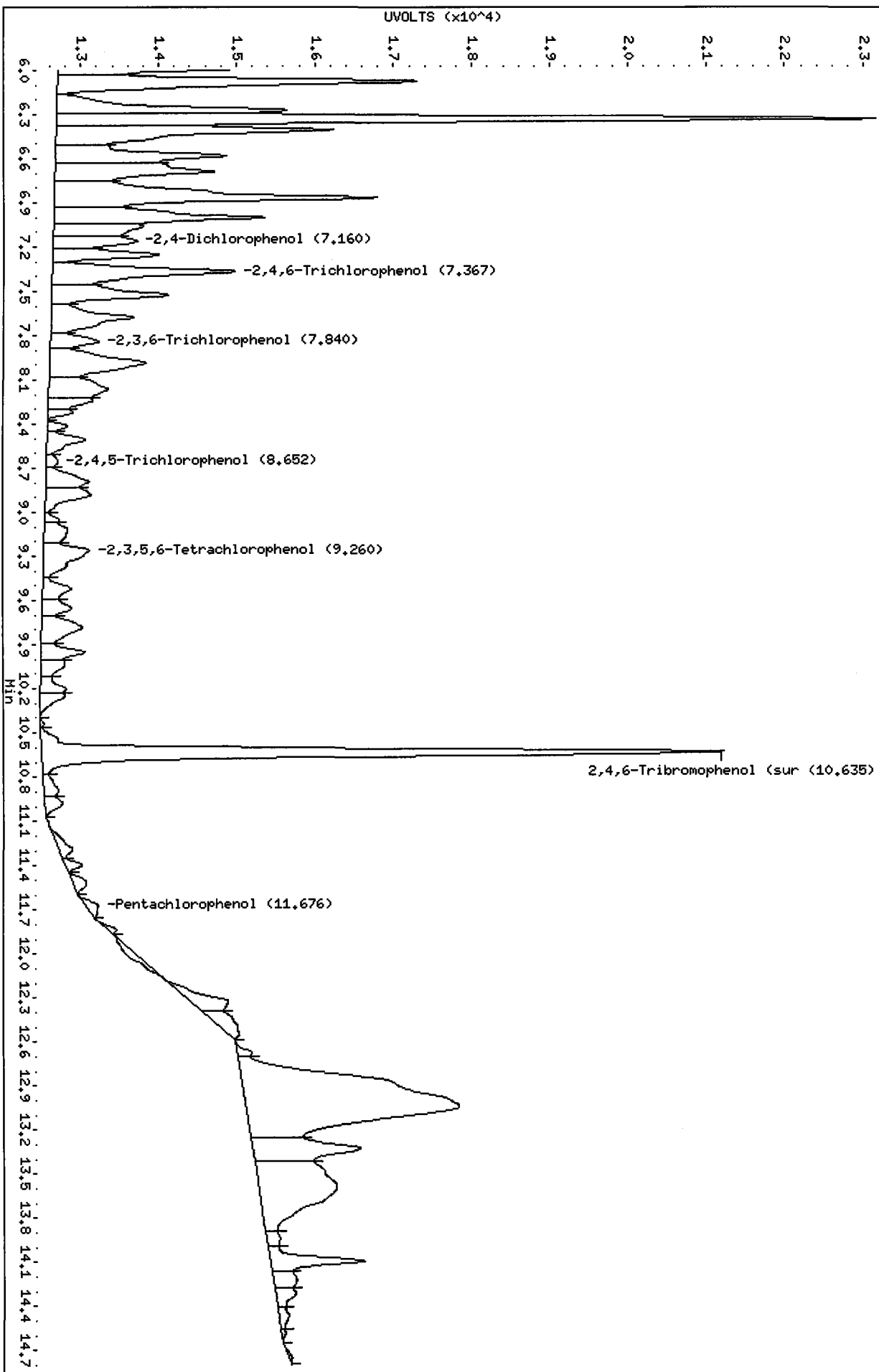
Instrument: ecd1.i  
 Operator: ar  
 Column diameter: 0.53



Data File: /chem2/ecdl.i/FP20100809.b/0813-2.b/08130041.d  
Date: 13-AUG-2010 22:44  
Client ID:  
Sample Info: R054L  
Purge Volume: 2.0  
Column phase: ZR35

Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53

/chem2/ecdl.i/FP20100809.b/0813-2.b/08130041.d/08130041.cdf



R054 : 08020

Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

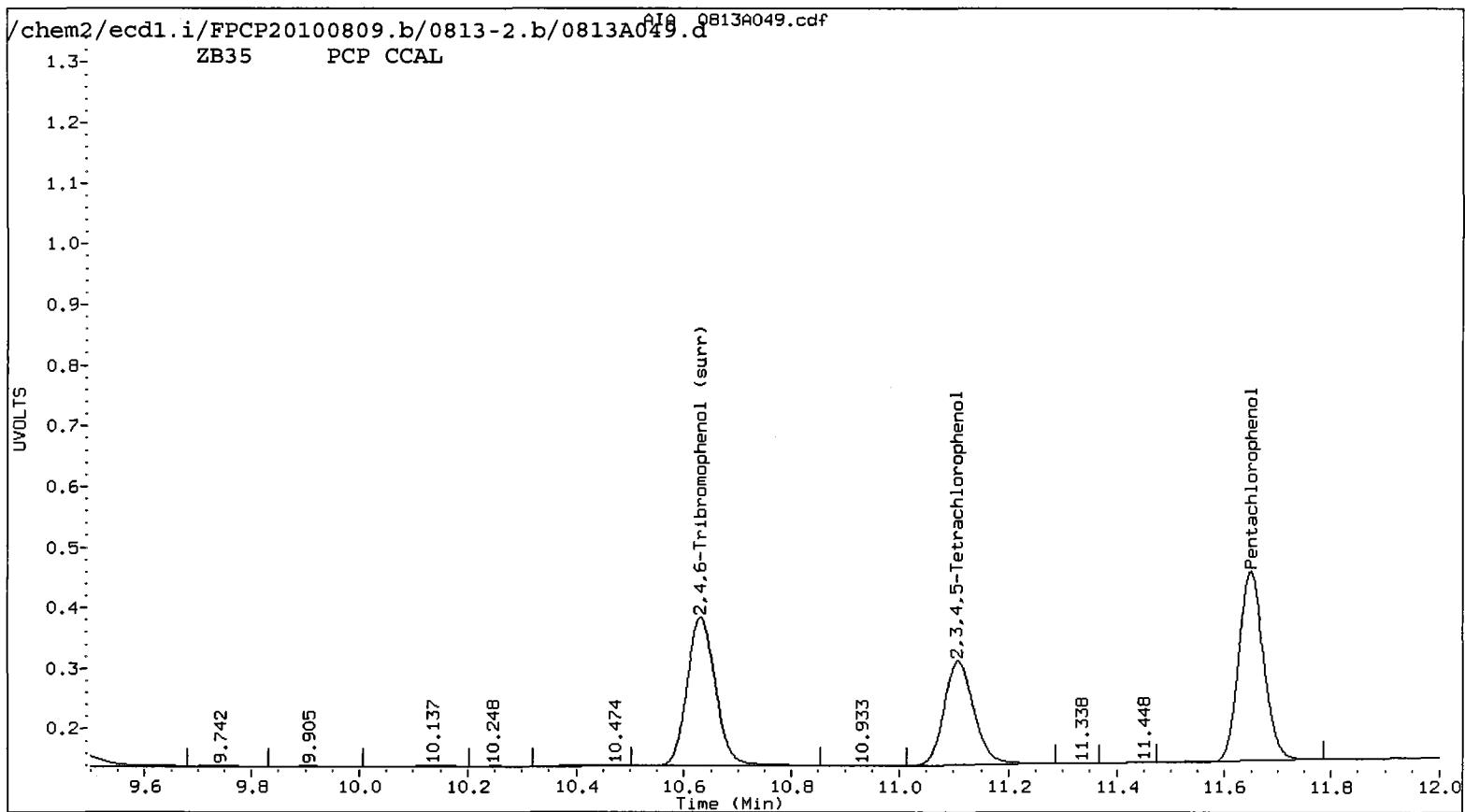
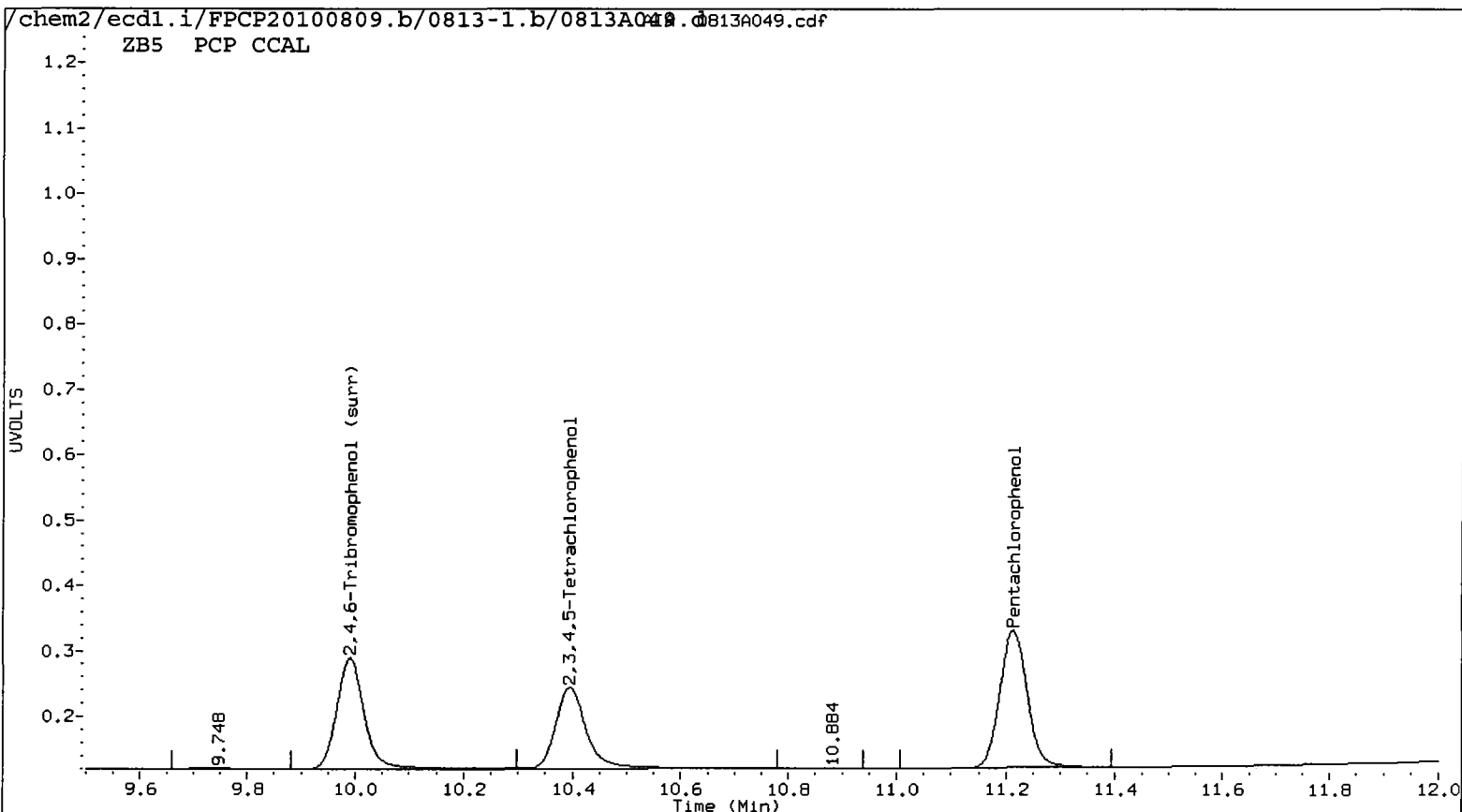
Data file 1: /chem2/ecdl.i/FPCP20100809.b/0813-1.b/0813A049.d ARI ID: PCP CCAL  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0813-2.b/0813A049.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 14-AUG-2010 01:24  
 Compound Sublist: all Report Date: 08/17/2010 16:03  
 Instrument: ecdl.i Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

Y28/18/10

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.212	-0.007	361086	11.649	-0.009	509434	23.1020	22.1865	4.0	Pentachlorophenol
7.263	-0.001	214941	7.330	-0.003	330756	25.5112	26.4931	3.8	2,4,6-Trichlorophenol
7.616	-0.003	203888	7.858	-0.006	303004	22.9535	24.4190	6.2	2,3,6-Trichlorophenol
8.218	-0.024	122858	8.590	-0.025	159514	24.3402	25.5995	5.0	2,4,5-Trichlorophenol
8.766	-0.026	162463	9.355	-0.025	204672	23.7481	24.0919	1.4	2,3,4-Trichlorophenol
8.996	-0.011	334920	9.261	-0.016	459935	23.7437	24.8414	4.5	2,3,5,6-Tetrachlorophenol
10.394	-0.019	245523	11.108	-0.018	324755	23.6104	22.2577	5.9	2,3,4,5-Tetrachlorophenol
6.888	-0.005	114682	7.157	-0.009	156608	231.1922	253.9298	9.4	2,4-Dichlorophenol
9.990	-0.012	302044	10.631	-0.015	449437	24.4	24.1	1.3	2,4,6-Tribromophenol (surr)

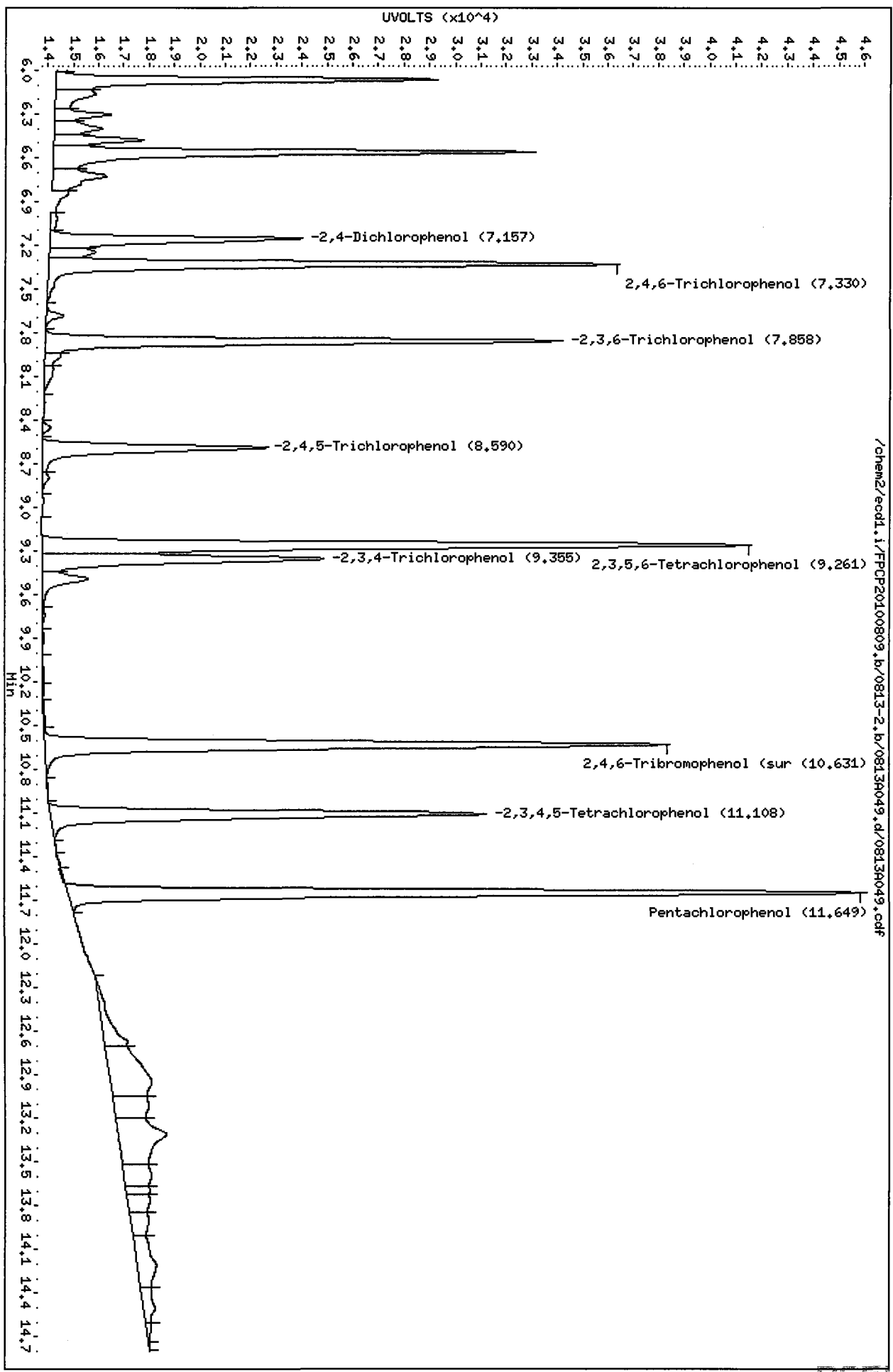
PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	92.4	88.7
2,4,6-Trichlorophenol	102.0	106.0
2,3,6-Trichlorophenol	91.8	97.7
2,4,5-Trichlorophenol	97.4	102.4
2,3,4-Trichlorophenol	95.0	96.4
2,3,5,6-Tetrachlorophenol	95.0	99.4
2,3,4,5-Tetrachlorophenol	94.4	89.0
2,4-Dichlorophenol	92.5	101.6
2,4,6-TBP (surr)	97.6	96.3



Data File: /chem2/ecdl.i/PPCP20100809.b/0813-2.b/0813A049.d  
Date : 14-AUG-2010 01:24  
Client ID:  
Sample Info: PCP COAL  
Column phase: ZB35

Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53



14000004

**TPHD Raw Data  
Extraction Bench Sheets and Notes**

**ARI Job ID: RG54**





**RUSH**  
 Analytical Chemists and  
 Consultants

Organic Extractions Benchsheet

NWTPHD Soil/seed

Microwave (3546) (SOP # 3304S)

Preparation Test TPHD # 3

ARI Job No(s) RG66, RG51, RG54

In-House (5ppm)

Batch set up by: JH

Bottle #	Extraction Requirements	Verify Client ID	Volume Extracted (wet wt)	Transfer to Turbo Tube	TurboVap 1 2 3	Acid/Silica Clean (1:1) Y/N	TurboVap 1 2 3	Final Effective Volume	Volume to Lab	Comments
	RG66 MBS	Date 8/2/10	10.00g					1mL	1mL	
	SBS		↓							
	SBS Dup.		↓							
3	A	checked	10.00							
↓	B		10.50							
↓	RG51 A		10.13							
↓	B		10.33							
↓	C		10.13							
↓	D		10.16							
↓	E		10.20							
↓	F		10.24							
↓	Fms		10.44							
↓	Fmsd		10.05							
↓	G		10.09							
↓	RG54 A		10.11							
↓	B		10.15							
↓	C		10.24							
↓	E		10.04							
↓	F		10.38							
↓	H		10.02							
↓	I		10.13							
↓	J		10.29							
↓	K		10.23							
↓	L		10.06							
Analyst/Date:		WC 8/2/10			8/2/03/10	8/2/03/10	8/2/03/10	8/2/03/10	8/2/03/10	

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	0	100µL	12/11/10	WC	WW
Spike	11	100µL	4/26/11	WC	WW
Extraction Time: 18:40			Balance ID: 24150347		

SPECIAL INSTRUCTIONS: 1. Weigh into 100mL beakers-dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add 20mL DCM to the vessel (if needed-Add 5mL increments until solvent is 1" above soil layer). 4. Add surr/spike. 5. Mix samples thoroughly before microwaving. 6. Microwave on appropriate power setting determined by # of samples. 7. After microwave-let cool 10-15 min. 8. Collect into turbo tube with sm. funnel containing glasswool and 1" sodium sulfate. 9. Add (2) 10mL DCM rinses to vessel and transfer to turbo tube. 10. TurboVap. 11. Acid/Silica Clean-up? = Y/N. 12. TurboVap (if Silica Clean). 13. Vial in DCM.

A. Need Total Solids Y/(N) B. Archive/Freeze Y/(N)



ARI Job No.: RG51/RG54

Client ID: Floyd/Suider

Parameter: TPHD w/Ac/si

Client Project: Lorn Lakes RI

Note problems, concerns, corrective actions	Analyst/Date
<b>Screens: Soil/Sediment/Solid/Other:</b>	
<input type="checkbox"/> No Anomalies (standard soil/sediment)	
<input type="checkbox"/> Wet sediment/sludge=	
<input type="checkbox"/> Standing Water Decanted=	
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=	
<input type="checkbox"/> Clay (Difficult to homogenize/Mixed with Kitchen Aid)=	
<input checked="" type="checkbox"/> <del>Rocks</del> /Organics = <sup>RA</sup> 51 (A,B,C,D,E,F,G) RG54 (A,B,C,E,F,H,I,J,K,L)	WC 8/2/10
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input type="checkbox"/> Other (Details)=	
<b>Aqueous:</b>	
<input type="checkbox"/> No Anomalies	
<input type="checkbox"/> Turbid/Color=	
<input type="checkbox"/> Particulates=	
<input type="checkbox"/> Emulsions=	
<input type="checkbox"/> Other (Details)=	
<input type="checkbox"/> Other Notes/Comments=	

**TPHD Raw Data  
Initial Calibration**

**ARI Job ID: RG54**



**GC Analyst Notes / Corrective Action Log**

ARI Project ID: Diesel, MOil Client ID: ARI

ARI SOP: AK102 Curve **403S(PCB)** **405S(Herb)** **407S(TPH-D)** **409S(HCID)** **412S(PCP)** **423S(Pest)**  
**427S(Dir Inj)** **428S(EPH)** **432S(EDB)** **Other**

Parameter(s): Diesel, 30wt MOil, AK702, 01 ephenyl, n-Tricantane

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

Dates: Curve: 7/28/10 Analysis Start: 7/28/10

Endrin/DDT Breakdown <15%?	YES / NO / <u>NA</u>	Method Blank In Control?	YES / NO
ICal Meets RF & %RSD Criteria?	<u>YES</u> / NO	LCS/LCSD Recovery In Control?	YES / NO
CCal Meets RF & %RSD Criteria?	<u>YES</u> / NO	Surrogate Recovery In Control?	<u>YES</u> / NO
Manual Integrations for ICal?	<u>YES</u> / NO	Manual Integrations for Samples?	<u>YES</u> / NO
Internal Standard Meets Criteria?	YES / NO / <u>NA</u>	Special Analysis Criteria Met?	YES / NO / <u>NA</u>

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

Additional Details on Reverse: Yes / No

Analyst: [Signature] Date: 7/30/10

Reviewer: [Signature] Date: 7/30/10

# Analytical Resources Inc.: Organics Instrument Log

FID-9 Agilent 6850 - Serial No.: US10404004

Date: 7/28/10 Analysis: MTPLD Analyst: M

GC Program: JPH Column No.: 802031 Column Type: HT-1

Instrument Tune (.U or .CT.): \_\_\_\_\_ EM Voltage: \_\_\_\_\_

Calibration File: \_\_\_\_\_ Curve Date: 7/28/10

IS/SS	Ical/Ccal	LCS/ICV
	1700-1	
	1680-2	
	1730-3	
	1727-3	

me	Filename	LabID	ClientId	DF	Time	Filename	LabID	ClientId	DF
34	0728A001.D	RINSE		1	23 0018	0728A023.D	MOIL 2500		1
55	0728A002.D	RINSE		1	24 0040	0728A024.D	MOIL 5000		1
48	0728A003.D	RINSE		1	25 0101	0728A025.D	MOIL ICV		1
10	0728A004.D	RINSE		1	26 0122	0728A026.D	DIESEL#1		1
31	0728A005.D	RT		1	27 0144	0728A027.D	MOIL#1		1
53	0728A006.D	DIESEL#1		1	28 0205	0728A028.D	BUNKERCH1		1
15	0728A007.D	MOIL#1		1	29 0226	0728A029.D	RF99MBS1	RF99MBS1	1
16	0728A008.D	BUNKERCH1		1	30 0247	0728A030.D	RF99LCSS1	RF99LCSS1	1
20	0728A009.D	RINSE		1	31 0308	0728A031.D	RF99LCSDS1	RF99LCSDS1	1
41	0728A010.D	RT		1	32 0329	0728A032.D	RF99A	PL2C-DB-11-0	1
02	0728A011.D	IB		1	33 0351	0728A033.D	RF99B	PL2-DB-11-10	1
24	0728A012.D	DIESEL 50		1	34 0412	0728A034.D	RF99BMS	PL2-DB-11-10	1
45	0728A013.D	DIESEL 100		1	35 0433	0728A035.D	RF99BMSD	PL2-DB-11-10	1
07	0728A014.D	DIESEL 250		1	36 0454	0728A036.D	DIESEL#2		1
28	0728A015.D	DIESEL 500		1	37 0515	0728A037.D	MOIL#2		1
49	0728A016.D	DIESEL 1000		1	38 0537	0728A038.D	BUNKERCH2		1
11	0728A017.D	DIESEL 2500		1	39 1349	0728A039.D	RF99A	PL2C-DB-11-0	5
32	0728A018.D	DIESEL ICV		1	40 1410	0728A040.D	DIESEL#3		1
53	0728A019.D	MOIL 100		1	41 1432	0728A041.D	MOIL#3		1
15	0728A020.D	MOIL 250		1	42 1453	0728A042.D	BUNKERCH3		1
36	0728A021.D	MOIL 500		1					
57	0728A022.D	MOIL 1000		1					

**Maintenance / Comments**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Maintenance Verification** (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

Report Date : 30-Jul-2010 17:02

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/fid9.i/20100728.B/ftphfid9a.m  
Batch File: /chem2/fid9.i/20100728.B  
Inst ID: fid9.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	1.545	1.545	1.542	1.550	1.522	1.527	1.536	1.436-1.636	1.539	0.011
37 JET-A	1.621	1.620	1.617	1.625	1.631	1.619	1.624	1.574-1.674	1.622	0.005
2 C8	1.699	1.703	1.700	1.707	1.681	1.696	1.694	1.594-1.794	1.698	0.009
3 C10	2.459	2.452	2.450	2.453	2.453	2.446	2.455	2.405-2.505	2.452	0.004
4 C12	3.101	3.103	3.102	3.103	3.105	3.108	3.091	3.041-3.141	3.104	0.002
5 C14	3.623	3.659	3.657	3.658	3.660	3.623	3.641	3.591-3.691	3.647	0.018
6 C16	4.138	4.123	4.122	4.122	4.123	4.129	4.128	4.078-4.178	4.126	0.006
7 C18	4.565	4.567	4.567	4.564	4.571	4.575	4.569	4.519-4.619	4.568	0.004
8 o-terph	4.760	4.762	4.771	4.780	4.795	4.830	4.767	4.717-4.817	4.783	0.026
9 C20	5.072	5.075	5.073	5.074	5.075	5.065	5.072	5.022-5.122	5.072	0.004
10 C22	5.592	5.588	5.589	5.584	5.588	5.599	5.589	5.539-5.639	5.590	0.005
11 C24	6.019	6.023	6.028	6.031	6.012	6.014	6.020	5.970-6.070	6.021	0.008
12 C25	6.225	6.197	6.201	6.201	6.201	6.200	6.212	6.162-6.262	6.204	0.010
13 C26	6.395	6.406	6.387	6.392	6.390	6.393	6.392	6.342-6.442	6.394	0.007
14 C28	6.710	6.710	6.716	6.713	6.716	6.714	6.723	6.673-6.773	6.713	0.003
15 Triacon Surr	7.038	7.036	7.038	7.035	7.032	7.036	7.038	6.988-7.088	7.036	0.002
16 C32	7.303	7.307	7.308	7.307	7.302	7.300	7.309	7.259-7.359	7.304	0.003

Reviewer 1 *AS* Date: 7/30/10  
 Reviewer 2 *AS* Date: 7/30/10

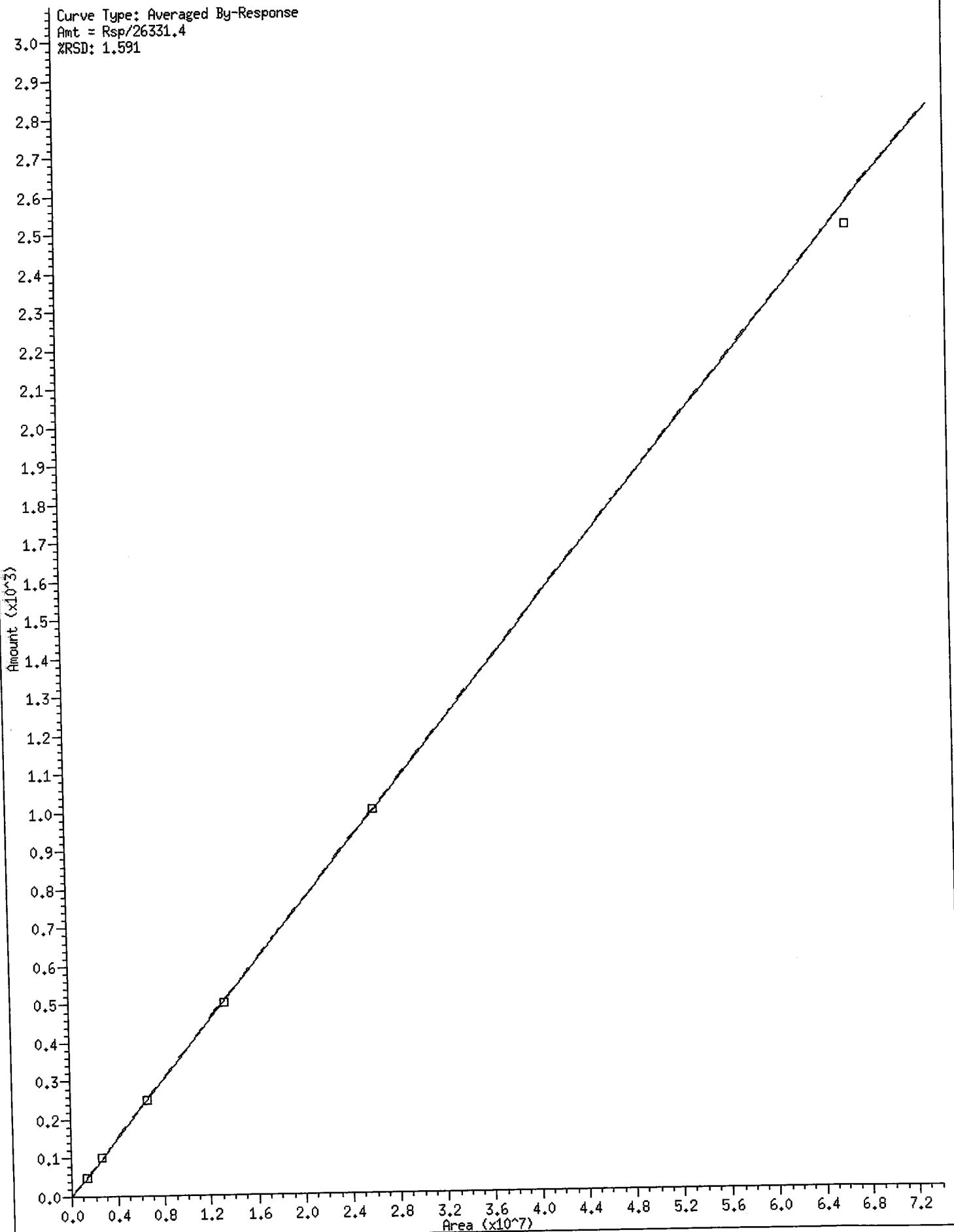
Report Date : 30-Jul-2010 17:02

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/fid9.i/20100728.B/ftphfid9a.m  
Batch File: /chem2/fid9.i/20100728.B  
Inst ID: fid9.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.594	7.593	7.600	7.599	7.591	7.598	7.596	7.546-7.646	7.596	0.004
18 Filter Peak	8.346	8.338	8.344	8.347	8.345	8.352	8.343	8.243-8.443	8.345	0.004
19 C36	7.939	7.942	7.941	7.946	7.947	7.939	7.945	7.895-7.995	7.942	0.003
20 C38	8.383	8.378	8.377	8.380	8.386	8.372	8.380	8.330-8.430	8.379	0.005
21 C40	8.938	8.938	8.935	8.933	8.938	8.930	8.935	8.885-8.985	8.935	0.003
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.513	0.463-0.563	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.690	0.640-0.740	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.660	0.610-0.710	+++++	+++++
30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 OR MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.658	0.608-0.708	+++++	+++++
38 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.705	0.655-0.755	+++++	+++++
39 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.550	0.500-0.600	+++++	+++++

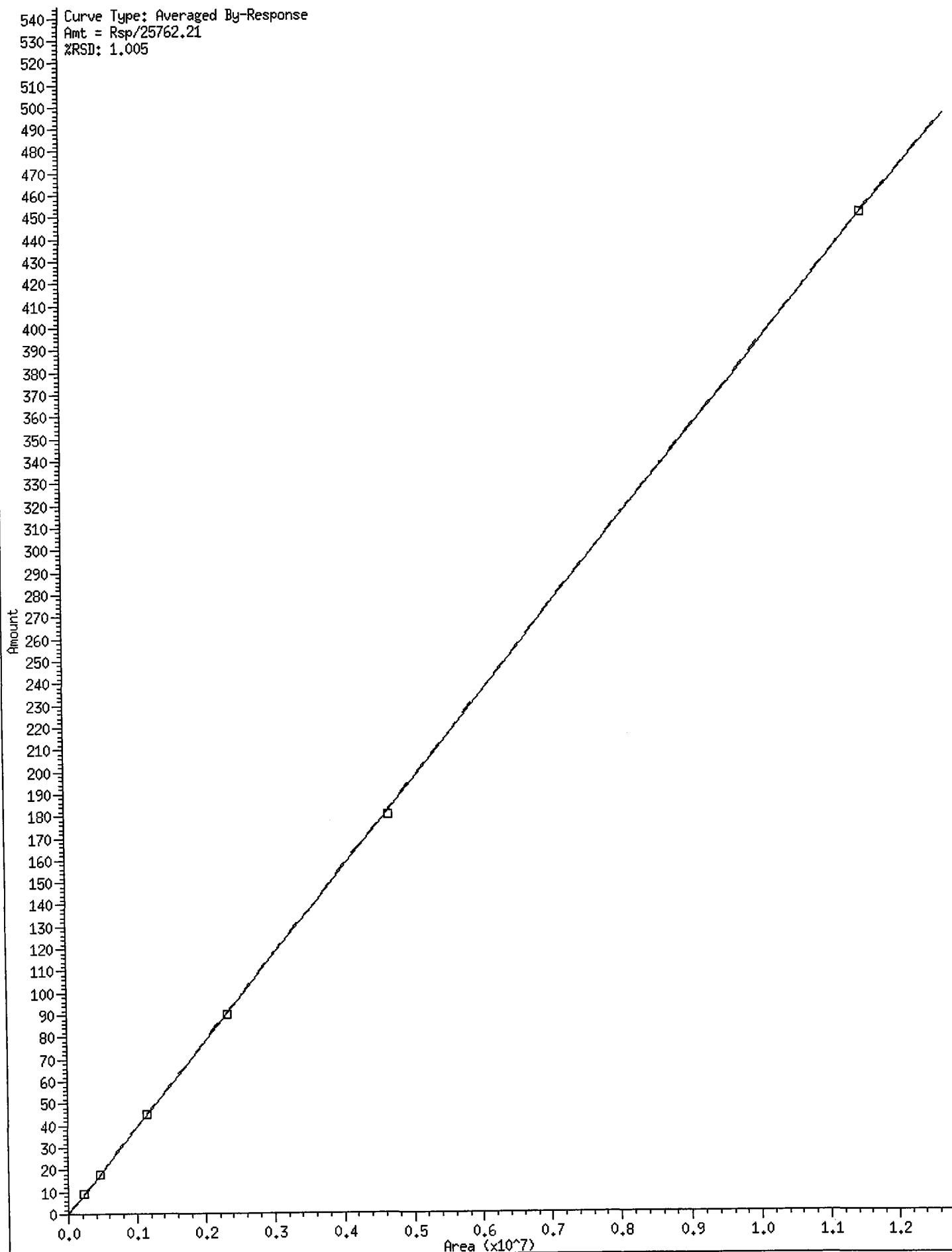
31 NW Diesel





\* 8 o-terph

Curve Type: Averaged By-Response  
Amt = Rsp/25762.21  
%RSD: 1.005



RG54 : 00941

Report Date : 30-Jul-2010 17:02

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/fid9.i/20100728.B/ftphfid9a.m  
Batch File: /chem2/fid9.i/20100728.B  
Inst ID: fid9.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	1.544	1.542	1.544	1.538	1.538	1.505	1.536	1.436-1.636	1.535	0.017
37 JET-A	1.598	1.620	1.621	1.654	1.654	1.505	1.624	1.574-1.674	1.624	0.023
2 C8	1.726	1.701	1.728	1.703	1.718	1.724	1.694	1.594-1.794	1.717	0.012
3 C10	2.453	2.453	2.454	2.453	2.459	2.462	2.455	2.405-2.505	2.456	0.004
4 C12	3.087	3.084	3.094	3.089	3.085	3.104	3.091	3.041-3.141	3.090	0.008
5 C14	3.638	3.641	3.642	3.639	3.640	3.646	3.641	3.591-3.691	3.641	0.003
6 C16	4.130	4.130	4.125	4.129	4.130	4.129	4.128	4.078-4.178	4.129	0.002
7 C18	4.564	4.564	4.561	4.560	4.559	4.560	4.569	4.519-4.619	4.561	0.002
8 o-terph	4.766	4.766	4.764	4.764	4.762	4.761	4.767	4.717-4.817	4.764	0.002
9 C20	5.075	5.076	5.072	5.072	5.069	5.070	5.072	5.022-5.122	5.072	0.003
10 C22	5.588	5.593	5.593	5.597	5.589	5.582	5.589	5.539-5.639	5.590	0.005
11 C24	6.024	6.019	6.019	6.018	6.020	6.023	6.020	5.970-6.070	6.020	0.003
12 C25	6.222	6.217	6.211	6.213	6.215	6.207	6.212	6.162-6.262	6.214	0.005
13 C26	6.393	6.394	6.394	6.389	6.388	6.393	6.392	6.342-6.442	6.392	0.003
14 C28	6.715	6.719	6.721	6.720	6.725	6.726	6.723	6.673-6.773	6.721	0.004
15 Triacon Surr	7.080	7.087	7.094	7.105	7.129	7.160	7.038	6.988-7.088	7.109	0.030
16 C32	7.310	7.310	7.312	7.310	7.308	7.305	7.309	7.259-7.359	7.309	0.002

\* NOT in M011 range

Reviewer 1: Mr. A Date: 7/30/10  
Reviewer 2: BB Date: 7/30/10

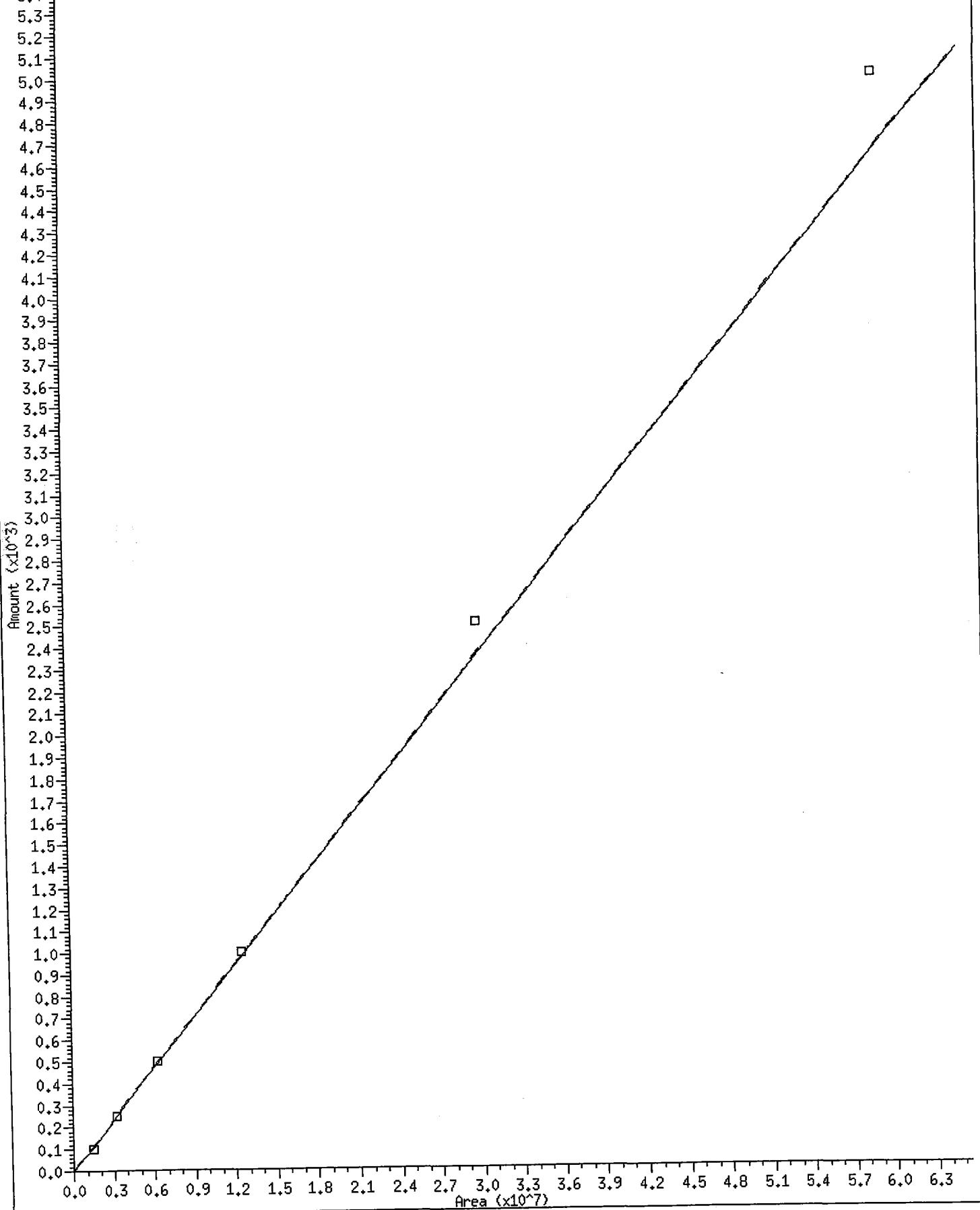
Report Date : 30-Jul-2010 17:02

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/fid9.i/20100728.B/ftphfid9a.m  
Batch File: /chem2/fid9.i/20100728.B  
Inst ID: fid9.i

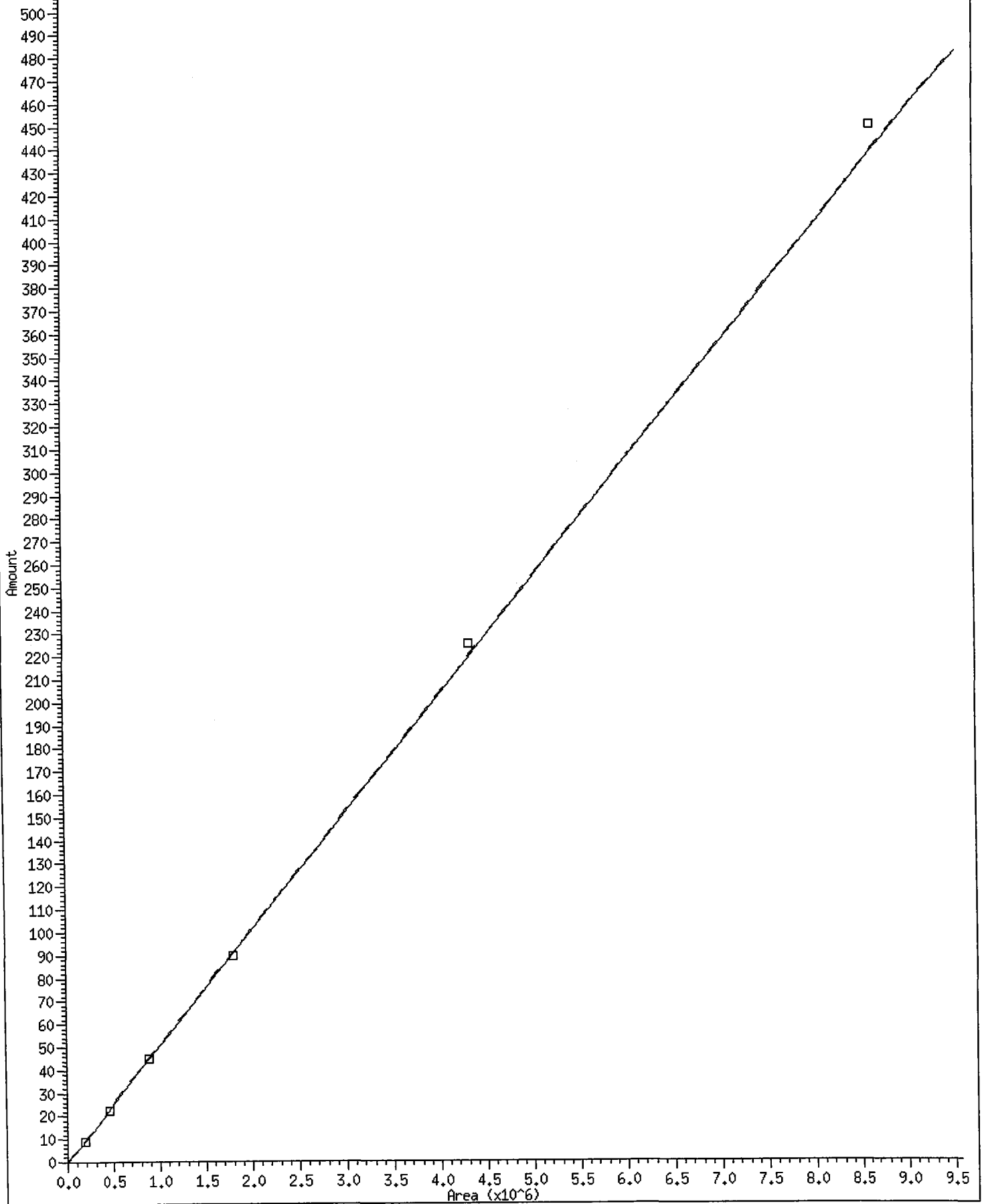
Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.596	7.596	7.600	7.599	7.594	7.597	7.596	7.546-7.646	7.597	0.002
18 Filter Peak	8.344	8.341	8.350	8.345	8.350	8.346	8.343	8.243-8.443	8.346	0.003
19 C36	7.940	7.941	7.944	7.948	7.944	7.943	7.945	7.895-7.995	7.943	0.003
20 C38	8.385	8.372	8.382	8.376	8.379	8.379	8.380	8.330-8.430	8.379	0.005
21 C40	8.936	8.931	8.934	8.939	8.938	8.935	8.935	8.885-8.985	8.935	0.003
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.513	0.463-0.563	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.690	0.640-0.740	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.660	0.610-0.710	+++++	+++++
30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 OR MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.658	0.608-0.708	+++++	+++++
38 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.705	0.655-0.755	+++++	+++++
39 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.550	0.500-0.600	+++++	+++++

Curve Type: Averaged By-Response  
Amt = Rsp/12787.21  
%RSD: 7.943



15 Triacon Surr

Curve Type: Averaged By-Response  
Amt = Rsp/19832.14  
%RSD: 2.295



RG54 : 00945

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A010.D  
Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 07/30/2010

ARI ID: RT  
Client ID:  
Injection: 28-JUL-2010 19:41  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.517	-0.019	514141	368763	GAS (Tol-C12)	1598268	76
C8	1.679	-0.015	287076	219985	DIESEL (C12-C24)	2425733	92
C10	2.459	0.004	526070	361774	M.OIL (C24-C38)	2580605	202
C12	3.102	0.011	705102	359778	AK-102 (C10-C25)	3167879	109
C14	3.656	0.015	709667	369366	AK-103 (C25-C36)	2254193	450
C16	4.147	0.018	748678	378104			
C18	4.594	0.025	597504	389741			
C20	5.109	0.036	506632	399062			
C22	5.624	0.035	543393	407898			
C24	6.058	0.038	581384	415443			
C25	6.254	0.041	732950	574610			
C26	6.434	0.042	563052	414700			
C28	6.769	0.046	524645	402665			
C32	7.355	0.046	442076	355003	JP-4 (Tol-C14)	1979943	121
C34	7.657	0.060	305593	316465	BUNKERC (C10-C38)	5745980	655
Filter Peak	8.342	-0.001	1743	1072			
C36	8.026	0.081	206132	287767			
C38	8.492	0.112	129300	109189			
C40	9.087	0.151	90977	37584			
o-terph	4.767	0.000	1717828	1429326	JET-A (C10-C18)	1904617	138
Triacon Surr	7.082	0.044	1365216	1311650	JP8 (Tol-C16)	2365997	134

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

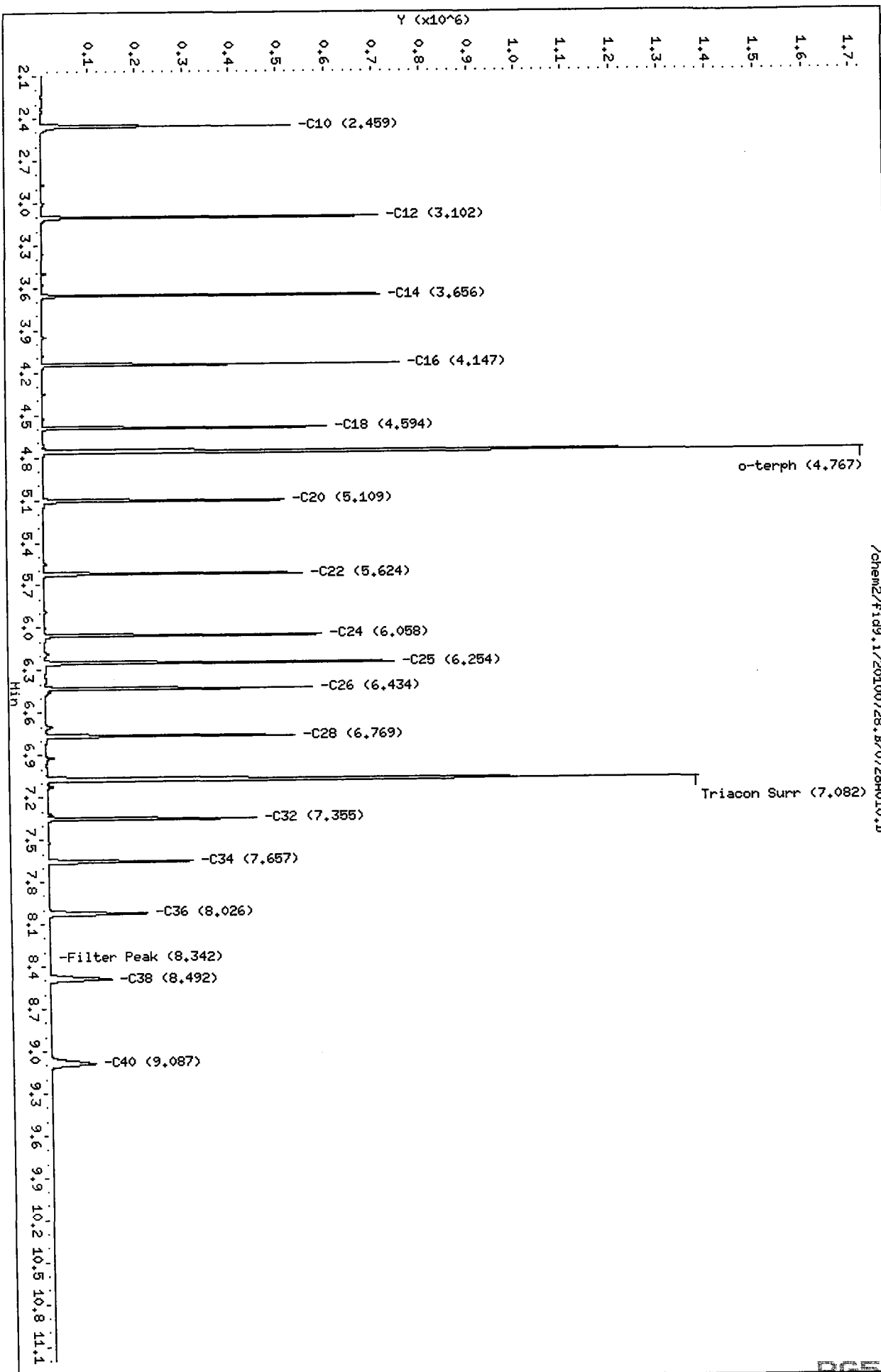
Surrogate	Area	Amount	%Rec
o-Terphenyl	1429326	55.5	123.3
Triacontane	1311650	66.1	147.0

*MS 7/30/10*

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100728.B/0728A010.D  
Date: 28-JUL-2010 19:41  
Client ID:  
Sample Info: RT  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



/chem2/fid9.i/20100728.B/0728A010.D

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A011.D  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 07/30/2010

ARI ID: IB  
 Client ID:  
 Injection: 28-JUL-2010 20:02  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS							
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.530	-0.006	10941	17318	GAS (Tol-C12)	213324	10
C8	1.689	-0.004	6937	4554	DIESEL (C12-C24)	27462	1
C10	2.452	-0.003	2699	2277	M.OIL (C24-C38)	135692	11
C12	3.103	0.012	581	482	AK-102 (C10-C25)	59825	2
C14	3.647	0.006	145	62	AK-103 (C25-C36)	103591	21
C16	4.132	0.003	47	14			
C18	4.567	-0.002	71	44			
C20	5.077	0.005	81	41			
C22	5.586	-0.003	141	94			
C24	6.011	-0.009	520	631			
C25	6.214	0.002	168	71			
C26	6.389	-0.003	226	197			
C28	6.736	0.013	375	109			
C32	7.298	-0.011	1141	226	JP-4 (Tol-C14)	221641	14
C34	7.601	0.004	1286	813	BUNKERC (C10-C38)	194987	22
Filter Peak	8.344	0.001	1309	1007			
C36	7.945	0.001	1333	1009			
C38	8.378	-0.003	1295	257			
C40	8.936	0.001	1347	505			
o-terph	4.769	0.002	1793639	1571761	JET-A (C10-C18)	48714	4
Triacon Surr	7.081	0.043	1256163	1194769	JP8 (Tol-C16)	226922	13

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1571761	61.0	135.6
Triacotane	1194769	60.2	133.9

*MW 7/20/10*

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010



Data File: /chem2/fid9.i/20100728.B/0728A011.D

Date: 28-JUL-2010 20:02

Client ID:

Sample Info: IB

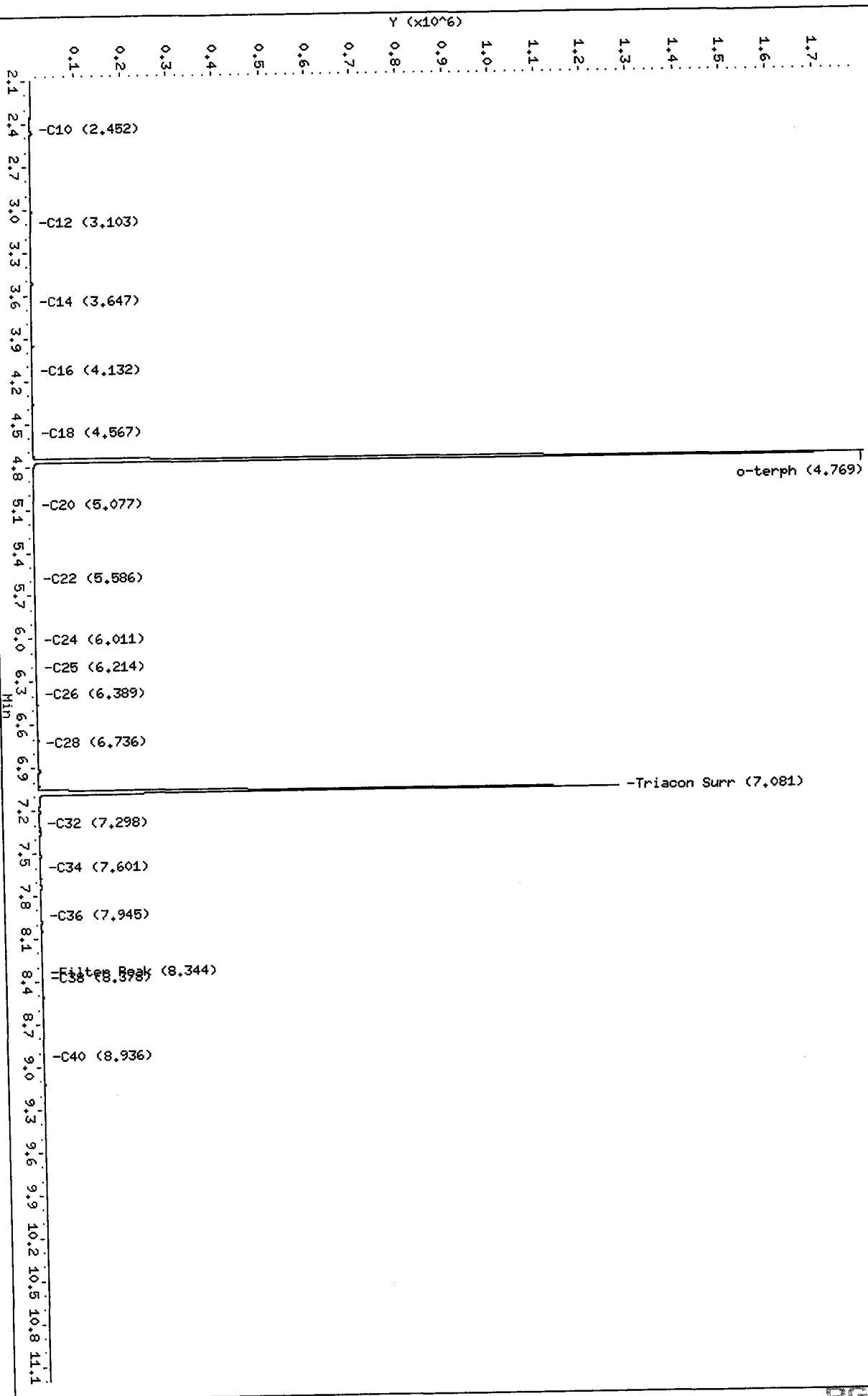
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

/chem2/fid9.i/20100728.B/0728A011.D



00040

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A012.D  
Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 07/30/2010

ARI ID: DIESEL 50  
Client ID:  
Injection: 28-JUL-2010 20:24  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.545	0.009	7102	15475	GAS (Tol-C12)	304122	14
C8	1.699	0.005	4935	5847	DIESEL (C12-C24)	1289892	49
C10	2.459	0.004	6197	8547	M.OIL (C24-C38)	72828	6
C12	3.101	0.010	13983	8220	AK-102 (C10-C25)	1422020	49 M
C14	3.623	-0.018	9291	10648	AK-103 (C25-C36)	50537	10
C16	4.138	0.009	11473	15225			
C18	4.565	-0.004	9397	11253			
C20	5.072	-0.001	4990	3711			
C22	5.592	0.004	2910	2637			
C24	6.019	-0.001	1136	455			
C25	6.225	0.013	442	364			
C26	6.395	0.003	185	147			
C28	6.710	-0.013	1703	1464			
C32	7.303	-0.006	467	137	JP-4 (Tol-C14)	499108	30
C34	7.594	-0.002	729	202	BUNKERC (C10-C38)	1491900	170 M
Filter Peak	8.346	0.003	768	227			
C36	7.939	-0.006	787	1098			
C38	8.383	0.003	750	640			
C40	8.938	0.003	800	514			
o-terph	4.760	-0.007	374938	229869	JET-A (C10-C18)	997196	72
Triacon Surr	7.038	0.000	197	80	JP8 (Tol-C16)	827113	47

M Indicates manual integration within range.

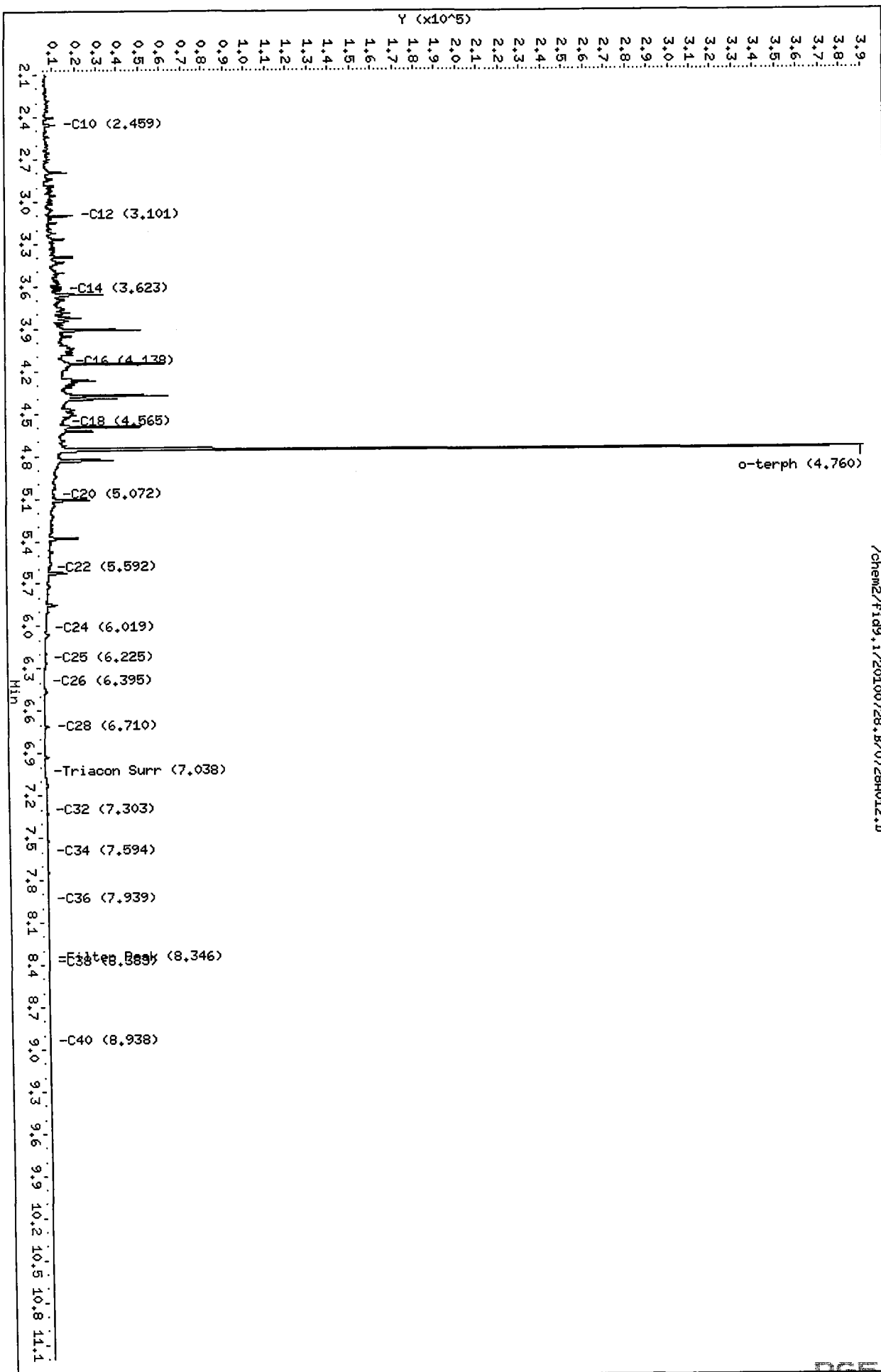
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	229869	8.9	19.8
Triacontane	80	0.0	0.0

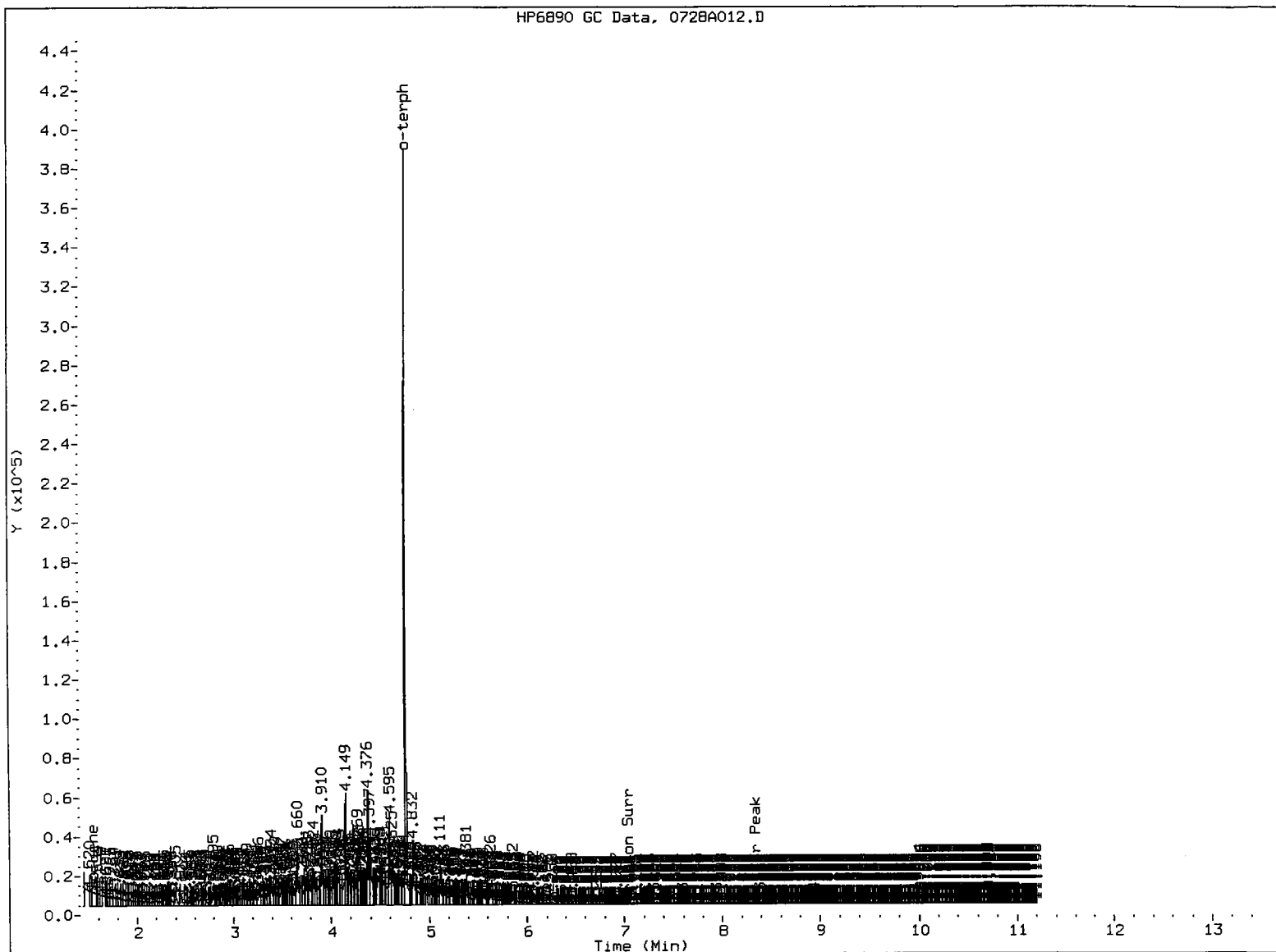
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100728.B/0728A012.D  
 Date: 28-JUL-2010 20:24  
 Client ID:  
 Sample Info: DIESEL 50  
 Column phase: RTX-1

Instrument: fid9.i  
 Operator: HS  
 Column diameter: 0.25



HP6890 GC Data, 0728A012.D



MANUAL INTEGRATION

- ① Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MM

Date: 7/30/10

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A013.D  
Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 07/30/2010

ARI ID: DIESEL 100  
Client ID:  
Injection: 28-JUL-2010 20:45  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.545	0.009	9394	12882	GAS (Tol-C12)	449059	21
C8	1.703	0.009	5426	7074	DIESEL (C12-C24)	2602087	99
C10	2.452	-0.003	3226	2569	M.OIL (C24-C38)	87640	7
C12	3.103	0.012	29285	17940	AK-102 (C10-C25)	2864062	99 M
C14	3.659	0.018	59261	58165	AK-103 (C25-C36)	61637	12
C16	4.123	-0.005	19941	17906			
C18	4.567	-0.002	19222	19309			
C20	5.075	0.002	10542	10663			
C22	5.588	0.000	5975	5552			
C24	6.023	0.003	2217	1308			
C25	6.197	-0.015	2531	4056			
C26	6.406	0.015	394	352			
C28	6.710	-0.013	3648	2966			
C32	7.307	-0.002	362	195	JP-4 (Tol-C14)	845763	52
C34	7.593	-0.004	637	240	BUNKERC (C10-C38)	2943973	336 M
Filter Peak	8.338	-0.005	643	405			
C36	7.942	-0.002	671	500			
C38	8.378	-0.002	638	365			
C40	8.938	0.002	649	435			
o-terph	4.762	-0.005	704196	457301	JET-A (C10-C18)	2010708	146
Triacon Surr	7.036	-0.002	119	42	JP8 (Tol-C16)	1503559	85

M Indicates manual integration within range.  
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	457301	17.8	39.4
Triacotane	42	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100728.B/0728R013.D

Date: 28-JUL-2010 20:45

Client ID:

Sample Info: DIESEL 100

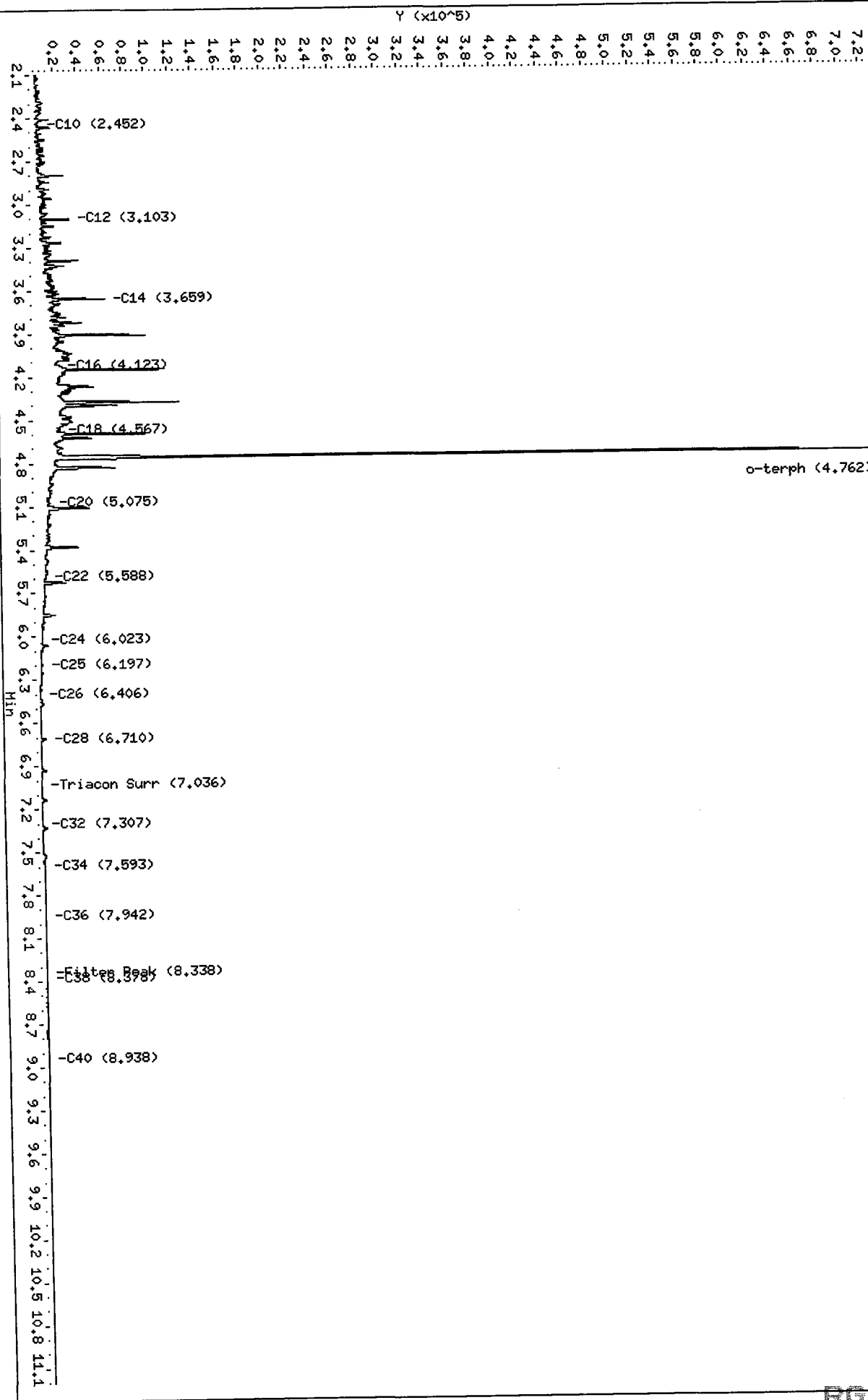
Column phase: RTX-1

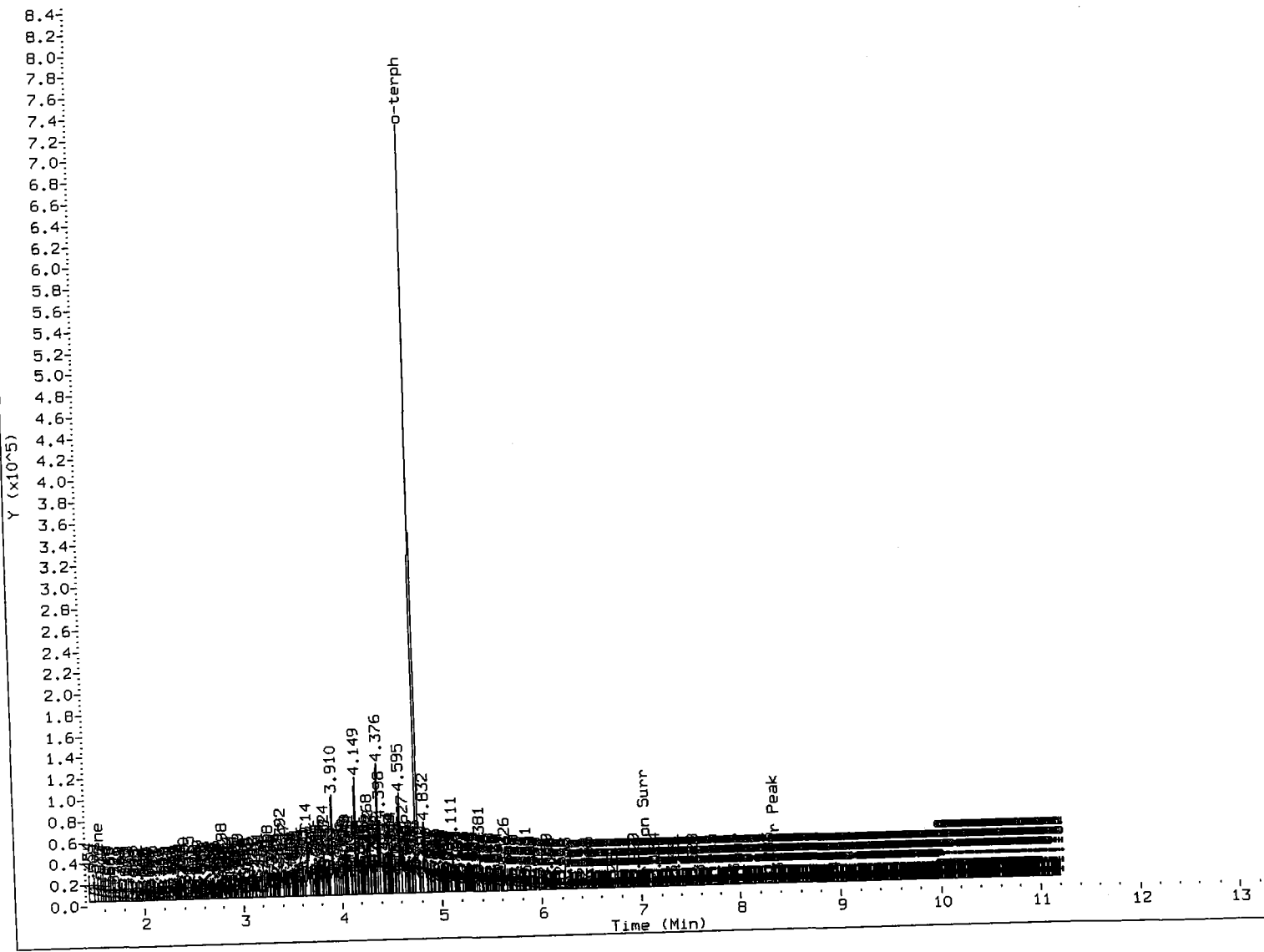
Instrument: fid9.i

Operator: MS

Column diameter: 0.25

/chem2/fid9.i/20100728.B/0728R013.D





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: Me

Date: APR 16

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A014.D  
Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 07/30/2010

ARI ID: DIESEL 250  
Client ID:  
Injection: 28-JUL-2010 21:07  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.542	0.006	14752	16460	GAS (Tol-C12)	999032	48
C8	1.700	0.006	8159	9848	DIESEL (C12-C24)	6571699	250
C10	2.450	-0.005	6508	5183	M.OIL (C24-C38)	128061	10
C12	3.102	0.011	80325	46536	AK-102 (C10-C25)	7261009	250 M
C14	3.657	0.016	148765	146845	AK-103 (C25-C36)	95793	19
C16	4.122	-0.007	48814	34422			
C18	4.567	-0.002	47241	38471			
C20	5.073	0.001	26043	28336			
C22	5.589	0.000	14890	4727			
C24	6.028	0.008	5981	4805			
C25	6.201	-0.012	6774	13133			
C26	6.387	-0.005	1514	1078			
C28	6.716	-0.007	5763	5256			
C32	7.308	-0.001	228	49	JP-4 (Tol-C14)	2097448	128
C34	7.600	0.003	463	110	BUNKERC (C10-C38)	7369358	840 M
Filter Peak	8.344	0.001	446	316			
C36	7.941	-0.004	482	433			
C38	8.377	-0.004	442	324			
C40	8.935	0.000	425	91			
o-terph	4.771	0.004	1353388	1159153	JET-A (C10-C18)	5066220	367
Triacon Surr	7.038	0.000	49	14	JP8 (Tol-C16)	3698235	210

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

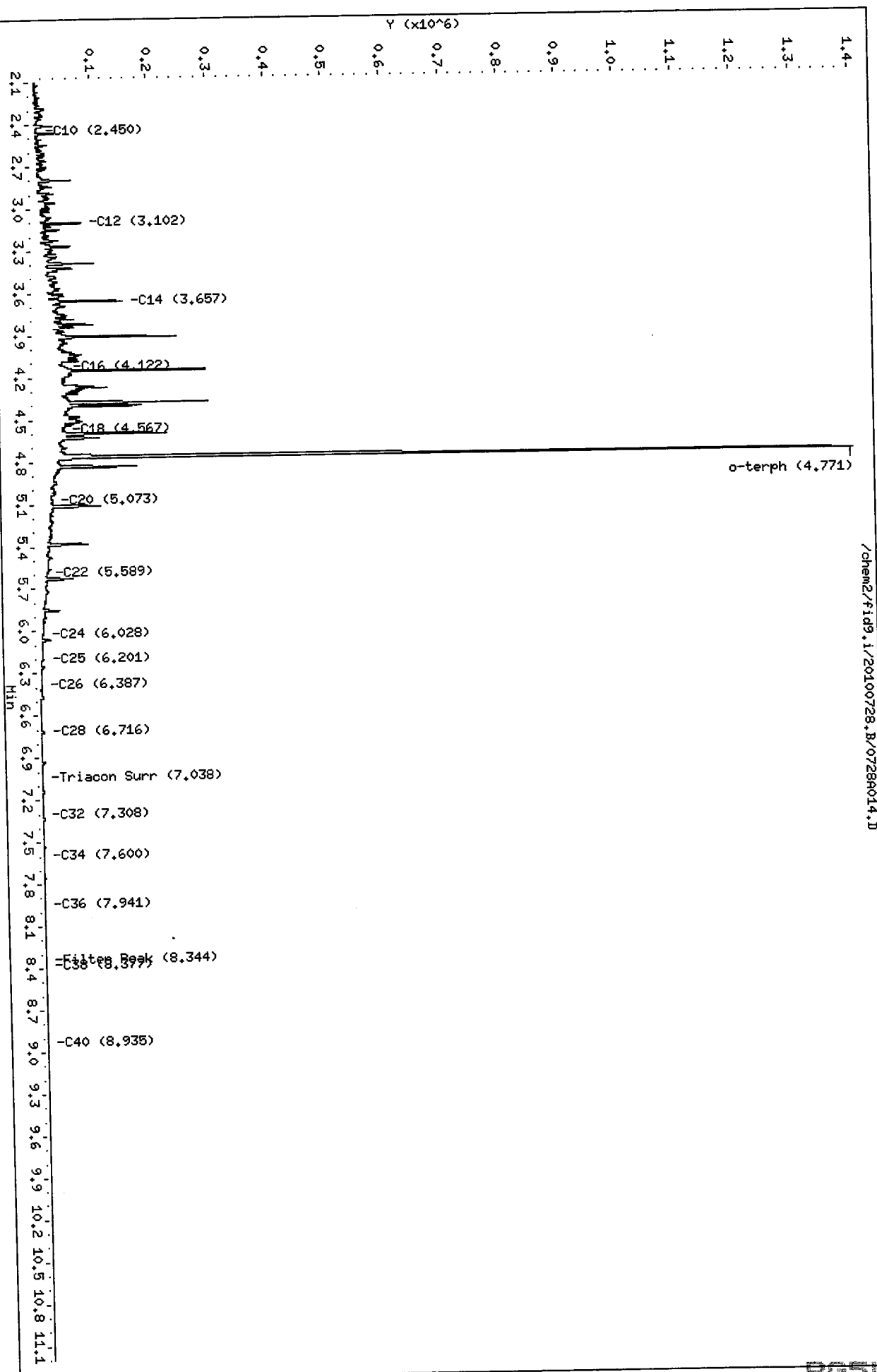
Surrogate	Area	Amount	%Rec
o-Terphenyl	1159153	45.0	100.0
Triacontane	14	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

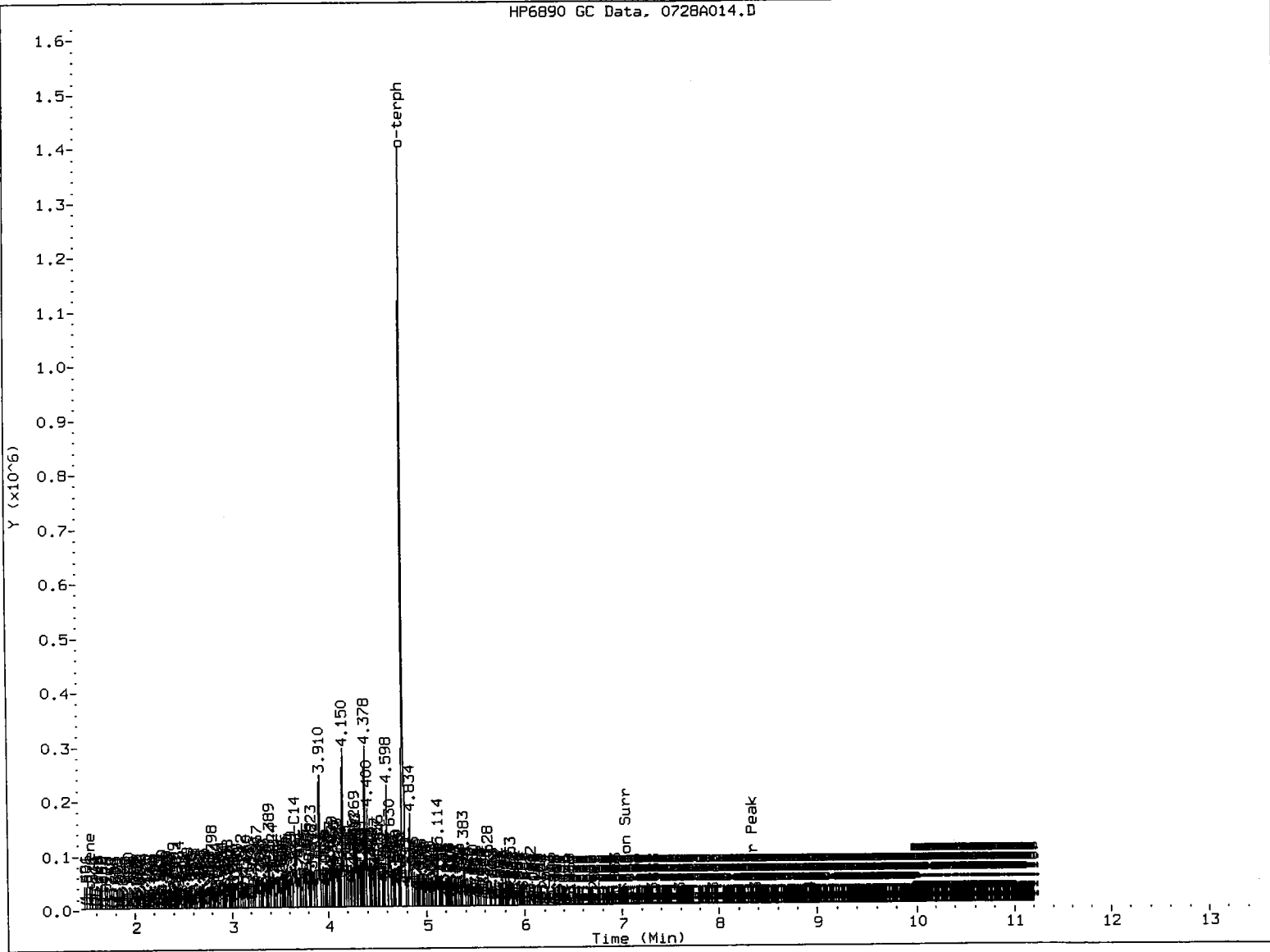


Data File: /chem2/fid9.1/20100728.B/0728A014.D  
Date: 28-JUL-2010 21:07  
Client ID:  
Sample Info: DIESEL 250  
Column phase: RTX-1

Instrument: fid9.1  
Operator: HS  
Column diameter: 0.25



HP6890 GC Data, 0728A014.D



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other \_\_\_\_\_

Analyst:           *JM*           Date:           7/30/00

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A015.D  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 07/30/2010

ARI ID: DIESEL 500  
 Client ID:  
 Injection: 28-JUL-2010 21:28  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.550	0.014	24092	21960	GAS (Tol-C12)	1901504	91
C8	1.707	0.013	12840	13683	DIESEL (C12-C24)	13349530	507
C10	2.453	-0.002	10841	4396	M.OIL (C24-C38)	182963	14
C12	3.103	0.012	165409	95735	AK-102 (C10-C25)	14740415	507 M
C14	3.658	0.017	311239	296922	AK-103 (C25-C36)	133392	27
C16	4.122	-0.006	99870	66038			
C18	4.564	-0.005	95431	110341			
C20	5.074	0.002	52479	17444			
C22	5.584	-0.004	30444	11329			
C24	6.031	0.011	12477	13304			
C25	6.201	-0.012	7950	11851			
C26	6.392	0.000	3328	3066			
C28	6.713	-0.010	2681	3159			
C32	7.307	-0.002	133	71	JP-4 (Tol-C14)	4128068	252
C34	7.599	0.003	311	54	BUNKERC (C10-C38)	14881360	1697 M
Filter Peak	8.347	0.003	266	158			
C36	7.946	0.002	325	199			
C38	8.380	0.000	252	200			
C40	8.933	-0.002	215	132			
o-terph	4.780	0.013	2231500	2341636	JET-A (C10-C18)	10357341	749
Triacon Surr	7.035	-0.003	24	5	JP8 (Tol-C16)	7327543	416

M Indicates manual integration within range.

Range Times: NW Diesel (3.091 - 6.020) AK102 (2.46 - 6.21) Jet A (2.46 - 4.57)  
 NW M.Oil (6.02 - 8.38) AK103 (6.21 - 7.94) OR Diesel (2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2341636	90.9	202.0
Triacontane	5	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.1/20100728.B/0728A015.D

Date: 28-JUL-2010 21:28

Client ID:

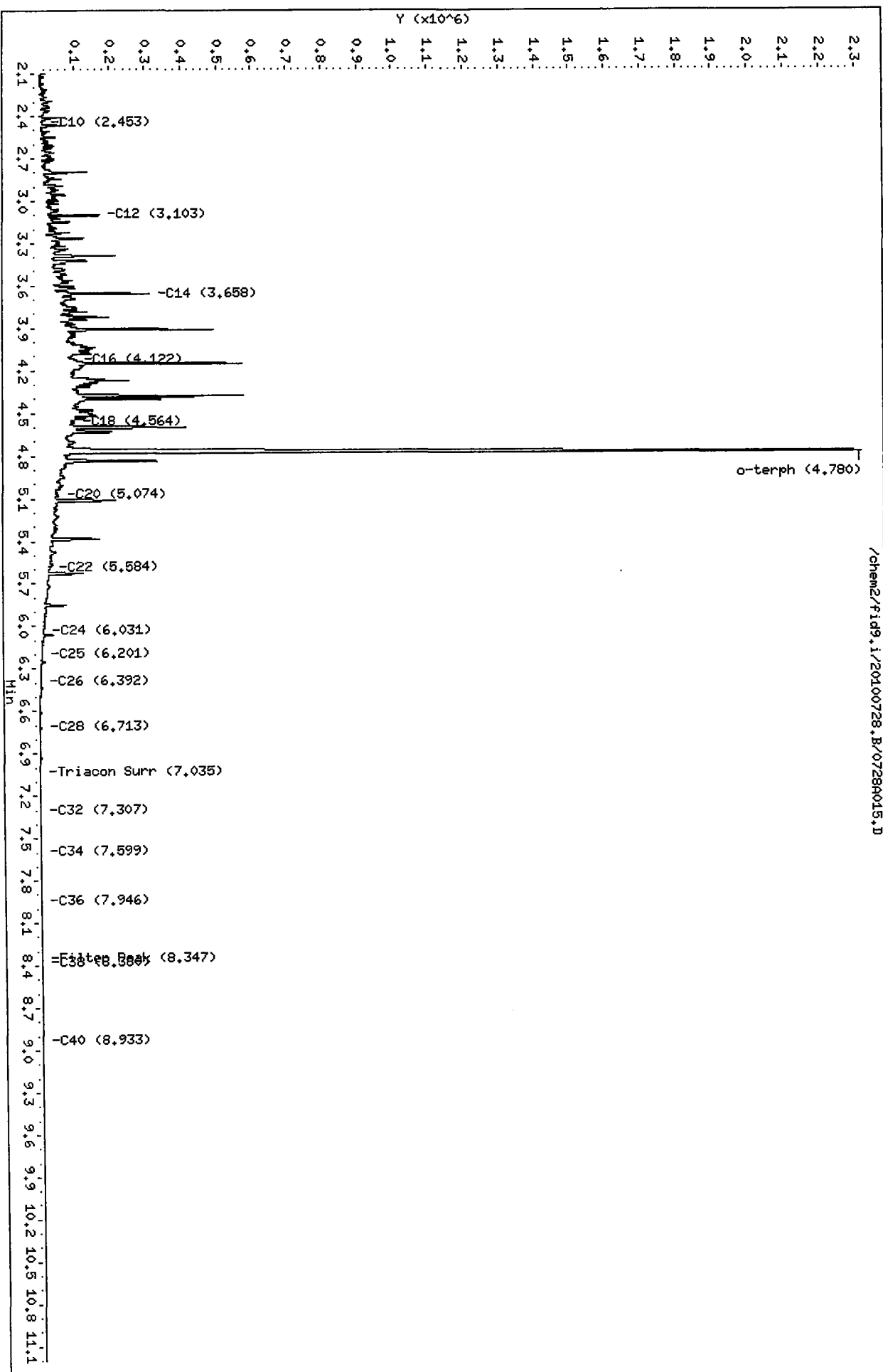
Sample Info: DIESEL 500

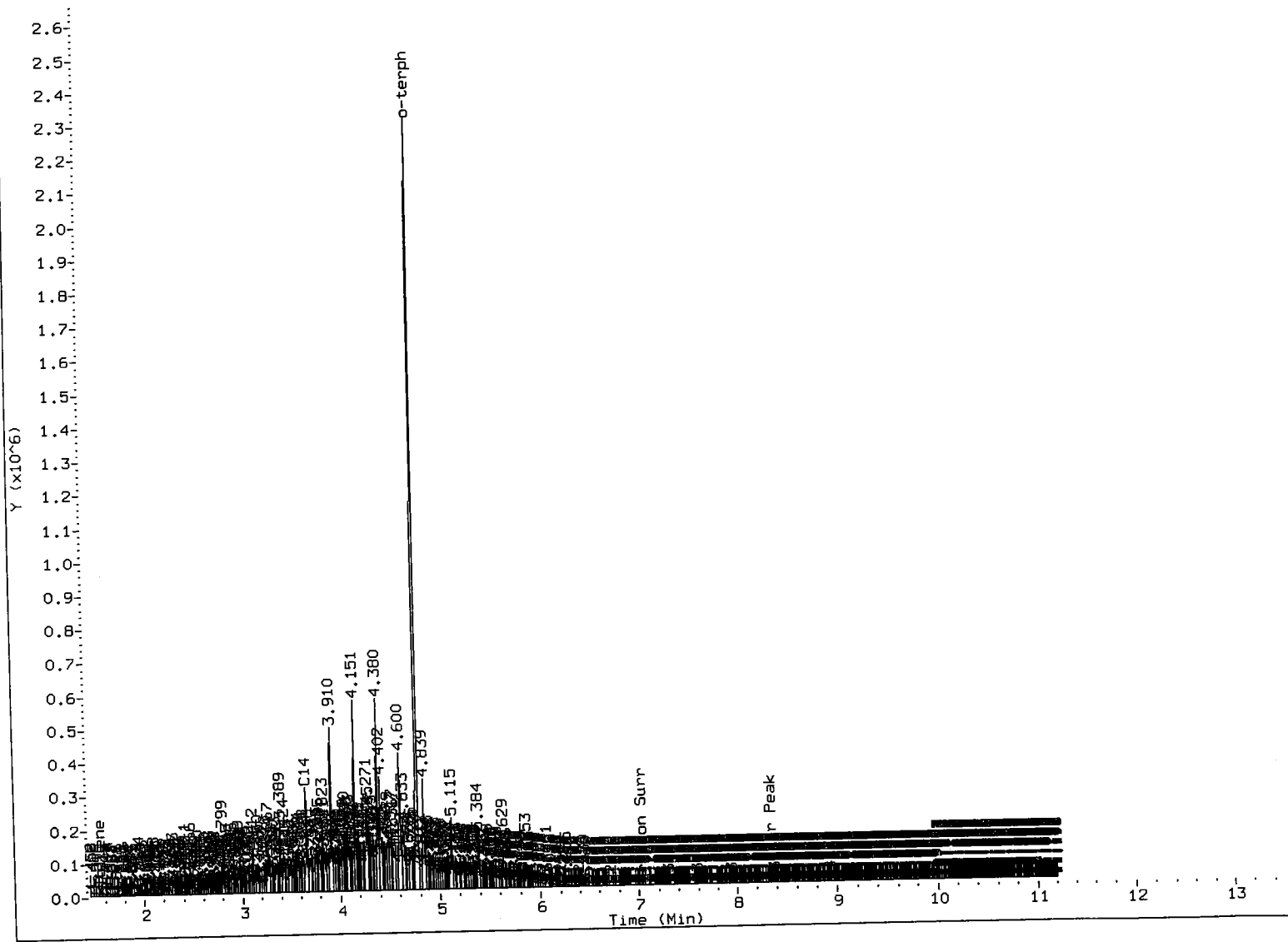
Column phase: RTX-1

Instrument: fid9.1

Operator: MS

Column diameter: 0.25





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: Mu

Date: 7/30/10

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A016.D  
Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 07/30/2010

ARI ID: DIESEL 1000  
Client ID:  
Injection: 28-JUL-2010 21:49  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.522	-0.014	10876	15528	GAS (Tol-C12)	3531545	168
C8	1.681	-0.013	9803	11090	DIESEL (C12-C24)	26257622	997
C10	2.453	-0.002	18978	7692	M.OIL (C24-C38)	394336	31
C12	3.105	0.014	327593	189038	AK-102 (C10-C25)	28983377	998 M
C14	3.660	0.019	587586	585940	AK-103 (C25-C36)	290957	58
C16	4.123	-0.005	194975	156606			
C18	4.571	0.002	188327	195568			
C20	5.075	0.003	102065	48020			
C22	5.588	-0.001	60397	13108			
C24	6.012	-0.008	28768	31861			
C25	6.201	-0.011	17610	33377			
C26	6.390	-0.002	7211	10254			
C28	6.716	-0.006	7614	9107			
C32	7.302	-0.007	202	83	JP-4 (Tol-C14)	7631157	465
C34	7.591	-0.005	294	192	BUNKERC (C10-C38)	29281417	3339 M
Filter Peak	8.345	0.002	161	90			
C36	7.947	0.002	235	162			
C38	8.386	0.006	146	81			
C40	8.938	0.002	67	15			
o-terph	4.795	0.028	3156698	4692065	JET-A (C10-C18)	20311515	1470
Triacon Surr	7.032	-0.006	267	242	JP8 (Tol-C16)	14220053	808

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	4692065	182.1	404.7
Triacontane	242	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9,i/20100728,B/0728A016.D

Date: 28-JUL-2010 21:49

Client ID:

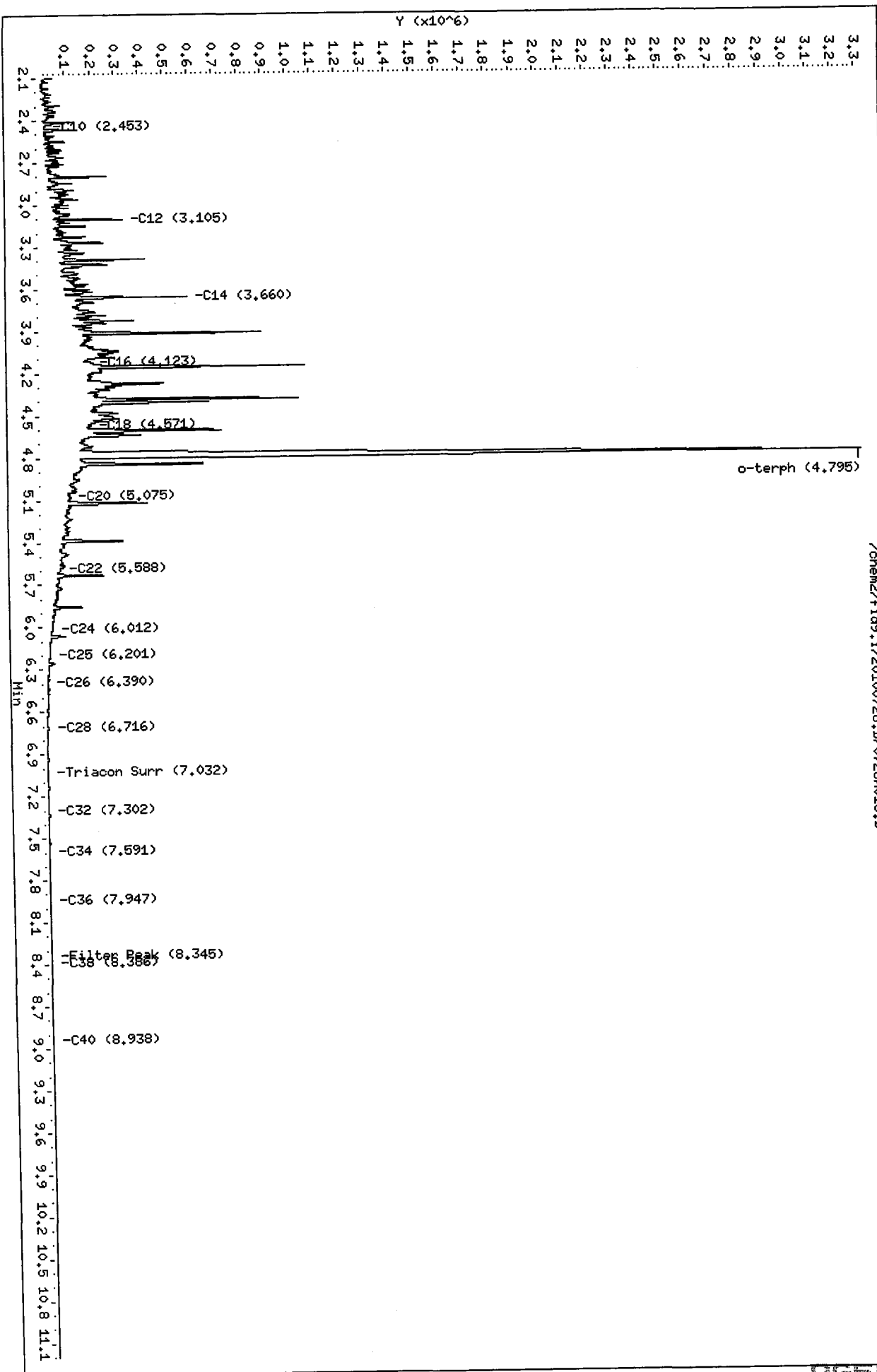
Sample Info: DIESEL 1000

Column phase: RTX-1

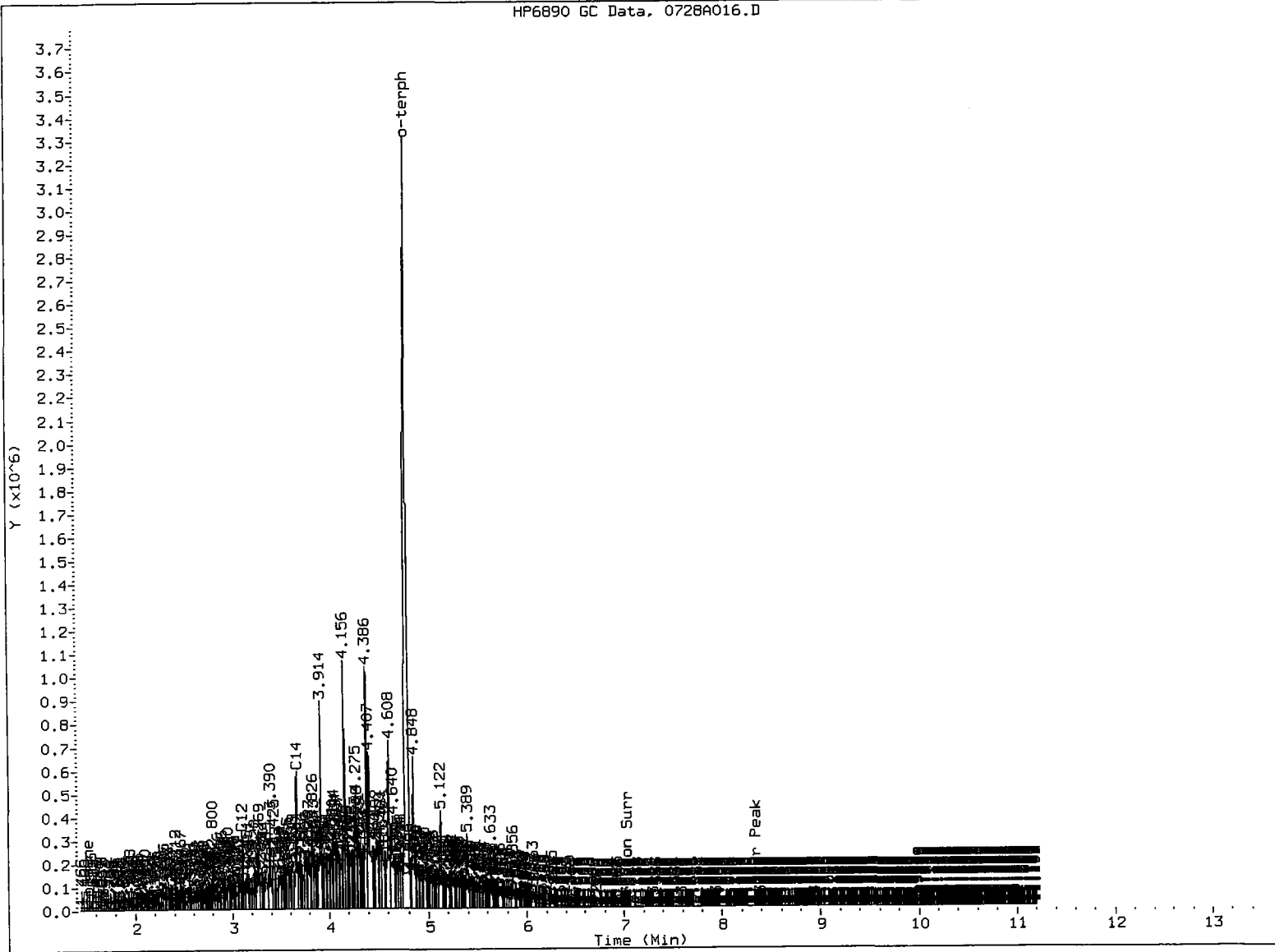
Instrument: fid9.i

Operator: HS

Column diameter: 0.25



HP6890 GC Data, 0728A016.D



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MM

Date: 7/30/10



Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A017.D  
Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 07/30/2010

ARI ID: DIESEL 2500  
Client ID:  
Injection: 28-JUL-2010 22:11  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS							
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.527	-0.009	13560	11562	GAS (Tol-C12)	8824002	420
C8	1.696	0.002	11080	4589	DIESEL (C12-C24)	67315582	2557
C10	2.446	-0.009	54486	45945	M.OIL (C24-C38)	1069546	84
C12	3.108	0.017	766741	530976	AK-102 (C10-C25)	74315545	2558 M
C14	3.623	-0.018	472383	536342	AK-103 (C25-C36)	814815	163
C16	4.129	0.001	485188	391044			
C18	4.575	0.006	464619	138288			
C20	5.065	-0.008	324441	293811			
C22	5.599	0.011	159352	44294			
C24	6.014	-0.006	74943	92274			
C25	6.200	-0.013	55517	125809			
C26	6.393	0.001	18866	27921			
C28	6.714	-0.009	18491	25629			
C32	7.300	-0.009	811	206	JP-4 (Tol-C14)	19257288	1174
C34	7.598	0.002	667	236	BUNKERC (C10-C38)	75143374	8568 M
Filter Peak	8.352	0.008	294	163			
C36	7.939	-0.006	456	454			
C38	8.372	-0.008	289	303			
C40	8.930	-0.005	144	37			
o-terph	4.830	0.063	4844941	11602111	JET-A (C10-C18)	49526362	3584
Triacon Surr	7.036	-0.002	1327	1487	JP8 (Tol-C16)	35611639	2024

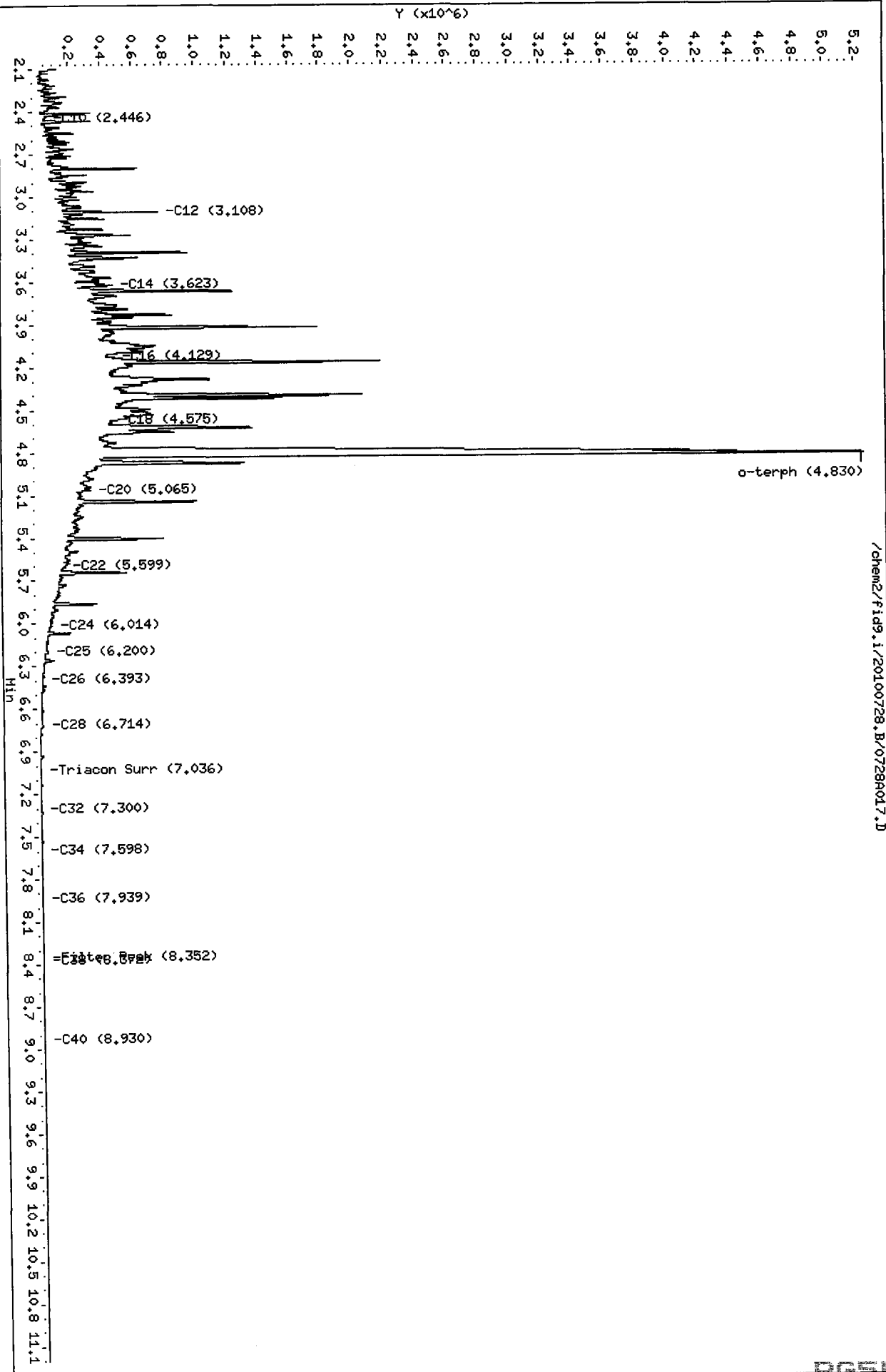
M Indicates manual integration within range.  
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	11602111	450.4	1000.8
Triacantane	1487	0.1	0.2

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100728.B/0728A017.D  
Date: 28-JUL-2010 22:11  
Client ID:  
Sample Info: DIESEL 2500  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



/chem2/fid9.i/20100728.B/0728A017.D

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Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A018.D  
Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 07/30/2010

ARI ID: DIESEL ICV  
Client ID:  
Injection: 28-JUL-2010 22:32  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS							
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.543	0.007	16954	20227	GAS (Tol-C12)	1113463	53
C8	1.701	0.007	9541	12338	DIESEL (C12-C24)	7079418	269
C10	2.452	-0.004	6974	6099	M.OIL (C24-C38)	125009	10
C12	3.103	0.012	84575	50749	AK-102 (C10-C25)	7832815	270 M
C14	3.659	0.018	161174	159868	AK-103 (C25-C36)	88819	18
C16	4.125	-0.003	53296	12670			
C18	4.566	-0.003	51560	65584			
C20	5.072	0.000	26951	15118			
C22	5.598	0.009	16514	25434			
C24	6.029	0.009	6302	1731			
C25	6.204	-0.009	6207	13796			
C26	6.389	-0.002	1666	1190			
C28	6.718	-0.005	4177	4021			
C32	7.309	0.000	191	45	JP-4 (Tol-C14)	2210824	135
C34	7.596	0.000	370	71	BUNKERC (C10-C38)	7932324	904 M
Filter Peak	8.339	-0.004	380	324			
C36	7.940	-0.004	379	284			
C38	8.380	0.000	338	298			
C40	8.940	0.005	284	190			
o-terph	4.774	0.007	1463888	1244864	JET-A (C10-C18)	5534317	400
Triacon Surr	7.045	0.007	34	10	JP8 (Tol-C16)	4004823	228

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1244864	48.3	107.4
Triacotane	10	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100728.B/0728R018.D

Date: 28-JUL-2010 22:32

Client ID:

Sample Info: DIESEL ICV

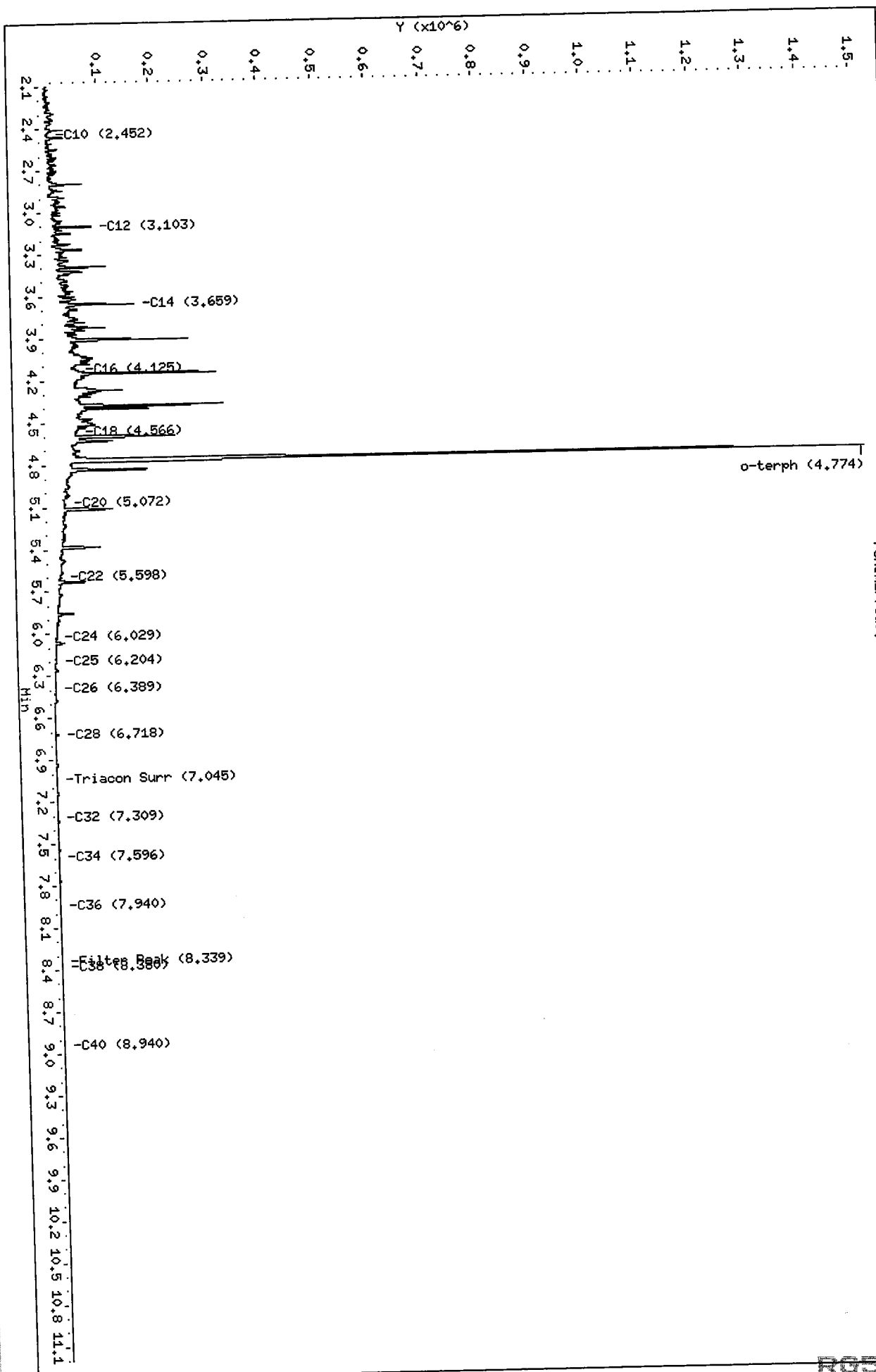
Column phase: RTX-1

Instrument: fid9.i

Operator: HS

Column diameter: 0.25

/chem2/fid9.i/20100728.B/0728R018.D





Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A019.D  
Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 07/30/2010

ARI ID: MOIL 100  
Client ID:  
Injection: 28-JUL-2010 22:53  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.544	0.008	7458	18695	GAS (Tol-C12)	141901	7
C8	1.726	0.033	5158	6296	DIESEL (C12-C24)	170722	6
C10	2.453	-0.002	2104	2277	M.OIL (C24-C38)	1466906	115
C12	3.087	-0.004	132	32	AK-102 (C10-C25)	227313	8
C14	3.638	-0.003	73	40	AK-103 (C25-C36)	1259769	251 M
C16	4.130	0.002	69	41			
C18	4.564	-0.005	811	866			
C20	5.075	0.003	500	282			
C22	5.588	-0.001	2108	500			
C24	6.024	0.004	5281	1867			
C25	6.222	0.010	6965	4086			
C26	6.393	0.001	8433	4859			
C28	6.715	-0.008	26196	37657			
C32	7.310	0.001	14515	3993	JP-4 (Tol-C14)	147735	9
C34	7.596	0.000	11767	4821	BUNKERC (C10-C38)	1662282	190 M
Filter Peak	8.344	0.001	6091	3946			
C36	7.940	-0.005	8533	7979			
C38	8.385	0.005	5855	2782			
C40	8.936	0.000	3917	1842			
o-terph	4.766	-0.001	1479	1425	JET-A (C10-C18)	40423	3
Triacon Surr	7.080	0.042	256627	183551	JP8 (Tol-C16)	151586	9

M Indicates manual integration within range.

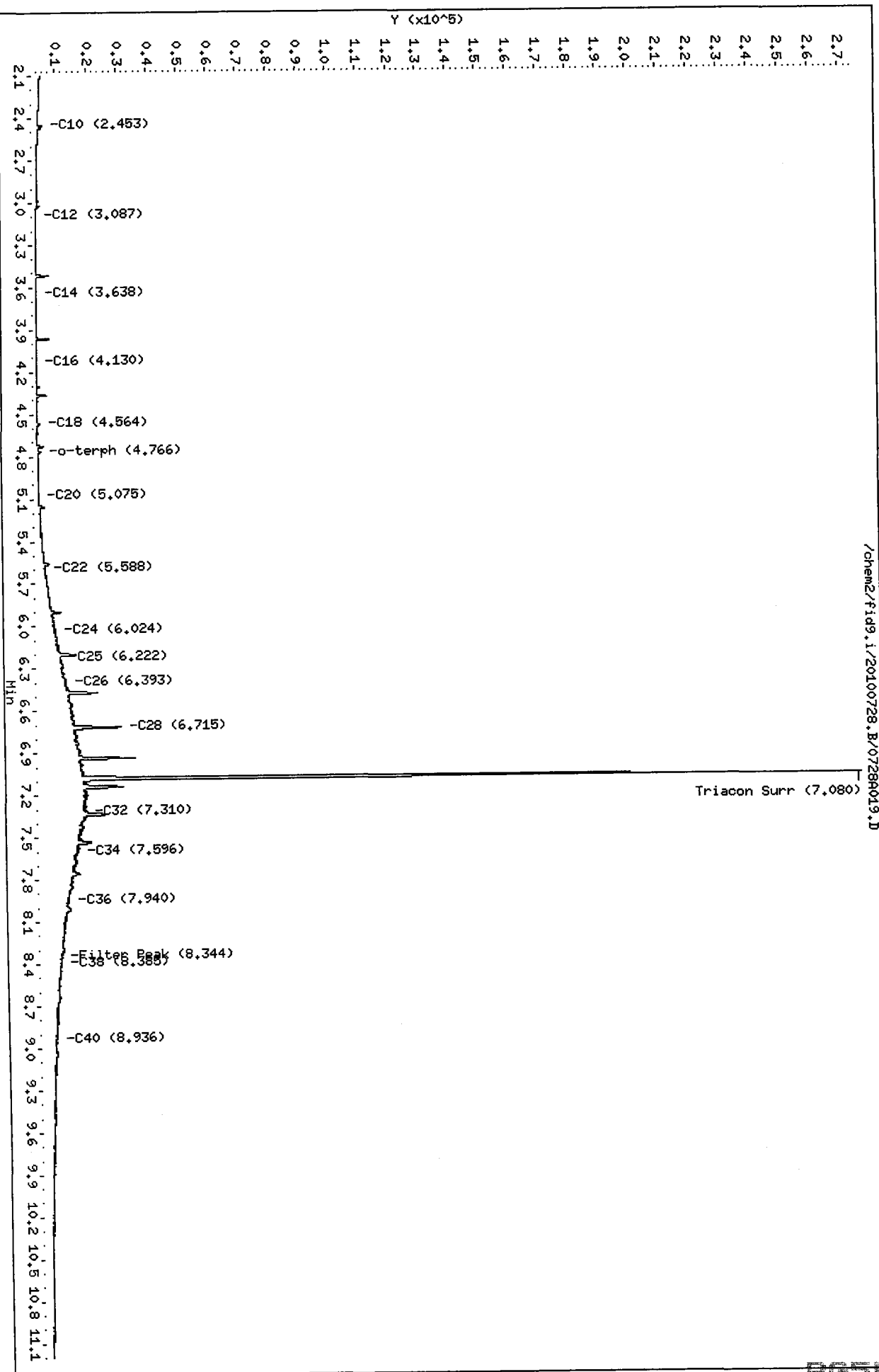
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1425	0.1	0.1
Triacontane	183551	9.3	20.6

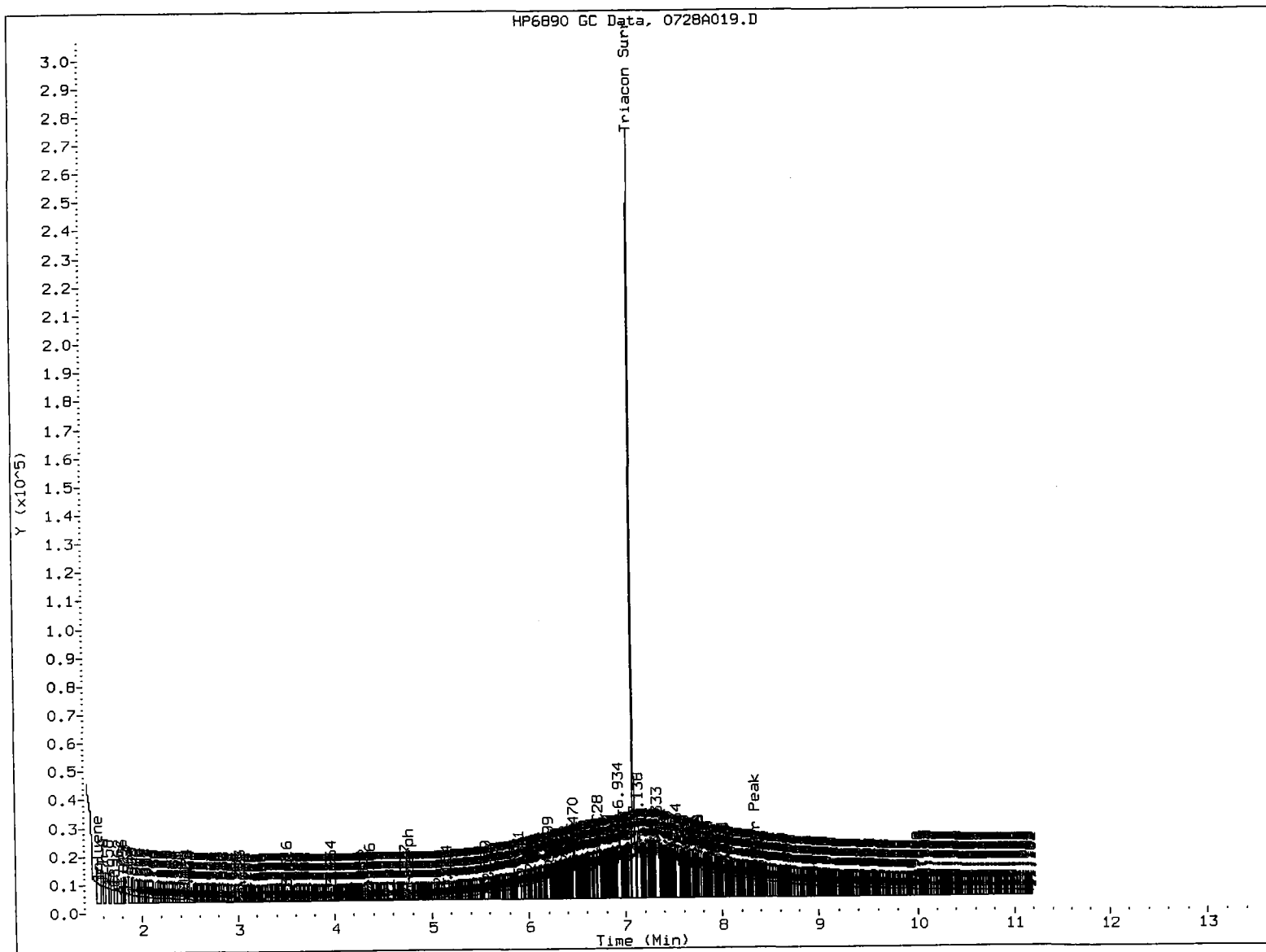
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100728.B/0728A019.D  
Date: 28-JUL-2010 22:53  
Client ID:  
Sample Info: M01L 100  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25







MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: Me

Date: 7/30/10

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A020.D  
Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 07/30/2010

ARI ID: MOIL 250  
Client ID:  
Injection: 28-JUL-2010 23:15  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.542	0.006	9497	26573	GAS (Tol-C12)	196853	9
C8	1.701	0.007	5948	3882	DIESEL (C12-C24)	365810	14
C10	2.453	-0.002	2442	3279	M.OIL (C24-C38)	3266021	255
C12	3.084	-0.007	295	172	AK-102 (C10-C25)	480434	17
C14	3.641	0.000	143	28	AK-103 (C25-C36)	2796307	558 M
C16	4.130	0.002	41	6			
C18	4.564	-0.005	1875	1532			
C20	5.076	0.003	1034	1260			
C22	5.593	0.005	5116	2268			
C24	6.019	-0.001	12501	3919			
C25	6.217	0.004	16132	5120			
C26	6.394	0.003	20541	11264			
C28	6.719	-0.004	29297	45978			
C32	7.310	0.001	33294	13189	JP-4 (Tol-C14)	205495	13
C34	7.596	0.000	26975	12175	BUNKERC (C10-C38)	3666421	418 M
Filter Peak	8.341	-0.002	13586	4242			
C36	7.941	-0.004	19049	9333			
C38	8.372	-0.008	13101	10702			
C40	8.931	-0.004	8356	5723			
o-terph	4.766	-0.001	970	1169	JET-A (C10-C18)	53412	4
Triacon Surr	7.087	0.049	578614	453460	JP8 (Tol-C16)	208886	12

M Indicates manual integration within range.

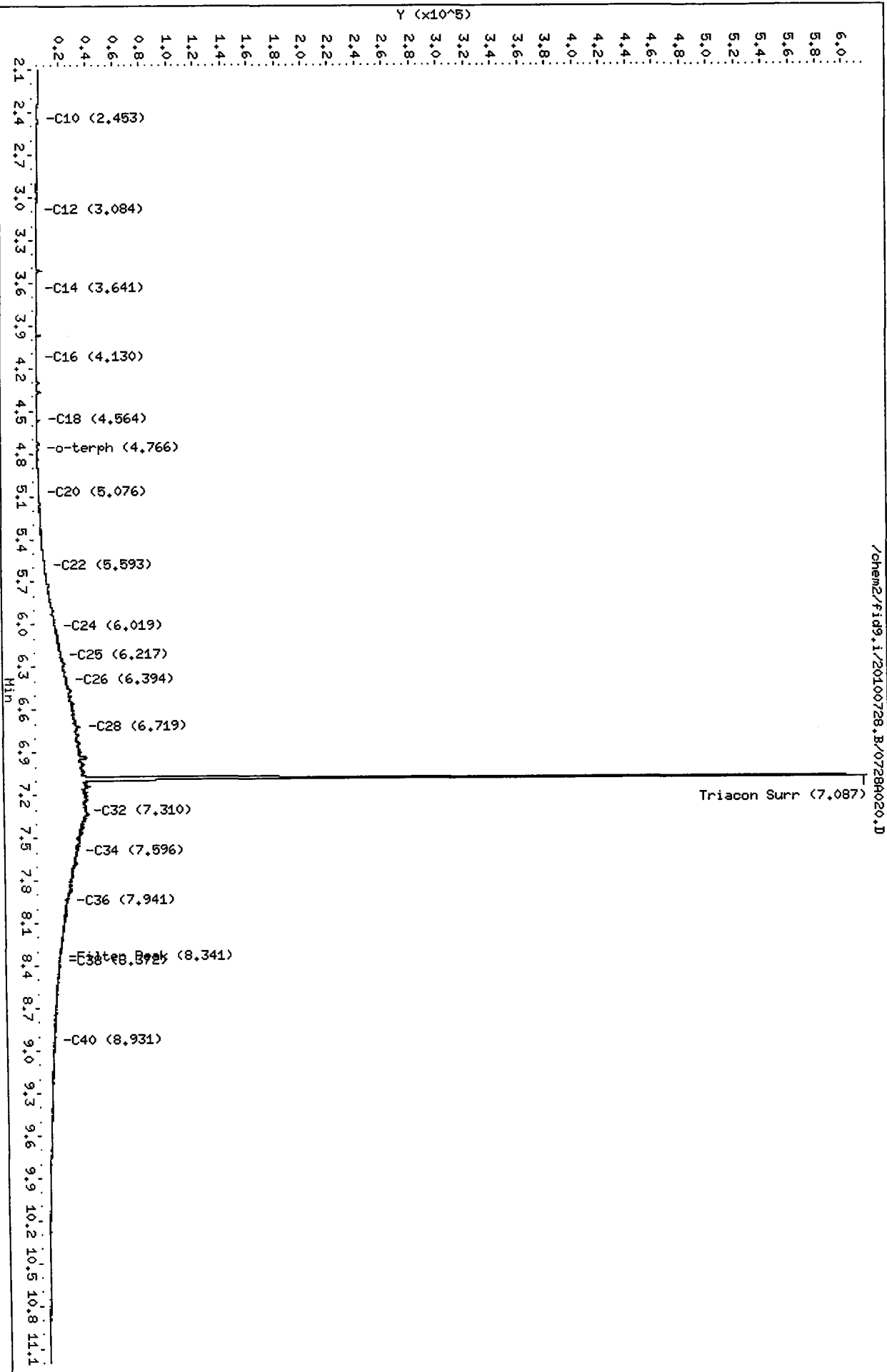
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

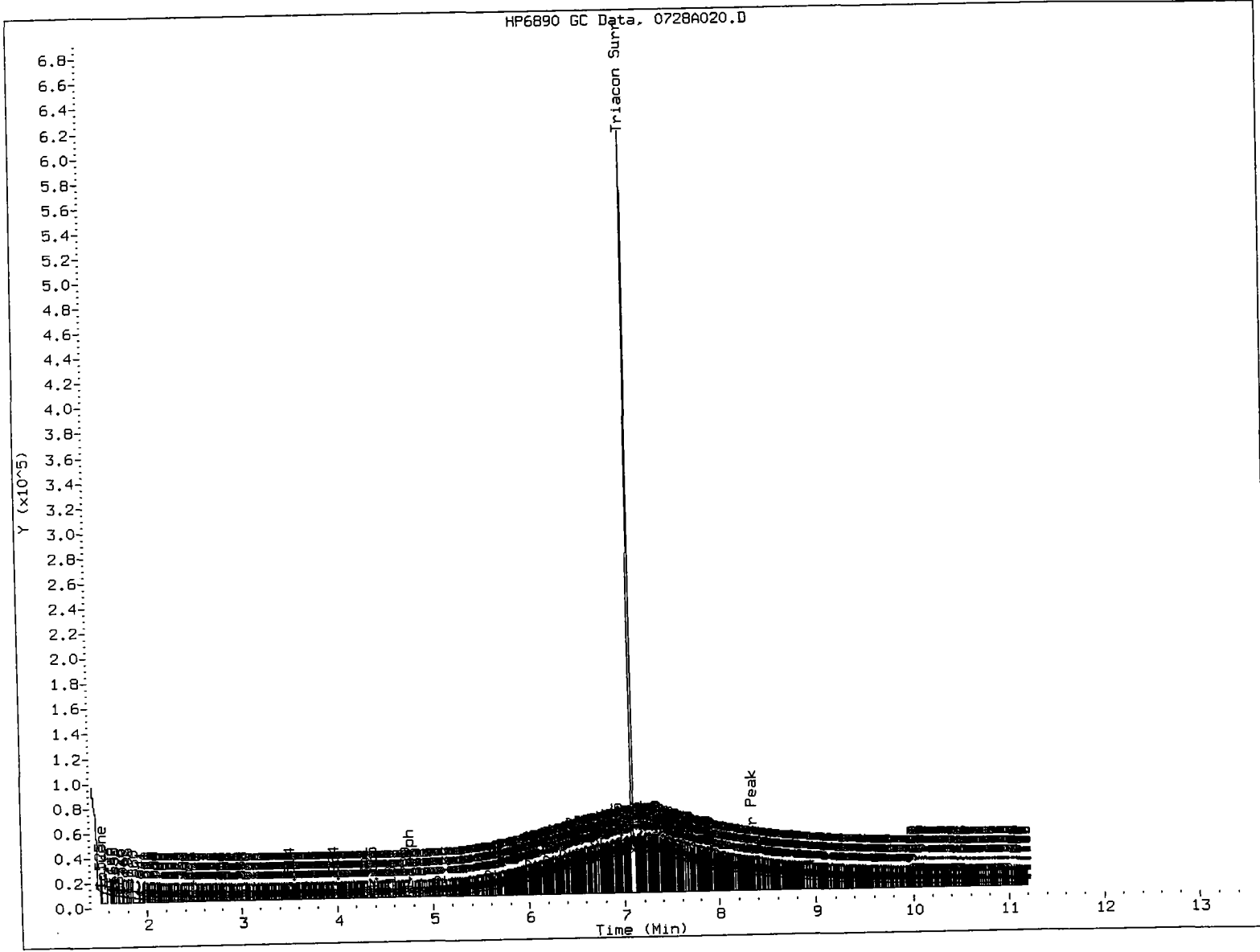
Surrogate	Area	Amount	%Rec
o-Terphenyl	1169	0.0	0.1
Triacontane	453460	22.9	50.8

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100728.B/0728A020.D  
Date: 28-JUL-2010 23:15  
Client ID:  
Sample Info: M01L 250  
Column Phase: RTX-1

Instrument: fid9.i  
Operator: HS  
Column diameter: 0.25





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: AM

Date: 7/27/10

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A021.D  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 07/30/2010

ARI ID: MOIL 500  
 Client ID:  
 Injection: 28-JUL-2010 23:36  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.544	0.008	9179	20369	GAS (Tol-C12)	216239	10
C8	1.728	0.034	6026	8955	DIESEL (C12-C24)	681352	26
C10	2.454	-0.002	2354	2271	M.OIL (C24-C38)	6262414	490
C12	3.094	0.003	289	44	AK-102 (C10-C25)	866175	30
C14	3.642	0.001	195	126	AK-103 (C25-C36)	5350968	1068 M
C16	4.125	-0.003	40	9			
C18	4.561	-0.008	3657	2936			
C20	5.072	-0.001	2047	2188			
C22	5.593	0.004	10080	6940			
C24	6.019	-0.001	23765	7965			
C25	6.211	-0.002	31744	9374			
C26	6.394	0.003	39169	13151			
C28	6.721	-0.002	55036	30221			
C32	7.312	0.003	65826	24703	JP-4 (Tol-C14)	225770	14
C34	7.600	0.003	52438	20690	BUNKERC (C10-C38)	6976056	795 M
Filter Peak	8.350	0.007	26035	6689			
C36	7.944	-0.001	38444	12762			
C38	8.382	0.002	26485	18398			
C40	8.934	-0.002	15558	5694			
o-terph	4.764	-0.003	1139	1159	JET-A (C10-C18)	56856	4
Triacon Surr	7.094	0.056	990900	889470	JP8 (Tol-C16)	229628	13

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

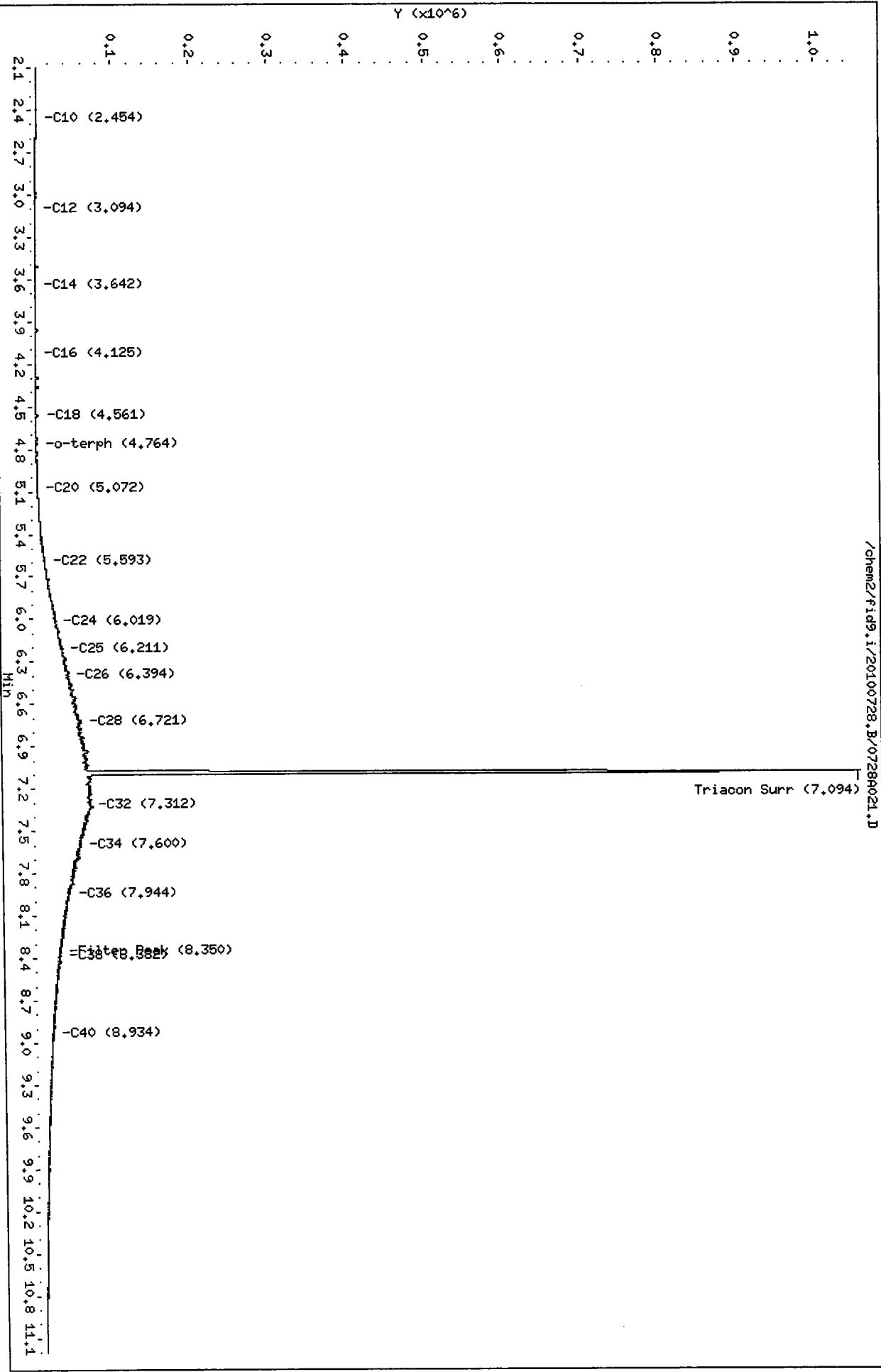
Surrogate	Area	Amount	%Rec
o-Terphenyl	1159	0.0	0.1
Triacontane	889470	44.8	99.7

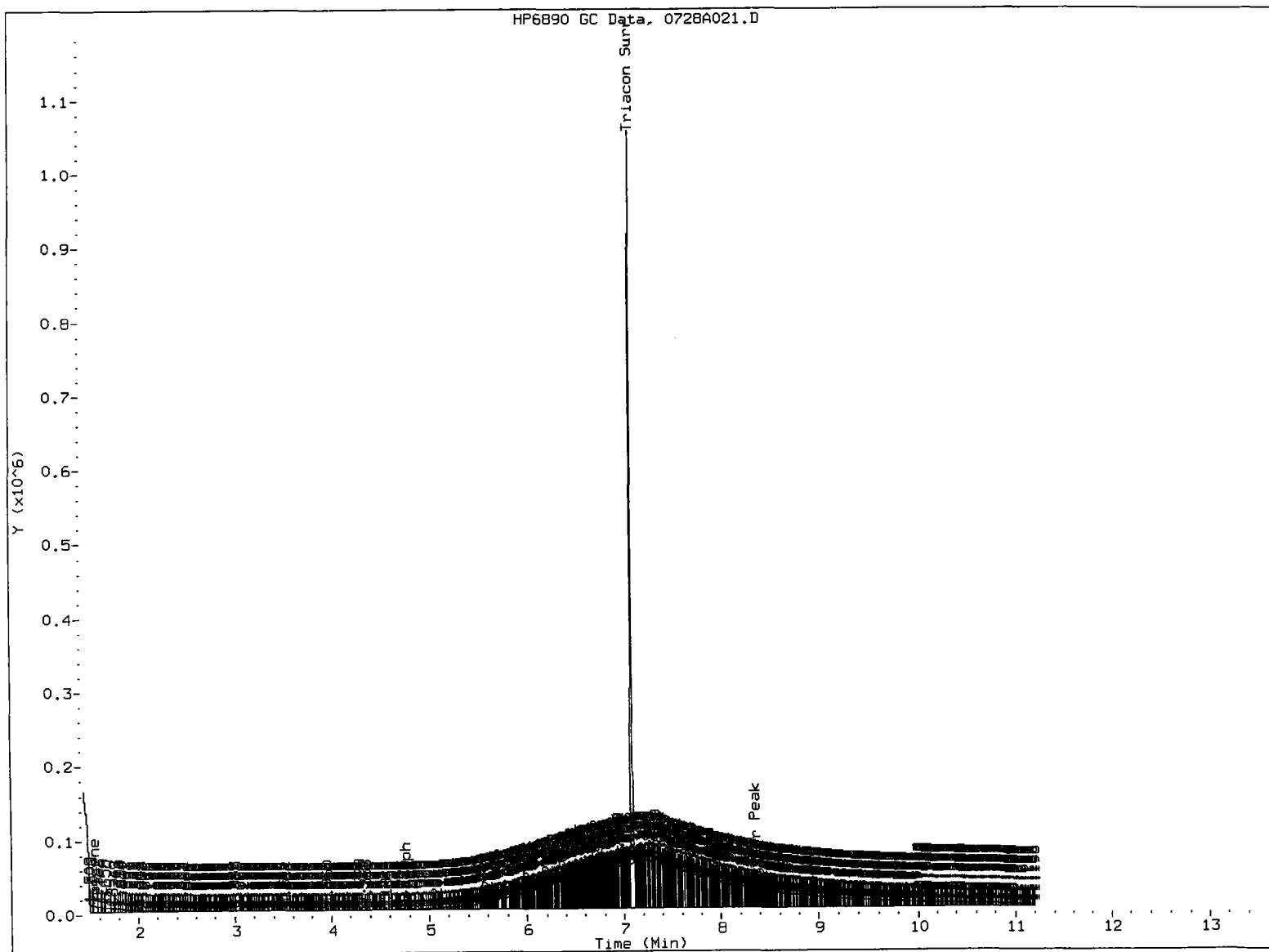
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100728.B/0728A021.D  
 Date : 28-JUL-2010 23:36  
 Client ID:  
 Sample Info: M01L 500  
 Column phase: RTX-1

Instrument: fid9.i  
 Operator: MS  
 Column diameter: 0.25

/chem2/fid9.i/20100728.B/0728A021.D





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other \_\_\_\_\_

Analyst: ME

Date: 2/20/10

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A022.D  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 07/30/2010

ARI ID: MOIL 1000  
 Client ID:  
 Injection: 28-JUL-2010 23:57  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.538	0.002	10649	63178	GAS (Tol-C12)	218627	10
C8	1.703	0.010	6083	4895	DIESEL (C12-C24)	1375330	52
C10	2.453	-0.003	2350	1902	M.OIL (C24-C38)	12575741	983
C12	3.089	-0.002	381	214	AK-102 (C10-C25)	1720432	59
C14	3.639	-0.002	299	246	AK-103 (C25-C36)	10794434	2155 M
C16	4.129	0.000	79	16			
C18	4.560	-0.009	7645	6024			
C20	5.072	0.000	4064	7040			
C22	5.597	0.008	20853	24416			
C24	6.018	-0.002	49376	52041			
C25	6.213	0.001	63610	16233			
C26	6.389	-0.002	79064	34283			
C28	6.720	-0.003	107910	42122			
C32	7.310	0.001	130942	41405	JP-4 (Tol-C14)	231895	14
C34	7.599	0.002	108281	136091	BUNKERC (C10-C38)	13985045	1595 M
Filter Peak	8.345	0.002	52029	25346			
C36	7.948	0.003	74855	16070			
C38	8.376	-0.004	51433	44591			
C40	8.939	0.003	30398	16046			
o-terph	4.764	-0.003	1794	1847	JET-A (C10-C18)	72341	5
Triacon Surr	7.105	0.067	1701872	1806179	JP8 (Tol-C16)	236928	13

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

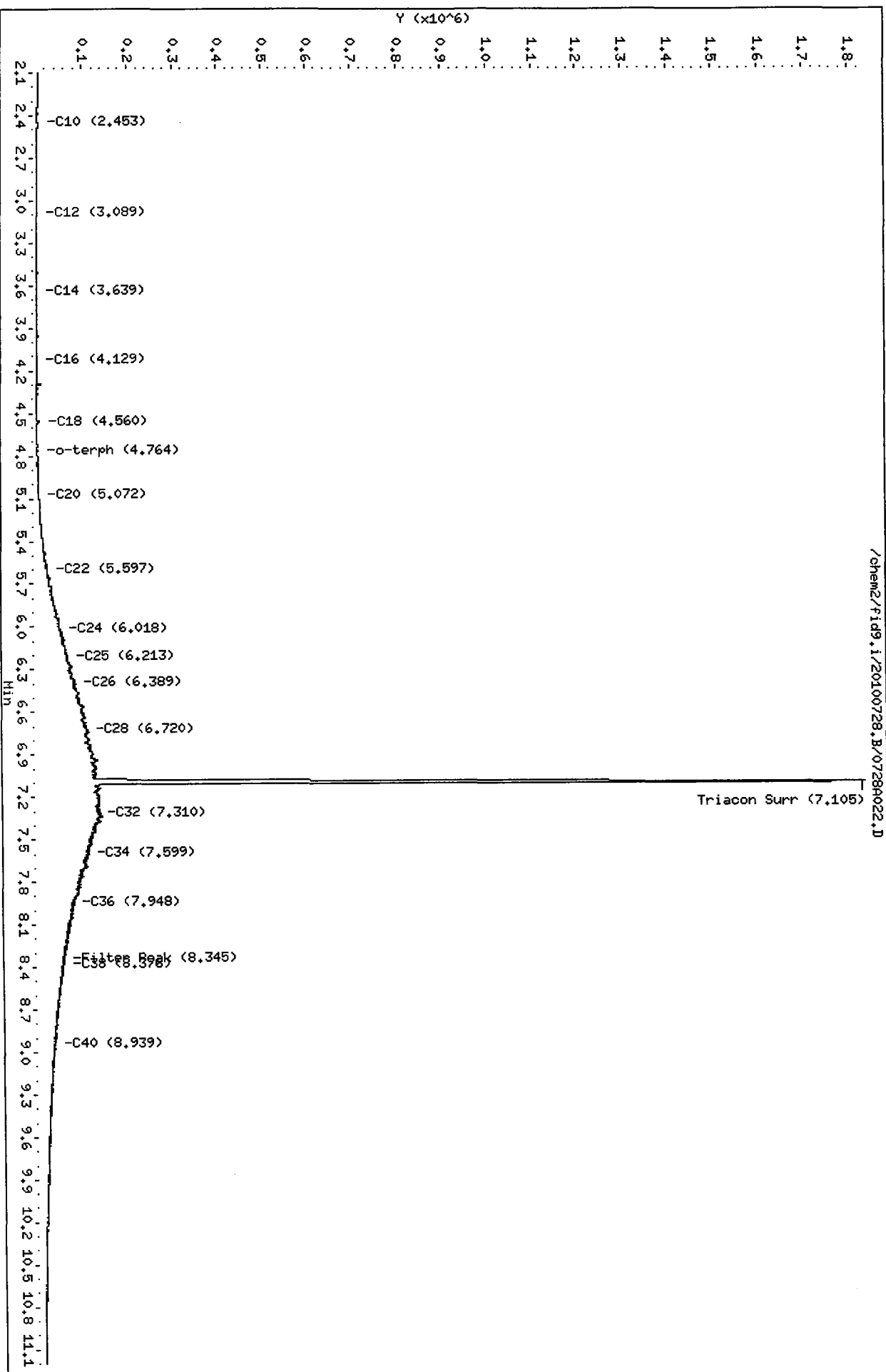
Surrogate	Area	Amount	%Rec
o-Terphenyl	1847	0.1	0.2
Triacontane	1806179	91.1	202.4

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

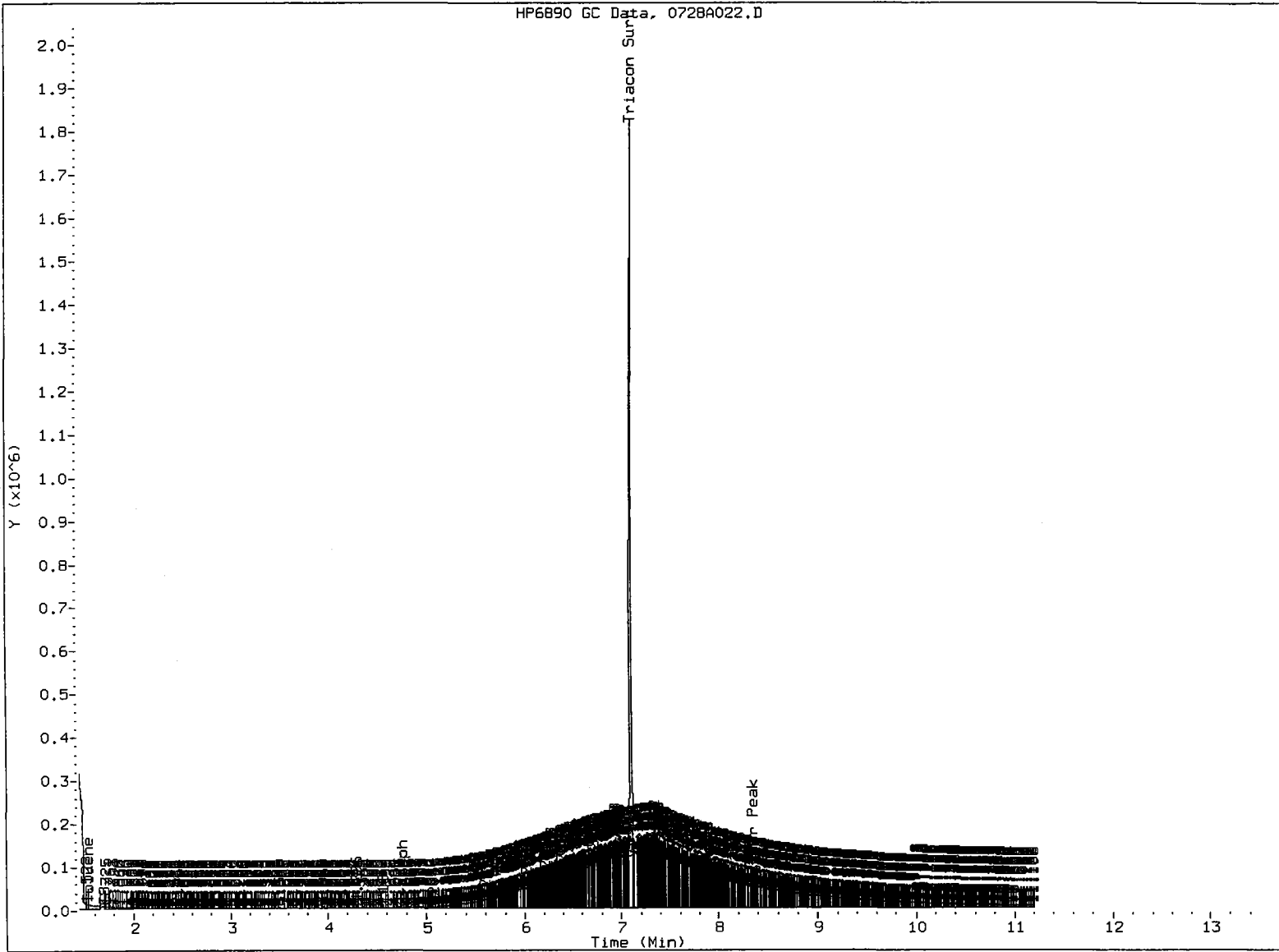


Data File: /chem2/fid9.i/20100728.B/0728A022.D  
 Date : 28-JUL-2010 23:57  
 Client ID:  
 Sample Info: H01L 1000  
 Column phase: RTX-1

Instrument: fid9.i  
 Operator: HS  
 Column diameter: 0.25



/chem2/fid9.i/20100728.B/0728A022.D



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: My

Date: 9/30/10

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A023.D  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 07/30/2010

ARI ID: MOIL 2500  
 Client ID:  
 Injection: 29-JUL-2010 00:18  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	185483	9
C8	1.718	0.025	7199	4779	DIESEL (C12-C24)	3353157	127
C10	2.459	0.004	3767	6961	M.OIL (C24-C38)	30008483	2347
C12	3.085	-0.006	494	385	AK-102 (C10-C25)	4193453	144
C14	3.640	-0.001	498	323	AK-103 (C25-C36)	25718318	5134 M
C16	4.130	0.001	204	91			
C18	4.559	-0.010	20942	16266			
C20	5.069	-0.004	9741	14269			
C22	5.589	0.001	46953	16444			
C24	6.020	0.000	116155	30105			
C25	6.215	0.003	149541	35623			
C26	6.388	-0.003	192672	83538			
C28	6.725	0.002	249614	49500			
C32	7.308	-0.001	301815	83744	JP-4 (Tol-C14)	202516	12
C34	7.594	-0.002	255953	217957	BUNKERC (C10-C38)	33397372	3808 M
Filter Peak	8.350	0.006	124584	111418			
C36	7.944	-0.001	179229	56451			
C38	8.379	-0.001	117276	59781			
C40	8.938	0.003	70596	37072			
o-terph	4.762	-0.005	3843	4178	JET-A (C10-C18)	110588	8
Triacon Surr	7.129	0.091	2546702	4343398	JP8 (Tol-C16)	210004	12

M Indicates manual integration within range.

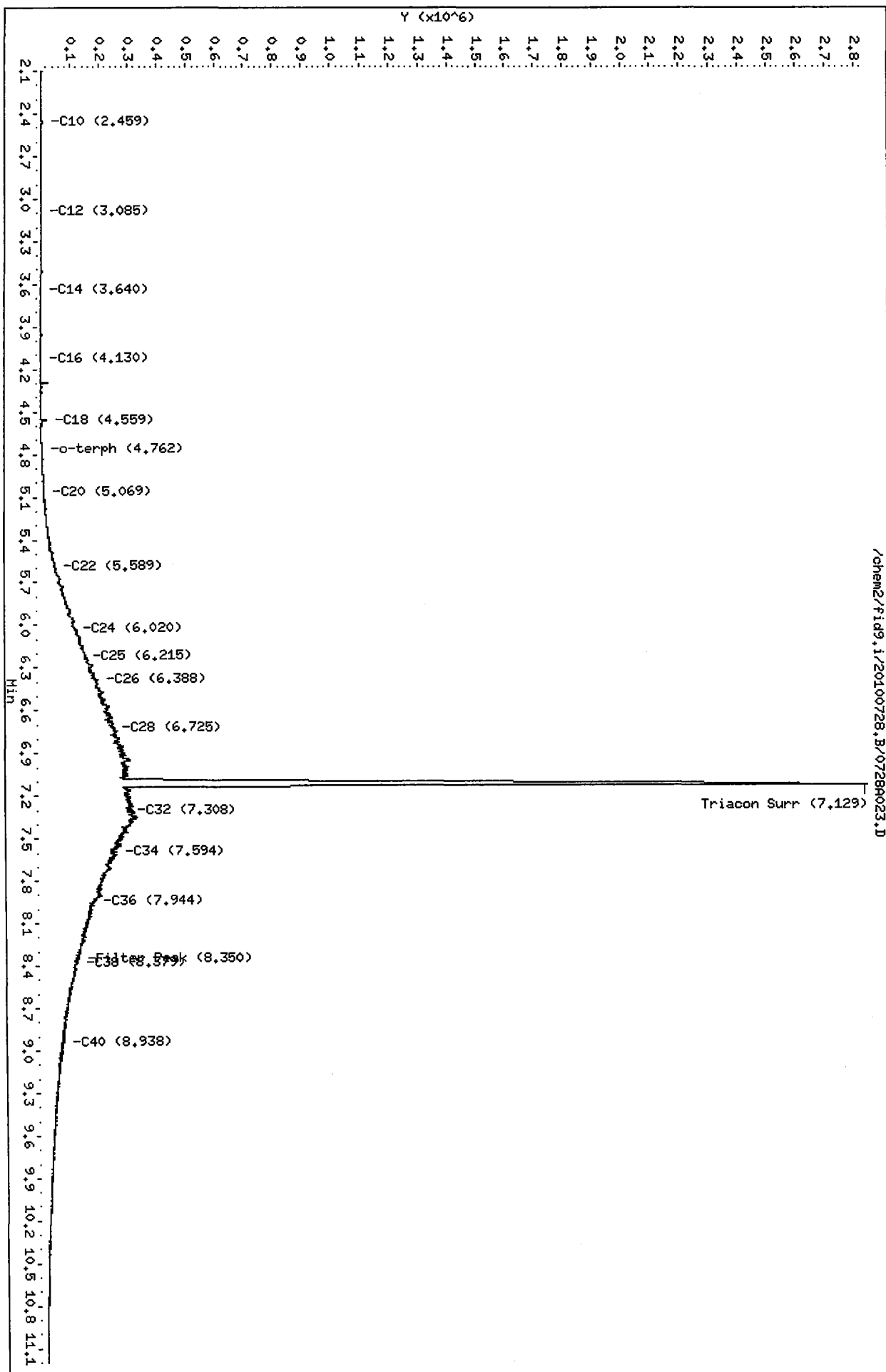
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

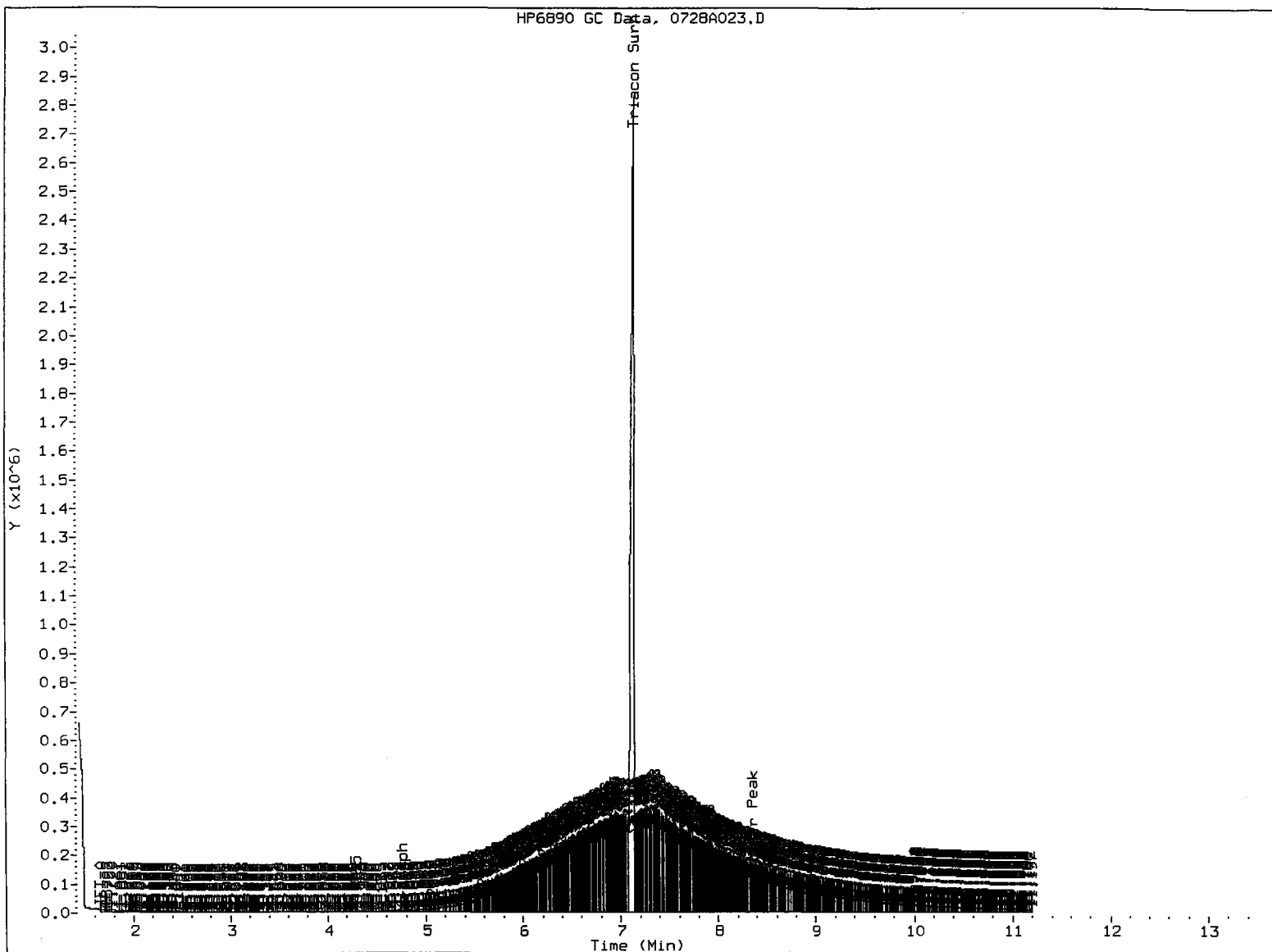
Surrogate	Area	Amount	%Rec
o-Terphenyl	4178	0.2	0.4
Triacontane	4343398	219.0	486.7

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9,1/20100728,B/0728A023.D  
 Date: 29-JUL-2010 00:18  
 Client ID:  
 Sample Info: H01L 2500  
 Column phase: RTX-1

Instrument: fid9,1  
 Operator: MS  
 Column diameter: 0.25





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: M

Date: 9/20/10

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A024.D  
Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 07/30/2010

ARI ID: MOIL 5000  
Client ID:  
Injection: 29-JUL-2010 00:40  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.505	-0.031	22596	103344	GAS (Tol-C12)	263209	13
C8	1.724	0.030	8164	11347	DIESEL (C12-C24)	6666776	253
C10	2.462	0.006	6166	7110	M.OIL (C24-C38)	59430781	4648
C12	3.104	0.013	3368	1784	AK-102 (C10-C25)	8147281	280
C14	3.646	0.005	615	350	AK-103 (C25-C36)	51523751	10286 M
C16	4.129	0.001	608	343			
C18	4.560	-0.009	37045	30543			
C20	5.070	-0.002	19428	26259			
C22	5.582	-0.007	96098	68803			
C24	6.023	0.003	234560	106000			
C25	6.207	-0.006	297700	255615			
C26	6.393	0.001	373459	230456			
C28	6.726	0.003	495735	196084			
C32	7.305	-0.004	602415	260738	JP-4 (Tol-C14)	285229	17
C34	7.597	0.000	510745	472002	BUNKERC (C10-C38)	66134433	7540 M
Filter Peak	8.346	0.002	226260	178664			
C36	7.943	-0.001	358012	278298			
C38	8.379	-0.001	210178	74132			
C40	8.935	0.000	96401	47669			
o-terph	4.761	-0.006	24528	21927	JET-A (C10-C18)	180059	13
Triacon Surr	7.160	0.122	3196100	8687632	JP8 (Tol-C16)	304722	17

M Indicates manual integration within range.

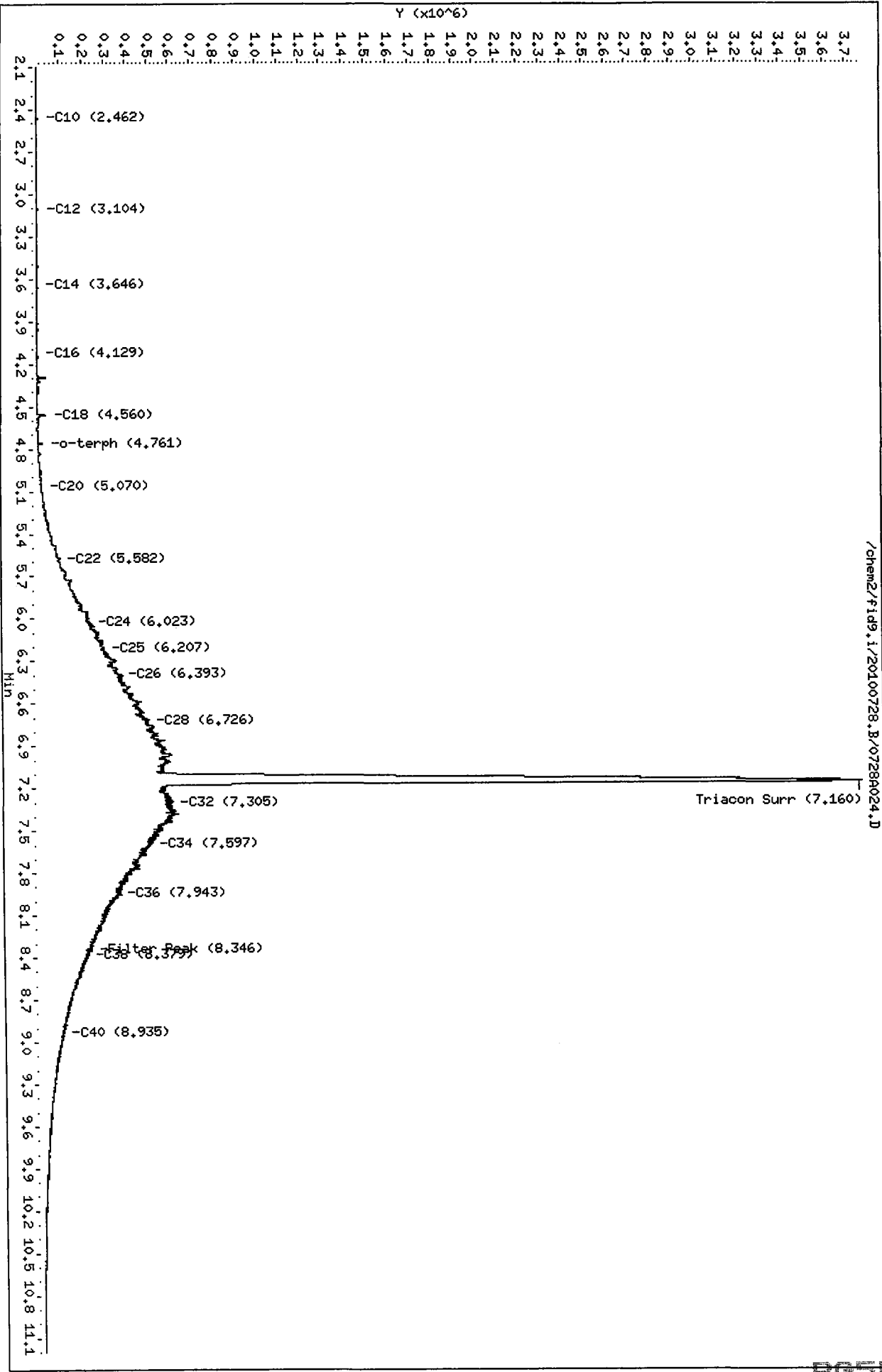
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	21927	0.9	1.9
Triacontane	8687632	438.1	973.5

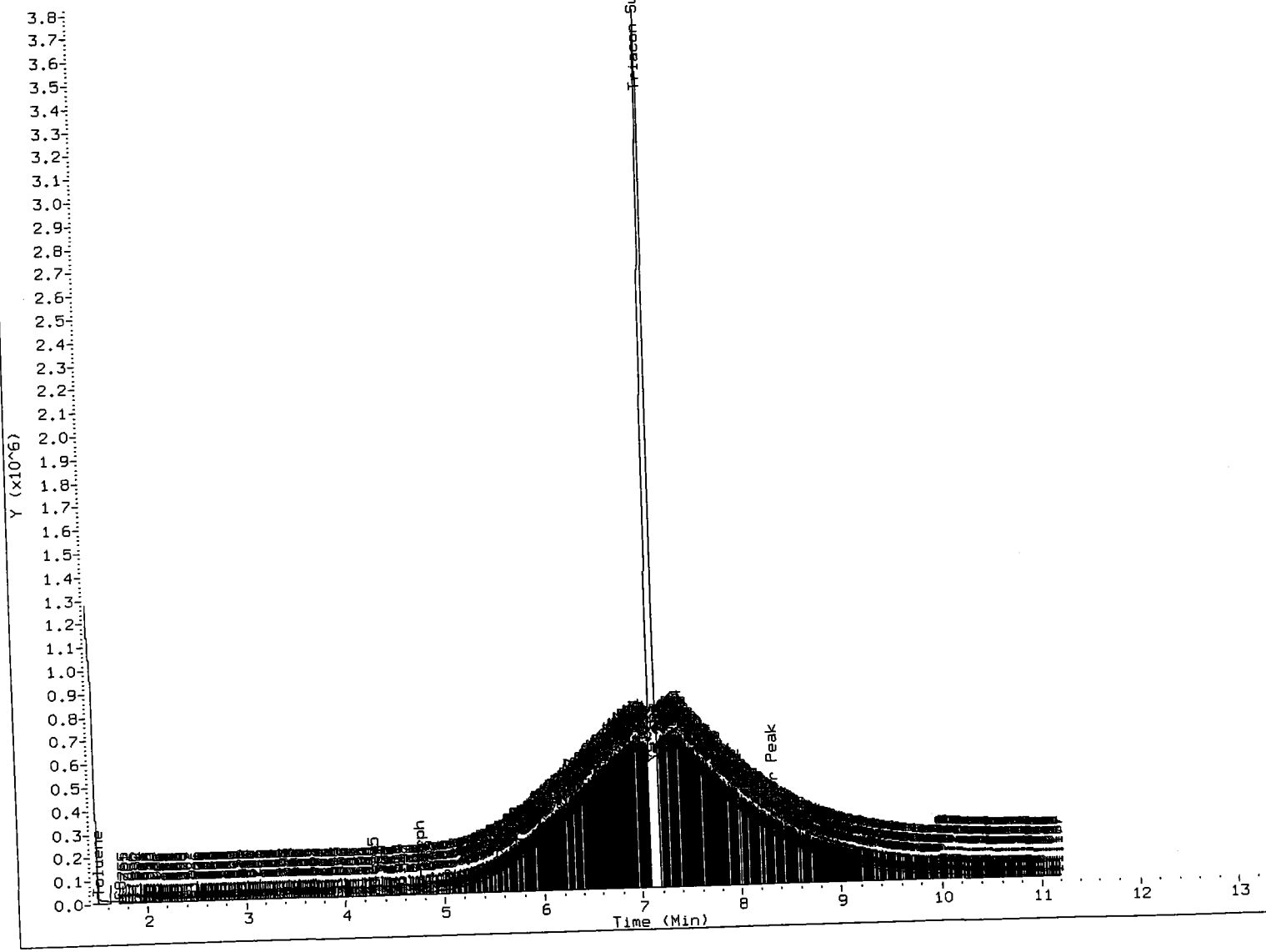
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100728.B/0728R024.D  
Date : 29-JUL-2010 00:40  
Client ID:  
Sample Info: MOIL 5000  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



HP6890 GC Data, 0728A024.D



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: M4

Date: 7/30/12



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728A025.D  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 07/30/2010

ARI ID: MOIL ICV  
 Client ID:  
 Injection: 29-JUL-2010 01:01  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.517	-0.019	9568	56363	GAS (Tol-C12)	190702	9
C8	1.697	0.003	5379	6116	DIESEL (C12-C24)	677543	26
C10	2.453	-0.003	2206	3494	M.OIL (C24-C38)	5773753	452
C12	3.084	-0.007	333	287	AK-102 (C10-C25)	857527	30
C14	3.646	0.005	183	82	AK-103 (C25-C36)	4998197	998 M
C16	4.126	-0.002	42	25			
C18	4.562	-0.007	4629	3455			
C20	5.075	0.002	1877	2081			
C22	5.592	0.004	9446	5227			
C24	6.020	0.000	22370	8391			
C25	6.201	-0.012	39707	65163			
C26	6.392	0.000	36721	13853			
C28	6.716	-0.007	75296	117760			
C32	7.311	0.002	59183	16220	JP-4 (Tol-C14)	199835	12
C34	7.599	0.003	44801	35701	BUNKERC (C10-C38)	6481420	739 M
Filter Peak	8.343	0.000	21659	10132			
C36	7.947	0.002	30815	9065			
C38	8.381	0.000	20938	14432			
C40	8.931	-0.004	13390	8876			
o-terph	4.764	-0.003	832	933	JET-A (C10-C18)	55969	4
Triacon Surr	7.090	0.052	914145	806969	JP8 (Tol-C16)	204147	12

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	933	0.0	0.1
Triacontane	806969	40.7	90.4

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100728.B/0728A025.D  
Date: 29-JUL-2010 01:01

Client ID:

Sample Info: MOIL ICV

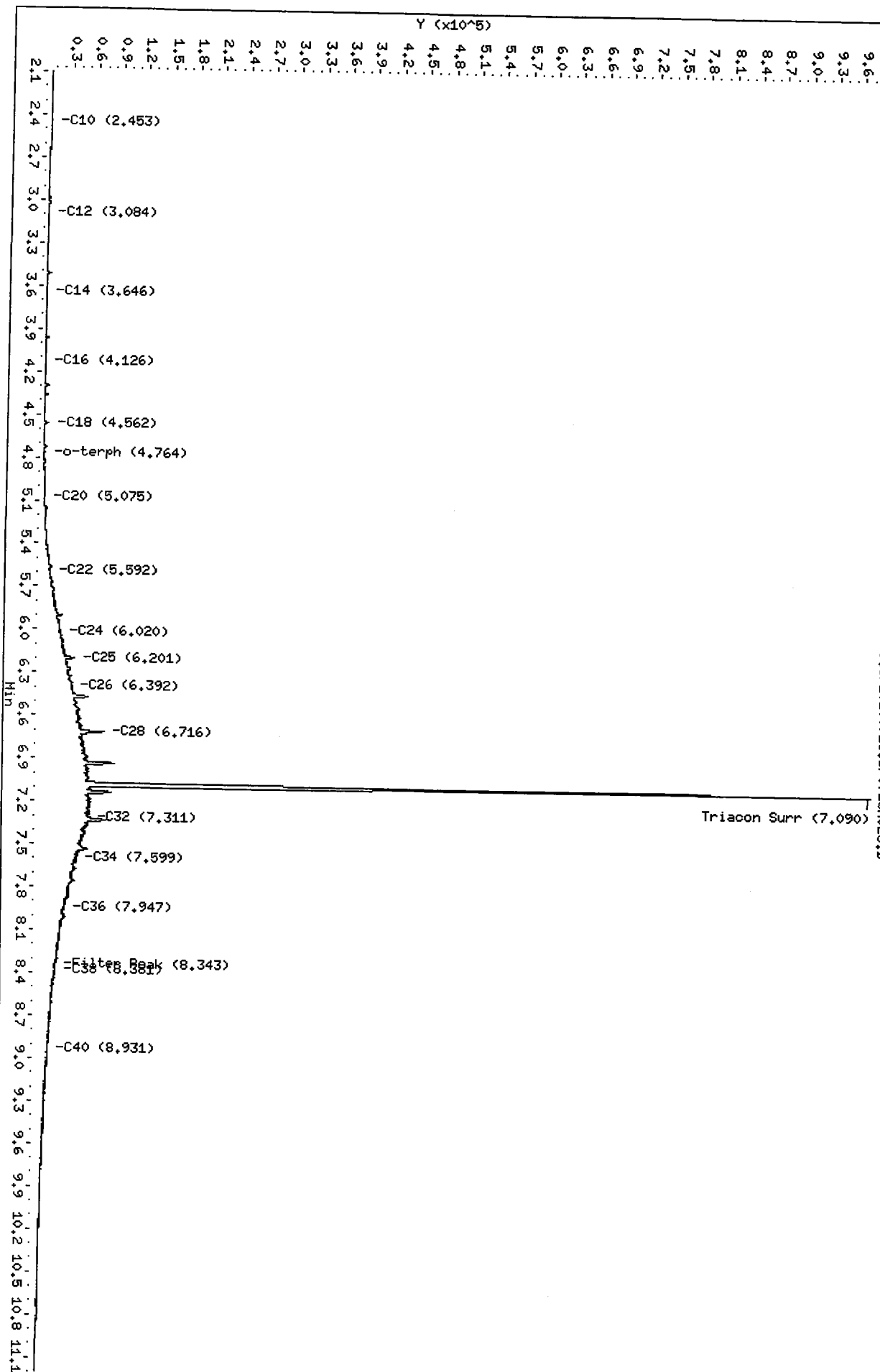
Column phase: RTX-1

Instrument: fid9.i

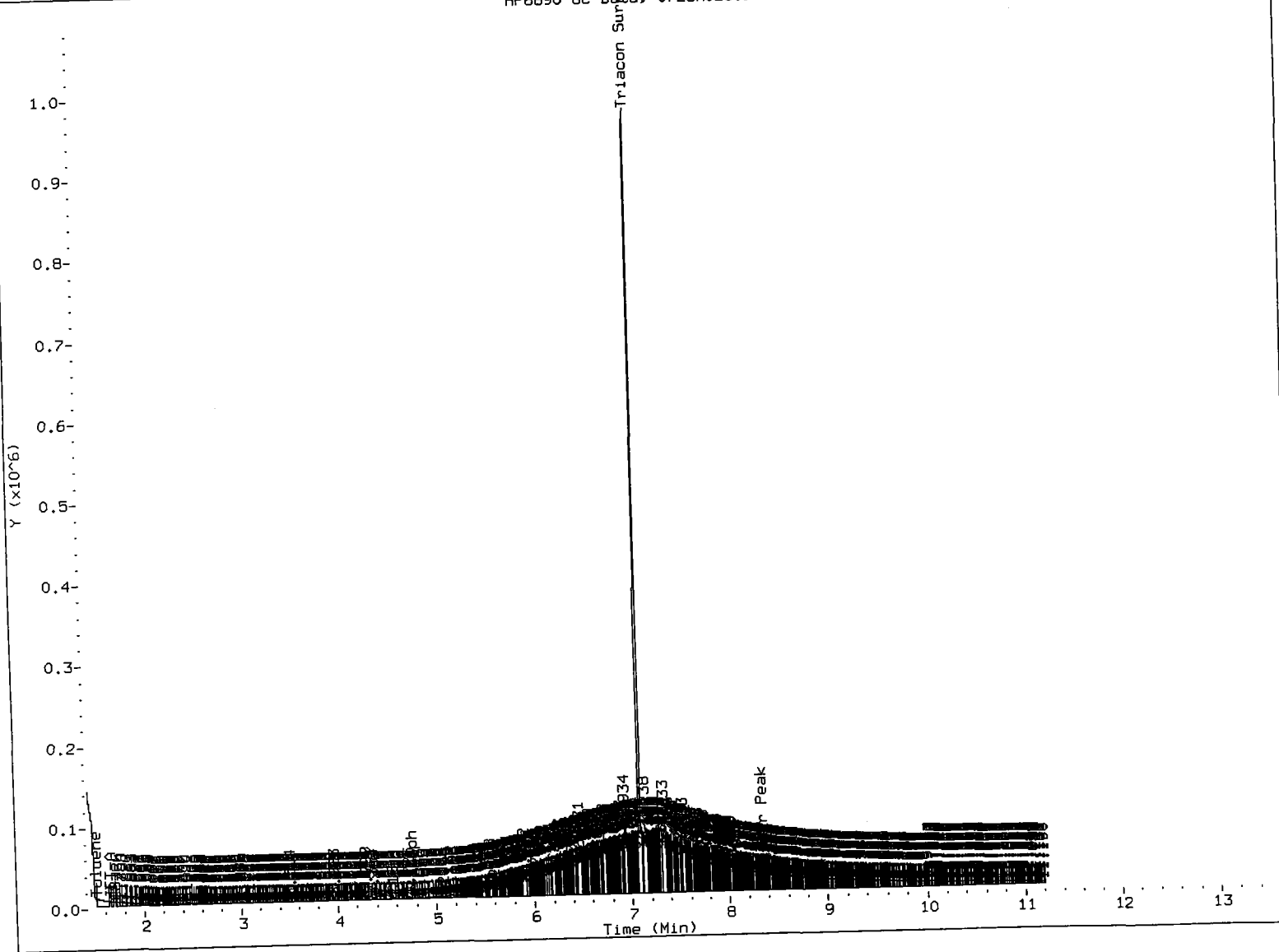
Operator: HS

Column diameter: 0.25

/chem2/fid9.i/20100728.B/0728A025.D



HP6890 GC Data, 0728A025.D



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: M

Date: 2/13/01

ARI Job No. : DIES Method: ftphfid9a.m Instrument: fid9.i Date: 28-JUL-2010

Time Filename LabID ClientID DF Manually Integrated Compounds

2024	0728A012.D	DIESEL 50	1	1	o-terph,
2045	0728A013.D	DIESEL 100	1	1	o-terph,
2107	0728A014.D	DIESEL 250	1	1	o-terph,
2128	0728A015.D	DIESEL 500	1	1	o-terph,
2149	0728A016.D	DIESEL 1000	1	1	o-terph,
2211	0728A017.D	DIESEL 2500	1	1	o-terph,
2232	0728A018.D	DIESEL ICV	1	1	o-terph,
2253	0728A019.D	MOIL 100	1	1	Triacon Surr,
2315	0728A020.D	MOIL 250	1	1	Triacon Surr,
2336	0728A021.D	MOIL 500	1	1	Triacon Surr,
2357	0728A022.D	MOIL 1000	1	1	Triacon Surr,
0018	0728A023.D	MOIL 2500	1	1	Triacon Surr,
0040	0728A024.D	MOIL 5000	1	1	Triacon Surr,
0101	0728A025.D	MOIL ICV	1	1	Triacon Surr,

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A012.D ARI ID: DIESEL 50  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 28-JUL-2010 20:24  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS							
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.545	0.009	7102	15475			
C8	1.699	0.005	4935	5847	GAS (Tol-C12)	304122	14
C10	2.459	0.004	6197	8547	DIESEL (C12-C24)	1257340	48
C12	3.101	0.010	13983	8220	M.OIL (C24-C38)	72828	6
C14	3.623	-0.018	9291	10648	AK-102 (C10-C25)	1389468	48
C16	4.138	0.009	11473	15225	AK-103 (C25-C36)	50537	10
C18	4.565	-0.004	9397	11253			
C20	5.072	-0.001	4990	3711			
C22	5.592	0.004	2910	2637			
C24	6.019	-0.001	1136	455			
C25	6.225	0.013	442	364			
C26	6.395	0.003	185	147			
C28	6.710	-0.013	1703	1464			
C32	7.303	-0.006	467	137			
C34	7.594	-0.002	729	202	JP-4 (Tol-C14)	499108	30
Filter Peak	8.346	0.003	768	227	BUNKERC (C10-C38)	1459349	166
C36	7.939	-0.006	787	1098			
C38	8.383	0.003	750	640			
C40	8.938	0.003	800	514			
o-terph	4.760	-0.007	385436	262259	JET-A (C10-C18)	997196	72
Triacon Surr	7.038	0.000	197	80	JP8 (Tol-C16)	827113	47

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	262259	10.2	22.6
Triacontane	80	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

*Handwritten signature/initials*

Data File: /chem2/fid9.i/20100728.B/0728rsw.b/0728R012.D

Date: 28-JUL-2010 20:24

Client ID:

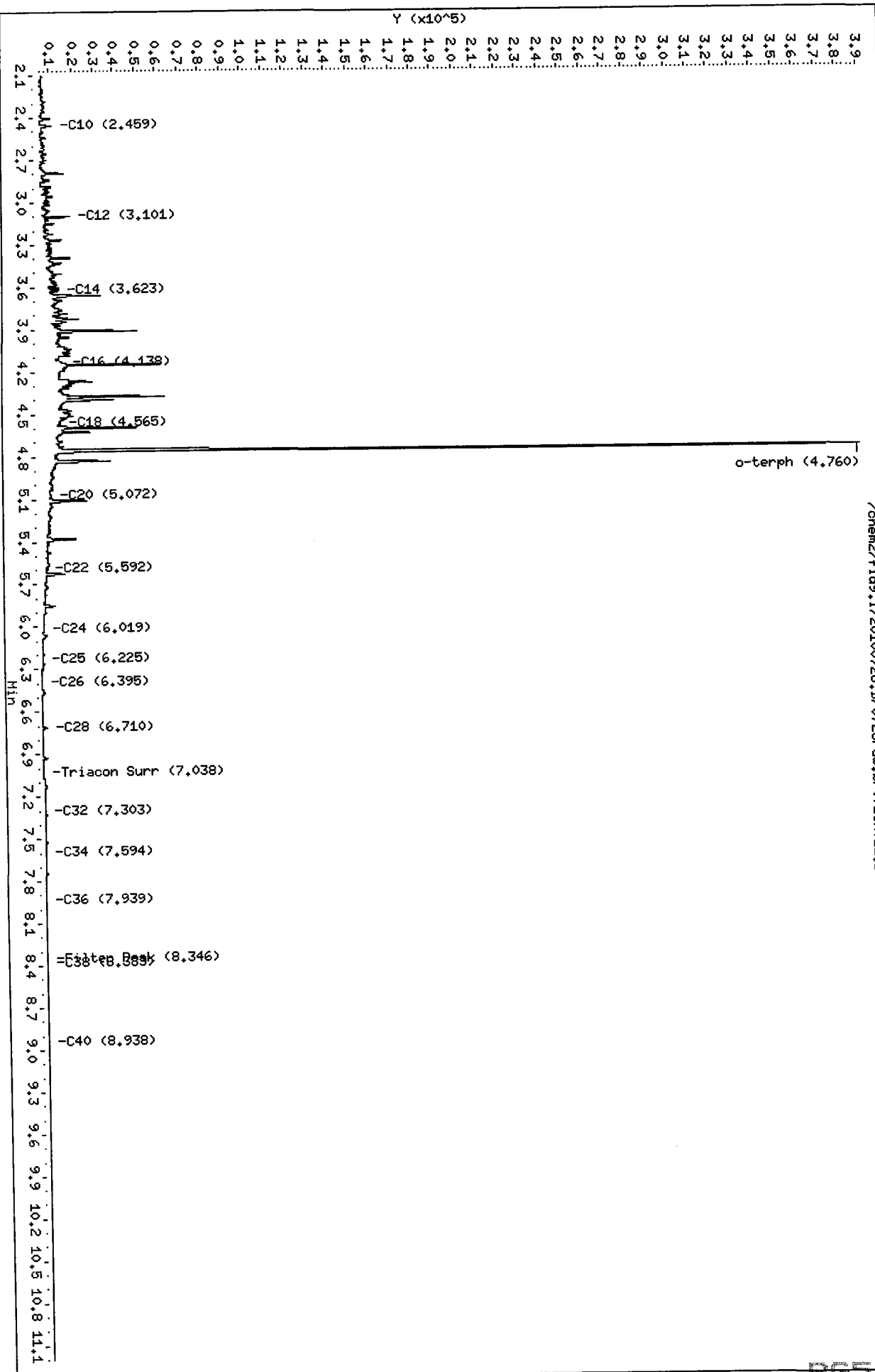
Sample Info: DIESEL 50

Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A013.D ARI ID: DIESEL 100  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 28-JUL-2010 20:45  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.545	0.009	9394	12882	GAS (Tol-C12)	449059	21
C8	1.703	0.009	5426	7074	DIESEL (C12-C24)	2552776	97
C10	2.452	-0.003	3226	2569	M.OIL (C24-C38)	87640	7
C12	3.103	0.012	29285	17940	AK-102 (C10-C25)	2814752	97
C14	3.659	0.018	59261	58165	AK-103 (C25-C36)	61637	12
C16	4.123	-0.005	19941	17906			
C18	4.567	-0.002	19222	19309			
C20	5.075	0.002	10542	10663			
C22	5.588	0.000	5975	5552			
C24	6.023	0.003	2217	1308			
C25	6.197	-0.015	2531	4056			
C26	6.406	0.015	394	352			
C28	6.710	-0.013	3648	2966			
C32	7.307	-0.002	362	195	JP-4 (Tol-C14)	845763	52
C34	7.593	-0.004	637	240	BUNKERC (C10-C38)	2894663	330
Filter Peak	8.338	-0.005	643	405			
C36	7.942	-0.002	671	500			
C38	8.378	-0.002	638	365			
C40	8.938	0.002	649	435			
o-terph	4.762	-0.005	723348	506270	JET-A (C10-C18)	2010708	146
Triacon Surr	7.036	-0.002	119	42	JP8 (Tol-C16)	1503559	85

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	506270	19.7	43.7
Triacotane	42	0.0	0.0

*Handwritten signature: MAB 7/11*

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100728.B/0728r-aw,b/0728R013.D

Date: 28-JUL-2010 20:45

Client ID:

Sample Info: DIESEL 100

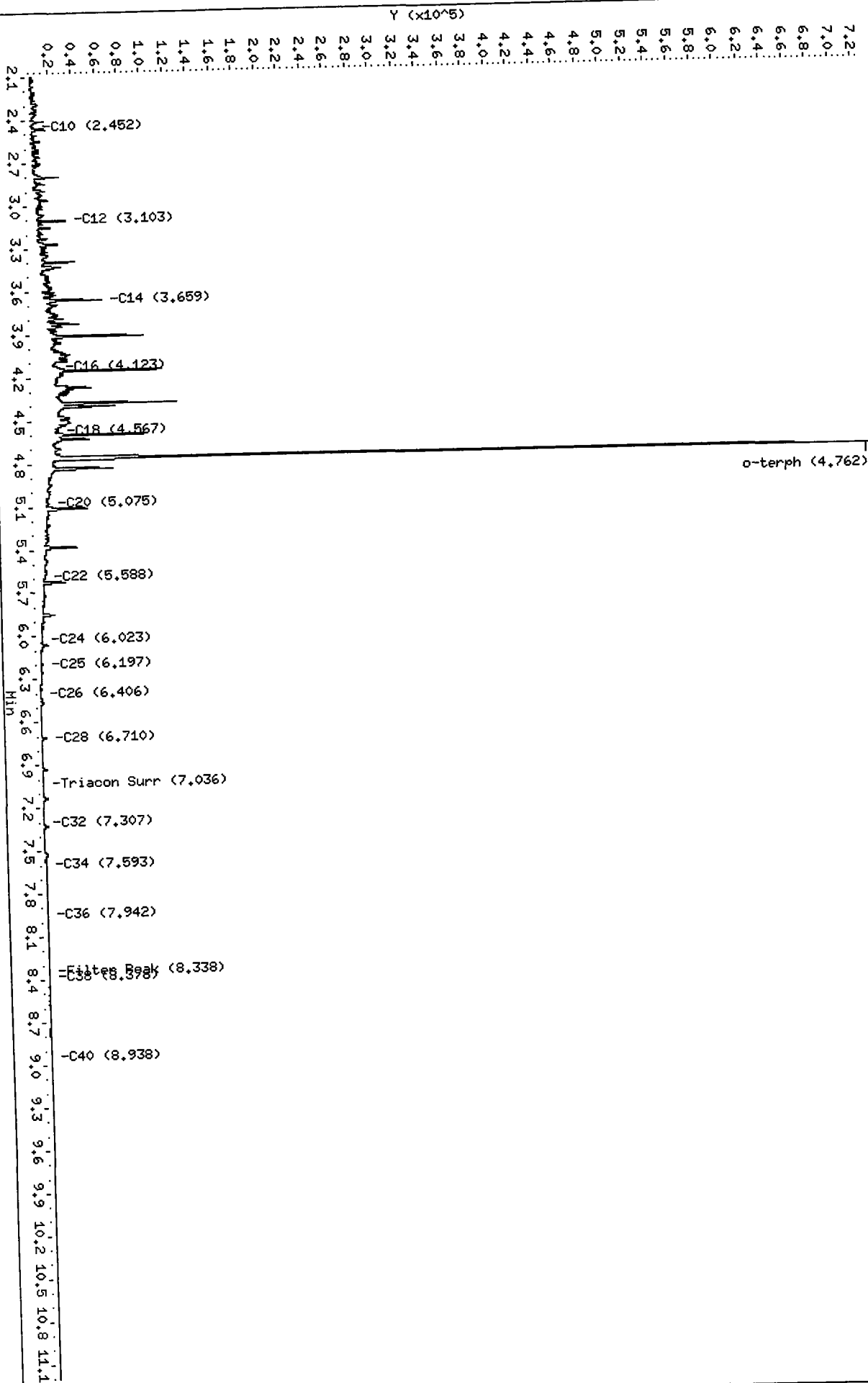
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

/chem2/fid9.i/20100728.B/0728r-aw,b/0728R013.D





Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A014.D ARI ID: DIESEL 250  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 28-JUL-2010 21:07  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.542	0.006	14752	16460	GAS (Tol-C12)	999032	48
C8	1.700	0.006	8159	9848	DIESEL (C12-C24)	6436255	244
C10	2.450	-0.005	6508	5183	M.OIL (C24-C38)	128061	10
C12	3.102	0.011	80325	46536	AK-102 (C10-C25)	7125565	245
C14	3.657	0.016	148765	146845	AK-103 (C25-C36)	95793	19
C16	4.122	-0.007	48814	34422			
C18	4.567	-0.002	47241	38471			
C20	5.073	0.001	26043	28336			
C22	5.589	0.000	14890	4727			
C24	6.028	0.008	5981	4805			
C25	6.201	-0.012	6774	13133			
C26	6.387	-0.005	1514	1078			
C28	6.716	-0.007	5763	5256			
C32	7.308	-0.001	228	49	JP-4 (Tol-C14)	2097448	128
C34	7.600	0.003	463	110	BUNKERC (C10-C38)	7233913	825
Filter Peak	8.344	0.001	446	316			
C36	7.941	-0.004	482	433			
C38	8.377	-0.004	442	324			
C40	8.935	0.000	425	91			
o-terph	4.771	0.004	1395660	1293787	JET-A (C10-C18)	5066220	367
Triacon Surr	7.038	0.000	49	14	JP8 (Tol-C16)	3698235	210

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

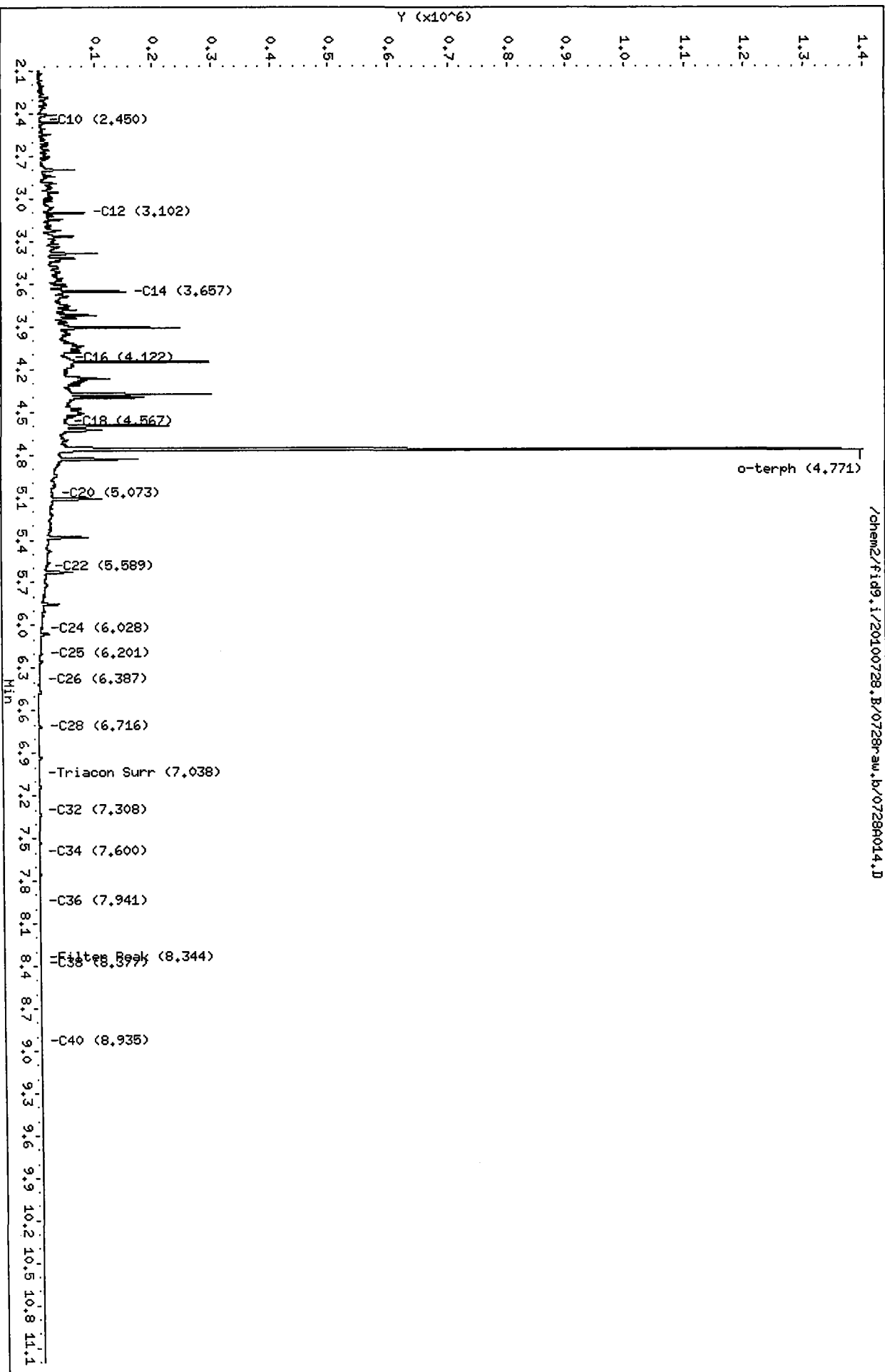
Surrogate	Area	Amount	%Rec
o-Terphenyl	1293787	50.2	111.6
Triacontane	14	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

*M 7/30/10*

Data File: /chem2/fid9.i/20100728.B/0728r-aw.b/0728R014.D  
 Date : 28-JUL-2010 21:07  
 Client ID:  
 Sample Info: DIESEL 250  
 Column phase: RTX-1

Instrument: fid9.i  
 Operator: MS  
 Column diameter: 0.25



Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A015.D ARI ID: DIESEL 500  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 28-JUL-2010 21:28  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.550	0.014	24092	21960	GAS (Tol-C12)	1901504	91
C8	1.707	0.013	12840	13683	DIESEL (C12-C24)	13073976	497
C10	2.453	-0.002	10841	4396	M.OIL (C24-C38)	182963	14
C12	3.103	0.012	165409	95735	AK-102 (C10-C25)	14464860	498
C14	3.658	0.017	311239	296922	AK-103 (C25-C36)	133392	27
C16	4.122	-0.006	99870	66038			
C18	4.564	-0.005	95431	110341			
C20	5.074	0.002	52479	17444			
C22	5.584	-0.004	30444	11329			
C24	6.031	0.011	12477	13304			
C25	6.201	-0.012	7950	11851			
C26	6.392	0.000	3328	3066			
C28	6.713	-0.010	2681	3159			
C32	7.307	-0.002	133	71	JP-4 (Tol-C14)	4128068	252
C34	7.599	0.003	311	54	BUNKERC (C10-C38)	14605806	1665
Filter Peak	8.347	0.003	266	158			
C36	7.946	0.002	325	199			
C38	8.380	0.000	252	200			
C40	8.933	-0.002	215	132			
o-terph	4.780	0.013	2312150	2615553	JET-A (C10-C18)	10357341	749
Triacon Surr	7.035	-0.003	24	5	JP8 (Tol-C16)	7327543	416

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2615553	101.5	225.6
Triacontane	5	0.0	0.0

*M 7/29/10*

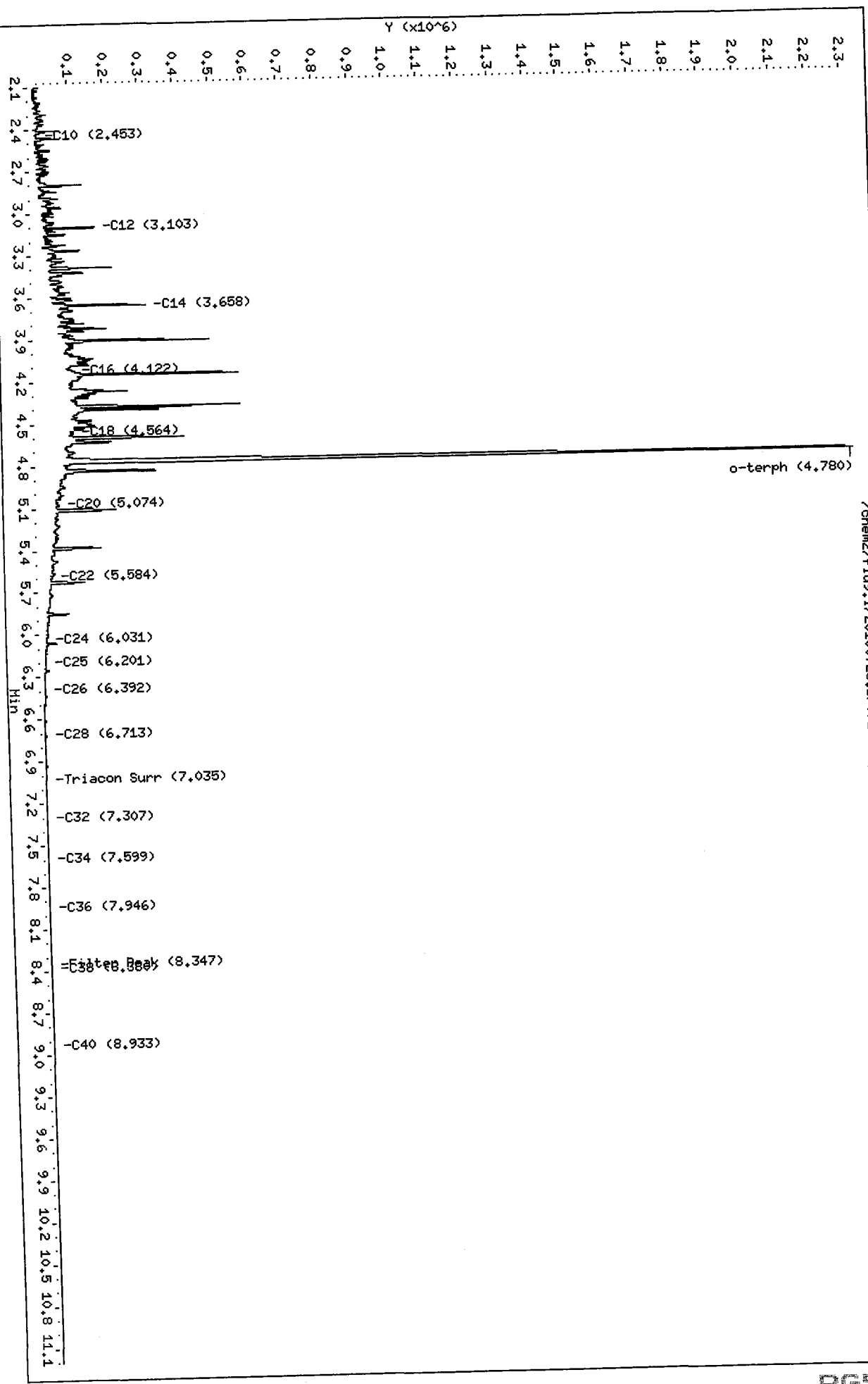
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100728.B/0728raw.b/0728a015.D  
Date: 28-JUL-2010 21:28  
Client ID:  
Sample Info: DIESEL 500

Column phase: RTX-1

/chem2/fid9.i/20100728.B/0728raw.b/0728a015.D

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A016.D ARI ID: DIESEL 1000  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 28-JUL-2010 21:49  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.522	-0.014	10876	15528	GAS (Tol-C12)	3531545	168
C8	1.681	-0.013	9803	11090	DIESEL (C12-C24)	25634454	974
C10	2.453	-0.002	18978	7692	M.OIL (C24-C38)	394336	31
C12	3.105	0.014	327593	189038	AK-102 (C10-C25)	28360210	976
C14	3.660	0.019	587586	585940	AK-103 (C25-C36)	290957	58
C16	4.123	-0.005	194975	156606			
C18	4.571	0.002	188327	195568			
C20	5.075	0.003	102065	48020			
C22	5.588	-0.001	60397	13108			
C24	6.012	-0.008	28768	31861			
C25	6.201	-0.011	17610	33377			
C26	6.390	-0.002	7211	10254			
C28	6.716	-0.006	7614	9107			
C32	7.302	-0.007	202	83	JP-4 (Tol-C14)	7631157	465
C34	7.591	-0.005	294	192	BUNKERC (C10-C38)	28658250	3268
Filter Peak	8.345	0.002	161	90			
C36	7.947	0.002	235	162			
C38	8.386	0.006	146	81			
C40	8.938	0.002	67	15			
o-terph	4.795	0.028	3307229	5312362	JET-A (C10-C18)	20311515	1470
Triacon Surr	7.032	-0.006	267	242	JP8 (Tol-C16)	14220053	808

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	5312362	206.2	458.2
Triacontane	242	0.0	0.0

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Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100728.B/0728r.aw.b/0728A016.D

Date: 28-JUL-2010 21:49

Client ID:

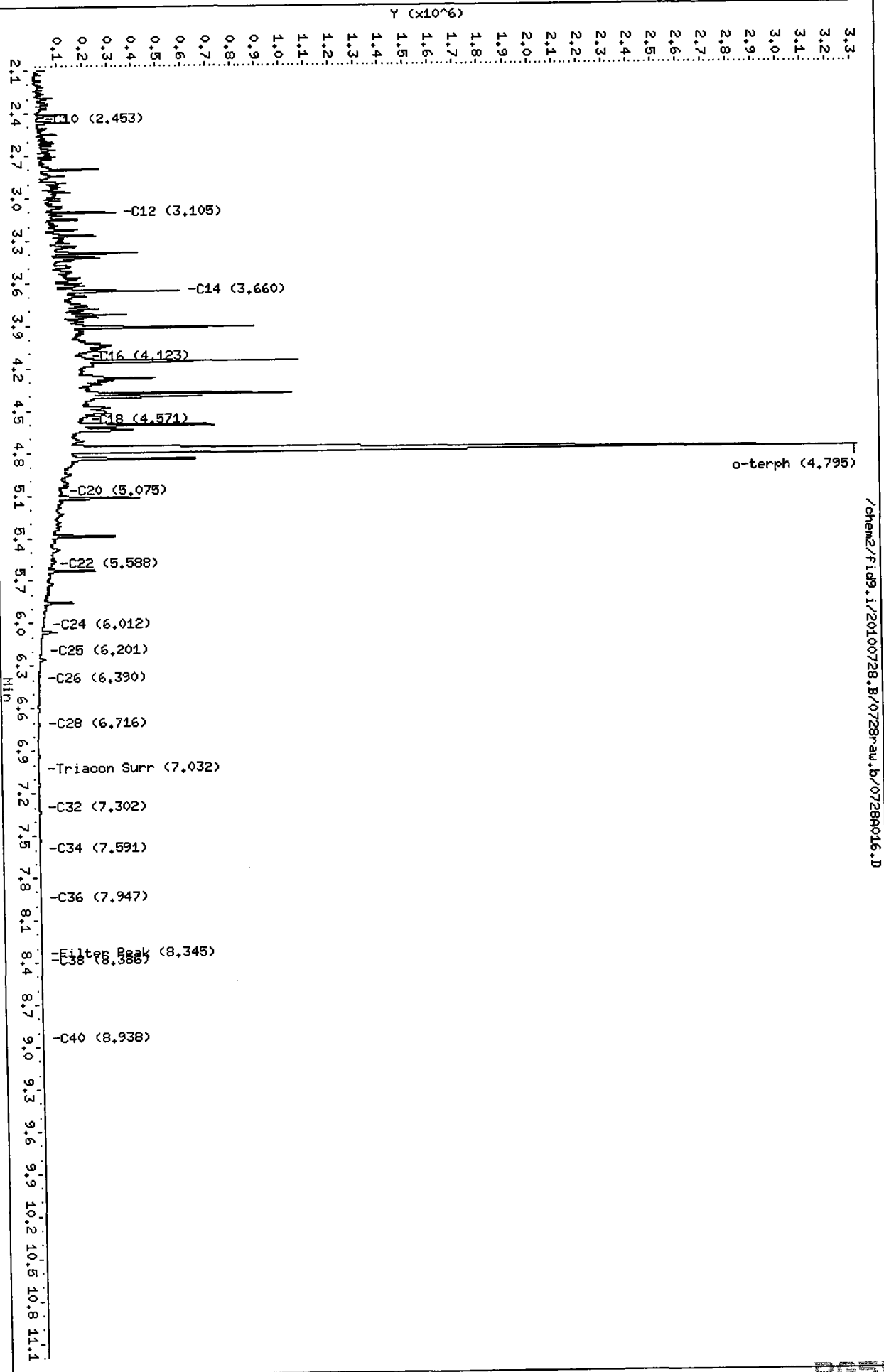
Sample Info: DIESEL 1000

Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25



Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A017.D ARI ID: DIESEL 2500  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 28-JUL-2010 22:11  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.527	-0.009	13560	11562	GAS (Tol-C12)	8824002	420
C8	1.696	0.002	11080	4589	DIESEL (C12-C24)	78583836	2984
C10	2.446	-0.009	54486	45945	M.OIL (C24-C38)	1069546	84
C12	3.108	0.017	766741	530976	AK-102 (C10-C25)	85583799	2946
C14	3.623	-0.018	472383	536342	AK-103 (C25-C36)	814815	163
C16	4.129	0.001	485188	391044			
C18	4.575	0.006	464619	138288			
C20	5.065	-0.008	324441	293811			
C22	5.599	0.011	159352	44294			
C24	6.014	-0.006	74943	92274			
C25	6.200	-0.013	55517	125809			
C26	6.393	0.001	18866	27921			
C28	6.714	-0.009	18491	25629			
C32	7.300	-0.009	811	206	JP-4 (Tol-C14)	19257288	1174
C34	7.598	0.002	667	236	BUNKERC (C10-C38)	86411627	9852
Filter Peak	8.352	0.008	294	163			
C36	7.939	-0.006	456	454			
C38	8.372	-0.008	289	303			
C40	8.930	-0.005	144	37			
o-terph	4.745	-0.022	442051	349242	JET-A (C10-C18)	49526362	3584
Triacon Surr	7.036	-0.002	1327	1487	JP8 (Tol-C16)	35611639	2024

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	349242	13.6	30.1
Triacotane	1487	0.1	0.2

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

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Data File: /chem2/fid9.i/20100728.B/0728r-aw.b/0728A017.D

Date: 28-JUL-2010 22:11

Client ID:

Sample Info: DIESEL 2500

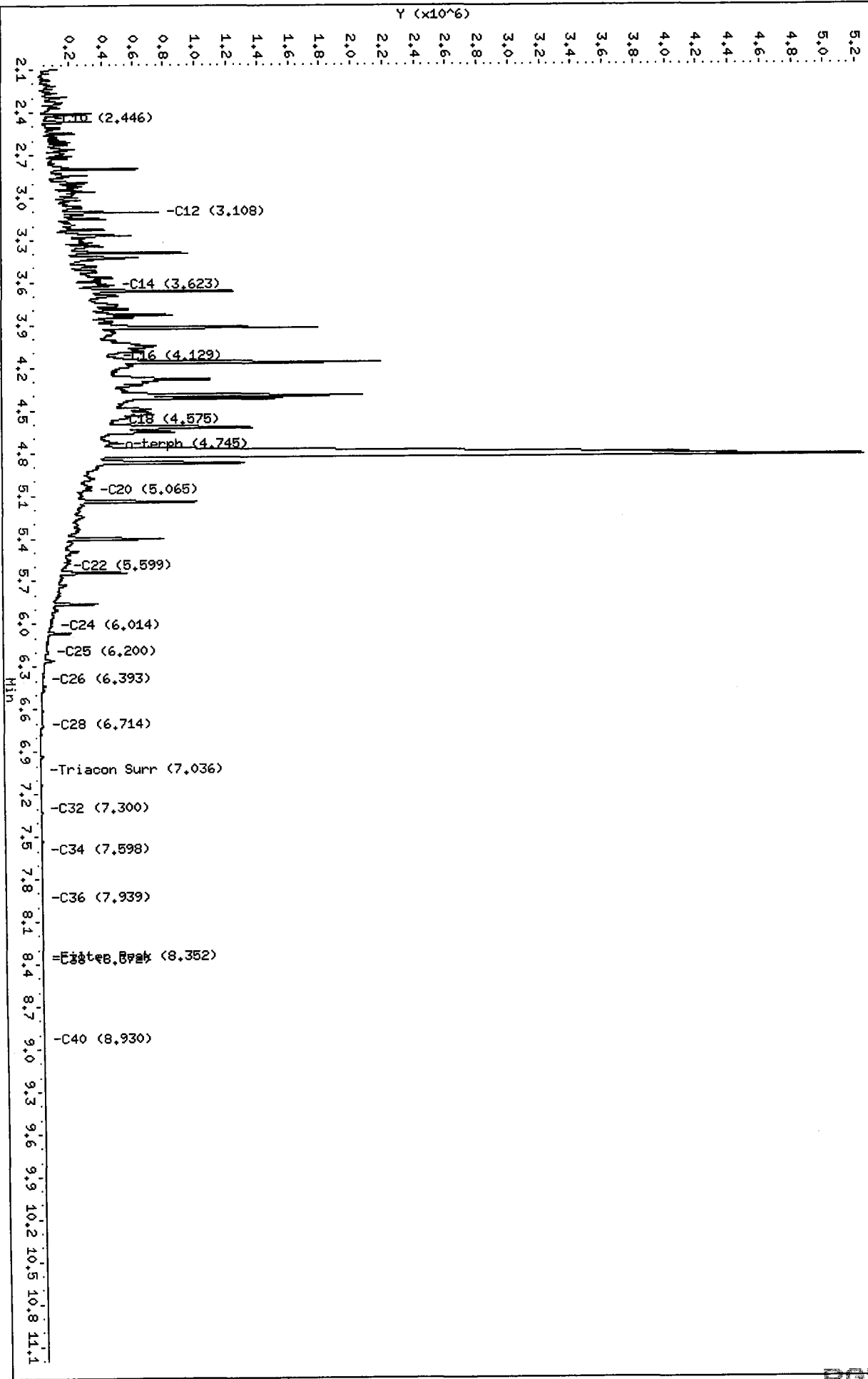
Column phase: RTX-1

Instrument: fid9.i

Operator: HS

Column diameter: 0.25

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Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/ftd9.i/20100728.B/0728raw.b/0728A019.D ARI ID: MOIL 100  
 Method: /chem2/ftd9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: ftd9.i Injection: 28-JUL-2010 22:53  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS							
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.544	0.008	7458	18695	GAS (Tol-C12)	141901	7
C8	1.726	0.033	5158	6296	DIESEL (C12-C24)	170722	6
C10	2.453	-0.002	2104	2277	M.OIL (C24-C38)	1637902	128
C12	3.087	-0.004	132	32	AK-102 (C10-C25)	227313	8
C14	3.638	-0.003	73	40	AK-103 (C25-C36)	1430764	286
C16	4.130	0.002	69	41			
C18	4.564	-0.005	811	866			
C20	5.075	0.003	500	282			
C22	5.588	-0.001	2108	500			
C24	6.024	0.004	5281	1867			
C25	6.222	0.010	6965	4086			
C26	6.393	0.001	8433	4859			
C28	6.715	-0.008	26196	37657			
C32	7.310	0.001	14515	3993	JP-4 (Tol-C14)	147735	9
C34	7.596	0.000	11767	4821	BUNKERC (C10-C38)	1833277	209
Filter Peak	8.344	0.001	6091	3946			
C36	7.940	-0.005	8533	7979			
C38	8.385	0.005	5855	2782			
C40	8.936	0.000	3917	1842			
o-terph	4.766	-0.001	1479	1425	JET-A (C10-C18)	40423	3
Triacon Surr	7.036	-0.002	13527	12287	JP8 (Tol-C16)	151586	9

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1425	0.1	0.1
Triacotane	12287	0.6	1.4

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

*M47396*

Data File: /chem2/fid9.i/20100728.B/0728r-aw.b/0728A019.D

Date: 28-JUL-2010 22:53

Client ID:

Sample Info: MOIL 100

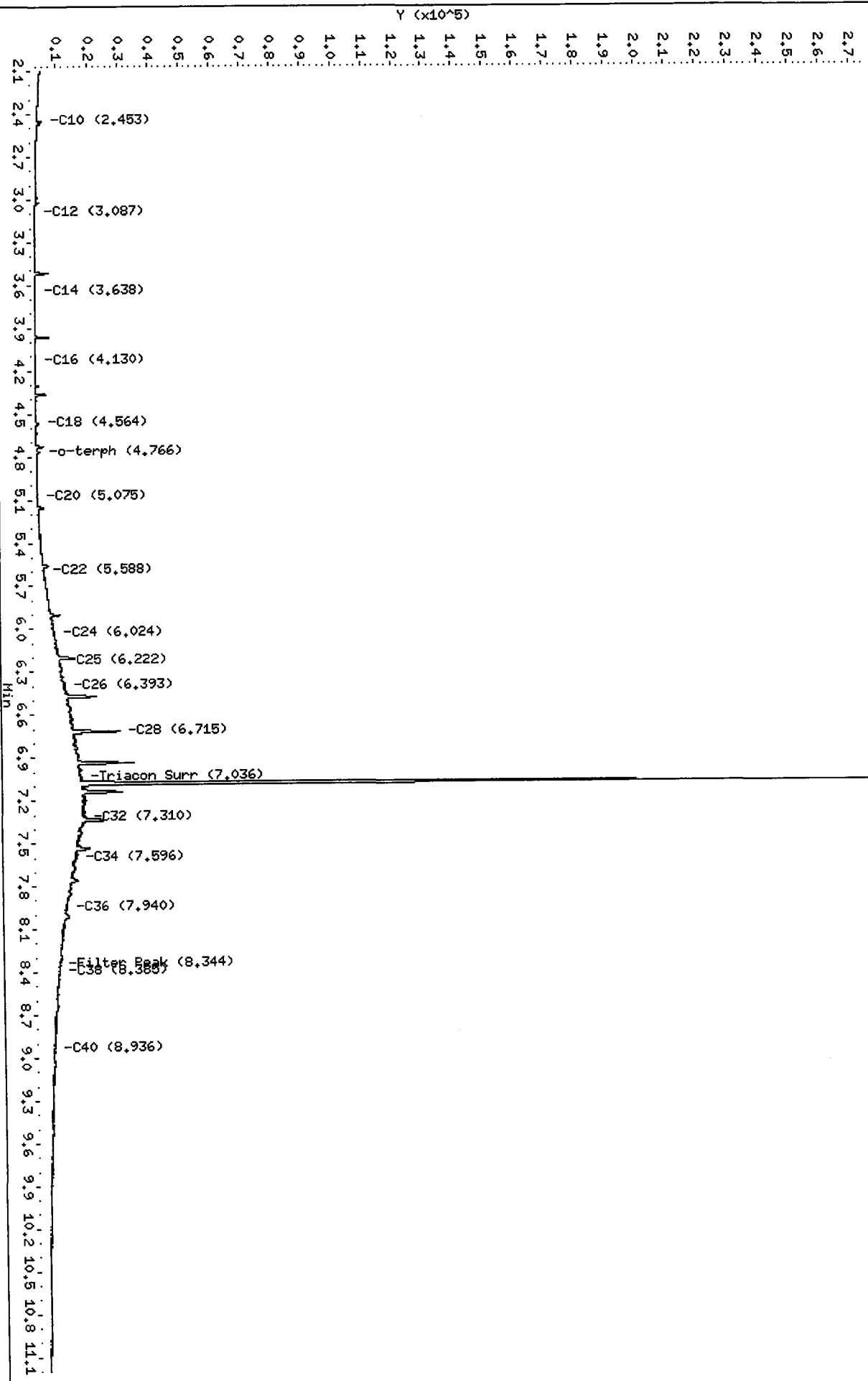
Column phase: RTX-1

Instrument: fid9.i

Operator: HS

Column diameter: 0.25

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Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A020.D ARI ID: MOIL 250  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 28-JUL-2010 23:15  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS							
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.542	0.006	9497	26573	GAS (Tol-C12)	196853	9
C8	1.701	0.007	5948	3882	DIESEL (C12-C24)	365810	14
C10	2.453	-0.002	2442	3279	M.OIL (C24-C38)	3704698	290
C12	3.084	-0.007	295	172	AK-102 (C10-C25)	480434	17
C14	3.641	0.000	143	28	AK-103 (C25-C36)	3234984	646
C16	4.130	0.002	41	6			
C18	4.564	-0.005	1875	1532			
C20	5.076	0.003	1034	1260			
C22	5.593	0.005	5116	2268			
C24	6.019	-0.001	12501	3919			
C25	6.217	0.004	16132	5120			
C26	6.394	0.003	20541	11264			
C28	6.719	-0.004	29297	45978			
C32	7.310	0.001	33294	13189	JP-4 (Tol-C14)	205495	13
C34	7.596	0.000	26975	12175	BUNKERC (C10-C38)	4105098	468
Filter Peak	8.341	-0.002	13586	4242			
C36	7.941	-0.004	19049	9333			
C38	8.372	-0.008	13101	10702			
C40	8.931	-0.004	8356	5723			
o-terph	4.766	-0.001	970	1169	JET-A (C10-C18)	53412	4
Triacon Surr	7.041	0.003	32829	14153	JP8 (Tol-C16)	208886	12

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1169	0.0	0.1
Triacontane	14153	0.7	1.6

*Not 13070*

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100728.B/0728raw.b/0728A020.D

Date: 28-JUL-2010 23:15

Client ID:

Sample Info: M01L 250

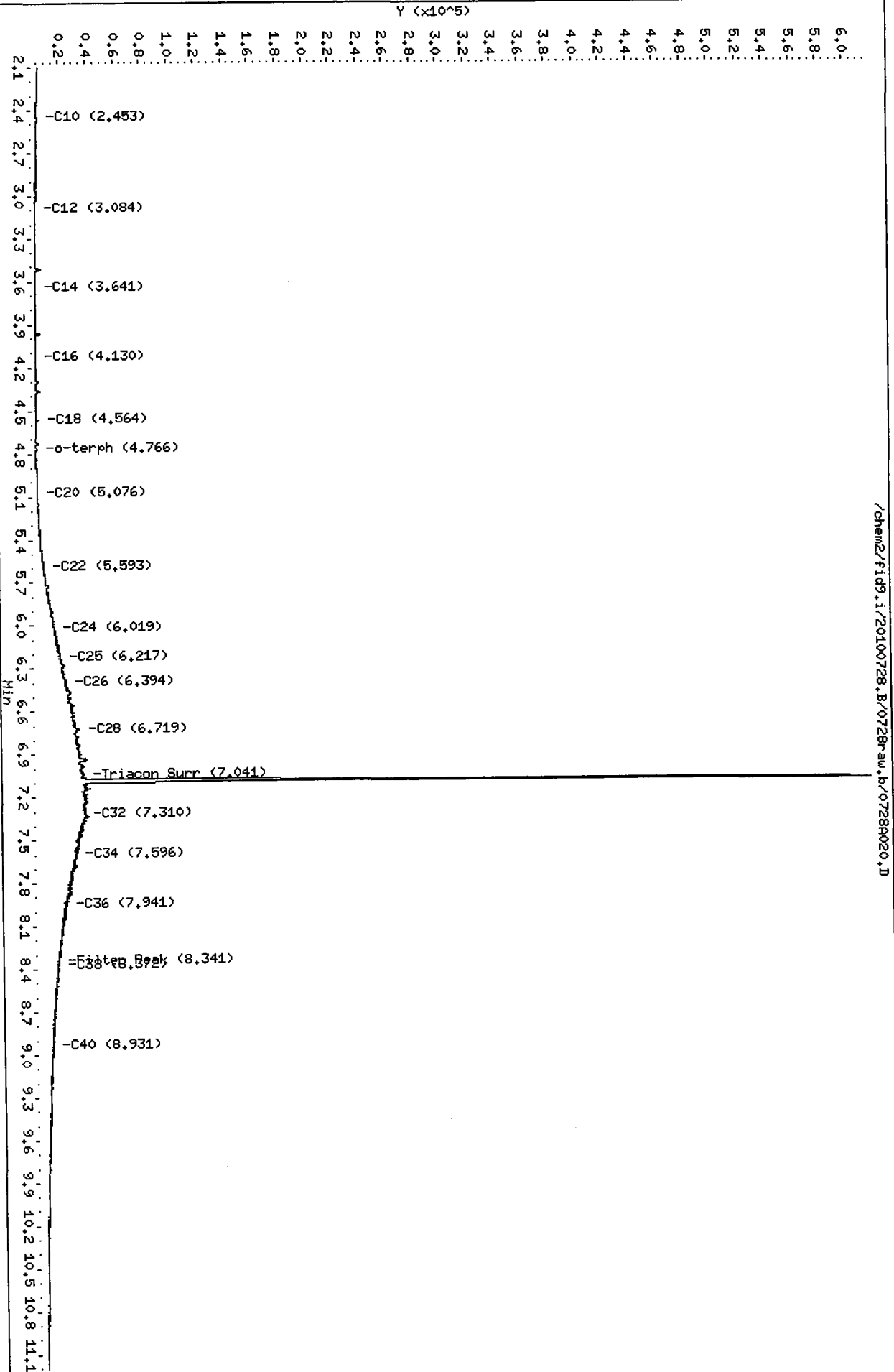
Column phase: RTX-1

Instrument: fid9.i

Operator: HS

Column diameter: 0.25

Page 1



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Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A021.D ARI ID: MOIL 500  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 28-JUL-2010 23:36  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.544	0.008	9179	20369	GAS (Tol-C12)	216239	10
C8	1.728	0.034	6026	8955	DIESEL (C12-C24)	681352	26
C10	2.454	-0.002	2354	2271	M.OIL (C24-C38)	7090303	554
C12	3.094	0.003	289	44	AK-102 (C10-C25)	866175	30
C14	3.642	0.001	195	126	AK-103 (C25-C36)	6178857	1234
C16	4.125	-0.003	40	9			
C18	4.561	-0.008	3657	2936			
C20	5.072	-0.001	2047	2188			
C22	5.593	0.004	10080	6940			
C24	6.019	-0.001	23765	7965			
C25	6.211	-0.002	31744	9374			
C26	6.394	0.003	39169	13151			
C28	6.721	-0.002	55036	30221			
C32	7.312	0.003	65826	24703	JP-4 (Tol-C14)	225770	14
C34	7.600	0.003	52438	20690	BUNKERC (C10-C38)	7803945	890
Filter Peak	8.350	0.007	26035	6689			
C36	7.944	-0.001	38444	12762			
C38	8.382	0.002	26485	18398			
C40	8.934	-0.002	15558	5694			
o-terph	4.764	-0.003	1139	1159	JET-A (C10-C18)	56856	4
Triacon Surr	7.035	-0.003	64313	60373	JP8 (Tol-C16)	229628	13

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1159	0.0	0.1
Triacontane	60373	3.0	6.8

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

*M 7/30/10*

Data File: /chem2/fid9.i/20100728.B/0728raw.b/0728A021.D

Date: 28-JUL-2010 23:36

Client ID:

Sample Info: M01L 500

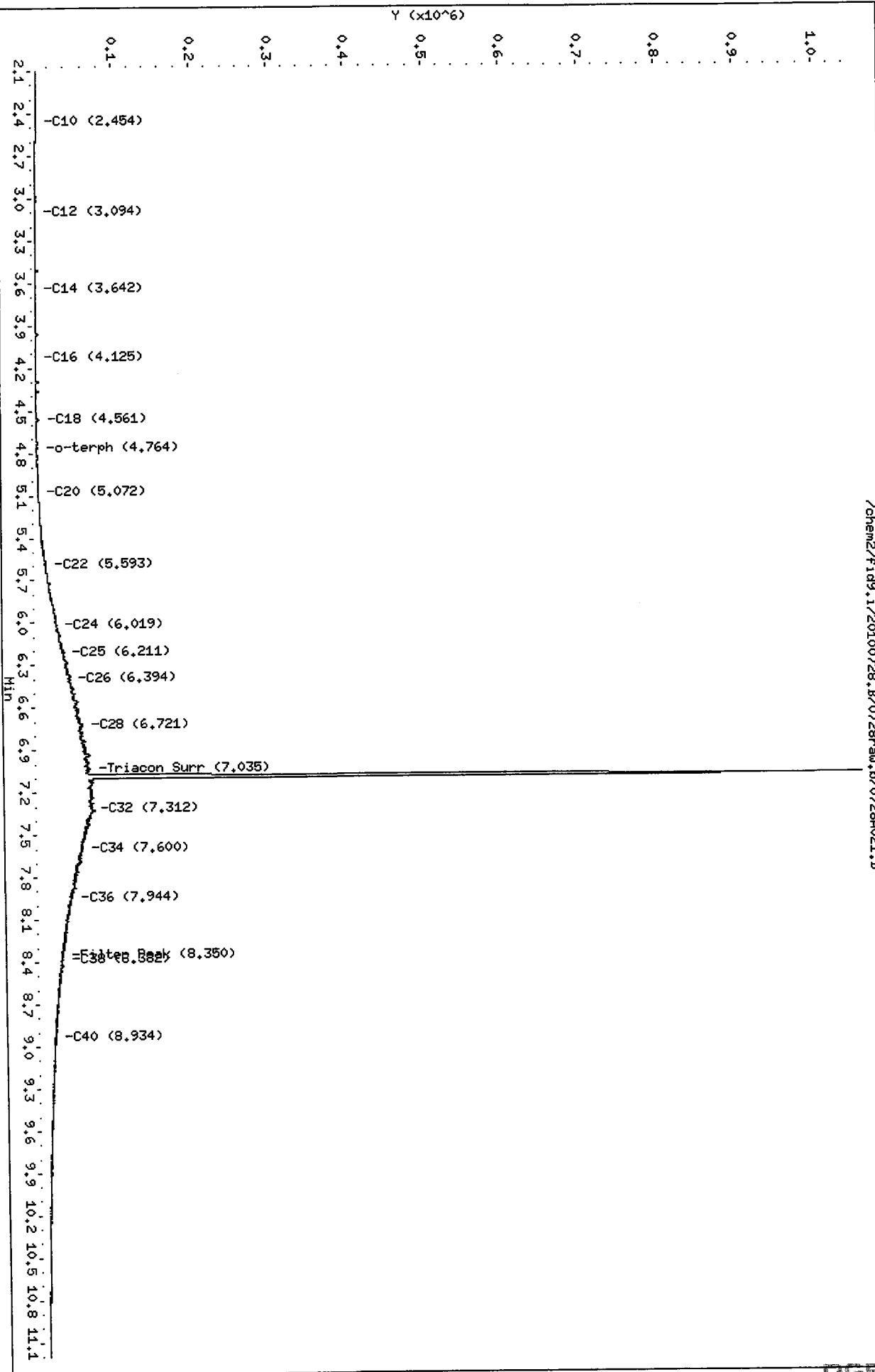
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

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Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A022.D ARI ID: MOIL 1000  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 28-JUL-2010 23:57  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.538	0.002	10649	63178	GAS (Tol-C12)	218627	10
C8	1.703	0.010	6083	4895	DIESEL (C12-C24)	1375330	52
C10	2.453	-0.003	2350	1902	M.OIL (C24-C38)	14305504	1119
C12	3.089	-0.002	381	214	AK-102 (C10-C25)	1720432	59
C14	3.639	-0.002	299	246	AK-103 (C25-C36)	12524196	2500
C16	4.129	0.000	79	16			
C18	4.560	-0.009	7645	6024			
C20	5.072	0.000	4064	7040			
C22	5.597	0.008	20853	24416			
C24	6.018	-0.002	49376	52041			
C25	6.213	0.001	63610	16233			
C26	6.389	-0.002	79064	34283			
C28	6.720	-0.003	107910	42122			
C32	7.310	0.001	130942	41405	JP-4 (Tol-C14)	231895	14
C34	7.599	0.002	108281	136091	BUNKERC (C10-C38)	15714808	1792
Filter Peak	8.345	0.002	52029	25346			
C36	7.948	0.003	74855	16070			
C38	8.376	-0.004	51433	44591			
C40	8.939	0.003	30398	16046			
o-terph	4.764	-0.003	1794	1847	JET-A (C10-C18)	72341	5
Triacon Surr	7.037	-0.001	127050	74010	JP8 (Tol-C16)	236928	13

M Indicates manual integration within range.  
 Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1847	0.1	0.2
Triacontane	74010	3.7	8.3

*M-13014*

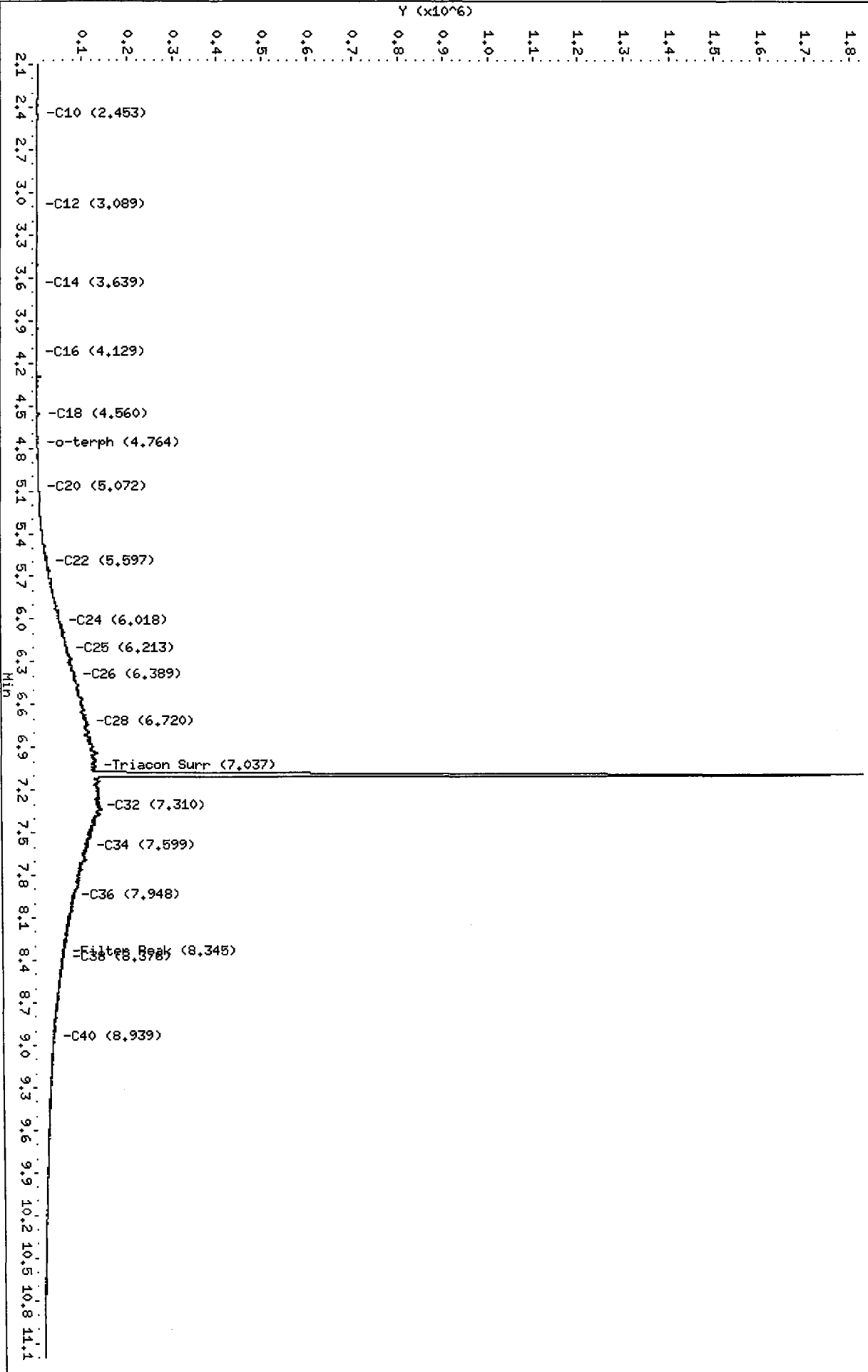
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.1/20100728.B/0728r-aw,b/0728r022.D  
Date: 28-JUL-2010 23:57  
Client ID:  
Sample Info: MOIL 1000

Column phase: RTX-1

Instrument: fid9.1  
Operator: HS  
Column diameter: 0.25

/chem2/fid9.1/20100728.B/0728r-aw,b/0728r022.D





Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A023.D ARI ID: MOIL 2500  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 29-JUL-2010 00:18  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	185483	9
C8	1.718	0.025	7199	4779	DIESEL (C12-C24)	3353157	127
C10	2.459	0.004	3767	6961	M.OIL (C24-C38)	34124562	2669
C12	3.085	-0.006	494	385	AK-102 (C10-C25)	4193453	144
C14	3.640	-0.001	498	323	AK-103 (C25-C36)	29834397	5956
C16	4.130	0.001	204	91			
C18	4.559	-0.010	20942	16266			
C20	5.069	-0.004	9741	14269			
C22	5.589	0.001	46953	16444			
C24	6.020	0.000	116155	30105			
C25	6.215	0.003	149541	35623			
C26	6.388	-0.003	192672	83538			
C28	6.725	0.002	249614	49500			
C32	7.308	-0.001	301815	83744	JP-4 (Tol-C14)	202516	12
C34	7.594	-0.002	255953	217957	BUNKERC (C10-C38)	37513451	4277
Filter Peak	8.350	0.006	124584	111418			
C36	7.944	-0.001	179229	56451			
C38	8.379	-0.001	117276	59781			
C40	8.938	0.003	70596	37072			
o-terph	4.762	-0.005	3843	4178	JET-A (C10-C18)	110588	8
Triacon Surr	7.043	0.005	291768	230191	JP8 (Tol-C16)	210004	12

M Indicates manual integration within range.

Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	4178	0.2	0.4
Triacontane	230191	11.6	25.8

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

*MW/591*

Data File: /chem2/fid9.i/20100728.B/0728raw.b/0728023.D

Date: 29-JUL-2010 00:18

Client ID:

Sample Info: M01L 2500

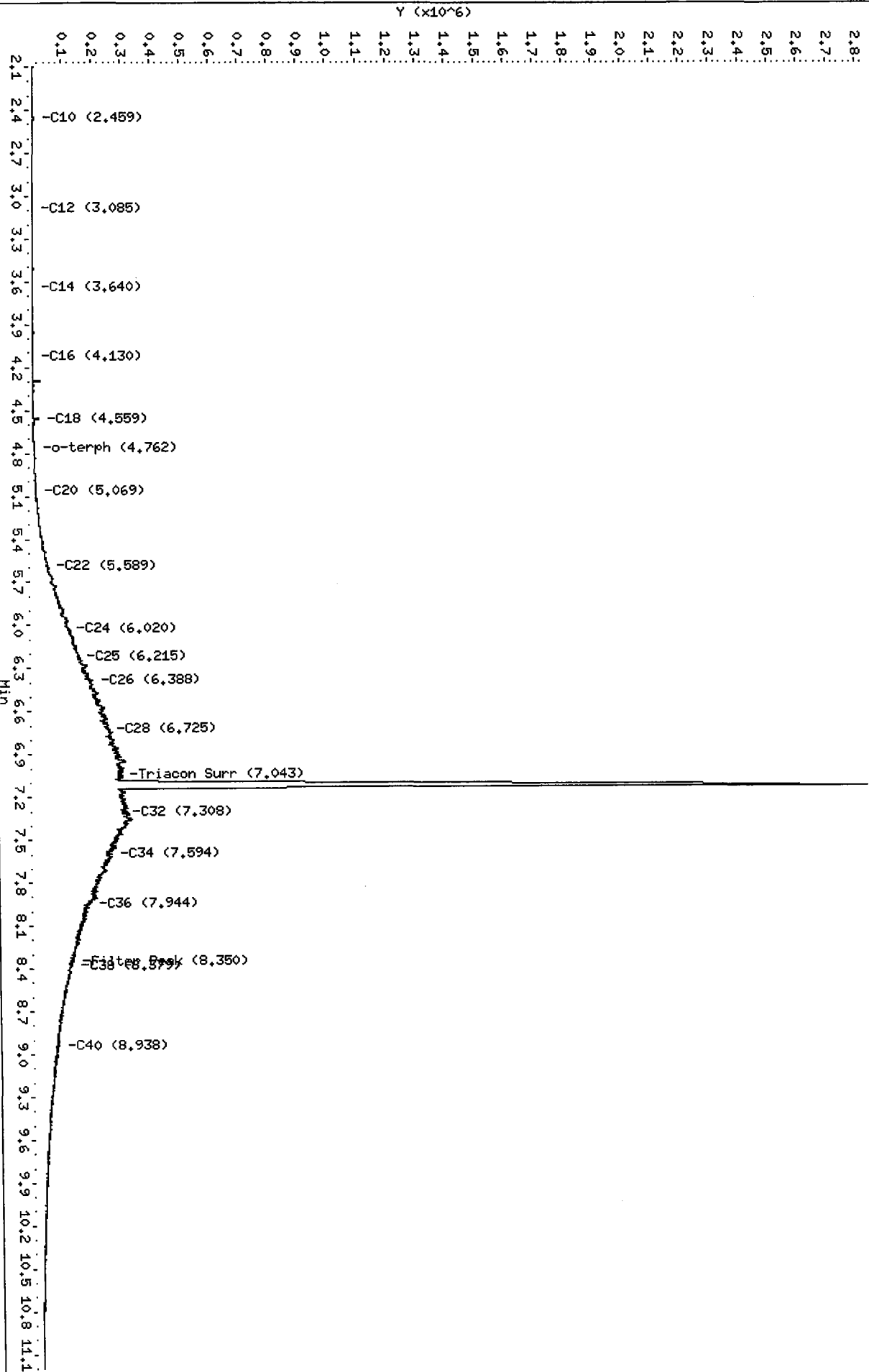
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

/chem2/fid9.i/20100728.B/0728raw.b/0728023.D



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A024.D ARI ID: MOIL 5000  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 29-JUL-2010 00:40  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS							
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.505	-0.031	22596	103344	GAS (Tol-C12)	263209	13
C8	1.724	0.030	8164	11347	DIESEL (C12-C24)	6666776	253
C10	2.462	0.006	6166	7110	M.OIL (C24-C38)	67258151	5260
C12	3.104	0.013	3368	1784	AK-102 (C10-C25)	8147281	280
C14	3.646	0.005	615	350	AK-103 (C25-C36)	59351121	11849
C16	4.129	0.001	608	343			
C18	4.560	-0.009	37045	30543			
C20	5.070	-0.002	19428	26259			
C22	5.582	-0.007	96098	68803			
C24	6.023	0.003	234560	106000			
C25	6.207	-0.006	297700	255615			
C26	6.393	0.001	373459	230456			
C28	6.726	0.003	495735	196084			
C32	7.305	-0.004	602415	260738	JP-4 (Tol-C14)	285229	17
C34	7.597	0.000	510745	472002	BUNKERC (C10-C38)	73961804	8433
Filter Peak	8.346	0.002	226260	178664			
C36	7.943	-0.001	358012	278298			
C38	8.379	-0.001	210178	74132			
C40	8.935	0.000	96401	47669			
o-terph	4.761	-0.006	24528	21927	JET-A (C10-C18)	180059	13
Triacon Surr	7.043	0.005	564895	111509	JP8 (Tol-C16)	304722	17

M Indicates manual integration within range.  
 Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

Surrogate	Area	Amount	%Rec
o-Terphenyl	21927	0.9	1.9
Triacontane	111509	5.6	12.5

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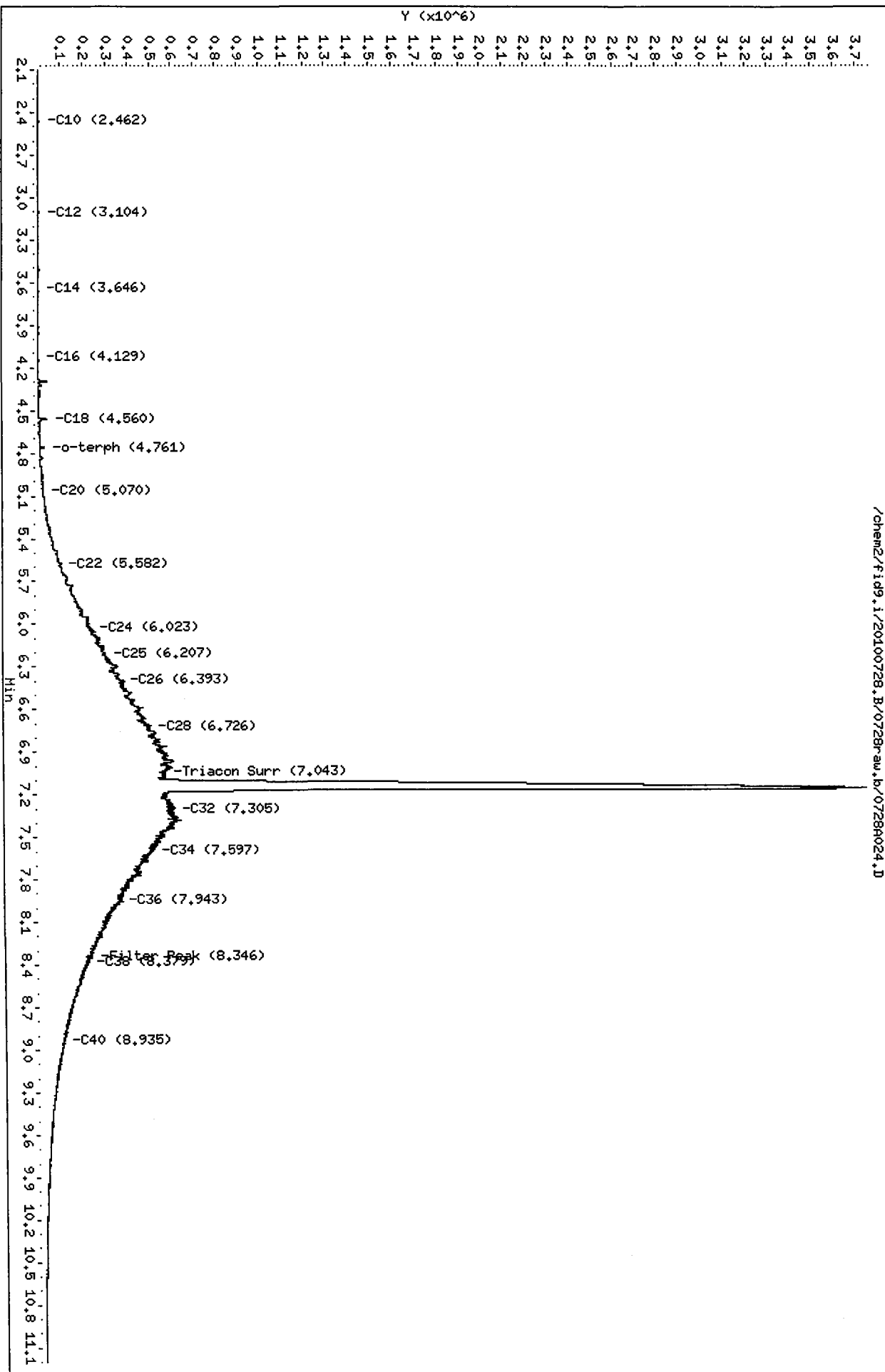
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100728.B/0728r-aw,b/0728R024.D  
Date: 29-JUL-2010 00:40  
Client ID:  
Sample Info: M01L 5000

Column phase: RTX-1

Instrument: fid9.i  
Operator: HS  
Column diameter: 0.25

Page 1



RG54: 01016

**-TPHD Raw Data  
Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: RG54**

Analytical Resources Inc.: Organics Instrument Log

FID-9 Agilent 6850 - Serial No.: US10404004

Date: 8/3/10 Analysis: NUTRAX Analyst: [Signature]

GC Program: TPI Column No: 802031 Column Type: RTX1

Instrument Tune (.U or .CT.): \_\_\_\_\_ EM Voltage: \_\_\_\_\_

Calibration File: \_\_\_\_\_ Curve Date: 7/28/10

IS/SS	Ical/Ccal	LCS/ICV
/	1700-1 1680-3 1730-2 1737-3	/

Time	Filename	LabID	ClientID	DF
1	1216	0803A001.D	RINSE	1
2	1238	0803A002.D	RT RT	1
3	1259	0803A003.D	DIESEL#1 GTSP	1
4	1321	0803A004.D	MOIL#1 GTSP	1
5	1342	0803A005.D	IB IB	1
6	1404	0803A006.D	RG18A KSC-DP-1-GW-	1
7	1426	0803A007.D	RG22A GTSP-RS-05	1
8	1447	0803A008.D	BUNKER#1	1
9	1509	0803A009.D	RG18LC5W1 RG18LC5W1	1
10	1531	0803A010.D	RG18LCSDW1 RG18LCSDW1	1
11	1553	0803A011.D	RG18MBW1 RG18MBW1	1
12	1615	0803A012.D	RG66A P2IM-DB-WC-0	1
13	1636	0803A013.D	RG66B P2IM-DB-WC-0	1
14	1658	0803A014.D	RG66MBS1 RG66MBS1	1
15	1720	0803A015.D	RG66LCSS1 RG66LCSS1	1
16	1742	0803A016.D	RG66LCSDS1 RG66LCSDS1	1
17	1803	0803A017.D	DIESEL#2 GTSP	1
18	1825	0803A018.D	MOIL#2 GTSP	1
19	1847	0803A019.D	BUNKER#2	1
20	1908	0803A020.D	RG51A	5
21	1930	0803A021.D	RG51F	1
22	1951	0803A022.D	RG51G	5

Time	Filename	LabID	ClientID	DF
23	2013	0803A023.D	RG54A	5
24	2035	0803A024.D	RG54E	5
25	2056	0803A025.D	RG54H	5
26	2117	0803A026.D	RG51B PSB12-1.5-2.	1
27	2139	0803A027.D	RG51A PSB12-0-0.5-	1
28	2200	0803A028.D	RG51C PSB12-2-4-07	1
29	2222	0803A029.D	RG51D PSB12-8-10-0	1
30	2243	0803A030.D	RG51E PSB12-8-10-0	1
31	2305	0803A031.D	RG51G PSB12-4-6-07	1
32	2326	0803A032.D	RG51FMS PSB12-14-17-	1
33	2347	0803A033.D	RG51FMSD PSB12-14-17-	1
34	0009	0803A034.D	RG66LCSS1 RG66LCSS1	1
35	0030	0803A035.D	RG66LCSDS1 RG66LCSDS1	1
36	0052	0803A036.D	RG66MBS1 RG66MBS1	1
37	0113	0803A037.D	DIESEL#3	1
38	0134	0803A038.D	MOIL#3	1
39	0156	0803A039.D	BUNKER#3	1
40	0217	0803A040.D	RG54A PSB14-0-.5-0	1
41	0238	0803A041.D	RG54B PSB14-1.5-2.	1
42	0259	0803A042.D	RG54C PSB14-2-4-07	1
43	0321	0803A043.D	RG54E PSB14-7-9-07	1
44	0342	0803A044.D	RG54F PSB14-12-14-	1
45	0403	0803A045.D	RG54H PSB17-0-0-0	1

Time	Filename	LabID	ClientID	DF
46	0424	0803A046.D	RG54I PSB17-1.5-2-	1
47	0446	0803A047.D	RG54J PSB17-2-4-07	1
48	0507	0803A048.D	RG54K PSB17-4-6-07	1
49	0528	0803A049.D	RG54L PSB17-10-13-	1
50	0549	0803A050.D	DIESEL#4	1
51	0611	0803A051.D	MOIL#4	1
52	0632	0803A052.D	BUNKER#4	1

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8/4/10

Maintenance / Comments None

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Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):  
 Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.



### GC Analyst Notes / Corrective Action Log

ARI Project ID: RYS7, RYS4 Client ID: FLOYD/SNIDER - LCA

ARI SOP: 403S(PCB) 405S(Herb) 407S(TPH-B) 409S(HCID) 412S(PCP) 423S(Pest)  
427S(Dir Inj) 428S(EPH) 432S(EDB) Other

Parameter(s): Diesel, Motor, 8 Top

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

Dates: Curve: 7/28/10 Analysis Start: 8/3/10

Endrin/DDT Breakdown <15%? YES / NO / NA Method Blank In Control? YES / NO

ICal Meets RF & %RSD Criteria? YES / NO LCS/LCSD Recovery In Control? YES / NO

CCal Meets RF & %RSD Criteria? YES / NO Surrogate Recovery In Control? YES / NO

Manual Integrations for ICal? YES / NO Manual Integrations for Samples? YES / NO

Internal Standard Meets Criteria? YES / NO / NA Special Analysis Criteria Met? YES / NO / NA

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

Additional Details on Reverse: Yes / No

Analyst: [Signature] Date: 8/4/10

Reviewer: \_\_\_\_\_ Date: \_\_\_\_\_

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A002.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: RT  
 Client ID: RT  
 Injection: 03-AUG-2010 12:38  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.551	0.000	1280184	595277	GAS (Tol-C12)	1936099	92
C8	1.712	0.019	698823	351080	DIESEL (C12-C24)	2807735	107
C10	2.477	0.012	1003750	459615	M.OIL (C24-C38)	3328480	260
C12	3.116	0.010	975889	452245	AK-102 (C10-C25)	3742550	129
C14	3.673	0.010	872060	457705	AK-103 (C25-C36)	2878703	575
C16	4.166	0.011	843232	462765			
C18	4.617	0.010	618396	465541			
C20	5.146	0.018	521744	464454			
C22	5.659	0.015	570410	453872			
C24	6.096	0.017	523314	448554			
C25	6.293	0.017	678368	612307			
C26	6.477	0.001	505385	443586			
C28	6.815	0.019	520257	431464			
C32	7.417	-0.003	442931	431096	JP-4 (Tol-C14)	2406493	147
C34	7.742	-0.002	314160	437580	BUNKERC (C10-C38)	7066963	806
Filter Peak	8.365	0.021	2904	8683			
C36	8.148	0.000	231108	424982			
C38	8.650	0.000	167603	404301			
C40	9.306	0.000	128221	228327			
o-terph	4.794	0.001	1759263	1659961	JET-A (C10-C18)	2340115	169
Triacon Surr	7.137	0.017	1246800	1461344	JP8 (Tol-C16)	2875028	163

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1659961	64.4	143.2
Triacantane	1461344	73.7	163.7

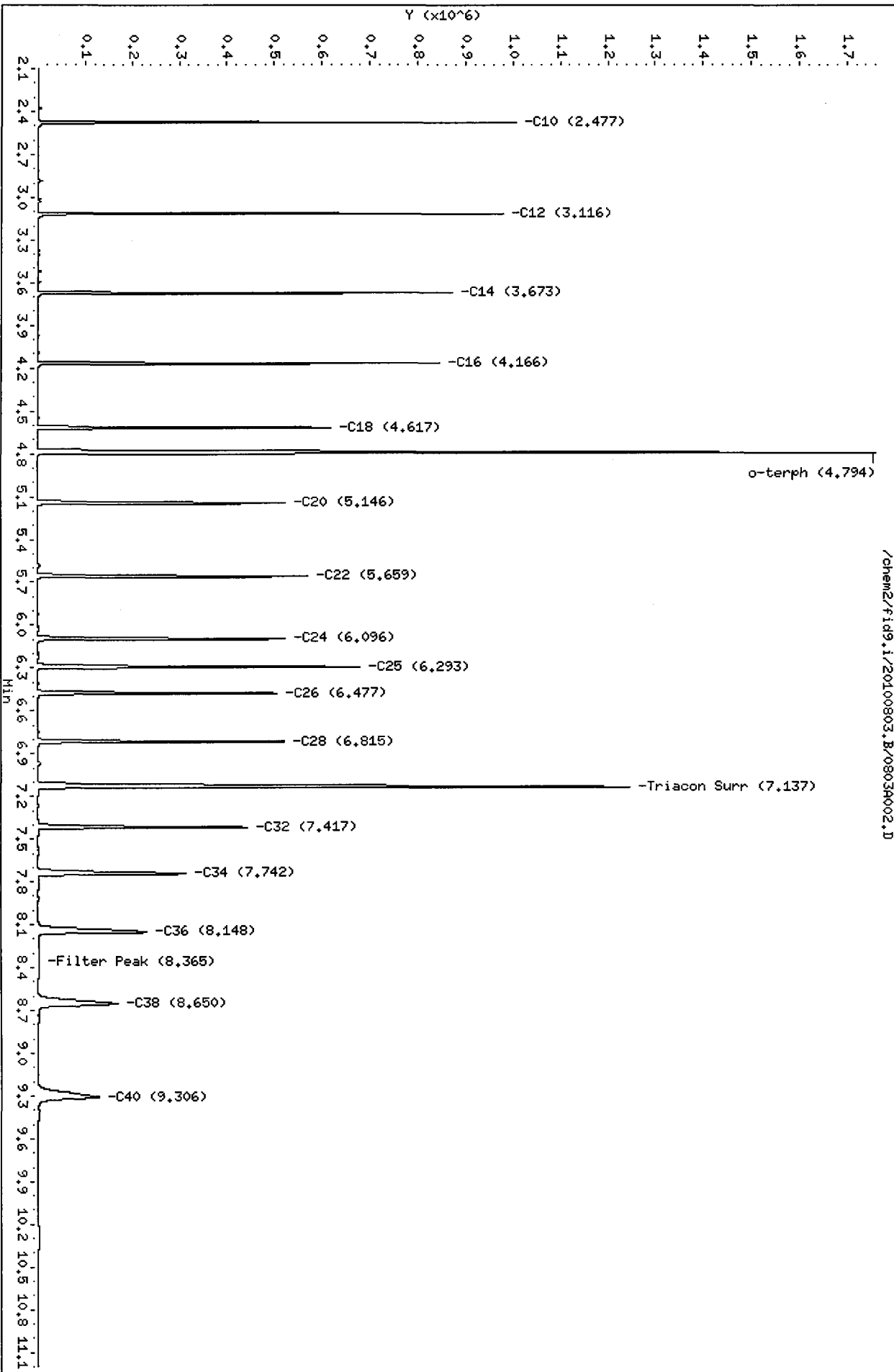
*MS/9/10*

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010



Data File: /chem2/fid9.i/20100803.B/0803A002.D  
Date : 03-AUG-2010 12:38  
Client ID: RT  
Sample Info: RT  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A005.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: IB  
Client ID: IB  
Injection: 03-AUG-2010 13:42  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.552	0.001	3173	3708	GAS (Tol-C12)	54895	3
C8	1.713	0.020	1380	2127	DIESEL (C12-C24)	26321	1
C10	2.448	-0.018	300	111	M.OIL (C24-C38)	130178	10
C12	3.103	-0.002	150	79	AK-102 (C10-C25)	45323	2
C14	3.661	-0.001	115	19	AK-103 (C25-C36)	99452	20
C16	4.156	0.000	72	20			
C18	4.613	0.007	1063	774			
C20	5.122	-0.006	46	19			
C22	5.659	0.015	942	1041			
C24	6.073	-0.006	145	86			
C25	6.269	-0.007	232	105			
C26	6.471	-0.005	1312	1485			
C28	6.786	-0.011	403	182			
C32	7.413	-0.007	4116	7332	JP-4 (Tol-C14)	63157	4
C34	7.736	-0.007	1528	2740	BUNKERC (C10-C38)	173276	20
Filter Peak	8.351	0.008	1079	638			
C36	8.139	-0.010	1524	2519			
C38	8.642	-0.008	1292	2853			
C40	9.305	-0.001	1135	1565			
o-terph	4.795	0.001	1868145	1907017	JET-A (C10-C18)	31549	2
Triacon Surr	7.139	0.019	1214494	1426944	JP8 (Tol-C16)	66921	4

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

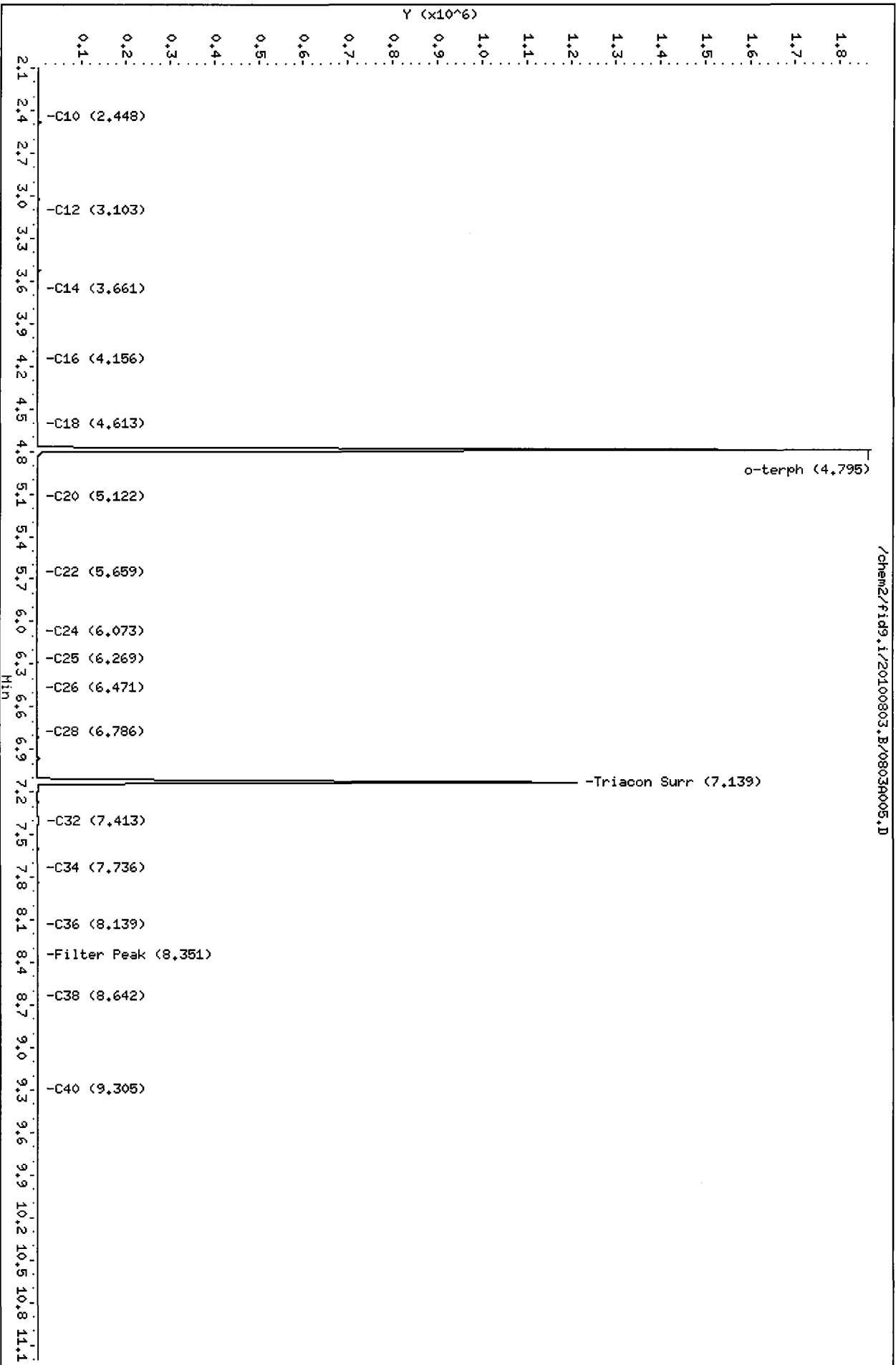
Surrogate	Area	Amount	%Rec
o-Terphenyl	1907017	74.0	164.5
Triacotane	1426944	72.0	159.9

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

*Handwritten signature/initials*

Data File: /chem2/fid9.i/20100803.B/0803H005.D  
Date : 03-AUG-2010 13:42  
Client ID: IB  
Sample Info: IB  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A017.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: DIESEL#2  
Client ID: DIESEL#2  
Injection: 03-AUG-2010 18:03  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.564	0.013	10393	5902	GAS (Tol-C12)	868100	41
C8	1.690	-0.003	1763	1581	DIESEL (C12-C24)	6132149	233
C10	2.466	0.000	3904	2537	M.OIL (C24-C38)	125272	10
C12	3.115	0.009	82030	44296	AK-102 (C10-C25)	6816350	235 M
C14	3.671	0.008	141683	142797	AK-103 (C25-C36)	98009	20
C16	4.150	-0.006	56420	41786			
C18	4.615	0.008	200377	189780			
C20	5.141	0.012	99273	109080			
C22	5.654	0.009	50642	52696			
C24	6.090	0.011	15723	21441			
C25	6.266	-0.010	2499	882			
C26	6.471	-0.005	2599	3618			
C28	6.787	-0.009	247	140			
C32	7.435	0.015	205	124	JP-4 (Tol-C14)	1917989	117
C34	7.746	0.003	290	206	BUNKERC (C10-C38)	6926152	790 M
Filter Peak	8.341	-0.002	551	682			
C36	8.155	0.006	179	116			
C38	8.647	-0.003	138	54			
C40	9.303	-0.003	116	78			
o-terph	4.790	-0.003	1252526	1064000	JET-A (C10-C18)	4966682	359
Triacon Surr	7.119	-0.001	3873	3638	JP8 (Tol-C16)	3477911	198

M Indicates manual integration within range.

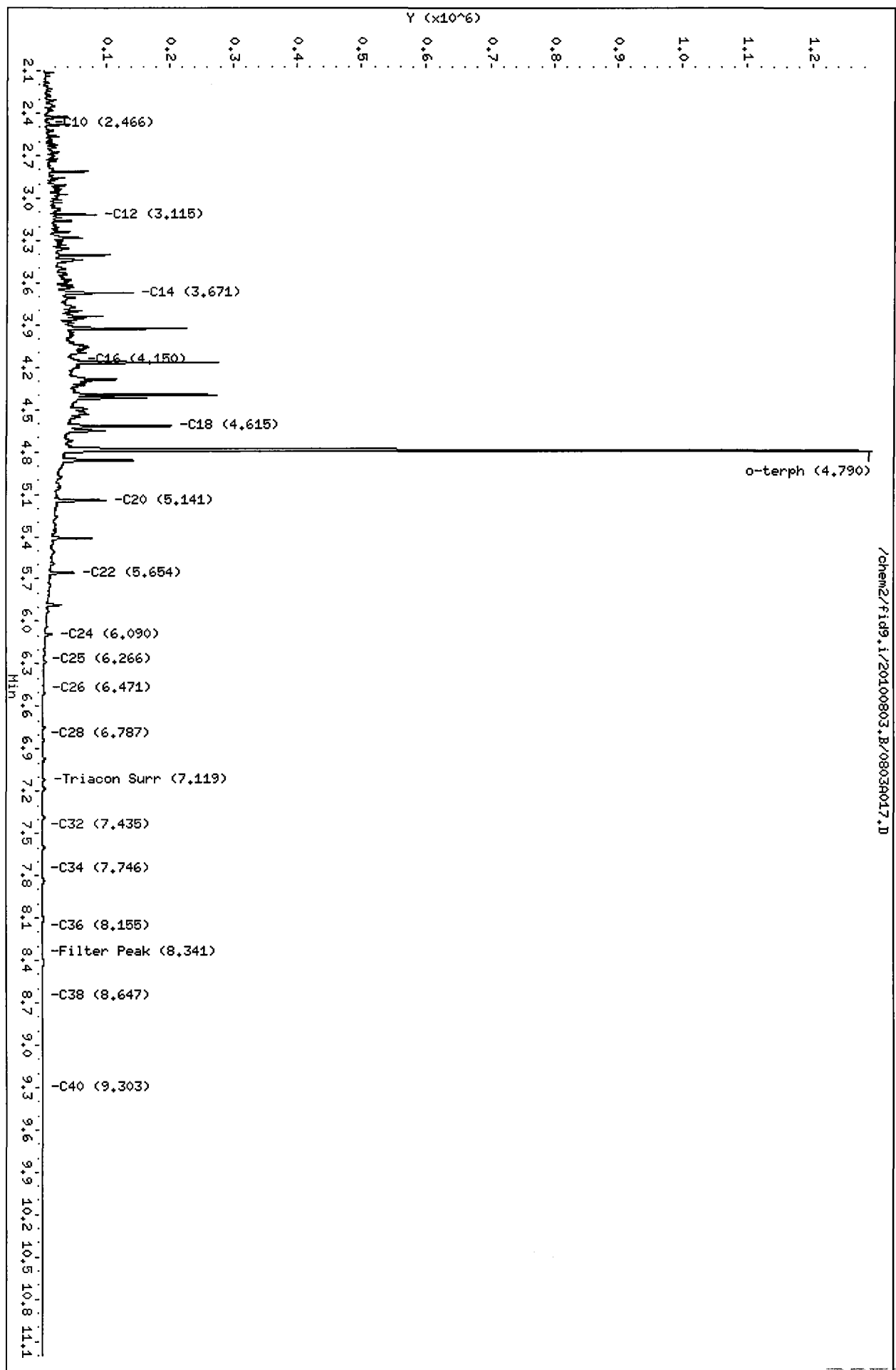
Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1064000	41.3	91.8
Triacotane	3638	0.2	0.4

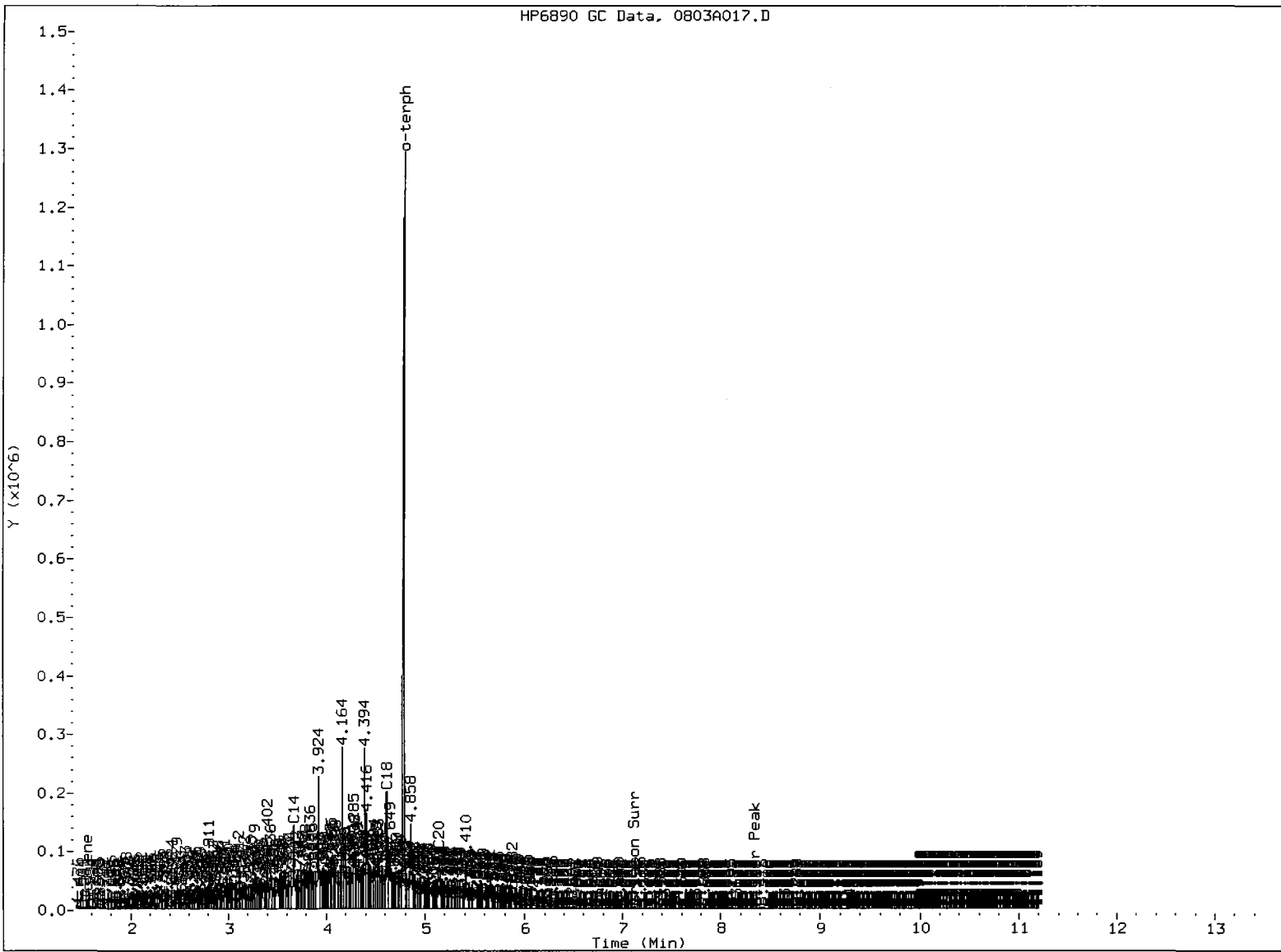
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/0803A017.D  
Date : 03-AUG-2010 18:03  
Client ID: DIESEL#2  
Sample Info: DIESEL#2  
Column phase: RTX-1

Instrument: fid9.i  
Operator: HS  
Column diameter: 0.25



/chem2/fid9.i/20100803.B/0803A017.D



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MA

Date: 8/4/14

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A018.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: MOIL#2  
 Client ID: MOIL#2  
 Injection: 03-AUG-2010 18:25  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.559	0.008	2028	3173	GAS (Tol-C12)	51020	2
C8	1.708	0.014	890	228	DIESEL (C12-C24)	760073	29
C10	2.449	-0.017	210	71	M.OIL (C24-C38)	6588886	515
C12	3.097	-0.009	39	21	AK-102 (C10-C25)	936390	32
C14	3.663	0.000	83	42	AK-103 (C25-C36)	5607210	1119 M
C16	4.157	0.001	133	72			
C18	4.615	0.008	944	1036			
C20	5.139	0.011	2815	4723			
C22	5.640	-0.005	10527	8088			
C24	6.077	-0.002	24056	11825			
C25	6.271	-0.005	31143	25368			
C26	6.476	0.000	39417	15469			
C28	6.793	-0.004	49615	14656			
C32	7.422	0.002	63199	17292	JP-4 (Tol-C14)	55629	3
C34	7.742	-0.001	51005	50177	BUNKERC (C10-C38)	7361488	839 M
Filter Peak	8.344	0.000	30464	20735			
C36	8.153	0.004	35979	24306			
C38	8.655	0.005	23051	14014			
C40	9.309	0.003	13694	5844			
o-terph	4.806	0.013	704	219	JET-A (C10-C18)	38352	3
Triacon Surr	7.133	0.013	819511	881439	JP8 (Tol-C16)	60554	3

M Indicates manual integration within range.

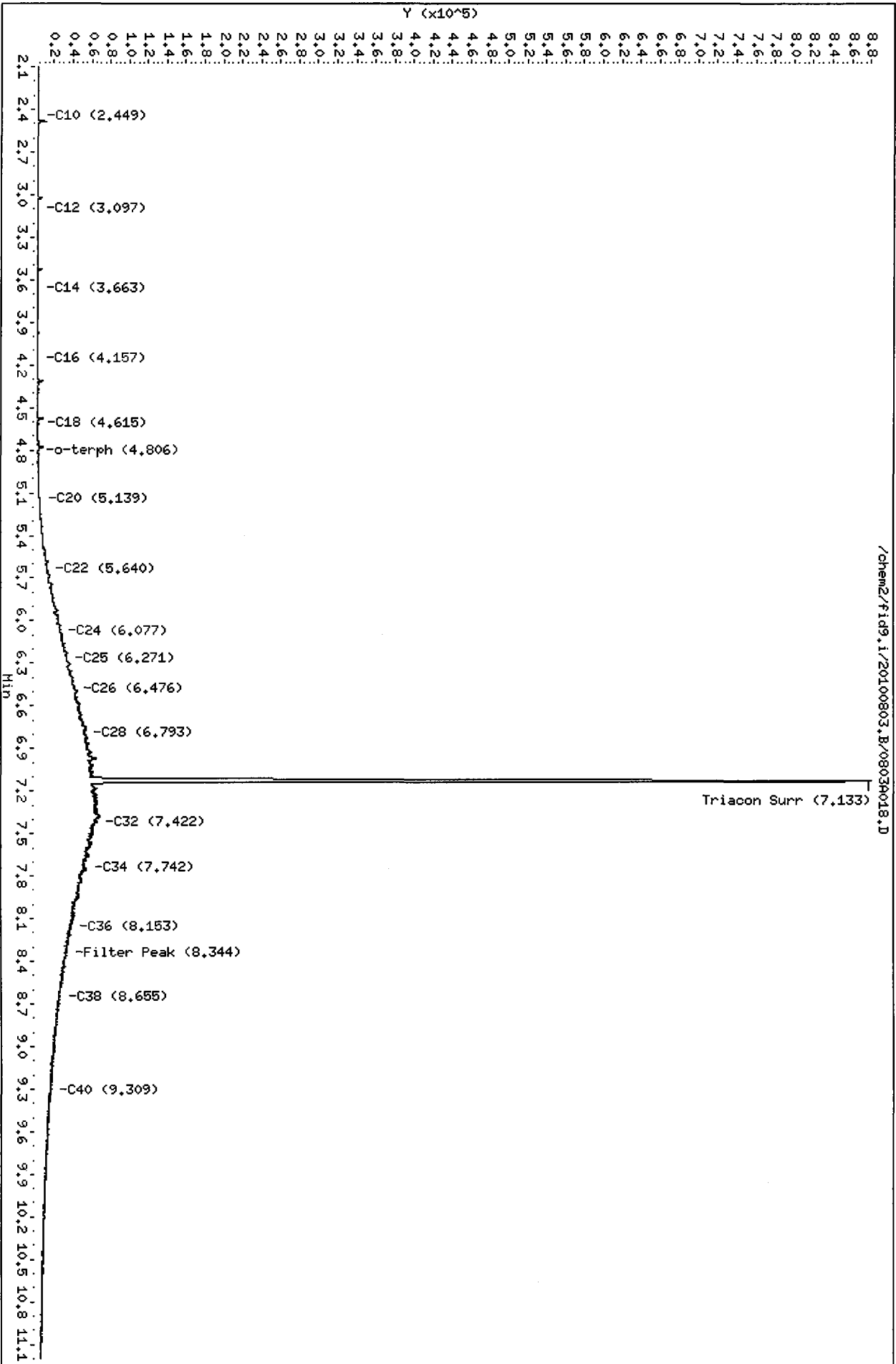
Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	219	0.0	0.0
Triacotane	881439	44.4	98.8

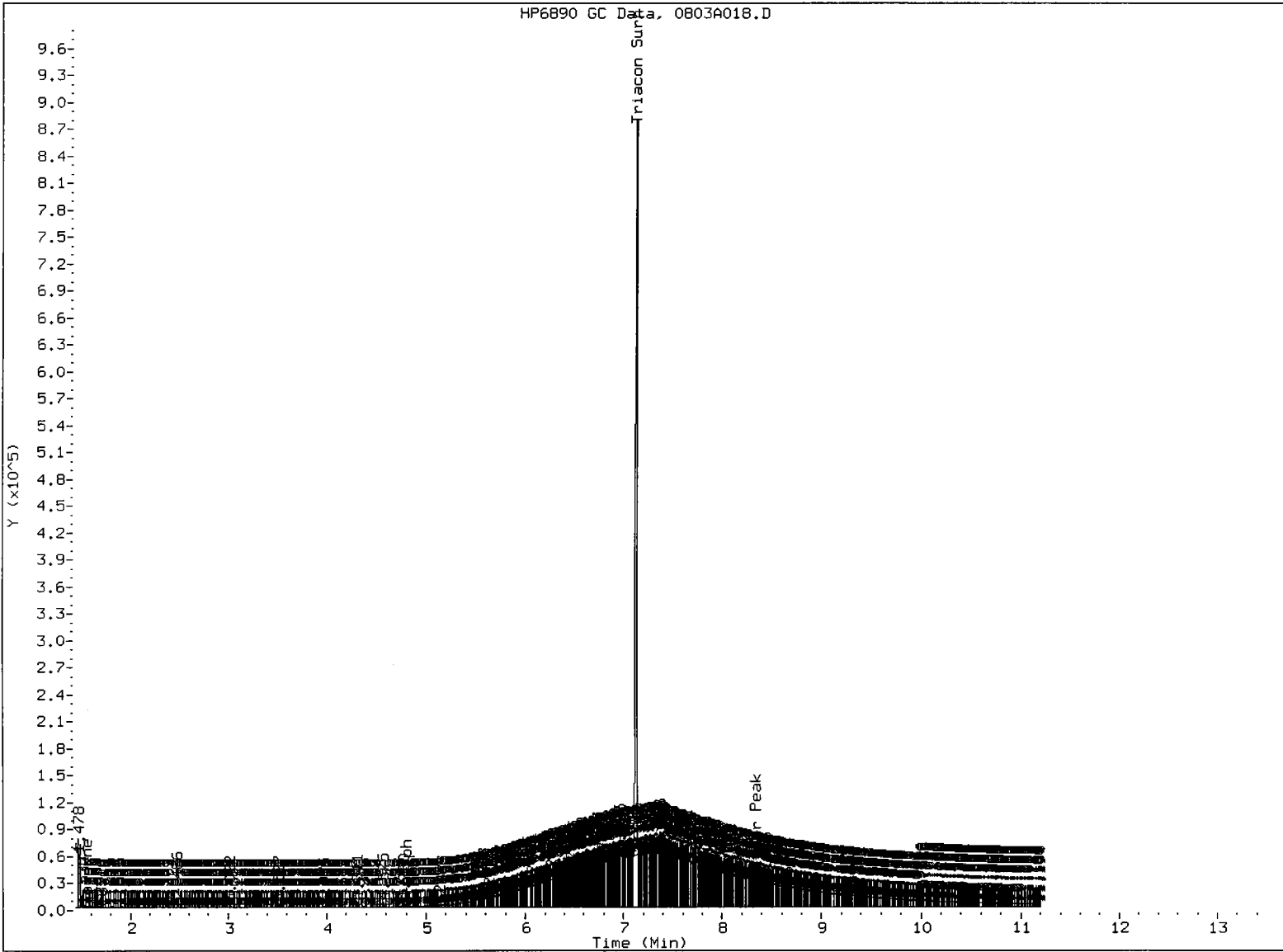
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/0803A018.D  
Date: 03-AUG-2010 18:25  
Client ID: M01L#2  
Sample Info: M01L#2  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25







MANUAL INTEGRATION

- ① Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: Mc

Date: 8/24/10

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A037.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: DIESEL#3  
Client ID: DIESEL#3  
Injection: 04-AUG-2010 01:13  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.565	0.014	10338	5749	GAS (Tol-C12)	874035	42
C8	1.691	-0.003	1683	1476	DIESEL (C12-C24)	6231950	237
C10	2.479	0.014	38827	28367	M.OIL (C24-C38)	121785	10
C12	3.115	0.010	81645	44163	AK-102 (C10-C25)	6922487	238 M
C14	3.671	0.008	145970	143138	AK-103 (C25-C36)	94155	19
C16	4.149	-0.006	57049	51593			
C18	4.615	0.009	197501	198383			
C20	5.141	0.013	97919	113579			
C22	5.654	0.009	51554	55768			
C24	6.089	0.011	16347	21978			
C25	6.284	0.008	6809	12363			
C26	6.469	-0.007	2802	3667			
C28	6.809	0.012	618	740			
C32	7.416	-0.004	404	306	JP-4 (Tol-C14)	1939640	118
C34	7.744	0.001	503	185	BUNKERC (C10-C38)	7025862	801 M
Filter Peak	8.348	0.005	402	209			
C36	8.150	0.001	399	305			
C38	8.652	0.003	326	285			
C40	9.305	0.000	192	50			
o-terph	4.790	-0.004	1235368	1056576	JET-A (C10-C18)	5040268	365
Triacon Surr	7.109	-0.011	4021	3947	JP8 (Tol-C16)	3505374	199

M Indicates manual integration within range.

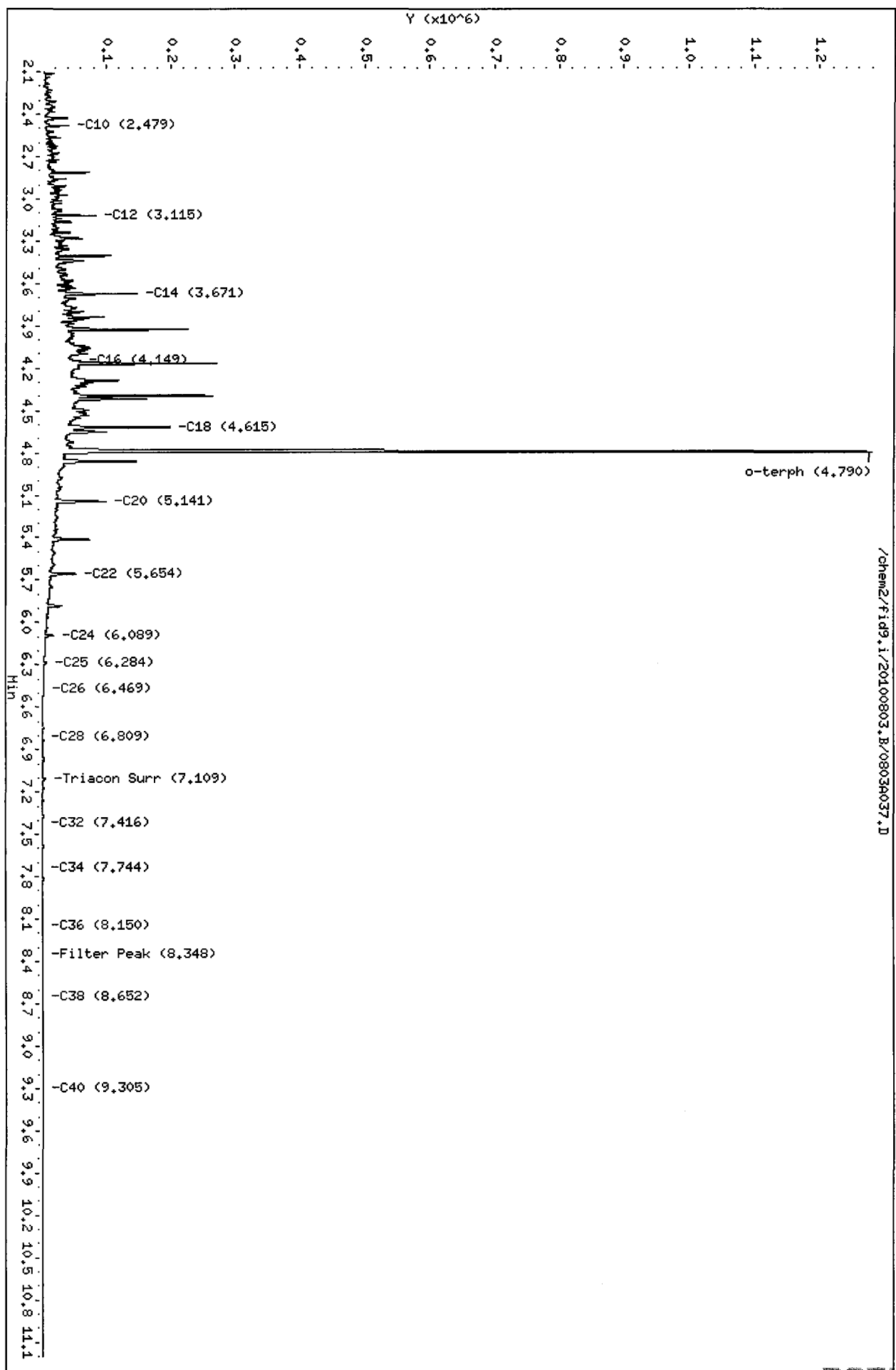
Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1056576	41.0	91.1
Triacotane	3947	0.2	0.4

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

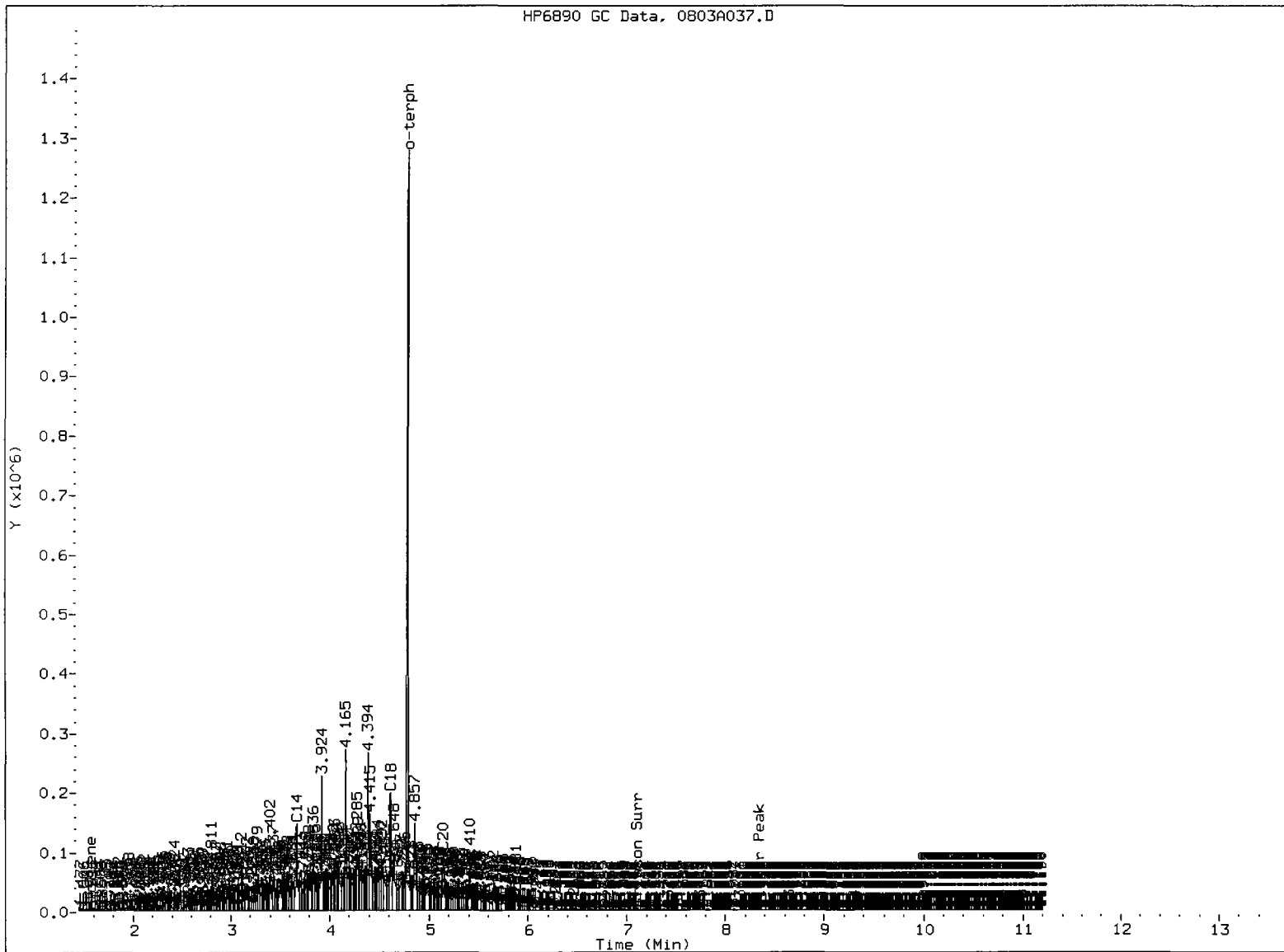
Data File: /chem2/fid9.i/20100803.B/0803A037.D  
Date: 04-AUG-2010 01:13  
Client ID: DIESEL#3  
Sample Info: DIESEL#3  
Column phase: RTX-1

Instrument: fid9.i  
Operator: HS  
Column diameter: 0.25



/chem2/fid9.i/20100803.B/0803A037.D

HP6890 GC Data, 0803A037.D



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MG

Date: 8/4/10

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A038.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: MOIL#3  
 Client ID: MOIL#3  
 Injection: 04-AUG-2010 01:34  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.560	0.010	1672	2018	GAS (Tol-C12)	40627	2
C8	1.711	0.018	619	230	DIESEL (C12-C24)	768079	29
C10	2.463	-0.002	195	45	M.OIL (C24-C38)	6524419	510
C12	3.105	0.000	28	7	AK-102 (C10-C25)	945383	33
C14	3.659	-0.003	85	34	AK-103 (C25-C36)	5611144	1120 M
C16	4.155	-0.001	148	60			
C18	4.616	0.009	1000	1013			
C20	5.138	0.010	2828	4883			
C22	5.643	-0.002	10526	4538			
C24	6.079	0.000	24232	4320			
C25	6.274	-0.002	31716	15007			
C26	6.476	0.000	40623	23208			
C28	6.793	-0.003	50471	17992			
C32	7.420	0.000	64230	33803	JP-4 (Tol-C14)	45826	3
C34	7.743	0.000	51015	20963	BUNKERC (C10-C38)	7304087	833 M
Filter Peak	8.339	-0.004	29256	14771			
C36	8.151	0.003	34396	12815			
C38	8.644	-0.005	21012	13534			
C40	9.308	0.003	11336	7422			
o-terph	4.781	-0.012	5813	5451	JET-A (C10-C18)	37310	3
Triacon Surr	7.126	0.006	905171	903945	JP8 (Tol-C16)	50643	3

M Indicates manual integration within range.

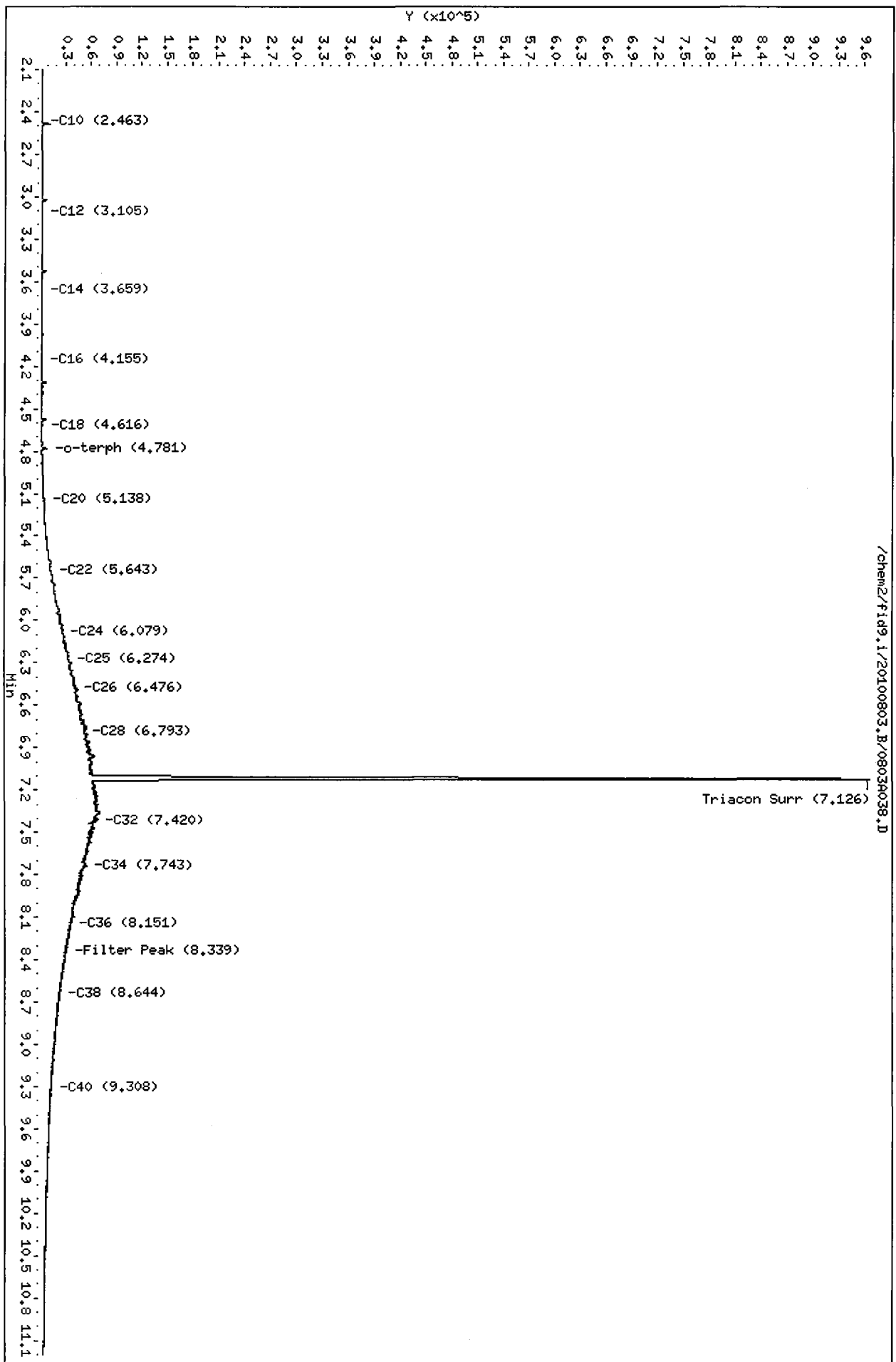
Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	5451	0.2	0.5
Triacontane	903945	45.6	101.3

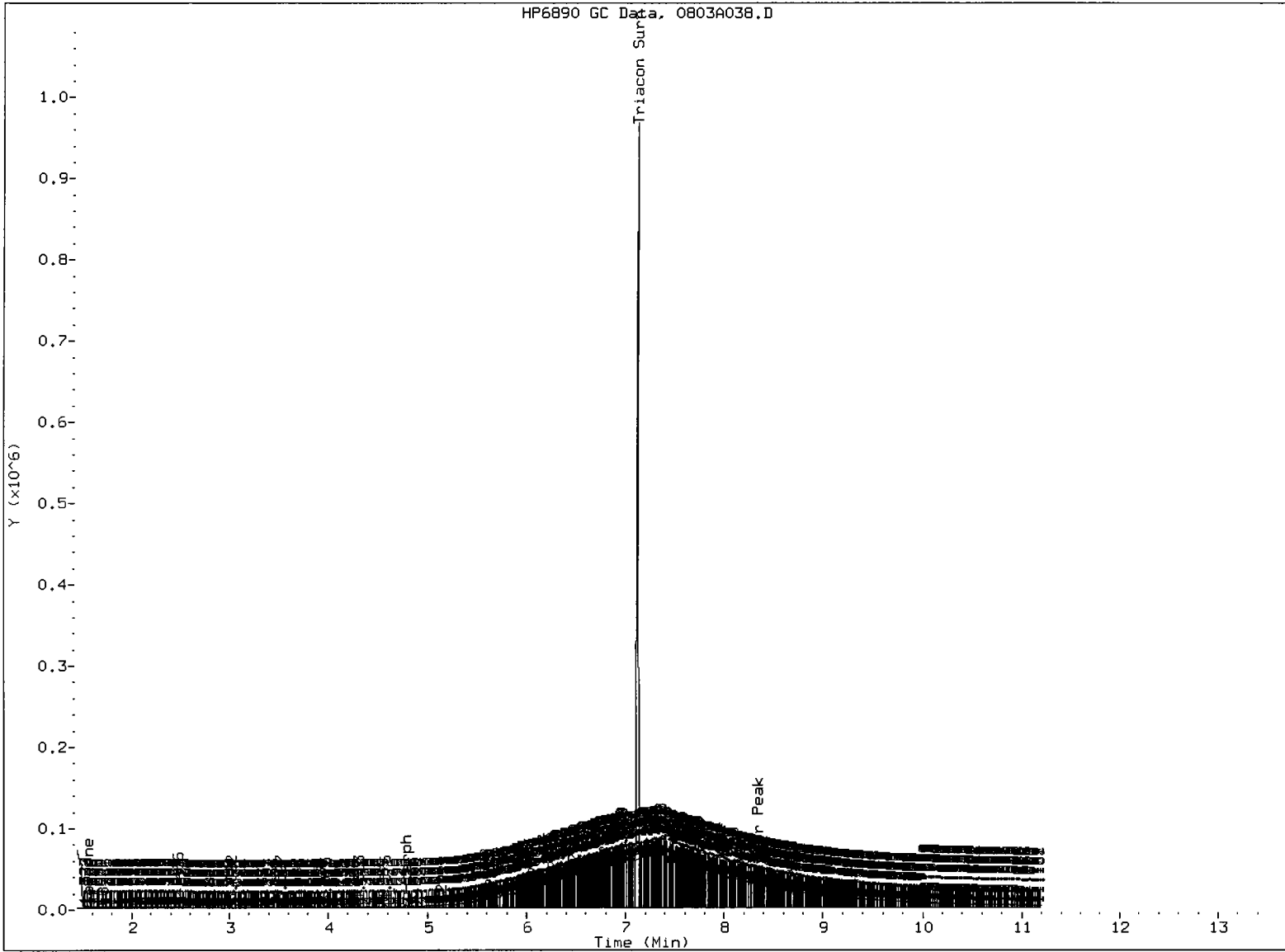
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/08034038.D  
Date : 04-AUG-2010 01:34  
Client ID: M01L#3  
Sample Info: M01L#3  
Column phase: RTX-1

Instrument: fid9.i  
Operator: NS  
Column diameter: 0.25



/chem2/fid9.i/20100803.B/08034038.D



MANUAL INTEGRATION

- ① 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: Me

Date: 8/7/10

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A034.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: RG66LCSS1  
 Client ID: RG66LCSS1  
 Injection: 04-AUG-2010 00:09  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.561	0.010	45444	22631	GAS (Tol-C12)	4367241	208
C8	1.688	-0.005	3795	3249	DIESEL (C12-C24)	33131972	1258
C10	2.465	-0.001	20037	12686	M.OIL (C24-C38)	439925	34
C12	3.116	0.010	425385	229549	AK-102 (C10-C25)	36757421	1265 M
C14	3.661	-0.002	215931	142045	AK-103 (C25-C36)	307377	61
C16	4.144	-0.012	244493	82899			
C18	4.598	-0.008	227501	92499			
C20	5.115	-0.014	129664	144260			
C22	5.662	0.017	264021	306742			
C24	6.092	0.013	85041	101182			
C25	6.287	0.010	39786	53504			
C26	6.470	-0.006	16075	24819			
C28	6.806	0.010	3971	5420			
C32	7.398	-0.022	2524	3727	JP-4 (Tol-C14)	9904323	604
C34	7.733	-0.010	984	1909	BUNKERC (C10-C38)	37078464	4228 M
Filter Peak	8.344	0.001	654	347			
C36	8.153	0.005	473	309			
C38	8.662	0.012	728	880			
C40	9.307	0.002	70	38			
o-terph	4.799	0.005	1346787	1221723	JET-A (C10-C18)	25973731	1880
Triacon Surr	7.124	0.004	851372	879721	JP8 (Tol-C16)	18165765	1032

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

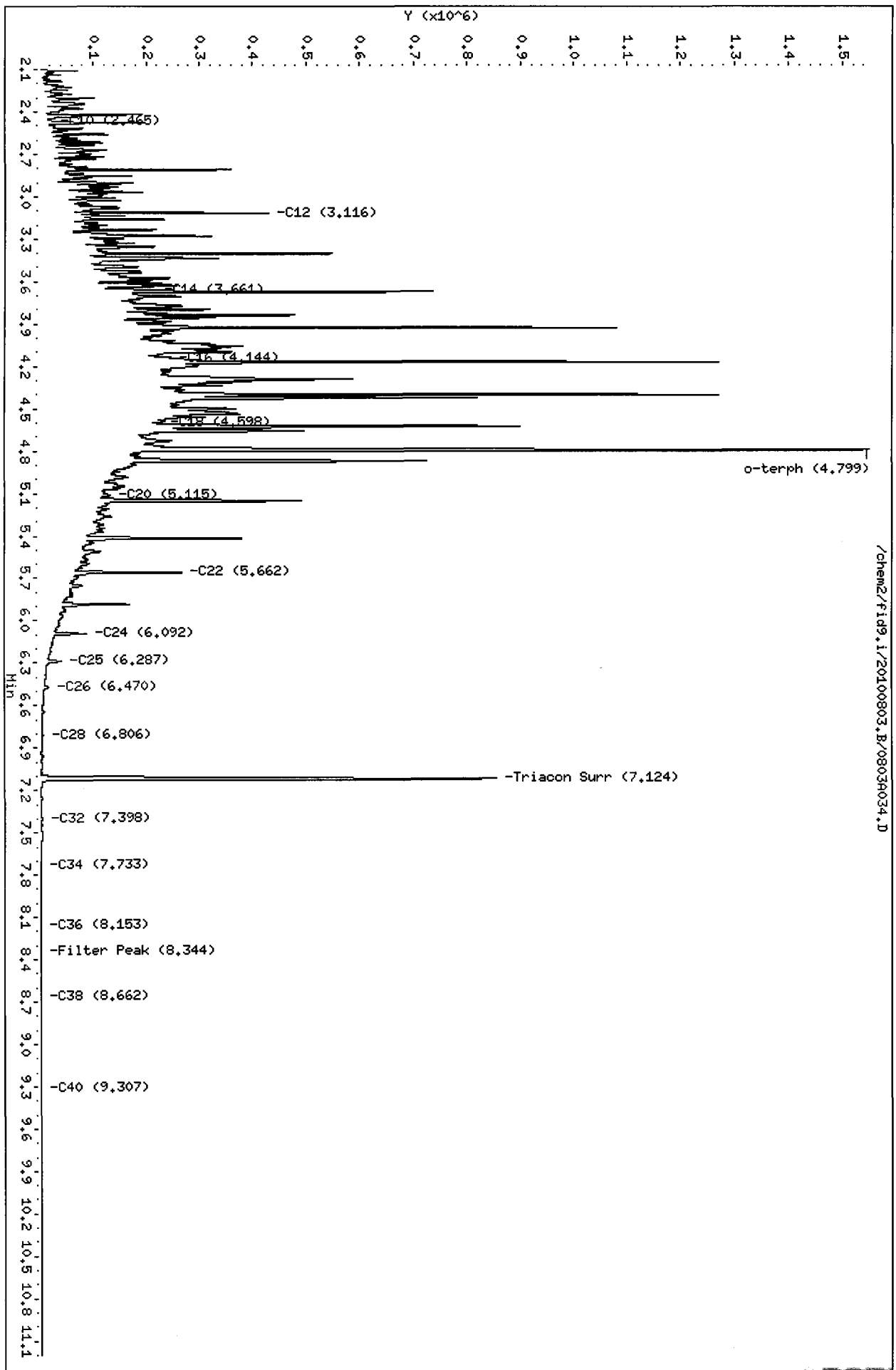
Surrogate	Area	Amount	%Rec
o-Terphenyl	1221723	47.4	105.4
Triacotane	879721	44.4	98.6

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010



Data File: /chem2/fid9.i/20100803.B/08034034.D  
Date: 04-AUG-2010 00:09  
Client ID: RG66LCSS1  
Sample Info: RG66LCSS1  
Column phase: RTX-1

Instrument: fid9.i  
Operator: HS  
Column diameter: 0.25





Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A035.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: RG66LCSDS1  
 Client ID: RG66LCSDS1  
 Injection: 04-AUG-2010 00:30  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.561	0.010	45741	22514	GAS (Tol-C12)	4627205	220
C8	1.688	-0.006	4195	3475	DIESEL (C12-C24)	34501924	1310
C10	2.465	0.000	21303	14842	M.OIL (C24-C38)	441636	35
C12	3.116	0.010	450712	242006	AK-102 (C10-C25)	38317731	1319 M
C14	3.673	0.011	749634	709116	AK-103 (C25-C36)	341873	68
C16	4.139	-0.017	253177	213899			
C18	4.607	0.000	229314	50032			
C20	5.127	-0.001	125214	49186			
C22	5.661	0.017	280440	316118			
C24	6.091	0.012	88435	107642			
C25	6.286	0.010	43134	65522			
C26	6.470	-0.006	17036	25676			
C28	6.806	0.009	3924	6129			
C32	7.426	0.006	746	439	JP-4 (Tol-C14)	10480783	639
C34	7.732	-0.012	1030	1250	BUNKERC (C10-C38)	38667186	4409 M
Filter Peak	8.348	0.004	459	302			
C36	8.150	0.001	480	258			
C38	8.654	0.004	275	262			
C40	9.301	-0.005	169	92			
o-terph	4.800	0.007	1313369	1271700	JET-A (C10-C18)	27101997	1961
Triacon Surr	7.125	0.005	905045	917631	JP8 (Tol-C16)	19125161	1087

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1271700	49.4	109.7
Triacontane	917631	46.3	102.8

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/08034035.D

Date: 04-AUG-2010 00:30

Client ID: RG66LCS0S1

Sample Info: RG66LCS0S1

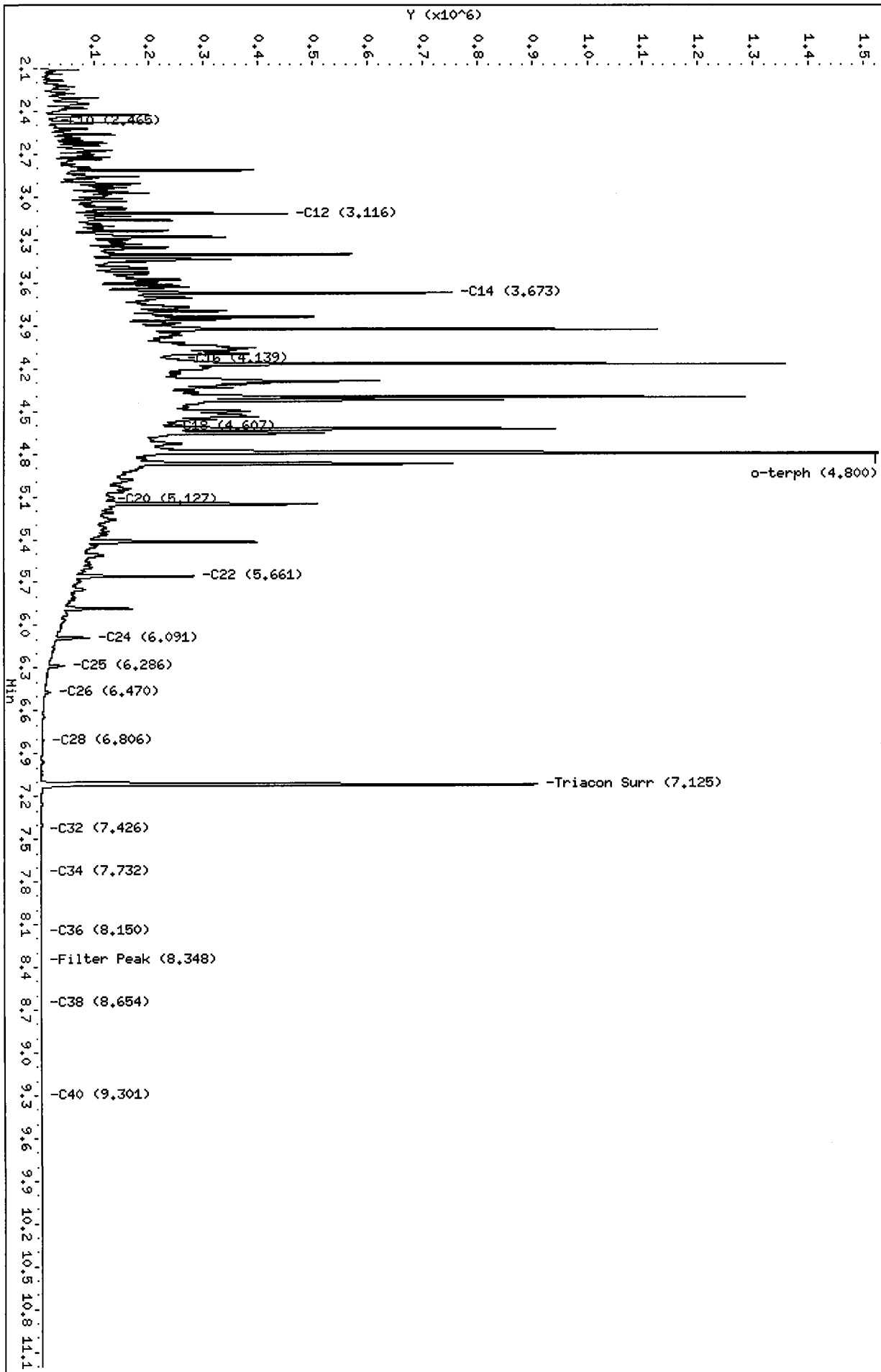
Column phase: RTX-1

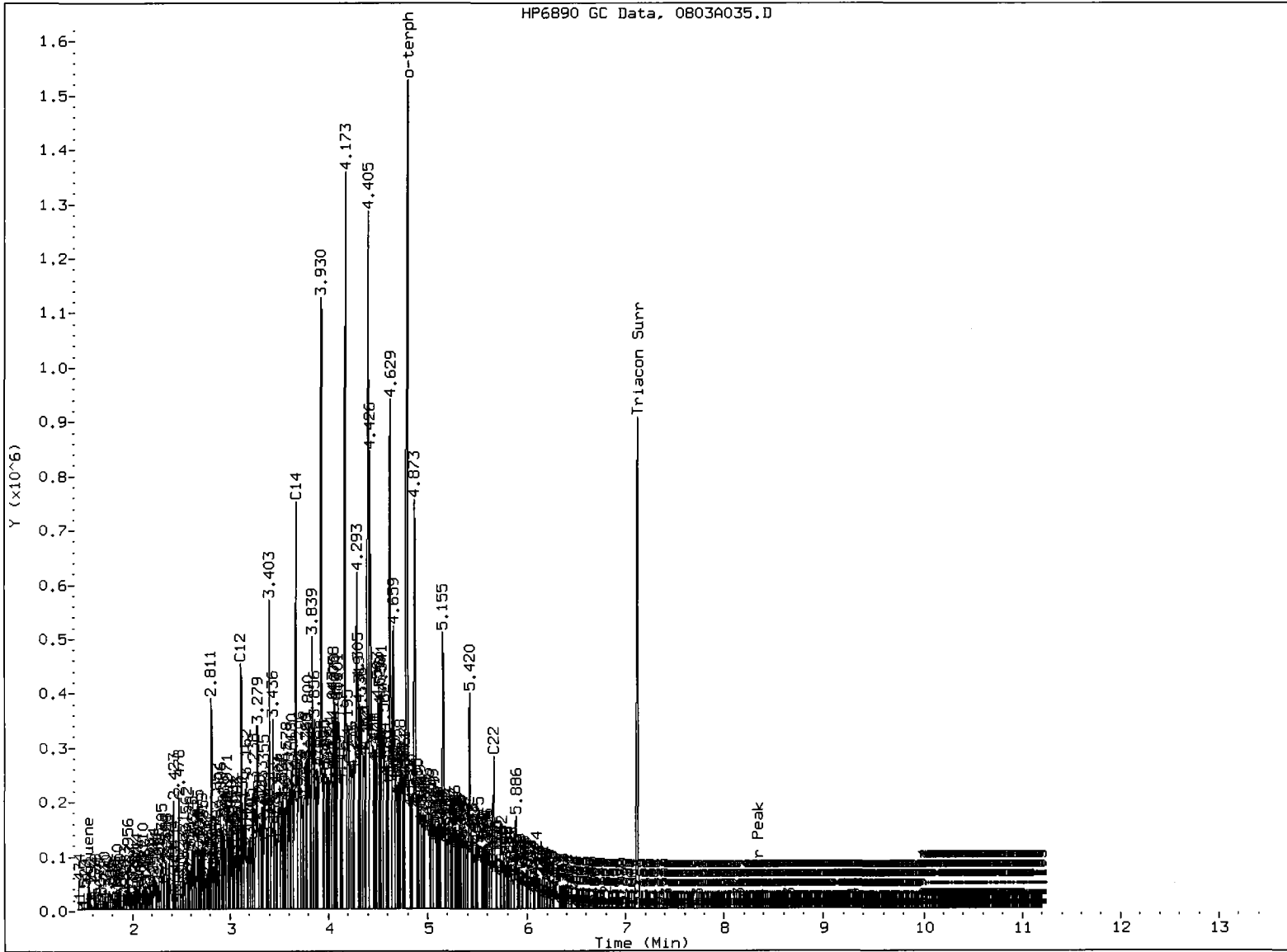
Instrument: fid9.i

Operator: HS

Column diameter: 0.25

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MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: M

Date: 5/4/16

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A036.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: RG66MBS1  
Client ID: RG66MBS1  
Injection: 04-AUG-2010 00:52  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.562	0.011	3460	2793	GAS (Tol-C12)	247926	12
C8	1.688	-0.006	866	878	DIESEL (C12-C24)	134342	5
C10	2.463	-0.002	3403	4141	M.OIL (C24-C38)	86279	7
C12	3.112	0.006	922	574	AK-102 (C10-C25)	200305	7
C14	3.667	0.004	1130	870	AK-103 (C25-C36)	66545	13
C16	4.151	-0.005	1785	2131			
C18	4.613	0.006	2054	1958			
C20	5.117	-0.011	498	535			
C22	5.637	-0.008	547	588			
C24	6.077	-0.002	337	281			
C25	6.290	0.014	322	484			
C26	6.471	-0.005	312	320			
C28	6.807	0.011	826	1184			
C32	7.401	-0.019	2264	3507	JP-4 (Tol-C14)	286289	17
C34	7.744	0.001	1024	1005	BUNKERC (C10-C38)	285853	33
Filter Peak	8.344	0.001	698	310			
C36	8.154	0.006	842	577			
C38	8.655	0.005	685	485			
C40	9.306	0.000	617	146			
o-terph	4.791	-0.003	1320954	1195308	JET-A (C10-C18)	176496	13
Triacon Surr	7.125	0.005	855791	881766	JP8 (Tol-C16)	326829	19

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

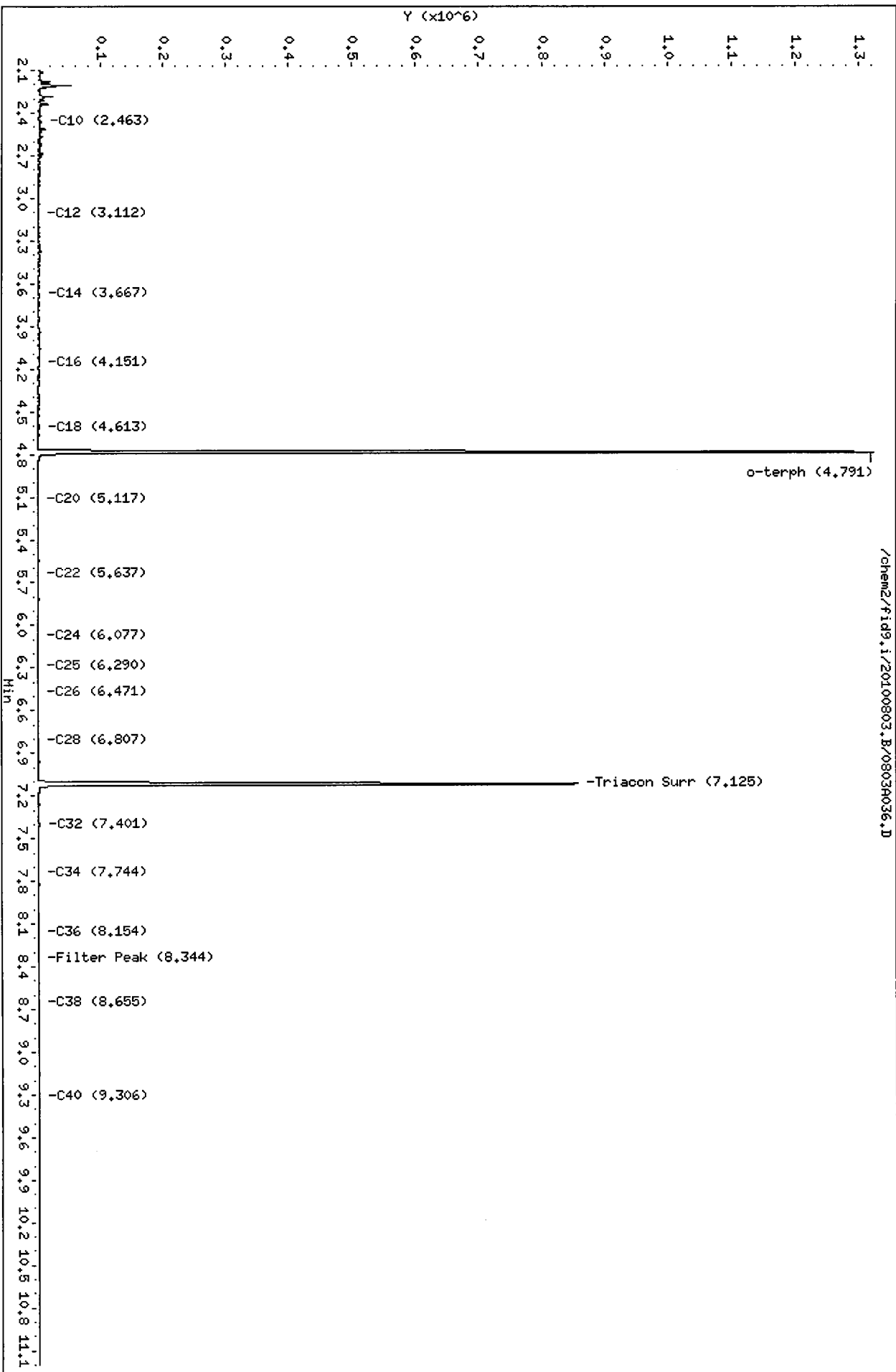
Surrogate	Area	Amount	%Rec
o-Terphenyl	1195308	46.4	103.1
Triacontane	881766	44.5	98.8

*MS/9/10*

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/0803A036.D  
Date : 04-AUG-2010 00:52  
Client ID: RG66MBS1  
Sample Info: RG66MBS1  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



/chem2/fid9.i/20100803.B/0803A036.D

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A040.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: RG54A  
 Client ID: PSB14-0-.5-072810  
 Injection: 04-AUG-2010 02:17  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.564	0.013	5284	3418	GAS (Tol-C12)	307693	15
C8	1.688	-0.006	452	168	DIESEL (C12-C24)	3299457	125
C10	2.465	0.000	2614	2034	M.OIL (C24-C38)	21677100	1695
C12	3.105	-0.001	1775	1055	AK-102 (C10-C25)	3865639	133 M
C14	3.649	-0.014	2327	2567	AK-103 (C25-C36)	18749570	3743 M
C16	4.165	0.009	9745	8974			
C18	4.615	0.008	19392	25482			
C20	5.140	0.012	25336	37172			
C22	5.636	-0.009	39712	32398			
C24	6.078	-0.001	63988	17509			
C25	6.275	-0.002	79054	37457			
C26	6.479	0.003	112300	43085			
C28	6.799	0.002	153223	30562			
C32	7.419	-0.001	213190	89035	JP-4 (Tol-C14)	355643	22
C34	7.751	0.008	157336	92812	BUNKERC (C10-C38)	25104972	2862 M
Filter Peak	8.343	0.000	92137	27227			
C36	8.152	0.003	108113	40705			
C38	8.651	0.001	68091	29368			
C40	9.303	-0.003	34177	20148			
o-terph	4.792	-0.002	1473565	1256097	JET-A (C10-C18)	549901	40
Triacon Surr	7.144	0.024	918591	941892	JP8 (Tol-C16)	466659	27

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

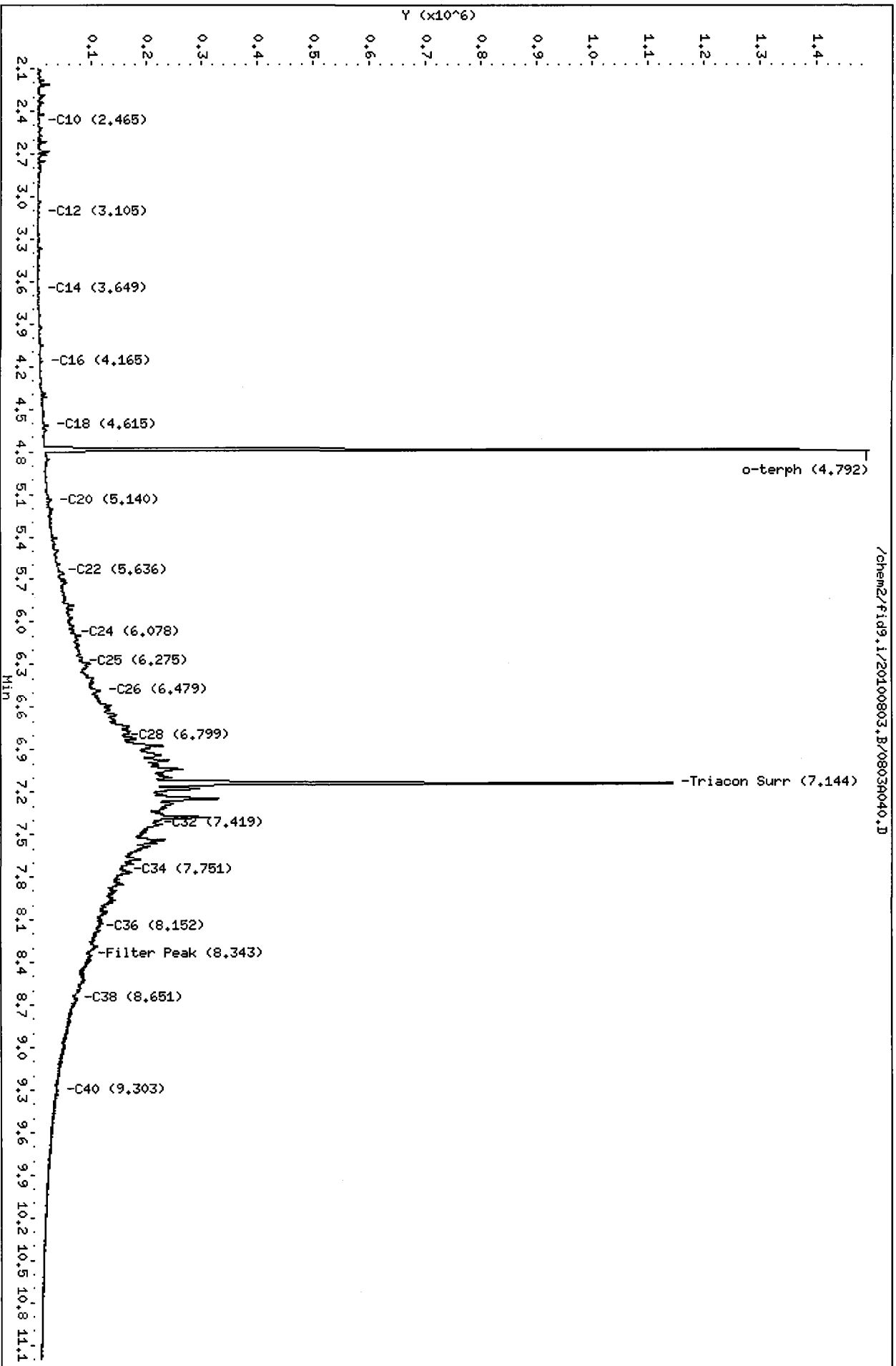
Surrogate	Area	Amount	%Rec
o-Terphenyl	1256097	48.8	108.3
Triacontane	941892	47.5	105.5

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

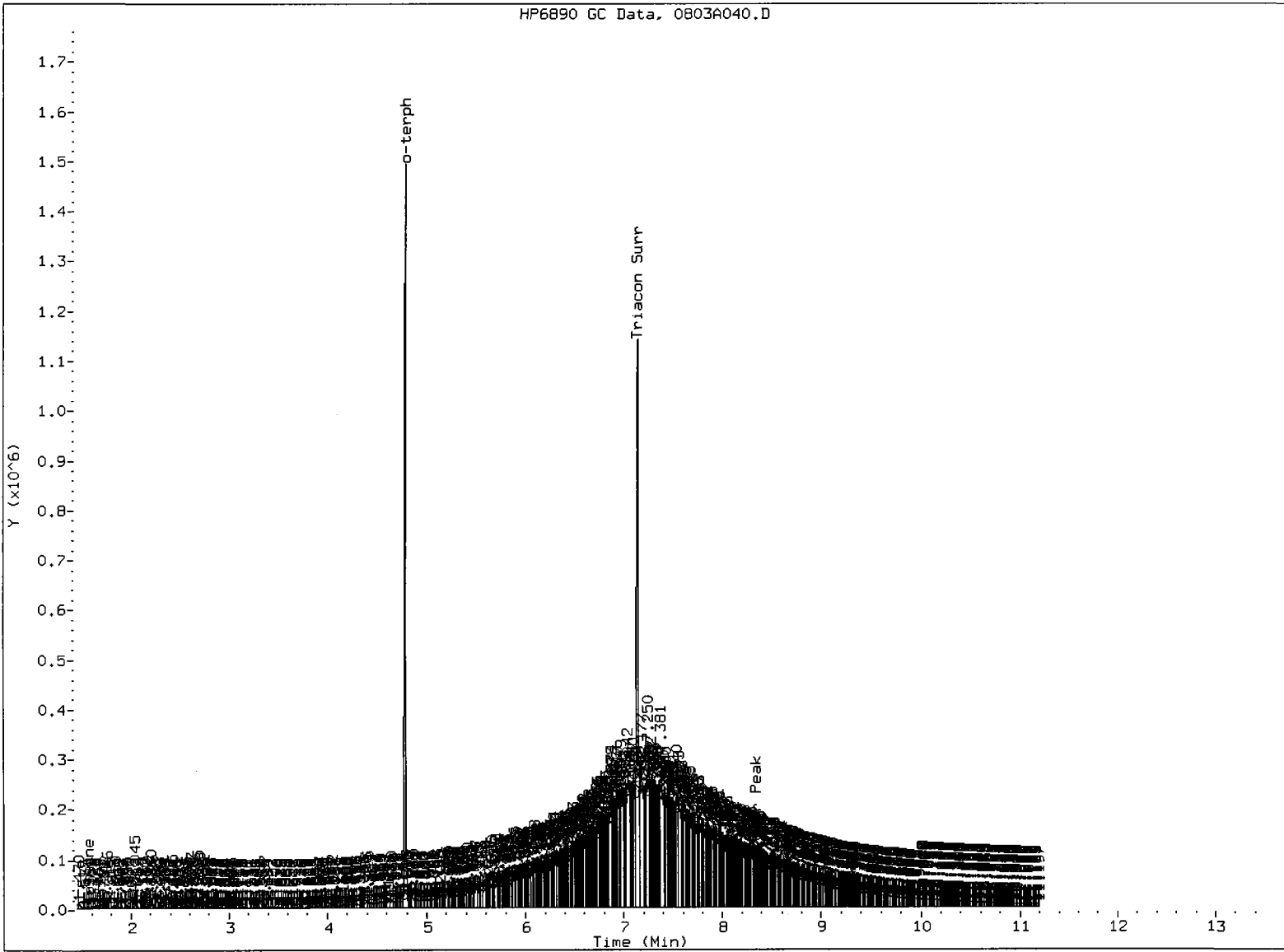


Data File: /chem2/fid9.i/20100803.B/08036040.D  
Date: 04-AUG-2010 02:17  
Client ID: PSB14-0-.5-072810  
Sample Info: R054A  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



HP6890 GC Data, 0803A040.D



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: M

Date: 8/9/10

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A041.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: RG54B  
 Client ID: PSB14-1.5-2.0-07281  
 Injection: 04-AUG-2010 02:38  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.563	0.012	4318	3021	GAS (Tol-C12)	273710	13
C8	1.688	-0.005	685	268	DIESEL (C12-C24)	178394	7
C10	2.464	-0.002	3530	2858	M.OIL (C24-C38)	584622	46
C12	3.112	0.006	489	212	AK-102 (C10-C25)	256353	9 M
C14	3.657	-0.005	379	414	AK-103 (C25-C36)	504891	101 M
C16	4.155	-0.001	1116	705			
C18	4.613	0.006	3261	2538			
C20	5.117	-0.011	918	969			
C22	5.636	-0.008	1830	2271			
C24	6.071	-0.008	2700	1279			
C25	6.287	0.010	4115	6810			
C26	6.472	-0.004	4351	5564			
C28	6.793	-0.004	5346	3945			
C32	7.432	0.012	4424	1315	JP-4 (Tol-C14)	291518	18
C34	7.744	0.001	3477	2215	BUNKERC (C10-C38)	823264	94 M
Filter Peak	8.342	-0.001	2870	1450			
C36	8.136	-0.012	3201	3872			
C38	8.648	-0.001	2517	2631			
C40	9.319	0.013	1002	791			
o-terph	4.792	-0.001	1536098	1351226	JET-A (C10-C18)	123327	9
Triacon Surr	7.127	0.007	958498	990202	JP8 (Tol-C16)	310402	18

M Indicates manual integration within range.

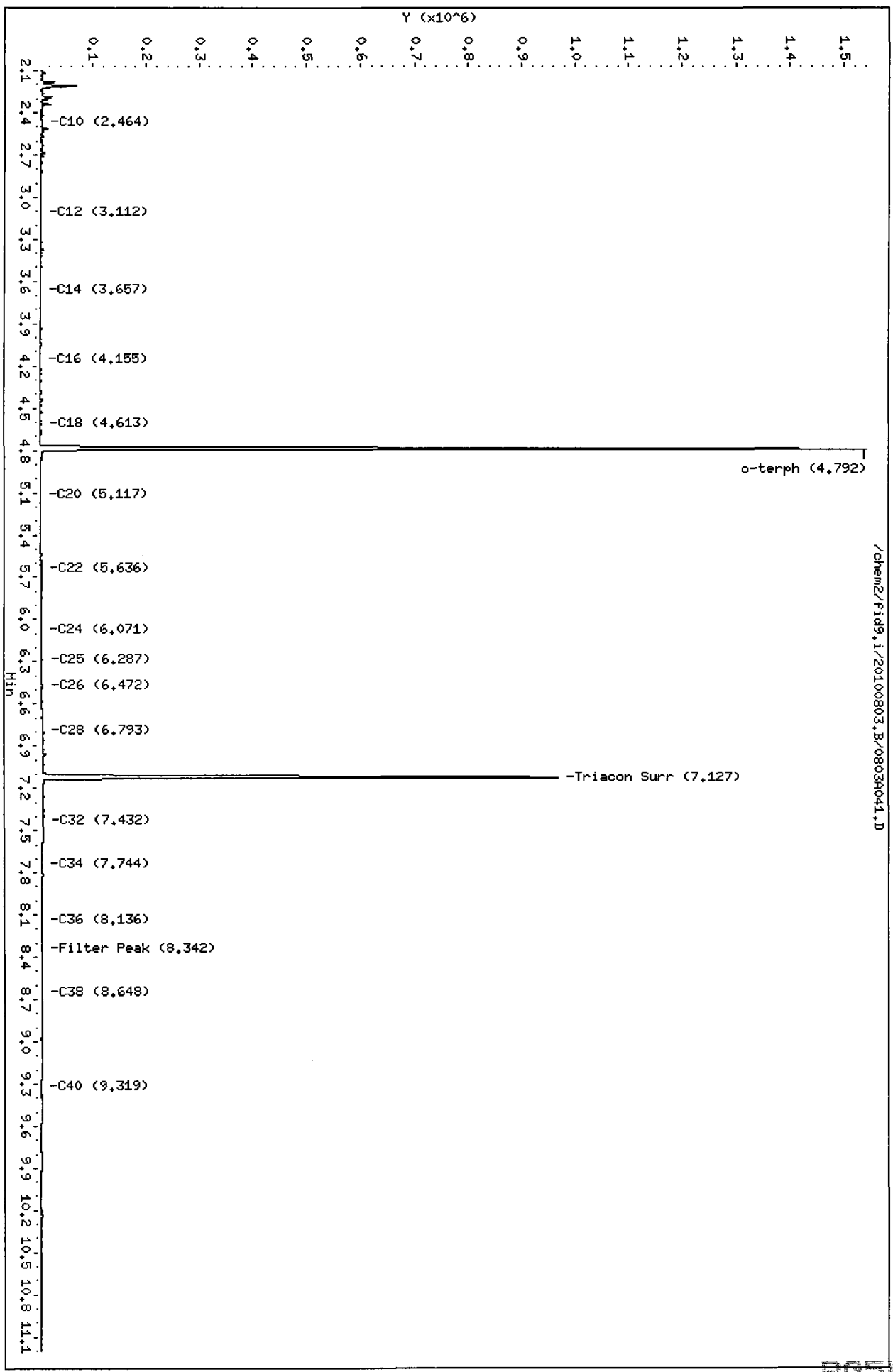
Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1351226	52.4	116.6
Triacontane	990202	49.9	111.0

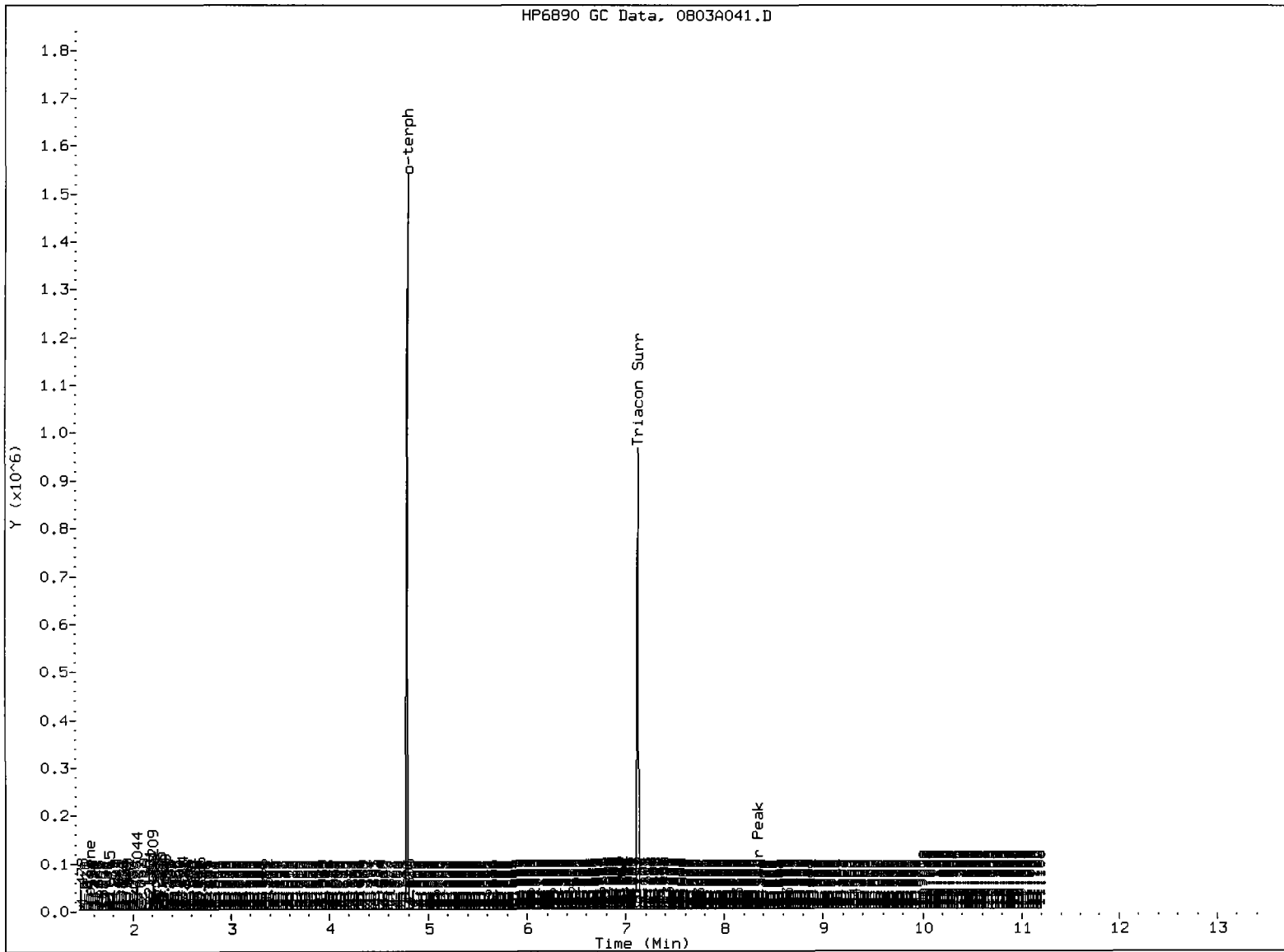
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/Fid9.i/20100803.B/0803R041.D  
Date: 04-AUG-2010 02:38  
Client ID: PSB14-1.5-2.0-07281  
Sample Info: R054B  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



HP6890 GC Data, 0803A041.D



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst:       M       Date:       8/9/10

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A042.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: RG54C  
Client ID: PSB14-2-4-072810  
Injection: 04-AUG-2010 02:59  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.563	0.012	6551	3693	GAS (Tol-C12)	184307	9
C8	1.690	-0.003	428	167	DIESEL (C12-C24)	427764	16
C10	2.463	-0.002	1994	1781	M.OIL (C24-C38)	1136226	89
C12	3.107	0.001	732	479	AK-102 (C10-C25)	553154	19 M
C14	3.652	-0.011	2888	4351	AK-103 (C25-C36)	995921	199 M
C16	4.155	-0.001	1775	898			
C18	4.614	0.007	4745	4205			
C20	5.139	0.011	2751	3901			
C22	5.635	-0.009	4128	3878			
C24	6.075	-0.003	5598	3275			
C25	6.285	0.009	8647	13048			
C26	6.469	-0.007	8704	14532			
C28	6.790	-0.007	9747	4447			
C32	7.401	-0.019	12427	25349	JP-4 (Tol-C14)	254801	16
C34	7.742	-0.001	6482	6132	BUNKERC (C10-C38)	1657069	189 M
Filter Peak	8.344	0.001	4785	1980			
C36	8.154	0.006	4795	2443			
C38	8.658	0.008	2818	1227			
C40	9.302	-0.004	2152	1723			
o-terph	4.792	-0.001	1574675	1343919	JET-A (C10-C18)	253140	18
Triacon Surr	7.127	0.007	981146	980511	JP8 (Tol-C16)	301879	17

M Indicates manual integration within range.

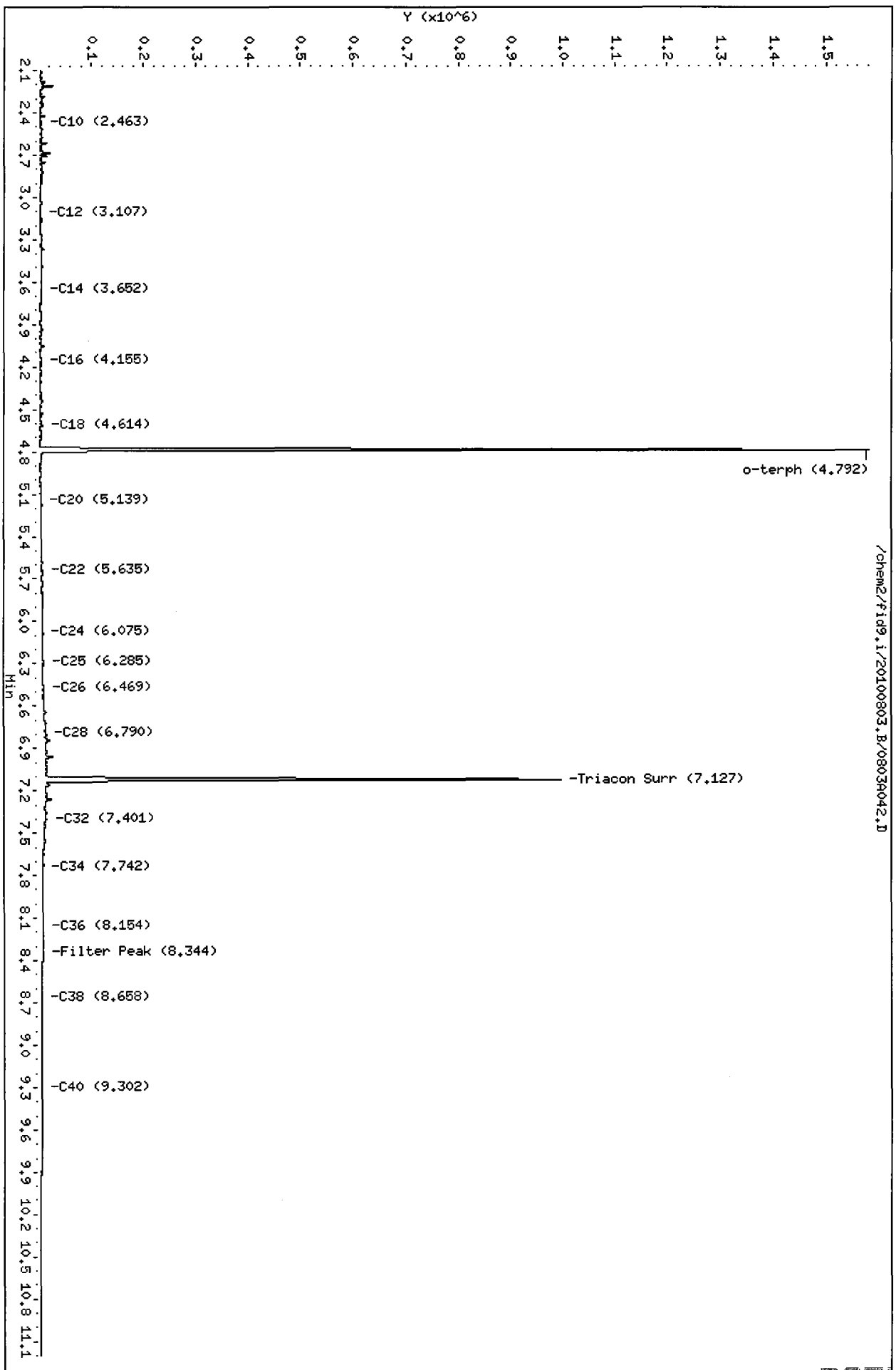
Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1343919	52.2	115.9
Triacontane	980511	49.4	109.9

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

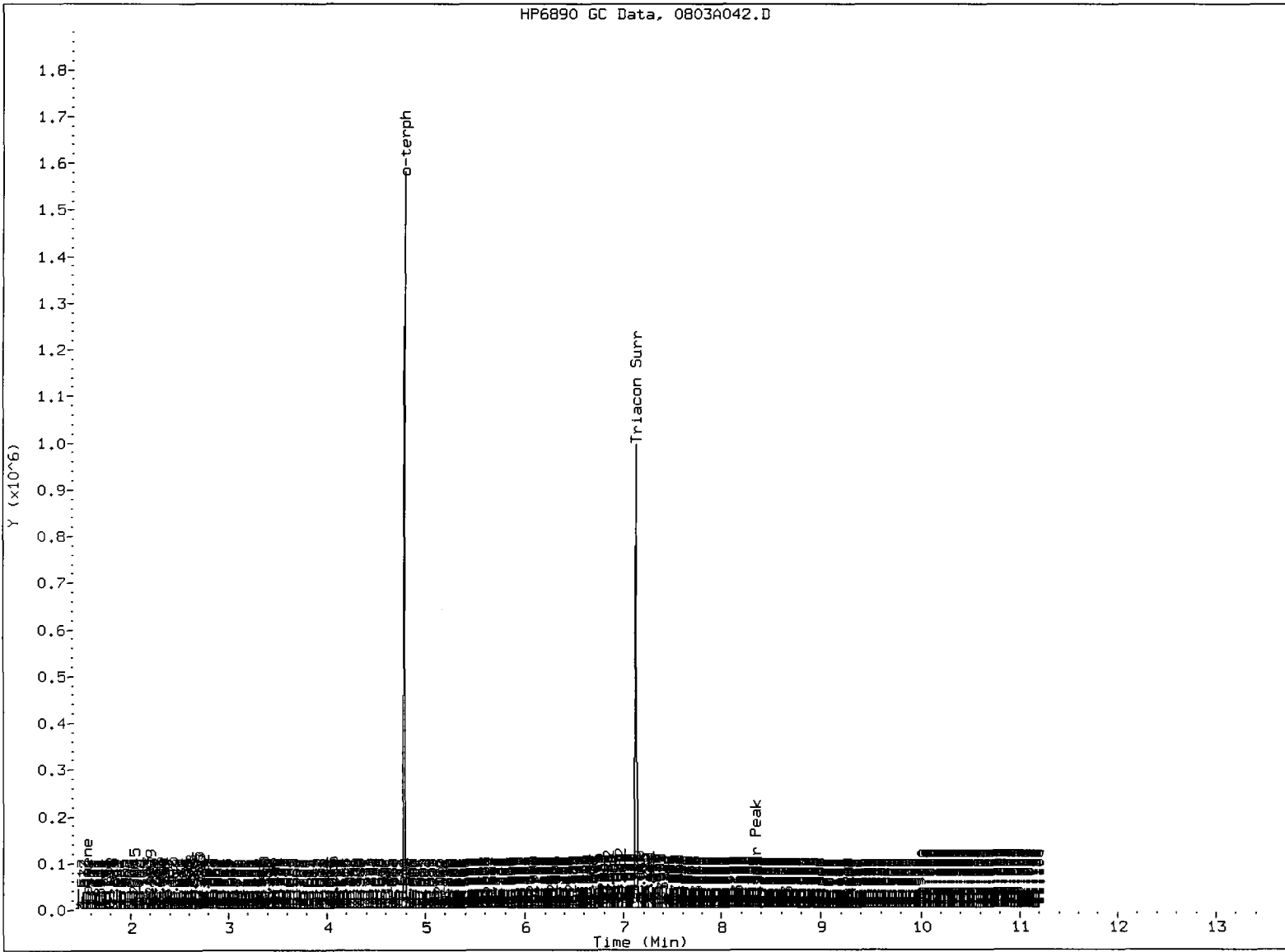
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Date : 04-AUG-2010 02:59  
Client ID: PSB14-2-4-072810  
Sample Info: R054C  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



/chem2/fid9.i/20100803.B/08034042.D

HP6890 GC Data, 0803A042.D



MANUAL INTEGRATION

- ① Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst:                     

Date: 8/4/16



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A043.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: RG54E  
 Client ID: PSB14-7-9-072810  
 Injection: 04-AUG-2010 03:21  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.560	0.009	1228993	570779	GAS (Tol-C12)	900882	43
C8	1.700	0.007	1234	796	DIESEL (C12-C24)	2131800	81
C10	2.462	-0.003	2777	2224	M.OIL (C24-C38)	13425468	1050
C12	3.104	-0.001	1894	1195	AK-102 (C10-C25)	2542018	87 M
C14	3.649	-0.013	2038	2502	AK-103 (C25-C36)	11539000	2304 M
C16	4.166	0.011	6333	5940			
C18	4.614	0.007	14162	17520			
C20	5.127	-0.001	12311	2694			
C22	5.643	-0.001	24335	5304			
C24	6.077	-0.002	38205	24894			
C25	6.276	0.000	48224	18127			
C26	6.476	0.001	74521	125728			
C28	6.792	-0.004	92765	25719			
C32	7.417	-0.003	146396	132765	JP-4 (Tol-C14)	946502	58
C34	7.744	0.001	113057	116503	BUNKERC (C10-C38)	15719327	1792 M
Filter Peak	8.342	-0.001	62761	34408			
C36	8.146	-0.003	73790	30526			
C38	8.652	0.002	47765	15020			
C40	9.304	-0.001	23246	13155			
o-terph	4.792	-0.001	1456101	1311256	JET-A (C10-C18)	470188	34
Triacon Surr	7.131	0.011	901862	965749	JP8 (Tol-C16)	1025973	58

M Indicates manual integration within range.

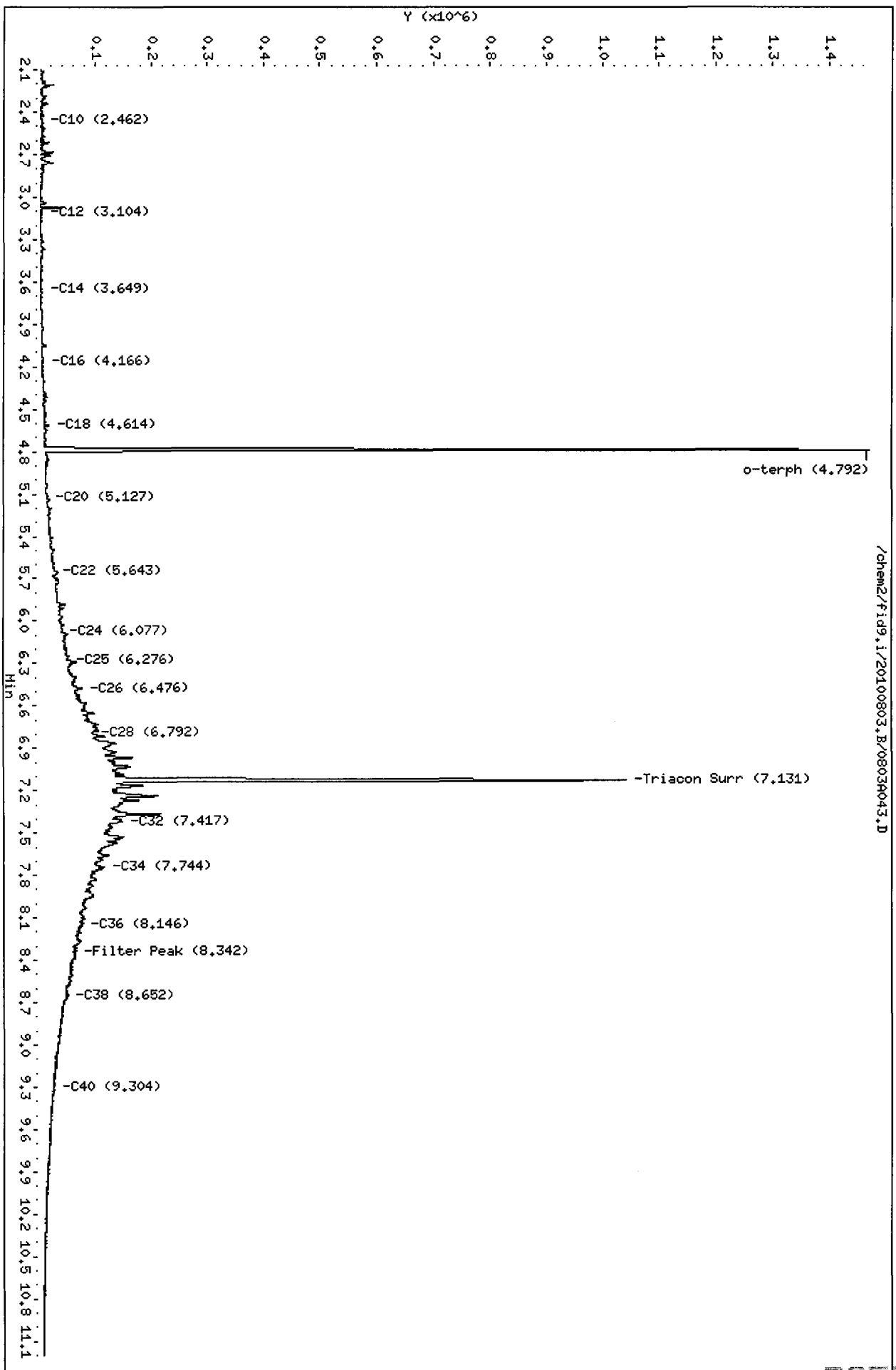
Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1311256	50.9	113.1
Triacontane	965749	48.7	108.2

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9,i/20100803,B/08036043.D  
Date: 04-AUG-2010 03:21  
Client ID: PSB14-7-9-072810  
Sample Info: R054E  
Column phase: RTX-1

Instrument: fid9,i  
Operator: HS  
Column diameter: 0.25





Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A044.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: RG54F  
 Client ID: PSB14-12-14-072810  
 Injection: 04-AUG-2010 03:42  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.558	0.007	12128	6353	GAS (Tol-C12)	174358	8
C8	1.698	0.005	789	571	DIESEL (C12-C24)	308235	12
C10	2.461	-0.004	2071	1767	M.OIL (C24-C38)	625560	49
C12	3.108	0.002	773	559	AK-102 (C10-C25)	434580	15 M
C14	3.655	-0.008	1291	1879	AK-103 (C25-C36)	537024	107 M
C16	4.146	-0.009	2285	2508			
C18	4.614	0.007	3864	3742			
C20	5.117	-0.011	2169	3276			
C22	5.636	-0.008	3002	2961			
C24	6.072	-0.007	3580	2914			
C25	6.268	-0.008	3824	1714			
C26	6.471	-0.005	5228	10269			
C28	6.808	0.012	7102	14443			
C32	7.431	0.011	4785	3280	JP-4 (Tol-C14)	210513	13
C34	7.748	0.005	3779	1620	BUNKERC (C10-C38)	1036517	118 M
Filter Peak	8.345	0.001	2983	1642			
C36	8.151	0.002	3381	2634			
C38	8.659	0.010	2251	402			
C40	9.323	0.017	1315	1229			
o-terph	4.792	-0.002	1373209	1204851	JET-A (C10-C18)	224170	16
Triacon Surr	7.126	0.006	876206	855429	JP8 (Tol-C16)	251578	14

M Indicates manual integration within range.

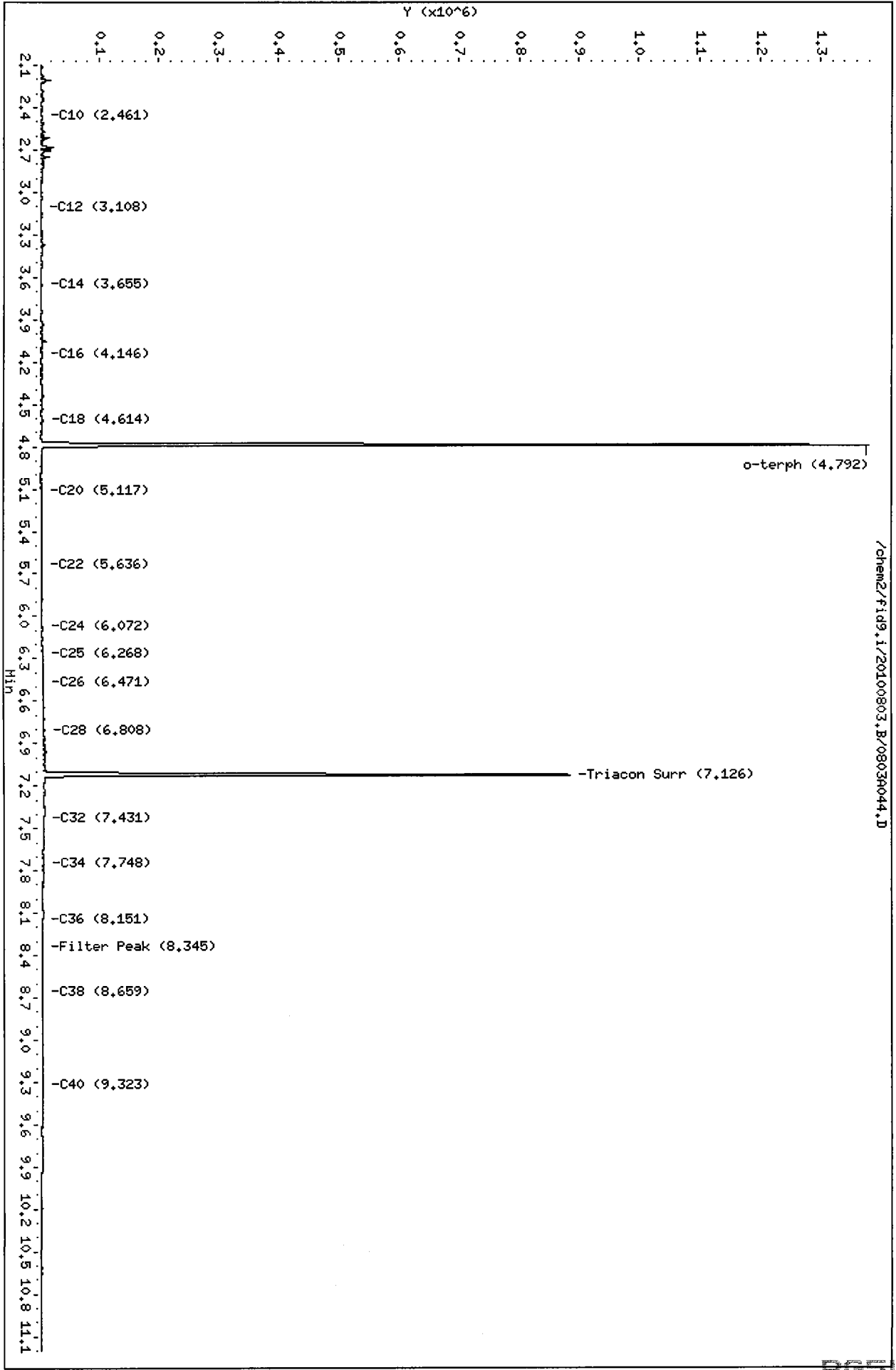
Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1204851	46.8	103.9
Triacontane	855429	43.1	95.9

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

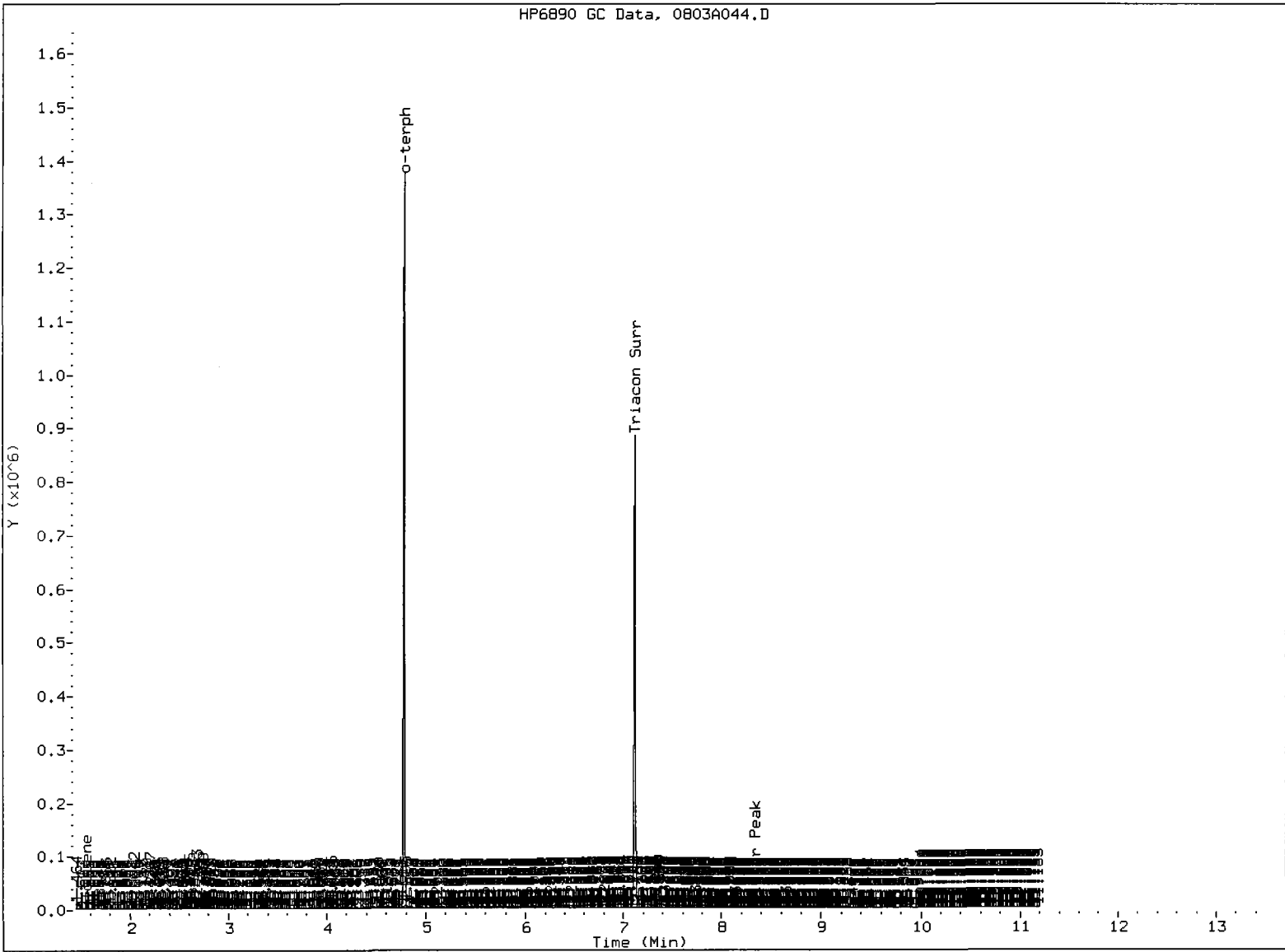
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Date : 04-AUG-2010 03:42  
Client ID: PSB14-12-14-072810  
Sample Info: R054F  
Column phase: RTX-1

Instrument: fid9.i  
Operator: HS  
Column diameter: 0.25



/chem2/fid9.i/20100803.B/0803R044.D

HP6890 GC Data, 0803A044.D



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: ms Date: 6/4/10

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A045.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: RG54H  
Client ID: PSB17-0-0.5-072810  
Injection: 04-AUG-2010 04:03  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.560	0.009	2812	2204	GAS (Tol-C12)	280566	13
C8	1.700	0.006	1429	914	DIESEL (C12-C24)	5302206	201
C10	2.462	-0.003	2350	2146	M.OIL (C24-C38)	30727074	2403
C12	3.104	-0.002	1950	1118	AK-102 (C10-C25)	6131946	211 M
C14	3.659	-0.004	2632	1809	AK-103 (C25-C36)	26852963	5361 M
C16	4.164	0.008	16740	18731			
C18	4.614	0.007	31522	49381			
C20	5.128	0.000	31975	7532			
C22	5.640	-0.005	61955	33729			
C24	6.075	-0.004	98312	59297			
C25	6.278	0.001	122640	77409			
C26	6.480	0.004	156625	88936			
C28	6.792	-0.004	250428	155340			
C32	7.415	-0.005	308280	212482	JP-4 (Tol-C14)	347747	21
C34	7.741	-0.002	217996	150403	BUNKERC (C10-C38)	36149613	4122 M
Filter Peak	8.342	-0.002	119051	69957			
C36	8.148	-0.001	147476	54007			
C38	8.647	-0.003	83830	32591			
C40	9.302	-0.004	38317	29653			
o-terph	4.791	-0.003	1410563	1265099	JET-A (C10-C18)	943970	68
Triacon Surr	7.153	0.033	753027	903169	JP8 (Tol-C16)	568580	32

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1265099	49.1	109.1
Triacotane	903169	45.5	101.2

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/0803A045.D

Date : 04-AUG-2010 04:03

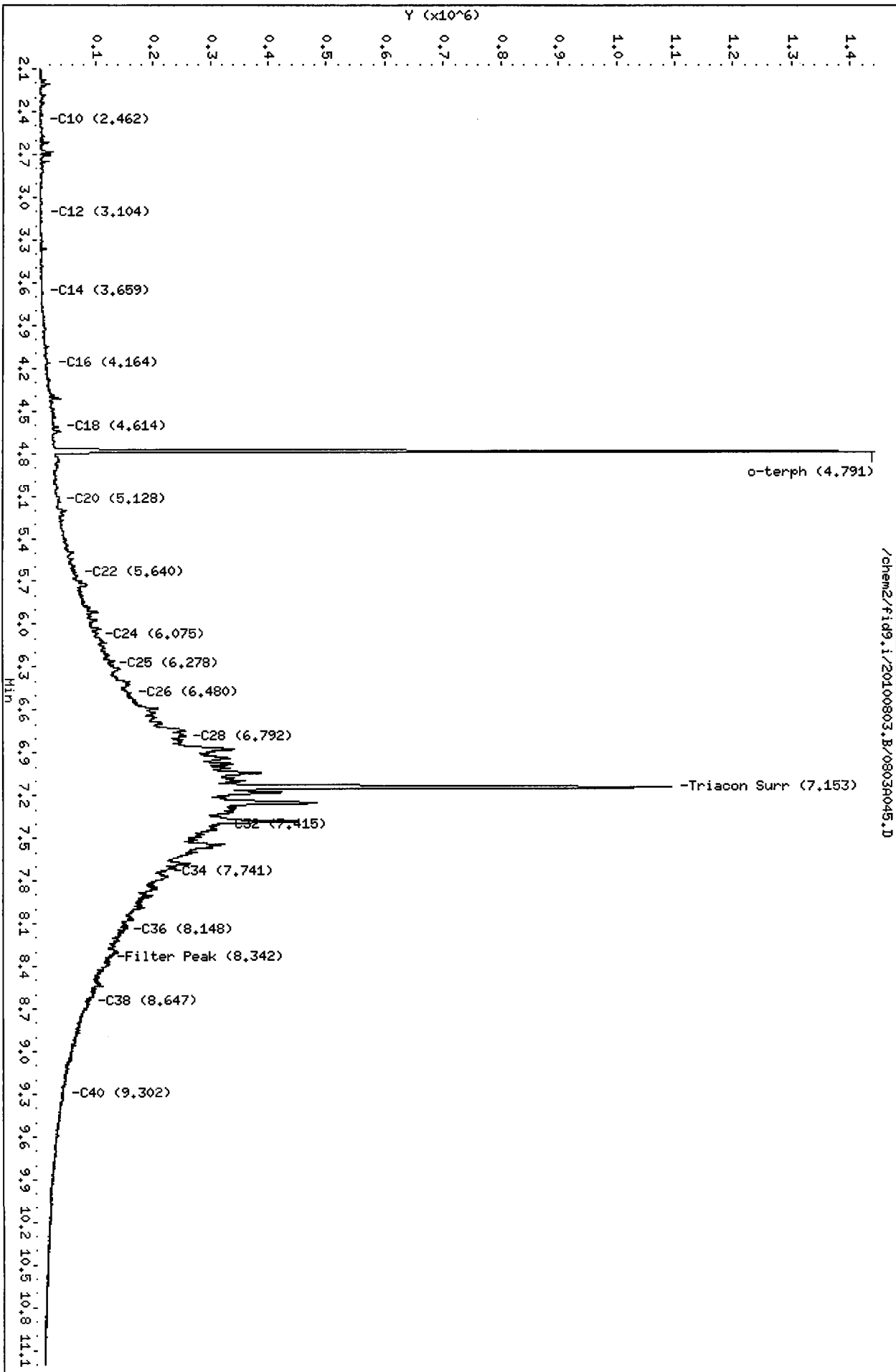
Client ID: PSB17-0-0.5-072810

Sample Info: RG54H

Page 1

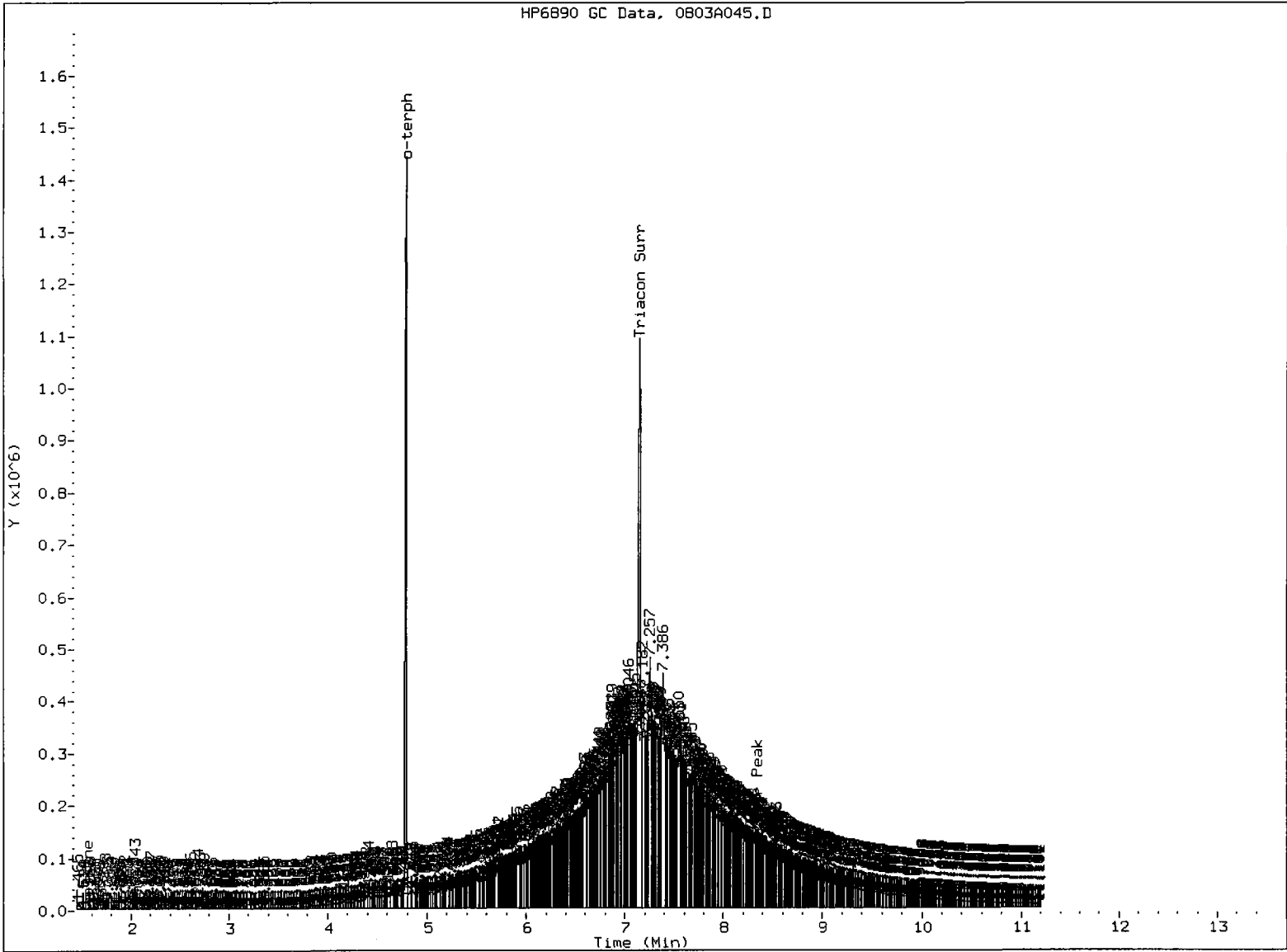
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25





HP6890 GC Data, 0803A045.D



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: M Date: 8/4/40

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A046.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: RG54I  
Client ID: PSB17-1.5-2-072810  
Injection: 04-AUG-2010 04:24  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.564	0.013	4139	2937	GAS (Tol-C12)	206478	10
C8	1.704	0.010	2471	1603	DIESEL (C12-C24)	155869	6
C10	2.464	-0.002	3369	3411	M.OIL (C24-C38)	309928	24
C12	3.099	-0.007	477	361	AK-102 (C10-C25)	214994	7 M
C14	3.657	-0.005	679	919	AK-103 (C25-C36)	250852	50 M
C16	4.146	-0.009	1966	1957			
C18	4.613	0.007	2896	2206			
C20	5.118	-0.010	645	635			
C22	5.636	-0.008	877	1215			
C24	6.079	0.000	1015	866			
C25	6.265	-0.011	1016	492			
C26	6.469	-0.007	1394	1891			
C28	6.808	0.012	3231	6185			
C32	7.402	-0.017	4614	8735	JP-4 (Tol-C14)	233173	14
C34	7.740	-0.003	2226	2452	BUNKERC (C10-C38)	520697	59 M
Filter Peak	8.340	-0.003	2628	3263			
C36	8.151	0.003	2456	2937			
C38	8.653	0.003	2786	4744			
C40	9.306	0.000	800	300			
o-terph	4.792	-0.001	1520107	1334482	JET-A (C10-C18)	153826	11
Triacon Surr	7.128	0.008	943271	982537	JP8 (Tol-C16)	272088	15

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1334482	51.8	115.1
Triacontane	982537	49.5	110.1

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/08038046.D

Date: 04-AUG-2010 04:24

Client ID: PSBL7-1.5-2-072810

Sample Info: R0541

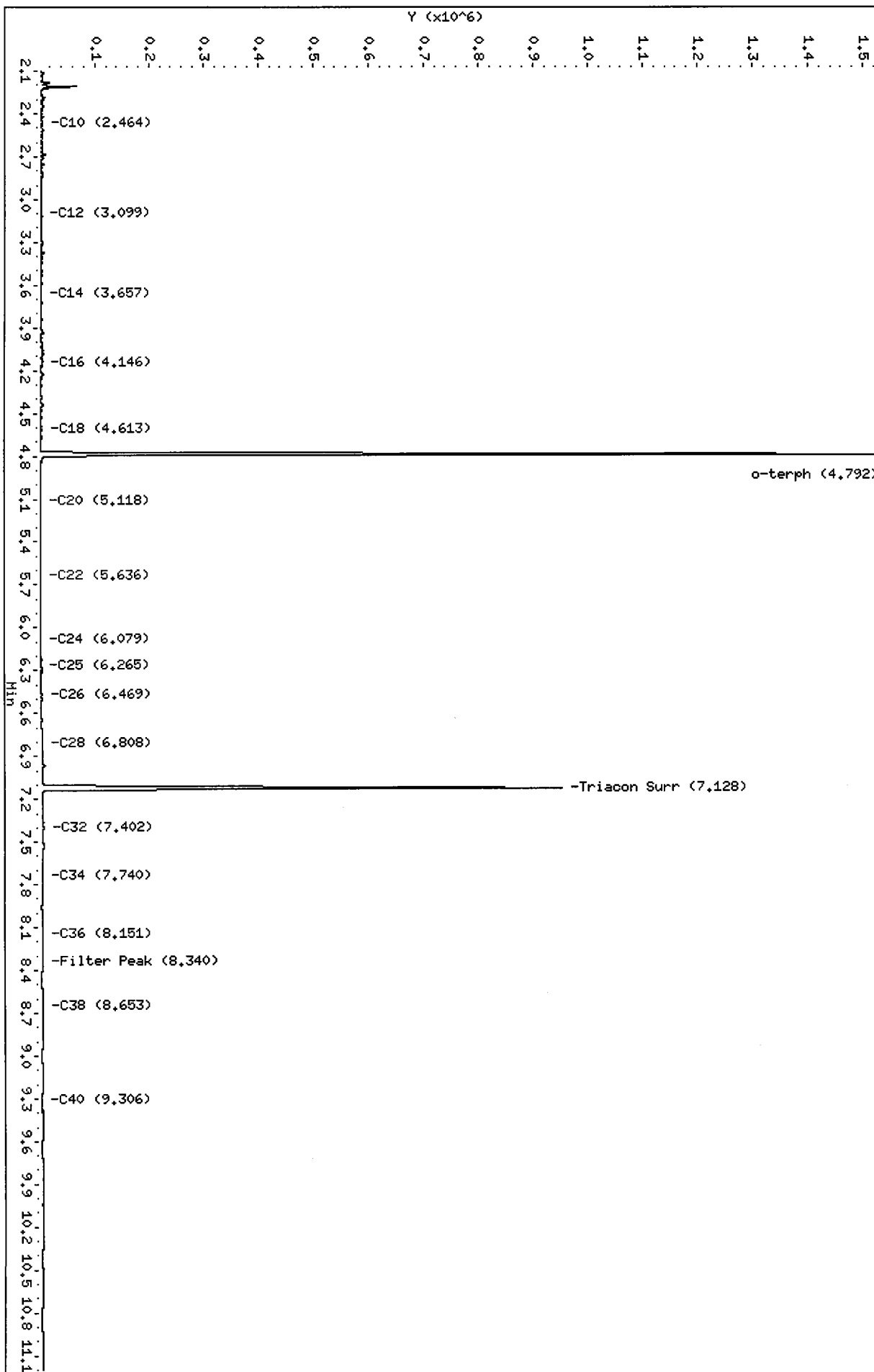
Column phase: RTX-1

Instrument: fid9.i

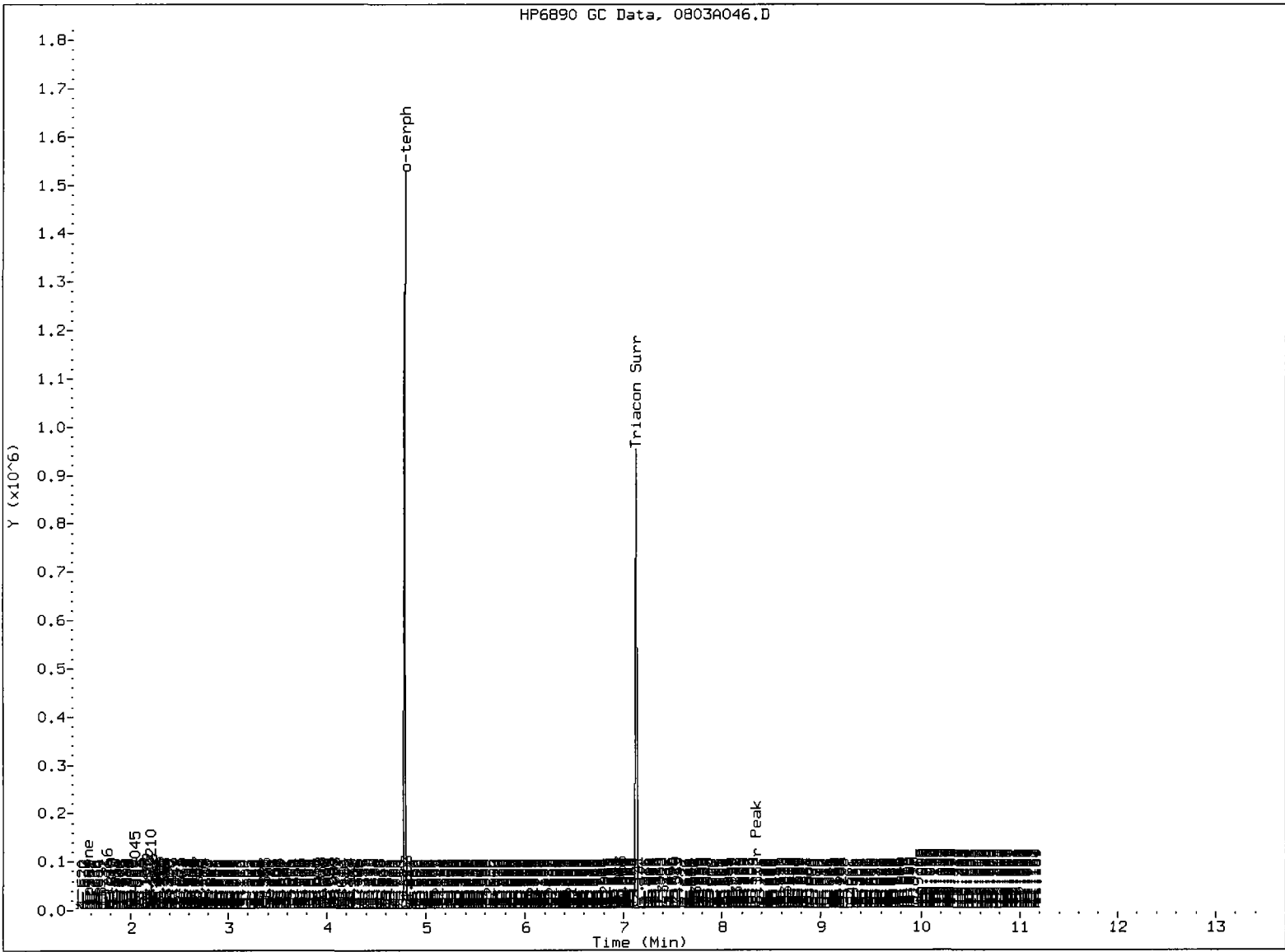
Operator: MS

Column diameter: 0.25

/chem2/fid9.i/20100803.B/08038046.D



HP6890 GC Data, 0803A046.D



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: Mr. ? Date: 8/4/10

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A047.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: RG54J  
 Client ID: PSB17-2-4-072810  
 Injection: 04-AUG-2010 04:46  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.563	0.012	30179	15659	GAS (Tol-C12)	137608	7
C8	1.692	-0.002	548	203	DIESEL (C12-C24)	253541	10
C10	2.464	-0.001	1137	592	M.OIL (C24-C38)	168496	13
C12	3.101	-0.005	1022	844	AK-102 (C10-C25)	339197	12 M
C14	3.652	-0.010	1902	2426	AK-103 (C25-C36)	133817	27 M
C16	4.146	-0.010	3855	4189			
C18	4.614	0.008	2865	2753			
C20	5.118	-0.010	1002	1086			
C22	5.637	-0.007	919	981			
C24	6.076	-0.003	563	539			
C25	6.290	0.014	784	1117			
C26	6.472	-0.003	752	1139			
C28	6.809	0.013	1978	3126			
C32	7.406	-0.013	3182	4560	JP-4 (Tol-C14)	205945	13
C34	7.732	-0.011	1139	360	BUNKERC (C10-C38)	506861	58 M
Filter Peak	8.348	0.005	2046	2567			
C36	8.161	0.012	1325	341			
C38	8.639	-0.010	924	1031			
C40	9.312	0.007	1189	422			
o-terph	4.792	-0.001	1409540	1279497	JET-A (C10-C18)	291606	21
Triacon Surr	7.130	0.011	854539	942154	JP8 (Tol-C16)	296062	17

M Indicates manual integration within range.

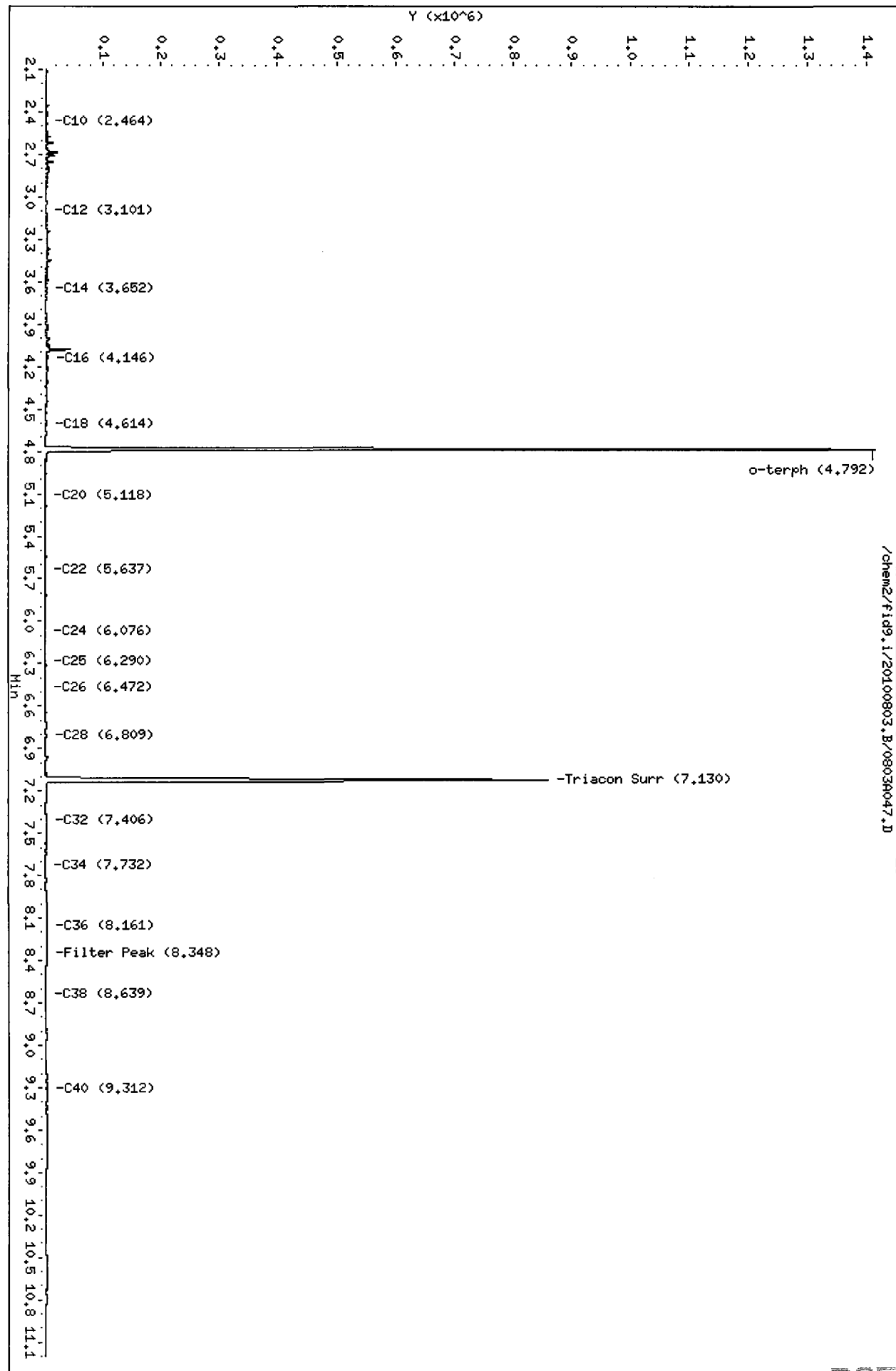
Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1279497	49.7	110.4
Triacontane	942154	47.5	105.6

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

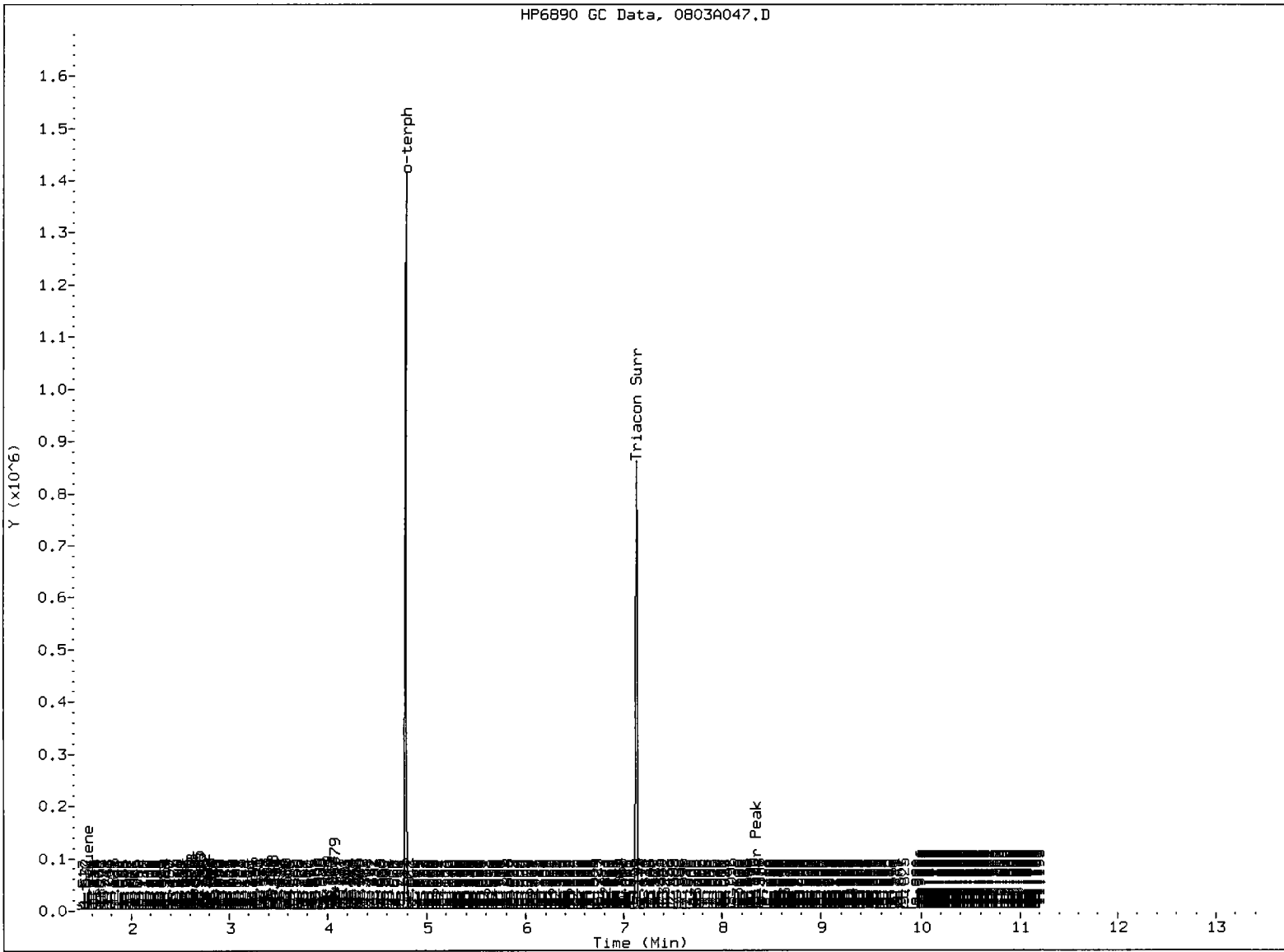
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Date : 04-AUG-2010 04:46  
Client ID: PSB17-2-4-072810  
Sample Info: RG54J  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



/chem2/fid9.i/20100803.B/08036047.D

HP6890 GC Data, 0803A047.D



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MS

Date: 8/14/10

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A048.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: RG54K  
Client ID: PSB17-4-6-072810  
Injection: 04-AUG-2010 05:07  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.563	0.012	597013	274462	GAS (Tol-C12)	522083	25
C8	1.703	0.010	1307	844	DIESEL (C12-C24)	805374	31
C10	2.465	-0.001	2484	1926	M.OIL (C24-C38)	4602256	360
C12	3.106	0.000	2074	1314	AK-102 (C10-C25)	1010360	35 M
C14	3.651	-0.012	1614	2157	AK-103 (C25-C36)	3963370	791 M
C16	4.165	0.010	4434	3683			
C18	4.612	0.005	7104	7942			
C20	5.138	0.010	4809	4558			
C22	5.645	0.001	8364	2787			
C24	6.075	-0.003	12777	4285			
C25	6.281	0.005	17084	12757			
C26	6.478	0.002	21258	18087			
C28	6.798	0.001	33285	10442			
C32	7.421	0.001	45491	38379	JP-4 (Tol-C14)	561824	34
C34	7.744	0.001	35624	15245	BUNKERC (C10-C38)	5527797	630 M
Filter Peak	8.341	-0.003	21485	8861			
C36	8.150	0.001	23591	7869			
C38	8.651	0.002	16154	10893			
C40	9.301	-0.005	8320	5663			
o-terph	4.789	-0.004	1452056	1248071	JET-A (C10-C18)	307806	22
Triacon Surr	7.126	0.006	927123	905953	JP8 (Tol-C16)	618605	35

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

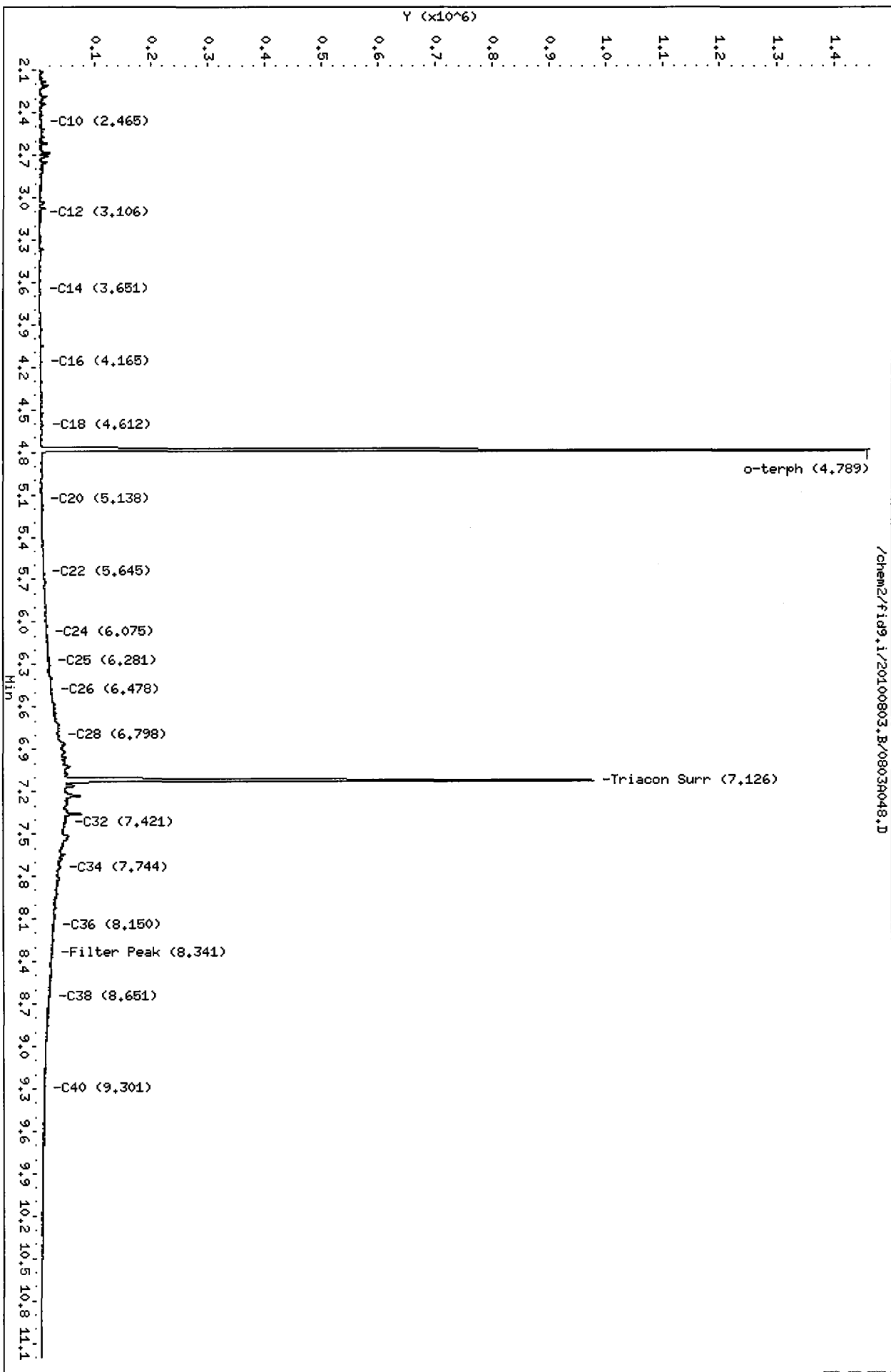
Surrogate	Area	Amount	%Rec
o-Terphenyl	1248071	48.4	107.7
Triacontane	905953	45.7	101.5

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010



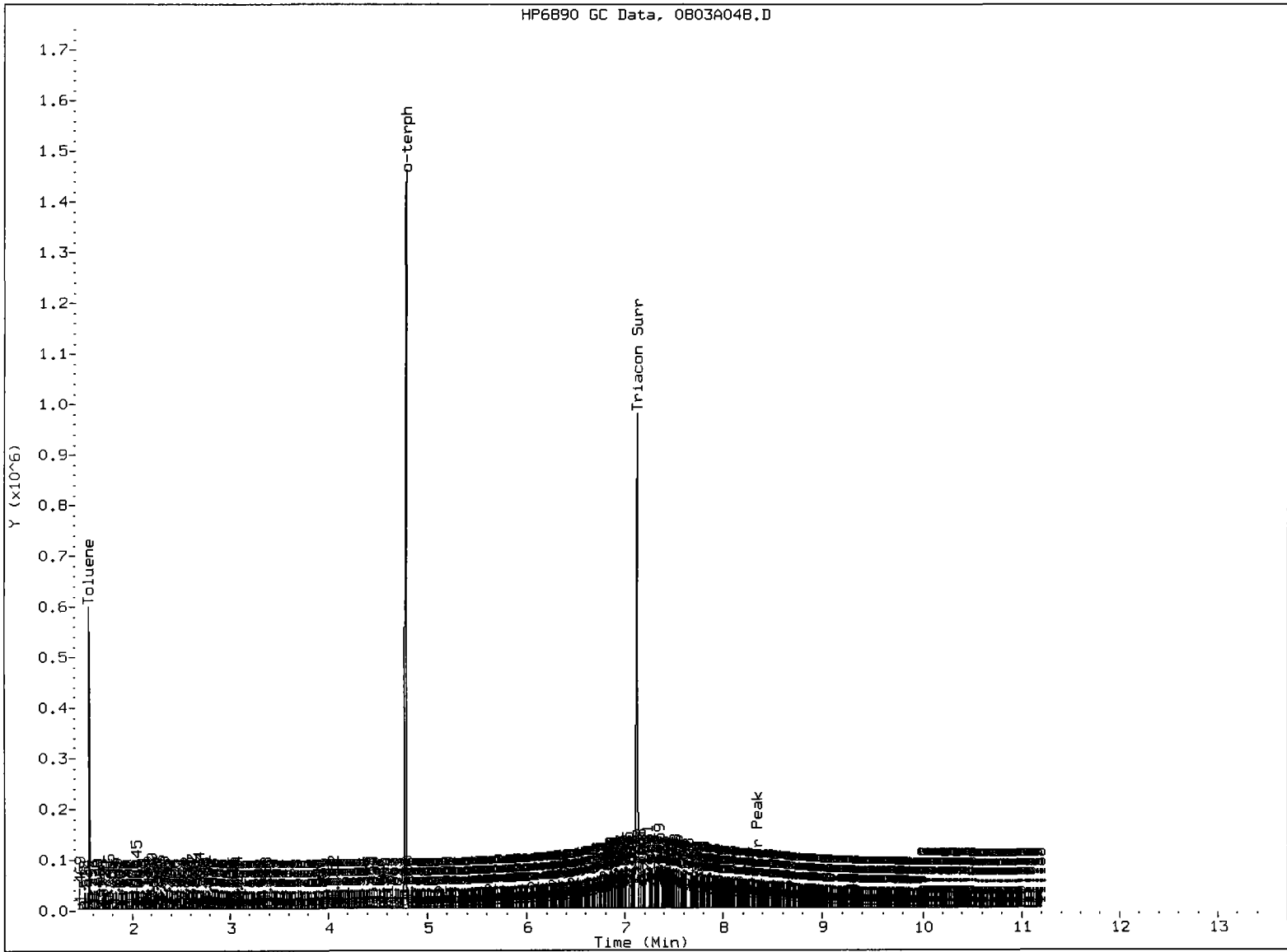
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Client ID: PSB17-4-6-072810  
Sample Info: RG54K  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



/chem2/fid9.i/20100803.B/08036048.D

HP6890 GC Data, 0803A04B.D



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: M Date: 8/14/4

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A049.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: RG54L  
Client ID: PSB17-10-13-072810  
Injection: 04-AUG-2010 05:28  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.566	0.015	5745	3700	GAS (Tol-C12)	123744	6
C8	1.705	0.011	3500	2092	DIESEL (C12-C24)	265029	10
C10	2.464	-0.001	1097	639	M.OIL (C24-C38)	156251	12
C12	3.101	-0.005	1043	1220	AK-102 (C10-C25)	347575	12 M
C14	3.653	-0.010	2879	3579	AK-103 (C25-C36)	132677	26 M
C16	4.147	-0.009	3741	4230			
C18	4.615	0.008	3773	3182			
C20	5.120	-0.008	1149	1173			
C22	5.638	-0.006	1140	1358			
C24	6.079	0.000	785	745			
C25	6.287	0.011	1435	1741			
C26	6.469	-0.006	1055	1579			
C28	6.807	0.011	1894	2598			
C32	7.401	-0.019	3284	5956	JP-4 (Tol-C14)	199329	12
C34	7.738	-0.005	1523	2680	BUNKERC (C10-C38)	502277	57 M
Filter Peak	8.343	0.000	1015	838			
C36	8.132	-0.017	1823	6427			
C38	8.661	0.011	831	559			
C40	9.318	0.013	548	378			
o-terph	4.794	0.000	1531601	1363507	JET-A (C10-C18)	286436	21
Triacon Surr	7.127	0.008	924650	993112	JP8 (Tol-C16)	281190	16

M Indicates manual integration within range.

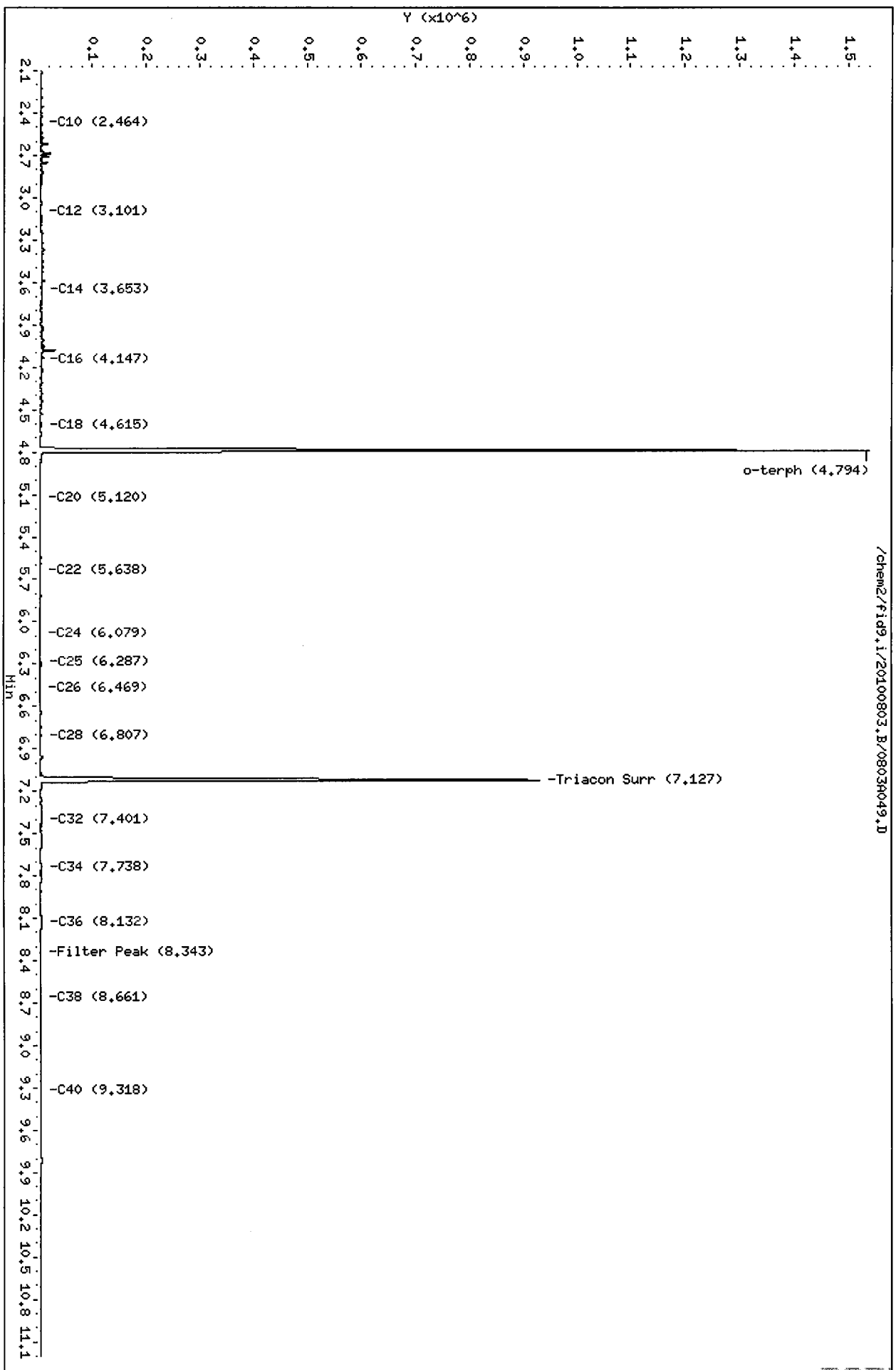
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NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1363507	52.9	117.6
Triacontane	993112	50.1	111.3

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/0803049.D  
Date : 04-AUG-2010 05:28  
Client ID: PSB17-10-13-072810  
Sample Info: R054L  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



/chem2/fid9.i/20100803.B/0803049.D



Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A050.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: DIESEL#4  
Client ID: DIESEL#4  
Injection: 04-AUG-2010 05:49  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.535	-0.016	1227	1233	GAS (Tol-C12)	882637	42
C8	1.693	-0.001	1565	1290	DIESEL (C12-C24)	6276395	238
C10	2.468	0.002	4065	2581	M.OIL (C24-C38)	153093	12
C12	3.116	0.010	81990	47329	AK-102 (C10-C25)	6977114	240 M
C14	3.671	0.009	144635	144270	AK-103 (C25-C36)	117560	23
C16	4.153	-0.003	57359	43773			
C18	4.615	0.009	192897	201298			
C20	5.140	0.012	99459	112774			
C22	5.654	0.010	52430	57982			
C24	6.089	0.011	16575	19701			
C25	6.268	-0.008	2714	741			
C26	6.470	-0.006	2978	4502			
C28	6.786	-0.011	499	127			
C32	7.416	-0.004	969	764	JP-4 (Tol-C14)	1971454	120
C34	7.743	0.000	594	210	BUNKERC (C10-C38)	7114314	811 M
Filter Peak	8.345	0.001	862	374			
C36	8.145	-0.004	530	372			
C38	8.648	-0.001	562	212			
C40	9.304	-0.002	656	193			
o-terph	4.790	-0.004	1274427	1075829	JET-A (C10-C18)	5103703	369
Triacon Surr	7.109	-0.011	4319	4684	JP8 (Tol-C16)	3534643	201

M Indicates manual integration within range.

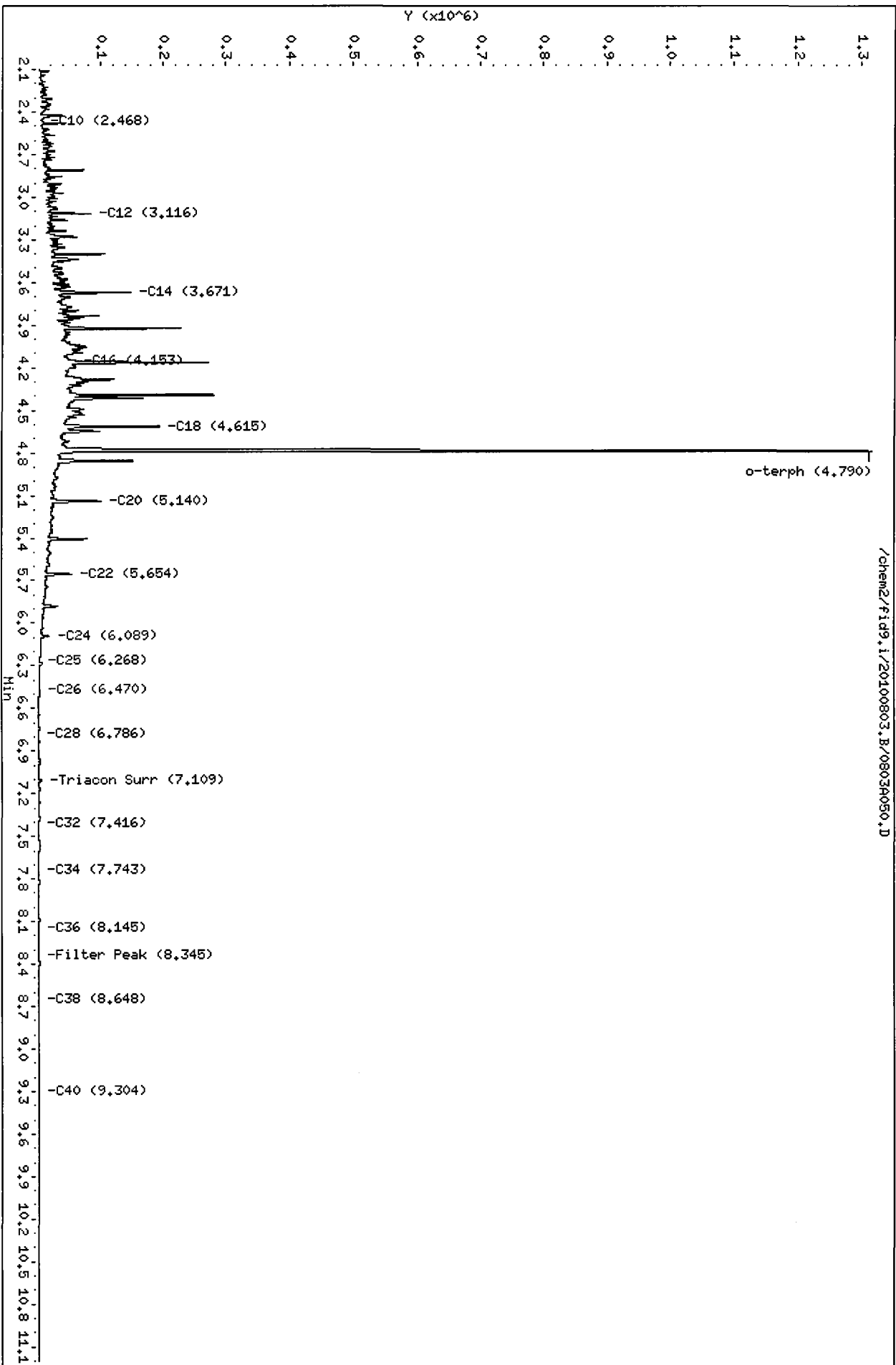
Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1075829	41.8	92.8
Triacotane	4684	0.2	0.5

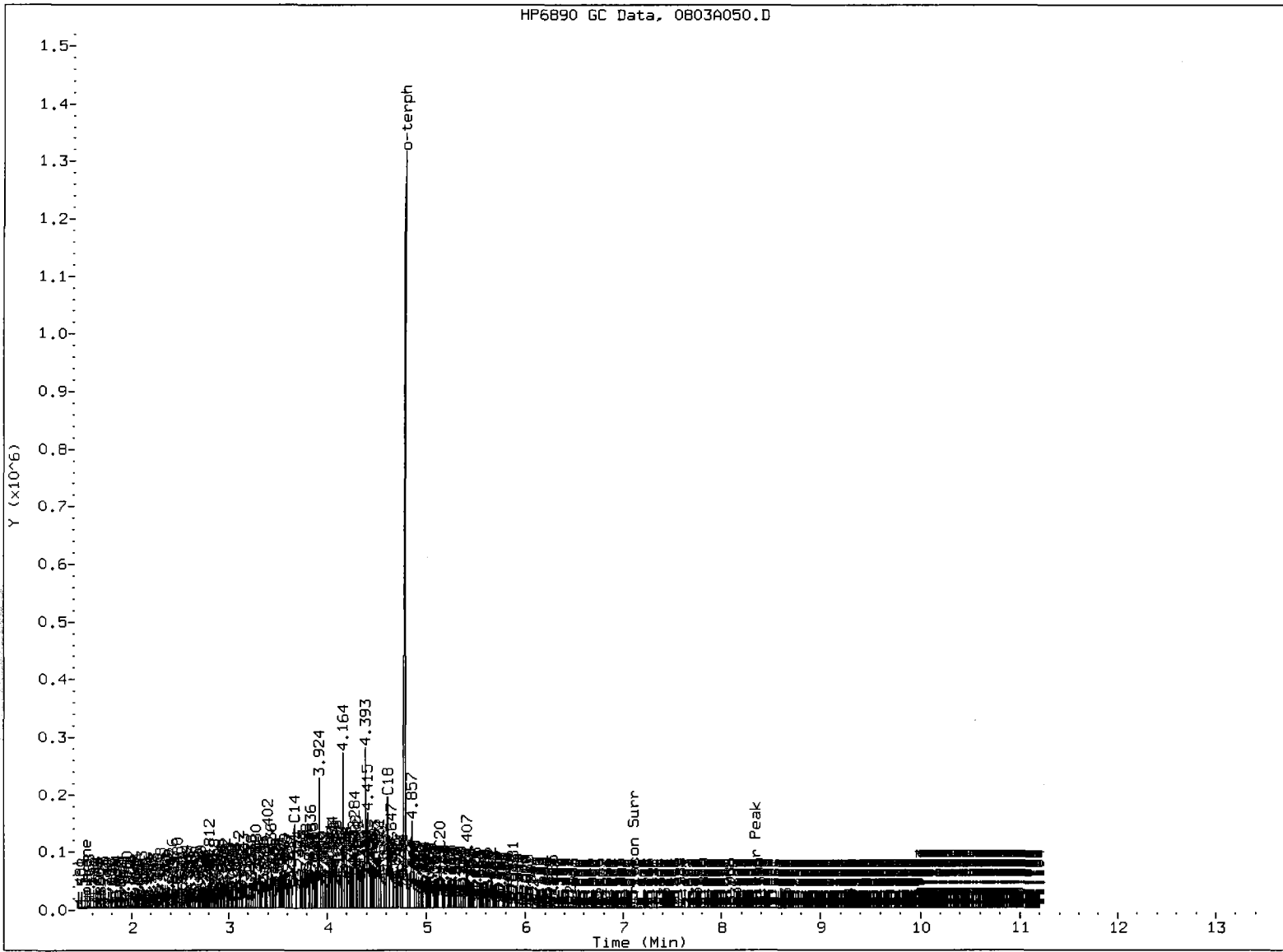
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/0803A050.D  
Date : 04-AUG-2010 05:49  
Client ID: DIESEL#4  
Sample Info: DIESEL#4  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



HP6890 GC Data, 0803A050.D



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: M

Date: 8/4/16



Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A051.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: MOIL#4  
Client ID: MOIL#4  
Injection: 04-AUG-2010 06:11  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.561	0.010	1848	2488	GAS (Tol-C12)	42860	2
C8	1.695	0.002	799	1016	DIESEL (C12-C24)	762535	29
C10	2.446	-0.020	213	124	M.OIL (C24-C38)	6698090	524
C12	3.102	-0.004	25	13	AK-102 (C10-C25)	954799	33
C14	3.659	-0.003	104	49	AK-103 (C25-C36)	5786031	1155 M
C16	4.151	-0.005	164	156			
C18	4.617	0.010	1198	1118			
C20	5.118	-0.010	1870	371			
C22	5.654	0.009	11753	7531			
C24	6.081	0.002	24137	7660			
C25	6.281	0.005	33047	17246			
C26	6.475	-0.001	40143	16671			
C28	6.796	0.000	51789	17349			
C32	7.422	0.002	65114	36918	JP-4 (Tol-C14)	48160	3
C34	7.743	0.000	52464	50042	BUNKERC (C10-C38)	7472819	852 M
Filter Peak	8.345	0.002	26490	7333			
C36	8.146	-0.002	34492	14669			
C38	8.653	0.003	19011	9718			
C40	9.308	0.002	9543	7599			
o-terph	4.781	-0.013	6952	6457	JET-A (C10-C18)	39540	3
Triacon Surr	7.127	0.007	865535	925341	JP8 (Tol-C16)	54062	3

M Indicates manual integration within range.

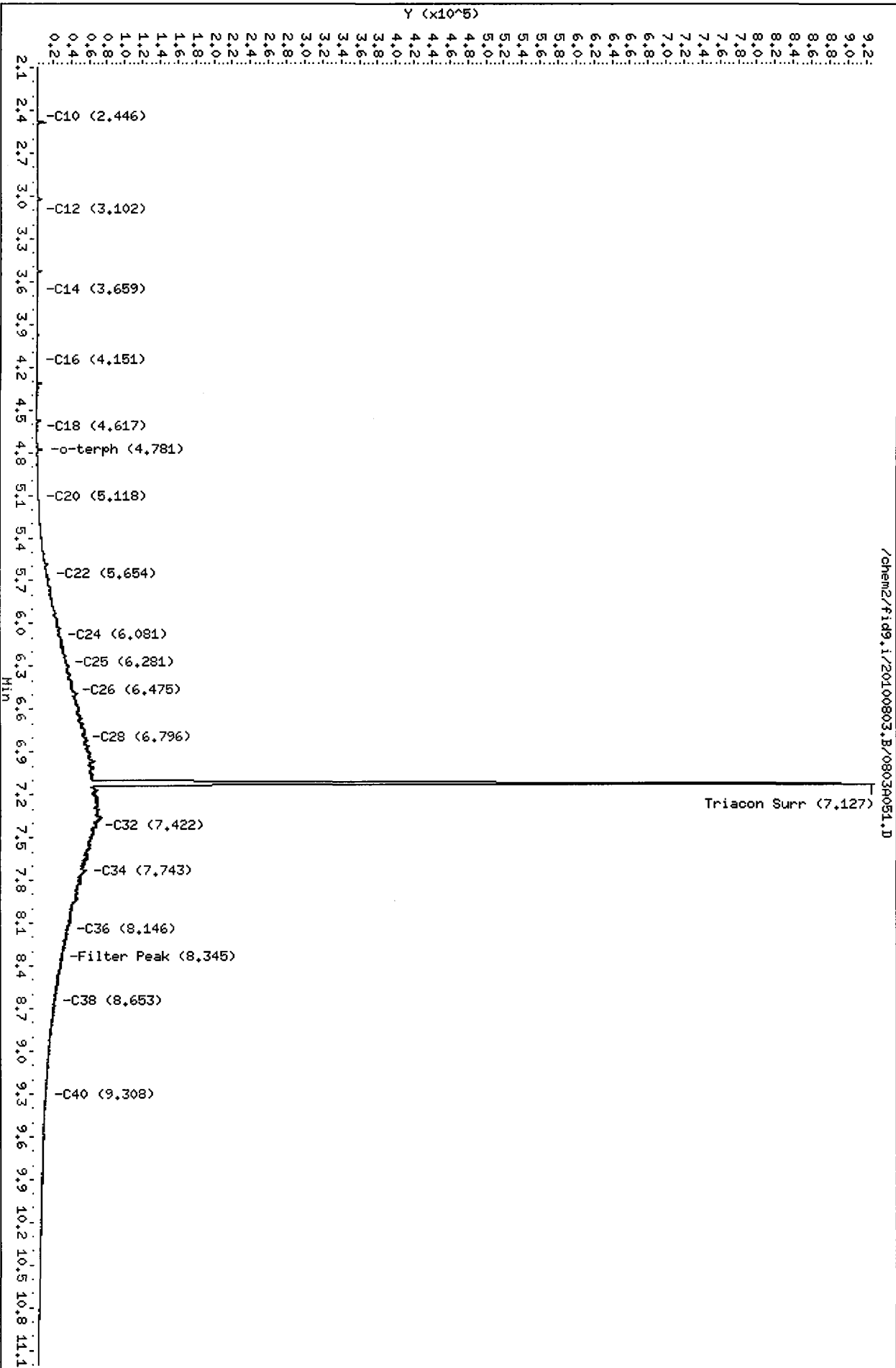
Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

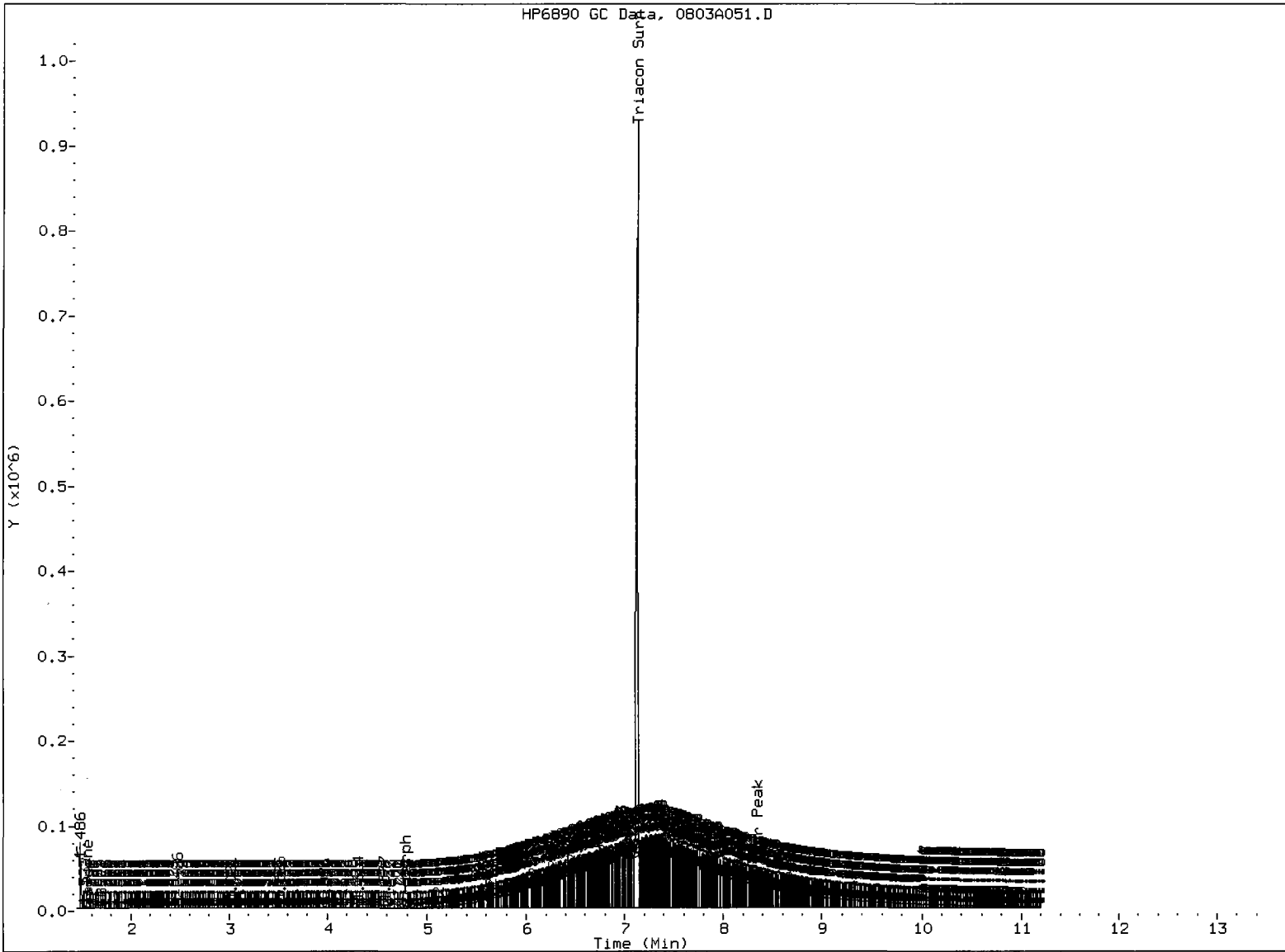
Surrogate	Area	Amount	%Rec
o-Terphenyl	6457	0.3	0.6
Triacontane	925341	46.7	103.7

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/0803A051.D  
Date : 04-AUG-2010 06:11  
Client ID: M01L#4  
Sample Info: M01L#4  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: Mr Date: 8/4/10

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/fid9.i/20100803.B

ARI Job No.: DIES Method: ftphfid9a.m Instrument: fid9.i Date: 03-AUG-2010

Time Filename LabID ClientID DF Manually Integrated Compounds

1803	0803A017.D	DIESEL#2	DIESEL#2	1	o-terph,
1825	0803A018.D	MOIL#2	MOIL#2	1	Triacon Surr,
1847	0803A019.D	BUNKER#2		1	Triacon Surr,
1908	0803A020.D	RG51A		5	NO MANUAL INTEGRATION
1930	0803A021.D	RG51F		1	NO MANUAL INTEGRATION
1951	0803A022.D	RG51G		5	NO MANUAL INTEGRATION
2013	0803A023.D	RG54A		5	NO MANUAL INTEGRATION
2035	0803A024.D	RG54E		5	NO MANUAL INTEGRATION
2056	0803A025.D	RG54H		5	NO MANUAL INTEGRATION
2117	0803A026.D	RG51B	PSB12-1.5-	1	o-terph,
2139	0803A027.D	RG51A	PSB12-0-0.	1	o-terph, Triacon Surr,
2200	0803A028.D	RG51C	PSB12-2-4-	1	o-terph, Triacon Surr,
2222	0803A029.D	RG51D	PSB12-8-10	1	o-terph, Triacon Surr,
2243	0803A030.D	RG51E	PSB12-8-10	1	o-terph, Triacon Surr,
2305	0803A031.D	RG51G	PSB12-4-6-	1	o-terph, Triacon Surr,
2326	0803A032.D	RG51FMS	PSB12-14-1	1	o-terph, Triacon Surr,
2347	0803A033.D	RG51FMSD	PSB12-14-1	1	o-terph, Triacon Surr,
2409	0803A034.D	RG66LCSS1	RG66LCSS1	1	o-terph,
25030	0803A035.D	RG66LCSDS1	RG66LCSDS1	1	o-terph,
25052	0803A036.D	RG66MBS1	RG66MBS1	1	NO MANUAL INTEGRATION
25113	0803A037.D	DIESEL#3	DIESEL#3	1	o-terph,
25134	0803A038.D	MOIL#3	MOIL#3	1	Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/fid9.i/20100803.B

Time	Filename	LabID	ClientID	DF	Manually Integrated Compounds
0156	0803A039.D	BUNKER#3	1	NO MANUAL INTEGRATION	
0217	0803A040.D	RG54A	PSB14-0-5	1	o-terph, Triacon Surr,
0238	0803A041.D	RG54B	PSB14-1.5-	1	o-terph, Triacon Surr,
0259	0803A042.D	RG54C	PSB14-2-4-	1	o-terph, Triacon Surr,
0321	0803A043.D	RG54E	PSB14-7-9-	1	o-terph, Triacon Surr,
0342	0803A044.D	RG54F	PSB14-12-1	1	o-terph, Triacon Surr,
0403	0803A045.D	RG54H	PSB17-0-0.	1	o-terph, Triacon Surr,
0424	0803A046.D	RG54I	PSB17-1.5-	1	o-terph, Triacon Surr,
0446	0803A047.D	RG54J	PSB17-2-4-	1	o-terph, Triacon Surr,
0507	0803A048.D	RG54K	PSB17-4-6-	1	o-terph, Triacon Surr,
0528	0803A049.D	RG54L	PSB17-10-1	1	o-terph, Triacon Surr,
0549	0803A050.D	DIESEL#4	DIESEL#4	1	o-terph,
0611	0803A051.D	MOIL#4	MOIL#4	1	Triacon Surr,
0632	0803A052.D	BUNKER#4		1	NO MANUAL INTEGRATION

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803raw.b/0803A017.D ARI ID: DIESEL#2  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 03-AUG-2010 18:03  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/04/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.564	0.013	10393	5902	GAS (Tol-C12)	868100	41
C8	1.690	-0.003	1763	1581	DIESEL (C12-C24)	6022741	229
C10	2.466	0.000	3904	2537	M.OIL (C24-C38)	125272	10
C12	3.115	0.009	82030	44296	AK-102 (C10-C25)	6706942	231
C14	3.671	0.008	141683	142797	AK-103 (C25-C36)	98009	20
C16	4.150	-0.006	56420	41786			
C18	4.615	0.008	200377	189780			
C20	5.141	0.012	99273	109080			
C22	5.654	0.009	50642	52696			
C24	6.090	0.011	15723	21441			
C25	6.266	-0.010	2499	882			
C26	6.471	-0.005	2599	3618			
C28	6.787	-0.009	247	140			
C32	7.435	0.015	205	124	JP-4 (Tol-C14)	1917989	117
C34	7.746	0.003	290	206	BUNKERC (C10-C38)	6816743	777
Filter Peak	8.341	-0.002	551	682			
C36	8.155	0.006	179	116			
C38	8.647	-0.003	138	54			
C40	9.303	-0.003	116	78			
o-terph	4.790	-0.003	1290250	1172653	JET-A (C10-C18)	4966682	359
Triacon Surr	7.119	-0.001	3873	3638	JP8 (Tol-C16)	3477911	198

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

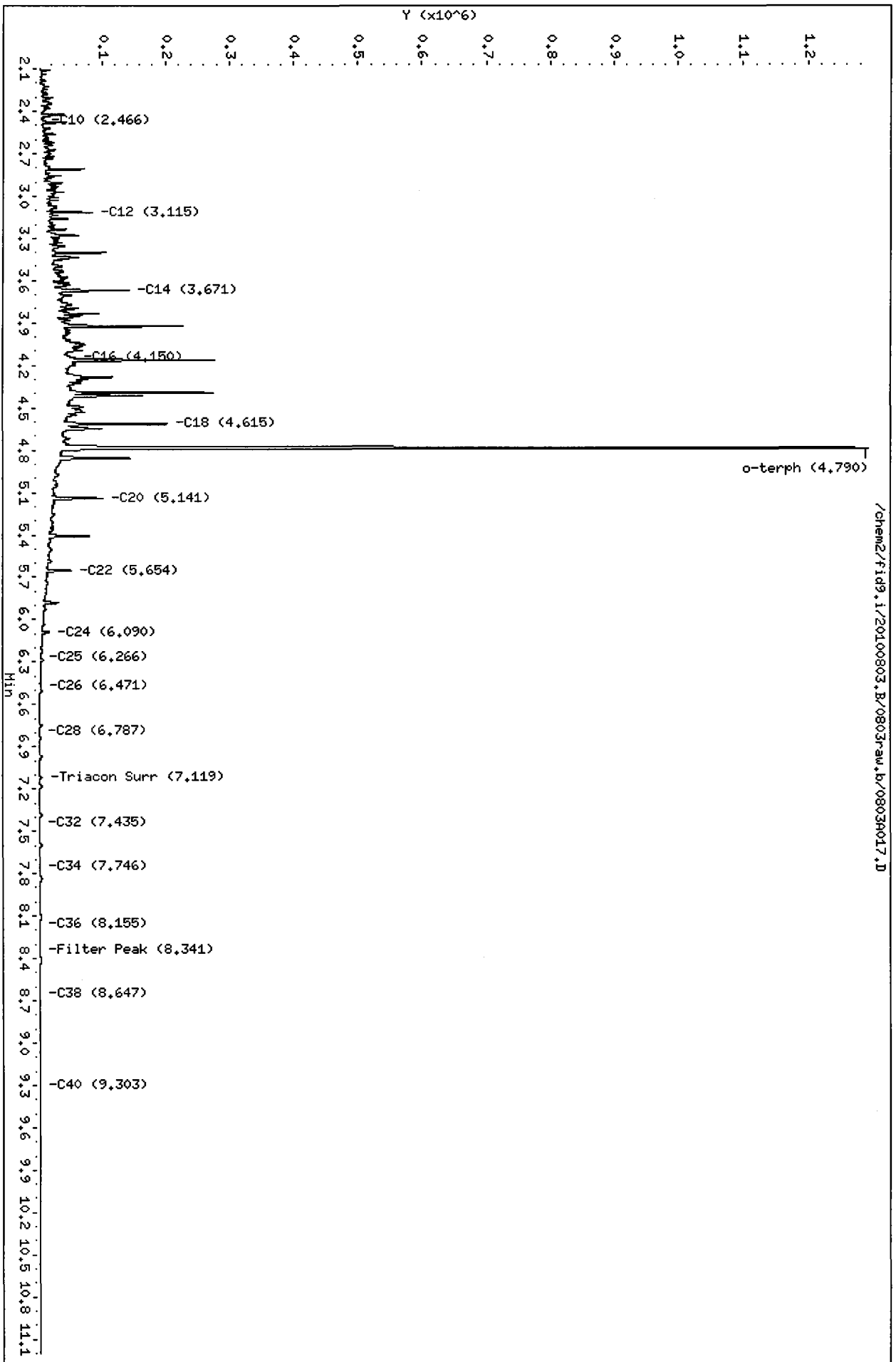
Surrogate	Area	Amount	%Rec
o-Terphenyl	1172653	45.5	101.2
Triacotane	3638	0.2	0.4

*28/9/10*

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.1/20100803.B/0803raw.b/08030017.D  
Date : 03-AUG-2010 18:03  
Client ID:  
Sample Info: DIESEL#2  
Column phase: RTX-1

Instrument: fid9.1  
Operator: MS  
Column diameter: 0.25



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803raw.b/0803A018.D ARI ID: MOIL#2  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 03-AUG-2010 18:25  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/04/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.559	0.008	2028	3173	GAS (Tol-C12)	51020	2
C8	1.708	0.014	890	228	DIESEL (C12-C24)	760073	29
C10	2.449	-0.017	210	71	M.OIL (C24-C38)	6399739	500
C12	3.097	-0.009	39	21	AK-102 (C10-C25)	936390	32
C14	3.663	0.000	83	42	AK-103 (C25-C36)	5418063	1082
C16	4.157	0.001	133	72			
C18	4.615	0.008	944	1036			
C20	5.139	0.011	2815	4723			
C22	5.640	-0.005	10527	8088			
C24	6.077	-0.002	24056	11825			
C25	6.271	-0.005	31143	25368			
C26	6.476	0.000	39417	15469			
C28	6.793	-0.004	49615	14656			
C32	7.422	0.002	63199	17292	JP-4 (Tol-C14)	55629	3
C34	7.742	-0.001	51005	50177	BUNKERC (C10-C38)	7172341	818
Filter Peak	8.344	0.000	30464	20735			
C36	8.153	0.004	35979	24306			
C38	8.655	0.005	23051	14014			
C40	9.309	0.003	13694	5844			
o-terph	4.806	0.013	704	219	JET-A (C10-C18)	38352	3
Triacon Surr	7.133	0.013	878219	1069463	JP8 (Tol-C16)	60554	3

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	219	0.0	0.0
Triacontane	1069463	53.9	119.8

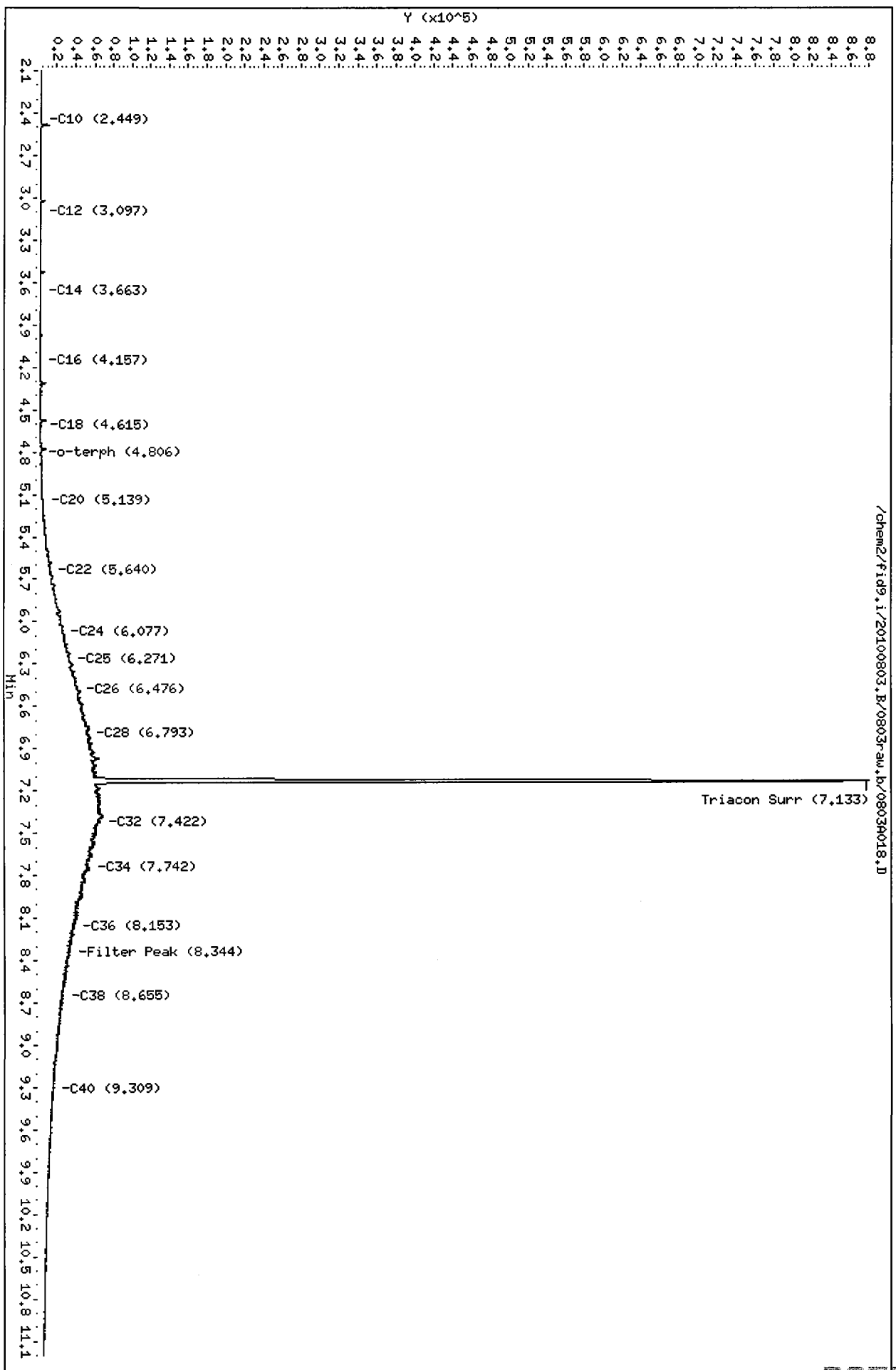
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Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010



Data File: /chem2/fid9.i/20100803.B/0803raw.b/0803A018.D  
Date: 03-AUG-2010 18:25  
Client ID:  
Sample Info: M01L#2  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A034.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: RG66LCSS1  
 Client ID: RG66LCSS1  
 Injection: 04-AUG-2010 00:09  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.561	0.010	45444	22631	GAS (Tol-C12)	4367241	208
C8	1.688	-0.005	3795	3249	DIESEL (C12-C24)	32562178	1237
C10	2.465	-0.001	20037	12686	M.OIL (C24-C38)	439925	34
C12	3.116	0.010	425385	229549	AK-102 (C10-C25)	36187627	1246
C14	3.661	-0.002	215931	142045	AK-103 (C25-C36)	307377	61
C16	4.144	-0.012	244493	82899			
C18	4.598	-0.008	227501	92499			
C20	5.115	-0.014	129664	144260			
C22	5.662	0.017	264021	306742			
C24	6.092	0.013	85041	101182			
C25	6.287	0.010	39786	53504			
C26	6.470	-0.006	16075	24819			
C28	6.806	0.010	3971	5420			
C32	7.398	-0.022	2524	3727	JP-4 (Tol-C14)	9904323	604
C34	7.733	-0.010	984	1909	BUNKERC (C10-C38)	36508670	4163
Filter Peak	8.344	0.001	654	347			
C36	8.153	0.005	473	309			
C38	8.662	0.012	728	880			
C40	9.307	0.002	70	38			
o-terph	4.799	0.005	1548553	1787531	JET-A (C10-C18)	25973731	1880
Triacon Surr	7.124	0.004	851372	879721	JP8 (Tol-C16)	18165765	1032

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1787531	69.4	154.2
Triacontane	879721	44.4	98.6

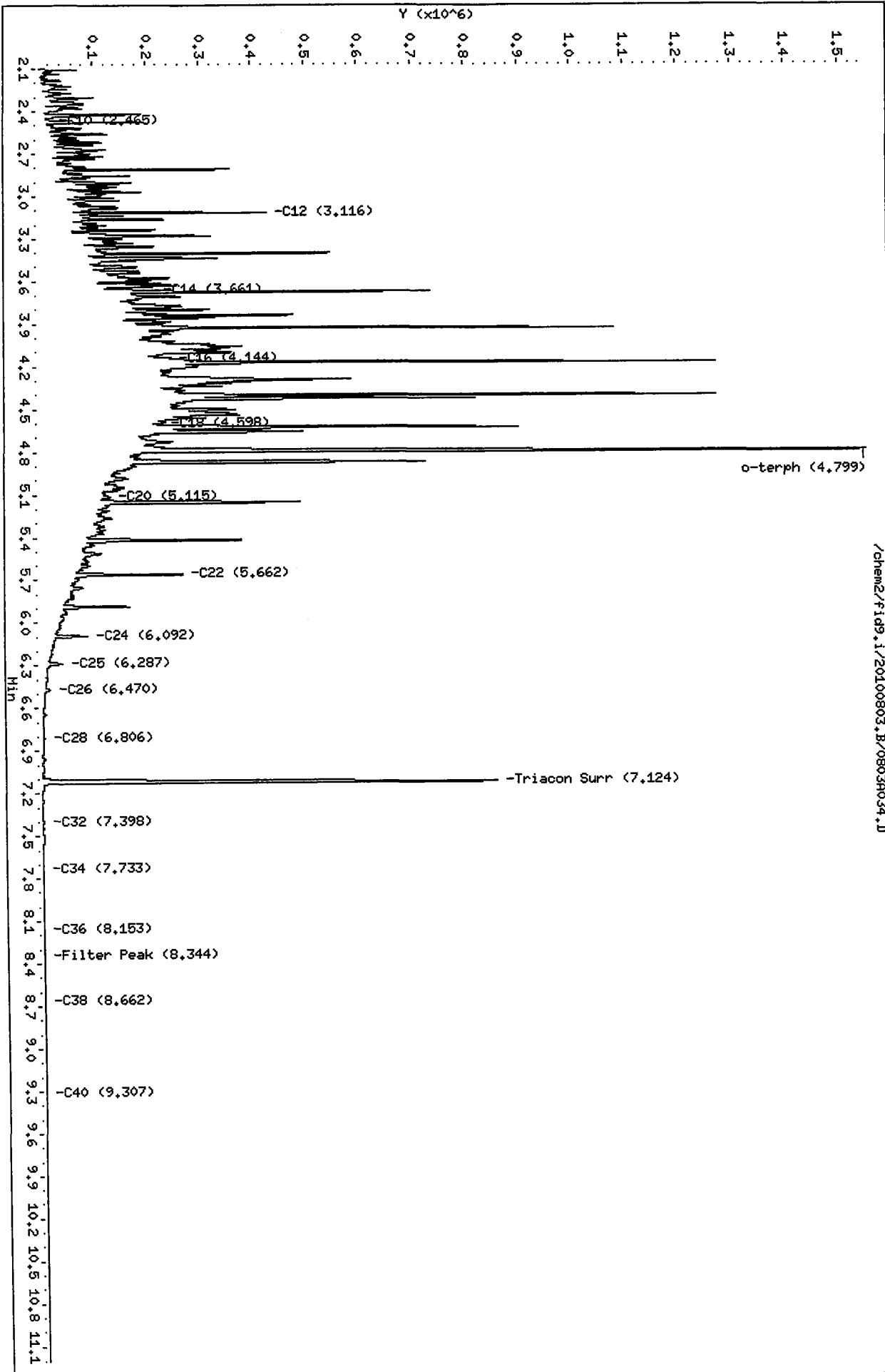
*MS F14/10*

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/0803A034.D  
Date: 04-AUG-2010 00:09  
Client ID: RG66LCSS1  
Sample Info: RG66LCSS1

Column phase: RTX-1

Instrument: fid9.i  
Operator: HS  
Column diameter: 0.25



/chem2/fid9.i/20100803.B/0803A034.D

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A035.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: RG66LCSDS1  
Client ID: RG66LCSDS1  
Injection: 04-AUG-2010 00:30  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.561	0.010	45741	22514	GAS (Tol-C12)	4627205	220
C8	1.688	-0.006	4195	3475	DIESEL (C12-C24)	33775584	1283
C10	2.465	0.000	21303	14842	M.OIL (C24-C38)	441636	35
C12	3.116	0.010	450712	242006	AK-102 (C10-C25)	37591391	1294
C14	3.673	0.011	749634	709116	AK-103 (C25-C36)	341873	68
C16	4.139	-0.017	253177	213899			
C18	4.607	0.000	229314	50032			
C20	5.127	-0.001	125214	49186			
C22	5.661	0.017	280440	316118			
C24	6.091	0.012	88435	107642			
C25	6.286	0.010	43134	65522			
C26	6.470	-0.006	17036	25676			
C28	6.806	0.009	3924	6129			
C32	7.426	0.006	746	439	JP-4 (Tol-C14)	10480783	639
C34	7.732	-0.012	1030	1250	BUNKERC (C10-C38)	37940847	4326
Filter Peak	8.348	0.004	459	302			
C36	8.150	0.001	480	258			
C38	8.654	0.004	275	262			
C40	9.301	-0.005	169	92			
o-terph	4.800	0.006	1524020	1993903	JET-A (C10-C18)	27101997	1961
Triacon Surr	7.125	0.005	905045	917631	JP8 (Tol-C16)	19125161	1087

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1993903	77.4	172.0
Triacontane	917631	46.3	102.8

*M=87411*

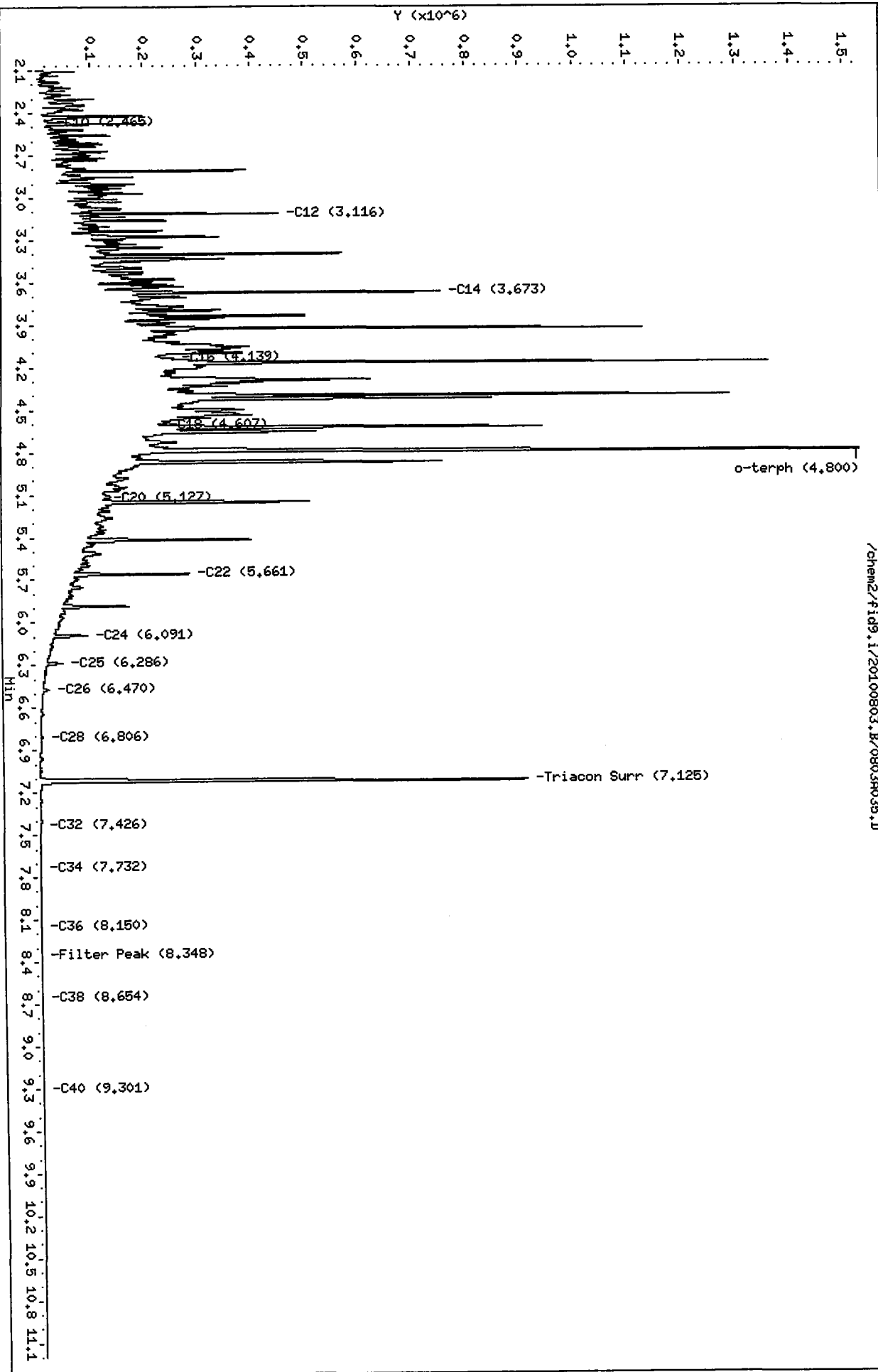
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/08034035.D  
Date: 04-AUG-2010 00:30  
Client ID: RG66LCS051  
Sample Info: RG66LCS051

Column phase: RTX-1

Instrument: fid9.i  
Operator: HS  
Column diameter: 0.25

/chem2/fid9.i/20100803.B/08034035.D



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803raw.b/0803A037.D ARI ID: DIESEL#3  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m Client ID: DIESEL#3  
 Instrument: fid9.i Injection: 04-AUG-2010 01:13  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/04/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.565	0.014	10338	5749	GAS (Tol-C12)	874035	42
C8	1.691	-0.003	1683	1476	DIESEL (C12-C24)	6090473	231
C10	2.479	0.014	38827	28367	M.OIL (C24-C38)	121785	10
C12	3.115	0.010	81645	44163	AK-102 (C10-C25)	6781010	233
C14	3.671	0.008	145970	143138	AK-103 (C25-C36)	94155	19
C16	4.149	-0.006	57049	51593			
C18	4.615	0.009	197501	198383			
C20	5.141	0.013	97919	113579			
C22	5.654	0.009	51554	55768			
C24	6.089	0.011	16347	21978			
C25	6.284	0.008	6809	12363			
C26	6.469	-0.007	2802	3667			
C28	6.809	0.012	618	740			
C32	7.416	-0.004	404	306	JP-4 (Tol-C14)	1939640	118
C34	7.744	0.001	503	185	BUNKERC (C10-C38)	6884385	785
Filter Peak	8.348	0.005	402	209			
C36	8.150	0.001	399	305			
C38	8.652	0.003	326	285			
C40	9.305	0.000	192	50			
o-terph	4.790	-0.004	1276815	1197332	JET-A (C10-C18)	5040268	365
Triacon Surr	7.109	-0.011	4021	3947	JP8 (Tol-C16)	3505374	199

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

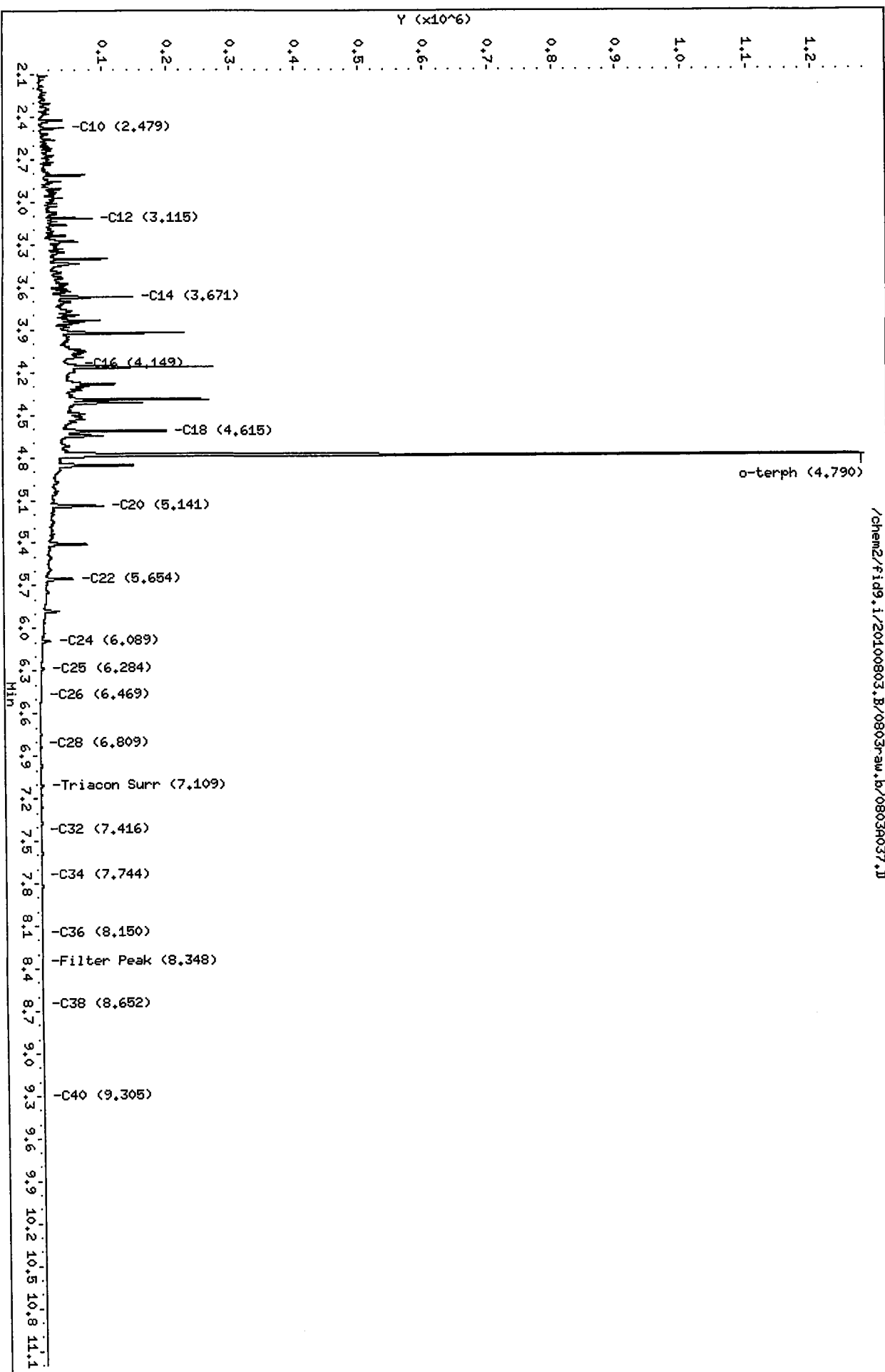
Surrogate	Area	Amount	%Rec
o-Terphenyl	1197332	46.5	103.3
Triacontane	3947	0.2	0.4

*Handwritten signature*

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/0803raw.b/0803A037.D  
Date: 04-AUG-2010 01:13  
Client ID: DIESEL#3  
Sample Info: DIESEL#3  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



/chem2/fid9.i/20100803.B/0803raw.b/0803A037.D

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803raw.b/0803A038.D ARI ID: MOIL#3  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m Client ID: MOIL#3  
 Instrument: fid9.i Injection: 04-AUG-2010 01:34  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/04/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.560	0.010	1672	2018	GAS (Tol-C12)	40627	2
C8	1.711	0.018	619	230	DIESEL (C12-C24)	768079	29
C10	2.463	-0.002	195	45	M.OIL (C24-C38)	6353271	497
C12	3.105	0.000	28	7	AK-102 (C10-C25)	945383	33
C14	3.659	-0.003	85	34	AK-103 (C25-C36)	5439996	1086
C16	4.155	-0.001	148	60			
C18	4.616	0.009	1000	1013			
C20	5.138	0.010	2828	4883			
C22	5.643	-0.002	10526	4538			
C24	6.079	0.000	24232	4320			
C25	6.274	-0.002	31716	15007			
C26	6.476	0.000	40623	23208			
C28	6.793	-0.003	50471	17992			
C32	7.420	0.000	64230	33803	JP-4 (Tol-C14)	45826	3
C34	7.743	0.000	51015	20963	BUNKERC (C10-C38)	7132939	813
Filter Peak	8.339	-0.004	29256	14771			
C36	8.151	0.003	34396	12815			
C38	8.644	-0.005	21012	13534			
C40	9.308	0.003	11336	7422			
o-terph	4.781	-0.012	5813	5451	JET-A (C10-C18)	37310	3
Triacon Surr	7.126	0.006	964571	1073927	JP8 (Tol-C16)	50643	3

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	5451	0.2	0.5
Triacantane	1073927	54.2	120.3

*Handwritten signature: Ne 8/4/10*

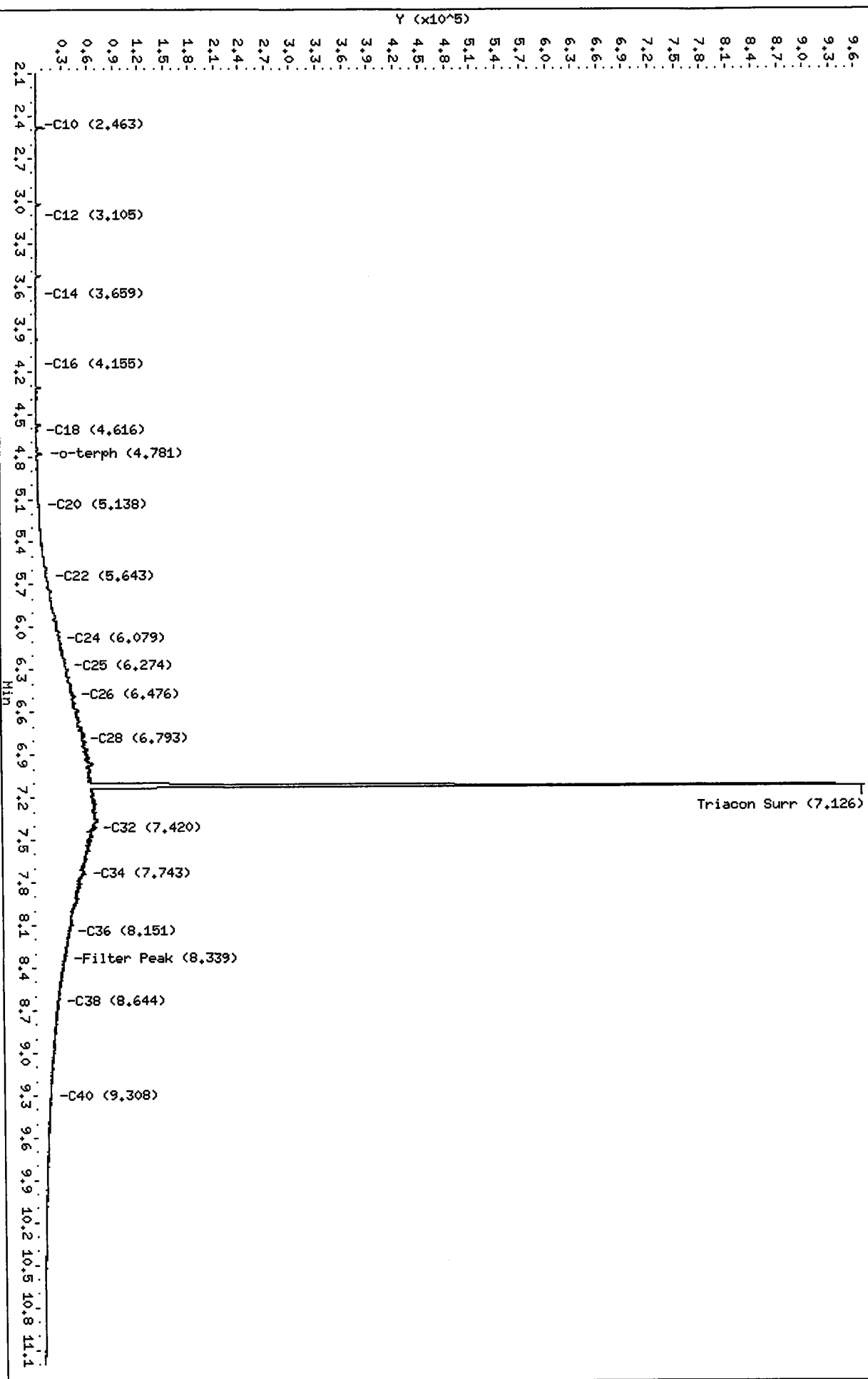
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010



Data File: /chem2/fid9.i/20100803.B/0803raw.b/0803A038.D  
 Date: 04-AUG-2010 01:34  
 Client ID: H01L#3  
 Sample Info: H01L#3  
 Column phase: RTX-1

Instrument: fid9.i  
 Operator: MS  
 Column diameter: 0.25

/chem2/fid9.i/20100803.B/0803raw.b/0803A038.D



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A040.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: RG54A  
 Client ID: PSB14-0-.5-072810  
 Injection: 04-AUG-2010 02:17  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.564	0.013	5284	3418	GAS (Tol-C12)	307693	15
C8	1.688	-0.006	452	168	DIESEL (C12-C24)	3240610	123
C10	2.465	0.000	2614	2034	M.OIL (C24-C38)	22403823	1752
C12	3.105	-0.001	1775	1055	AK-102 (C10-C25)	3806792	131
C14	3.649	-0.014	2327	2567	AK-103 (C25-C36)	19476293	3888
C16	4.165	0.009	9745	8974			
C18	4.615	0.008	19392	25482			
C20	5.140	0.012	25336	37172			
C22	5.636	-0.009	39712	32398			
C24	6.078	-0.001	63988	17509			
C25	6.275	-0.002	79054	37457			
C26	6.479	0.003	112300	43085			
C28	6.799	0.002	153223	30562			
C32	7.419	-0.001	213190	89035	JP-4 (Tol-C14)	355643	22
C34	7.751	0.008	157336	92812	BUNKERC (C10-C38)	25772848	2939
Filter Peak	8.343	0.000	92137	27227			
C36	8.152	0.003	108113	40705			
C38	8.651	0.001	68091	29368			
C40	9.303	-0.003	34177	20148			
o-terph	4.792	-0.002	1491893	1314658	JET-A (C10-C18)	549901	40
Triacon Surr	7.100	-0.020	243423	210818	JP8 (Tol-C16)	466659	27

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1314658	51.0	113.4
Triacontane	210818	10.6	23.6

*MS 8/4/10*

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9,1/20100803.B/08036040.D

Date: 04-AUG-2010 02:17

Client ID: PSB14-0-.5-072810

Sample Info: RC54A

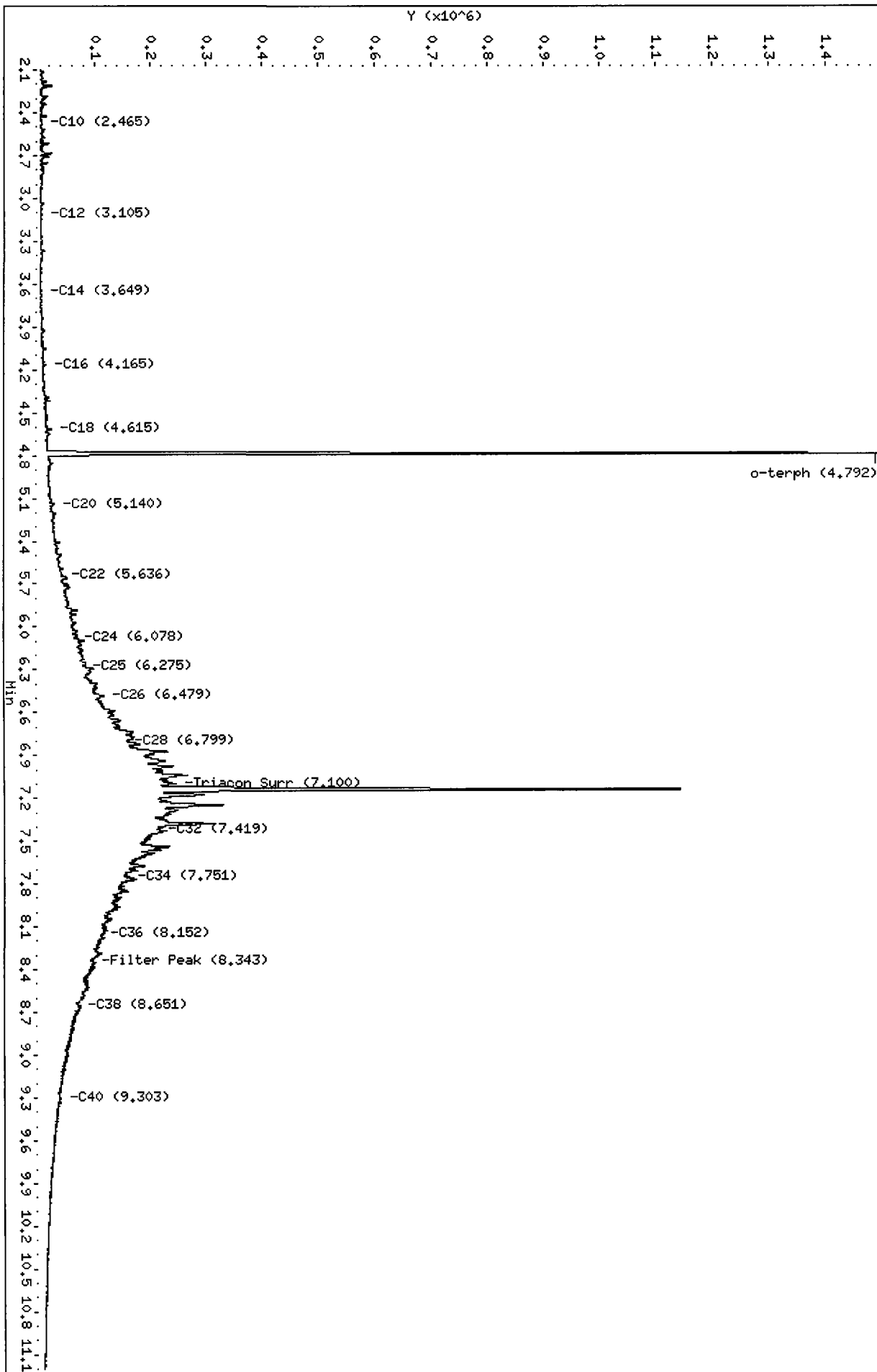
Column phase: RTX-1

Instrument: fid9,1

Operator: NS

Column diameter: 0.25

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Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A041.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: RG54B  
 Client ID: PSB14-1.5-2.0-07281  
 Injection: 04-AUG-2010 02:38  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.563	0.012	4318	3021	GAS (Tol-C12)	273710	13
C8	1.688	-0.005	685	268	DIESEL (C12-C24)	164977	6
C10	2.464	-0.002	3530	2858	M.OIL (C24-C38)	560925	44
C12	3.112	0.006	489	212	AK-102 (C10-C25)	242936	8
C14	3.657	-0.005	379	414	AK-103 (C25-C36)	481194	96
C16	4.155	-0.001	1116	705			
C18	4.613	0.006	3261	2538			
C20	5.117	-0.011	918	969			
C22	5.636	-0.008	1830	2271			
C24	6.071	-0.008	2700	1279			
C25	6.287	0.010	4115	6810			
C26	6.472	-0.004	4351	5564			
C28	6.793	-0.004	5346	3945			
C32	7.432	0.012	4424	1315	JP-4 (Tol-C14)	291518	18
C34	7.744	0.001	3477	2215	BUNKERC (C10-C38)	786150	90
Filter Peak	8.342	-0.001	2870	1450			
C36	8.136	-0.012	3201	3872			
C38	8.648	-0.001	2517	2631			
C40	9.319	0.013	1002	791			
o-terph	4.792	-0.001	1540083	1364626	JET-A (C10-C18)	123327	9
Triacon Surr	7.127	0.007	965450	1013774	JP8 (Tol-C16)	310402	18

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1364626	53.0	117.7
Triacotane	1013774	51.1	113.6

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

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 8/4/10

Data File: /chem2/fid9.i/20100803.B/0803041.D

Date : 04-AUG-2010 02:38

Client ID: PSB14-1.5-2.0-07281

Sample Info: RC54B

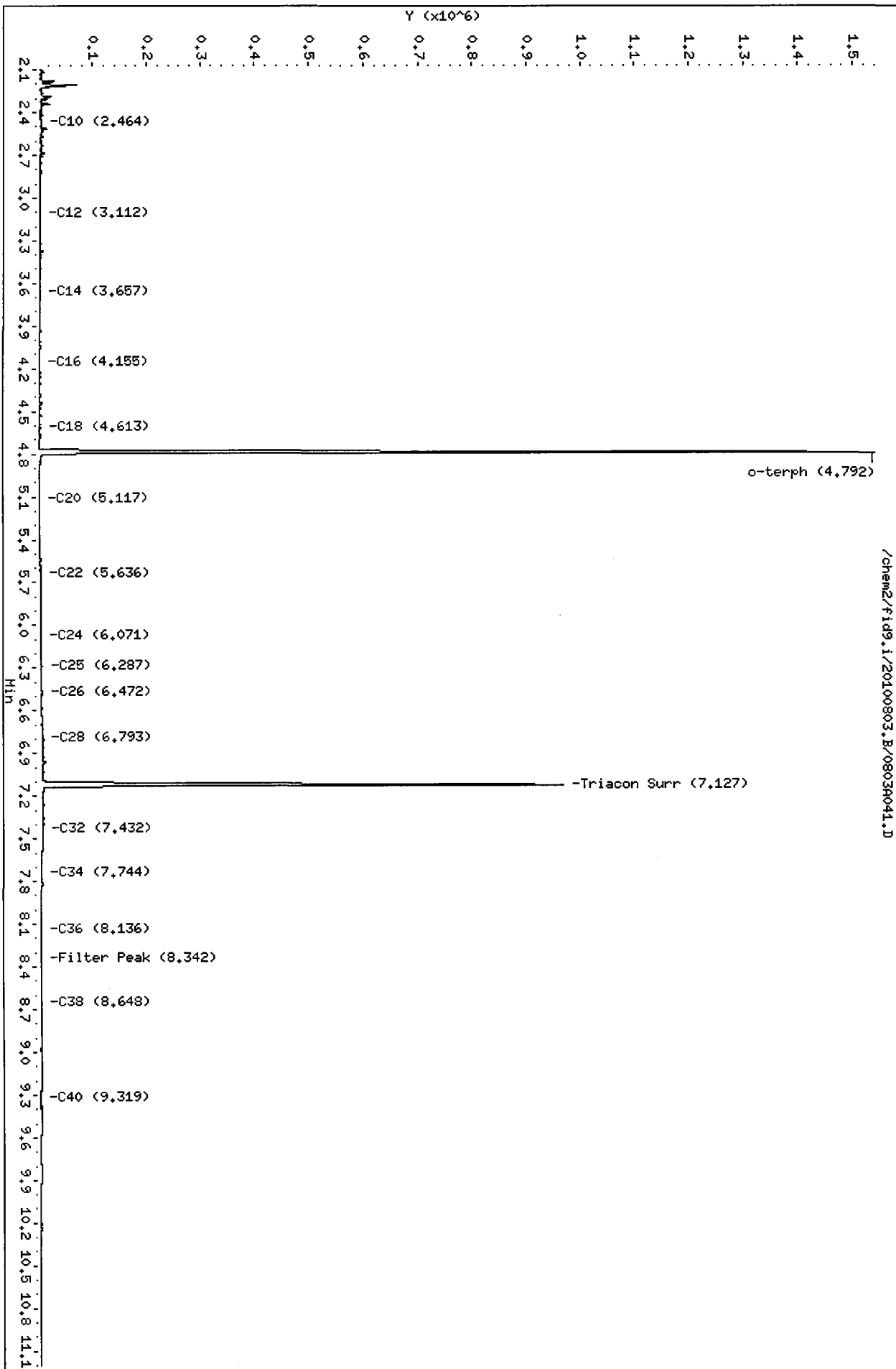
Column phase: RTX-1

Instrument: fid9.1

Operator: MS

Column diameter: 0.25

Page 1



RG54 : 01097

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A042.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: RG54C  
 Client ID: PSB14-2-4-072810  
 Injection: 04-AUG-2010 02:59  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.563	0.012	6551	3693	GAS (Tol-C12)	184307	9
C8	1.690	-0.003	428	167	DIESEL (C12-C24)	410298	16
C10	2.463	-0.002	1994	1781	M.OIL (C24-C38)	1093444	86
C12	3.107	0.001	732	479	AK-102 (C10-C25)	535687	18
C14	3.652	-0.011	2888	4351	AK-103 (C25-C36)	953138	190
C16	4.155	-0.001	1775	898			
C18	4.614	0.007	4745	4205			
C20	5.139	0.011	2751	3901			
C22	5.635	-0.009	4128	3878			
C24	6.075	-0.003	5598	3275			
C25	6.285	0.009	8647	13048			
C26	6.469	-0.007	8704	14532			
C28	6.790	-0.007	9747	4447			
C32	7.401	-0.019	12427	25349	JP-4 (Tol-C14)	254801	16
C34	7.742	-0.001	6482	6132	BUNKERC (C10-C38)	1596821	182
Filter Peak	8.344	0.001	4785	1980			
C36	8.154	0.006	4795	2443			
C38	8.658	0.008	2818	1227			
C40	9.302	-0.004	2152	1723			
o-terph	4.792	-0.001	1579767	1361354	JET-A (C10-C18)	253140	18
Triacon Surr	7.127	0.007	994356	1023056	JP8 (Tol-C16)	301879	17

M Indicates manual integration within range.

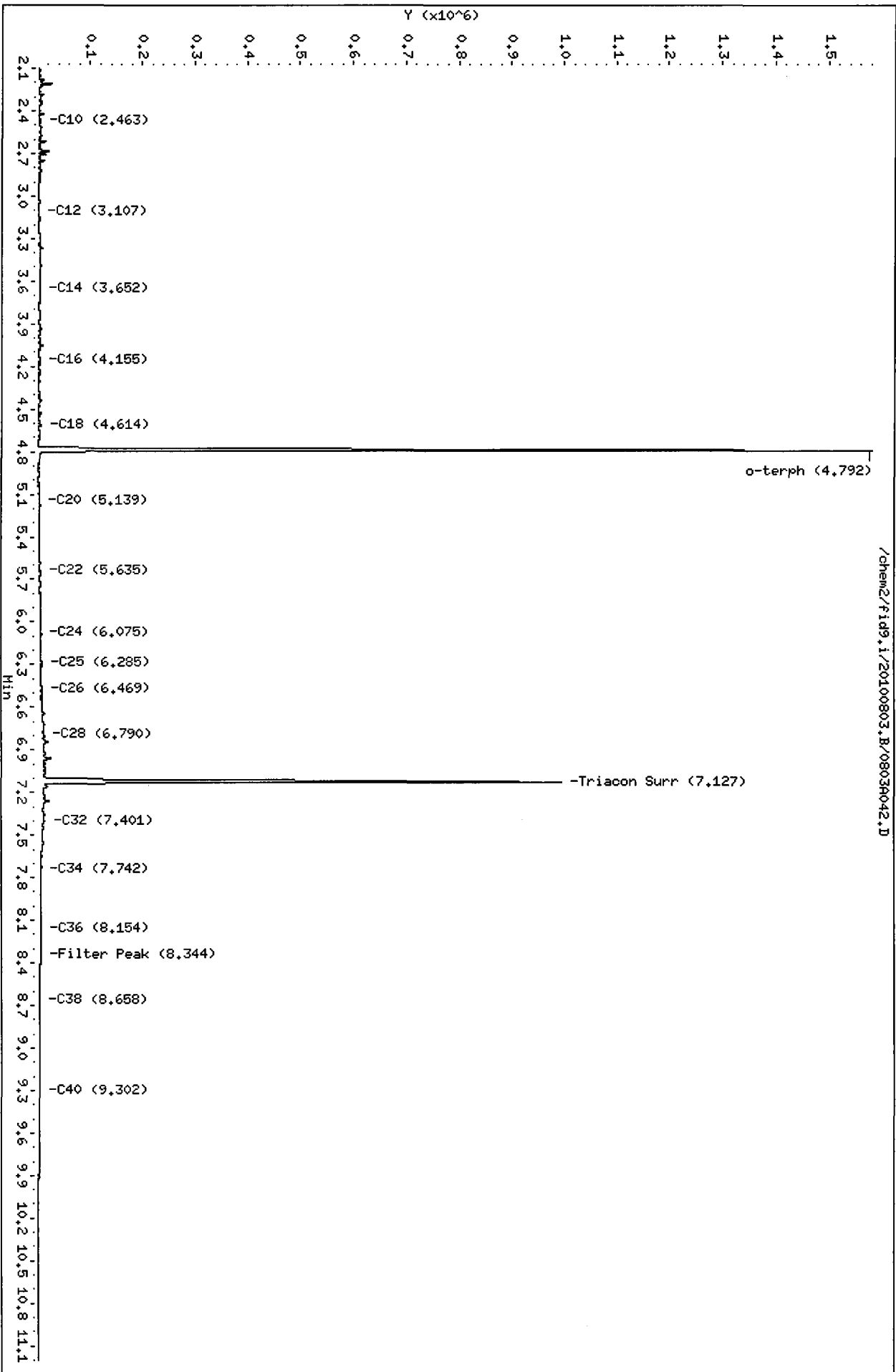
Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1361354	52.8	117.4
Triacotane	1023056	51.6	114.6

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/0803A042.D  
Date: 04-AUG-2010 02:59  
Client ID: PSB14-2-4-072810  
Sample Info: R054C  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A043.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: RG54E  
Client ID: PSB14-7-9-072810  
Injection: 04-AUG-2010 03:21  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.560	0.009	1228993	570779	GAS (Tol-C12)	900882	43
C8	1.700	0.007	1234	796	DIESEL (C12-C24)	2095909	80
C10	2.462	-0.003	2777	2224	M.OIL (C24-C38)	12997413	1016
C12	3.104	-0.001	1894	1195	AK-102 (C10-C25)	2506127	86
C14	3.649	-0.013	2038	2502	AK-103 (C25-C36)	11110945	2218
C16	4.166	0.011	6333	5940			
C18	4.614	0.007	14162	17520			
C20	5.127	-0.001	12311	2694			
C22	5.643	-0.001	24335	5304			
C24	6.077	-0.002	38205	24894			
C25	6.276	0.000	48224	18127			
C26	6.476	0.001	74521	125728			
C28	6.792	-0.004	92765	25719			
C32	7.417	-0.003	146396	132765	JP-4 (Tol-C14)	946502	58
C34	7.744	0.001	113057	116503	BUNKERC (C10-C38)	15255381	1739
Filter Peak	8.342	-0.001	62761	34408			
C36	8.146	-0.003	73790	30526			
C38	8.652	0.002	47765	15020			
C40	9.304	-0.001	23246	13155			
o-terph	4.792	-0.001	1467880	1346960	JET-A (C10-C18)	470188	34
Triacon Surr	7.131	0.011	1039953	1391127	JP8 (Tol-C16)	1025973	58

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1346960	52.3	116.2
Triacontane	1391127	70.1	155.9

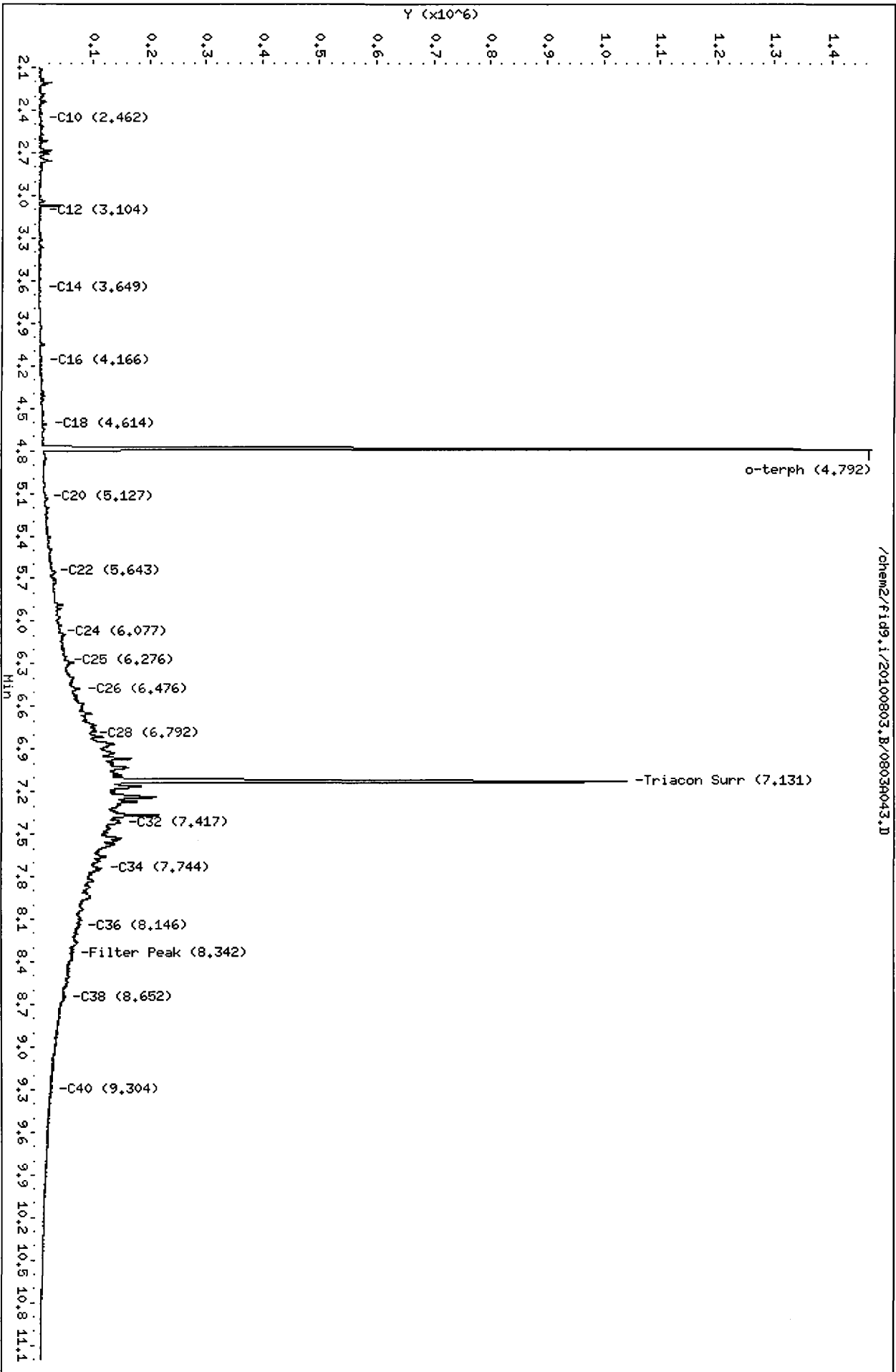
*MS 8/4/10*

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010



Data File: /chem2/fid9.i/20100803.B/0803R043.D  
Date: 04-AUG-2010 03:21  
Client ID: PSB14-7-9-072810  
Sample Info: R054E  
Column phase: RTX-1

Instrument: fid9.i  
Operator: HS  
Column diameter: 0.25



/chem2/fid9.i/20100803.B/0803R043.D

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A044.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: RG54F  
Client ID: PSB14-12-14-072810  
Injection: 04-AUG-2010 03:42  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.558	0.007	12128	6353	GAS (Tol-C12)	174358	8
C8	1.698	0.005	789	571	DIESEL (C12-C24)	292420	11
C10	2.461	-0.004	2071	1767	M.OIL (C24-C38)	603678	47
C12	3.108	0.002	773	559	AK-102 (C10-C25)	418765	14
C14	3.655	-0.008	1291	1879	AK-103 (C25-C36)	515141	103
C16	4.146	-0.009	2285	2508			
C18	4.614	0.007	3864	3742			
C20	5.117	-0.011	2169	3276			
C22	5.636	-0.008	3002	2961			
C24	6.072	-0.007	3580	2914			
C25	6.268	-0.008	3824	1714			
C26	6.471	-0.005	5228	10269			
C28	6.808	0.012	7102	14443			
C32	7.431	0.011	4785	3280	JP-4 (Tol-C14)	210513	13
C34	7.748	0.005	3779	1620	BUNKERC (C10-C38)	998819	114
Filter Peak	8.345	0.001	2983	1642			
C36	8.151	0.002	3381	2634			
C38	8.659	0.010	2251	402			
C40	9.323	0.017	1315	1229			
o-terph	4.792	-0.002	1377457	1220635	JET-A (C10-C18)	224170	16
Triacon Surr	7.126	0.006	882986	877187	JP8 (Tol-C16)	251578	14

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

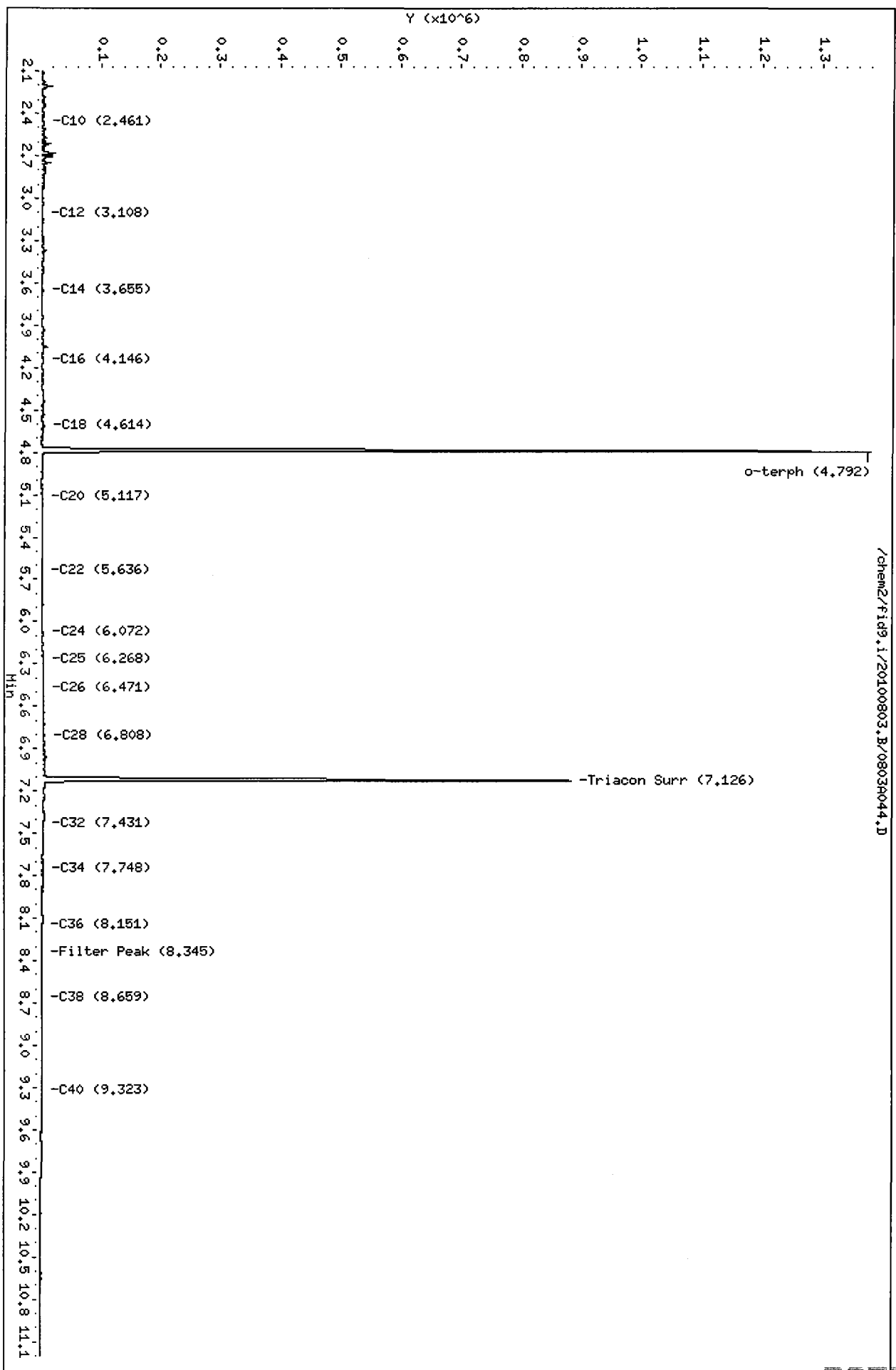
Surrogate	Area	Amount	%Rec
o-Terphenyl	1220635	47.4	105.3
Triacontane	877187	44.2	98.3

*MS 8/4/10*

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/0803R044.D  
Date: 04-AUG-2010 03:42  
Client ID: PSB14-12-14-072810  
Sample Info: RG54F  
Column phase: RTX-1

Instrument: fid9.i  
Operator: HS  
Column diameter: 0.25



/chem2/fid9.i/20100803.B/0803R044.D

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A045.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: RG54H  
Client ID: PSB17-0-0.5-072810  
Injection: 04-AUG-2010 04:03  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.560	0.009	2812	2204	GAS (Tol-C12)	280566	13
C8	1.700	0.006	1429	914	DIESEL (C12-C24)	5213787	198
C10	2.462	-0.003	2350	2146	M.OIL (C24-C38)	31287181	2447
C12	3.104	-0.002	1950	1118	AK-102 (C10-C25)	6043527	208
C14	3.659	-0.004	2632	1809	AK-103 (C25-C36)	27413070	5473
C16	4.164	0.008	16740	18731			
C18	4.614	0.007	31522	49381			
C20	5.128	0.000	31975	7532			
C22	5.640	-0.005	61955	33729			
C24	6.075	-0.004	98312	59297			
C25	6.278	0.001	122640	77409			
C26	6.480	0.004	156625	88936			
C28	6.792	-0.004	250428	155340			
C32	7.415	-0.005	308280	212482	JP-4 (Tol-C14)	347747	21
C34	7.741	-0.002	217996	150403	BUNKERC (C10-C38)	36621301	4175
Filter Peak	8.342	-0.002	119051	69957			
C36	8.148	-0.001	147476	54007			
C38	8.647	-0.003	83830	32591			
C40	9.302	-0.004	38317	29653			
o-terph	4.791	-0.003	1439212	1353003	JET-A (C10-C18)	943970	68
Triacon Surr	7.105	-0.015	357448	336560	JP8 (Tol-C16)	568580	32

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

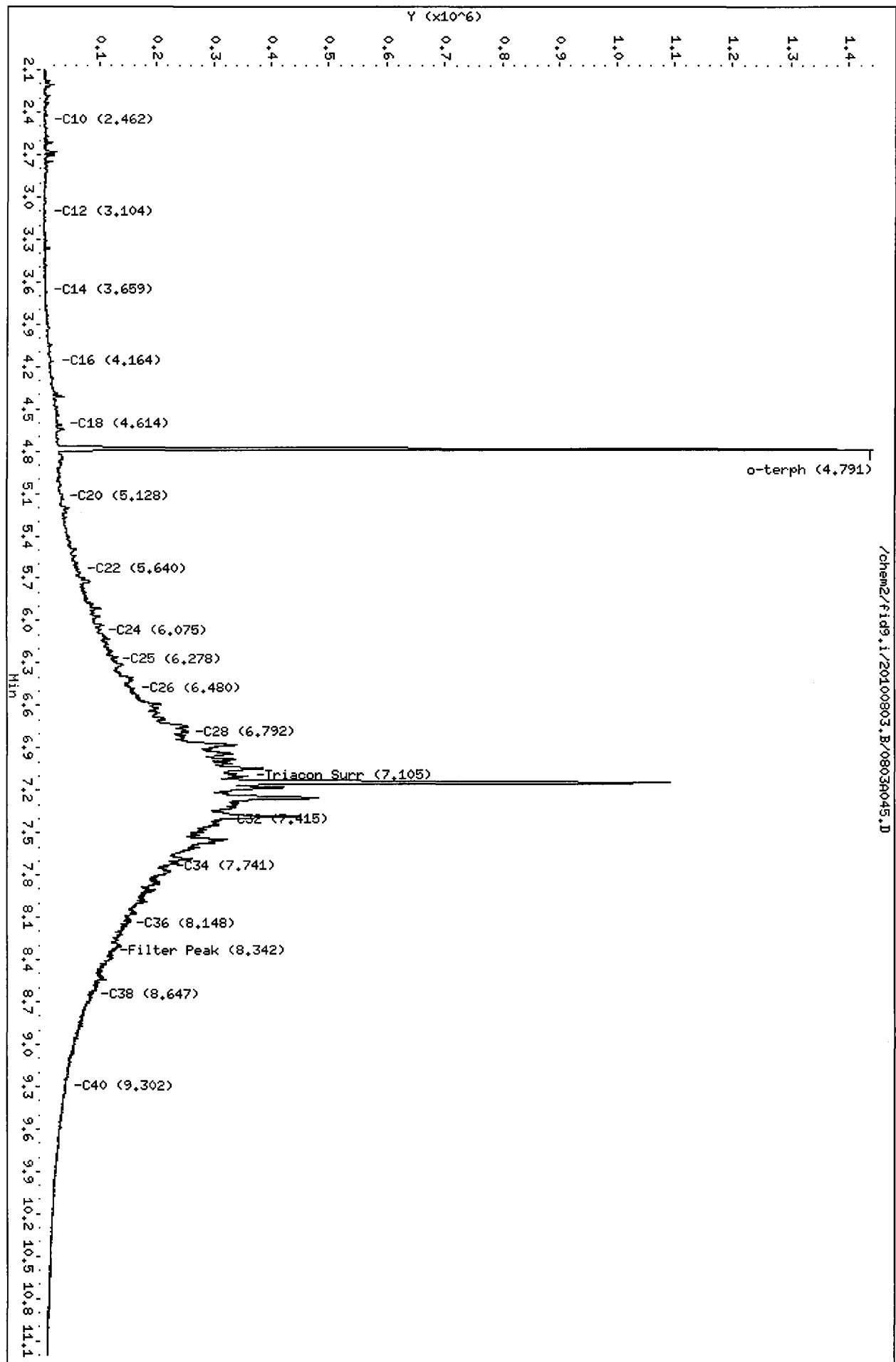
Surrogate	Area	Amount	%Rec
o-Terphenyl	1353003	52.5	116.7
Triacotane	336560	17.0	37.7

*MS 8/4/10*

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
Jeta	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/0803A045.D  
Date : 04-AUG-2010 04:03  
Client ID: PSB17-0-0.5-072810  
Sample Info: RGS4H  
Column phase: RTX-1

Instrument: fid9.i  
Operator: HS  
Column diameter: 0.25



/chem2/fid9.i/20100803.B/0803A045.D

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A046.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: RG54I  
Client ID: PSB17-1.5-2-072810  
Injection: 04-AUG-2010 04:24  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.564	0.013	4139	2937	GAS (Tol-C12)	206478	10
C8	1.704	0.010	2471	1603	DIESEL (C12-C24)	136021	5
C10	2.464	-0.002	3369	3411	M.OIL (C24-C38)	280904	22
C12	3.099	-0.007	477	361	AK-102 (C10-C25)	195146	7
C14	3.657	-0.005	679	919	AK-103 (C25-C36)	221827	44
C16	4.146	-0.009	1966	1957			
C18	4.613	0.007	2896	2206			
C20	5.118	-0.010	645	635			
C22	5.636	-0.008	877	1215			
C24	6.079	0.000	1015	866			
C25	6.265	-0.011	1016	492			
C26	6.469	-0.007	1394	1891			
C28	6.808	0.012	3231	6185			
C32	7.402	-0.017	4614	8735	JP-4 (Tol-C14)	233173	14
C34	7.740	-0.003	2226	2452	BUNKERC (C10-C38)	471824	54
Filter Peak	8.340	-0.003	2628	3263			
C36	8.151	0.003	2456	2937			
C38	8.653	0.003	2786	4744			
C40	9.306	0.000	800	300			
o-terph	4.792	-0.001	1527062	1354315	JET-A (C10-C18)	153826	11
Triacon Surr	7.128	0.008	949928	1011518	JP8 (Tol-C16)	272088	15

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

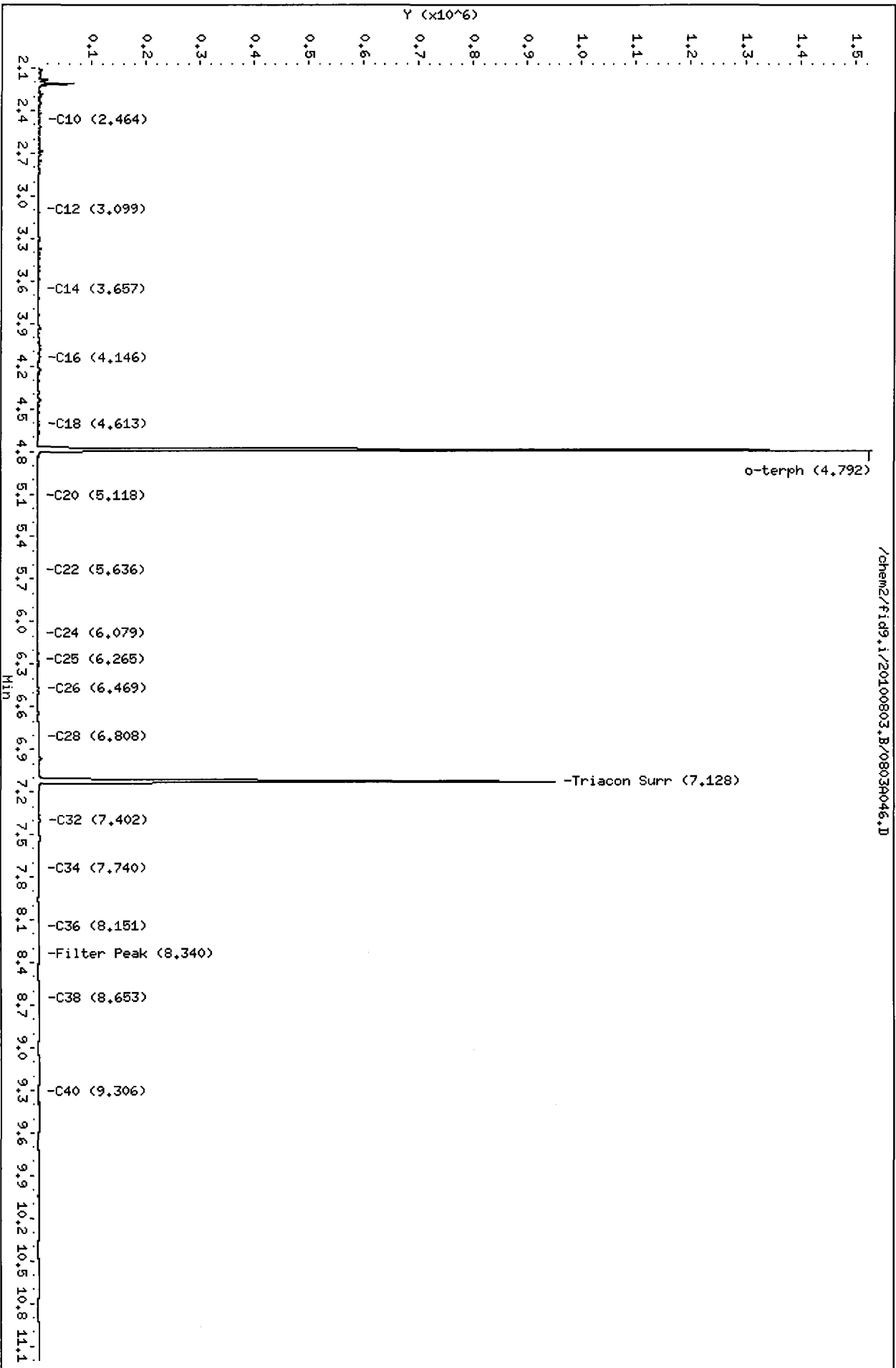
Surrogate	Area	Amount	%Rec
o-Terphenyl	1354315	52.6	116.8
Triacotane	1011518	51.0	113.3

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

*MS 8/4/10*

Data File: /chem2/fid9,i/20100803,B/0803R046.D  
Date : 04-AUG-2010 04:24  
Client ID: PSB17-1.5-2-072810  
Sample Info: RG541  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A047.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: RG54J  
 Client ID: PSB17-2-4-072810  
 Injection: 04-AUG-2010 04:46  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.563	0.012	30179	15659	GAS (Tol-C12)	137608	7
C8	1.692	-0.002	548	203	DIESEL (C12-C24)	242514	9
C10	2.464	-0.001	1137	592	M.OIL (C24-C38)	155699	12
C12	3.101	-0.005	1022	844	AK-102 (C10-C25)	328170	11
C14	3.652	-0.010	1902	2426	AK-103 (C25-C36)	121020	24
C16	4.146	-0.010	3855	4189			
C18	4.614	0.008	2865	2753			
C20	5.118	-0.010	1002	1086			
C22	5.637	-0.007	919	981			
C24	6.076	-0.003	563	539			
C25	6.290	0.014	784	1117			
C26	6.472	-0.003	752	1139			
C28	6.809	0.013	1978	3126			
C32	7.406	-0.013	3182	4560	JP-4 (Tol-C14)	205945	13
C34	7.732	-0.011	1139	360	BUNKERC (C10-C38)	483037	55
Filter Peak	8.348	0.005	2046	2567			
C36	8.161	0.012	1325	341			
C38	8.639	-0.010	924	1031			
C40	9.312	0.007	1189	422			
o-terph	4.792	-0.001	1412374	1290506	JET-A (C10-C18)	291606	21
Triacon Surr	7.130	0.011	858292	954921	JP8 (Tol-C16)	296062	17

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1290506	50.1	111.3
Triacontane	954921	48.2	107.0

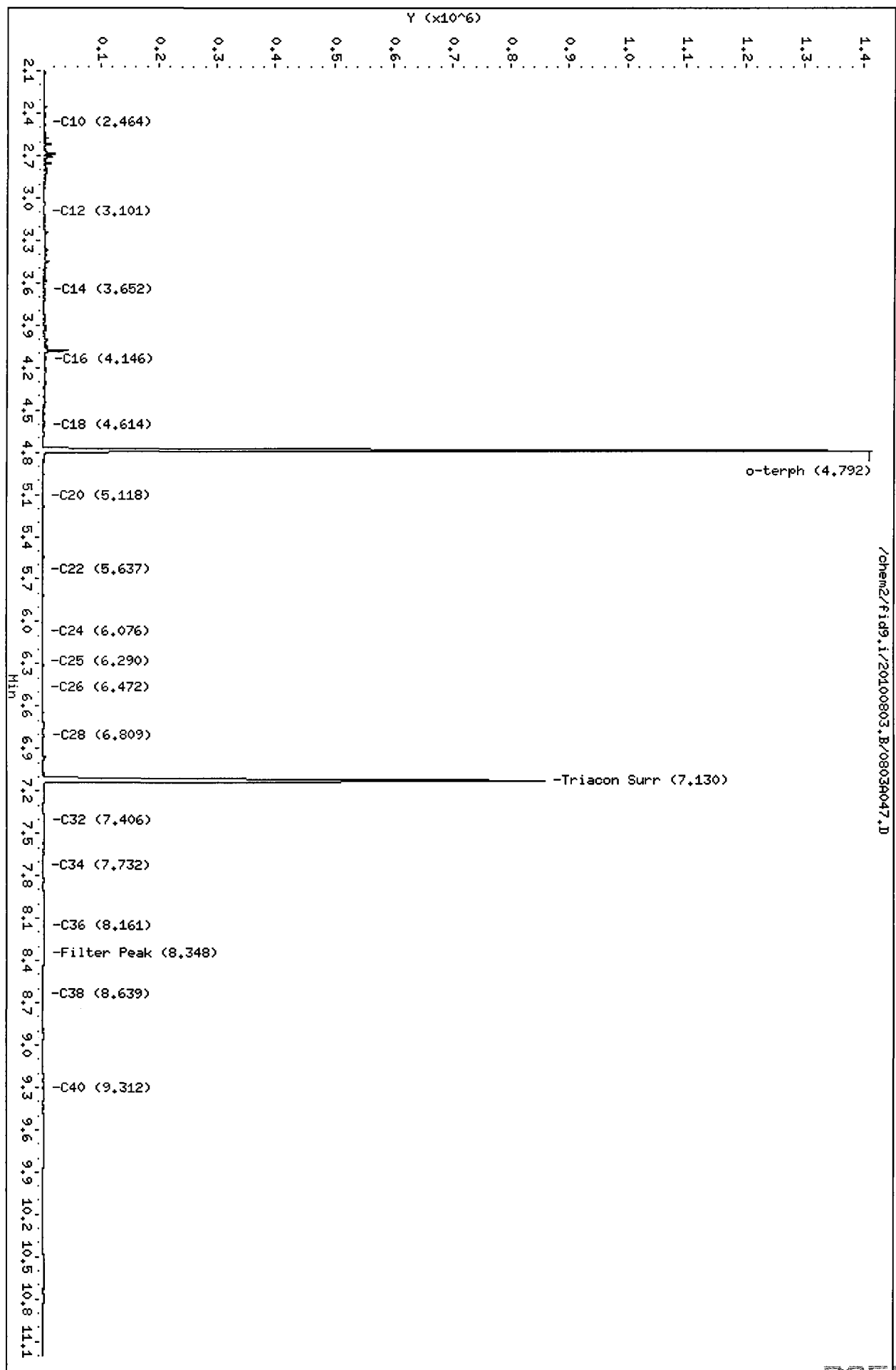
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 8/4/10

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010



Data File: /chem2/fid9.i/20100803.B/0803A047.D  
Date: 04-AUG-2010 04:46  
Client ID: PSB17-2-4-072810  
Sample Info: RGS4J  
Column phase: RTX-1

Instrument: fid9.i  
Operator: HS  
Column diameter: 0.25



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A048.D  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: MS  
 Report Date: 08/04/2010

ARI ID: RG54K  
 Client ID: PSB17-4-6-072810  
 Injection: 04-AUG-2010 05:07  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.563	0.012	597013	274462	GAS (Tol-C12)	522083	25
C8	1.703	0.010	1307	844	DIESEL (C12-C24)	780534	30
C10	2.465	-0.001	2484	1926	M.OIL (C24-C38)	4446931	348
C12	3.106	0.000	2074	1314	AK-102 (C10-C25)	985521	34
C14	3.651	-0.012	1614	2157	AK-103 (C25-C36)	3808044	760
C16	4.165	0.010	4434	3683			
C18	4.612	0.005	7104	7942			
C20	5.138	0.010	4809	4558			
C22	5.645	0.001	8364	2787			
C24	6.075	-0.003	12777	4285			
C25	6.281	0.005	17084	12757			
C26	6.478	0.002	21258	18087			
C28	6.798	0.001	33285	10442			
C32	7.421	0.001	45491	38379	JP-4 (Tol-C14)	561824	34
C34	7.744	0.001	35624	15245	BUNKERC (C10-C38)	5347632	610
Filter Peak	8.341	-0.003	21485	8861			
C36	8.150	0.001	23591	7869			
C38	8.651	0.002	16154	10893			
C40	9.301	-0.005	8320	5663			
o-terph	4.789	-0.004	1459832	1272828	JET-A (C10-C18)	307806	22
Triacon Surr	7.126	0.006	977894	1060369	JP8 (Tol-C16)	618605	35

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

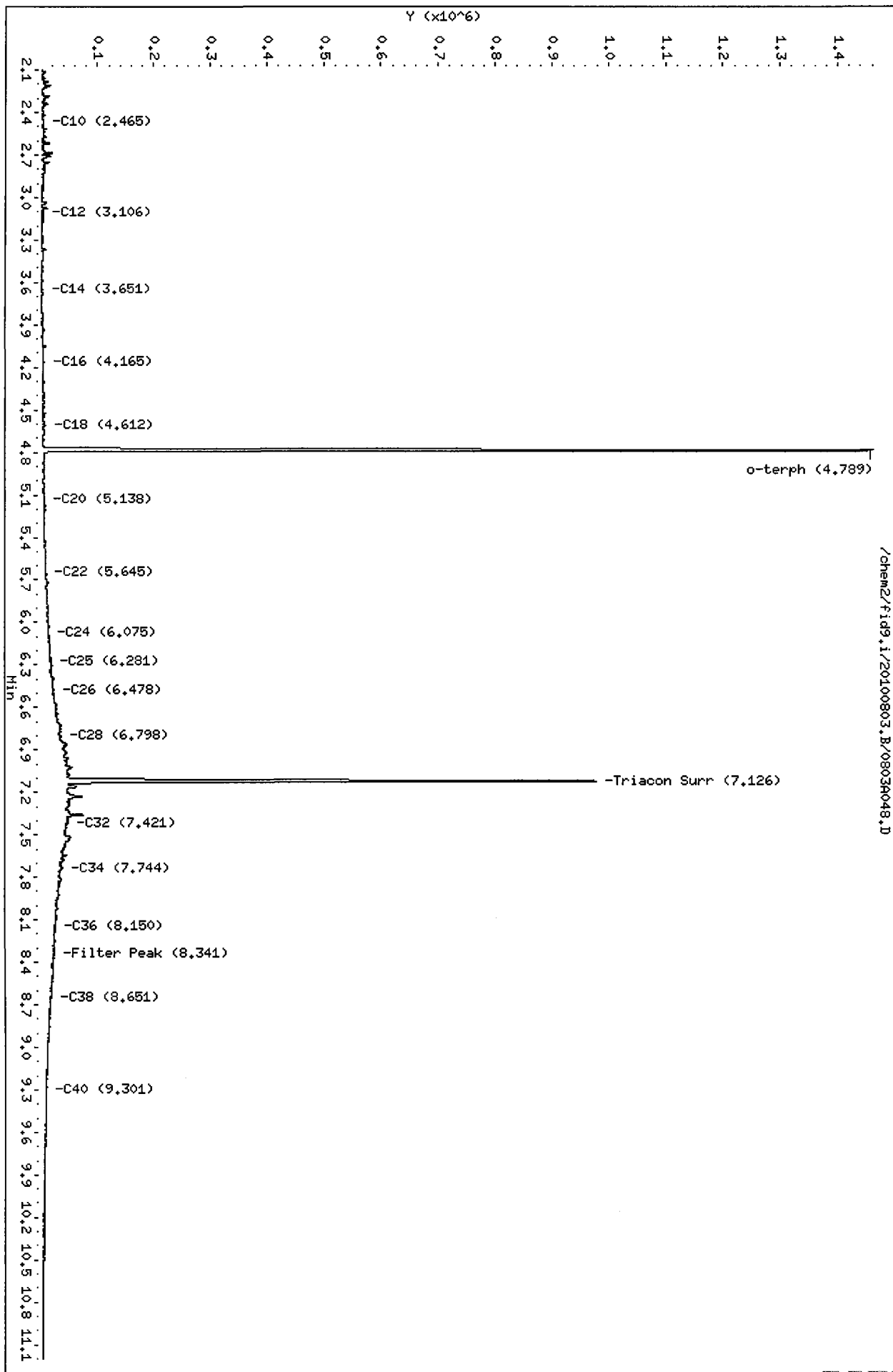
Surrogate	Area	Amount	%Rec
o-Terphenyl	1272828	49.4	109.8
Triacotane	1060369	53.5	118.8

*MS 8/4/10*

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/0803R048.D  
Date : 04-AUG-2010 05:07  
Client ID: PSB17-4-6-072810  
Sample Info: RCS4K  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803A049.D  
Method: /chem2/fid9.i/20100803.B/ftphfid9a.m  
Instrument: fid9.i  
Operator: MS  
Report Date: 08/04/2010

ARI ID: RG54L  
Client ID: PSB17-10-13-072810  
Injection: 04-AUG-2010 05:28  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.566	0.015	5745	3700	GAS (Tol-C12)	123744	6
C8	1.705	0.011	3500	2092	DIESEL (C12-C24)	249036	9
C10	2.464	-0.001	1097	639	M.OIL (C24-C38)	144652	11
C12	3.101	-0.005	1043	1220	AK-102 (C10-C25)	331582	11
C14	3.653	-0.010	2879	3579	AK-103 (C25-C36)	121078	24
C16	4.147	-0.009	3741	4230			
C18	4.615	0.008	3773	3182			
C20	5.120	-0.008	1149	1173			
C22	5.638	-0.006	1140	1358			
C24	6.079	0.000	785	745			
C25	6.287	0.011	1435	1741			
C26	6.469	-0.006	1055	1579			
C28	6.807	0.011	1894	2598			
C32	7.401	-0.019	3284	5956	JP-4 (Tol-C14)	199329	12
C34	7.738	-0.005	1523	2680	BUNKERC (C10-C38)	474685	54
Filter Peak	8.343	0.000	1015	838			
C36	8.132	-0.017	1823	6427			
C38	8.661	0.011	831	559			
C40	9.318	0.013	548	378			
o-terph	4.794	0.000	1536431	1379482	JET-A (C10-C18)	286436	21
Triacon Surr	7.127	0.008	927533	1004681	JP8 (Tol-C16)	281190	16

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

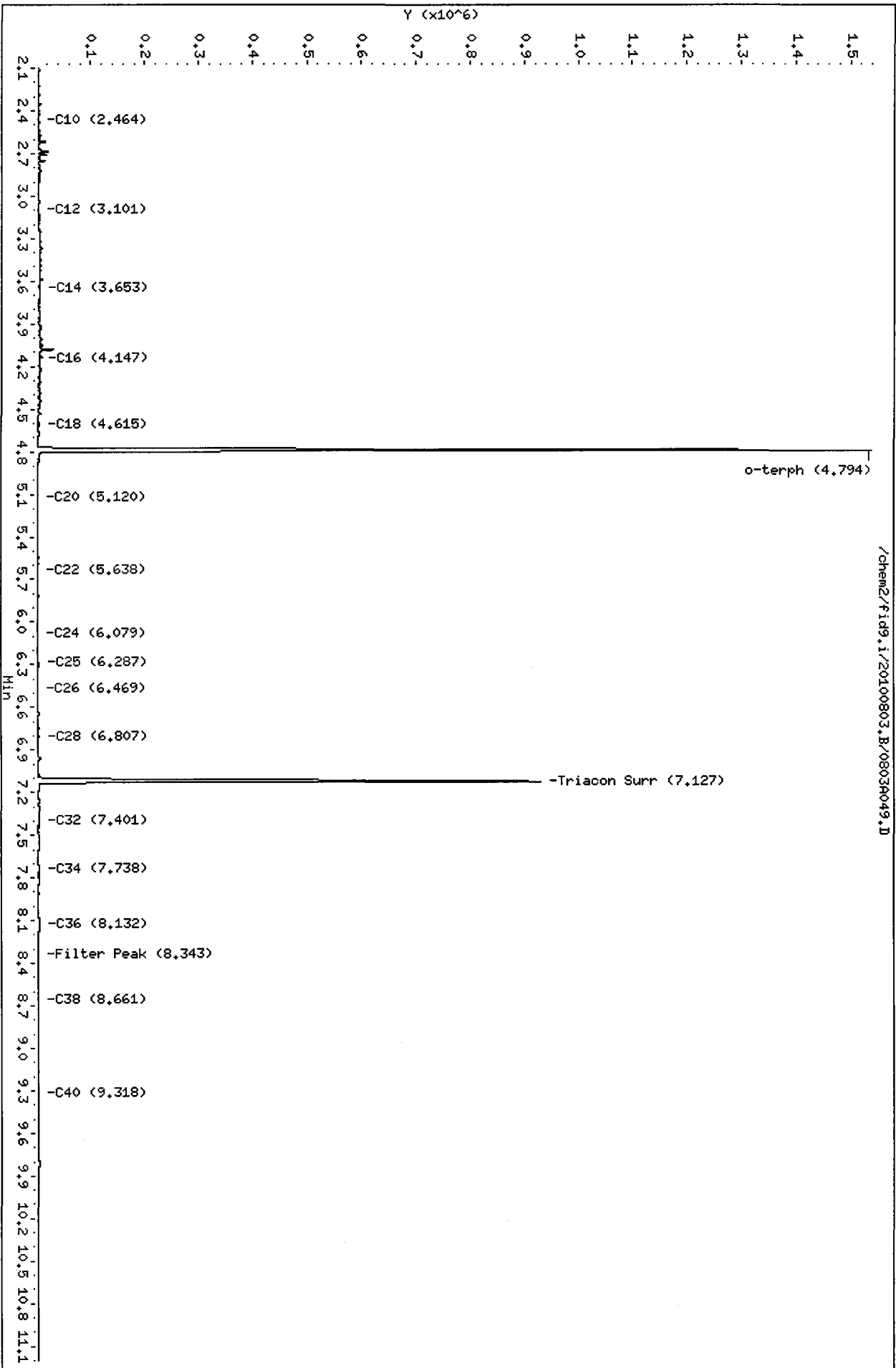
Surrogate	Area	Amount	%Rec
o-Terphenyl	1379482	53.5	119.0
Triacontane	1004681	50.7	112.6

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8/4/10

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20100803.B/0803A049.D  
Date : 04-AUG-2010 05:28  
Client ID: PSBL7-10-13-072810  
Sample Info: R054L  
Column phase: RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



/chem2/fid9.i/20100803.B/0803A049.D

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803raw.b/0803A050.D ARI ID: DIESEL#4  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m Client ID: DIESEL#4  
 Instrument: fid9.i Injection: 04-AUG-2010 05:49  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/04/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.535	-0.016	1227	1233	GAS (Tol-C12)	882637	42
C8	1.693	-0.001	1565	1290	DIESEL (C12-C24)	6142841	233
C10	2.468	0.002	4065	2581	M.OIL (C24-C38)	153093	12
C12	3.116	0.010	81990	47329	AK-102 (C10-C25)	6843560	236
C14	3.671	0.009	144635	144270	AK-103 (C25-C36)	117560	23
C16	4.153	-0.003	57359	43773			
C18	4.615	0.009	192897	201298			
C20	5.140	0.012	99459	112774			
C22	5.654	0.010	52430	57982			
C24	6.089	0.011	16575	19701			
C25	6.268	-0.008	2714	741			
C26	6.470	-0.006	2978	4502			
C28	6.786	-0.011	499	127			
C32	7.416	-0.004	969	764	JP-4 (Tol-C14)	1971454	120
C34	7.743	0.000	594	210	BUNKERC (C10-C38)	6980760	796
Filter Peak	8.345	0.001	862	374			
C36	8.145	-0.004	530	372			
C38	8.648	-0.001	562	212			
C40	9.304	-0.002	656	193			
o-terph	4.790	-0.004	1314240	1208655	JET-A (C10-C18)	5103703	369
Triacon Surr	7.109	-0.011	4319	4684	JP8 (Tol-C16)	3534643	201

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1208655	46.9	104.3
Triacontane	4684	0.2	0.5

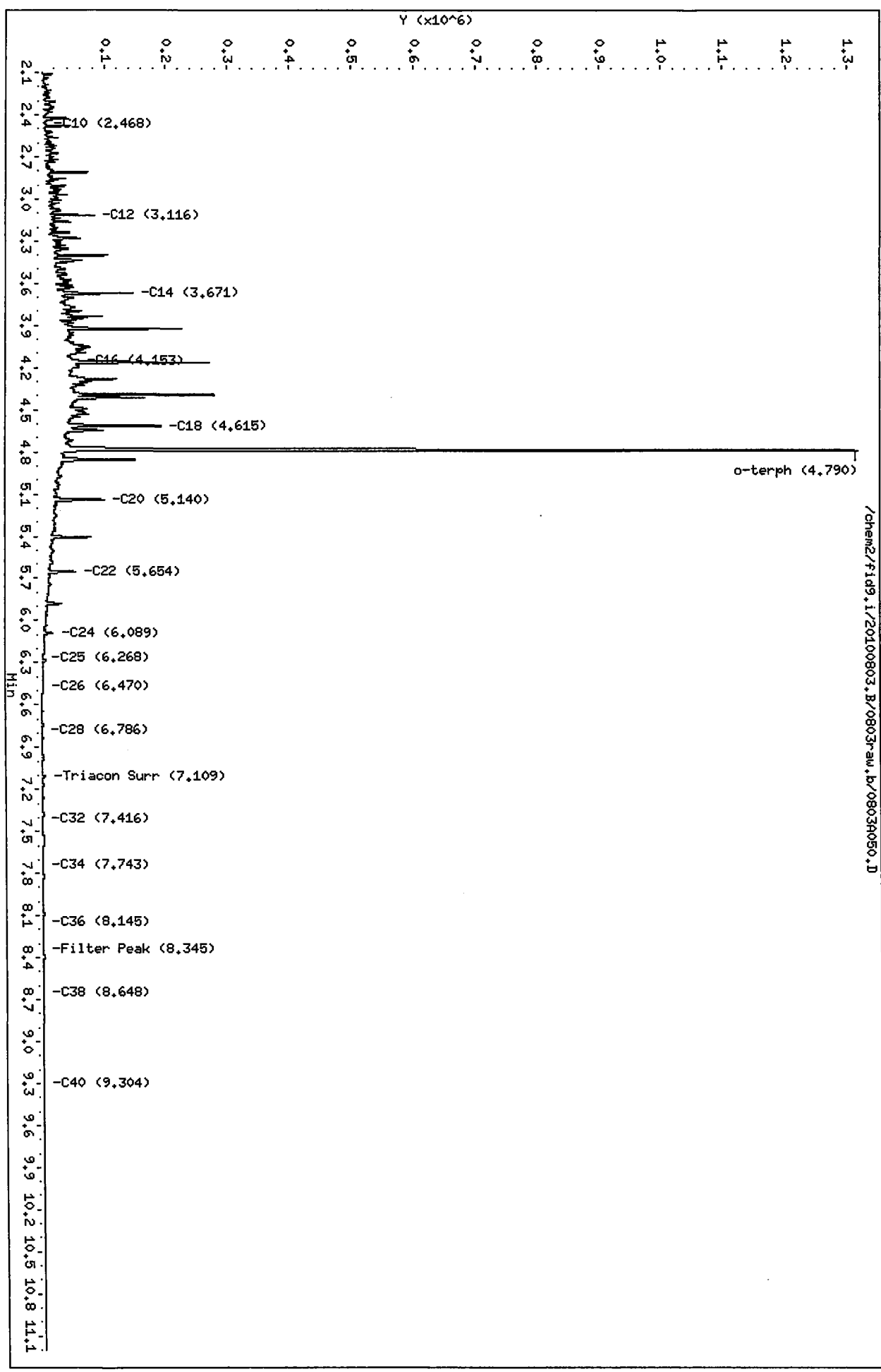
*Handwritten signature*

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.1/20100803.B/0803r-aw,b/0803A050.D  
Date: 04-AUG-2010 05:49  
Client ID: DIESEL#4  
Sample Info: DIESEL#4  
Column phase: RTX-1

Instrument: fid9.1  
Operator: HS  
Column diameter: 0.25

/chem2/fid9.1/20100803.B/0803r-aw,b/0803A050.D



Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100803.B/0803raw.b/0803A051.D ARI ID: MOIL#4  
 Method: /chem2/fid9.i/20100803.B/ftphfid9a.m Client ID: MOIL#4  
 Instrument: fid9.i Injection: 04-AUG-2010 06:11  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/04/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.561	0.010	1848	2488	GAS (Tol-C12)	42860	2
C8	1.695	0.002	799	1016	DIESEL (C12-C24)	762535	29
C10	2.446	-0.020	213	124	M.OIL (C24-C38)	6498951	508
C12	3.102	-0.004	25	13	AK-102 (C10-C25)	954799	33
C14	3.659	-0.003	104	49	AK-103 (C25-C36)	5586891	1115
C16	4.151	-0.005	164	156			
C18	4.617	0.010	1198	1118			
C20	5.118	-0.010	1870	371			
C22	5.654	0.009	11753	7531			
C24	6.081	0.002	24137	7660			
C25	6.281	0.005	33047	17246			
C26	6.475	-0.001	40143	16671			
C28	6.796	0.000	51789	17349			
C32	7.422	0.002	65114	36918	JP-4 (Tol-C14)	48160	3
C34	7.743	0.000	52464	50042	BUNKERC (C10-C38)	7273680	829
Filter Peak	8.345	0.002	26490	7333			
C36	8.146	-0.002	34492	14669			
C38	8.653	0.003	19011	9718			
C40	9.308	0.002	9543	7599			
o-terph	4.781	-0.013	6952	6457	JET-A (C10-C18)	39540	3
Triacon Surr	7.127	0.007	926759	1123284	JP8 (Tol-C16)	54062	3

M Indicates manual integration within range.

Range Times: NW Diesel(3.106 - 6.079) AK102(2.47 - 6.28) Jet A(2.47 - 4.61)  
 NW M.Oil(6.08 - 8.65) AK103(6.28 - 8.15) OR Diesel(2.47 - 6.80)

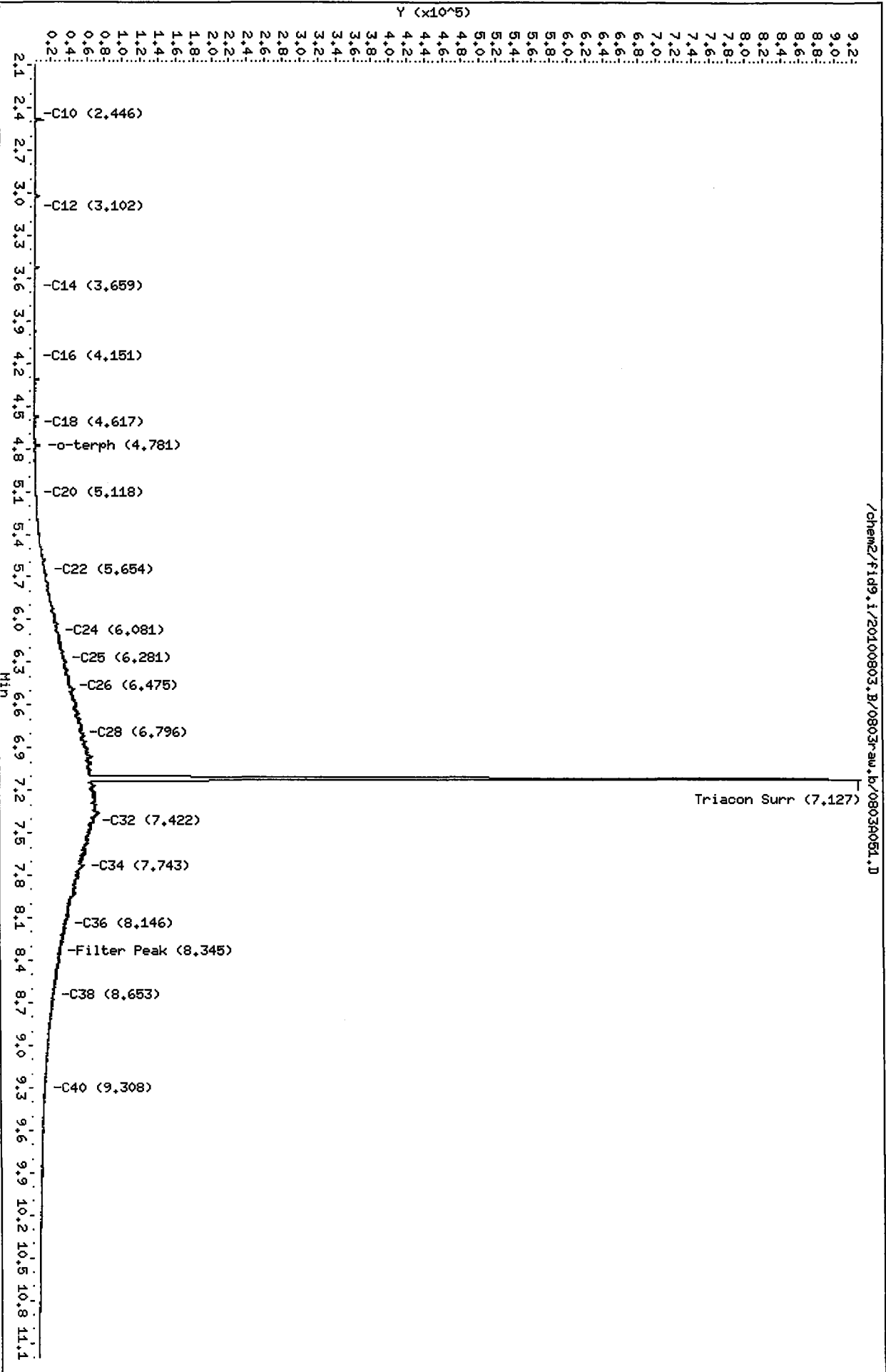
Surrogate	Area	Amount	%Rec
o-Terphenyl	6457	0.3	0.6
Triacontane	1123284	56.6	125.9

Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8	17594.0	25-MAY-2010



Data File: /chem2/fid9.i/20100803.B/0803raw.b/0803A051.D  
Date: 04-AUG-2010 06:11  
Client ID: M01L#4  
Sample Info: M01L#4  
Column phaset RTX-1

Instrument: fid9.i  
Operator: MS  
Column diameter: 0.25



**TPHG/BETX Raw Data  
Preparation Log**

**ARI Job ID: RG54**



Analytical Resources, Incorporated  
Analytical Chemists and Consultants

# Volatile Organics Extraction Bench Sheet

(8260B, 8260B-SIM (8021), NWTPH-Gx, AK-101, TPH-G, VPH, TCLP-ZHE)

ARI Project No. \_\_\_\_\_

Client ID/Project \_\_\_\_\_

Extraction Date \_\_\_\_\_

MeOH Lot No. \_\_\_\_\_

Analyst \_\_\_\_\_

1<sup>st</sup> Extraction: 8/3/10

MH

2<sup>nd</sup> Extraction: \_\_\_\_\_

Lab ID	Vial No.	Preservative		Method 5035 Sample Weight				MeOH Split Volume	Comments
		NaHSO <sub>3</sub>	CH <sub>3</sub> OH	Vial Weight	Tare (from vial)	Sample Weight	Extract Volume		
1	2	X	X	36.25	28.241	8.009	S	900	
2	1	X	X	37.64	28.177	9.463			
3	3	X	X	37.99	28.210	9.77			
4	3	X	X	38.58	28.112	10.30468 <sup>8/5</sup>			
5	1	X	X	39.30	28.280	11.02 <sup>8/5</sup>			
6	2	X	X	39.07	28.120	10.95			
7									
8									
9	1	X	X	39.08	28.141	10.939	S	900	
10	1	X	X	38.14	28.202	9.936			
11	1	X	X	37.71	28.140	9.570			
12	1	X	X	35.86	28.142	7.716			
13	2	X	X	38.03	27.953	10.077			
14	2	X	X	38.34	28.118	10.222			
15	1	X	X	36.87	28.096	8.774			
16	2	X	X	37.10	28.193	8.907			
17	1	X	X	36.62	28.031	8.589			
18	1	X	X	38.11	28.055	10.055			
19									
20									
Balance ID:									

Surrogate: \_\_\_\_\_  
Spike: \_\_\_\_\_

Solution ID \_\_\_\_\_ Concentration \_\_\_\_\_ Amount Spiked \_\_\_\_\_ Analyst \_\_\_\_\_ Witness \_\_\_\_\_

RG54: 01119

**TPHG/BETX Raw Data  
Initial Calibration Notes and Raw Data**

**ARI Job ID: RG54**



### VOA Analyst Notes / Corrective Action Log

ARI Project ID: Gas Curve Client ID: \_\_\_\_\_

ARI SQP: 404S(Gas) 410S(BTEX) 430S(VPH) 700S(8260C) 703S(SIM) 706S(524.2) 710S(RSK-175)

Parameter(s): Gas

Instrument: NT-3 NT-5 NT-7 NT-9 NT-10 PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 5 Curve Date: 7/28/10 Analysis Start Date: 7/28/10

pH ≤ 2.0 YES / NO NA Method Blank In Control? YES / NO

BFB Tune Meets Criteria? YES / NO NA LCS / LCSD Recovery In Control? YES / NO

Internal Standard Meets Criteria? YES / NO NA Surrogate Recovery In Control? YES / NO

ICal acceptable? YES / NO CCal acceptable? YES / NO

Q flag applied? YES / NO NA Q flag applied? YES / NO NA

Manual Integrations for ICal? YES / NO Manual Integrations for Samples? Yes / NO

Special Analysis Criteria Met? YES / NO NA

Bubbles/Headspace: None SM (≤ 2mm ●) PB (2-4mm) LG (> 4mm ●) Head Space

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Gas ICU Targeted 2.5

Additional Details on Reverse: Yes / No

Analyst: [Signature] Date: 7/29/10

Reviewer: [Signature] Date: 7/29/10

# Analytical Resources Inc.: Organics Instrument Log

PID-3 HP 5890 Series II - Serial No.: 2728A-13336

Date: 7/28/10 Analysis: NWTPHG Analyst: MH

GC Program: BETA Column No: 832213 Column Type: RTX502-2

Instrument Tune (.U or .CT.): \_\_\_\_\_ EM Voltage: \_\_\_\_\_

Calibration File: \_\_\_\_\_ Curve Date: 7/28/10

IS/SS	Ical/Ccal	LCS/ICV
<u>VW632-3</u>	<u>VW635-1</u>	<u>VW618-1</u>
	<u>VW644-3</u>	<u>VW647-2</u>
	<u>VW647-2</u>	

Time	Filename	LabID	ClientID	Vial#	pH	DF					
1	0653	0728a001.d	RINSE			1	23	1702	0728a023.d GCAL 2	1	
2	0718	0728a002.d	RT+BCAL 1			1	24	1726	0728a024.d RF82Q	LLASB06-5	0.00
3	0742	0728a003.d	GAS .1			1	25	1751	0728a025.d RF82S	LLASB06-8	0.00
4	0807	0728a004.d	GAS .25			1	26	1816	0728a026.d RF83A	LLASB06-8S	0.00
5	0831	0728a005.d	GAS 1"			1	27	1840	0728a027.d RF83B	LLASB11-8	0.00
6	0856	0728a006.d	GAS 2.5			1	28	1904	0728a028.d RF83C	LLASB11-5	0.00
7	0920	0728a007.d	GAS 5			1	29	1929	0728a029.d RF83D	LLASB11-2	0.00
8	0945	0728a008.d	GAS 20			1	30	1953	0728a030.d RG01D	LLASB01-5	0.00
9	1009	0728a009.d	RINSE			1	31	2018	0728a031.d RG01E	LLASB01-5S	0.00
10	1034	0728a010.d	GAS ICV			1	32	2042	0728a032.d RG01EMS		1
11	1117	0728a011.d	RINSE			1	33	2107	0728a033.d RG01EMSD		1
12	1142	0728a012.d	GAS .1			1	34	2132	0728a034.d RINSE		1
13	1238	0728a013.d	LCS0728'			1	35	2156	0728a035.d GCAL3		1
14	1303	0728a014.d	LCSD0728			1	36	2221	0728a036.d RG01F	LLASB01-6.5	0.00
15	1328	0728a015.d	MB0728			1	37	2246	0728a037.d RG01G	LLASB01-8	0.00
16	1410	0728a016.d	RF80K	GTSP-TB-03		1	38	2311	0728a038.d RF74A	SYASB01-5	0.00
17	1435	0728a017.d	RF82E	LLASB10-2	0.00		39	2335	0728a039.d RF80A	SYASB05-5	0.00
18	1459	0728a018.d	RF82G	LLASB10-5	0.00		40	0000	0728a040.d RF80B	SYASB05-5S	0.00
19	1523	0728a019.d	RF82H	LLASB10-5S	0.00		41	0025	0728a041.d RF80C	SYASB05-8	0.00
20	1546	0728a020.d	RF82J	LLASB10-8	0.00		42	0049	0728a042.d RINSE		1
21	1613	0728a021.d	RF82O	LLASB06-2	0.00		43	0114	0728a043.d GCAL 4		1
22	1637	0728a022.d	RINSE			1					

MH 7/29/10

## Maintenance / Comments

## Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

Mh  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a012.d      ARI ID: GAS .1  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a012.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 11:42  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.425	0.017	7873	93810	109.4	TFT (Surr)
14.901	0.013	4596	37219	106.7	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	100925	0.122 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	195939	0.118 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	134256	0.119 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	110221	0.125 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.424	0.017	23728	107.9	TFT (Surr)
14.900	0.013	47912	105.1	BB (Surr)

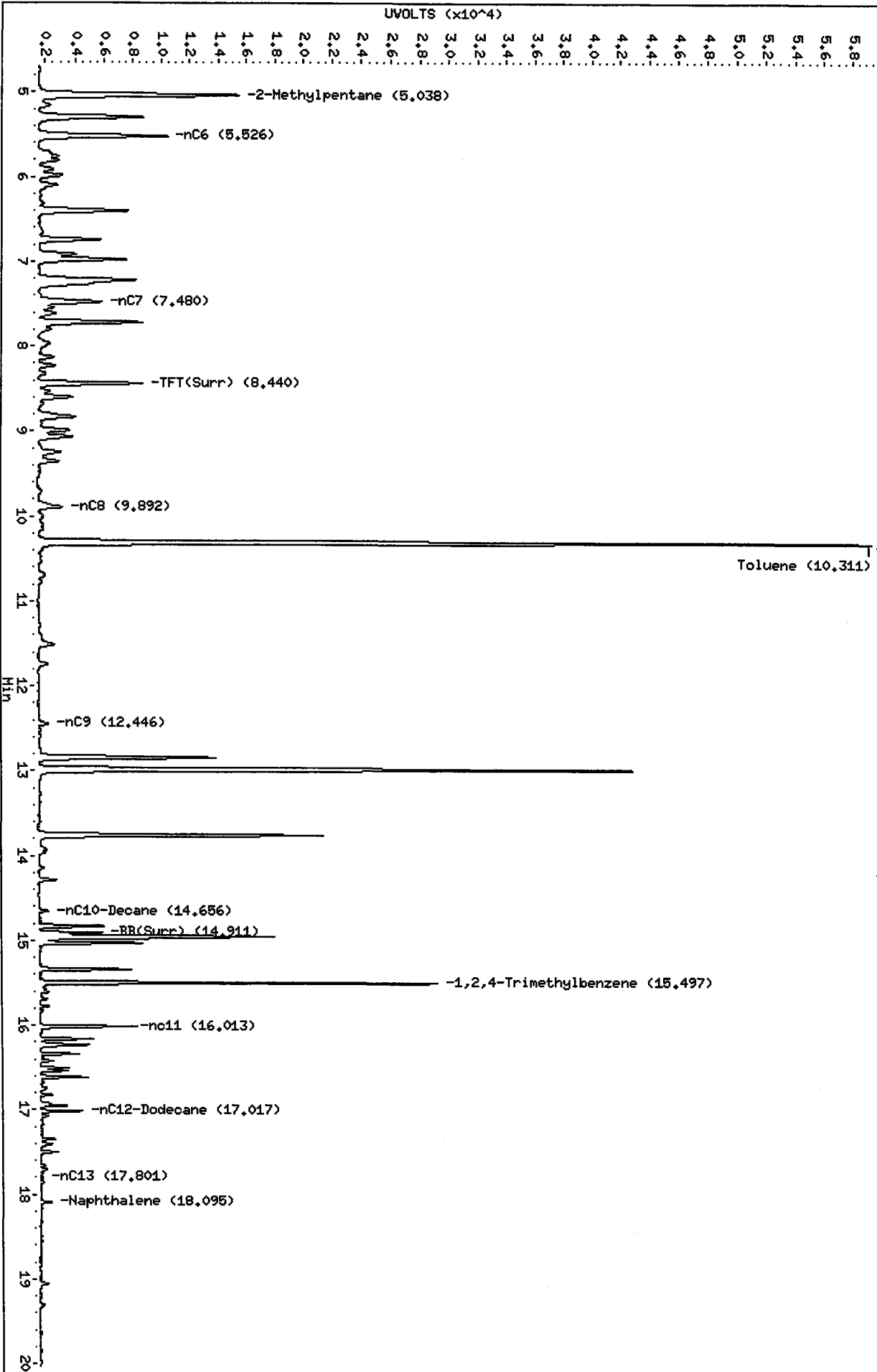
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.290	0.018	4229	3.20	Toluene
12.825	0.020	1325	1.07	Ethylbenzene
12.964	0.022	4623	3.43	M/P-Xylene
13.742	0.018	1960	1.53	O-Xylene
5.294	0.007	3815	10.72	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.1/20100728-2.b/0728a010.d  
Date: 28-JUL-2010 10:34  
Client ID:  
Sample Info: GAS ICV  
Column phase: RTX 502-2 FID

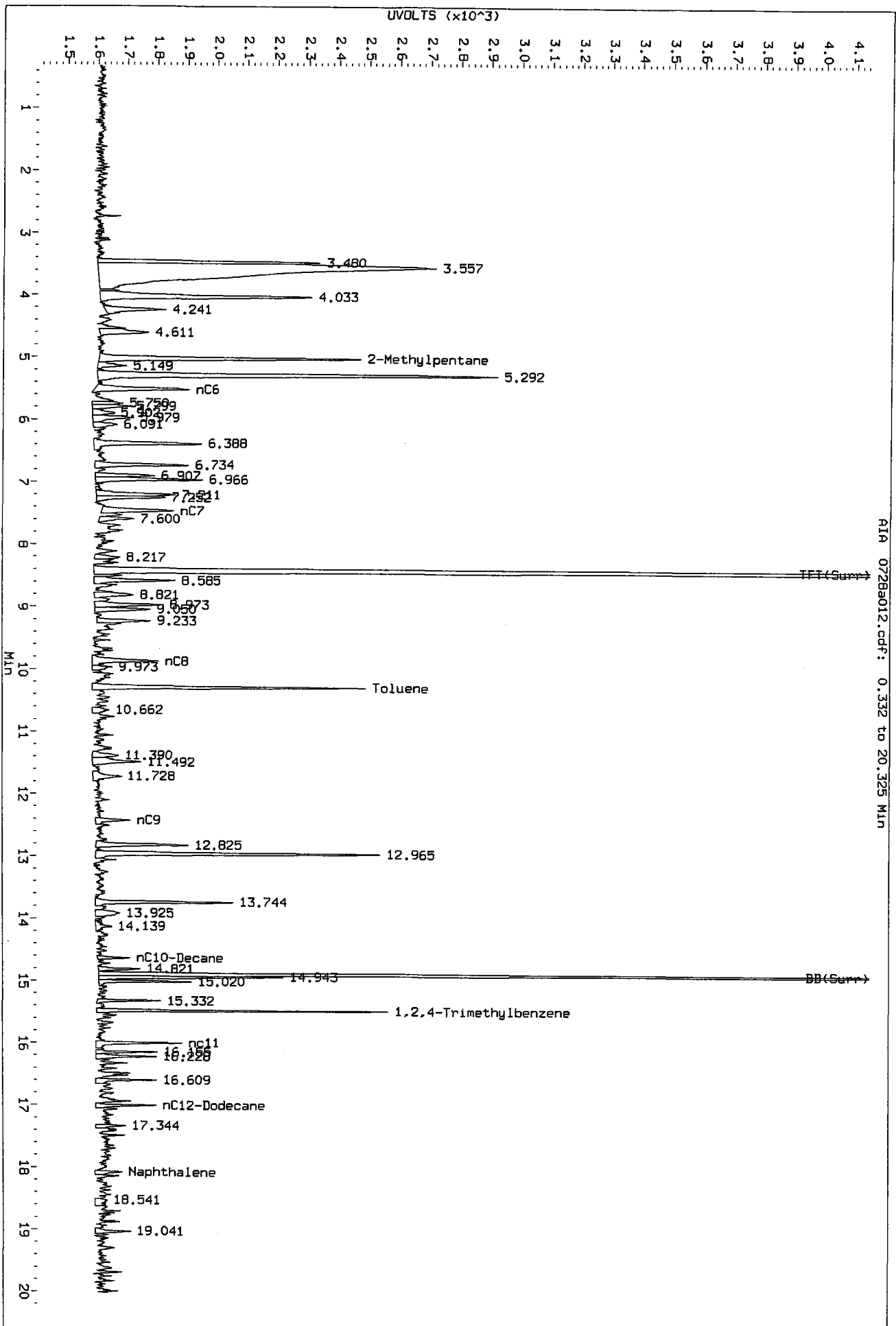
Instrument: pid3.1  
Operator: HH  
Column diameter: 0.18



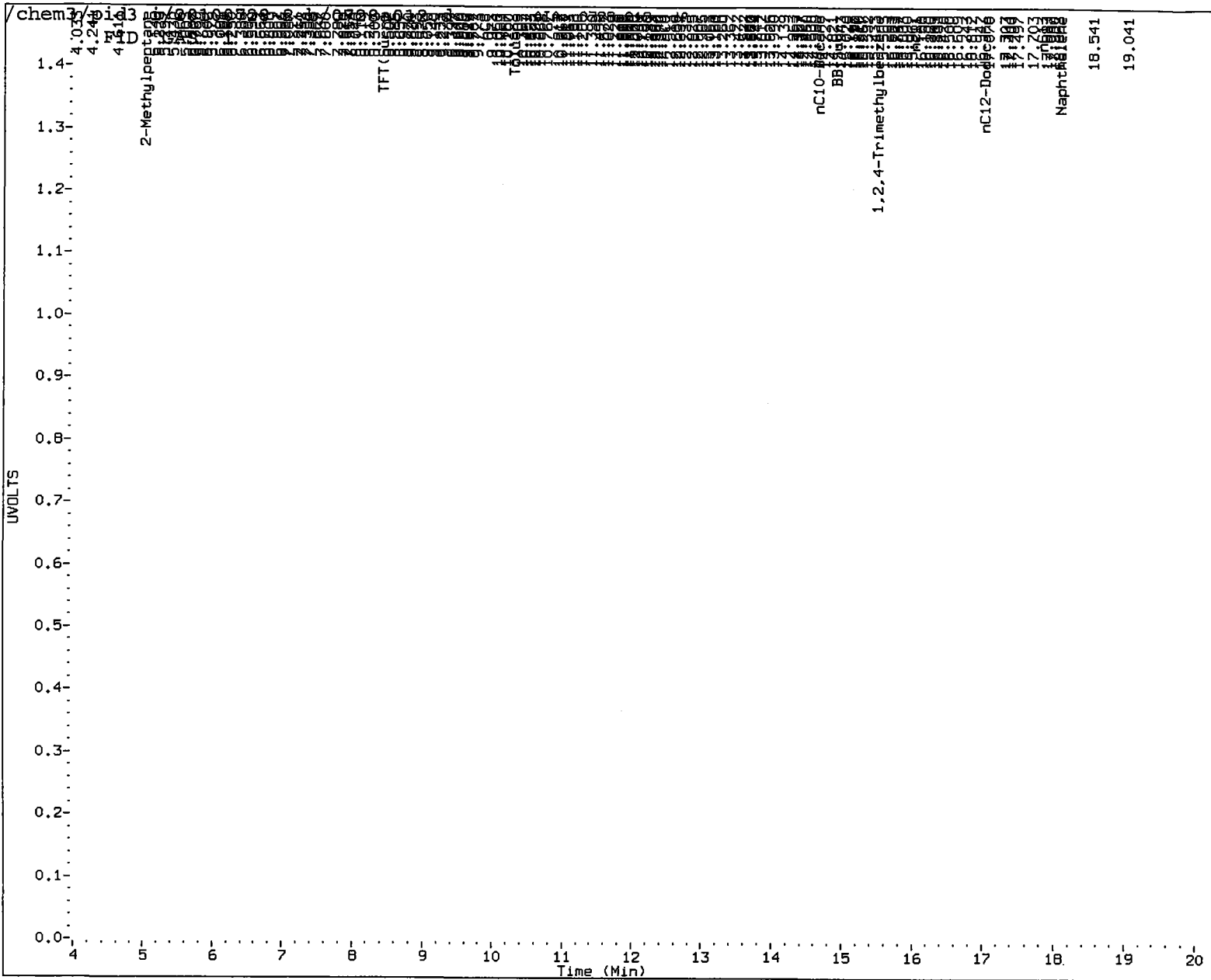


MH  
1/16/10

Data File: /chem3/pid3.1/20100728-2.b/0728a012.d/0728a012.cdf  
Injection Date: 28-JUL-2010 11:42  
Instrument: pid3.1  
Client Sample ID:



R1A 0728a012.cdf: 0.332 to 20.325 MIN



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MH      Date: 7/29/10

M  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a004.d      ARI ID: GAS .25  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a004.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m            Injection Date: 28-JUL-2010 08:07  
Instrument: pid3.i                                        Matrix: WATER  
Gas Ical Date: 28-JUL-2010                            Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.435	0.027	7186	84666	99.8	TFT (Surr)
14.907	0.019	4308	34905	100.0	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	193174	0.233 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	400040	0.240 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	266719	0.236 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	207460	0.235 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.434	0.027	21029	95.7	TFT (Surr)
14.906	0.020	44130	96.8	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.711	0.024	617	0.47	Benzene
10.300	0.029	9631	7.30	Toluene
12.835	0.030	2739	2.20	Ethylbenzene
12.974	0.032	10740	7.98	M/P-Xylene
13.751	0.027	4547	3.54	O-Xylene
5.301	0.013	9271	26.06	MTBE

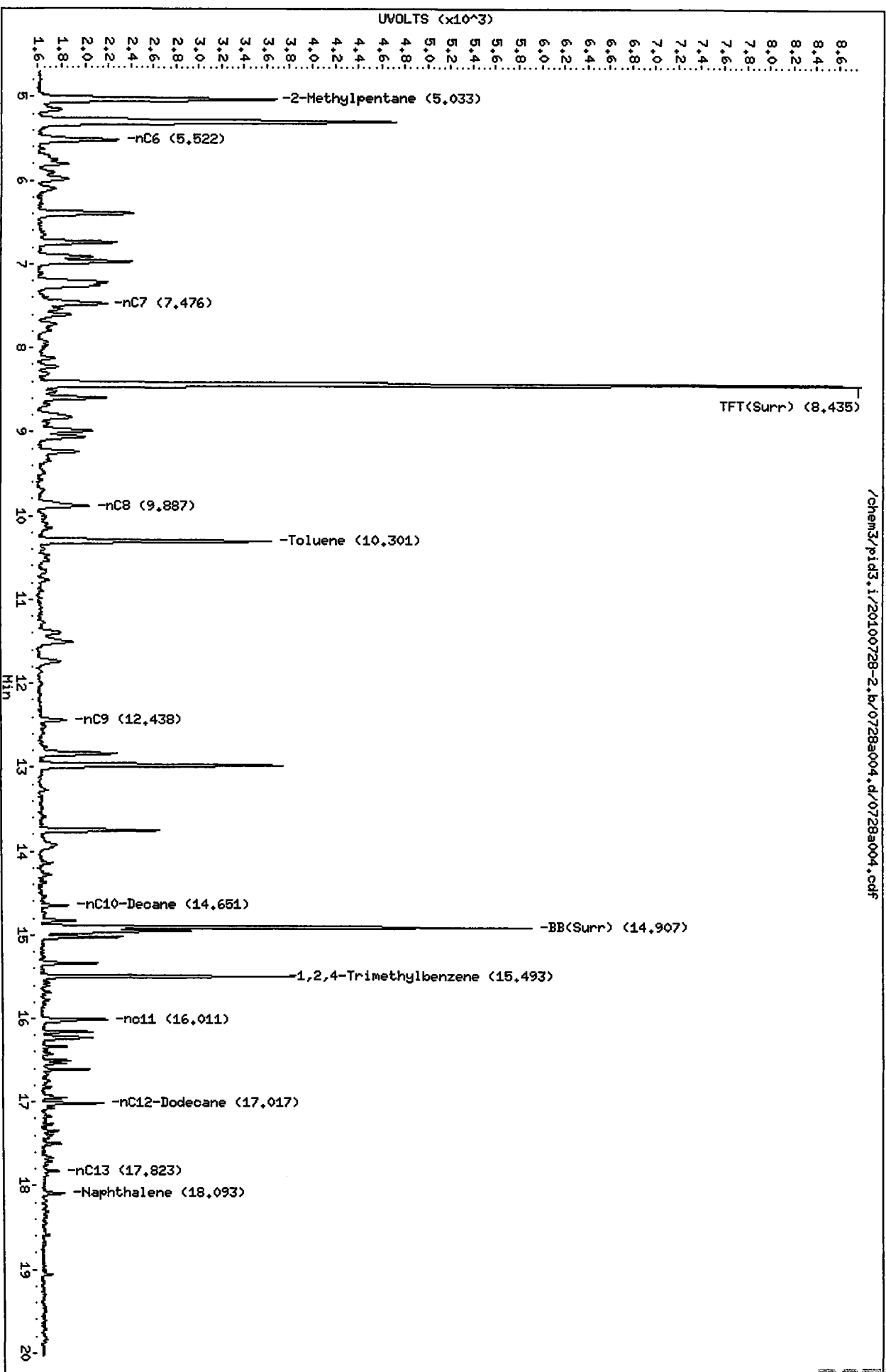
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100728-2.b/0728s004.d  
Date : 28-JUL-2010 08:07  
Client ID:  
Sample Info: GAS .25  
Column phase: RTX 502-2 FID

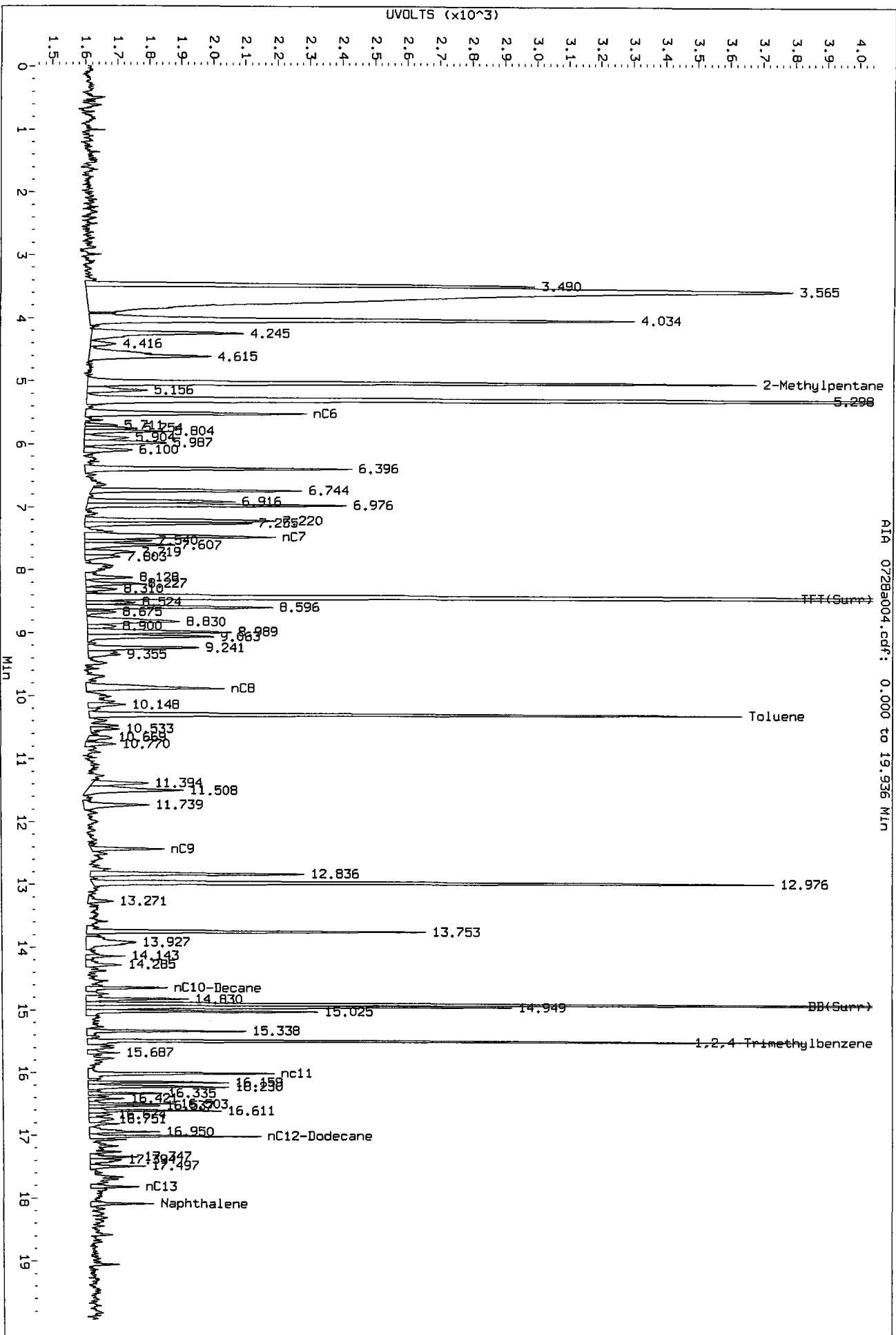
Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid3.i/20100728-2.b/0728s004.d/0728s004.cdf



MH  
7/29/10

Data File: /chem3/pid3.1/20100728-2.b/0728a004.d/0728a004.cdf  
Injection Date: 28-JUL-2010 08:07  
Instrument: pid3.i  
Client Sample ID:



AIA 0728a004.cdf: 0.000 to 19.936 MIN



M.  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a005.d      ARI ID: GAS 1  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a005.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 08:31  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
8.437	0.029	7240	85071	100.6	TFT (Surr)
14.910	0.022	4266	35061	99.1	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.17 to 17.11)	827807	761867	0.920 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	1564234	0.940 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1050254	0.928 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	811111	0.920 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
8.436	0.029	21131	96.1	TFT (Surr)
14.908	0.022	43950	96.4	BB (Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.713	0.026	2868	2.17	Benzene
10.303	0.032	37994	28.79	Toluene
12.838	0.033	10898	8.77	Ethylbenzene
12.978	0.036	42543	31.59	M/P-Xylene
13.754	0.029	17526	13.64	O-Xylene
5.302	0.015	35267	99.12	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chems3/pid3.i/20100728-2.b/0728a005.d

Date: 28-JUL-2010 08:31

Client ID:

Sample Info: GAS 1

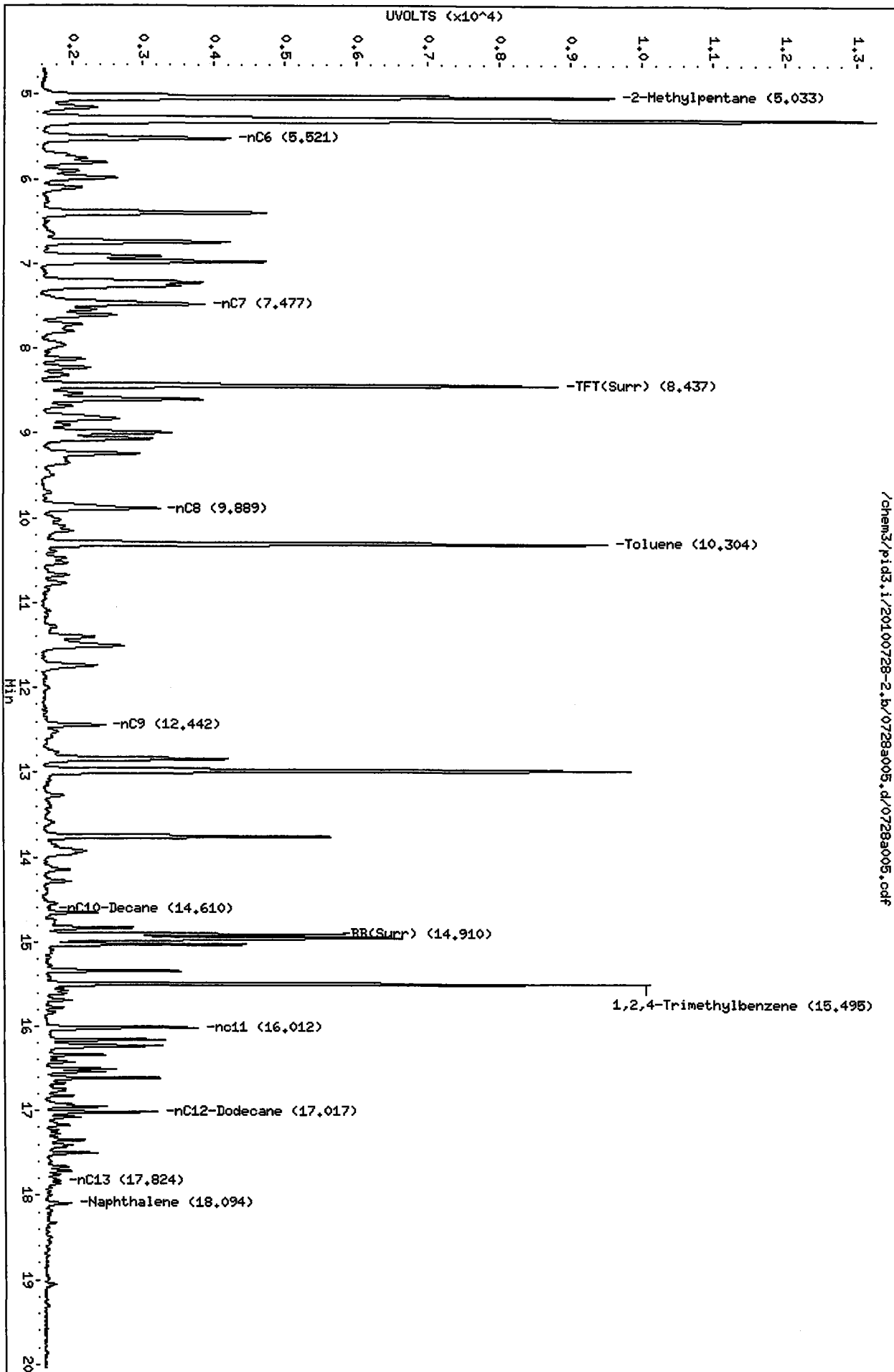
Instrument: pid3.i

Operator: HH

Column diameter: 0.18

Column phase: RTX 502-2 FID

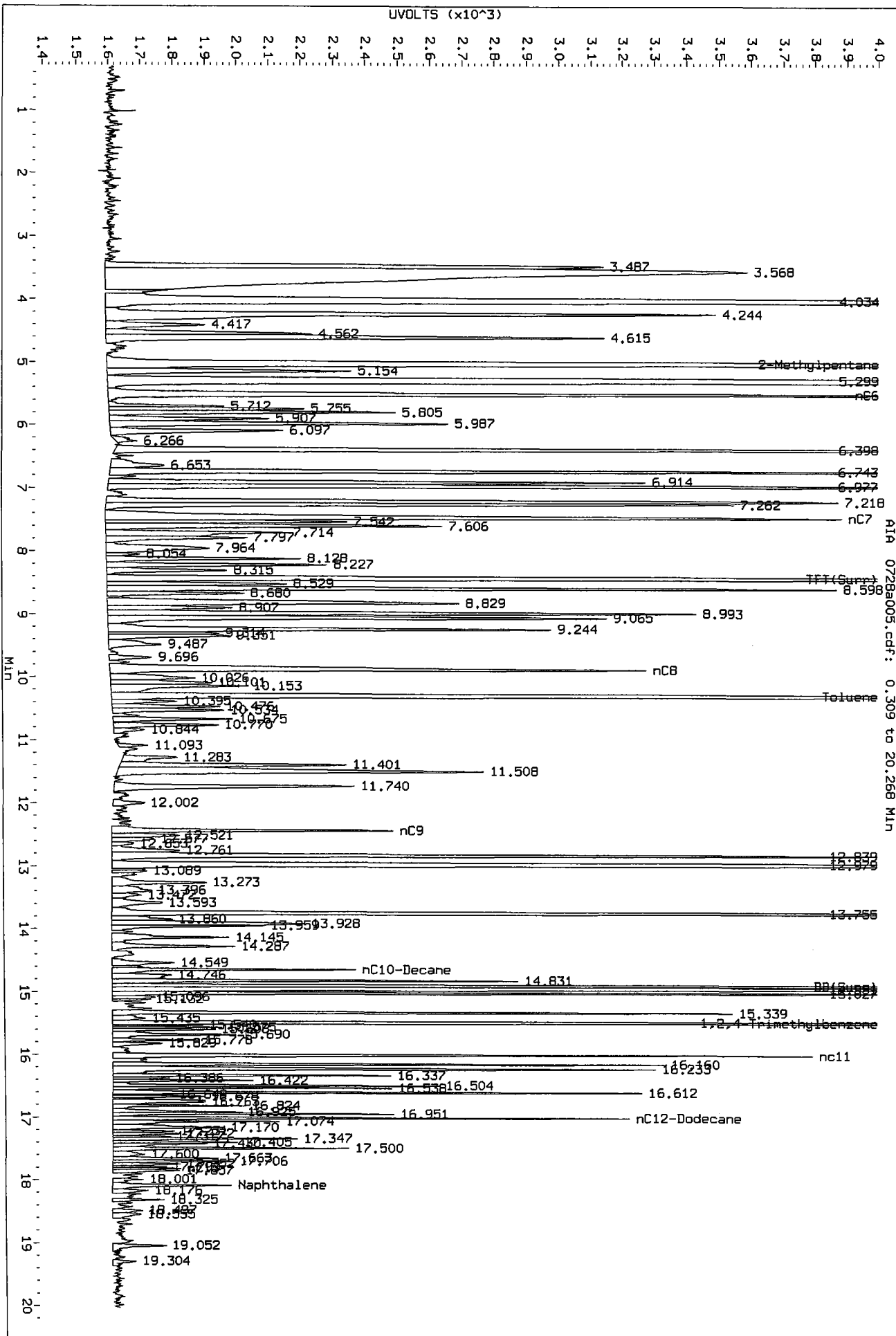
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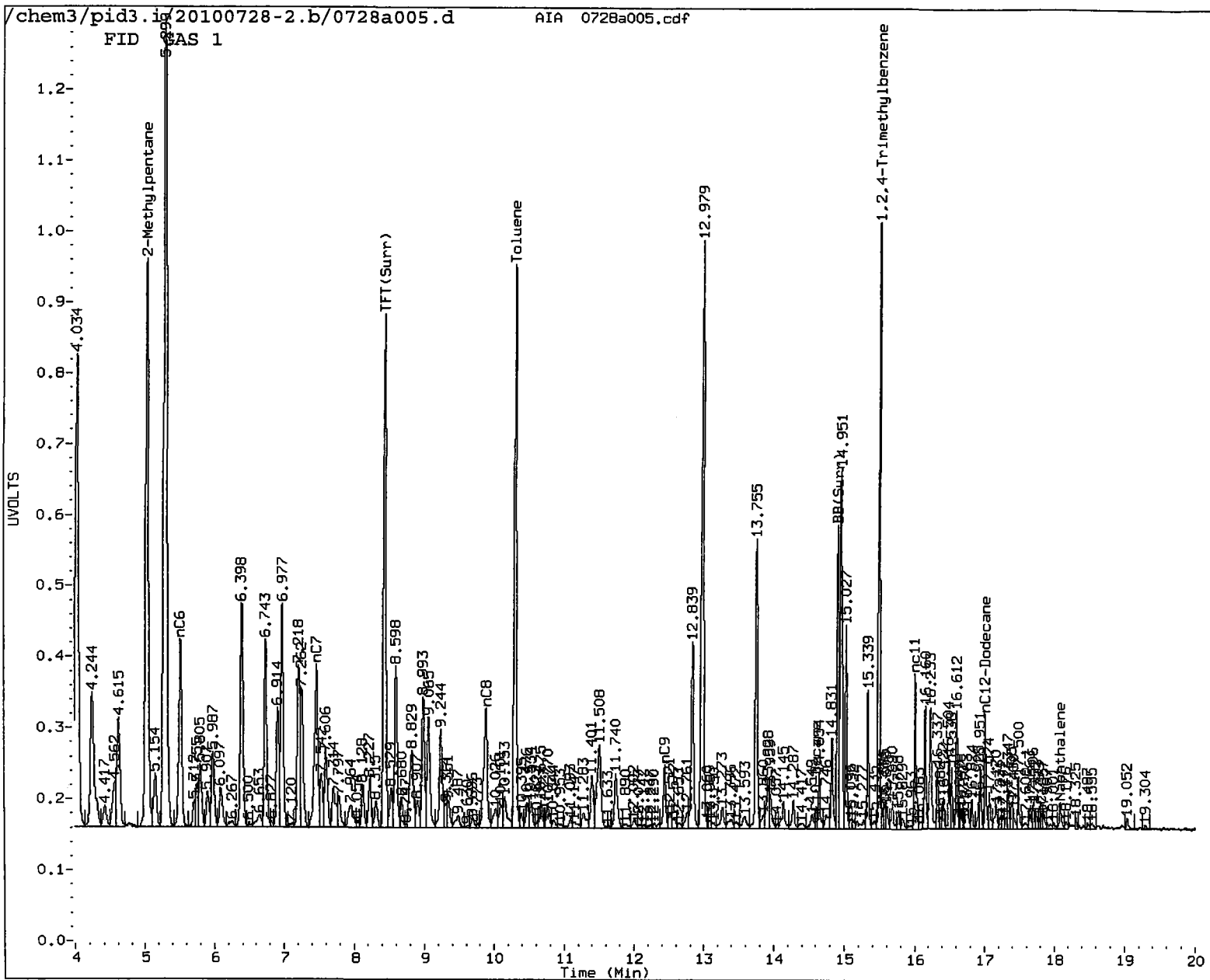


MH  
7/29/10

Data File: /chem3/pid3.1/20100728-2.b/0728a005.d/0728a005.cdf  
Injection Date: 28-JUL-2010 08:31  
Instrument: pid3.1  
Client Sample ID:



FID SAS 1



MANUAL INTEGRATION

- Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MH

Date: 7/29/10

7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a006.d      ARI ID: GAS 2.5  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a006.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 08:56  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                   Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.031	7507	89299	104.3	TFT(Surr)
14.911	0.023	4475	36770	103.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	1957108	2.364 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	3879004	2.331 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2606200	2.303 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	2072468	2.350 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.438	0.031	21902	99.6	TFT(Surr)
14.909	0.023	45851	100.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.715	0.028	7095	5.37	Benzene
10.306	0.034	94086	71.29	Toluene
12.840	0.036	27296	21.97	Ethylbenzene
12.981	0.039	105425	78.29	M/P-Xylene
13.756	0.032	43640	33.97	O-Xylene
5.306	0.019	82935	233.09	MTBE

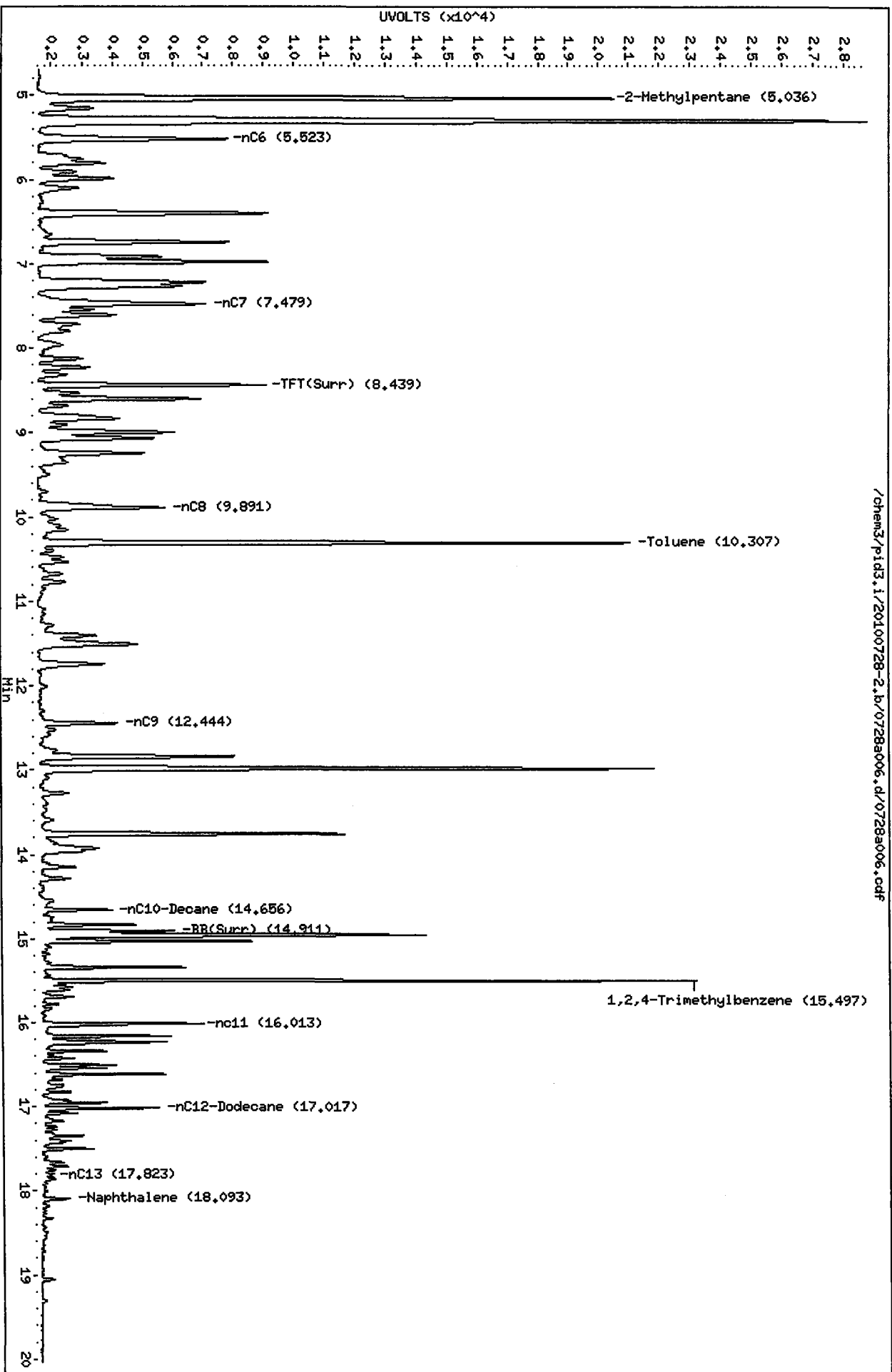
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/p1a3.i/20100728-2.b/0728a006.d  
Date: 28-JUL-2010 08:56

Client ID:  
Sample Info: GAS 2.5

Column phase: RTX 502-2 FID

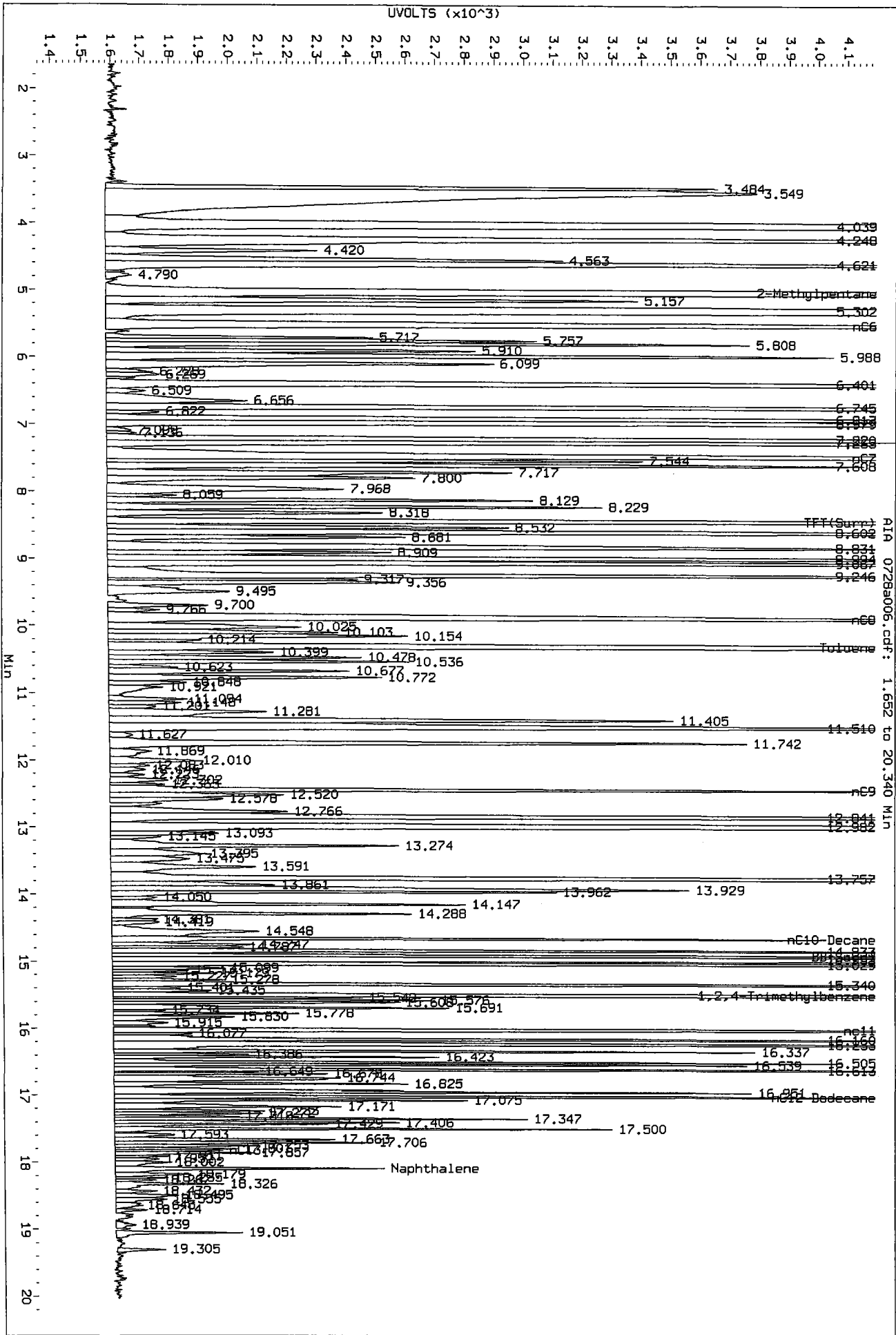
Instrument: p1a3.i  
Operator: MH  
Column diameter: 0.18

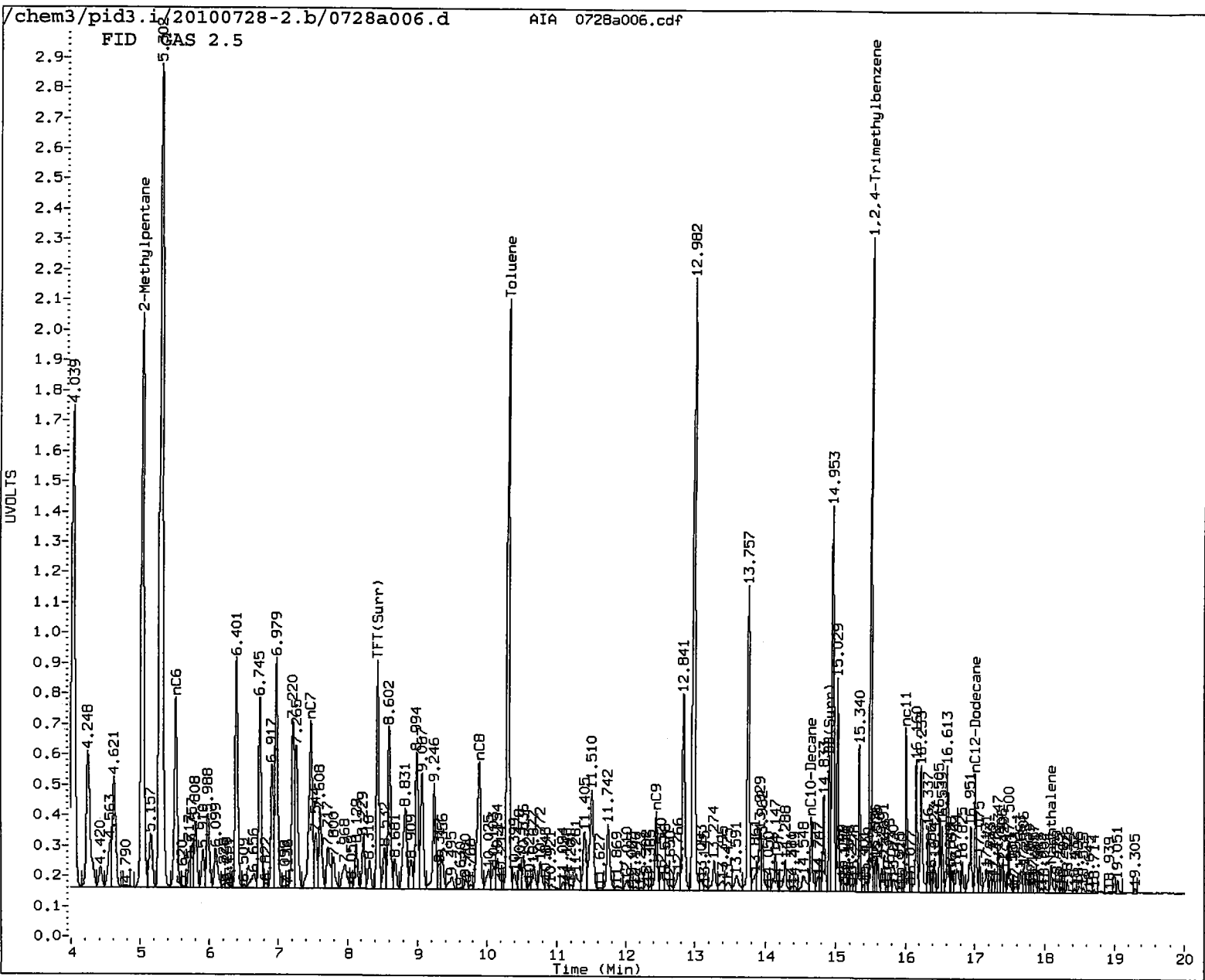


/chem3/p1a3.i/20100728-2.b/0728a006.d/0728a006.cdf

MM  
7/29/10

Data File: /chem3/pid3.1/20100728-2.b/0728a006.d/0728a006.cdf  
Injection Date: 28-JUL-2010 08:56  
Instrument: pid3.1  
Client Sample ID:





MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: ML

Date: 7/29/10

MH  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a007.d      ARI ID: GAS 5  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a007.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 09:20  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
8.440	0.031	7878	94697	109.5	TFT (Surr)
14.912	0.024	4741	41421	110.1	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.17 to 17.11)	827807	4003725	4.837
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	7856270	4.721 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	5316980	4.698 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	4221581	4.786

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====  
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
8.438	0.031	23349	106.2	TFT (Surr)
14.910	0.023	47815	104.9	BB (Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.716	0.029	14610	11.05	Benzene
10.308	0.037	191522	145.11	Toluene
12.842	0.038	56084	45.13	Ethylbenzene
12.985	0.043	209817	155.81	M/P-Xylene
13.758	0.033	88195	68.64	O-Xylene
5.308	0.021	162558	456.88	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100728-2.b/0728a007.d

Date: 28-JUL-2010 09:20

Client ID:

Sample Info: GAS 5

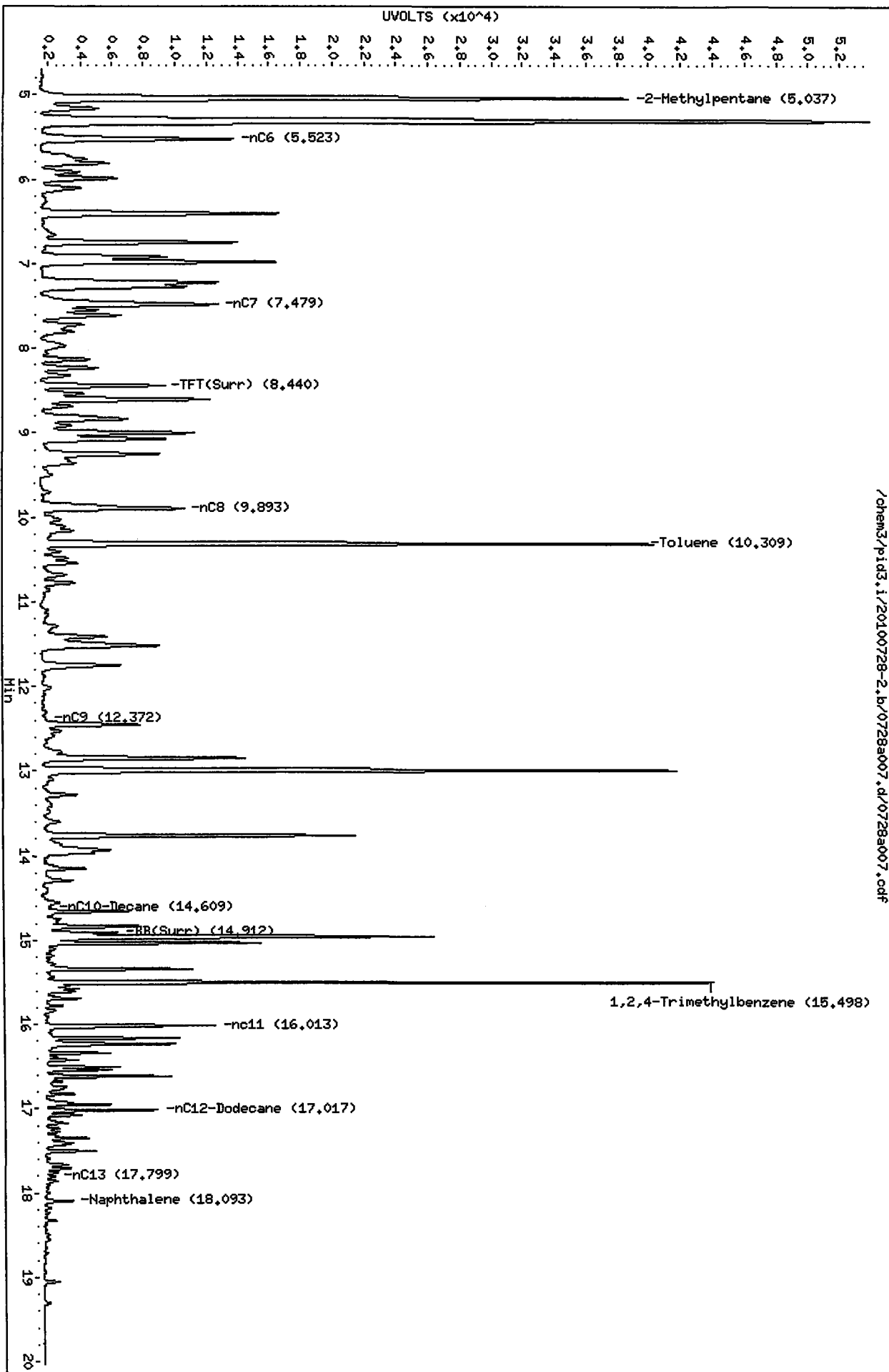
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: HH

Column diameter: 0.18

Page 1



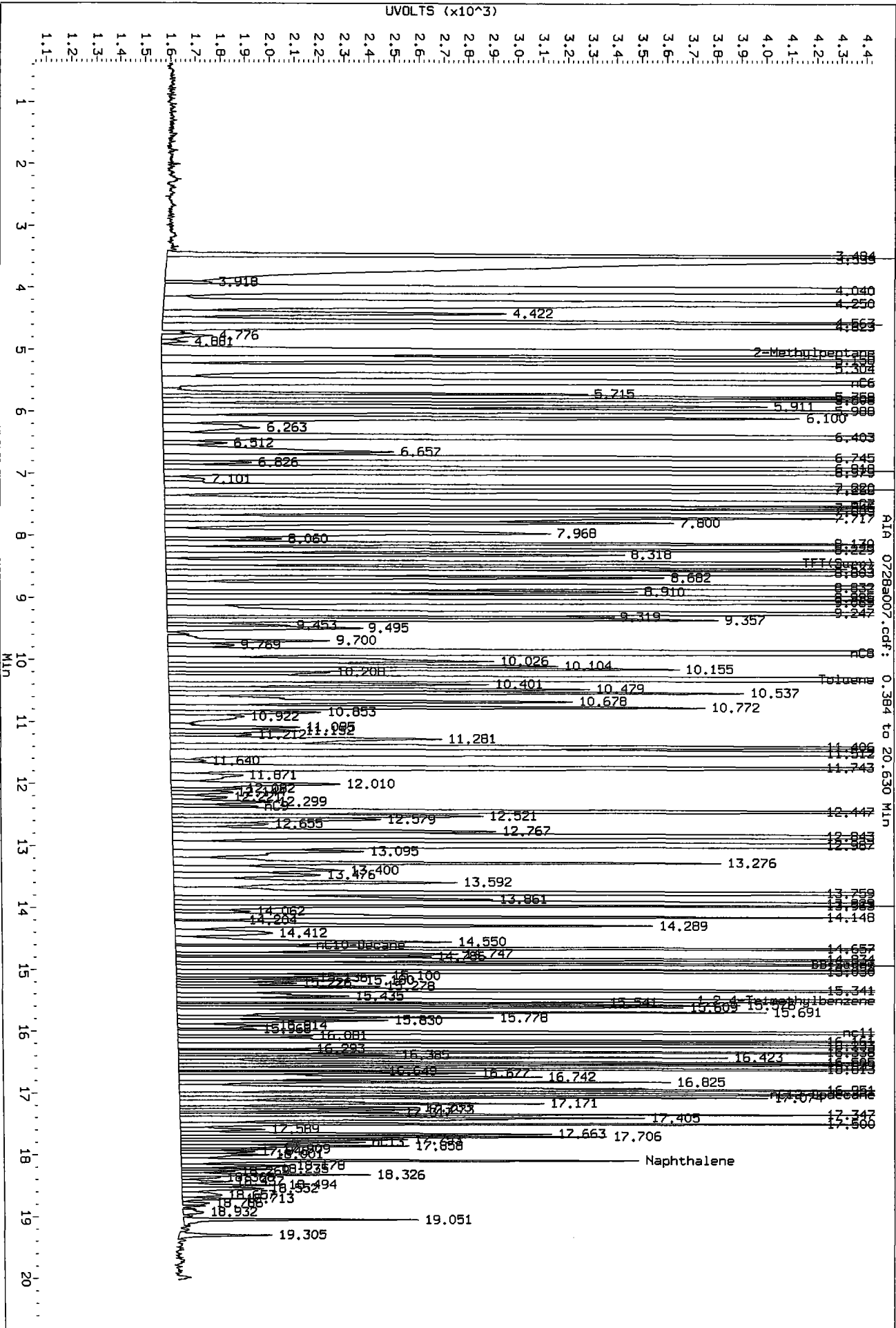
/chem3/pid3.i/20100728-2.b/0728a007.d/0728a007.cdf

7054 : 01140

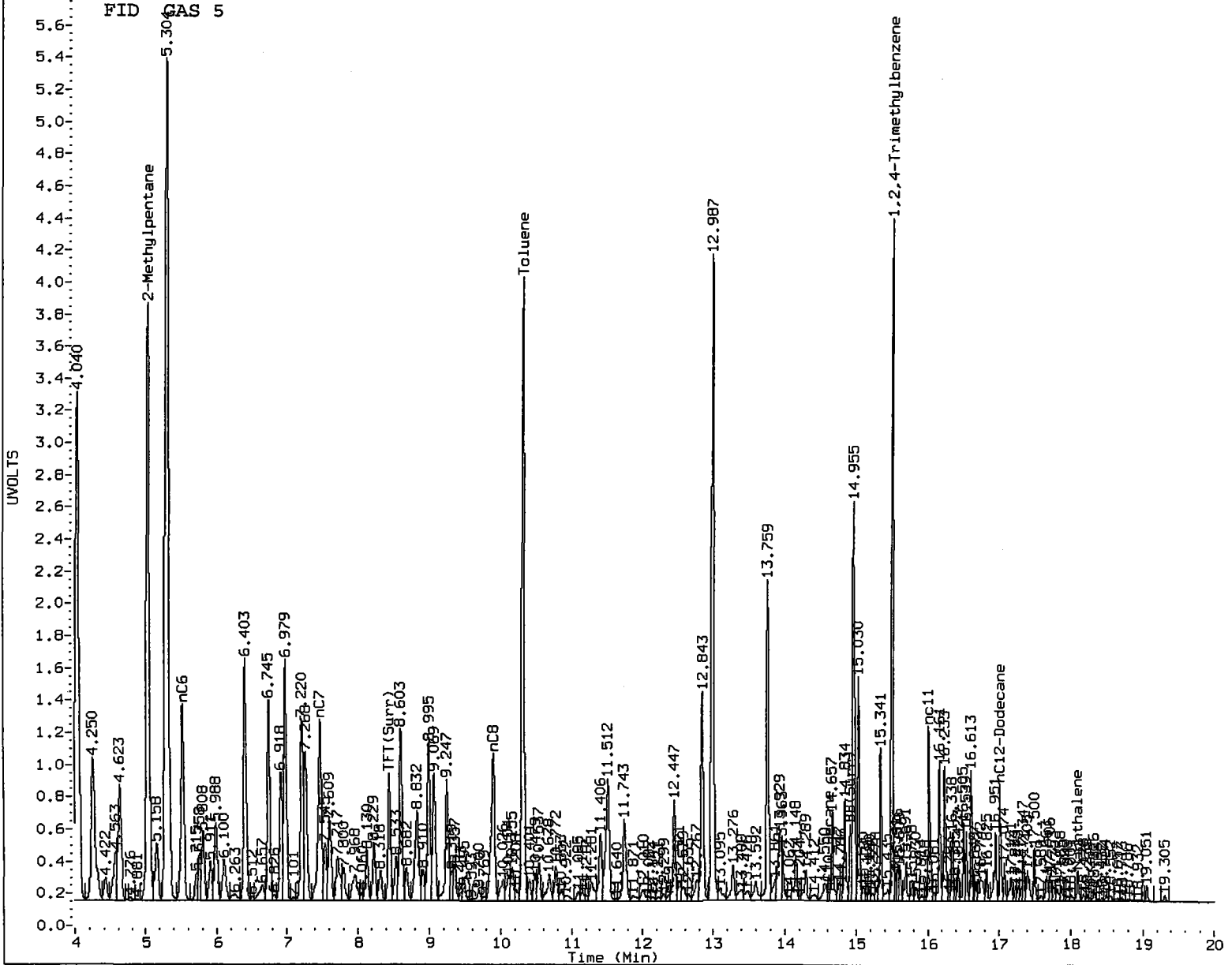


Mt. 7/19/11

Data File: /chem3/p1d3.1/20100728-2.b/0728a007.d/0728a007.cdf  
Injection Date: 28-JUL-2010 09:20  
Instrument: p1d3.1  
Client Sample ID:



Min 0728a007.cdf: 0.384 to 20.630 Min



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MH

Date: 7/29/10

2/28/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a008.d      ARI ID: GAS 20  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a008.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 09:45  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.032	10794	142846	150.0	TFT(Surr)
14.914	0.026	6397	57315	148.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	16788832	20.281
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	34760005	20.888
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	24502732	21.650
NWTPHG Tol-Nap (10.17 to 18.18)	882029	17514258	19.857

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.439	0.032	28146	128.0	TFT(Surr)
14.834	-0.052	109465	240.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.719	0.032	57953	43.83	Benzene
10.317	0.046	742279	562.41	Toluene
12.772	-0.032	18288	14.72	Ethylbenzene
13.001	0.059	811732	602.78	M/P-Xylene
13.765	0.041	355553	276.74	O-Xylene
5.321	0.033	530538	1491.10	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100728-2.b/0728a008.d

Date: 28-JUL-2010 09:45

Client ID:

Sample Info: GAS 20

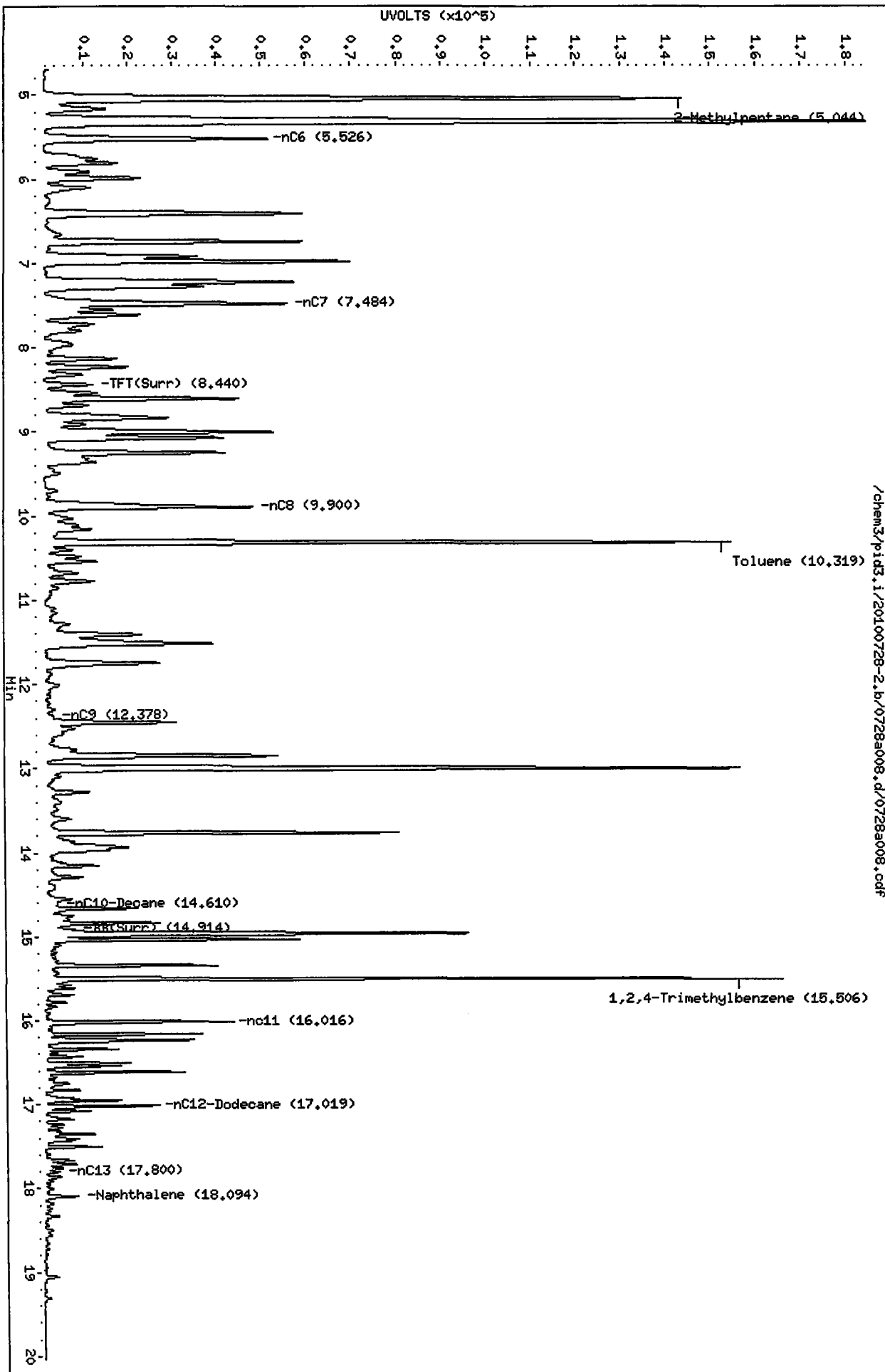
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

Page 1



RG54 : 01144

M.  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a010.d      ARI ID: GAS ICV  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a010.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 10:34  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
8.440	0.032	7179	85915	99.7	TFT (Surr)
14.911	0.023	4354	33856	101.1	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.17 to 17.11)	827807	2492293	3.011 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	3736060	2.245 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2858584	2.526 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	2556570	2.899 M

M Indicates manual integration within range  
\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
8.439	0.032	21749	98.9	TFT (Surr)
14.909	0.023	46674	102.4	BB (Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.715	0.029	38928	29.44	Benzene
10.309	0.037	288200	218.36	Toluene
12.842	0.037	55963	45.04	Ethylbenzene
12.983	0.041	219824	163.24	M/P-Xylene
13.757	0.033	89384	69.57	O-Xylene
5.294	0.007	2620	7.36	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100728-2.b/0728a010.d

Date: 28-JUL-2010 10:34

Client ID:

Sample Info: GAS ICV

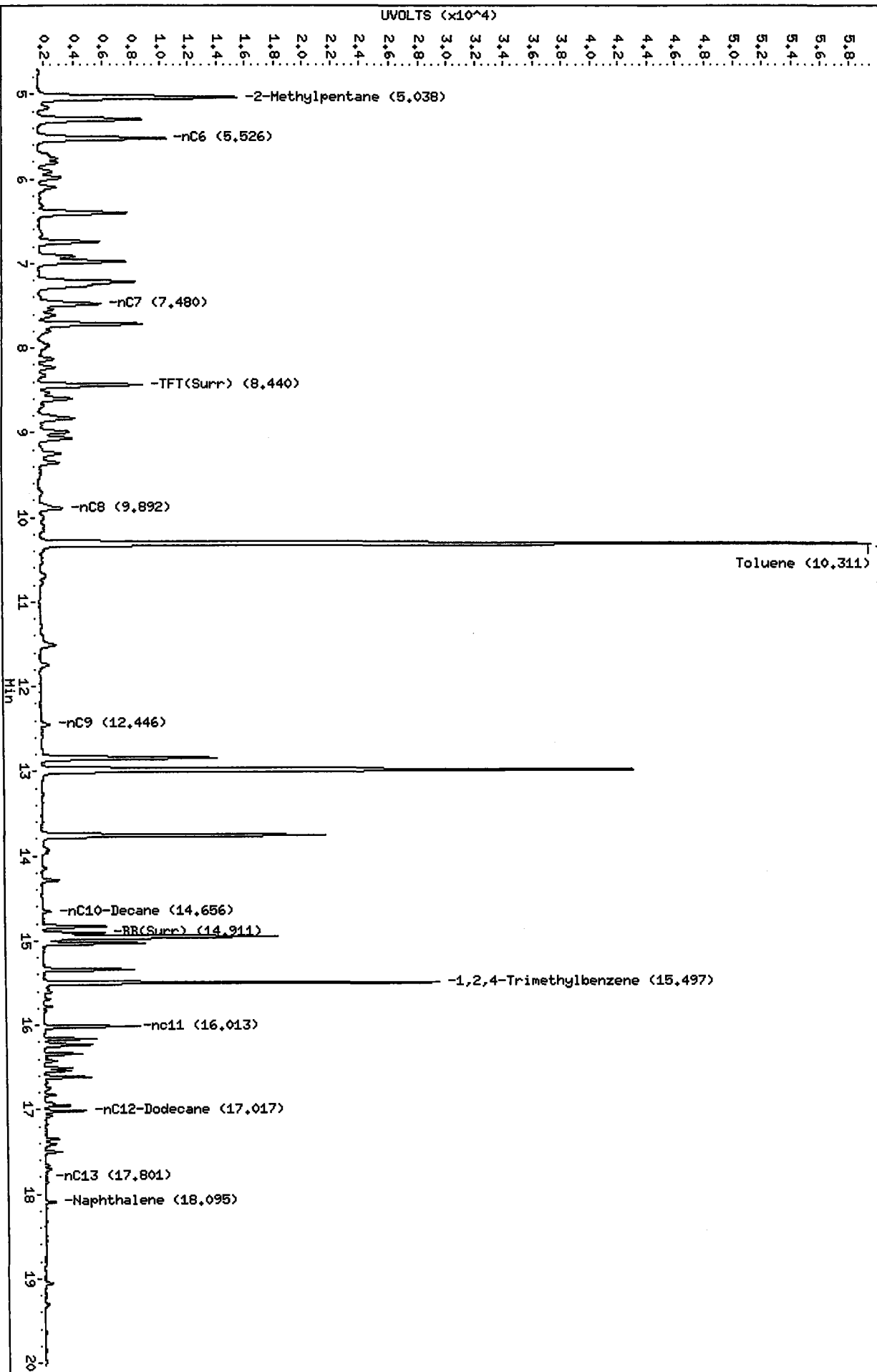
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

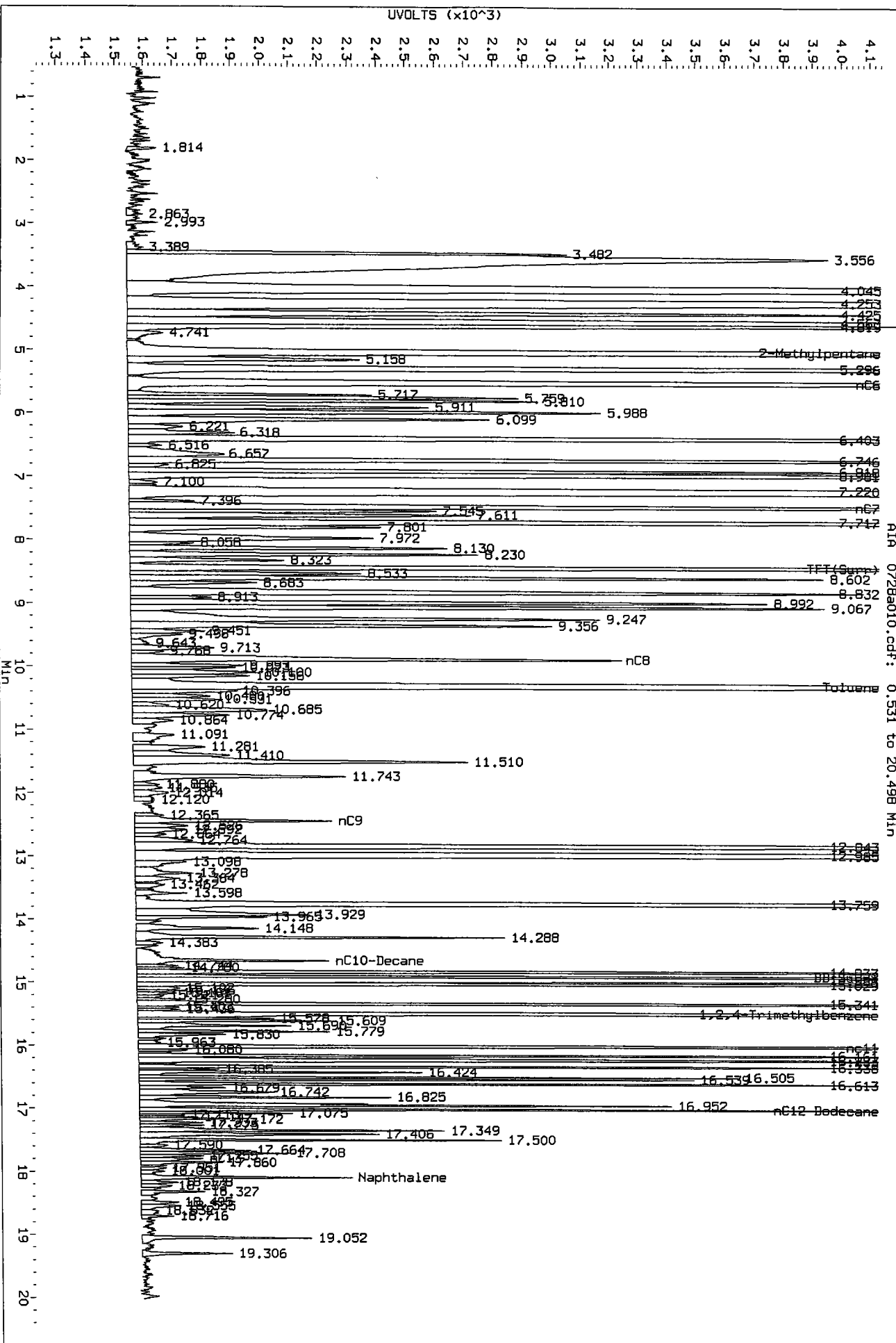
Column diameter: 0.18

/chem3/pid3.i/20100728-2.b/0728a010.d/0728a010.cdf



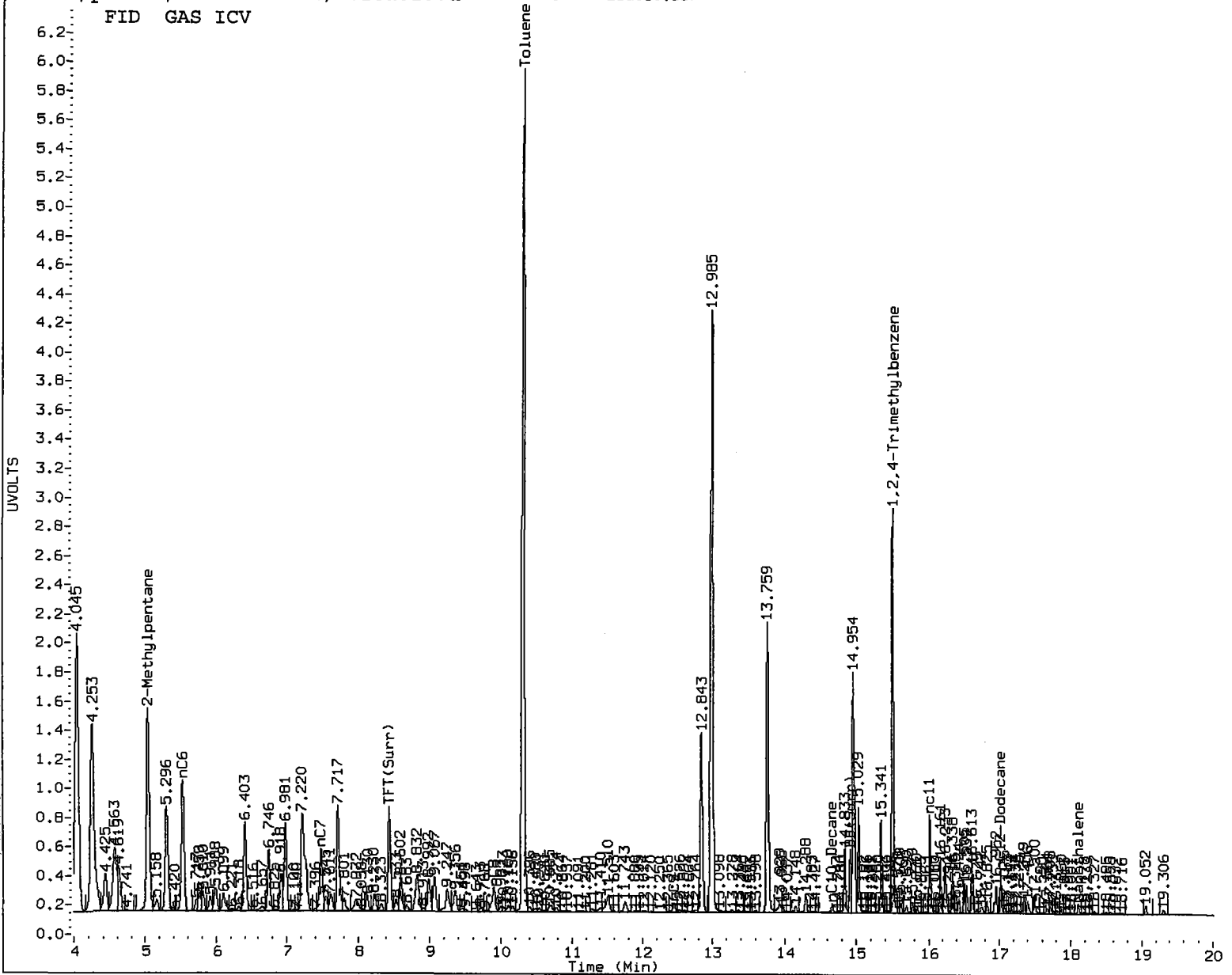
MA  
7/27/02

Data File: /chem3/pid3.1/20100728-2.b/0728a010.d/0728a010.cdf  
Injection Date: 28-JUL-2010 10:34  
Instrument: pid3.1  
Client Sample ID:



AIA 0728a010.cdf: 0.531 to 20.498 MIN

FID GAS ICV



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MH Date: 7/29/10



Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid3.i/20100728-2.b/FID.m  
Batch File: /chem3/pid3.i/20100728-2.b  
Inst ID: pid3.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 2-Methylpentane	5.033	5.033	5.036	5.037	5.044	5.028	5.022	4.952-5.092	5.035	0.005
18 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	1.097	1.027-1.167	+++++	+++++
19 8015B	+++++	+++++	+++++	+++++	+++++	+++++	0.833	0.763-0.903	+++++	+++++
20 AK101	+++++	+++++	+++++	+++++	+++++	+++++	0.989	0.919-1.059	+++++	+++++
21 NWGAS	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.930-1.070	+++++	+++++
2 nC6	5.522	5.521	5.523	5.523	5.526	5.520	5.507	5.437-5.577	5.523	0.002
3 nC7	7.476	7.477	7.479	7.479	7.484	7.469	7.454	7.384-7.524	7.477	0.005
4 TFT(Surr)	8.435	8.437	8.439	8.440	8.440	8.425	8.408	8.338-8.478	8.436	0.006
5 nC8	9.887	9.889	9.891	9.893	9.900	9.874	9.858	9.788-9.928	9.889	0.009
6 Toluene	10.301	10.304	10.307	10.309	10.319	10.292	10.273	10.203-10.343	10.306	0.009
7 nC9	12.438	12.442	12.444	12.447	12.456	12.430	12.409	12.339-12.479	12.443	0.009
8 nC10-Decane	14.651	14.610	14.656	14.609	14.663	14.644	14.632	14.562-14.702	14.639	0.024
9 BB(Surr)	14.907	14.910	14.911	14.912	14.914	14.901	14.888	14.818-14.958	14.909	0.005
10 1,2,4-Trimethylbenzene	15.493	15.495	15.497	15.498	15.506	15.488	15.477	15.407-15.547	15.496	0.006
11 nC11	16.011	16.012	16.013	16.013	16.016	16.007	16.020	15.950-16.090	16.012	0.003
12 nC12-Dodecane	17.017	17.017	17.017	17.017	17.019	17.014	17.008	16.938-17.078	17.017	0.002
13 nC13	17.823	17.824	17.823	17.799	17.860	17.823	17.814	17.744-17.884	17.825	0.019

Reviewer 1 MH Date: 7/29/10  
Reviewer 2 [Signature] Date: 7/29/10

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid3.i/20100728-2.b/FID.m  
 Batch File: /chem3/pid3.i/20100728-2.b  
 Inst ID: pid3.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXEC RT	RT WINDOW	AVG RT	STD DEV
14 Naphthalene	18.093	18.094	18.093	18.093	18.094	18.089	18.082	18.012-18.152	18.093	0.002



### VOA Analyst Notes / Corrective Action Log

ARI Project ID: BETX Curve Client ID: \_\_\_\_\_

ARI SOP: ~~404S~~(Gas) ~~410S~~(BTEX) ~~430S~~(VPH) ~~700S~~(8260C) ~~703S~~(SIM) ~~706S~~(524.2) ~~710S~~(RSK-175)

Parameter(s): BETX

Instrument: NT-3 NT-5 NT-7 NT-9 NT-10 PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 5 Curve Date: 6/29/10 Analysis Start Date: 6/29/10

pH ≤ 2.0	YES / NO <u>NA</u>	Method Blank In Control?	<u>YES</u> / NO
BFB Tune Meets Criteria?	YES / NO <u>NA</u>	LCS / LCSD Recovery In Control?	<u>YES</u> / NO
Internal Standard Meets Criteria?	YES / NO <u>NA</u>	Surrogate Recovery In Control?	<u>YES</u> / NO
ICal acceptable?	<u>YES</u> / NO	CCal acceptable?	<u>YES</u> / NO
Q flag applied?	YES / NO <u>NA</u>	Q flag applied?	YES / NO <u>NA</u>
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes / NO
Special Analysis Criteria Met?	YES / NO / NA		

Bubbles/Headspace: None SM (≤ 2mm ●) PB (2-4mm) LG (> 4mm ●) Head Space

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

BETX ICS Targeted 25

**Additional Details on Reverse: Yes / No**

Analyst: [Signature] ult Date: 7/10/10

Reviewer: [Signature] Date: 7-10-10

# Analytical Resources Inc.: Organics Instrument Log

PID-3 HP 5890 Series II - Serial No.: 2728A-13336

Date: 6/29/10 <sup>MH 7/1/10</sup> Analysis: NWTPHG/BETX Analyst: MH

GC Program: BETX Column No: 832213 Column Type: RTX502-Z

Instrument Tune (.U or .CT.): \_\_\_\_\_ EM Voltage: \_\_\_\_\_

Calibration File: \_\_\_\_\_ Curve Date: 2/2/10 63  
6/29/10 BETX

IS/SS	Ical/Ccal	LCS/ICV
<u>VW632-2</u>	<u>VW607-1</u>	<u>VW629-4</u>
_____	<u>VW630-4</u>	_____
_____	<u>VW629-4</u>	_____
_____	_____	_____
_____	_____	_____

Time	Filename	LabID	ClientID	Vial#	pH	DF								
							23	1611	0629a023.d	RB54H	02-1	4	1	1
1	0548	0629a001.d	RINSE				24	1636	0629a024.d	RINSE				1
2	0613	0629a002.d	RT-BCAL 1				25	1700	0629a025.d	BCAL 3				1
3	0637	0629a003.d	GCAL 1				26	1725	0629a026.d	GCAL 2				1
4	0735	0629a004.d	RINSE											
5	0759	0629a005.d	BETX .25											
6	0824	0629a006.d	BETX .5											
7	0848	0629a007.d	BETX 5											
8	0912	0629a008.d	BETX 25											
9	0937	0629a009.d	BETX 50											
10	1001	0629a010.d	BETX 100											
11	1026	0629a011.d	BETX 200											
12	1050	0629a012.d	BETX ICV											
13	1145	0629a013.d	GCAL 2											
14	1210	0629a014.d	LCS0629											
15	1234	0629a015.d	LCSD0629											
16	1259	0629a016.d	MB0629											
17	1344	0629a017.d	RC18B	Trip Blank	2	1								
18	1408	0629a018.d	RC18A	Sample 1	2	1								
19	1433	0629a019.d	RB54D	92-85	8	1								
20	1458	0629a020.d	RB54E	92-95	4	1								
21	1522	0629a021.d	RB54F	92-105	4	1								
22	1547	0629a022.d	RB54G	51-2	3	1								

*(Large handwritten scribble)*

MH  
7/1/10

## Maintenance / Comments

**Maintenance Verification** (Identify ICal or CCal that demonstrates the instrument is in control):  
Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid3.i/20100629-1.1.b

ARI Job No.: BETX Method: PIDB.m Instrument: pid3.i Date: 29-JUN-2010

Time Filename LabID ClientId DF Manually Integrated Compounds

0759 0629a005.d BETX .25 1 Toluene, Ethylbenzene, O-Xylene, MTBE, TFT(Surr), BB(Surr),

0824 0629a006.d BETX .5 1 Toluene, O-Xylene, MTBE,

0848 0629a007.d BETX 5 1 NO MANUAL INTEGRATION

0912 0629a008.d BETX 25 1 NO MANUAL INTEGRATION

0937 0629a009.d BETX 50 1 NO MANUAL INTEGRATION

1001 0629a010.d BETX 100 1 NO MANUAL INTEGRATION

1026 0629a011.d BETX 200 1 NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid3.i/20100629-2.b  
ARI Job No.: BETX Method: FID.m Instrument: pid3.i Date: 29-JUN-2010

Time Filename LabID ClientId DF Manually Integrated Compounds

0759 0629a005.d BETX .25 1 NO MANUAL INTEGRATION

0824 0629a006.d BETX .5 1 NO MANUAL INTEGRATION

0848 0629a007.d BETX 5 1 NO MANUAL INTEGRATION

0912 0629a008.d BETX 25 1 NO MANUAL INTEGRATION

0937 0629a009.d BETX 50 1 NO MANUAL INTEGRATION

1001 0629a010.d BETX 100 1 NO MANUAL INTEGRATION

1026 0629a011.d BETX 200 1 NO MANUAL INTEGRATION

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-JUN-2010 07:59  
 End Cal Date : 29-JUN-2010 10:26  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid3.i/20100629-1.b/PIDB.m  
 Cal Date : 29-Jun-2010 11:12 monicah  
 Curve Type : Average

Calibration File Names:

Level 1: /chem3/pid3.i/20100629-1.b/0629a005.d/0629a005.cdf  
 Level 2: /chem3/pid3.i/20100629-1.b/0629a006.d/0629a006.cdf  
 Level 3: /chem3/pid3.i/20100629-1.b/0629a007.d  
 Level 4: /chem3/pid3.i/20100629-1.b/0629a008.d  
 Level 5: /chem3/pid3.i/20100629-1.b/0629a009.d  
 Level 6: /chem3/pid3.i/20100629-1.b/0629a010.d  
 Level 7: /chem3/pid3.i/20100629-1.b/0629a011.d

Compound	0.25000	0.50000	5.000	25.000	50.000	100.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	200.000							
	Level 7							
1 MTBE	464 343	288	367	346	348	334	356	15.046
2 Benzene	1564 1254	1462	1257	1240	1256	1221	1322	10.156
4 Toluene	1608 1294	1252	1288	1275	1275	1247	1320	9.717
15 Chlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++
5 Ethylbenzene	1404 1183	1420	1164	1185	1190	1152	1243	9.380
6 M/P-Xylene	1614 1268	1381	1314	1300	1302	1247	1347	9.293

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-JUN-2010 07:59  
 End Cal Date : 29-JUN-2010 10:26  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid3.i/20100629-1.b/PIDB.m  
 Cal Date : 29-Jun-2010 11:12 monicah  
 Curve Type : Average

Compound	0.25000	0.50000	5.000	25.000	50.000	100.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	200.000							
	Level 7							
7 O-Xylene	1352 1307	1232	1295	1269	1282	1256	1285	3.016
13 1,3,5 Trimethylbenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
14 1,2,4 Trimethyl benzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
16 1,3 Dichlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
17 1,4 Dichlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
18 1,2 Dichlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
\$ 3 TFT(Surr)	243 219	220	213	214	217	212	220	4.943
\$ 8 BB(Surr)	496 463	451	434	440	456	450	456	4.411



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-JUN-2010 07:59  
 End Cal Date : 29-JUN-2010 10:26  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid3.i/20100629-2.b/FID.m  
 Cal Date : 29-Jun-2010 11:13 monicah  
 Curve Type : Average

Compound	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	0.000e+00							
	Level 7							
14 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	+++++						+++++	+++++
\$ 4 TPT(Surr)	78.13636	73.54545	71.97015	70.36000	70.48120	69.03933		
	70.30000						71.97607	4.271
\$ 9 BB(Surr)	48.72727	43.22727	42.49254	41.18000	42.06767	41.53933		
	42.23000						43.06630	5.994

7/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a005.d      ARI ID: BETX .25  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a005.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 07:59  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	----	----	-----
8.418	-0.021	1719	20323	23.9	TFT (Surr)
14.897	-0.015	1072	10075	24.9	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.13)	23668	0.034
8015B 2MP-TMB ( 4.93 to 15.54)	22061	0.016
AK101 nC6-nC10 ( 5.50 to 14.63)	15306	0.014
NWTPHG Tol-Nap (10.21 to 18.23)	24708	0.033

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	----	-----
8.417	-0.021	5356	24.4	TFT (Surr)
14.893	-0.016	10910	23.9	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	----	-----
7.694	-0.019	391	0.30	Benzene
10.287	-0.021	402	0.30N	Toluene
12.817	-0.030	351	0.28N	Ethylbenzene
12.955	-0.034	807	0.60	M/P-Xylene
13.737	-0.025	338	0.26N	O-Xylene
5.283	-0.017	116	0.33N	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

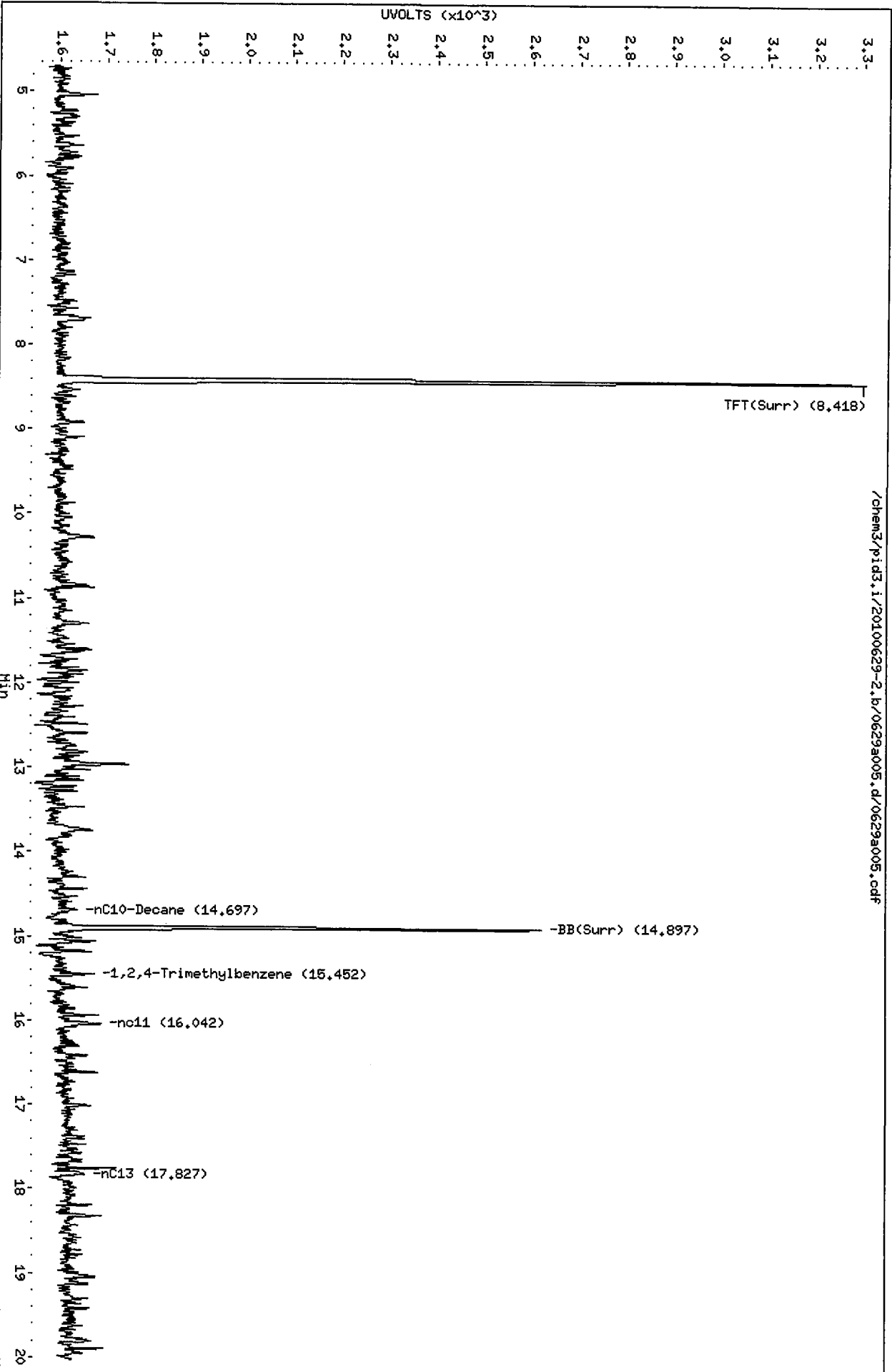
Data File: /chem3/pid3.i/20100629-2.b/0629a005.d  
Date : 29-JUN-2010 07:59

Client ID:  
Sample Info: BETX .25

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: HH  
Column diameter: 0.18



Data File: /chem3/pid3.i/20100629-1.b/0629a005.d  
Date : 29-JUN-2010 07:59

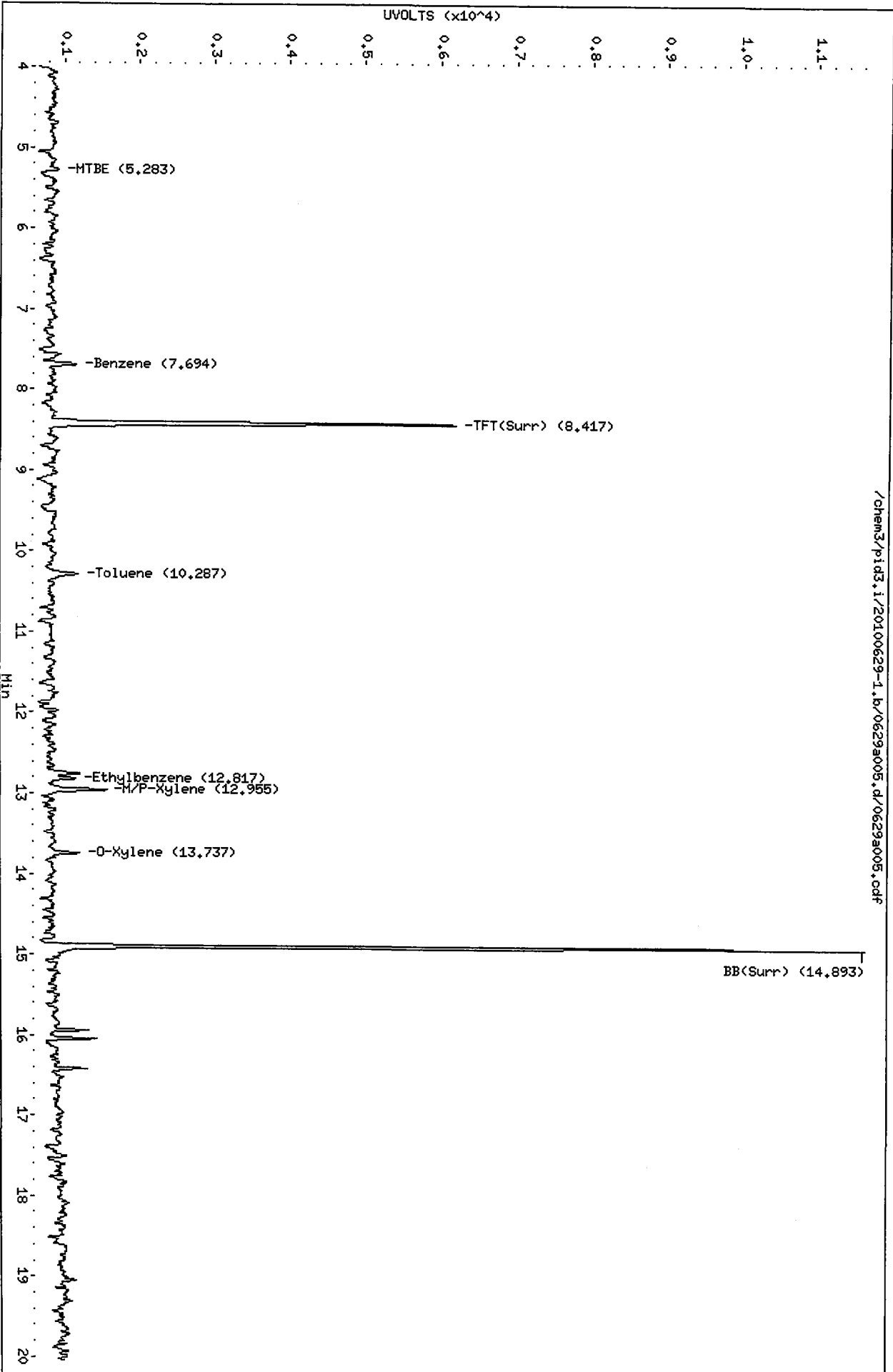
Page 1

Client ID:  
Sample Info: BETX .25

Instrument: pid3.i

Column phase: RTX 502-2 PID

Operator: HH  
Column diameter: 0.18

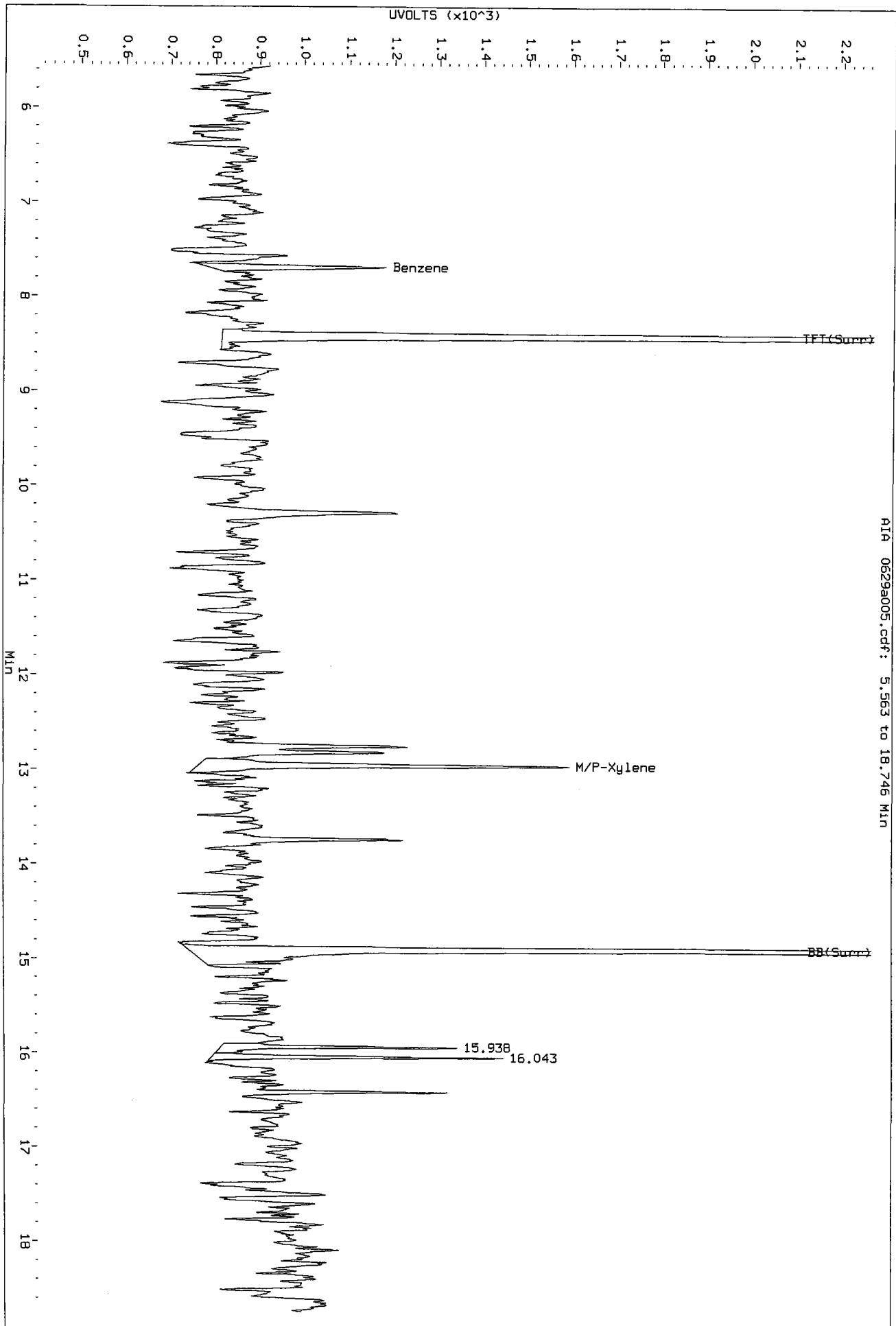


/chem3/pid3.i/20100629-1.b/0629a005.d/0629a005.cdf

REC 4 : 01100

MM  
7/10/00

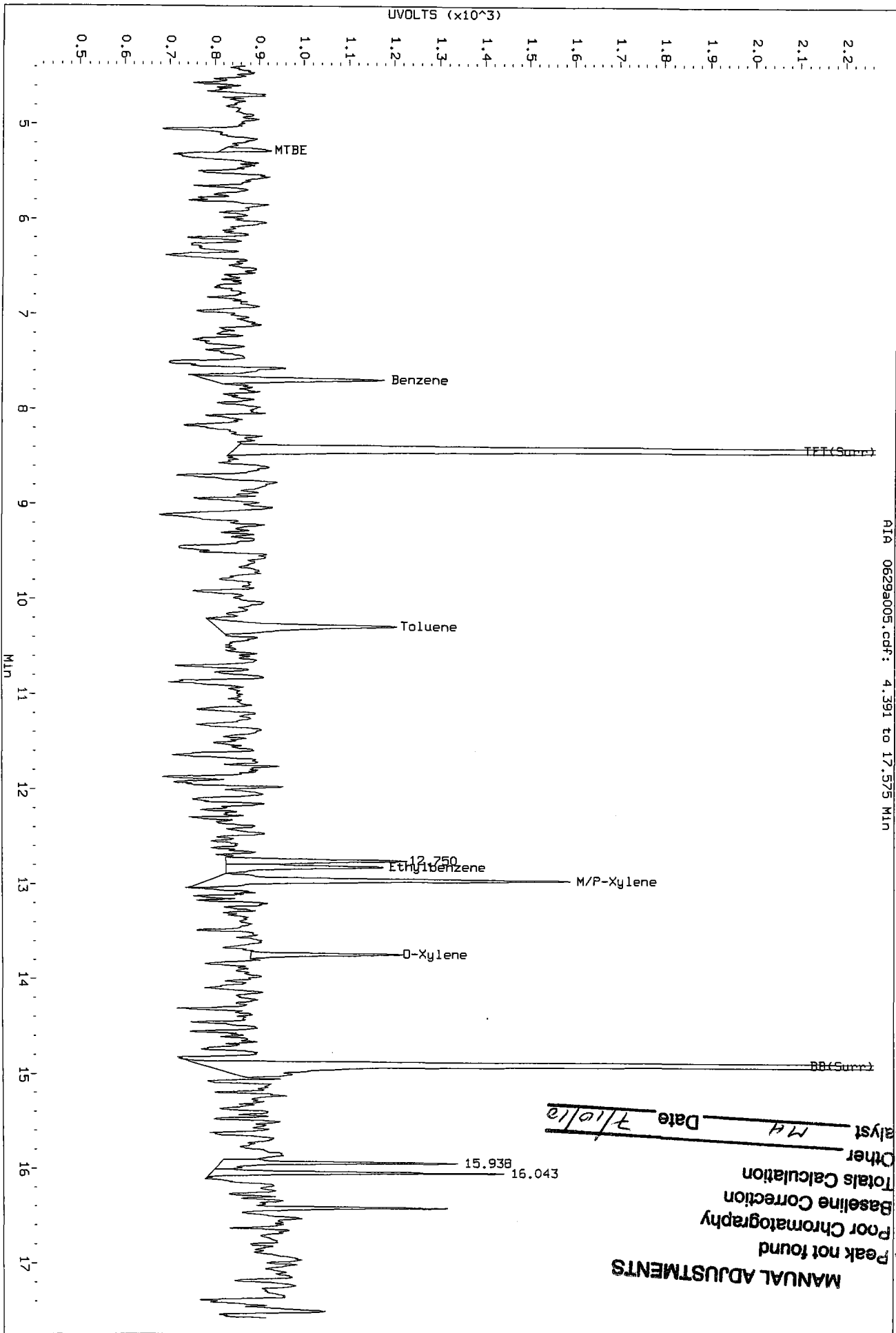
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Injection Date: 29-JUN-2010 07:59  
Instrument: pid3.1  
Client Sample ID:



AIA 0629a005.cdf: 5.563 to 18.746 Min

Data File: /chem3/pid3.1/20100629-1.b/0629a005.d/0629a005.cdf  
Injection Date: 29-JUN-2010 07:59  
Instrument: pid3.1  
Client Sample ID:

AIR 0629a005.cdf: 4.391 to 17.575 MIN



**MANUAL ADJUSTMENTS**

Peak not found

Poor Chromatography

Baseline Correction

Totals Calculation

Other

Analyst MA Date 7/10/10

7/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a006.d      ARI ID: BETX .5  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a006.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 08:24  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.430	-0.008	3236	38151	45.0	TFT (Surr)
14.906	-0.006	1902	15702	44.2	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-Cl2 (10.21 to 17.13)	29425	0.042
8015B 2MP-TMB ( 4.93 to 15.54)	33980	0.025
AK101 nC6-nC10 ( 5.50 to 14.63)	33979	0.031
NWTPHG Tol-Nap (10.21 to 18.23)	34396	0.046

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.429	-0.008	9683	44.0	TFT (Surr)
14.904	-0.006	19865	43.6	BB (Surr)

SW8021 (PID)

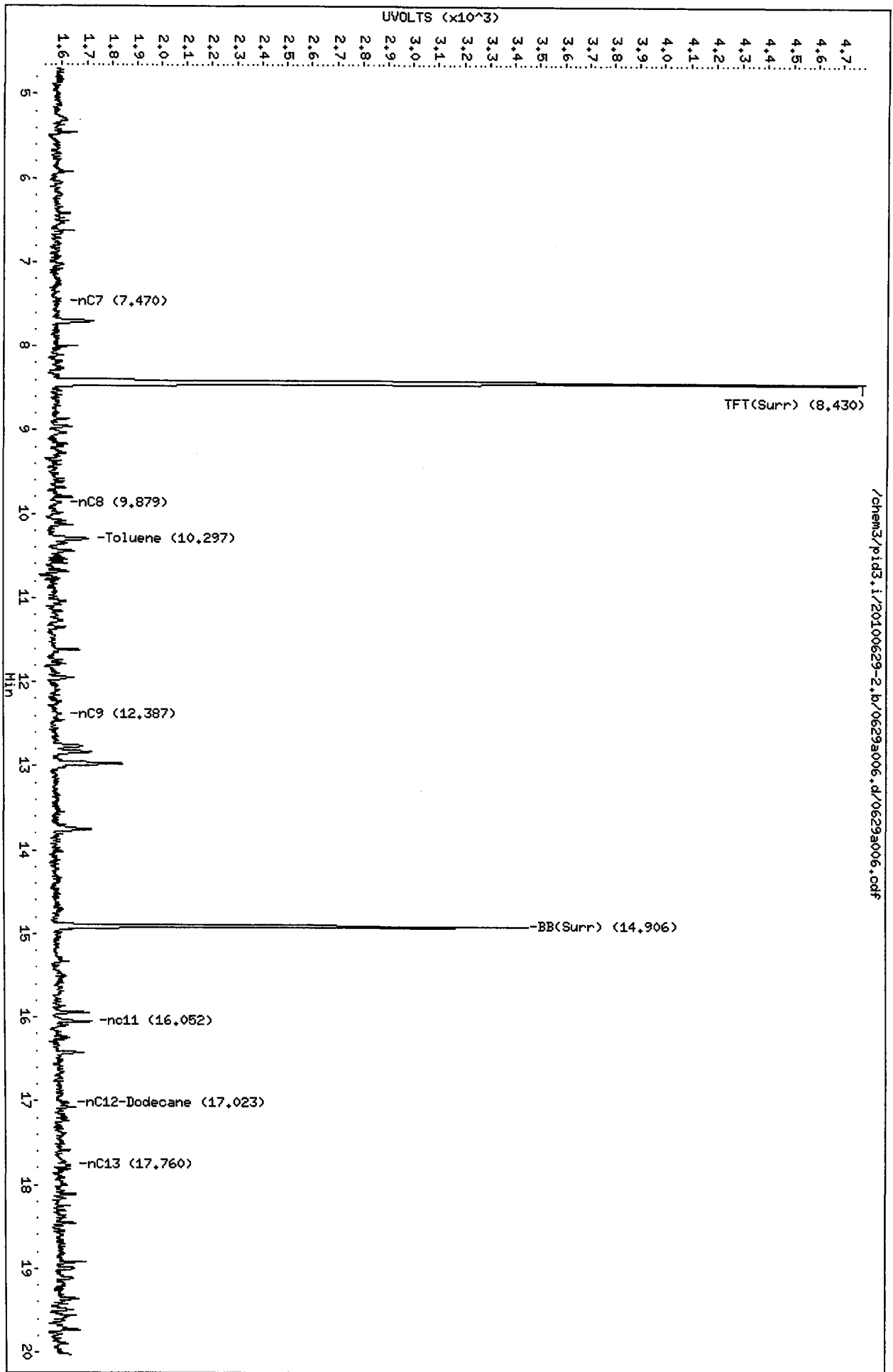
RT	Shift	Response	Amount	Compound
7.706	-0.007	731	0.55	Benzene
10.297	-0.011	626	0.47N	Toluene
12.832	-0.015	710	0.57	Ethylbenzene
12.969	-0.020	1381	1.03	M/P-Xylene
13.750	-0.012	616	0.48N	O-Xylene
5.300	-0.001	144	0.40N	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100629-2.b/0629a006.d  
Date : 29-JUN-2010 08:24  
Client ID:  
Sample Info: BETX .5  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

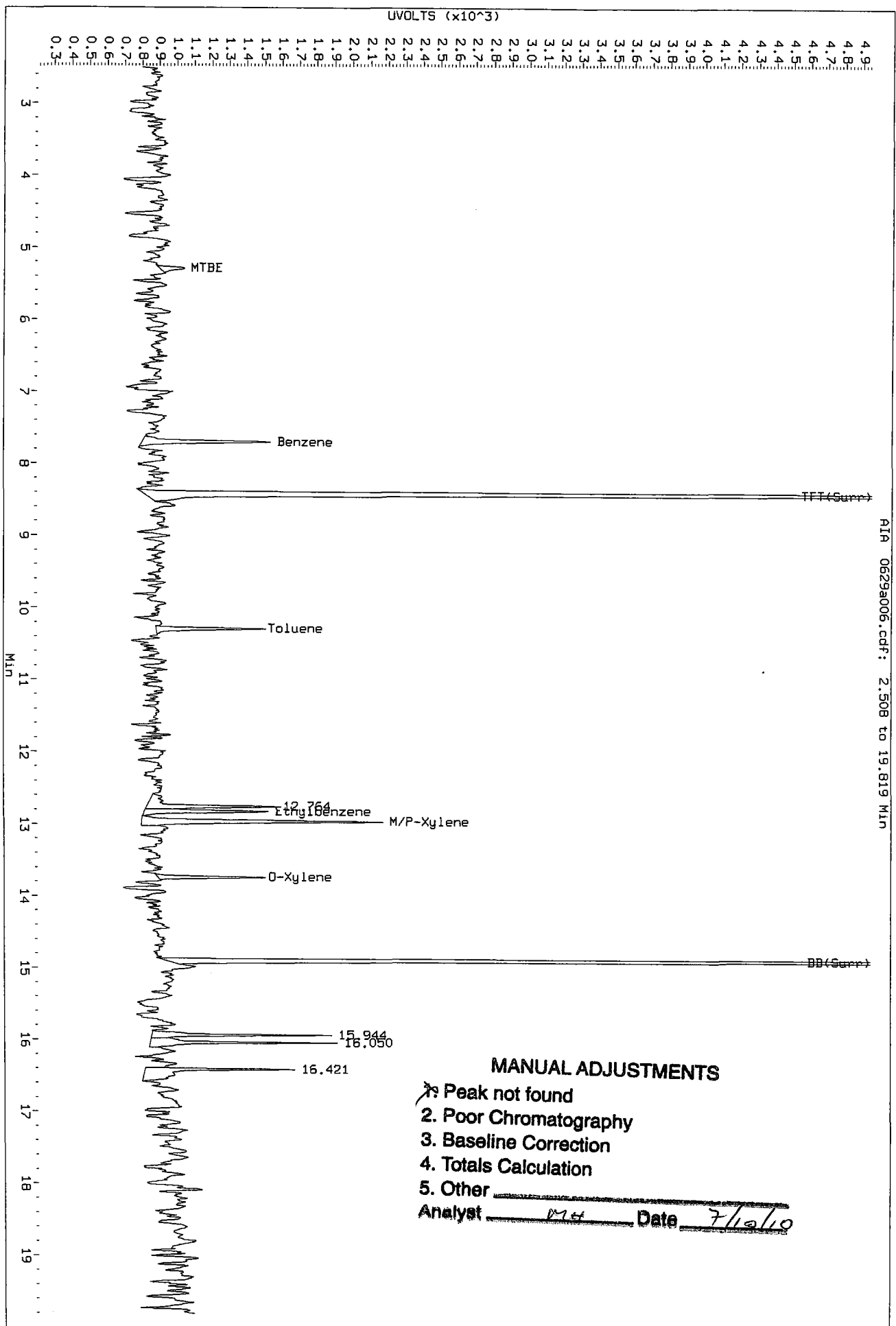
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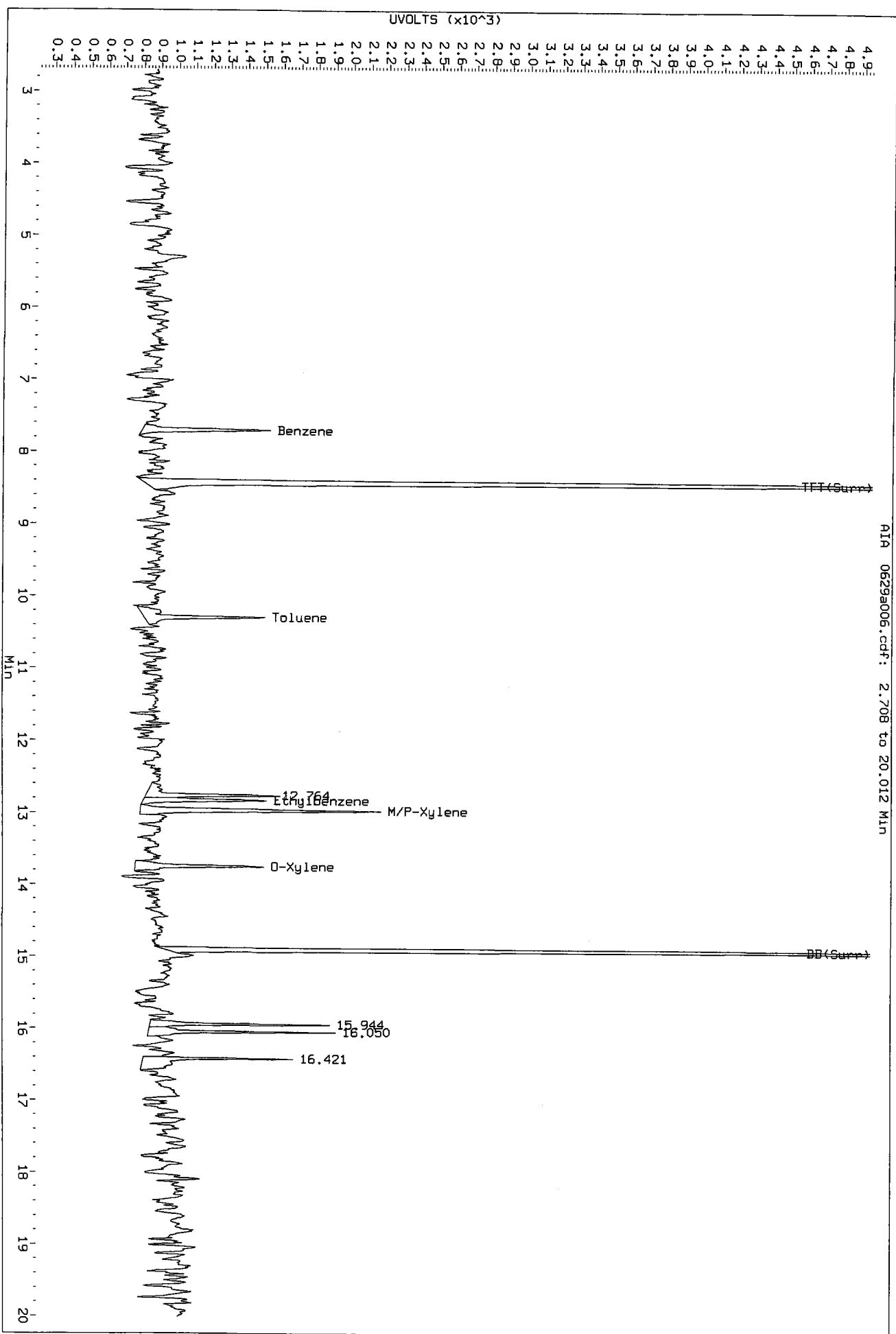
Data File: /chem3/p1d3.1/20100629-1.b/0629a006.d/0629a006.cdf  
 Injection Date: 29-JUN-2010 08:24  
 Instrument: p1d3.1  
 Client Sample ID:



AIR 0629a006.cdf: 2.508 to 19.819 MIN

MH  
7/10/10

Data File: /chem3/pid3.1/20100629-1.b/0629s006.d/0629s006.cdf  
Injection Date: 29-JUN-2010 08:24  
Instrument: pid3.i  
Client Sample ID:



AIA 0629s006.cdf: 2.708 to 20.012 Min

7/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a007.d      ARI ID: BETX 5  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a007.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 08:48  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.435	-0.003	4822	56817	67.0	TFT (Surr)
14.908	-0.003	2847	24157	66.1	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.13)	137046	0.197
8015B 2MP-TMB ( 4.93 to 15.54)	118984	0.088
AK101 nC6-nC10 ( 5.50 to 14.63)	107982	0.100
NWTPHG Tol-Nap (10.21 to 18.23)	152307	0.206

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.434	-0.003	14296	65.0	TFT (Surr)
14.907	-0.003	29105	63.8	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.709	-0.004	6287	4.76	Benzene
10.302	-0.006	6442	4.88	Toluene
12.837	-0.010	5819	4.68	Ethylbenzene
12.974	-0.015	13142	9.76	M/P-Xylene
13.753	-0.009	6477	5.04	O-Xylene
5.297	-0.003	1833	5.15	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

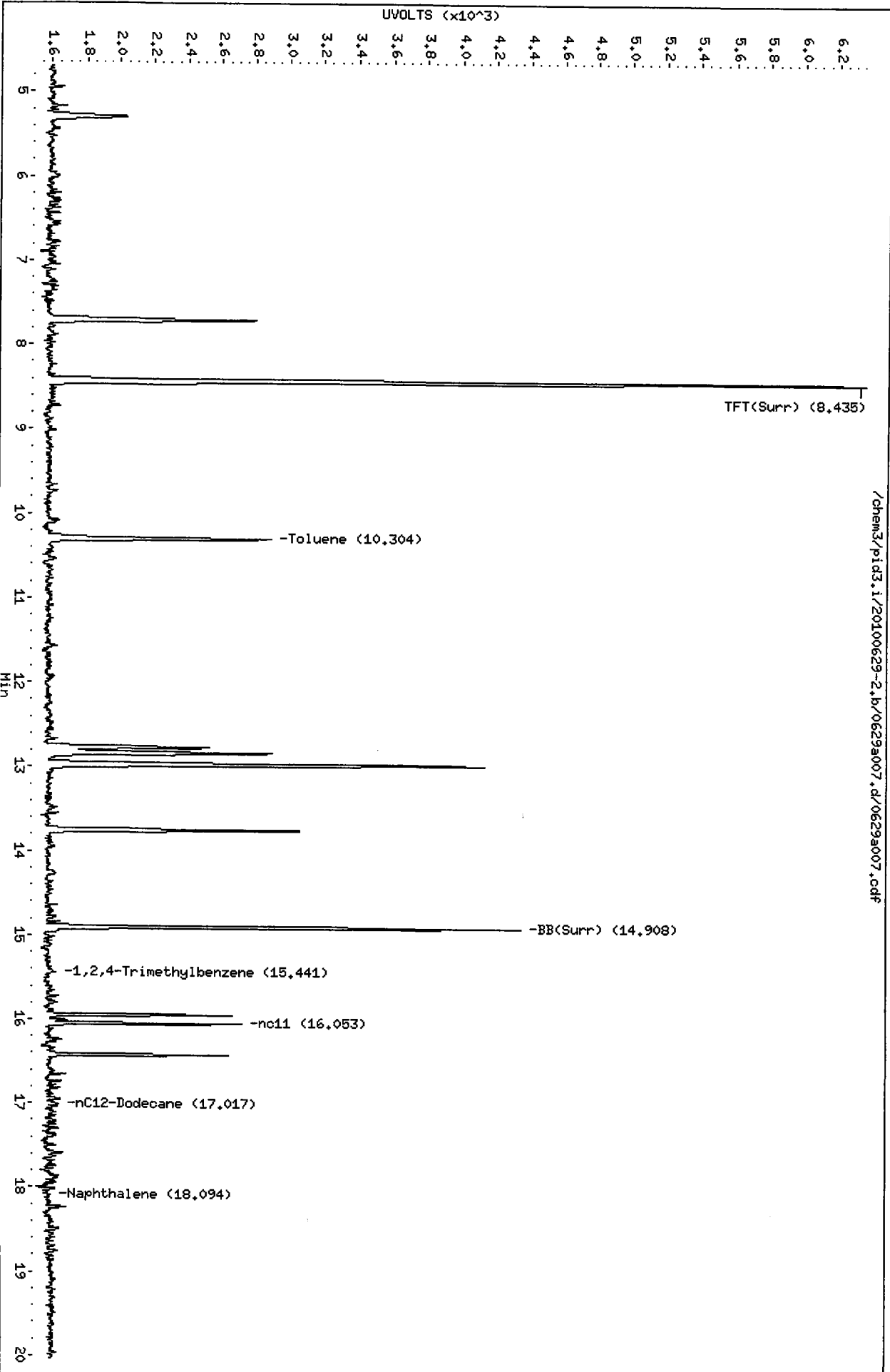
Data File: /chem3/pid3.i/20100629-2.b/0629a007.d  
Date : 29-JUN-2010 08:48

Client ID:  
Sample Info: BETX 5

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH  
Column diameter: 0.18



/chem3/pid3.i/20100629-2.b/0629a007.d/0629a007.cdf

Data File: /chem3/pid3.i/20100629-1.b/0629a007.d  
Date: 29-JUN-2010 08:48

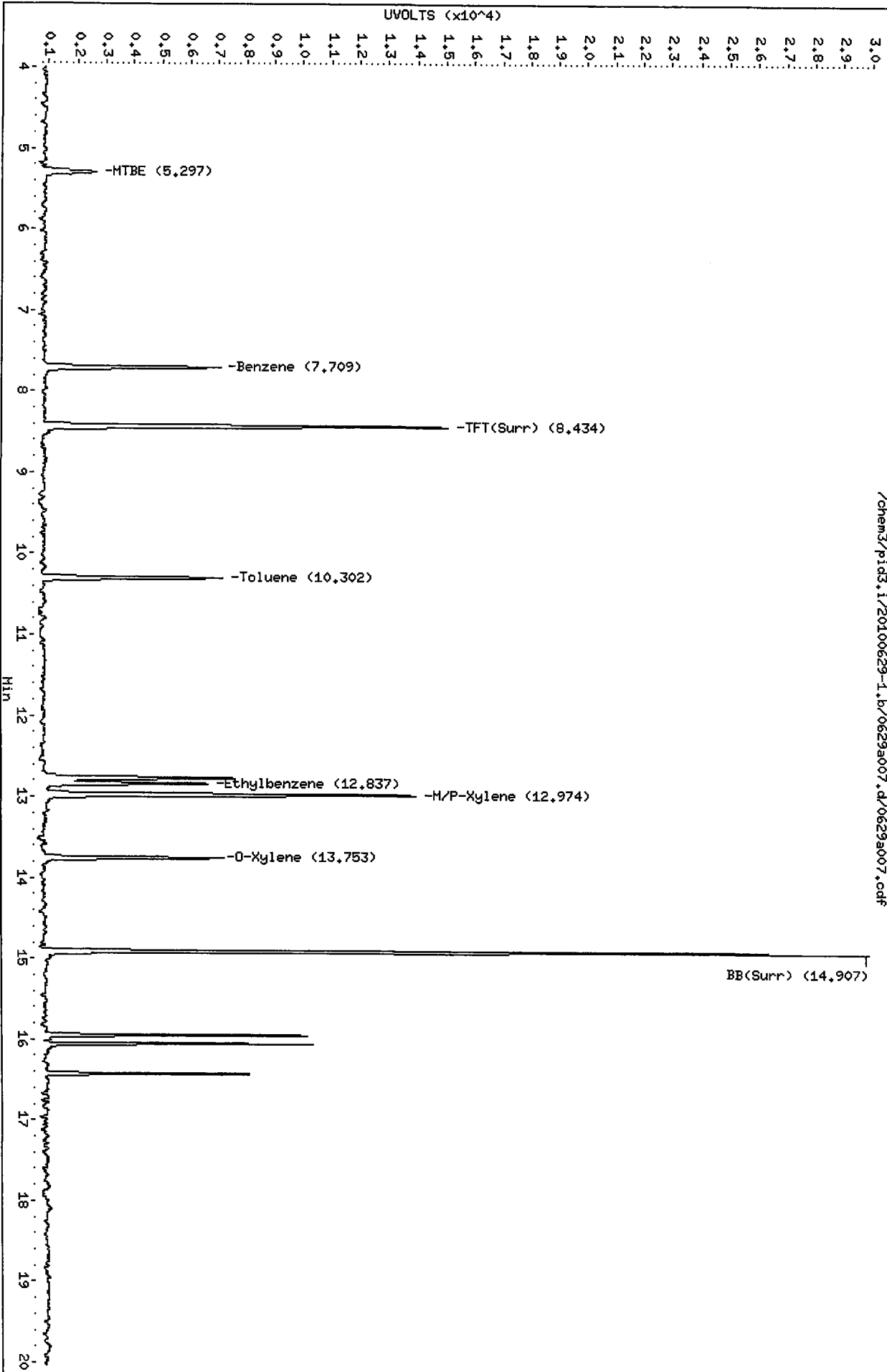
Client ID:  
Sample Info: BETX 5

Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100629-1.b/0629a007.d/0629a007.cdf



7/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a008.d      ARI ID: BETX 25  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a008.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 09:12  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                   Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.000	7036	82252	97.8	TFT (Surr)
14.911	-0.001	4118	35649	95.6	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-Cl2 (10.21 to 17.13)	554289	0.797
8015B 2MP-TMB ( 4.93 to 15.54)	539482	0.398
AK101 nC6-nC10 ( 5.50 to 14.63)	505710	0.468
NWTPHG Tol-Nap (10.21 to 18.23)	562868	0.760

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.436	-0.001	21401	97.4	TFT (Surr)
14.908	-0.002	44020	96.6	BB (Surr)

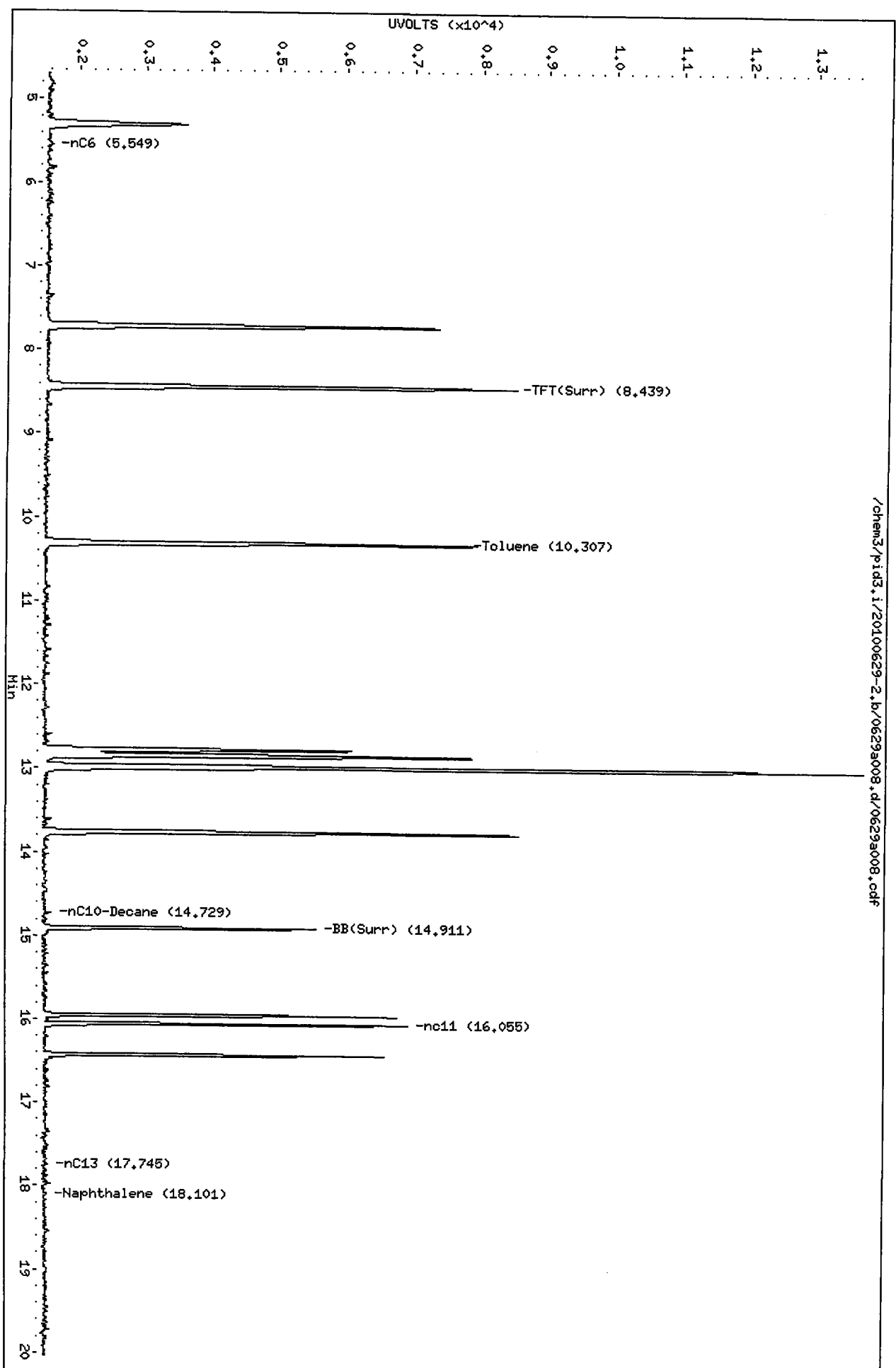
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.712	-0.001	31003	23.45	Benzene
10.304	-0.004	31867	24.14	Toluene
12.840	-0.007	29632	23.85	Ethylbenzene
12.977	-0.012	65022	48.28	M/P-Xylene
13.755	-0.007	31715	24.68	O-Xylene
5.300	-0.001	8658	24.33	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100629-2.b/0629a008.d  
Date: 29-JUN-2010 09:12  
Client ID:  
Sample Info: BETX 25  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid3.i/20100629-2.b/0629a008.d/0629a008.cdf



Data File: /chem3/pid3.i/20100629-1.b/0629a008.d  
Date: 29-JUN-2010 09:12

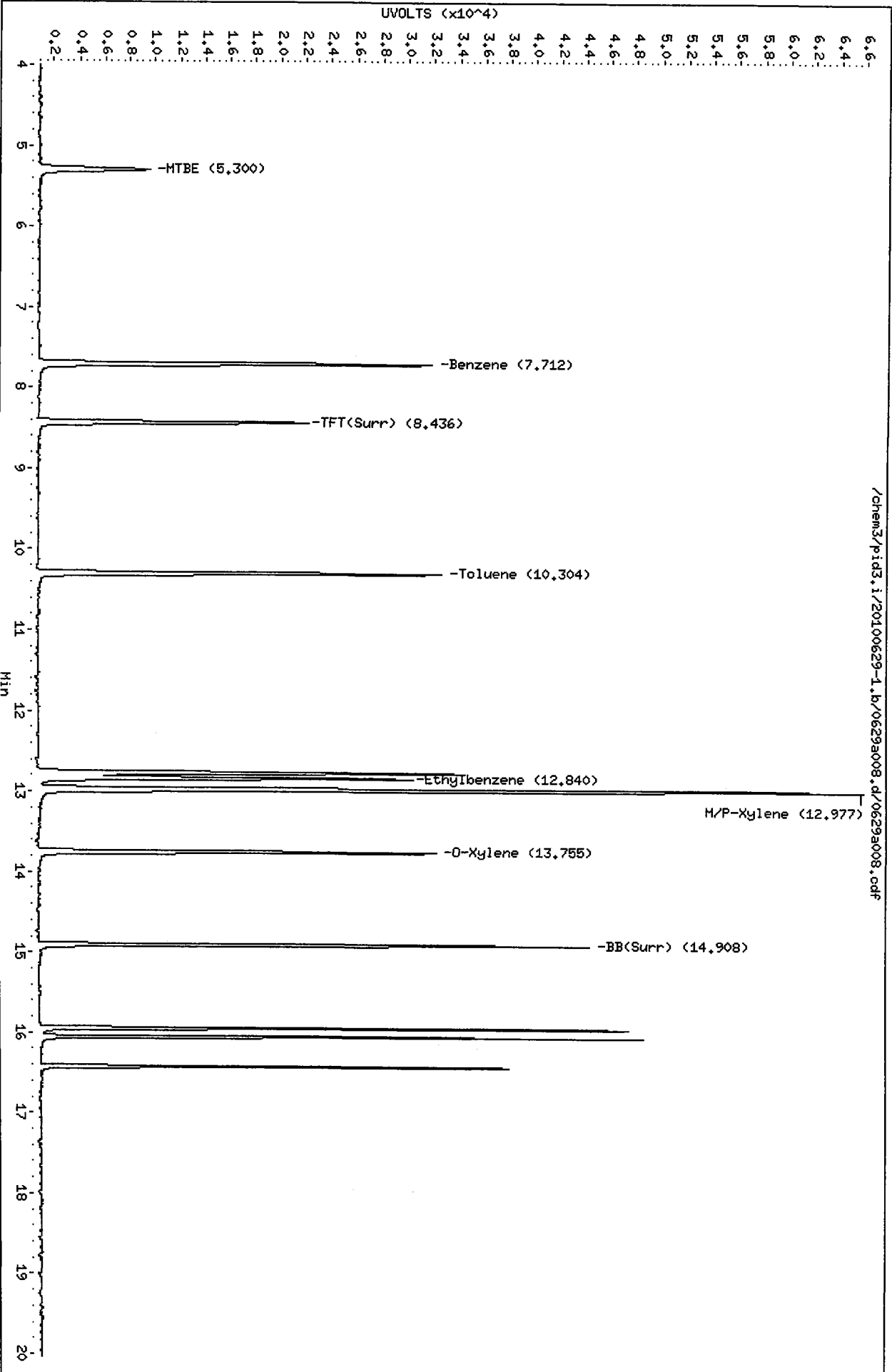
Client ID:  
Sample Info: BETX 25

Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100629-1.b/0629a008.d/0629a008.cdf



M  
7/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a009.d      ARI ID: BETX 50  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a009.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m            Injection Date: 29-JUN-2010 09:37  
Instrument: pid3.i                                        Matrix: WATER  
Gas Ical Date: 02-FEB-2010                            Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
---	-----	-----	-----	-----	-----
8.438	-0.001	9374	110805	130.2	TFT (Surr)
14.911	-0.001	5595	46087	129.9	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
-----	-----	-----
WAGas Tol-C12 (10.21 to 17.13)	1045595	1.504
8015B 2MP-TMB ( 4.93 to 15.54)	1041320	0.768
AK101 nC6-nC10 ( 5.50 to 14.63)	978534	0.906
NWTPHG Tol-Nap (10.21 to 18.23)	1053990	1.423

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====  
PID Surrogates

RT	Shift	Response	%Rec	Compound
---	-----	-----	-----	-----
8.436	-0.001	28902	131.5	TFT (Surr)
14.909	-0.001	60660	133.1	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
---	-----	-----	-----	-----
7.711	-0.002	62822	47.52	Benzene
10.305	-0.003	63750	48.30	Toluene
12.841	-0.006	59507	47.89	Ethylbenzene
12.979	-0.010	130181	96.67	M/P-Xylene
13.757	-0.005	64099	49.89	O-Xylene
5.298	-0.003	17422	48.97	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100629-2.b/0629a009.d  
Date : 29-JUN-2010 09:37

Client ID:

Sample Info: BETX 50

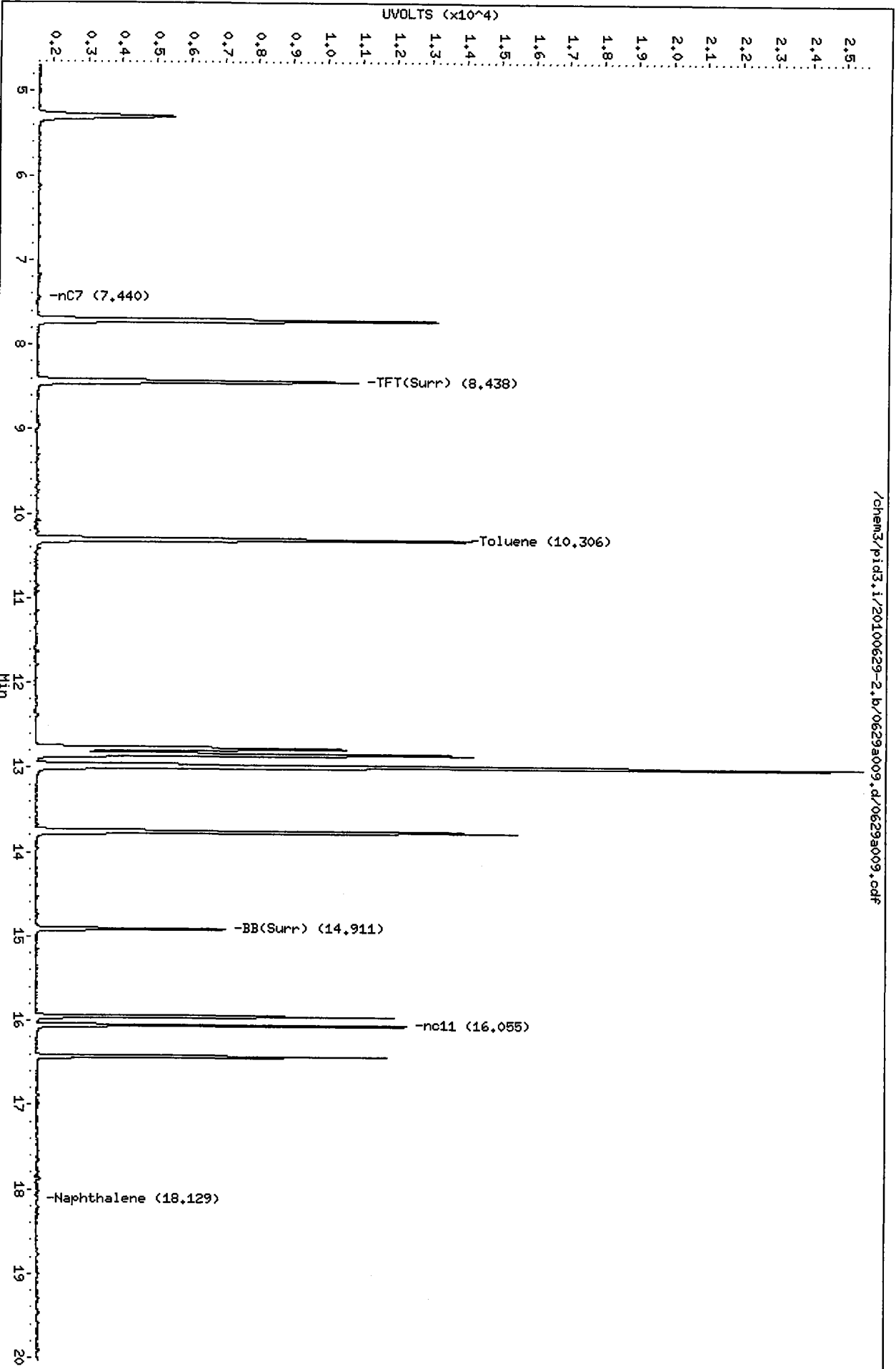
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

/chem3/pid3.i/20100629-2.b/0629a009.d/0629a009.cdf



Data File: /chem3/pid3.i/20100629-1.b/0629a009.d  
Date : 29-JUN-2010 09:37

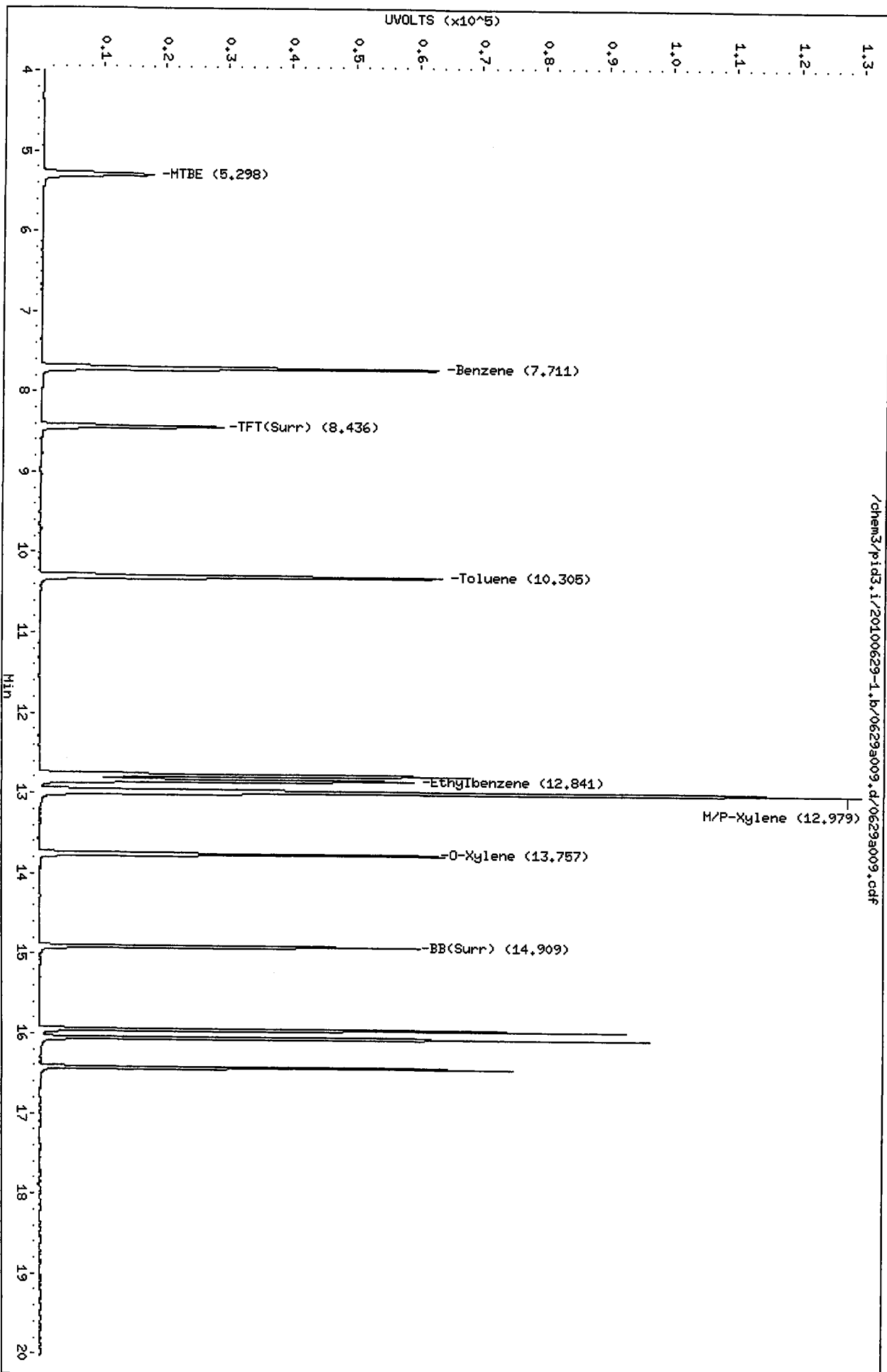
Client ID:  
Sample Info: BETX 50

Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: HH  
Column diameter: 0.18

Page 1



/chem3/pid3.i/20100629-1.b/0629a009.d/0629a009.cdf

7/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a010.d      ARI ID: BETX 100  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a010.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 10:01  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                   Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.440	0.001	12289	144775	170.7	TFT(Surr)
14.912	0.001	7394	58577	171.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
-----	-----	-----
WAGas Tol-C12 (10.21 to 17.13)	2011481	2.893
8015B 2MP-TMB ( 4.93 to 15.54)	1982095	1.462
AK101 nC6-nC10 ( 5.50 to 14.63)	1860428	1.722
NWTPHG Tol-Nap (10.21 to 18.23)	2014004	2.719

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====  
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.438	0.001	37664	171.3	TFT(Surr)
14.910	0.001	80033	175.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.714	0.001	122057	92.32	Benzene
10.307	-0.001	124686	94.47	Toluene
12.844	-0.003	115194	92.70	Ethylbenzene
12.984	-0.006	249433	185.23	M/P-Xylene
13.759	-0.003	125630	97.78	O-Xylene
5.302	0.001	33414	93.91	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

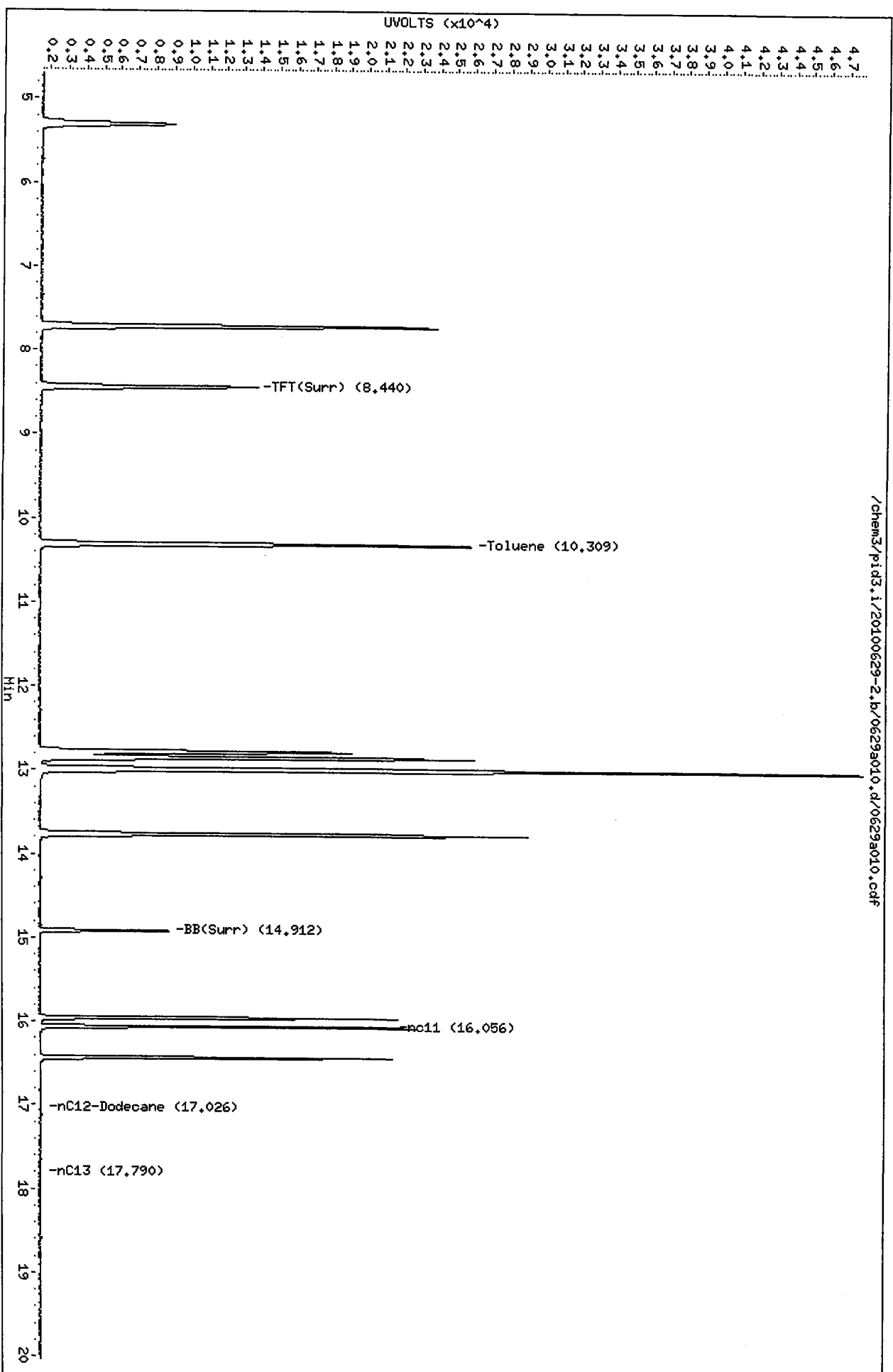
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Date : 29-JUN-2010 10:01

Client ID:  
Sample Info: BETX 100

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid3.i/20100629-2.b/0629a010.d/0629a010.cdf



001170

Data File: /chem3/pid3.i/20100629-1.b/0629a010.d

Date: 29-JUN-2010 10:01

Client ID:

Sample Info: BETX 100

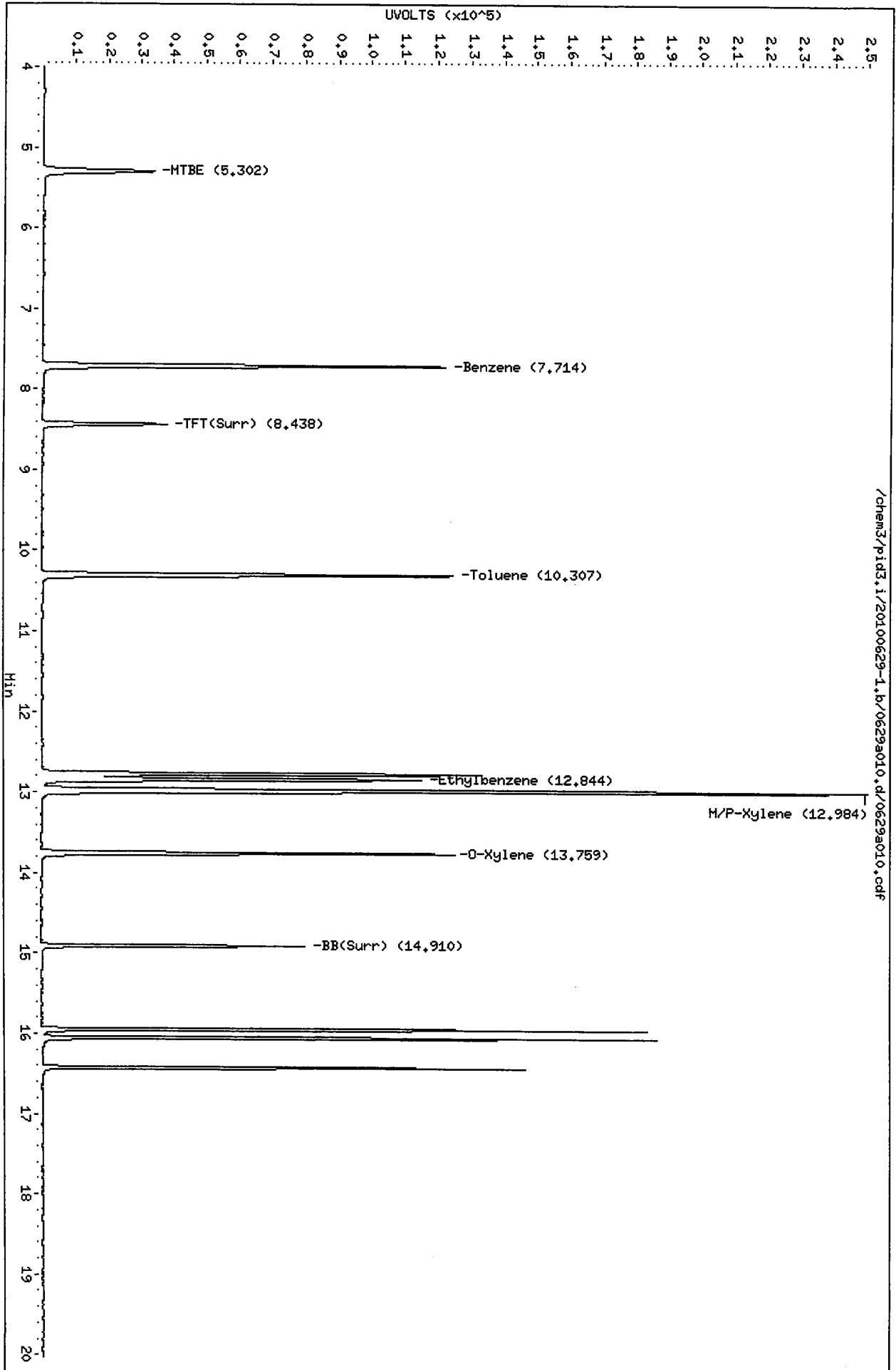
Instrument: pid3.i

Operator: MH

Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid3.i/20100629-1.b/0629a010.d/0629a010.cdf



M.  
7/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a011.d      ARI ID: BETX 200  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a011.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 10:26  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	-----	-----	-----
8.439	0.000	14060	165027	195.3	TFT (Surr)
14.911	0.000	8446	67516	196.1	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas Tol-C12 (10.21 to 17.13)	4138650	5.951
8015B 2MP-TMB ( 4.93 to 15.54)	4088735	3.015
AK101 nC6-nC10 ( 5.50 to 14.63)	3833098	3.547
NWTPHG Tol-Nap (10.21 to 18.23)	4139793	5.588

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	-----	-----
8.437	0.000	43804	199.3	TFT (Surr)
14.910	0.000	92698	203.3	BB (Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.713	0.000	250899	189.77	Benzene
10.308	0.000	258768	196.06	Toluene
12.847	0.000	236635	190.43	Ethylbenzene
12.989	0.000	507143	376.60	M/P-Xylene
13.762	0.000	261479	203.52	O-Xylene
5.301	0.000	68624	192.87	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



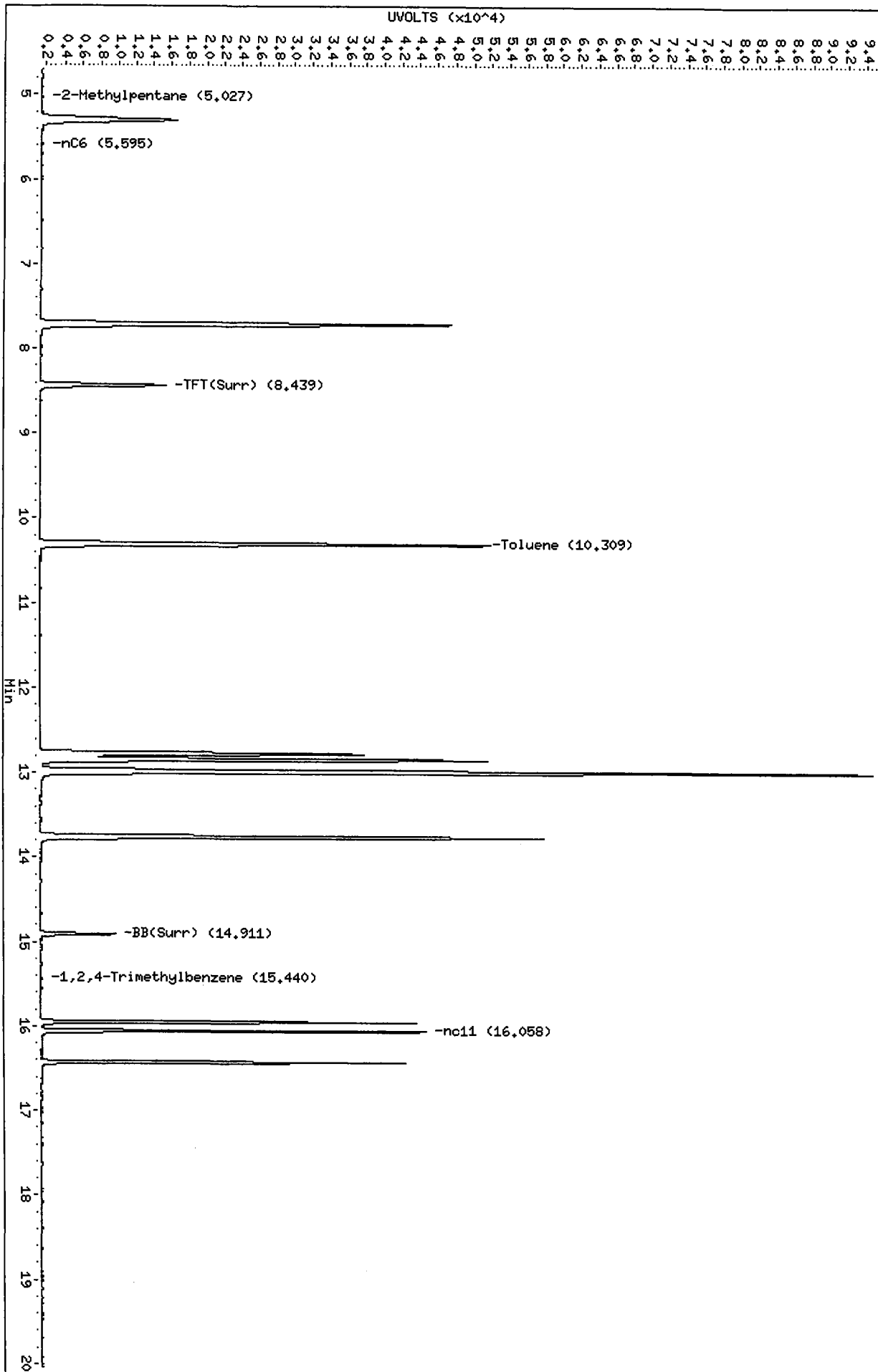
Data File: /chem3/pid3,i/20100629-2,b/0629s011.d  
Date : 29-JUN-2010 10:26

Client ID:  
Sample Info: BETX 200

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3,i/20100629-2,b/0629s011.d/0629s011.cdf



Data File: /chem3/pid3.i/20100629-1.b/0629a011.d

Date: 29-JUN-2010 10:26

Client ID:

Sample Info: BETX 200

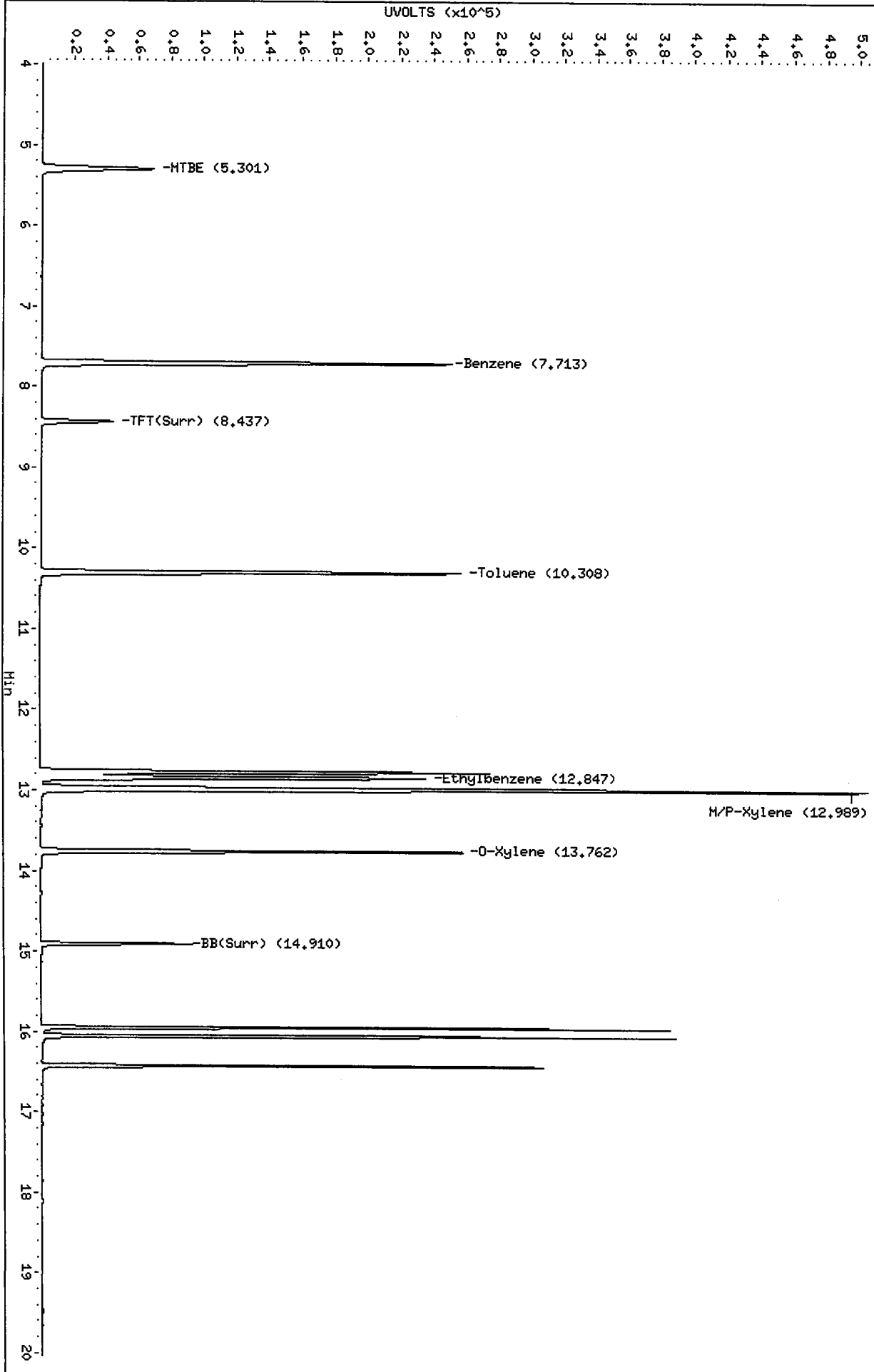
Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

/chem3/pid3.i/20100629-1.b/0629a011.d/cdf



M.  
7/16/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a012.d      ARI ID: BETX ICV  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a012.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 10:50  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                   Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.000	6906	81786	95.9	TFT (Surr)
14.911	0.000	4128	34996	95.9	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.13)	577743	0.831
8015B 2MP-TMB ( 4.93 to 15.54)	579812	0.428
AK101 nC6-nC10 ( 5.50 to 14.63)	541769	0.501
NWTPHG Tol-Nap (10.21 to 18.23)	580332	0.783

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.437	0.000	21036	95.7	TFT (Surr)
14.909	0.000	44825	98.3	BB (Surr)

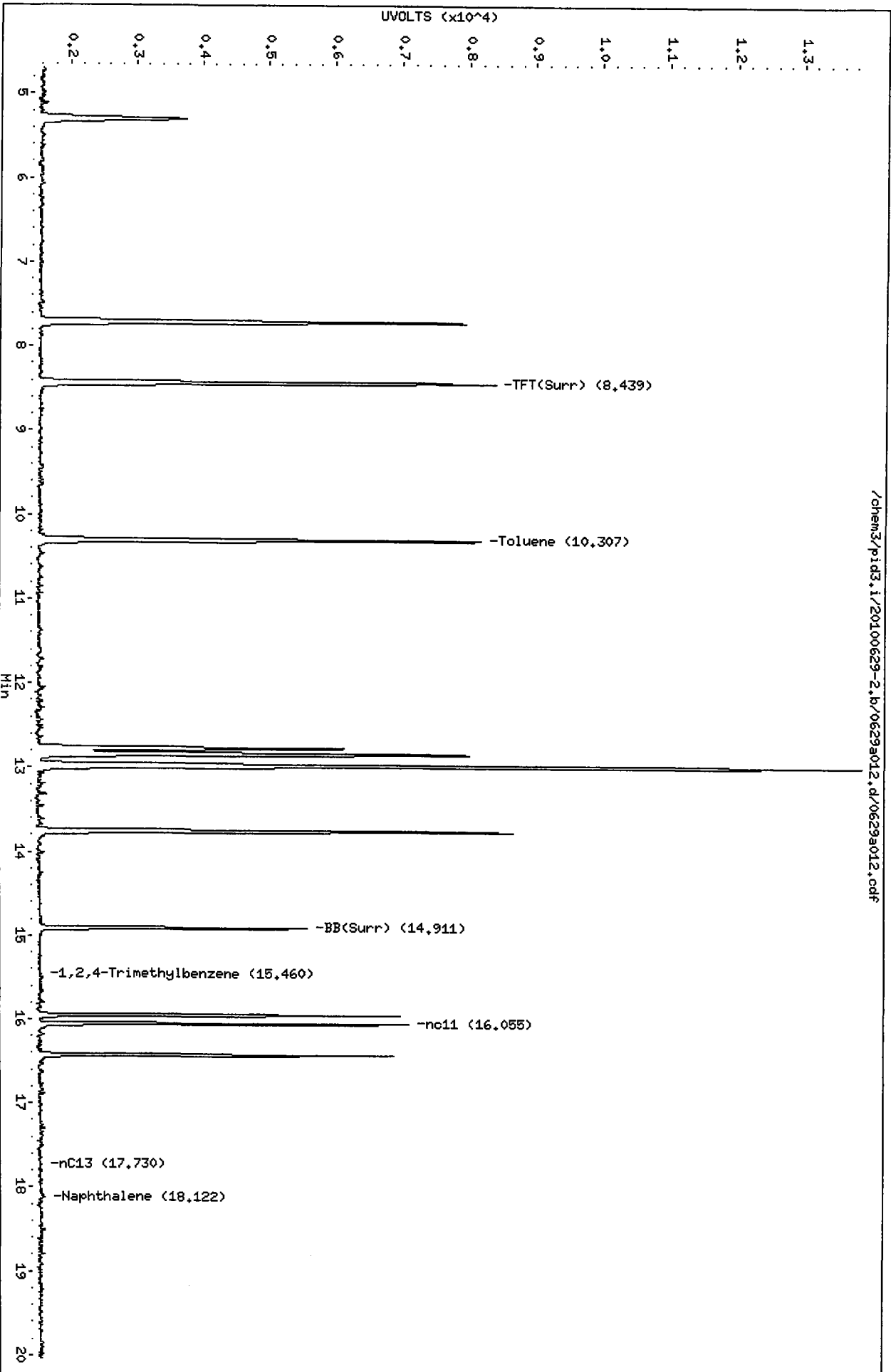
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.712	-0.001	34297	25.94	Benzene
10.305	-0.002	33530	25.40	Toluene
12.841	-0.005	30482	24.53	Ethylbenzene
12.979	-0.010	67184	49.89	M/P-Xylene
13.757	-0.005	32583	25.36	O-Xylene
5.300	-0.001	9537	26.80	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100629-2.b/0629a012.d  
Date: 29-JUN-2010 10:50  
Client ID:  
Sample Info: BETX ICV  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



/chem3/pid3.i/20100629-2.b/0629a012.d/0629a012.cdf

Data File: /chem3/pid3.i/20100629-1.b/0629a012.d  
Date: 29-JUN-2010 10:50  
Client ID:

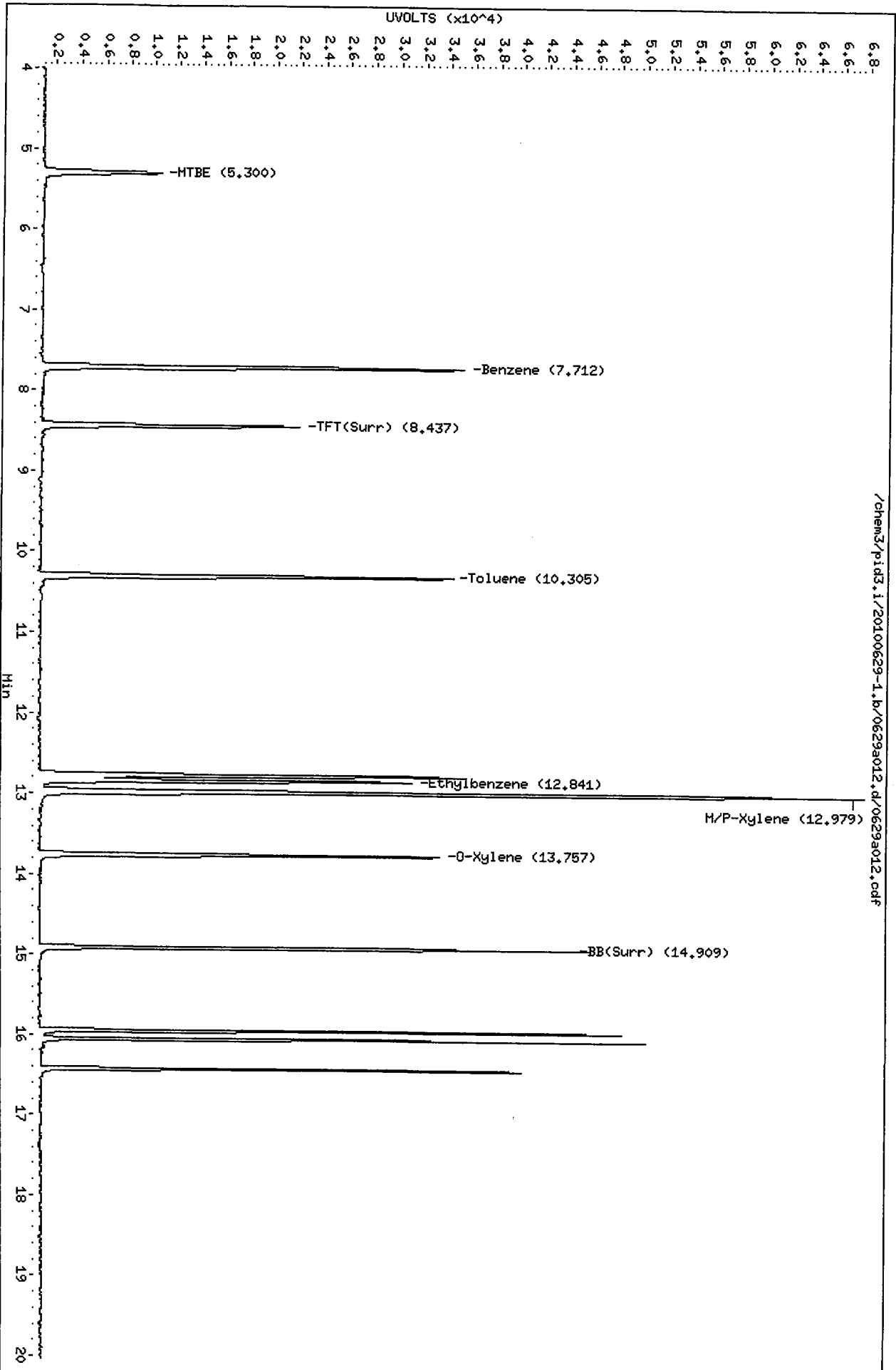
Sample Info: BETX ICV

Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18



/chem3/pid3.i/20100629-1.b/0629a012.d/0629a012.cdf

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid3.i/20100629-2.b/FID.m  
Batch File: /chem3/pid3.i/20100629-2.b  
Inst ID: pid3.i

ID: RT01 RT02 RT03 RT04 RT05 RT06 RT07 RT07 EXPEC RT RT WINDOW AVG RT STD DEV  
 FILENAME: 0629a005 0629a006 0629a007 0629a008 0629a009 0629a010 0629a011 0629a011  
 INJ DATE: 29-JUN-2010 29-JUN-2010 29-JUN-2010 29-JUN-2010 29-JUN-2010 29-JUN-2010 29-JUN-2010  
 INJ TIME: 07:59 08:24 08:48 09:12 09:37 10:01 10:26

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	5.027	5.027	4.957-5.097	5.027	0.000
18 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	1.097	1.097	1.027-1.167	+++++	+++++
19 8015B	+++++	+++++	+++++	+++++	+++++	+++++	0.891	0.891	0.821-0.961	+++++	+++++
20 AK101	+++++	+++++	+++++	+++++	+++++	+++++	1.000	1.000	0.930-1.070	+++++	+++++
21 NWGAS	+++++	+++++	+++++	+++++	+++++	+++++	1.000	1.000	0.930-1.070	+++++	+++++
2 nC5	+++++	+++++	+++++	5.549	+++++	+++++	5.595	5.595	5.525-5.665	5.572	0.032
3 nC7	+++++	7.470	+++++	+++++	7.440	+++++	+++++	7.440	7.370-7.510	7.455	0.021
4 TET (Surr)	8.418	8.430	8.435	8.439	8.438	8.440	8.439	8.418	8.348-8.488	8.434	0.008
5 nC8	+++++	9.879	+++++	+++++	+++++	+++++	+++++	9.879	9.809-9.949	9.879	0.000
6 Toluene	+++++	10.297	10.304	10.307	10.306	10.309	10.309	10.309	10.239-10.379	10.305	0.005
7 nC9	+++++	12.387	+++++	+++++	+++++	+++++	+++++	12.387	12.317-12.457	12.387	0.000
8 nC10-Decane	14.697	+++++	+++++	14.729	+++++	+++++	+++++	14.697	14.627-14.767	14.713	0.023
9 BB (Surr)	14.897	14.906	14.908	14.911	14.911	14.912	14.911	14.897	14.827-14.967	14.908	0.005
10 1,2,4-Trimethylbenzene	15.452	+++++	15.441	+++++	+++++	+++++	15.440	15.452	15.382-15.522	15.444	0.007
11 nC11	16.042	16.052	16.053	16.055	16.055	16.056	16.058	16.042	15.972-16.112	16.053	0.005
12 nC12-Dodecane	+++++	17.023	17.017	+++++	+++++	17.026	+++++	17.026	16.956-17.096	17.022	0.005
13 nC13	17.827	17.760	+++++	17.745	+++++	17.790	+++++	17.827	17.757-17.897	17.781	0.036

Reviewer 1          M4  
 Reviewer 2           
 Date: 7/10/10  
 Date: 7.10.10

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid3.i/20100629-1.b/PIDB.m  
Batch File: /chem3/pid3.i/20100629-1.b  
Inst ID: pid3.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
FILENAME: 0629a005	0629a006	0629a007	0629a008	0629a009	0629a010	0629a011	0629a011				
INJ DATE: 29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010				
INJ TIME: 07:59	08:24	08:48	09:12	09:37	10:01	10:26	10:26				
Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 MTBE	5.283	5.300	5.297	5.300	5.298	5.302	5.301	5.283	5.213-5.353	5.297	0.006
2 Benzene	7.694	7.706	7.709	7.712	7.711	7.714	7.713	7.694	7.624-7.764	7.708	0.007
3 TBT(Surr)	8.417	8.429	8.434	8.436	8.436	8.438	8.437	8.417	8.347-8.487	8.433	0.008
4 Toluene	10.287	10.297	10.302	10.304	10.305	10.307	10.308	10.287	10.217-10.357	10.301	0.007
15 Chlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.835	12.765-12.905	+++++	+++++
5 Ethylbenzene	12.817	12.832	12.837	12.840	12.841	12.844	12.847	12.817	12.747-12.887	12.837	0.010
6 M/P-Xylene	12.955	12.969	12.974	12.977	12.979	12.984	12.989	12.955	12.885-13.025	12.975	0.011
7 O-Xylene	13.737	13.750	13.753	13.755	13.757	13.759	13.762	13.737	13.687-13.787	13.753	0.008
8 BB(Surr)	14.893	14.904	14.907	14.908	14.909	14.910	14.910	14.893	14.823-14.963	14.906	0.006
13 1,3,5 Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.421	12.351-12.491	+++++	+++++
14 1,2,4 Trimethyl benzen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.059	12.989-13.129	+++++	+++++
16 1,3 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.034	15.964-16.104	+++++	+++++
17 1,4 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.140	16.070-16.210	+++++	+++++
18 1,2 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.513	16.443-16.583	+++++	+++++

Reviewer 1 MH Date: 7/10/10  
Reviewer 2 VP Date: 7-10-10

**TPHG/BETX Raw Data**  
**Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: RG54**





### VOA Analyst Notes / Corrective Action Log

ARI Project ID: RG54 Client ID: Floyd/Snyder

ARI SOP: ~~404S(Gas)~~ ~~410S(BTEX)~~ ~~430S(VPH)~~ ~~700S(8260C)~~ ~~703S(SIM)~~ ~~706S(524.2)~~ ~~710S(RSK-175)~~

Parameter(s): NWTPH6/BETX

Instrument: NT-3 NT-5 NT-7 NT-9 NT-10 PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 5 Curve Date: 6/29/10 BETX / 7/28/10 GCS Analysis Start Date: 8/3/10

pH ≤ 2.0	YES / NO <u>(NA)</u>	Method Blank In Control?	<u>(YES)</u> / NO
BFB Tune Meets Criteria?	YES / NO <u>(NA)</u>	LCS / LCSD Recovery In Control?	<u>(YES)</u> / NO
Internal Standard Meets Criteria?	YES / NO <u>(NA)</u>	Surrogate Recovery In Control?	<u>(YES)</u> / NO
ICal acceptable?	<u>(YES)</u> / NO	CCal acceptable?	<u>(YES)</u> / NO
Q flag applied?	YES / NO / <u>(NA)</u>	Q flag applied?	YES / NO / <u>(NA)</u>
Manual Integrations for ICal?	<u>(YES)</u> / NO	Manual Integrations for Samples?	Yes / <u>(NO)</u>
Special Analysis Criteria Met?	YES / NO <u>(NA)</u>		

Bubbles/Headspace: None SM (≤ 2mm ●) PB (2-4mm) LG (> 4mm ●) Head Space

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

Additional Details on Reverse: Yes / No

Analyst: [Signature] Date: 8/6/10

Reviewer: [Signature] Date: \_\_\_\_\_

**Analytical Resources Inc.: Organics Instrument Log**  
**PID-3 HP 5890 Series II - Serial No.: 2728A-13336**

Date: 8/3/10 Analysis: NWTP46/BETA Analyst: MH  
 GC Program: BETA Column No: 832213 Column Type: RTX502-C  
 Instrument Tune (.U or .CT.): \_\_\_\_\_ EM Voltage: \_\_\_\_\_  
 Calibration File: \_\_\_\_\_ Curve Date: 7/28/10 63  
6/28/10 BETA

IS/SS	Ical/Ccal	LCS/ICV
<u>VW 632-3</u>	<u>VW 635-1</u>	<u>VW 647-2</u>
_____	<u>VW 644-3</u>	_____
_____	<u>VW 647-2</u>	_____
_____	_____	_____
_____	_____	_____

Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0708	0803a001.d	RINSE		1	
2	0732	0803a002.d	RT-BCAL 1		1	
3	0757	0803a003.d	GCAL 1		1	
4	0821	0803a004.d	LCS0803		1	
5	0846	0803a005.d	LCSD0803		1	
6	0910	0803a006.d	MB0803		1	
7	1005	0803a007.d	RG54G	PSB14-TB	1	
8	1030	0803a008.d	RG60G	PSB13-TB	1	
9	1054	0803a009.d	RG60A	PSB13-0-0.5-072910	0.00	
10	1119	0803a010.d	RG60B	PSB13-1.5-2-072910	0.00	
11	1143	0803a011.d	RG60C	PSB13-2-4-072910	0.00	
12	1208	0803a012.d	RG60D	PSB13-4-6-072910	0.00	
13	1232	0803a013.d	RINSE		1	
14	1256	0803a014.d	BCAL 2		1	
15	1320	0803a015.d	GCAL 2		1	
16	1345	0803a016.d	RG60E	PSB13-11-13-072910	0.00	
17	1410	0803a017.d	RG60F	PSB13-14.5-16.5-072	0.00	
18	1435	0803a018.d	RG54A	PSB14-0-.5-072810	0.00	
19	1459	0803a019.d	RG54B	PSB14-1.5-2.0-07281	0.00	
20	1524	0803a020.d	RG54C	PSB14-2-4-072810	0.00	
21	1548	0803a021.d	RG54E	PSB14-7-9-072810	0.00	
22	1613	0803a022.d	RG54F	PSB14-12-14-072810	0.00	
23	1637	0803a023.d	RG54FMS		1	
24	1702	0803a024.d	RG54FMSD		1	
25	1727	0803a025.d	RINSE		1	
26	1751	0803a026.d	BCAL3		1	
27	1816	0803a027.d	GCAL 3		1	
28	1840	0803a028.d	RG54H	PSB17-0-0.5-072810	0.00	
29	1904	0803a029.d	RG54I	PSB17-1.5-2-072810	0.00	
30	1929	0803a030.d	RG54J	PSB17-2-4-072810	0.00	
31	1954	0803a031.d	RG54K	PSB17-4-6-072810	0.00	
32	2018	0803a032.d	RG54L	PSB17-10-13-072810	0.00	
33	2043	0803a033.d	RINSE		1	
34	2108	0803a034.d	BCAL 4		1	
35	2132	0803a035.d	GCAL 4		1	

MH  
8/3/10

**Maintenance / Comments**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Maintenance Verification** (Identify ICal or CCal that demonstrates the instrument is in control):  
 Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

M  
8/15/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a002.d      ARI ID: RT+BCAL 1  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a002.d      Client ID: RT+BCAL 1  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 07:32  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
---	-----	-----	-----	-----	-----
8.408	-0.035	7429	87387	103.2	TFT(Surr)
14.888	-0.025	4327	35599	100.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)  
-----

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (10.21 to 17.12)	827807	1067809	1.290
8015B 2MP-TMB ( 4.94 to 15.60)	1664107	1323007	0.795
AK101 nC6-nC10 ( 5.43 to 14.51)	1131784	927489	0.819
NWTPHG Tol-Nap (10.21 to 18.19)	882029	1127350	1.278

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
---	-----	-----	-----	-----
8.407	0.000	21502	97.8	TFT(Surr)
14.886	0.000	44002	96.5	BB(Surr)

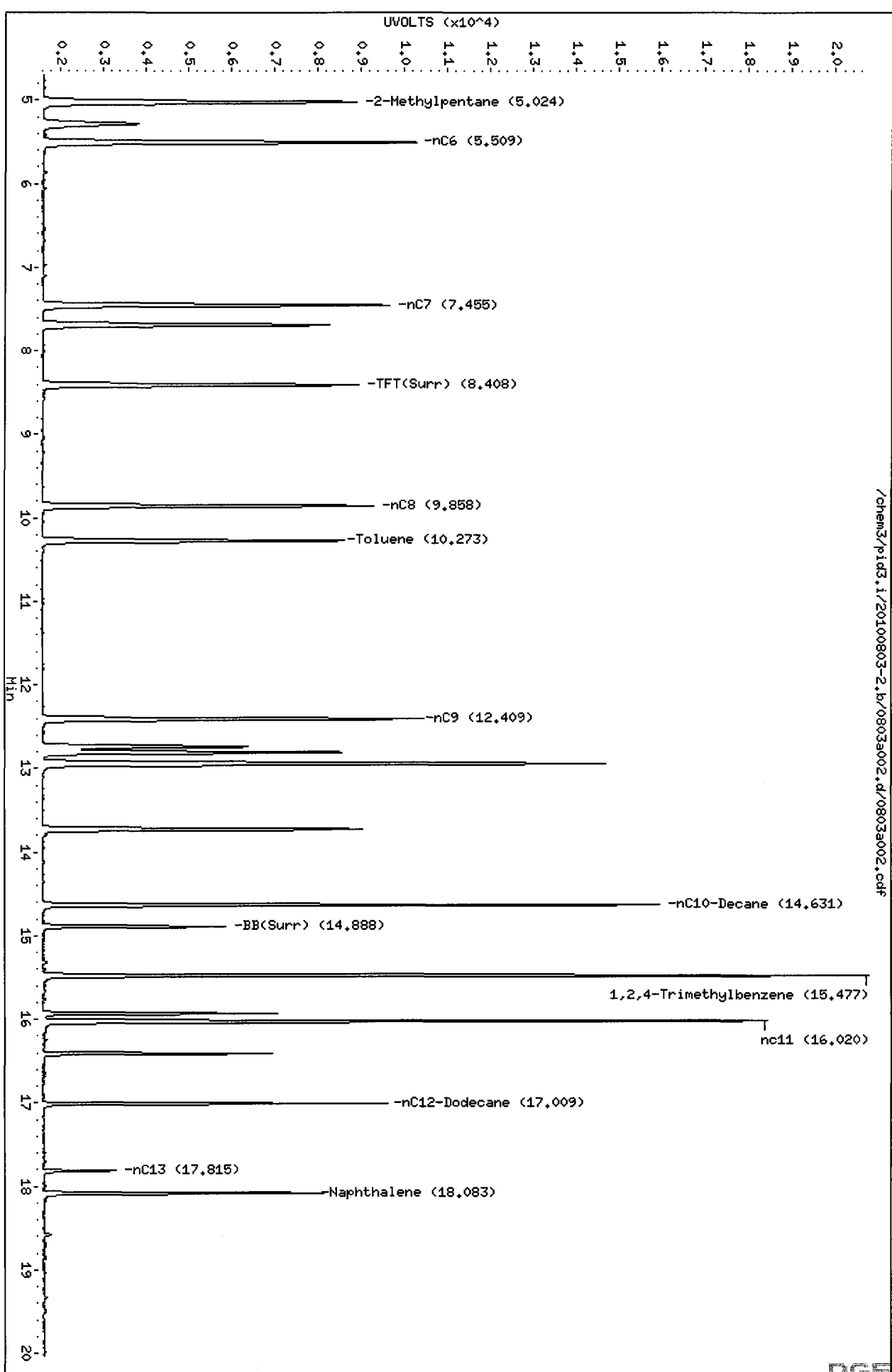
SW8021 (PID)  
-----

RT	Shift	Response	Amount	Compound
---	-----	-----	-----	-----
7.688	0.000	33920	25.66	Benzene
10.271	0.000	33570	25.44	Toluene
12.805	0.000	30736	24.73	Ethylbenzene
12.942	0.000	67291	49.97	M/P-Xylene
13.724	0.000	32001	24.91	O-Xylene
5.288	0.000	9362	26.31	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a002.d  
Date: 03-AUG-2010 07:32  
Client ID:  
Sample Info: RT+BCAL 1  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid3.i/20100803-2.b/0803a002.d/0803a002.caf

Data File: /chem3/pid3.1/20100803-1.b/0803a002.d

Date: 03-AUG-2010 07:32

Client ID: RT+BCAL 1

Sample Info: RT+BCAL 1

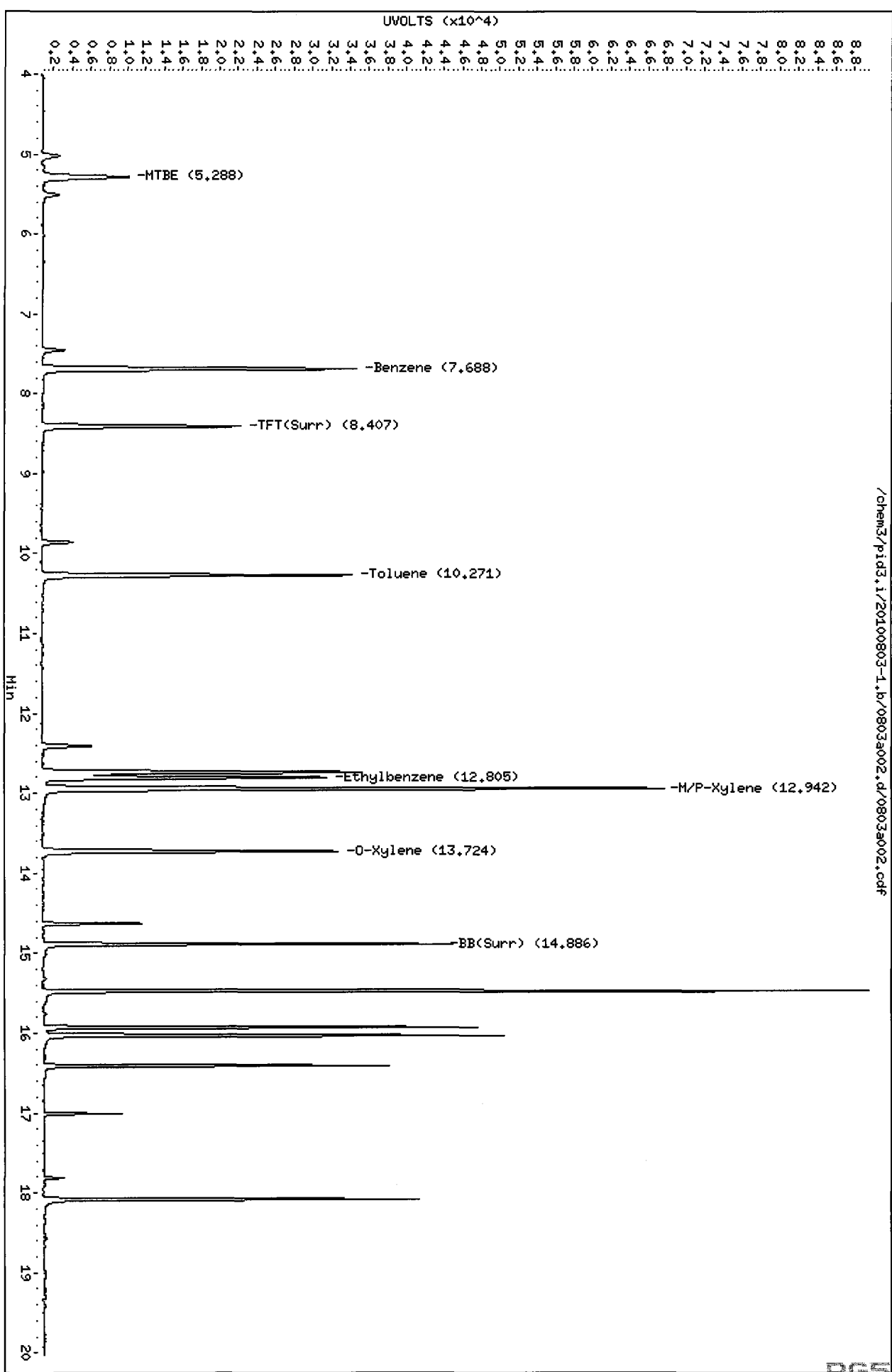
Column phase: RTX 502-2 PID

Instrument: pid3.1

Operator: MH

Column diameter: 0.18

/chem3/pid3.1/20100803-1.b/0803a002.d/0803a002.cdf



8/5/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a003.d      ARI ID: GCAL 1  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a003.d      Client ID:  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 07:57  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.427	0.018	7874	93670	109.4	TFT(Surr)
14.901	0.014	4587	37366	106.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	2059882	2.488 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	4090267	2.458 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2749760	2.430 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	2190146	2.483 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.425	0.017	22816	103.8	TFT(Surr)
14.899	0.013	45787	100.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.704	0.016	7312	5.53	Benzene
10.291	0.020	99034	75.04	Toluene
12.824	0.020	28689	23.09	Ethylbenzene
12.965	0.023	110466	82.03	M/P-Xylene
13.742	0.018	45267	35.23	O-Xylene
5.301	0.013	82461	231.76	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a003.d

Date: 03-AUG-2010 07:57

Client ID:

Sample Info: GCAL 1

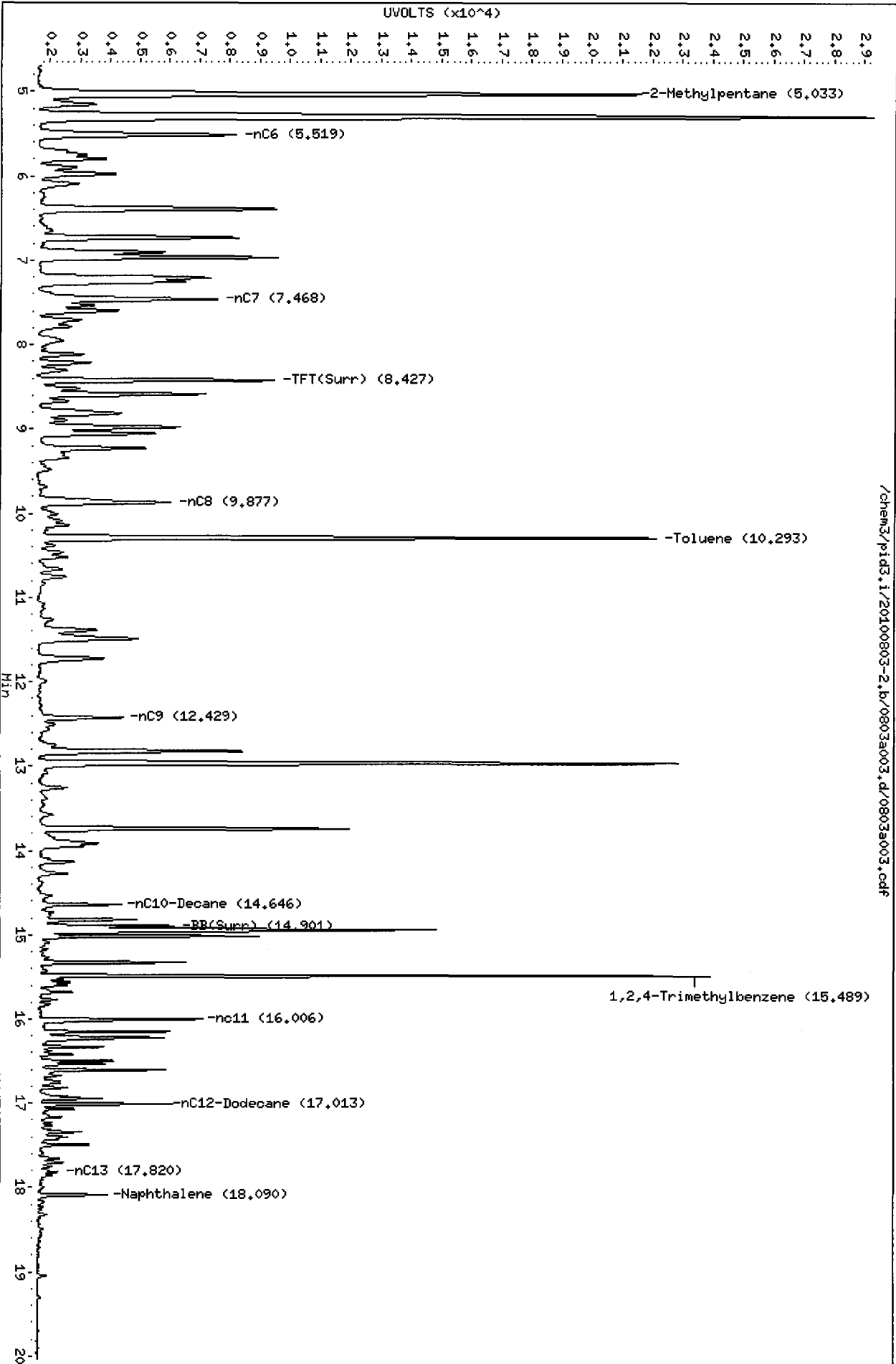
Instrument: pid3.i

Operator: MH

Column diameter: 0.18

Column phase: RTX 502-2 FID

/chem3/pid3.i/20100803-2.b/0803a003.d/0803a003.cdf



Data File: /chem3/pid3.1/20100803-1.b/0803a003.d

Date: 03-AUG-2010 07:57

Client ID:

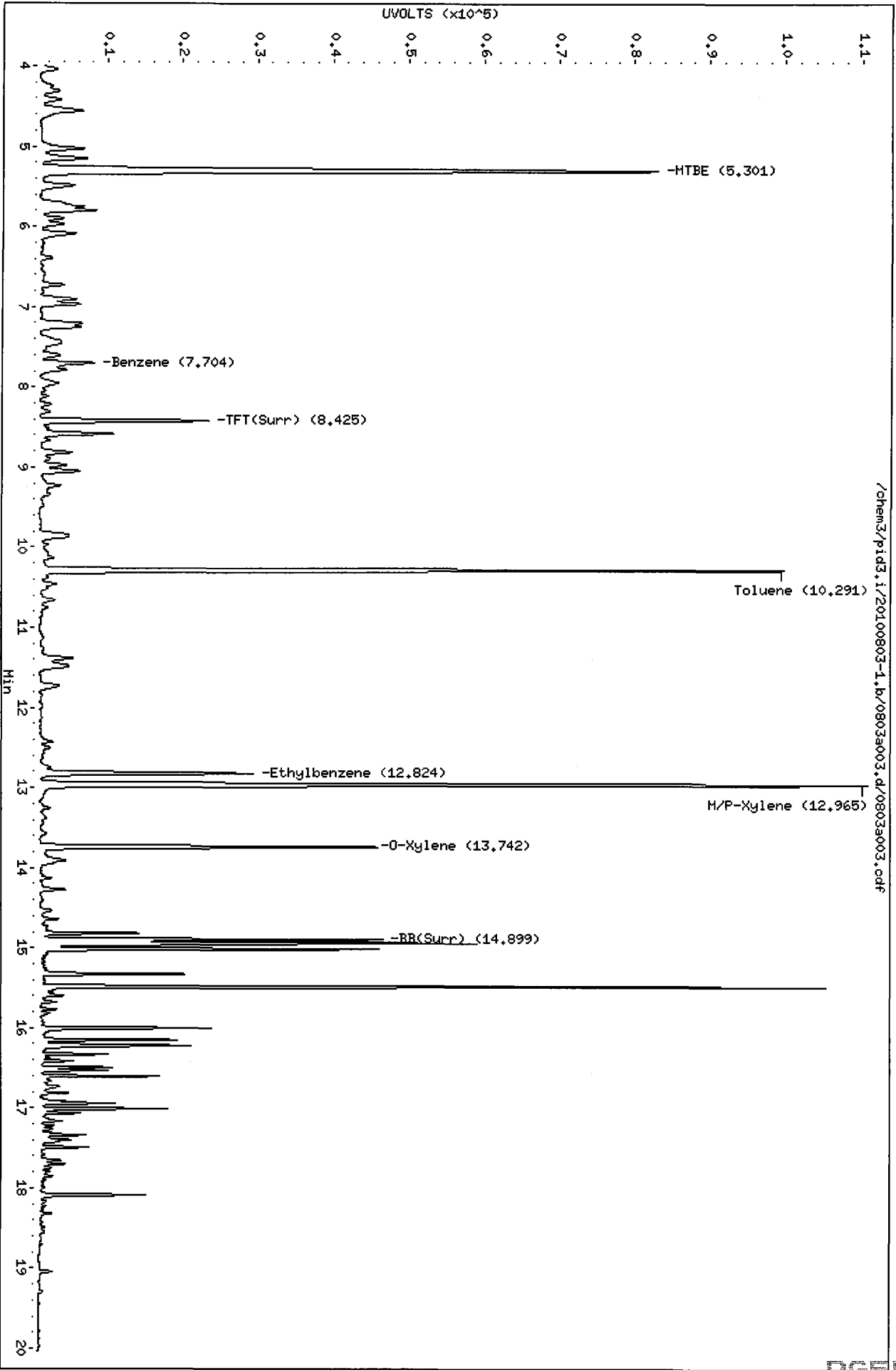
Sample Info: GCAL 1

Column phase: RTX 502-2 PID

Instrument: pid3.1

Operator: MH

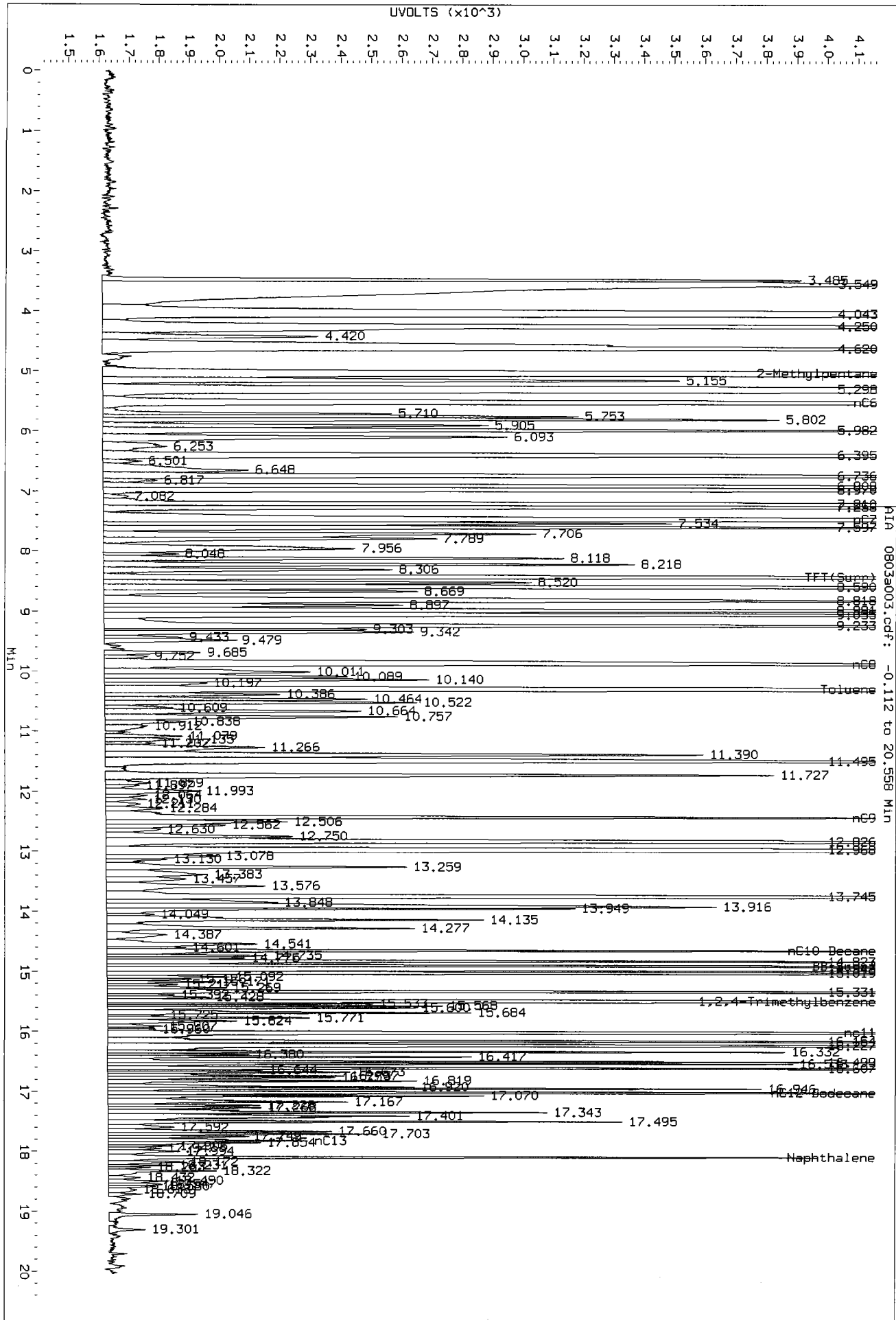
Column diameter: 0.18

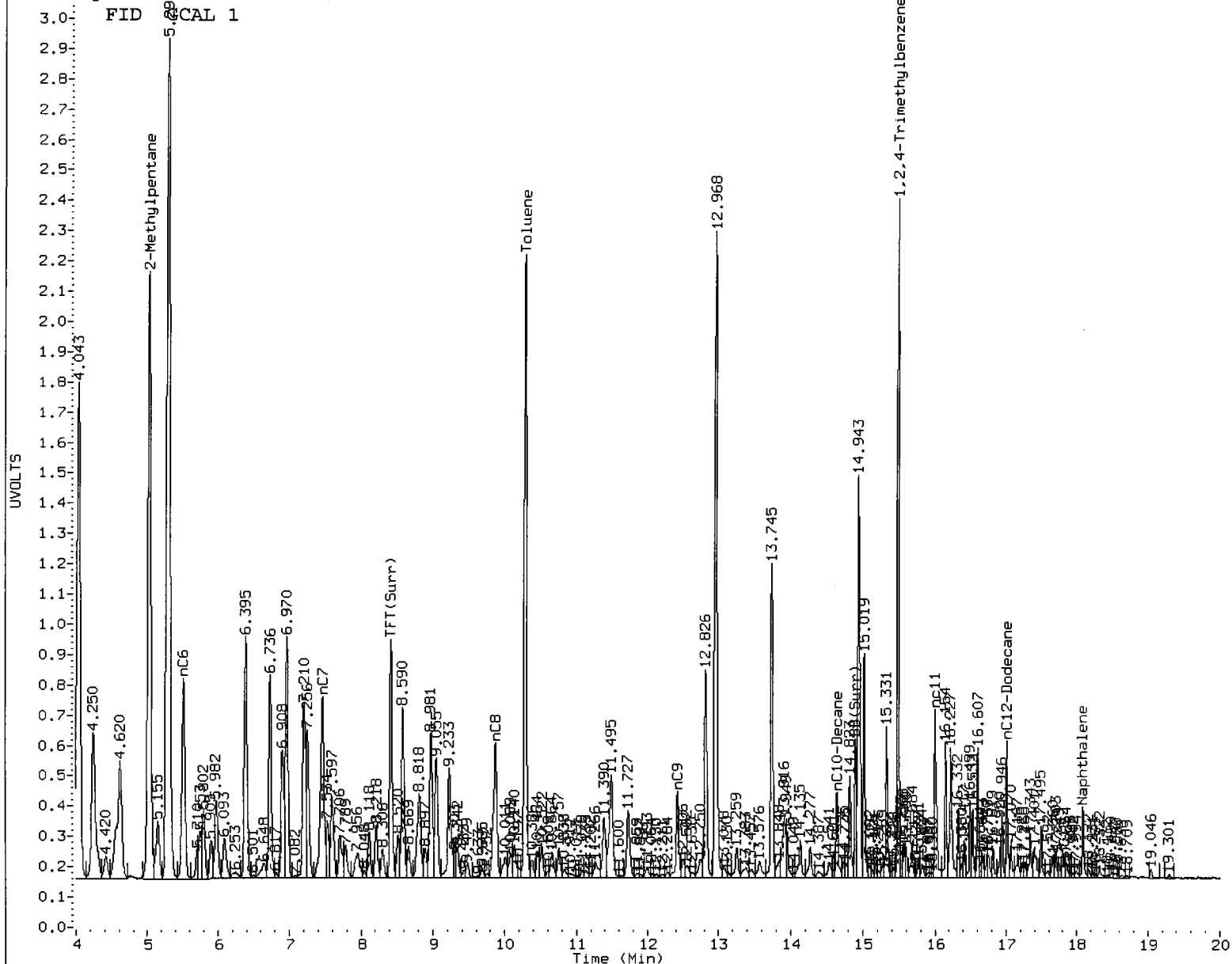




ML  
8/5/10

Data File: /chem3/pid3.1/20100803-2.b/0803a003.d/0803a003.cdf  
Injection Date: 03-AUG-2010 07:57  
Instrument: pid3.1  
Client Sample ID:





MANUAL INTEGRATION

- Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
  
- 5. Other \_\_\_\_\_

Analyst: MH

Date: 8/5/10

8/5/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a004.d      ARI ID: LCS0803  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a004.d      Client ID:  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 08:21  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.434	0.025	7542	88749	104.8	TFT(Surr)
14.907	0.019	4423	35659	102.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	825689	0.997 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	1644413	0.988 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1103770	0.975 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	885735	1.004 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.432	0.025	21798	99.2	TFT(Surr)
14.905	0.019	44602	97.8	BB(Surr)

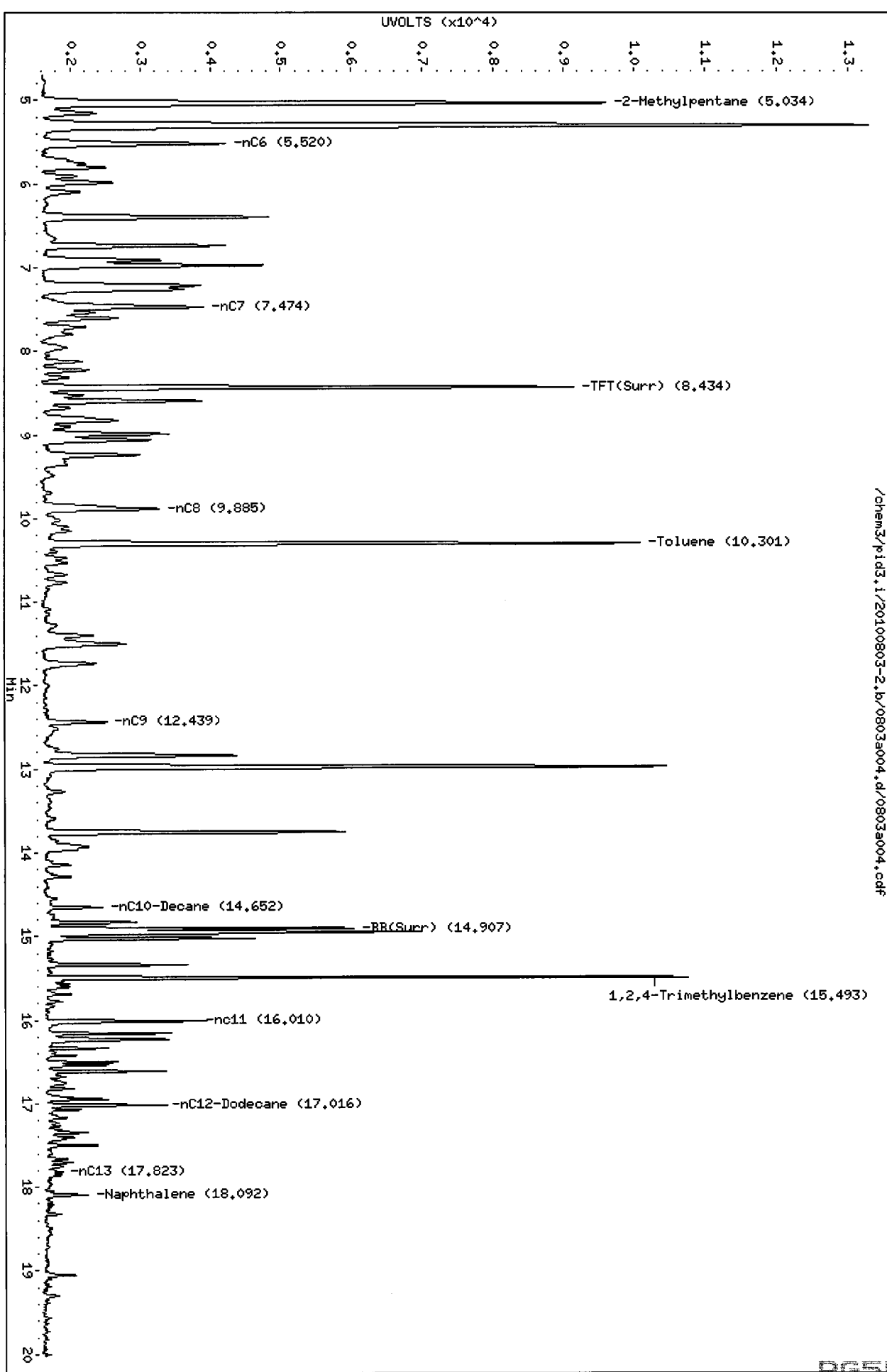
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.710	0.022	2959	2.24	Benzene
10.300	0.028	40606	30.77	Toluene
12.834	0.029	11611	9.34	Ethylbenzene
12.974	0.032	45321	33.65	M/P-Xylene
13.750	0.026	18497	14.40	O-Xylene
5.302	0.014	35390	99.47	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a004.d  
Date: 03-AUG-2010 08:21  
Client ID:  
Sample Info: LCS0803  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: KH  
Column diameter: 0.18



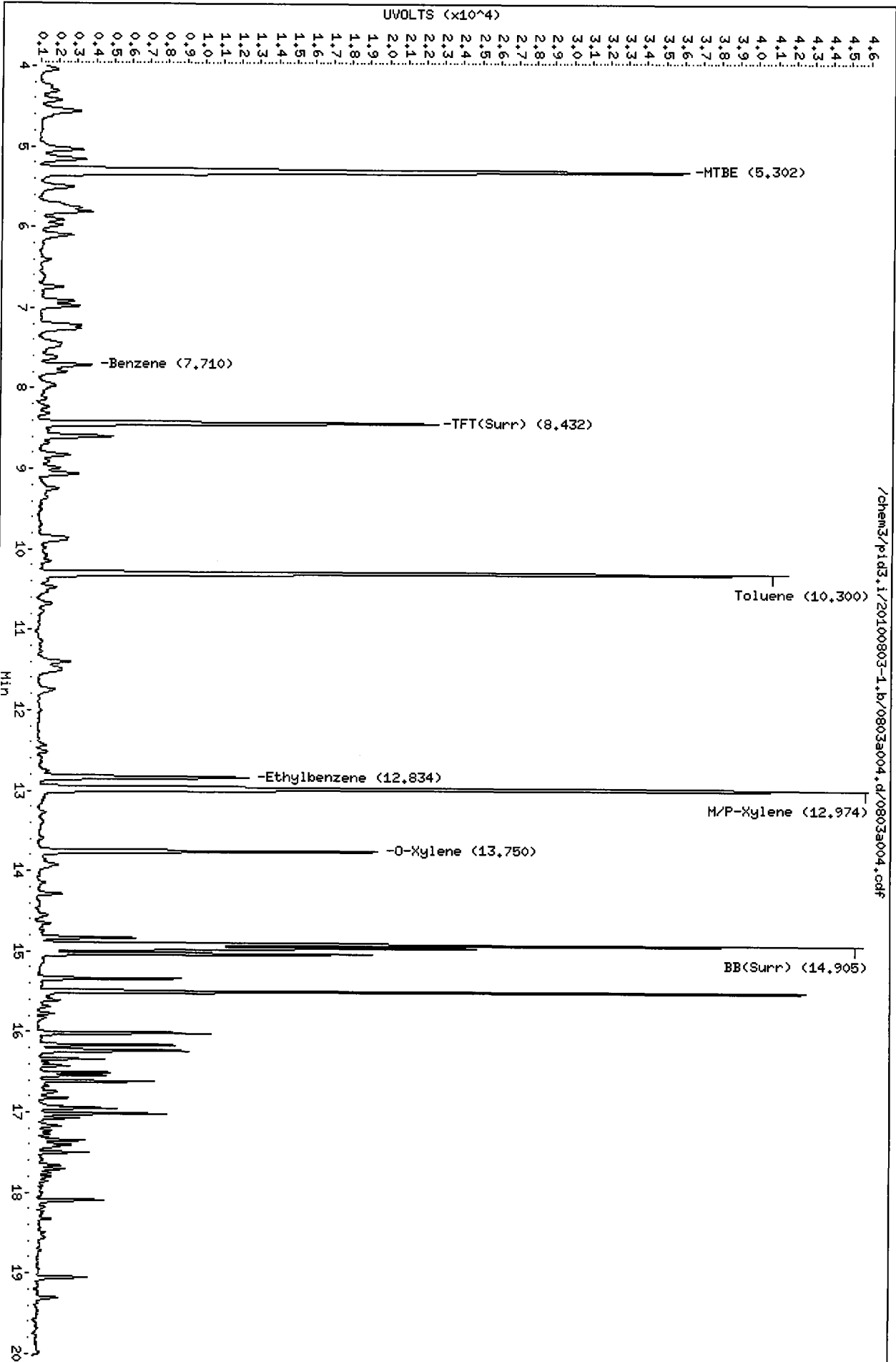
/chem3/pid3.i/20100803-2.b/0803a004.d/0803a004.cdf

Data File: /chem3/pid3.i/20100803-1.b/0803a004.d  
Date: 03-AUG-2010 08:21

Client ID:  
Sample Info: LCS0803

Column phase: RTX 502-2 PID

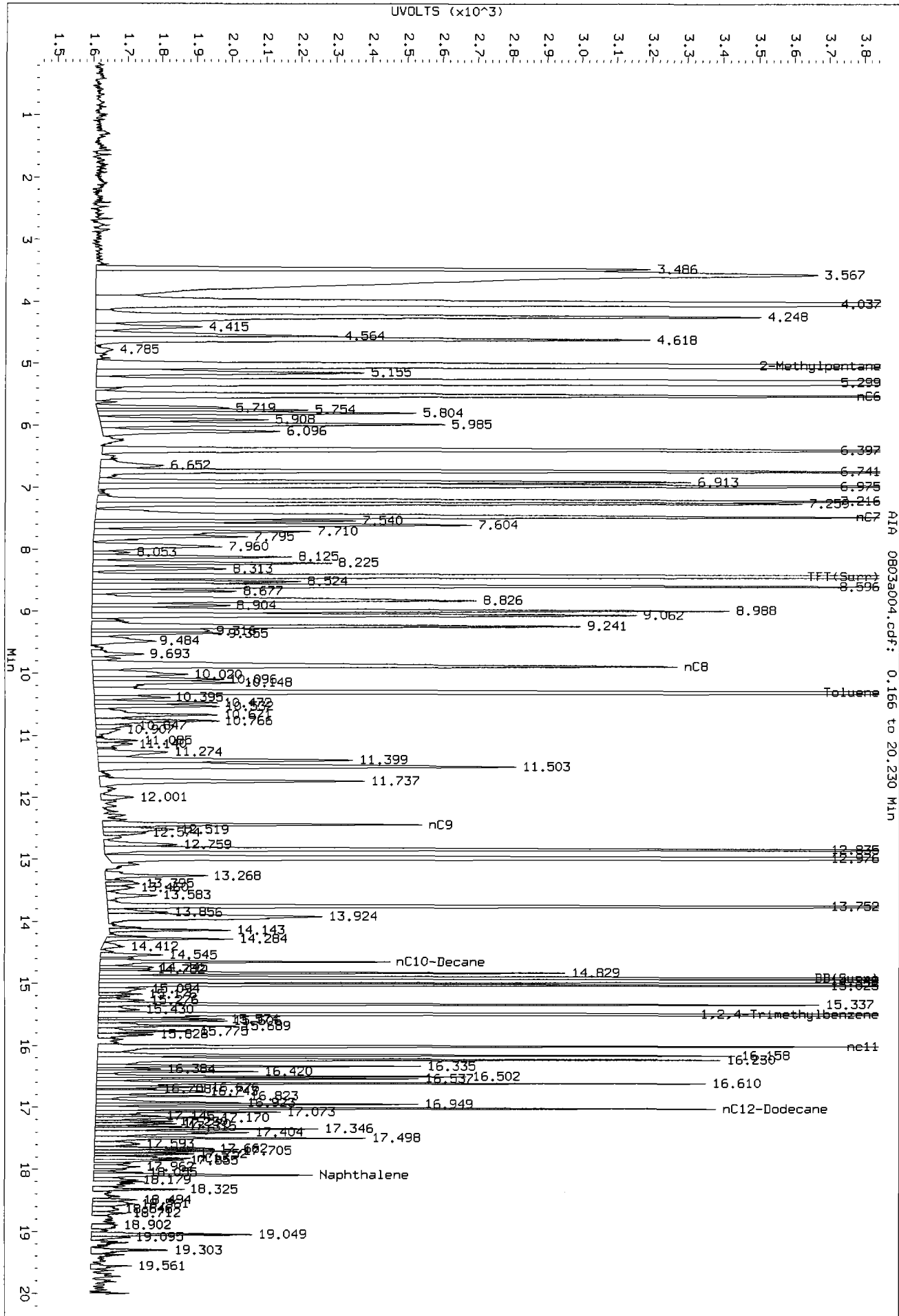
Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid3.i/20100803-1.b/0803a004.d/0803a004.cdf

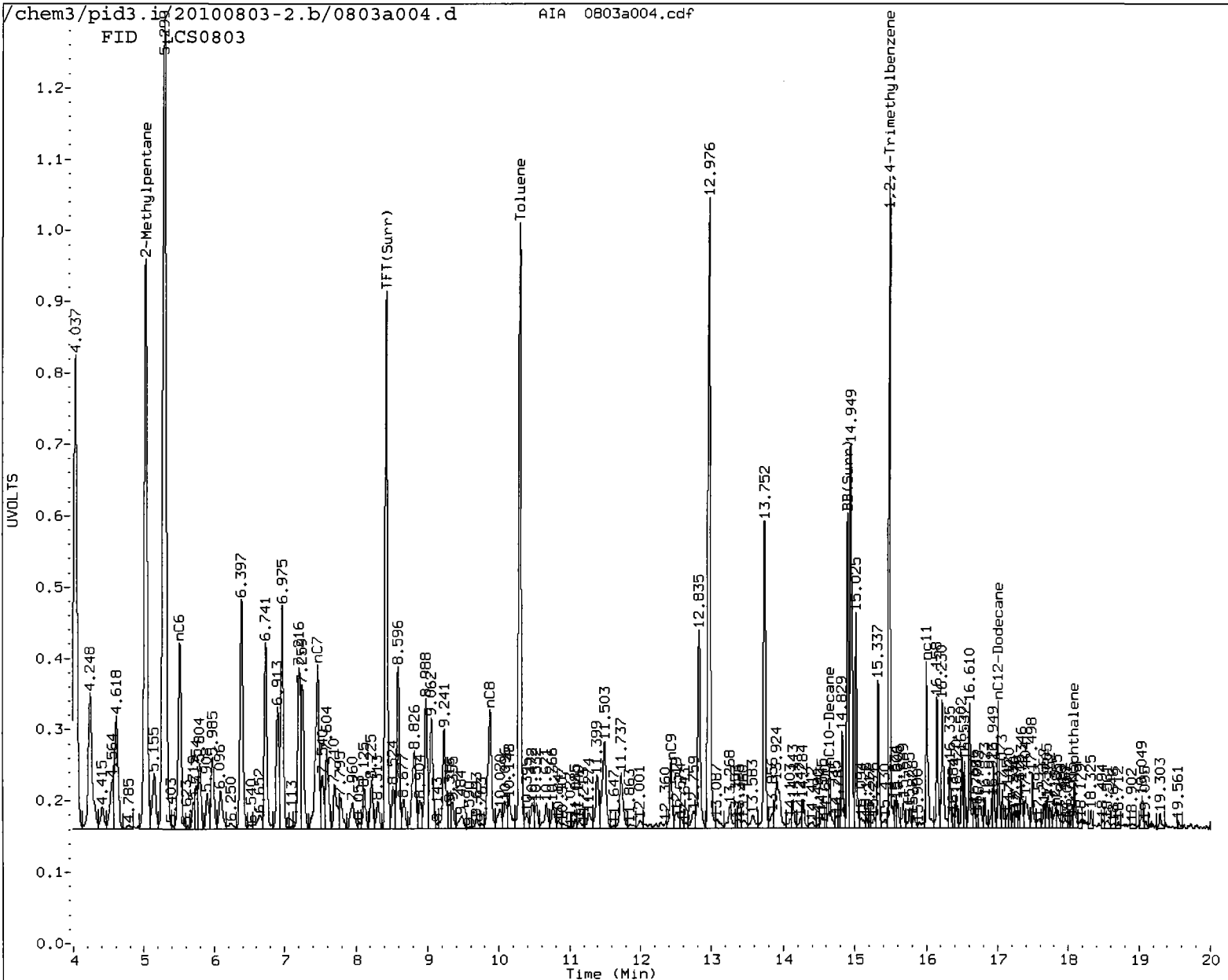
8/5/10

Data File: /chem3/pid3.1/20100803-2.b/0803a004.d/0803a004.cdf  
Injection Date: 03-AUG-2010 08:21  
Instrument: pid3.1  
Client Sample ID:



AIR 0803a004.cdf: 0.166 to 20.230 Min

FID STICS0803



MANUAL INTEGRATION

- Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MH

Date: 8/5/10

M.  
8/5/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a005.d      ARI ID: LCSD0803  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a005.d      Client ID:  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 08:46  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.438	0.029	7359	87683	102.2	TFT(Surr)
14.910	0.022	4397	35861	102.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.17 to 17.11)	827807	804160	0.971 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	1623426	0.976 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1100768	0.973 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	853910	0.968 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.437	0.029	21380	97.3	TFT(Surr)
14.908	0.022	45215	99.2	BB(Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
7.715	0.027	2854	2.16	Benzene
10.304	0.032	39183	29.69	Toluene
12.838	0.034	11258	9.06	Ethylbenzene
12.978	0.036	43452	32.27	M/P-Xylene
13.754	0.030	18171	14.14	O-Xylene
5.305	0.016	34357	96.56	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

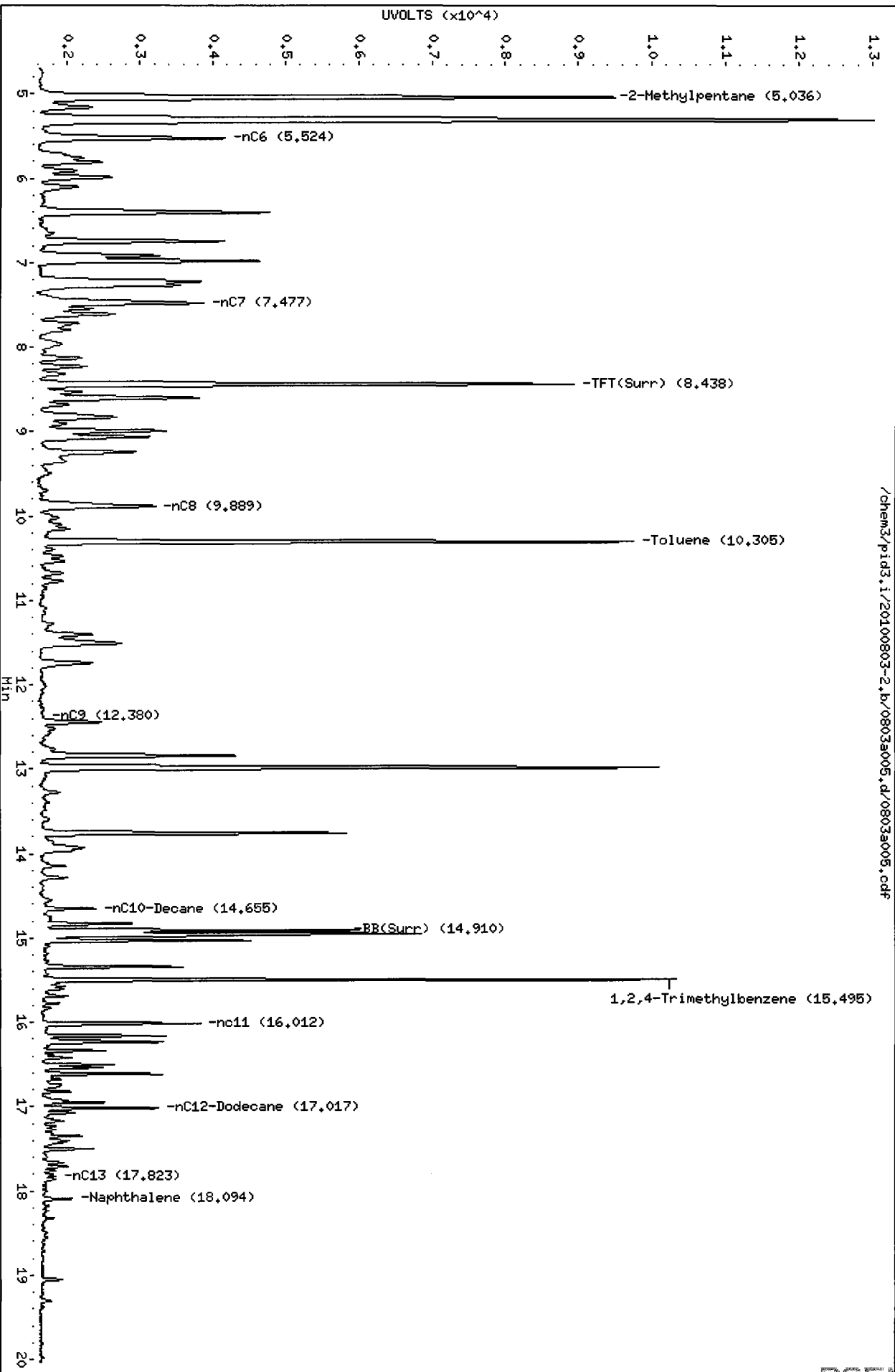


Data File: /chem3/pid3.i/20100803-2.b/0803a005.d  
Date: 03-AUG-2010 08:46

Client ID:  
Sample Info: LCSD0803

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

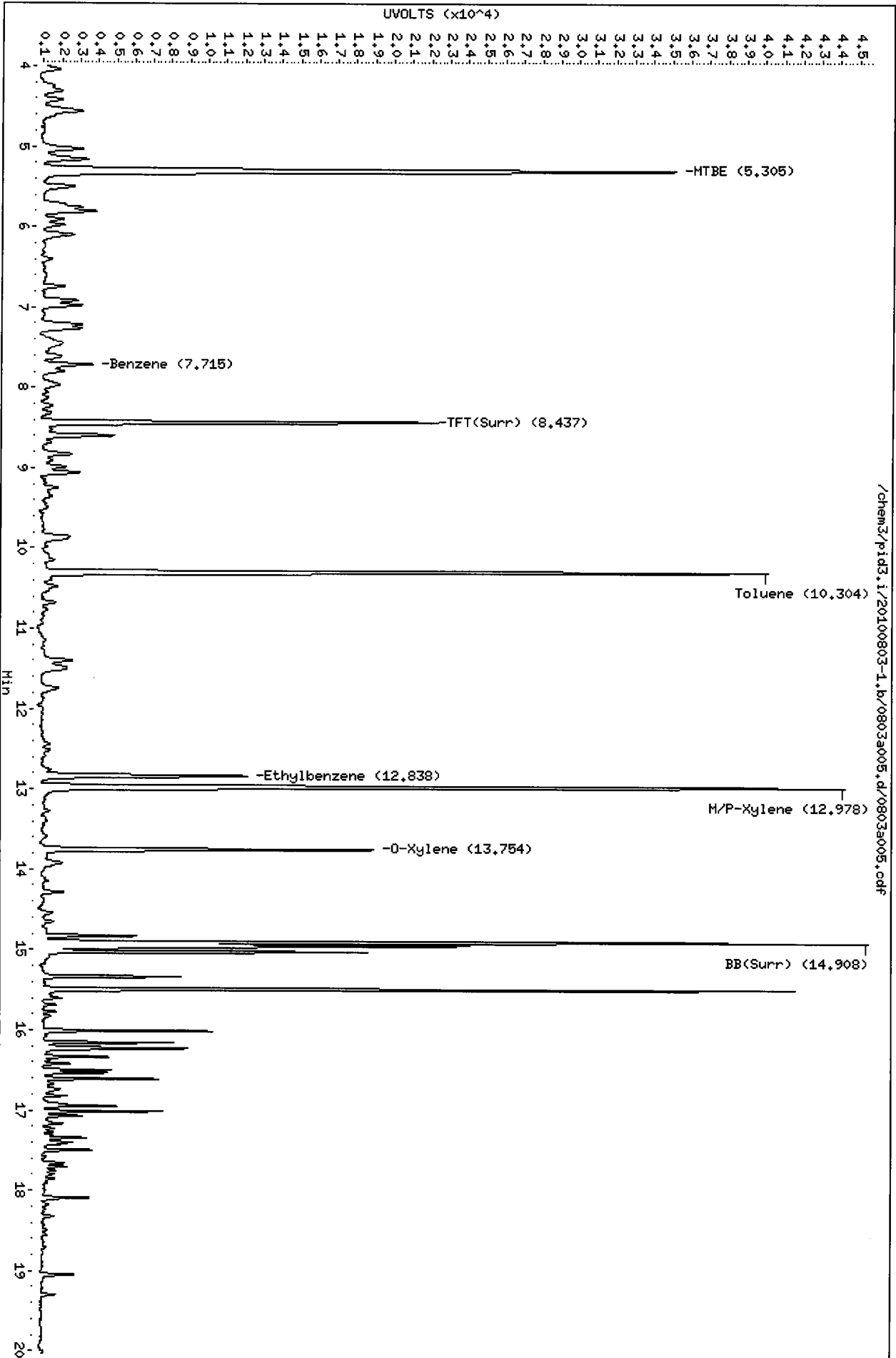


/chem3/pid3.i/20100803-2.b/0803a005.d/0803a005.cdf

Data File: /chem3/pid3.i/20100803-1.b/0803a005.d  
Date: 03-AUG-2010 08:46  
Client ID:  
Sample Info: LCSD0803

Column phase: RTX 502-2 PID

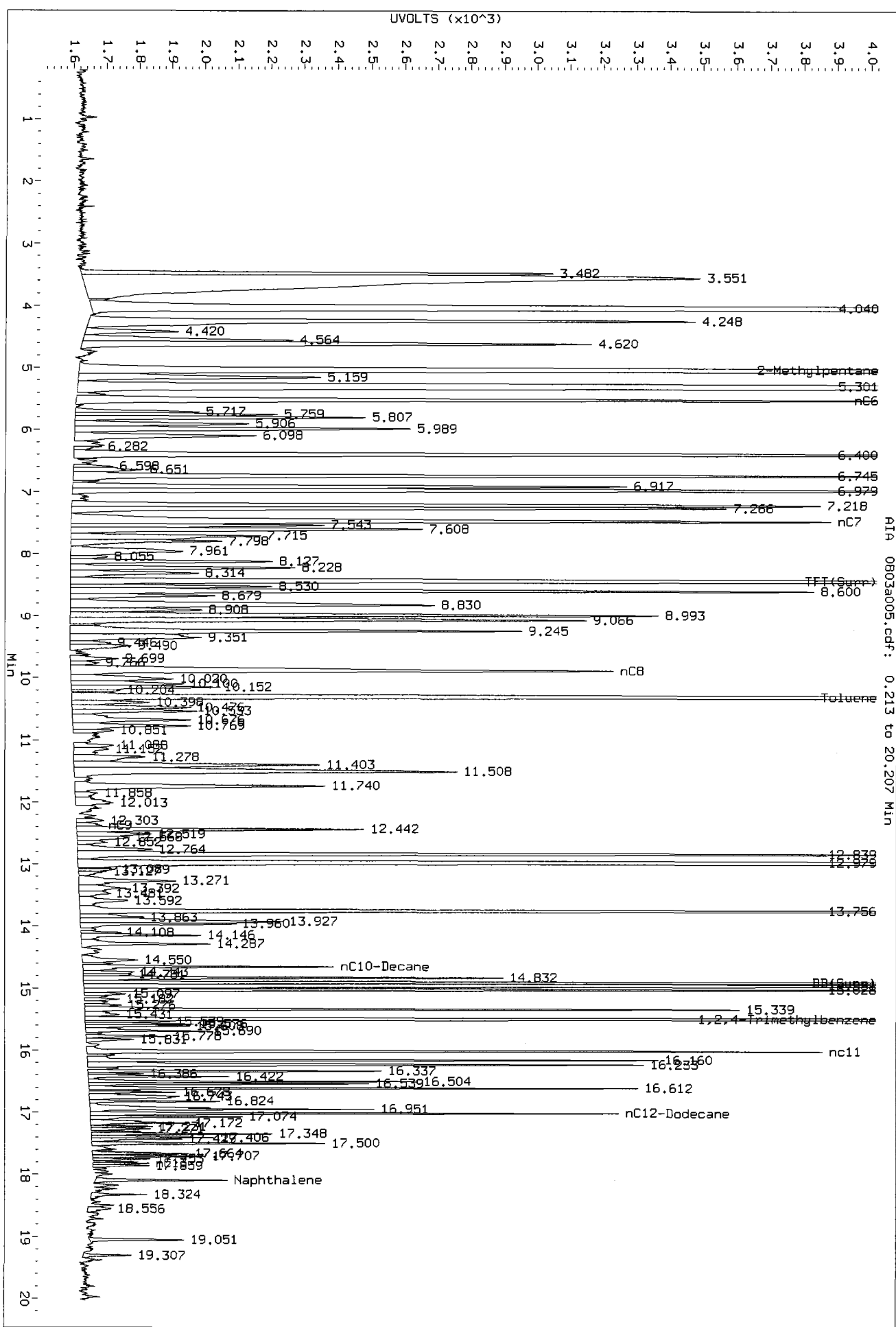
Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid3.i/20100803-1.b/0803a005.d/0803a005.cdf

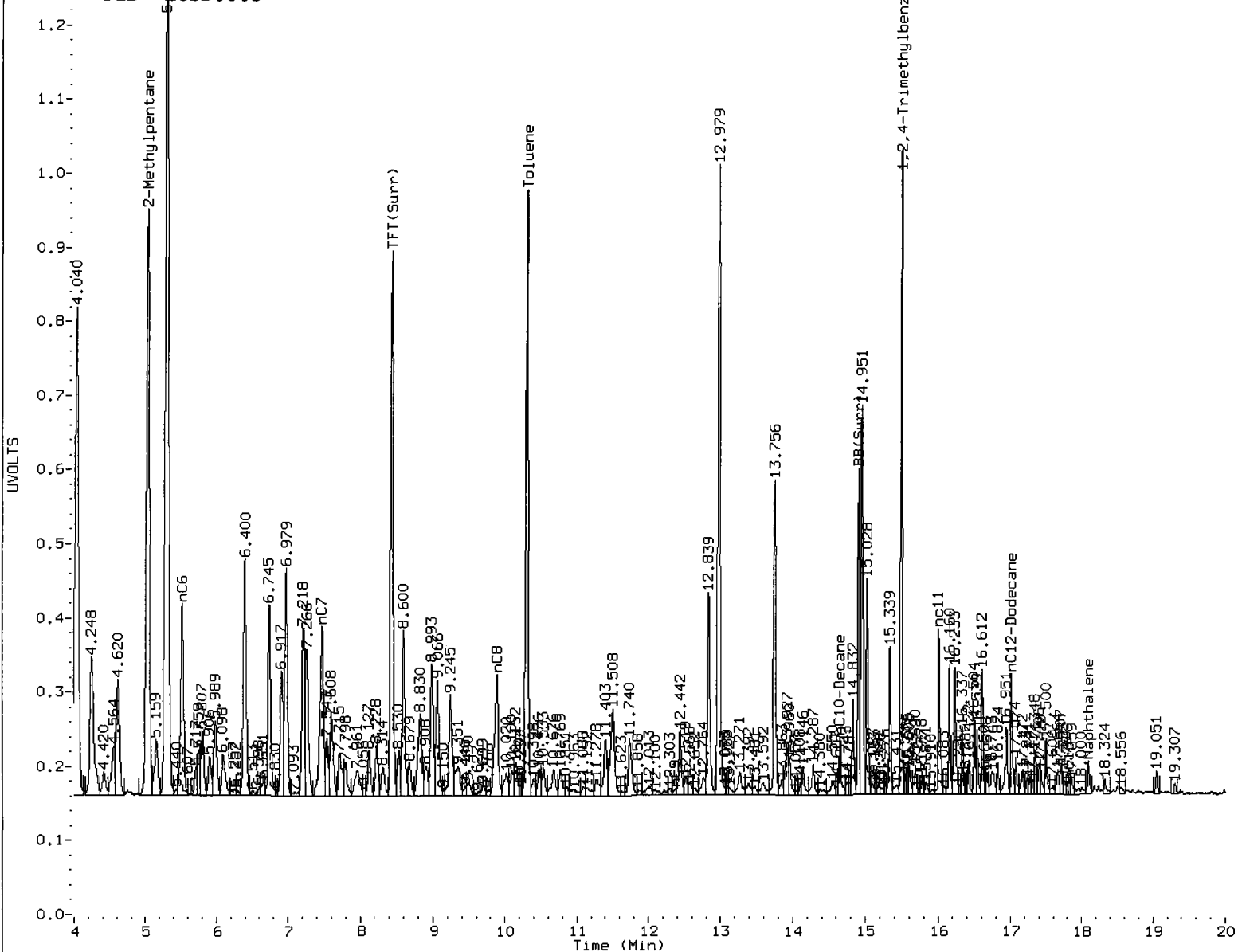
M  
8/5/09

Data File: /chem3/pid3.1/20100803-2.b/0803a005.d/0803a005.cdf  
Injection Date: 03-AUG-2010 08:46  
Instrument: pid3.1  
Client Sample ID:



AIA 0803a005.cdf: 0.213 to 20.207 MIN

FID



MANUAL INTEGRATION

- Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation

5. Other \_\_\_\_\_

Analyst: MH

Date: 8/5/10

M.  
8/5/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a006.d      ARI ID: MB0803  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a006.d      Client ID:  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 09:10  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.439	0.031	7213	84789	100.2	TFT(Surr)
14.911	0.023	4266	34969	99.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.17 to 17.11)	827807	8777	0.011
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	1027	0.001
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1	0.000
NWTPHG Tol-Nap (10.17 to 18.18)	882029	15811	0.018

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.438	0.030	20836	94.8	TFT(Surr)
14.909	0.023	43365	95.1	BB(Surr)

SW8021 (PID)

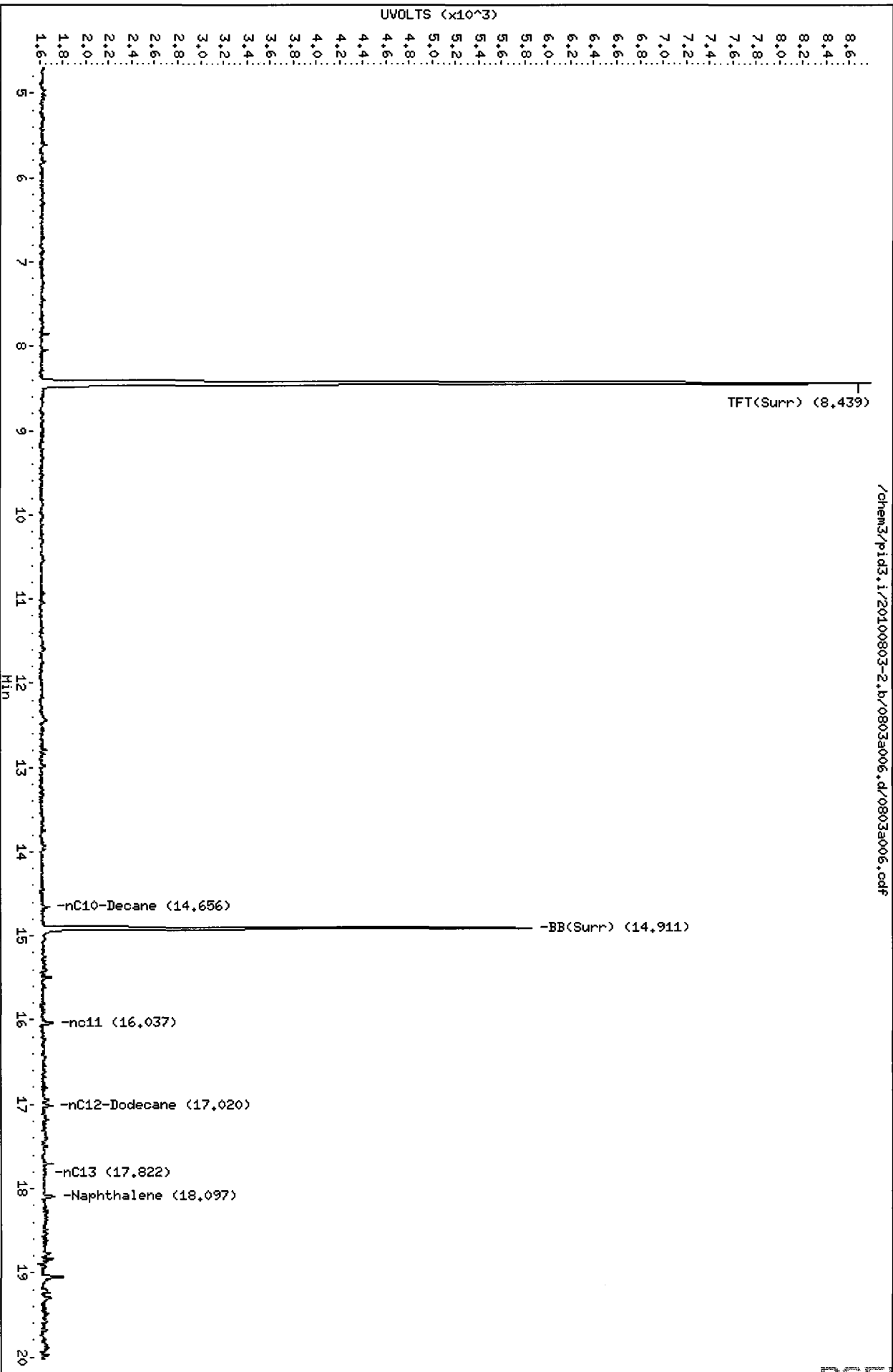
-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a006.d  
Date: 03-AUG-2010 09:10  
Client ID:  
Sample Info: MB0803  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



/chem3/pid3.i/20100803-2.b/0803a006.d/0803a006.cdf

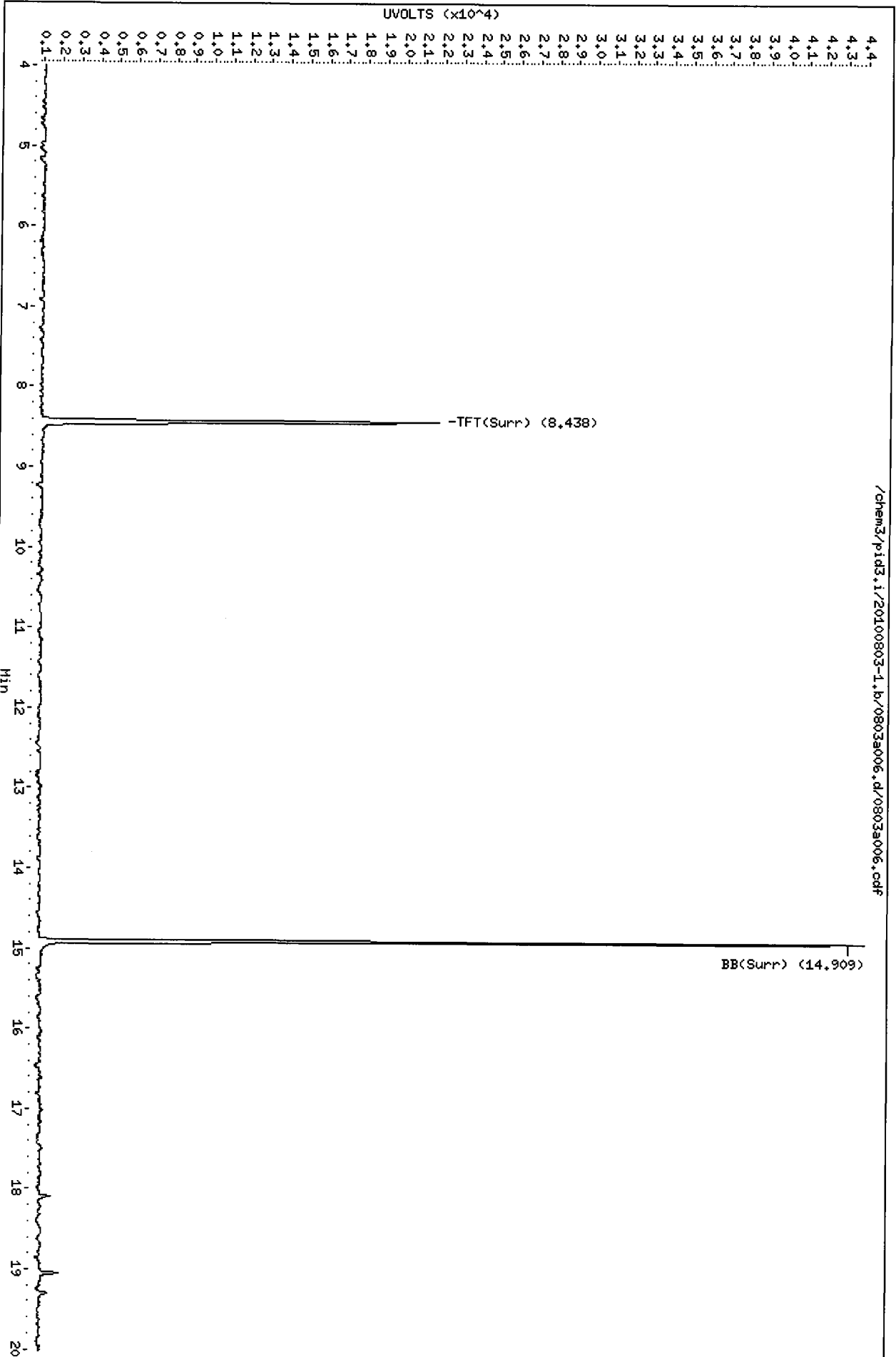
Data File: /chem3/pid3.i/20100803-1.b/0803a006.d  
Date : 03-AUG-2010 09:10

Client ID:  
Sample Info: MB0803

Instrument: pid3.i

Column phase: RTX 502-2 PID

Operator: MH  
Column diameter: 0.18



/chem3/pid3.i/20100803-1.b/0803a006.d/0803a006.cdf

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8/5/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a007.d      ARI ID: RG54G  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a007.d      Client ID: PSB14-TB  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 10:05  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.371	-0.037	7579	89932	105.3	TFT(Surr)
14.874	-0.014	4437	36618	103.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	4191	0.005
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	1	0.000
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1	0.000
NWTPHG Tol-Nap (10.17 to 18.18)	882029	6684	0.008

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.370	-0.038	22049	100.3	TFT(Surr)
14.872	-0.014	45074	98.9	BB(Surr)

SW8021 (PID)

-----

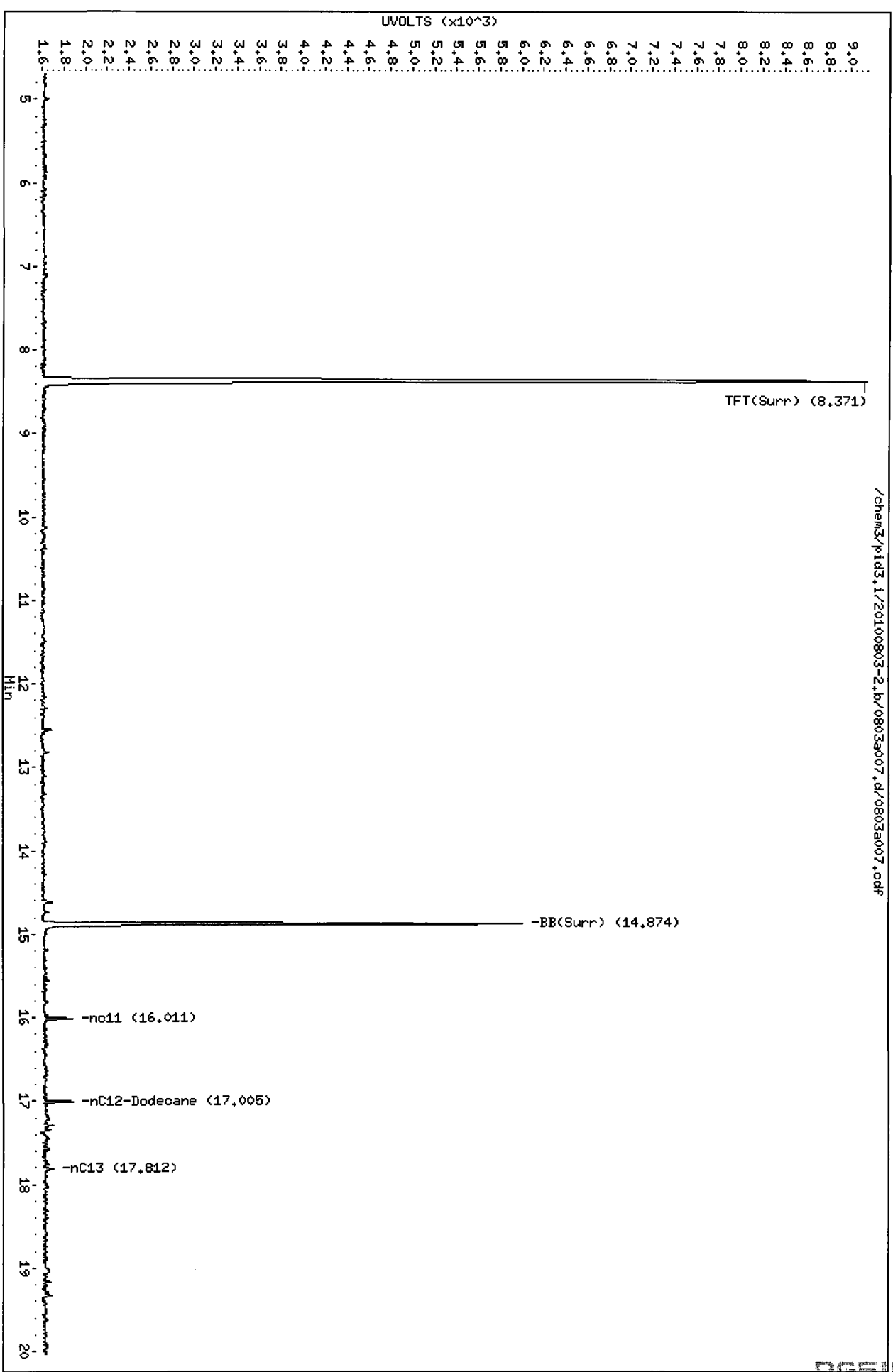
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20100803-2.b/0803a007.d  
Date : 03-AUG-2010 10:05  
Client ID: PSB14-TB  
Sample Info: RG54C  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



Data File: /chem3/pid3.i/20100803-1.b/0803a007.d

Date: 03-AUG-2010 10:05

Client ID: PSB14-TB

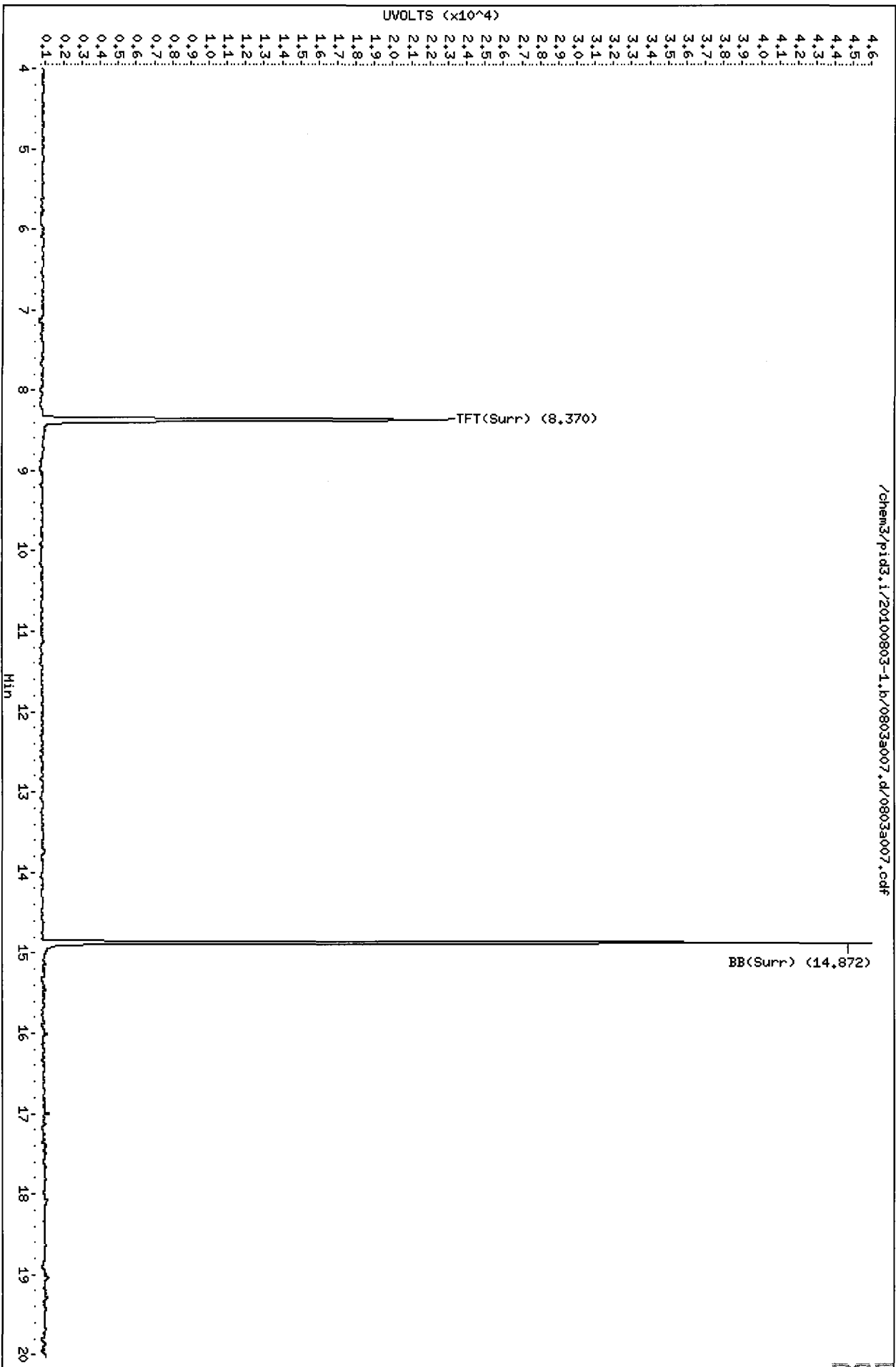
Sample Info: RG54C

Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: HH

Column diameter: 0.18



Mr.  
8/15/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a014.d      ARI ID: BCAL 2  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a014.d      Client ID: BCAL 2  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 12:56  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.444	0.000	7625	90698	105.9	TFT(Surr)
14.912	-0.001	4562	37241	105.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.12)	827807	592639	0.716
8015B 2MP-TMB ( 4.94 to 15.60)	1664107	601018	0.361
AK101 nC6-nC10 ( 5.43 to 14.51)	1131784	561612	0.496
NWTPHG Tol-Nap (10.21 to 18.19)	882029	595305	0.675

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.442	0.035	22530	102.5	TFT(Surr)
14.910	0.024	47545	104.3	BB(Surr)

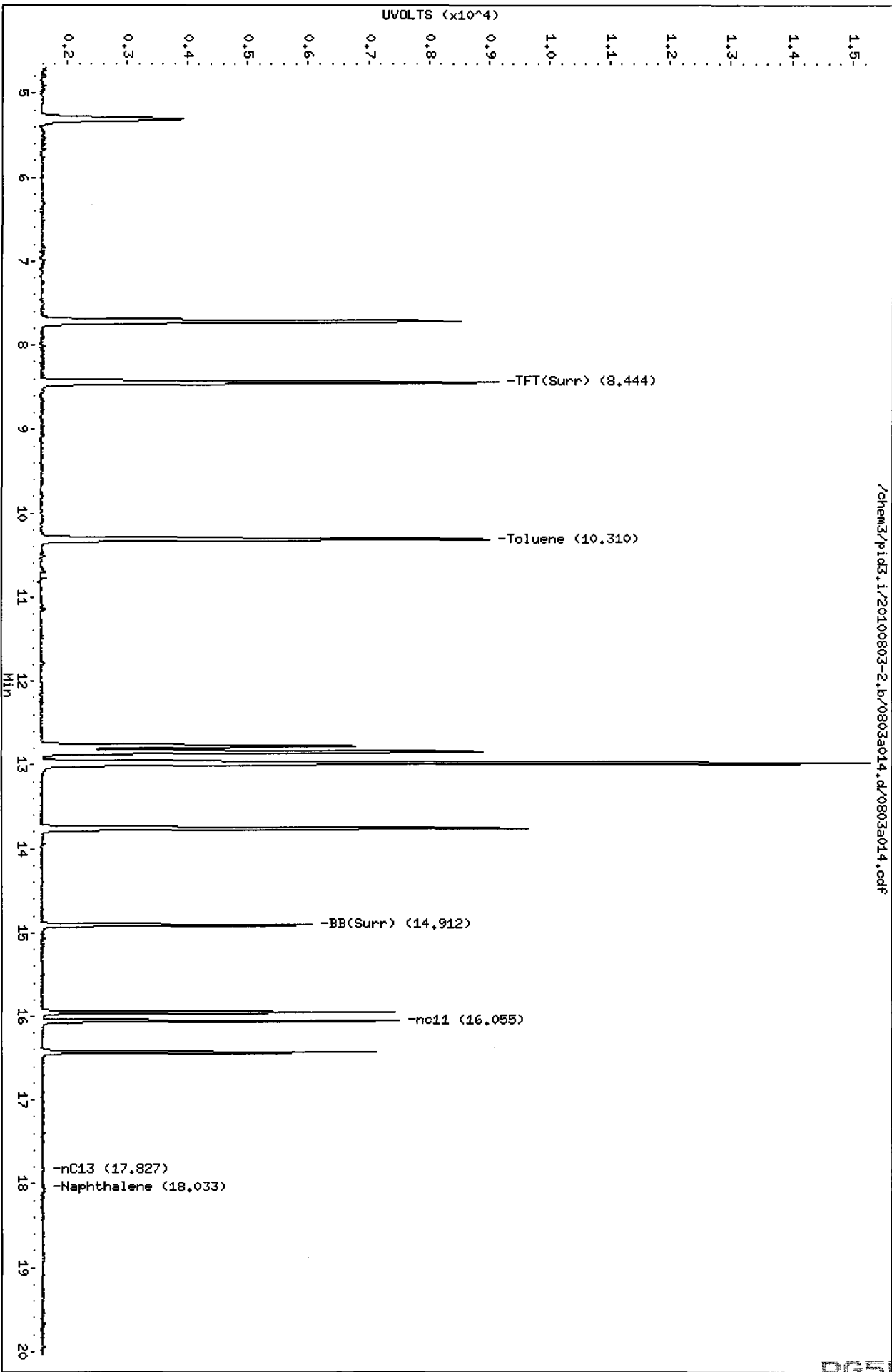
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.718	0.030	35899	27.15	Benzene
10.309	0.038	36306	27.51	Toluene
12.843	0.038	33141	26.67	Ethylbenzene
12.980	0.039	72311	53.70	M/P-Xylene
13.758	0.034	35351	27.51	O-Xylene
5.308	0.020	9637	27.09	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a014.d  
Date: 03-AUG-2010 12:56  
Client ID:  
Sample Info: BCAL 2  
Column Phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



Data File: /chem3/pid3.i/20100803-1.b/0803a014.d

Date : 03-AUG-2010 12:56

Client ID: BCAL 2

Sample Info: BCAL 2

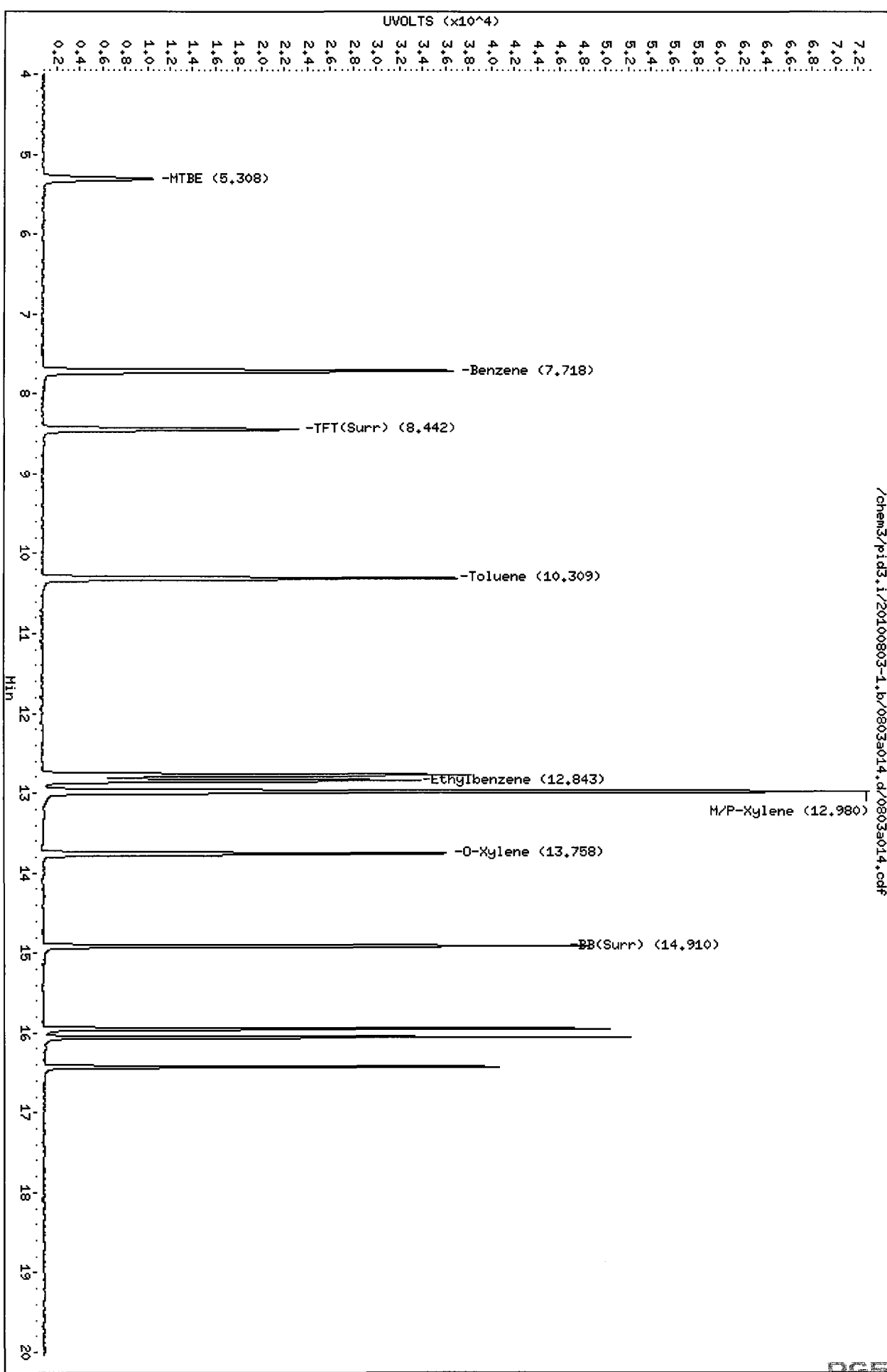
Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

/chem3/pid3.i/20100803-1.b/0803a014.d/0803a014.cdf



M.  
8/15/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a015.d      ARI ID: GCAL 2  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a015.d      Client ID: GCAL 2  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 13:20  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.444	0.000	7924	94644	110.1	TFT(Surr)
14.912	0.000	4672	39566	108.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.12)	827807	2060837	2.490 M
8015B 2MP-TMB ( 4.94 to 15.60)	1664107	4079909	2.452 M
AK101 nC6-nC10 ( 5.43 to 14.51)	1131784	2737165	2.418 M
NWTPHG Tol-Nap (10.21 to 18.19)	882029	2177926	2.469 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.442	0.001	23225	105.6	TFT(Surr)
14.910	0.000	48155	105.6	BB(Surr)

SW8021 (PID)

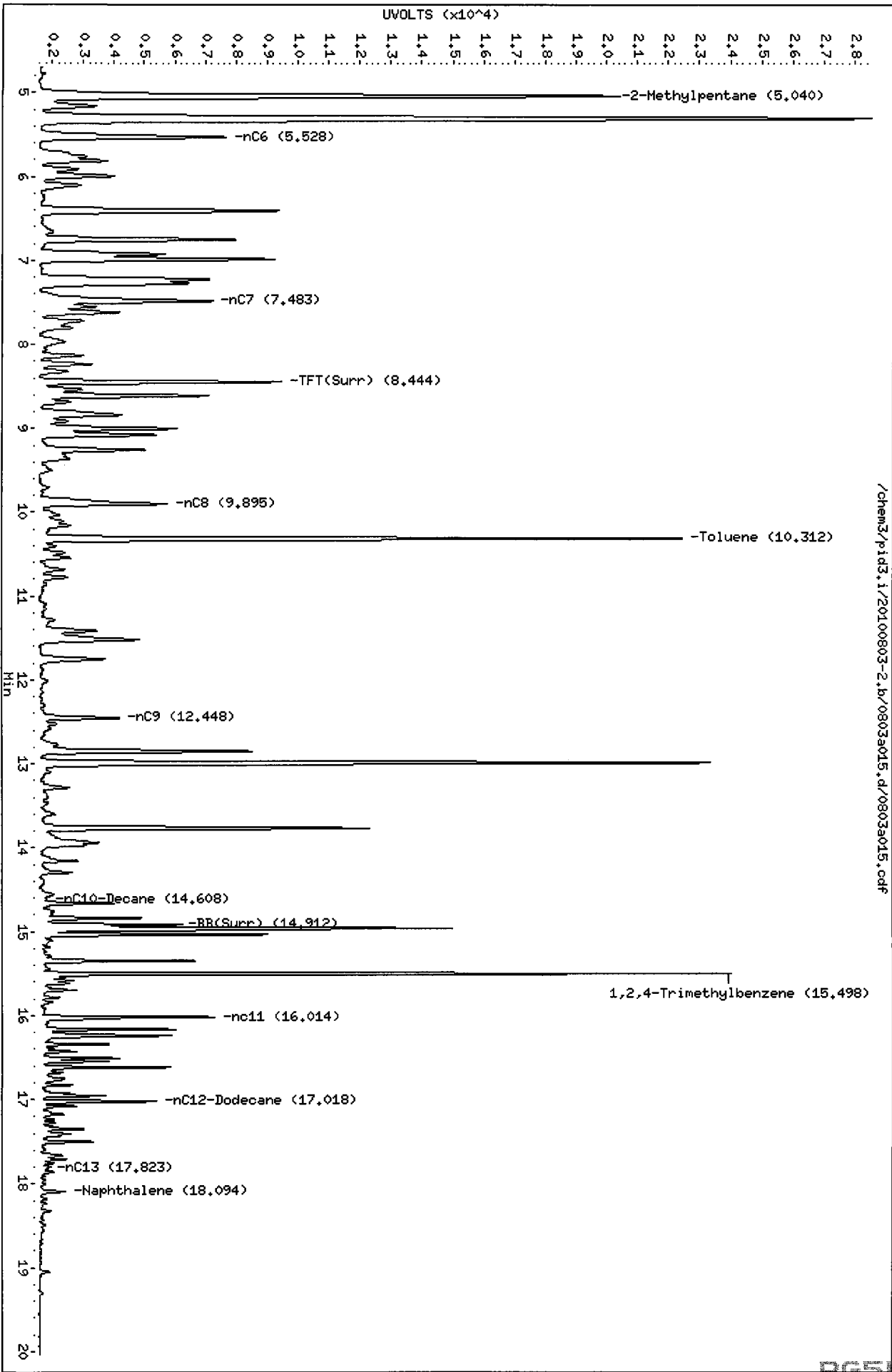
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RT	Shift	Response	Amount	Compound
7.719	0.003	7395	5.59	Benzene
10.310	0.001	102334	77.54	Toluene
12.843	0.000	29505	23.74	Ethylbenzene
12.984	0.003	113435	84.24	M/P-Xylene
13.759	0.000	46945	36.54	O-Xylene
5.312	0.006	83048	233.41	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a015.d  
Date: 03-AUG-2010 13:20  
Client ID:  
Sample Info: GCAL 2  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



/chem3/pid3.i/20100803-2.b/0803a015.d/0803a015.cdf

Data File: /chem3/pid3.i/20100803-1.b/0803a015.d

Date: 03-AUG-2010 13:20

Client ID:

Sample Info: GCAL 2

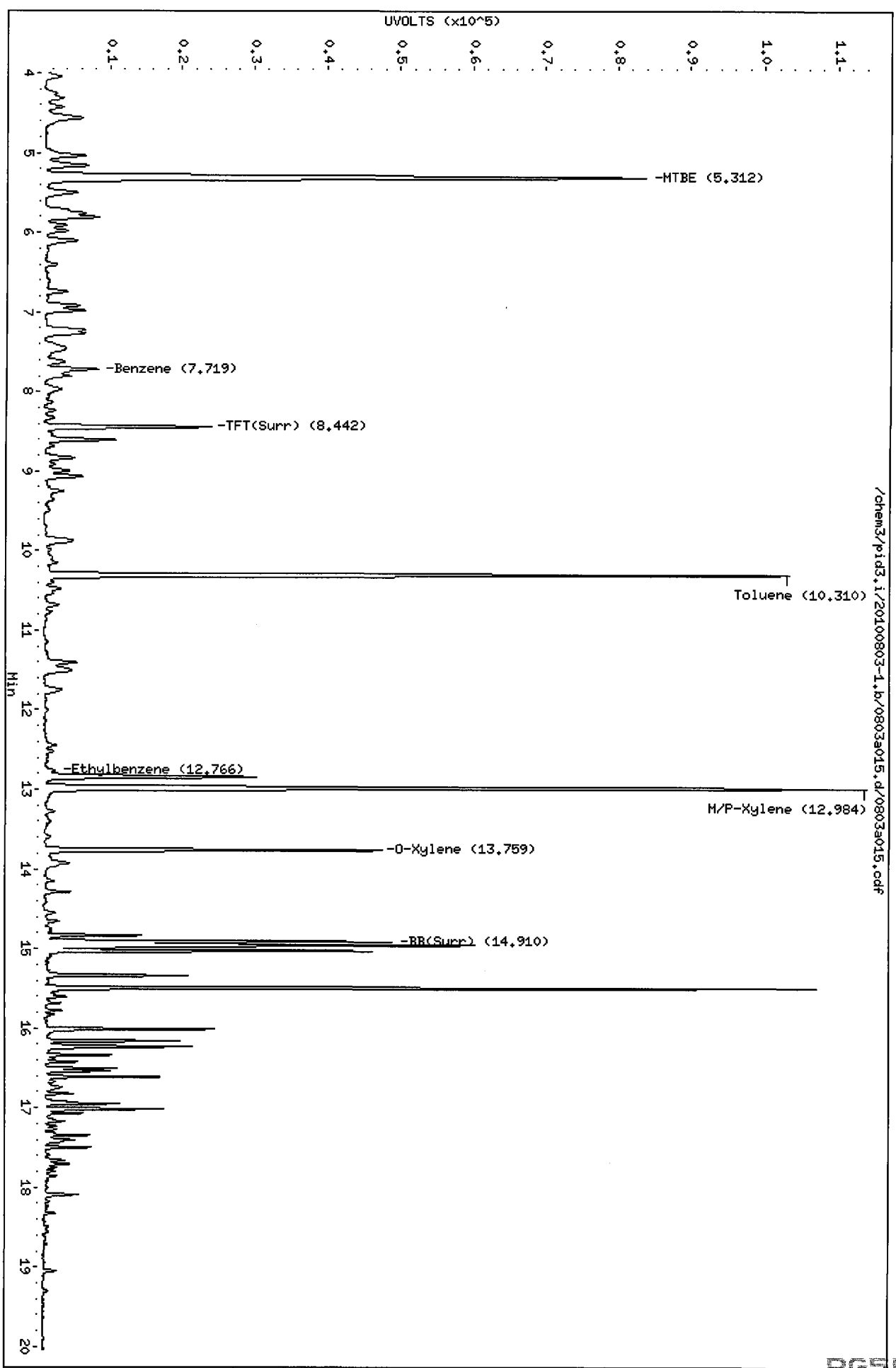
Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

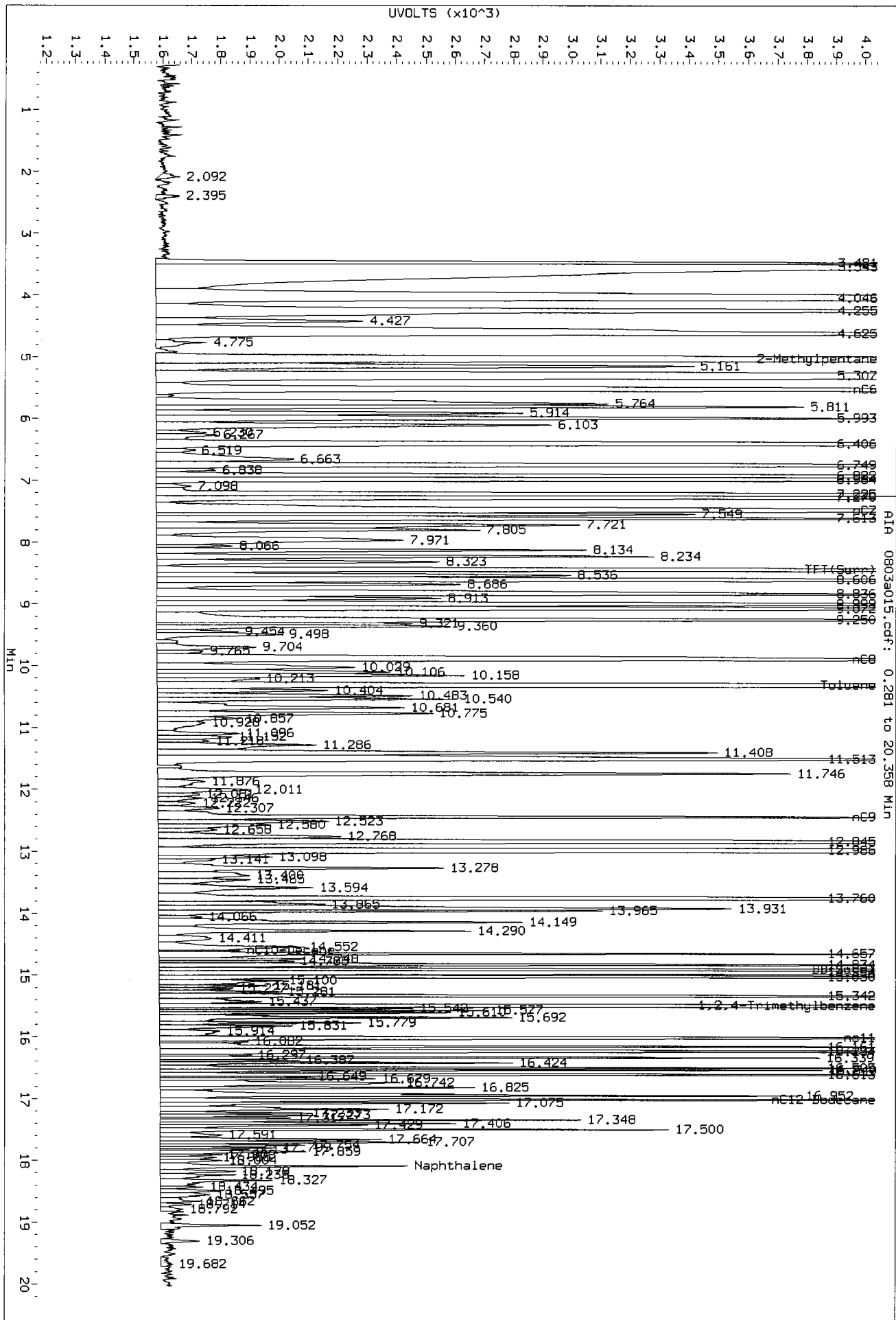
/chem3/pid3.i/20100803-1.b/0803a015.d/0803a015.cdf



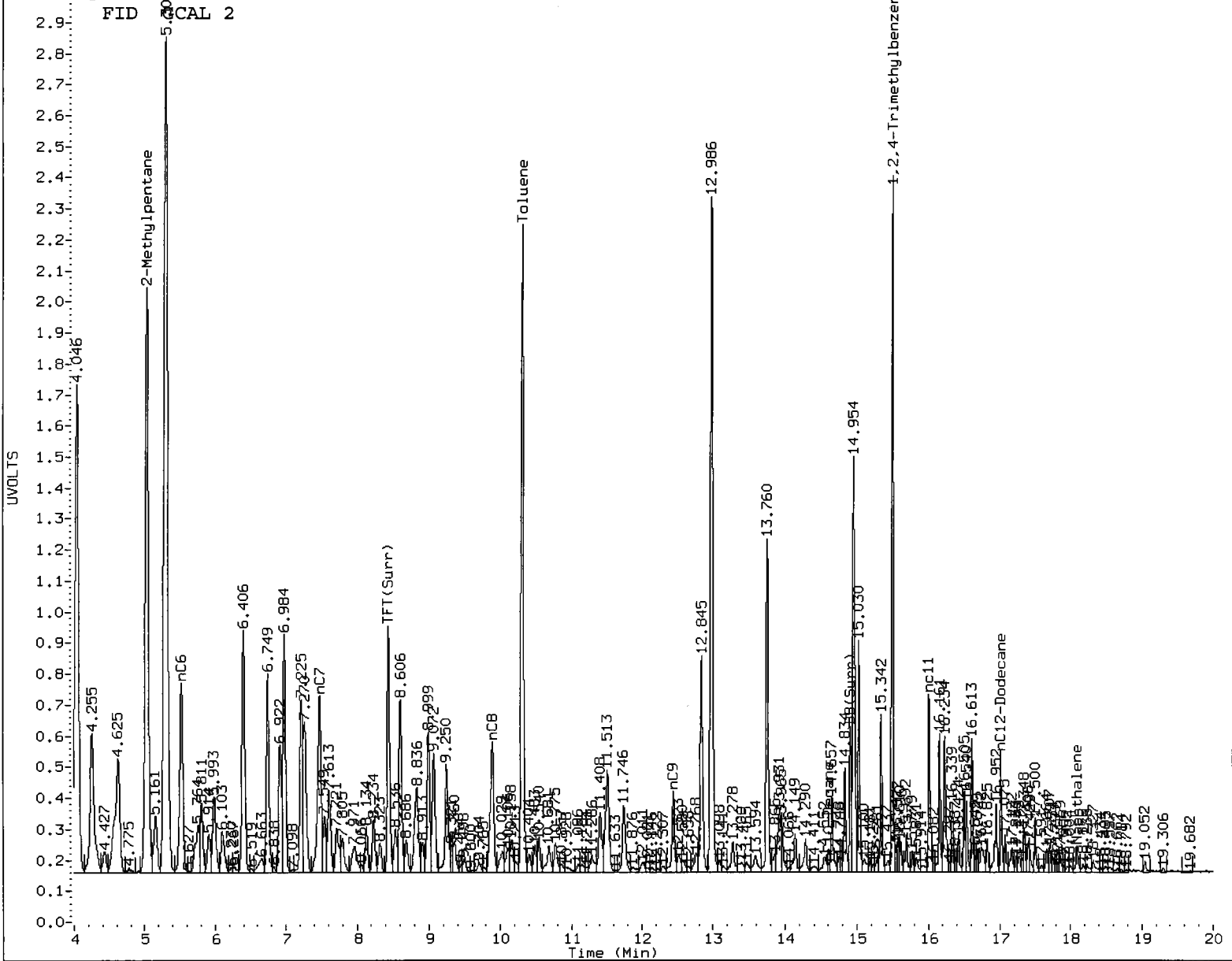


M  
8/5/10

Data File: /chem3/pid3.1/20100803-2.b/0803a015.d/0803a015.cdf  
Injection Date: 03-AUG-2010 13:20  
Instrument: pid3.1  
Client Sample ID:



AIA 0803a015.cdf: 0.281 to 20.358 MIN



MANUAL INTEGRATION

- Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MH

Date: 8/5/10

M.  
8/5/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a018.d      ARI ID: RG54A  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a018.d      Client ID: PSB14-0-.5-072810  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 14:35  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	-----	-----	-----
8.439	0.030	7532	89431	104.6	TFT(Surr)
14.910	0.022	4370	35498	101.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (10.17 to 17.11)	827807	6321	0.008
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	5276	0.003
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	5275	0.005
NWTPHG Tol-Nap (10.17 to 18.18)	882029	6321	0.007

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	-----	-----
8.437	0.030	22022	100.2	TFT(Surr)
14.908	0.022	44978	98.7	BB(Surr)

SW8021 (PID)

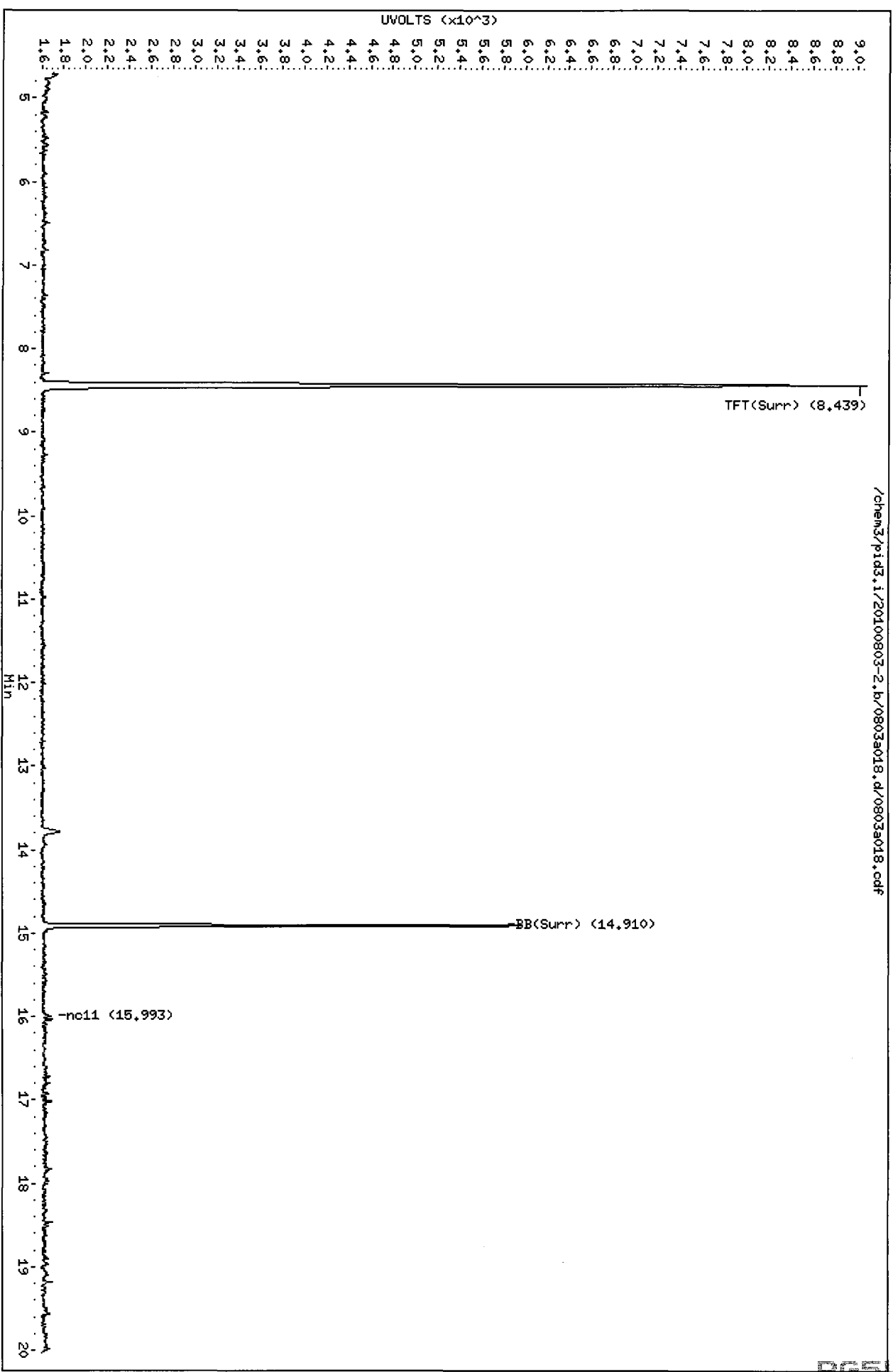
-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a018.d  
Date : 03-AUG-2010 14:35  
Client ID: PSB14-0-.5-072810  
Sample Info: RG54A  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



Data File: /chem3/pid3.1/20100803-1.b/0803a018.d

Date: 03-AUG-2010 14:35

Client ID: PSB14-0-5-072810

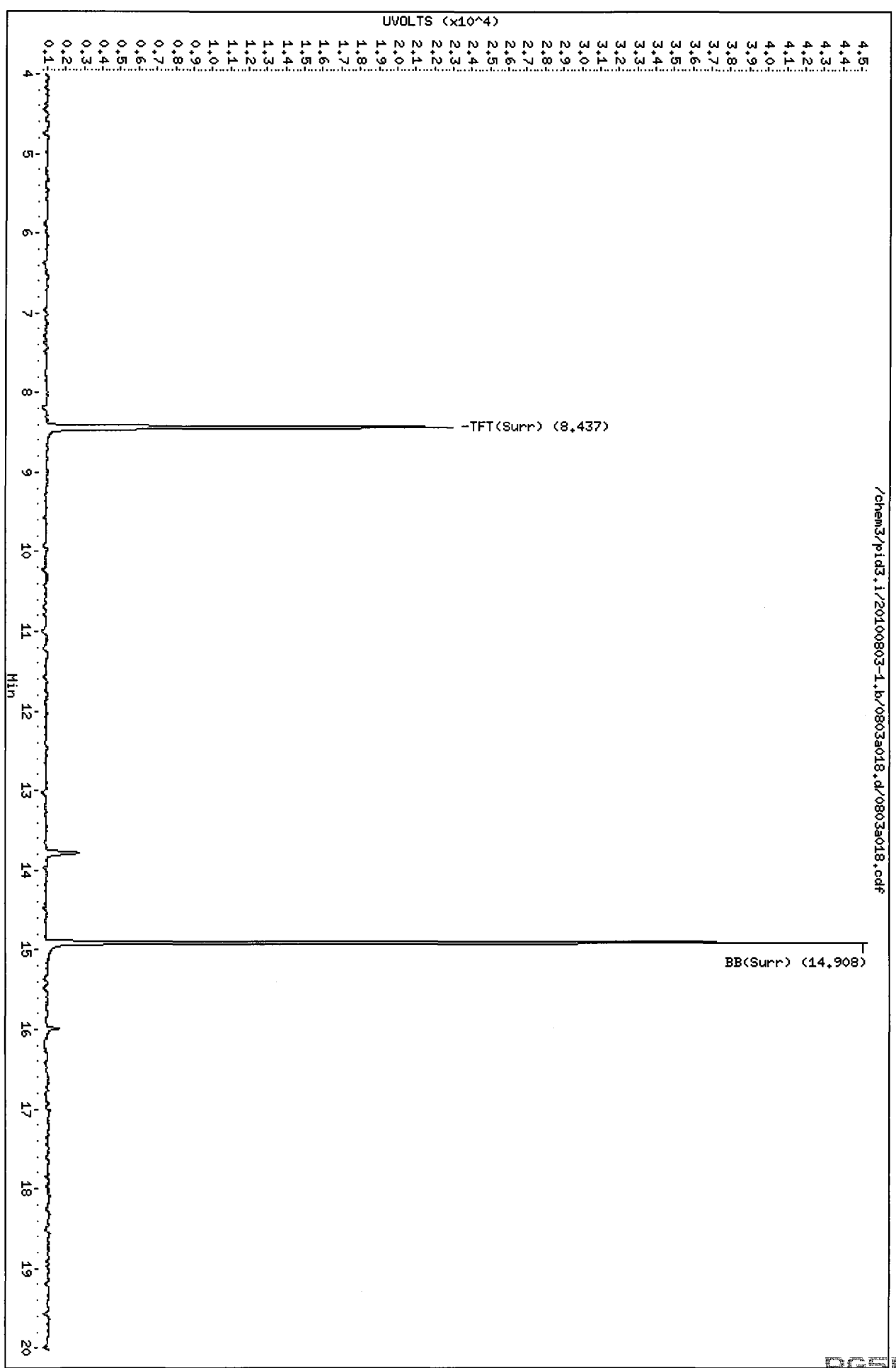
Sample Info: RG544

Column phase: RTX 502-2 PID

Instrument: pid3.1

Operator: MH

Column diameter: 0.18



Met  
8/15/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a019.d      ARI ID: RG54B  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a019.d      Client ID: PSB14-1.5-2.0-07281  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 14:59  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
8.443	0.035	7443	87532	103.4	TFT(Surr)
14.912	0.024	4415	35267	102.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (10.17 to 17.11)	827807	0	0.000
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	1	0.000
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1	0.000
NWTPHG Tol-Nap (10.17 to 18.18)	882029	0	0.000

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
8.442	0.035	21724	98.8	TFT(Surr)
14.910	0.024	45148	99.0	BB(Surr)

SW8021 (PID)

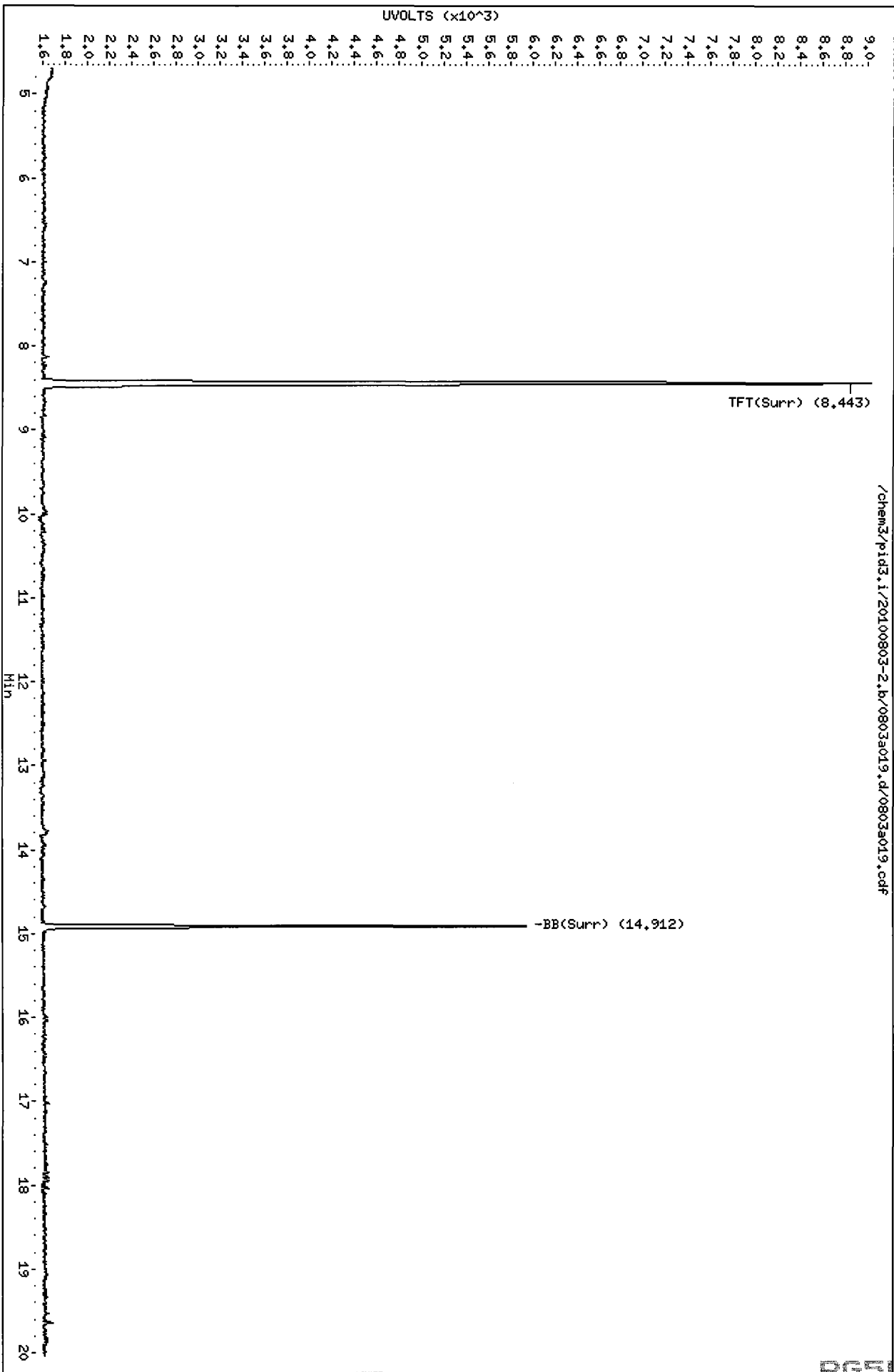
-----

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a019.d  
Date : 03-AUG-2010 14:59  
Client ID: PSB14-1.5-2.0-07281  
Sample Info: RG54B  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



Data File: /chem3/pid3.i/20100803-1.b/0803a019.d

Date: 03-AUG-2010 14:59

Client ID: PSB14-1.5-2.0-07281

Sample Info: RGS4B

Page 1

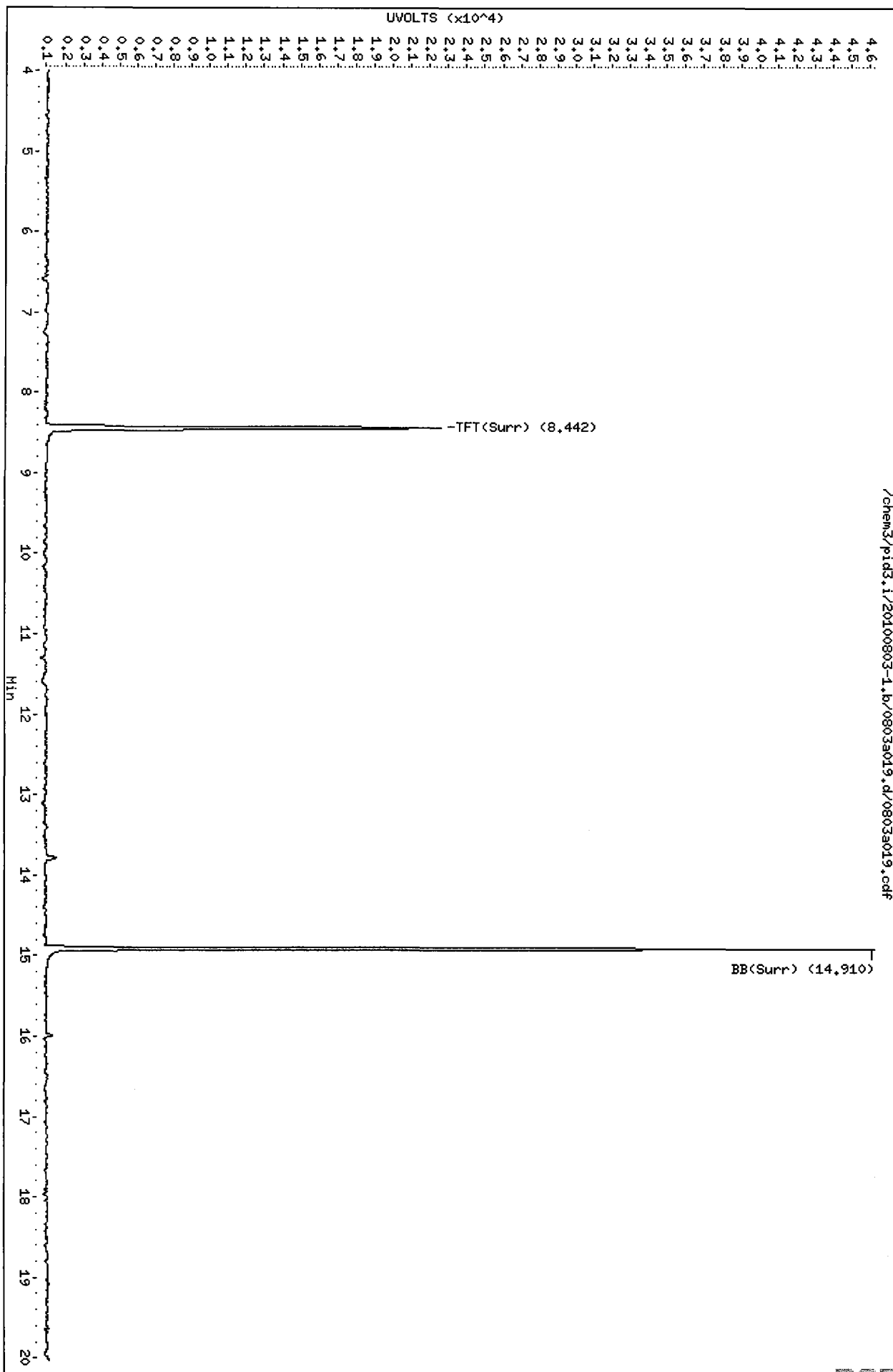
Instrument: pid3.i

Operator: MH

Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid3.i/20100803-1.b/0803a019.d/0803a019.cdf



RGS4 : 01228



M  
9/5/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a020.d      ARI ID: RG54C  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a020.d      Client ID: PSB14-2-4-072810  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 15:24  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.032	7671	91544	106.6	TFT (Surr)
14.911	0.023	4582	36465	106.4	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	6563	0.008
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	5831	0.004
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	5830	0.005
NWTPHG Tol-Nap (10.17 to 18.18)	882029	6563	0.007

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.439	0.032	22131	100.7	TFT (Surr)
14.909	0.023	46702	102.4	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a020.d

Date: 03-AUG-2010 15:24

Client ID: PSB14-2-4-072810

Sample Info: RGS4C

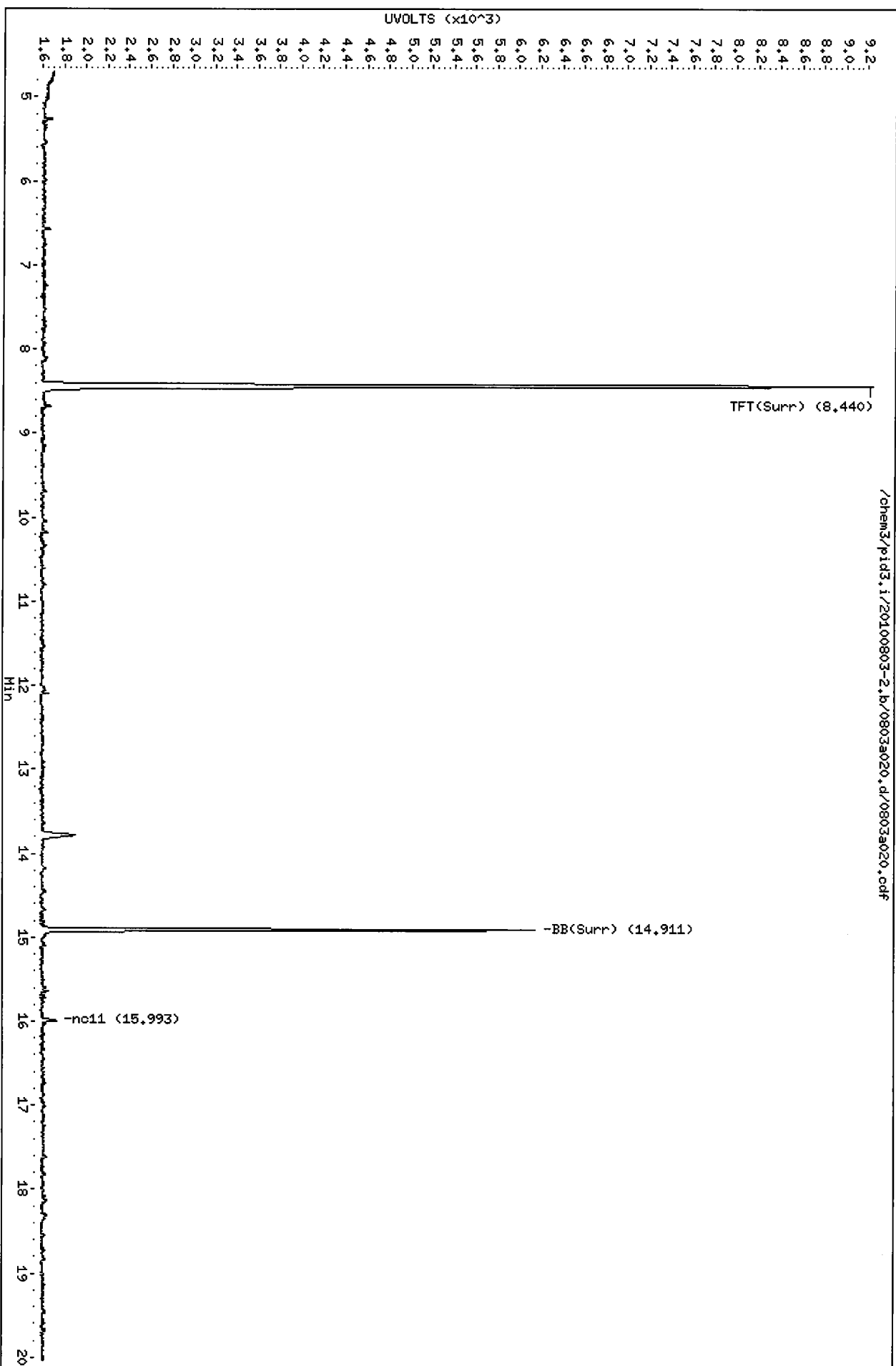
Page 1

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

Column phase: RTX 502-2 FID



Data File: /chem3/pid3.i/20100803-1.b/0803a020.d

Date: 03-AUG-2010 15:24

Client ID: PSB14-2-4-072810

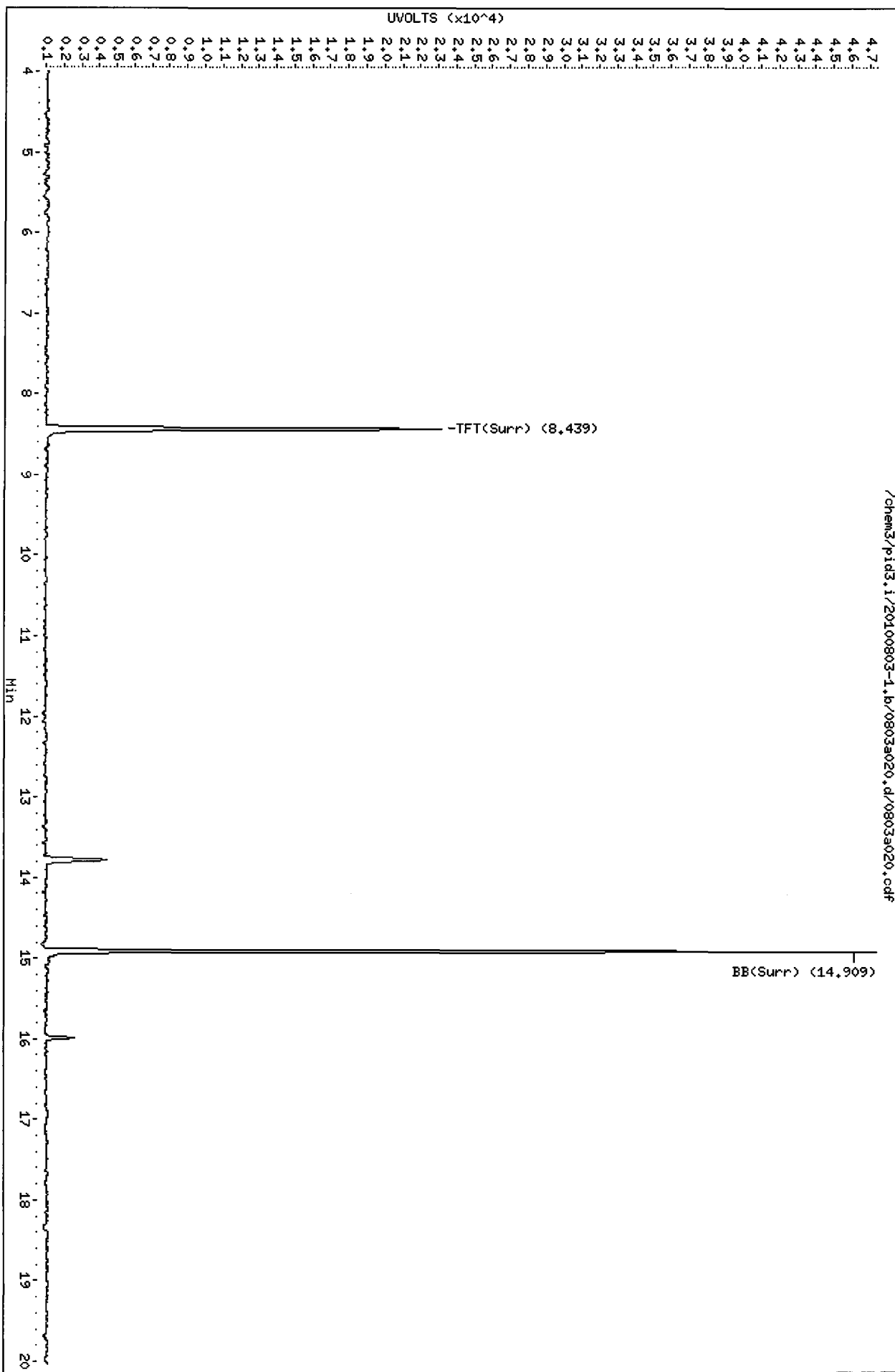
Sample Info: RGS4C

Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18



Mr. 8/15/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a021.d      ARI ID: RG54E  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a021.d      Client ID: PSB14-7-9-072810  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 15:48  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.031	8001	95156	111.2	TFT (Surr)
14.911	0.023	4697	37683	109.1	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	12349	0.015
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	14344	0.009
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	14343	0.013
NWTPHG Tol-Nap (10.17 to 18.18)	882029	13735	0.016

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.438	0.031	23251	105.8	TFT (Surr)
14.909	0.023	48352	106.1	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a021.d

Date: 03-AUG-2010 15:48

Client ID: PSB14-7-9-072810

Sample Info: RGS4E

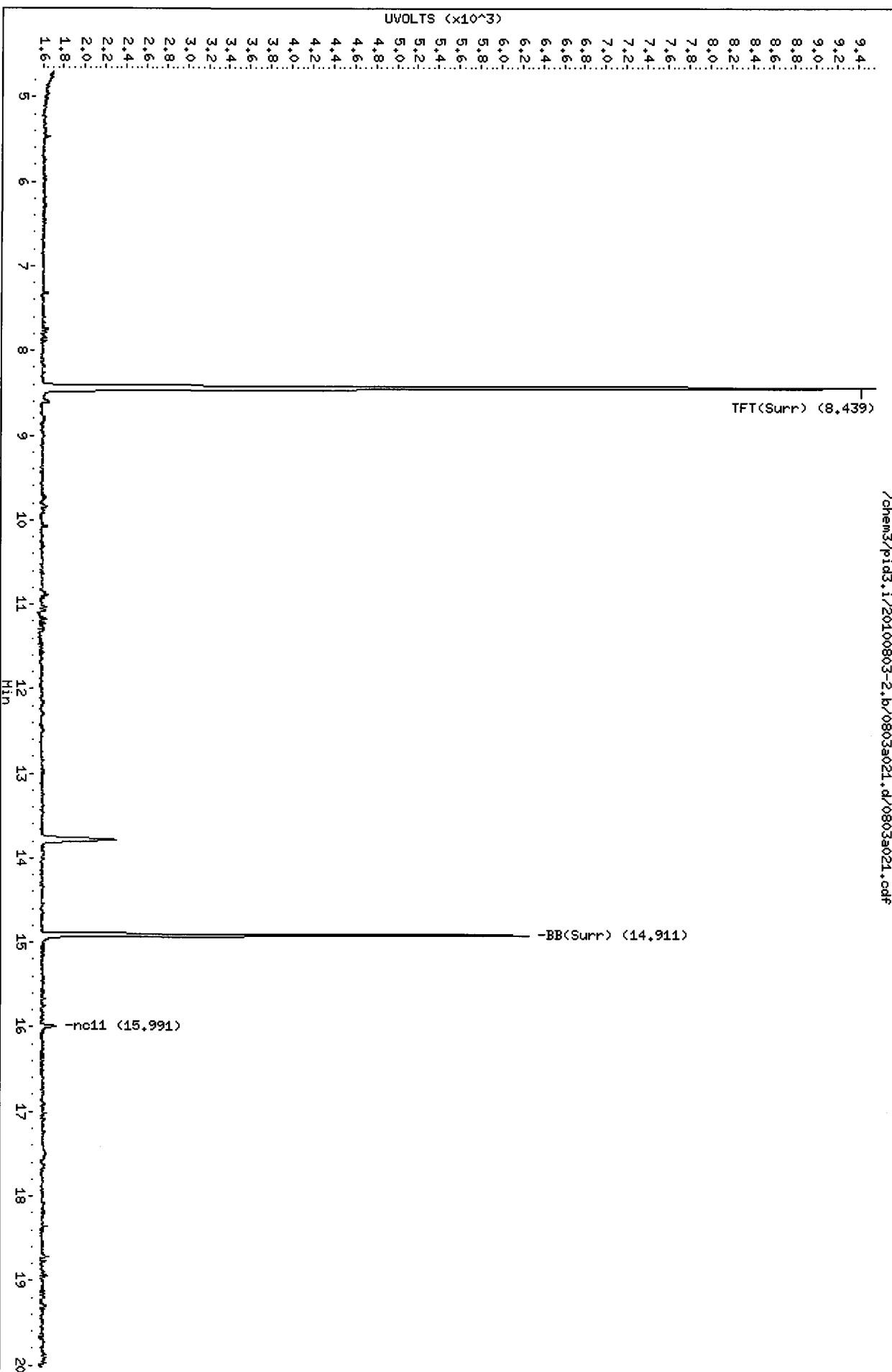
Page 1

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

Column phase: RTX 502-2 FID



Data File: /chem3/pid3.i/20100803-1.b/0803a021.d

Date: 03-AUG-2010 15:48

Client ID: PSB14-7-9-072810

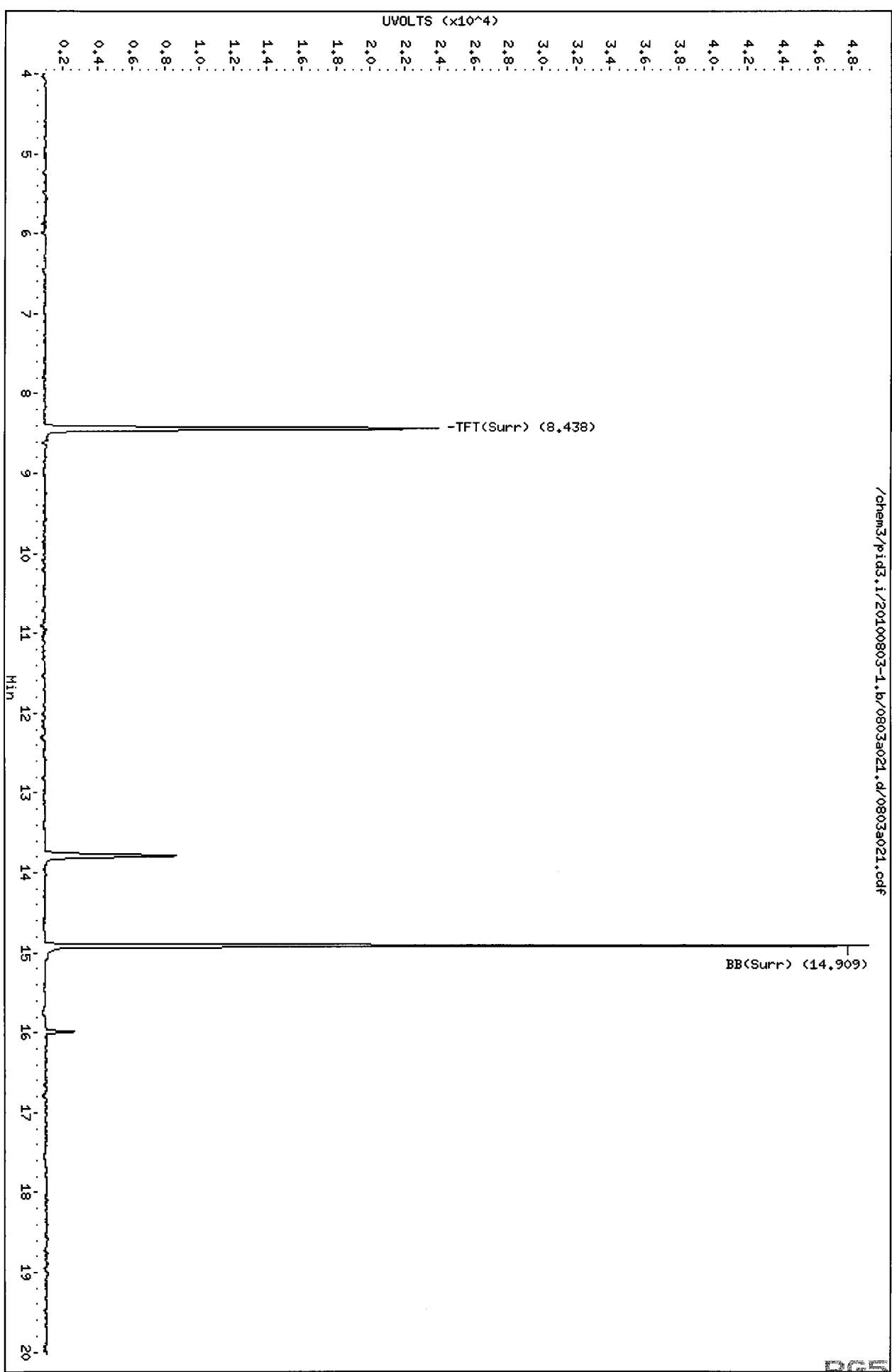
Sample Info: RG54E

Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18



8/5/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a022.d      ARI ID: RG54F  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a022.d      Client ID: PSB14-12-14-072810  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 16:13  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.031	8064	96324	112.0	TFT (Surr)
14.911	0.023	4782	38123	111.0	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	1016	0.001
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	3905	0.002
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	3904	0.003
NWTPHG Tol-Nap (10.17 to 18.18)	882029	1016	0.001

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.439	0.031	23574	107.2	TFT (Surr)
14.909	0.023	49009	107.5	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a022.d

Date: 03-AUG-2010 16:13

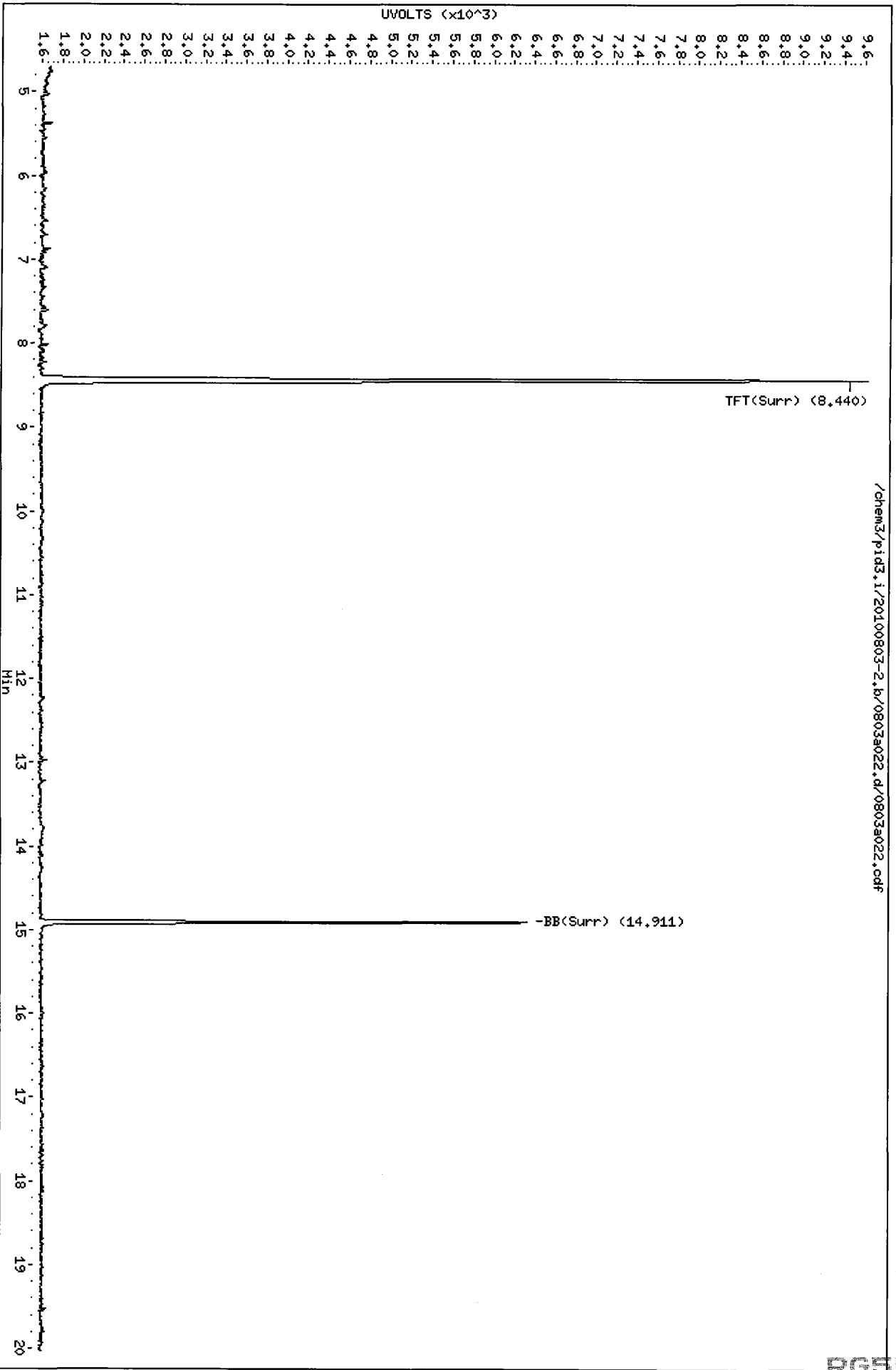
Client ID: PSB14-12-14-072810

Sample Info: RG54F

Page 1

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



RG54 : 01230



Data File: /chem3/pid3.i/20100803-1.b/0803a022.d

Date: 03-AUG-2010 16:13

Client ID: PSB14-12-14-072810

Sample Info: RGS4F

Page 1

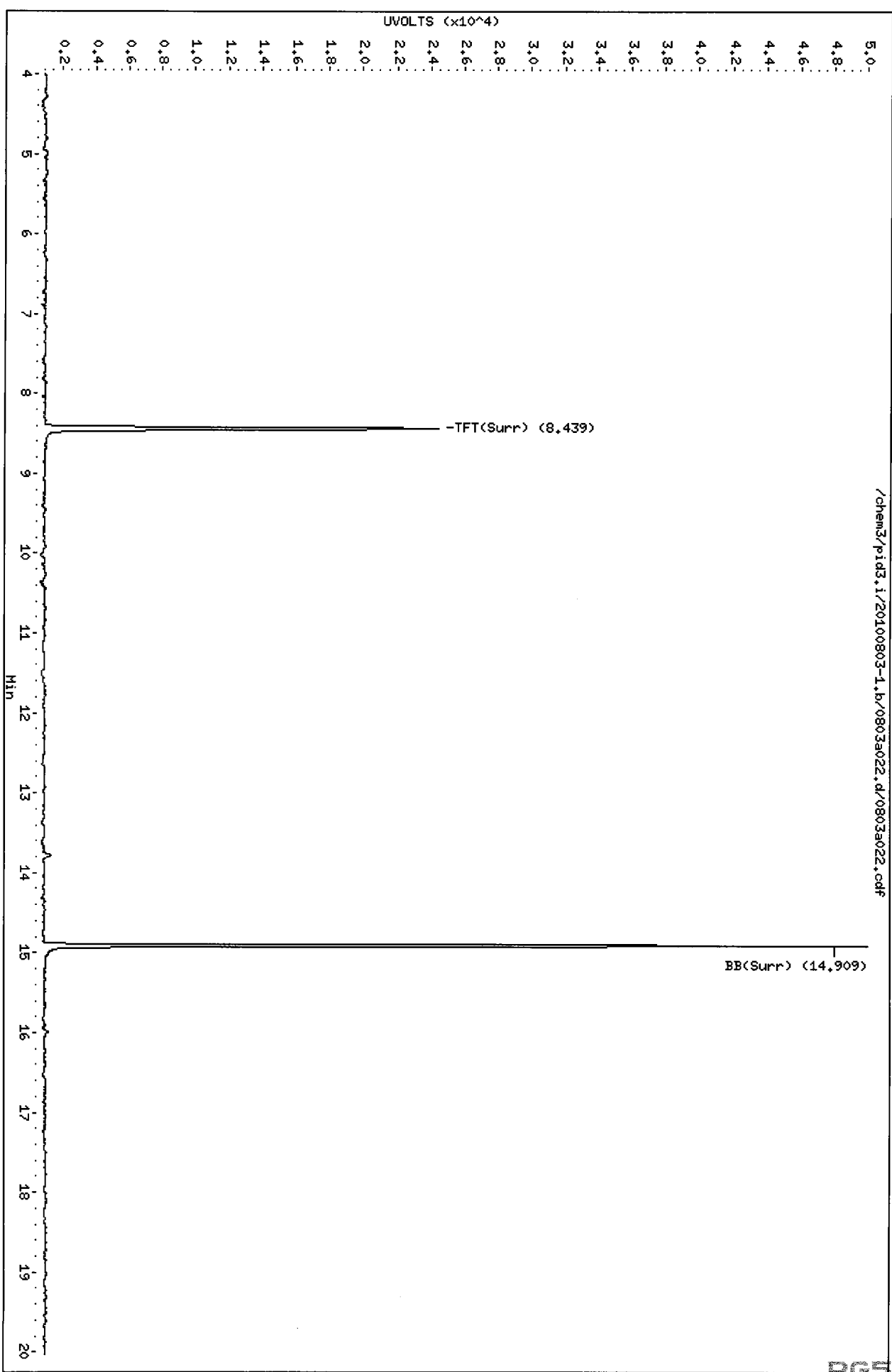
Instrument: pid3.i

Operator: MH

Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid3.i/20100803-1.b/0803a022.d/0803a022.cdf



RGS4: 01297

11/15/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a023.d      ARI ID: RG54FMS  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a023.d      Client ID:  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 16:37  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.445	0.036	7450	89455	103.5	TFT(Surr)
14.912	0.025	4591	37983	106.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	835770	1.010 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	1636656	0.984 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1093332	0.966 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	891035	1.010 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.443	0.035	21778	99.1	TFT(Surr)
14.910	0.024	47786	104.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.721	0.033	3074	2.33	Benzene
10.309	0.038	41864	31.72	Toluene
12.770	-0.034	512	0.41	Ethylbenzene
12.983	0.041	47329	35.15	M/P-Xylene
13.758	0.034	19580	15.24	O-Xylene
5.312	0.024	35034	98.46	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.1/20100803-2.b/0803a023.d

Date: 03-AUG-2010 16:37

Client ID:

Sample Info: RGS4FMS

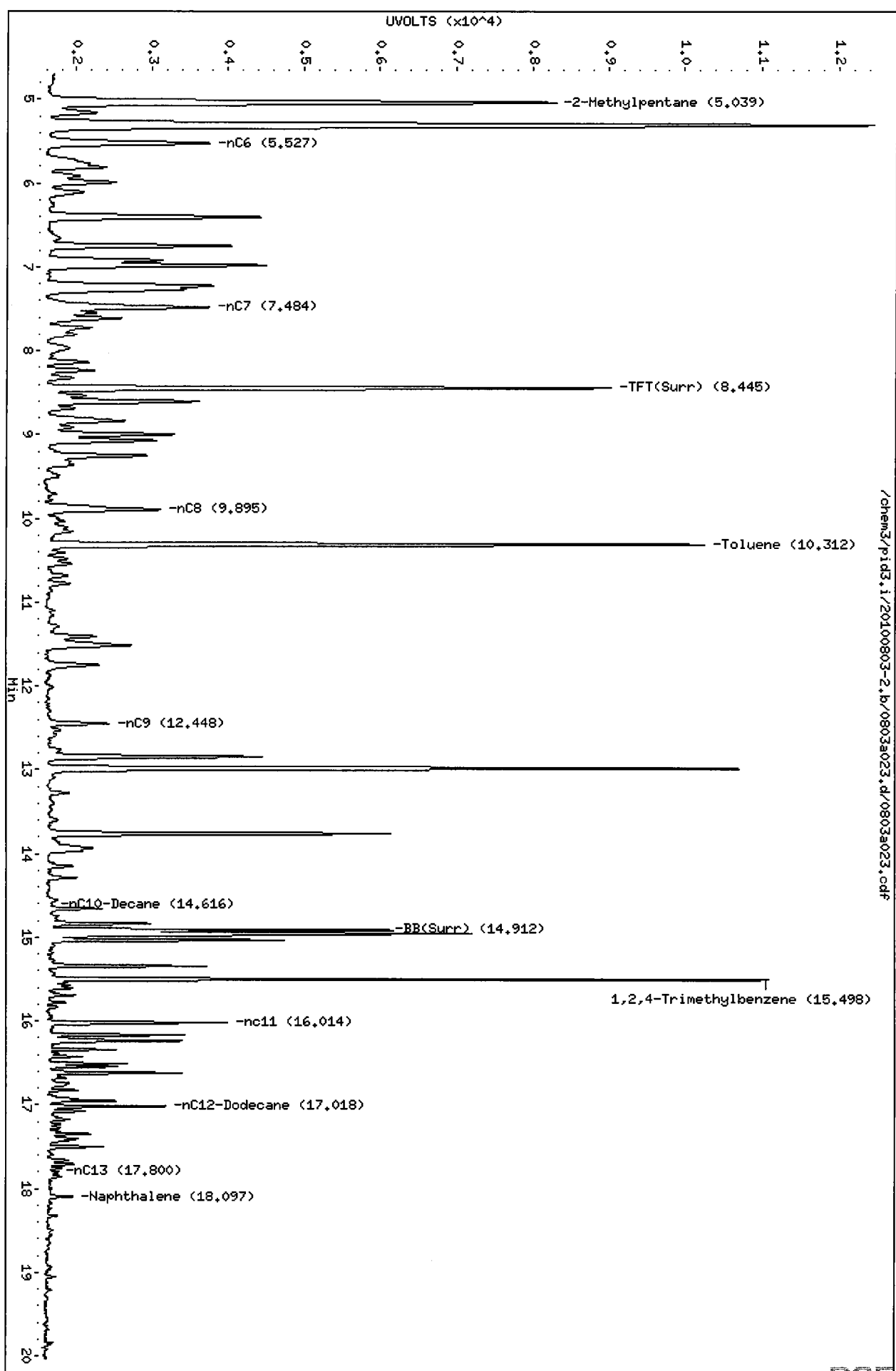
Column phase: RTX 502-2 FID

Instrument: pid3.1

Operator: MH

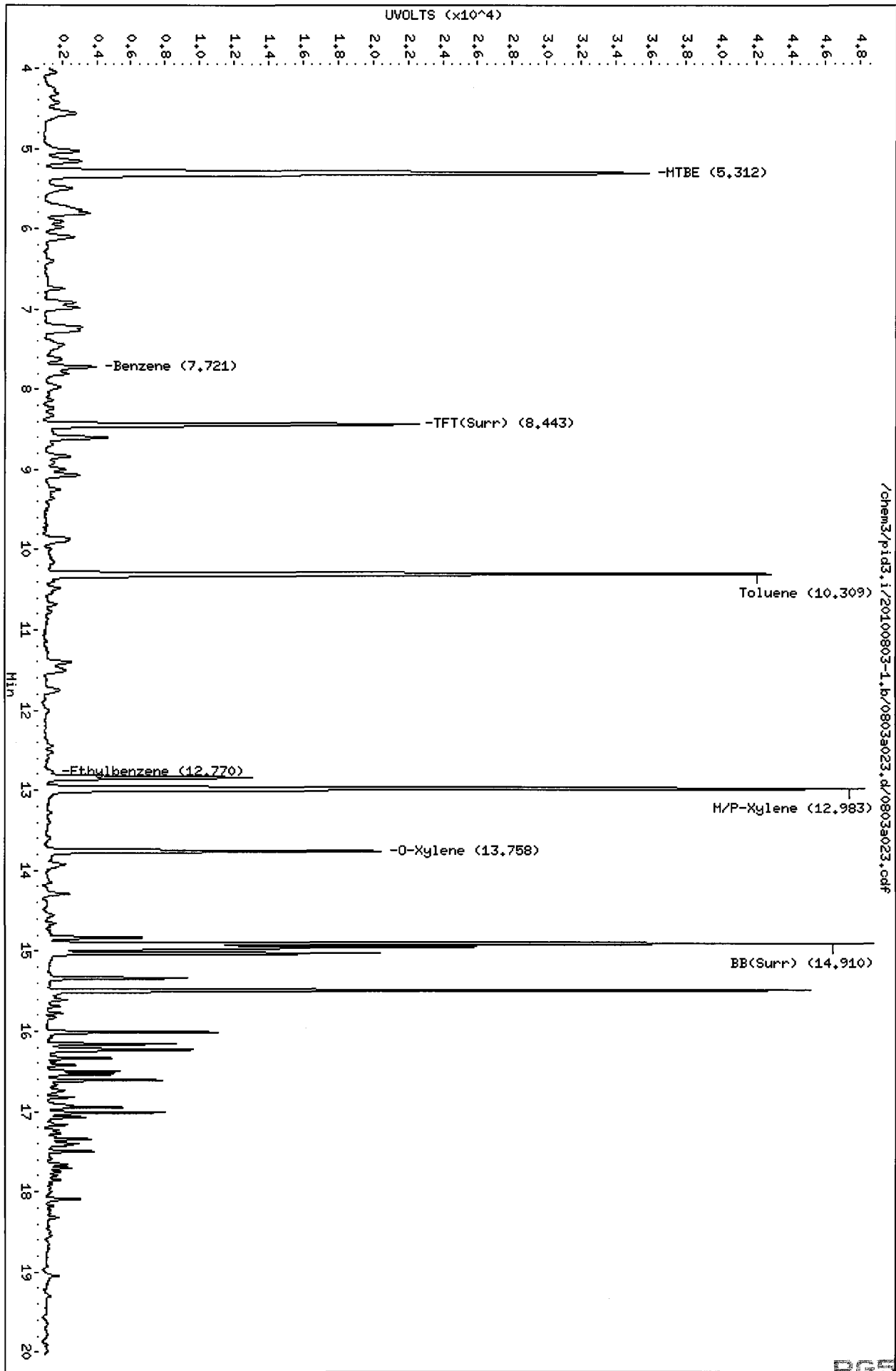
Column diameter: 0.18

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Data File: /chem3/pid3.i/20100803-1.b/0803a023.d  
Date: 03-AUG-2010 16:37  
Client ID:  
Sample Info: RGS4FMS  
Column phase: RTX 502-2 PID

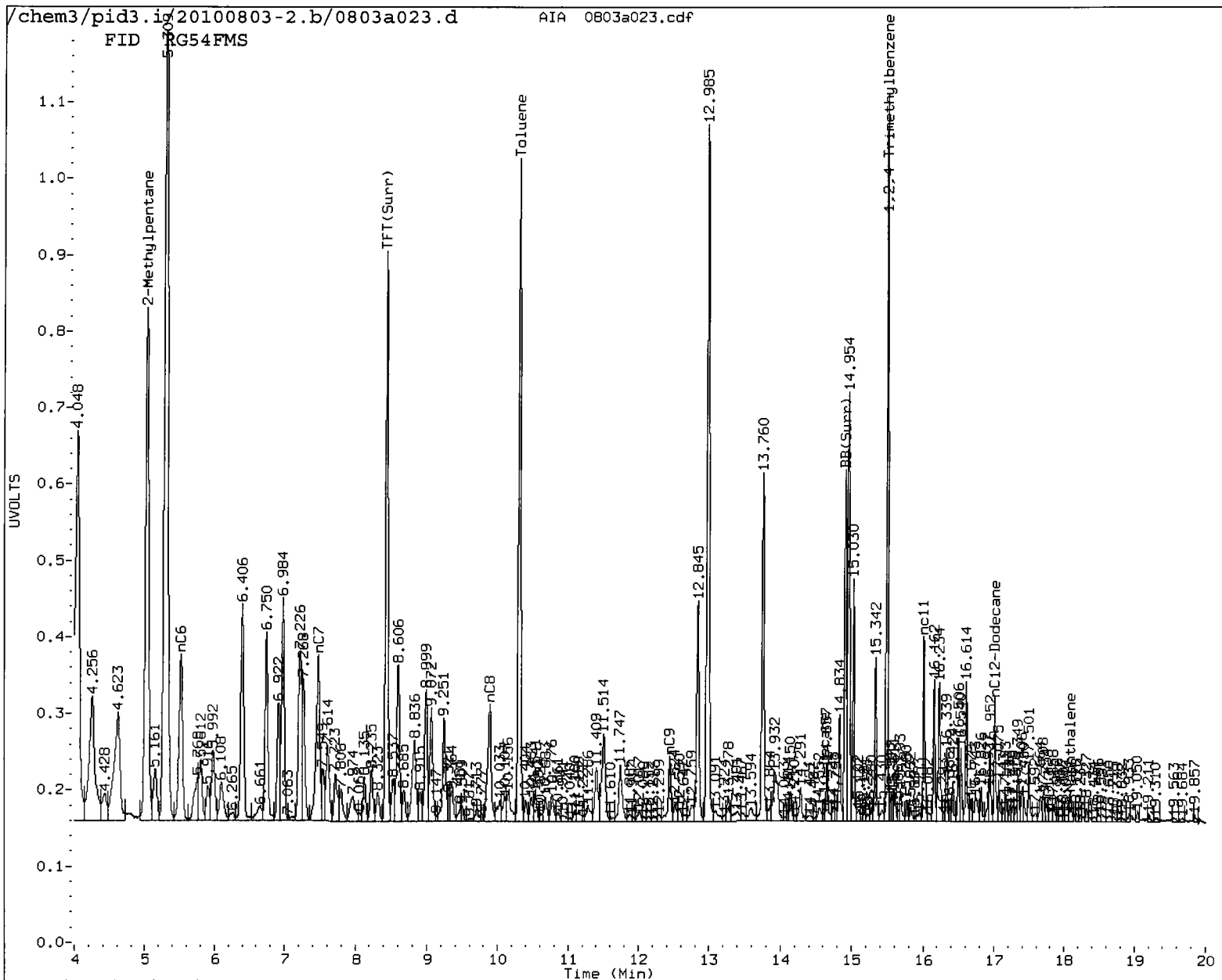
Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



/chem3/pid3.i/20100803-1.b/0803a023.d/0803a023.cdf



FID RG54FMS



MH  
8/5/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a024.d      ARI ID: RG54FMSD  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a024.d      Client ID:  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 17:02  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.031	7997	95455	111.1	TFT(Surr)
14.912	0.024	4602	37411	106.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	882426	1.066 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	1803990	1.084 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1223628	1.081 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	936741	1.062 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.439	0.031	23359	106.3	TFT(Surr)
14.910	0.024	48315	106.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.716	0.028	3180	2.41	Benzene
10.306	0.035	43335	32.83	Toluene
12.841	0.036	12704	10.22	Ethylbenzene
12.980	0.039	48701	36.16	M/P-Xylene
13.756	0.032	20187	15.71	O-Xylene
5.308	0.020	35299	99.21	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a024.d

Date: 03-AUG-2010 17:02

Client ID:

Sample Info: RG54FMSD

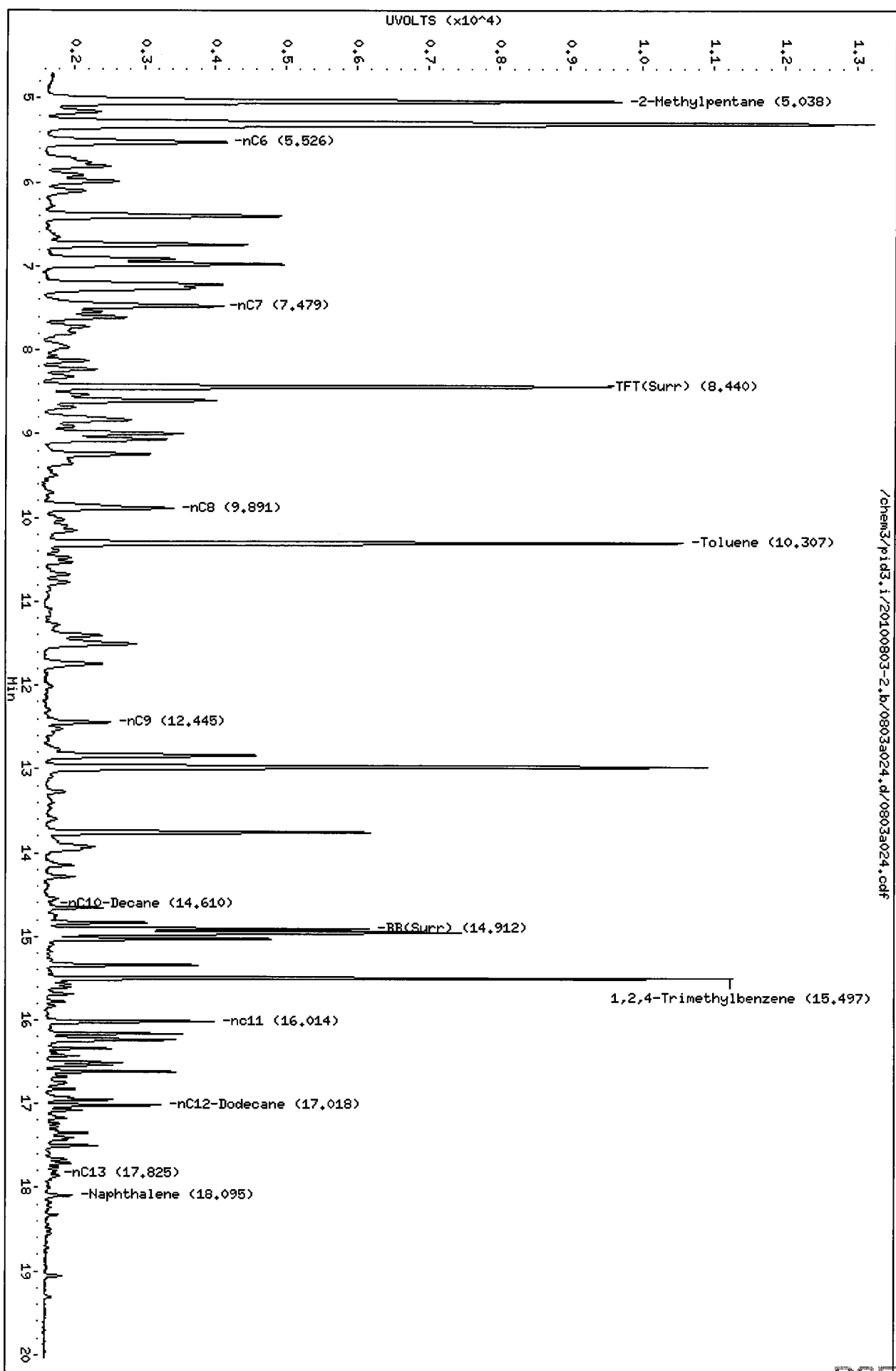
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

/chem3/pid3.i/20100803-2.b/0803a024.d/0803a024.cdf





Data File: /chem3/pid3.i/20100803-1.b/0803a024.d

Date: 03-AUG-2010 17:02

Client ID: PSB14-12-14-072810

Sample Info: RGS4FMSD

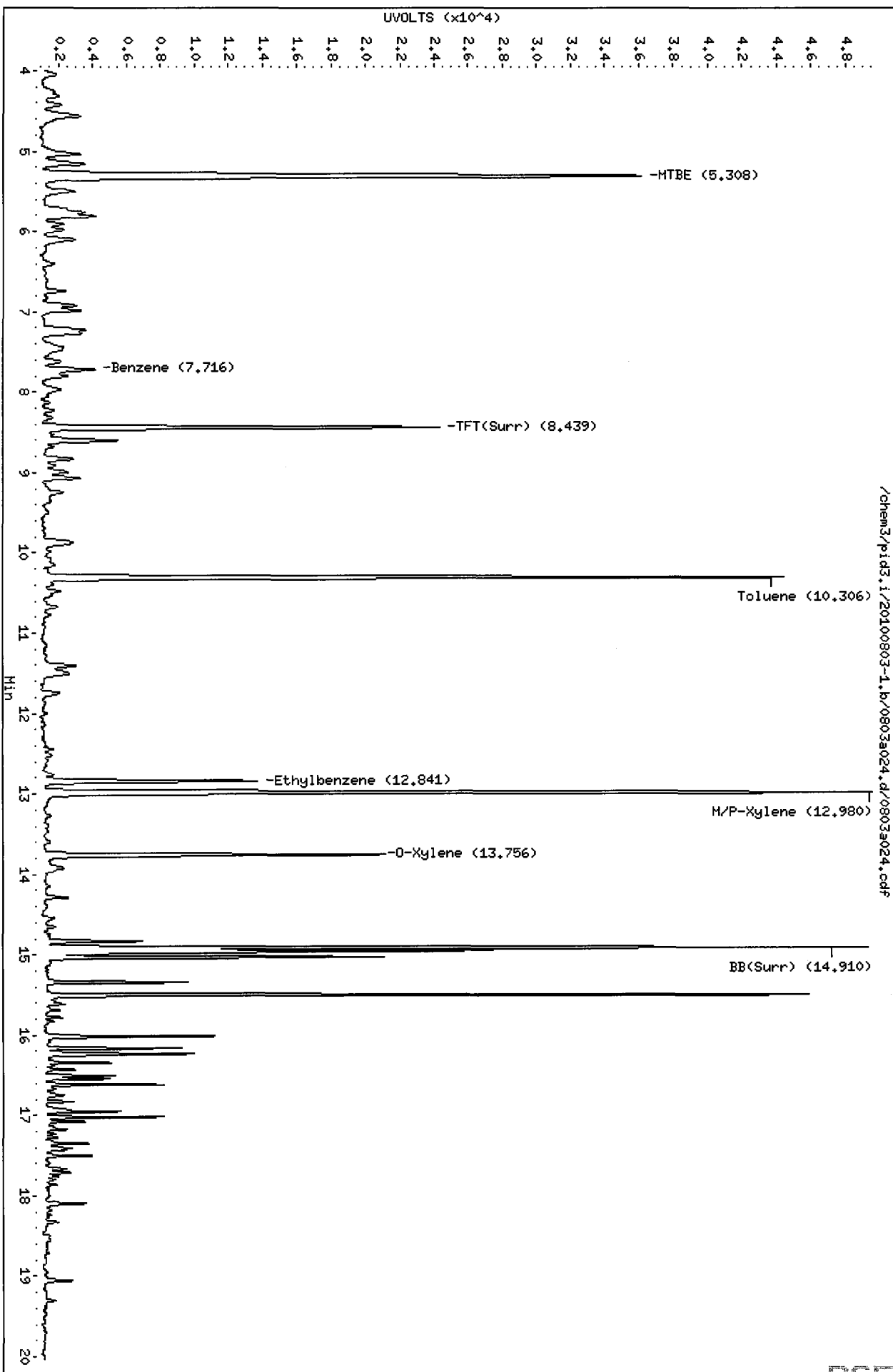
Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: NH

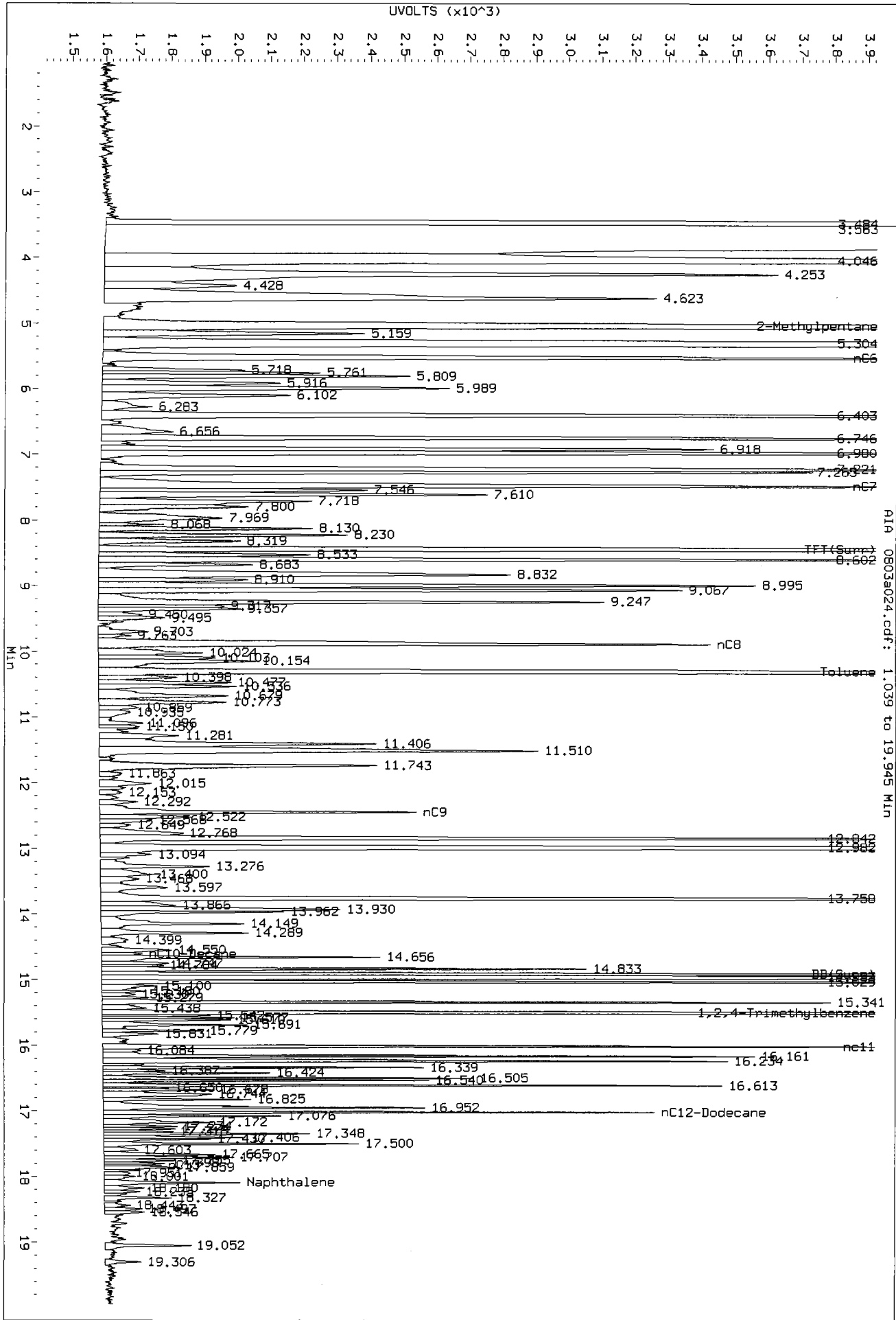
Column diameter: 0.18

Page 1



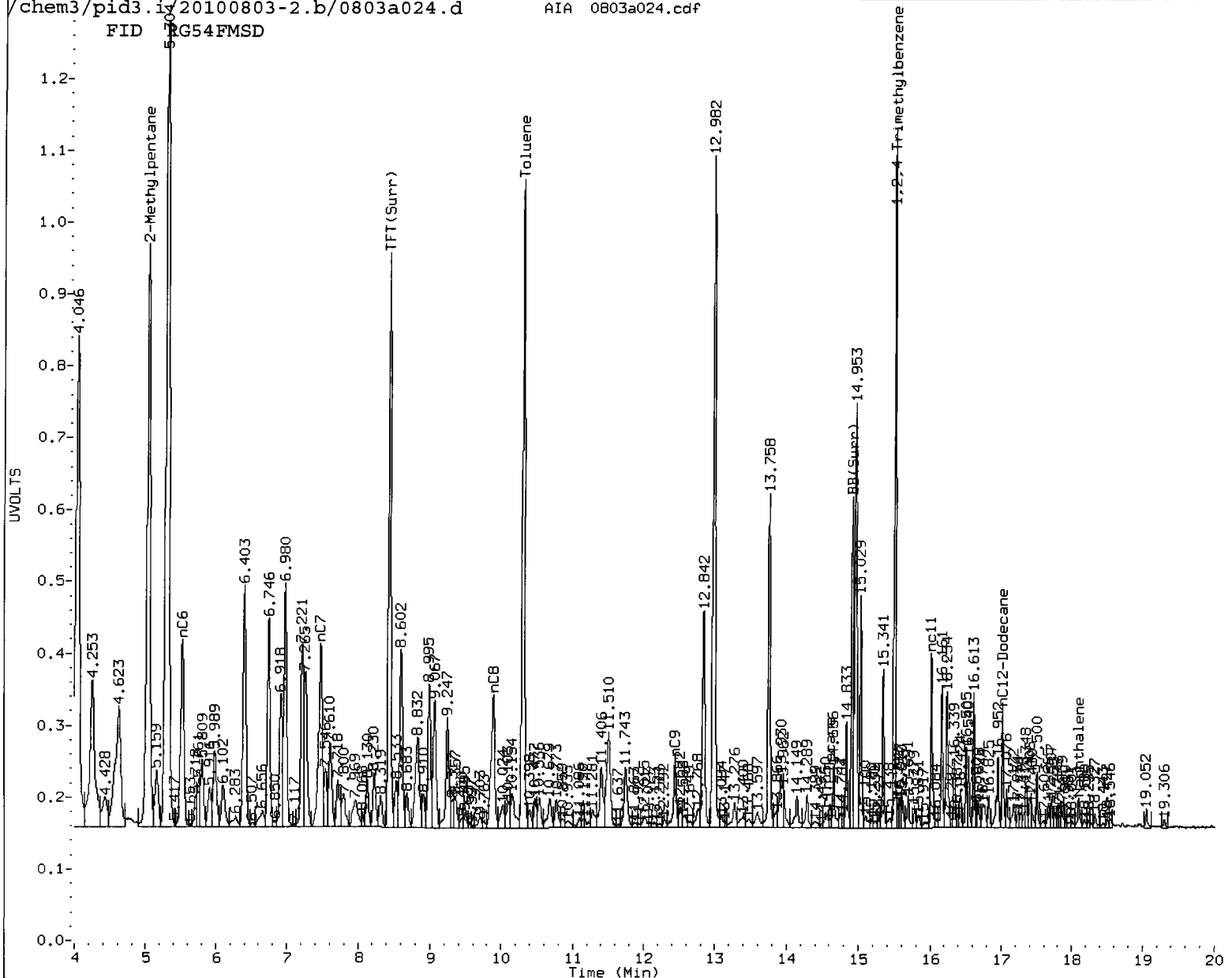
1.1  
8/5/10

Data File: /chem3/p103.1/20100803-2.b/0803a024.d/0803a024.cdf  
Injection Date: 03-AUG-2010 17:02  
Instrument: p103.1  
Client Sample ID:



AIA 0803a024.cdf: 1.039 to 19.945 MIN

FID RG54FMSD



MANUAL INTEGRATION

- Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MA

Date: 8/5/10

124  
8/5/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a026.d      ARI ID: BCAL3  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a026.d      Client ID: BCAL3  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 17:51  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.443	-0.001	7666	90233	106.5	TFT(Surr)
14.912	0.000	4509	35847	104.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.12)	827807	577930	0.698
8015B 2MP-TMB ( 4.94 to 15.60)	1664107	588032	0.353
AK101 nC6-nC10 ( 5.43 to 14.51)	1131784	551349	0.487
NWTPHG Tol-Nap (10.21 to 18.19)	882029	577930	0.655

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.442	0.034	22685	103.2	TFT(Surr)
14.911	0.025	46995	103.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.717	0.029	35403	26.78	Benzene
10.309	0.038	35446	26.86	Toluene
12.843	0.039	32457	26.12	Ethylbenzene
12.981	0.039	70492	52.35	M/P-Xylene
13.759	0.035	34151	26.58	O-Xylene
5.305	0.017	9536	26.80	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-1.b/0803a026.d

Date: 03-AUG-2010 17:51

Client ID: BCAL3

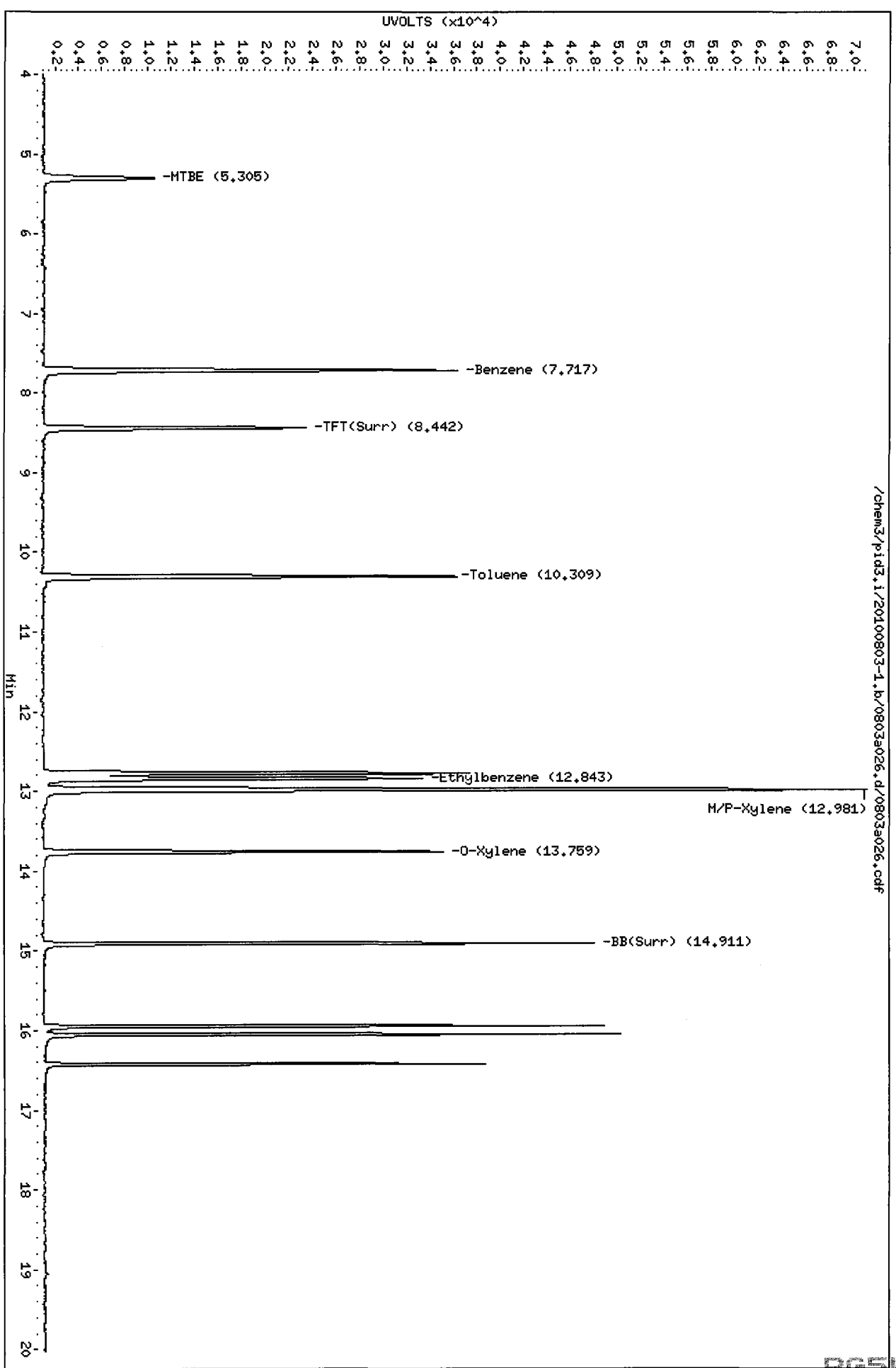
Sample Info: BCAL3

Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: HH

Column diameter: 0.18



/chem3/pid3.i/20100803-1.b/0803a026.d/0803a026.cdf

01210

Data File: /chem3/pid3.i/20100803-1.b/0803a026.d

Date: 03-AUG-2010 17:51

Client ID: BCAL3

Sample Info: BCAL3

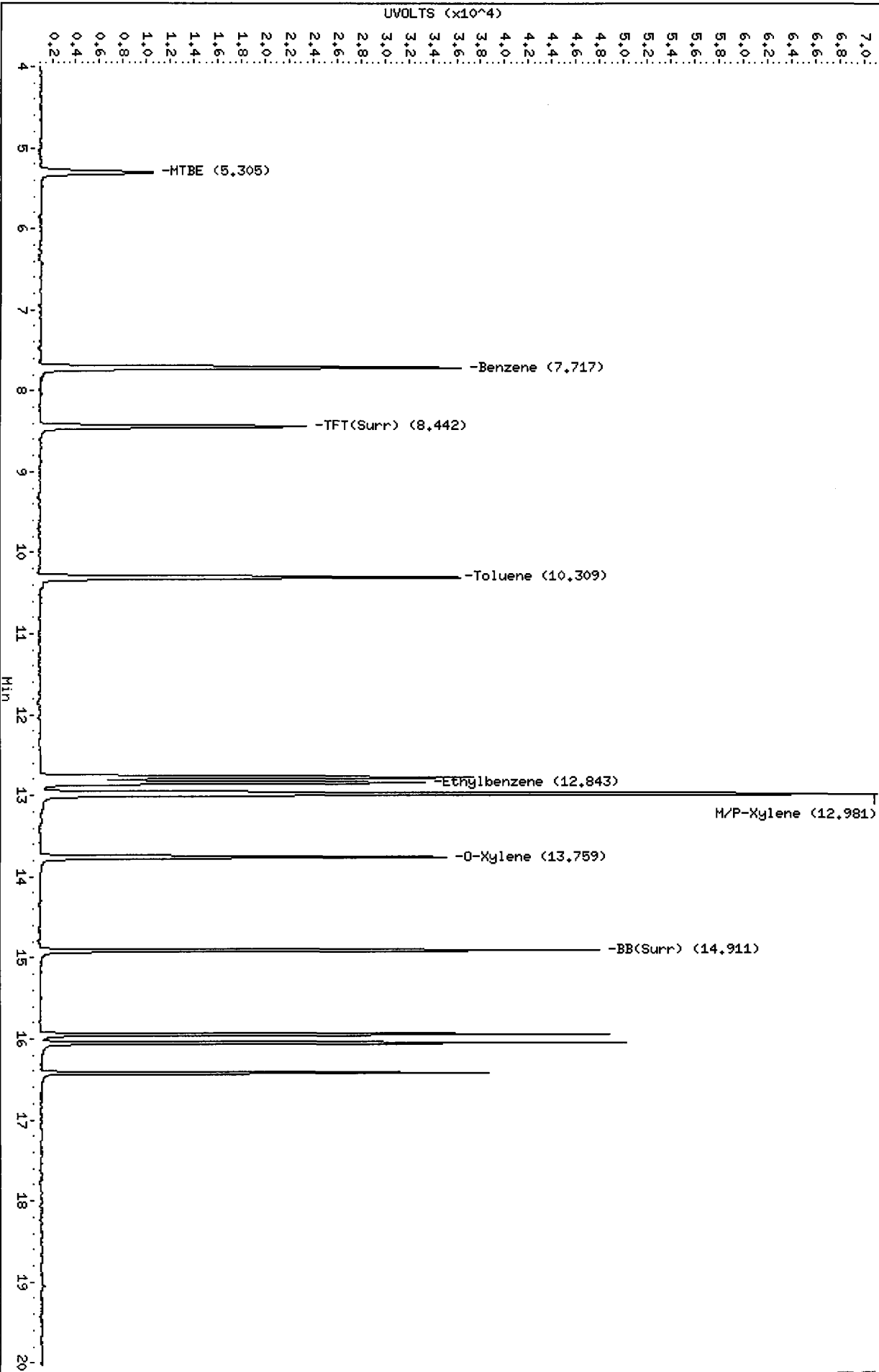
Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

/chem3/pid3.i/20100803-1.b/0803a026.d/0803a026.cdf



Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a027.d      ARI ID: GCAL 3  
 Data file 2: /chem3/pid3.i/20100803-1.b/0803a027.d      Client ID:  
 Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 18:16  
 Instrument: pid3.i    Matrix: WATER  
 Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
 BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.032	7835	93833	108.9	TFT(Surr)
14.911	0.024	4655	38029	108.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	2033253	2.456 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	3991386	2.399 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2663212	2.353 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	2147059	2.434 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.439	0.031	22898	104.2	TFT(Surr)
14.910	0.024	48075	105.5	BB(Surr)

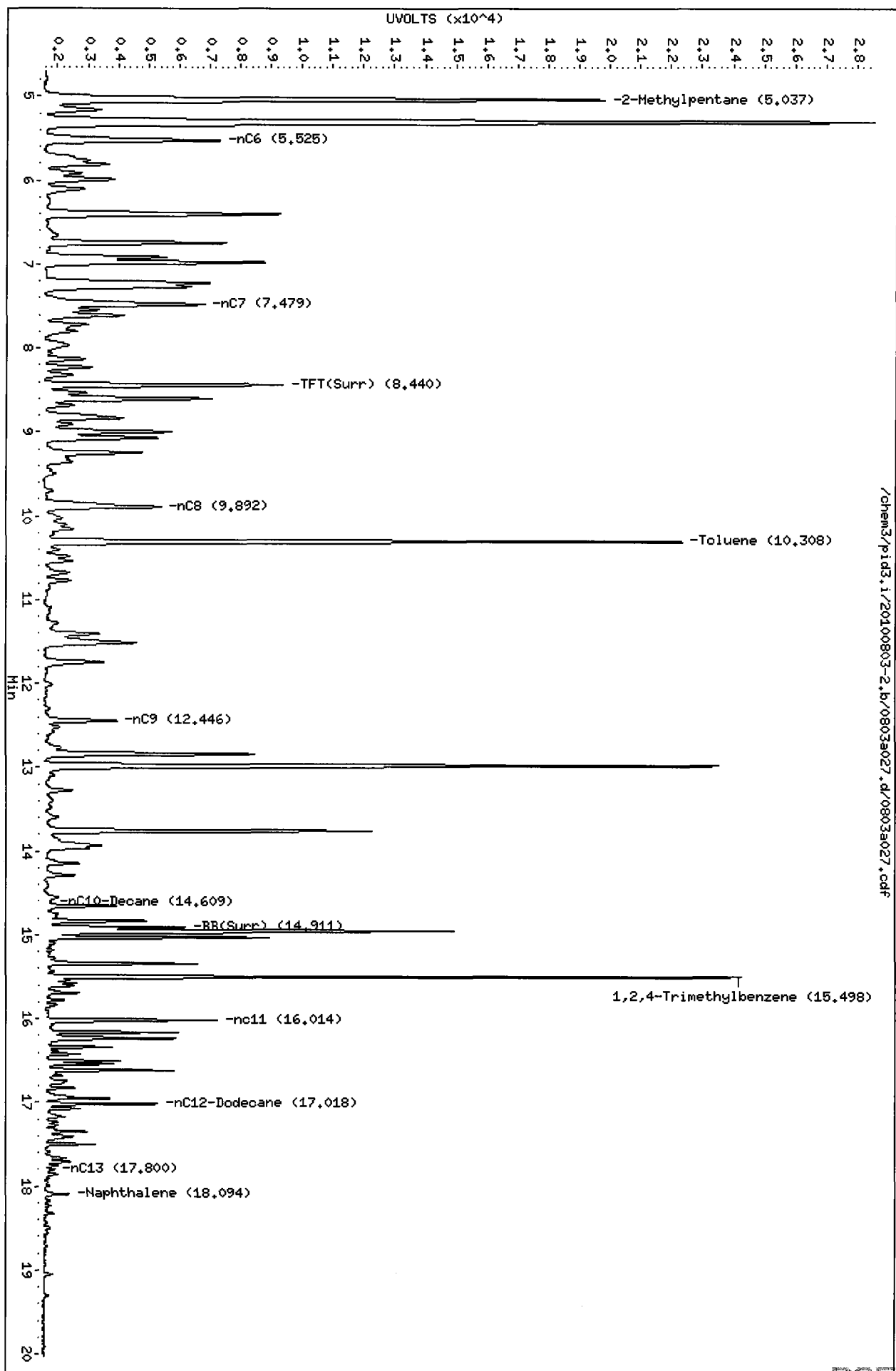
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.716	0.028	7368	5.57	Benzene
10.307	0.036	102093	77.35	Toluene
12.841	0.037	29469	23.72	Ethylbenzene
12.982	0.040	114276	84.86	M/P-Xylene
13.757	0.033	46501	36.19	O-Xylene
5.308	0.020	83395	234.39	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a027.d  
Date : 03-AUG-2010 18:16  
Client ID:  
Sample Info: GCAL 3  
Column Phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: NH  
Column diameter: 0.18



/chem3/pid3.i/20100803-2.b/0803a027.d/0803a027.cdf



Data File: /chem3/pid3.i/20100803-1.b/0803a027.d

Date: 03-AUG-2010 18:16

Client ID: CCAL 3

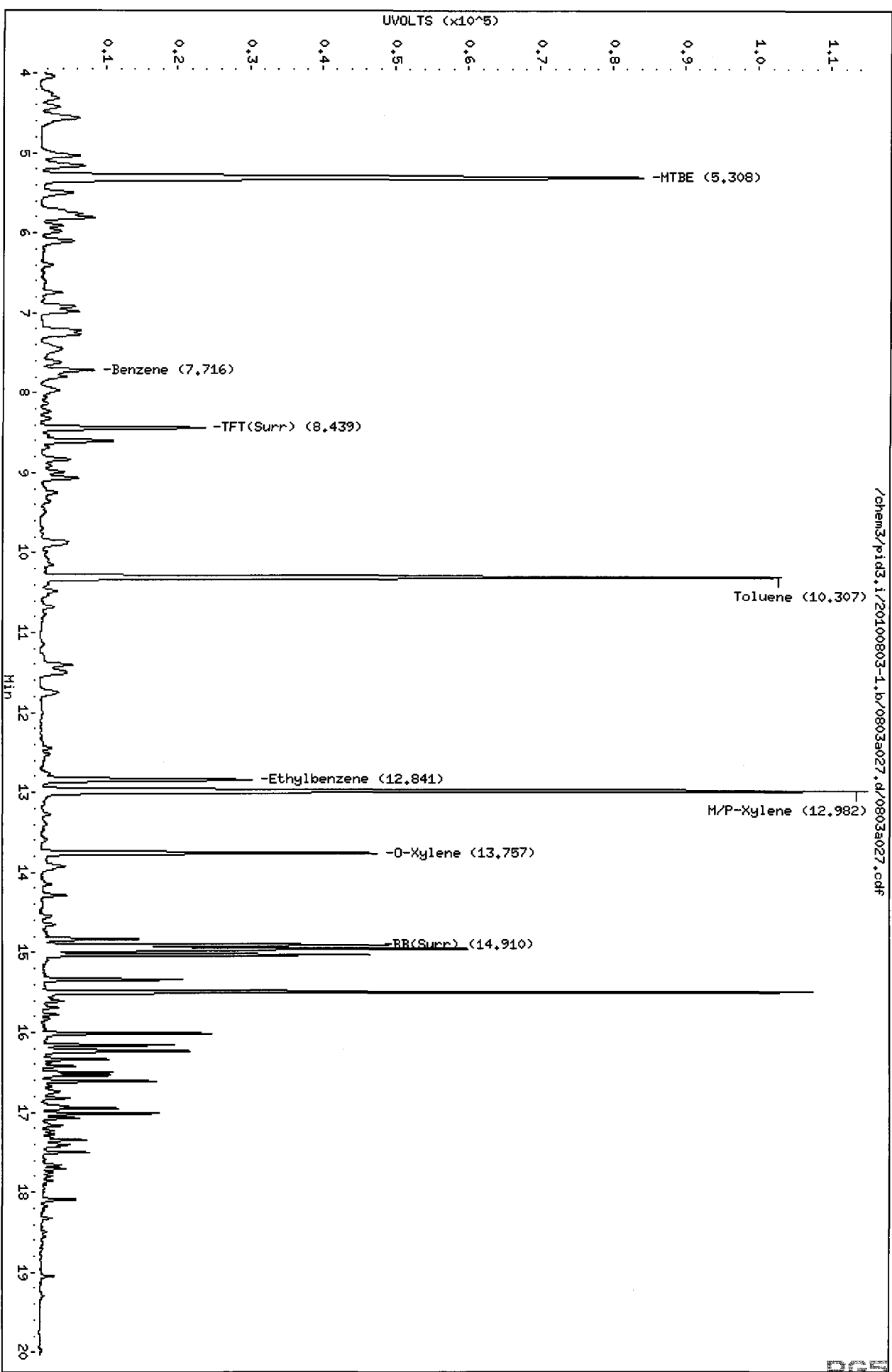
Sample Info: CCAL 3

Column phase: RTX 502-2 PID

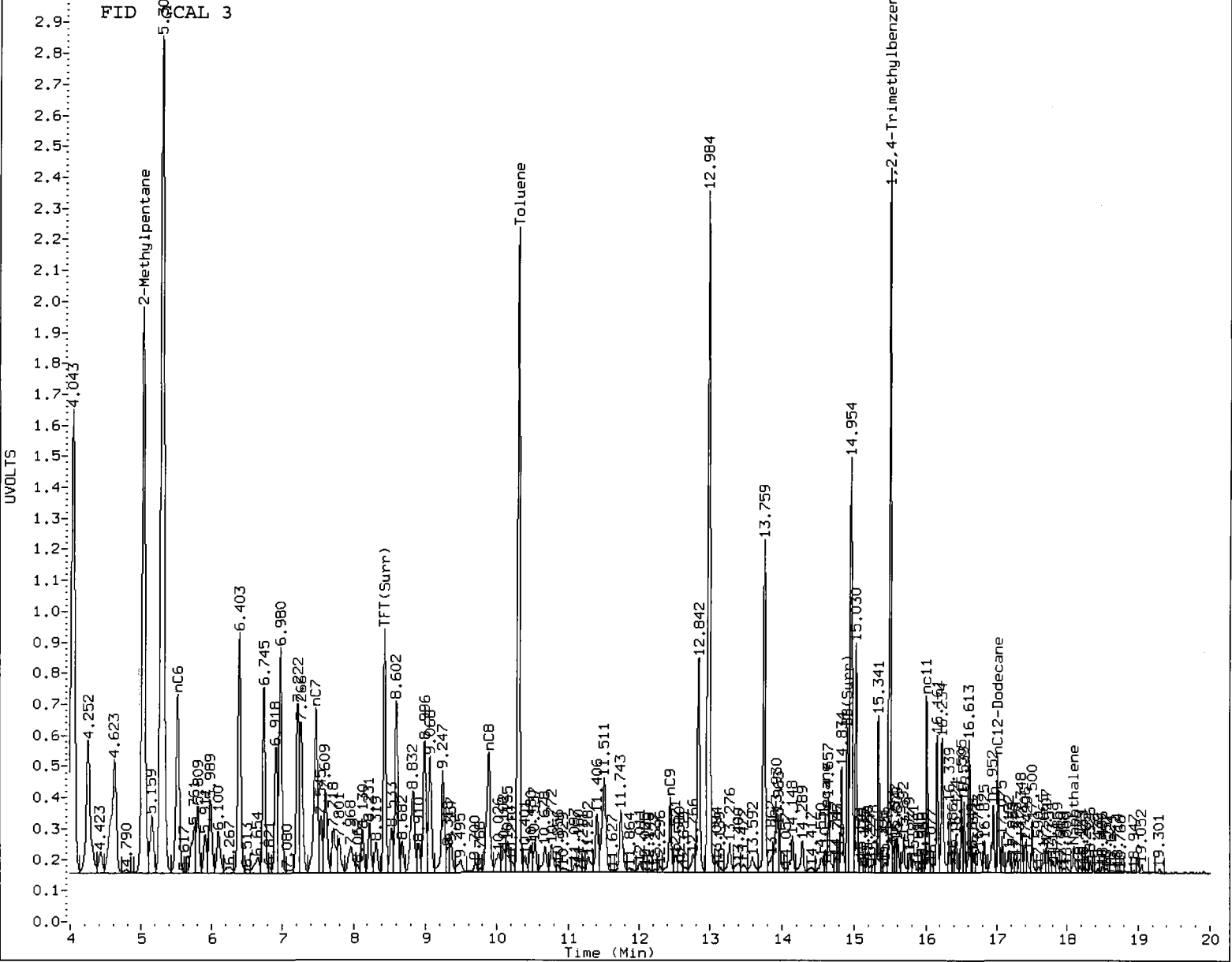
Instrument: pid3.i

Operator: MH

Column diameter: 0.18







MANUAL INTEGRATION

- Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MH Date: 8/5/10

8/15/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a028.d      ARI ID: RG54H  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a028.d      Client ID: PSB17-0-0.5-072810  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 18:40  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.441	0.033	7475	88533	103.9	TFT(Surr)
14.912	0.025	4487	38062	104.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	24116	0.029
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	21475	0.013
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	15524	0.014
NWTPHG Tol-Nap (10.17 to 18.18)	882029	26986	0.031

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.440	0.033	21808	99.2	TFT(Surr)
14.910	0.024	46037	101.0	BB(Surr)

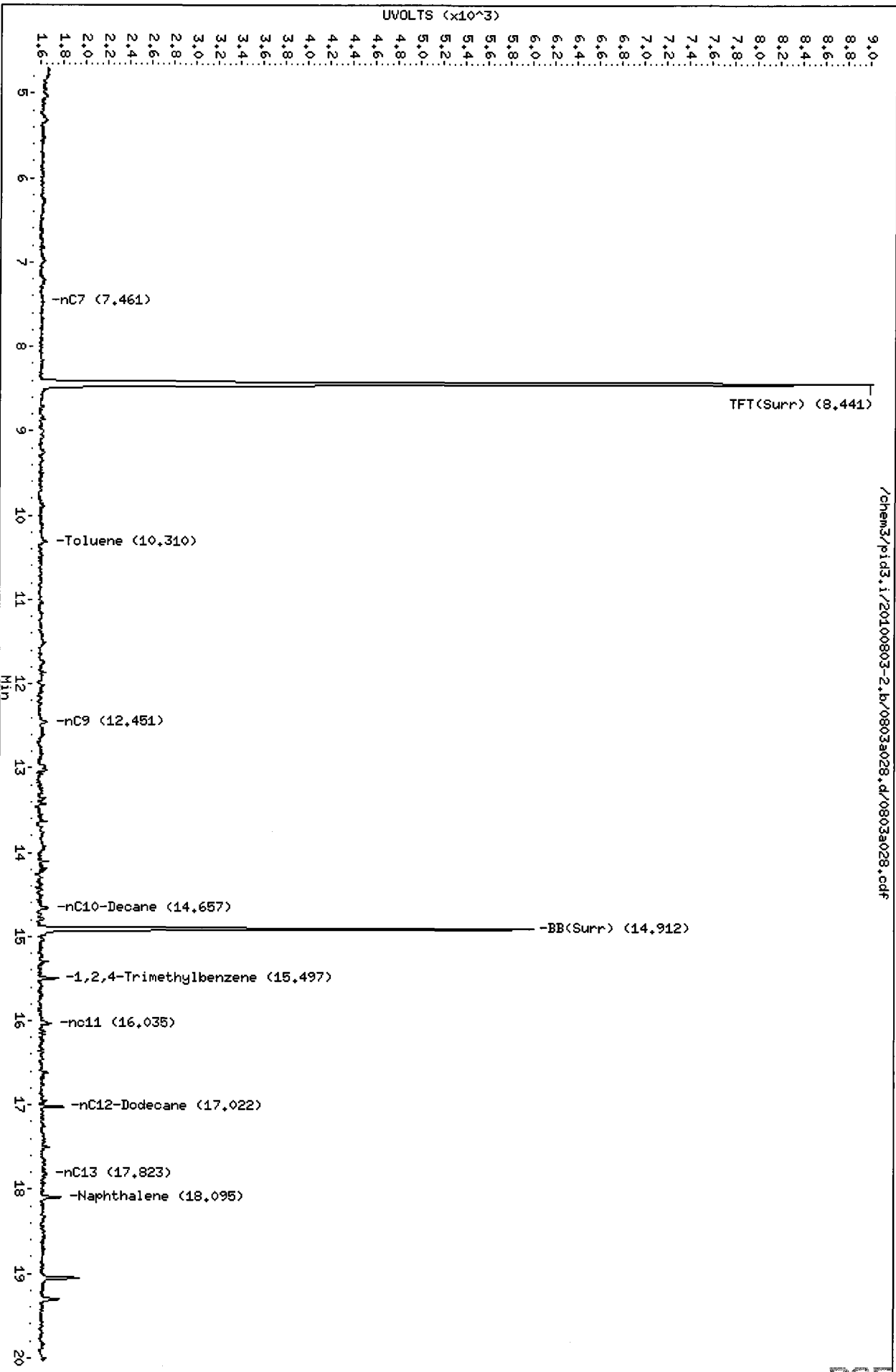
SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

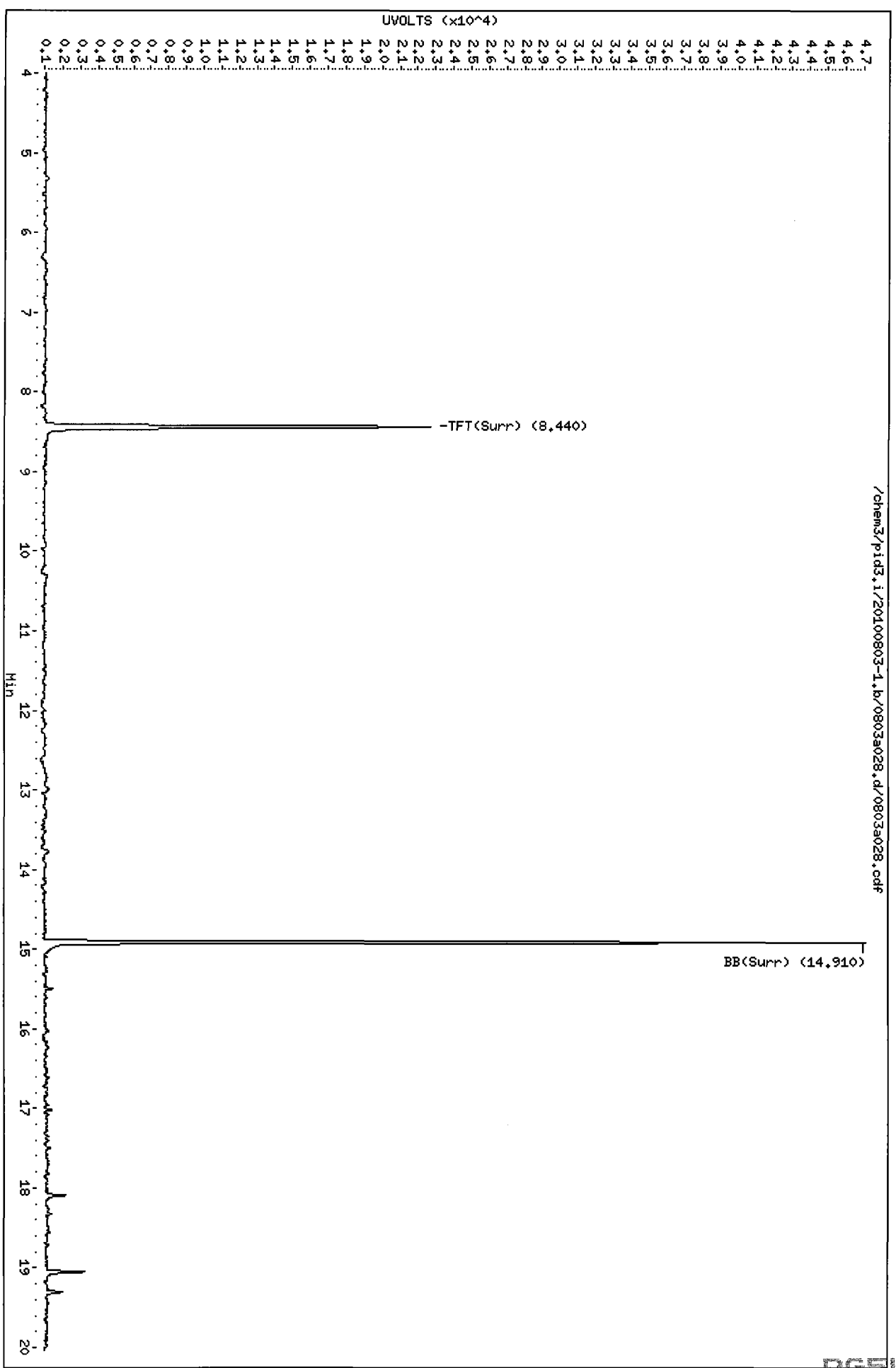
Data File: /chem3/pid3.i/20100803-2.b/0803a028.d  
Date : 03-AUG-2010 18:40  
Client ID: PS817-0-0.5-072810  
Sample Info: RGS4H  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



Data File: /chem3/pid3.i/20100803-1.b/0803a028.d  
Date: 03-AUG-2010 18:40  
Client ID: PSB17-0-0.5-072810  
Sample Info: RGS4H  
Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



M  
8/5/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a029.d      ARI ID: RG54I  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a029.d      Client ID: PSB17-1.5-2-072810  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 19:04  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
8.445	0.036	7658	90494	106.4	TFT(Surr)
14.913	0.025	4616	37362	107.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (10.17 to 17.11)	827807	1236	0.001
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	2240	0.001
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2240	0.002
NWTPHG Tol-Nap (10.17 to 18.18)	882029	2593	0.003

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
8.444	0.036	22487	102.3	TFT(Surr)
14.911	0.025	46904	102.9	BB(Surr)

SW8021 (PID)

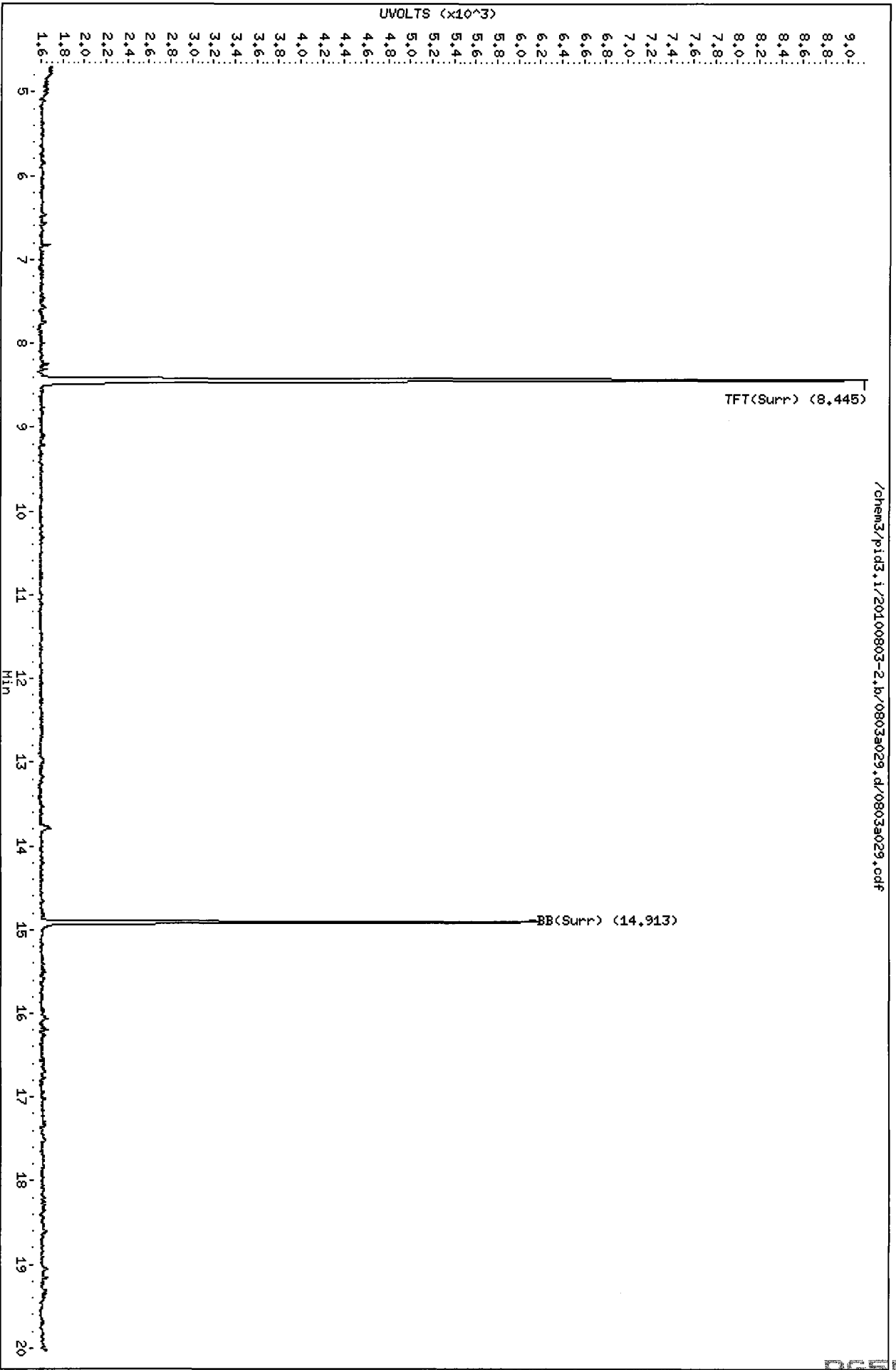
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RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a029.d  
Date: 03-AUG-2010 19:04  
Client ID: PSB17-1.5-2-072810  
Sample Info: RGS41  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18





Data File: /chem3/pid3.1/20100803-1.b/0803a029.d

Date: 03-AUG-2010 19:04

Client ID: PSB17-1.5-2-072810

Sample Info: RGS41

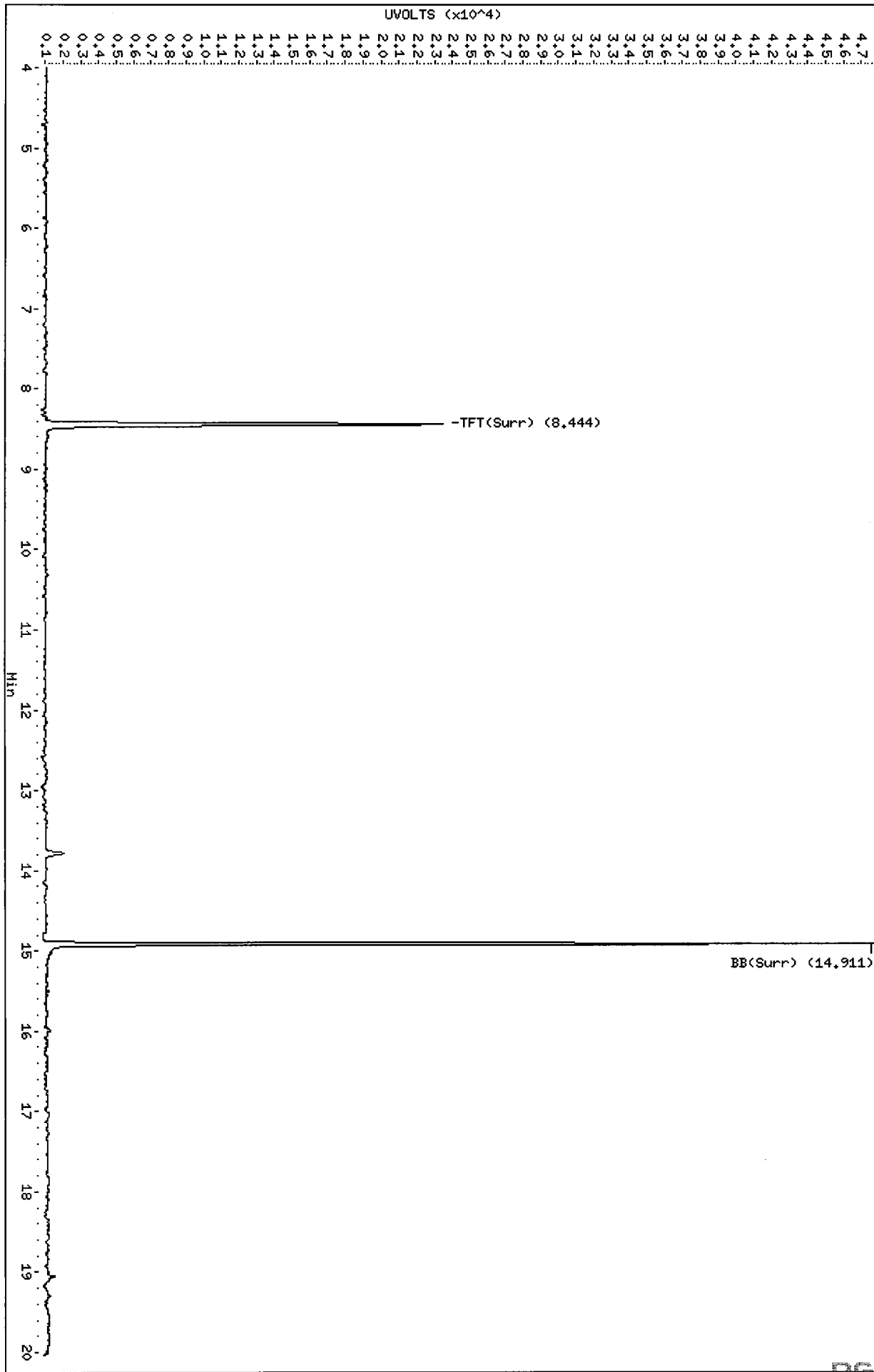
Column phase: RTX 502-2 PID

Instrument: pid3.1

Operator: MH

Column diameter: 0.18

/chem3/pid3.1/20100803-1.b/0803a029.d/0803a029.cdf



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MH  
8/5/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a030.d      ARI ID: RG54J  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a030.d      Client ID: PSB17-2-4-072810  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 19:29  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.031	7610	90372	105.7	TFT(Surr)
14.911	0.024	4537	38044	105.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	8329	0.010
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	6683	0.004
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	5504	0.005
NWTPHG Tol-Nap (10.17 to 18.18)	882029	10734	0.012

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.439	0.031	22494	102.3	TFT(Surr)
14.910	0.024	46589	102.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a030.d

Date: 03-AUG-2010 19:29

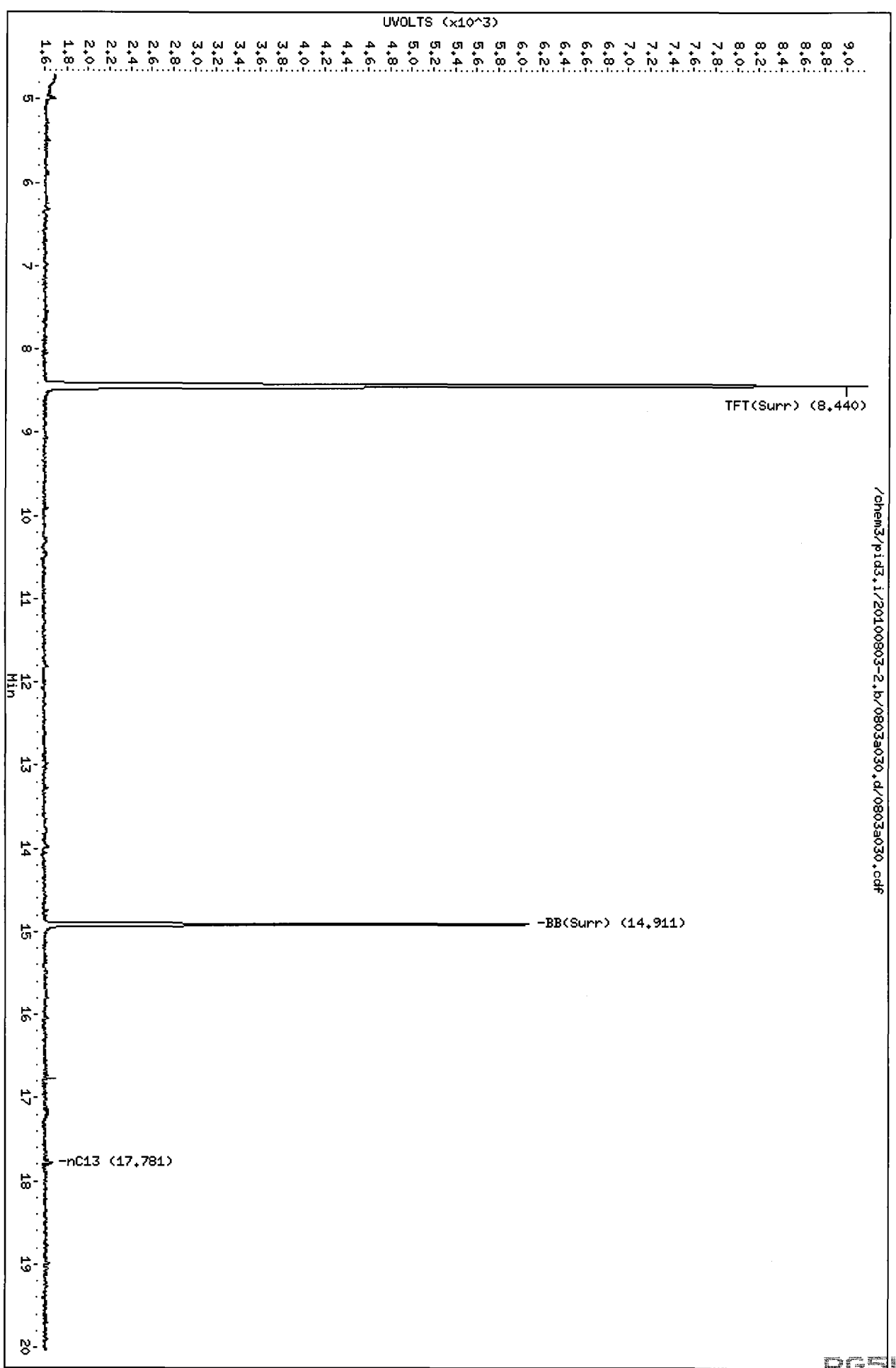
Client ID: PSB17-2-4-072810

Sample Info: RGS4J

Page 1

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



Data File: /chem3/pid3.i/20100803-1.b/0803a030.d

Date: 03-AUG-2010 19:29

Client ID: PSB17-2-4-072810

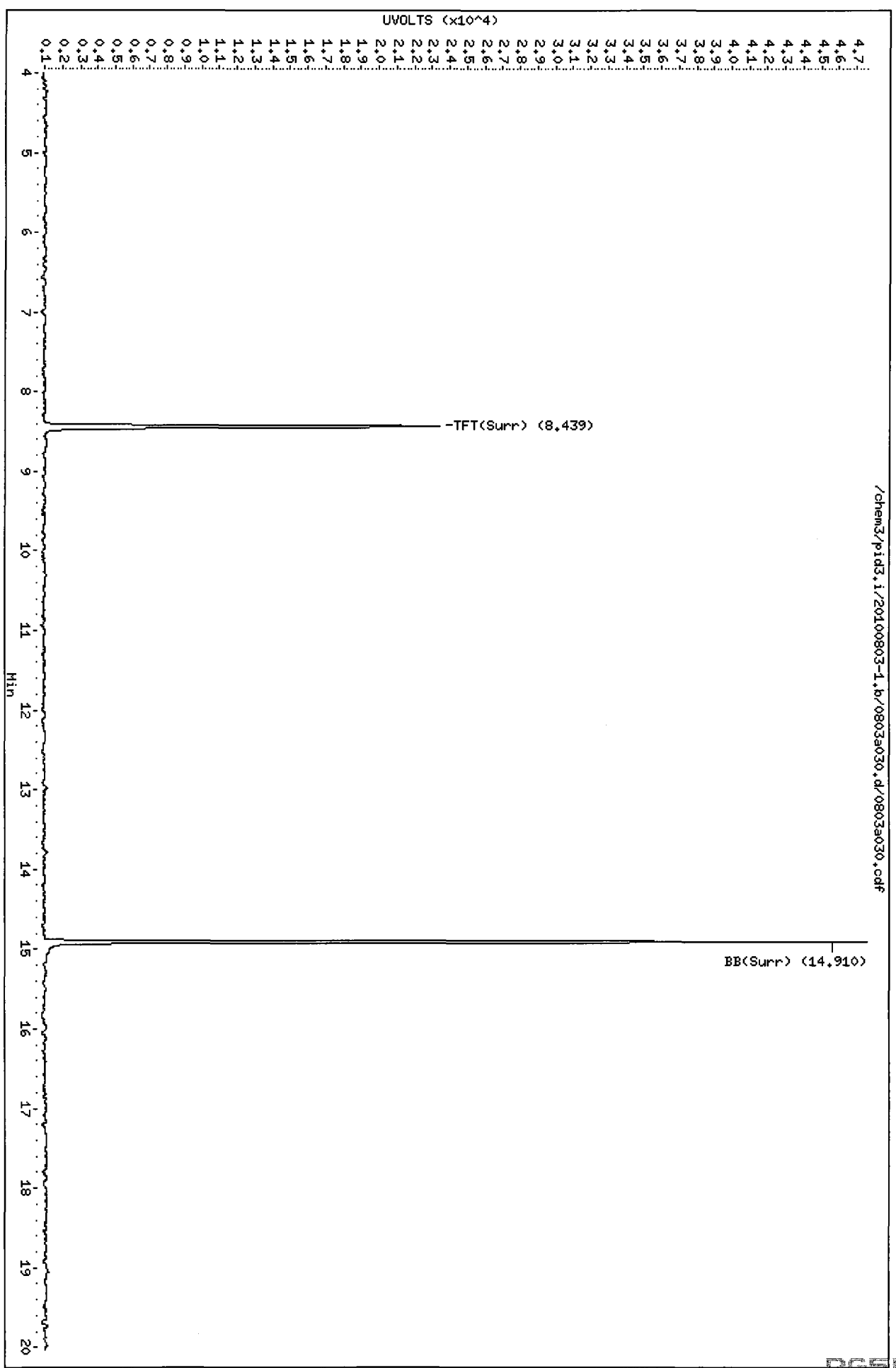
Sample Info: RGS4J

Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18



/chem3/pid3.i/20100803-1.b/0803a030.d/0803a030.cdf

012054

8/15/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a031.d      ARI ID: RG54K  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a031.d      Client ID: PSB17-4-6-072810  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 19:54  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.032	7480	89049	103.9	TFT(Surr)
14.912	0.024	4573	36815	106.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	0	0.000
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	1256	0.001
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1256	0.001
NWTPHG Tol-Nap (10.17 to 18.18)	882029	0	0.000

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.439	0.032	21860	99.4	TFT(Surr)
14.910	0.024	46959	103.0	BB(Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a031.d

Date: 03-AUG-2010 19:54

Client ID: PSB17-4-6-072810

Sample Info: R054K

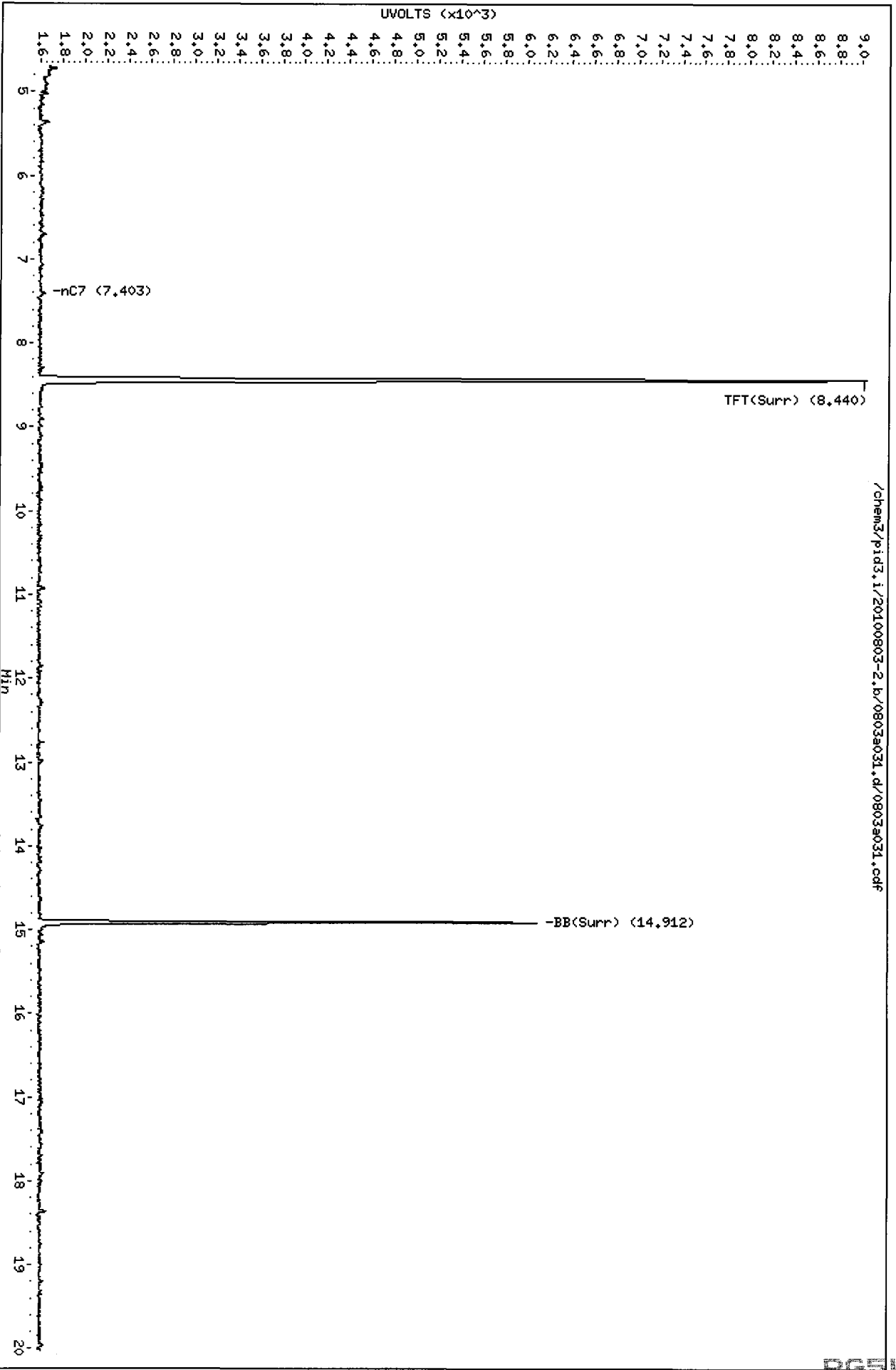
Page 1

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

Column phase: RTX 502-2 FID



R054 : 01200

Data File: /chem3/pid3.i/20100803-1.b/0803a031.d

Date : 03-AUG-2010 19:54

Client ID: PSB17-4-6-072810

Sample Info: RGS4K

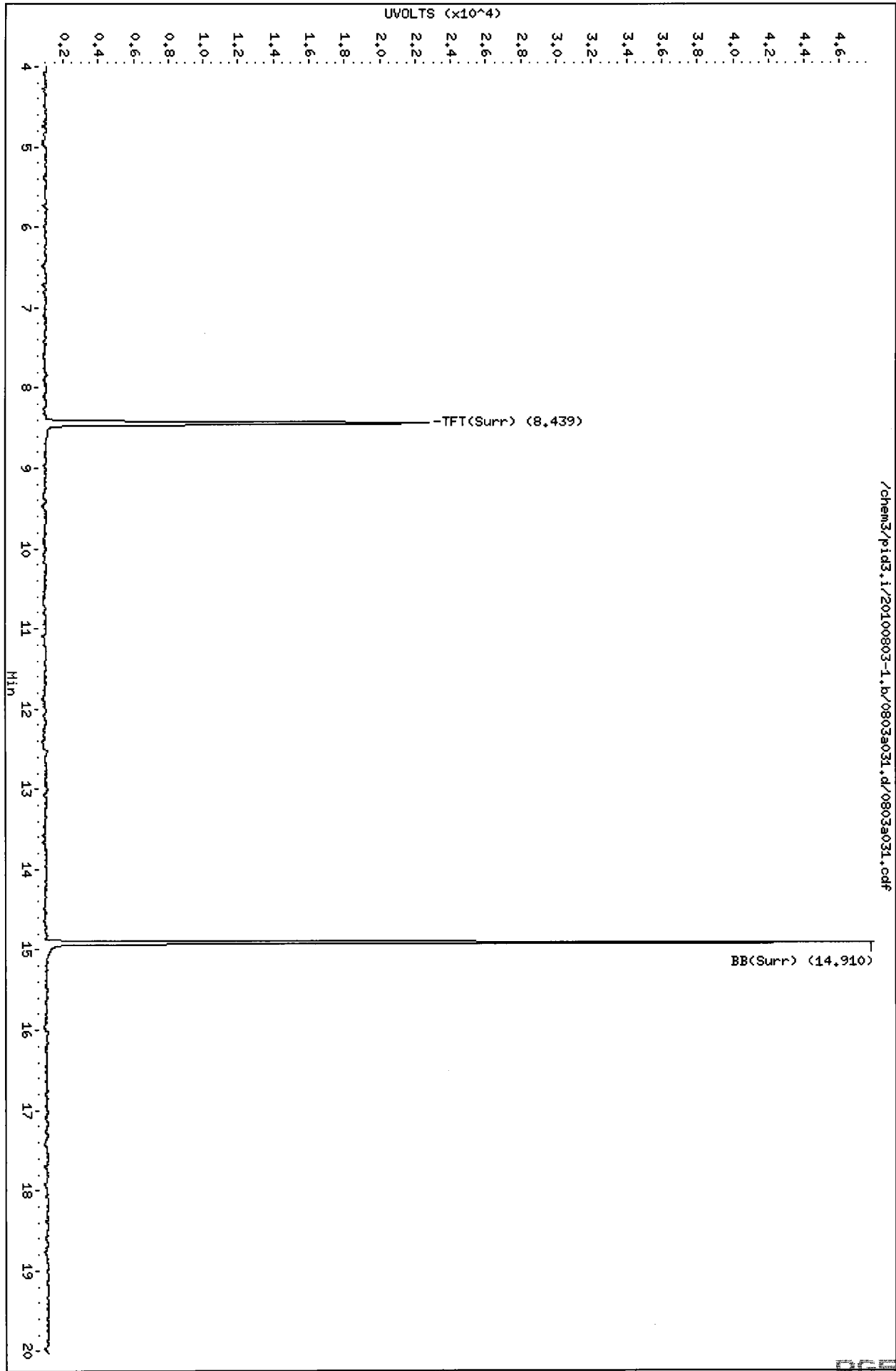
Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

/chem3/pid3.i/20100803-1.b/0803a031.d/0803a031.cdf



M. 8/15/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a032.d      ARI ID: RG54L  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a032.d      Client ID: PSB17-10-13-072810  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 20:18  
Instrument: pid3.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.031	7636	90750	106.1	TFT(Surr)
14.911	0.023	4538	37226	105.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	5320	0.006
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	5320	0.003
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	3869	0.003
NWTPHG Tol-Nap (10.17 to 18.18)	882029	6427	0.007

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.439	0.031	22255	101.2	TFT(Surr)
14.909	0.023	46476	101.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20100803-2.b/0803a032.d

Date: 03-AUG-2010 20:18

Client ID: PSB17-10-13-072810

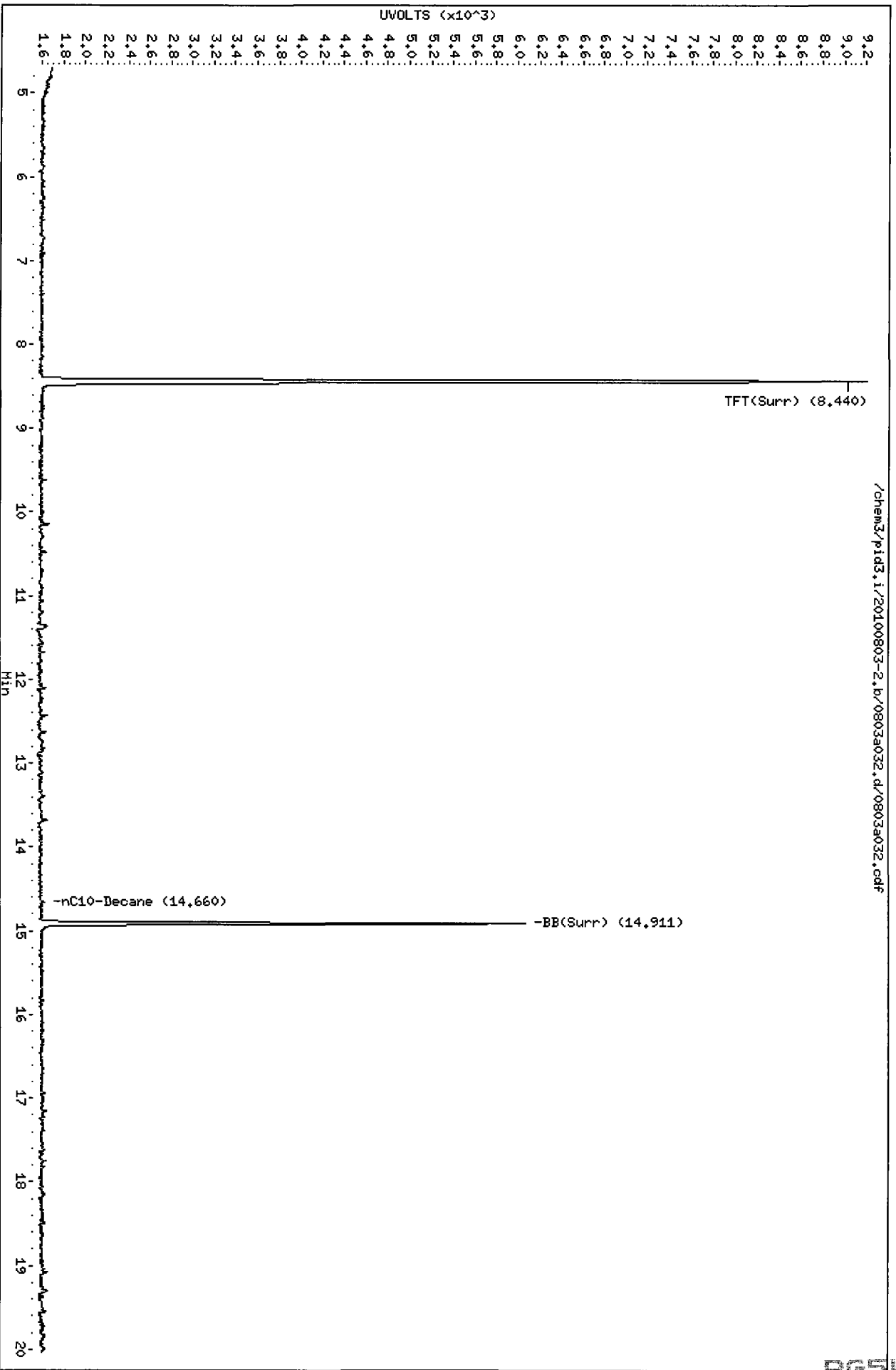
Sample Info: RGS4L

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18



01260

Data File: /chem3/pid3.i/20100803-1.b/0803a032.d

Date: 03-AUG-2010 20:18

Client ID: PSH17-10-13-072810

Sample Info: RGS4L

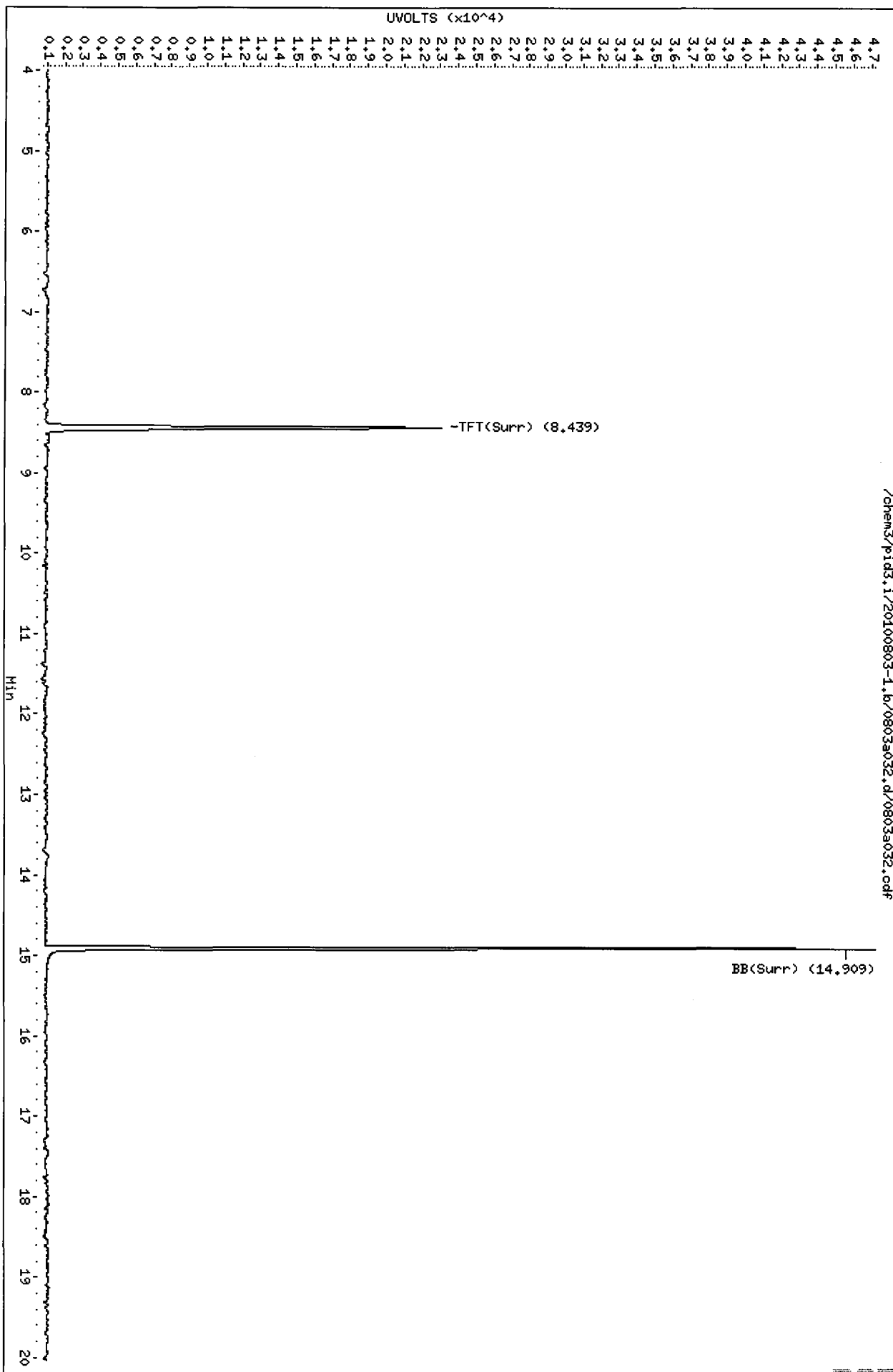
Instrument: pid3.i

Operator: MH

Column diameter: 0.18

Column phase: RTX 502-2 PID

/chem3/pid3.i/20100803-1.b/0803a032.d/0803a032.cdf



1/1/10  
8/1/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a034.d      ARI ID: BCAL 4  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a034.d      Client ID: BCAL 4  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 21:08  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	-0.003	7584	89838	105.4	TFT(Surr)
14.911	-0.001	4649	37281	107.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.12)	827807	600935	0.726
8015B 2MP-TMB ( 4.94 to 15.60)	1664107	614789	0.369
AK101 nC6-nC10 ( 5.43 to 14.51)	1131784	576478	0.509
NWTPHG Tol-Nap (10.21 to 18.19)	882029	600935	0.681

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.439	0.032	22091	100.5	TFT(Surr)
14.909	0.023	48710	106.8	BB(Surr)

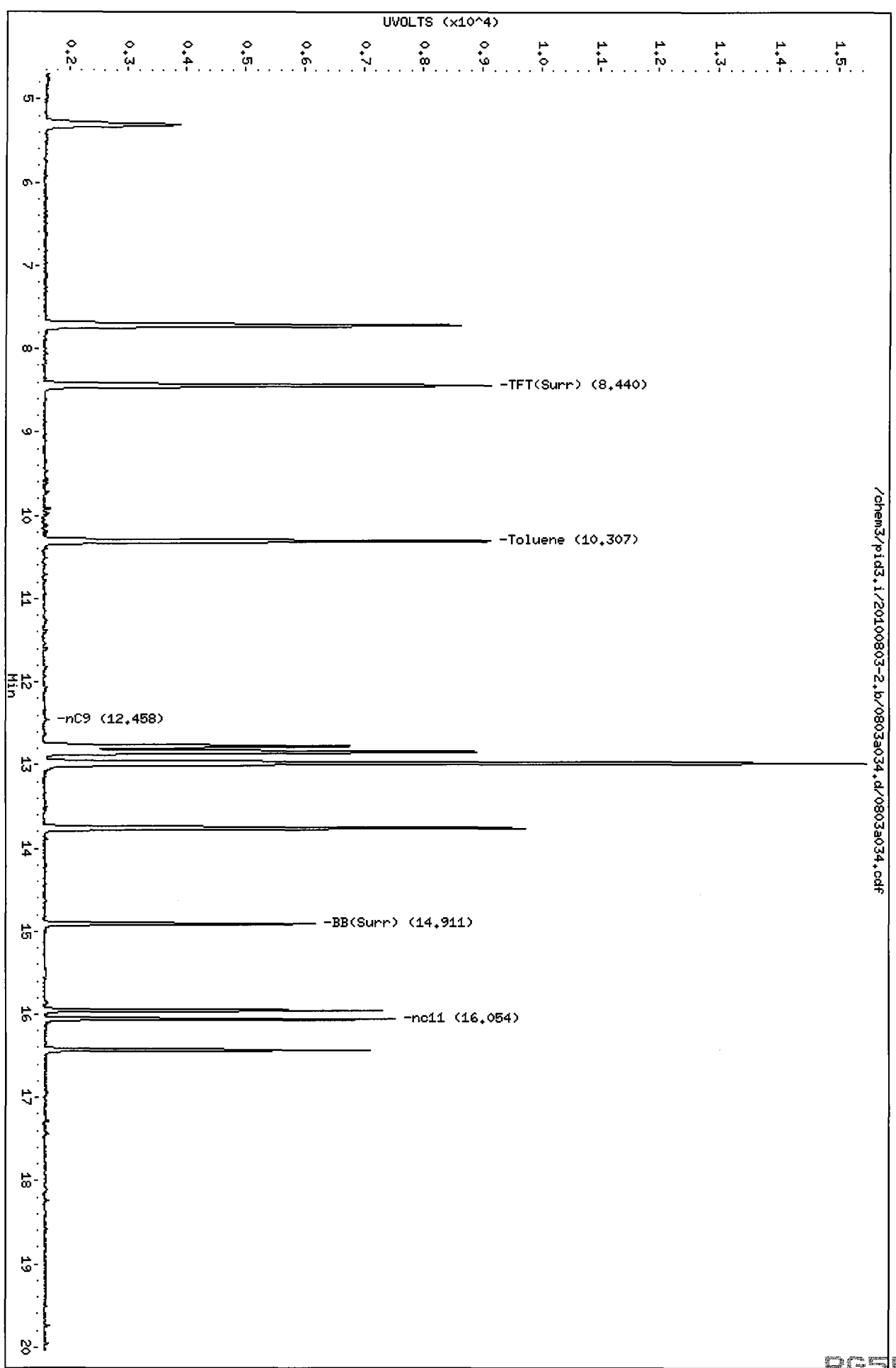
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.714	0.027	36516	27.62	Benzene
10.306	0.035	36479	27.64	Toluene
12.841	0.036	33159	26.68	Ethylbenzene
12.978	0.036	72144	53.57	M/P-Xylene
13.757	0.033	35621	27.72	O-Xylene
5.304	0.016	9546	26.83	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.b/0803a034.d  
Date: 03-AUG-2010 21:08  
Client ID:  
Sample Info: BCAL 4  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



Data File: /chem3/pid3.i/20100803-1.b/0803a034.d

Date: 03-AUG-2010 21:08

Client ID: BCAL 4

Sample Info: BCAL 4

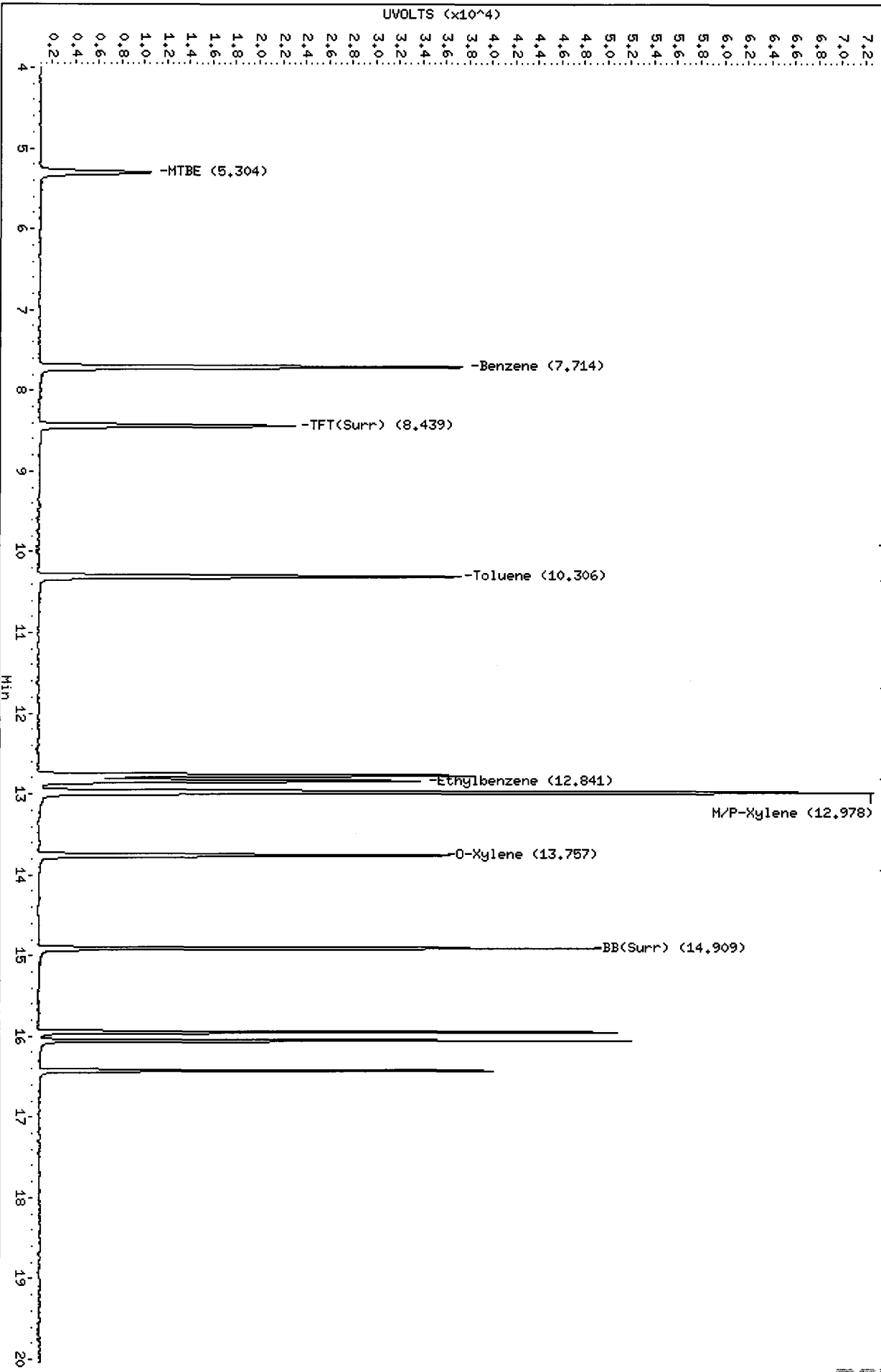
Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: HH

Column diameter: 0.18

/chem3/pid3.i/20100803-1.b/0803a034.d/0803a034.cdf



MH  
8/5/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100803-2.b/0803a035.d      ARI ID: GCAL 4  
Data file 2: /chem3/pid3.i/20100803-1.b/0803a035.d      Client ID:  
Method: /chem3/pid3.i/20100803-1.b/PIDB.m              Injection Date: 03-AUG-2010 21:32  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.031	7676	92144	106.6	TFT (Surr)
14.911	0.024	4765	37796	110.6	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	1918976	2.318 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	3757672	2.258 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2475978	2.188 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	2026436	2.297 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.438	0.031	22400	101.9	TFT (Surr)
14.909	0.023	48945	107.4	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.715	0.027	7565	5.72	Benzene
10.306	0.035	102897	77.96	Toluene
12.841	0.036	29575	23.80	Ethylbenzene
12.982	0.040	114676	85.16	M/P-Xylene
13.756	0.032	47530	36.99	O-Xylene
5.307	0.019	87321	245.42	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100803-2.lv/0803a035.d

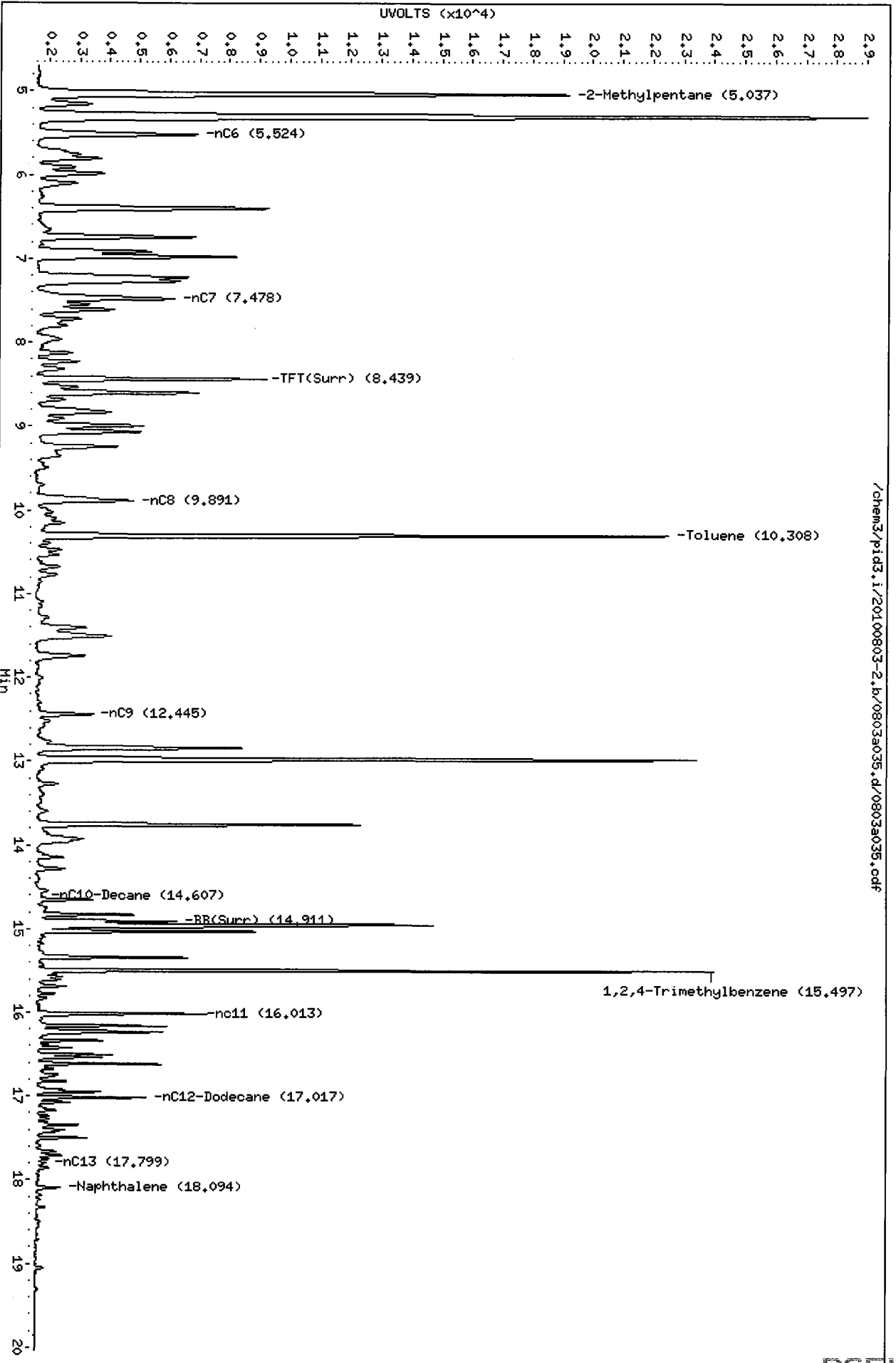
Date: 03-AUG-2010 21:32

Client ID:

Sample Info: GCAL 4

Column phase: RTX 502-2 FID

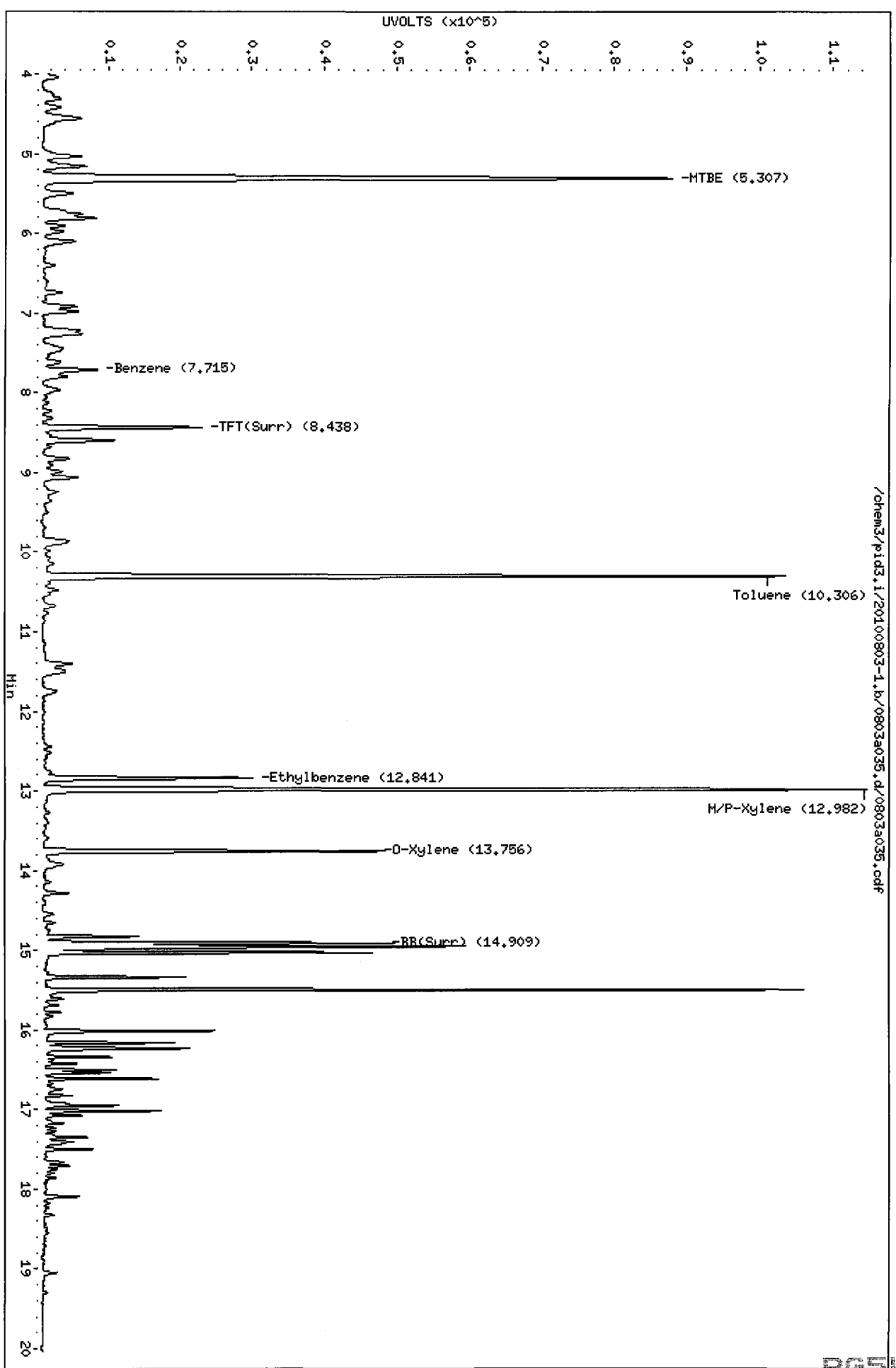
Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



/chem3/pid3.i/20100803-2.lv/0803a035.d/0803a035.cdf

Data File: /chem3/pid3.i/20100803-1.b/0803a035.d  
Date: 03-AUG-2010 21:32  
Client ID:  
Sample Info: GCAL 4  
Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

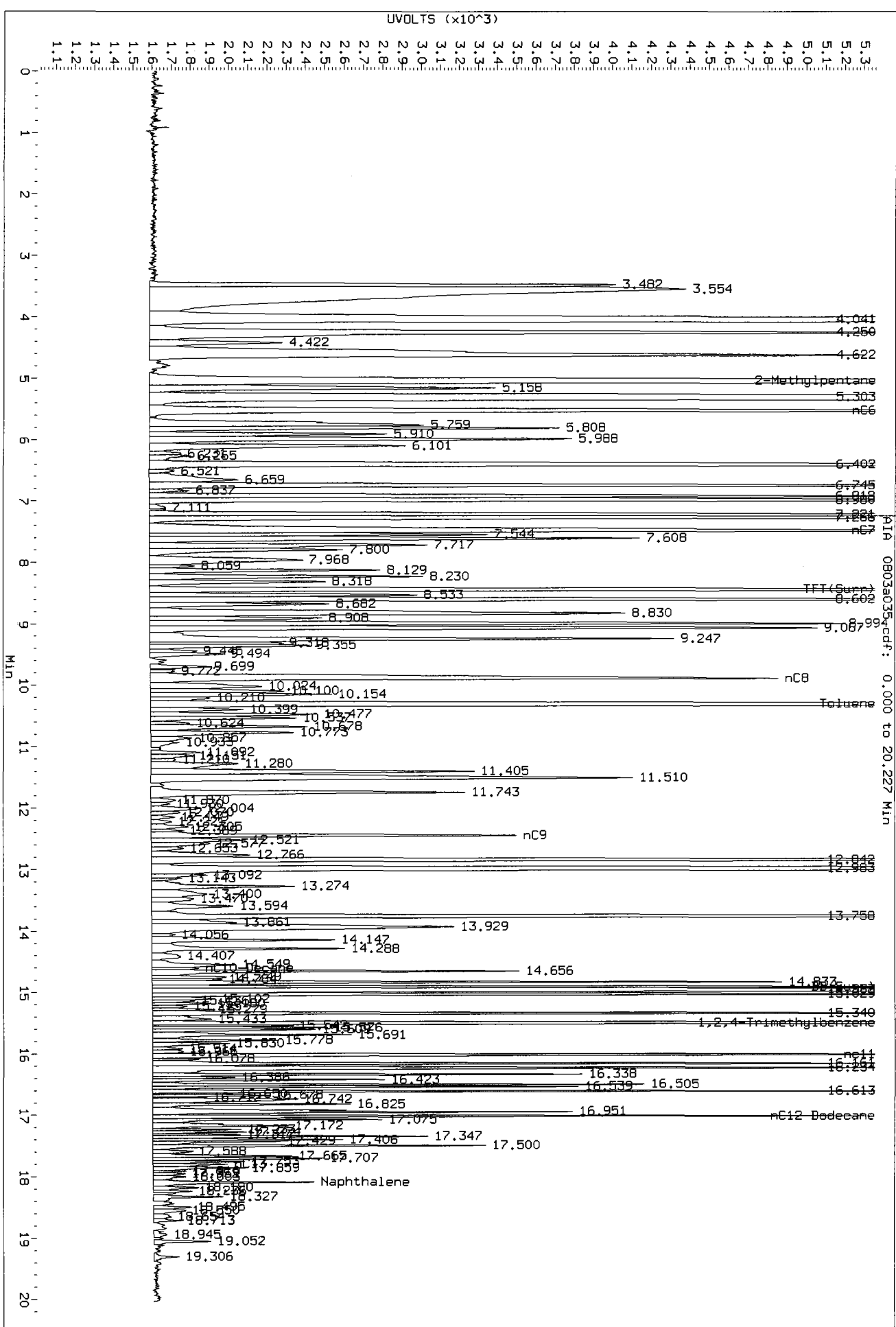


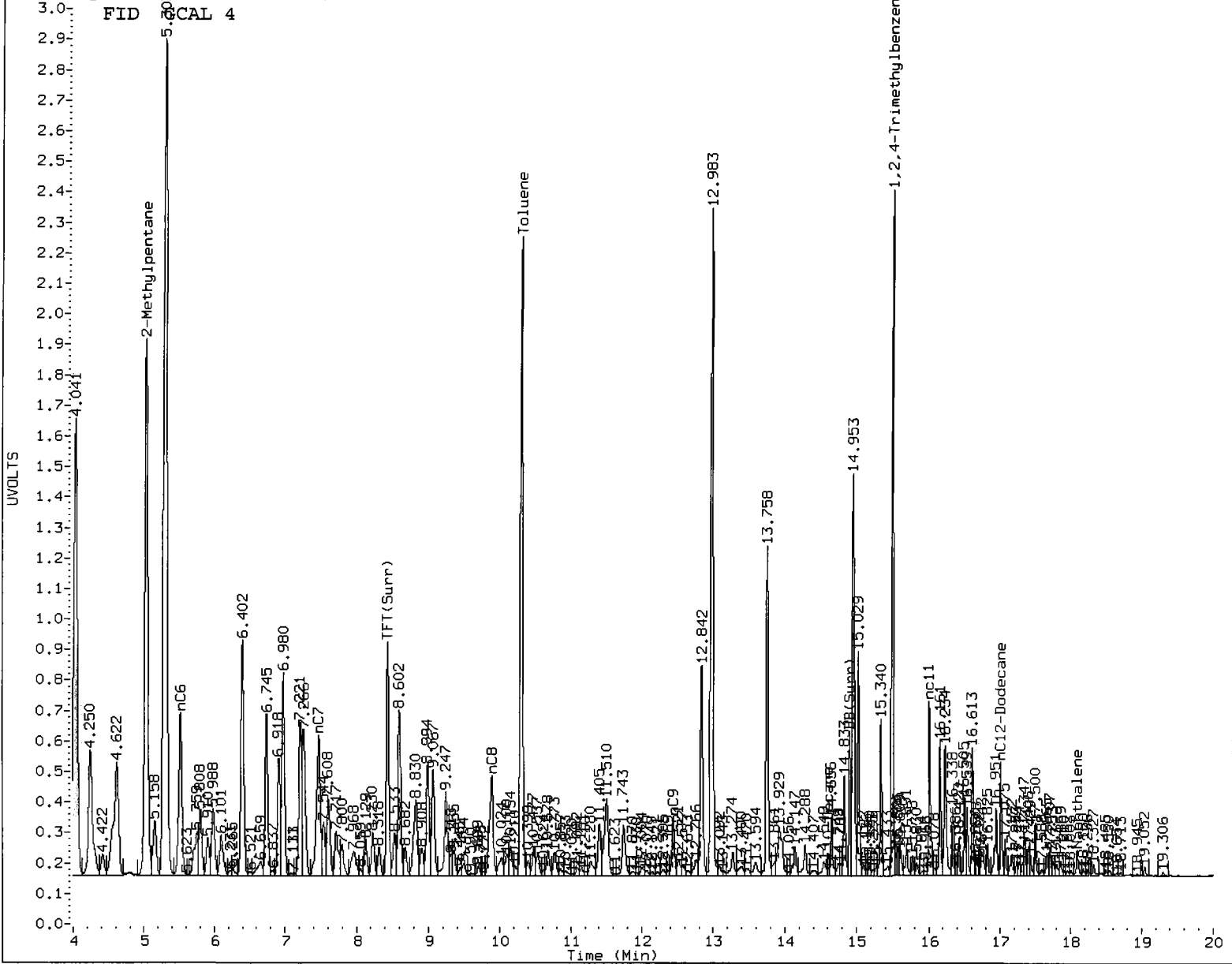
/chem3/pid3.i/20100803-1.b/0803a035.d/0803a035.cdf



MH  
8/5/10

Data File: /chem3/pid3\_1/20100803-2.b/0803a035.d/0803a035.cdf  
Injection Date: 03-AUG-2010 21:32  
Instrument: pid3.1  
Client Sample ID: LORA LAKE





MANUAL INTEGRATION

- Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: MA Date: 8/5/10

**Metals Raw Data  
Preparation Bench Sheets and Notes**

**ARI Job ID: RG54**





# Digestion Log

Analyst: DM  
Matrix: Soil

Date: 8.03.10  
Block Temp: 90°C

ARI Sample ID	Btl #	pH<2	Prep Code: <u>SWC</u>		Prep Code:		Comments
			Initial Wt (g) Vol (mL)	Final Vol (mL)	Initial Wt (g) Vol (mL)	Final Vol (mL)	
RG51 A	3	-	1.064	50.0			←
" ADUP	3	-	1.069				
" ASPK	3	-	1.060				
" B	3	-	1.054				
" C	3	-	1.076				
" D	3	-	1.089				
" E	1	-	1.005				
" F	2	-	1.074				
" G	3	-	1.033				
" REF1	0053	-	1.009				
" MBI	-	-	-				
" MBSPK	-	-	-				
RG54 A	7	-	1.080				
" B	7	-	1.030				
" C	7	-	1.034				
" E	7	-	1.088				
" F	7	-	1.001				
" H	7	-	1.045				
" I	7	-	1.024				
" J	7	-	1.044				
" K	7	-	1.019	↓			
" L	7	-	1.055	50.0			←
8.3.10 DM							

Chemical/Reagent ID:

HNO<sub>3</sub>: MP1926 / ISS47 HCl: I5548 H<sub>2</sub>O<sub>2</sub>: I5512 Tube Lot #: 1005282

**Metals Raw Data  
Run Logs, Calibrations, and Raw Data**

**ARI Job ID: RG54**



IEC Date: 6-24-10

Analysis Date: 8-6-10

Analyst: A

LR Date: 6-25-10

Page: 1 of 7

All corrections made by analyst unless otherwise noted.

48-6-10

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD0			2747-15
		2			-2
		3			-3
		4			-4
		5			-5
222		<del>for</del> 22222			
		STD5			
		ICR			2732-14
		ICB			
		CR1			
		ICSA			
		ICSA <sub>0</sub>			
		CR1			Ca Ad Na 330 Si high
		CR1			
		STD0			2747-15
		2			-2
		3			-3
		4			-4
		5			-5
		ICV			2732-14
		ICM			
		CR1			
		ICSA			
		ICSA <sub>0</sub>			



IEC Date: \_\_\_\_\_

Analysis Date: 8-6-10

Analyst: AD

LR Date: \_\_\_\_\_

Page: 2 of 7

All corrections made by analyst unless otherwise noted.

#8610

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		CCV1			<del>AD</del> Na330 Si high
		CCB1			
	✓	RF71 MBI	SUC	Z	Went
	✓	RG11 MBI			
		A			RR 1/5 (Fe)
		RF71 ADup			
		A			CAF
	✓	Asp			Sb 19%
<del>ZZZ</del>	✓	ADup			0.06 mL Sk000
		<del>ADup</del>			0.08 mL ICPSPK
	✓	MBIspl			Sb
	✓	RG11 MBIspl			
SUC	✓	MBISPD			
		CCV2			Al or Na33 Si high
		CCB2			
		STD2			
		↳ 5			
		CCV3			
		CCB3			
		RG30 MBI	TWC		
		F			
		G			
		H			
		ADup			
	✓	A			





IEC Date:                      Analysis Date: 8-6-10 Analyst: MA

LR Date:                      Page: 3 of 7

All corrections made by analyst unless otherwise noted. MS-6-10

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		RG 30 Aspik	TWE		
		↓ MBIsplk	↓		
		CCM			5u high
		CCB4			
		RF71 MBI	SWC	2	
		RG11 MBI		↓	
		↓ A		5	
		RF71 ADup		2	
		↓ A			
		Aspk			50% R low CAR
222		<del>Aspk</del>			not packed
		↓ MBIsplk			
		RG11 MBIsplk			
SWC		↓ MBISPD	↓	↓	
		CCr5			
		CCB5			
	✓	RG54 D	SWC	10	W out
		↓ G		↓	
		↓ H		2	
		↓ I			
		↓ J			
		↓ K		↓	
		↓ ADup		20	
		↓ D.C	↓		



IEC Date: \_\_\_\_\_

Analysis Date: 8-6-10

Analyst: MT

LR Date: \_\_\_\_\_

Page: 1 of 7

All corrections made by analyst unless otherwise noted.

ARE-640

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
	✓	RG84 A	Swc	20	
	✓	↓ Aspl	↓	↓	
		CCV6			Al Ca Fe K Mg Na 330 Si Sr Ti Zn high
		CCB6			
		RG823MB	LEN	5	Ba 0.009 A.N
		↓ ADup	↓	↓	
		↓ A	↓	↓	
		↓ Aspl	↓	↓	
		RG54 K	Swc	2	
		↓ L	↓	↓	
		CCV7			Si high
		CCB7			
		STD 3			
		CCV8			Si high
		CCB8			
		RG84 D	Swc	10	
		↓ G	↓	↓	
		↓ H	↓	2	
		↓ I	↓	↓	
		↓ J	↓	↓	
		↓ K	↓	↓	
		↓ A	↓	20	CAF
		↓ Aspl	↓	↓	Cr Cu Zn STL
		↓ ADup	↓	↓	Cu high RPD



IEC Date: \_\_\_\_\_

Analysis Date: 8-6-10

Analyst: M

LR Date: \_\_\_\_\_

Page: 5 of 17

All corrections made by analyst unless otherwise noted.

M 89-10

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		DIL			
		CCV9			
		CCV9			
		RG51 UR1	SWC	Z	
		B			
		C			
		D			
		ADup			
		A			
		Aspl			
222		<del>RF71-Aspl</del>			Client
		RG51 Ref1			Scr noisy (NR)
		UR15PL	D	D	Scr st noisy (NR)
		CCV10			Chcd k Mg Na 300 Sb S. Sr wsh
		CCV10			
		RG51 F	SWC	Z	
		G			
		RG51 A			
		B			
		C			
		E			
		F			
		H			
		I			



IEC Date: \_\_\_\_\_ Analysis Date: 8-6-10 Analyst: MA  
LR Date: \_\_\_\_\_ Page: 6 of 7

All corrections made by analyst unless otherwise noted. 8-9-10

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		RG154 J	SWC	2	
		CCV11			ca Cd K Mg Sb Si Sn high
		CCB34			end pkg
	✓	RG142 MB	SWC	2	CV out
		RG151 E	SWC	2	
	✓	RG142 A	SWC		CV out
		B			
		C			
		D			
		E			
etc		RG147 A		5	
RG		MB side		2	
↓	↓	RG142 MB side	↓	↓	↓
		CCV2			ca Cd Fe K Mg Na Zn Sb Si Sn high
		CCB12			end pkg
	✓	RG147 MB	SWC	2	CV out
		RG147 MB	WMS		
		A			
		B			
		C			
		D			
		E			
		F			
	↓	G	↓		↓

*[Handwritten signature]*  
8/9/10

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA

Analysis Date: 8-6-10

	Analyst <u>AB-9</u>	Peer <u>BW84</u>	Comment
<b>Logbook:</b>			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
<b>Calibration:</b>			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
<b>Calibration Verification:</b>			
ICV/CCV	✓	✓	See log
ICB/CCB	✓	✓	
<b>Samples:</b>			
RSD's & SD's	✓	✓	see log
Internal Standards	✓	✓	
Carry-over	✓	✓	
<b>Method QC:</b>			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	✓	✓	
<b>Matrix QC:</b>			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
<b>Data Distribution:</b>			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	A.W. RG83, RG30 CAF RG84, RG71

=====  
Analysis Begun

Start Time: 8/6/2010 9:16:14 AM  
 Logged In Analyst: metals  
 Spectrometer Model: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 8/6/2010 7:12:02 AM  
 Technique: ICP Continuous  
 Autosampler Model: AS-93plus

Sample Information File: C:\pe\metals\Sample Information\0806.sif

Batch ID:

Results Data Set: I2100806

Results Library: C:\pe\metals\Results\Results.mdb

=====  
 Sequence No.: 1

Sample ID: Calib Blank 1

Autosampler Location: 1

Date Collected: 8/6/2010 9:16:15 AM

Data Type: Original

-----  
Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	199.0 kPa	0.75 L/min

-----  
Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	1901694.7	13813.30	0.73%	100.0	%
ScR 361.383	292682.5	2628.77	0.90%	100.0	%
Ag 328.068†	-308.7	46.44	15.04%	[0.00]	mg/L
Al 308.215†	-39.4	3.75	9.51%	[0.00]	mg/L
As 188.979†	-17.3	2.85	16.52%	[0.00]	mg/L
B 249.677†	-26.3	6.28	23.88%	[0.00]	mg/L
Ba 233.527†	39.3	0.90	2.29%	[0.00]	mg/L
Be 313.042†	1086.5	19.65	1.81%	[0.00]	mg/L
Ca 317.933†	96.9	28.75	29.67%	[0.00]	mg/L
Cd 228.802†	72.2	4.48	6.21%	[0.00]	mg/L
Co 228.616†	-82.3	3.19	3.87%	[0.00]	mg/L
Cr 267.716†	-78.5	2.38	3.03%	[0.00]	mg/L
Cu 324.752†	8508.7	51.87	0.61%	[0.00]	mg/L
Fe 273.955†	10.9	1.16	10.59%	[0.00]	mg/L
K 766.490†	-74.4	43.61	58.59%	[0.00]	mg/L
Mg 279.077†	-70.9	3.88	5.47%	[0.00]	mg/L
Mn 257.610†	46.4	5.19	11.20%	[0.00]	mg/L
Mo 202.031†	100.3	2.47	2.47%	[0.00]	mg/L
Na 589.592†	-331.8	17.52	5.28%	[0.00]	mg/L
Na 330.237†	-77.2	1.59	2.06%	[0.00]	mg/L
Ni 231.604†	-8.0	1.89	23.68%	[0.00]	mg/L
Pb 220.353†	-73.9	7.42	10.04%	[0.00]	mg/L
Sb 206.836†	98.8	7.15	7.23%	[0.00]	mg/L
Se 196.026†	-65.3	0.71	1.08%	[0.00]	mg/L
Si 288.158†	76.3	1.82	2.38%	[0.00]	mg/L
Sn 189.927†	-10.4	0.83	7.91%	[0.00]	mg/L
Sr 421.552†	262.0	8.24	3.14%	[0.00]	mg/L
Ti 334.903†	-64.7	3.33	5.15%	[0.00]	mg/L
Tl 190.801†	-39.1	2.89	7.40%	[0.00]	mg/L
V 292.402†	307.8	23.97	7.79%	[0.00]	mg/L
Zn 206.200†	2.5	0.28	11.40%	[0.00]	mg/L

Sequence No.: 2  
Sample ID: STD2

Autosampler Location: 2  
Date Collected: 8/6/2010 9:20:26 AM  
Data Type: Original

## Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	199.0 kPa	0.75 L/min

## Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
ScA 357.253	1939918.3	5780.58	0.30%	102.0 %
ScR 361.383	295499.5	2573.48	0.87%	101.0 %
Ba 233.527†	30826.9	202.74	0.66%	[10] mg/L
Cd 228.802†	210506.4	1462.86	0.69%	[10] mg/L
Co 228.616†	295454.6	1388.64	0.47%	[10] mg/L
Cr 267.716†	47137.9	301.75	0.64%	[10] mg/L
Cu 324.752†	2771035.9	2210.85	0.08%	[10] mg/L
Mn 257.610†	293173.6	1742.54	0.59%	[10] mg/L
V 292.402†	963014.9	2487.89	0.26%	[10] mg/L

Sequence No.: 3  
Sample ID: STD3

Autosampler Location: 3  
Date Collected: 8/6/2010 9:22:22 AM  
Data Type: Original

## Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	199.0 kPa	0.75 L/min

## Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	1911947.0	9470.44	0.50%	100.5	%
ScR 361.383	287119.4	1408.49	0.49%	98.10	%
Ag 328.068†	173230.5	724.62	0.42%	[1.0]	mg/L
As 188.979†	13799.9	59.29	0.43%	[10]	mg/L
B 249.677†	33101.0	220.79	0.67%	[10]	mg/L
Be 313.042†	2747545.2	12271.89	0.45%	[5.0]	mg/L
Na 589.592†	593348.7	1683.23	0.28%	[50]	mg/L
Ni 231.604†	16190.4	108.29	0.67%	[10]	mg/L
Pb 220.353†	68969.7	302.79	0.44%	[10]	mg/L
Se 196.026†	11905.4	55.38	0.47%	[10]	mg/L
Sr 421.552†	3161764.0	21881.79	0.69%	[5]	mg/L
Tl 190.801†	17199.8	109.97	0.64%	[10]	mg/L
Zn 206.200†	6199.9	43.31	0.70%	[10]	mg/L



Sequence No.: 4  
Sample ID: STD4

Autosampler Location: 4  
Date Collected: 8/6/2010 9:24:51 AM  
Data Type: Original

## Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	199.0 kPa	0.75 L/min

## Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	1931680.4	8059.19	0.42%	101.6	%
ScR 361.383	294713.8	1276.62	0.43%	100.7	%
Mo 202.031†	171903.3	1189.02	0.69%	[10]	mg/L
Sb 206.836†	26845.3	141.08	0.53%	[10]	mg/L
Si 288.158†	14767.8	22.92	0.16%	[10]	mg/L
Sn 189.927†	36766.5	241.76	0.66%	[10]	mg/L
Ti 334.903†	219593.7	120.79	0.06%	[10]	mg/L

Sequence No.: 5  
Sample ID: STD5

Autosampler Location: 5  
Date Collected: 8/6/2010 9:27:01 AM  
Data Type: Original

## Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	199.0 kPa	0.75 L/min

## Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1825905.4	26915.81	1.47%	96.01	%
ScR 361.383	290148.4	1529.84	0.53%	99.13	%
Al 308.215†	37889.0	50.64	0.13%	[30]	mg/L
Ca 317.933†	431183.3	1568.55	0.36%	[30]	mg/L
Fe 273.955†	113290.3	543.90	0.48%	[100]	mg/L
K 766.490†	143026.9	1263.39	0.88%	[100]	mg/L
Mg 279.077†	27720.9	121.41	0.44%	[30]	mg/L
Na 330.237†	2893.7	17.63	0.61%	[100]	mg/L

## Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	173200	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1263	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1380	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	3310	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	3083	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	549500	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	14370	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	21050	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	29550	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	4714	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	277100	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1133	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1430	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	924.0	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	29320	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	17190	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	11870	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	28.94	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	1619	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	6897	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2685	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1191	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1477	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3677	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	632400	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	21960	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	1720	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	96300	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	620.0	0.00000	1.000000	

=====  
**Analysis Begun**

Start Time: 8/6/2010 9:29:53 AM  
 Logged In Analyst: metals  
 Spectrometer Model: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 8/6/2010 7:12:02 AM  
 Technique: ICP Continuous

Autosampler Model: AS-93plus

Sample Information File: C:\pe\metals\Sample Information\0806.sif

Batch ID:

Results Data Set: I2100806

Results Library: C:\pe\metals\Results\Results.mdb

=====  
 Sequence No.: 1  
 Sample ID: CV  
 Analyst: ALA  
 Dilution: 1X

Autosampler Location: 7  
 Date Collected: 8/6/2010 9:29:54 AM  
 Data Type: Original

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**Nebulizer Parameters: CV**

<b>Analyte</b>	<b>Back Pressure</b>	<b>Flow</b>
All	199.0 kPa	0.75 L/min

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**Mean Data: CV**

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity				Conc. Units	Std.Dev.	
ScA 357.253	1919699.5		100.9 %	0.51			0.50%
ScR 361.383	289156.1		98.80 %	0.716			0.72%
Ag 328.068†	179266.0		1.035 mg/L	0.0063	1.035 mg/L	0.0063	0.61%
Al 308.215†	2684.1		2.093 mg/L	0.0187	2.093 mg/L	0.0187	0.90%
As 188.979†	2776.4		2.029 mg/L	0.0088	2.029 mg/L	0.0088	0.44%
B 249.677†	3311.0	0.9985 mg/L		0.00654	0.9985 mg/L	0.00654	0.65%
Ba 233.527†	3204.3	1.039 mg/L		0.0101	1.039 mg/L	0.0101	0.97%
Be 313.042†	541467.3	0.9848 mg/L		0.00710	0.9848 mg/L	0.00710	0.72%
Ca 317.933†	30473.5	2.120 mg/L		0.0086	2.120 mg/L	0.0086	0.41%
Cd 228.802†	22001.2	1.039 mg/L		0.0041	1.039 mg/L	0.0041	0.39%
Co 228.616†	29893.8	1.010 mg/L		0.0055	1.010 mg/L	0.0055	0.54%
Cr 267.716†	4956.9	1.051 mg/L		0.0069	1.051 mg/L	0.0069	0.66%
Cu 324.752†	287003.5	1.035 mg/L		0.0065	1.035 mg/L	0.0065	0.62%
Fe 273.955†	2321.6	2.044 mg/L		0.0147	2.044 mg/L	0.0147	0.72%
K 766.490†	29239.7	20.44 mg/L		0.121	20.44 mg/L	0.121	0.59%
Mg 279.077†	1918.3	2.081 mg/L		0.0173	2.081 mg/L	0.0173	0.83%
Mn 257.610†	29614.8	1.011 mg/L		0.0059	1.011 mg/L	0.0059	0.58%
Mo 202.031†	17281.2	1.005 mg/L		0.0052	1.005 mg/L	0.0052	0.52%
Na 589.592†	599623.4	50.53 mg/L		0.353	50.53 mg/L	0.353	0.70%
Na 330.237†	1487.3	51.46 mg/L		0.299	51.46 mg/L	0.299	0.58%
Ni 231.604†	1634.8	1.011 mg/L		0.0049	1.011 mg/L	0.0049	0.48%
Pb 220.353†	13915.1	2.019 mg/L		0.0063	2.019 mg/L	0.0063	0.31%
Sb 206.836†	5574.8	2.082 mg/L		0.0126	2.082 mg/L	0.0126	0.60%
Se 196.026†	2415.9	2.029 mg/L		0.0114	2.029 mg/L	0.0114	0.56%
Si 288.158†	3154.0	2.139 mg/L		0.0116	2.139 mg/L	0.0116	0.54%
Sn 189.927†	3697.2	1.007 mg/L		0.0062	1.007 mg/L	0.0062	0.62%
Sr 421.552†	638679.4	1.010 mg/L		0.0071	1.010 mg/L	0.0071	0.70%
Ti 334.903†	22384.4	1.018 mg/L		0.0080	1.018 mg/L	0.0080	0.78%
Tl 190.801†	3467.5	2.016 mg/L		0.0117	2.016 mg/L	0.0117	0.58%
V 292.402†	97120.9	1.013 mg/L		0.0061	1.013 mg/L	0.0061	0.60%
Zn 206.200†	615.0	0.9915 mg/L		0.00774	0.9915 mg/L	0.00774	0.78%

Sequence No.: 2  
 Sample ID: CB  
 Analyst: A/A  
 Dilution: 1X

Autosampler Location: 1  
 Date Collected: 8/6/2010 9:34:07 AM  
 Data Type: Original

## Nebulizer Parameters: CB

Analyte Back Pressure Flow  
 All 198.0 kPa 0.75 L/min

## Mean Data: CB

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1920093.2	101.0	%	0.51				0.51%
ScR 361.383	274885.6	93.92	%	0.273				0.29%
Ag 328.068†	-14.0	-0.00008	mg/L	0.000094	-0.00008	mg/L	0.000094	116.43%
Al 308.215†	-7.9	-0.00624	mg/L	0.005167	-0.00624	mg/L	0.005167	82.85%
As 188.979†	4.3	0.00311	mg/L	0.001713	0.00311	mg/L	0.001713	55.04%
B 249.677†	4.2	0.00126	mg/L	0.002518	0.00126	mg/L	0.002518	200.54%
Ba 233.527†	3.3	0.00108	mg/L	0.000847	0.00108	mg/L	0.000847	78.37%
Be 313.042†	55.7	0.00010	mg/L	0.000049	0.00010	mg/L	0.000049	48.29%
Ca 317.933†	10.8	0.00075	mg/L	0.002432	0.00075	mg/L	0.002432	323.25%
Cd 228.802†	-1.7	-0.00009	mg/L	0.000165	-0.00009	mg/L	0.000165	182.43%
Co 228.616†	2.3	0.00008	mg/L	0.000220	0.00008	mg/L	0.000220	285.33%
Cr 267.716†	-0.7	-0.00015	mg/L	0.001140	-0.00015	mg/L	0.001140	738.40%
Cu 324.752†	-52.5	-0.00019	mg/L	0.000361	-0.00019	mg/L	0.000361	190.29%
Fe 273.955†	-1.7	-0.00152	mg/L	0.002196	-0.00152	mg/L	0.002196	144.43%
K 766.490†	45.6	0.03187	mg/L	0.020405	0.03187	mg/L	0.020405	64.02%
Mg 279.077†	-2.9	-0.00312	mg/L	0.002210	-0.00312	mg/L	0.002210	70.88%
Mn 257.610†	4.9	0.00017	mg/L	0.000050	0.00017	mg/L	0.000050	30.23%
Mo 202.031†	0.2	0.00001	mg/L	0.000065	0.00001	mg/L	0.000065	596.14%
Na 589.592†	64.1	0.00540	mg/L	0.003285	0.00540	mg/L	0.003285	60.80%
Na 330.237†	-5.1	-0.1763	mg/L	0.13025	-0.1763	mg/L	0.13025	73.89%
Ni 231.604†	6.9	0.00428	mg/L	0.001189	0.00428	mg/L	0.001189	27.78%
Pb 220.353†	0.1	0.00002	mg/L	0.000213	0.00002	mg/L	0.000213	>999.9%
Sb 206.836†	8.1	0.00303	mg/L	0.002451	0.00303	mg/L	0.002451	80.87%
Se 196.026†	5.0	0.00418	mg/L	0.003761	0.00418	mg/L	0.003761	89.91%
Si 288.158†	12.0	0.00810	mg/L	0.003591	0.00810	mg/L	0.003591	44.34%
Sn 189.927†	1.5	0.00042	mg/L	0.000959	0.00042	mg/L	0.000959	227.28%
Sr 421.552†	49.9	0.00008	mg/L	0.000039	0.00008	mg/L	0.000039	48.94%
Ti 334.903†	-0.2	-0.00001	mg/L	0.001087	-0.00001	mg/L	0.001087	>999.9%
Tl 190.801†	1.6	0.00094	mg/L	0.000489	0.00094	mg/L	0.000489	51.78%
V 292.402†	-6.1	-0.00006	mg/L	0.000081	-0.00006	mg/L	0.000081	127.96%
Zn 206.200†	-0.0	-0.00005	mg/L	0.002159	-0.00005	mg/L	0.002159	>999.9%

Sequence No.: 3  
 Sample ID: CRI  
 Analyst: ALA  
 Dilution: 1X

Autosampler Location: 301  
 Date Collected: 8/6/2010 9:38:03 AM  
 Data Type: Original

## Nebulizer Parameters: CRI

Analyte Back Pressure Flow  
 All 199.0 kPa 0.75 L/min

## Mean Data: CRI

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1935537.6	101.8	%	0.98				0.96%
ScR 361.383	291639.5	99.64	%	0.946				0.95%
Ag 328.068†	545.3	0.00315	mg/L	0.000288	0.00315	mg/L	0.000288	9.16%
Al 308.215†	55.1	0.04354	mg/L	0.004078	0.04354	mg/L	0.004078	9.36%
As 188.979†	69.9	0.05076	mg/L	0.001608	0.05076	mg/L	0.001608	3.17%
B 249.677†	65.0	0.01962	mg/L	0.002319	0.01962	mg/L	0.002319	11.82%
Ba 233.527†	11.3	0.00365	mg/L	0.000734	0.00365	mg/L	0.000734	20.13%
Be 313.042†	504.7	0.00092	mg/L	0.000060	0.00092	mg/L	0.000060	6.60%
Ca 317.933†	711.0	0.04947	mg/L	0.000311	0.04947	mg/L	0.000311	0.63%
Cd 228.802†	46.6	0.00205	mg/L	0.000118	0.00205	mg/L	0.000118	5.77%
Co 228.616†	90.9	0.00307	mg/L	0.000097	0.00307	mg/L	0.000097	3.17%
Cr 267.716†	28.1	0.00596	mg/L	0.000697	0.00596	mg/L	0.000697	11.69%
Cu 324.752†	395.2	0.00142	mg/L	0.000242	0.00142	mg/L	0.000242	16.97%
Fe 273.955†	58.0	0.05116	mg/L	0.002333	0.05116	mg/L	0.002333	4.56%
K 766.490†	704.8	0.4927	mg/L	0.02666	0.4927	mg/L	0.02666	5.41%
Mg 279.077†	46.6	0.05047	mg/L	0.002385	0.05047	mg/L	0.002385	4.73%
Mn 257.610†	22.2	0.00076	mg/L	0.000068	0.00076	mg/L	0.000068	8.90%
Mo 202.031†	81.7	0.00475	mg/L	0.000497	0.00475	mg/L	0.000497	10.45%
Na 589.592†	5919.4	0.4988	mg/L	0.00306	0.4988	mg/L	0.00306	0.61%
Na 330.237†	18.0	0.6204	mg/L	0.45229	0.6204	mg/L	0.45229	72.90%
Ni 231.604†	20.8	0.01290	mg/L	0.002918	0.01290	mg/L	0.002918	22.63%
Pb 220.353†	134.9	0.01958	mg/L	0.001270	0.01958	mg/L	0.001270	6.49%
Sb 206.836†	141.2	0.05269	mg/L	0.001899	0.05269	mg/L	0.001899	3.60%
Se 196.026†	64.5	0.05414	mg/L	0.002952	0.05414	mg/L	0.002952	5.45%
Si 288.158†	90.6	0.06138	mg/L	0.004309	0.06138	mg/L	0.004309	7.02%
Sn 189.927†	37.4	0.01022	mg/L	0.000408	0.01022	mg/L	0.000408	4.00%
Sr 421.552†	620.3	0.00098	mg/L	0.000073	0.00098	mg/L	0.000073	7.49%
Ti 334.903†	121.7	0.00553	mg/L	0.001320	0.00553	mg/L	0.001320	23.87%
Tl 190.801†	87.6	0.05097	mg/L	0.000232	0.05097	mg/L	0.000232	0.45%
V 292.402†	282.6	0.00295	mg/L	0.000311	0.00295	mg/L	0.000311	10.54%
Zn 206.200†	5.2	0.00834	mg/L	0.002054	0.00834	mg/L	0.002054	24.63%

Sequence No.: 4  
 Sample ID: ICSA  
 Analyst: ALA  
 Dilution: 1X

Autosampler Location: 302  
 Date Collected: 8/6/2010 9:42:14 AM  
 Data Type: Original

## Nebulizer Parameters: ICSA

Analyte Back Pressure Flow  
 All 199.0 kPa 0.75 L/min

## Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1870069.2	98.34	%	0.875			0.89%
ScR 361.383	290138.9	99.13	%	0.616			0.62%
Ag 328.068†	-177.5	-0.00102	mg/L	0.000239	-0.00102 mg/L	0.000239	23.40%
Al 308.215†	255190.8	202.1	mg/L	0.53	202.1 mg/L	0.53	0.26%
As 188.979†	16.2	0.00879	mg/L	0.000890	0.00879 mg/L	0.000890	10.12%
B 249.677†	-19.6	-0.00591	mg/L	0.001857	-0.00591 mg/L	0.001857	31.42%
Ba 233.527†	63.3	0.00156	mg/L	0.000492	0.00156 mg/L	0.000492	31.62%
Be 313.042†	-1.6	-0.00002	mg/L	0.000026	-0.00002 mg/L	0.000026	168.35%
Ca 317.933†	1446765.9	100.7	mg/L	0.55	100.7 mg/L	0.55	0.54%
Cd 228.802†	44.9	0.00210	mg/L	0.000185	0.00210 mg/L	0.000185	8.84%
Co 228.616†	56.2	-0.00057	mg/L	0.000162	-0.00057 mg/L	0.000162	28.51%
Cr 267.716†	34.3	0.00159	mg/L	0.001212	0.00159 mg/L	0.001212	76.39%
Cu 324.752†	-3687.1	-0.00147	mg/L	0.000391	-0.00147 mg/L	0.000391	26.54%
Fe 273.955†	223019.7	196.9	mg/L	0.87	196.9 mg/L	0.87	0.44%
K 766.490†	19.0	0.01328	mg/L	0.011046	0.01328 mg/L	0.011046	83.16%
Mg 279.077†	92019.1	99.47	mg/L	0.479	99.47 mg/L	0.479	0.48%
Mn 257.610†	46.8	0.00101	mg/L	0.000283	0.00101 mg/L	0.000283	28.14%
Mo 202.031†	105.1	0.00437	mg/L	0.000422	0.00437 mg/L	0.000422	9.65%
Na 589.592†	98.0	0.00826	mg/L	0.000669	0.00826 mg/L	0.000669	8.10%
Na 330.237†	1.3	0.6518	mg/L	0.13949	0.6518 mg/L	0.13949	21.40%
Ni 231.604†	3.5	0.00220	mg/L	0.004025	0.00220 mg/L	0.004025	183.18%
Pb 220.353†	-205.9	-0.00938	mg/L	0.000804	-0.00938 mg/L	0.000804	8.57%
Sb 206.836†	69.2	0.02563	mg/L	0.002142	0.02563 mg/L	0.002142	8.36%
Se 196.026†	62.5	0.04568	mg/L	0.005316	0.04568 mg/L	0.005316	11.64%
Si 288.158†	-26.6	-0.01798	mg/L	0.011587	-0.01798 mg/L	0.011587	64.44%
Sn 189.927†	-55.2	-0.01033	mg/L	0.001424	-0.01033 mg/L	0.001424	13.79%
Sr 421.552†	2288.6	0.00362	mg/L <i>Cont</i>	0.000038	0.00362 mg/L	0.000038	1.04%
Ti 334.903†	161.3	0.00106	mg/L	0.000544	0.00106 mg/L	0.000544	51.23%
Tl 190.801†	-33.4	0.01017	mg/L	0.002501	0.01017 mg/L	0.002501	24.59%
V 292.402†	2275.7	0.00259	mg/L	0.000403	0.00259 mg/L	0.000403	15.58%
Zn 206.200†	-2.6	-0.00982	mg/L	0.002657	-0.00982 mg/L	0.002657	27.05%

Sequence No.: 5  
 Sample ID: ICSAB  
 Analyst: ALA  
 Dilution: 1X

Autosampler Location: 303  
 Date Collected: 8/6/2010 9:46:25 AM  
 Data Type: Original

## Nebulizer Parameters: ICSAB

Analyte Back Pressure Flow  
 All 199.0 kPa 0.75 L/min

## Mean Data: ICSAB

Analyte	Mean Corrected			Std.Dev.	Sample		
	Intensity	Conc. Units	Calib. Units		Conc. Units	Std.Dev.	RSD
ScA 357.253	1886771.3	99.22	%	0.973			0.98%
ScR 361.383	287580.3	98.26	%	0.884			0.90%
Ag 328.068†	177635.6	1.025	mg/L	0.0147	1.025	mg/L	0.0147 1.43%
Al 308.215†	260071.3	205.9	mg/L	0.41	205.9	mg/L	0.41 0.20%
As 188.979†	1409.0	1.018	mg/L	0.0100	1.018	mg/L	0.0100 0.98%
B 249.677†	-24.0	-0.00970	mg/L	0.001187	-0.00970	mg/L	0.001187 12.24%
Ba 233.527†	3214.8	1.023	mg/L	0.0051	1.023	mg/L	0.0051 0.50%
Be 313.042†	551747.9	1.004	mg/L	0.0021	1.004	mg/L	0.0021 0.21%
Ca 317.933†	1468892.5	102.2	mg/L	0.21	102.2	mg/L	0.21 0.21%
Cd 228.802†	22262.2	1.055	mg/L	0.0129	1.055	mg/L	0.0129 1.22%
Co 228.616†	28742.1	0.9699	mg/L	0.01244	0.9699	mg/L	0.01244 1.28%
Cr 267.716†	4925.8	1.039	mg/L	0.0048	1.039	mg/L	0.0048 0.46%
Cu 324.752†	285018.5	1.041	mg/L	0.0133	1.041	mg/L	0.0133 1.28%
Fe 273.955†	226418.6	199.9	mg/L	0.16	199.9	mg/L	0.16 0.08%
K 766.490†	-70.1	-0.04899	mg/L	0.050312	-0.04899	mg/L	0.050312 102.70%
Mg 279.077†	93245.9	100.8	mg/L	0.43	100.8	mg/L	0.43 0.43%
Mn 257.610†	28549.4	0.9734	mg/L	0.00363	0.9734	mg/L	0.00363 0.37%
Mo 202.031†	98.3	0.00395	mg/L	0.000404	0.00395	mg/L	0.000404 10.24%
Na 589.592†	254.2	0.02142	mg/L	0.004104	0.02142	mg/L	0.004104 19.16%
Na 330.237†	-2.8	0.2889	mg/L	0.11678	0.2889	mg/L	0.11678 40.43%
Ni 231.604†	1557.4	0.9627	mg/L	0.00535	0.9627	mg/L	0.00535 0.56%
Pb 220.353†	6466.6	0.9592	mg/L	0.01034	0.9592	mg/L	0.01034 1.08%
Sb 206.836†	2835.2	1.048	mg/L	0.0135	1.048	mg/L	0.0135 1.29%
Se 196.026†	1277.5	1.066	mg/L	0.0061	1.066	mg/L	0.0061 0.57%
Si 288.158†	-35.4	-0.02024	mg/L	0.003071	-0.02024	mg/L	0.003071 15.17%
Sn 189.927†	-55.7	-0.00974	mg/L	0.002688	-0.00974	mg/L	0.002688 27.60%
Sr 421.552†	2354.3	0.00372	mg/L	0.000042	0.00372	mg/L	0.000042 1.12%
Ti 334.903†	179.1	0.00159	mg/L	0.000359	0.00159	mg/L	0.000359 22.65%
Tl 190.801†	1629.1	0.9740	mg/L	0.00881	0.9740	mg/L	0.00881 0.90%
V 292.402†	96755.5	0.9878	mg/L	0.01033	0.9878	mg/L	0.01033 1.05%
Zn 206.200†	593.5	0.9513	mg/L	0.00369	0.9513	mg/L	0.00369 0.39%

Sequence No.: 6  
 Sample ID: CV  
 Analyst: ALA  
 Dilution: 1X

Autosampler Location: 7  
 Date Collected: 8/6/2010 9:50:08 AM  
 Data Type: Original

## Nebulizer Parameters: CV

Analyte Back Pressure Flow  
 All 199.0 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	1905842.6	100.2 %	0.81			0.81%
ScR 361.383	275838.7	94.25 %	0.469			0.50%
Ag 328.068†	181213.7	1.046 mg/L	0.0028	1.046 mg/L	0.0028	0.26%
Al 308.215†	2841.4	2.217 mg/L	0.0050	2.217 mg/L	0.0050	0.23%
As 188.979†	2829.6	2.068 mg/L	0.0184	2.068 mg/L	0.0184	0.89%
B 249.677†	3461.7	1.044 mg/L	0.0023	1.044 mg/L	0.0023	0.22%
Ba 233.527†	3351.1	1.086 mg/L	0.0029	1.086 mg/L	0.0029	0.26%
Be 313.042†	562156.0	1.022 mg/L	0.0081	1.022 mg/L	0.0081	0.79%
Ca 317.933†	31369.4	2.183 mg/L	0.0117	2.183 mg/L	0.0117	0.54%
Cd 228.802†	22235.5	1.050 mg/L	0.0092	1.050 mg/L	0.0092	0.87%
Co 228.616†	30212.5	1.021 mg/L	0.0072	1.021 mg/L	0.0072	0.71%
Cr 267.716†	5185.8	1.100 mg/L	0.0030	1.100 mg/L	0.0030	0.28%
Cu 324.752†	289540.6	1.044 mg/L	0.0080	1.044 mg/L	0.0080	0.77%
Fe 273.955†	2442.1	2.150 mg/L	0.0013	2.150 mg/L	0.0013	0.06%
K 766.490†	30647.7	21.43 mg/L	0.057	21.43 mg/L	0.057	0.26%
Mg 279.077†	1999.9	2.169 mg/L	0.0027	2.169 mg/L	0.0027	0.12%
Mn 257.610†	30572.0	1.043 mg/L	0.0066	1.043 mg/L	0.0066	0.63%
Mo 202.031†	17554.2	1.021 mg/L	0.0089	1.021 mg/L	0.0089	0.87%
Na 589.592†	624394.6	52.62 mg/L	0.310	52.62 mg/L	0.310	0.59%
Na 330.237†	1594.6	55.16 mg/L	0.237	55.16 mg/L	0.237	0.43%
Ni 231.604†	1705.1	1.055 mg/L	0.0010	1.055 mg/L	0.0010	0.10%
Pb 220.353†	14179.1	2.057 mg/L	0.0192	2.057 mg/L	0.0192	0.93%
Sb 206.836†	5666.5	2.116 mg/L	0.0213	2.116 mg/L	0.0213	1.01%
Se 196.026†	2466.0	2.071 mg/L	0.0178	2.071 mg/L	0.0178	0.86%
Si 288.158†	3326.4	2.256 mg/L	0.0092	2.256 mg/L	0.0092	0.41%
Sn 189.927†	3778.0	1.029 mg/L	0.0124	1.029 mg/L	0.0124	1.20%
Sr 421.552†	666444.3	1.054 mg/L	0.0046	1.054 mg/L	0.0046	0.44%
Ti 334.903†	23150.0	1.053 mg/L	0.0056	1.053 mg/L	0.0056	0.53%
Tl 190.801†	3525.8	2.050 mg/L	0.0213	2.050 mg/L	0.0213	1.04%
V 292.402†	98599.5	1.029 mg/L	0.0094	1.029 mg/L	0.0094	0.91%
Zn 206.200†	645.4	1.041 mg/L	0.0040	1.041 mg/L	0.0040	0.38%



Sequence No.: 7  
 Sample ID: CB  
 Analyst: ALA  
 Dilution: 1X

Autosampler Location: 1  
 Date Collected: 8/6/2010 9:54:21 AM  
 Data Type: Original

## Nebulizer Parameters: CB

Analyte Back Pressure Flow  
 All 199.0 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	1922942.6	101.1	%	0.99			0.98%
ScR 361.383	274349.7	93.74	%	0.319			0.34%
Ag 328.068†	-26.6	-0.00015	mg/L	0.000267	-0.00015 mg/L	0.000267	174.16%
Al 308.215†	0.5	0.00043	mg/L	0.002215	0.00043 mg/L	0.002215	517.86%
As 188.979†	-4.5	-0.00329	mg/L	0.000810	-0.00329 mg/L	0.000810	24.66%
B 249.677†	1.4	0.00041	mg/L	0.002350	0.00041 mg/L	0.002350	573.64%
Ba 233.527†	3.4	0.00111	mg/L	0.001190	0.00111 mg/L	0.001190	107.49%
Be 313.042†	96.9	0.00018	mg/L	0.000056	0.00018 mg/L	0.000056	31.61%
Ca 317.933†	22.8	0.00158	mg/L	0.000780	0.00158 mg/L	0.000780	49.26%
Cd 228.802†	-1.4	-0.00005	mg/L	0.000254	-0.00005 mg/L	0.000254	467.92%
Co 228.616†	-0.0	0.00000	mg/L	0.000039	0.00000 mg/L	0.000039	>999.9%
Cr 267.716†	-0.1	-0.00003	mg/L	0.000974	-0.00003 mg/L	0.000974	>999.9%
Cu 324.752†	7.9	0.00003	mg/L	0.000235	0.00003 mg/L	0.000235	821.65%
Fe 273.955†	1.2	0.00110	mg/L	0.001478	0.00110 mg/L	0.001478	134.07%
K 766.490†	60.9	0.04258	mg/L	0.027136	0.04258 mg/L	0.027136	63.72%
Mg 279.077†	-0.7	-0.00076	mg/L	0.012151	-0.00076 mg/L	0.012151	>999.9%
Mn 257.610†	5.6	0.00019	mg/L	0.000118	0.00019 mg/L	0.000118	61.67%
Mo 202.031†	4.0	0.00024	mg/L	0.000210	0.00024 mg/L	0.000210	89.14%
Na 589.592†	22.6	0.00191	mg/L	0.003293	0.00191 mg/L	0.003293	172.82%
Na 330.237†	-4.2	-0.1459	mg/L	0.11158	-0.1459 mg/L	0.11158	76.49%
Ni 231.604†	4.6	0.00282	mg/L	0.001610	0.00282 mg/L	0.001610	57.10%
Pb 220.353†	-4.6	-0.00067	mg/L	0.000465	-0.00067 mg/L	0.000465	69.53%
Sb 206.836†	3.1	0.00116	mg/L	0.001963	0.00116 mg/L	0.001963	169.48%
Se 196.026†	4.2	0.00351	mg/L	0.002781	0.00351 mg/L	0.002781	79.16%
Si 288.158†	9.7	0.00654	mg/L	0.004024	0.00654 mg/L	0.004024	61.54%
Sn 189.927†	3.9	0.00107	mg/L	0.001045	0.00107 mg/L	0.001045	97.60%
Sr 421.552†	66.0	0.00010	mg/L	0.000049	0.00010 mg/L	0.000049	46.84%
Ti 334.903†	-8.3	-0.00038	mg/L	0.000499	-0.00038 mg/L	0.000499	131.37%
Tl 190.801†	3.7	0.00212	mg/L	0.001605	0.00212 mg/L	0.001605	75.55%
V 292.402†	-8.3	-0.00009	mg/L	0.000241	-0.00009 mg/L	0.000241	280.50%
Zn 206.200†	0.4	0.00064	mg/L	0.002043	0.00064 mg/L	0.002043	319.40%

Sequence No.: 8  
 Sample ID: RF71 MB1 SWC  
 Analyst: ALA  
 Dilution: 2X

Autosampler Location: 304  
 Date Collected: 8/6/2010 9:58:17 AM  
 Data Type: Original

*Del*

## Nebulizer Parameters: RF71 MB1 SWC

Analyte Back Pressure Flow  
 All 199.0 kPa 0.75 L/min

## Mean Data: RF71 MB1 SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1948105.1	102.4	%	0.75			0.73%
ScR 361.383	292462.1	99.92	%	2.909			2.91%
Ag 328.068†	-18.5	-0.00011	mg/L	0.000189	-0.00021	0.000378	176.95%
Al 308.215†	4.1	0.00328	mg/L	0.006860	0.00656	0.013719	209.18%
As 188.979†	-0.6	-0.00045	mg/L	0.001666	-0.00089	0.003333	373.88%
B 249.677†	-2.7	-0.00082	mg/L	0.001528	-0.00164	0.003056	186.90%
Ba 233.527†	0.7	0.00022	mg/L	0.000692	0.00044	0.001383	314.76%
Be 313.042†	-22.8	-0.00004	mg/L	0.000056	-0.00008	0.000113	135.97%
Ca 317.933†	134.8	0.00938	mg/L	0.001124	0.01876	0.002247	11.98%
Cd 228.802†	-2.6	-0.00012	mg/L	0.000132	-0.00024	0.000264	109.28%
Co 228.616†	1.5	0.00005	mg/L	0.000122	0.00010	0.000243	239.44%
Cr 267.716†	1.2	0.00026	mg/L	0.001019	0.00052	0.002037	390.40%
Cu 324.752†	-55.0	-0.00020	mg/L	0.000161	-0.00040	0.000322	81.11%
Fe 273.955†	0.2	0.00014	mg/L	0.003707	0.00028	0.007414	>999.9%
K 766.490†	-19.8	-0.01383	mg/L	0.011765	-0.02765	0.023531	85.09%
Mg 279.077†	5.2	0.00559	mg/L	0.009401	0.01118	0.018802	168.23%
Mn 257.610†	-5.9	-0.00020	mg/L	0.000095	-0.00040	0.000191	47.70%
Mo 202.031†	-6.7	-0.00039	mg/L	0.000198	-0.00078	0.000396	51.03%
Na 589.592†	29.4	0.00248	mg/L	0.003401	0.00496	0.006802	137.12%
Na 330.237†	6.2	0.2155	mg/L	0.31297	0.4310	0.62593	145.22%
Ni 231.604†	4.5	0.00278	mg/L	0.001182	0.00556	0.002364	42.52%
Pb 220.353†	2.9	0.00042	mg/L	0.001131	0.00084	0.002261	267.74%
Sb 206.836†	-0.9	-0.00033	mg/L	0.000110	-0.00066	0.000221	33.54%
Se 196.026†	10.4	0.00870	mg/L	0.005925	0.01739	0.011849	68.13%
Si 288.158†	-1.6	-0.00106	mg/L	0.003415	-0.00212	0.006831	322.16%
Sn 189.927†	2.8	0.00077	mg/L	0.000558	0.00154	0.001115	72.53%
Sr 421.552†	-16.8	-0.00003	mg/L	0.000064	-0.00005	0.000129	241.27%
Ti 334.903†	2.0	0.00009	mg/L	0.000719	0.00018	0.001437	809.25%
Tl 190.801†	5.9	0.00342	mg/L	0.002256	0.00685	0.004513	65.89%
V 292.402†	-5.2	-0.00005	mg/L	0.000174	-0.00011	0.000347	325.74%
Zn 206.200†	0.4	0.00057	mg/L	0.000343	0.00115	0.000686	59.87%

Sequence No.: 9  
 Sample ID: RG11 MBI SWC  
 Analyst: ALA  
 Dilution: 2X

Autosampler Location: 305  
 Date Collected: 8/6/2010 10:02:29 AM  
 Data Type: Original

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 Nebulizer Parameters: RG11 MBI SWC

Analyte Back Pressure Flow  
 All 199.0 kPa 0.75 L/min

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 Mean Data: RG11 MBI SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1950662.5	102.6	%	1.04			1.01%
ScR 361.383	295484.0	101.0	%	2.92			2.89%
Ag 328.068†	2.7	0.00002	mg/L	0.000312	0.00003 mg/L	0.000624	>999.9%
Al 308.215†	1.2	0.00099	mg/L	0.004016	0.00198 mg/L	0.008033	405.31%
As 188.979†	0.8	0.00062	mg/L	0.002395	0.00124 mg/L	0.004790	387.51%
B 249.677†	-5.1	-0.00155	mg/L	0.001520	-0.00311 mg/L	0.003040	97.87%
Ba 233.527†	0.4	0.00014	mg/L	0.000651	0.00028 mg/L	0.001303	464.67%
Be 313.042†	-46.7	-0.00008	mg/L	0.000075	-0.00017 mg/L	0.000151	88.83%
Ca 317.933†	123.3	0.00858	mg/L	0.001351	0.01715 mg/L	0.002703	15.76%
Cd 228.802†	0.3	0.00002	mg/L	0.000179	0.00003 mg/L	0.000358	>999.9%
Co 228.616†	0.4	0.00001	mg/L	0.000111	0.00002 mg/L	0.000222	>999.9%
Cr 267.716†	6.9	0.00145	mg/L	0.000947	0.00291 mg/L	0.001894	65.11%
Cu 324.752†	-69.1	-0.00025	mg/L	0.000383	-0.00050 mg/L	0.000766	153.45%
Fe 273.955†	-0.6	-0.00055	mg/L	0.001553	-0.00111 mg/L	0.003106	280.09%
K 766.490†	18.1	0.01263	mg/L	0.018316	0.02527 mg/L	0.036632	144.97%
Mg 279.077†	0.2	0.00027	mg/L	0.004795	0.00053 mg/L	0.009591	>999.9%
Mn 257.610†	-1.9	-0.00006	mg/L	0.000070	-0.00013 mg/L	0.000140	110.80%
Mo 202.031†	-5.4	-0.00031	mg/L	0.000297	-0.00063 mg/L	0.000595	95.03%
Na 589.592†	19.5	0.00164	mg/L	0.003087	0.00329 mg/L	0.006173	187.66%
Na 330.237†	0.7	0.02327	mg/L	0.096014	0.04654 mg/L	0.192029	412.64%
Ni 231.604†	4.3	0.00266	mg/L	0.000669	0.00532 mg/L	0.001337	25.13%
Pb 220.353†	-3.1	-0.00045	mg/L	0.000209	-0.00090 mg/L	0.000419	46.48%
Sb 206.836†	1.2	0.00044	mg/L	0.001260	0.00089 mg/L	0.002519	284.26%
Se 196.026†	8.3	0.00697	mg/L	0.001442	0.01394 mg/L	0.002883	20.68%
Si 288.158†	9.0	0.00606	mg/L	0.000946	0.01212 mg/L	0.001891	15.60%
Sn 189.927†	4.2	0.00113	mg/L	0.000314	0.00227 mg/L	0.000628	27.70%
Sr 421.552†	-30.3	-0.00005	mg/L	0.000007	-0.00010 mg/L	0.000013	13.92%
Ti 334.903†	15.3	0.00070	mg/L	0.000369	0.00139 mg/L	0.000738	53.00%
Tl 190.801†	3.1	0.00180	mg/L	0.002141	0.00360 mg/L	0.004281	118.77%
V 292.402†	-19.7	-0.00020	mg/L	0.000018	-0.00040 mg/L	0.000037	9.18%
Zn 206.200†	-0.5	-0.00076	mg/L	0.001164	-0.00151 mg/L	0.002329	153.92%

Sequence No.: 10  
 Sample ID: RG11 A SWC  
 Analyst: ALA  
 Dilution: 2X

Autosampler Location: 306  
 Date Collected: 8/6/2010 10:06:39 AM  
 Data Type: Original

*RR 1/5*

## Nebulizer Parameters: RG11 A SWC

Analyte	Back Pressure	Flow
All	199.0 kPa	0.75 L/min

## Mean Data: RG11 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1969031.6	103.5	%	1.76			1.70%
ScR 361.383	303919.5	103.8	%	1.28			1.23%
Ag 328.068†	336.3	0.00153	mg/L	0.000181	0.00306 mg/L	0.000362	11.84%
Al 308.215†	123001.2	97.36	mg/L	0.383	194.7 mg/L	0.77	0.39%
As 188.979†	-106.1	0.04896	mg/L	0.003118	0.09792 mg/L	0.006236	6.37%
B 249.677†	350.7	0.1060	mg/L	0.00182	0.2120 mg/L	0.00364	1.72%
Ba 233.527†	2351.0	0.7366	mg/L	0.00802	1.473 mg/L	0.0160	1.09%
Be 313.042†	644.4	0.00086	mg/L	0.000027	0.00171 mg/L	0.000054	3.15%
Ca 317.933†	1096563.4	76.29	mg/L	0.844	152.6 mg/L	1.69	1.11%
Cd 228.802†	31.5	0.00682	mg/L	0.000282	0.01364 mg/L	0.000565	4.14%
Co 228.616†	5176.4	0.1577	mg/L	0.00244	0.3155 mg/L	0.00488	1.55%
Cr 267.716†	35038.8	7.437	mg/L	0.0327	14.87 mg/L	0.065	0.44%
Cu 324.752†	3121499.1	11.28	mg/L	0.215	22.56 mg/L	0.429	1.90%
Fe 273.955†	299813.7	264.6	mg/L	1.61	529.3 mg/L	3.23	0.61%
K 766.490†	7627.0	5.333	mg/L	0.0247	10.67 mg/L	0.049	0.46%
Mg 279.077†	48310.0	52.15	mg/L	0.293	104.3 mg/L	0.59	0.56%
Mn 257.610†	103635.1	3.536	mg/L	0.0431	7.071 mg/L	0.0862	1.22%
Mo 202.031†	10609.6	0.6159	mg/L	0.01002	1.232 mg/L	0.0200	1.63%
Na 589.592†	38660.0	3.258	mg/L	0.0275	6.516 mg/L	0.0551	0.85%
Na 330.237†	37.2	3.295	mg/L	0.0890	6.590 mg/L	0.1781	2.70%
Ni 231.604†	12663.5	7.822	mg/L	0.0944	15.64 mg/L	0.189	1.21%
Pb 220.353†	2227.2	0.3214	mg/L	0.00545	0.6428 mg/L	0.01089	1.69%
Sb 206.836†	247.1	0.02749	mg/L	0.002804	0.05499 mg/L	0.005608	10.20%
Se 196.026†	41.4	0.02960	mg/L	0.003400	0.05920 mg/L	0.006799	11.49%
Si 288.158†	3210.6	2.174	mg/L	0.0322	4.348 mg/L	0.0645	1.48%
Sn 189.927†	160.9	0.05080	mg/L	0.001812	0.1016 mg/L	0.00362	3.57%
Sr 421.552†	177813.6	0.2812	mg/L	0.00119	0.5624 mg/L	0.00237	0.42%
Ti 334.903†	165991.7	7.552	mg/L	0.0567	15.10 mg/L	0.113	0.75%
Tl 190.801†	-47.7	0.01394	mg/L	0.004894	0.02787 mg/L	0.009788	35.12%
V 292.402†	43027.6	0.4460	mg/L	0.00749	0.8919 mg/L	0.01498	1.68%
Zn 206.200†	1380.8	2.222	mg/L	0.0235	4.444 mg/L	0.0470	1.06%

Sequence No.: 11  
Sample ID: RF71 ADUP SWC  
Analyst: ALA  
Dilution: 2X

*Del*

Autosampler Location: 307  
Date Collected: 8/6/2010 10:10:22 AM  
Data Type: Original

Nebulizer Parameters: RF71 ADUP SWC

Analyte Back Pressure Flow  
All 199.0 kPa 0.75 L/min

Mean Data: RF71 ADUP SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1940833.7	102.1	%	0.62			0.61%
ScR 361.383	293686.2	100.3	%	0.78			0.78%
Ag 328.068†	30.1	0.00004	mg/L	0.000273	0.00007 mg/L	0.000546	737.43%
Al 308.215†	146057.3	115.6	mg/L	1.14	231.3 mg/L	2.29	0.99%
As 188.979†	-55.4	0.05587	mg/L	0.001883	0.1117 mg/L	0.00377	3.37%
B 249.677†	239.5	0.07218	mg/L	0.002896	0.1444 mg/L	0.00579	4.01%
Ba 233.527†	996.2	0.3069	mg/L	0.00376	0.6138 mg/L	0.00753	1.23%
Be 313.042†	1030.8	0.00164	mg/L	0.000045	0.00327 mg/L	0.000090	2.76%
Ca 317.933†	432545.3	30.09	mg/L	0.387	60.19 mg/L	0.775	1.29%
Cd 228.802†	84.5	0.00432	mg/L	0.000019	0.00864 mg/L	0.000037	0.43%
Co 228.616†	2329.0	0.06752	mg/L	0.000403	0.1350 mg/L	0.00081	0.60%
Cr 267.716†	1352.6	0.2867	mg/L	0.00368	0.5733 mg/L	0.00737	1.29%
Cu 324.752†	88482.6	0.3283	mg/L	0.00355	0.6566 mg/L	0.00709	1.08%
Fe 273.955†	194488.1	171.7	mg/L	1.98	343.3 mg/L	3.97	1.16%
K 766.490†	13935.7	9.743	mg/L	0.1511	19.49 mg/L	0.302	1.55%
Mg 279.077†	54580.2	58.98	mg/L	0.793	118.0 mg/L	1.59	1.35%
Mn 257.610†	60088.4	2.050	mg/L	0.0294	4.099 mg/L	0.0587	1.43%
Mo 202.031†	186.7	0.01034	mg/L	0.000047	0.02068 mg/L	0.000094	0.45%
Na 589.592†	198397.1	16.72	mg/L	0.207	33.44 mg/L	0.414	1.24%
Na 330.237†	454.7	17.23	mg/L	0.251	34.46 mg/L	0.502	1.46%
Ni 231.604†	447.2	0.2762	mg/L	0.00447	0.5525 mg/L	0.00894	1.62%
Pb 220.353†	925.6	0.1419	mg/L	0.00017	0.2839 mg/L	0.00035	0.12%
Sb 206.836†	23.8	0.01395	mg/L	0.001746	0.02789 mg/L	0.003491	12.52%
Se 196.026†	44.8	0.03559	mg/L	0.001748	0.07118 mg/L	0.003496	4.91%
Si 288.158†	10946.0	7.412	mg/L	0.0669	14.82 mg/L	0.134	0.90%
Sn 189.927†	13.9	0.00763	mg/L	0.000791	0.01526 mg/L	0.001583	10.37%
Sr 421.552†	157880.1	0.2497	mg/L	0.00337	0.4993 mg/L	0.00674	1.35%
Ti 334.903†	117921.9	5.368	mg/L	0.0714	10.74 mg/L	0.143	1.33%
Tl 190.801†	-34.8	0.00681	mg/L	0.001641	0.01362 mg/L	0.003281	24.09%
V 292.402†	33574.2	0.3286	mg/L	0.00359	0.6573 mg/L	0.00718	1.09%
Zn 206.200†	372.5	0.5975	mg/L	0.00527	1.195 mg/L	0.0105	0.88%

Sequence No.: 12  
Sample ID: RF71 A SWC  
Analyst: ALA  
Dilution: 2X

DEL

Autosampler Location: 308  
Date Collected: 8/6/2010 10:14:18 AM  
Data Type: Original

Nebulizer Parameters: RF71 A SWC

Analyte Back Pressure Flow  
All 199.0 kPa 0.75 L/min

Mean Data: RF71 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1935116.0	101.8 %	1.28			1.26%
ScR 361.383	296773.6	101.4 %	0.70			0.69%
Ag 328.068†	42.6	0.00013 mg/L	0.000171	0.00026 mg/L	0.000342	131.39%
Al 308.215†	158364.6	125.4 mg/L	0.85	250.7 mg/L	1.70	0.68%
As 188.979†	-72.1	0.05526 mg/L	0.002437	0.1105 mg/L	0.00487	4.41%
B 249.677†	266.2	0.08020 mg/L	0.001474	0.1604 mg/L	0.00295	1.84%
Ba 233.527†	1075.6	0.3316 mg/L	0.00215	0.6631 mg/L	0.00429	0.65%
Be 313.042†	1079.8	0.00169 mg/L	0.000046	0.00338 mg/L	0.000092	2.71%
Ca 317.933†	472819.8	32.90 mg/L	0.254	65.79 mg/L	0.507	0.77%
Cd 228.802†	88.9	0.00458 mg/L	0.000449	0.00916 mg/L	0.000897	9.80%
Co 228.616†	2548.5	0.07372 mg/L	0.000919	0.1474 mg/L	0.00184	1.25%
Cr 267.716†	1483.4	0.3142 mg/L	0.00205	0.6284 mg/L	0.00410	0.65%
Cu 324.752†	95159.4	0.3529 mg/L	0.00406	0.7057 mg/L	0.00812	1.15%
Fe 273.955†	207505.3	183.2 mg/L	1.21	366.3 mg/L	2.42	0.66%
K 766.490†	14925.0	10.44 mg/L	0.096	20.87 mg/L	0.193	0.92%
Mg 279.077†	59318.2	64.10 mg/L	0.476	128.2 mg/L	0.95	0.74%
Mn 257.610†	62128.7	2.119 mg/L	0.0132	4.238 mg/L	0.0264	0.62%
Mo 202.031†	210.7	0.01168 mg/L	0.000198	0.02337 mg/L	0.000397	1.70%
Na 589.592†	207784.6	17.51 mg/L	0.096	35.02 mg/L	0.192	0.55%
Na 330.237†	482.0	18.36 mg/L	0.137	36.72 mg/L	0.275	0.75%
Ni 231.604†	477.0	0.2946 mg/L	0.00290	0.5893 mg/L	0.00580	0.98%
Pb 220.353†	1003.9	0.1542 mg/L	0.00186	0.3083 mg/L	0.00372	1.21%
Sb 206.836†	34.2	0.01854 mg/L	0.001025	0.03709 mg/L	0.002050	5.53%
Se 196.026†	38.8	0.03036 mg/L	0.005474	0.06073 mg/L	0.010948	18.03%
Si 288.158†	10940.5	7.408 mg/L	0.0629	14.82 mg/L	0.126	0.85%
Sn 189.927†	17.9	0.00914 mg/L	0.000924	0.01829 mg/L	0.001848	10.10%
Sr 421.552†	169060.7	0.2674 mg/L	0.00252	0.5347 mg/L	0.00503	0.94%
Ti 334.903†	132058.6	6.012 mg/L	0.0407	12.02 mg/L	0.081	0.68%
Tl 190.801†	-33.8	0.00905 mg/L	0.002683	0.01810 mg/L	0.005366	29.64%
V 292.402†	38812.4	0.3816 mg/L	0.00683	0.7631 mg/L	0.01365	1.79%
Zn 206.200†	397.9	0.6382 mg/L	0.00860	1.276 mg/L	0.0172	1.35%

Sequence No.: 13  
 Sample ID: RF71 ASPK SWC  
 Analyst: ALA  
 Dilution: 2X

Autosampler Location: 309  
 Date Collected: 8/6/2010 10:18:14 AM  
 Data Type: Original

## Nebulizer Parameters: RF71 ASPK SWC

Analyte Back Pressure Flow  
 All 199.0 kPa 0.75 L/min

## Mean Data: RF71 ASPK SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	1935544.1	101.8	%	1.31				1.29%
ScR 361.383	296252.8	101.2	%	1.57				1.55%
Ag 328.068†	85187.9	0.4917	mg/L	0.00849	0.9833	mg/L	0.01699	1.73%
Al 308.215†	155584.6	123.2	mg/L	2.60	246.3	mg/L	5.20	2.11%
As 188.979†	2683.0	2.049	mg/L	0.0336	4.097	mg/L	0.0671	1.64%
B 249.677†	283.4	0.08420	mg/L	0.001285	0.1684	mg/L	0.00257	1.53%
Ba 233.527†	7250.2	2.335	mg/L	0.0383	4.669	mg/L	0.0766	1.64%
Be 313.042†	267105.3	0.4856	mg/L	0.01274	0.9712	mg/L	0.02548	2.62%
Ca 317.933†	622544.5	43.31	mg/L	1.104	86.63	mg/L	2.207	2.55%
Cd 228.802†	11046.7	0.5186	mg/L	0.00810	1.037	mg/L	0.0162	1.56%
Co 228.616†	16738.4	0.5538	mg/L	0.00830	1.108	mg/L	0.0166	1.50%
Cr 267.716†	3826.1	0.8098	mg/L	0.01339	1.620	mg/L	0.0268	1.65%
Cu 324.752†	228301.1	0.8331	mg/L	0.01445	1.666	mg/L	0.0289	1.73%
Fe 273.955†	201940.8	178.2	mg/L	4.22	356.5	mg/L	8.43	2.37%
K 766.490†	29008.4	20.28	mg/L	0.427	40.56	mg/L	0.854	2.11%
Mg 279.077†	65468.9	70.76	mg/L	1.601	141.5	mg/L	3.20	2.26%
Mn 257.610†	73242.0	2.499	mg/L	0.0639	4.997	mg/L	0.1278	2.56%
Mo 202.031†	209.7	0.01145	mg/L	0.000226	0.02290	mg/L	0.000451	1.97%
Na 589.592†	327164.0	27.57	mg/L	0.604	55.14	mg/L	1.207	2.19%
Na 330.237†	785.4	28.76	mg/L	0.562	57.52	mg/L	1.124	1.95%
Ni 231.604†	1215.2	0.7509	mg/L	0.01343	1.502	mg/L	0.0269	1.79%
Pb 220.353†	14286.0	2.080	mg/L	0.0300	4.161	mg/L	0.0599	1.44%
Sb 206.836†	1014.4	0.3797	mg/L	0.00438	0.7595	mg/L	0.00876	1.15%
Se 196.026†	2443.5	2.050	mg/L	0.0333	4.099	mg/L	0.0666	1.62%
Si 288.158†	11372.0	7.702	mg/L	0.1187	15.40	mg/L	0.237	1.54%
Sn 189.927†	6.7	0.00676	mg/L	0.002135	0.01351	mg/L	0.004270	31.60%
Sr 421.552†	481853.3	0.7620	mg/L	0.01693	1.524	mg/L	0.0339	2.22%
Ti 334.903†	128811.4	5.863	mg/L	0.1290	11.73	mg/L	0.258	2.20%
Tl 190.801†	3265.5	1.925	mg/L	0.0304	3.850	mg/L	0.0609	1.58%
V 292.402†	81592.6	0.8285	mg/L	0.01035	1.657	mg/L	0.0207	1.25%
Zn 206.200†	675.2	1.085	mg/L	0.0172	2.171	mg/L	0.0344	1.58%

Sequence No.: 14 *RF71 APOST SWC*  
 Sample ID: ~~RF71 APOST SWC~~ *222222*  
 Analyst: ALA  
 Dilution: 2X  
*USE #8 9-10*

Autosampler Location: 310  
 Date Collected: 8/6/2010 10:21:59 AM  
 Data Type: Original

Nebulizer Parameters: RF71 APOST SWC

Analyte Back Pressure Flow  
 All 199.0 kPa 0.75 L/min

Mean Data: RF71 APOST SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1945358.4	102.3	%	0.76			0.75%
ScR 361.383	299180.8	102.2	%	0.74			0.72%
Ag 328.068†	85858.9	0.4955	mg/L	0.00175	0.9911 mg/L	0.00350	0.35%
Al 308.215†	156169.7	123.6	mg/L	0.25	247.2 mg/L	0.51	0.20%
As 188.979†	2737.8	2.088	mg/L	0.0161	4.176 mg/L	0.0321	0.77%
B 249.677†	264.0	0.07833	mg/L	0.001573	0.1567 mg/L	0.00315	2.01%
Ba 233.527†	7253.1	2.335	mg/L	0.0148	4.671 mg/L	0.0295	0.63%
Be 313.042†	266419.4	0.4843	mg/L	0.00143	0.9686 mg/L	0.00286	0.30%
Ca 317.933†	603300.5	41.98	mg/L	0.139	83.95 mg/L	0.278	0.33%
Cd 228.802†	11146.4	0.5232	mg/L	0.00505	1.046 mg/L	0.0101	0.96%
Co 228.616†	16949.7	0.5610	mg/L	0.00502	1.122 mg/L	0.0100	0.90%
Cr 267.716†	3815.3	0.8074	mg/L	0.00605	1.615 mg/L	0.0121	0.75%
Cu 324.752†	228689.1	0.8345	mg/L	0.00591	1.669 mg/L	0.0118	0.71%
Fe 273.955†	203762.5	179.9	mg/L	0.82	359.7 mg/L	1.64	0.46%
K 766.490†	28958.5	20.25	mg/L	0.018	40.49 mg/L	0.037	0.09%
Mg 279.077†	66988.2	72.40	mg/L	0.191	144.8 mg/L	0.38	0.26%
Mn 257.610†	74258.5	2.533	mg/L	0.0066	5.067 mg/L	0.0132	0.26%
Mo 202.031†	202.9	0.01108	mg/L	0.000287	0.02215 mg/L	0.000573	2.59%
Na 589.592†	319113.9	26.89	mg/L	0.059	53.78 mg/L	0.117	0.22%
Na 330.237†	769.8	28.20	mg/L	0.270	56.41 mg/L	0.540	0.96%
Ni 231.604†	1220.0	0.7550	mg/L	0.00570	1.510 mg/L	0.0114	0.75%
Pb 220.353†	14424.6	2.100	mg/L	0.0153	4.201 mg/L	0.0306	0.73%
Sb 206.836†	5550.7	2.070	mg/L	0.0172	4.139 mg/L	0.0343	0.83%
Se 196.026†	2510.8	2.106	mg/L	0.0216	4.212 mg/L	0.0431	1.02%
Si 288.158†	10979.3	7.436	mg/L	0.0555	14.87 mg/L	0.111	0.75%
Sn 189.927†	2.7	0.00666	mg/L	0.000348	0.01333 mg/L	0.000696	5.22%
Sr 421.552†	474377.4	0.7502	mg/L	0.00207	1.500 mg/L	0.0041	0.28%
Ti 334.903†	128325.1	5.841	mg/L	0.0133	11.68 mg/L	0.027	0.23%
Tl 190.801†	3295.4	1.943	mg/L	0.0148	3.885 mg/L	0.0295	0.76%
V 292.402†	83871.7	0.8520	mg/L	0.01263	1.704 mg/L	0.0253	1.48%
Zn 206.200†	677.4	1.089	mg/L	0.0142	2.178 mg/L	0.0284	1.30%



Sequence No.: 15  
 Sample ID: RF71 MB1SPK SWC  
 Analyst: ALA  
 Dilution: 2X

Autosampler Location: 311  
 Date Collected: 8/6/2010 10:25:42 AM  
 Data Type: Original

*DEL*

Nebulizer Parameters: RF71 MB1SPK SWC

Analyte Back Pressure Flow  
 All 199.0 kPa 0.75 L/min

Mean Data: RF71 MB1SPK SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	1937689.8	101.9	%	0.32			0.32%
ScR 361.383	296376.3	101.3	%	0.39			0.38%
Ag 328.068†	93882.6	0.5420	mg/L	0.00234	1.084 mg/L	0.0047	0.43%
Al 308.215†	2713.8	2.139	mg/L	0.0058	4.278 mg/L	0.0115	0.27%
As 188.979†	2923.3	2.118	mg/L	0.0074	4.236 mg/L	0.0149	0.35%
B 249.677†	-3.5	-0.00235	mg/L	0.000760	-0.00470 mg/L	0.001519	32.34%
Ba 233.527†	6536.8	2.120	mg/L	0.0086	4.240 mg/L	0.0172	0.41%
Be 313.042†	275757.6	0.5016	mg/L	0.00257	1.003 mg/L	0.0051	0.51%
Ca 317.933†	146668.3	10.20	mg/L	0.051	20.41 mg/L	0.102	0.50%
Cd 228.802†	11272.5	0.5286	mg/L	0.00064	1.057 mg/L	0.0013	0.12%
Co 228.616†	15317.7	0.5179	mg/L	0.00176	1.036 mg/L	0.0035	0.34%
Cr 267.716†	2537.0	0.5367	mg/L	0.00289	1.073 mg/L	0.0058	0.54%
Cu 324.752†	138824.8	0.5011	mg/L	0.00292	1.002 mg/L	0.0058	0.58%
Fe 273.955†	2441.0	2.152	mg/L	0.0060	4.304 mg/L	0.0121	0.28%
K 766.490†	14780.1	10.33	mg/L	0.031	20.67 mg/L	0.063	0.30%
Mg 279.077†	9585.6	10.37	mg/L	0.026	20.75 mg/L	0.051	0.25%
Mn 257.610†	14701.3	0.5019	mg/L	0.00420	1.004 mg/L	0.0084	0.84%
Mo 202.031†	19.7	0.00097	mg/L	0.000388	0.00193 mg/L	0.000777	40.14%
Na 589.592†	120061.4	10.12	mg/L	0.039	20.23 mg/L	0.078	0.38%
Na 330.237†	320.6	11.02	mg/L	0.265	22.04 mg/L	0.529	2.40%
Ni 231.604†	821.0	0.5087	mg/L	0.00345	1.017 mg/L	0.0069	0.68%
Pb 220.353†	14114.1	2.047	mg/L	0.0135	4.094 mg/L	0.0271	0.66%
Sb 206.836†	5823.4	2.165	mg/L	0.0088	4.331 mg/L	0.0177	0.41%
Se 196.026†	2527.9	2.123	mg/L	0.0086	4.245 mg/L	0.0173	0.41%
Si 288.158†	9.3	0.00821	mg/L	0.008348	0.01641 mg/L	0.016695	101.73%
Sn 189.927†	-13.7	-0.00187	mg/L	0.000890	-0.00374 mg/L	0.001780	47.64%
Sr 421.552†	323572.9	0.5117	mg/L	0.00125	1.023 mg/L	0.0025	0.25%
Ti 334.903†	52.5	0.00166	mg/L	0.000406	0.00331 mg/L	0.000811	24.49%
Tl 190.801†	3607.4	2.096	mg/L	0.0147	4.192 mg/L	0.0293	0.70%
V 292.402†	51162.2	0.5334	mg/L	0.00454	1.067 mg/L	0.0091	0.85%
Zn 206.200†	316.2	0.5100	mg/L	0.00392	1.020 mg/L	0.0078	0.77%