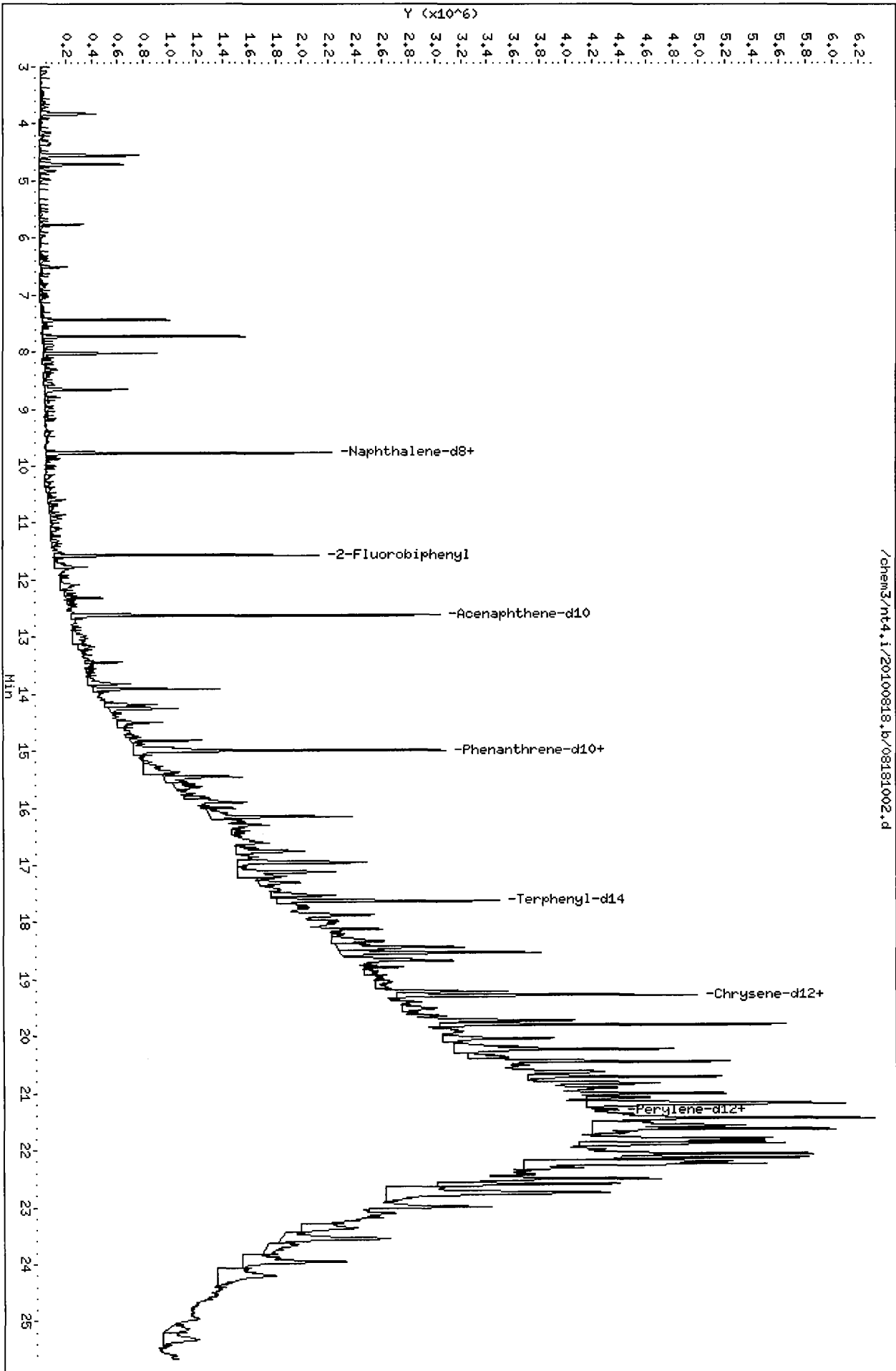


Data File: /chem3/nt4.i/20100818.b/08181002.d  
Date: 18-AUG-2010 12:59  
Client ID: PSB11-4-6-073010  
Sample Info: RG79E  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

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



Date : 18-AUG-2010 12:59

Client ID: PSB11-4-6-073010

Instrument: nt4.i

Sample Info: RG79E

Volume Injected (uL): 1.0

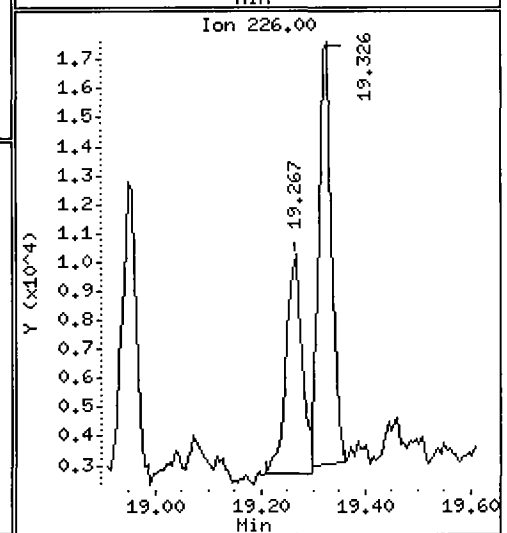
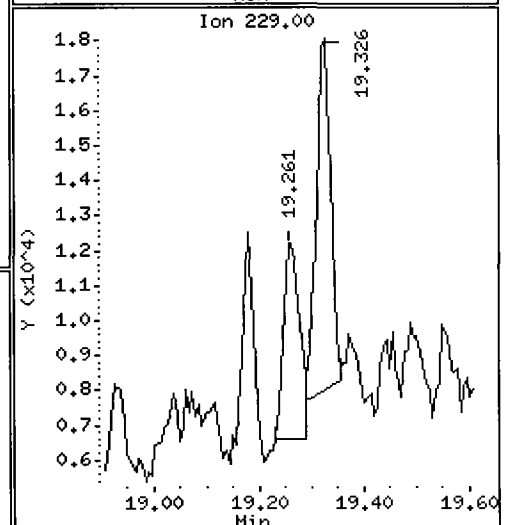
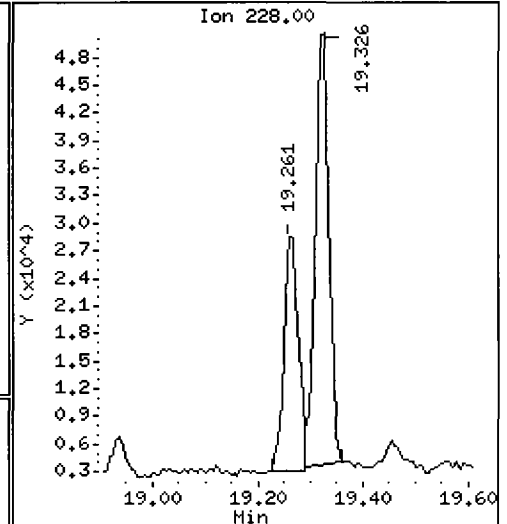
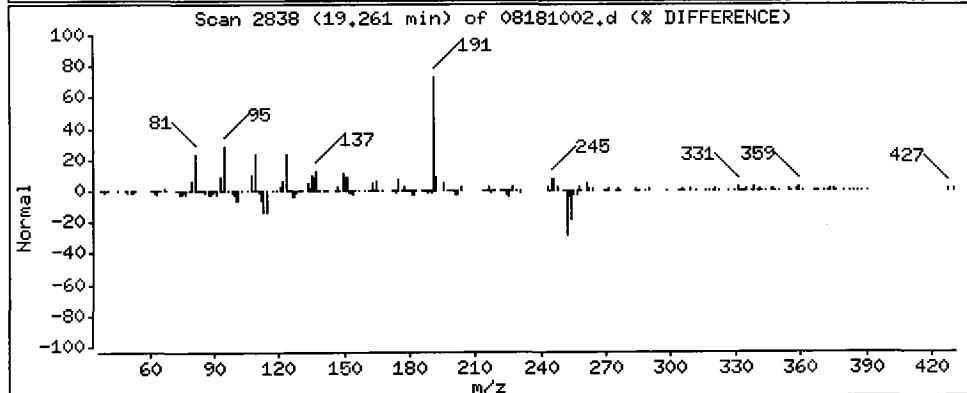
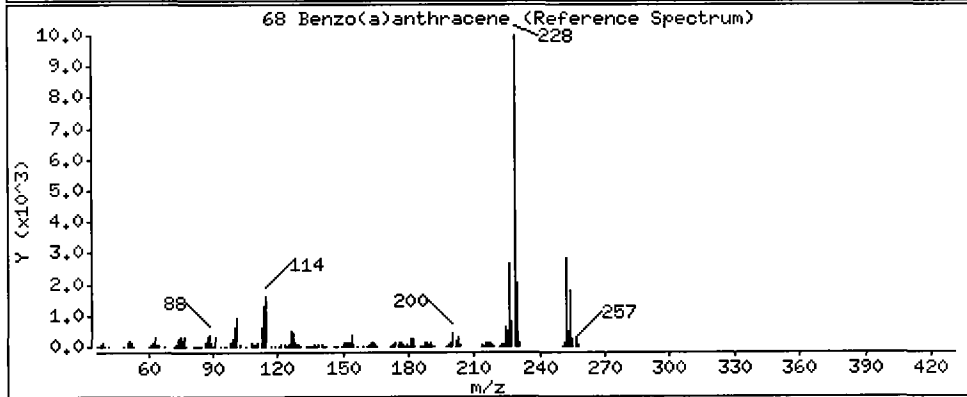
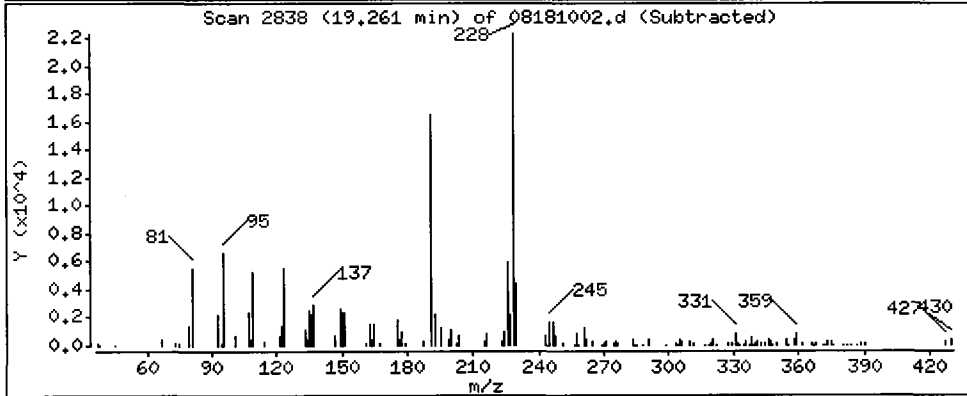
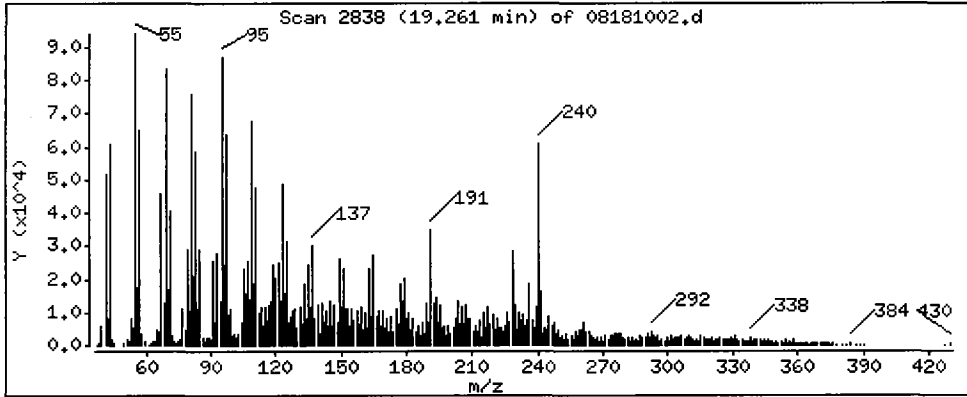
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

68 Benzo(a)anthracene

Concentration: 12.01 ug/kg



Date : 18-AUG-2010 12:59

Client ID: PSB11-4-6-073010

Instrument: nt4.i

Sample Info: RG79E

Volume Injected (uL): 1.0

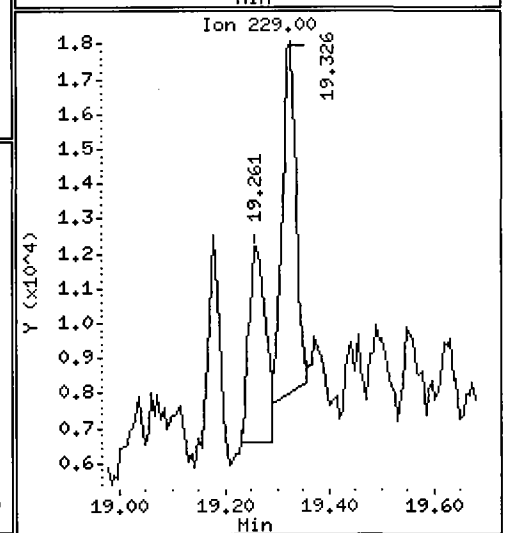
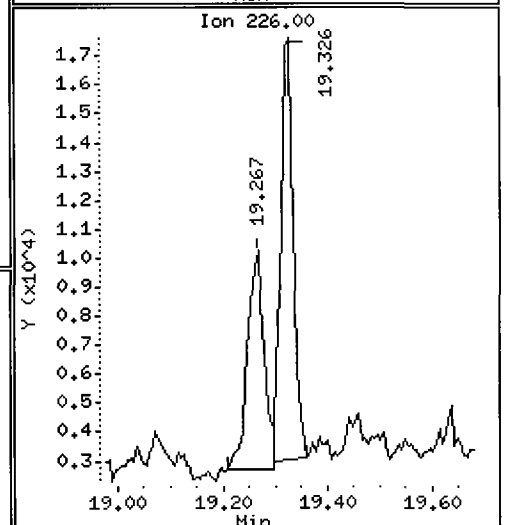
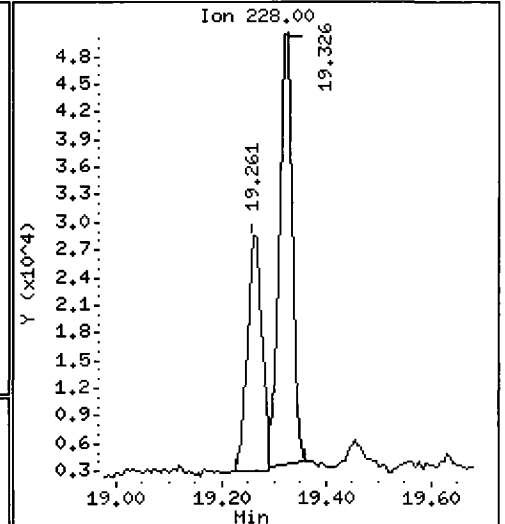
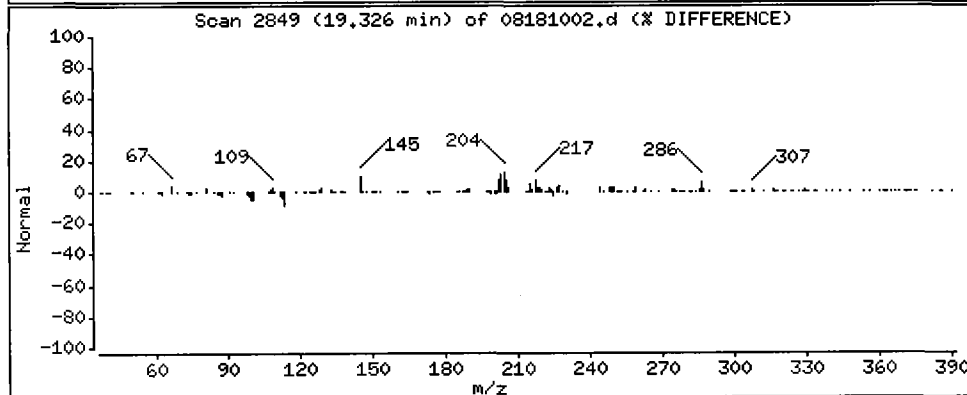
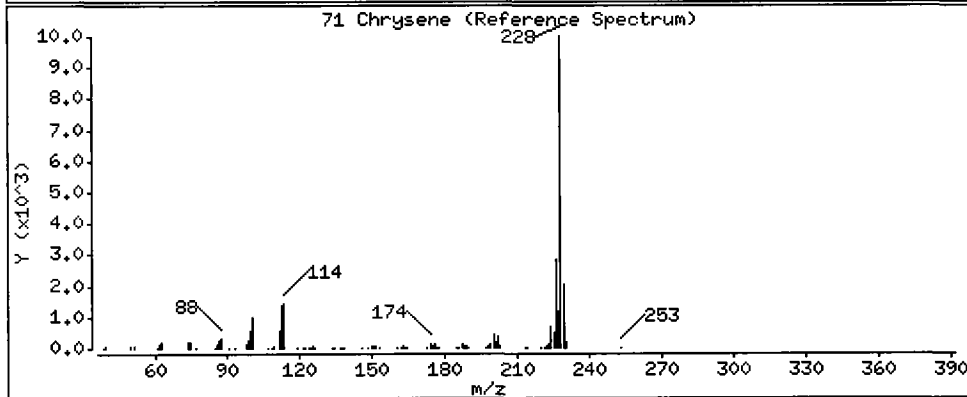
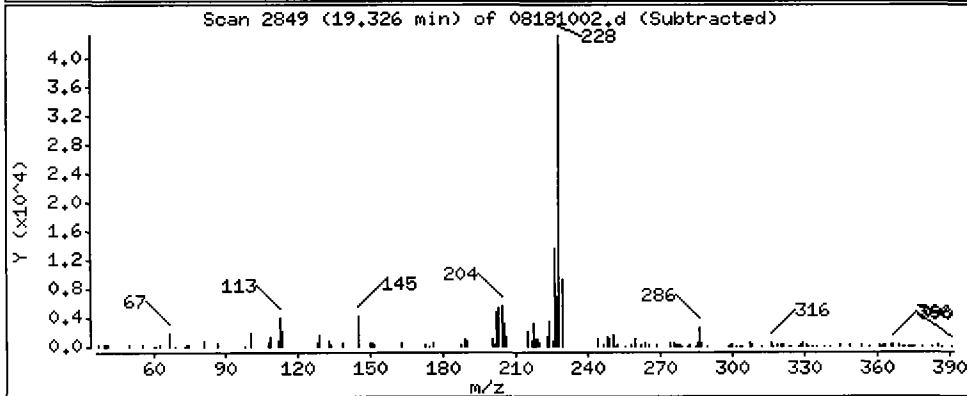
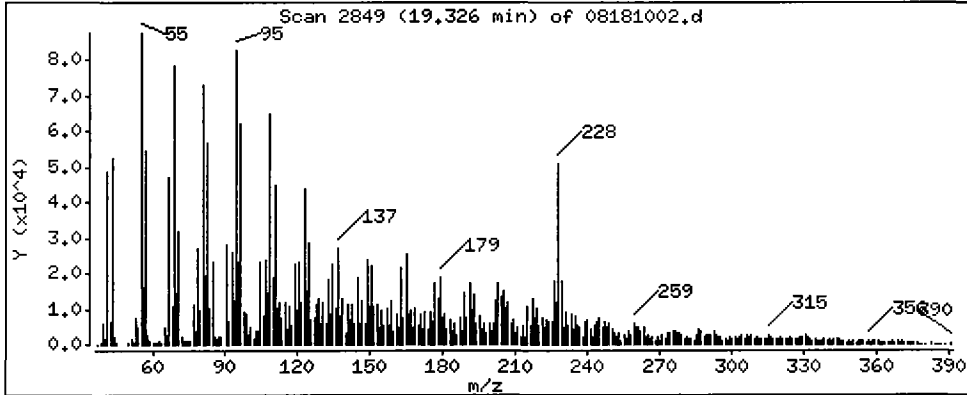
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

71 Chrysene

Concentration: 20.87 ug/kg



Date : 18-AUG-2010 12:59

Client ID: PSB11-4-6-073010

Instrument: nt4.i

Sample Info: RG79E

Volume Injected (uL): 1.0

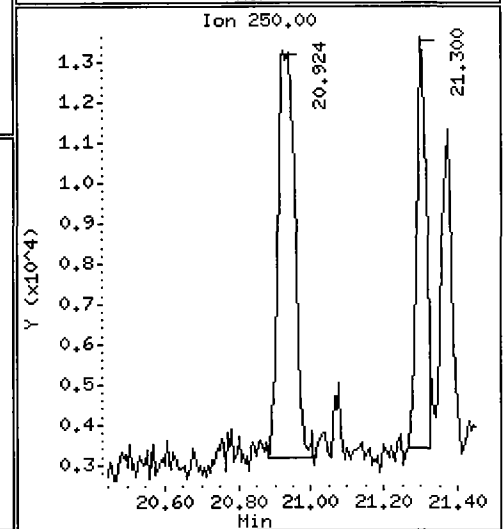
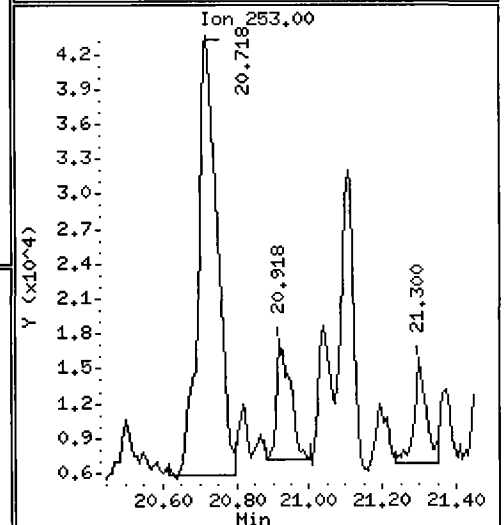
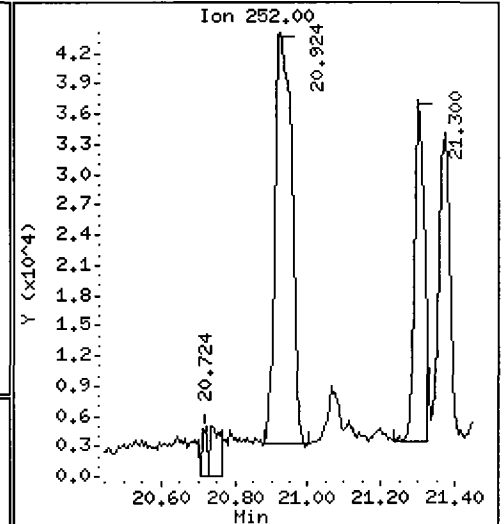
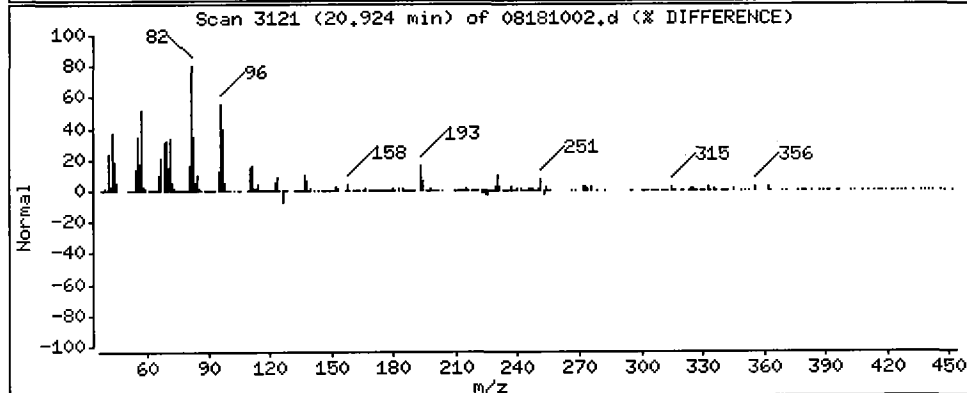
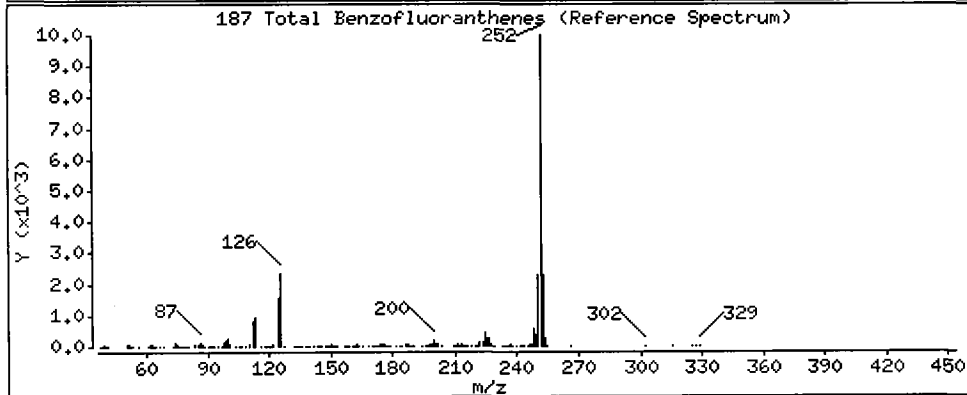
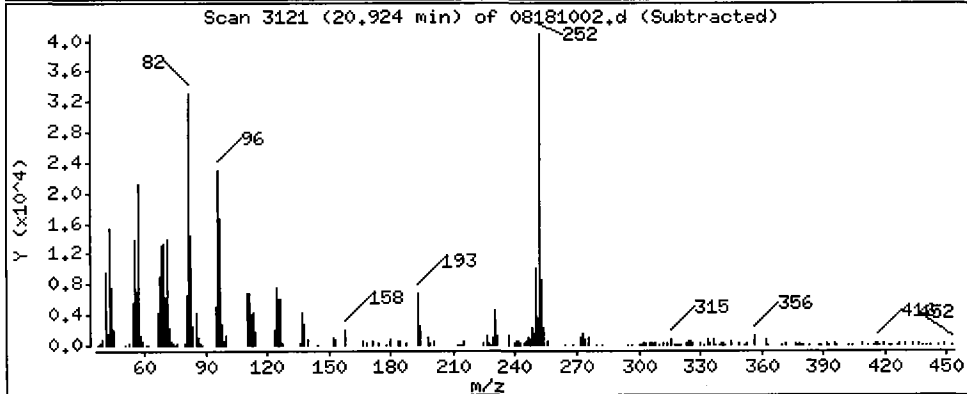
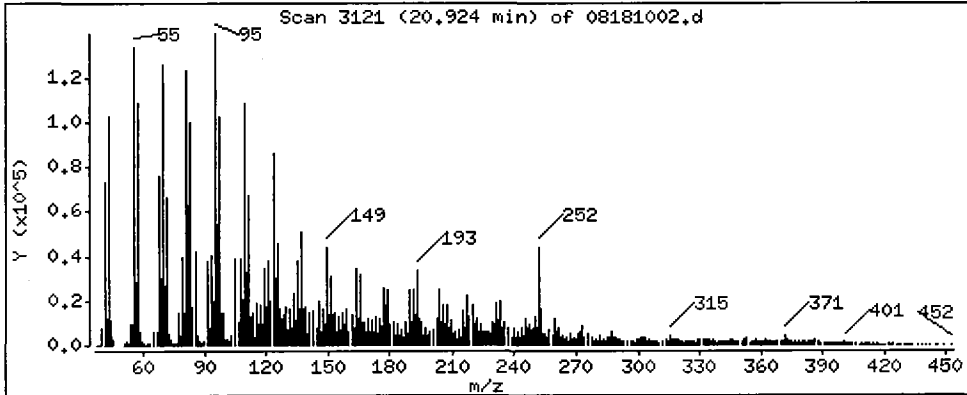
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

187 Total Benzofluoranthenes

Concentration: 32.90 ug/kg



Date : 18-AUG-2010 12:59

Client ID: PSB11-4-6-073010

Instrument: nt4.i

Sample Info: RG79E

Volume Injected (uL): 1.0

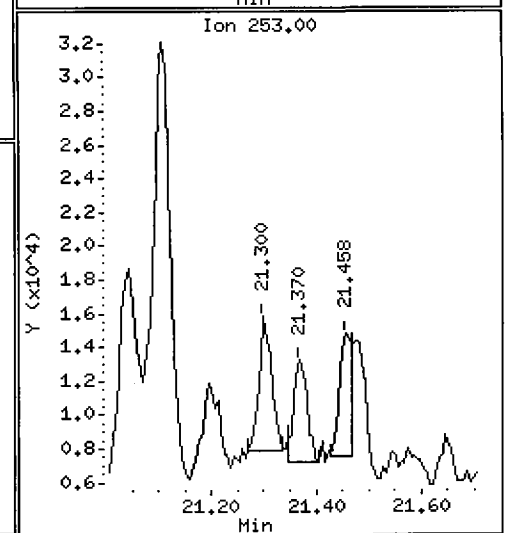
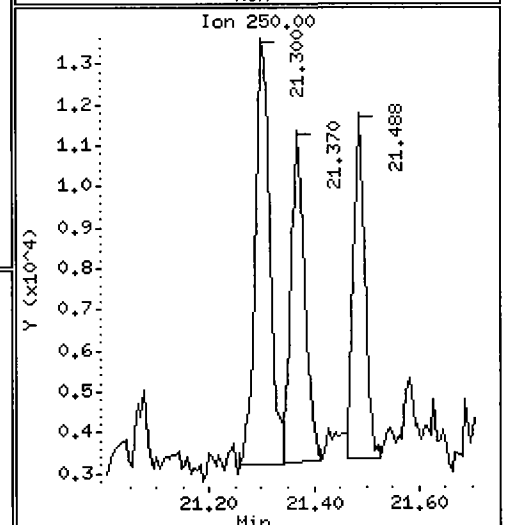
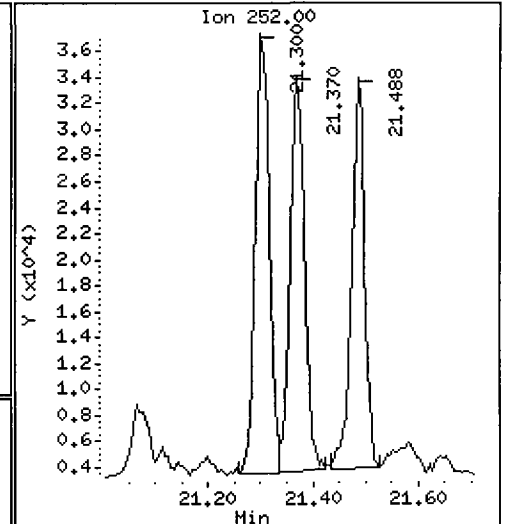
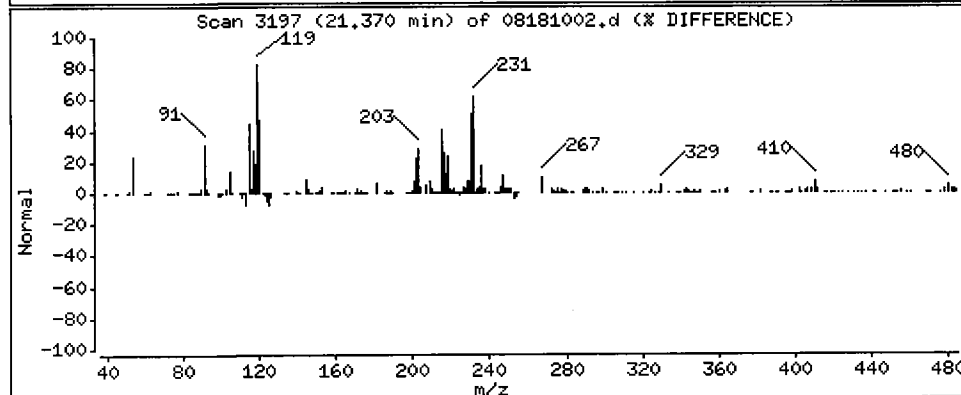
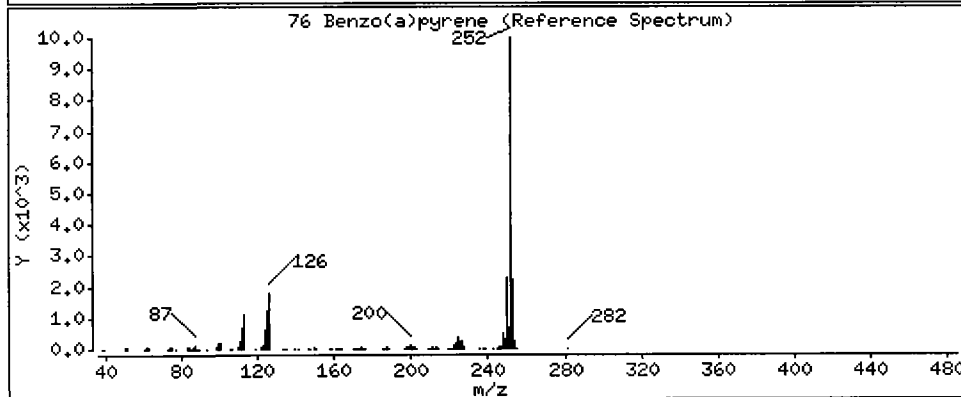
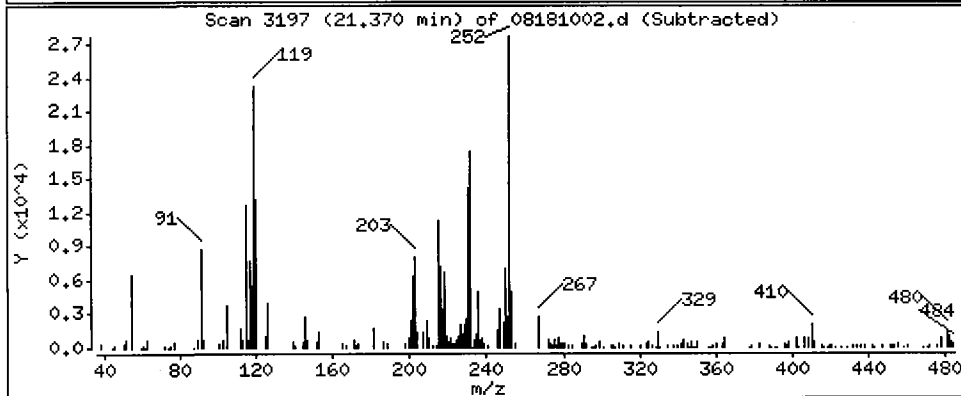
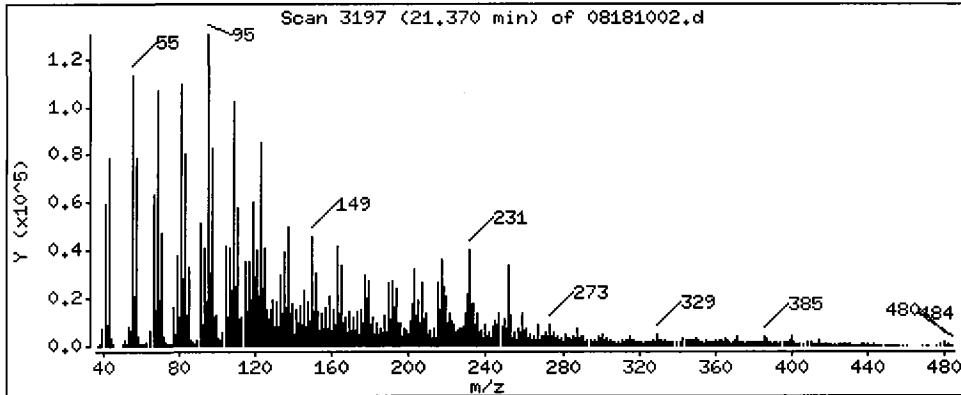
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

76 Benzo(a)pyrene

Concentration: 16.01 ug/kg



Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100818.b/08181003.d  
 Lab Smp Id: RG79EMS Client Smp ID: PSB11-4-6-07301 MS  
 Inj Date : 18-AUG-2010 13:33  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG79EMS  
 Misc Info : 10-18509  
 Comment : lul Injection  
 Method : /chem3/nt4.i/20100818.b/SW846100719.m  
 Meth Date : 18-Aug-2010 15:53 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 3 QC Sample: MS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*Handwritten:* 18/8/10

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	28.30000	Weight of sample extracted (g)
M	8.60000	% 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	9.767	9.775	(1.000)		1644357	20.0000	
28 Naphthalene	128	9.802	9.804	(1.004)		1191189	15.2671	295.1
32 2-Methylnaphthalene	142	10.918	10.926	(1.118)		897298	16.9225	327.1
105 1-methylnaphthalene	142	11.089	11.091	(1.135)		884300	17.0248	329.1
\$ 36 2-Fluorobiphenyl	172	11.565	11.572	(0.916)		1042145	16.6765	322.4
40 Acenaphthylene	152	12.369	12.371	(0.980)		1475276	17.6270	340.7
* 42 Acenaphthene-d10	164	12.622	12.624	(1.000)		1020181	20.0000	
44 Acenaphthene	153	12.669	12.677	(1.004)		916873	16.8263	325.3
46 Dibenzofuran	168	12.933	12.935	(1.025)		1380888	19.0114	367.5
49 Fluorene	166	13.485	13.493	(1.068)		1128258	17.9530	347.0
* 59 Phenanthrene-d10	188	14.989	14.985	(1.000)		1682426	20.0000	
60 Phenanthrene	178	15.025	15.026	(1.002)		1625029	18.6451	360.4
61 Anthracene	178	15.095	15.097	(1.007)		1605825	18.0109	348.2
64 Fluoranthene	202	16.963	16.947	(1.132)		1804642	19.9846	386.3
65 Pyrene	202	17.316	17.300	(0.897)		1981590	21.0843	407.6

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	=====	==	=====	=====	=====	=====	=====
\$ 66 Terphenyl-d14	244	17.639	17.623	(0.914)	1079404	18.8074	363.6
68 Benzo(a)anthracene	228	19.278	19.256	(0.998)	1623086	18.6812	361.1
* 69 Chrysene-d12	240	19.307	19.285	(1.000)	1482177	20.0000	
71 Chrysene	228	19.342	19.326	(1.002)	1605094	18.8752	364.9
187 Total Benzofluoranthenes	252	20.975	20.948	(0.977)	2858186	41.3710	799.7
76 Benzo(a)pyrene	252	21.392	21.353	(0.996)	1163765	18.0025	348.0
* 77 Perylene-d12	264	21.475	21.435	(1.000)	1170751	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	22.896	22.851	(1.066)	864413	12.4529	240.7
79 Dibenzo(a,h)anthracene	278	22.920	22.875	(1.067)	690590	12.3755	239.2
80 Benzo(g,h,i)perylene	276	23.266	23.227	(1.083)	648391	10.9277	211.2

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt4.i  
 Lab File ID: 08181003.d  
 Lab Smp Id: RG79EMS  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt4.i/20100818.b/SW846100719.m  
 Misc Info: 10-18509

Calibration Date: 18-AUG-2010  
 Calibration Time: 12:26  
 Client Smp ID: PSB11-4-6-07301  
 Level: LOW  
 Sample Type: Soil

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1644357	27.13
42 Acenaphthene-d10	785897	392948	1571794	1020181	29.81
59 Phenanthrene-d10	1313990	656995	2627980	1682426	28.04
69 Chrysene-d12	1155293	577646	2310586	1482177	28.29
77 Perylene-d12	1146289	573144	2292578	1170751	2.13

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.77	9.27	10.27	9.77	-0.08
42 Acenaphthene-d10	12.62	12.12	13.12	12.62	-0.01
59 Phenanthrene-d10	14.99	14.49	15.49	14.99	0.03
69 Chrysene-d12	19.29	18.79	19.79	19.31	0.11
77 Perylene-d12	21.44	20.94	21.94	21.47	0.18

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: FSI Client SDG: RG79  
 Sample Matrix: SOLID Fraction: SV  
 Lab Smp Id: RG79EMS Client Smp ID: PSB11-4-6-07301 MS  
 Level: LOW Operator: JZ  
 Data Type: MS DATA SampleType: MS  
 SpikeList File: pnaslcass.spk Quant Type: ISTD  
 Sublist File: pnas.sub  
 Method File: /chem3/nt4.i/20100818.b/SW846100719.m  
 Misc Info: 10-18509

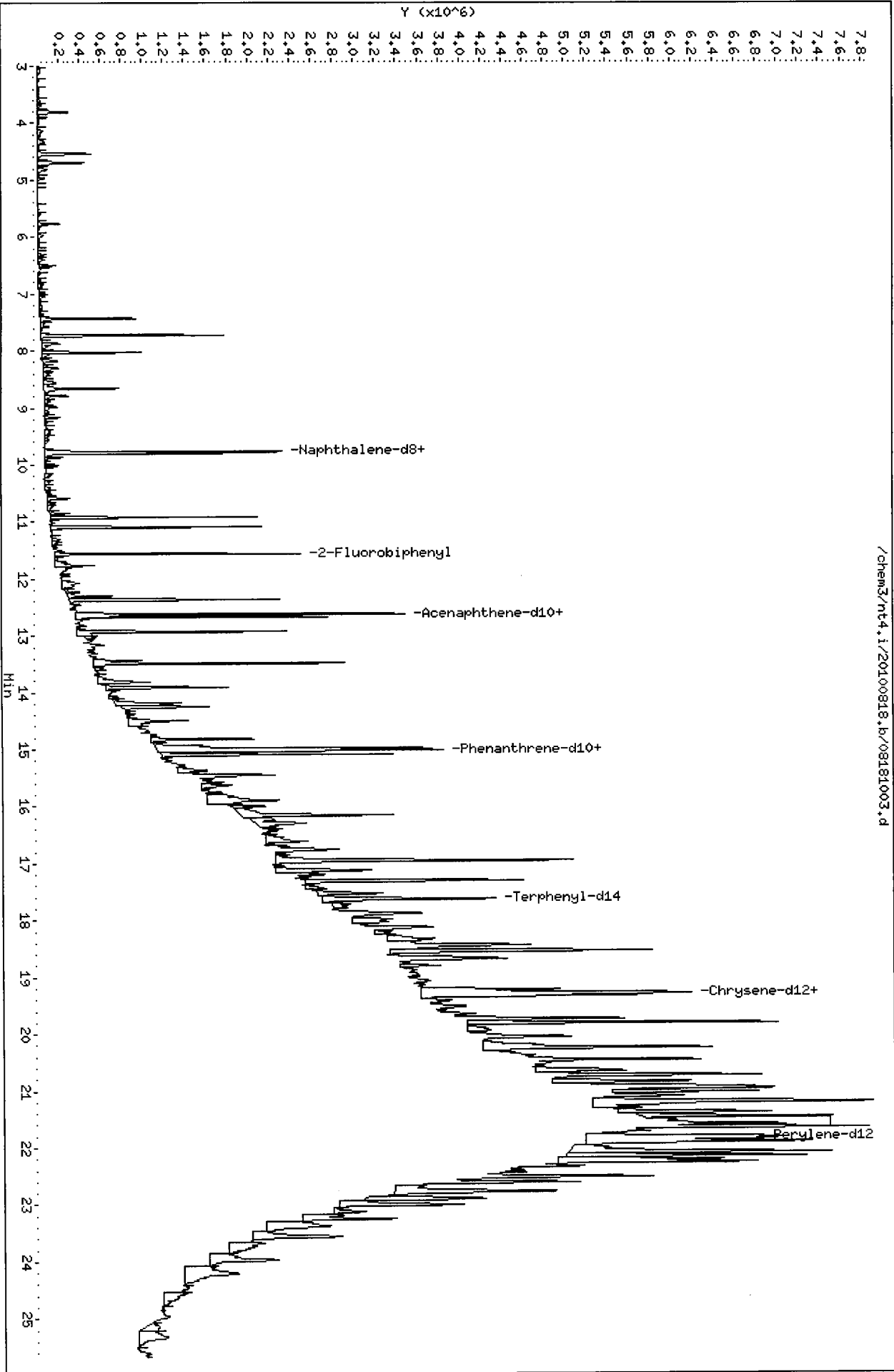
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
28 Naphthalene	483.3	295.1	61.07	37-100
32 2-Methylnaphthalen	483.3	327.1	67.69	43-101
105 1-methylnaphthalen	483.3	329.1	68.10	39-100
40 Acenaphthylene	483.3	340.7	70.51	44-100
44 Acenaphthene	483.3	325.3	67.31	41-100
46 Dibenzofuran	483.3	367.5	76.05	44-100
49 Fluorene	483.3	347.0	71.81	49-100
60 Phenanthrene	483.3	360.4	74.58	48-100
61 Anthracene	483.3	348.2	72.04	50-100
64 Fluoranthene	483.3	386.3	79.94	54-100
65 Pyrene	483.3	407.6	84.34	41-105
68 Benzo(a)anthracene	483.3	361.1	74.72	49-100
71 Chrysene	483.3	364.9	75.50	50-100
187 Total Benzofluoran	966.5	799.7	82.74	30-160
76 Benzo(a)pyrene	483.3	348.0	72.01	50-100
78 Indeno(1,2,3-cd)py	483.3	240.7	49.81	33-101
79 Dibenzo(a,h)anthra	483.3	239.2	49.50	37-104
80 Benzo(g,h,i)peryle	483.3	211.2	43.71	33-107

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	483.3	322.4	66.71	34-100
\$ 66 Terphenyl-d14	483.3	363.6	75.23	35-112

Data File: /chem3/nt4.i/20100818.b/08181003.d  
Date: 18-AUG-2010 13:33  
Client ID: PSB14-4-6-07301 MS  
Sample Info: RG79EHS  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

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

/chem3/nt4.i/20100818.b/08181003.d



Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100818.b/08181004.d  
 Lab Smp Id: RG79EMSD Client Smp ID: PSB11-4-6-07301 MSD  
 Inj Date : 18-AUG-2010 14:39  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG79EMSD  
 Misc Info : 10-18509  
 Comment : lul Injection  
 Method : /chem3/nt4.i/20100818.b/SW846100719.m  
 Meth Date : 18-Aug-2010 15:53 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 4 QC Sample: MSD  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

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	28.80000	Weight of sample extracted (g)
M	8.60000	% Moisture

Cpd 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	9.771	9.775	(1.000)	1633426	20.0000	
28 Naphthalene	128	9.801	9.804	(1.003)	1142485	14.7409	280.0
32 2-Methylnaphthalene	142	10.923	10.926	(1.118)	854681	16.2267	308.2
105 1-methylnaphthalene	142	11.093	11.091	(1.135)	833991	16.1636	307.0
\$ 36 2-Fluorobiphenyl	172	11.569	11.572	(0.917)	1002176	16.0454	304.8
40 Acenaphthylene	152	12.368	12.371	(0.980)	1400847	16.7466	318.1
* 42 Acenaphthene-d10	164	12.620	12.624	(1.000)	1019641	20.0000	
44 Acenaphthene	153	12.673	12.677	(1.004)	870625	15.9860	303.6
46 Dibenzofuran	168	12.932	12.935	(1.025)	1311155	18.0609	343.1
49 Fluorene	166	13.490	13.493	(1.069)	1111731	17.6994	336.2
* 59 Phenanthrene-d10	188	14.988	14.985	(1.000)	1774095	20.0000	
60 Phenanthrene	178	15.029	15.026	(1.003)	1582593	17.2200	327.1
61 Anthracene	178	15.099	15.097	(1.007)	1593315	16.9472	321.9
64 Fluoranthene	202	16.962	16.947	(1.132)	1743309	18.3079	347.8
65 Pyrene	202	17.314	17.300	(0.897)	1911178	19.2837	366.3

Compounds	QUANT SIG		CONCENTRATIONS					
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
=====	====	==	=====	=====	=====	=====	=====	
\$ 66 Terphenyl-d14	244	17.643	17.623	(0.914)	1100219	18.1789	345.3	
68 Benzo(a)anthracene	228	19.282	19.256	(0.998)	1607986	17.5505	333.4	
* 69 Chrysene-d12	240	19.311	19.285	(1.000)	1562988	20.0000		
71 Chrysene	228	19.347	19.326	(1.002)	1569165	17.4987	332.4	
187 Total Benzofluoranthenes	252	20.974	20.948	(0.976)	2735592	40.9643	778.1	
76 Benzo(a)pyrene	252	21.397	21.353	(0.996)	1072413	17.1624	326.0	
* 77 Perylene-d12	264	21.479	21.435	(1.000)	1131662	20.0000		
78 Indeno(1,2,3-cd)pyrene	276	22.895	22.851	(1.066)	763758	11.3829	216.2	
79 Dibenzo(a,h)anthracene	278	22.918	22.875	(1.067)	585064	10.8466	206.0	
80 Benzo(g,h,i)perylene	276	23.265	23.227	(1.083)	559182	9.74972	185.2	

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt4.i  
 Lab File ID: 08181004.d  
 Lab Smp Id: RG79EMSD  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt4.i/20100818.b/SW846100719.m  
 Misc Info: 10-18509

Calibration Date: 18-AUG-2010  
 Calibration Time: 12:26  
 Client Smp ID: PSB11-4-6-07301  
 Level: LOW  
 Sample Type: Soil

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1633426	26.29
42 Acenaphthene-d10	785897	392948	1571794	1019641	29.74
59 Phenanthrene-d10	1313990	656995	2627980	1774095	35.02
69 Chrysene-d12	1155293	577646	2310586	1562988	35.29
77 Perylene-d12	1146289	573144	2292578	1131662	-1.28

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.77	9.27	10.27	9.77	-0.03
42 Acenaphthene-d10	12.62	12.12	13.12	12.62	-0.03
59 Phenanthrene-d10	14.99	14.49	15.49	14.99	0.02
69 Chrysene-d12	19.29	18.79	19.79	19.31	0.14
77 Perylene-d12	21.44	20.94	21.94	21.48	0.20

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.

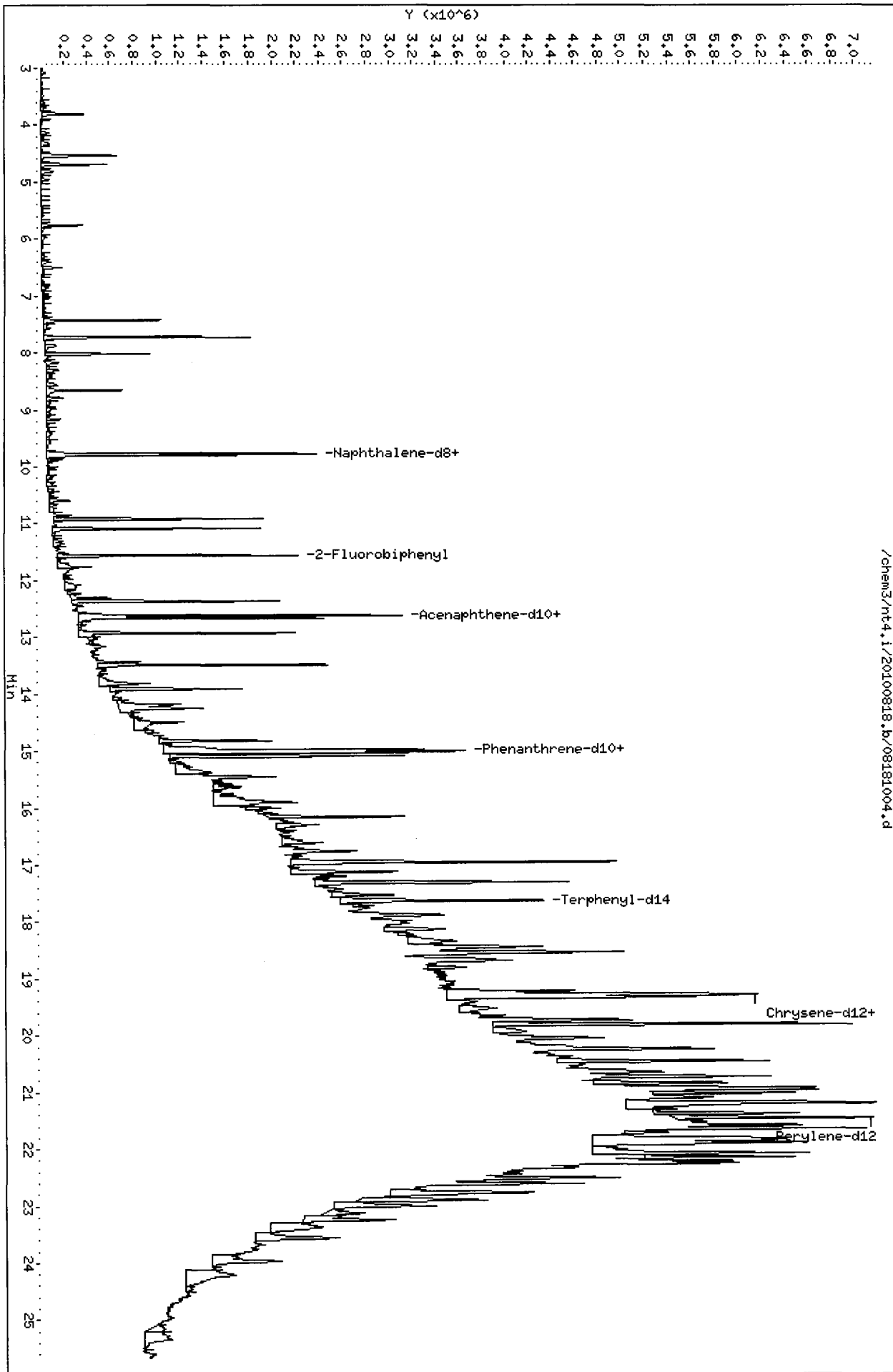
RECOVERY REPORT

Client Name: FSI Client SDG: RG79  
 Sample Matrix: SOLID Fraction: SV  
 Lab Smp Id: RG79EMSD Client Smp ID: PSB11-4-6-07301 MSD  
 Level: LOW Operator: JZ  
 Data Type: MS DATA SampleType: MSD  
 SpikeList File: pnaslcss.spk Quant Type: ISTD  
 Sublist File: pnas.sub  
 Method File: /chem3/nt4.i/20100818.b/SW846100719.m  
 Misc Info: 10-18509

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
28 Naphthalene	474.9	280.0	58.96	37-100
32 2-Methylnaphthalen	474.9	308.2	64.91	43-101
105 1-methylnaphthalen	474.9	307.0	64.65	39-100
40 Acenaphthylene	474.9	318.1	66.99	44-100
44 Acenaphthene	474.9	303.6	63.94	41-100
46 Dibenzofuran	474.9	343.1	72.24	44-100
49 Fluorene	474.9	336.2	70.80	49-100
60 Phenanthrene	474.9	327.1	68.88	48-100
61 Anthracene	474.9	321.9	67.79	50-100
64 Fluoranthene	474.9	347.8	73.23	54-100
65 Pyrene	474.9	366.3	77.13	41-105
68 Benzo(a)anthracene	474.9	333.4	70.20	49-100
71 Chrysene	474.9	332.4	69.99	50-100
187 Total Benzofluoran	949.7	778.1	81.93	30-160
76 Benzo(a)pyrene	474.9	326.0	68.65	50-100
78 Indeno(1,2,3-cd)py	474.9	216.2	45.53	33-101
79 Dibenzo(a,h)anthra	474.9	206.0	43.39	37-104
80 Benzo(g,h,i)peryle	474.9	185.2	39.00	33-107

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	474.9	304.8	64.18	34-100
\$ 66 Terphenyl-d14	474.9	345.3	72.72	35-112

/chem3/nt4.i/20100818.b/08181004.d



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100818.b/08181005.d  
 Lab Smp Id: RG79G Client Smp ID: PSB11-11-13-073010  
 Inj Date : 18-AUG-2010 15:46  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG79G,3,  
 Misc Info : 10-18511  
 Comment : lul Injection  
 Method : /chem3/nt4.i/20100818.b/SW846100719.m  
 Meth Date : 18-Aug-2010 19:15 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 5  
 Dil Factor: 3.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*AB 08/18/10*

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	29.40000	Weight of sample extracted (g)
M	11.60000	% 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	9.772	9.775	(1.000)	1463129	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	11.563	11.572	(0.916)	344331	6.35175	366.6	
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	12.621	12.624	(1.000)	884984	20.0000		
44 Acenaphthene	153	Compound Not Detected.						
46 Dibenzofuran	168	Compound Not Detected.						
49 Fluorene	166	Compound Not Detected.						
* 59 Phenanthrene-d10	188	14.988	14.985	(1.000)	1512318	20.0000		
60 Phenanthrene	178	15.017	15.026	(1.002)	47901	0.61142	35.29	
61 Anthracene	178	Compound Not Detected.						
64 Fluoranthene	202	16.956	16.947	(1.131)	55158	0.67952	39.22	
65 Pyrene	202	17.308	17.300	(0.897)	121763	1.41640	81.75	



Compounds	QUANT SIG		CONCENTRATIONS					
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
=====	=====	==	=====	=====	=====	=====	=====	
\$ 66 Terphenyl-d14	244	17.637	17.623	(0.914)	357433	6.80873	393.0	
68 Benzo(a)anthracene	228	Compound Not Detected.						
* 69 Chrysene-d12	240	19.300	19.285	(1.000)	1355731	20.0000		
71 Chrysene	228	19.335	19.326	(1.002)	63031	0.81035	46.77	
187 Total Benzofluoranthenes	252	20.939	20.948	(0.975)	62154	1.30435	75.28	
76 Benzo(a)pyrene	252	21.385	21.353	(0.996)	32011	0.71794	41.44	
* 77 Perylene-d12	264	21.468	21.435	(1.000)	807503	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	23.248	23.227	(1.083)	24525	0.59927	34.59	

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt4.i	Calibration Date: 18-AUG-2010
Lab File ID: 08181005.d	Calibration Time: 12:26
Lab Smp Id: RG79G	Client Smp ID: PSB11-11-13-0730
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Soil
Operator: JZ	
Method File: /chem3/nt4.i/20100818.b/SW846100719.m	
Misc Info: 10-18511	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1463129	13.12
42 Acenaphthene-d10	785897	392948	1571794	884984	12.61
59 Phenanthrene-d10	1313990	656995	2627980	1512318	15.09
69 Chrysene-d12	1155293	577646	2310586	1355731	17.35
77 Perylene-d12	1146289	573144	2292578	807503	-29.56

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.77	9.27	10.27	9.77	-0.03
42 Acenaphthene-d10	12.62	12.12	13.12	12.62	-0.02
59 Phenanthrene-d10	14.99	14.49	15.49	14.99	0.02
69 Chrysene-d12	19.29	18.79	19.79	19.30	0.08
77 Perylene-d12	21.44	20.94	21.94	21.47	0.15

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: RG79
Sample Matrix: SOLID	Fraction: SV
Lab Smp Id: RG79G	Client Smp ID: PSB11-11-13-073010
Level: LOW	Operator: JZ
Data Type: MS DATA	SampleType: SAMPLE
SpikeList File: pnaslcss.spk	Quant Type: ISTD
Sublist File: pnas.sub	
Method File: /chem3/nt4.i/20100818.b/SW846100719.m	
Misc Info: 10-18511	

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	481.0	366.6	76.22	34-100
\$ 66 Terphenyl-d14	481.0	393.0	81.70	35-112

Data File: /chem3/nt4.i/20100818.b/08181005.d  
Date : 18-AUG-2010 15:46

Client ID: PSB11-11-13-073010

Sample Info: RG795.3,

Volume Injected (uL): 1.0

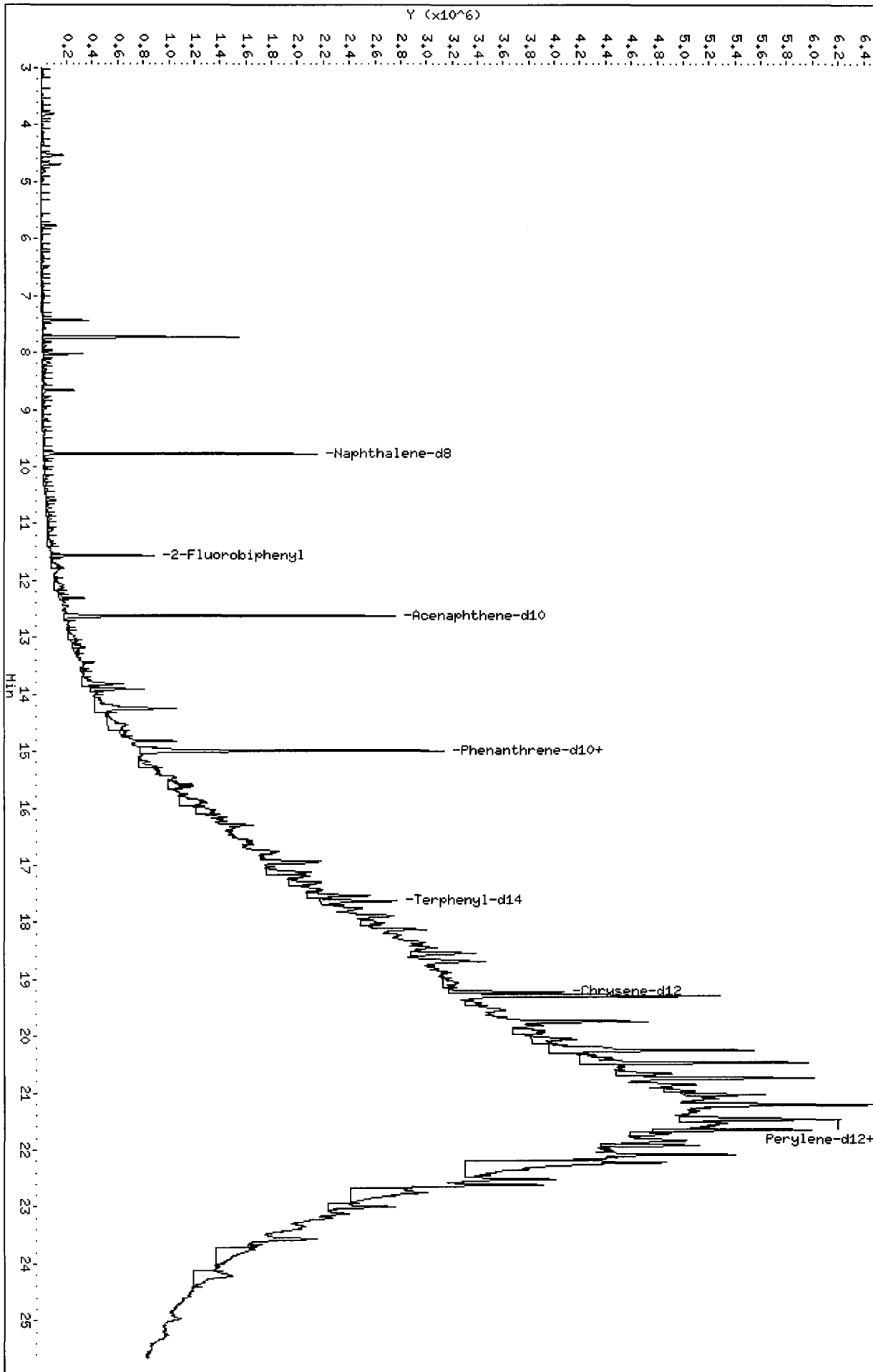
Column phase: ZB-5ms1

Instrument: nt4.i

Operator: JZ

Column diameter: 0.32

/chem3/nt4.i/20100818.b/08181005.d



Date: 18-AUG-2010 15:46

Client ID: PSB11-11-13-073010

Instrument: nt4.i

Sample Info: RG79G,3,

Volume Injected (uL): 1.0

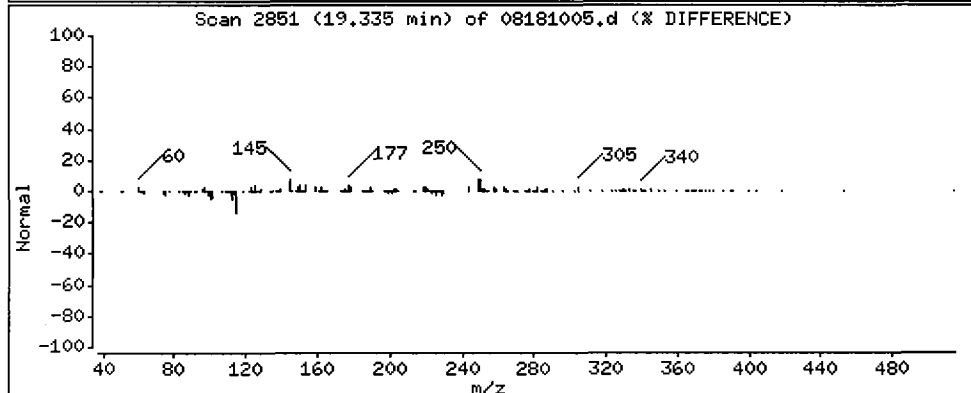
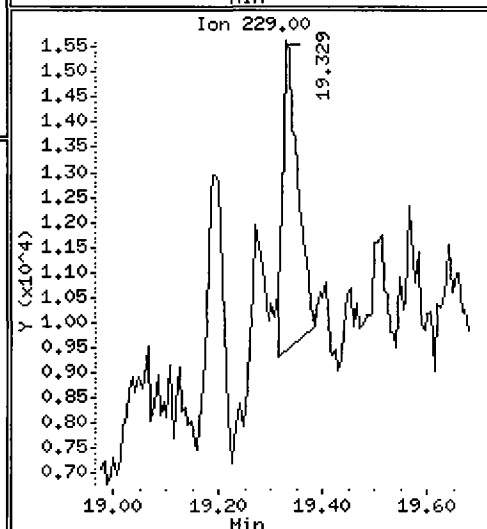
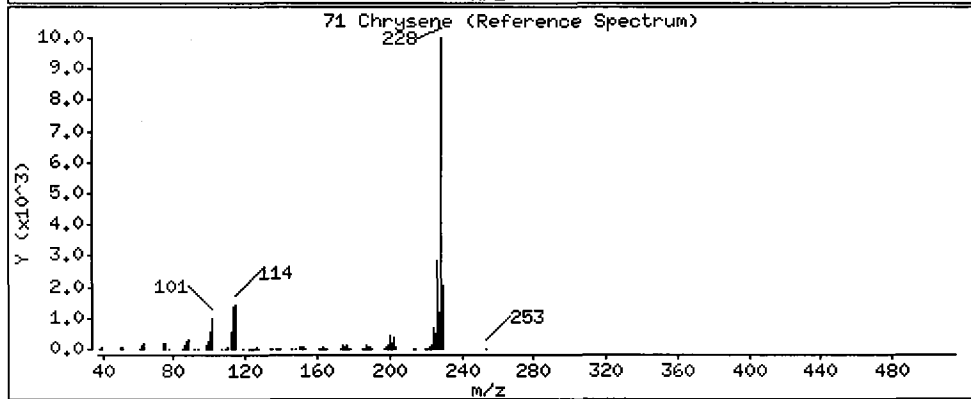
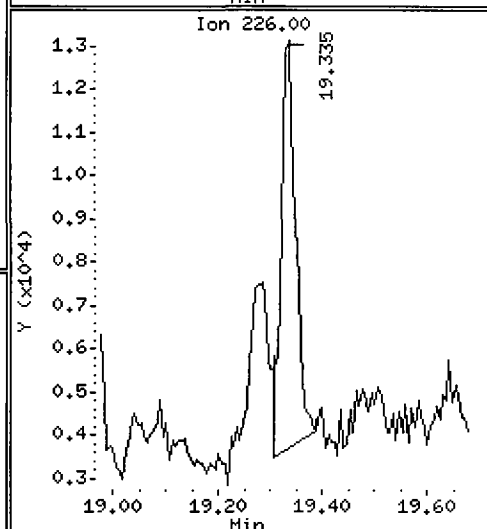
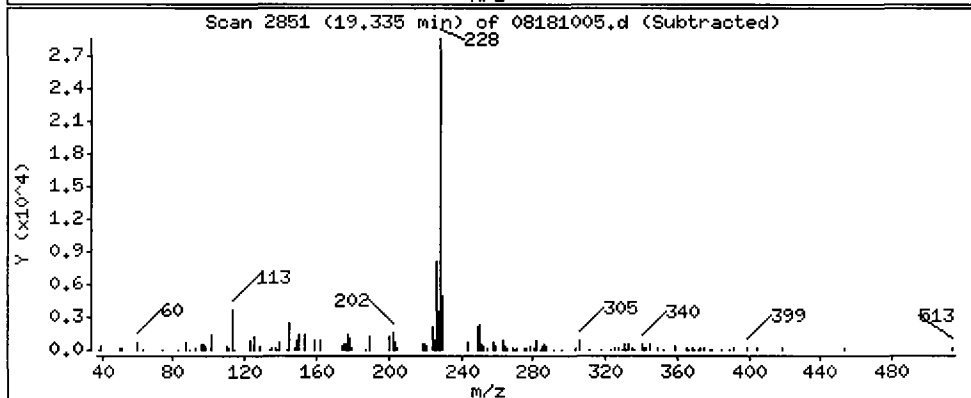
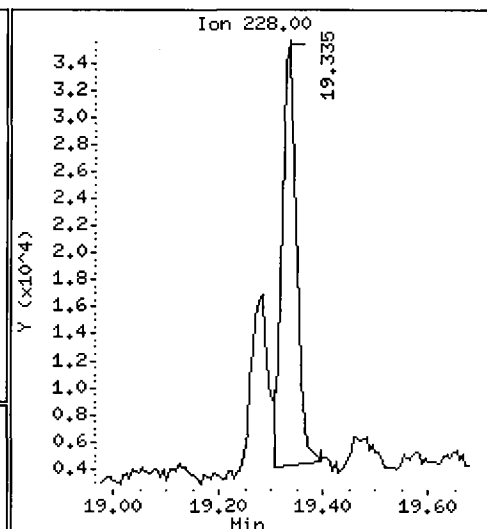
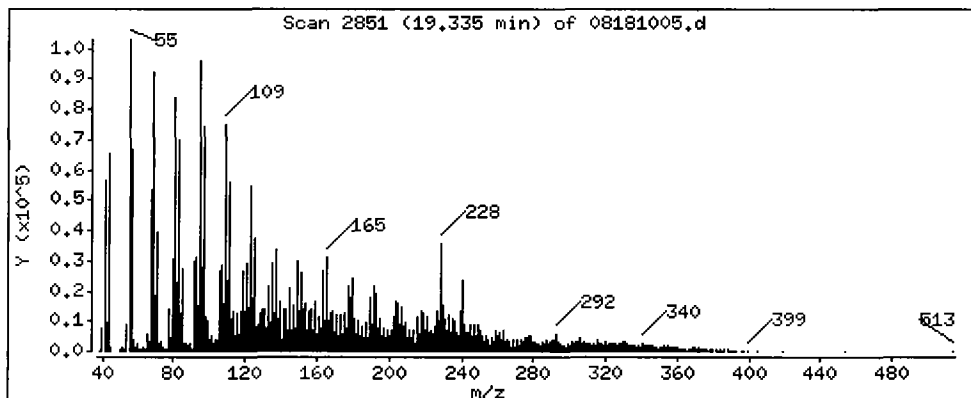
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

71 Chrysene

Concentration: 46.77 ug/kg



Date : 18-AUG-2010 15:46

Client ID: PSB11-11-13-073010

Instrument: nt4.i

Sample Info: RG79G,3,

Volume Injected (uL): 1.0

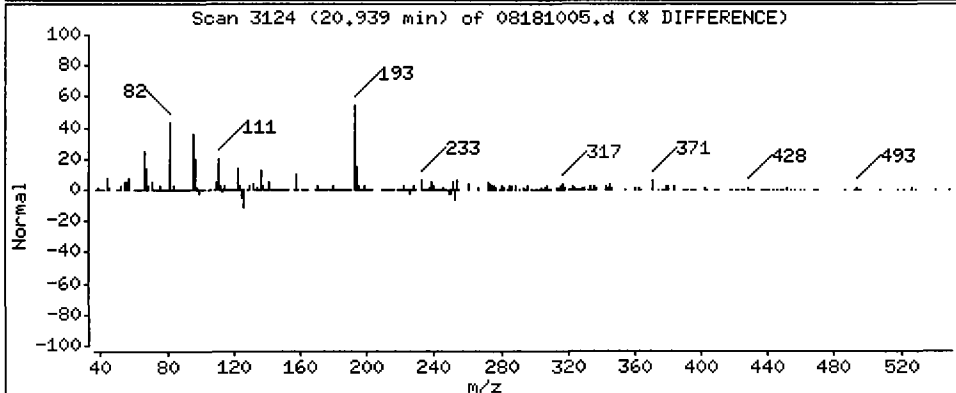
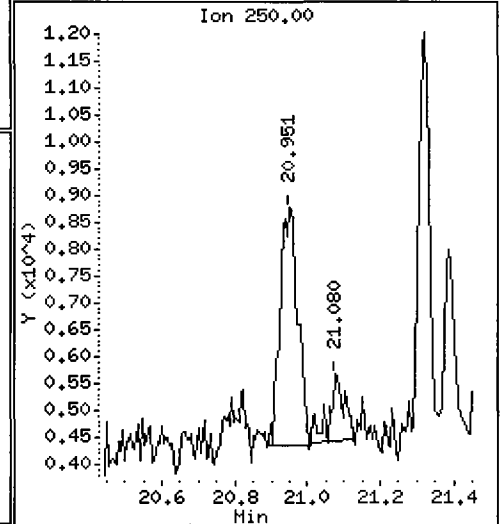
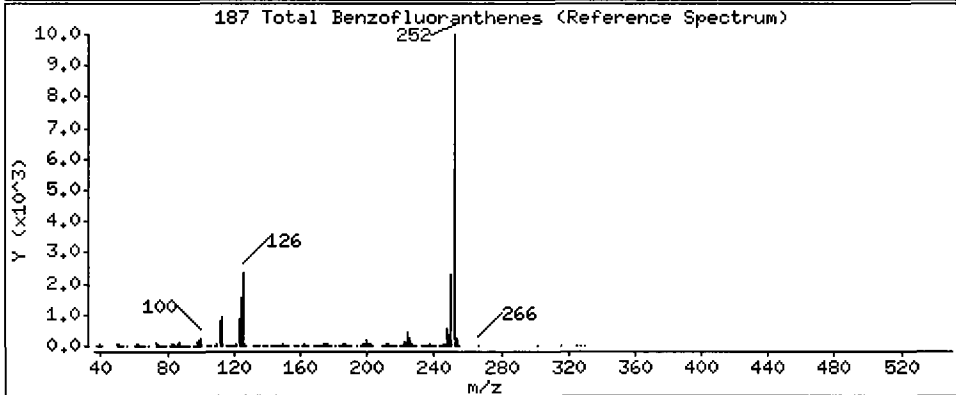
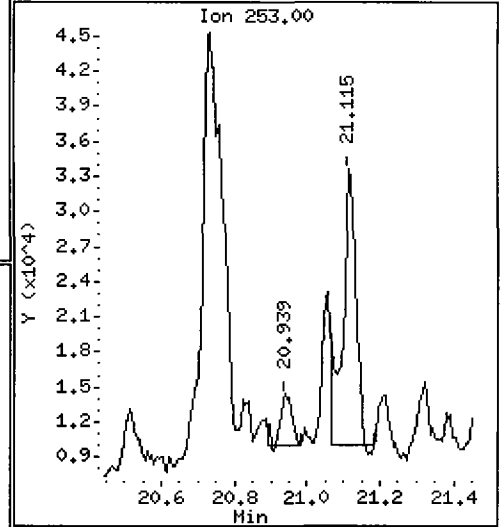
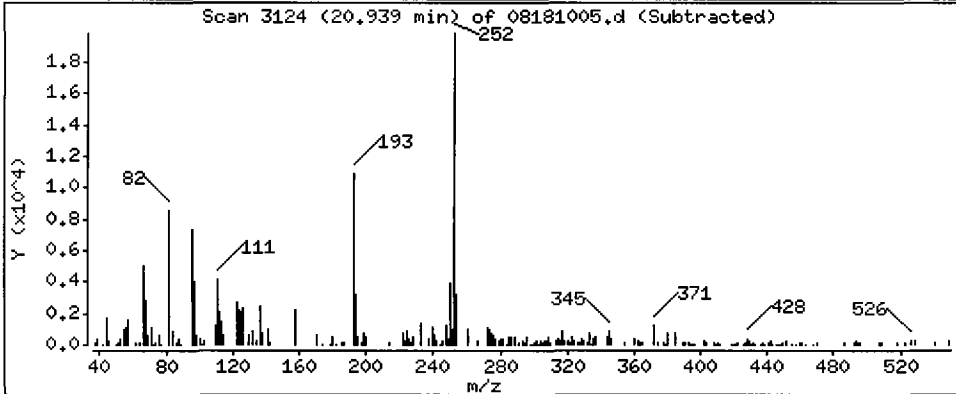
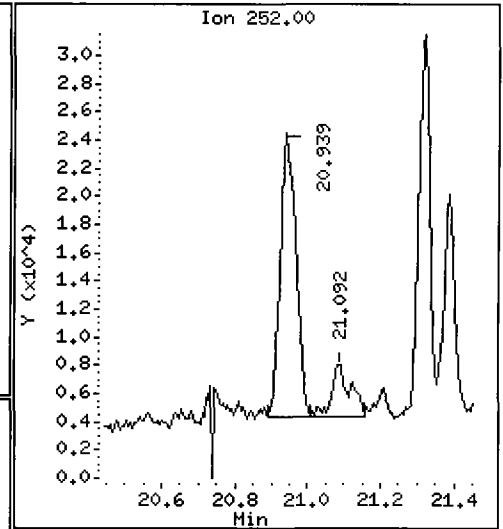
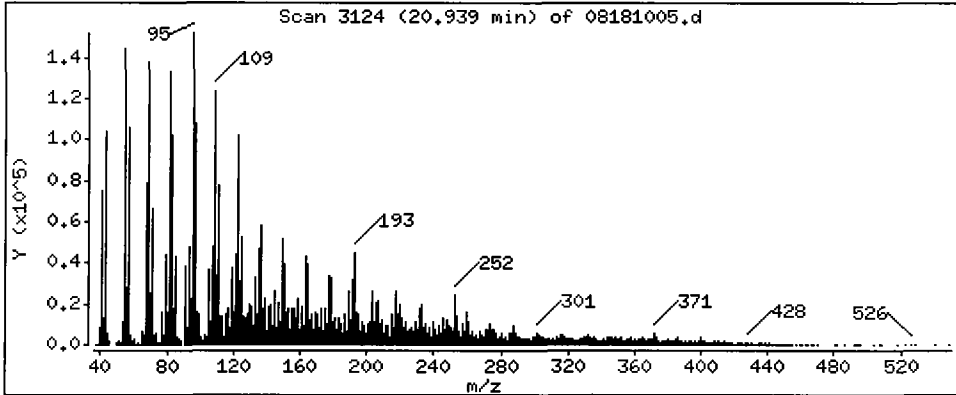
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

187 Total Benzofluoranthenes

Concentration: 75.28 ug/kg



Date : 18-AUG-2010 15:46

Client ID: PSB11-11-13-073010

Instrument: nt4.i

Sample Info: RG79G,3,

Volume Injected (uL): 1.0

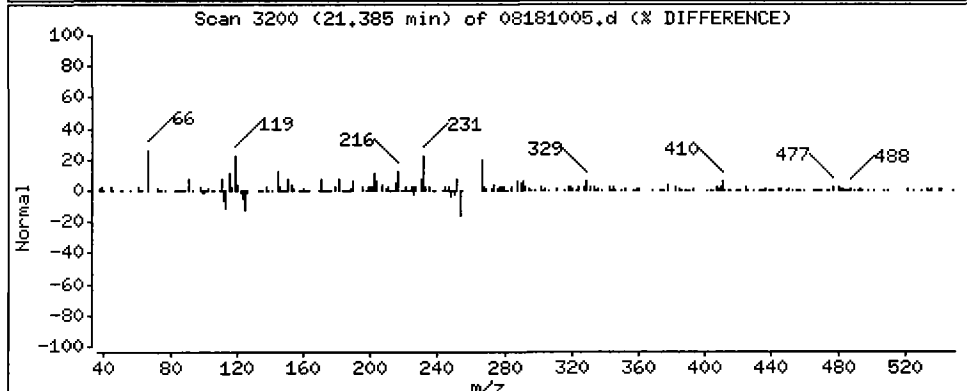
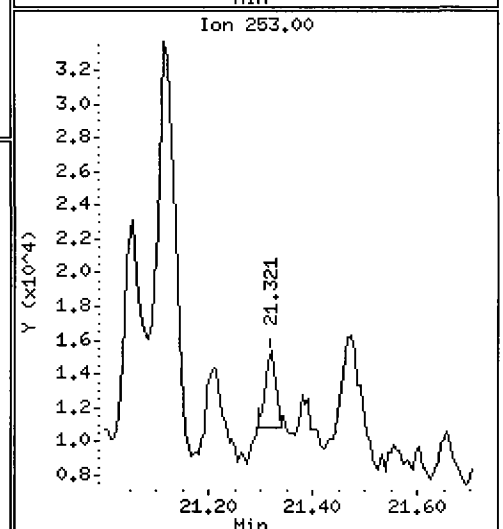
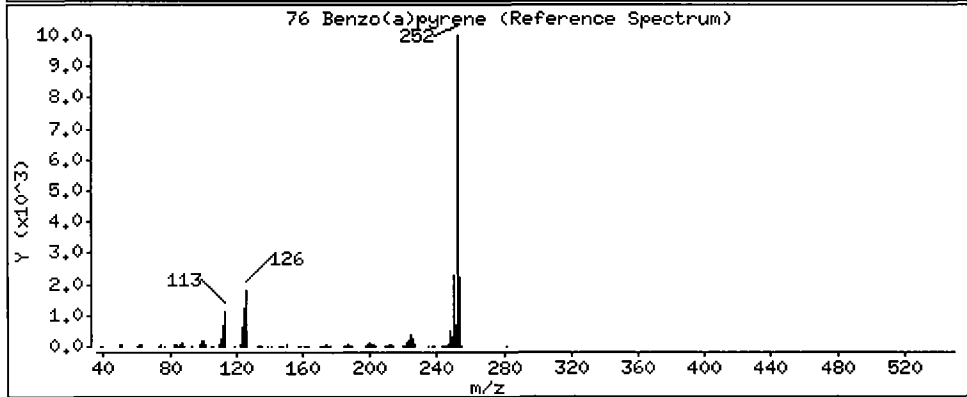
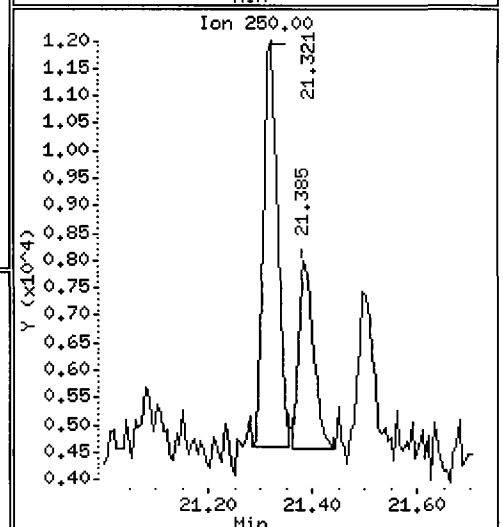
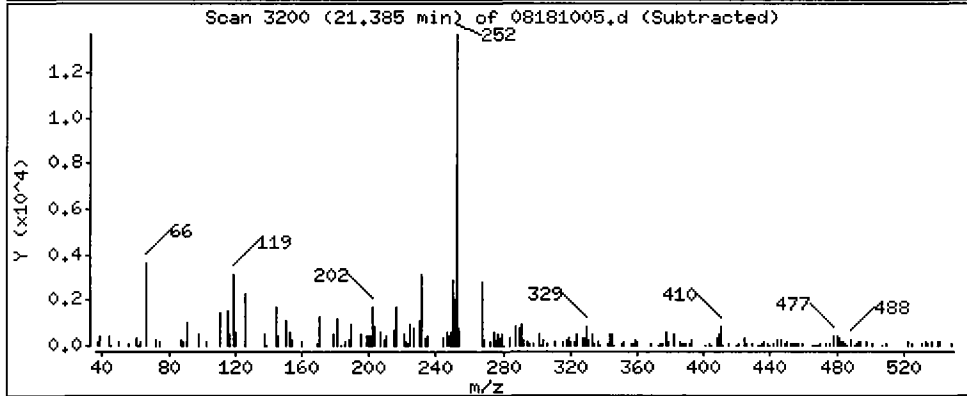
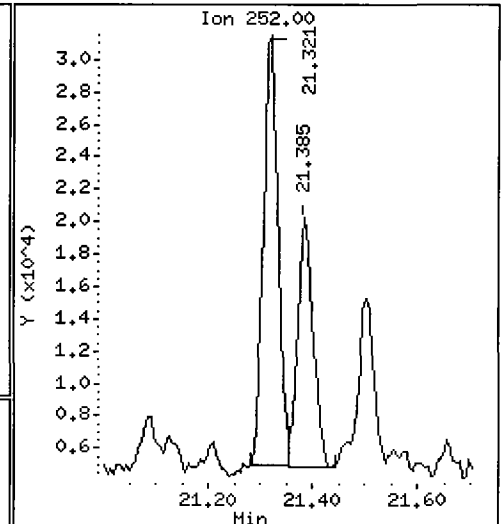
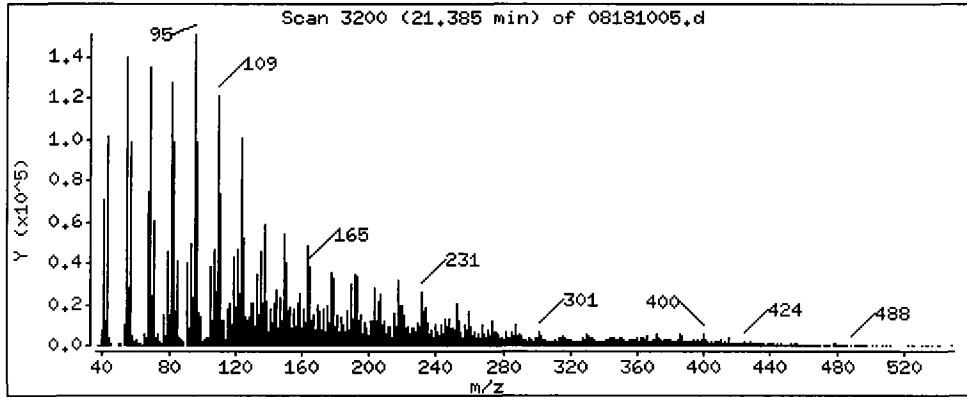
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

76 Benzo(a)pyrene

Concentration: 41.44 ug/kg



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100818.b/08181006.d  
 Lab Smp Id: RG79H Client Smp ID: PSB11-14-16-073010  
 Inj Date : 18-AUG-2010 16:59  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG79H  
 Misc Info : 10-18512  
 Comment : lul Injection  
 Method : /chem3/nt4.i/20100818.b/SW846100719.m  
 Meth Date : 18-Aug-2010 19:15 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 6  
 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	30.40000	Weight of sample extracted (g)
M	16.50000	% 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	9.773	9.775	(1.000)	1432018	20.0000	
28 Naphthalene	128	9.802	9.804	(1.003)	185971	2.73697	53.91
32 2-Methylnaphthalene	142	10.924	10.926	(1.118)	84890	1.83838	36.21
105 1-methylnaphthalene	142	11.089	11.091	(1.135)	63845	1.41143	27.80
\$ 36 2-Fluorobiphenyl	172	11.570	11.572	(0.917)	908702	17.1682	338.2
40 Acenaphthylene	152	Compound Not Detected.					
* 42 Acenaphthene-d10	164	12.622	12.624	(1.000)	864072	20.0000	
44 Acenaphthene	153	12.669	12.677	(1.004)	51603	1.11812	22.02
46 Dibenzofuran	168	12.933	12.935	(1.025)	78972	1.28368	25.29
49 Fluorene	166	13.491	13.493	(1.069)	141580	2.65987	52.39
* 59 Phenanthrene-d10	188	14.995	14.985	(1.000)	1474359	20.0000	
60 Phenanthrene	178	15.030	15.026	(1.002)	477769	6.25541	123.2
61 Anthracene	178	15.101	15.097	(1.007)	231096	2.95776	58.26
64 Fluoranthene	202	16.975	16.947	(1.132)	624560	7.89244	155.5
65 Pyrene	202	17.327	17.300	(0.897)	679396	9.27851	182.8



Compounds	QUANT SIG				RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT		ON-COLUMN (ug/mL)	FINAL (ug/kg)
\$ 66 Terphenyl-d14	244	17.662	17.623	(0.914)	917463	20.5184	404.2
68 Benzo(a)anthracene	228	19.295	19.256	(0.998)	133314	1.96947	38.79
* 69 Chrysene-d12	240	19.325	19.285	(1.000)	1154755	20.0000	
71 Chrysene	228	19.360	19.326	(1.002)	219921	3.31948	65.39
187 Total Benzofluoranthenes	252	<del>20.981</del> 21.122	20.948	(0.983)	<del>16733</del>	<del>0.45544</del> 3.734	<del>8.971</del> (a) 73.55
76 Benzo(a)pyrene	252	21.410	21.353	(0.996)	61041	1.77558	34.97
* 77 Perylene-d12	264	21.492	21.435	(1.000)	622609	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	23.272	23.227	(1.083)	22140	0.70165	13.82

VIS  
8.21,

QC Flag Legend

a - Target compound detected but, quantitated amount  
 Below Limit Of Quantitation(BLOQ).

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt4.i	Calibration Date: 18-AUG-2010
Lab File ID: 08181006.d	Calibration Time: 12:26
Lab Smp Id: RG79H	Client Smp ID: PSB11-14-16-0730
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Soil
Operator: JZ	
Method File: /chem3/nt4.i/20100818.b/SW846100719.m	
Misc Info: 10-18512	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1432018	10.72
42 Acenaphthene-d10	785897	392948	1571794	864072	9.95
59 Phenanthrene-d10	1313990	656995	2627980	1474359	12.20
69 Chrysene-d12	1155293	577646	2310586	1154755	-0.05
77 Perylene-d12	1146289	573144	2292578	622609	-45.68

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.77	9.27	10.27	9.77	-0.02
42 Acenaphthene-d10	12.62	12.12	13.12	12.62	-0.01
59 Phenanthrene-d10	14.99	14.49	15.49	15.00	0.07
69 Chrysene-d12	19.29	18.79	19.79	19.32	0.20
77 Perylene-d12	21.44	20.94	21.94	21.49	0.27

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

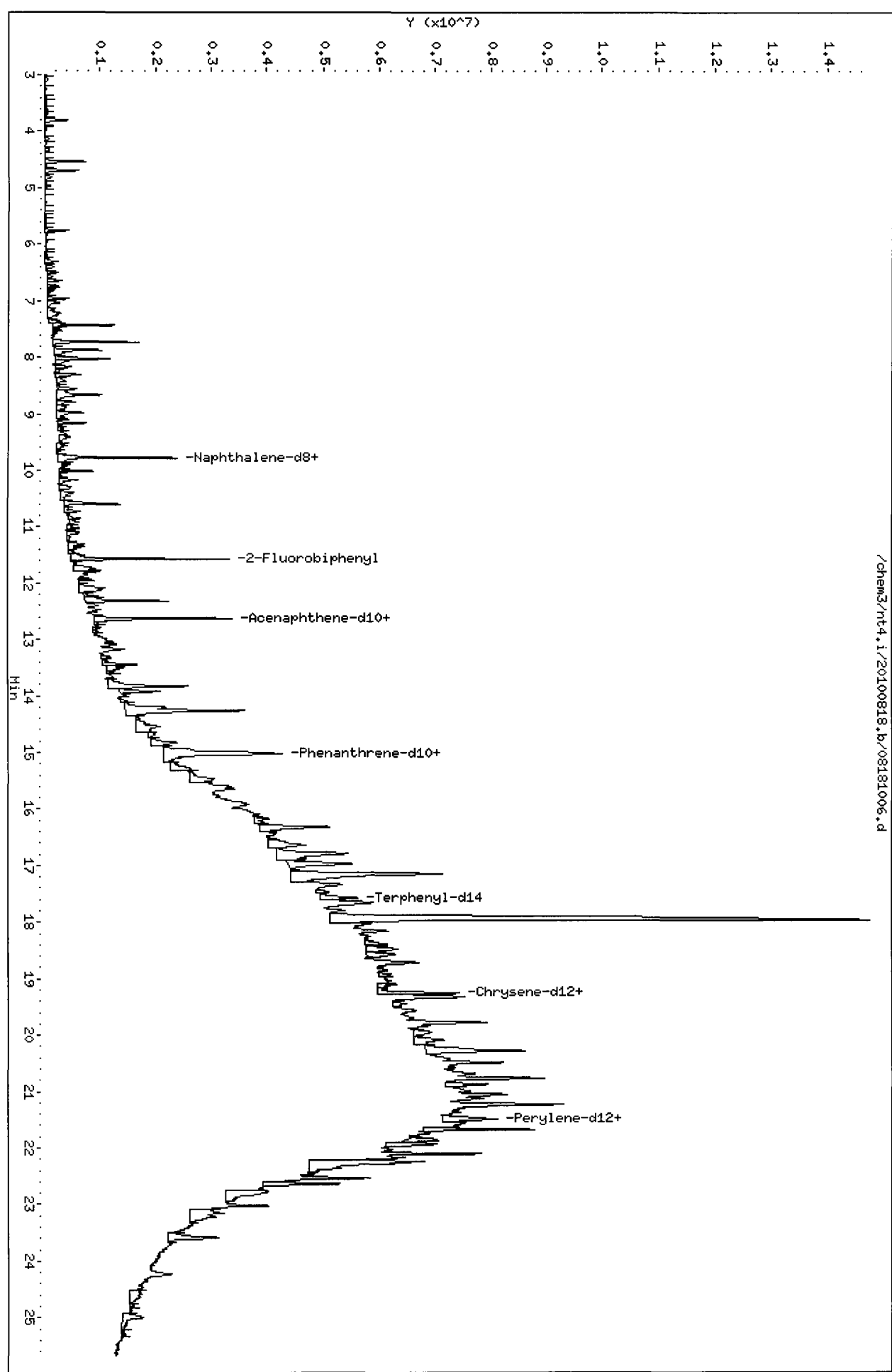
Client Name: Floyd/Snider                      Client SDG: RG79  
Sample Matrix: SOLID                            Fraction: SV  
Lab Smp Id: RG79H                              Client Smp ID: PSB11-14-16-073010  
Level: LOW                                        Operator: JZ  
Data Type: MS DATA                            SampleType: SAMPLE  
SpikeList File: pnaslcass.spk                Quant Type: ISTD  
Sublist File: pnas.sub  
Method File: /chem3/nt4.i/20100818.b/SW846100719.m  
Misc Info: 10-18512

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	492.4	338.2	68.67	34-100
\$ 66 Terphenyl-d14	492.4	404.2	82.07	35-112

Data File: /chem3/nt4.i/20100818.b/08181006.d  
Date : 18-AUG-2010 16:59  
Client ID: PSB11-14-16-073010  
Sample Info: RG79H  
Volume Injected (uL): 1.0  
Column phase: ZB-5ms1

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

/chem3/nt4.i/20100818.b/08181006.d



Date : 18-AUG-2010 16:59

Client ID: PSB11-14-16-073010

Instrument: nt4.i

Sample Info: RG79H

Volume Injected (uL): 1.0

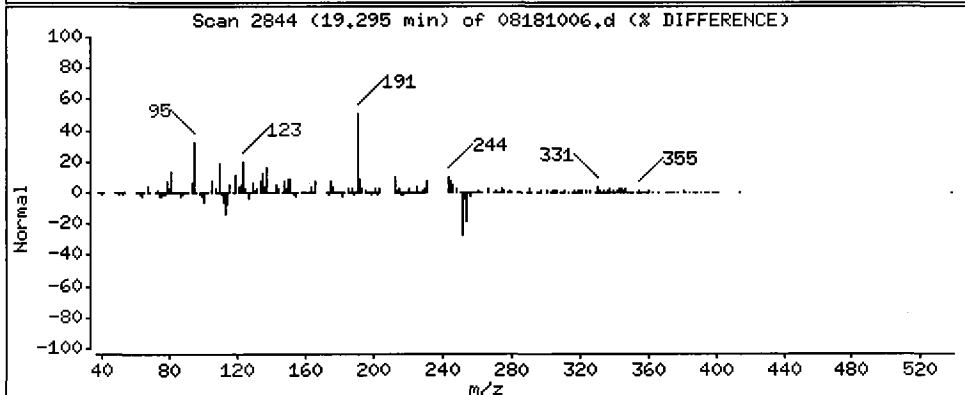
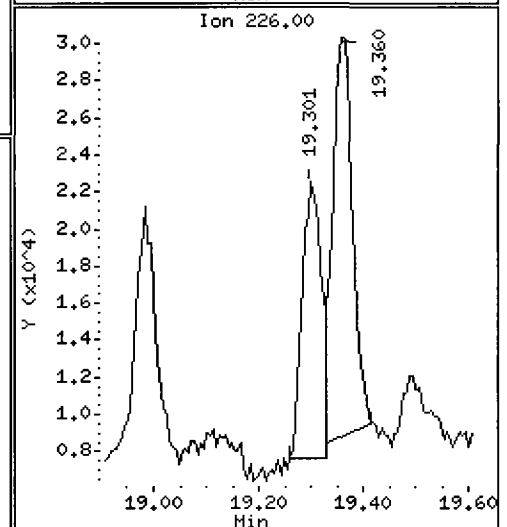
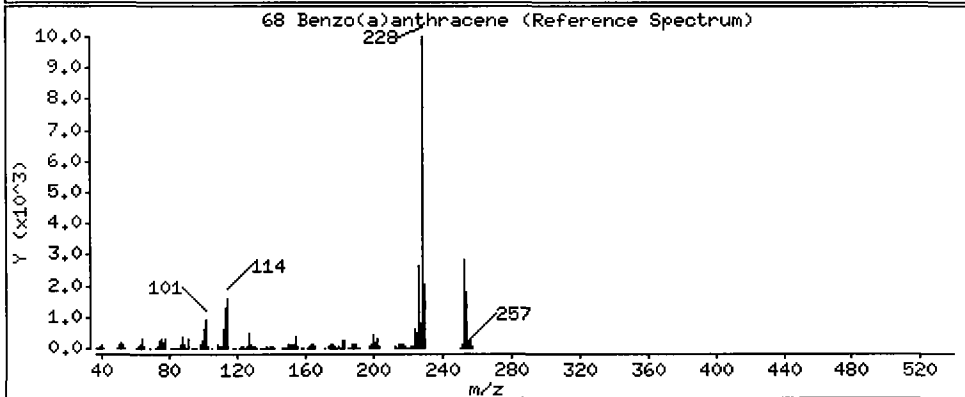
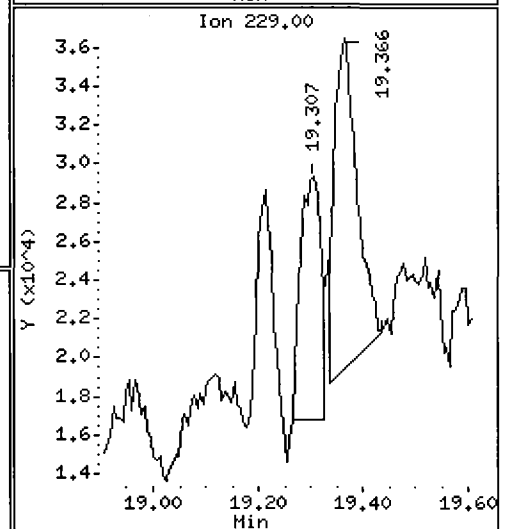
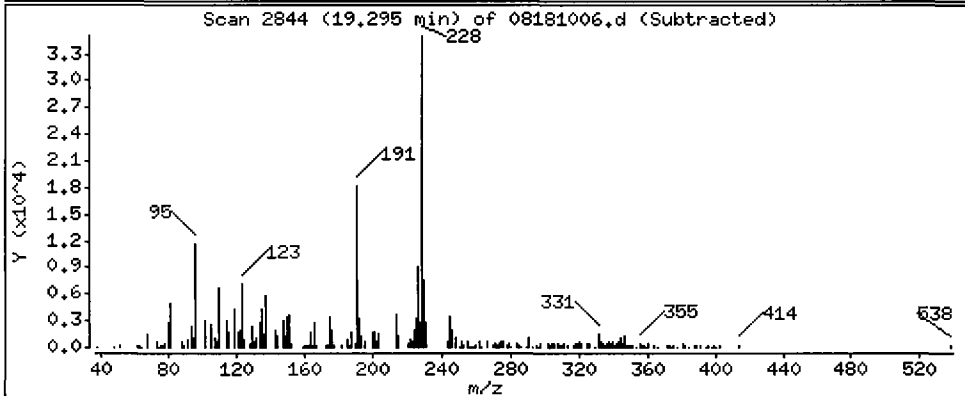
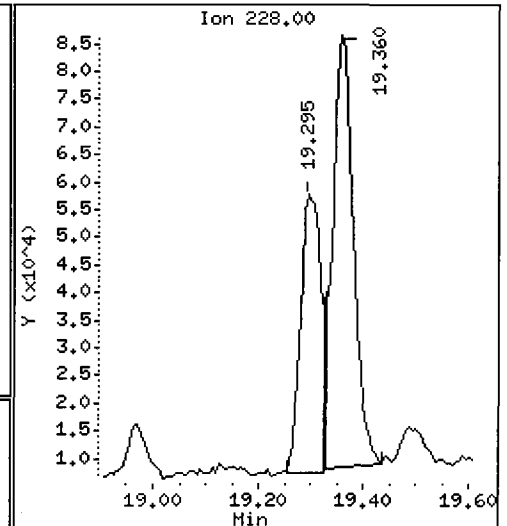
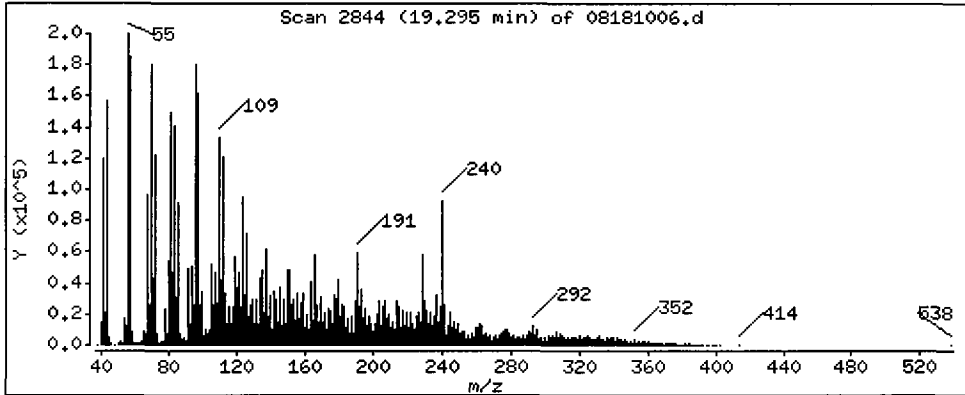
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

68 Benzo(a)anthracene

Concentration: 38.79 ug/kg



Date : 18-AUG-2010 16:59

Client ID: PSB11-14-16-073010

Instrument: nt4.i

Sample Info: RG79H

Volume Injected (uL): 1.0

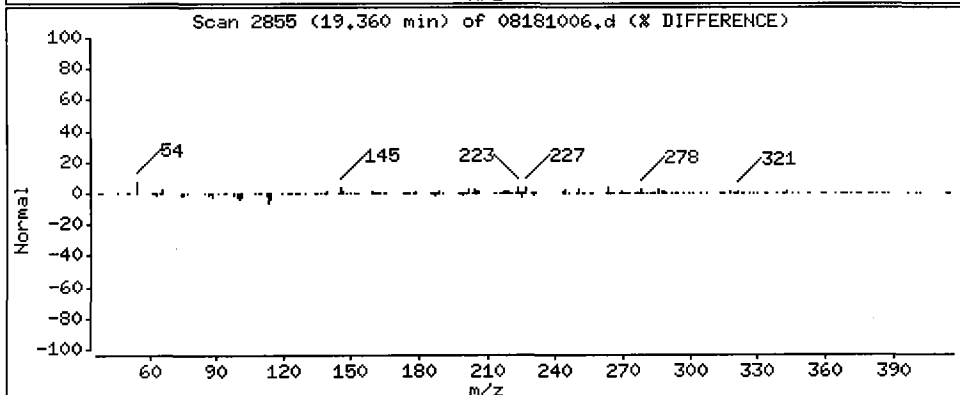
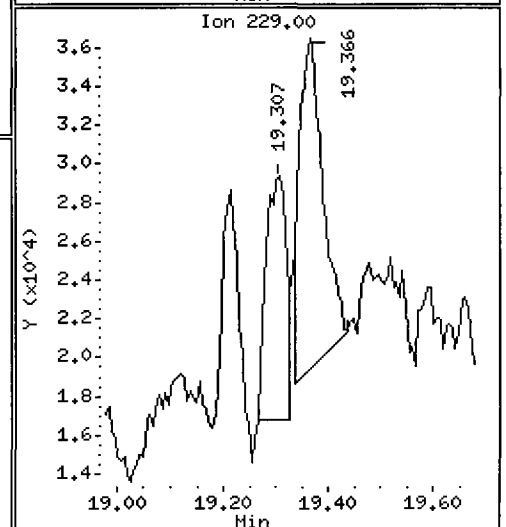
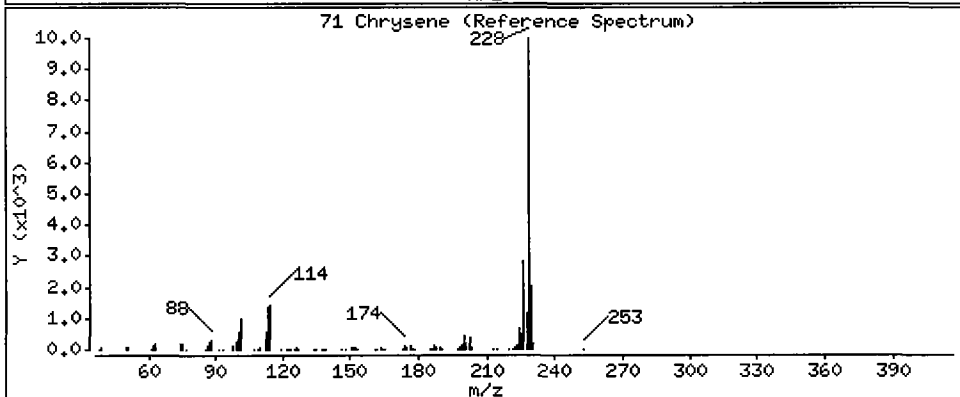
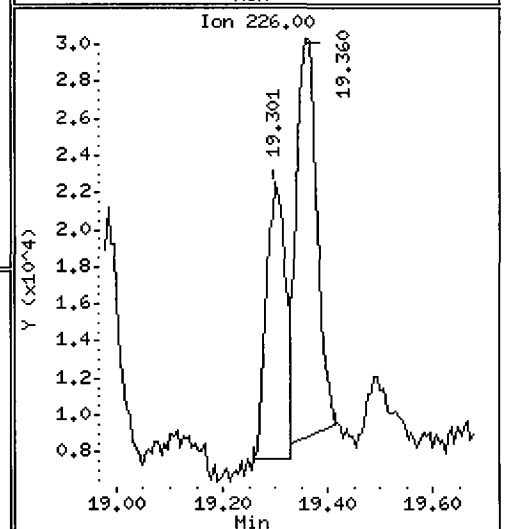
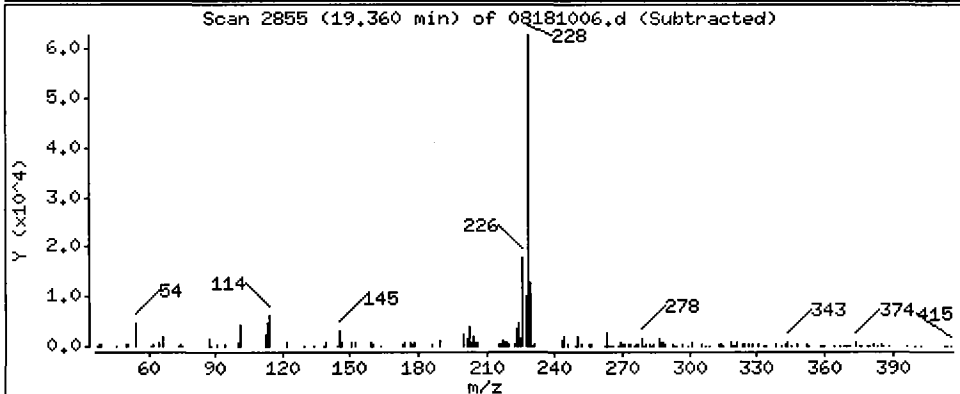
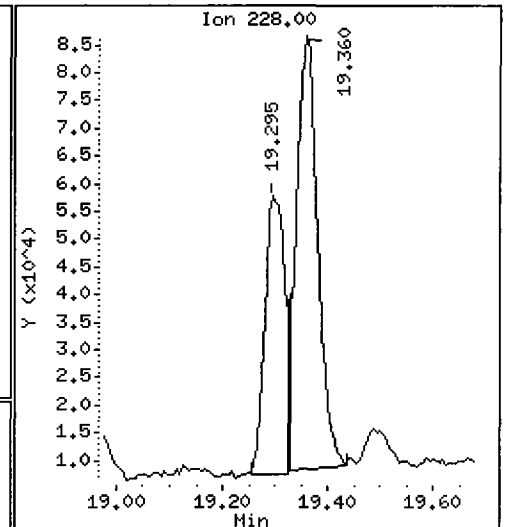
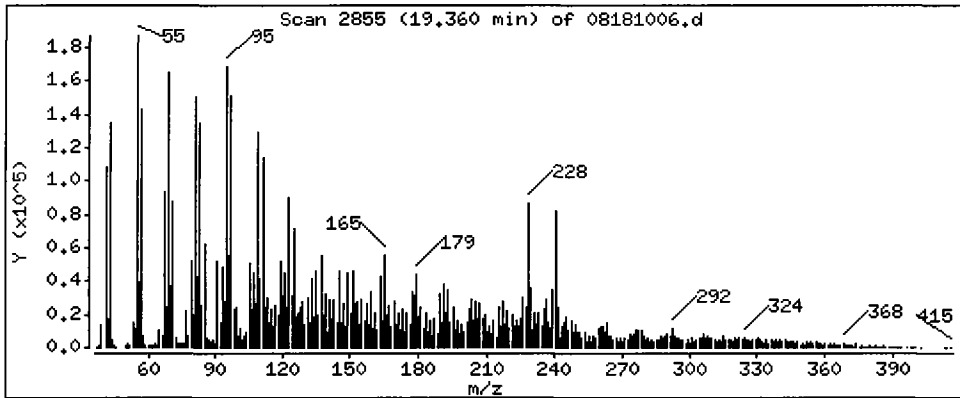
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

71 Chrysene

Concentration: 65.39 ug/kg



Date : 18-AUG-2010 16:59

Client ID: PSB11-14-16-073010

Instrument: nt4.i

Sample Info: RG79H

Volume Injected (uL): 1.0

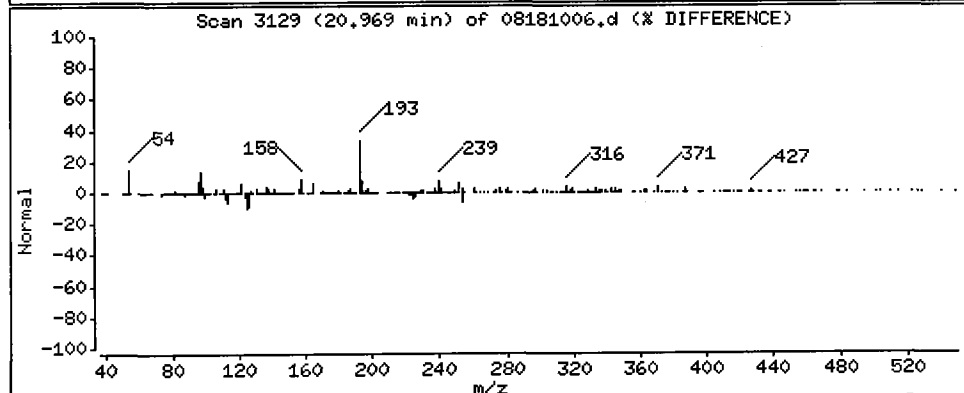
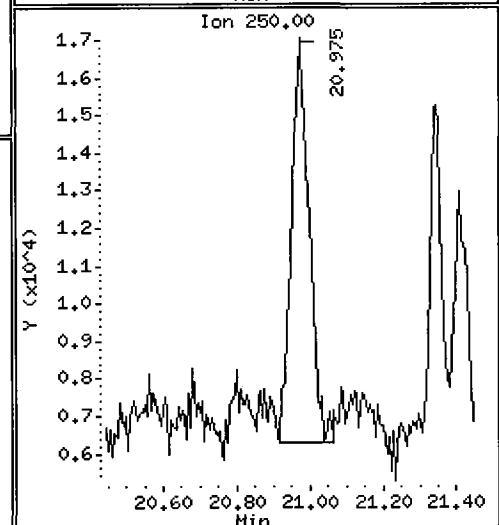
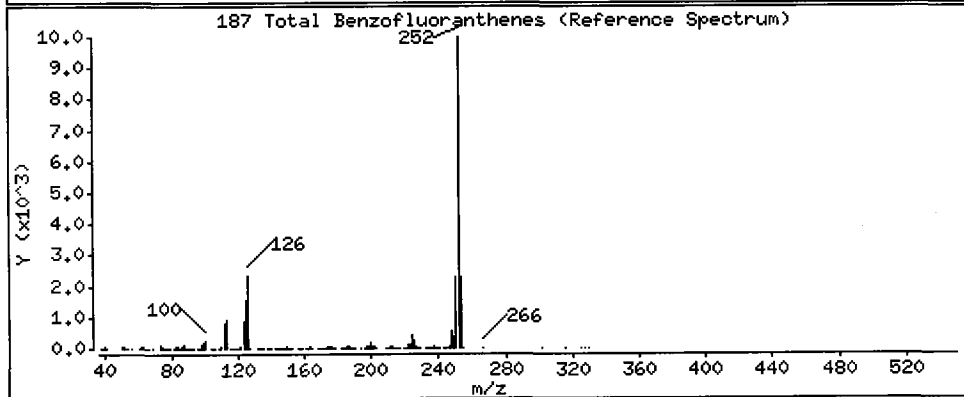
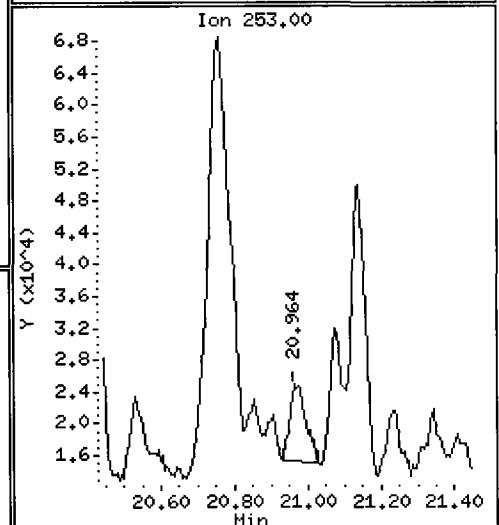
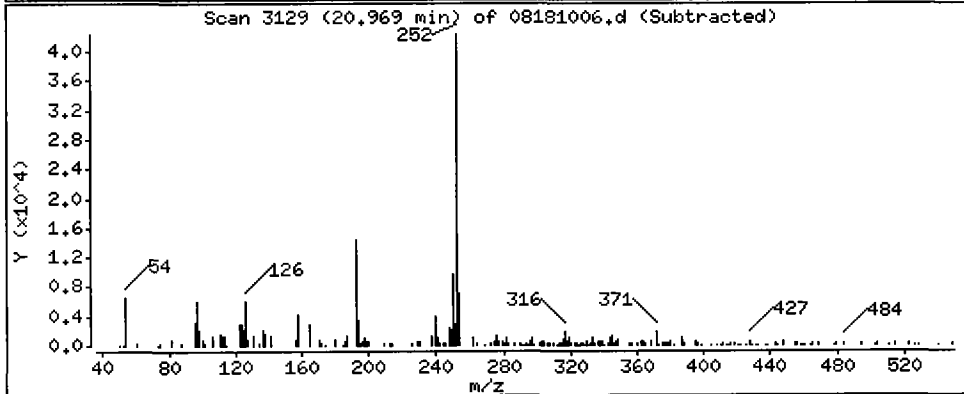
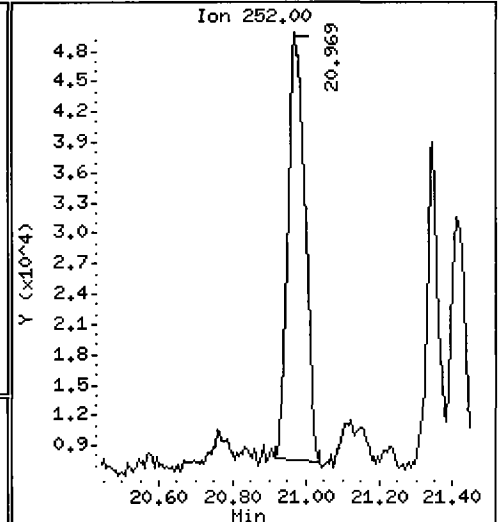
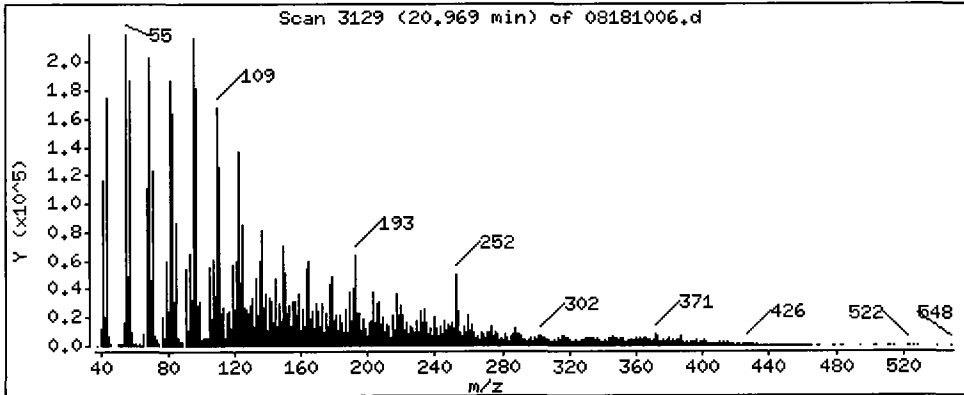
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

187 Total Benzofluoranthenes

Concentration: 73.55 ug/kg



Date : 18-AUG-2010 16:59

Client ID: PSB11-14-16-073010

Instrument: nt4.i

Sample Info: RG79H

Volume Injected (uL): 1.0

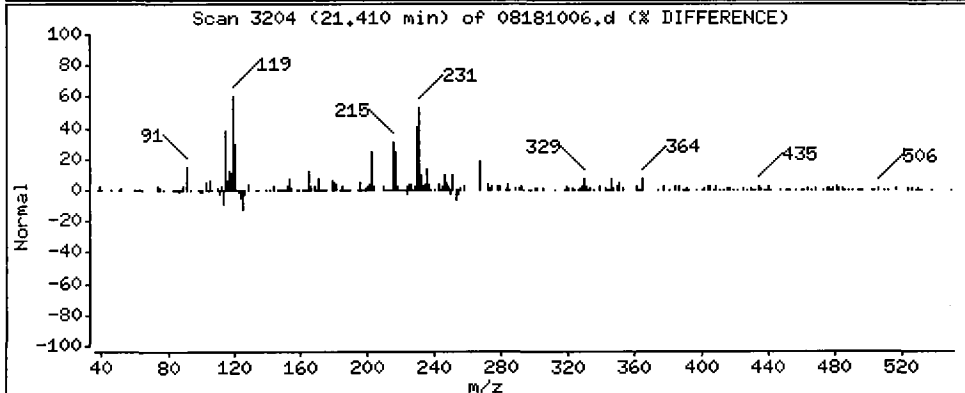
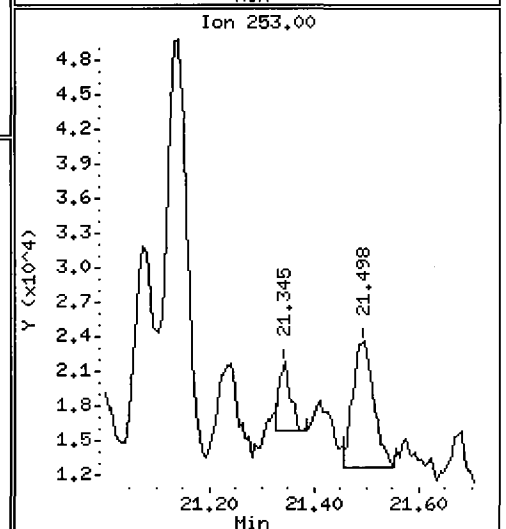
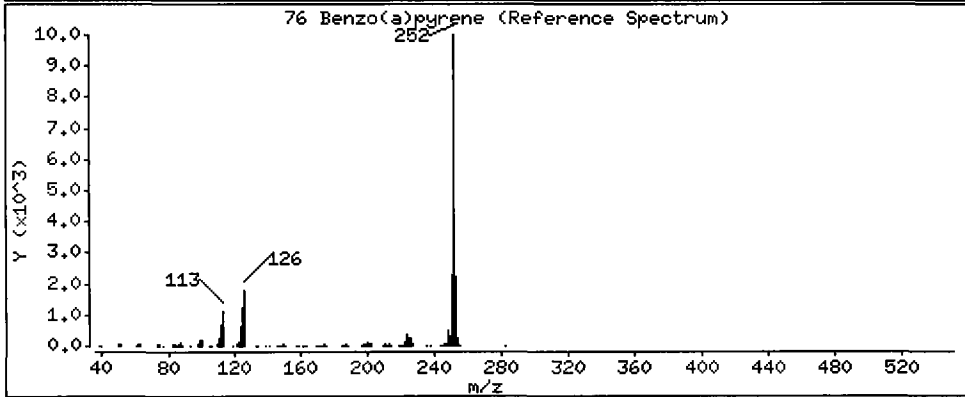
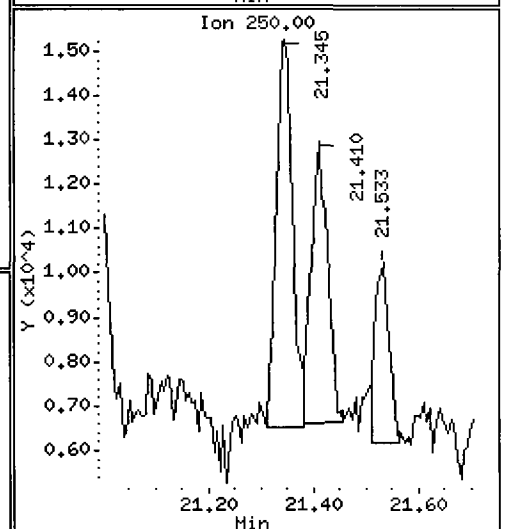
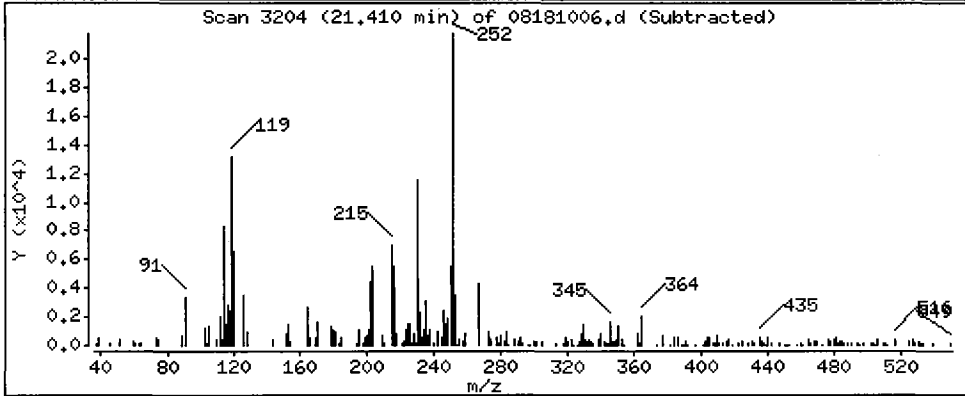
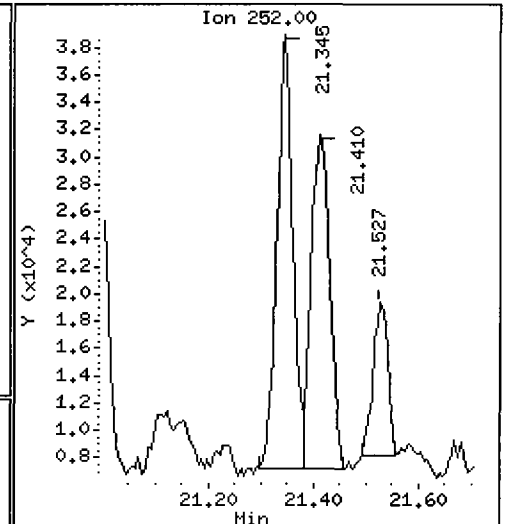
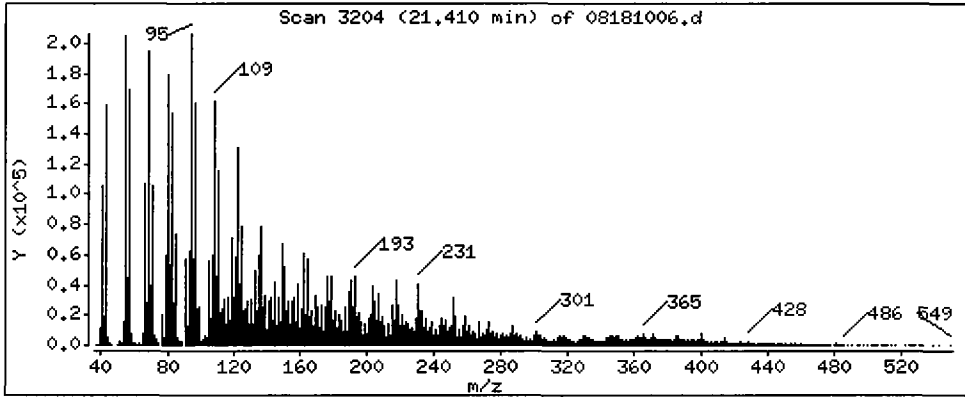
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0,32

76 Benzo(a)pyrene

Concentration: 34.97 ug/kg

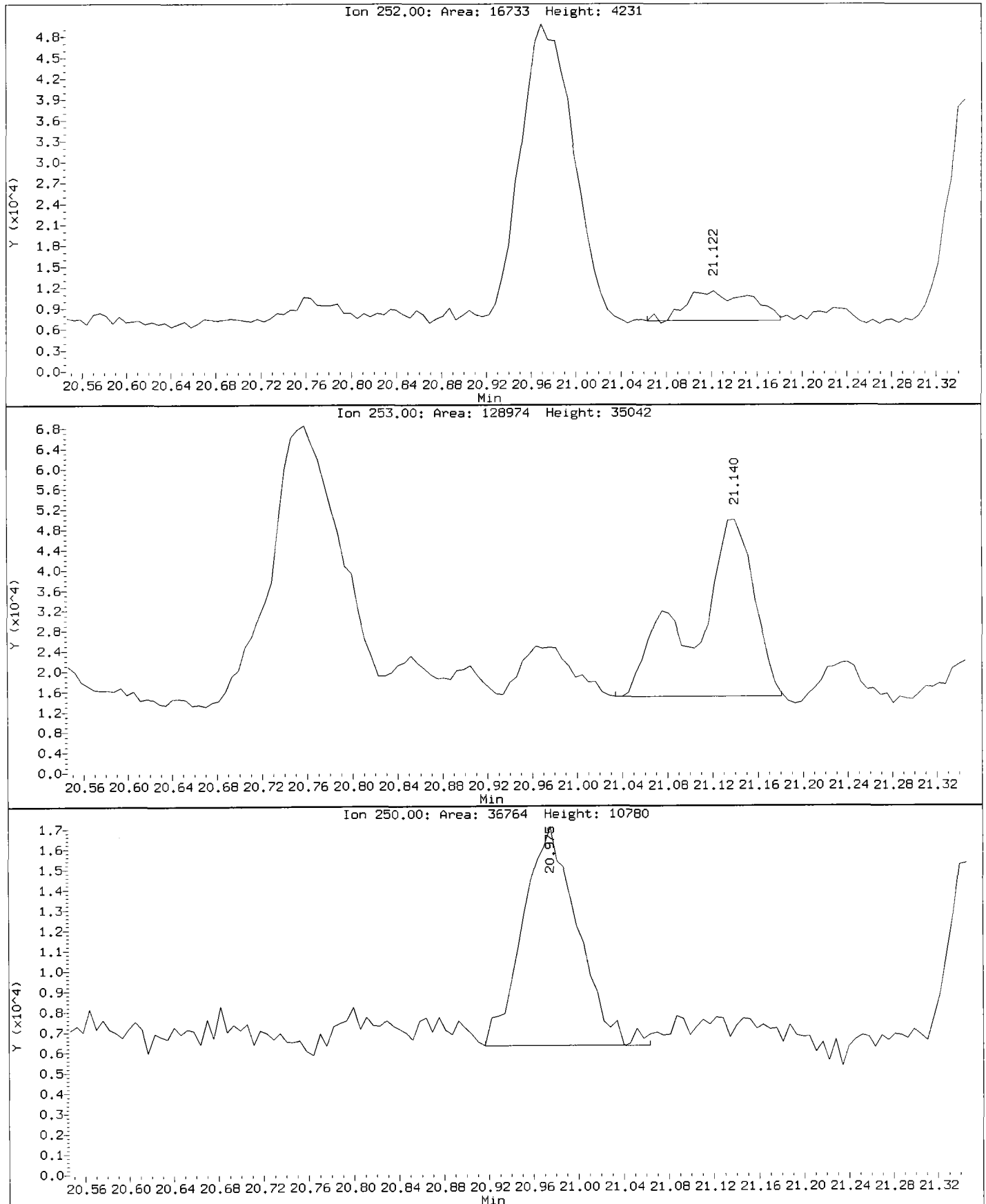




Data File: /chem3/nt4.1/20100818.b/08181006.d  
Injection Date: 18-AUG-2010 16:59  
Instrument: nt4.i  
Client Sample ID: PSB11-14-16-073010

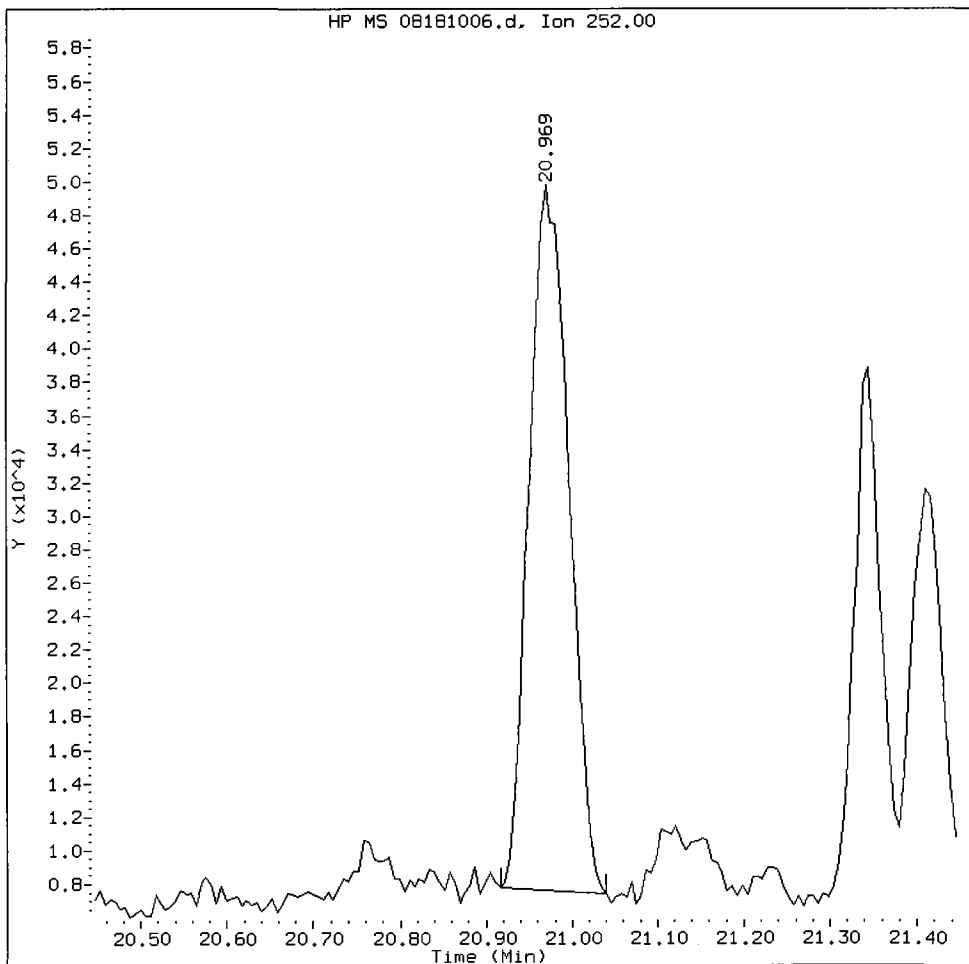
8.21.10  
LS

Compound: Total Benzofluoranthenes  
CAS Number:



RG79H, /chem3/nt4.i/20100818.b/08181006.d

Total Benzofluoranthenes Amount: 3.73 Area: 137184



MANUAL INTEGRATION for Total Benzofluoranthenes

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

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

Analyst: VB

Date: 8.21.10

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100818.b/08181007.d  
 Lab Smp Id: RG79K Client Smp ID: PSB15-0-0.5-073010  
 Inj Date : 18-AUG-2010 18:07  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG79K  
 Misc Info : 10-18515  
 Comment : lul Injection  
 Method : /chem3/nt4.i/20100818.b/SW846100719.m  
 Meth Date : 18-Aug-2010 19:15 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 7  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*AZ 08/18/10*

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	13.30000	% 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	9.769	9.775	(1.000)	1443686	20.0000	
28 Naphthalene	128	9.798	9.804	(1.003)	86028	1.25586	24.89
32 2-Methylnaphthalene	142	10.920	10.926	(1.118)	52410	1.12581	22.31
105 1-methylnaphthalene	142	11.091	11.091	(1.135)	40318	0.88410	17.52
\$ 36 2-Fluorobiphenyl	172	11.566	11.572	(0.916)	842569	15.8014	313.2
40 Acenaphthylene	152	Compound Not Detected.					
* 42 Acenaphthene-d10	164	12.624	12.624	(1.000)	870485	20.0000	
44 Acenaphthene	153	Compound Not Detected.					
46 Dibenzofuran	168	12.929	12.935	(1.024)	40914	0.66015	13.08
49 Fluorene	166	Compound Not Detected.					
* 59 Phenanthrene-d10	188	14.985	14.985	(1.000)	1495284	20.0000	
60 Phenanthrene	178	15.021	15.026	(1.002)	327002	4.22150	83.66
61 Anthracene	178	15.091	15.097	(1.007)	70861	0.89424	17.72
64 Fluoranthene	202	16.953	16.947	(1.131)	435695	5.42874	107.6
65 Pyrene	202	17.306	17.300	(0.897)	472284	5.41960	107.4

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	====	==	=====	=====	=====	=====	=====
\$ 66 Terphenyl-d14	244	17.635	17.623	(0.914)	894818	16.8151	333.2
68 Benzo(a)anthracene	228	19.268	19.256	(0.998)	244919	3.04021	60.25
* 69 Chrysene-d12	240	19.297	19.285	(1.000)	1374299	20.0000	
71 Chrysene	228	19.332	19.326	(1.002)	342039	4.33797	85.97
187 Total Benzofluoranthenes	252	20.936	20.948	(0.976)	483142	9.26653	183.6
76 Benzo(a)pyrene	252	21.377	21.353	(0.996)	212070	4.34695	86.15
* 77 Perylene-d12	264	21.459	21.435	(1.000)	883544	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	22.875	22.851	(1.066)	82329	1.57159	31.15
79 Dibenzo(a,h)anthracene	278	22.886	22.875	(1.067)	30616	0.72699	14.41(M)
80 Benzo(g,h,i)perylene	276	23.239	23.227	(1.083)	77027	1.72017	34.09

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt4.i	Calibration Date: 18-AUG-2010
Lab File ID: 08181007.d	Calibration Time: 12:26
Lab Smp Id: RG79K	Client Smp ID: PSB15-0-0.5-0730
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Soil
Operator: JZ	
Method File: /chem3/nt4.i/20100818.b/SW846100719.m	
Misc Info: 10-18515	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1443686	11.62
42 Acenaphthene-d10	785897	392948	1571794	870485	10.76
59 Phenanthrene-d10	1313990	656995	2627980	1495284	13.80
69 Chrysene-d12	1155293	577646	2310586	1374299	18.96
77 Perylene-d12	1146289	573144	2292578	883544	-22.92

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.77	9.27	10.27	9.77	-0.06
42 Acenaphthene-d10	12.62	12.12	13.12	12.62	0.00
59 Phenanthrene-d10	14.99	14.49	15.49	14.99	0.00
69 Chrysene-d12	19.29	18.79	19.79	19.30	0.06
77 Perylene-d12	21.44	20.94	21.94	21.46	0.11

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: RG79  
Sample Matrix: SOLID                            Fraction: SV  
Lab Smp Id: RG79K                              Client Smp ID: PSB15-0-0.5-073010  
Level: LOW                                      Operator: JZ  
Data Type: MS DATA                            SampleType: SAMPLE  
SpikeList File: pnaslcss.spk                   Quant Type: ISTD  
Sublist File: pnas.sub  
Method File: /chem3/nt4.i/20100818.b/SW846100719.m  
Misc Info: 10-18515

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	495.4	313.2	63.21	34-100
\$ 66 Terphenyl-d14	495.4	333.2	67.26	35-112

Date : 18-AUG-2010 18:07

Client ID: PSB15-0-0.5-073010

Sample Info: RG79K

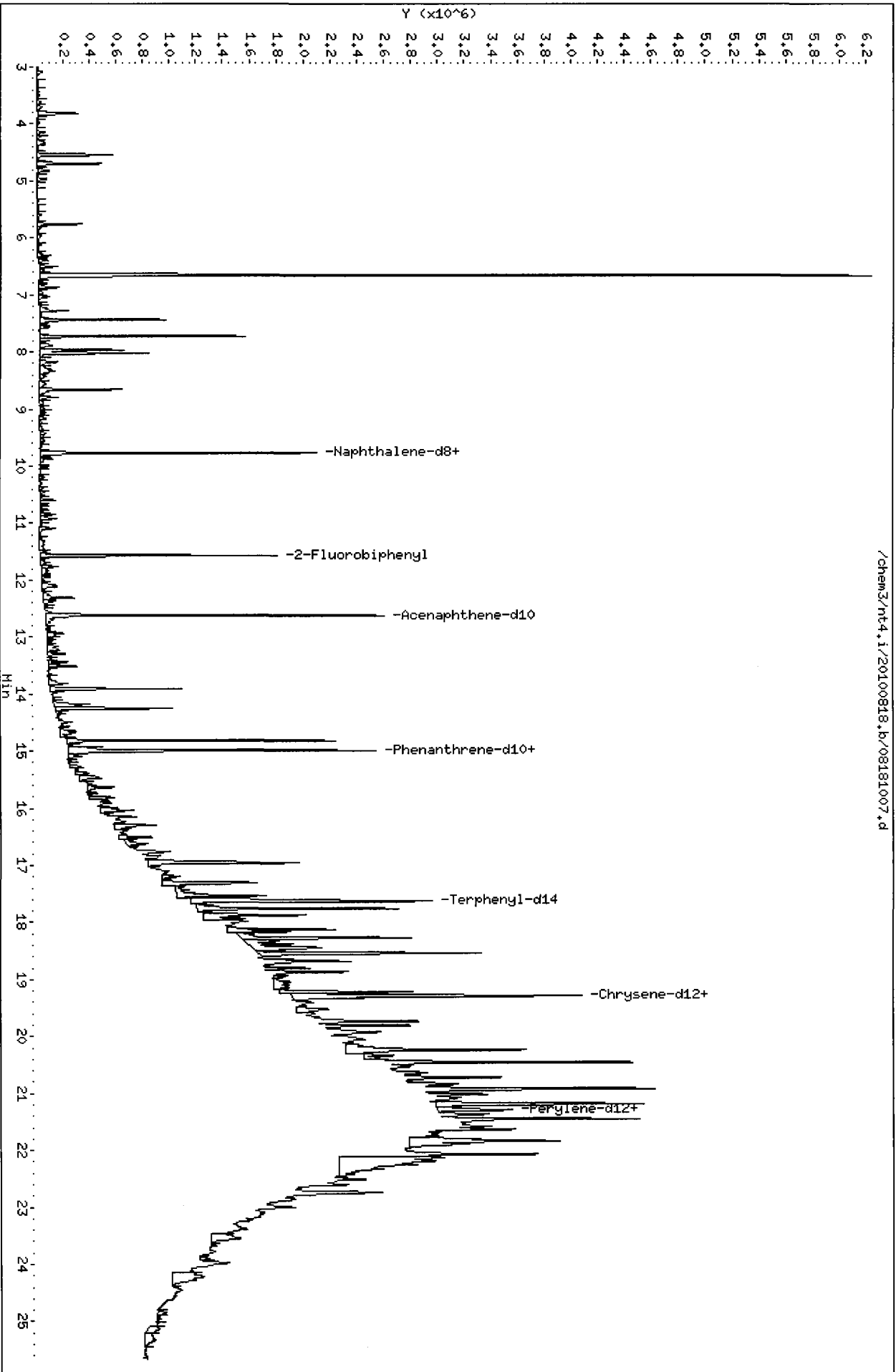
Volume Injected (uL): 1.0

Column phase: ZB-5ms1

Instrument: nt4.i

Operator: JZ

Column diameter: 0.32



Date : 18-AUG-2010 18:07

Client ID: PSB15-0-0.5-073010

Instrument: nt4.i

Sample Info: RG79K

Volume Injected (uL): 1.0

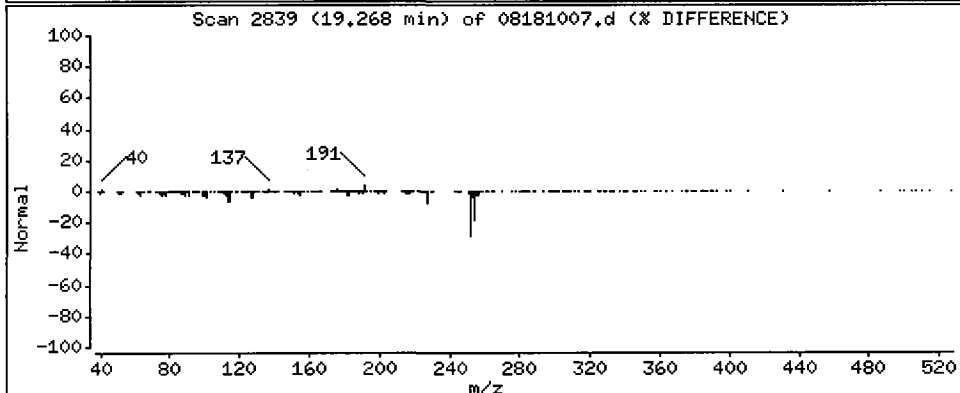
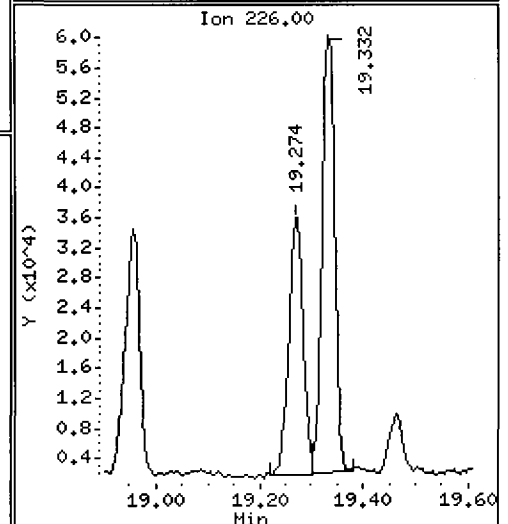
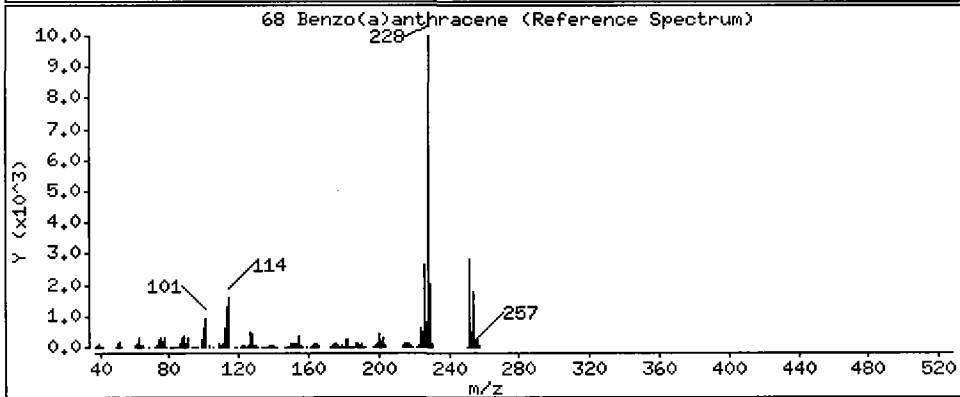
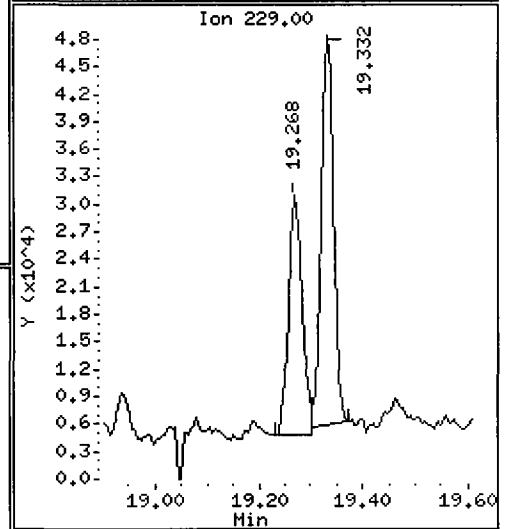
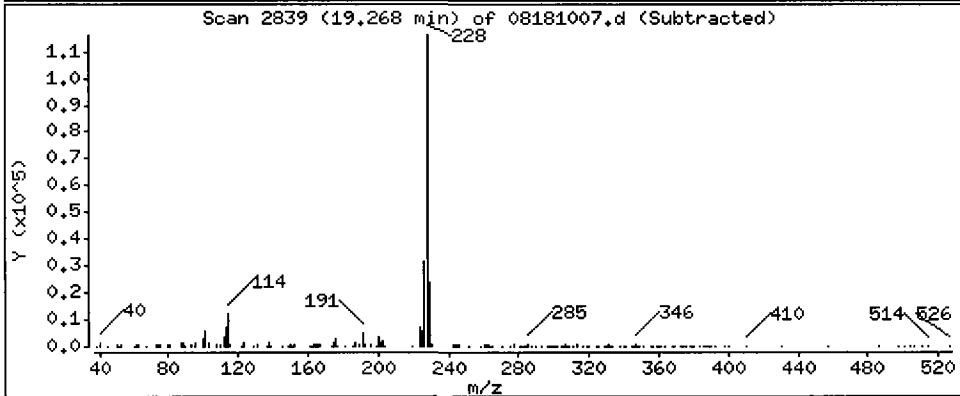
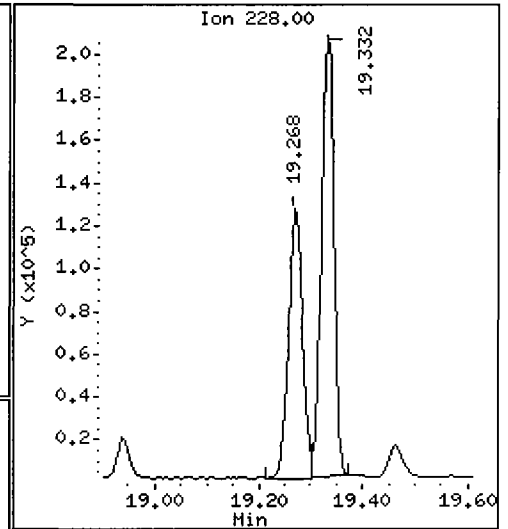
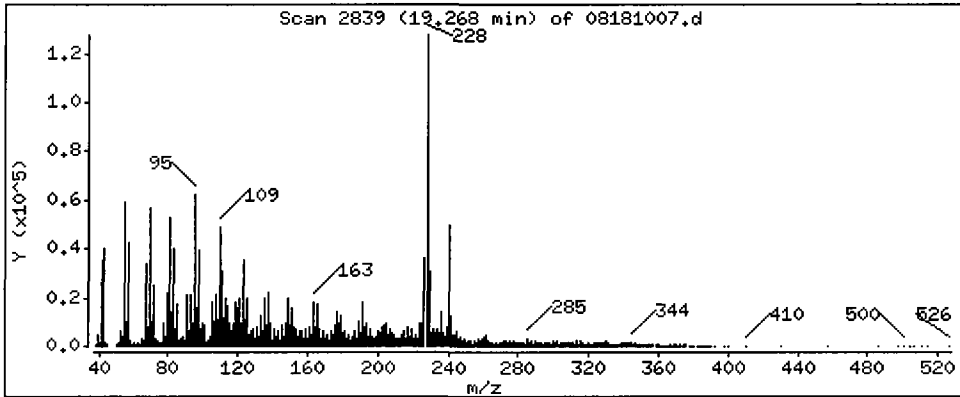
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

68 Benzo(a)anthracene

Concentration: 60.25 ug/kg





Date : 18-AUG-2010 18:07

Client ID: PSB15-0-0.5-073010

Instrument: nt4.i

Sample Info: RG79K

Volume Injected (uL): 1.0

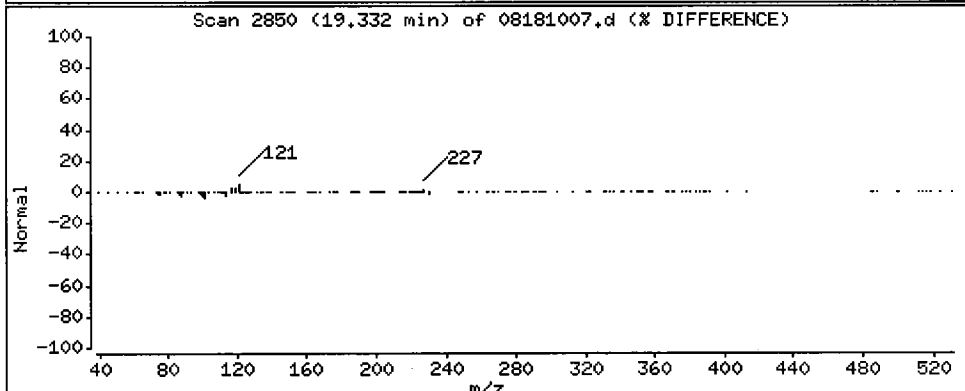
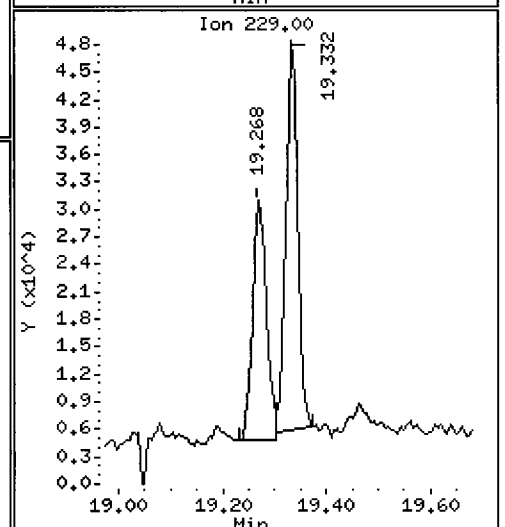
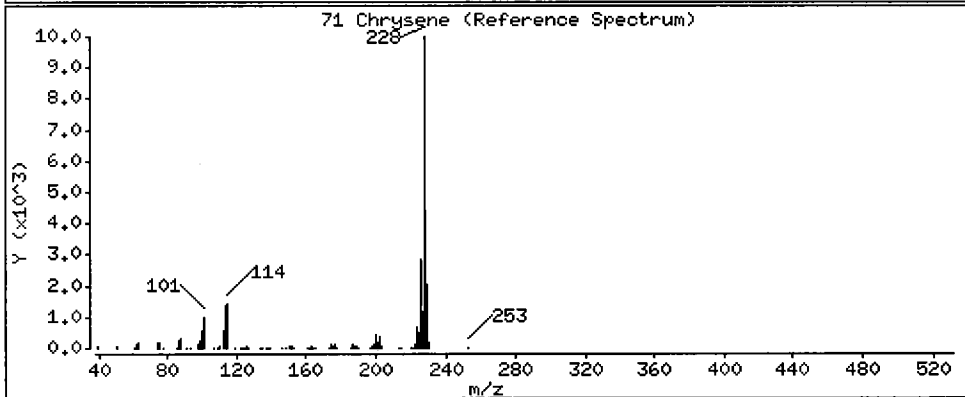
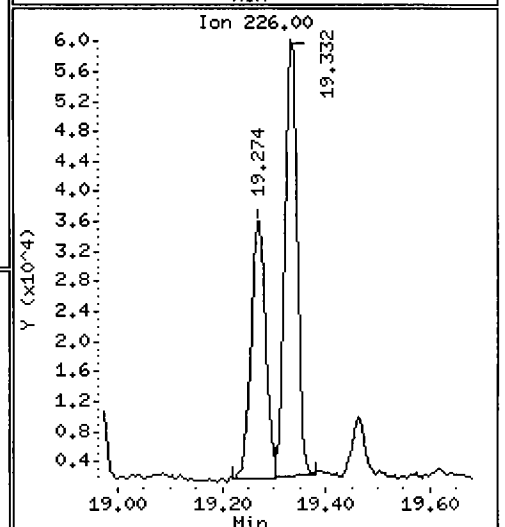
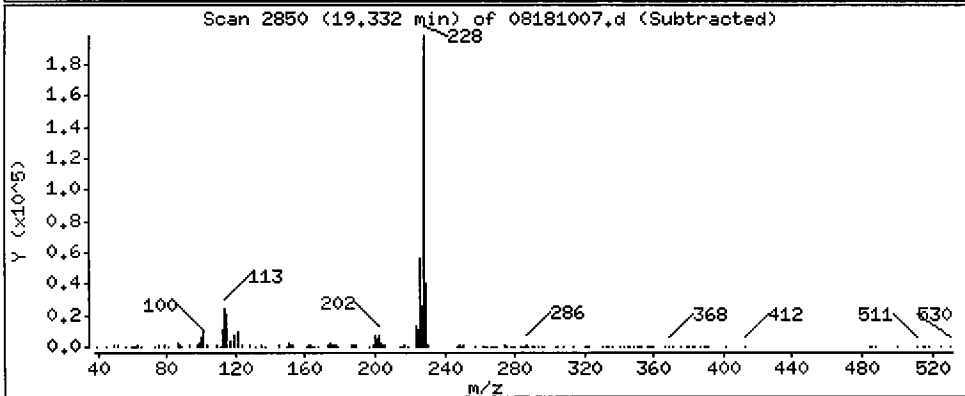
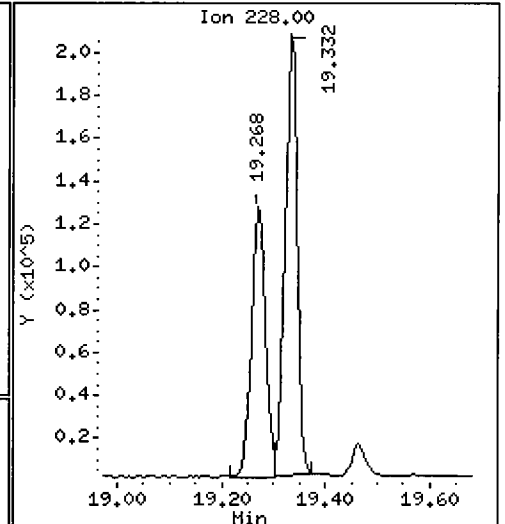
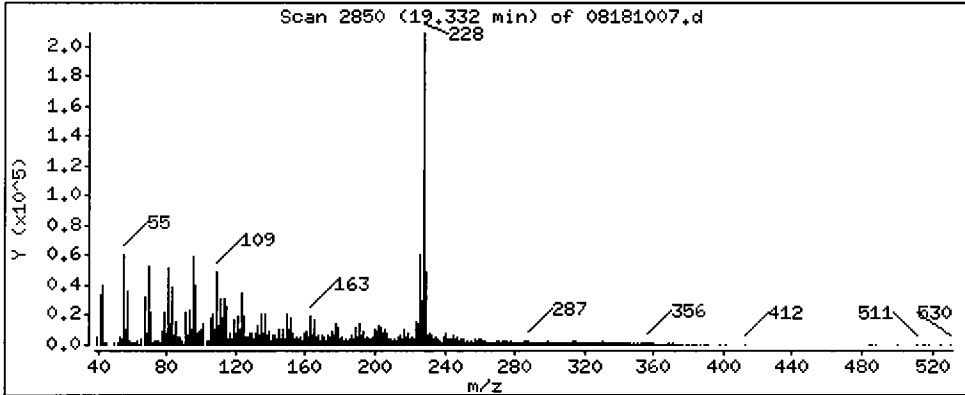
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

71 Chrysene

Concentration: 85.97 ug/kg



Date : 18-AUG-2010 18:07

Client ID: PSB15-0-0.5-073010

Instrument: nt4.i

Sample Info: RG79K

Volume Injected (uL): 1.0

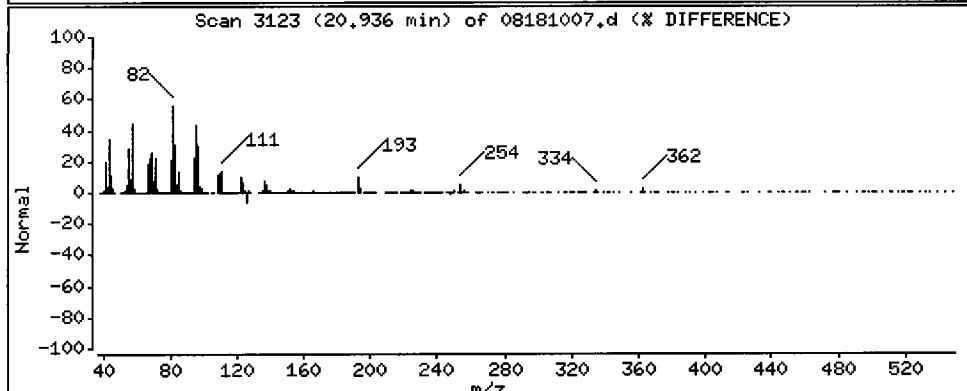
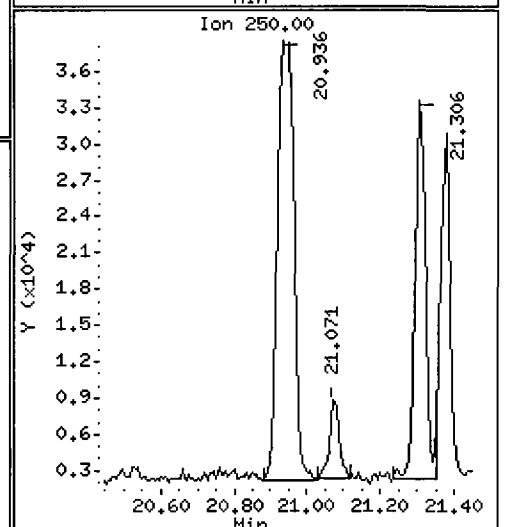
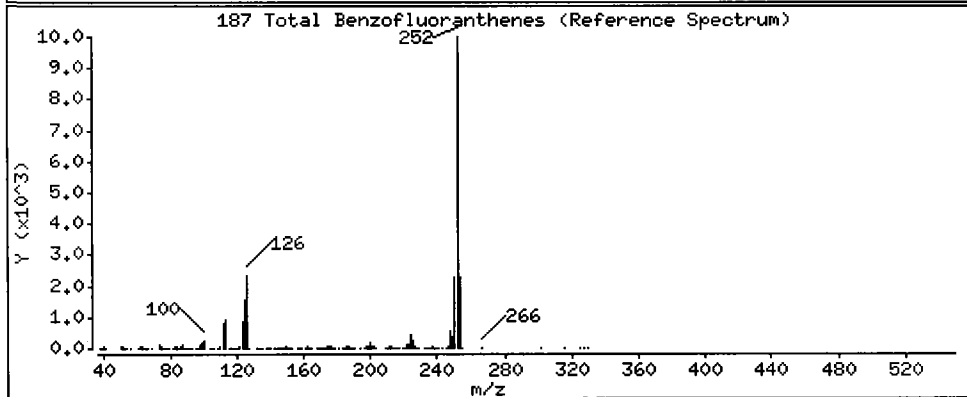
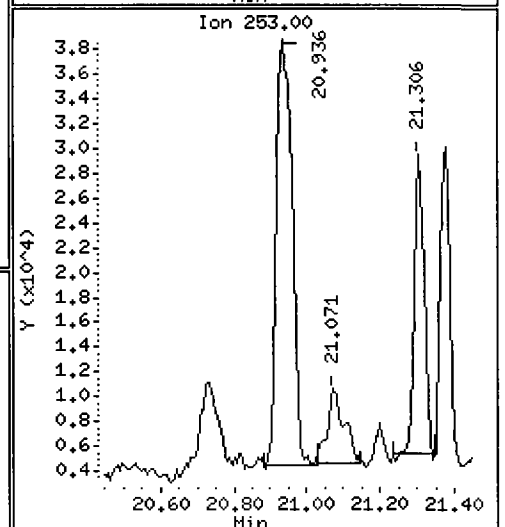
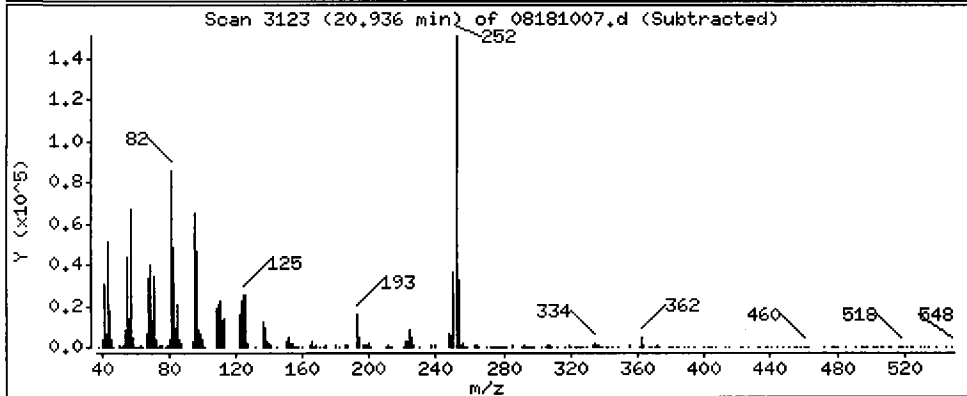
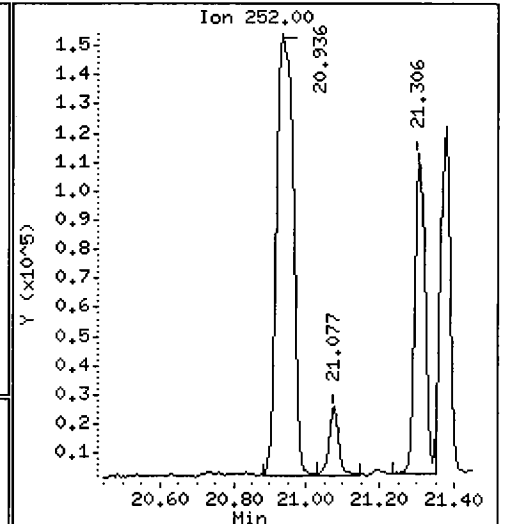
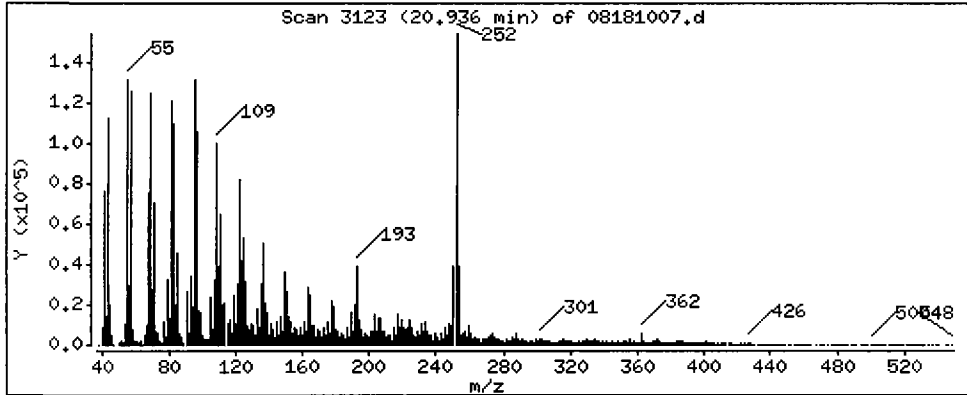
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

187 Total Benzofluoranthenes

Concentration: 183.6 ug/kg



Date : 18-AUG-2010 18:07

Client ID: PSB15-0-0.5-073010

Instrument: nt4.i

Sample Info: RG79K

Volume Injected (uL): 1.0

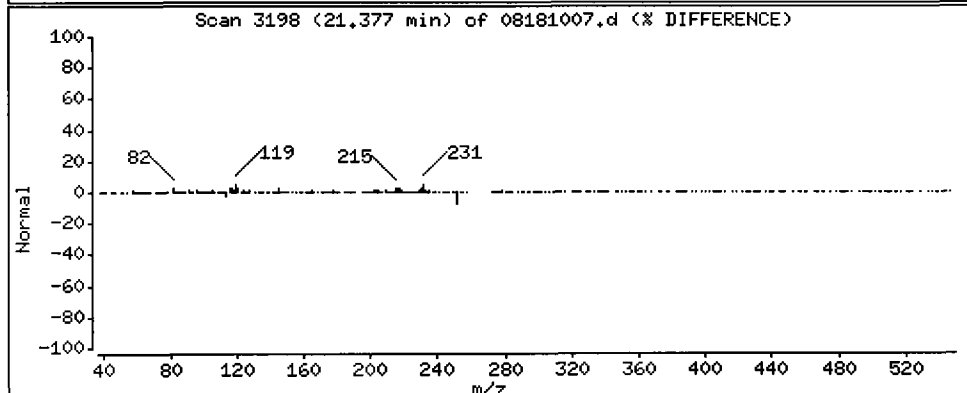
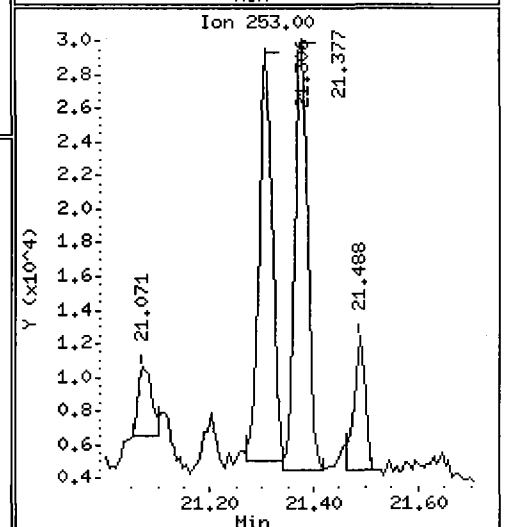
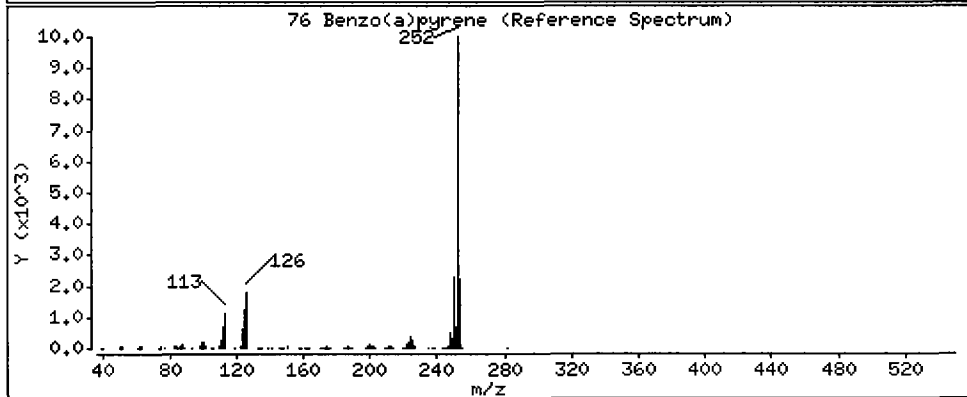
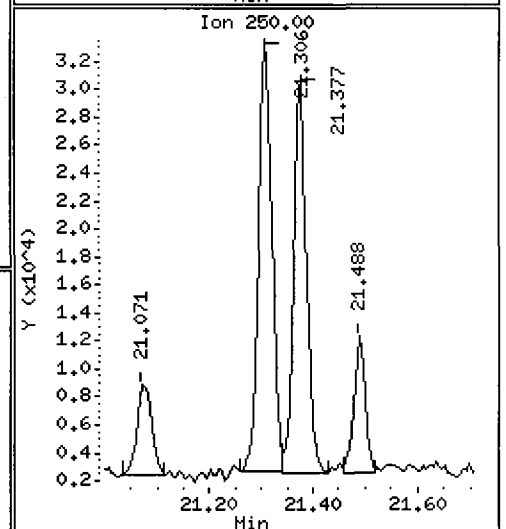
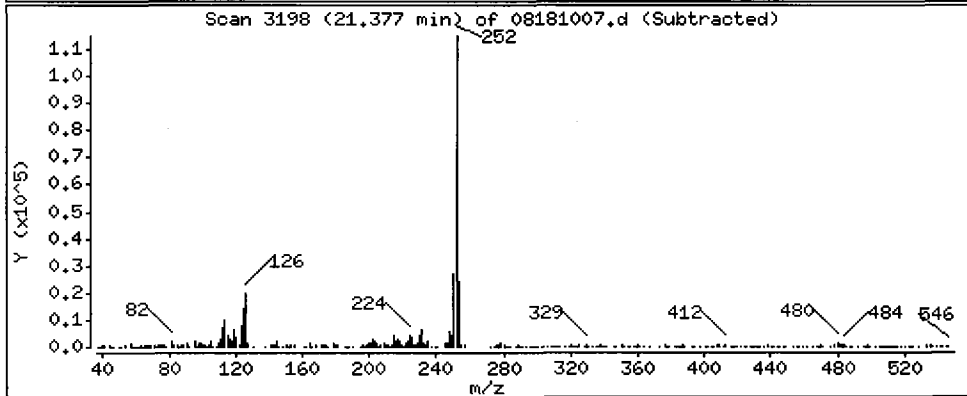
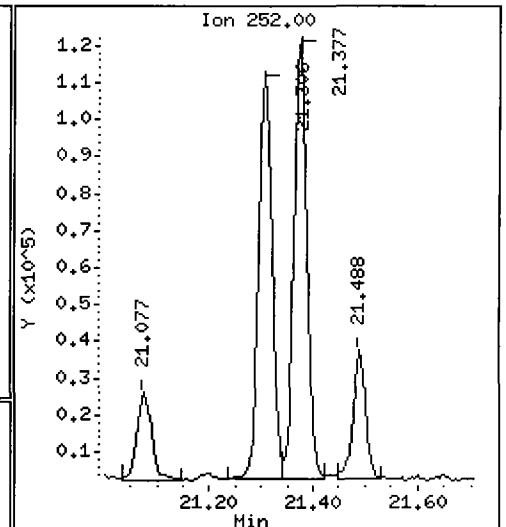
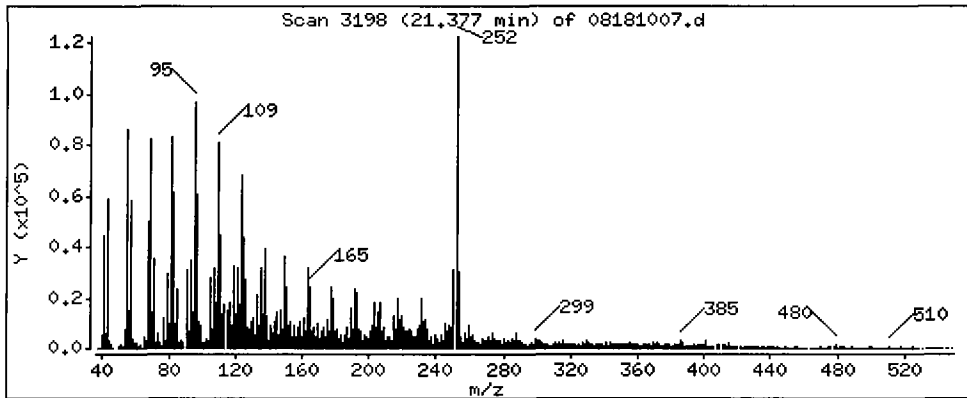
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

76 Benzo(a)pyrene

Concentration: 86.15 ug/kg



Date : 18-AUG-2010 18:07

Client ID: PSB15-0-0.5-073010

Instrument: nt4.i

Sample Info: RG79K

Volume Injected (uL): 1.0

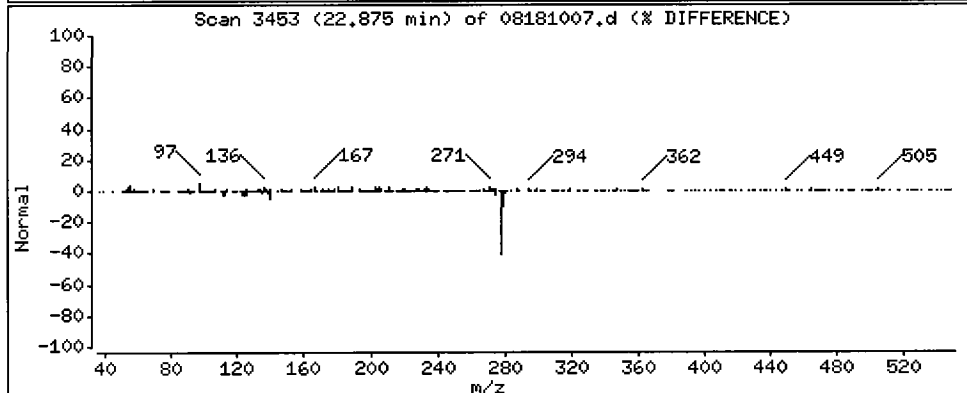
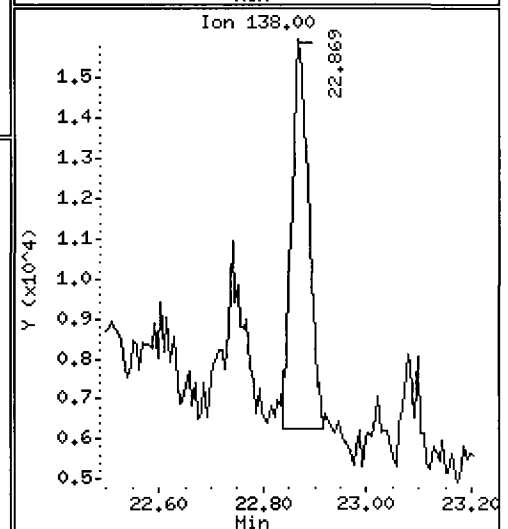
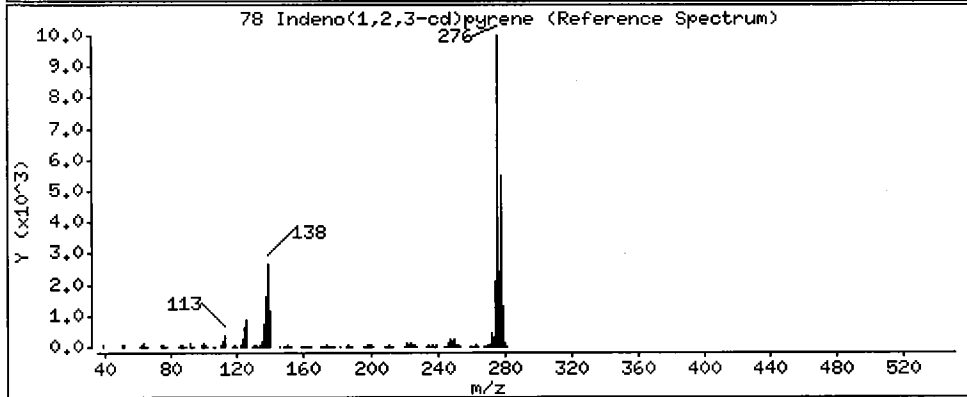
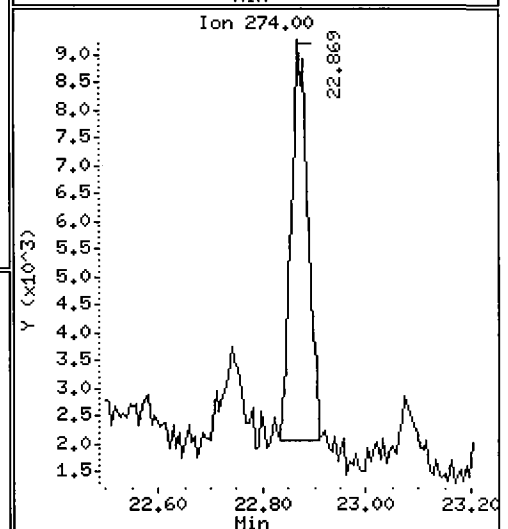
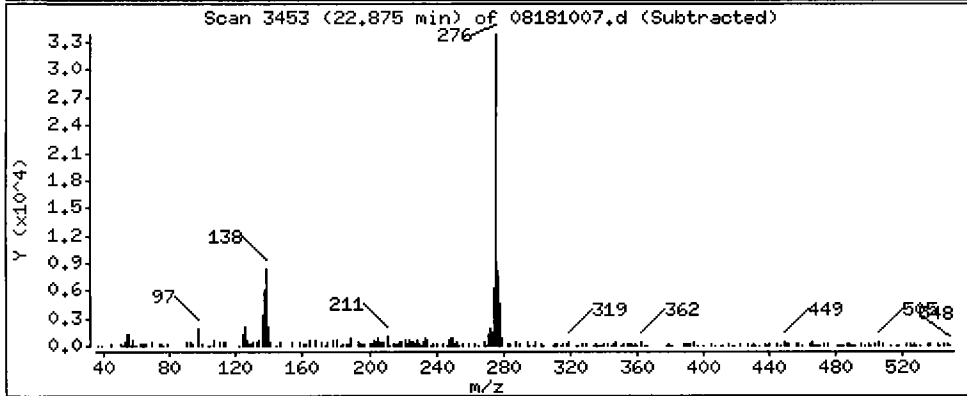
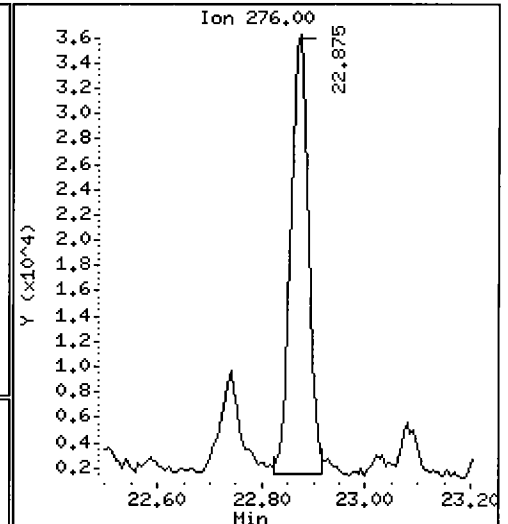
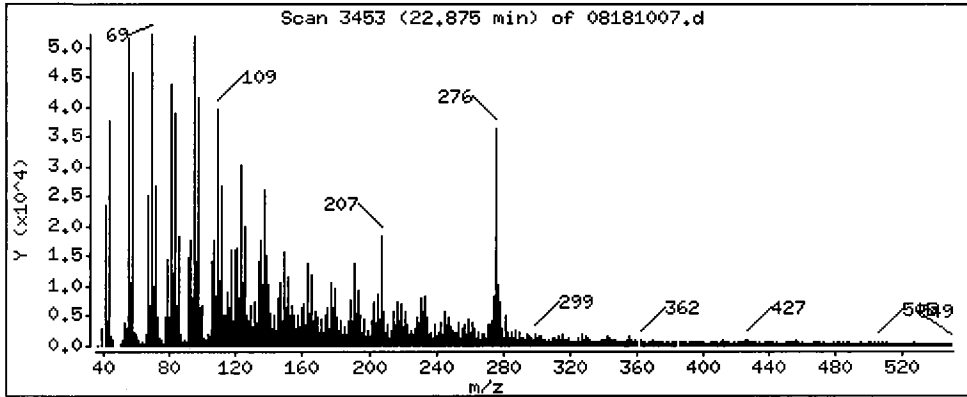
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

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

Concentration: 31.15 ug/kg



Date : 18-AUG-2010 18:07

Client ID: PSB15-0-0.5-073010

Instrument: nt4.i

Sample Info: RG79K

Volume Injected (uL): 1.0

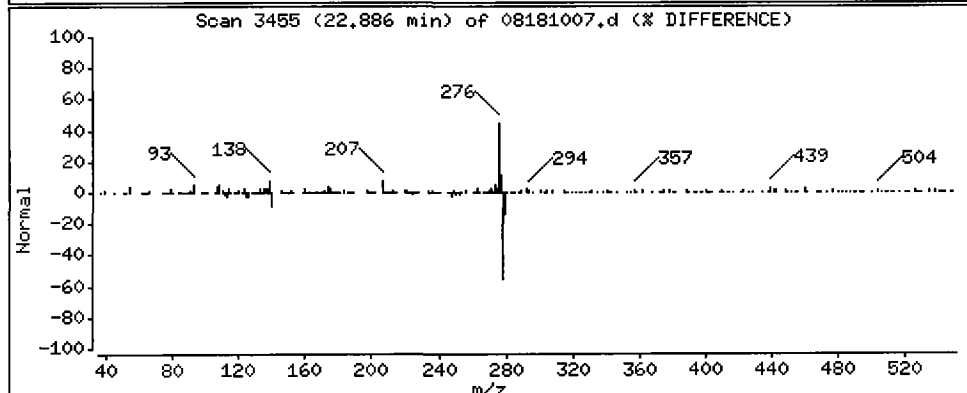
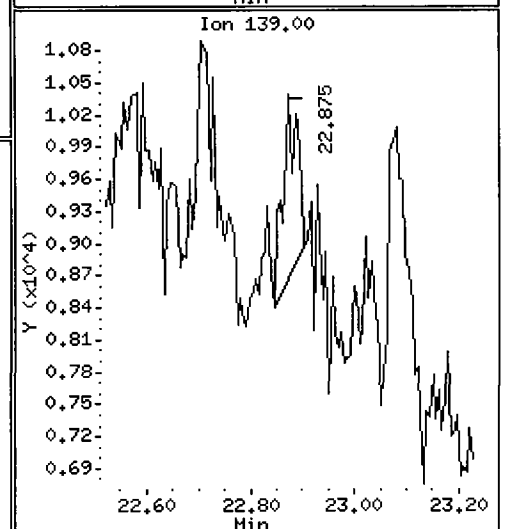
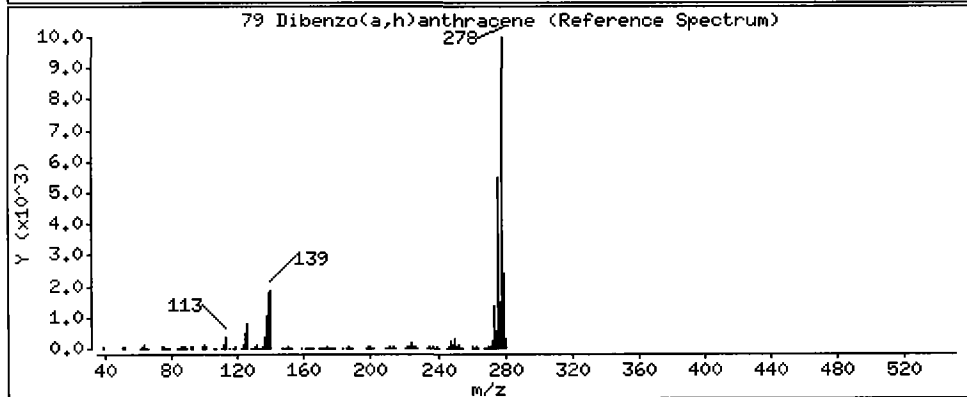
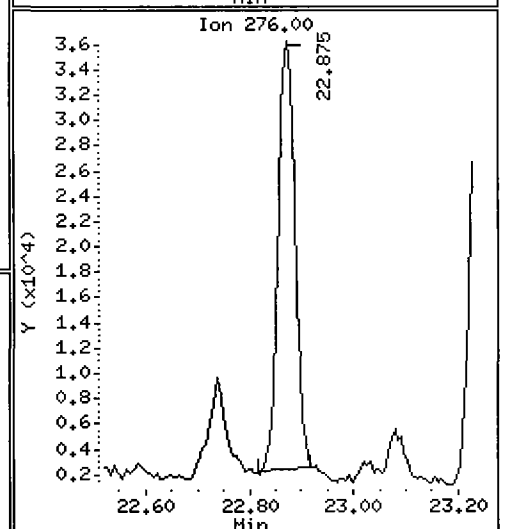
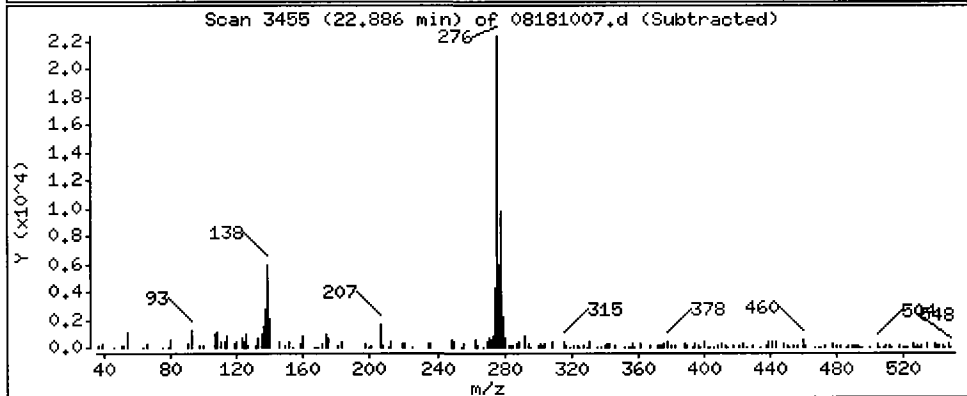
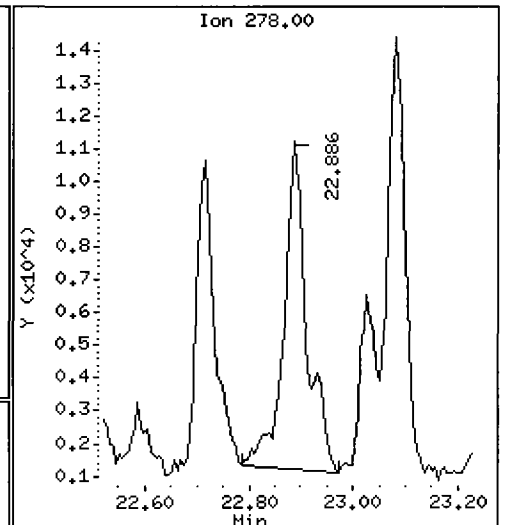
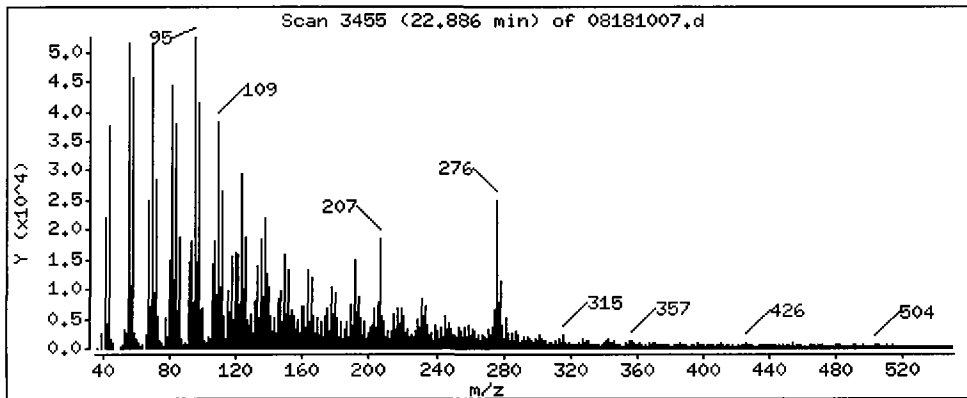
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

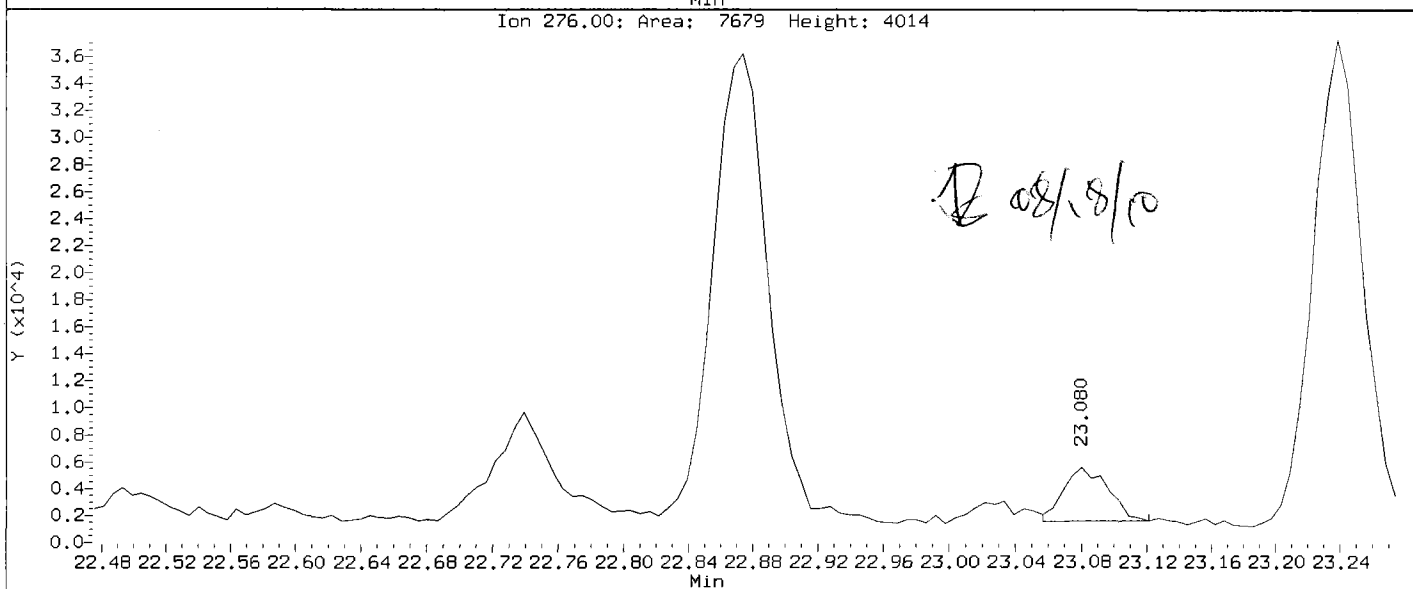
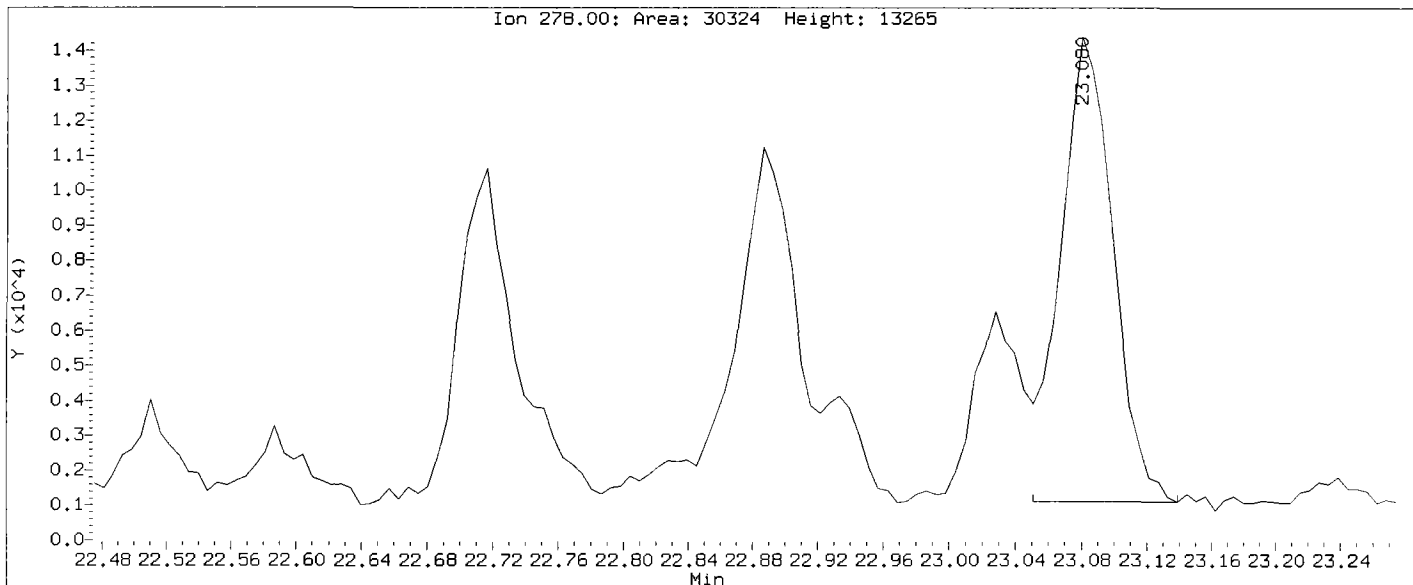
79 Dibenzo(a,h)anthracene

Concentration: 14.41 ug/kg



Data File: /chem3/nt4.i/20100818.b/08181007.d  
Injection Date: 18-AUG-2010 18:07  
Instrument: nt4.i  
Client Sample ID: PSB15-0-0.5-073010

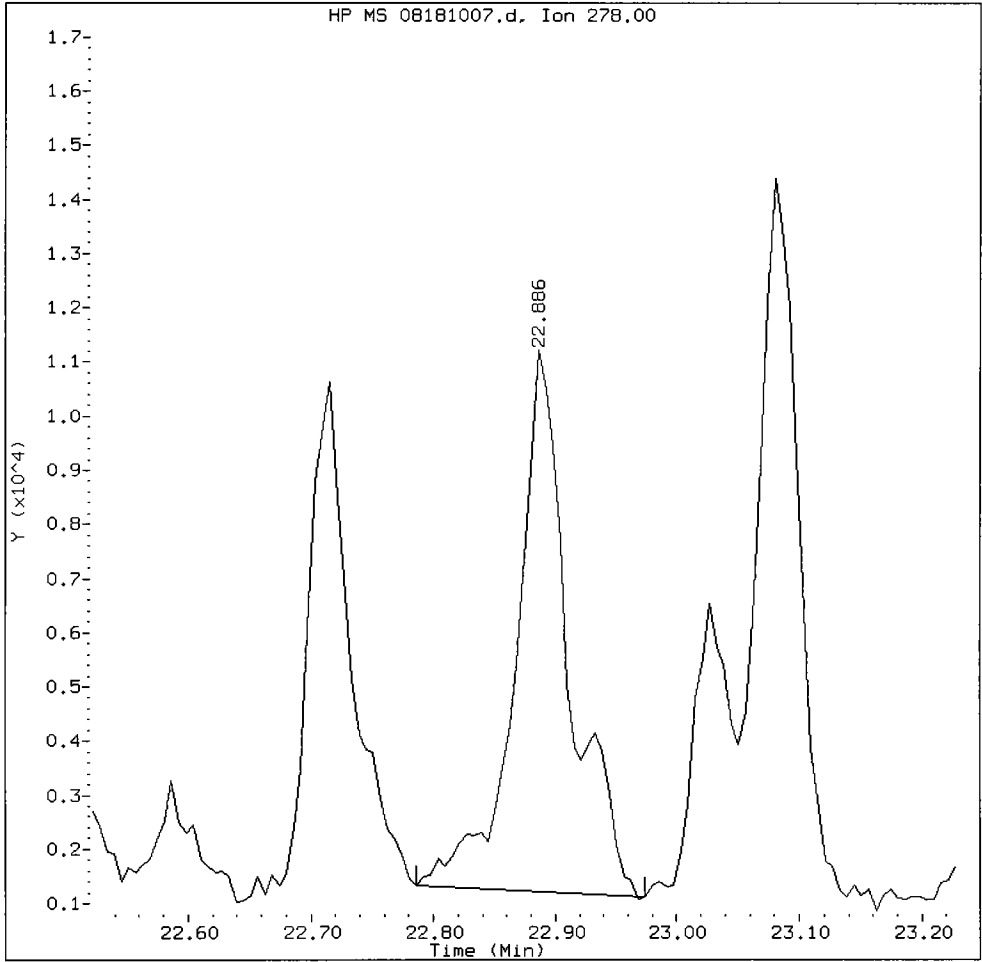
Compound: Dibenzo(a,h)anthracene  
CAS Number: 53-70-3



RG79: 00758

RG79K, /chem3/nt4.i/20100818.b/08181007.d

Dibenzo(a,h)anthracene Amount: 0.73 Area: 30616



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

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

5. Other R1 correction

Analyst: DE Date: 08/18/10

Analytical Resources, Inc.

Semivolatiles Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100818.b/08181008.d  
Lab Smp Id: RG79L Client Smp ID: PSB15-1.5-2-073010  
Inj Date : 18-AUG-2010 19:15  
Operator : JZ Inst ID: nt4.i  
Smp Info : RG79L  
Misc Info : 10-18516  
Comment : 1ul Injection  
Method : /chem3/nt4.i/20100818.b/SW846100719.m  
Meth Date : 19-Aug-2010 18:11 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 08/19/10*

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	27.40000	Weight of sample extracted (g)
M	6.80000	% 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	9.772	9.775	(1.000)	1403747	20.0000	
28 Naphthalene	128						
32 2-Methylnaphthalene	142						
105 1-methylnaphthalene	142						
\$ 36 2-Fluorobiphenyl	172	11.563	11.572	(0.916)	720970	13.3989	262.3
40 Acenaphthylene	152						
* 42 Acenaphthene-d10	164	12.621	12.624	(1.000)	878416	20.0000	
44 Acenaphthene	153						
46 Dibenzofuran	168						
49 Fluorene	166						
* 59 Phenanthrene-d10	188	14.982	14.985	(1.000)	1479409	20.0000	
60 Phenanthrene	178						
61 Anthracene	178						
64 Fluoranthene	202						
65 Pyrene	202						



Compounds	QUANT SIG		CONCENTRATIONS					
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
=====	====	==	=====	=====	=====	=====	=====	
\$ 66 Terphenyl-d14	244	17.626	17.623	(0.914)	877515	17.1822	336.4	
68 Benzo(a)anthracene	228	Compound Not Detected.						
* 69 Chrysene-d12	240	19.282	19.285	(1.000)	1318929	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	21.438	21.435	(1.000)	1068469	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: 18-AUG-2010
Lab File ID: 08181008.d	Calibration Time: 12:26
Lab Smp Id: RG79L	Client Smp ID: PSB15-1.5-2-0730
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Soil
Operator: JZ	
Method File: /chem3/nt4.i/20100818.b/SW846100719.m	
Misc Info: 10-18516	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1403747	8.53
42 Acenaphthene-d10	785897	392948	1571794	878416	11.77
59 Phenanthrene-d10	1313990	656995	2627980	1479409	12.59
69 Chrysene-d12	1155293	577646	2310586	1318929	14.16
77 Perylene-d12	1146289	573144	2292578	1068469	-6.79

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.77	9.27	10.27	9.77	-0.03
42 Acenaphthene-d10	12.62	12.12	13.12	12.62	-0.02
59 Phenanthrene-d10	14.99	14.49	15.49	14.98	-0.02
69 Chrysene-d12	19.29	18.79	19.79	19.28	-0.02
77 Perylene-d12	21.44	20.94	21.94	21.44	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

Client SDG: RG79

Sample Matrix: SOLID

Fraction: SV

Lab Smp Id: RG79L

Client Smp ID: PSB15-1.5-2-073010

Level: LOW

Operator: JZ

Data Type: MS DATA

SampleType: SAMPLE

SpikeList File: pnaslcass.spk

Quant Type: ISTD

Sublist File: pnas.sub

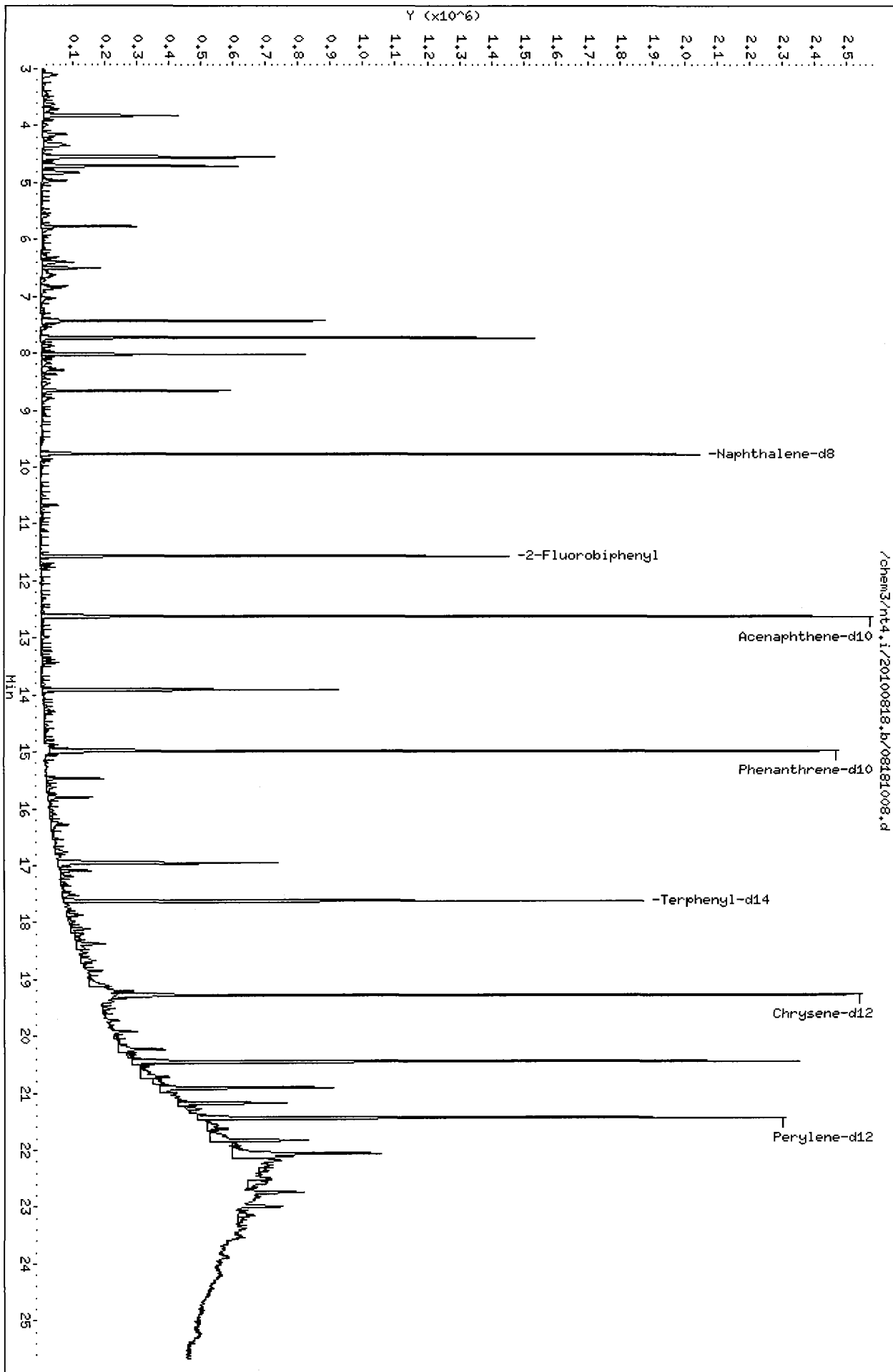
Method File: /chem3/nt4.i/20100818.b/SW846100719.m

Misc Info: 10-18516

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	489.5	262.3	53.60	34-100
\$ 66 Terphenyl-d14	489.5	336.4	68.73	35-112

Data File: /chem3/nt4.i/20100818.b/08181008.d  
Date : 18-AUG-2010 19:15  
Client ID: PSB15-1.5-2-073010  
Sample Info: RG79L  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

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



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100818.b/08181009.d  
 Lab Smp Id: RG79M Client Smp ID: PSB15-2-4-073010  
 Inj Date : 18-AUG-2010 20:17  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG79M  
 Misc Info : 10-18517  
 Comment : lul Injection  
 Method : /chem3/nt4.i/20100818.b/SW846100719.m  
 Meth Date : 19-Aug-2010 18:11 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 9  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*Q 08/19/10*

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	27.10000	Weight of sample extracted (g)
M	4.80000	% 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	9.771	9.775	(1.000)	1493449	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	11.563	11.572	(0.916)	796446	15.0870	292.4	
40 Acenaphthylene	152				Compound Not Detected.			
* 42 Acenaphthene-d10	164	12.621	12.624	(1.000)	861798	20.0000		
44 Acenaphthene	153				Compound Not Detected.			
46 Dibenzofuran	168				Compound Not Detected.			
49 Fluorene	166				Compound Not Detected.			
* 59 Phenanthrene-d10	188	14.982	14.985	(1.000)	1438009	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	17.626	17.623	(0.914)	959042	18.1218	351.2
68 Benzo(a)anthracene	228				Compound Not Detected.		
* 69 Chrysene-d12	240	19.282	19.285	(1.000)	1366722	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	21.438	21.435	(1.000)	1058341	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: 18-AUG-2010
Lab File ID: 08181009.d	Calibration Time: 12:26
Lab Smp Id: RG79M	Client Smp ID: PSB15-2-4-073010
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Soil
Operator: JZ	
Method File: /chem3/nt4.i/20100818.b/SW846100719.m	
Misc Info: 10-18517	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1493449	15.47
42 Acenaphthene-d10	785897	392948	1571794	861798	9.66
59 Phenanthrene-d10	1313990	656995	2627980	1438009	9.44
69 Chrysene-d12	1155293	577646	2310586	1366722	18.30
77 Perylene-d12	1146289	573144	2292578	1058341	-7.67

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.77	9.27	10.27	9.77	-0.03
42 Acenaphthene-d10	12.62	12.12	13.12	12.62	-0.03
59 Phenanthrene-d10	14.99	14.49	15.49	14.98	-0.02
69 Chrysene-d12	19.29	18.79	19.79	19.28	-0.02
77 Perylene-d12	21.44	20.94	21.94	21.44	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: RG79M  
Level: LOW  
Data Type: MS DATA  
SpikeList File: pna1css.spk  
Sublist File: pna1.sub  
Method File: /chem3/nt4.i/20100818.b/SW846100719.m  
Misc Info: 10-18517

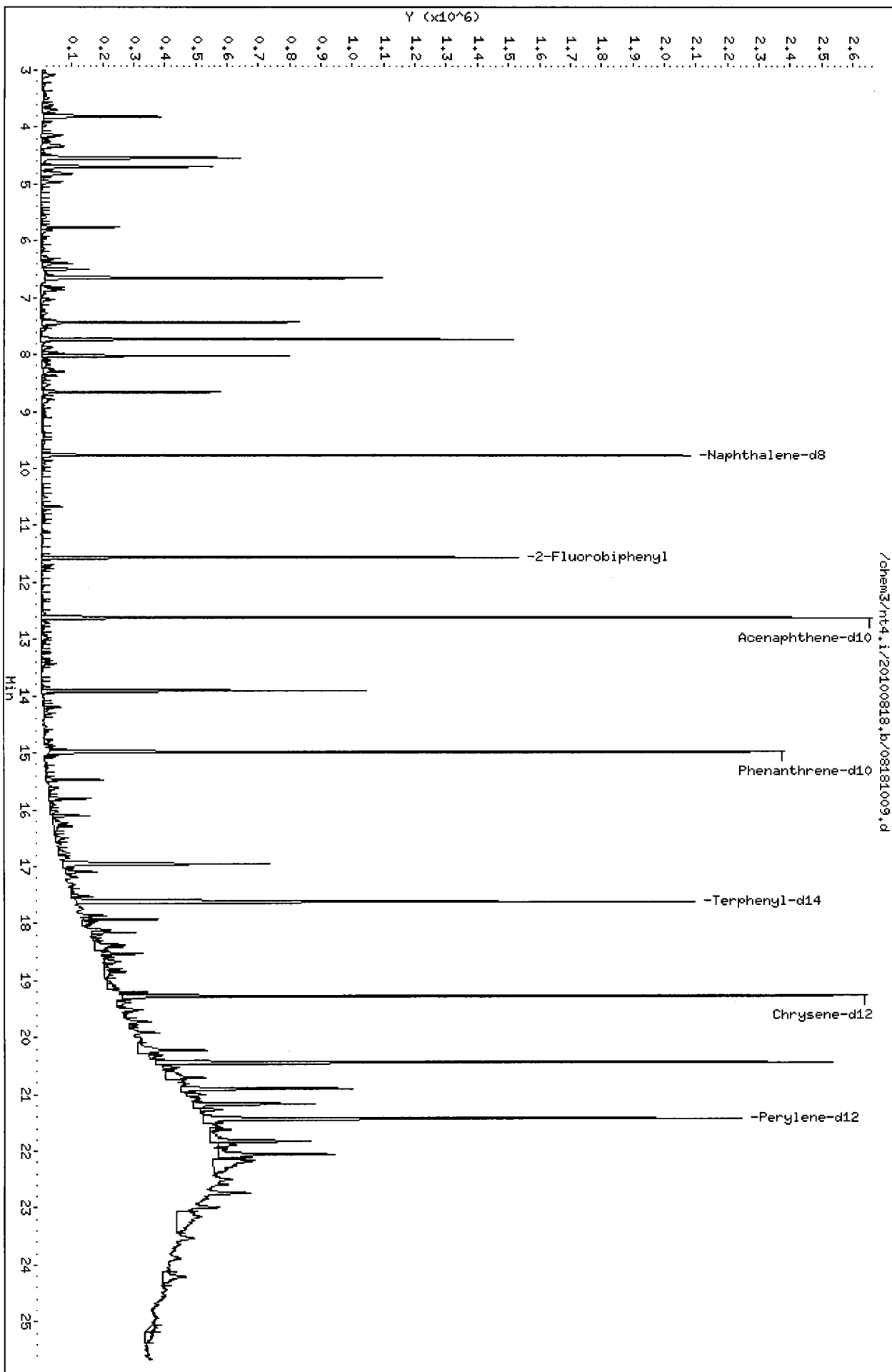
Client SDG: RG79  
Fraction: SV  
Client Smp ID: PSB15-2-4-073010  
Operator: JZ  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	484.5	292.4	60.35	34-100
\$ 66 Terphenyl-d14	484.5	351.2	72.49	35-112



Data File: /chem3/nt4.i/20100818.b/08181009.d  
Date : 18-AUG-2010 20:17  
Client ID: PSB15-2-4-073010  
Sample Info: RG79H  
Volume Injected (uL): 1.0  
Column phase: ZB-5ms1

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



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100818.b/08181010.d  
 Lab Smp Id: RG79N Client Smp ID: PSB15-4-6-073010  
 Inj Date : 18-AUG-2010 21:21  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG79N  
 Misc Info : 10-18518  
 Comment : 1ul Injection  
 Method : /chem3/nt4.i/20100818.b/SW846100719.m  
 Meth Date : 19-Aug-2010 18:11 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 10  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*Q 08/19/10*

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	4.80000	% 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	9.769	9.775	(1.000)	1274710	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	11.567	11.572	(0.917)	806145	16.1837	312.5
40 Acenaphthylene	152				Compound Not Detected.		
* 42 Acenaphthene-d10	164	12.618	12.624	(1.000)	813181	20.0000	
44 Acenaphthene	153				Compound Not Detected.		
46 Dibenzofuran	168				Compound Not Detected.		
49 Fluorene	166				Compound Not Detected.		
* 59 Phenanthrene-d10	188	14.980	14.985	(1.000)	1374902	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	17.629	17.623	(0.914)	961957	20.4694	395.2
68 Benzo(a)anthracene	228	Compound Not Detected.					
* 69 Chrysene-d12	240	19.280	19.285	(1.000)	1213654	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	21.436	21.435	(1.000)	1012667	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: 18-AUG-2010
Lab File ID: 08181010.d	Calibration Time: 12:26
Lab Smp Id: RG79N	Client Smp ID: PSB15-4-6-073010
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Soil
Operator: JZ	
Method File: /chem3/nt4.i/20100818.b/SW846100719.m	
Misc Info: 10-18518	

Test Mode: Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1274710	-1.45
42 Acenaphthene-d10	785897	392948	1571794	813181	3.47
59 Phenanthrene-d10	1313990	656995	2627980	1374902	4.64
69 Chrysene-d12	1155293	577646	2310586	1213654	5.05
77 Perylene-d12	1146289	573144	2292578	1012667	-11.66

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.77	9.27	10.27	9.77	-0.06
42 Acenaphthene-d10	12.62	12.12	13.12	12.62	-0.04
59 Phenanthrene-d10	14.99	14.49	15.49	14.98	-0.04
69 Chrysene-d12	19.29	18.79	19.79	19.28	-0.03
77 Perylene-d12	21.44	20.94	21.94	21.44	0.00

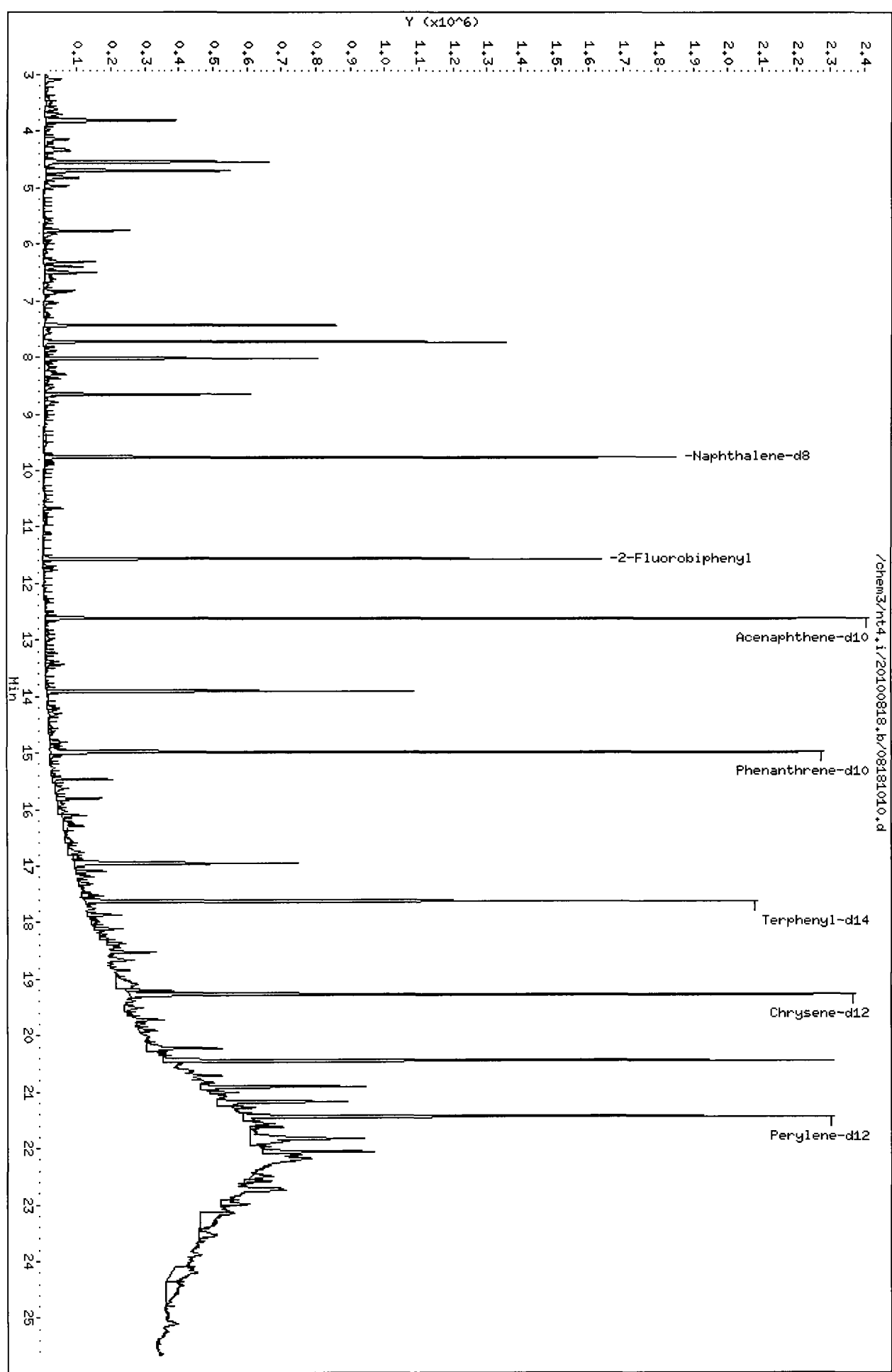
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd/Snider                                      Client SDG: RG79  
Sample Matrix: SOLID    Fraction: SV  
Lab Smp Id: RG79N    Client Smp ID: PSB15-4-6-073010  
Level: LOW    Operator: JZ  
Data Type: MS DATA    SampleType: SAMPLE  
SpikeList File: pnaslcss.spk                                    Quant Type: ISTD  
Sublist File: pnas.sub  
Method File: /chem3/nt4.i/20100818.b/SW846100719.m  
Misc Info: 10-18518

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	482.7	312.5	64.73	34-100
\$ 66 Terphenyl-d14	482.7	395.2	81.88	35-112



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100818.b/08181011.d  
 Lab Smp Id: RG79P Client Smp ID: PSB15-17-19-073010  
 Inj Date : 18-AUG-2010 22:23  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG79P  
 Misc Info : 10-18520  
 Comment : lul Injection  
 Method : /chem3/nt4.i/20100818.b/SW846100719.m  
 Meth Date : 19-Aug-2010 18:11 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*SD 08/19/10*

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	31.50000	Weight of sample extracted (g)
M	19.00000	% 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	9.767	9.775	(1.000)	1530271	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	11.564	11.572	(0.916)	758991	13.7866	270.2
40 Acenaphthylene	152	Compound Not Detected.					
* 42 Acenaphthene-d10	164	12.622	12.624	(1.000)	898734	20.0000	
44 Acenaphthene	153	Compound Not Detected.					
46 Dibenzofuran	168	Compound Not Detected.					
49 Fluorene	166	Compound Not Detected.					
* 59 Phenanthrene-d10	188	14.983	14.985	(1.000)	1469284	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	17.627	17.623	(0.914)	975487	17.9656	352.1	
68 Benzo(a)anthracene	228	Compound Not Detected.						
* 69 Chrysene-d12	240	19.277	19.285	(1.000)	1402247	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	21.433	21.435	(1.000)	1133585	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: 18-AUG-2010
Lab File ID: 08181011.d	Calibration Time: 12:26
Lab Smp Id: RG79P	Client Smp ID: PSB15-17-19-0730
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Soil
Operator: JZ	
Method File: /chem3/nt4.i/20100818.b/SW846100719.m	
Misc Info: 10-18520	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1530271	18.31
42 Acenaphthene-d10	785897	392948	1571794	898734	14.36
59 Phenanthrene-d10	1313990	656995	2627980	1469284	11.82
69 Chrysene-d12	1155293	577646	2310586	1402247	21.38
77 Perylene-d12	1146289	573144	2292578	1133585	-1.11

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.77	9.27	10.27	9.77	-0.08
42 Acenaphthene-d10	12.62	12.12	13.12	12.62	-0.02
59 Phenanthrene-d10	14.99	14.49	15.49	14.98	-0.01
69 Chrysene-d12	19.29	18.79	19.79	19.28	-0.04
77 Perylene-d12	21.44	20.94	21.94	21.43	-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.

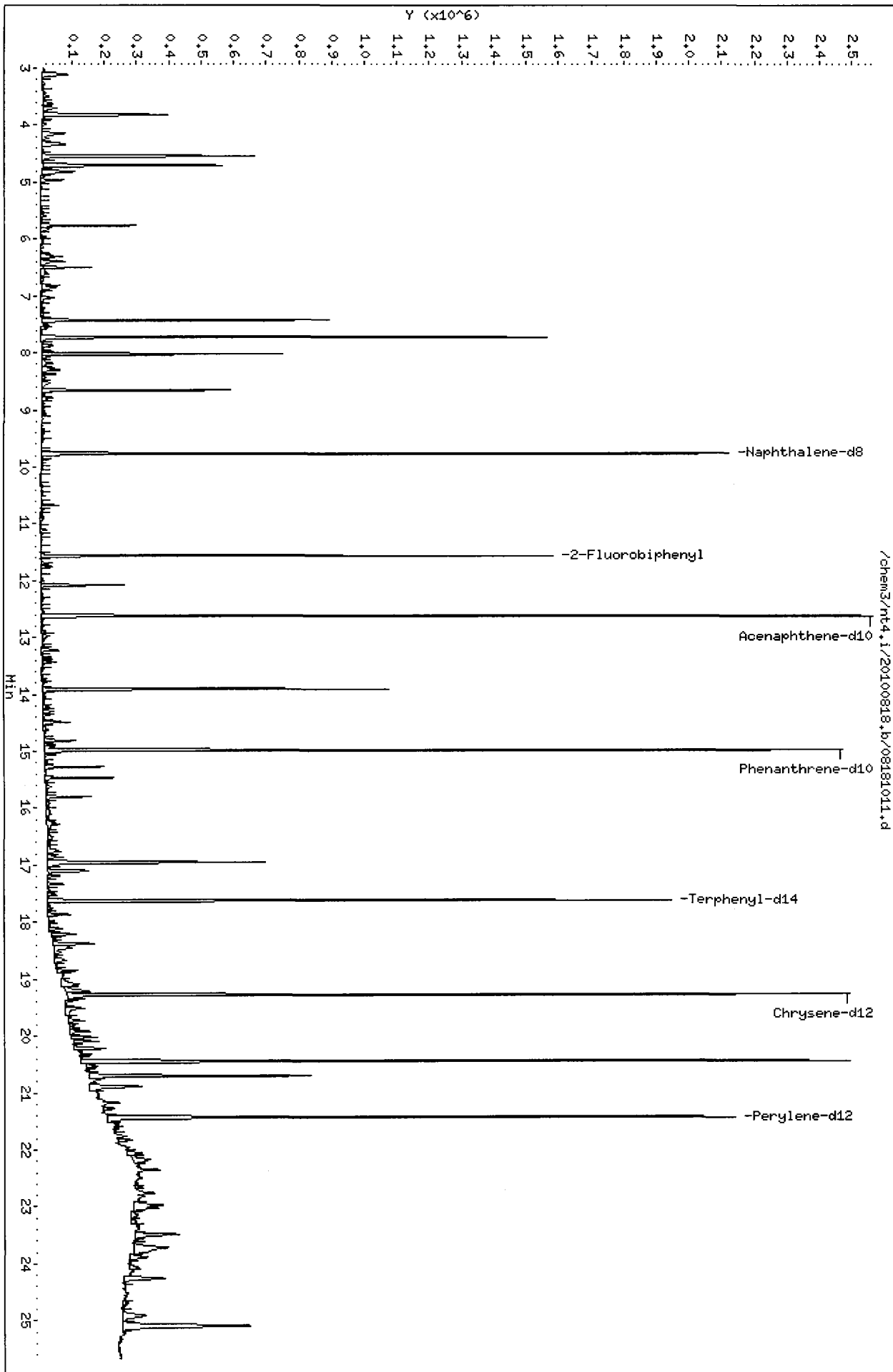
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd/Snider  
Sample Matrix: SOLID  
Lab Smp Id: RG79P  
Level: LOW  
Data Type: MS DATA  
SpikeList File: pnaslcss.spk  
Sublist File: pnas.sub  
Method File: /chem3/nt4.i/20100818.b/SW846100719.m  
Misc Info: 10-18520

Client SDG: RG79  
Fraction: SV  
Client Smp ID: PSB15-17-19-073010  
Operator: JZ  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	489.9	270.2	55.15	34-100
\$ 66 Terphenyl-d14	489.9	352.1	71.86	35-112



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100818.b/08181012.d  
 Lab Smp Id: RG79Q Client Smp ID: PSB15-17-19-073010-  
 Inj Date : 18-AUG-2010 23:24  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG79Q  
 Misc Info : 10-18521  
 Comment : 1ul Injection  
 Method : /chem3/nt4.i/20100818.b/SW846100719.m  
 Meth Date : 19-Aug-2010 18:11 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 12  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*D 08/19/10*

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	29.20000	Weight of sample extracted (g)
M	12.60000	% 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	9.769	9.775	(1.000)	1518235	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	11.566	11.572	(0.917)	774308	14.3645	281.4	
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	12.618	12.624	(1.000)	879986	20.0000		
44 Acenaphthene	153	Compound Not Detected.						
46 Dibenzofuran	168	Compound Not Detected.						
49 Fluorene	166	Compound Not Detected.						
* 59 Phenanthrene-d10	188	14.979	14.985	(1.000)	1442172	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	17.623	17.623	(0.914)	1013580	18.7259	366.9	
68 Benzo(a)anthracene	228	Compound Not Detected.						
* 69 Chrysene-d12	240	19.279	19.285	(1.000)	1397852	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	21.435	21.435	(1.000)	1137427	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: 08181012.d  
 Lab Smp Id: RG79Q  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt4.i/20100818.b/SW846100719.m  
 Misc Info: 10-18521

Calibration Date: 18-AUG-2010  
 Calibration Time: 12:26  
 Client Smp ID: PSB15-17-19-0730  
 Level: LOW  
 Sample Type: Soil

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1518235	17.38
42 Acenaphthene-d10	785897	392948	1571794	879986	11.97
59 Phenanthrene-d10	1313990	656995	2627980	1442172	9.76
69 Chrysene-d12	1155293	577646	2310586	1397852	21.00
77 Perylene-d12	1146289	573144	2292578	1137427	-0.77

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.77	9.27	10.27	9.77	-0.06
42 Acenaphthene-d10	12.62	12.12	13.12	12.62	-0.05
59 Phenanthrene-d10	14.99	14.49	15.49	14.98	-0.04
69 Chrysene-d12	19.29	18.79	19.79	19.28	-0.03
77 Perylene-d12	21.44	20.94	21.94	21.44	0.00

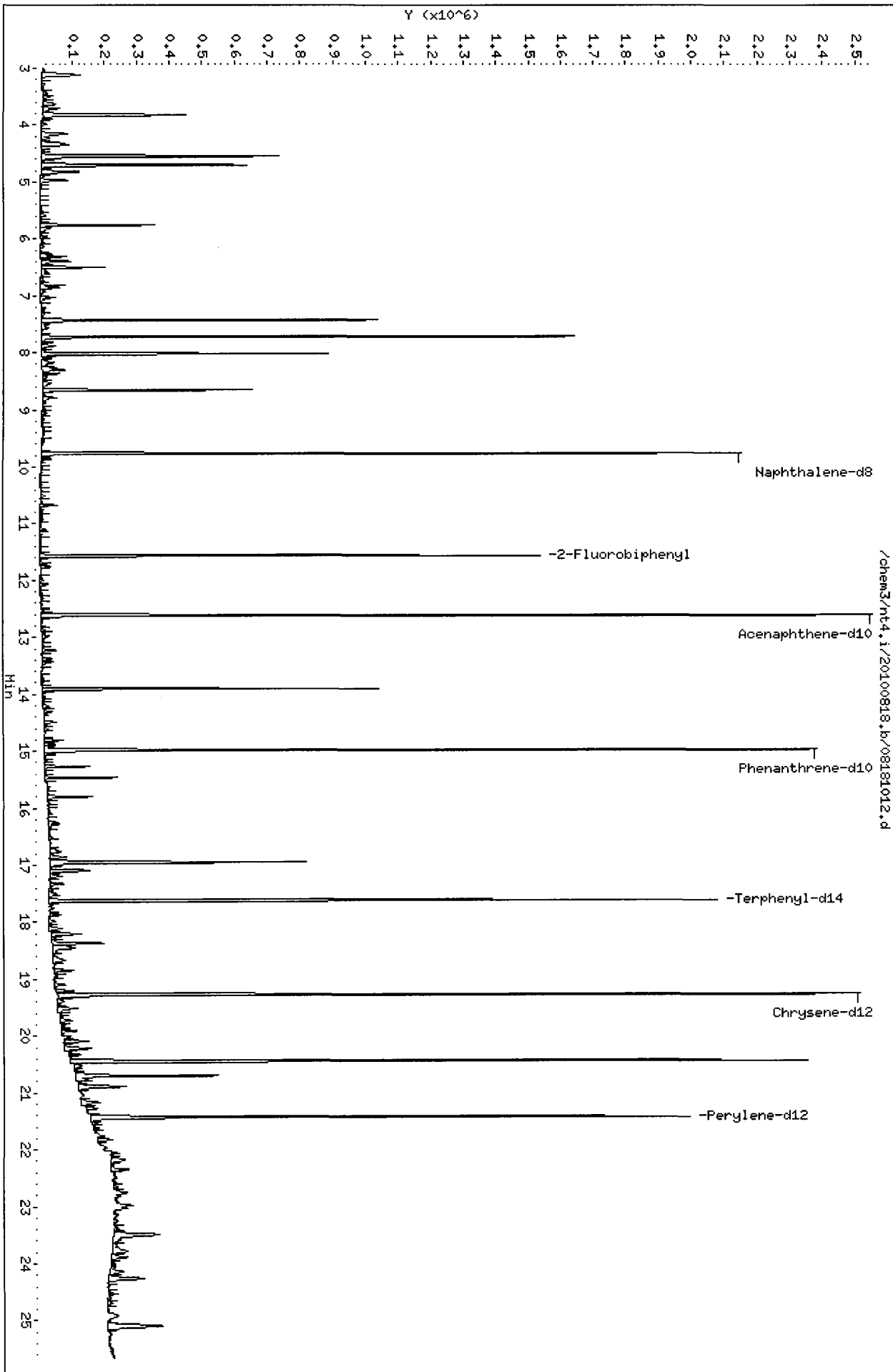
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd/Snider	Client SDG: RG79
Sample Matrix: SOLID	Fraction: SV
Lab Smp Id: RG79Q	Client Smp ID: PSB15-17-19-073010-
Level: LOW	Operator: JZ
Data Type: MS DATA	SampleType: SAMPLE
SpikeList File: pnaslcss.spk	Quant Type: ISTD
Sublist File: pnas.sub	
Method File: /chem3/nt4.i/20100818.b/SW846100719.m	
Misc Info: 10-18521	

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	489.8	281.4	57.46	34-100
\$ 66 Terphenyl-d14	489.8	366.9	74.90	35-112





**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: 172296 Column Type: ZB-5MS+  
 Instrument Tune (.U or .CT.): 100716 EM Voltage: 1247  
 Calibration File: 08191001 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														
<i>missing - Anal. Pinject</i>																			
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				
<i>5x is out</i>																			
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				
<i>5x is out</i>																			
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	536247	12.55	311511	14.92	540526	19.21	524158	21.37	377039				
<i>is out</i>																			
11	1918	08191011.d	RG790	PSB15-13-15-	3	9.72	1605673	12.56	993285	14.92	1633598	19.22	1528883	21.37	1121219				
<i>3x is out - AR Re-act.</i>																			
12	2001	08191012.d	Rinse0817	Rinse0817	5														
<i>[NO ISTDs FOUND]</i>																			
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				
<i>is out</i>																			
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				
<i>is out</i>																			
15	2141	08191015.d	RG79D	PSB11-2-4-07	10	9.72	1588583	12.56	1023882	14.92	1770132	19.23	1525443	21.40	762859				
<i>is out</i>																			
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				
<i>is out</i>																			

*AB 08/20/10*

**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/nt4.i/20100819.b

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

*AZ 08/20/10*

Time	Filename	LabID	ClientID	DF	Manually Integrated Compounds
1340	08191001.d	CC0819	CC0819	1	Benzyl alcohol,
2035	08191013.d	RG79B	PSB11-1.5-	10	Total Benzofluoranthenes,
2108	08191014.d	RG79C	PSB11-2-4-	10	NO MANUAL INTEGRATION
2141	08191015.d	RG79D	PSB11-2-4-	10	Total Benzofluoranthenes,

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	-----

*D* 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	%D / %DRIFT	%D / %DRIFT	
\$ 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	___		CCAL	MIN			MAX	CURVE TYPE
	RRF / AMOUNT	RF25	RRF25	RRF	%D / %DRIFT	%D / %DRIFT		
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 : lul 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

*D* 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				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		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		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	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

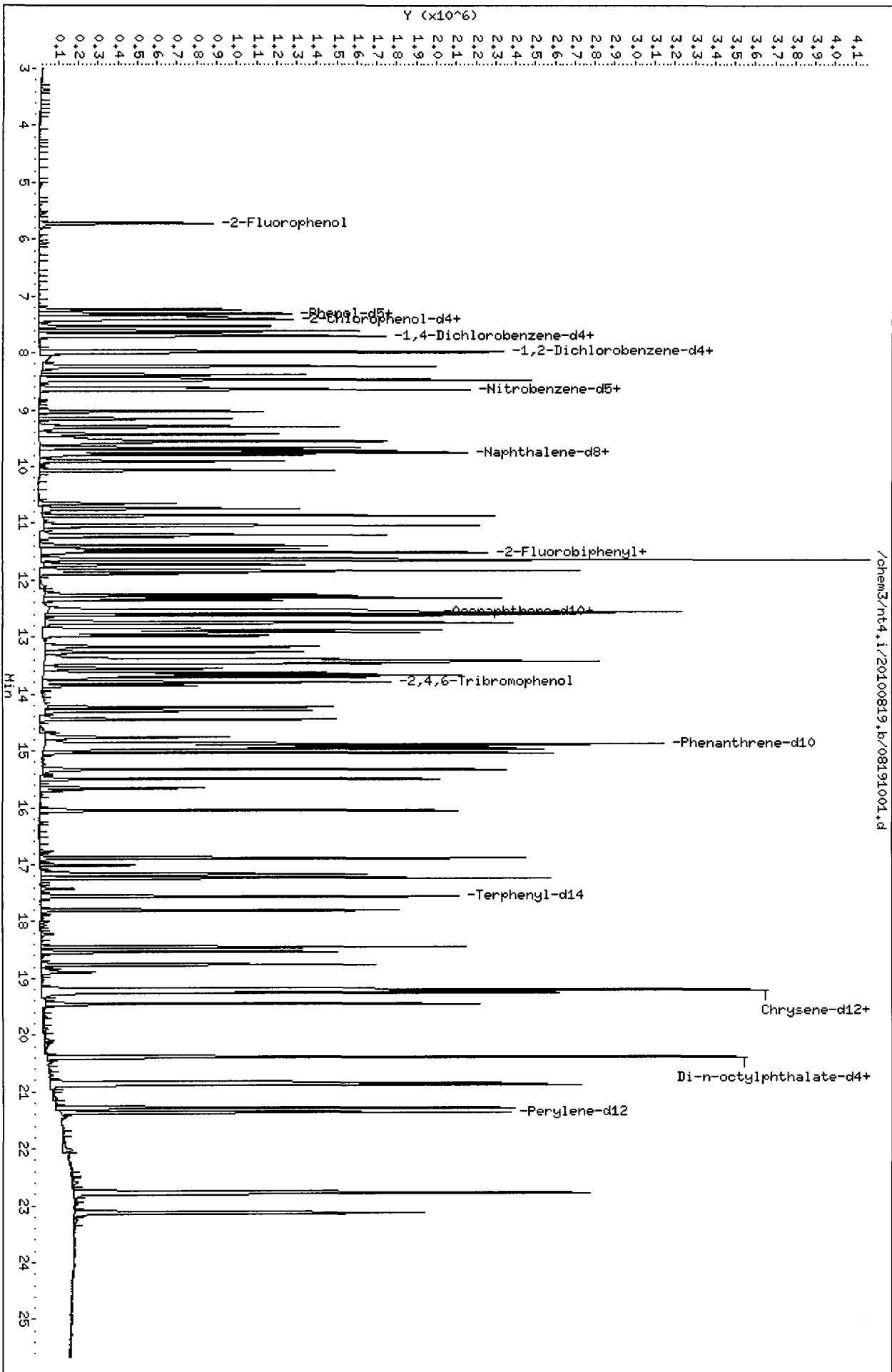
Instrument ID: nt4.i	Calibration Date: 19-AUG-2010
Lab File ID: 08191001.d	Calibration Time: 13:40
Lab Smp Id: CC0819	Client Smp ID: CC0819
Analysis Type: SV	Level:
Quant Type: ISTD	Sample Type:
Operator: JZ	
Method File: /chem3/nt4.i/20100819.b/SW846100719.m	
Misc Info: 10-	

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

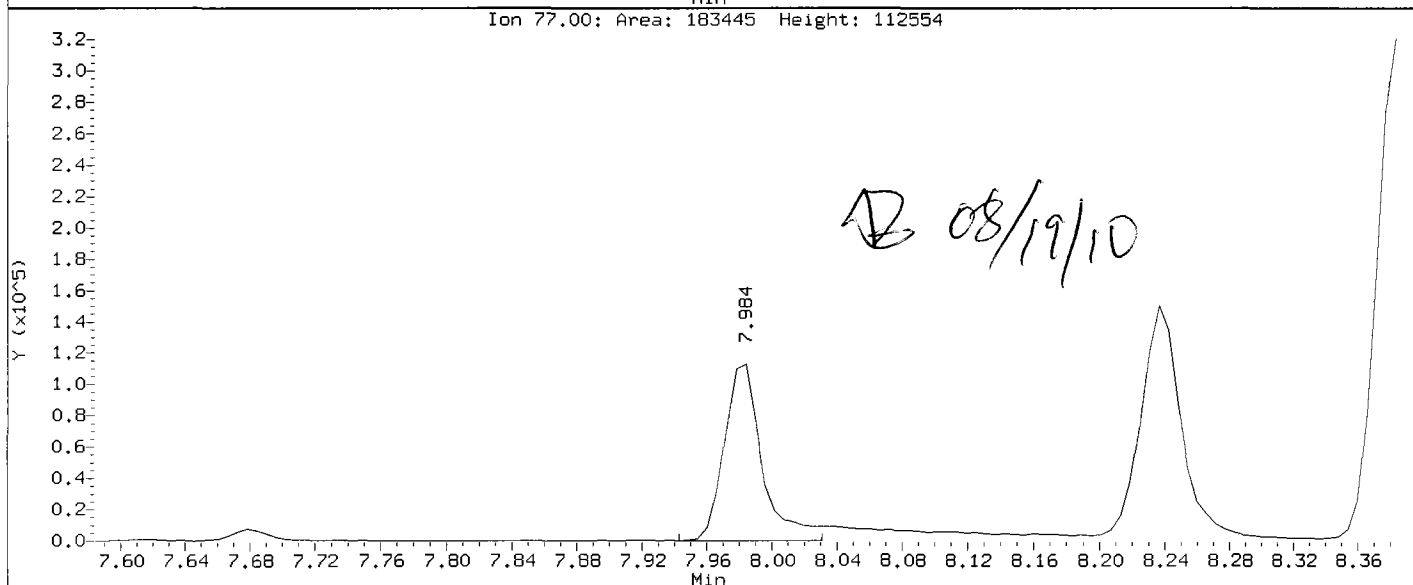
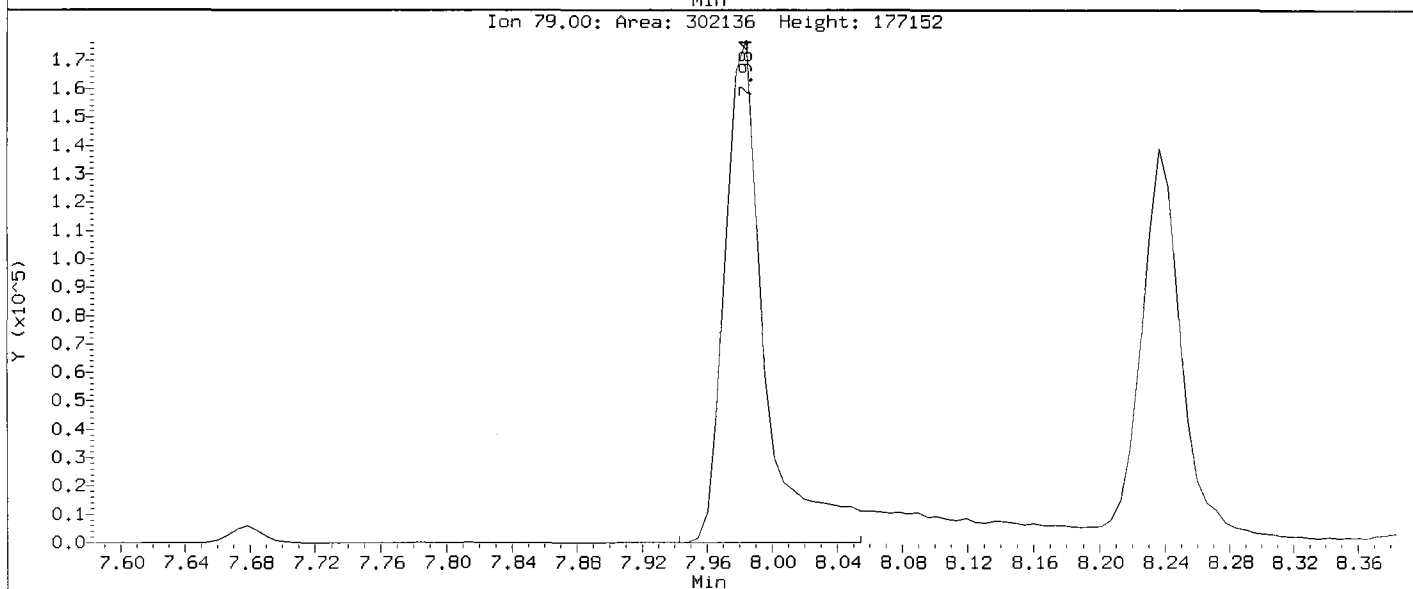
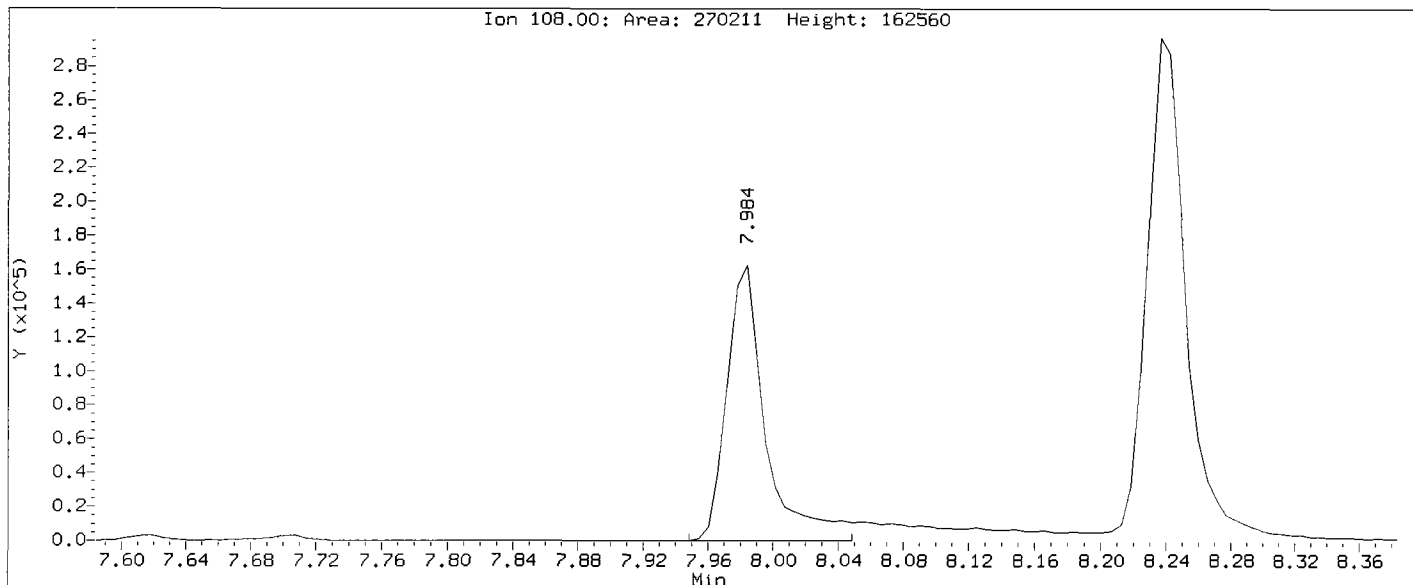
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	7.68	7.18	8.18	7.68	0.00
27 Naphthalene-d8	9.72	9.22	10.22	9.72	0.00
42 Acenaphthene-d10	12.57	12.07	13.07	12.57	0.00
59 Phenanthrene-d10	14.93	14.43	15.43	14.93	0.00
69 Chrysene-d12	19.22	18.72	19.72	19.22	0.00
134 Di-n-octylphthala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



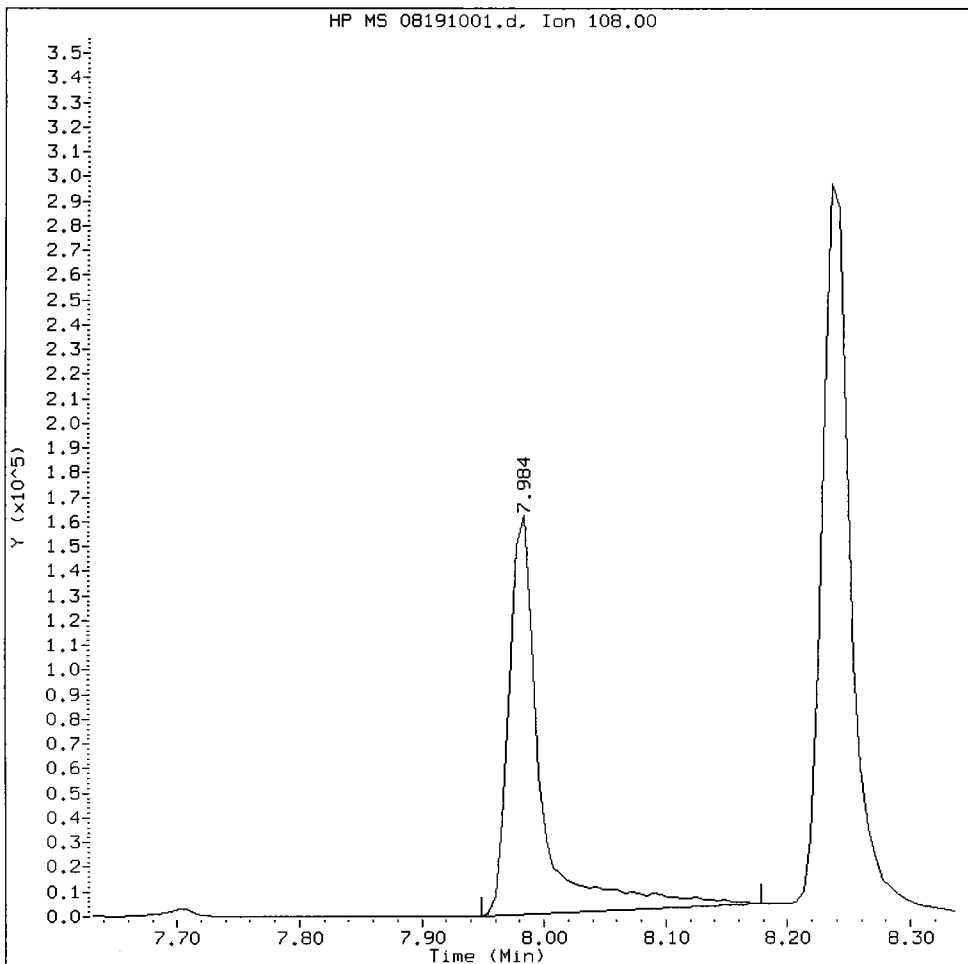
Data File: /chem3/nt4.i/20100819.b/08191001.d  
Injection Date: 19-AUG-2010 13:40  
Instrument: nt4.i  
Client Sample ID: CC0819

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



CC0819, /chem3/nt4.i/20100819.b/08191001.d

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

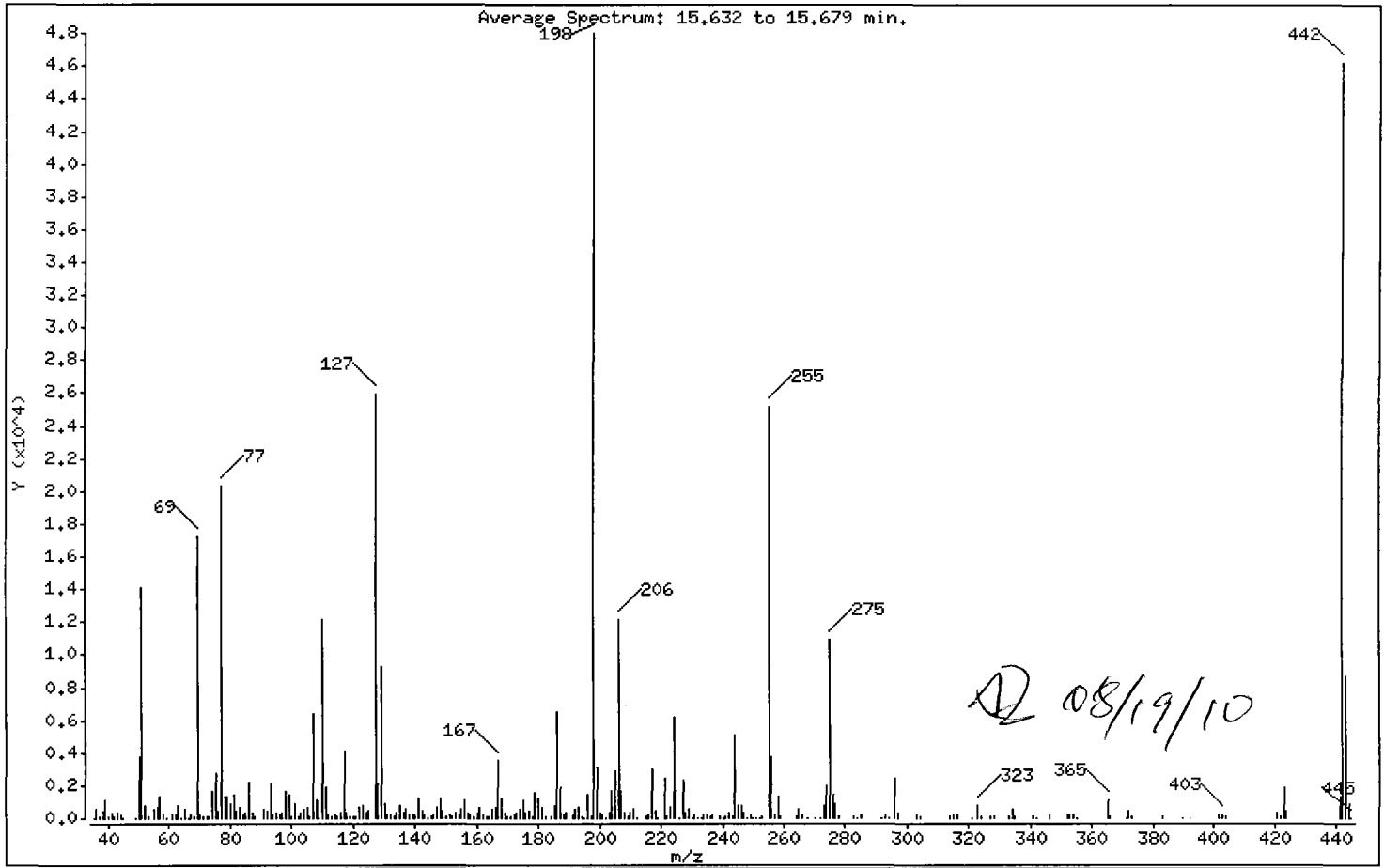
Sample Info: DFTPP0819,

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

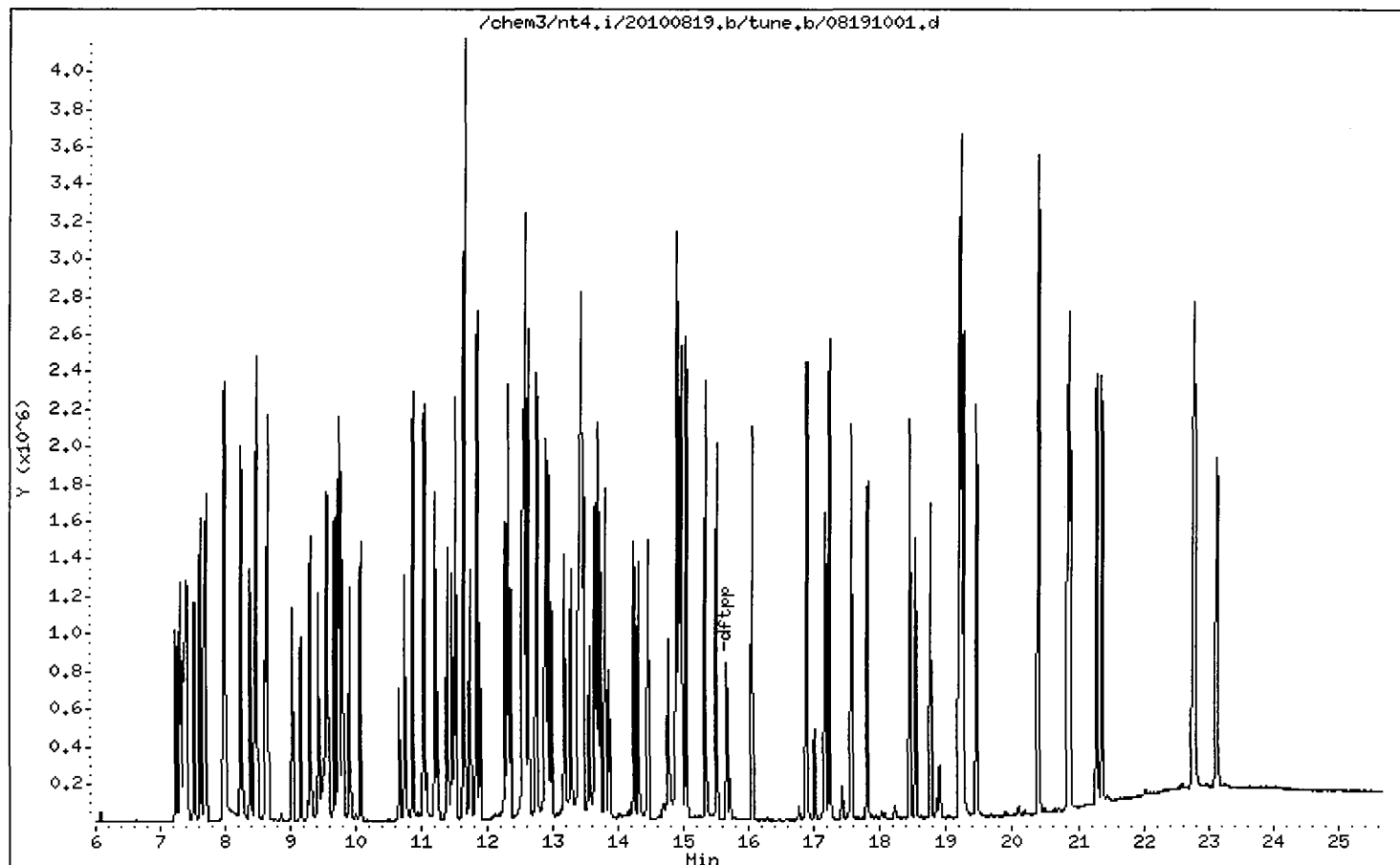
Instrument: nt4.i

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

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

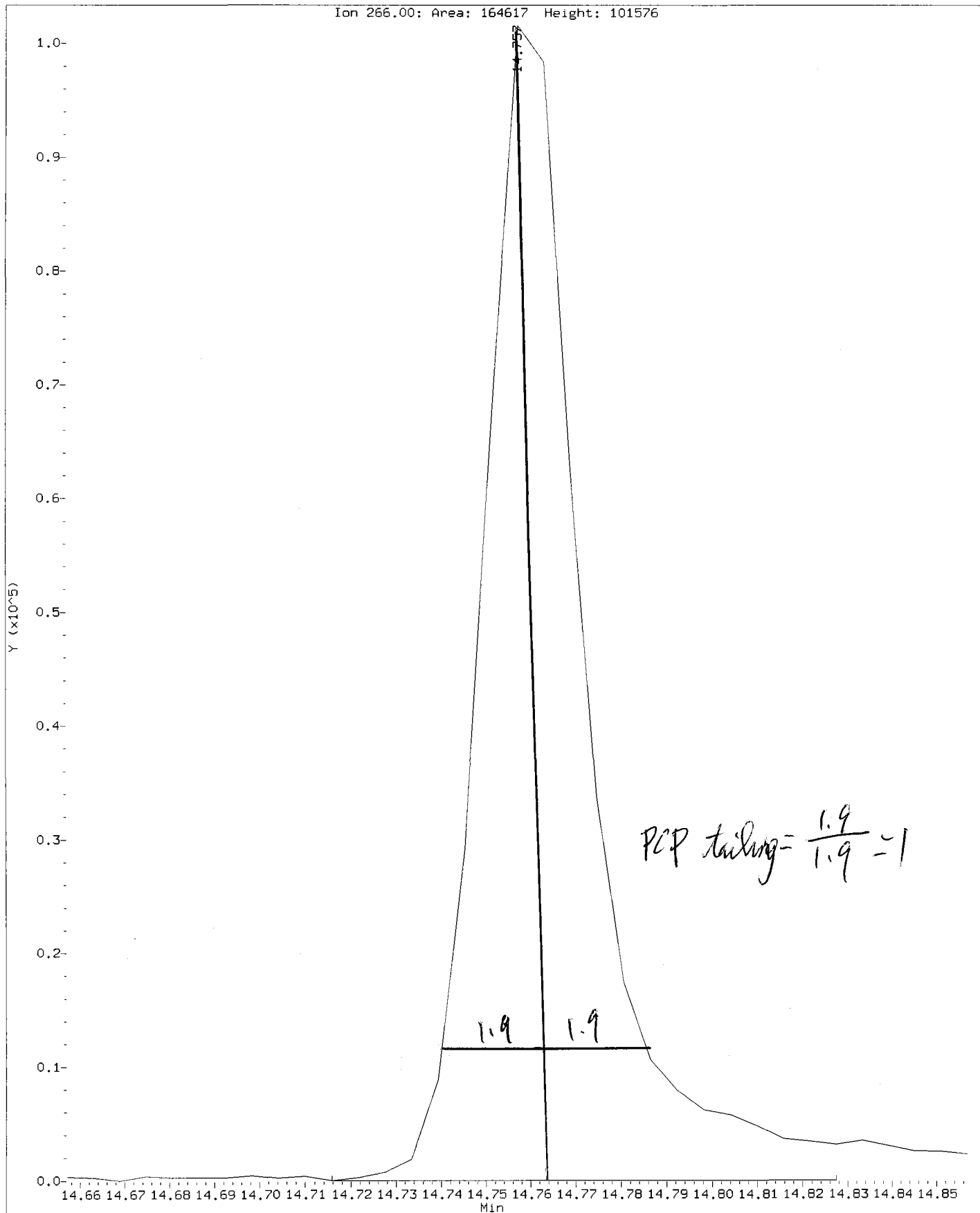
$$\text{DDT Percent Breakdown} = \frac{(0 + 8986) * 100}{(0 + 8986 + 456413)}$$

$$\text{DDT Percent Breakdown} = 1.9\% \quad \text{olq}$$

*Q*    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

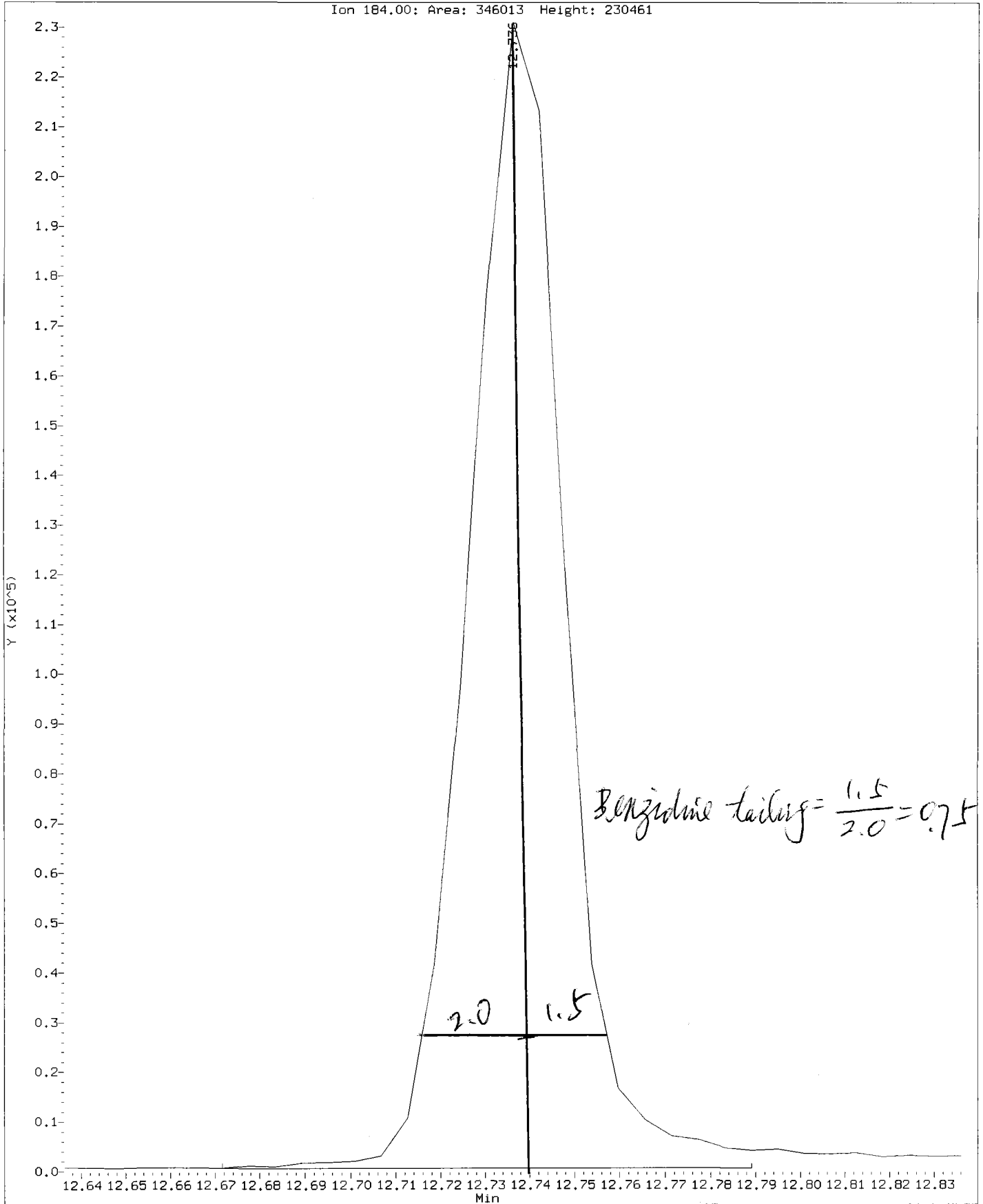
Compound: Pentachlorophenol  
CAS Number: 87-86-5



RG79: 00803

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:



Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100819.b/08191013.d  
 Lab Smp Id: RG79B Client Smp ID: PSB11-1.5-2-073010  
 Inj Date : 19-AUG-2010 20:35  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG79B,10  
 Misc Info : 10-18506  
 Comment : 1ul Injection  
 Method : /chem3/nt4.i/20100819.b/SW846100719.m  
 Meth Date : 20-Aug-2010 20:39 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 14  
 Dil Factor: 10.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*08/20/10*

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

Name	Value	Description
DF	10.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	28.60000	Weight of sample extracted (g)
M	8.60000	% 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	9.716	9.723	(1.000)		1581290	20.0000	
28 Naphthalene	128	9.746	9.752	(1.003)		61735	0.82280	157.4
32 2-Methylnaphthalene	142	10.862	10.868	(1.118)		49498	0.97074	185.7
105 1-methylnaphthalene	142	11.032	11.038	(1.135)		51856	1.03816	198.6
\$ 36 2-Fluorobiphenyl	172	11.508	11.514	(0.916)		87974	1.48626	284.3
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	12.559	12.566	(1.000)		966301	20.0000	
44 Acenaphthene	153	Compound Not Detected.						
46 Dibenzofuran	168	Compound Not Detected.						
49 Fluorene	166	13.423	13.429	(1.069)		49511	0.83176	159.1
* 59 Phenanthrene-d10	188	14.921	14.927	(1.000)		1688418	20.0000	
60 Phenanthrene	178	14.956	14.963	(1.002)		274360	3.13676	600.0
61 Anthracene	178	Compound Not Detected.						
64 Fluoranthene	202	16.889	16.889	(1.132)		173617	1.91581	366.4
65 Pyrene	202	17.241	17.236	(0.897)		225695	2.33866	447.3

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	=====	==	=====	=====	=====	=====	=====
\$ 66 Terphenyl-d14	244	17.570	17.565	(0.914)	78352	1.32952	254.3
68 Benzo(a)anthracene	228	19.203	19.192	(0.999)	60138	0.67408	128.9
* 69 Chrysene-d12	240	19.227	19.221	(1.000)	1521945	20.0000	
71 Chrysene	228	19.262	19.263	(1.002)	79791	0.91379	174.8
187 Total Benzofluoranthenes	252	20.866	20.878	(0.976)	59156	1.07388	205.4 (M)
76 Benzo(a)pyrene	252	21.306	21.289	(0.996)	27867	0.54064	103.4
* 77 Perylene-d12	264	21.389	21.366	(1.000)	933504	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

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt4.i	Calibration Date: 19-AUG-2010
Lab File ID: 08191013.d	Calibration Time: 13:40
Lab Smp Id: RG79B	Client Smp ID: PSB11-1.5-2-0730
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Soil
Operator: JZ	
Method File: /chem3/nt4.i/20100819.b/SW846100719.m	
Misc Info: 10-18506	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1581290	22.26
42 Acenaphthene-d10	785897	392948	1571794	966301	22.96
59 Phenanthrene-d10	1313990	656995	2627980	1688418	28.50
69 Chrysene-d12	1155293	577646	2310586	1521945	31.74
77 Perylene-d12	1146289	573144	2292578	933504	-18.56

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.72	9.22	10.22	9.72	-0.07
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	19.23	0.03
77 Perylene-d12	21.37	20.87	21.87	21.39	0.11

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: RG79
Sample Matrix: SOLID	Fraction: SV
Lab Smp Id: RG79B	Client Smp ID: PSB11-1.5-2-073010
Level: LOW	Operator: JZ
Data Type: MS DATA	SampleType: SAMPLE
SpikeList File: pnaslcss.spk	Quant Type: ISTD
Sublist File: pnas.sub	
Method File: /chem3/nt4.i/20100819.b/SW846100719.m	
Misc Info: 10-18506	

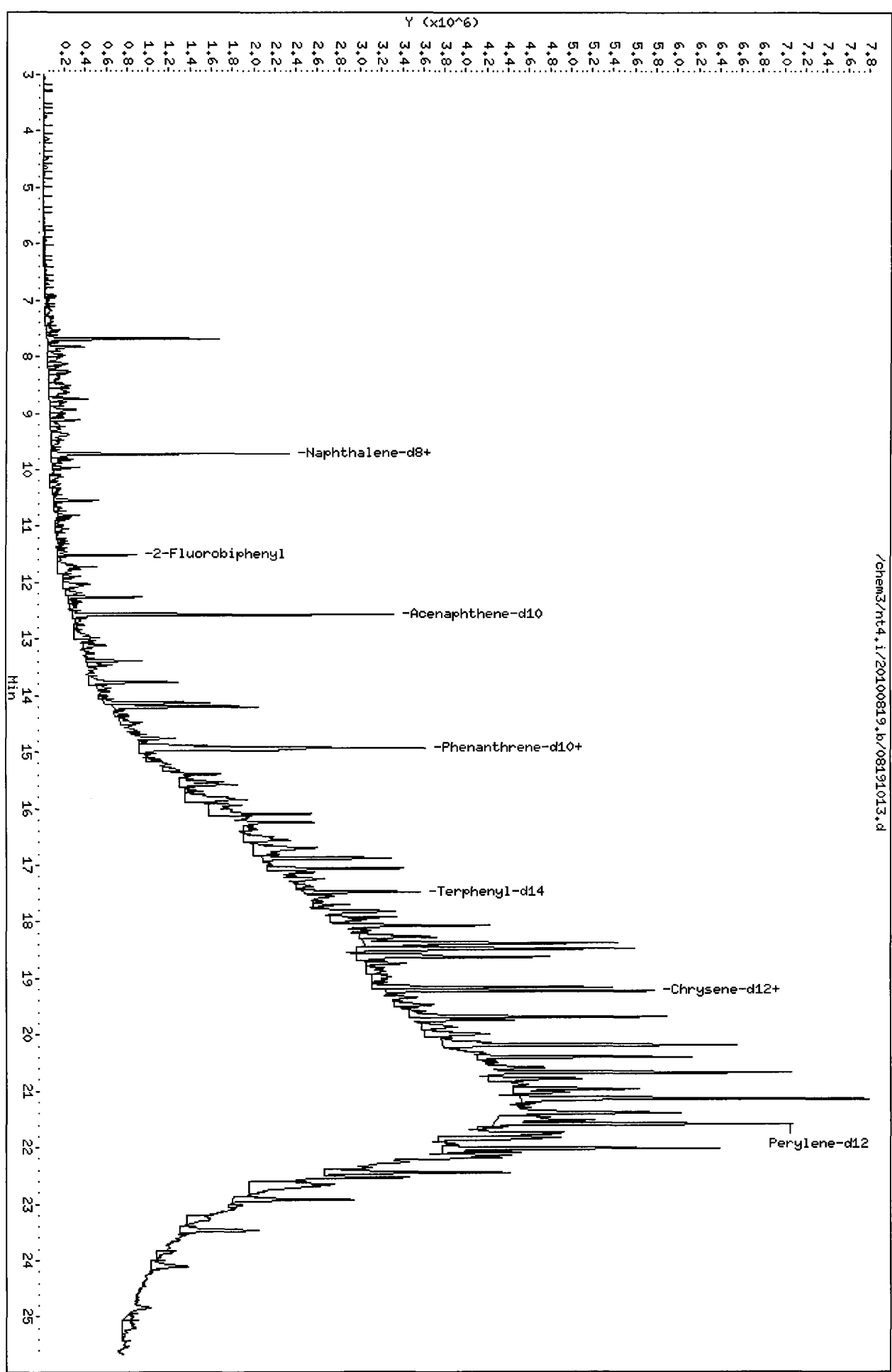
SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	478.2	284.3	59.45	34-100
\$ 66 Terphenyl-d14	478.2	254.3	53.18	35-112



Data File: /chem3/nt4.i/20100819.b/08191013.d  
Date: 19-AUG-2010 20:35  
Client ID: PSB11-1.5-2-073010  
Sample Info: RG79B,10  
Volume Injected (uL): 1.0  
Column phase: ZB-5ms1

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

/chem3/nt4.i/20100819.b/08191013.d



Date : 19-AUG-2010 20:35

Client ID: PSB11-1.5-2-073010

Instrument: nt4.i

Sample Info: RG79B,10

Volume Injected (uL): 1.0

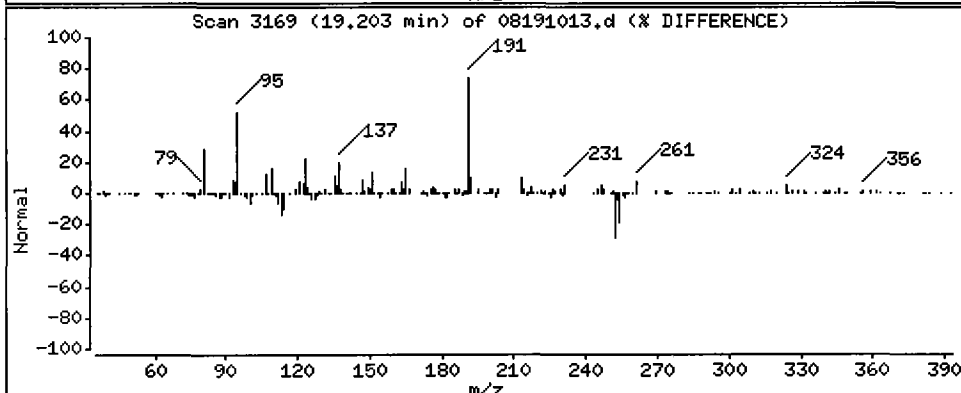
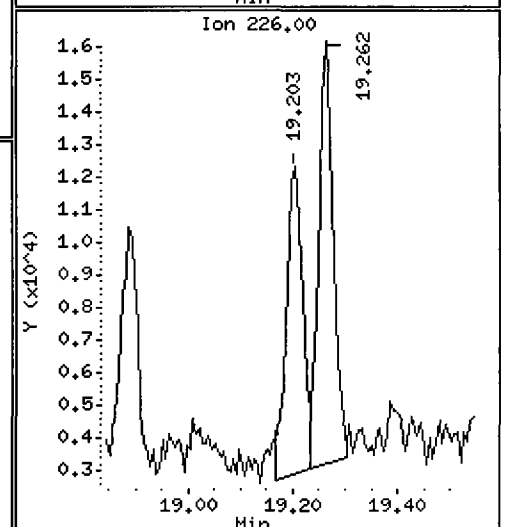
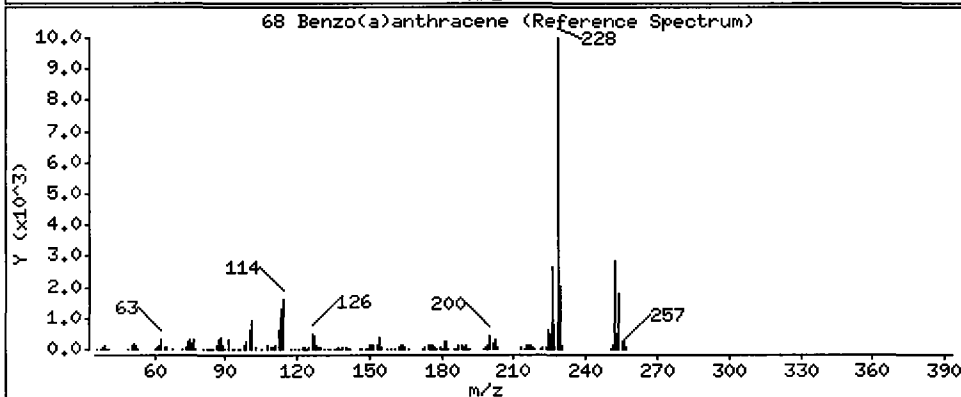
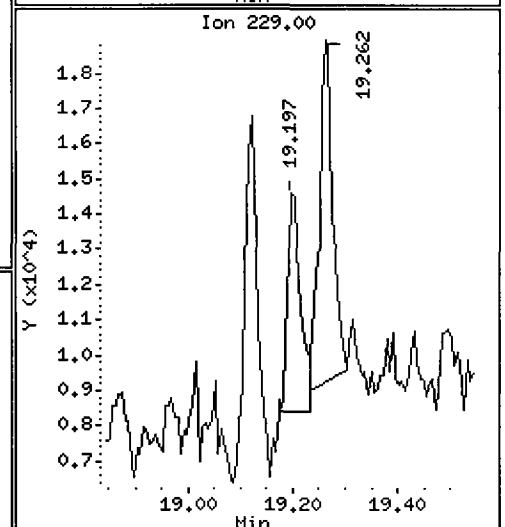
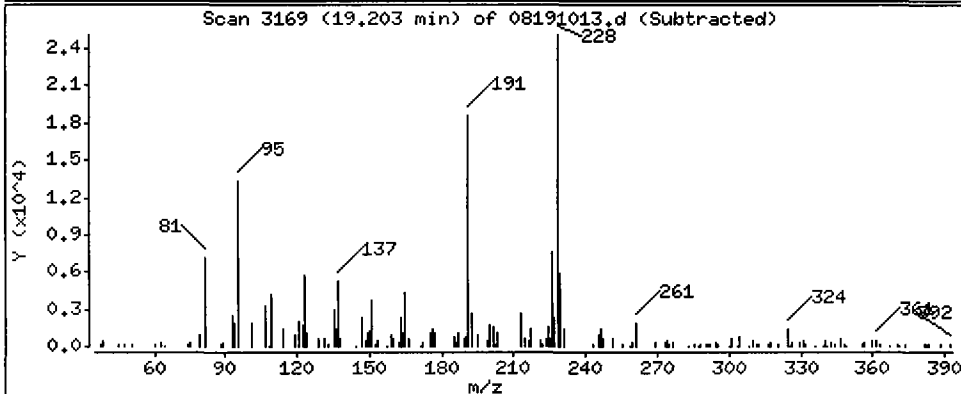
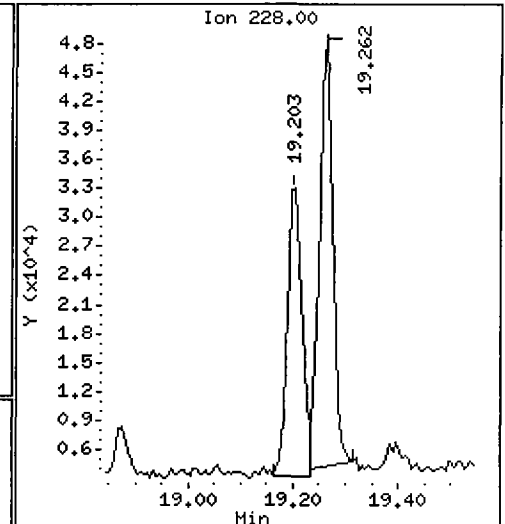
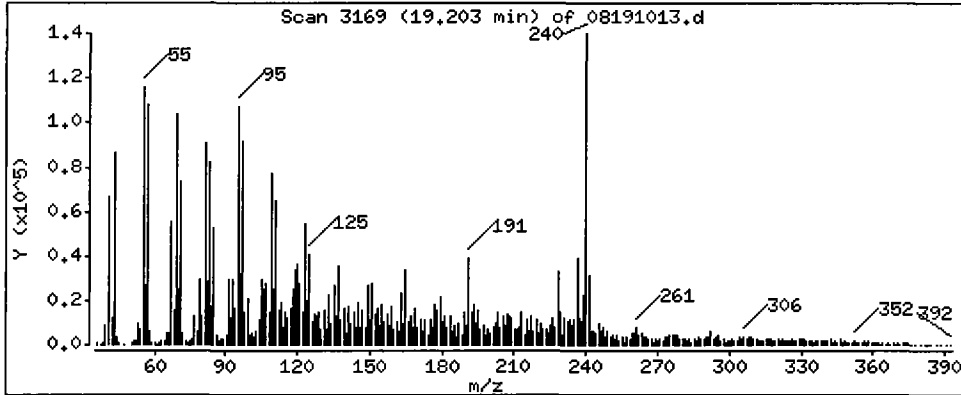
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

68 Benzo(a)anthracene

Concentration: 128.9 ug/kg



Date : 19-AUG-2010 20:35

Client ID: PSB11-1.5-2-073010

Instrument: nt4.i

Sample Info: RG79B,10

Volume Injected (uL): 1.0

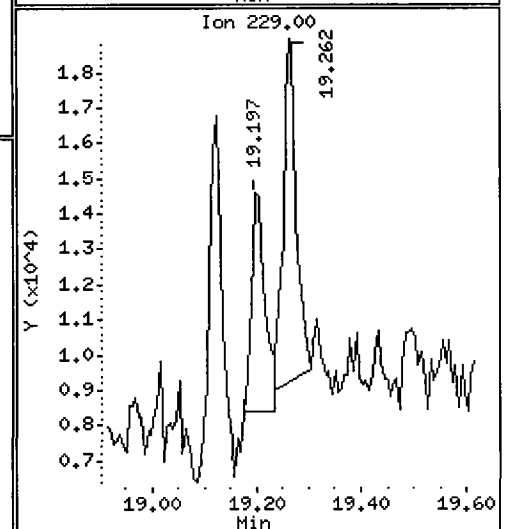
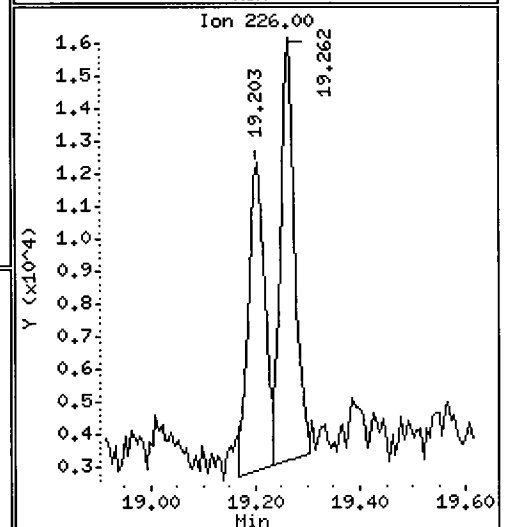
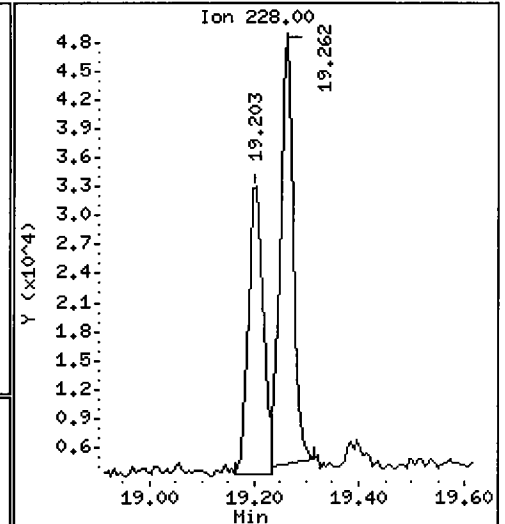
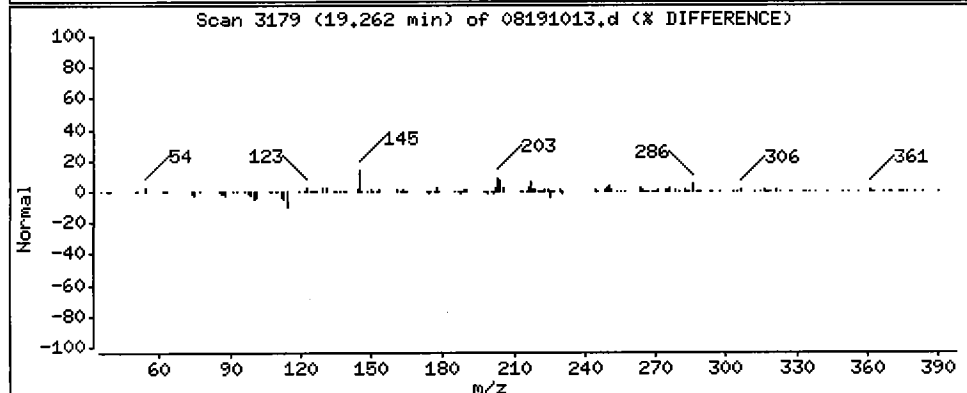
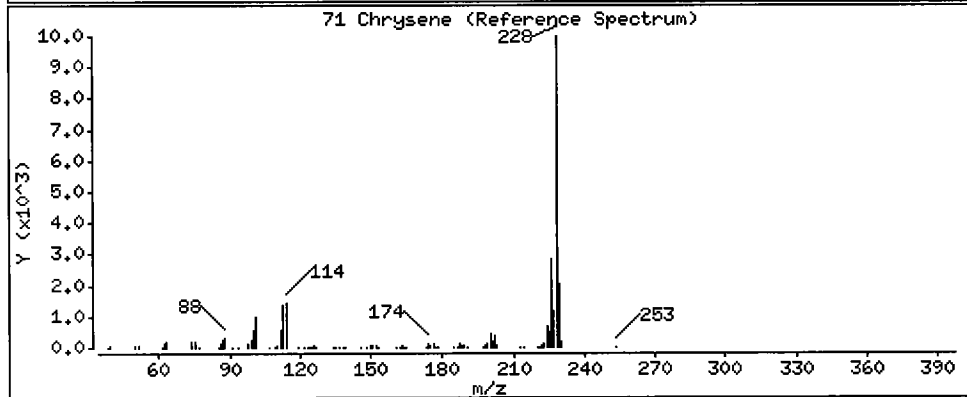
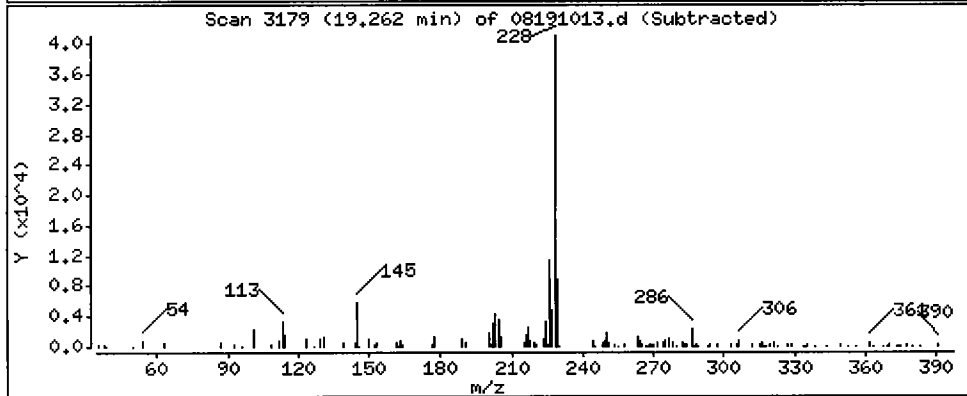
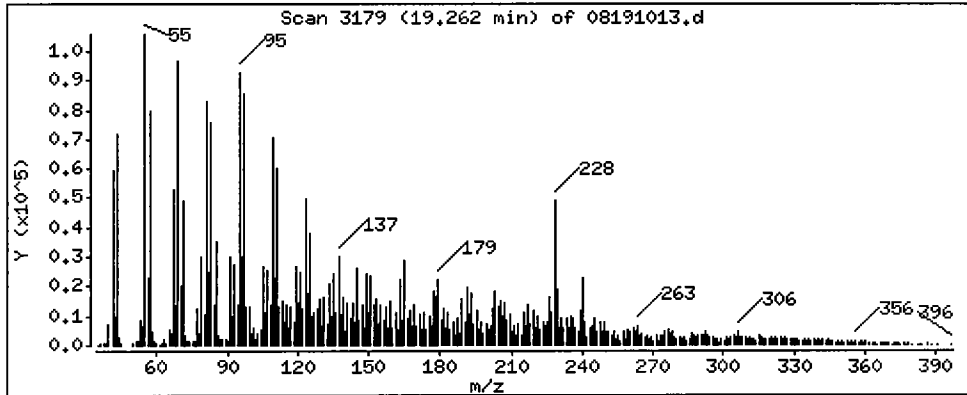
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

71 Chrysene

Concentration: 174.8 ug/kg



Date : 19-AUG-2010 20:35

Client ID: PSB11-1.5-2-073010

Instrument: nt4.i

Sample Info: RG79B,10

Volume Injected (uL): 1.0

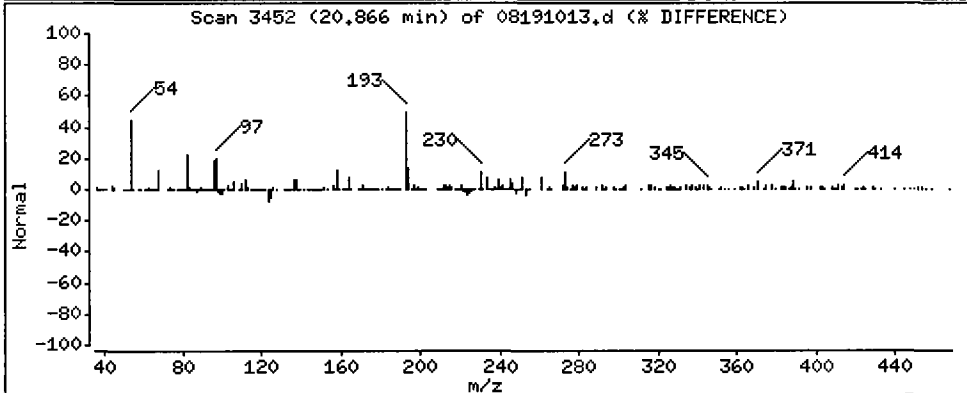
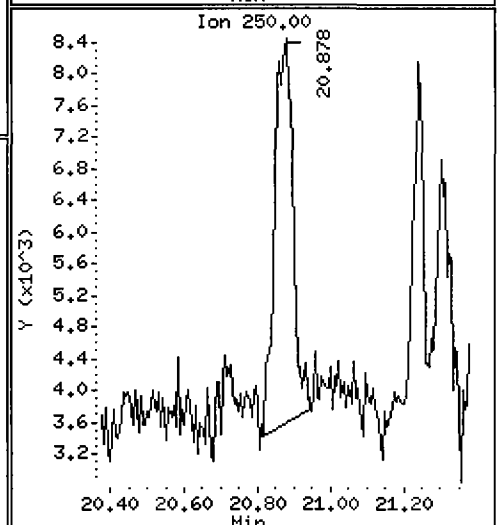
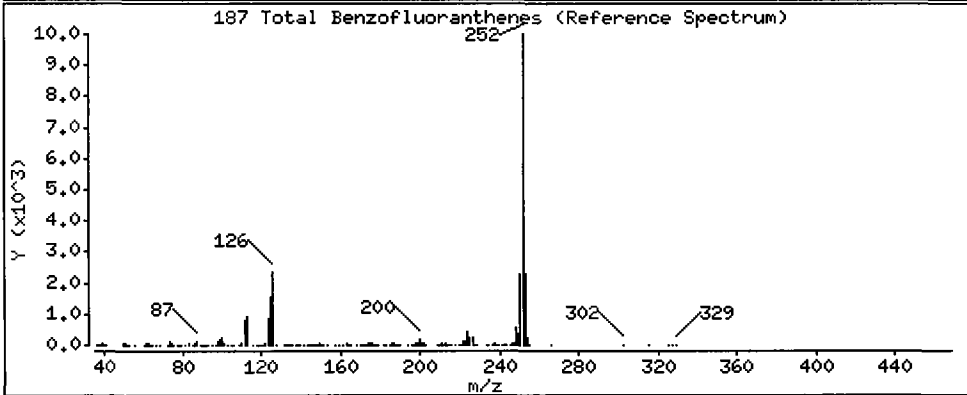
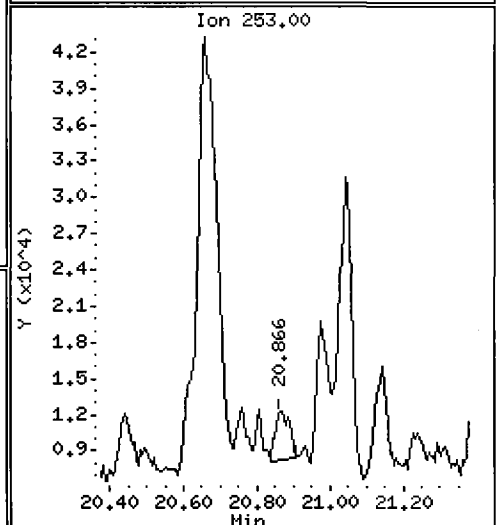
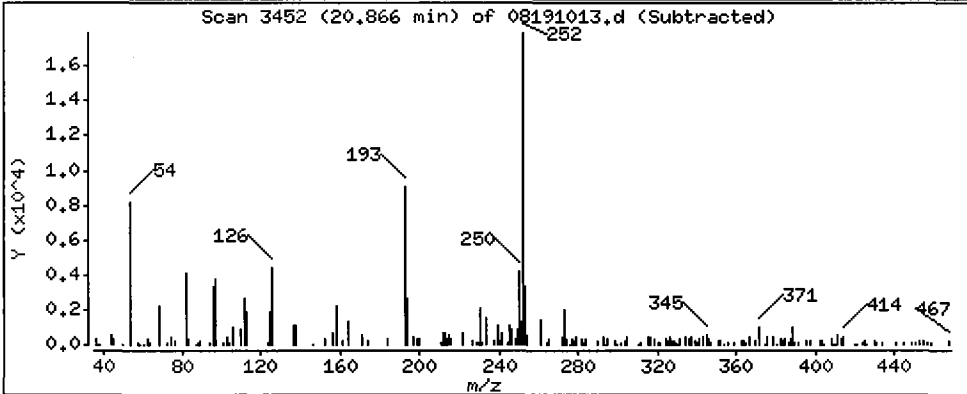
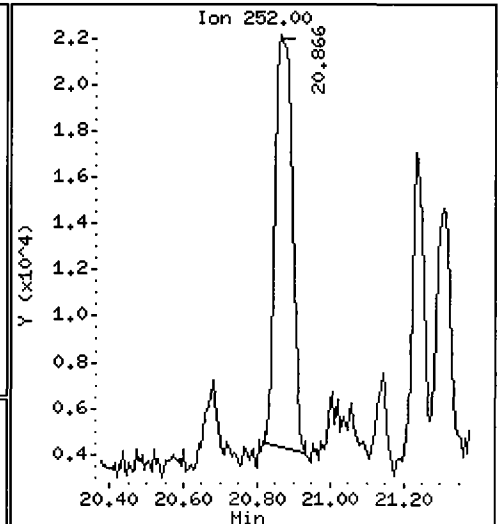
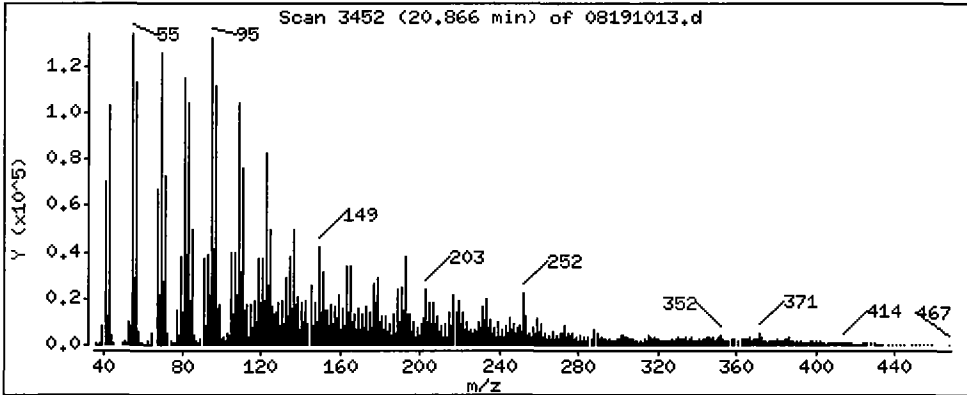
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

187 Total Benzofluoranthenes

Concentration: 205.4 ug/kg



Date : 19-AUG-2010 20:35

Client ID: PSB11-1.5-2-073010

Instrument: nt4.i

Sample Info: RG79B,10

Volume Injected (uL): 1.0

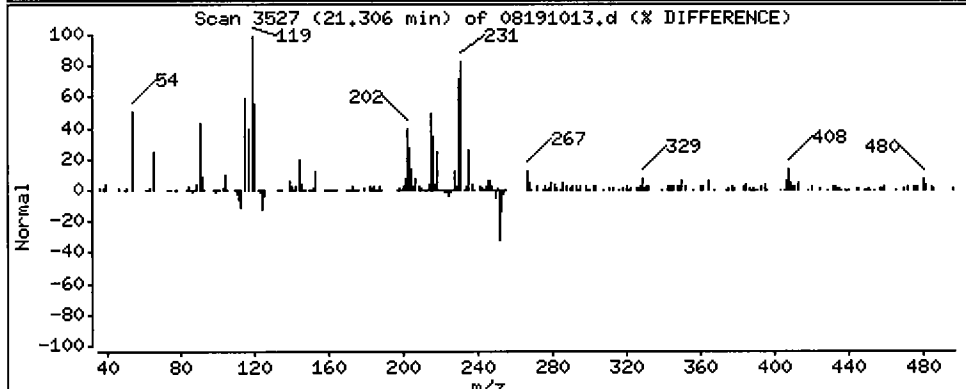
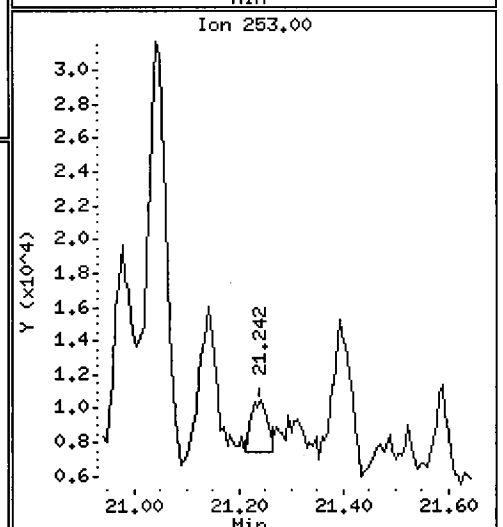
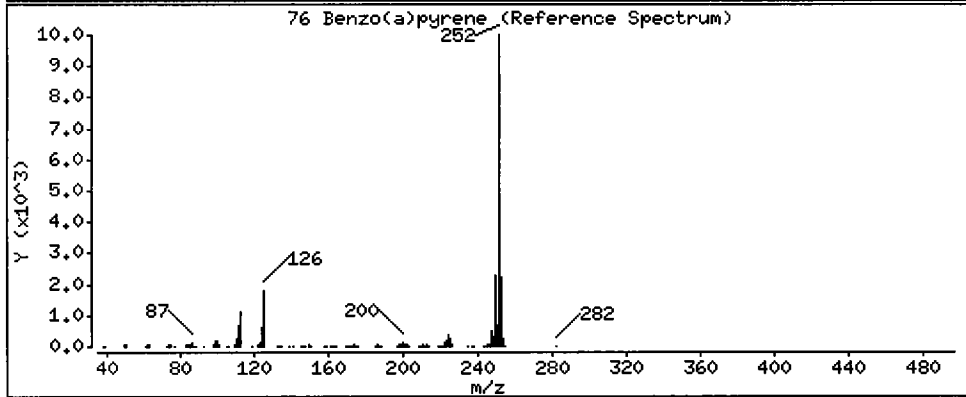
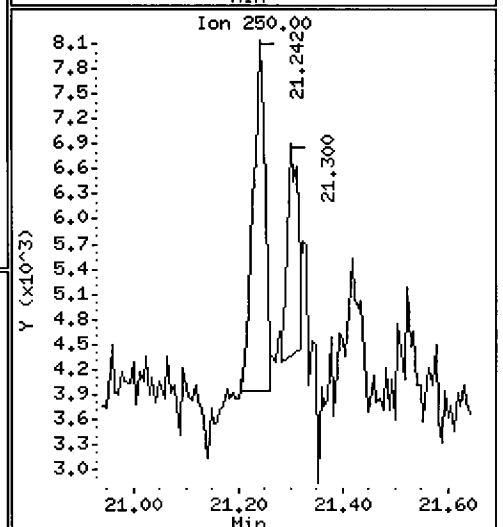
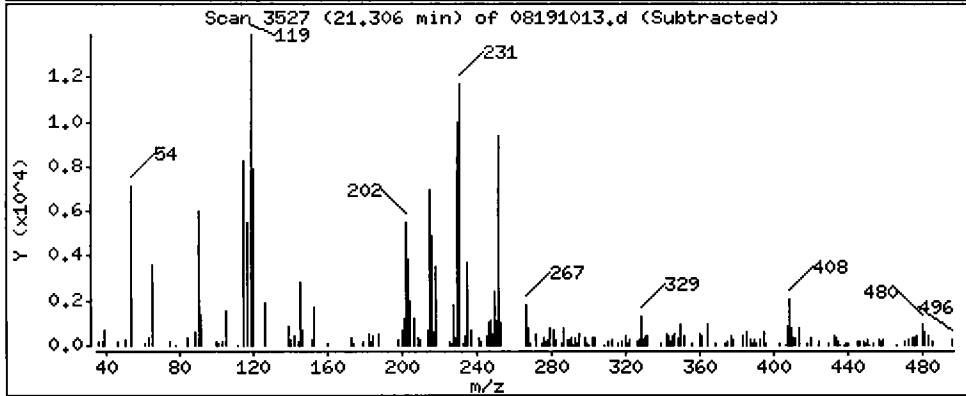
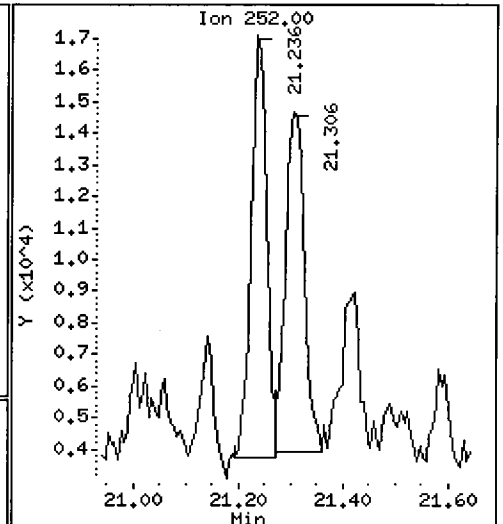
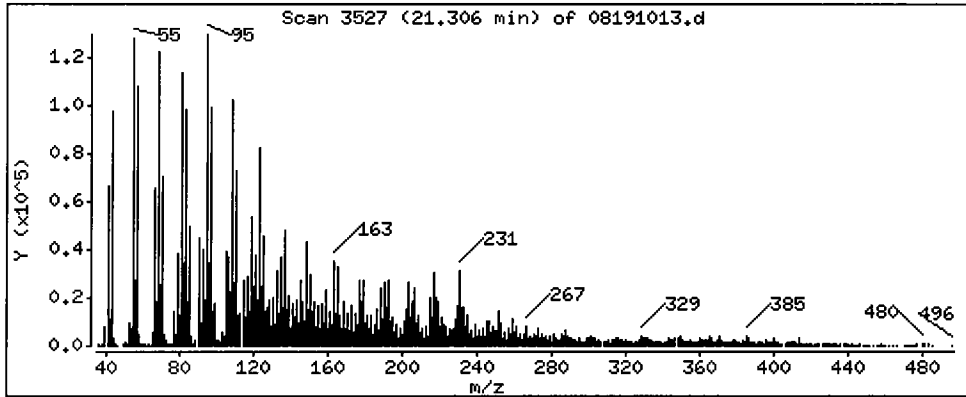
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

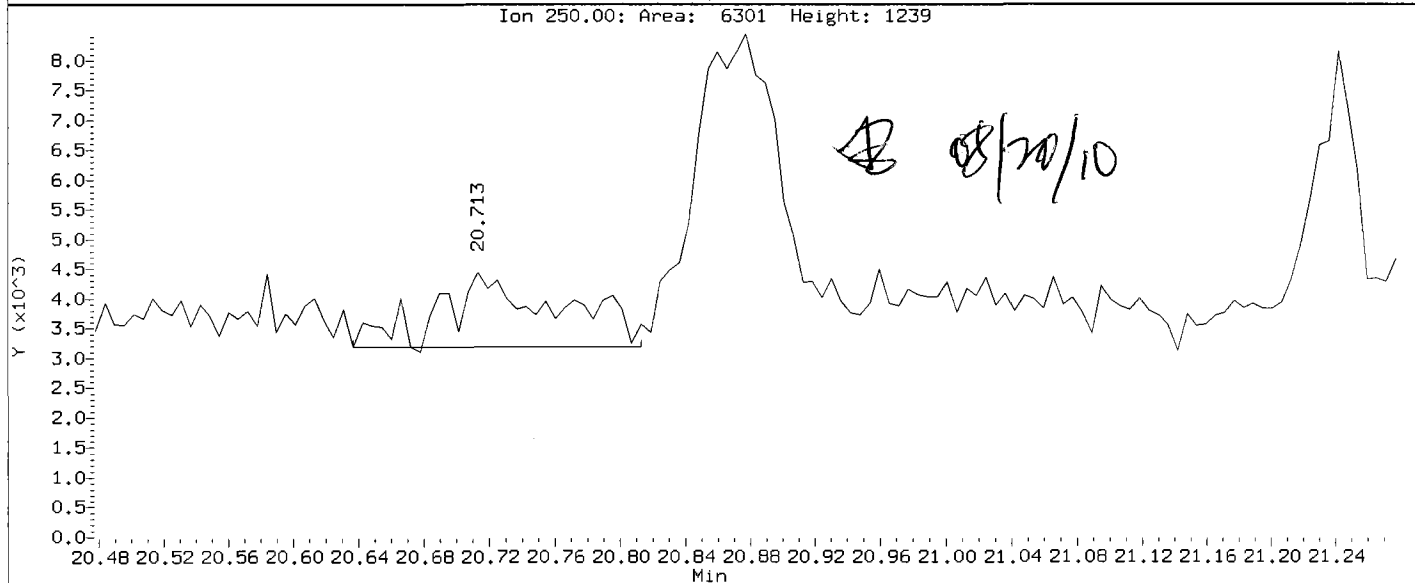
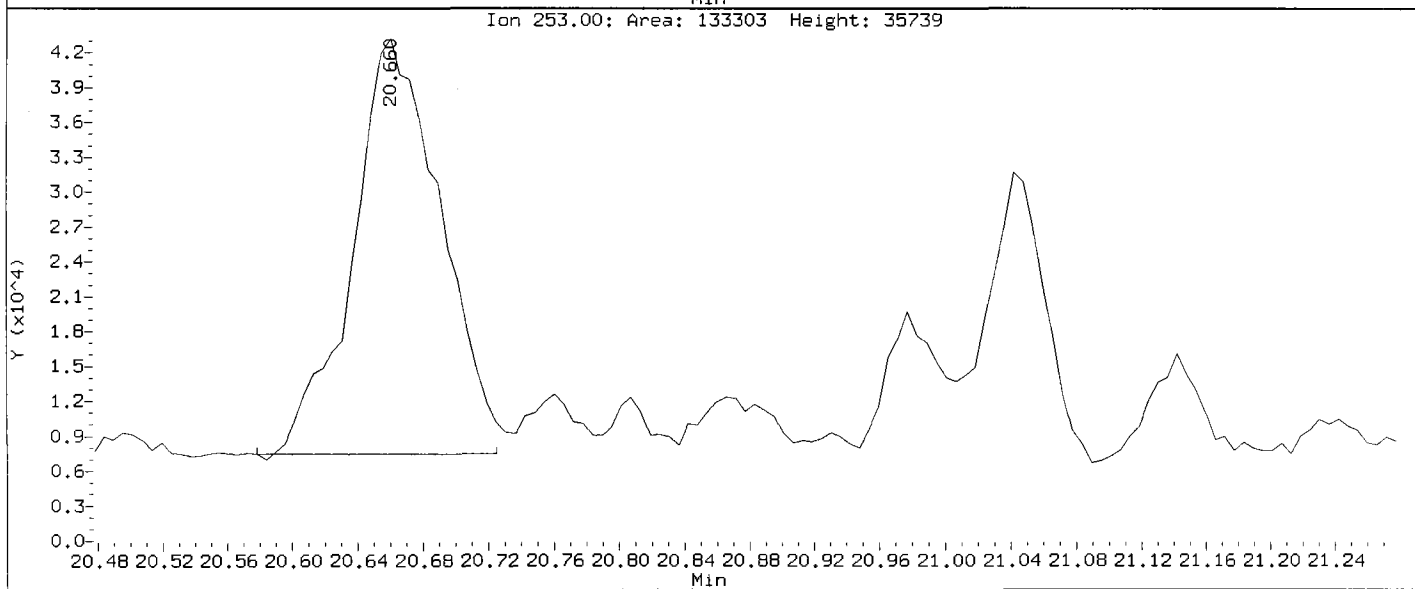
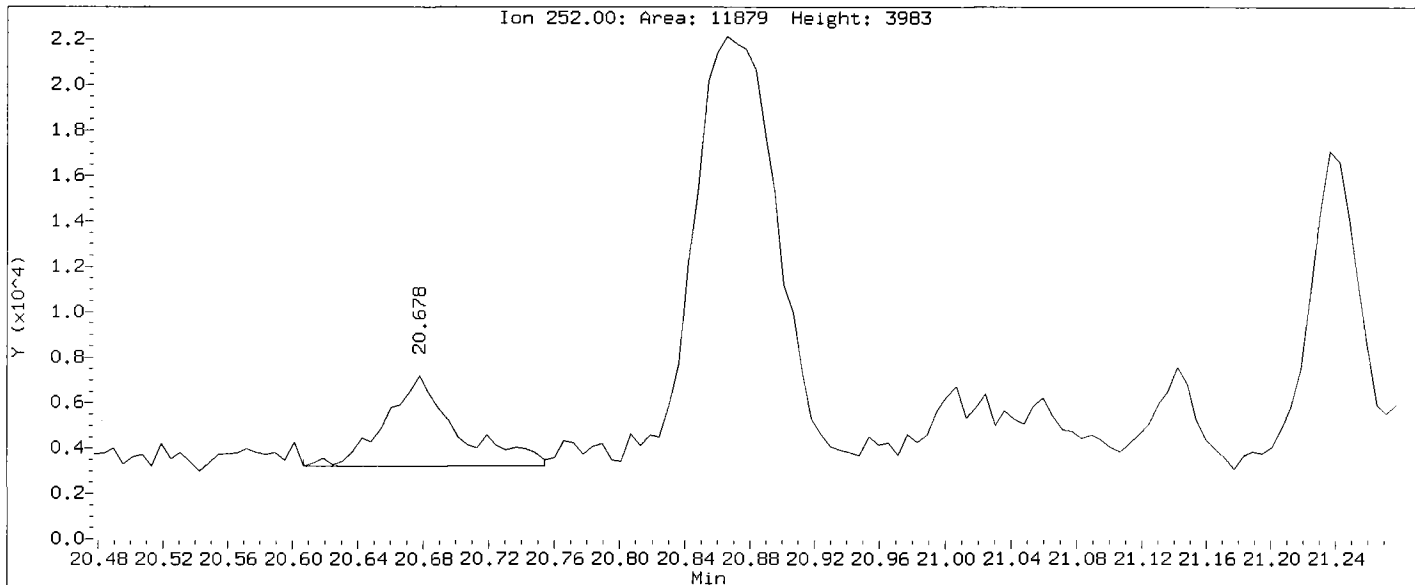
76 Benzo(a)pyrene

Concentration: 103.4 ug/kg



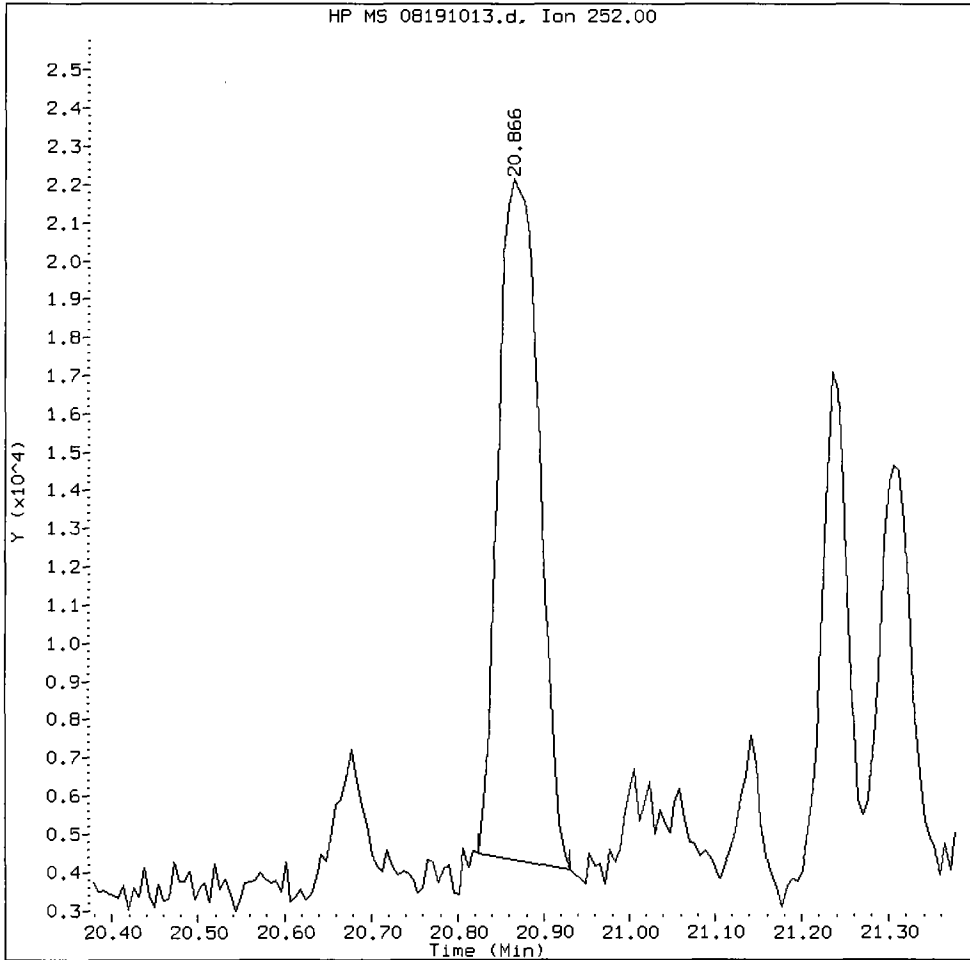
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Injection Date: 19-AUG-2010 20:35  
Instrument: nt4.1  
Client Sample ID: PSB11-1.5-2-073010

Compound: Total Benzofluoranthenes  
CAS Number:



RG79B, /chem3/nt4.i/20100819.b/08191013.d

Total Benzofluoranthenes Amount: 1.07 Area: 59156



MANUAL INTEGRATION for Total Benzofluoranthenes

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

Analyst:       *AS*      

Date:       *08/20/10*

Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100819.b/08191014.d  
 Lab Smp Id: RG79C Client Smp ID: PSB11-2-4-073010  
 Inj Date : 19-AUG-2010 21:08  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG79C,10  
 Misc Info : 10-18507  
 Comment : 1ul Injection  
 Method : /chem3/nt4.i/20100819.b/SW846100719.m  
 Meth Date : 20-Aug-2010 20:39 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 15  
 Dil Factor: 10.00000  
 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	10.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	30.20000	Weight of sample extracted (g)
M	15.30000	% 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	9.716	9.723	(1.000)	1714387	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	11.507	11.514	(0.916)	45656	0.70860	277.0	
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	12.559	12.566	(1.000)	1051836	20.0000		
44 Acenaphthene	153	Compound Not Detected.						
46 Dibenzofuran	168	Compound Not Detected.						
49 Fluorene	166	Compound Not Detected.						
* 59 Phenanthrene-d10	188	14.920	14.927	(1.000)	1832866	20.0000		
60 Phenanthrene	178	Compound Not Detected.						
61 Anthracene	178	Compound Not Detected.						
64 Fluoranthene	202	16.888	16.889	(1.132)	51097	0.51940	203.1	
65 Pyrene	202	17.241	17.236	(0.896)	159879	1.83910	719.0	



Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	=====	==	=====	=====	=====	=====	=====
\$ 66 Terphenyl-d14	244	17.570	17.565	(0.913)	48029	0.90472	353.7
68 Benzo(a)anthracene	228	Compound Not Detected.					
* 69 Chrysene-d12	240	19.238	19.221	(1.000)	1370983	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	21.417	21.366	(1.000)	624089	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: 08191014.d	Calibration Time: 13:40
Lab Smp Id: RG79C	Client Smp ID: PSB11-2-4-073010
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Soil
Operator: JZ	
Method File: /chem3/nt4.i/20100819.b/SW846100719.m	
Misc Info: 10-18507	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1714387	32.55
42 Acenaphthene-d10	785897	392948	1571794	1051836	33.84
59 Phenanthrene-d10	1313990	656995	2627980	1832866	39.49
69 Chrysene-d12	1155293	577646	2310586	1370983	18.67
77 Perylene-d12	1146289	573144	2292578	624089	-45.56

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.72	9.22	10.22	9.72	-0.07
42 Acenaphthene-d10	12.57	12.07	13.07	12.56	-0.06
59 Phenanthrene-d10	14.93	14.43	15.43	14.92	-0.05
69 Chrysene-d12	19.22	18.72	19.72	19.24	0.09
77 Perylene-d12	21.37	20.87	21.87	21.42	0.24

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

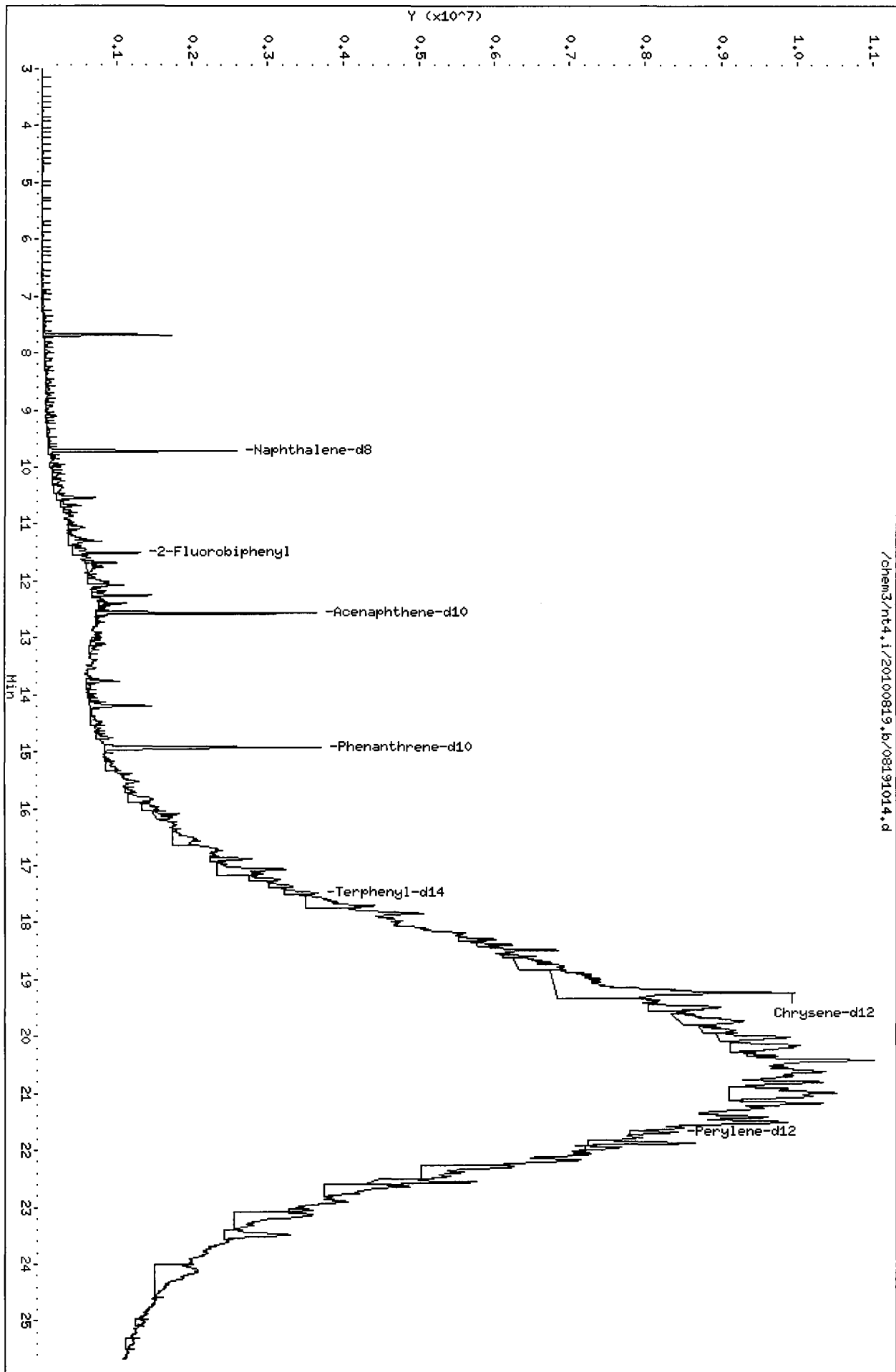
Client Name: Floyd/Snider	Client SDG: RG79
Sample Matrix: SOLID	Fraction: SV
Lab Smp Id: RG79C	Client Smp ID: PSB11-2-4-073010
Level: LOW	Operator: JZ
Data Type: MS DATA	SampleType: SAMPLE
SpikeList File: pnaslcss.spk	Quant Type: ISTD
Sublist File: pnas.sub	
Method File: /chem3/nt4.i/20100819.b/SW846100719.m	
Misc Info: 10-18507	

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	488.7	277.0	56.69	34-100
\$ 66 Terphenyl-d14	488.7	353.7	72.38	35-112

Data File: /chem3/nt4.i/20100819.b/08191014.d  
Date : 19-AUG-2010 21:08  
Client ID: PSB11-2-4-073010  
Sample Info: RG79C,10  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

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

/chem3/nt4.i/20100819.b/08191014.d



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100819.b/08191015.d  
 Lab Smp Id: RG79D Client Smp ID: PSB11-2-4-073010-D  
 Inj Date : 19-AUG-2010 21:41  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG79D,10  
 Misc Info : 10-18508  
 Comment : 1ul Injection  
 Method : /chem3/nt4.i/20100819.b/SW846100719.m  
 Meth Date : 20-Aug-2010 20:39 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 16  
 Dil Factor: 10.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*DZ 08/10/10*

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

Name	Value	Description
DF	10.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	30.60000	Weight of sample extracted (g)
M	14.10000	% 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	9.716	9.723	(1.000)	1588583	20.0000	
28 Naphthalene	128	9.745	9.752	(1.003)	40132	0.53242	101.3
32 2-Methylnaphthalene	142	10.861	10.868	(1.118)	27693	0.54061	102.8
105 1-methylnaphthalene	142	Compound Not Detected.					
\$ 36 2-Fluorobiphenyl	172	11.508	11.514	(0.916)	106471	1.69760	322.9
40 Acenaphthylene	152	Compound Not Detected.					
* 42 Acenaphthene-d10	164	12.559	12.566	(1.000)	1023882	20.0000	
44 Acenaphthene	153	Compound Not Detected.					
46 Dibenzofuran	168	Compound Not Detected.					
49 Fluorene	166	Compound Not Detected.					
* 59 Phenanthrene-d10	188	14.921	14.927	(1.000)	1770132	20.0000	
60 Phenanthrene	178	14.956	14.963	(1.002)	93256	1.01698	193.4
61 Anthracene	178	Compound Not Detected.					
64 Fluoranthene	202	16.889	16.889	(1.132)	85801	0.90308	171.8
65 Pyrene	202	17.241	17.236	(0.896)	162315	1.67806	319.2

Compounds	QUANT SIG		CONCENTRATIONS					
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
=====	====	==	=====	=====	=====	=====	=====	
\$ 66 Terphenyl-d14	244	17.570	17.565	(0.914)	111103	1.88094	357.8	
68 Benzo(a)anthracene	228	Compound Not Detected.						
* 69 Chrysene-d12	240	19.232	19.221	(1.000)	1525443	20.0000		
71 Chrysene	228	19.268	19.263	(1.002)	65528	0.74873	142.4	
187 Total Benzofluoranthenes	252	20.895	20.878	(0.976)	41162	0.91438	173.9 (aM)	
76 Benzo(a)pyrene	252	21.318	21.289	(0.996)	22465	0.53333	101.4	
* 77 Perylene-d12	264	21.400	21.366	(1.000)	762859	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

- a - Target compound detected but, quantitated amount  
 Below Limit Of Quantitation(BLOQ).
- M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt4.i	Calibration Date: 19-AUG-2010
Lab File ID: 08191015.d	Calibration Time: 13:40
Lab Smp Id: RG79D	Client Smp ID: PSB11-2-4-073010
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Soil
Operator: JZ	
Method File: /chem3/nt4.i/20100819.b/SW846100719.m	
Misc Info: 10-18508	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1588583	22.82
42 Acenaphthene-d10	785897	392948	1571794	1023882	30.28
59 Phenanthrene-d10	1313990	656995	2627980	1770132	34.71
69 Chrysene-d12	1155293	577646	2310586	1525443	32.04
77 Perylene-d12	1146289	573144	2292578	762859	-33.45

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.72	9.22	10.22	9.72	-0.07
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	19.23	0.06
77 Perylene-d12	21.37	20.87	21.87	21.40	0.16

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: RG79
Sample Matrix: SOLID	Fraction: SV
Lab Smp Id: RG79D	Client Smp ID: PSB11-2-4-073010-D
Level: LOW	Operator: JZ
Data Type: MS DATA	SampleType: SAMPLE
SpikeList File: pnaslcss.spk	Quant Type: ISTD
Sublist File: pnas.sub	
Method File: /chem3/nt4.i/20100819.b/SW846100719.m	
Misc Info: 10-18508	

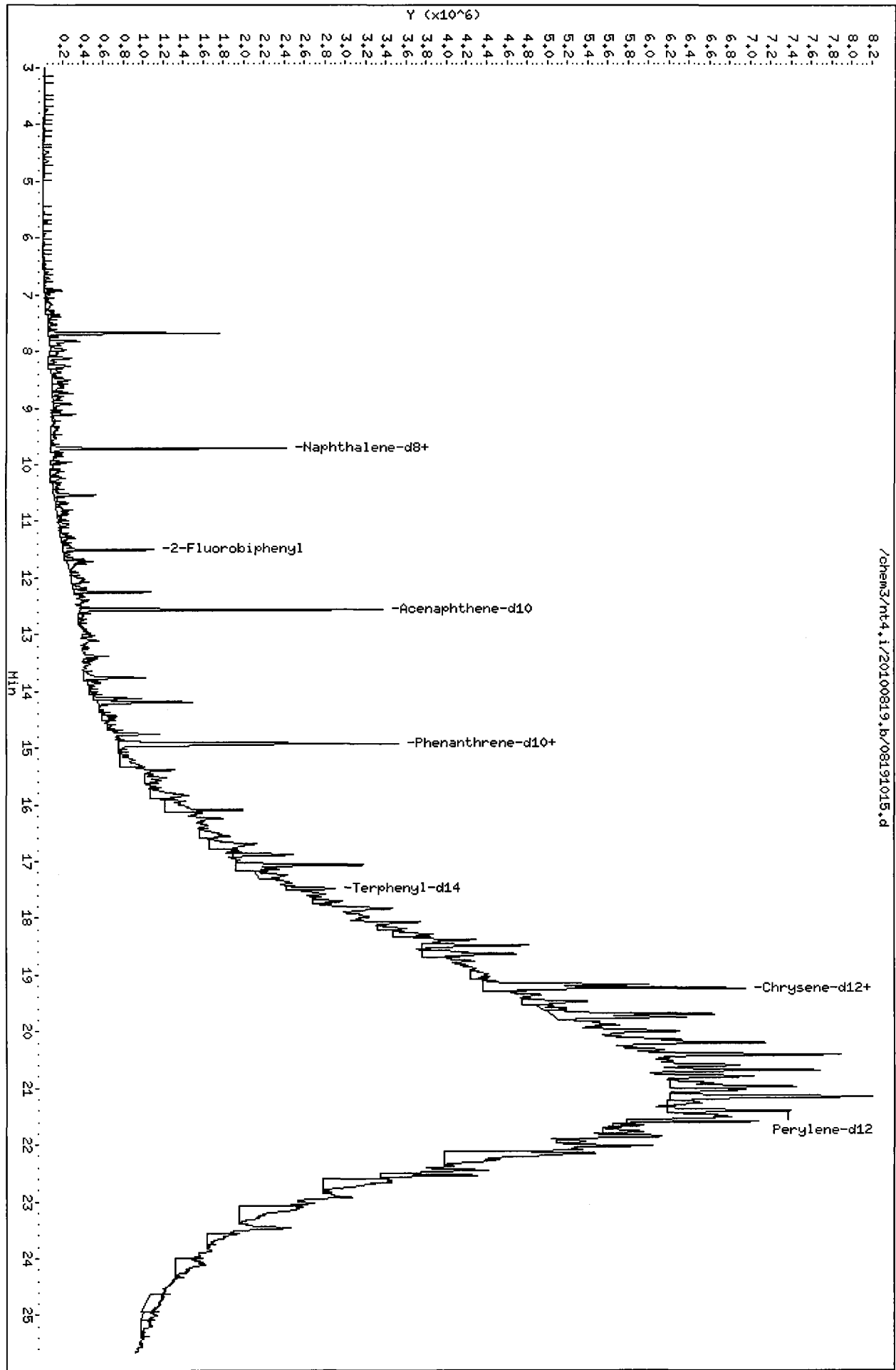
SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	475.5	322.9	67.90	34-100
\$ 66 Terphenyl-d14	475.5	357.8	75.24	35-112



Data File: /chem3/nt4.i/20100819.b/08191015.d  
Date: 19-AUG-2010 21:41  
Client ID: PSB11-2-4-073010-D  
Sample Info: RG79D,10  
Volume Injected (uL): 1.0  
Column phase: ZB-5ms1

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

/chem3/nt4.i/20100819.b/08191015.d



Date : 19-AUG-2010 21:41

Client ID: PSB11-2-4-073010-D

Instrument: nt4.i

Sample Info: RG79D,10

Volume Injected (uL): 1.0

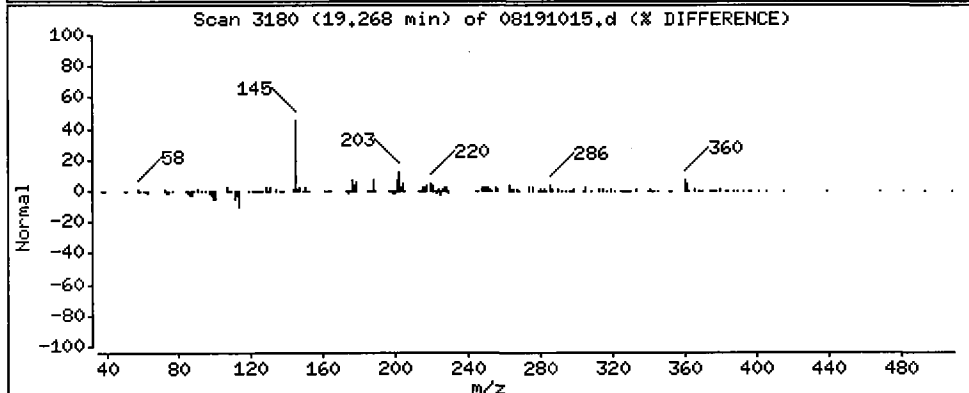
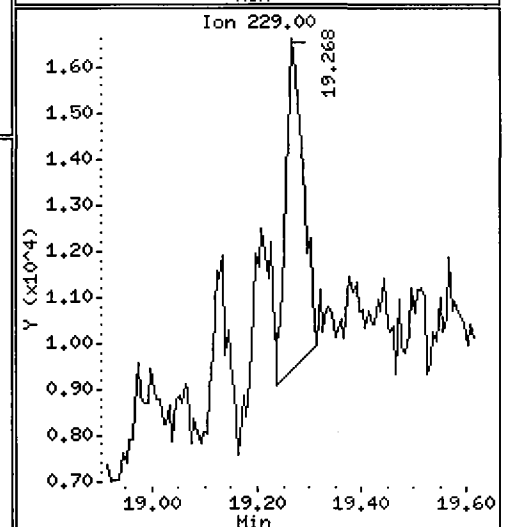
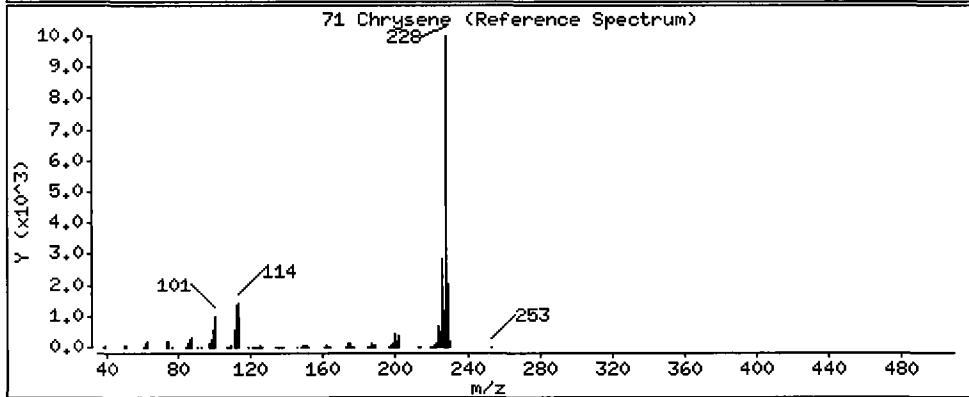
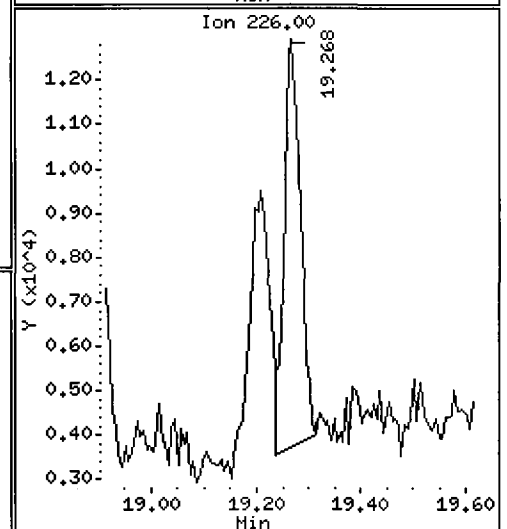
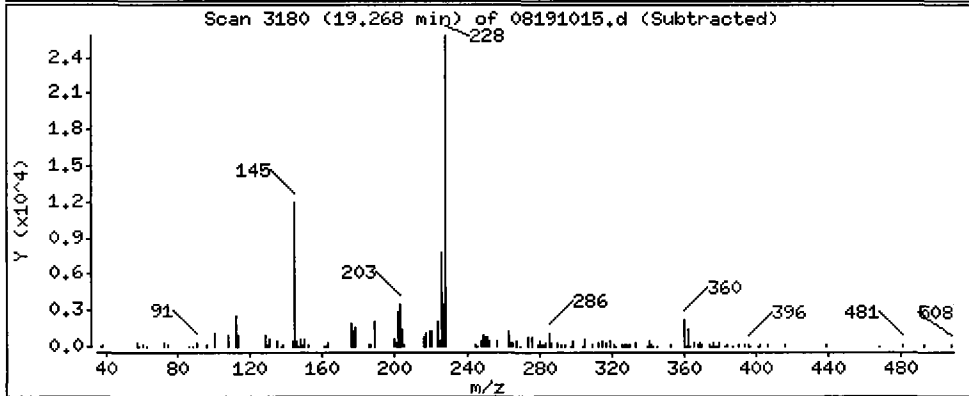
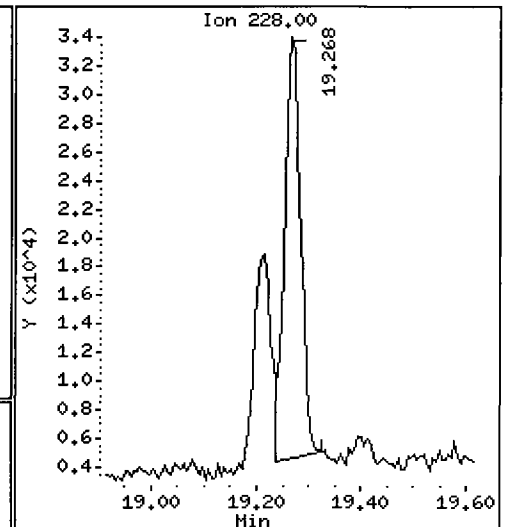
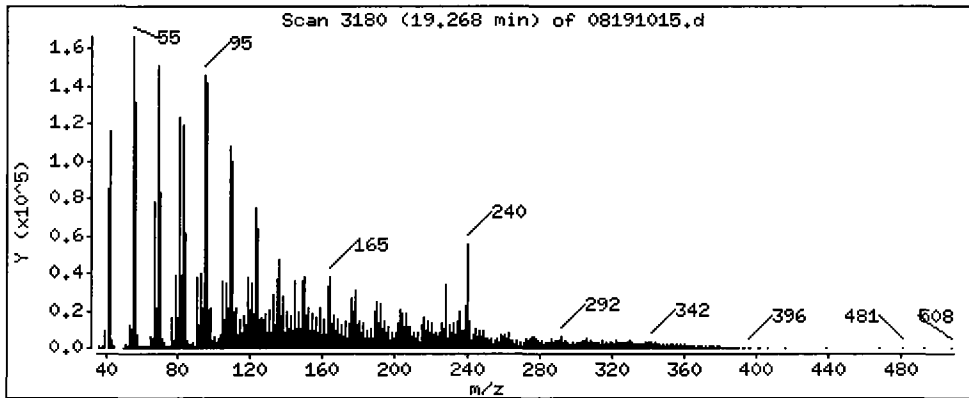
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

71 Chrysene

Concentration: 142.4 ug/kg



Date : 19-AUG-2010 21:41

Client ID: PSB11-2-4-073010-D

Instrument: nt4.i

Sample Info: RG79D,10

Volume Injected (uL): 1.0

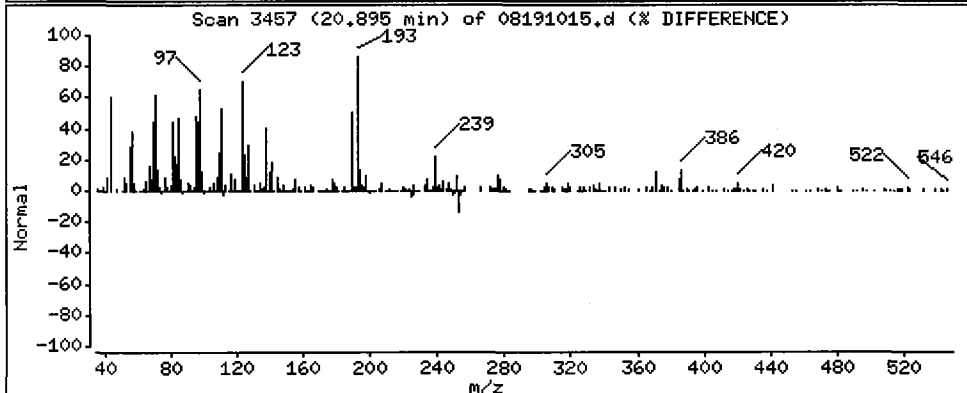
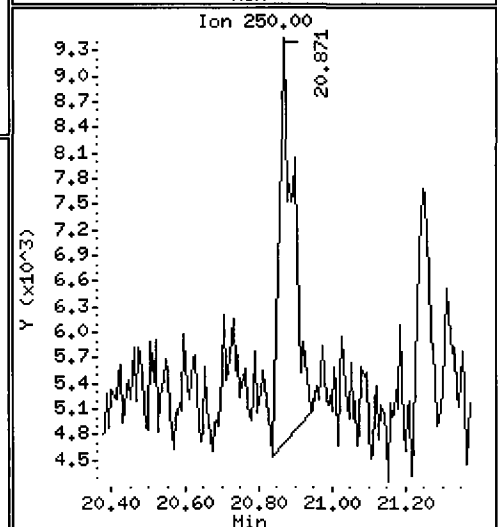
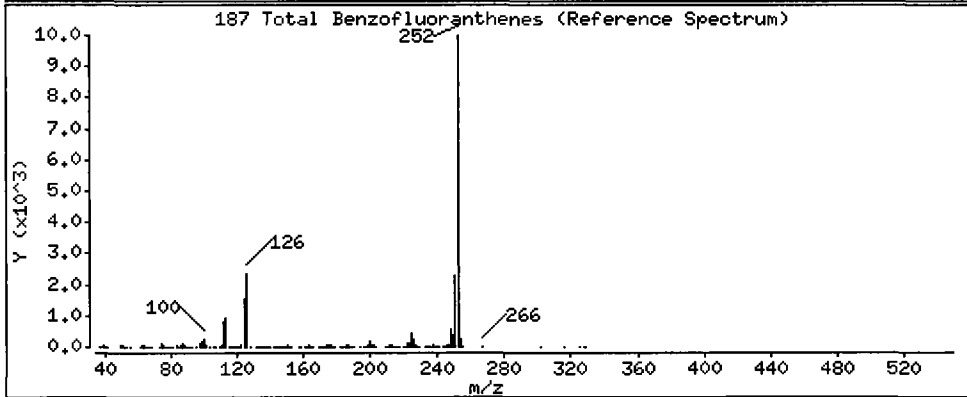
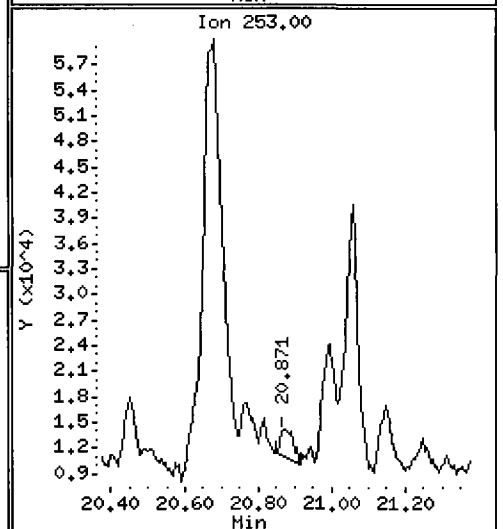
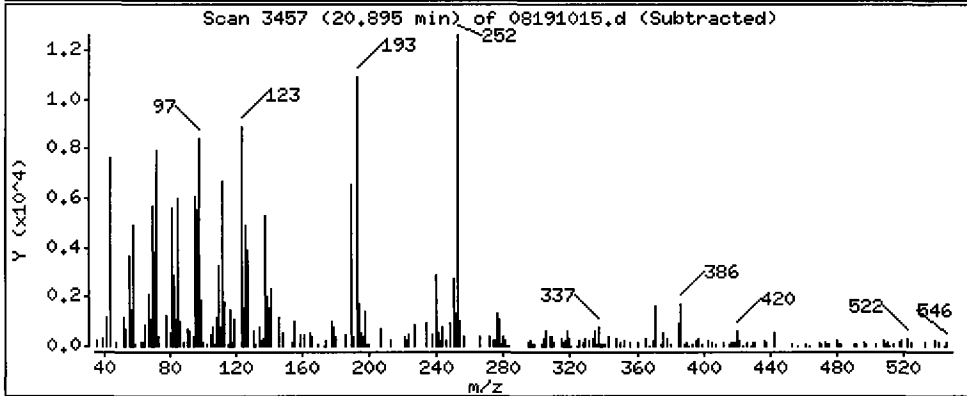
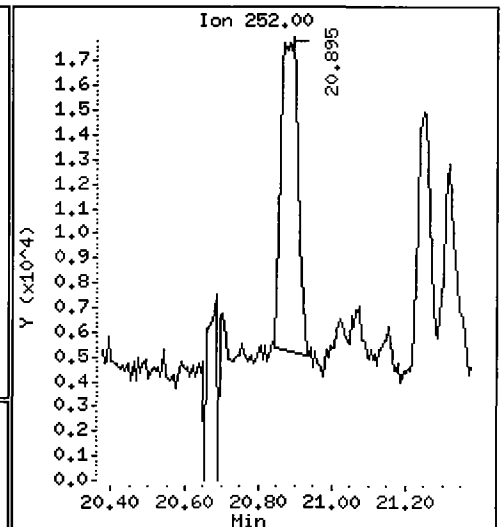
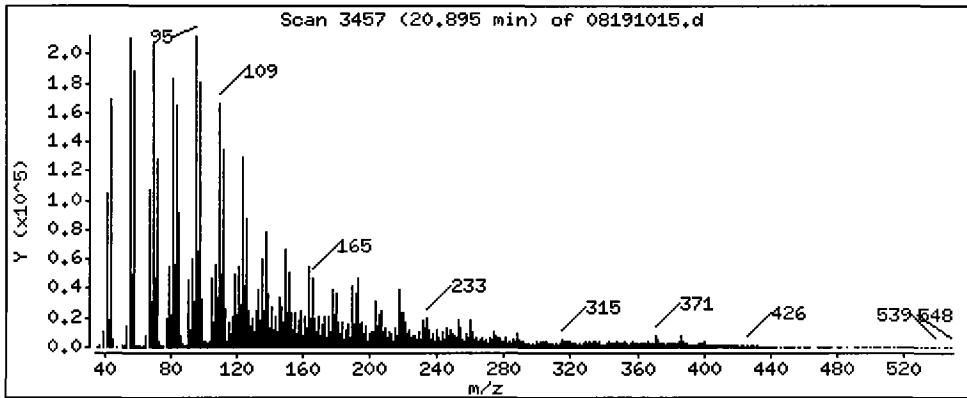
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

187 Total Benzofluoranthenes

Concentration: 173.9 ug/kg



Date : 19-AUG-2010 21:41

Client ID: PSB11-2-4-073010-D

Instrument: nt4.i

Sample Info: RG79D,10

Volume Injected (uL): 1.0

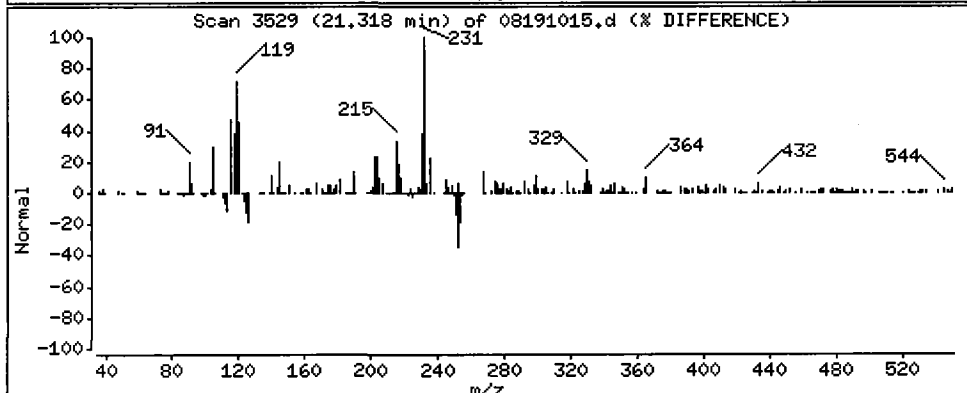
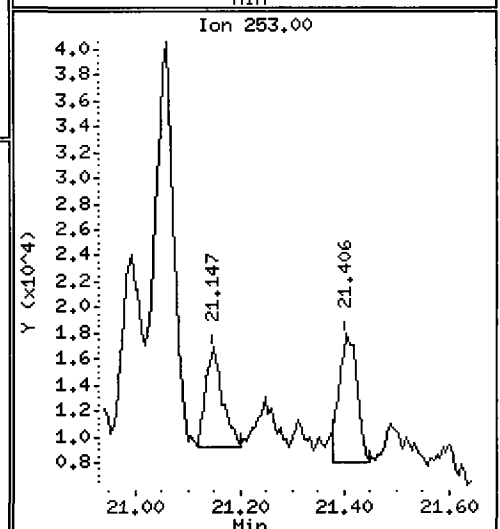
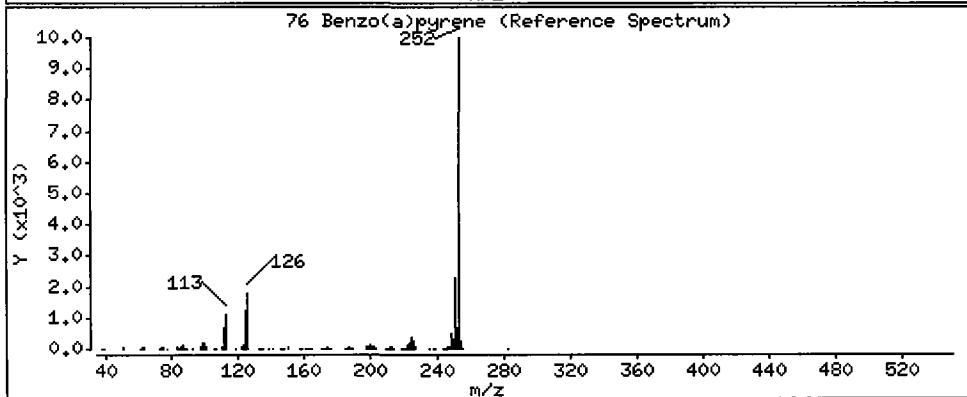
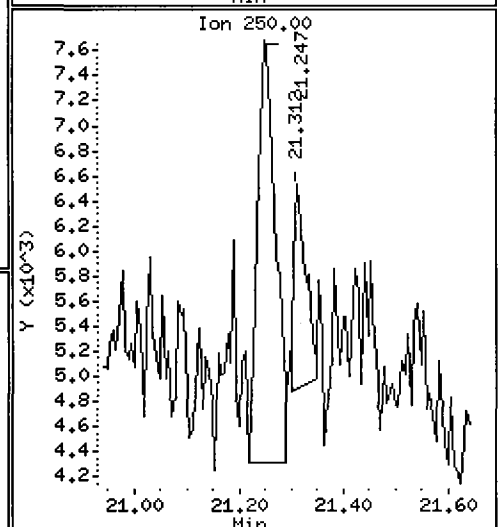
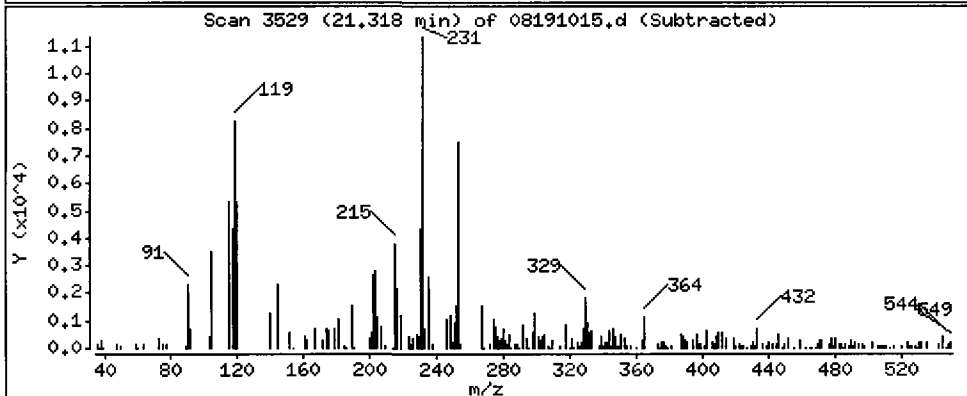
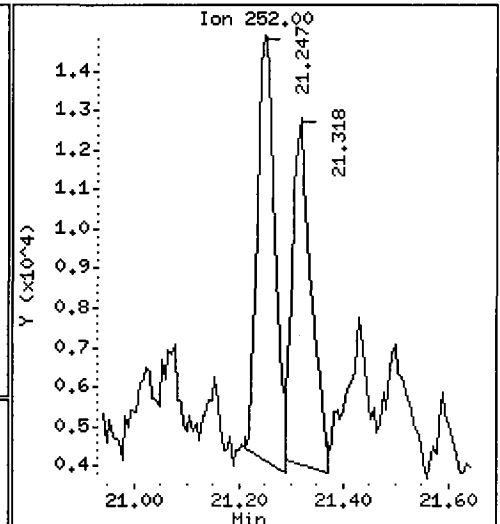
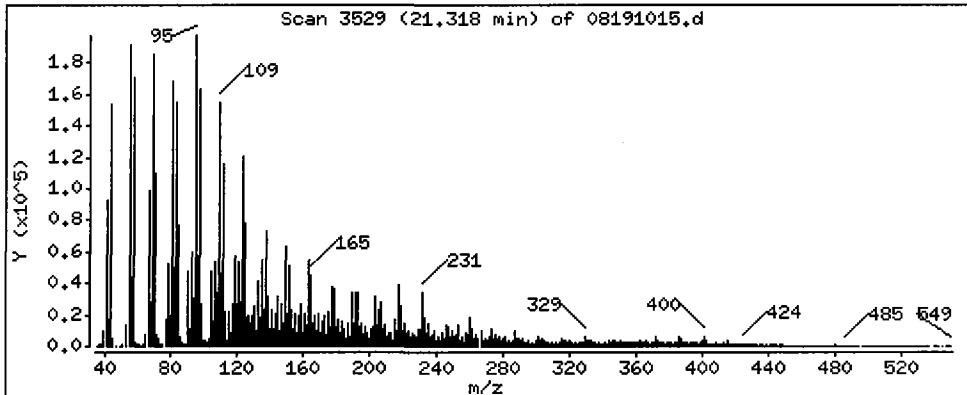
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

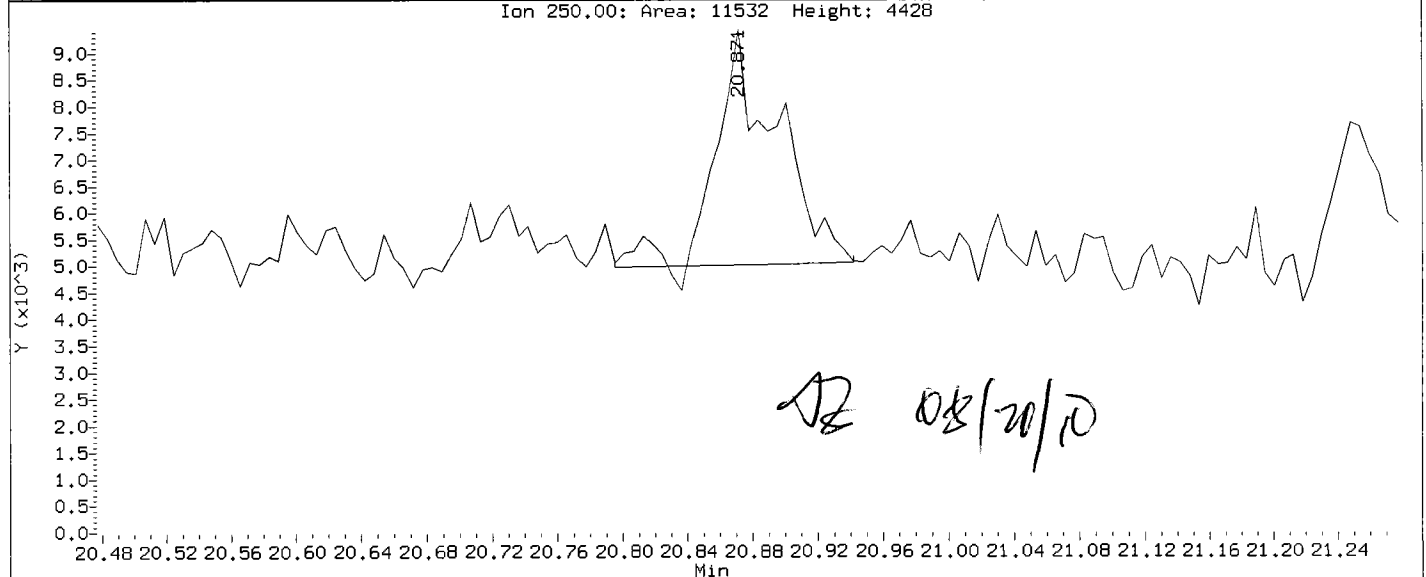
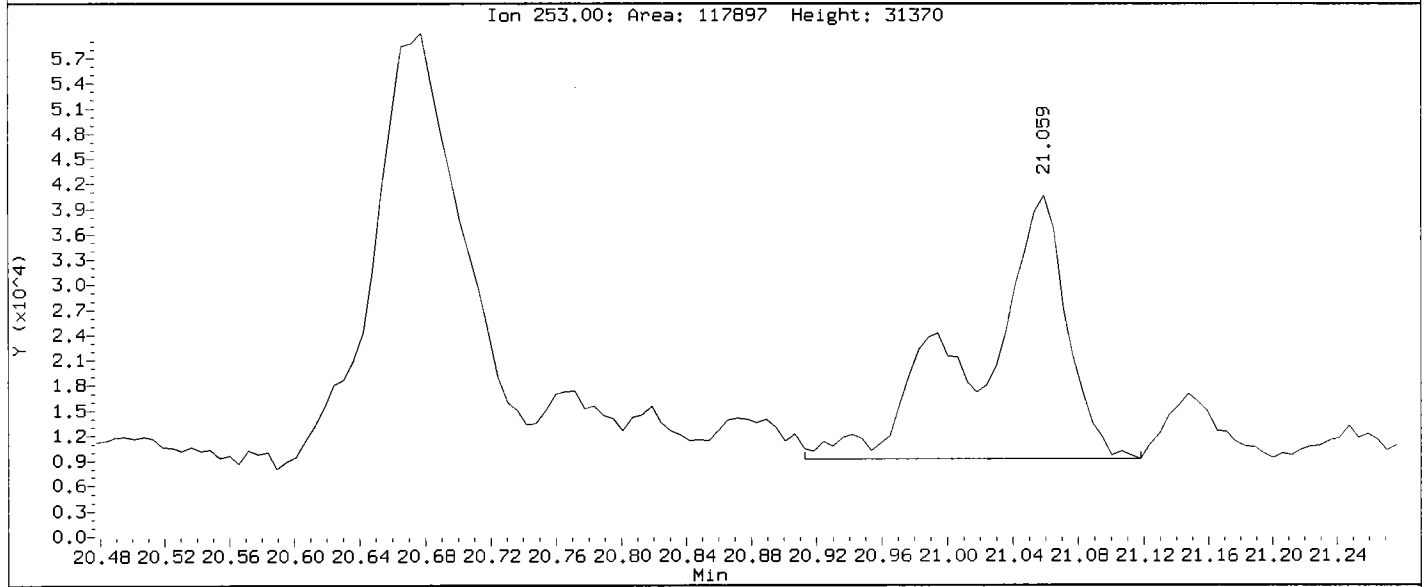
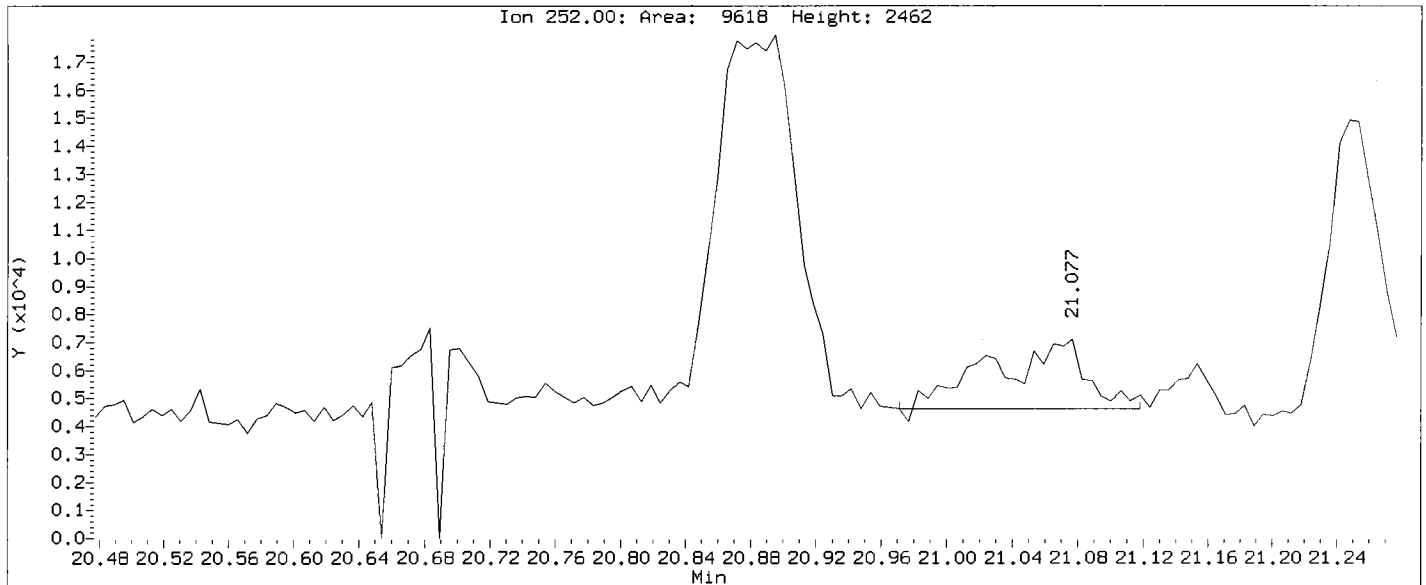
76 Benzo(a)pyrene

Concentration: 101.4 ug/kg



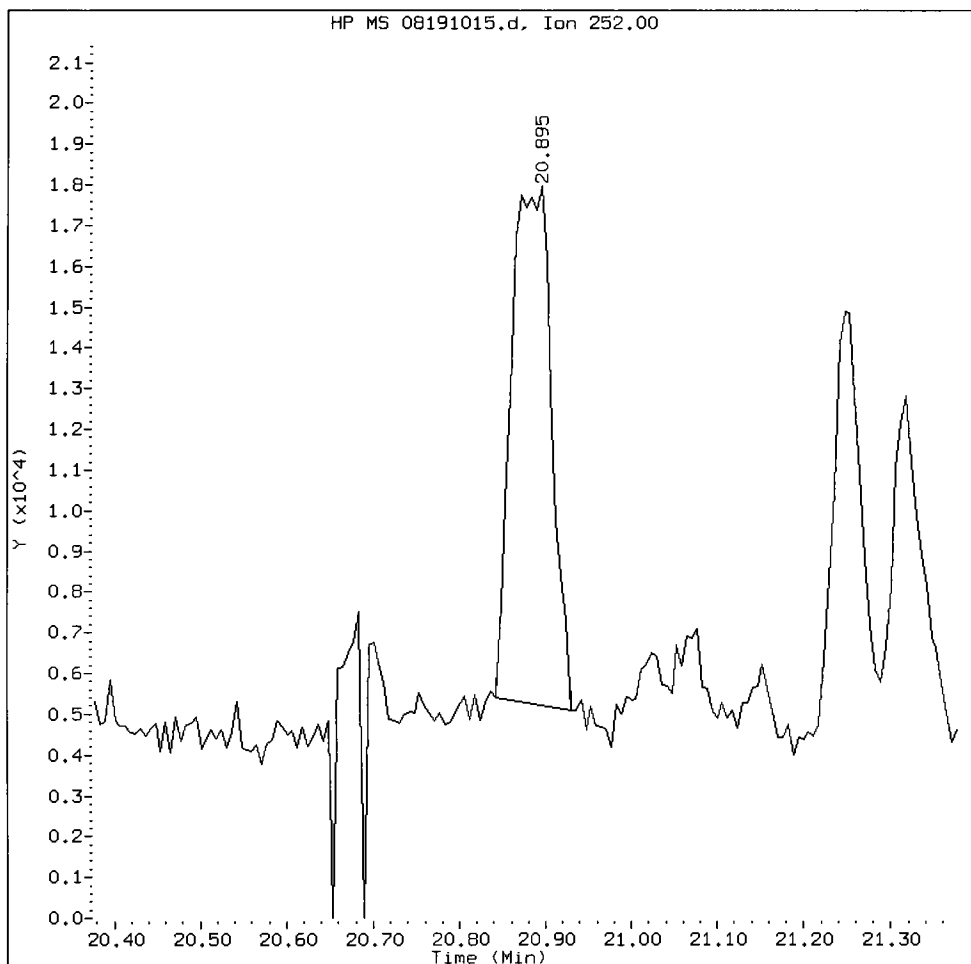
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Injection Date: 19-AUG-2010 21:41  
Instrument: nt4.i  
Client Sample ID: PSB11-2-4-073010-D

Compound: Total Benzofluoranthenes  
CAS Number:



RG79D, /chem3/nt4.i/20100819.b/08191015.d

Total Benzofluoranthenes Amount: 0.91 Area: 41162



MANUAL INTEGRATION for Total Benzofluoranthenes

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

5. Other R1 correction

Analyst: AB

Date: 08/20/10

# Analytical Resources Inc.: Organics Instrument Log

NT-4 Serial No.: GC = US00010849; MS = US72821113

Date: 8/25/10 Analysis: 8270 Analyst: JB  
 GC Program: ABN Column No: 172294 Column Type: 2B-5MSi  
 Instrument Tune (.U or .CT.): 100716 EM Voltage: 1247  
 Calibration File: 08241001 Curve Date: 7/19/10  
 IS/SS Ical/Ccal LCS/ICV

IS/SS	Ical/Ccal	LCS/ICV
<u>1752-1</u>	<u>1747-3, 1732-1</u>	
	<u>1735-1, 1736-1</u>	
	<u>15019, 1743-5</u>	

## INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt4.i/20100825.b

Time	Filename	LabID	ClientID	DF															
1	1054	08251001.d	CC0825	CC0825	1	7.52	398586	9.56	1359281	12.40	795834	14.75	1279774	19.03	1003908	21.17	1186080	20.22	1590251
2	1142	08251002.d	RG78MBS2	RG78MBS2	1	9.56	1760219	12.40	1044927	14.75	1628771	19.03	1348280	21.17	1426142				
3	1216	08251003.d	RG78LCSS2	RG78LCSS2	1	9.55	1722044	12.40	1033820	14.75	1584991	19.03	1299858	21.17	1457844				
4	1249	08251004.d	RG78ERS	PSB9A-0-0.5-	1	9.55	1762005	12.40	1050442	14.75	1580793	19.02	1315117	21.17	1466690				
5	1323	08251005.d	RG79ORE	PSB15-13-15-	1	9.55	1761958	12.39	1038825	14.75	1584948	19.03	1451077	21.18	1555973				
6	1357	08251006.d	RI55B	CB27B-081210	3	7.52	448983	9.56	1529861	12.40	741353	14.74	202747	19.15	1166521	20.28	1623886	21.25	820401
7	1431	08251007.d	RI55C	CB27A-081210	1	7.52	428801	9.56	1466185	12.41	887101	14.76	1566851	20.33	1048163	21.32	501758		
8	1505	08251008.d	RI14MBS1	RI14MBS1	1	7.52	348905	9.56	1228328	12.40	762432	14.75	1156224	19.03	1106360	20.22	1602493	21.18	1168938
9	1539	08251009.d	RI14LCSS1	RI14LCSS1	1	7.52	395857	9.56	1383894	12.40	829930	14.75	1284109	19.03	1179676	20.22	1772609	21.18	1404068
10	1613	08251010.d	RI14A	SLW-VC-02-0-	3	7.52	507650	9.56	1701091	12.40	1022982	14.75	1576977	19.04	1559370	20.22	2330086	21.18	1686829
11	1647	08251011.d	RI14B	SLW-VC-02-3-	1	7.52	474472	9.56	1570662	12.40	920038	14.75	1440492	19.04	1415395	20.22	2157677	21.18	1483968
12	1721	08251012.d	RI14BMS	SLW-VC-02-3-	1	7.52	491784	9.56	1674310	12.40	945555	14.76	1502085	19.04	1553036	20.23	2341000	21.18	1584592
13	1755	08251013.d	RI14BMSD	SLW-VC-02-3-	1	7.52	487676	9.56	1654643	12.41	992270	14.75	1519027	19.04	1523418	20.22	2249116	21.18	1553843
14	1829	08251014.d	RH70A	PortCB6-0809	10	7.52	434495	9.56	1429359	12.40	825669	14.75	1300949	19.05	1351479	20.24	1958547	21.21	1137724
15	1902	08251015.d	RI14C	SLW-VC-03-0-	1	7.52	507886	9.56	1645897	12.40	970828	14.75	1507682	19.04	1535497	20.22	2327147	21.18	1517390
16	1936	08251016.d	RI14D	SLW-VC-03-3-	3	7.52	629272	9.56	2101333	12.40	1220486	14.75	1902450	19.04	1991290	20.23	2977378	21.19	1647463
17	2010	08251017.d	RI14E	LSW-VC-04-0-	3	7.52	606601	9.56	1950275	12.40	1156899	14.75	1799571	19.05	1905026	20.23	2785371	21.20	1513420
18	2044	08251018.d	RI14F	SLW-VC-04-3-	3	7.52	540369	9.56	1783200	12.40	1055858	14.75	1625192	19.03	1621355	20.23	2431399	21.18	1295882
19	2118	08251019.d	RI55B	CB27B-081210	10	7.52	437369	9.56	1469444	12.40	867239	14.76	1367603	19.08	1582044	20.25	2108907	21.21	942896
20	2151	08251020.d	RI55C	CB27A-081210	10	7.52	482029	9.56	1526450	12.40	882651	14.75	1391737	19.05	1704548	20.24	2320864	21.20	1225092

### Maintenance / Comments

*[Handwritten signature and date]*  
 JB 08/26/10

**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 - /chem3/nt4.i/20100825.b

ARI Job No.: CC08 Method: SW846100719.m Instrument: nt4.i Date: 25-AUG-2010

12 08/26/10

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1054	08251001.d	CC0825	CC0825	1	NO MANUAL INTEGRATION
1142	08251002.d	RG78MES2	RG78MES2	1	NO MANUAL INTEGRATION
1216	08251003.d	RG78LCSS2	RG78LCSS2	1	NO MANUAL INTEGRATION
1249	08251004.d	RG78ERE	PSB9A-0-0.	1	NO MANUAL INTEGRATION
1323	08251005.d	RG79ORE	PSB15-13-1	1	NO MANUAL INTEGRATION





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

ARI Project ID: RG78 & RG79 Client ID: Floyd / Snyder

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: 8/25/10

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?	<u>YES</u> / NO	Q flag applied?	<u>YES</u> / NO
Surrogate Recovery in Control?	<u>YES</u> / NO	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):**

*Samples RG78 ERZ & RG79 RE + MB/LCS*

*Forms included*

*Batch QC: RG78 & RG79*

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

Analyst: [Signature] Date: 08/26/10

Reviewer: [Signature] Date: 8/26/10

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt4.i/20100825.b

Instrument: nt4.i Date: 25-AUG-2010 Method: SW846100719.m

INITIAL CAL: 19-JUL-2010

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

08/25/10

CONTINUING CAL: 25-AUG-2010

Compound	%D
-----	
Hexachlorocyclopentadiene	-31.5
Pentachlorophenol	-30.9
-----	

> NTC -

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt4.i                      Injection Date: 25-AUG-2010 10:54  
 Lab File ID: 08251001.d                Init. Cal. Date(s): 19-JUL-2010 19-JUL-2010  
 Analysis Type:                            Init. Cal. Times: 16:18 19:48  
 Lab Sample ID: CC0825                  Quant Type: ISTD  
 Method: /chem3/nt4.i/20100825.b/SW846100719.m

*Handwritten:* 08/25/10

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
\$ 1 2-Fluorophenol	1.08371	1.05687	1.05687	0.010	-2.47708	20.00000	Averaged
\$ 2 Phenol-d5	1.06604	1.07185	1.07185	0.010	0.54414	20.00000	Averaged
3 Phenol	1.37947	1.30766	1.30766	0.100	-5.20574	20.00000	Averaged
\$ 5 2-Chlorophenol-d4	1.14386	1.08155	1.08155	0.010	-5.44736	20.00000	Averaged
4 Bis(2-Chloroethyl) ether	1.02875	1.01204	1.01204	0.700	-1.62456	20.00000	Averaged
6 2-Chlorophenol	1.31278	1.22362	1.22362	0.800	-6.79177	20.00000	Averaged
7 1,3-Dichlorobenzene	1.49159	1.39537	1.39537	0.010	-6.45082	20.00000	Averaged
9 1,4-Dichlorobenzene	1.50653	1.40809	1.40809	0.010	-6.53460	20.00000	Averaged
\$ 10 1,2-Dichlorobenzene-d4	0.85327	0.76853	0.76853	0.010	-9.93073	20.00000	Averaged
12 1,2-Dichlorobenzene	1.40311	1.29713	1.29713	0.010	-7.55299	20.00000	Averaged
11 Benzyl alcohol	0.78176	0.62836	0.62836	0.010	-19.62254	20.00000	Averaged
14 2,2'-oxybis(1-Chloropropane	0.96702	0.93412	0.93412	0.010	-3.40204	20.00000	Averaged
13 2-Methylphenol	1.05383	0.97228	0.97228	0.700	-7.73861	20.00000	Averaged
17 Hexachloroethane	0.55799	0.49468	0.49468	0.300	-11.34743	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	0.72131	0.66649	0.66649	0.500	-7.60022	20.00000	Averaged
15 4-Methylphenol	1.09383	1.00647	1.00647	0.600	-7.98720	20.00000	Averaged
\$ 18 Nitrobenzene-d5	0.30955	0.29385	0.29385	0.010	-5.06965	20.00000	Averaged
19 Nitrobenzene	0.30648	0.29808	0.29808	0.200	-2.73873	20.00000	Averaged
20 Isophorone	0.50898	0.47415	0.47415	0.300	-6.84182	20.00000	Averaged
21 2-Nitrophenol	0.19148	0.19321	0.19321	0.100	0.90655	20.00000	Averaged
22 2,4-Dimethylphenol	0.34090	0.31356	0.31356	0.200	-8.02024	20.00000	Averaged
23 Bis(2-Chloroethoxy)methane	0.35475	0.34927	0.34927	0.050	-1.54348	20.00000	Averaged
24 Benzoic acid	42.63901	50.00000	0.23380	0.010	-14.72198	20.00000	Linear
25 2,4-Dichlorophenol	0.29949	0.28704	0.28704	0.100	-4.15722	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.33353	0.31128	0.31128	0.010	-6.67251	20.00000	Averaged
28 Naphthalene	0.94898	0.91374	0.91374	0.100	-3.71403	20.00000	Averaged
29 4-Chloroaniline	0.37840	0.36209	0.36209	0.010	-4.30875	20.00000	Averaged
30 Hexachlorobutadiene	0.18923	0.16766	0.16766	0.010	-11.39728	20.00000	Averaged
31 4-Chloro-3-methylphenol	0.27464	0.26540	0.26540	0.200	-3.36580	20.00000	Averaged
32 2-Methylnaphthalene	0.64492	0.59421	0.59421	0.300	-7.86263	20.00000	Averaged
33 Hexachlorocyclopentadiene	0.29263	0.20051	0.20051	0.001	-31.47972	20.00000	Averaged
34 2,4,6-Trichlorophenol	0.36003	0.34188	0.34188	0.200	-5.03888	20.00000	Averaged
35 2,4,5-Trichlorophenol	0.36654	0.36180	0.36180	0.200	-1.29221	20.00000	Averaged
\$ 36 2-Fluorobiphenyl	1.22512	1.11460	1.11460	0.010	-9.02052	20.00000	Averaged
37 2-Chloronaphthalene	1.08775	1.02899	1.02899	0.700	-5.40204	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt4.i                      Injection Date: 25-AUG-2010 10:54  
 Lab File ID: 08251001.d                Init. Cal. Date(s): 19-JUL-2010 19-JUL-2010  
 Analysis Type:                            Init. Cal. Times: 16:18 19:48  
 Lab Sample ID: CC0825                    Quant Type: ISTD  
 Method: /chem3/nt4.i/20100825.b/SW846100719.m

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
38 2-Nitroaniline	0.21001	0.22324	0.22324	0.010	6.30006	20.00000	Averaged
39 Dimethylphthalate	1.27768	1.16776	1.16776	0.010	-8.60328	20.00000	Averaged
40 Acenaphthylene	1.64077	1.59475	1.59475	0.900	-2.80462	20.00000	Averaged
41 2,6-Dinitrotoluene	0.28751	0.28478	0.28478	0.100	-0.94983	20.00000	Averaged
43 3-Nitroaniline	0.25351	0.26186	0.26186	0.010	3.29296	20.00000	Averaged
44 Acenaphthene	1.06825	0.99553	0.99553	0.100	-6.80731	20.00000	Averaged
45 2,4-Dinitrophenol	44.66517	50.00000	0.14996	0.030	-10.66966	20.00000	Quadratic
46 Dibenzofuran	1.42396	1.33907	1.33907	0.800	-5.96161	20.00000	Averaged
47 4-Nitrophenol	0.17920	0.14425	0.14425	0.010	-19.50583	20.00000	Averaged
48 2,4-Dinitrotoluene	0.37910	0.36800	0.36800	0.200	-2.92686	20.00000	Averaged
50 Diethylphthalate	1.32169	1.13920	1.13920	0.010	-13.80691	20.00000	Averaged
49 Fluorene	1.23204	1.13668	1.13668	0.100	-7.74006	20.00000	Averaged
51 4-Chlorophenyl-phenylether	0.59756	0.55918	0.55918	0.100	-6.42266	20.00000	Averaged
52 4-Nitroaniline	0.27464	0.25763	0.25763	0.010	-6.19533	20.00000	Averaged
53 4,6-Dinitro-2-methylphenol	0.13800	0.12876	0.12876	0.001	-6.69222	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.56415	0.52926	0.52926	0.010	-6.18481	20.00000	Averaged
55 2,4,6-Tribromophenol	0.14302	0.13501	0.13501	0.010	-5.60212	20.00000	Averaged
56 4-Bromophenyl-phenylether	0.20445	0.19231	0.19231	0.100	-5.93437	20.00000	Averaged
57 Hexachlorobenzene	0.20941	0.19303	0.19303	0.100	-7.82359	20.00000	Averaged
58 Pentachlorophenol	0.14268	0.09853	0.09853	0.010	-30.94853	20.00000	Averaged
60 Phenanthrene	1.03607	0.93915	0.93915	0.700	-9.35426	20.00000	Averaged
61 Anthracene	1.05988	0.97396	0.97396	0.700	-8.10648	20.00000	Averaged
62 Carbazole	0.96311	0.88816	0.88816	0.010	-7.78262	20.00000	Averaged
63 Di-n-butylphthalate	1.22802	1.13226	1.13226	0.010	-7.79750	20.00000	Averaged
64 Fluoranthene	1.07347	0.96233	0.96233	0.600	-10.35317	20.00000	Averaged
65 Pyrene	1.26819	1.25301	1.25301	0.600	-1.19744	20.00000	Averaged
66 Terphenyl-d14	0.77444	0.71963	0.71963	0.010	-7.07719	20.00000	Averaged
67 Butylbenzylphthalate	0.64359	0.64020	0.64020	0.010	-0.52682	20.00000	Averaged
68 Benzo(a)anthracene	1.17238	1.13282	1.13282	0.800	-3.37404	20.00000	Averaged
70 3,3'-Dichlorobenzidine	0.37917	0.43735	0.43735	0.010	15.34326	20.00000	Averaged
71 Chrysene	1.14746	1.10317	1.10317	0.700	-3.85986	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.56782	0.55355	0.55355	0.010	-2.51293	20.00000	Averaged
73 Di-n-octylphthalate	0.99436	0.91815	0.91815	0.010	-7.66377	20.00000	Averaged
74 Benzo(b)fluoranthene	1.24491	1.03341	1.03341	0.700	-16.98891	20.00000	Averaged
75 Benzo(k)fluoranthene	1.26106	1.21197	1.21197	0.700	-3.89237	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt4.i                      Injection Date: 25-AUG-2010 10:54  
 Lab File ID: 08251001.d                Init. Cal. Date(s): 19-JUL-2010 19-JUL-2010  
 Analysis Type:                            Init. Cal. Times:    16:18                    19:48  
 Lab Sample ID: CC0825                    Quant Type:    ISTD  
 Method: /chem3/nt4.i/20100825.b/SW846100719.m

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
187 Total Benzofluoranthenes	1.18021	1.05135	1.05135	0.010	-10.91843	20.00000	Averaged
76 Benzo(a)pyrene	1.10432	1.03447	1.03447	0.700	-6.32520	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.18581	1.21826	1.21826	0.500	2.73631	20.00000	Averaged
79 Dibenzo(a,h)anthracene	0.95329	1.00942	1.00942	0.400	5.88853	20.00000	Averaged
80 Benzo(g,h,i)perylene	1.01362	1.08197	1.08197	0.500	6.74365	20.00000	Averaged
90 N-Nitrosodimethylamine	0.58263	0.55561	0.55561	0.010	-4.63809	20.00000	Averaged
103 Pyridine	1.00478	0.99541	0.99541	0.010	-0.93284	20.00000	Averaged
91 Aniline	1.43987	1.31307	1.31307	0.010	-8.80593	20.00000	Averaged
105 1-methylnaphthalene	0.63176	0.58089	0.58089	0.010	-8.05253	20.00000	Averaged

Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100825.b/08251001.d  
 Lab Smp Id: CC0825 Client Smp ID: CC0825  
 Inj Date : 25-AUG-2010 10:54  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : CC0825  
 Misc Info : 10-  
 Comment : 1ul Injection  
 Method : /chem3/nt4.i/20100825.b/SW846100719.m  
 Meth Date : 25-Aug-2010 18:44 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 1 Continuing Calibration Sample  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50  
 Compound Sublist: ICALS.sub

*B* 08/25/10

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112		5.553	5.553	(0.739)	526567	25.0000	24.38
\$ 2 Phenol-d5	99		7.151	7.151	(0.952)	534028	25.0000	25.14
3 Phenol	94		7.169	7.169	(0.954)	651519	25.0000	23.70
\$ 5 2-Chlorophenol-d4	132		7.228	7.228	(0.962)	538862	25.0000	23.64
4 Bis(2-Chloroethyl)ether	93		7.210	7.210	(0.959)	504231	25.0000	24.59
6 2-Chlorophenol	128		7.251	7.251	(0.965)	609649	25.0000	23.30
7 1,3-Dichlorobenzene	146		7.451	7.451	(0.991)	695218	25.0000	23.39
* 8 1,4-Dichlorobenzene-d4	152		7.516	7.516	(1.000)	398586	20.0000	
9 1,4-Dichlorobenzene	146		7.545	7.545	(1.004)	701555	25.0000	23.37
\$ 10 1,2-Dichlorobenzene-d4	152		7.815	7.815	(1.040)	382908	25.0000	22.52
12 1,2-Dichlorobenzene	146		7.839	7.839	(1.043)	646272	25.0000	23.11
11 Benzyl alcohol	108		7.827	7.827	(1.041)	313070	25.0000	20.09
14 2,2'-oxybis(1-Chloropropane)	45		8.079	8.079	(1.075)	465410	25.0000	24.15
13 2-Methylphenol	108		8.091	8.091	(1.077)	484420	25.0000	23.07
17 Hexachloroethane	117		8.320	8.320	(1.107)	246463	25.0000	22.16
16 N-Nitroso-di-n-propylamine	70		8.303	8.303	(1.105)	332066	25.0000	23.10
15 4-Methylphenol	108		8.326	8.326	(1.108)	501454	25.0000	23.00
\$ 18 Nitrobenzene-d5	82		8.455	8.455	(0.884)	499286	25.0000	23.73
19 Nitrobenzene	77		8.485	8.485	(0.888)	506476	25.0000	24.32
20 Isophorone	82		8.872	8.872	(0.928)	805632	25.0000	23.29
21 2-Nitrophenol	139		9.002	9.002	(0.942)	328291	25.0000	25.23
22 2,4-Dimethylphenol	107		9.149	9.149	(0.957)	532774	25.0000	22.99
23 Bis(2-Chloroethoxy)methane	93		9.278	9.278	(0.970)	593452	25.0000	24.61
24 Benzoic acid	105		9.436	9.436	(0.987)	794483	50.0000	42.64
25 2,4-Dichlorophenol	162		9.401	9.401	(0.983)	487716	25.0000	23.96
26 1,2,4-Trichlorobenzene	180		9.507	9.507	(0.994)	528894	25.0000	23.33
* 27 Naphthalene-d8	136		9.560	9.560	(1.000)	1359281	20.0000	

Compounds	QUANT SIG			AMOUNTS		
	MASS	RT	EXP RT REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
28 Naphthalene	128	9.589	9.589 (1.003)	1552529	25.0000	24.07
29 4-Chloroaniline	127	9.754	9.754 (1.020)	615232	25.0000	23.92
30 Hexachlorobutadiene	225	9.912	9.912 (1.037)	284874	25.0000	22.15
31 4-Chloro-3-methylphenol	107	10.594	10.594 (1.108)	450939	25.0000	24.16
32 2-Methylnaphthalene	142	10.705	10.705 (1.120)	1009626	25.0000	23.03
33 Hexachlorocyclopentadiene	237	11.087	11.087 (0.894)	199467	25.0000	17.13
34 2,4,6-Trichlorophenol	196	11.234	11.234 (0.906)	340104	25.0000	23.74
35 2,4,5-Trichlorophenol	196	11.299	11.299 (0.911)	359919	25.0000	24.68
§ 36 2-Fluorobiphenyl	172	11.357	11.357 (0.916)	1108800	25.0000	22.74
37 2-Chloronaphthalene	162	11.475	11.475 (0.926)	1023635	25.0000	23.65
38 2-Nitroaniline	65	11.727	11.727 (0.946)	222078	25.0000	26.58
39 Dimethylphthalate	163	12.109	12.109 (0.977)	1161681	25.0000	22.85
40 Acenaphthylene	152	12.145	12.145 (0.980)	1586445	25.0000	24.30
41 2,6-Dinitrotoluene	165	12.197	12.197 (0.984)	283292	25.0000	24.76
* 42 Acenaphthene-d10	164	12.397	12.397 (1.000)	795834	20.0000	
43 3-Nitroaniline	138	12.403	12.403 (1.000)	260495	25.0000	25.82
44 Acenaphthene	153	12.450	12.450 (1.004)	990350	25.0000	23.30
45 2,4-Dinitrophenol	184	12.573	12.573 (1.014)	298358	50.0000	44.67
46 Dibenzofuran	168	12.708	12.708 (1.025)	1332092	25.0000	23.51
47 4-Nitrophenol	109	12.761	12.761 (1.029)	143496	25.0000	20.12
48 2,4-Dinitrotoluene	165	12.814	12.814 (1.034)	366085	25.0000	24.27
50 Diethylphthalate	149	13.255	13.255 (1.069)	1133272	25.0000	21.55
49 Fluorene	166	13.261	13.261 (1.070)	1130757	25.0000	23.06
51 4-Chlorophenyl-phenylether	204	13.296	13.296 (1.072)	556267	25.0000	23.39
52 4-Nitroaniline	138	13.390	13.390 (1.080)	256285	25.0000	23.45
53 4,6-Dinitro-2-methylphenol	198	13.472	13.472 (0.914)	411968	50.0000	46.65
54 N-Nitrosodiphenylamine	169	13.507	13.507 (0.916)	846660	25.0000	23.45
§ 55 2,4,6-Tribromophenol	330	13.684	13.684 (1.104)	134307	25.0000	23.60
56 4-Bromophenyl-phenylether	248	14.071	14.071 (0.954)	307648	25.0000	23.52
57 Hexachlorobenzene	284	14.277	14.277 (0.968)	308788	25.0000	23.04
58 Pentachlorophenol	266	14.588	14.588 (0.989)	157613	25.0000	17.26
* 59 Phenanthrene-d10	188	14.747	14.747 (1.000)	1279774	20.0000	
60 Phenanthrene	178	14.788	14.788 (1.003)	1502383	25.0000	22.66
61 Anthracene	178	14.858	14.858 (1.008)	1558064	25.0000	22.97
62 Carbazole	167	15.152	15.152 (1.027)	1420797	25.0000	23.05
63 Di-n-butylphthalate	149	15.887	15.887 (1.077)	1811302	25.0000	23.05
64 Fluoranthene	202	16.703	16.703 (1.133)	1539460	25.0000	22.41
65 Pyrene	202	17.050	17.050 (0.896)	1572380	25.0000	24.70
§ 66 Terphenyl-d14	244	17.384	17.384 (0.914)	903049	25.0000	23.23
67 Butylbenzylphthalate	149	18.277	18.277 (0.960)	803382	25.0000	24.87
68 Benzo(a)anthracene	228	19.006	19.006 (0.999)	1421560	25.0000	24.16
* 69 Chrysene-d12	240	19.029	19.029 (1.000)	1003908	20.0000	
70 3,3'-Dichlorobenzidine	252	19.029	19.029 (1.000)	548826	25.0000	28.84
71 Chrysene	228	19.070	19.070 (1.002)	1384352	25.0000	24.04
72 bis(2-Ethylhexyl)phthalate	149	19.288	19.288 (0.954)	1100357	25.0000	24.37
* 134 Di-n-octylphthalate-d4	153	20.216	20.216 (1.000)	1590251	20.0000	
73 Di-n-octylphthalate	149	20.228	20.228 (1.001)	1825114	25.0000	23.08

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
-----	====	==	=====	=====	=====	=====	=====
74 Benzo(b)fluoranthene	252	20.651	20.651	(0.976)	1532138	25.0000	20.75
75 Benzo(k)fluoranthene	252	20.680	20.680	(0.977)	1796874	25.0000	24.03
187 Total Benzofluoranthenes	252	20.680	20.680	(0.977)	3117464	50.0000	44.54
76 Benzo(a)pyrene	252	21.091	21.091	(0.996)	1533711	25.0000	23.42
* 77 Perylene-d12	264	21.168	21.168	(1.000)	1186080	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	22.542	22.542	(1.065)	1806188	25.0000	25.68
79 Dibenzo(a,h)anthracene	278	22.566	22.566	(1.066)	1496567	25.0000	26.47
80 Benzo(g,h,i)perylene	276	22.883	22.883	(1.081)	1604134	25.0000	26.69
90 N-Nitrosodimethylamine	74	2.687	2.687	(0.357)	276820	25.0000	23.84
103 Pyridine	79	2.657	2.657	(0.354)	495943	25.0000	24.77
91 Aniline	93	7.081	7.081	(0.942)	654215	25.0000	22.80
105 1-methylnaphthalene	142	10.876	10.876	(1.138)	986987	25.0000	22.99



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt4.i  
 Lab File ID: 08251001.d  
 Lab Smp Id: CC0825  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt4.i/20100825.b/SW846100719.m  
 Misc Info: 10-

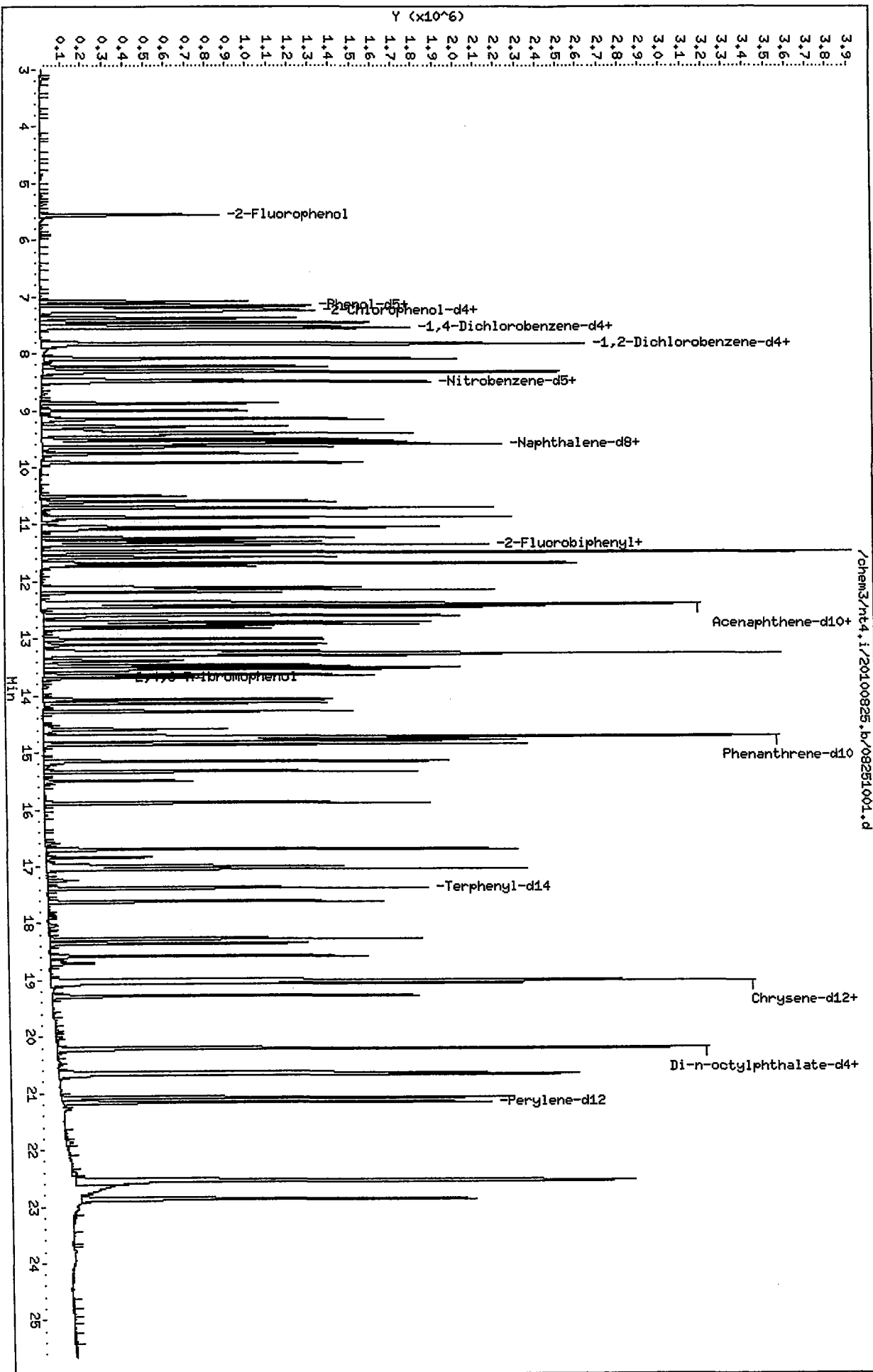
Calibration Date: 25-AUG-2010  
 Calibration Time: 10:54  
 Client Smp ID: CC0825  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	356478	178239	712956	398586	11.81
27 Naphthalene-d8	1293412	646706	2586824	1359281	5.09
42 Acenaphthene-d10	785897	392948	1571794	795834	1.26
59 Phenanthrene-d10	1313990	656995	2627980	1279774	-2.60
69 Chrysene-d12	1155293	577646	2310586	1003908	-13.10
134 Di-n-octylphthala	1825297	912648	3650594	1590251	-12.88
77 Perylene-d12	1146289	573144	2292578	1186080	3.47

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	7.52	7.02	8.02	7.52	0.00
27 Naphthalene-d8	9.56	9.06	10.06	9.56	0.00
42 Acenaphthene-d10	12.40	11.90	12.90	12.40	0.00
59 Phenanthrene-d10	14.75	14.25	15.25	14.75	0.00
69 Chrysene-d12	19.03	18.53	19.53	19.03	0.00
134 Di-n-octylphthala	20.22	19.72	20.72	20.22	0.00
77 Perylene-d12	21.17	20.67	21.67	21.17	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 : 25-AUG-2010 10:54

Client ID: DFTPP0825

Instrument: nt4.i

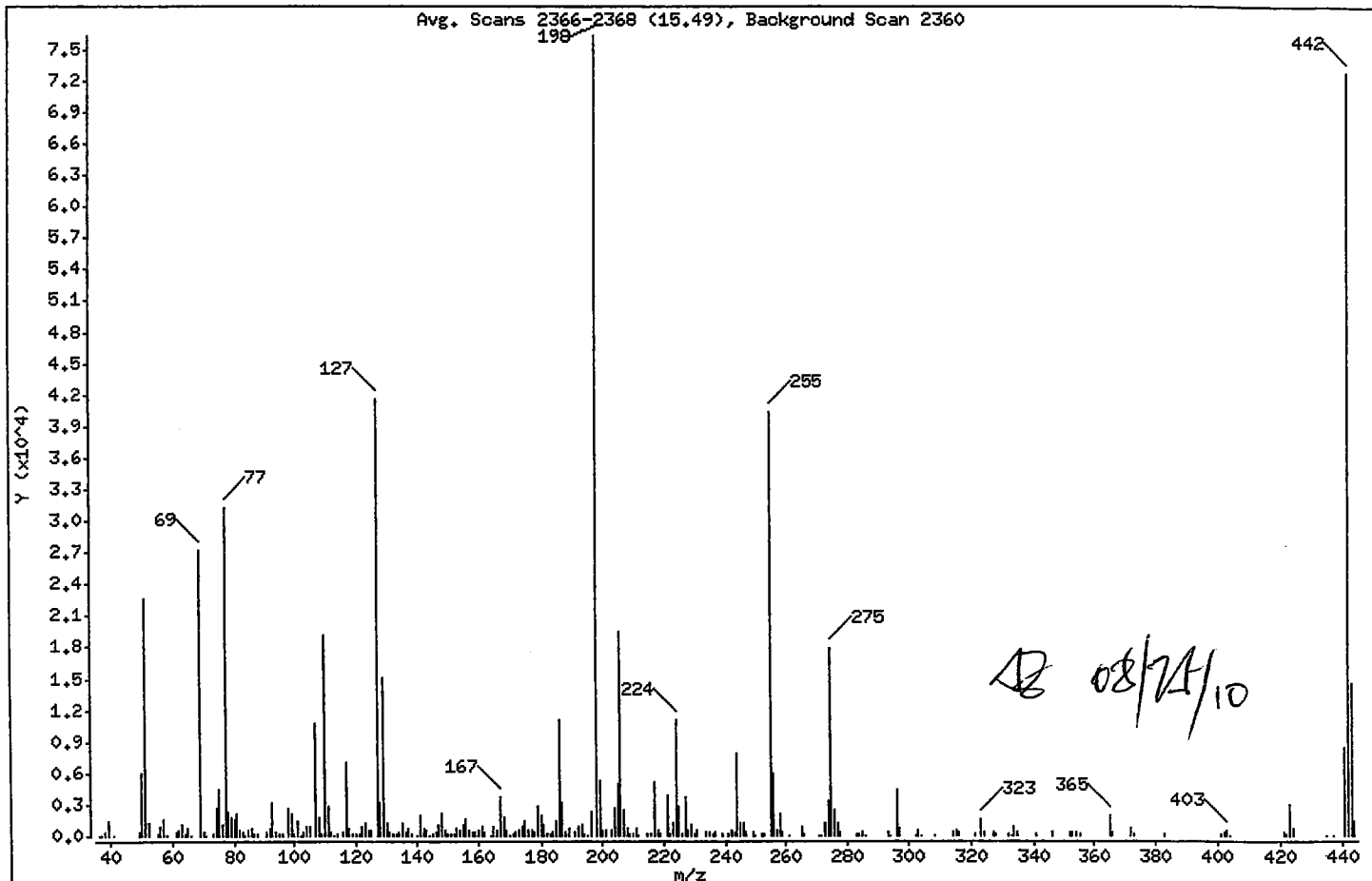
Sample Info: DFTPP0825

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	29.54
68	Less than 2.00% of mass 69	0.00 < 0.00
69	Mass 69 relative abundance	35.54
70	Less than 2.00% of mass 69	0.36 < 1.02
127	10.00 - 80.00% of mass 198	54.55
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.91
275	10.00 - 60.00% of mass 198	23.54
365	Greater than 1.00% of mass 198	2.49
441	0.01 - 24.00% of mass 442	11.07 < 11.59
442	50.00 - 200.00% of mass 198	95.49
443	15.00 - 24.00% of mass 442	19.04 < 19.94

Date : 25-AUG-2010 10:54

Client ID: DFTPP0825

Instrument: nt4.i

Sample Info: DFTPP0825

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0,25

Data File: 08251001.d

Spectrum: Avg. Scans 2366-2368 (15,49), Background Scan 2360

Location of Maximum: 198,00

Number of points: 248

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36,00	56	119,00	118	185,00	1333	265,00	834
37,00	58	120,00	183	186,00	11141	266,00	156
38,00	394	121,00	137	187,00	3177	271,00	56
39,00	1447	122,00	846	188,00	341	272,00	52
41,00	17	123,00	1282	189,00	660	273,00	1187
49,00	276	124,00	551	191,00	314	274,00	3341
50,00	5956	125,00	494	192,00	817	275,00	17976
51,00	22560	127,00	41656	193,00	1057	276,00	2439
52,00	1197	128,00	3110	194,00	256	277,00	1248
55,00	96	129,00	15148	195,00	68	278,00	305
56,00	898	130,00	1261	196,00	2325	283,00	196
57,00	1565	131,00	296	198,00	76368	284,00	174
58,00	61	132,00	192	199,00	5280	285,00	268
61,00	303	133,00	232	200,00	498	286,00	56
62,00	538	134,00	406	201,00	553	293,00	355
63,00	1097	135,00	1227	203,00	495	294,00	51
64,00	230	136,00	408	204,00	2670	296,00	4355
65,00	707	137,00	708	205,00	4906	297,00	621
66,00	83	138,00	198	206,00	19400	302,00	52
69,00	27144	140,00	68	207,00	2475	303,00	610
70,00	276	141,00	1858	208,00	668	304,00	57
71,00	53	142,00	702	209,00	184	308,00	63
73,00	178	143,00	564	210,00	199	314,00	285
74,00	2668	144,00	61	211,00	723	315,00	520
75,00	4363	145,00	190	212,00	60	316,00	340
76,00	1034	146,00	343	215,00	211	321,00	90
77,00	31208	147,00	1072	216,00	157	323,00	1580
78,00	2327	148,00	2057	217,00	5063	324,00	321
79,00	1765	149,00	588	218,00	594	327,00	316
80,00	1535	150,00	225	219,00	106	328,00	172
81,00	2081	151,00	259	221,00	3925	332,00	149
82,00	486	152,00	190	222,00	176	333,00	81
83,00	366	153,00	632	223,00	1158	334,00	912
84,00	37	154,00	495	224,00	10995	335,00	296
85,00	466	155,00	1077	225,00	2749	341,00	194

Date : 25-AUG-2010 10:54

Client ID: DFTPP0825

Instrument: nt4.i

Sample Info: DFTPP0825

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0,25

Data File: 08251001.d

Spectrum: Avg. Scans 2366-2368 (15,49), Background Scan 2360

Location of Maximum: 198,00

Number of points: 248

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86,00	737	156,00	1640	226,00	167	346,00	323
87,00	129	157,00	448	227,00	3689	352,00	391
88,00	111	158,00	333	228,00	511	353,00	355
91,00	418	159,00	315	229,00	1051	354,00	363
92,00	660	160,00	575	230,00	144	355,00	131
93,00	3239	161,00	857	231,00	447	365,00	1900
94,00	290	162,00	305	234,00	269	366,00	279
95,00	171	164,00	59	235,00	282	372,00	765
96,00	212	165,00	798	236,00	198	373,00	240
98,00	2677	166,00	559	237,00	349	383,00	144
99,00	2131	167,00	3636	239,00	110	401,00	137
100,00	211	168,00	1752	241,00	185	402,00	265
101,00	1324	169,00	448	242,00	508	403,00	472
102,00	59	170,00	64	243,00	375	404,00	63
103,00	437	171,00	205	244,00	7889	421,00	429
104,00	805	172,00	341	245,00	1207	422,00	154
105,00	849	173,00	472	246,00	1315	423,00	3045
107,00	10636	174,00	864	247,00	417	424,00	735
108,00	1721	175,00	1332	249,00	279	435,00	50
109,00	152	176,00	564	250,00	57	437,00	50
110,00	19080	177,00	597	252,00	108	441,00	8455
111,00	2841	178,00	432	253,00	170	442,00	72920
112,00	435	179,00	2862	255,00	40360	443,00	14539
113,00	51	180,00	1911	256,00	5952	444,00	1396
114,00	121	181,00	1093	257,00	531		
116,00	378	182,00	134	258,00	2128		
117,00	7020	183,00	137	259,00	328		
118,00	617	184,00	334	261,00	52		

Date : 25-AUG-2010 10:54

Client ID: DFTPP0825

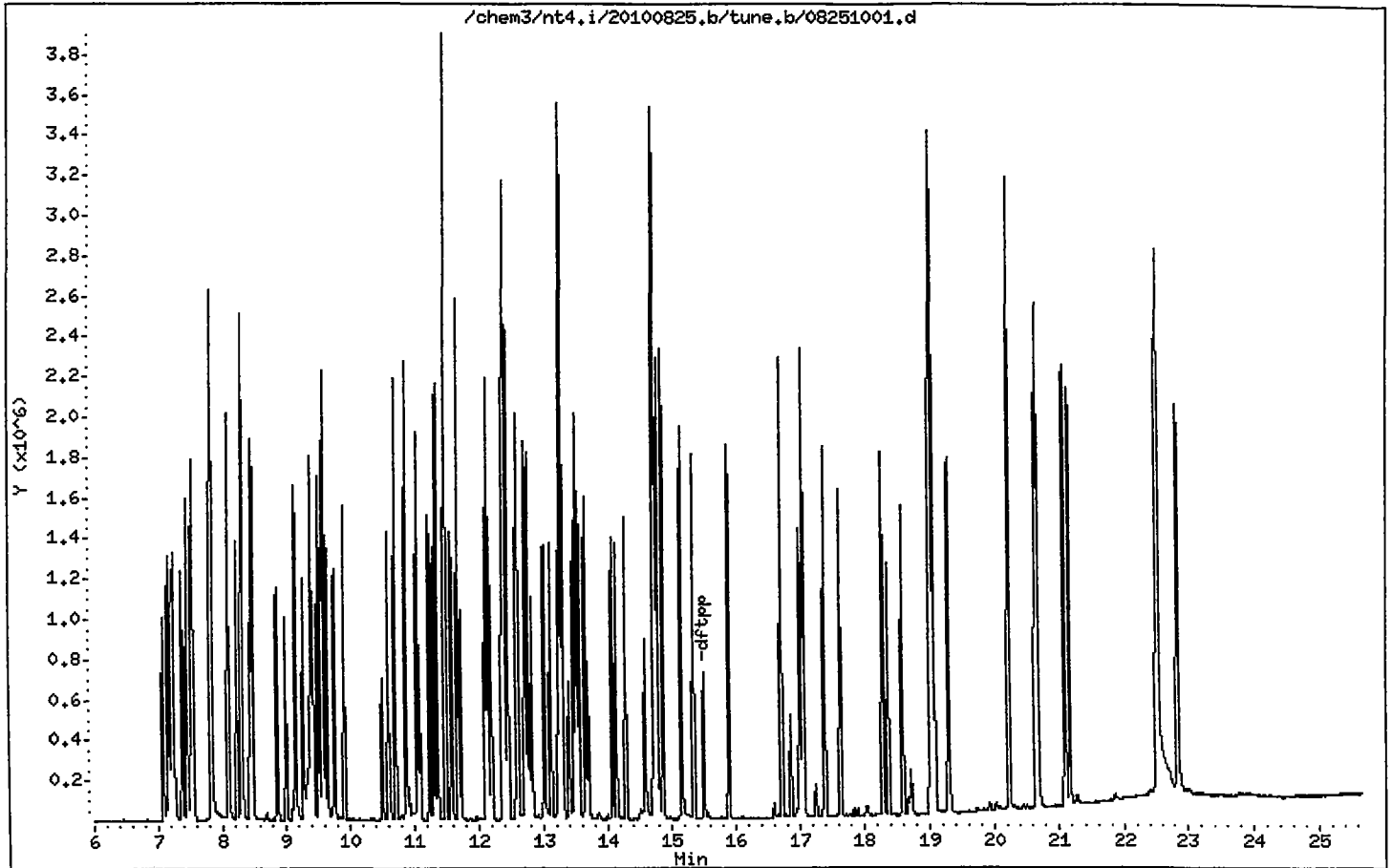
Instrument: nt4.i

Sample Info: DFTPP0825

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/20100825.b/ddt.b/08251001.d    ARI ID: CC0825  
Method: /chem3/nt4.i/20100825.b/ddt.b/sw846ddt.m    Misc: 10-  
Analysis Date: 25-AUG-2010 10:54    Instrument: nt4.i

COMPOUND	RT	AREA
Pentachlorophenol	14.588	157049
Benzidine	12.573	298358
4,4'-DDE	----	----
4,4'-DDD	17.890	11532
4,4'-DDT	18.360	400744

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

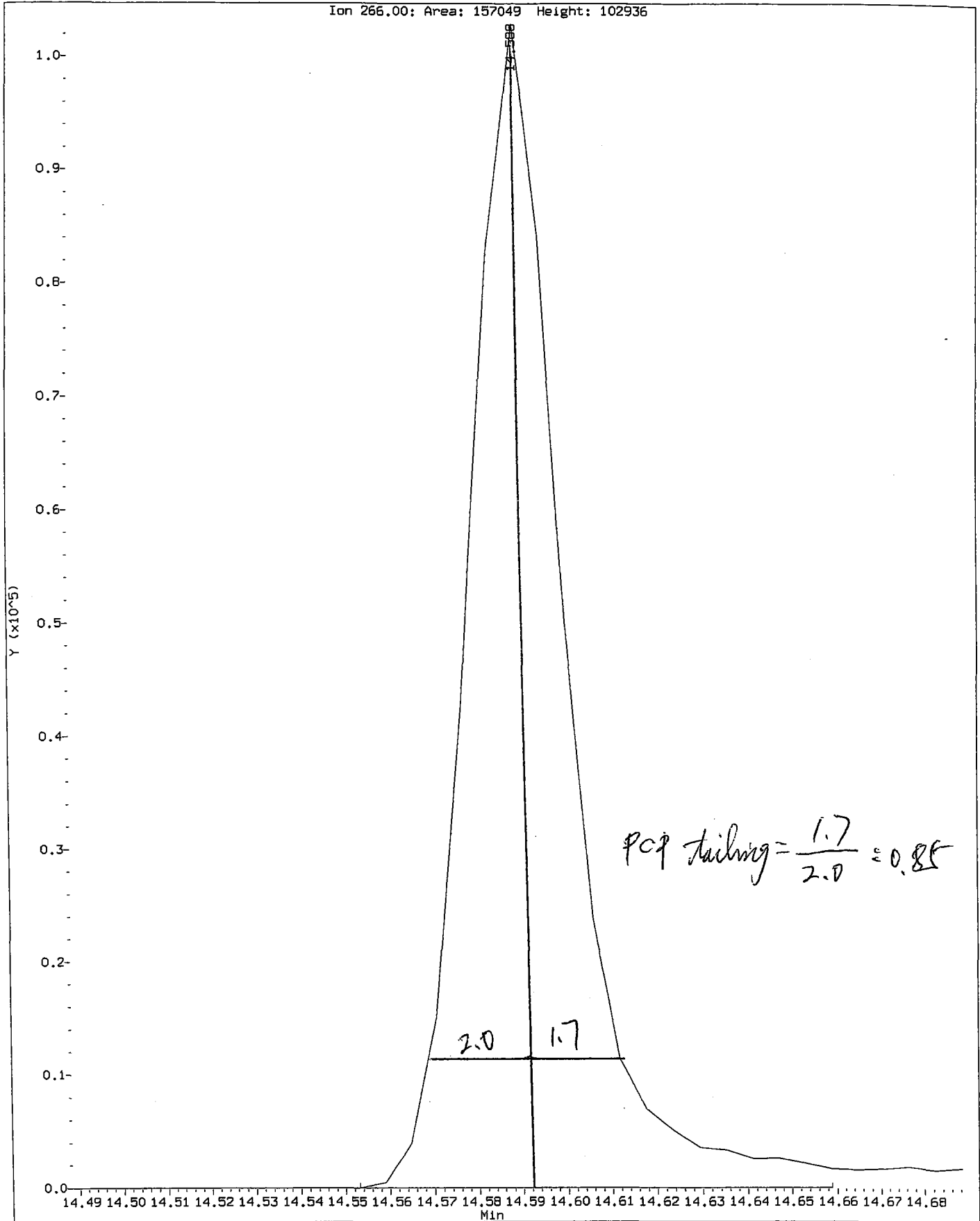
$$\text{DDT Percent Breakdown} = \frac{(0 + 11532) * 100}{(0 + 11532 + 400744)}$$

DDT Percent Breakdown = 2.8 %

*Handwritten notes:*  
0/2  
12  
08/25/10

Data File: /chem3/nt4.1/20100825.b/ddt.b/08251001.d  
Injection Date: 25-AUG-2010 10:54  
Instrument: nt4.1  
Client Sample ID: CC0825

Compound: Pentachlorophenol  
CAS Number: 87-86-5

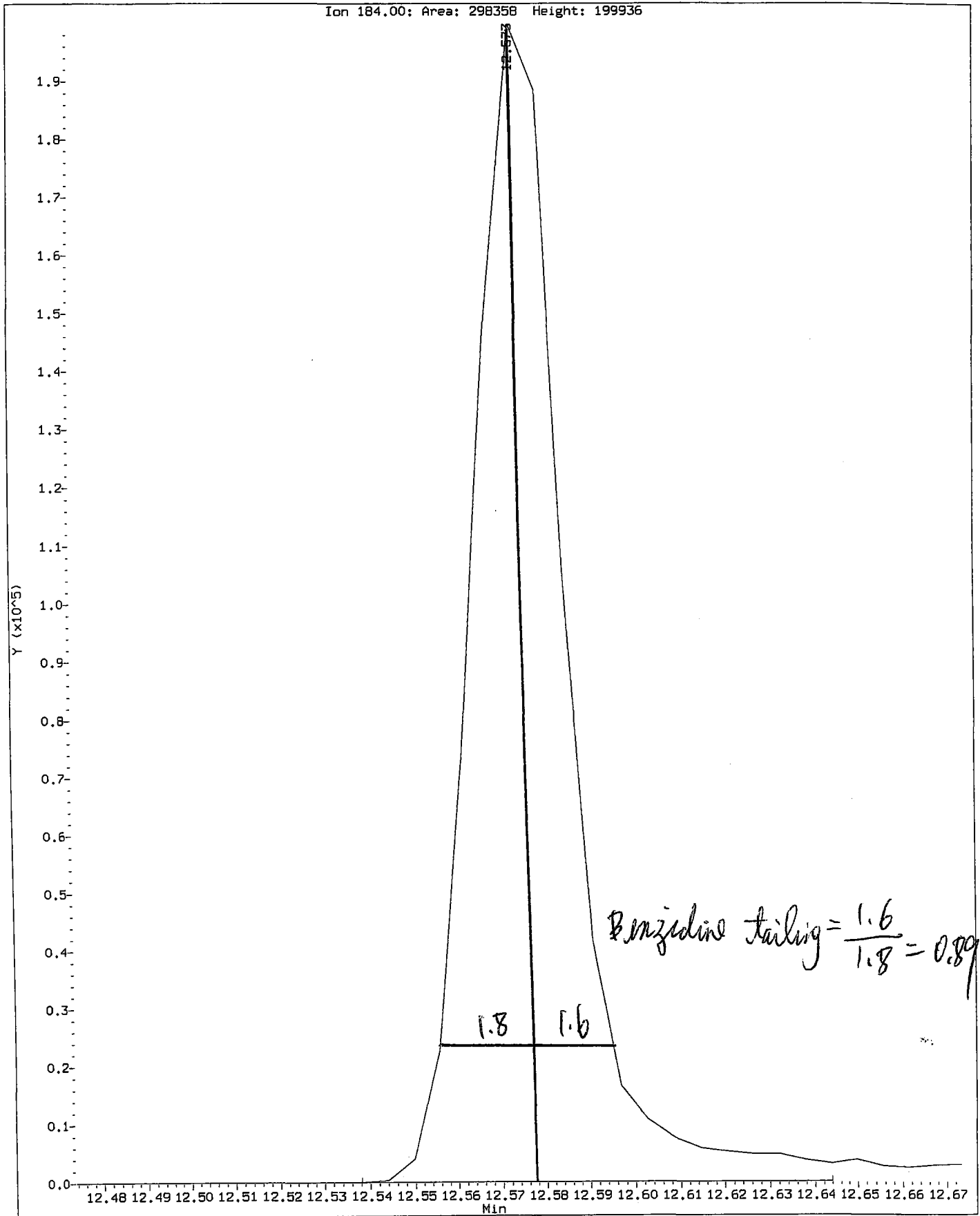


RG79: 00848



Data File: /chem3/nt4.i/20100825.b/ddt.b/08251001.d  
Injection Date: 25-AUG-2010 10:54  
Instrument: nt4.i  
Client Sample ID: CC0825

Compound: Benzidine  
CAS Number:



RG79: 00849

Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100825.b/08251002.d  
 Lab Smp Id: RG78MBS2 *RG79MBS2* Client Smp ID: RG78MBS2  
 Inj Date : 25-AUG-2010 11:42  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG78MBS2,  
 Misc Info : 10-18437  
 Comment : lul Injection *10-18519*  
 Method : /chem3/nt4.i/20100825.b/SW846100719.m  
 Meth Date : 26-Aug-2010 12:25 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.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 *12 08/26/10*

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	9.556	9.560	(1.000)	1760219	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	11.353	11.357	(0.916)	953375	14.8947	297.9
40 Acenaphthylene	152	Compound Not Detected.					
* 42 Acenaphthene-d10	164	12.399	12.397	(1.000)	1044927	20.0000	
44 Acenaphthene	153	Compound Not Detected.					
46 Dibenzofuran	168	Compound Not Detected.					
49 Fluorene	166	Compound Not Detected.					
* 59 Phenanthrene-d10	188	14.748	14.747	(1.000)	1628771	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 MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ug/mL)	FINAL (ug/kg)	
\$ 66 Terphenyl-d14	244	17.386	17.384	(0.914)	969967	18.5790	371.6	
68 Benzo(a)anthracene	228	Compound Not Detected.						
* 69 Chrysene-d12	240	19.025	19.029	(1.000)	1348280	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	21.169	21.168	(1.000)	1426142	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: 25-AUG-2010
Lab File ID: 08251002.d	Calibration Time: 10:54
Lab Smp Id: RG78MBS2	Client Smp ID: RG78MBS2
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Solid
Operator: JZ	
Method File: /chem3/nt4.i/20100825.b/SW846100719.m	
Misc Info: 10-18437	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1760219	36.09
42 Acenaphthene-d10	785897	392948	1571794	1044927	32.96
59 Phenanthrene-d10	1313990	656995	2627980	1628771	23.96
69 Chrysene-d12	1155293	577646	2310586	1348280	16.70
77 Perylene-d12	1146289	573144	2292578	1426142	24.41

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.56	9.06	10.06	9.56	-0.04
42 Acenaphthene-d10	12.40	11.90	12.90	12.40	0.01
59 Phenanthrene-d10	14.75	14.25	15.25	14.75	0.01
69 Chrysene-d12	19.03	18.53	19.53	19.03	-0.02
77 Perylene-d12	21.17	20.67	21.67	21.17	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                      Client SDG: RG78  
Sample Matrix: SOLID                          Fraction: SV  
Lab Smp Id: RG78MBS2                      Client Smp ID: RG78MBS2  
Level: LOW                                      Operator: JZ  
Data Type: MS DATA                      SampleType: BLANK  
SpikeList File: pnaslcass.spk              Quant Type: ISTD  
Sublist File: pnas.sub  
Method File: /chem3/nt4.i/20100825.b/SW846100719.m  
Misc Info: 10-18437

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	500.0	297.9	59.58	34-100
\$ 66 Terphenyl-d14	500.0	371.6	74.32	35-112

Client ID: RG78HBS2

Sample Info: RG78HBS2

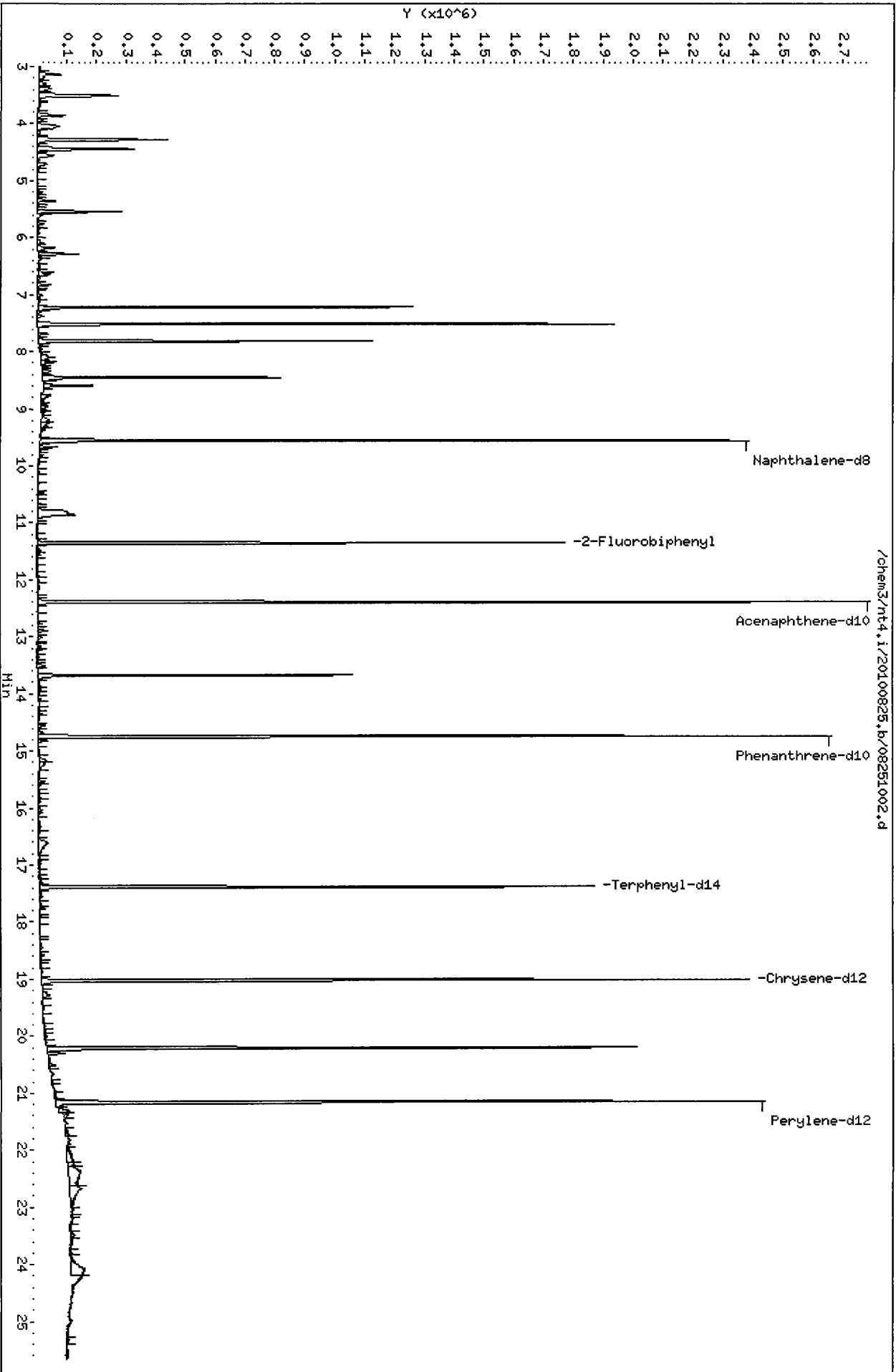
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt4.i

Operator: JZ

Column diameter: 0.32



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100825.b/08251003.d  
 Lab Smp Id: RG78LCSS2 *RG79LCSS2* Client Smp ID: RG78LCSS2  
 Inj Date : 25-AUG-2010 12:16  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG78LCSS2,  
 Misc Info : 10-18437  
 Comment : lul Injection *10-18437*  
 Method : /chem3/nt4.i/20100825.b/SW846100719.m  
 Meth Date : 26-Aug-2010 12:25 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 3 QC Sample: LCS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*08/26/10*

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	9.555	9.560	(1.000)	1722044	20.0000	
28 Naphthalene	128	9.584	9.589	(1.003)	1184701	14.4990	290.0
32 2-Methylnaphthalene	142	10.706	10.705	(1.121)	815366	14.6836	293.7
105 1-methylnaphthalene	142	10.871	10.876	(1.138)	802884	14.7600	295.2
\$ 36 2-Fluorobiphenyl	172	11.352	11.357	(0.916)	1021863	16.1362	322.7
40 Acenaphthylene	152	12.140	12.145	(0.979)	1300005	15.3279	306.6
* 42 Acenaphthene-d10	164	12.398	12.397	(1.000)	1033820	20.0000	
44 Acenaphthene	153	12.445	12.450	(1.004)	785262	14.2208	284.4
46 Dibenzofuran	168	12.704	12.708	(1.025)	1187900	16.1387	322.8
49 Fluorene	166	13.256	13.261	(1.069)	960818	15.0870	301.7
* 59 Phenanthrene-d10	188	14.748	14.747	(1.000)	1584991	20.0000	
60 Phenanthrene	178	14.783	14.788	(1.002)	1317548	16.0465	320.9
61 Anthracene	178	14.854	14.858	(1.007)	1355312	16.1356	322.7
64 Fluoranthene	202	16.704	16.703	(1.133)	1438202	16.9057	338.1
65 Pyrene	202	17.051	17.050	(0.896)	1474302	17.8869	357.7

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	====	==	=====	=====	=====	=====	=====
\$ 66 Terphenyl-d14	244	17.385	17.384	(0.914)	987076	19.6110	392.2
68 Benzo(a)anthracene	228	19.001	19.006	(0.998)	1355206	17.7857	355.7
* 69 Chrysene-d12	240	19.030	19.029	(1.000)	1299858	20.0000	
71 Chrysene	228	19.066	19.070	(1.002)	1293140	17.3397	346.8
187 Total Benzofluoranthenes	252	20.681	20.680	(0.977)	2892440	33.6220	672.4
76 Benzo(a)pyrene	252	21.086	21.091	(0.996)	1314412	16.3288	326.6
* 77 Perylene-d12	264	21.174	21.168	(1.000)	1457844	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	22.537	22.542	(1.064)	1693411	19.5914	391.8
79 Dibenzo(a,h)anthracene	278	22.561	22.566	(1.065)	1373867	19.7715	395.4
80 Benzo(g,h,i)perylene	276	22.878	22.883	(1.080)	1467445	19.8612	397.2



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt4.i	Calibration Date: 25-AUG-2010
Lab File ID: 08251003.d	Calibration Time: 10:54
Lab Smp Id: RG78LCSS2	Client Smp ID: RG78LCSS2
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Solid
Operator: JZ	
Method File: /chem3/nt4.i/20100825.b/SW846100719.m	
Misc Info: 10-18437	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1722044	33.14
42 Acenaphthene-d10	785897	392948	1571794	1033820	31.55
59 Phenanthrene-d10	1313990	656995	2627980	1584991	20.62
69 Chrysene-d12	1155293	577646	2310586	1299858	12.51
77 Perylene-d12	1146289	573144	2292578	1457844	27.18

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.56	9.06	10.06	9.55	-0.05
42 Acenaphthene-d10	12.40	11.90	12.90	12.40	0.01
59 Phenanthrene-d10	14.75	14.25	15.25	14.75	0.01
69 Chrysene-d12	19.03	18.53	19.53	19.03	0.01
77 Perylene-d12	21.17	20.67	21.67	21.17	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

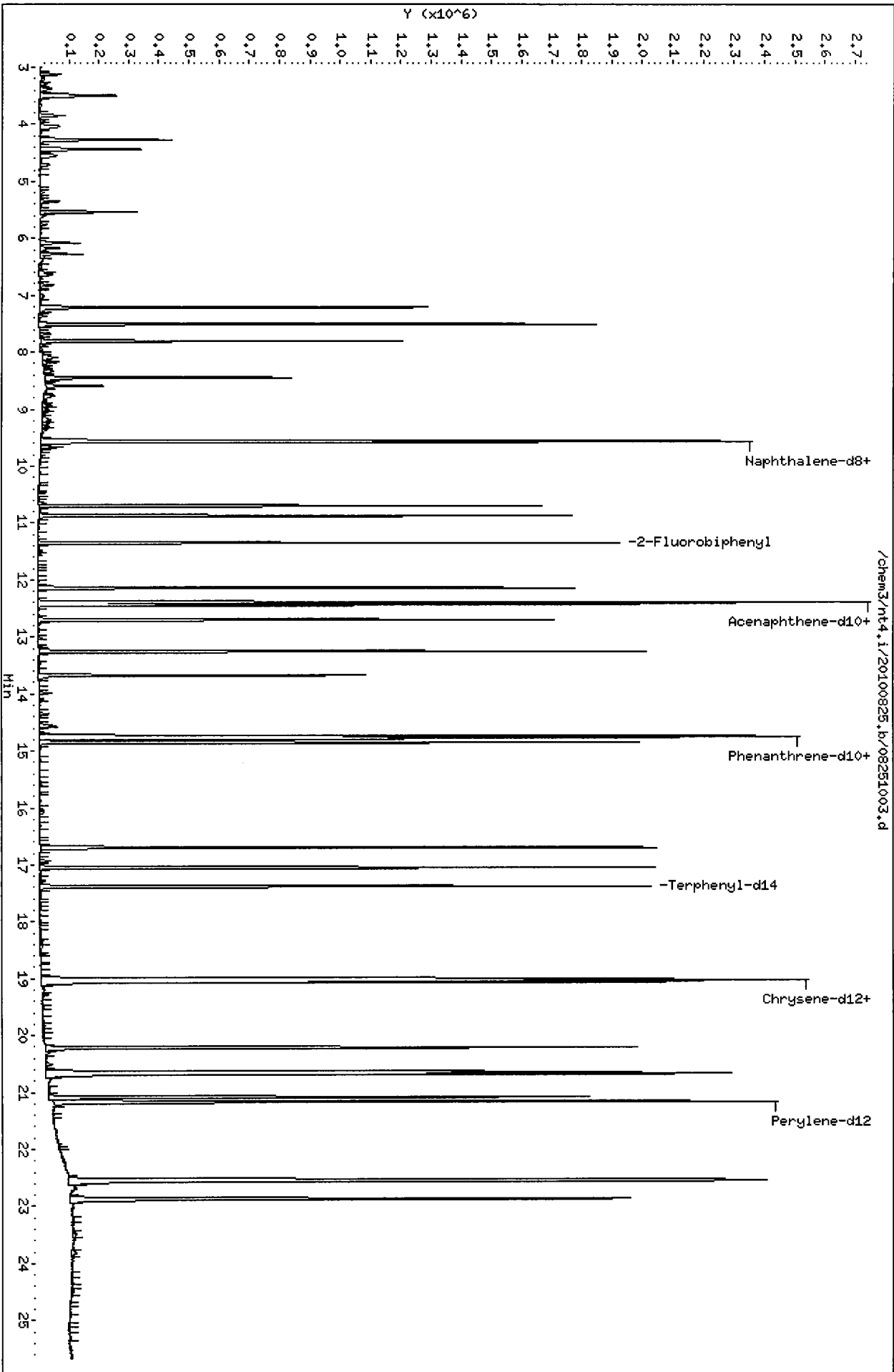
Client Name: Floyd/Snider	Client SDG: RG78
Sample Matrix: SOLID	Fraction: SV
Lab Smp Id: RG78LCSS2	Client Smp ID: RG78LCSS2
Level: LOW	Operator: JZ
Data Type: MS DATA	SampleType: LCS
SpikeList File: pnaclcss.spk	Quant Type: ISTD
Sublist File: pna.sub	
Method File: /chem3/nt4.i/20100825.b/SW846100719.m	
Misc Info: 10-18437	

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
28 Naphthalene	500.0	290.0	58.00	37-100
32 2-Methylnaphthalen	500.0	293.7	58.73	43-101
105 1-methylnaphthalen	500.0	295.2	59.04	39-100
40 Acenaphthylene	500.0	306.6	61.31	44-100
44 Acenaphthene	500.0	284.4	56.88	41-100
46 Dibenzofuran	500.0	322.8	64.55	44-100
49 Fluorene	500.0	301.7	60.35	49-100
60 Phenanthrene	500.0	320.9	64.19	48-100
61 Anthracene	500.0	322.7	64.54	50-100
64 Fluoranthene	500.0	338.1	67.62	54-100
65 Pyrene	500.0	357.7	71.55	41-105
68 Benzo(a)anthracene	500.0	355.7	71.14	49-100
71 Chrysene	500.0	346.8	69.36	50-100
187 Total Benzofluoran	1000	672.4	67.24	30-160
76 Benzo(a)pyrene	500.0	326.6	65.32	50-100
78 Indeno(1,2,3-cd)py	500.0	391.8	78.37	33-101
79 Dibenzo(a,h)anthra	500.0	395.4	79.09	37-104
80 Benzo(g,h,i)peryle	500.0	397.2	79.44	33-107

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	500.0	322.7	64.54	34-100
\$ 66 Terphenyl-d14	500.0	392.2	78.44	35-112

Date : 25-AUG-2010 12:16  
Client ID: RG78LCSS2  
Sample Info: RG78LCSS2,  
Volume Injected (uL): 1.0  
Column phase: ZB-5ms1

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



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt4.i/20100825.b/08251005.d  
 Lab Smp Id: RG79ORE Client Smp ID: PSB15-13-15-073010  
 Inj Date : 25-AUG-2010 13:23  
 Operator : JZ Inst ID: nt4.i  
 Smp Info : RG79ORE  
 Misc Info : 10-18519  
 Comment : 1ul Injection  
 Method : /chem3/nt4.i/20100825.b/SW846100719.m  
 Meth Date : 25-Aug-2010 19:08 jianqing Quant Type: ISTD  
 Cal Date : 19-JUL-2010 19:48 Cal File: 07191007.d  
 Als bottle: 5  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnas.sub  
 Target Version: 3.50

*Handwritten:* 08/25/10

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	10.00000	Weight of sample extracted (g)
M	16.10000	% 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	9.551	9.560	(1.000)	1761958	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	11.354	11.357	(0.916)	982343	15.4374	920.0	
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	12.394	12.397	(1.000)	1038825	20.0000		
44 Acenaphthene	153	Compound Not Detected.						
46 Dibenzofuran	168	Compound Not Detected.						
49 Fluorene	166	Compound Not Detected.						
* 59 Phenanthrene-d10	188	14.749	14.747	(1.000)	1584948	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	17.387	17.384	(0.914)	607827	10.8177	644.7	
68 Benzo(a)anthracene	228	Compound Not Detected.						
* 69 Chrysene-d12	240	19.026	19.029	(1.000)	1451077	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	21.182	21.168	(1.000)	1555973	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: 25-AUG-2010
Lab File ID: 08251005.d	Calibration Time: 10:54
Lab Smp Id: RG79ORE	Client Smp ID: PSB15-13-15-0730
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Soil
Operator: JZ	
Method File: /chem3/nt4.i/20100825.b/SW846100719.m	
Misc Info: 10-18519	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	1293412	646706	2586824	1761958	36.23
42 Acenaphthene-d10	785897	392948	1571794	1038825	32.18
59 Phenanthrene-d10	1313990	656995	2627980	1584948	20.62
69 Chrysene-d12	1155293	577646	2310586	1451077	25.60
77 Perylene-d12	1146289	573144	2292578	1555973	35.74

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
27 Naphthalene-d8	9.56	9.06	10.06	9.55	-0.10
42 Acenaphthene-d10	12.40	11.90	12.90	12.39	-0.03
59 Phenanthrene-d10	14.75	14.25	15.25	14.75	0.02
69 Chrysene-d12	19.03	18.53	19.53	19.03	-0.02
77 Perylene-d12	21.17	20.67	21.67	21.18	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.

Analytical Resources, Inc.

RECOVERY REPORT

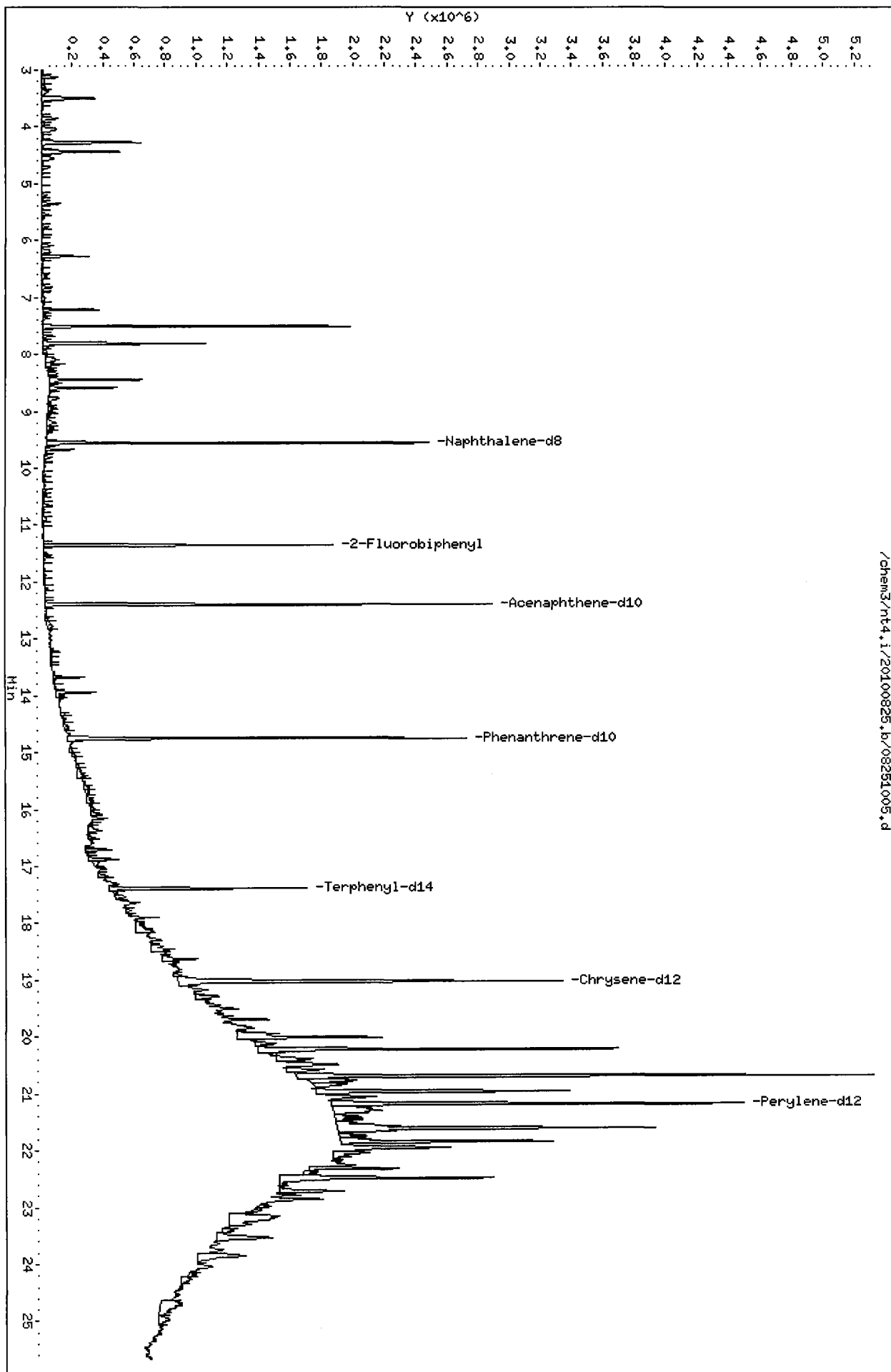
Client Name: Floyd/Snider Client SDG: RG78  
Sample Matrix: SOLID Fraction: SV  
Lab Smp Id: RG79ORE Client Smp ID: PSB15-13-15-073010  
Level: LOW Operator: JZ  
Data Type: MS DATA SampleType: SAMPLE  
SpikeList File: pnaslcass.spk Quant Type: ISTD  
Sublist File: pnas.sub  
Method File: /chem3/nt4.i/20100825.b/SW846100719.m  
Misc Info: 10-18519

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 36 2-Fluorobiphenyl	1490	920.0	61.75	34-100
\$ 66 Terphenyl-d14	1490	644.7	43.27	35-112

Data File: /chem3/nt4.i/20100825.b/08251005.d  
Date: 25-AUG-2010 13:23  
Client ID: PSB15-13-15-073010  
Sample Info: RG790RE  
Volume Injected (uL): 1.0  
Column phase: ZB-5ms1

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

/chem3/nt4.i/20100825.b/08251005.d





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

**ARI Job ID: RG79**



Preparation Test PCP # 3

ARI Job No(s) RG79

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

Bottle #	Extraction Requirements	Verify Client ID	Volume Extracted (wet wt)	Sonic Horn ID	KD Exchange To Hexane (X 2)	Turbo Vap 123	Final Effective Volume	Volume to Lab	Derivitize	Comments
	RG79 MB	Date 08/12/10	10.00g	1			25mL	1-2mL		
	SB		↓	2						
7	A	↓	10.08	3						
7	B	Check out	10.00	4						
7	C		10.05	5						
7	D		10.04	6						
18	E		10.03	7						
18	Ems		10.01	8						
18	EmsD		10.08	9						
7	G		10.03	10						
7	H		10.02	11						
7	K		10.04	12						
7	L		10.06	1						
7	M		10.05	2						
7	N		10.03	3						
7	O		10.00	4						
7	P		10.04	5						
7	Q		10.01	6						
Analyst/Date		AC 8/14/10	TS/RR 8-16-10	JP 08/16/10	JP 08/16/10	JP 08/16/10	JP 08/16/10	JP 08/16/10		

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	F 10483-3	50µL 12.5	12/9/10	JP	AC
Spike	6 1702-2	50µL 12.5/12.5	2/18/11	ATZ	AC
Extraction Time:	12.30	Balance ID: 21784520	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)

5899



ARI Job No.: RG 79

Client ID: Floyd/Snyder

Parameter: PCP

Client Project: Lura Lake RI

Note problems, concerns, corrective actions	Analyst/Date
Screens: <u>Soil</u> /Sediment/Solid/Other: <u>Soil</u>	WC 8/7/10
<input checked="" type="checkbox"/> No Anomalies (standard soil/sediment) <u>G, L, M</u>	↓
<input type="checkbox"/> Wet sediment/sludge= <u>Moistured (H)</u>	
<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"/> Rocks/Organics= <u>Rock (A, B, C, D, E, H, I, K, N, Q, PO)</u> <u>Organic (K)</u>	WC 8/7/10
<input checked="" type="checkbox"/> Oily, obvious fuel/sulfur odors= <u>Fuel odor (I)</u>	↓
<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: RG79**



### 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>AD</u> <u>8/12/10</u> YES / NO / <u>NA</u>
ICal Meets RF & %RSD Criteria?	<u>YES</u> / NO	LCS/LCSD Recovery In Control?	<u>AD</u> <u>8/12/10</u> YES / NO / <u>NA</u>
CCal Meets RF & %RSD Criteria?	<u>YES</u> / NO	Surrogate Recovery In Control?	YES / 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: 8/13/10

**Analytical Resources Inc.: Organics Instrument Log**


**ECD1 Serial No.: 3410A39690**

Date: 8/9/2010 Analysis: Herbicides <sup>Cl. Phenols</sup> <sub>AR 8/12/2010</sub> Analyst: AR

GC Program: HERB.M Column No: 150608/148146 Column Type: ZB5/ZB35

Instrument Tune (.U or .CT.): PCPF <sup>AR</sup> <sub>PCPF</sub> EM Voltage: NA

Calibration File: HERB20100809.F <sup>AR</sup> <sub>FPCP20100809.b</sub> Curve Date: 8/2/2010 <sup>AR</sup> <sub>8/9/2010</sub>

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

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd1.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	

AR 8/12/2010

**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.

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd1.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	

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
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:	12:23	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	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  
Reviewer 2

AR Date: 8/12/2010  
Date: 8/13/10



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: ecdl1.i

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	8.584	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 Date: 8/12/200  
Reviewer 2 [Signature] Date: 8/13/10

MANUAL INTEGRATION SUMMARY FOR DATAATCH - /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

AP 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

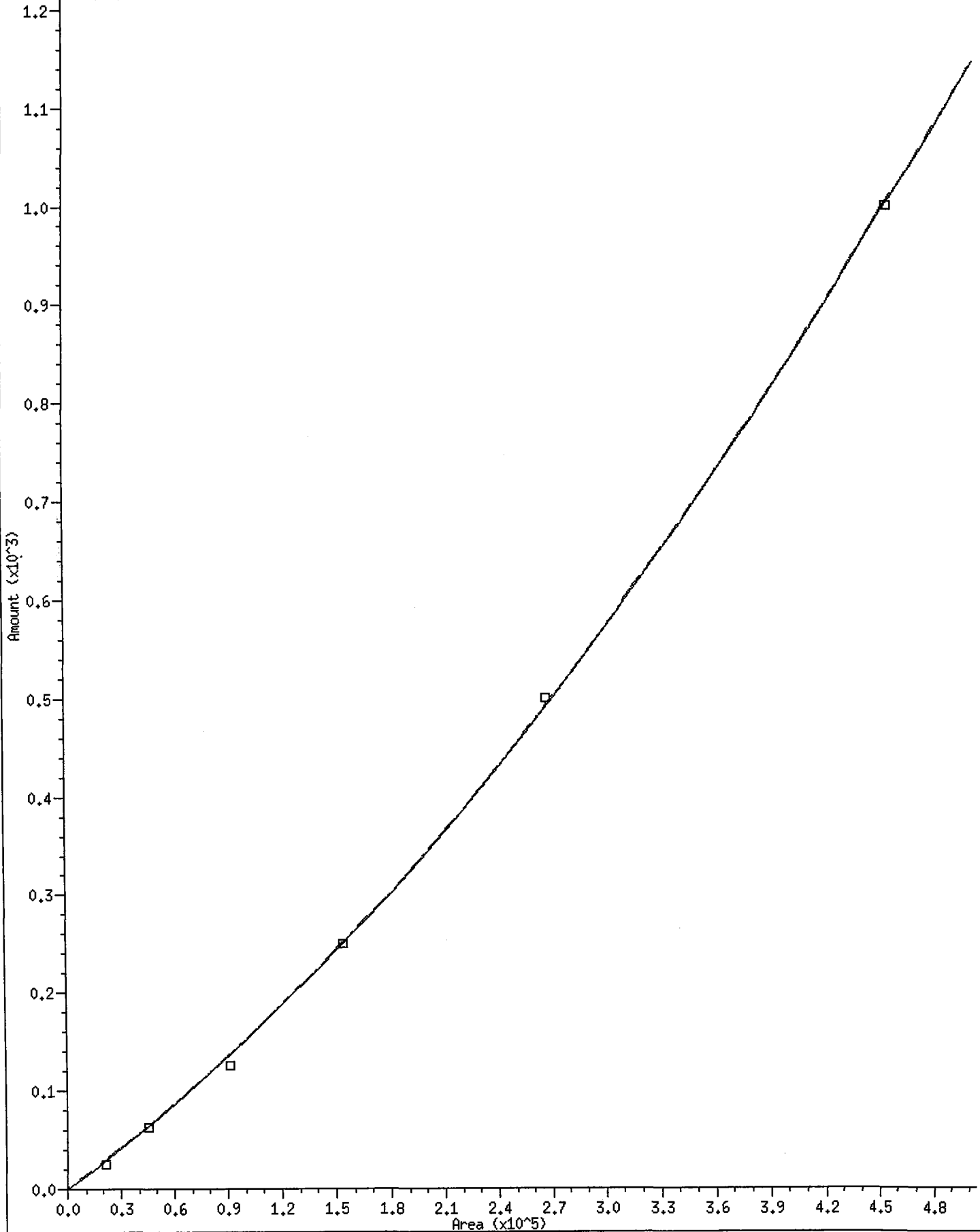
## Calibration File Names:

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

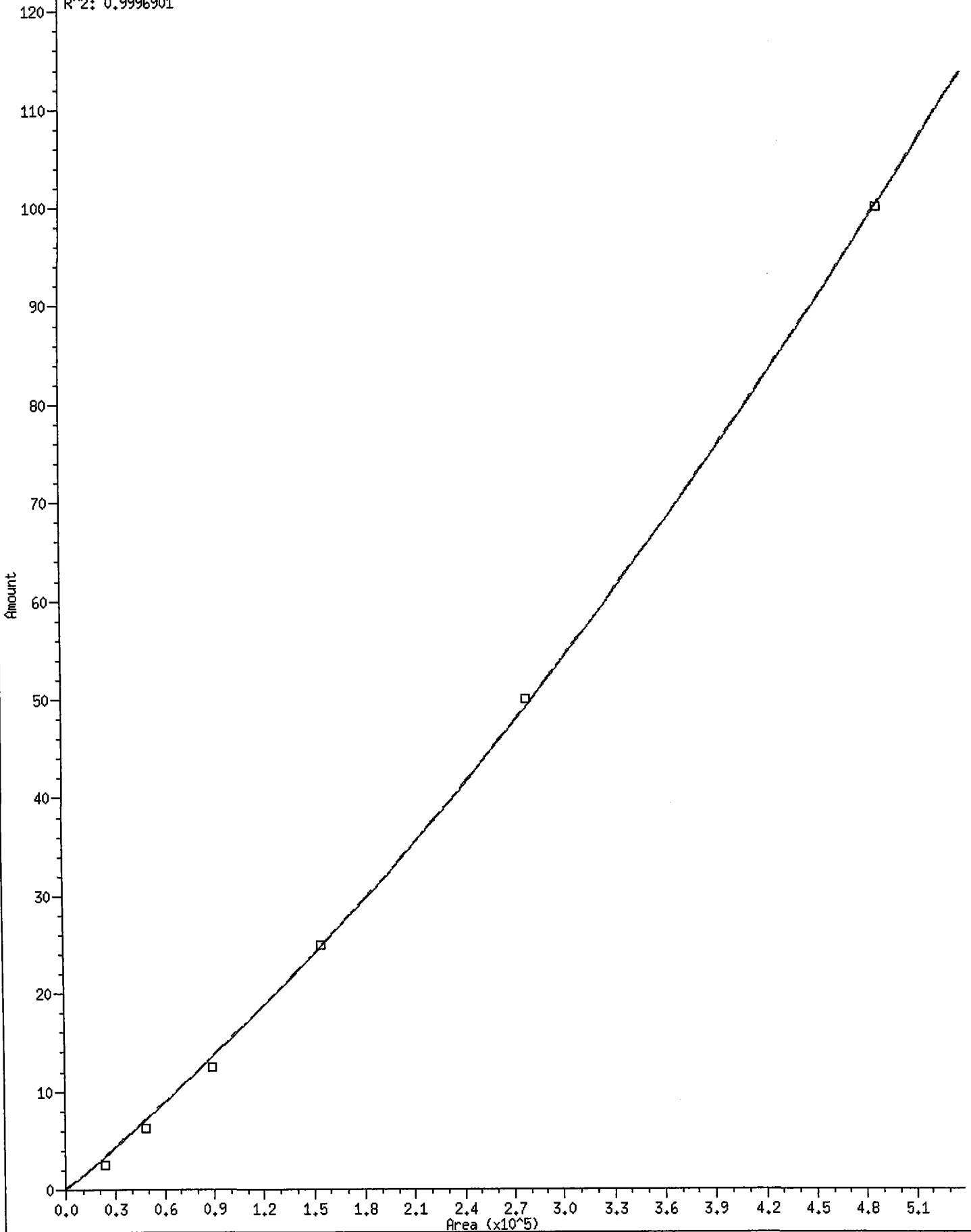
1 2,4-Dichlorophenol

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



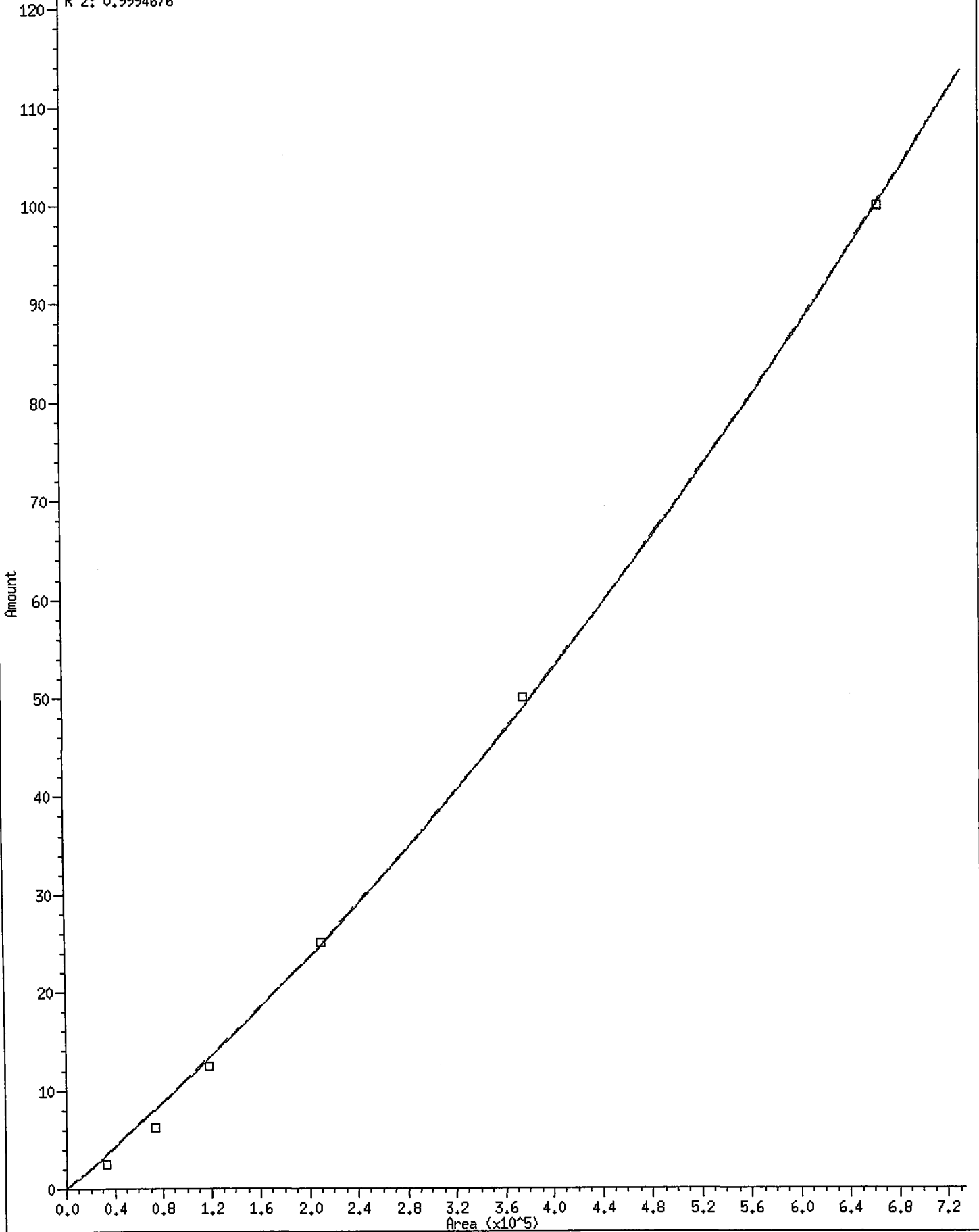
4 2,4,5-Trichlorophenol

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



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/ecd1.i/FPCP20100809.b/FPCPB.m  
 Cal Date : 12-Aug-2010 18:59 aron

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

Compound	2		6		12		25		50		100		Coefficients			or R <sup>2</sup>
	Level 1	Level 2	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 4	Level 5	Level 6	Curve	b	m1	m2	
1 2,4-Dichlorophenol	21466	45023	91643	154741	267768	457854	QUAD	0.000e+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					



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

Curve	Formula	Units
Averaged	Amt = Resp/ml	Response
Quad	Amt = b + m1*Resp + m2*Resp^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/ecdl.i/FPCP20100809.b/FPCP.m  
 Cal Date : 12-Aug-2010 19:13 aron  
 Curve Type : Average

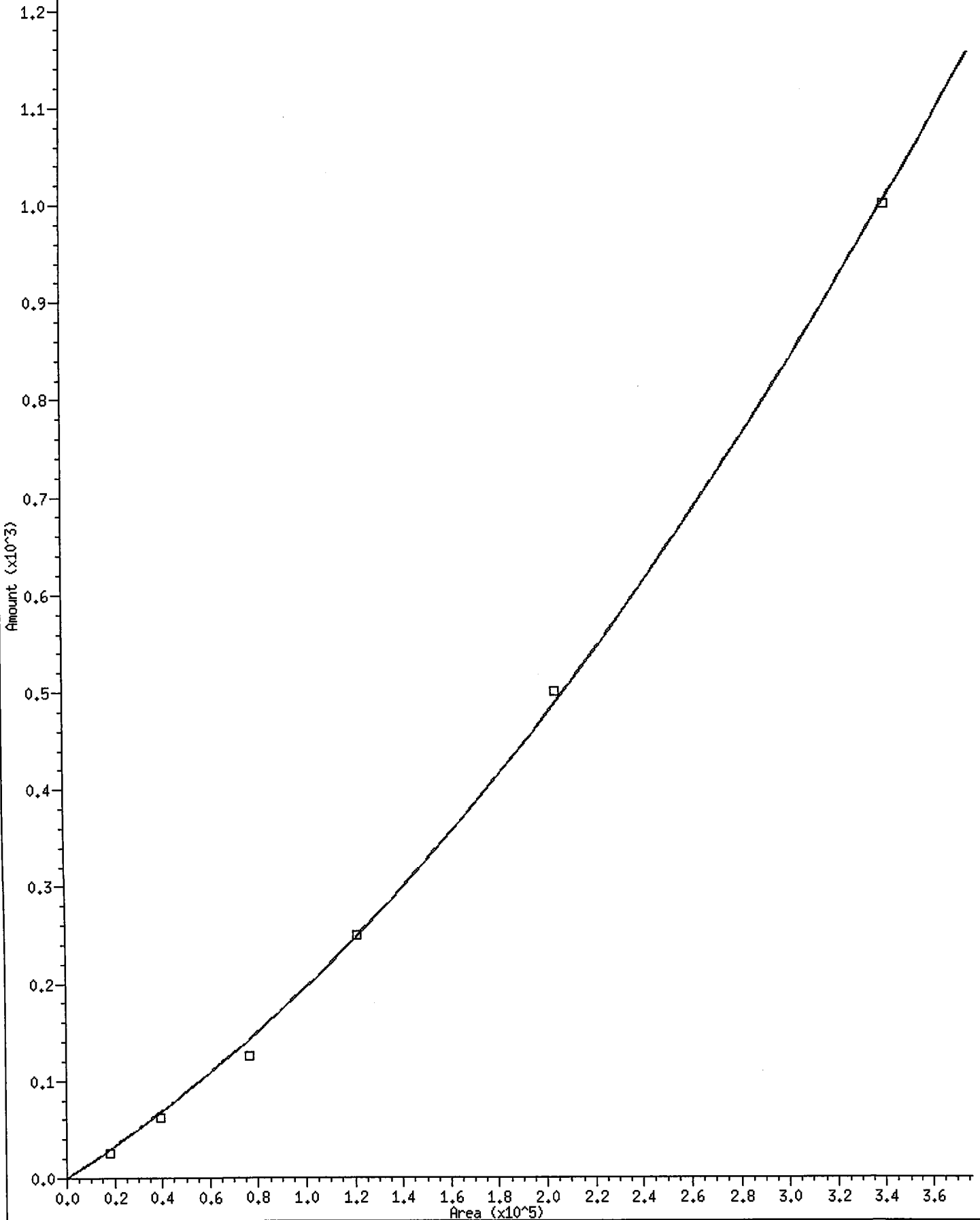
## Calibration File Names:

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

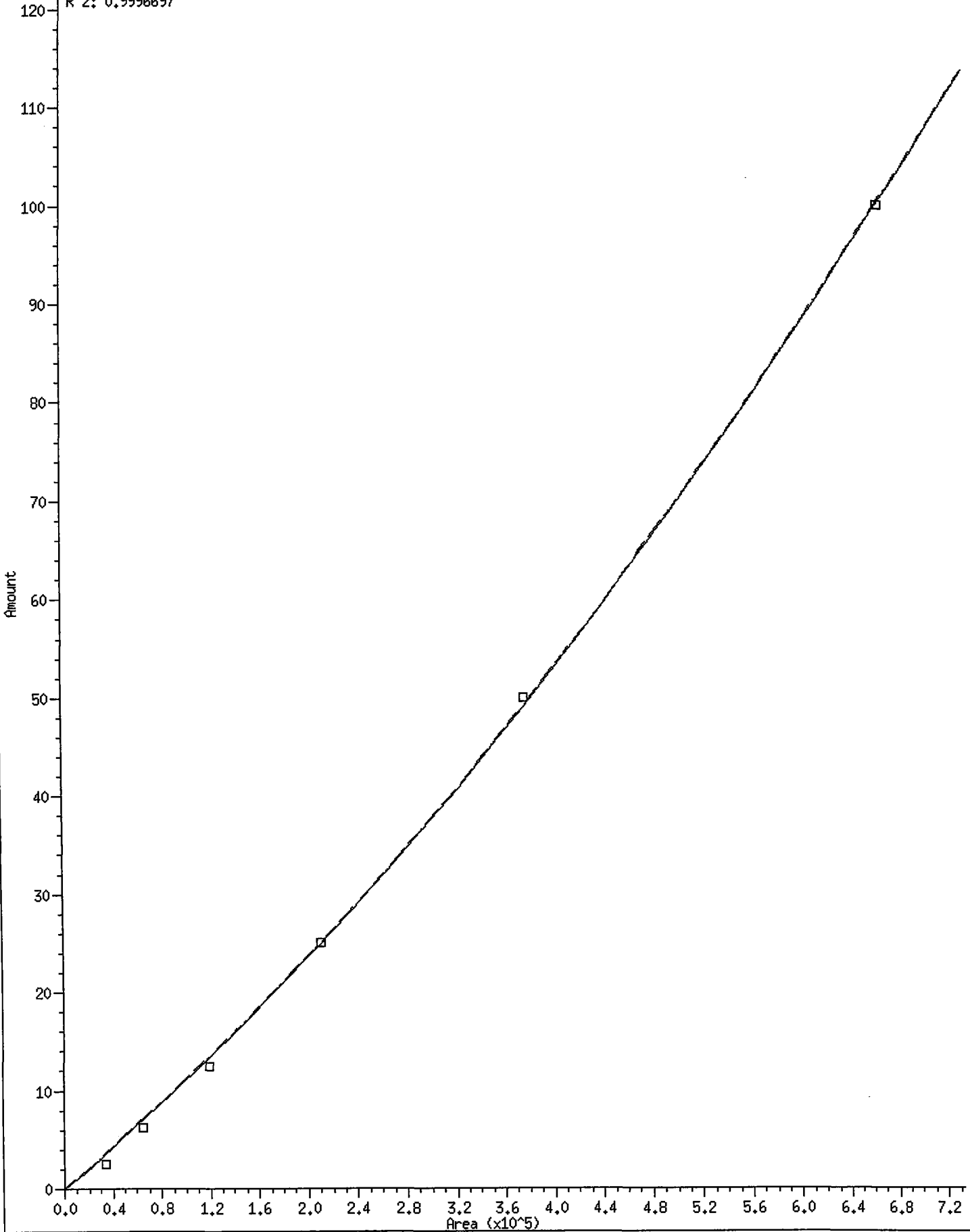
1 2,4-Dichlorophenol

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



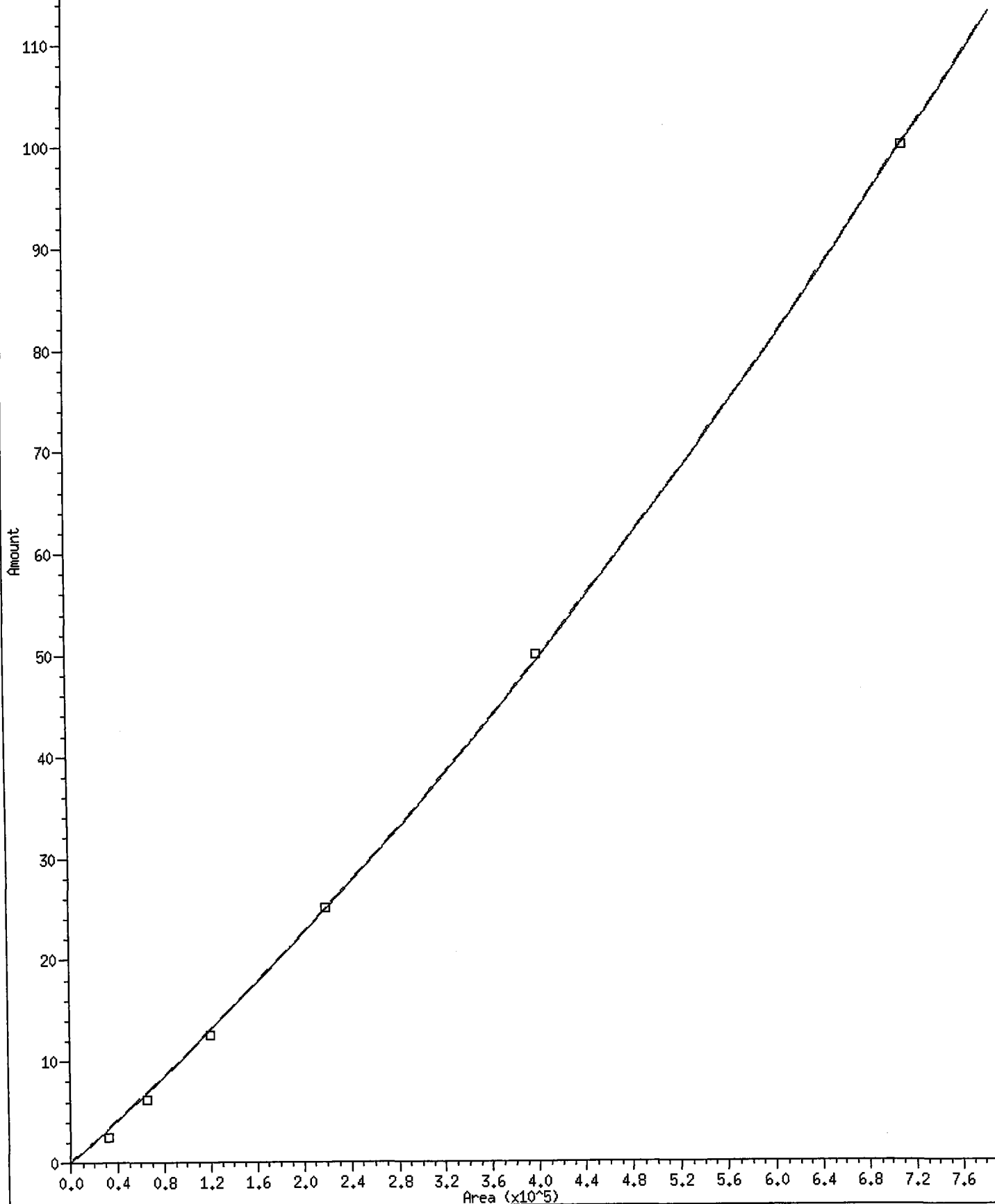
2 2,4,6-Trichlorophenol

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



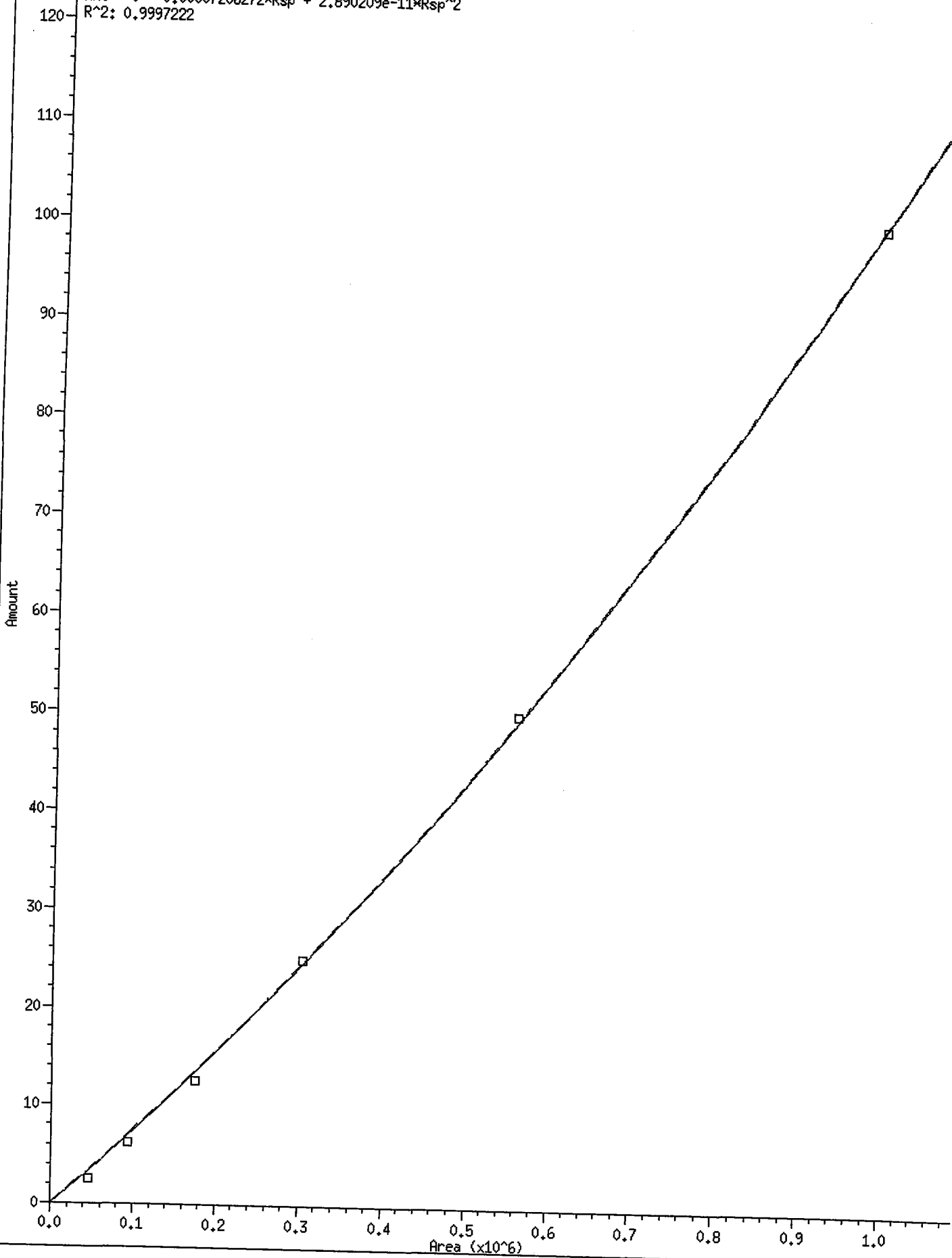
3 2,3,6-Trichlorophenol

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



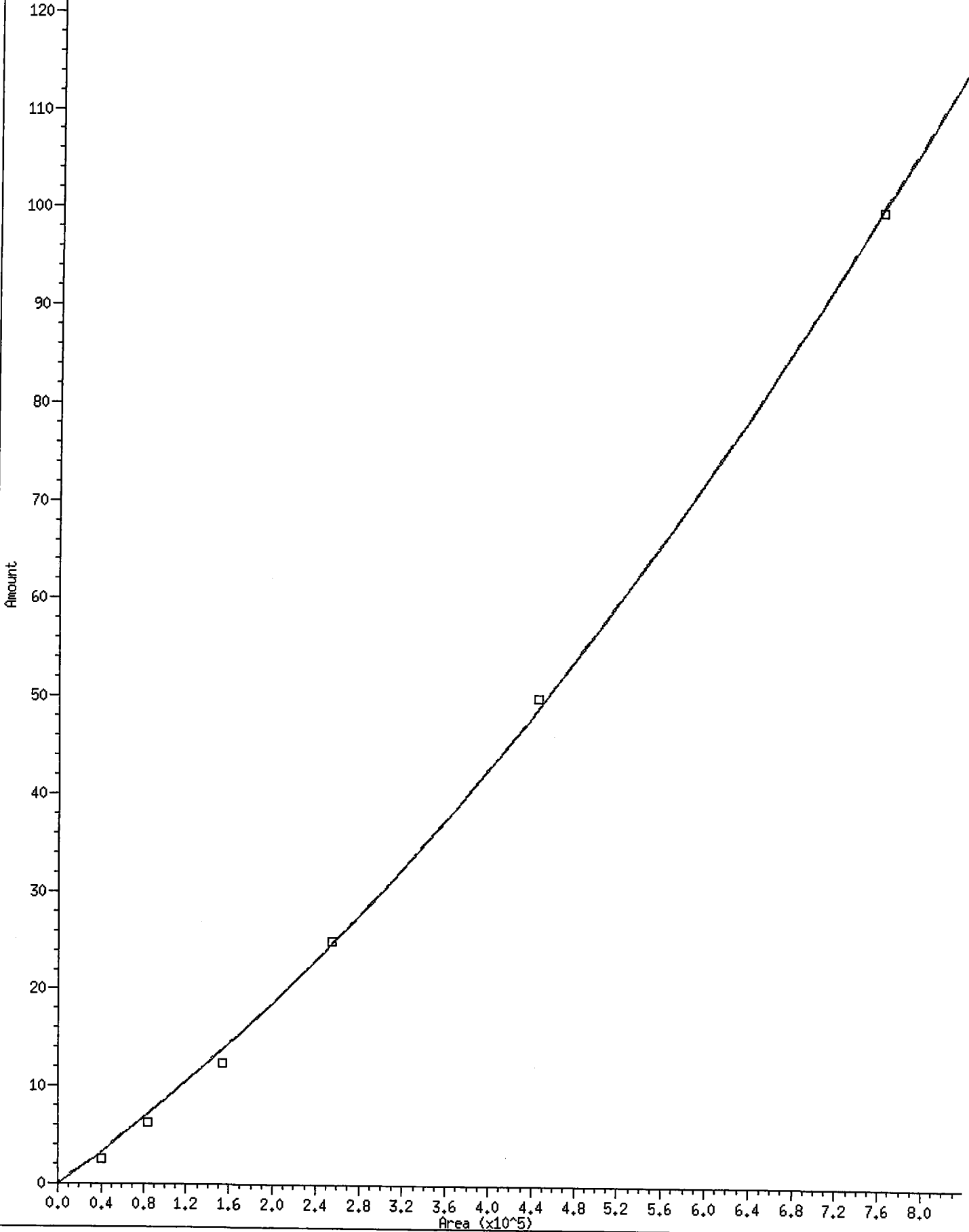
\* 7 2,4,6-Tribromophenol (surr)

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



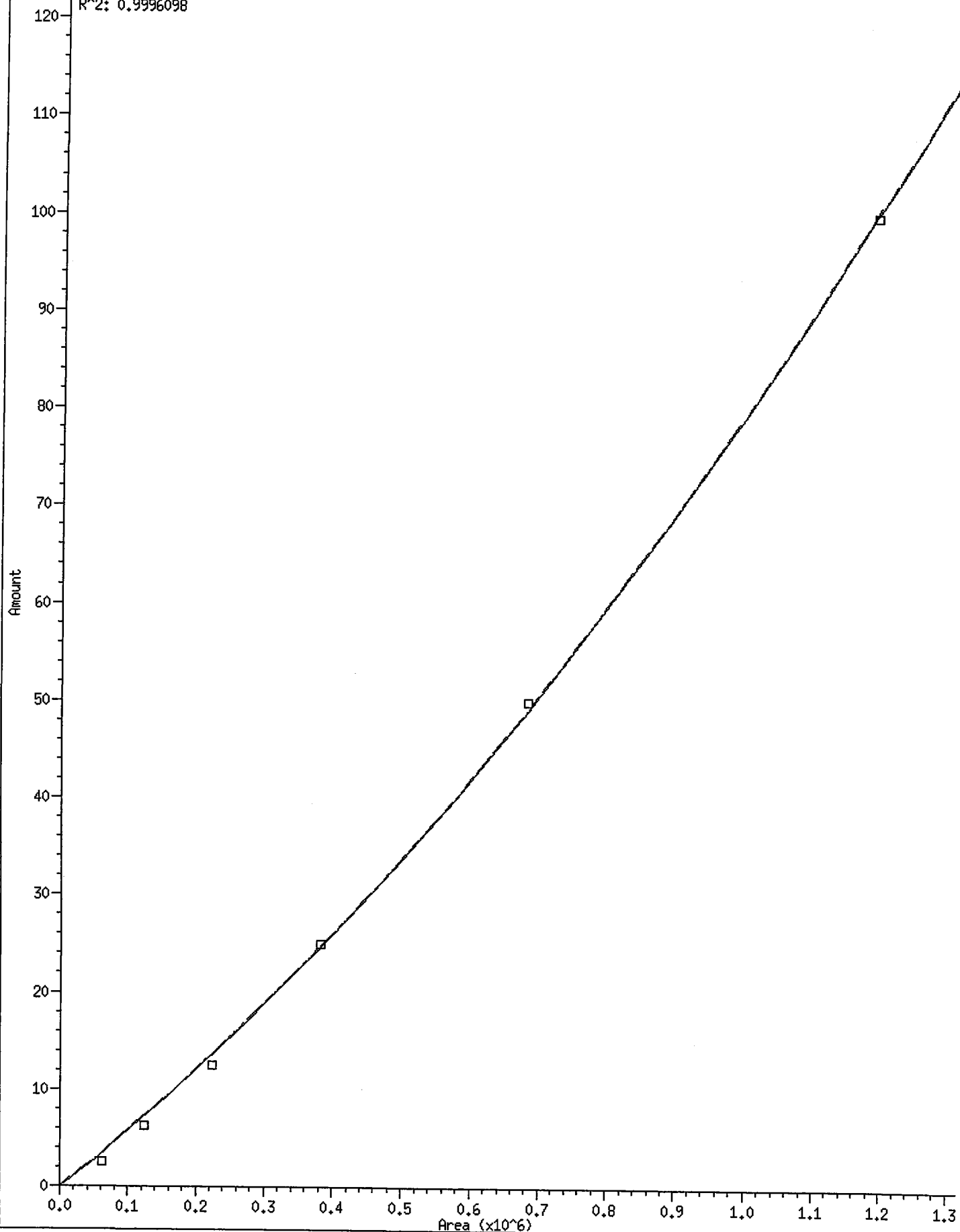
8 2,3,4,5-Tetrachlorophenol

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



9 Pentachlorophenol

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





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						%RSD or R <sup>2</sup>
	2 Level 1	6 Level 2	12 Level 3	25 Level 4	50 Level 5	100 Level 6	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 2,3,5,6-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	0.00007	2.890e-11			0.99972

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

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

Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

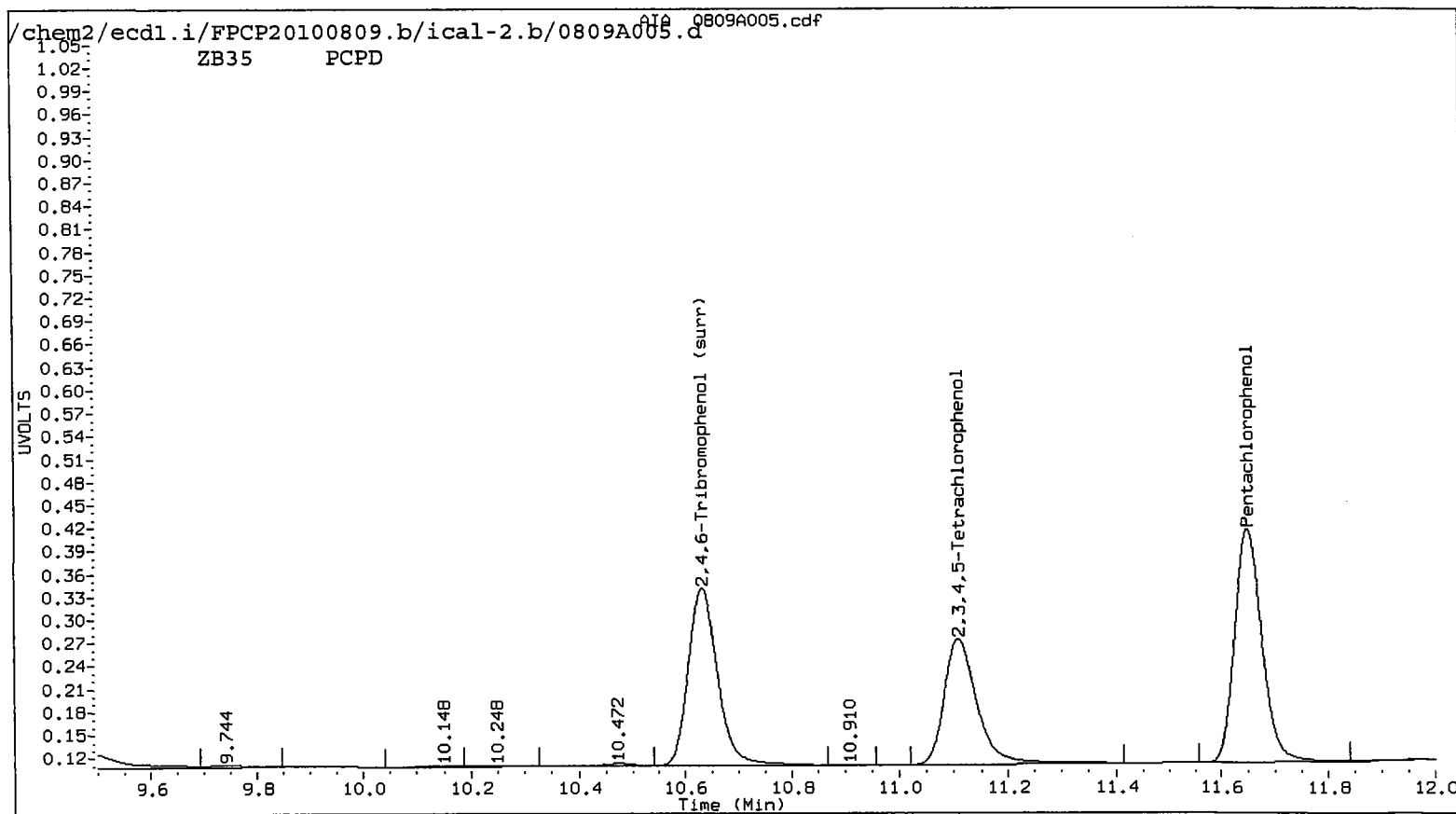
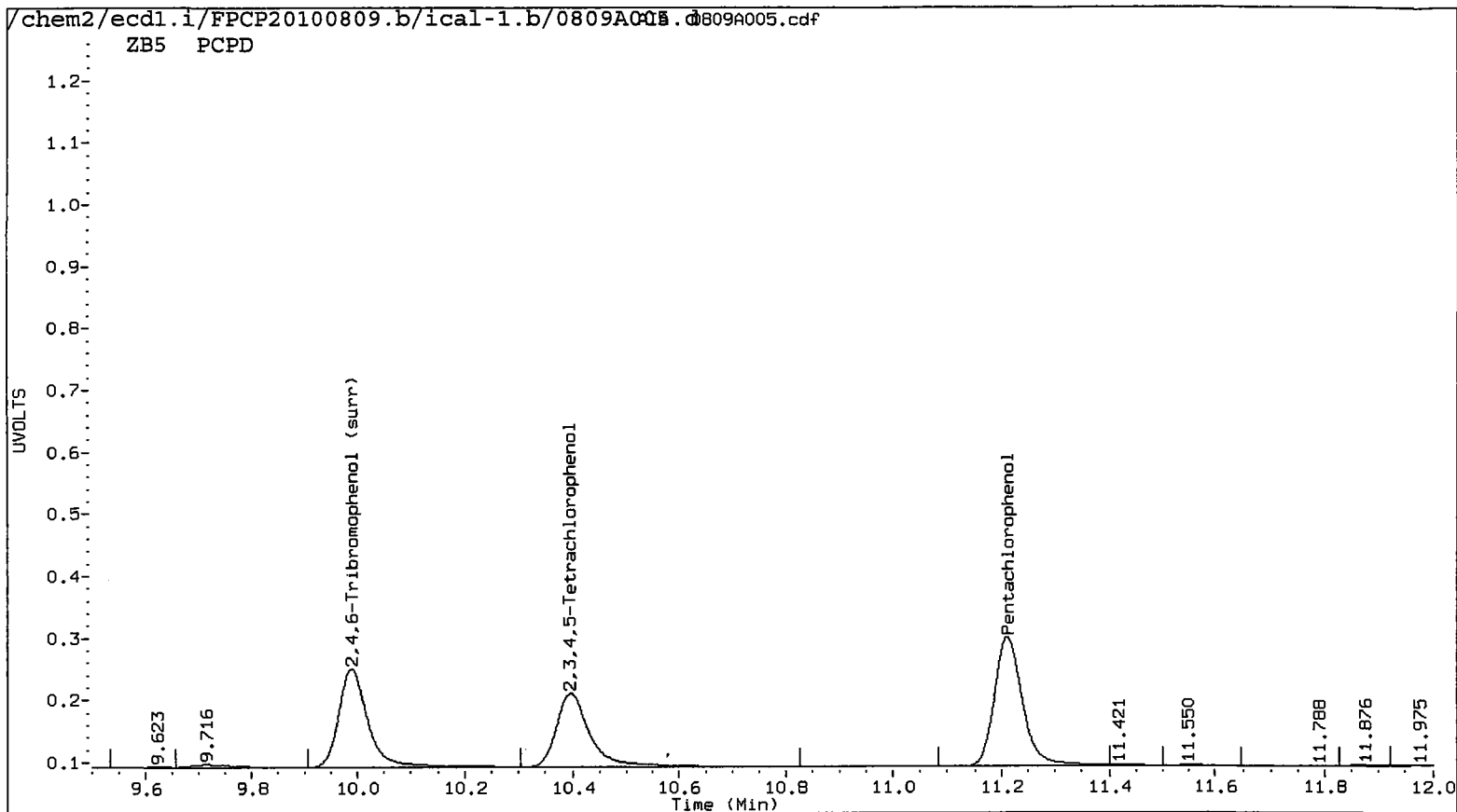
AR 8/12/2010

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/ecdl1.i/FPCP20100809.b/ical-1.b/0809A005.d

Date : 09-AUG-2010 12:23

Client ID:

Sample Info: PCPD

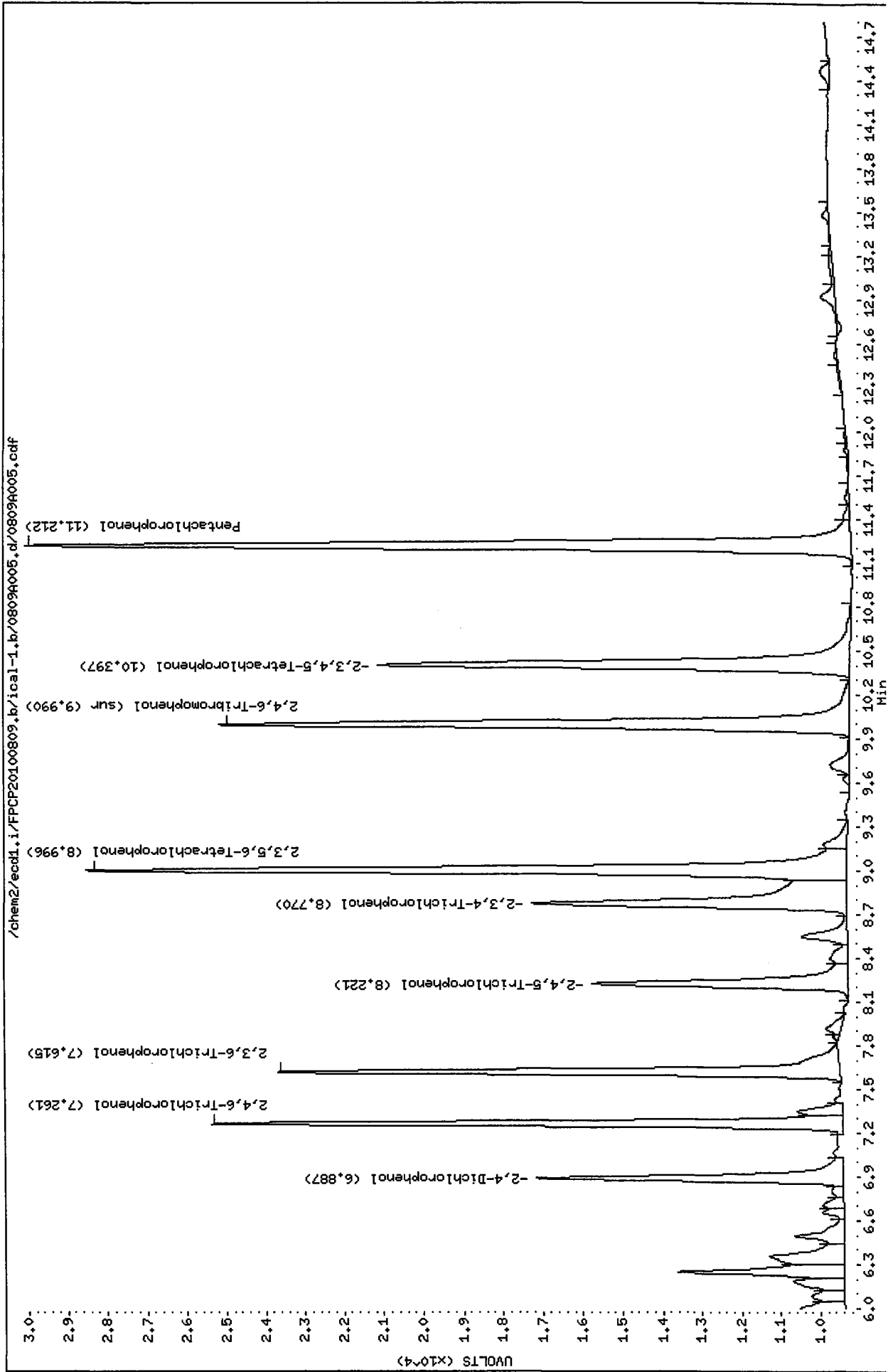
Purge Volume: 2.0

Column phase: ZB5

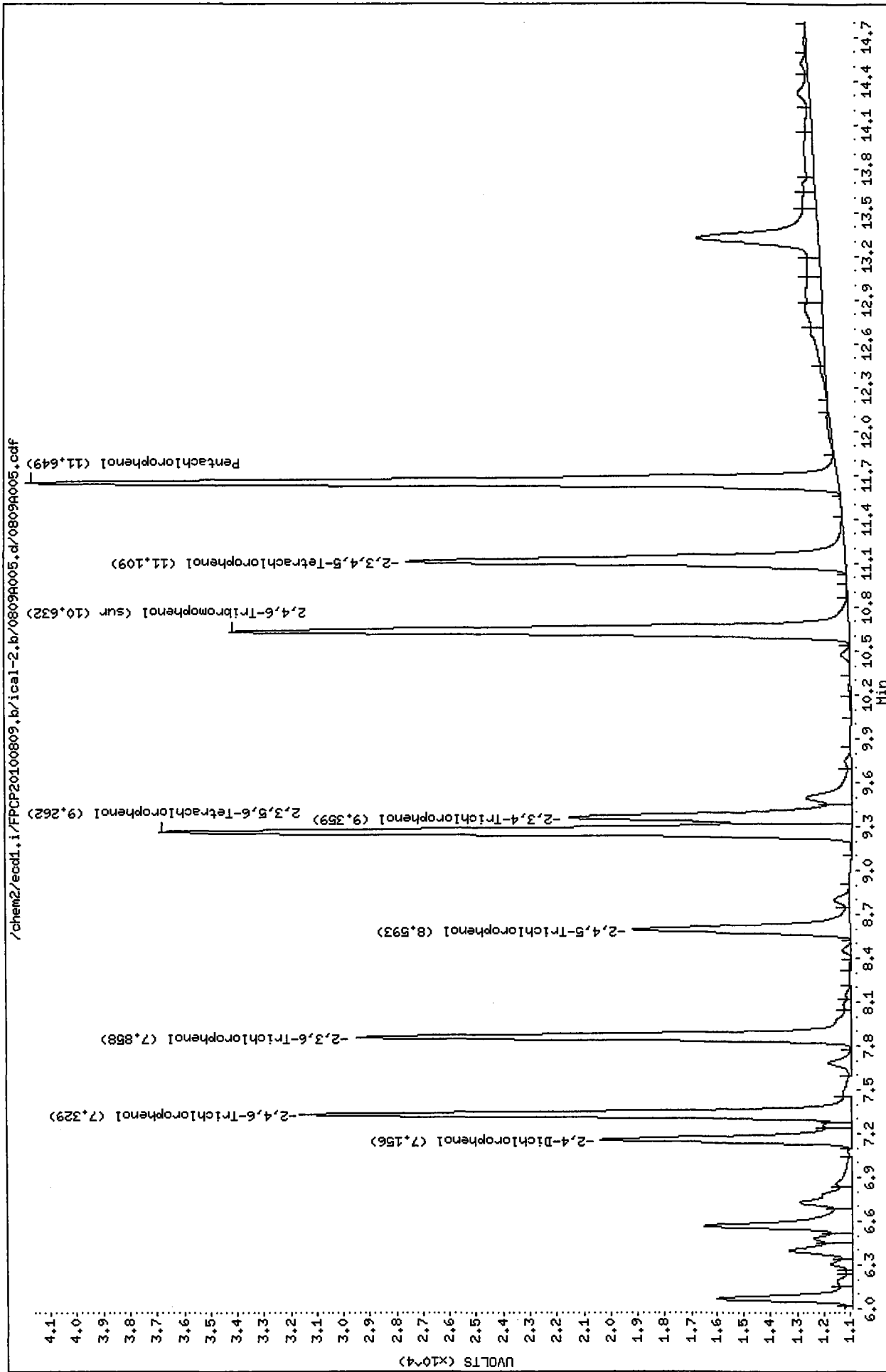
Instrument: ecd1.i

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:  
Instrument: ecdl1.i  
Sample Info: PCPD  
Operator: ar  
Purge Volume: 2.0  
Column phase: ZB35  
Column diameter: 0.53



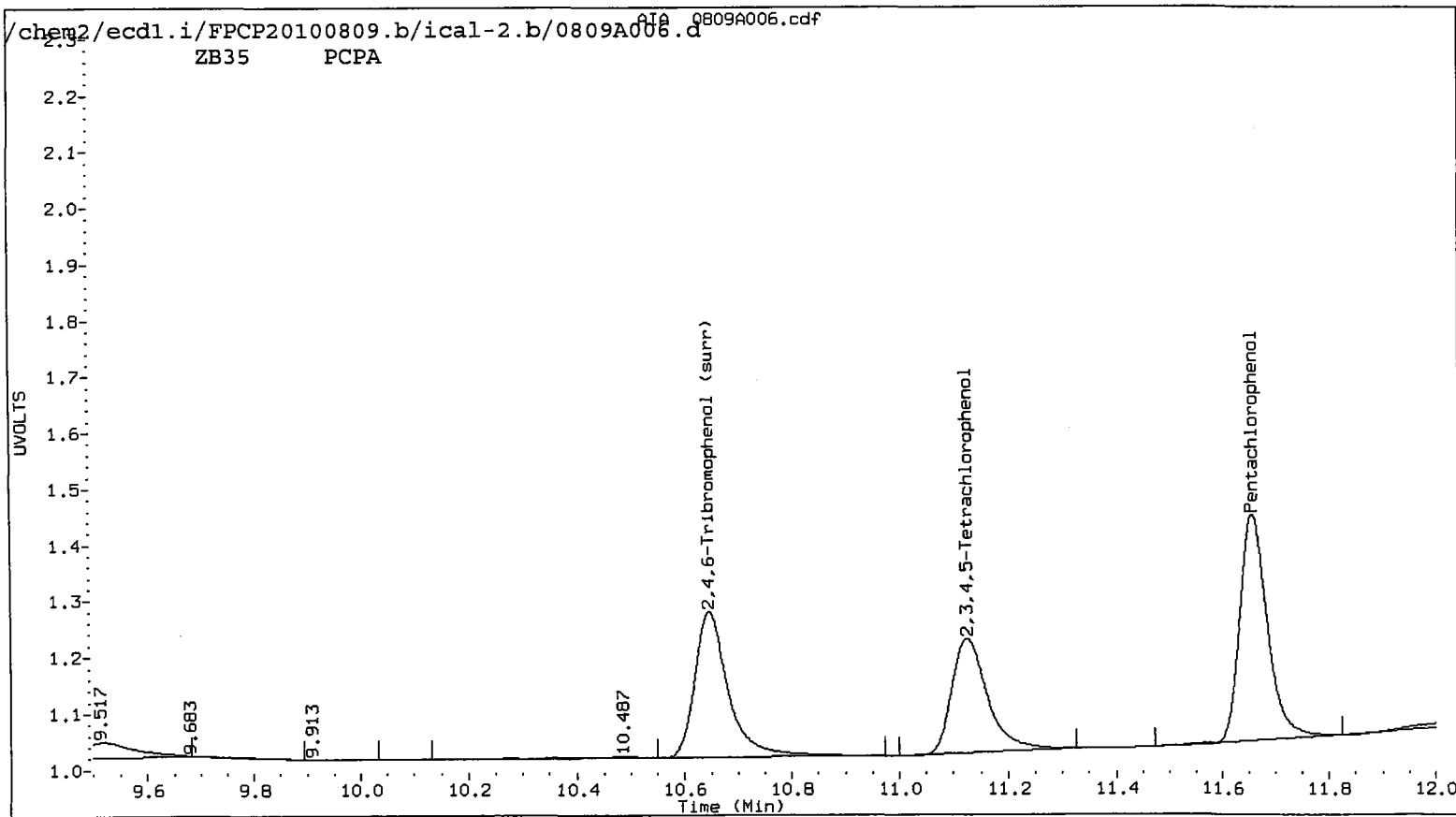
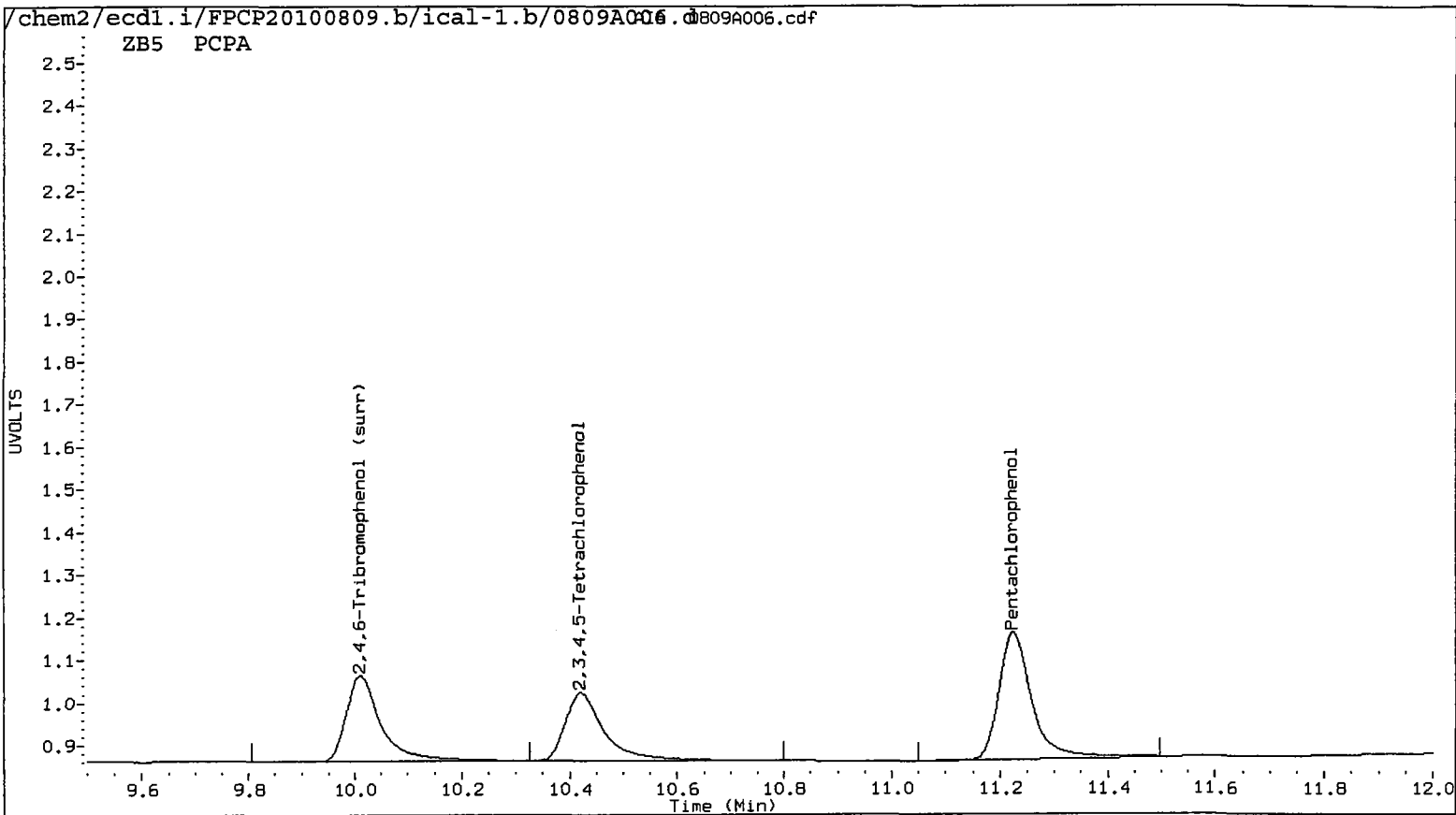
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

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: 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		
11.225	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

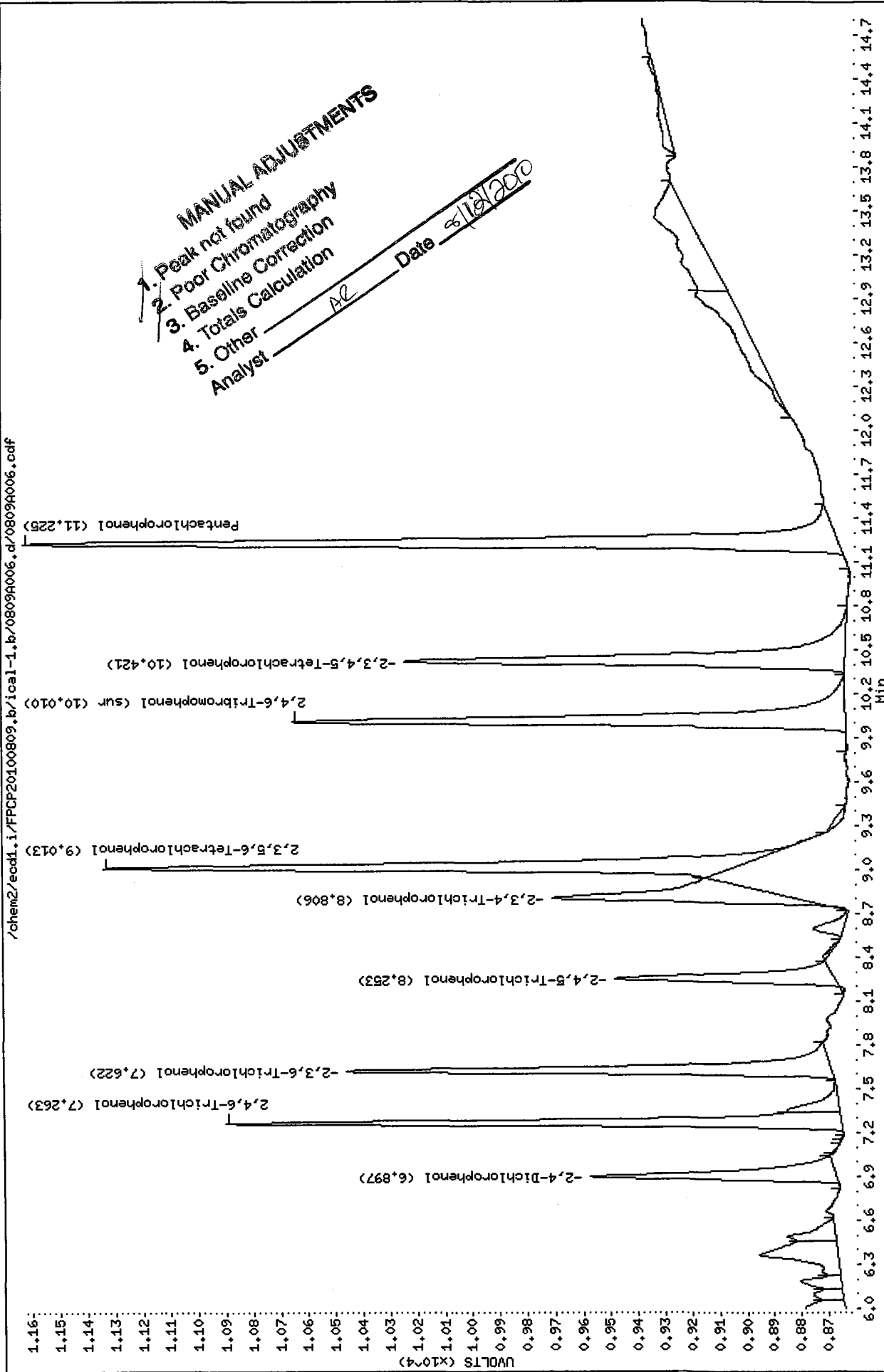
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	13.6	12.1





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

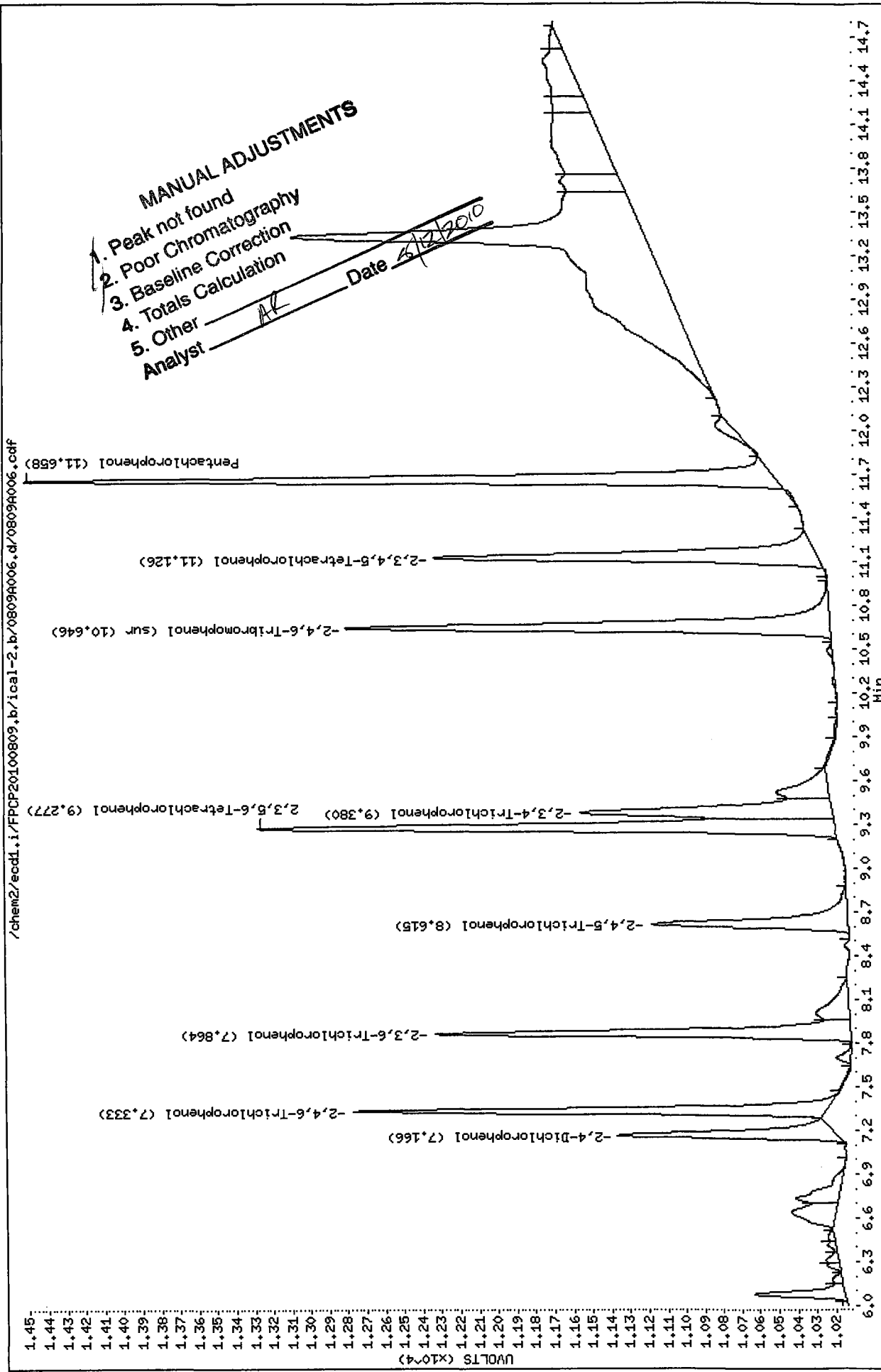
Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53



Data File: /chem2/ecdl.i/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

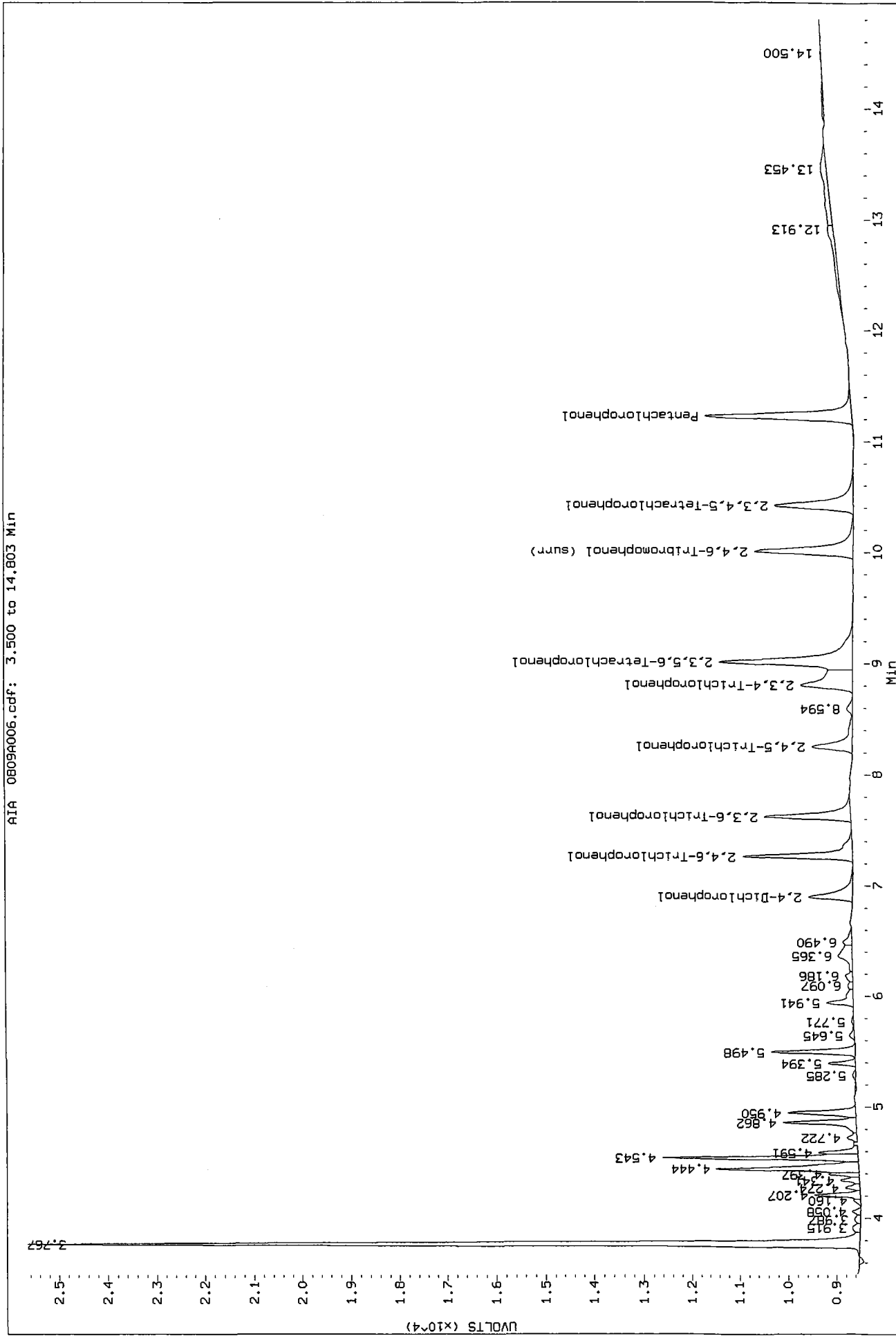
Instrument: ecdl.i

Operator: ar  
Column diameter: 0.53



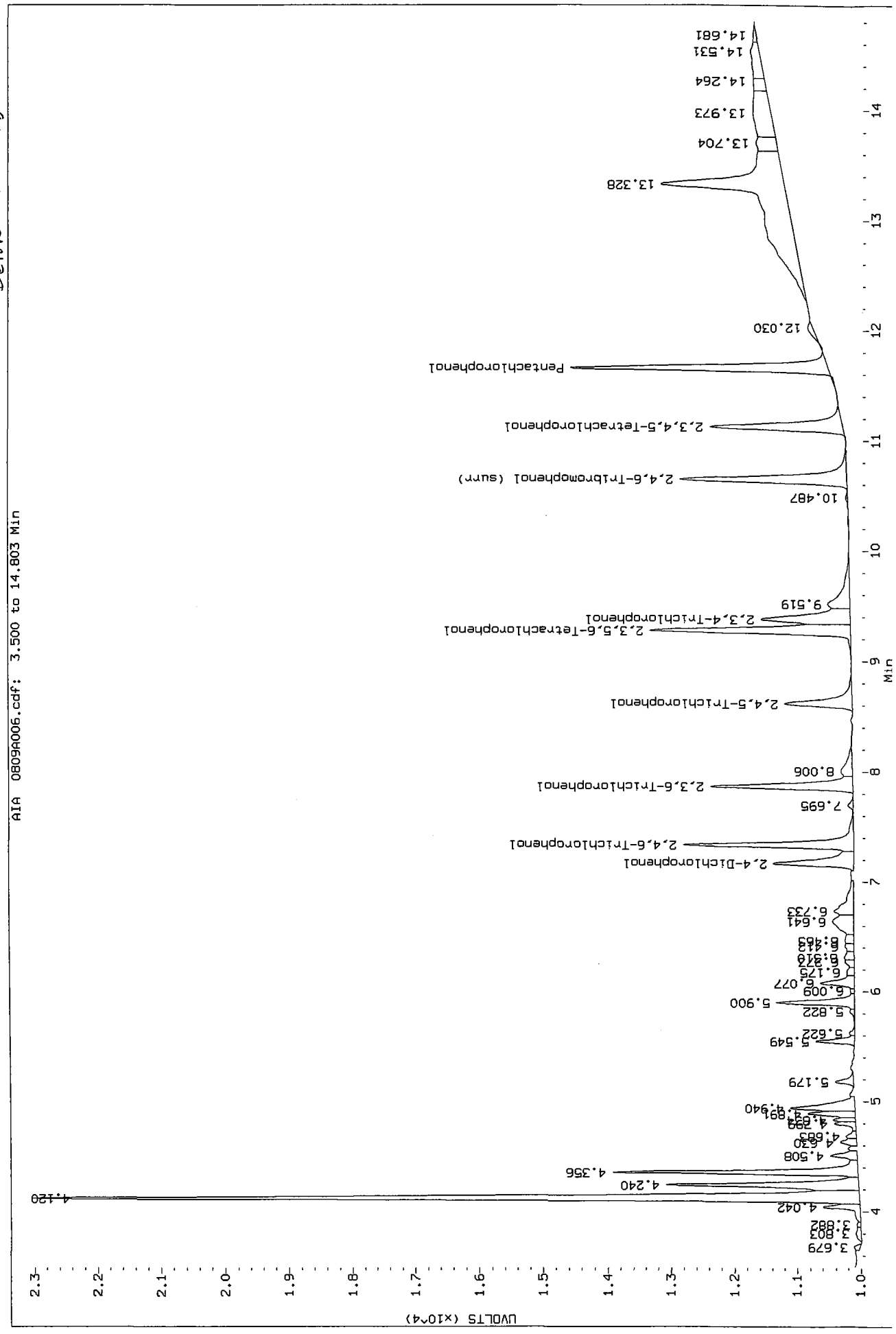
Data File: /chem2/eecd1.1/FP/CP20100809.b/1cal-1.b/0809A006.d/0809A006.cdf  
 Injection Date: 09-AUG-2010 12:43  
 Instrument: ecd1.1  
 Client Sample ID:

Before 08/12/200



Data File: /chem2/ecdl.i/FPCP20100809.b/1ca1-2.b/0809A006.d/0809A006.cdf  
 Injection Date: 09-AUG-2010 12:43  
 Instrument: ecdl.1  
 Client Sample ID:

Before AR 8/19/2010



RG79 : 00900

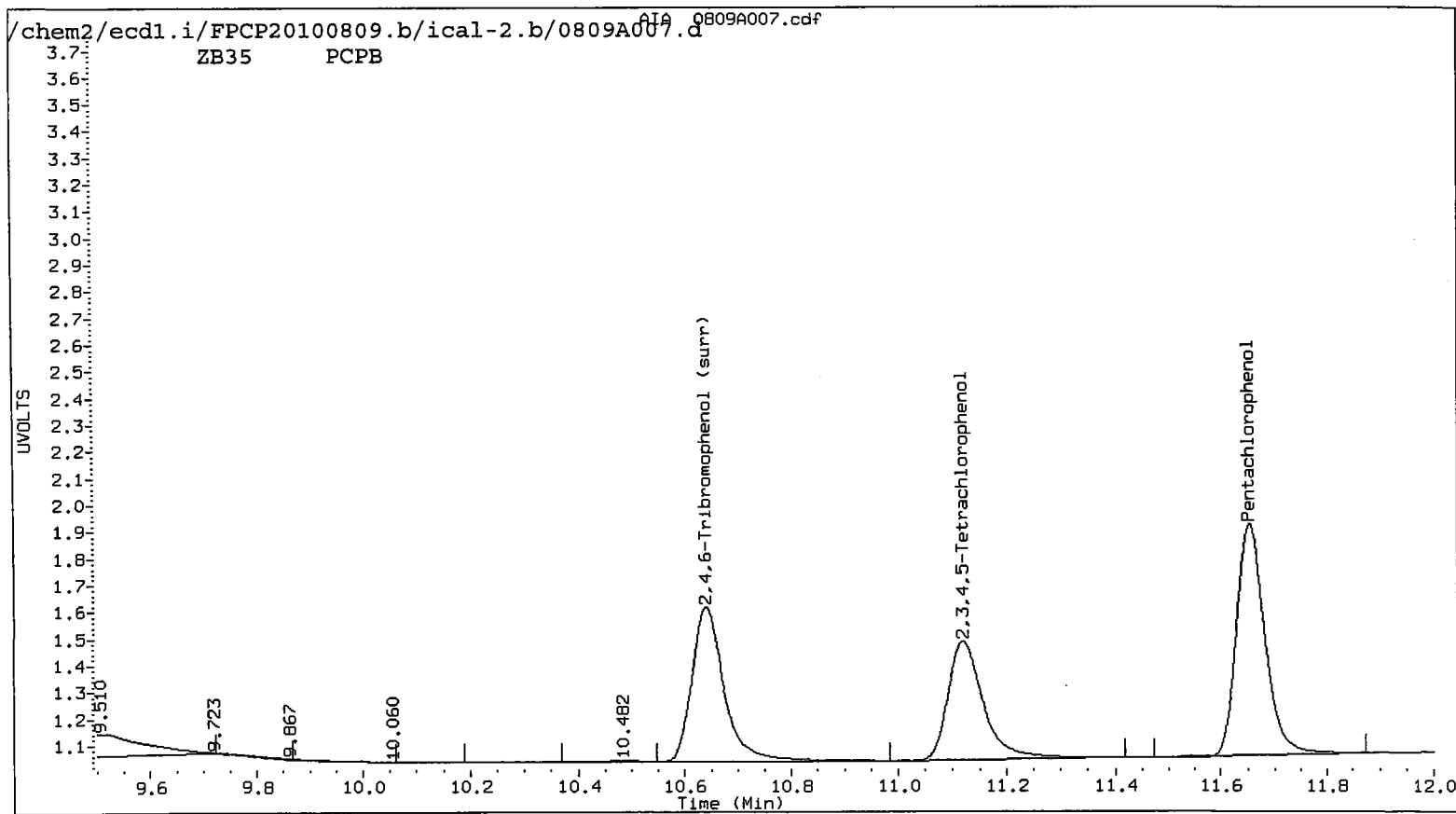
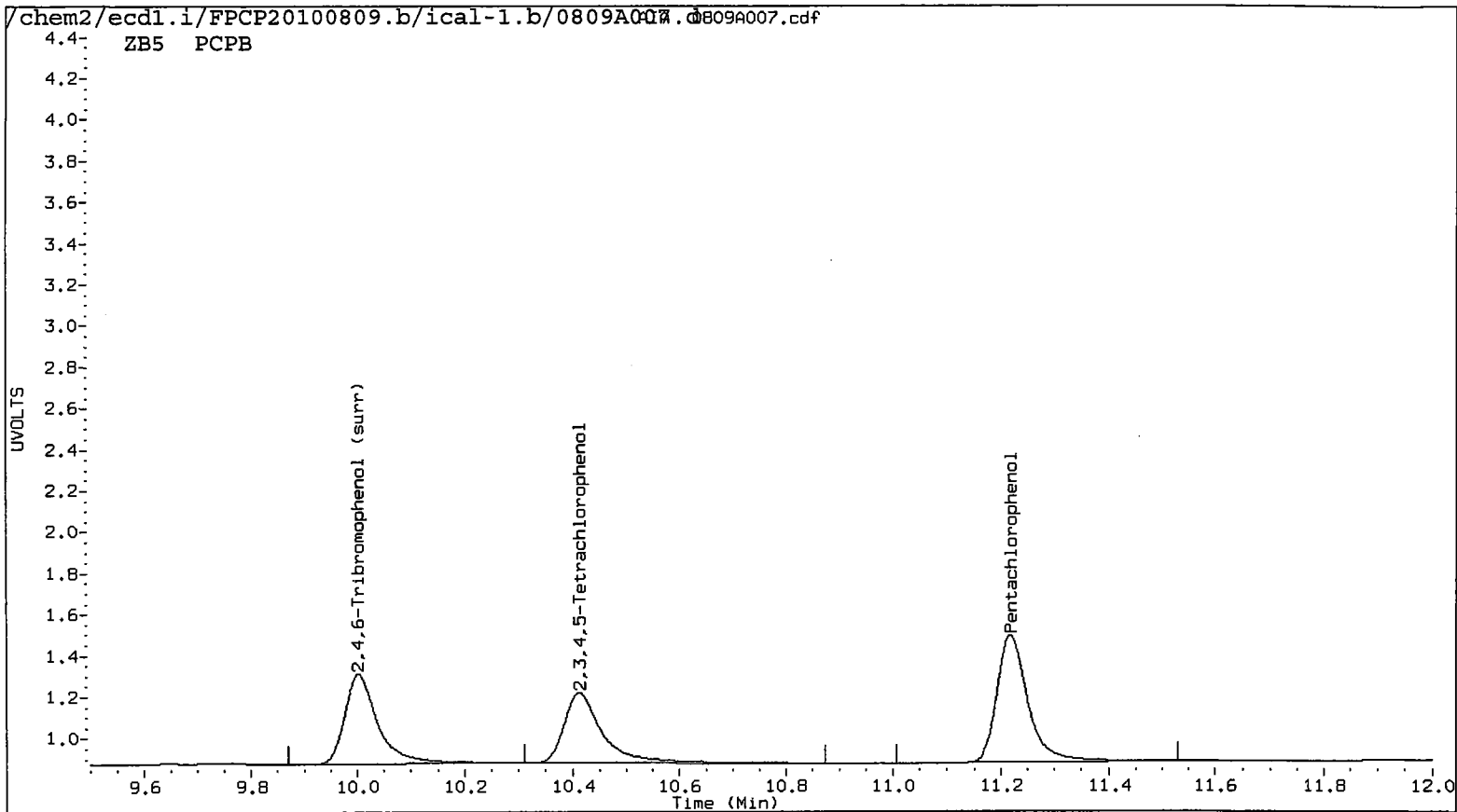
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

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: ecdl.i    Matrix: WATER  
 Operator: ar   Dilution Factor: 1.000

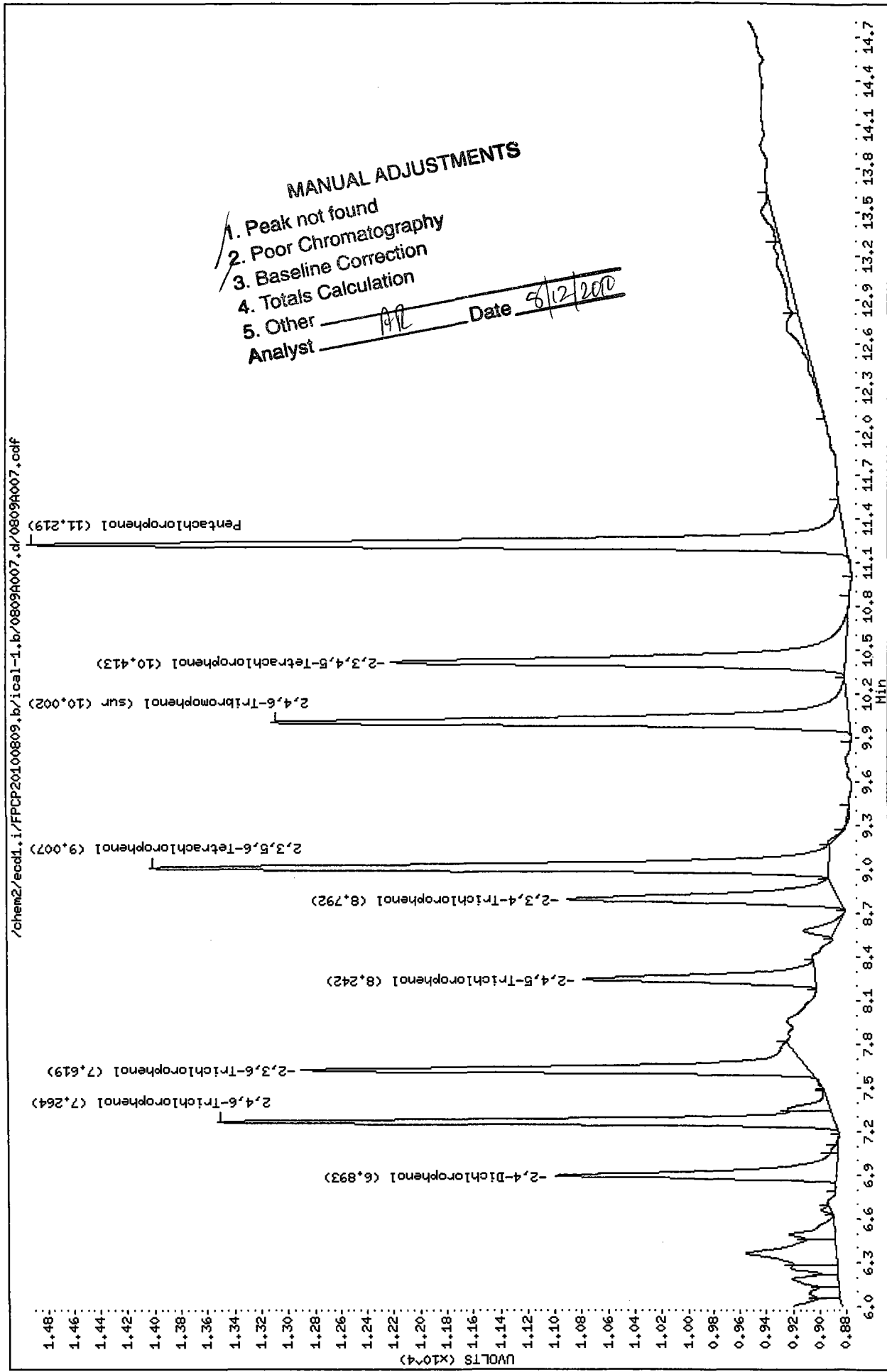
ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.219	0.000	123902	11.654	-0.004	156217	7.2292	6.8035	6.1	Pentachlorophenol
7.264	0.000	65457	7.333	0.000	78390	7.0775	6.2789	12.0	2,4,6-Trichlorophenol
7.619	0.000	65624	7.862	-0.002	82392	6.9041	6.6399	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/ecdl.i/FPCP20100809,b/ical-1.b/0809A007.d  
 Date : 09-AUG-2010 13:03  
 Client ID:  
 Sample Info: PCB  
 Purge Volume: 2.0  
 Column phase: ZB5  
 Instrument: ecdl.i  
 Operator: ar  
 Column diameter: 0.53

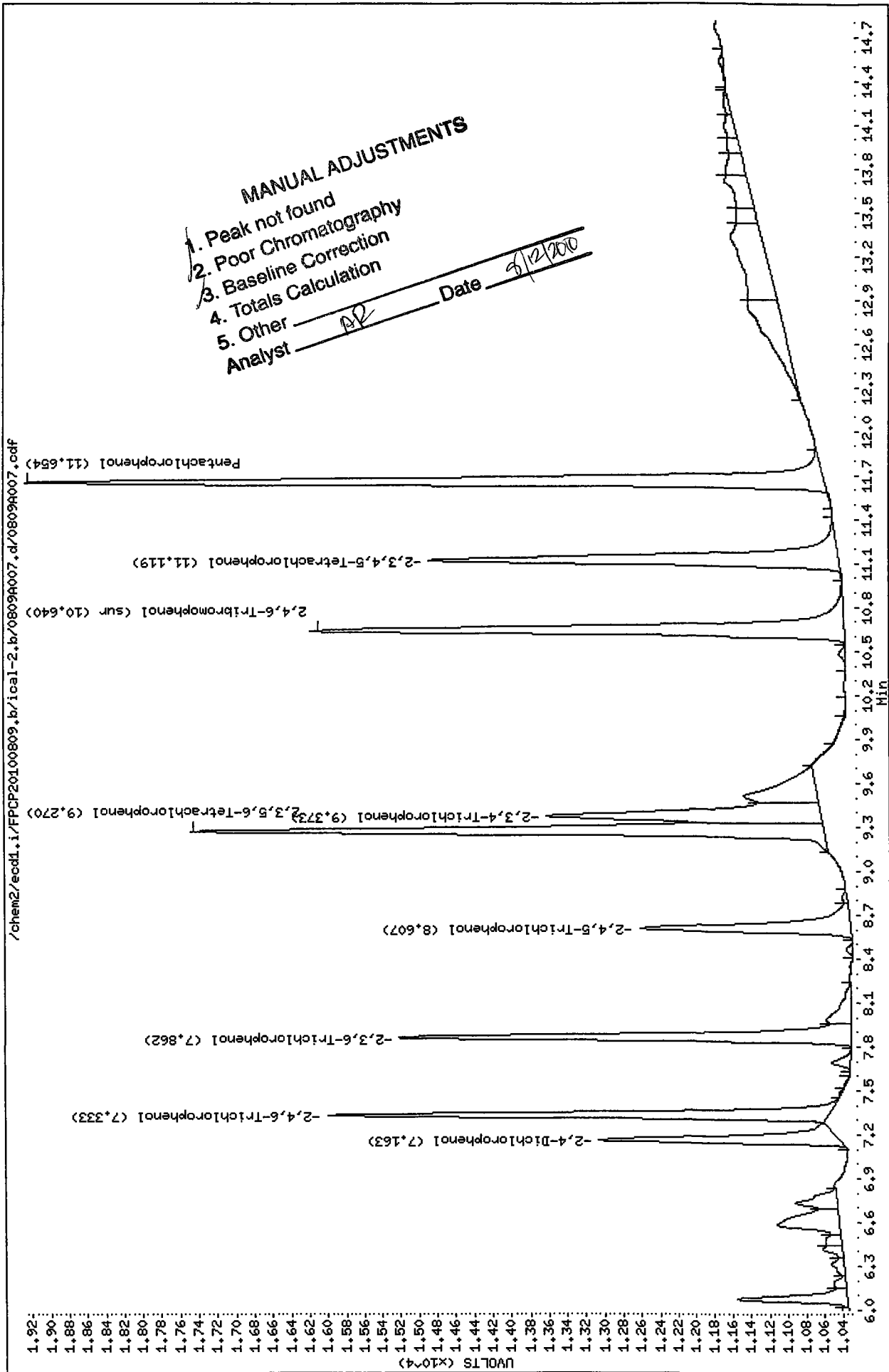


**MANUAL ADJUSTMENTS**  
 1. Peak not found  
 2. Poor Chromatography  
 3. Baseline Correction  
 4. Totals Calculation  
 5. Other  
 Analyst: AR Date: 8/12/2010

Data File: /chem2/ecdl.i/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: ecdl.i

Operator: ar  
Column diameter: 0.53

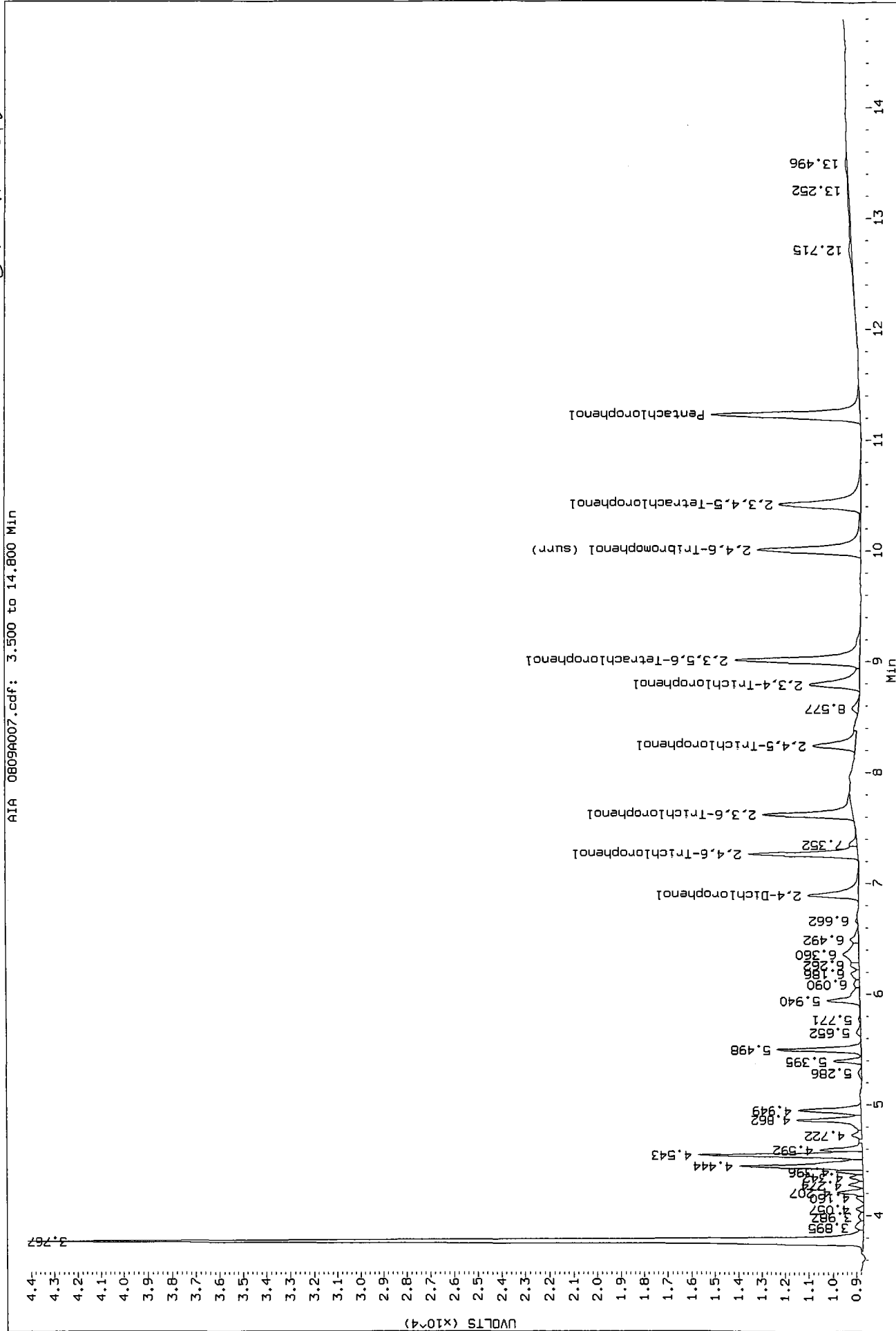


MANUAL ADJUSTMENTS  
1. Peak not found  
2. Poor Chromatography  
3. Baseline Correction  
4. Totals Calculation  
5. Other \_\_\_\_\_  
Analyst AR Date 8/12/2010



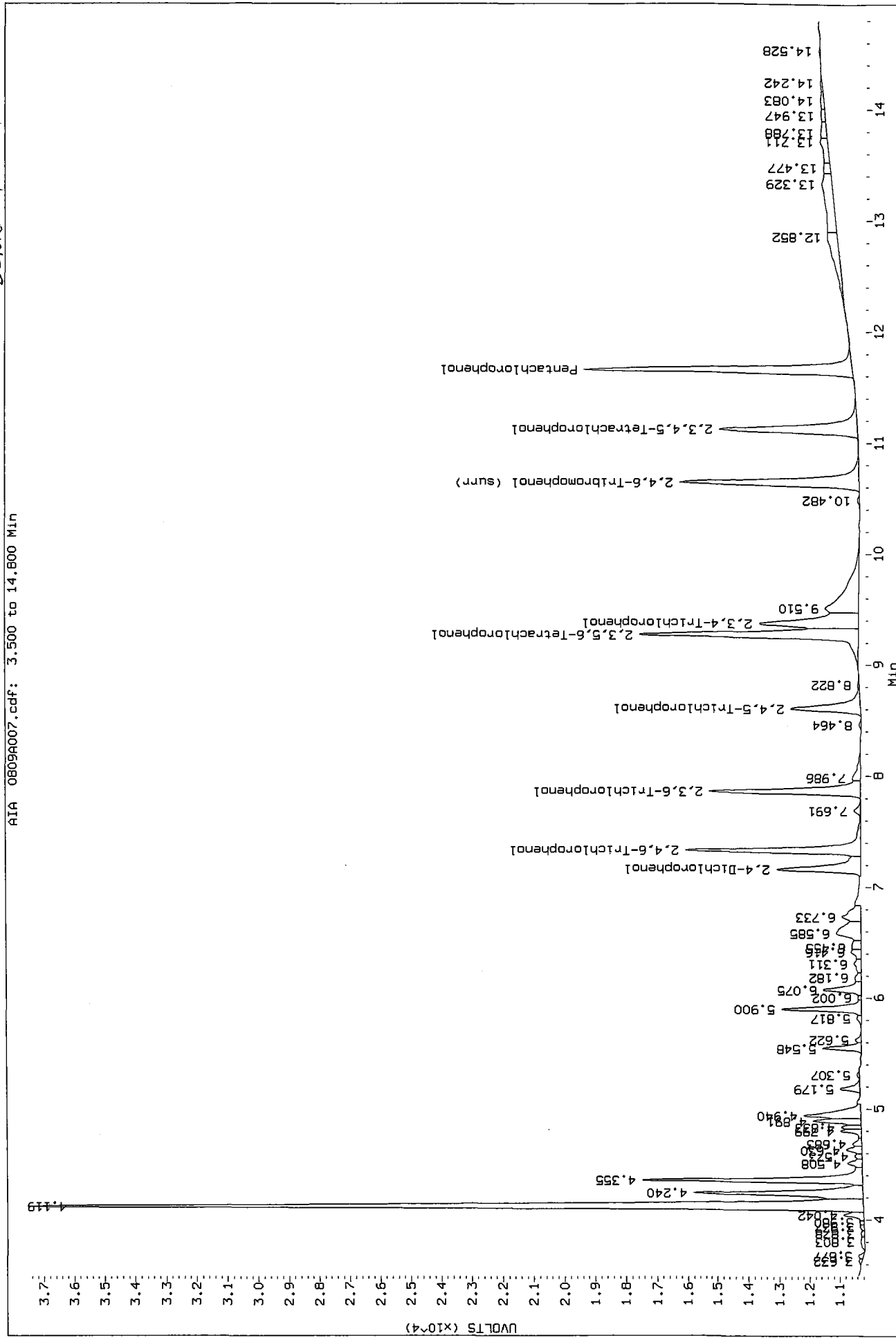
Data File: /chem2/ecdl1.i/FPCP20100809.b/ical-1.b/0809A007.d/0809A007.cdf  
 Injection Date: 09-AUG-2010 13:03  
 Instrument: ecdl1  
 Client Sample ID:

Before AR 8/18/2010



Data File: /chem2/ecd1.i/TPCP20100809.b/ical-2.b/0809A007.d/0809A007.cdf  
 Injection Date: 09-AUG-2010 13:03  
 Instrument: ecd1.1  
 Client Sample ID:

Before AR 8/12/2010



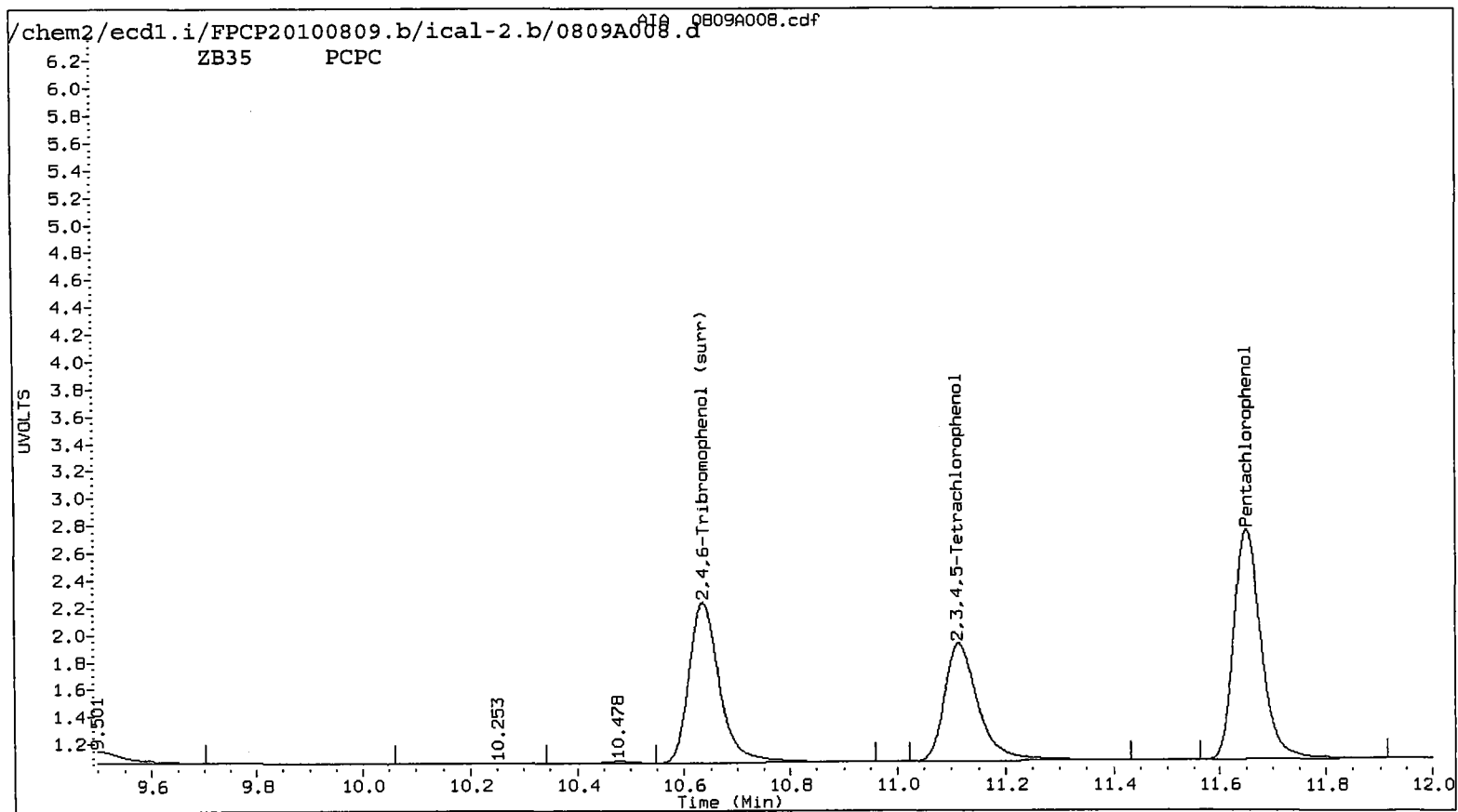
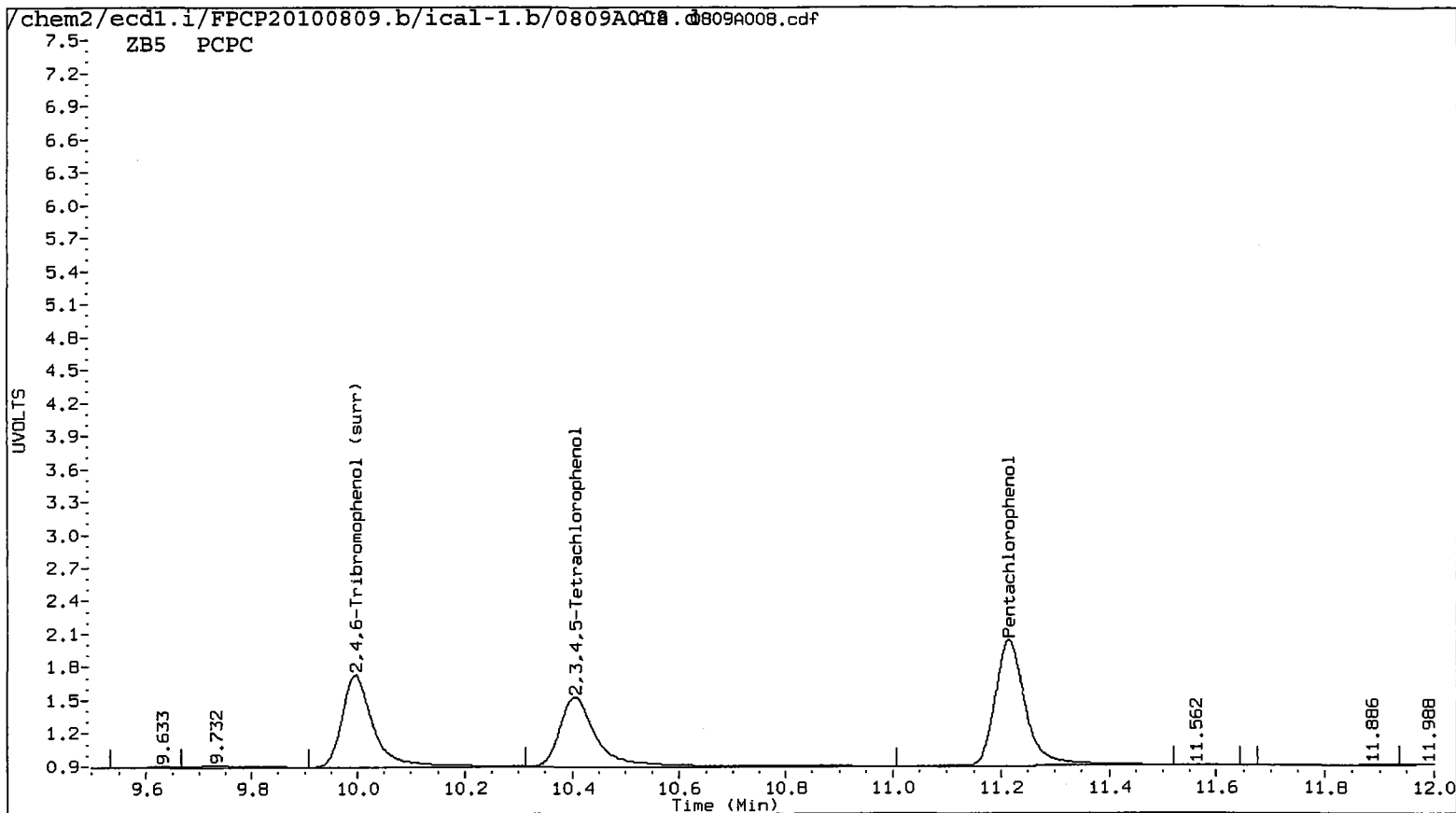
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

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

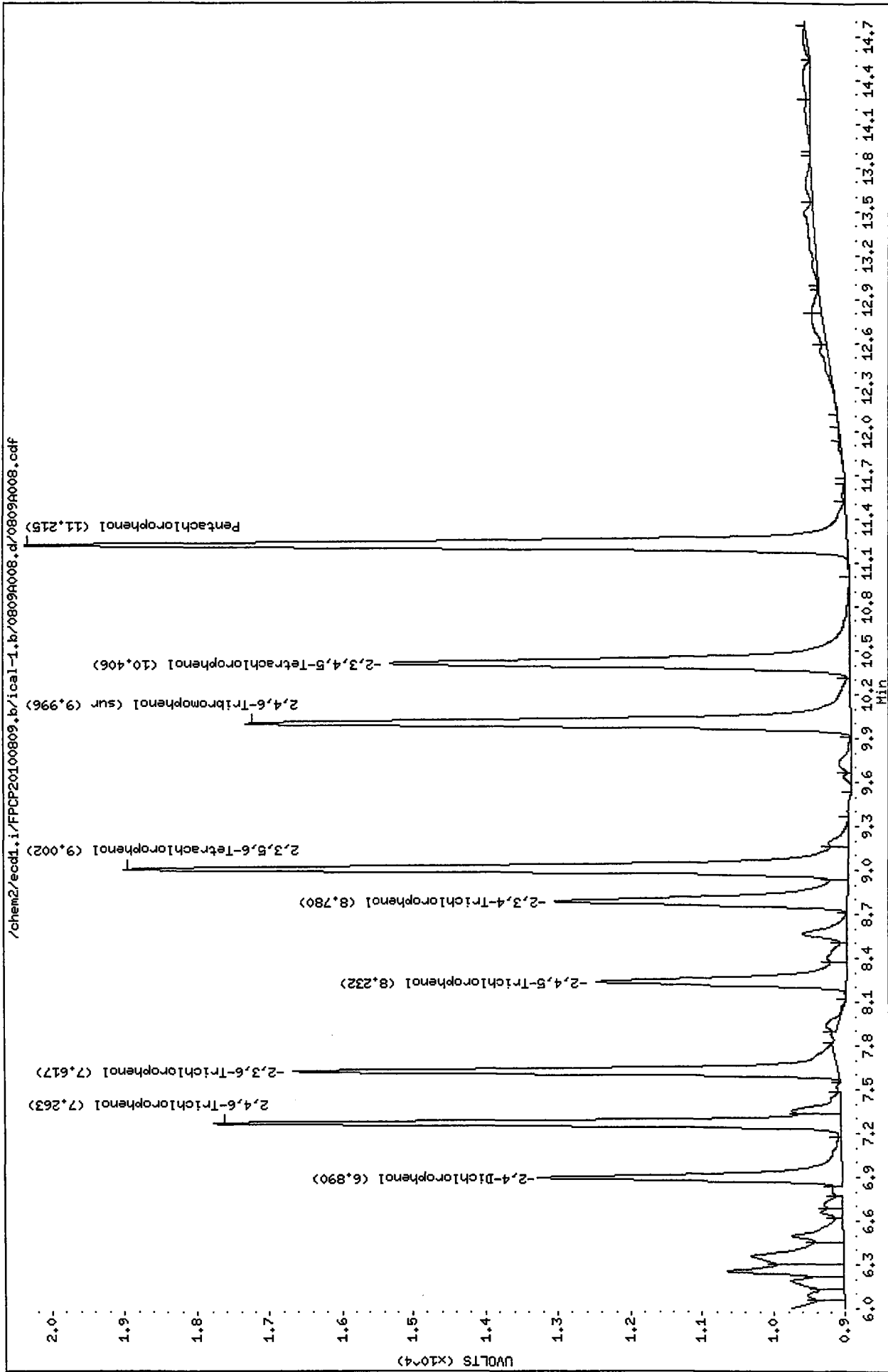
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	53.9	50.4



Data File: /chem2/ecdl.i/FFPCP20100809.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/ecdl1.i/FPCP20100809.b/ical-2.b/0809A008.d

Date : 09-AUG-2010 13:23

Client ID:

Sample Info: PDPC

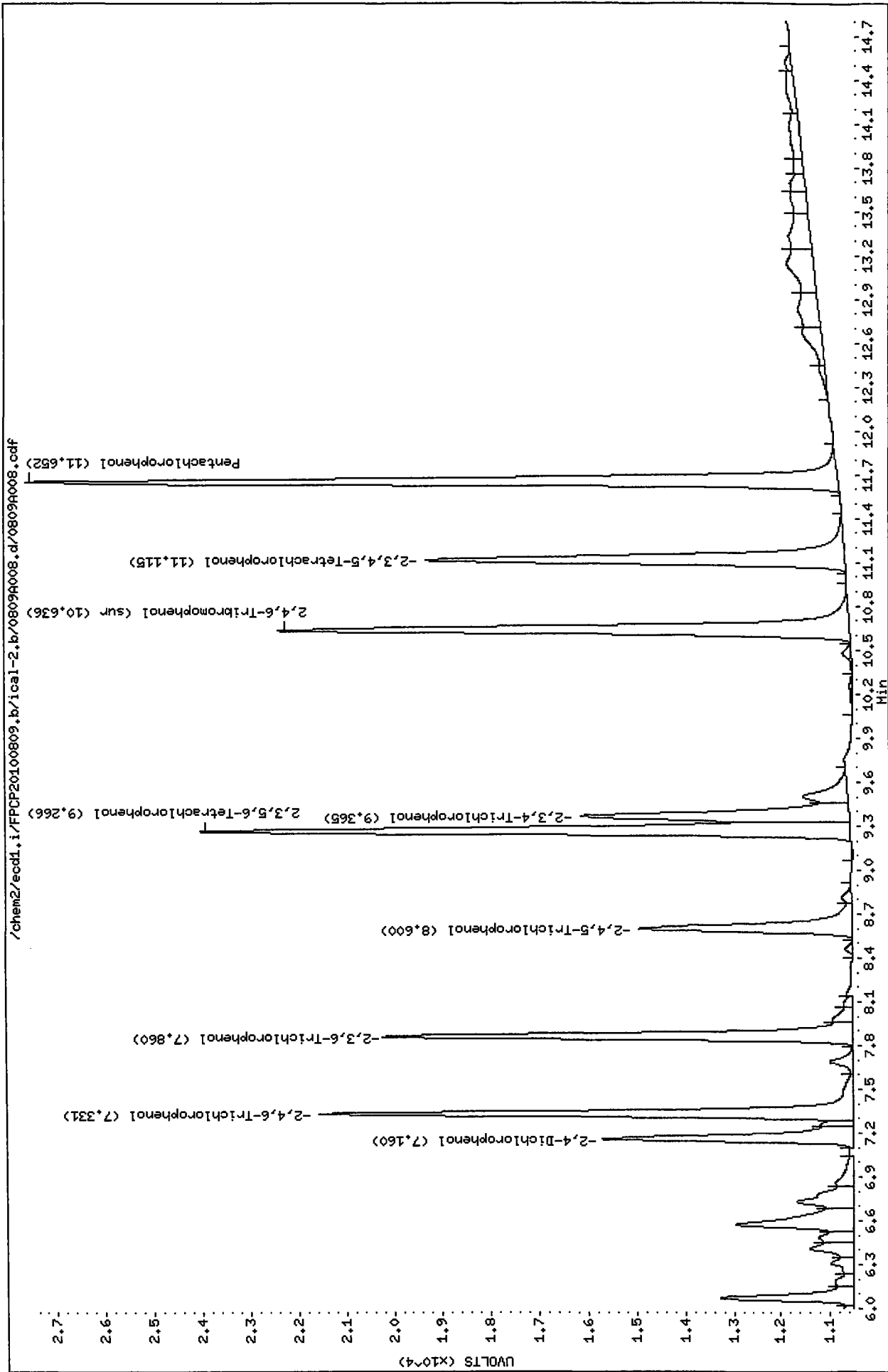
Purge Volume: 2.0

Column phase: ZB35

Instrument: ecd1.i

Operator: ar

Column diameter: 0.53



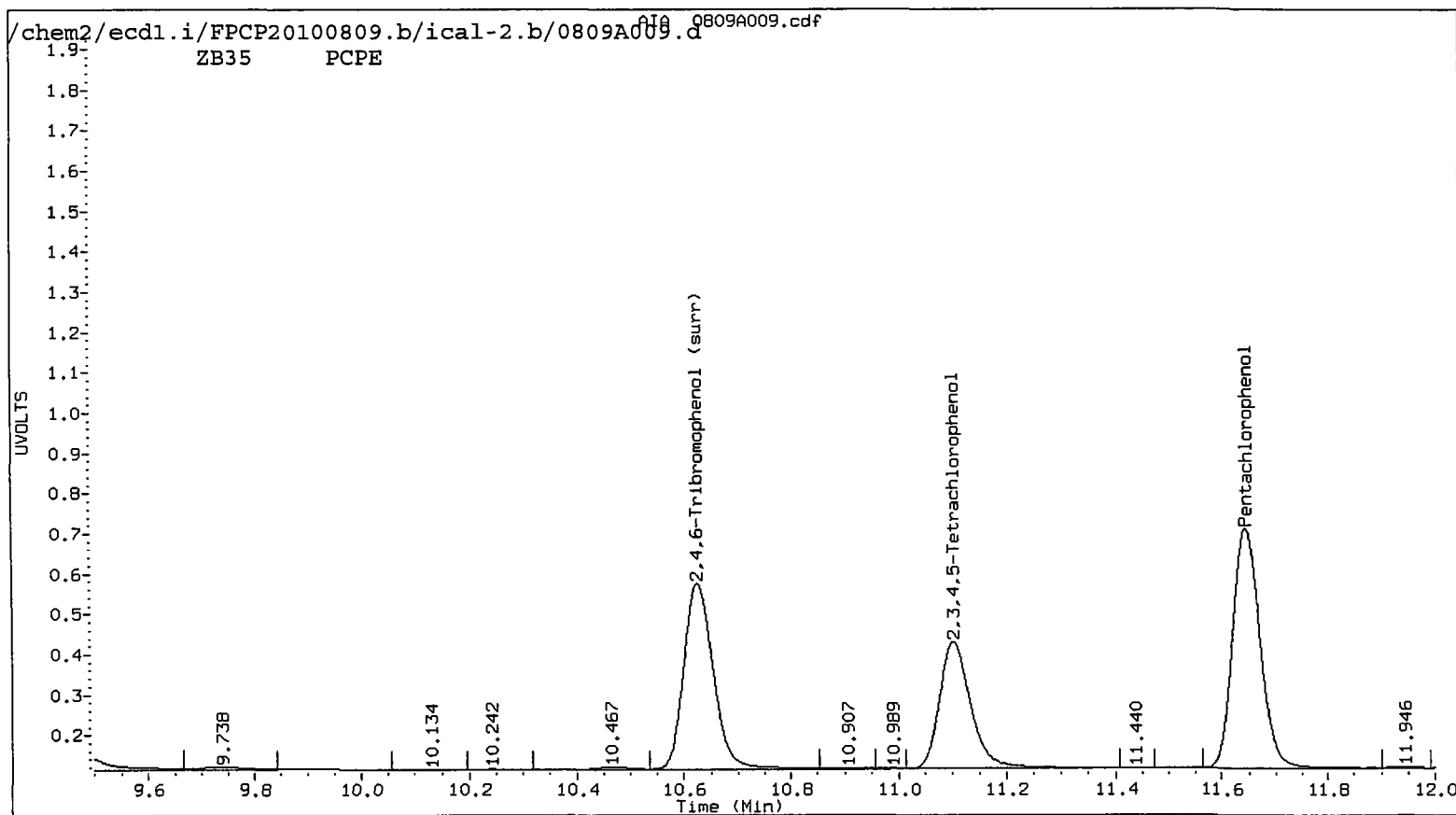
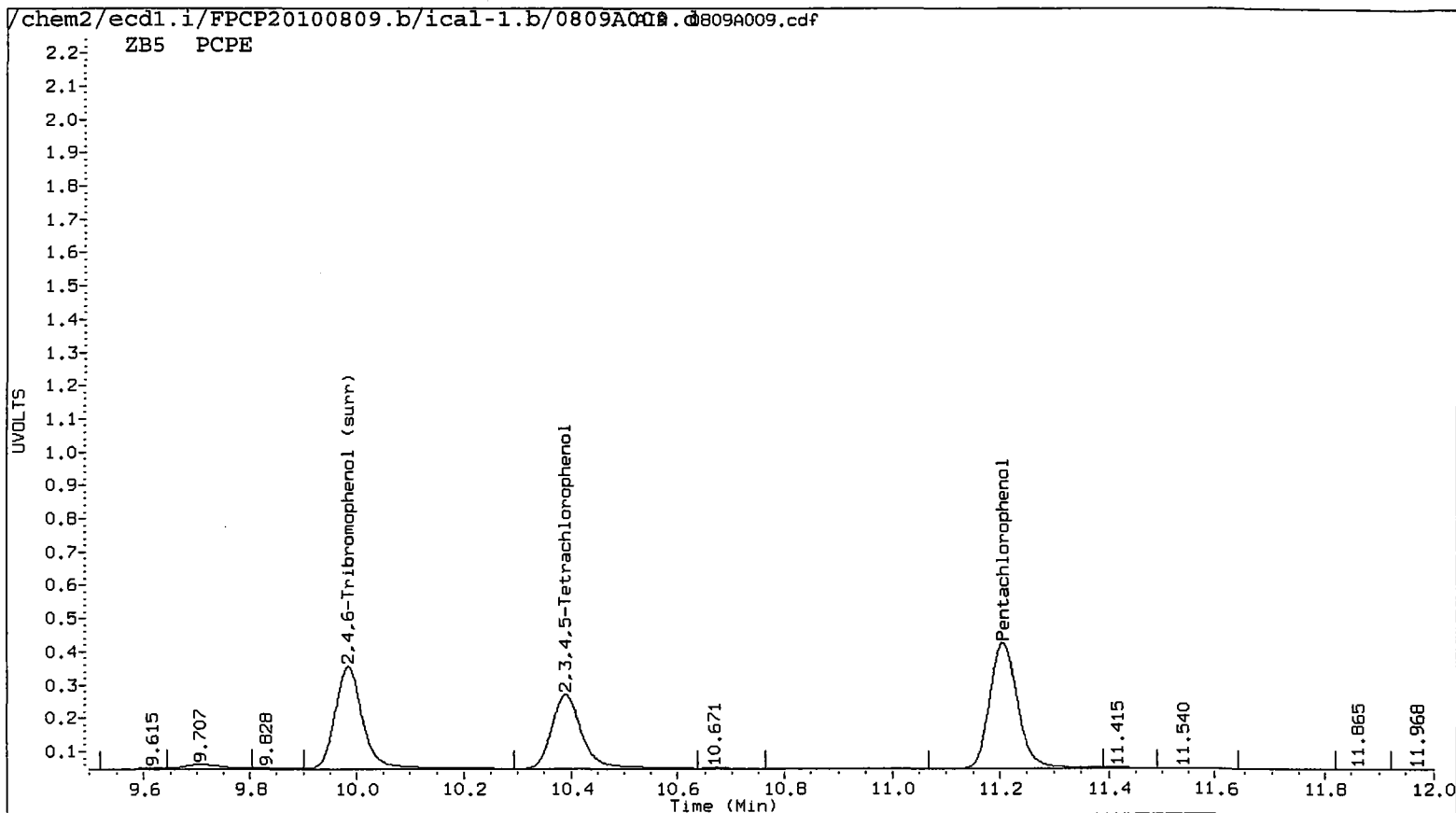
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/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: 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	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/ecdl.i/FPCP20100809,b\ical-1.b\0809A009.d

Date : 09-AUG-2010 13:43

Client ID:

Sample Info: PCPE

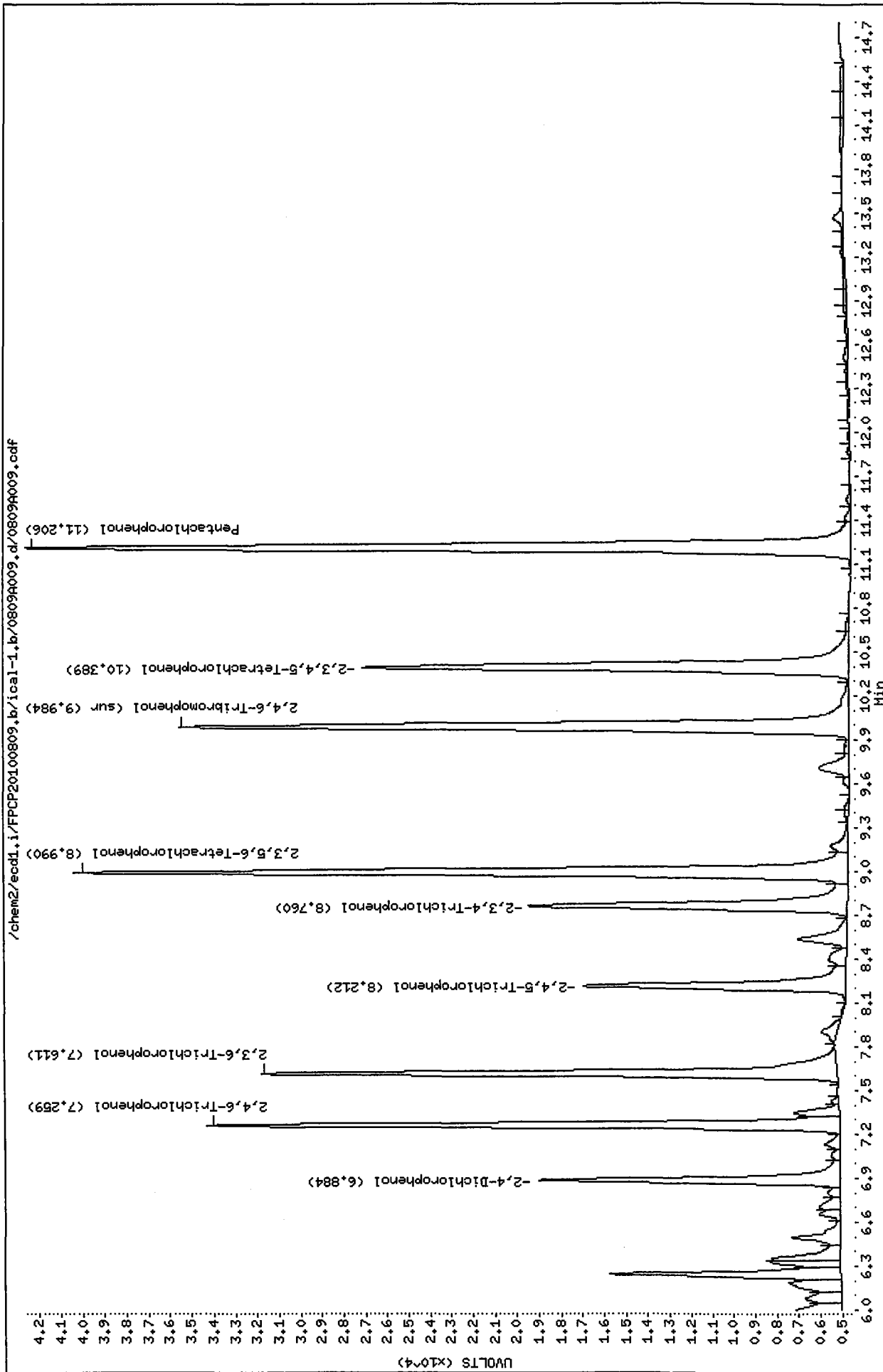
Purge Volume: 2.0

Column phase: ZB5

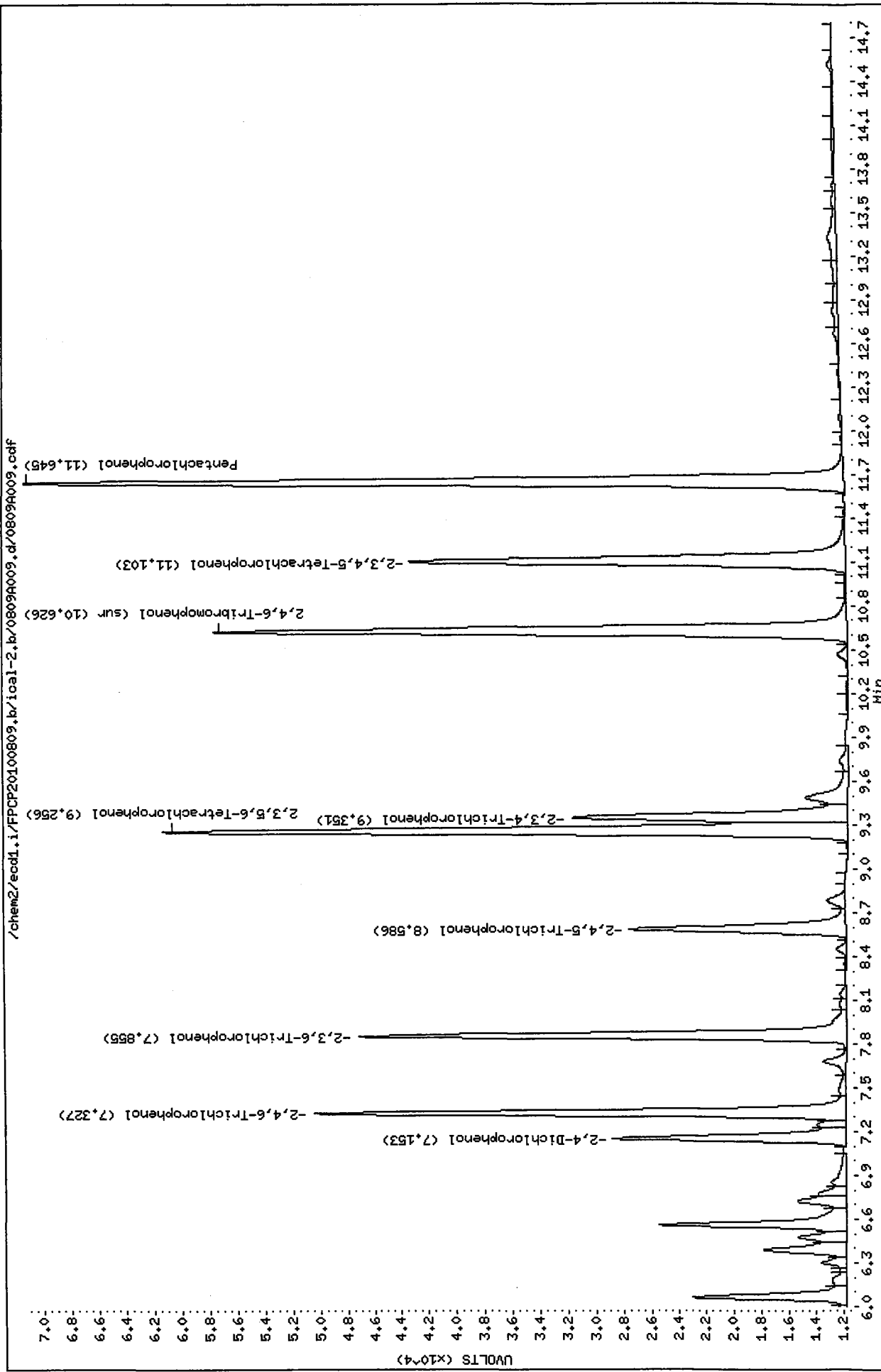
Instrument: ecdl.i

Operator: ar

Column diameter: 0.53



Data File: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A009.d  
Date: 09-AUG-2010 13:43  
Client ID:  
Instrument: ecdl.i  
Sample Info: PCPE  
Operator: ar  
Purge Volume: 2.0  
Column diameter: 0.53  
Column phase: ZB35



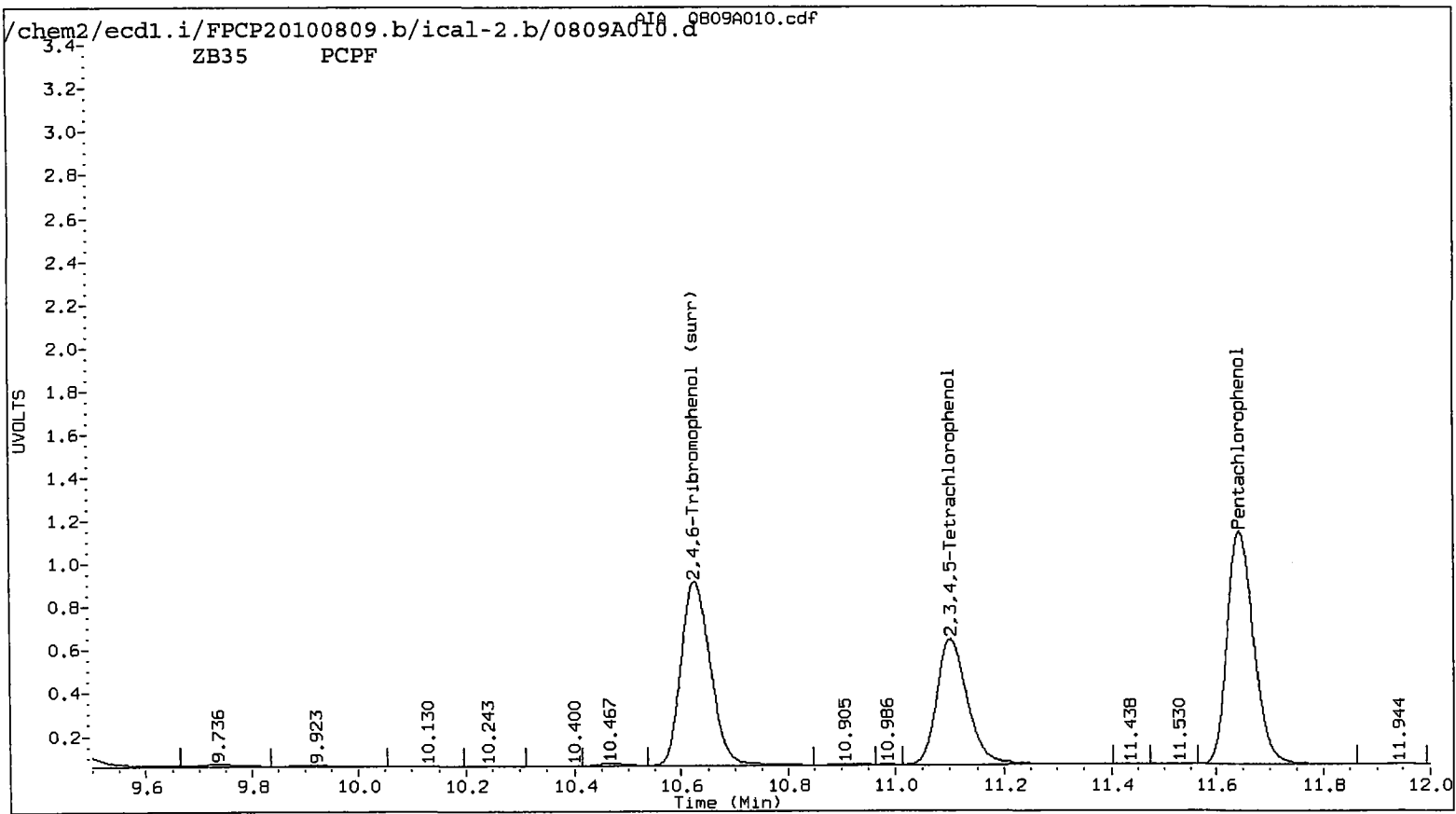
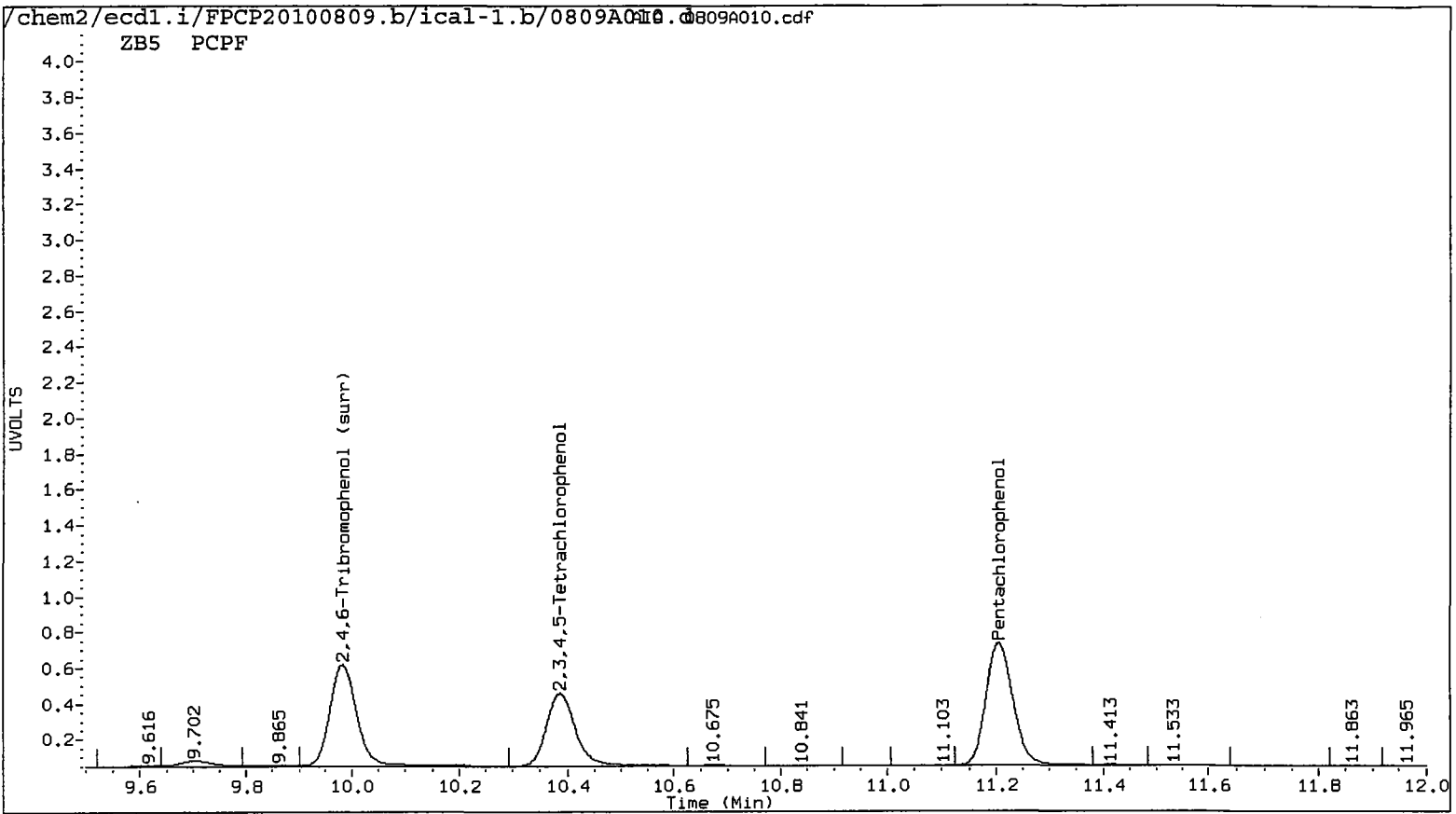
Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

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

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
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/ecdl.i/FPCP20100809,b/ical-1,b/0809A010.d

Date : 09-AUG-2010 14:03

Client ID:

Sample Info: PCPF

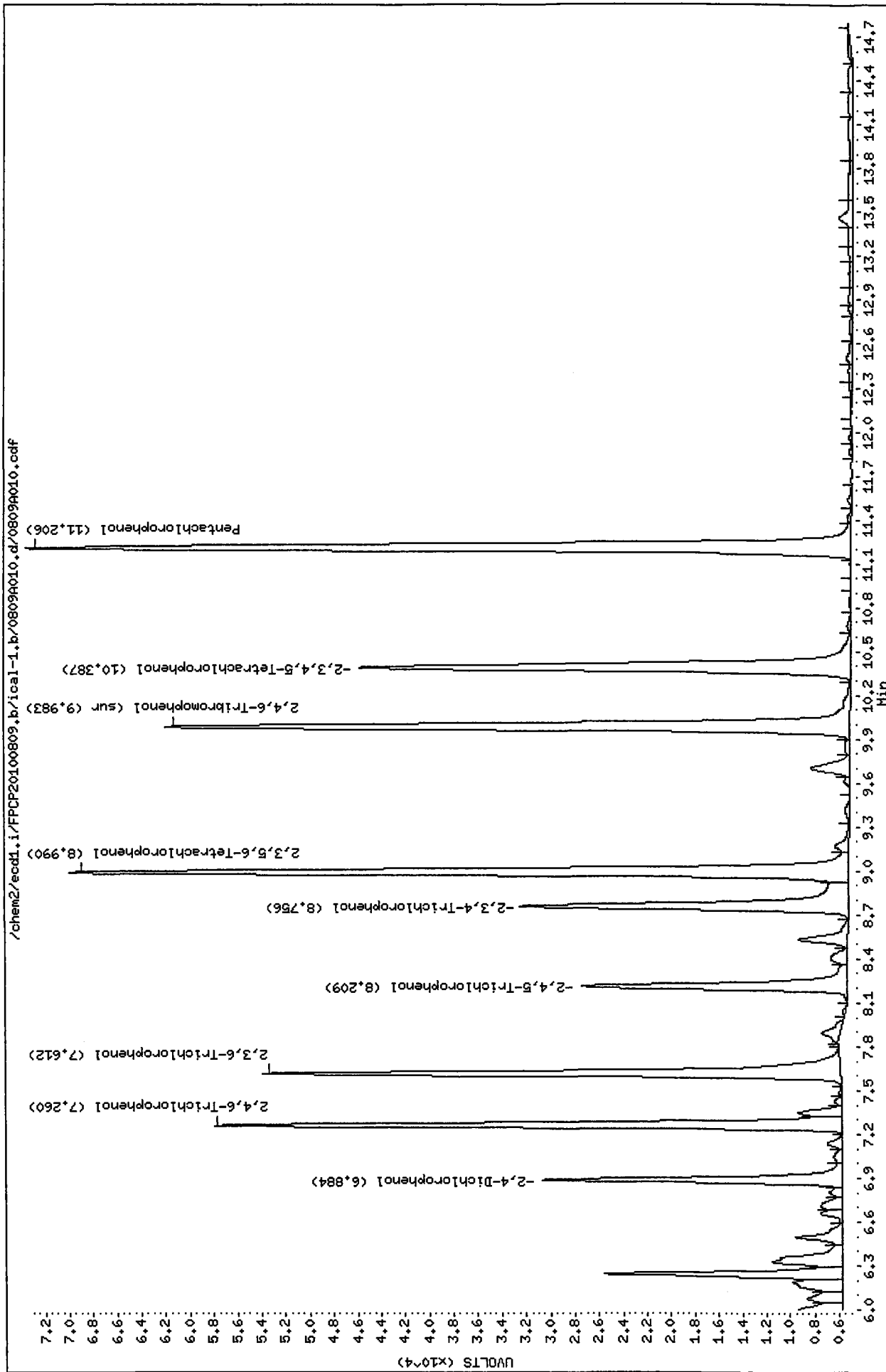
Purge Volume: 2.0

Column phase: ZB5

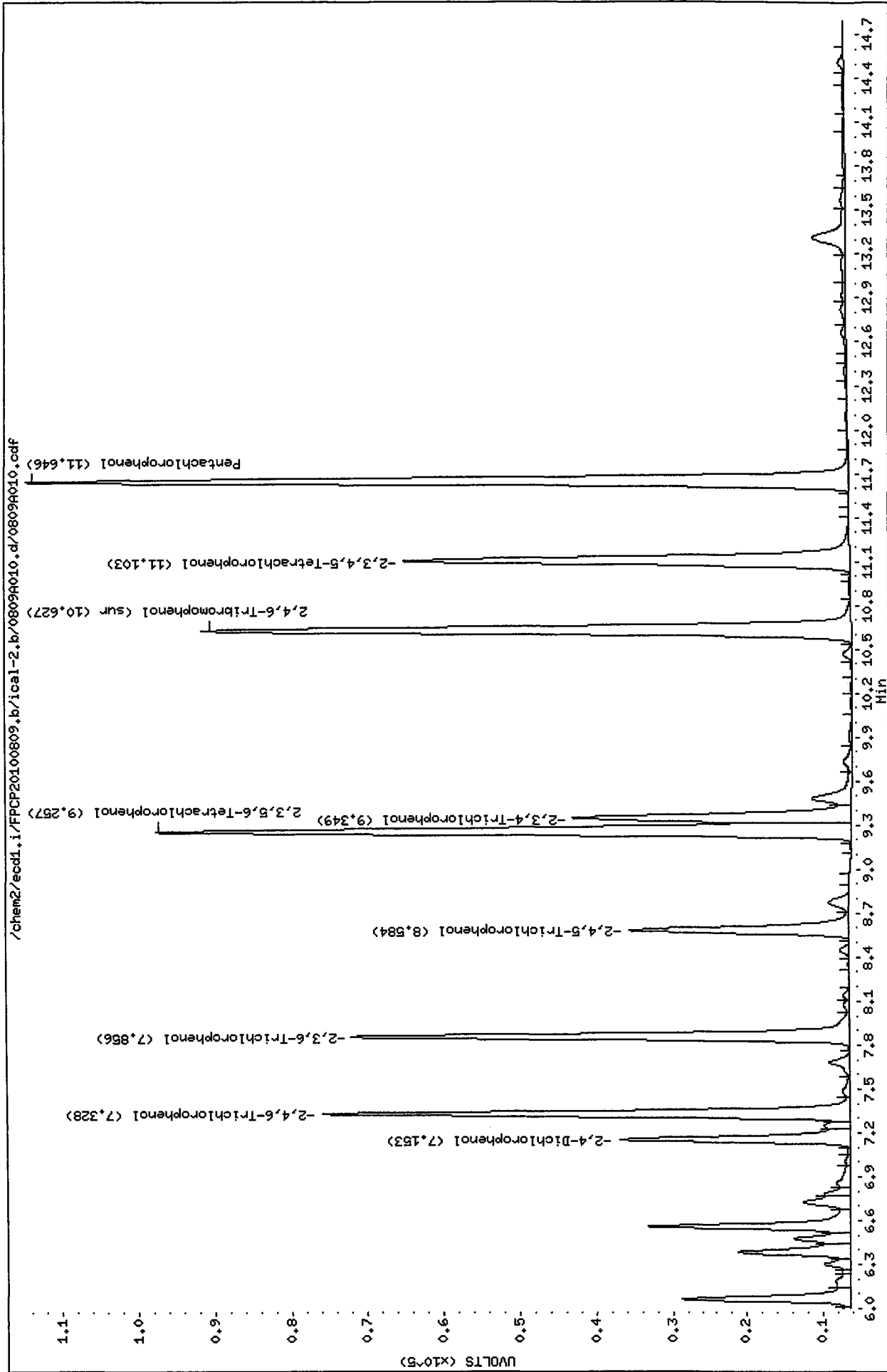
Instrument: ecdl.i

Operator: ar

Column diameter: 0.53



Data File: /chem2/eccd1.i/FPCP20100809.b/ical-2.b/0809A010.d  
Date : 09-AUG-2010 14:03  
Client ID:  
Instrument: eccd1.i  
Sample Info: PCPF  
Operator: ar  
Purge Volume: 2.0  
Column diameter: 0.53  
Column phase: ZB35



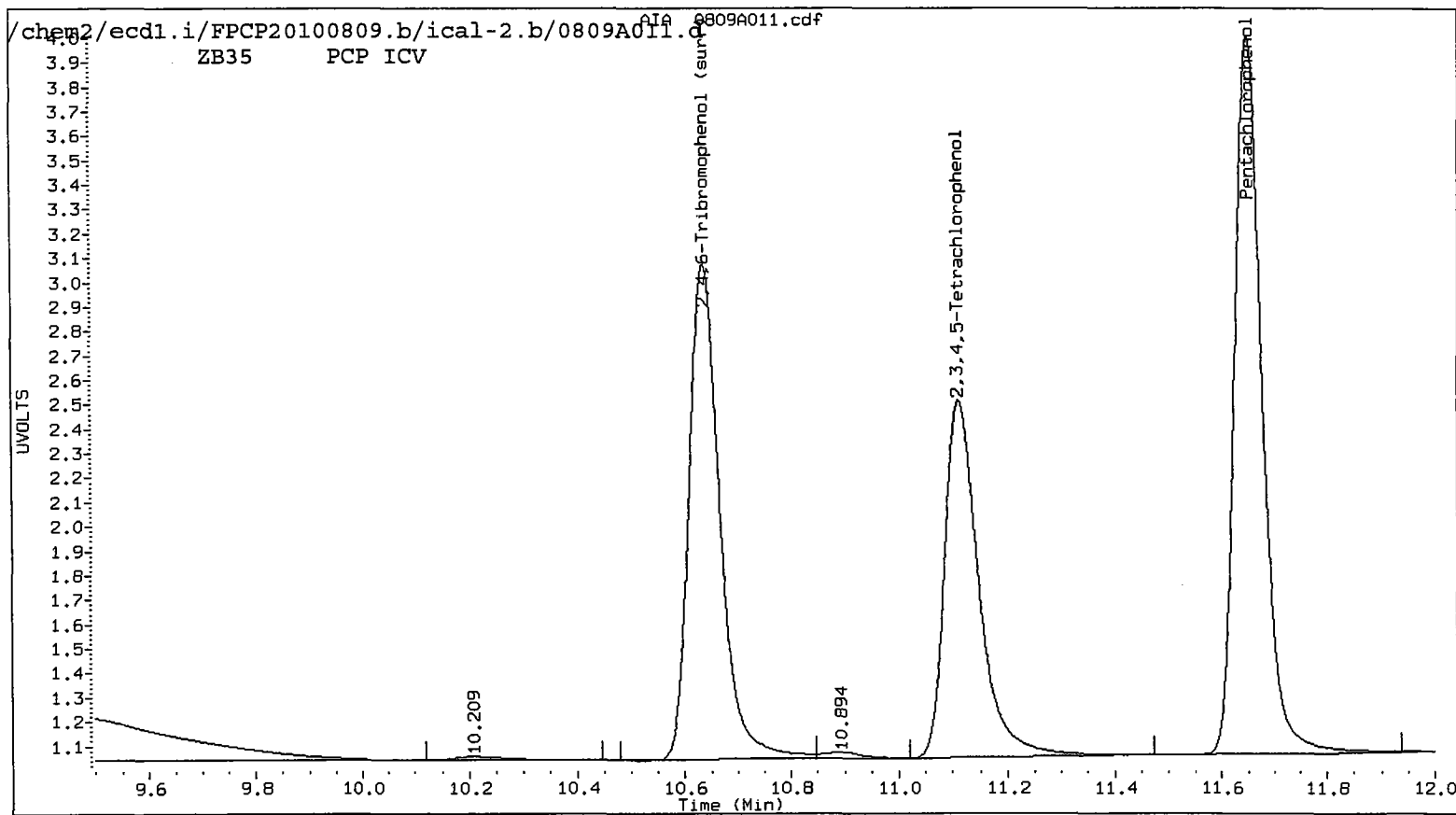
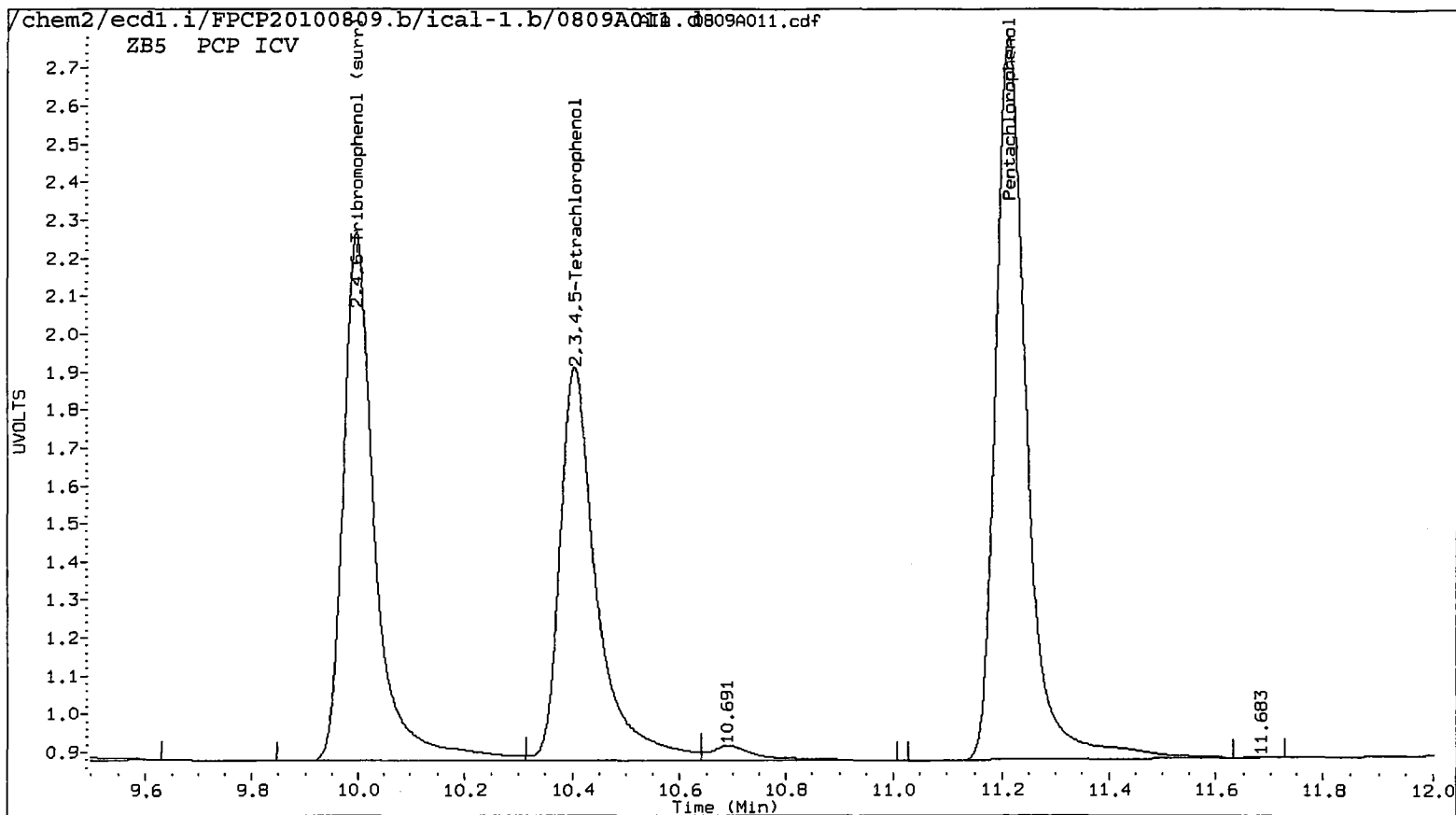
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

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: ecdl.i    Matrix: WATER  
 Operator: ar   Dilution Factor: 1.000

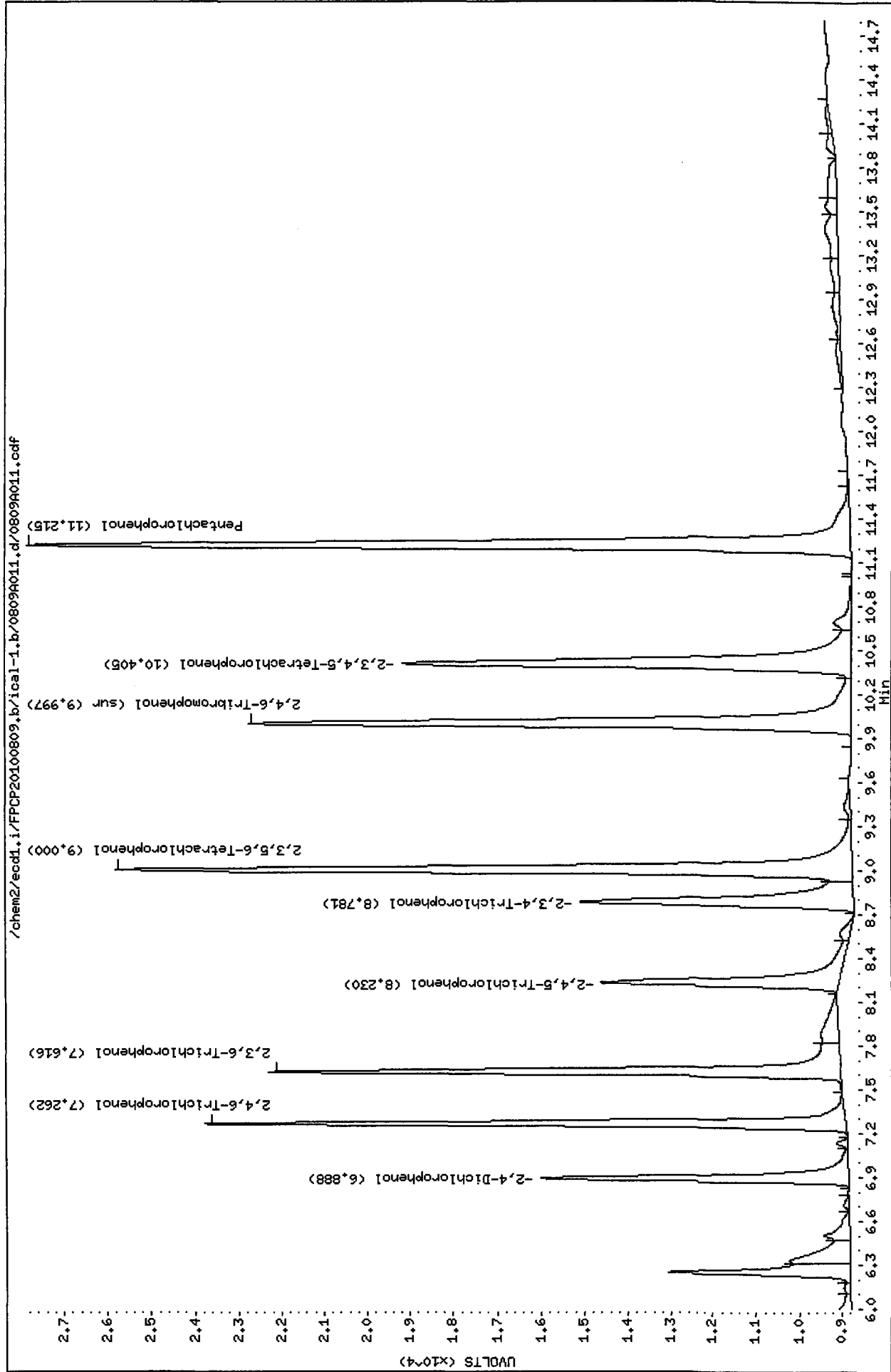
ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.215	-0.004	379790	11.652	-0.006	529883	24.4673	23.0771	5.8	Pentachlorophenol
7.262	-0.002	205092	7.330	-0.003	298811	24.1995	23.9344	1.1	2,4,6-Trichlorophenol
7.616	-0.003	218352	7.859	-0.005	286346	24.7503	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/ecdl1.i/FPCP20100809.b/ical-2.b/0809A011.d

Date : 09-AUG-2010 14:23

Client ID:

Sample Info: PCP ICV

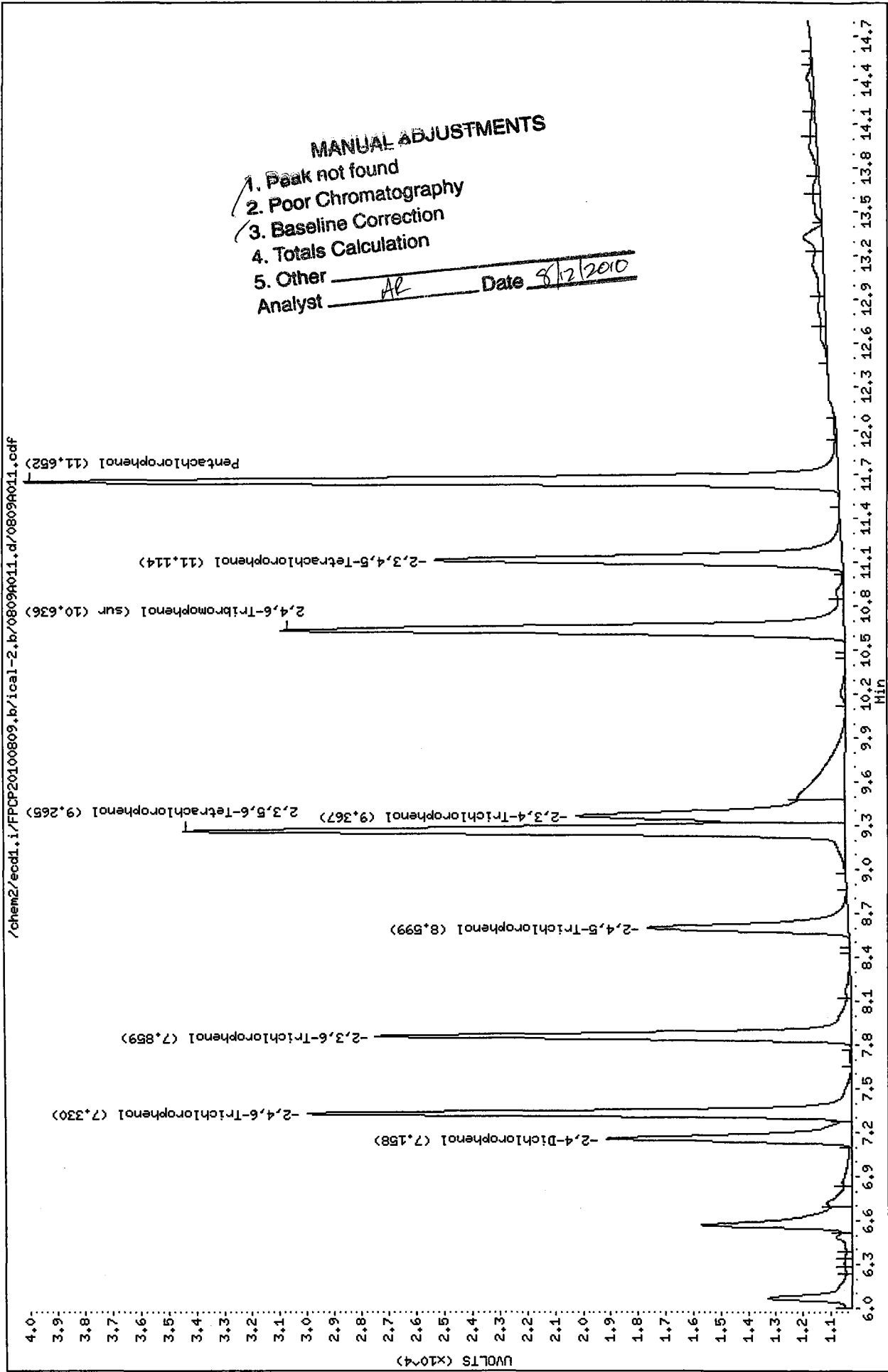
Purge Volume: 2.0

Column phase: ZB35

Instrument: ecdl1.i

Operator: ar

Column diameter: 0.53



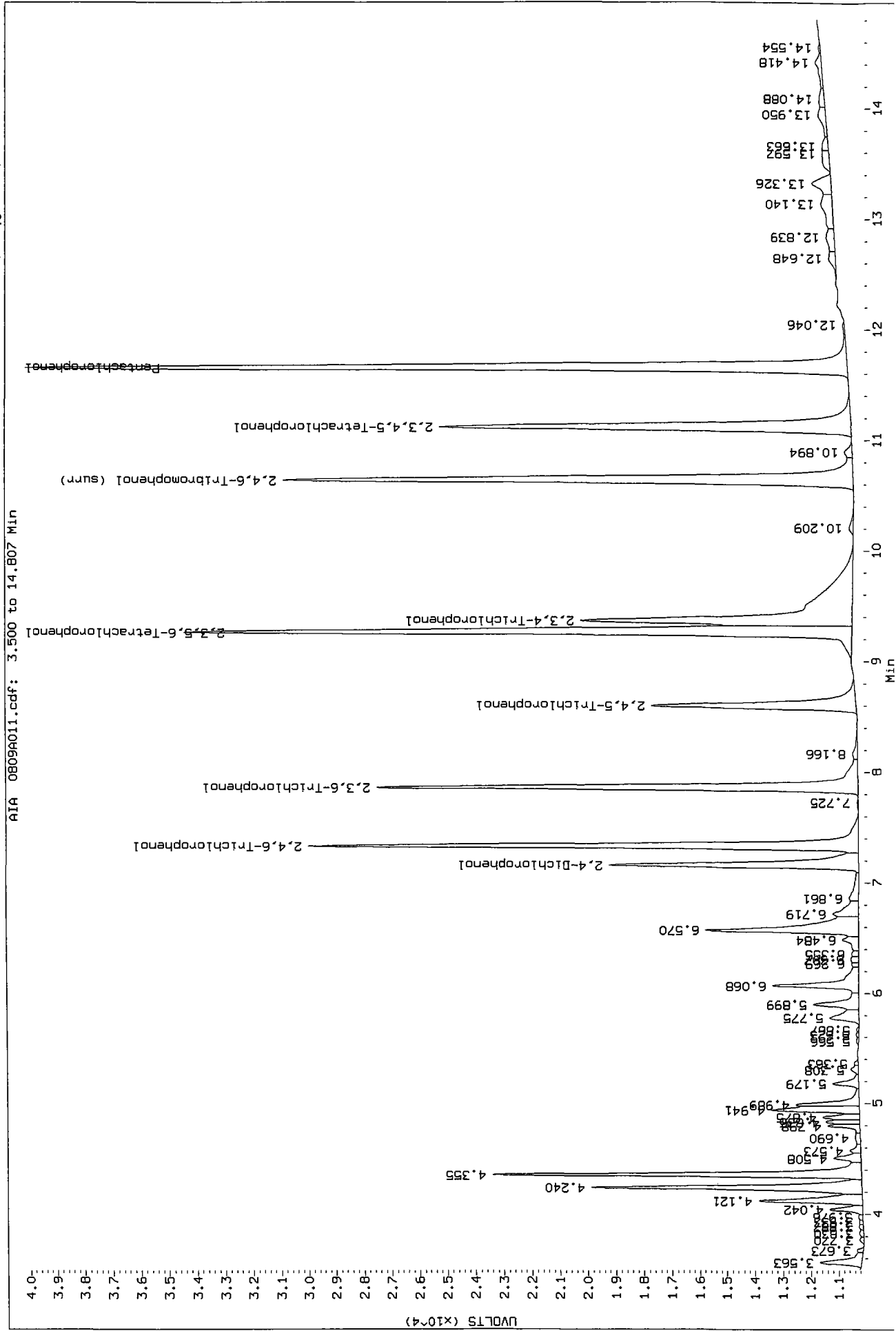
MANUAL ADJUSTMENTS

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

Analyst AR Date 8/12/2010

Before AP-8/12/2010

Data File: /chem2/ecdl.i/FPCP20100809.b/1cal-2.b/0809A011.d/0809A011.cdf  
Injection Date: 09-AUG-2010 14:23  
Instrument: eccl.i  
Client Sample ID:



RG79 : 00923

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

**ARI Job ID: RG79**



### GC Analyst Notes / Corrective Action Log

ARI Project ID: RG79 Client ID: Floyd/Snyder

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: 8/1/2010 Analysis Start: 8/23/2010

Endrin/DDT Breakdown <15%?	YES / NO / <u>NA</u>	Method Blank In Control?	<u>YES</u> / NO
ICal Meets RF & %RSD Criteria?	<u>YES</u> / NO	LCS/LCSD Recovery In Control?	<u>YES</u> / NO
CCal Meets RF & %RSD Criteria?	<u>YES</u> / NO	Surrogate Recovery In Control?	<u>YES</u> / NO <sup>1</sup>
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?	<u>YES</u> / NO / NA

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

① Samp D & K surr RPD >30%

② MS/MS reported value col 1 ms ≠ col 2 ms RPD 33.3%

Additional Details on Reverse: Yes / No

Analyst: [Signature] Date: 8/25/2010

Reviewer: [Signature] Date: 8/25/10

# Analytical Resources Inc.: Organics Instrument Log

ECD1 Serial No.: 3410A39690

Date: 8/23/2010 Analysis: Cl. Phenols Analyst: AR

GC Program: PCFAST.M Column No: 150608/148146 Column Type: 235/35

Instrument Tune (.U or .CT.): N/A EM Voltage: N/A

Calibration File: FPCP20100809-b Curve Date: 8/12/2010

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

GC LOG SUMMARY FOR DATABATCH - /chem2/ecl1.i/FPCP20100809.b/0823-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	23-AUG-2010 13:12	0823A004.d	1	PCPCCAL - fails low	
2	23-AUG-2010 13:32	0823A005.d	1	RG94A	MW14-15-16.5-080210
3	23-AUG-2010 13:52	0823A006.d	1	PCPCCAL - Passes	
4	23-AUG-2010 14:12	0823A007.d	1	RG94A	MW14-15-16.5-080210
5	23-AUG-2010 14:32	0823A008.d	1	RG94E	MW13-18.5-19.5-0802
6	23-AUG-2010 14:52	0823A009.d	1	RG94F	MW13-18.5-19.5-0802
7	23-AUG-2010 15:12	0823A010.d	1	RG94J	MW12-17.5-19-080210
8	23-AUG-2010 15:32	0823A011.d	1	PCP	
9	23-AUG-2010 15:52	0823A012.d	1	PCPCCAL - Passes	
10	23-AUG-2010 16:12	0823A013.d	1	RG78MBS1	RG78MBS1
11	23-AUG-2010 16:32	0823A014.d	1	RG78LCSS1	RG78LCSS1
12	23-AUG-2010 16:52	0823A015.d	5	RG78H	PSB10-2-4-073010
13	23-AUG-2010 17:12	0823A016.d	10	RG78I	PSB10-4-6-073010
14	23-AUG-2010 17:32	0823A017.d	1	RG78J	PSB10-8.5-10-073010
15	23-AUG-2010 17:52	0823A018.d	1	RG78S	PSB9-8.5-9.5-073010
16	23-AUG-2010 18:12	0823A019.d	1	PCP	
17	23-AUG-2010 18:32	0823A020.d	1	PCPCCAL - Passes	
18	23-AUG-2010 18:52	0823A021.d	1	RG79MBS1	RG79MBS1
19	23-AUG-2010 19:12	0823A022.d	1	RG79LCSS1	RG79LCSS1
20	23-AUG-2010 19:32	0823A023.d	10	RG79A	PSB11-0-0.5-073010
21	23-AUG-2010 19:52	0823A024.d	50	RG79B	PSB11-1.5-2-073010
22	23-AUG-2010 20:12	0823A025.d	10	RG79C	PSB11-2-4-073010
23	23-AUG-2010 20:32	0823A026.d	10	RG79D	PSB11-2-4-073010-D
24	23-AUG-2010 20:52	0823A027.d	1	RG79E	PSB11-4-6-073010
25	23-AUG-2010 21:12	0823A028.d	1	RG79EMS	PSB11-4-6-07301 MS
26	23-AUG-2010 21:32	0823A029.d	5	RG79EMSD	PSB11-4-6-07301 MSD
27	23-AUG-2010 21:52	0823A030.d	1	RG79G	PSB11-11-13-073010
28	23-AUG-2010 22:11	0823A031.d	1	PCP	
29	23-AUG-2010 22:31	0823A032.d	1	PCP	
30	23-AUG-2010 22:51	0823A033.d	1	PCPCCAL - passes	
31	23-AUG-2010 23:11	0823A034.d	1	RG79H	PSB11-14-16-073010
32	23-AUG-2010 23:31	0823A035.d	10	RG79K	PSB15-0-0.5-073010
33	23-AUG-2010 23:51	0823A036.d	1	RG79L	PSB15-1.5-2-073010
34	24-AUG-2010 00:11	0823A037.d	1	RG79M	PSB15-2-4-073010
35	24-AUG-2010 00:31	0823A038.d	1	RG79N	PSB15-4-6-073010
36	24-AUG-2010 00:51	0823A039.d	1	RG79O	PSB15-13-15-073010
37	24-AUG-2010 01:11	0823A040.d	1	RG79P	PSB15-17-19-073010
38	24-AUG-2010 01:31	0823A041.d	1	RG79Q	PSB15-17-19-073010-
39	24-AUG-2010 01:51	0823A042.d	1	PCP	
40	24-AUG-2010 02:11	0823A043.d	1	PCP	
41	24-AUG-2010 02:31	0823A044.d	1	PCPCCAL - passes	
42	24-AUG-2010 02:51	0823A045.d	1	RG79A	PSB11-0-0.5-073010
43	24-AUG-2010 03:11	0823A046.d	10	RG79B	PSB11-1.5-2-073010
44	24-AUG-2010 03:31	0823A047.d	1	PCP	
45	24-AUG-2010 03:50	0823A048.d	1	PCPCCAL - passes	

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

AR 8/25/2010

Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

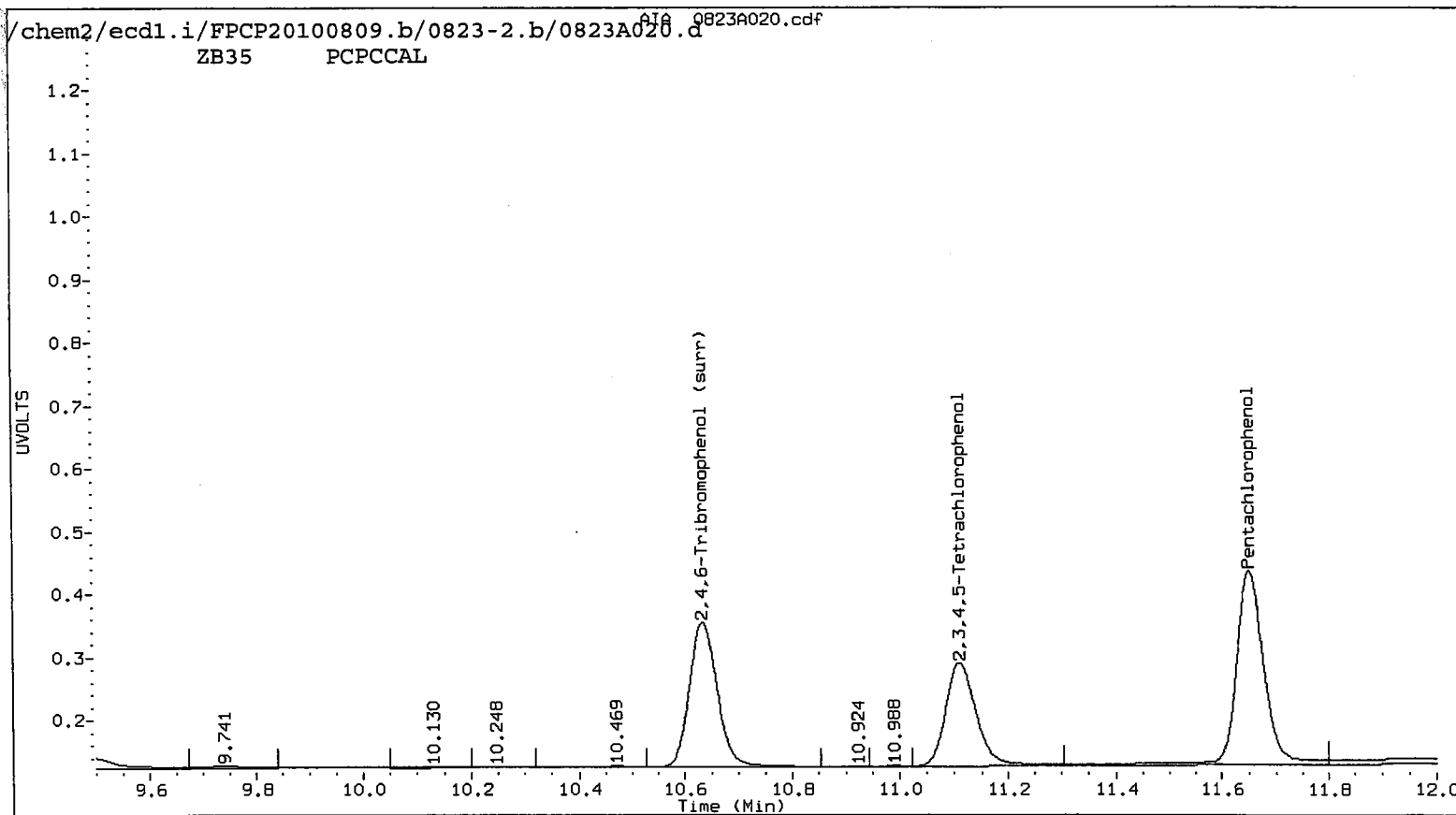
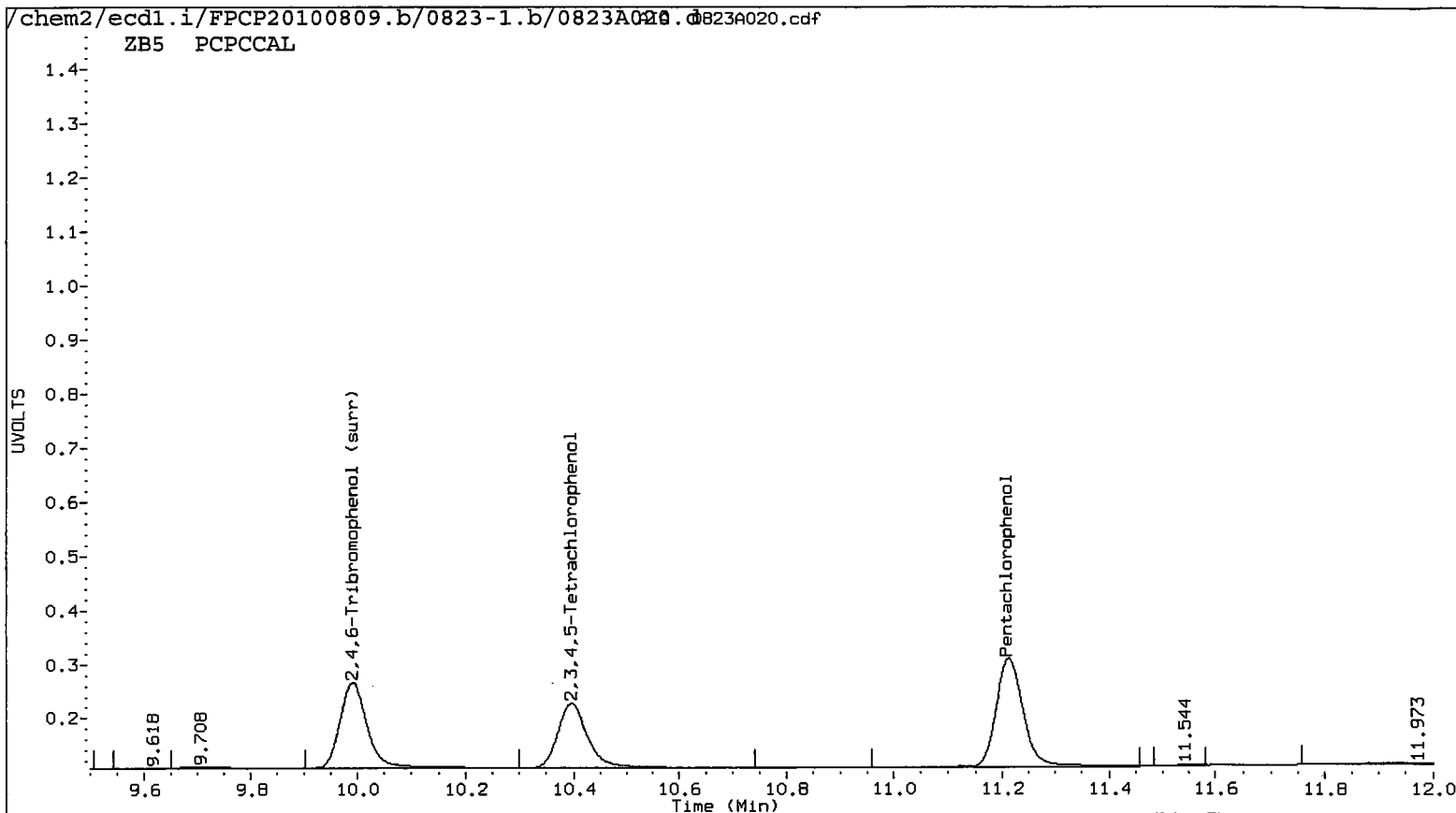
AR 8/24/2010

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A020.d    ARI ID: PCPCAL  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A020.d    Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m    Injection Date: 23-AUG-2010 18:32  
 Compound Sublist: all    Report Date: 08/24/2010 14:06  
 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		
11.213	-0.006	368674	11.651	-0.007	549017	23.6539	23.9104	1.1	Pentachlorophenol
7.265	0.001	204277	7.333	0.000	291242	24.0916	23.3281	3.2	2,4,6-Trichlorophenol
7.618	-0.001	200675	7.861	-0.003	276405	22.5576	22.2755	1.3	2,3,6-Trichlorophenol
8.220	-0.022	115910	8.593	-0.022	150555	22.9638	23.9807	4.3	2,4,5-Trichlorophenol
8.769	-0.023	144771	9.358	-0.022	193794	21.1621	22.6624	6.8	2,3,4-Trichlorophenol
8.998	-0.009	317914	9.264	-0.013	427557	22.5382	23.0927	2.4	2,3,5,6-Tetrachlorophenol
10.397	-0.016	230509	11.110	-0.016	319309	21.9297	21.8845	0.2	2,3,4,5-Tetrachlorophenol
6.890	-0.003	111143	7.159	-0.007	143379	222.4600	228.8994	2.9	2,4-Dichlorophenol
9.992	-0.010	281985	10.633	-0.013	418311	22.6	22.4	0.9	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	94.6	95.6
2,4,6-Trichlorophenol	96.4	93.3
2,3,6-Trichlorophenol	90.2	89.1
2,4,5-Trichlorophenol	91.9	95.9
2,3,4-Trichlorophenol	84.6	90.6
2,3,5,6-Tetrachlorophenol	90.2	92.4
2,3,4,5-Tetrachlorophenol	87.7	87.5
2,4-Dichlorophenol	89.0	91.6
2,4,6-TBP (surr)	90.5	89.6





Data File: /chem2/eod1.i/FPCP20100809.b/0823-1.b/0823A020.d

Date: 23-AUG-2010 18:32

Client ID:

Sample Info: PCPCCAL

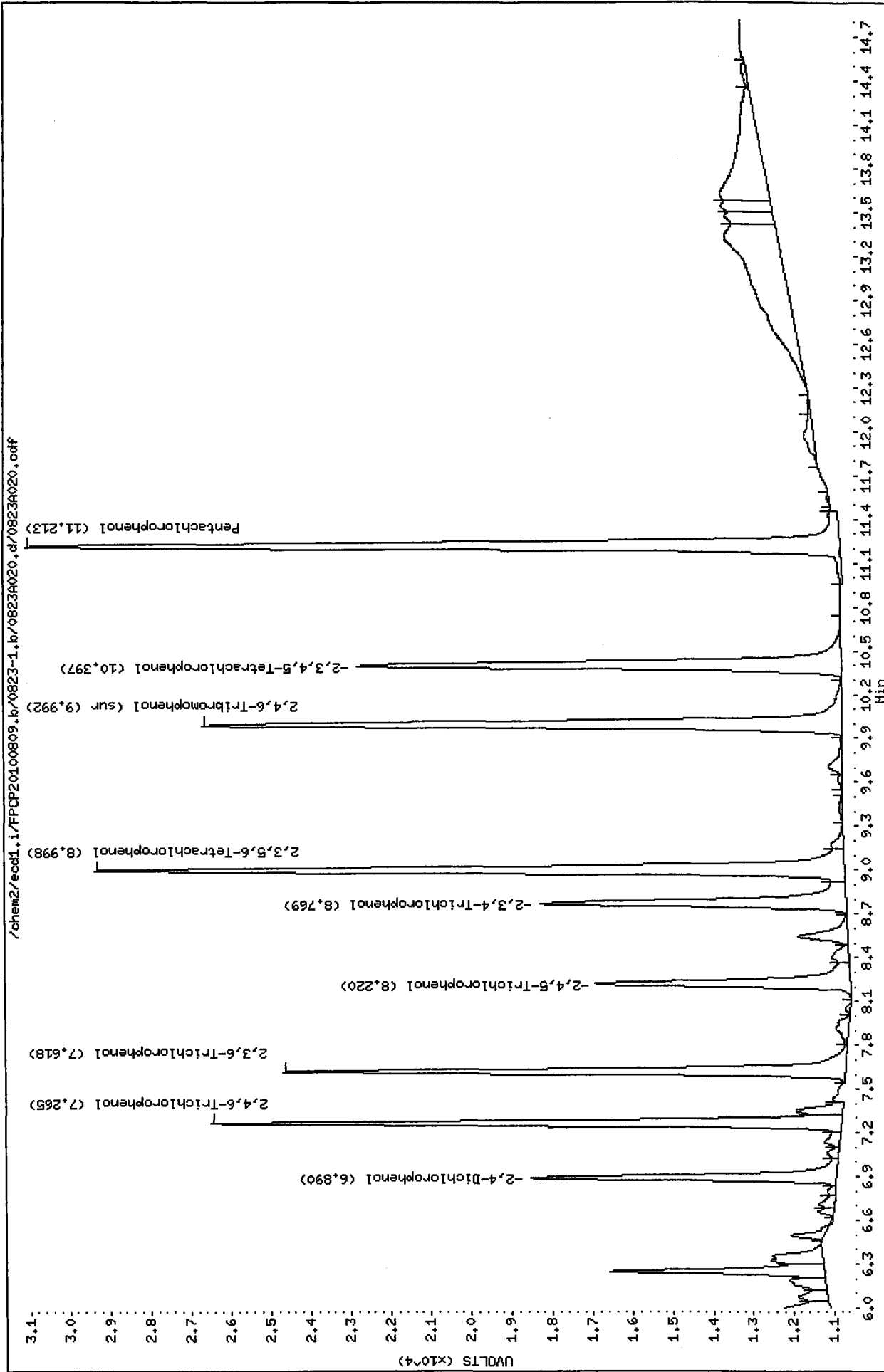
Purge Volume: 2.0

Column phase: ZB5

Instrument: eod1.i

Operator: ar

Column diameter: 0.53



Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

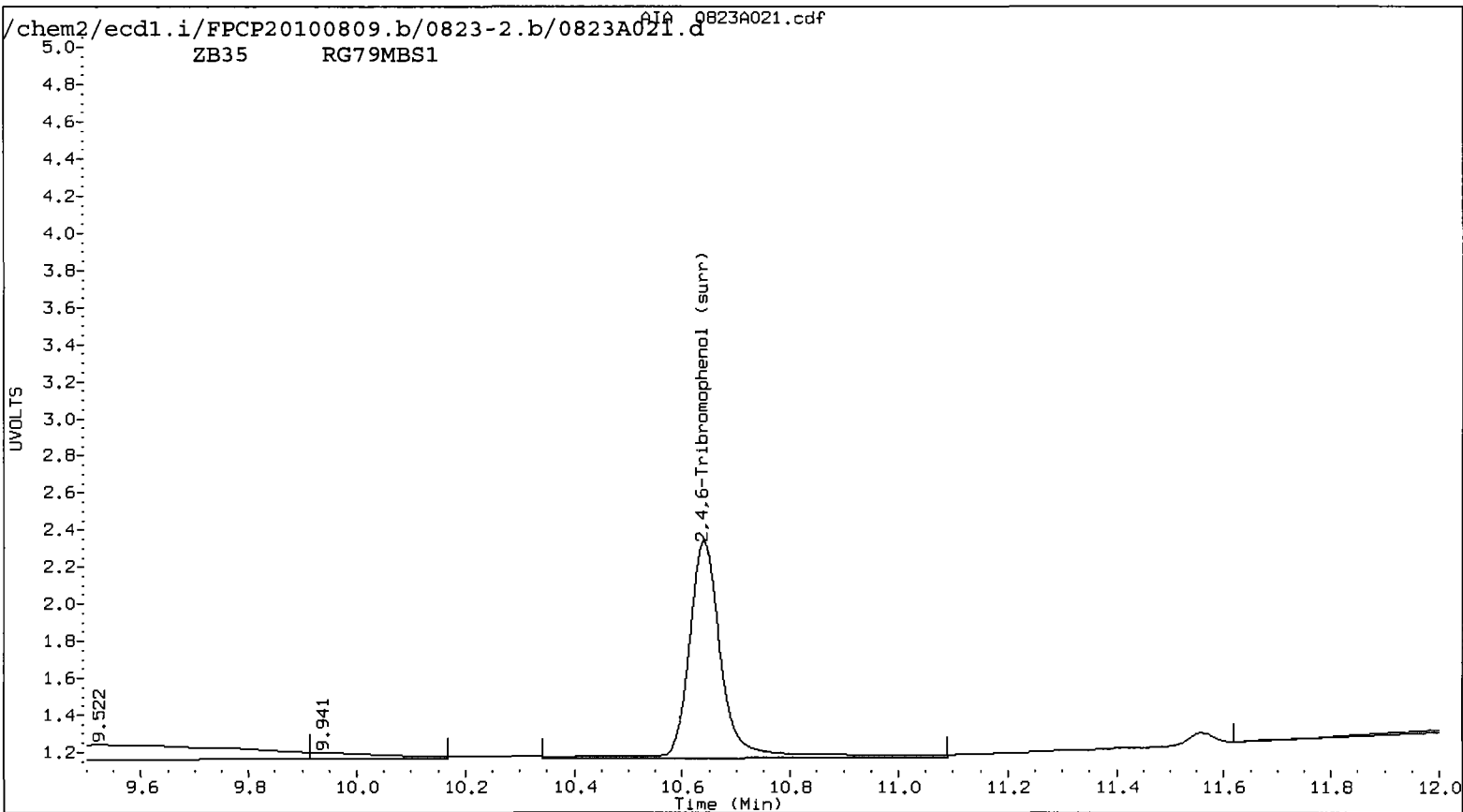
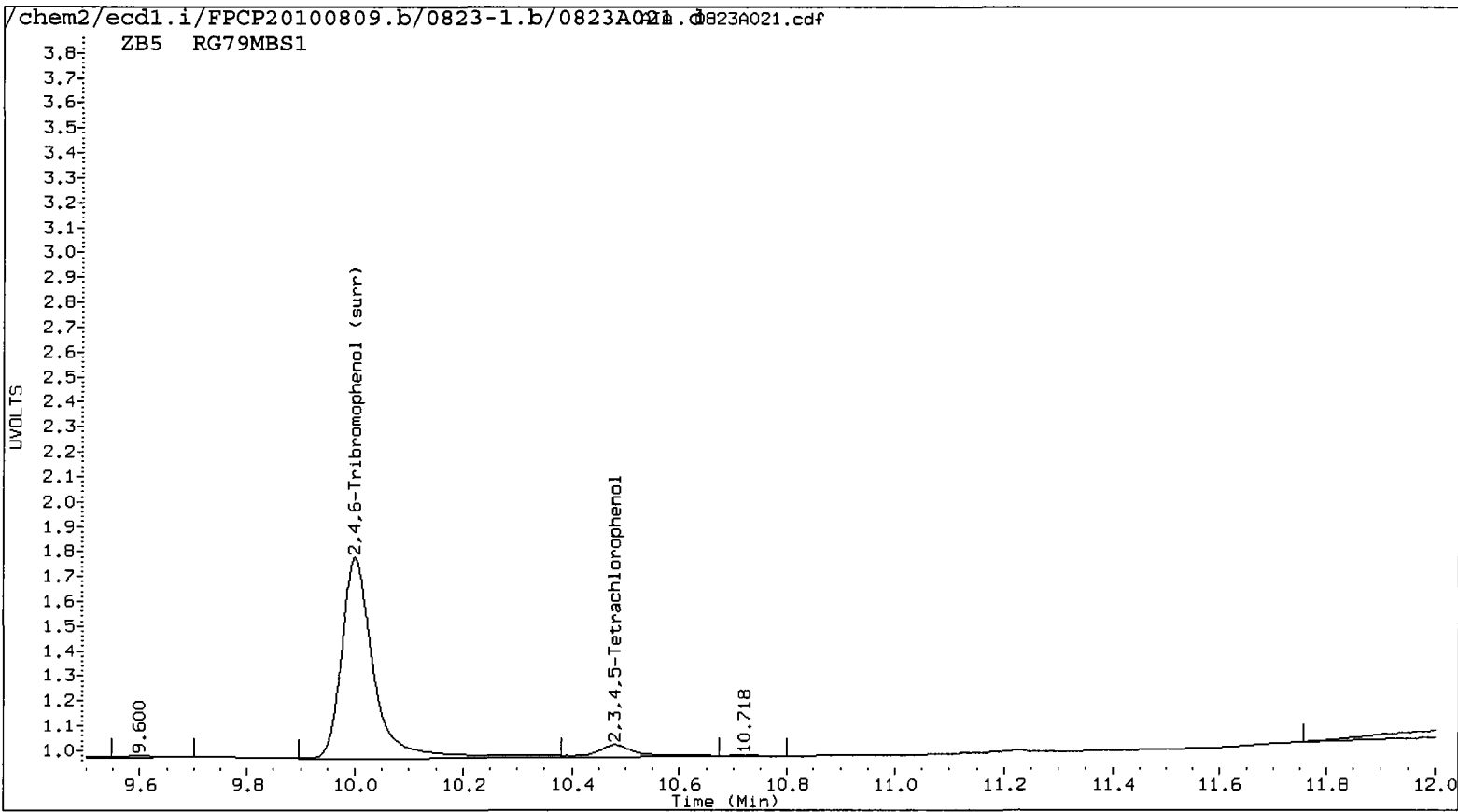
ARS(25/200

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A021.d ARI ID: RG79MBS1  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A021.d Client ID: RG79MBS1  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 23-AUG-2010 18:52  
 Compound Sublist: all Report Date: 08/24/2010 14:20  
 Instrument: ecdl.i Matrix: SOIL  
 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		
-----			-----			0.0000	0.0000	---	Pentachlorophenol
7.288	0.024	16853	7.372	0.039	7578	1.7644	0.6070	97.6*	2,4,6-Trichlorophenol
-----			7.844	-0.020	1462	0.0000	0.1179	---	2,3,6-Trichlorophenol
8.221	-0.021	12987	-----			2.5731	0.0000	---	2,4,5-Trichlorophenol
-----			-----			0.0000	0.0000	---	2,3,4-Trichlorophenol
9.018	0.011	8118	-----			0.5756	0.0000	---	2,3,5,6-Tetrachlorophenol
10.479	0.066	13077	-----			1.0494	0.0000	---	2,3,4,5-Tetrachlorophenol
6.855	-0.038	✓1353	7.165	-0.001	3195	2.1052	4.2556	67.6*	2,4-Dichlorophenol
10.001	-0.001	166909	10.640	-0.006	247374	12.8	13.3	3.2	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

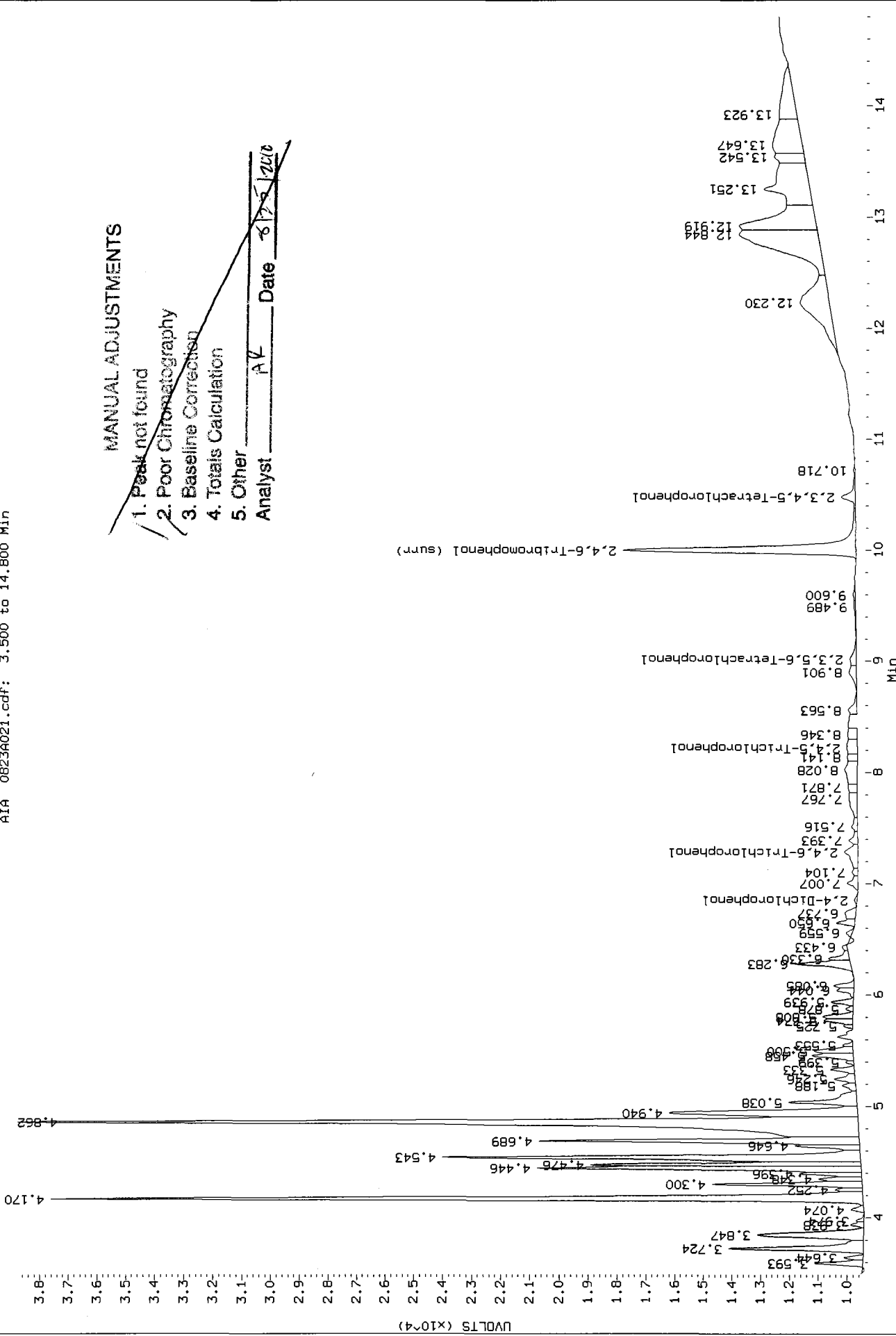
COMPOUND	Col1	Col2
-----		
2,4,6-TBP (surr)	51.3	53.0



Data File: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A021.d/0823A021.cdf  
 Injection Date: 23-AUG-2010 18:52  
 Instrument: ecdl.i  
 Client Sample ID: RG79MBS1

Before AR 8/25/2010

AIA 0823A021.cdf: 3.500 to 14.800 Min

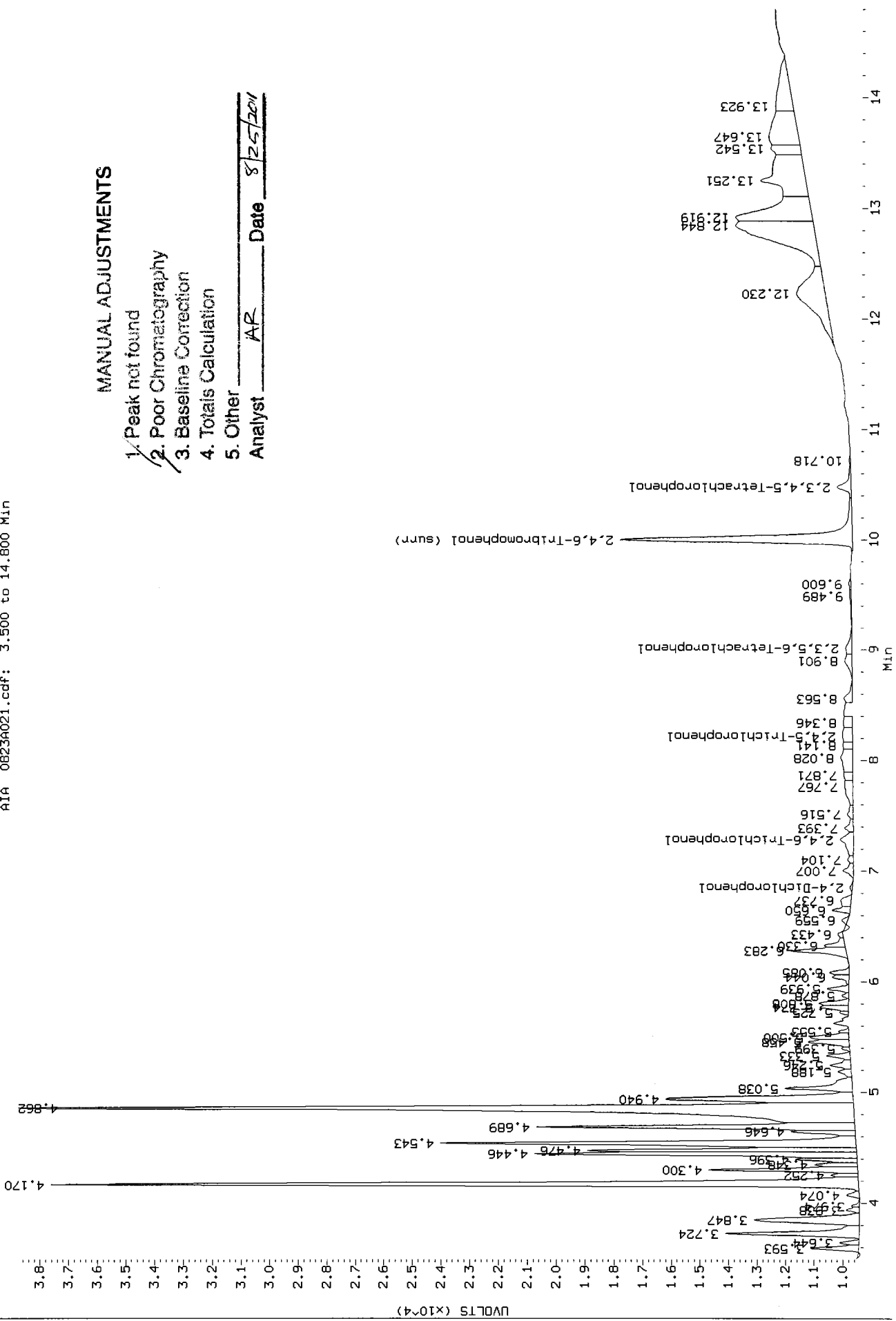


MANUAL ADJUSTMENTS

- 1. Peak not found
  - 2. Poor Chromatography
  - 3. Baseline Correction
  - 4. Totals Calculation
  - 5. Other
- Analyst AV Date 8/25/2010

Data File: /chem2/ecd1.i/FPCP20100809.b/0823-1.b/0823A021.d/0823A021.cdf  
 Injection Date: 23-AUG-2010 18:52  
 Instrument: ecd1.1  
 Client Sample ID: RG79MBS1

AIA 0823A021.cdf: 3.500 to 14.800 Min



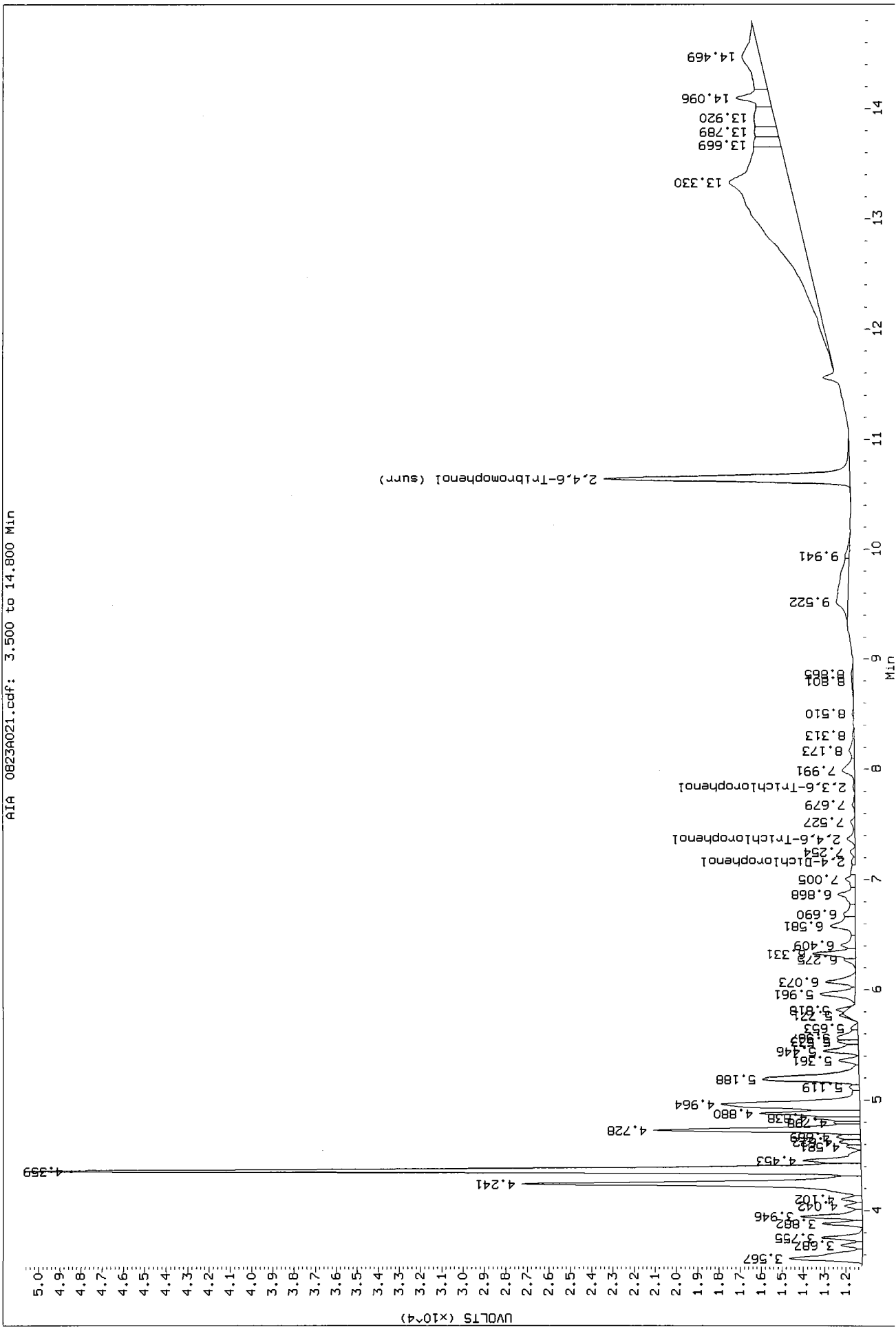
MANUAL ADJUSTMENTS

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

Analyst AR Date 8/25/2011

Data File: /chem2/ecdd1.i/FPCP20100809.b/0823-2.b/0823A021.d/0823A021.cdf  
 Injection Date: 23-AUG-2010 18:52  
 Instrument: ecdd1.i  
 Client Sample ID: RG79MBS1

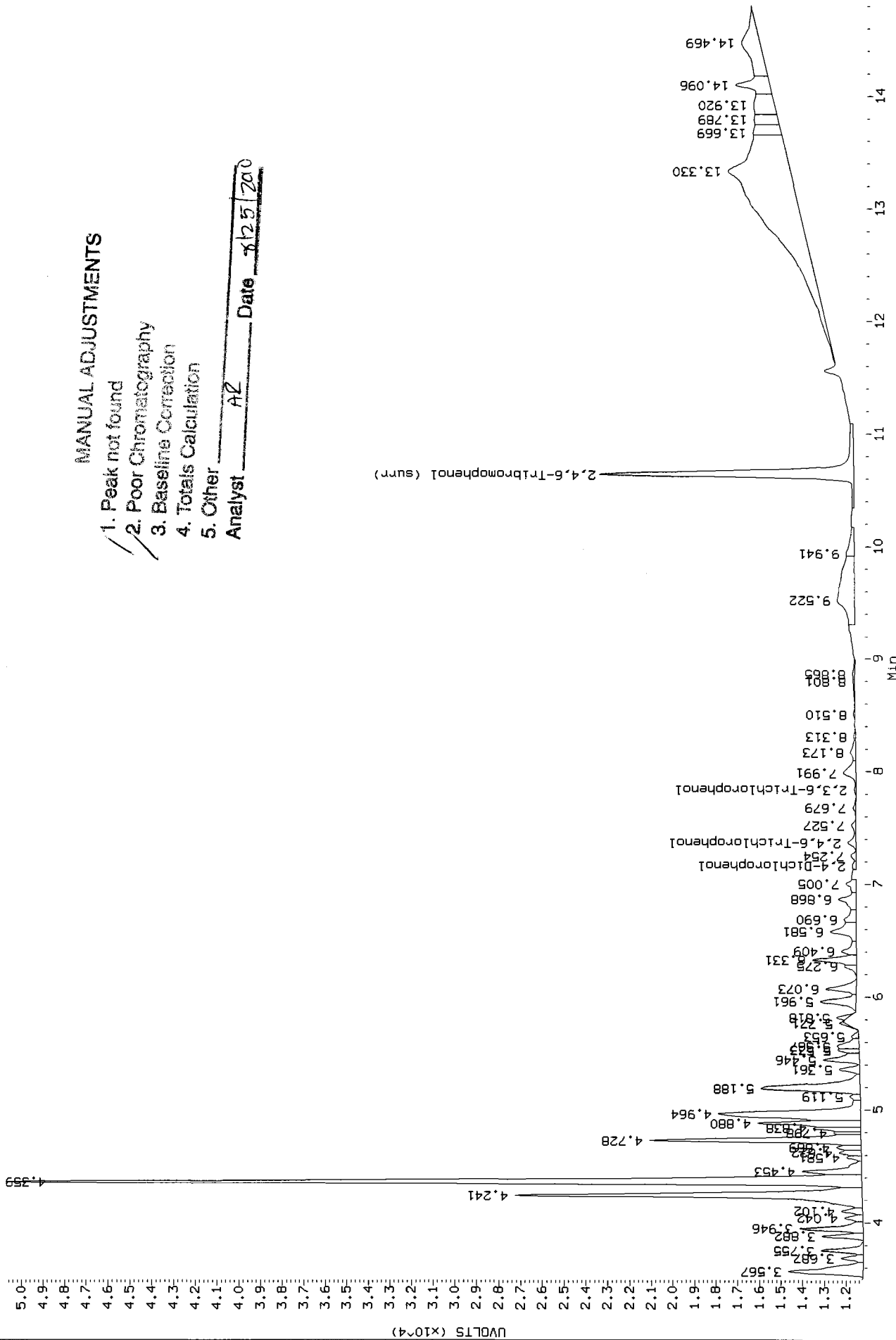
AR 8/25/2010



RG79 : 00934

Data File: /chem2/ecdl1.i/FPCP20100809.b/0823--2.b/0823A021.d/0823A021.cdf  
 Injection Date: 23-AUG-2010 18:52  
 Instrument: ecld1.i  
 Client Sample ID: RG79MBS1

AIA 0823A021.cdf: 3.500 to 14.800 Min



Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

AR 8/25/2010

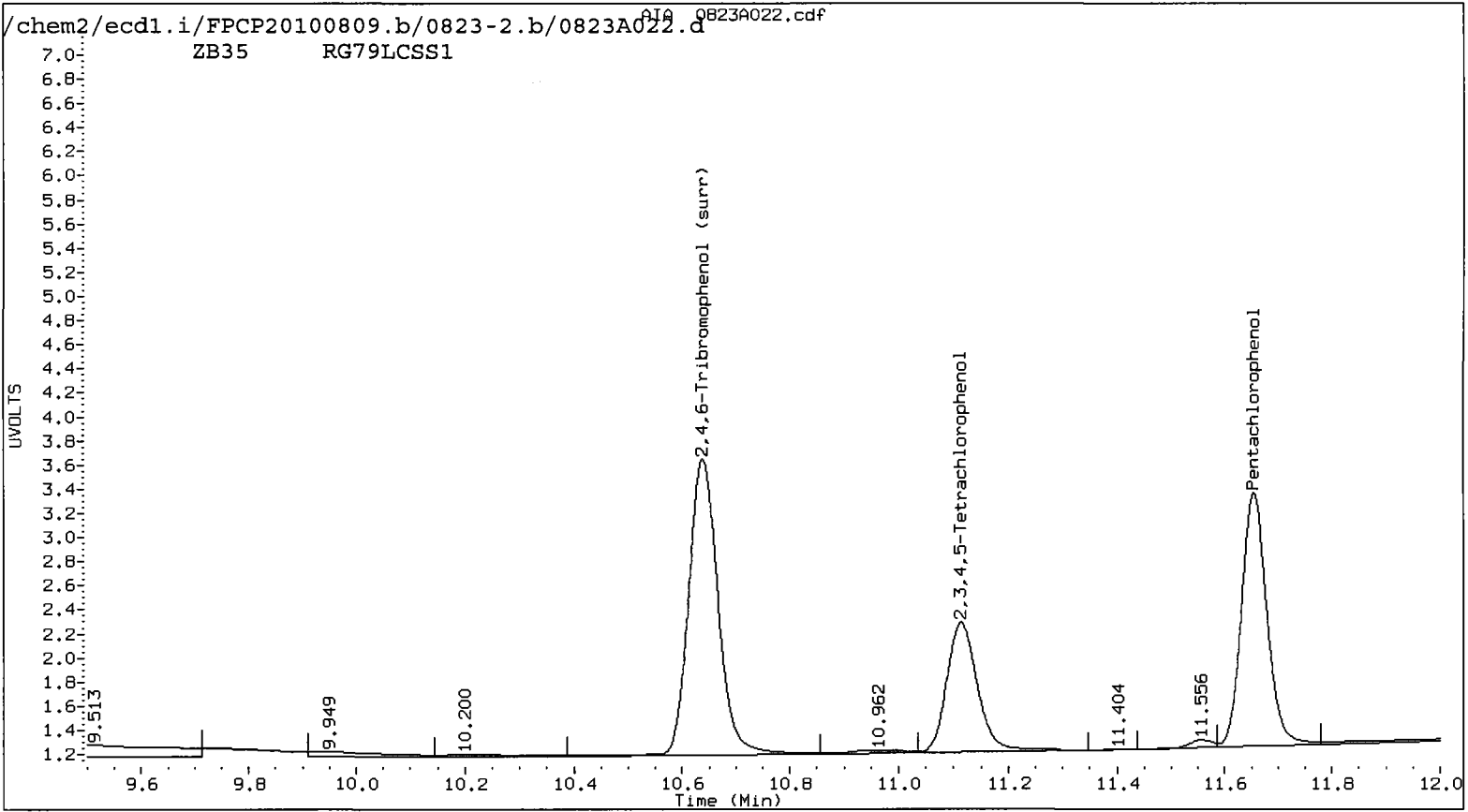
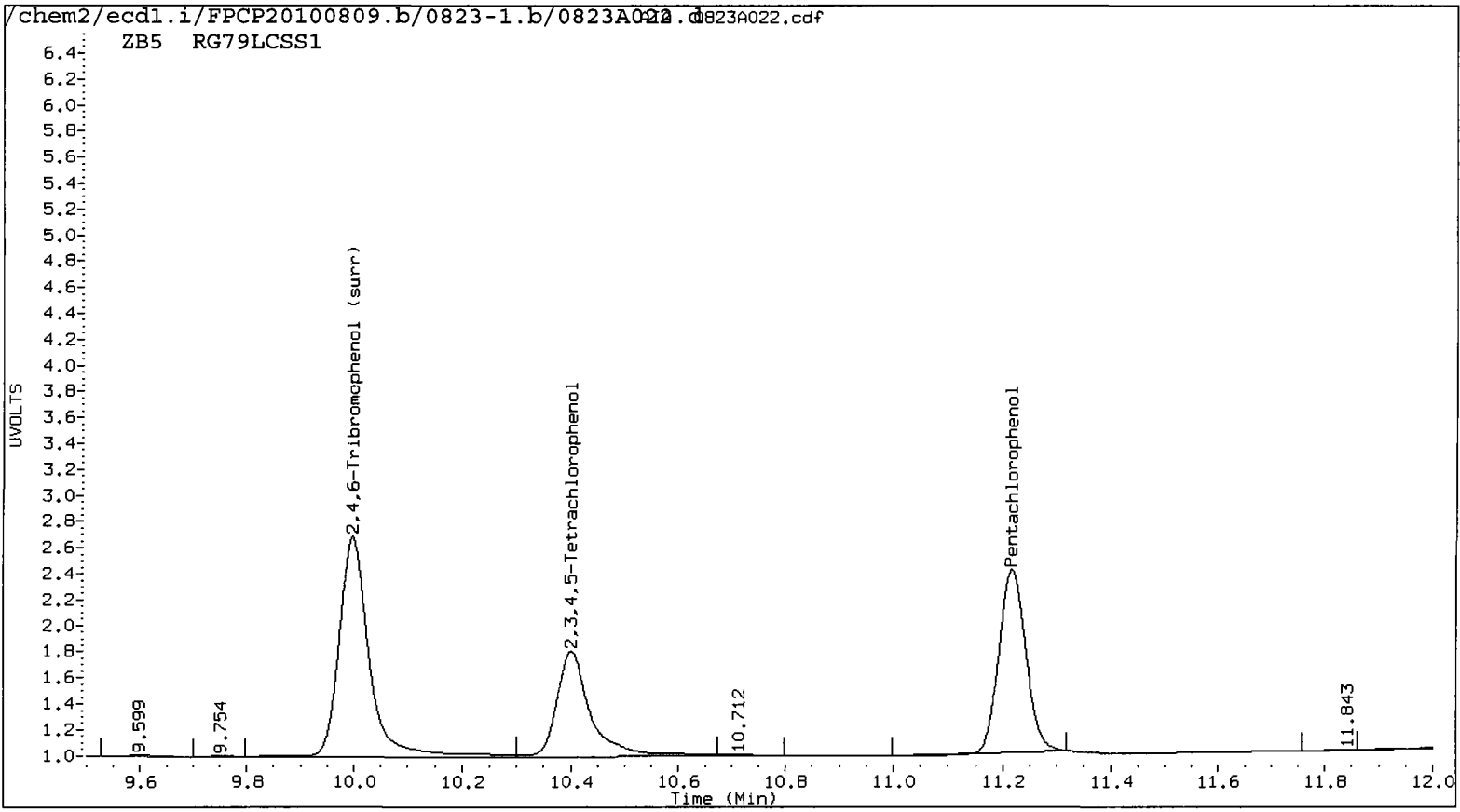
Data file 1: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A022.d ARI ID: RG79LCSS1  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A022.d Client ID: RG79LCSS1  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 23-AUG-2010 19:12  
 Compound Sublist: all Report Date: 08/24/2010 14:24  
 Instrument: ecdl.i Matrix: SOIL  
 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		
11.217	-0.002	238611	11.654	-0.004	353187	14.5721	15.3818	5.4	Pentachlorophenol
7.267	0.003	138597	7.335	0.002	189479	15.7023	15.1770	3.4	2,4,6-Trichlorophenol
7.620	0.001	139746	7.863	-0.001	175492	15.2546	14.1429	7.6	2,3,6-Trichlorophenol
8.228	-0.014	95720	8.598	-0.017	99018	18.9637	15.0868	22.8	2,4,5-Trichlorophenol
8.778	-0.014	88049	9.365	-0.015	130315	12.8707	14.6538	13.0	2,3,4-Trichlorophenol
9.002	-0.005	199026	9.267	-0.010	271926	14.1097	14.6870	4.0	2,3,5,6-Tetrachlorophenol
10.400	-0.013	176499	11.114	-0.012	209007	16.1388	14.3247	11.9	2,3,4,5-Tetrachlorophenol
6.893	0.000	40122	7.163	-0.003	60771	68.7299	87.5425	24.1	2,4-Dichlorophenol
9.997	-0.005	331173	10.638	-0.008	468977	27.0	25.1	7.3	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	58.3	61.5
2,4,6-Trichlorophenol	62.8	60.7
2,3,6-Trichlorophenol	61.0	56.6
2,4,5-Trichlorophenol	75.9	60.3
2,3,4-Trichlorophenol	51.5	58.6
2,3,5,6-Tetrachlorophenol	56.4	58.7
2,3,4,5-Tetrachlorophenol	64.6	57.3
2,4-Dichlorophenol	27.5	35.0
2,4,6-TBP (surr)	54.1	50.2





Data File: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A022.d

Date : 23-AUG-2010 19:12

Client ID: R679LCSS1

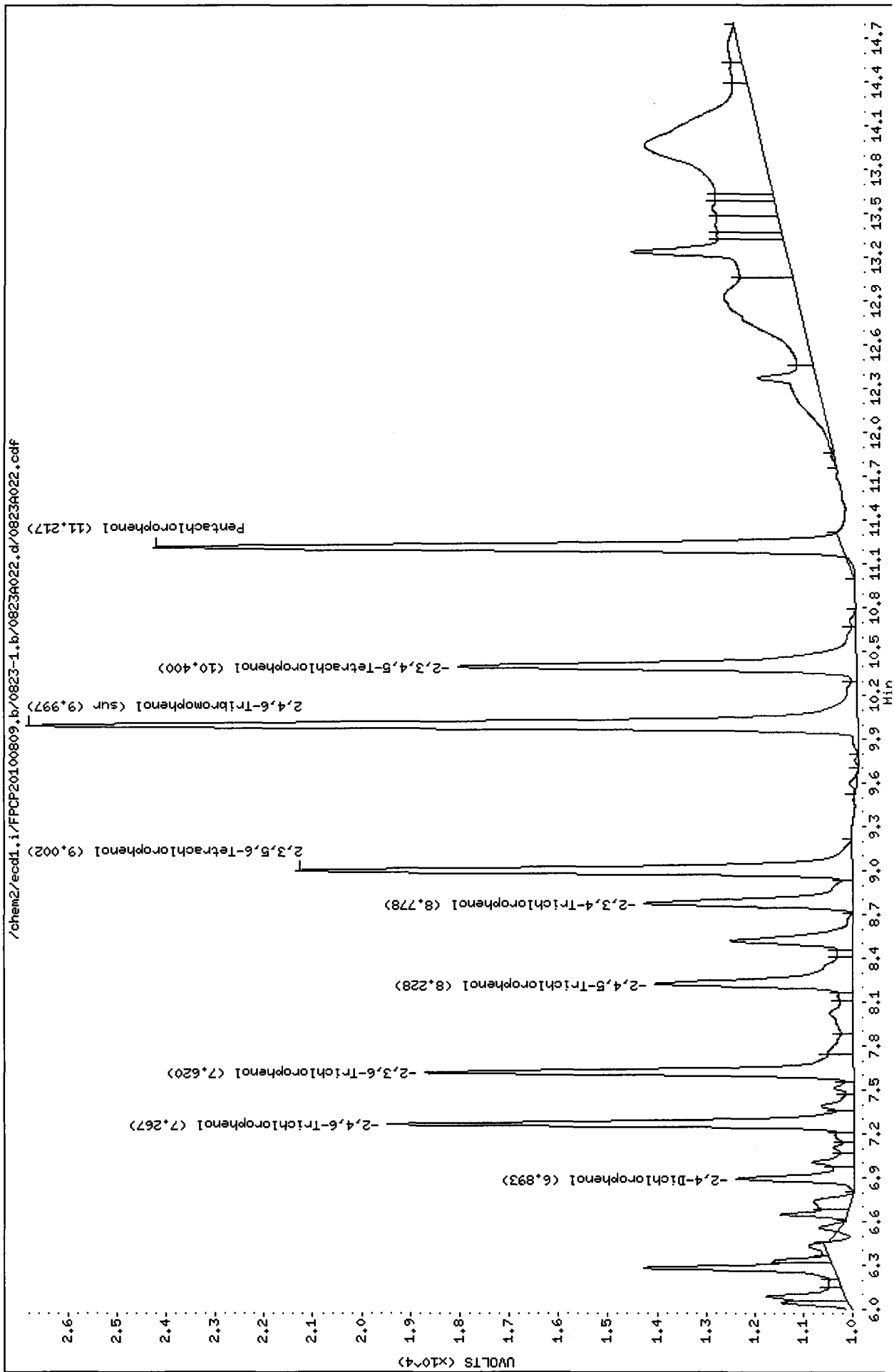
Sample Info: R679LCSS1

Column phase: ZB5

Instrument: ecd1.i

Operator: ar

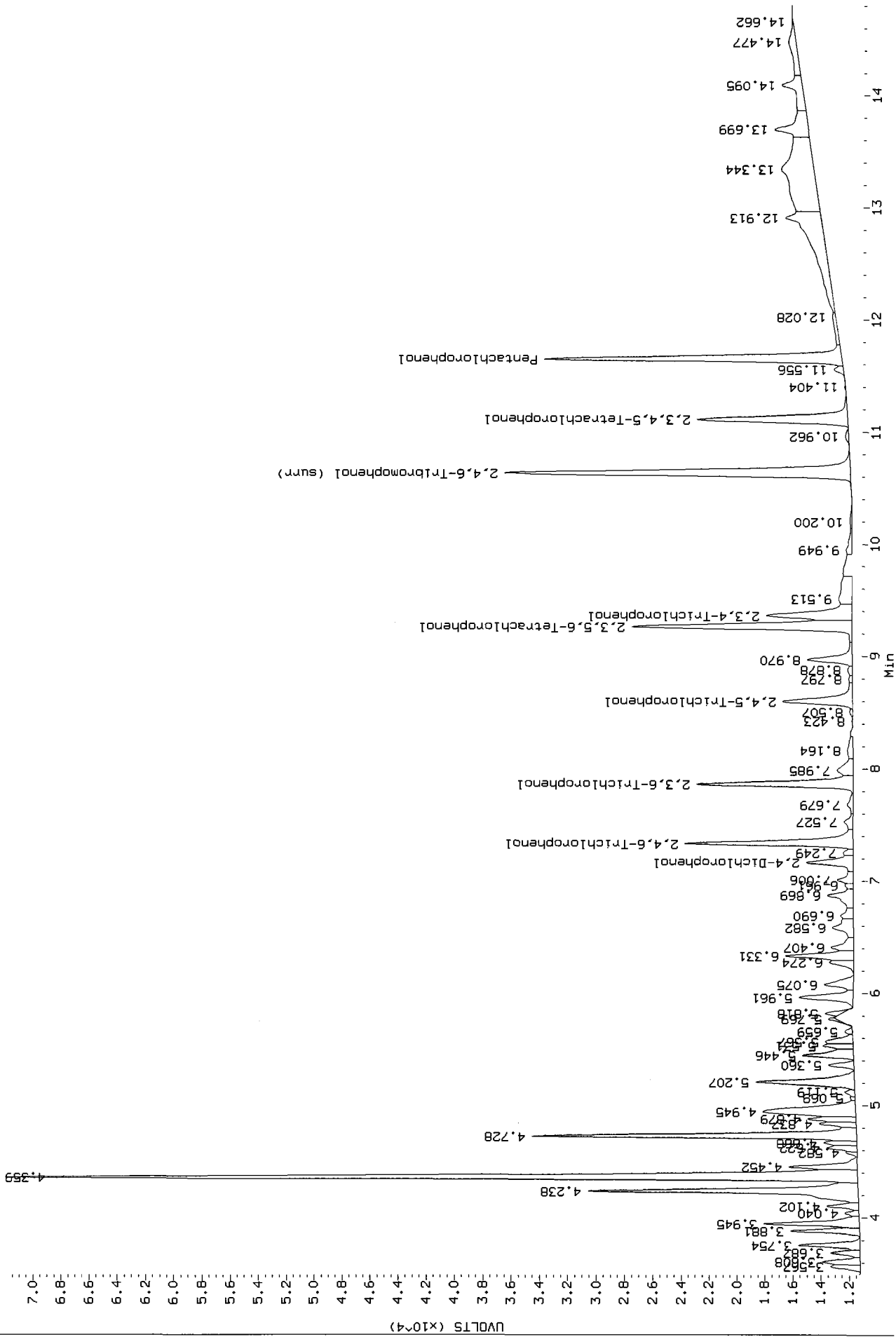
Column diameter: 0.53



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 Injection Date: 23-AUG-2010 19:12  
 Instrument: ecdl.i  
 Client Sample ID: RG79LCSS1

AR 5/24/2010

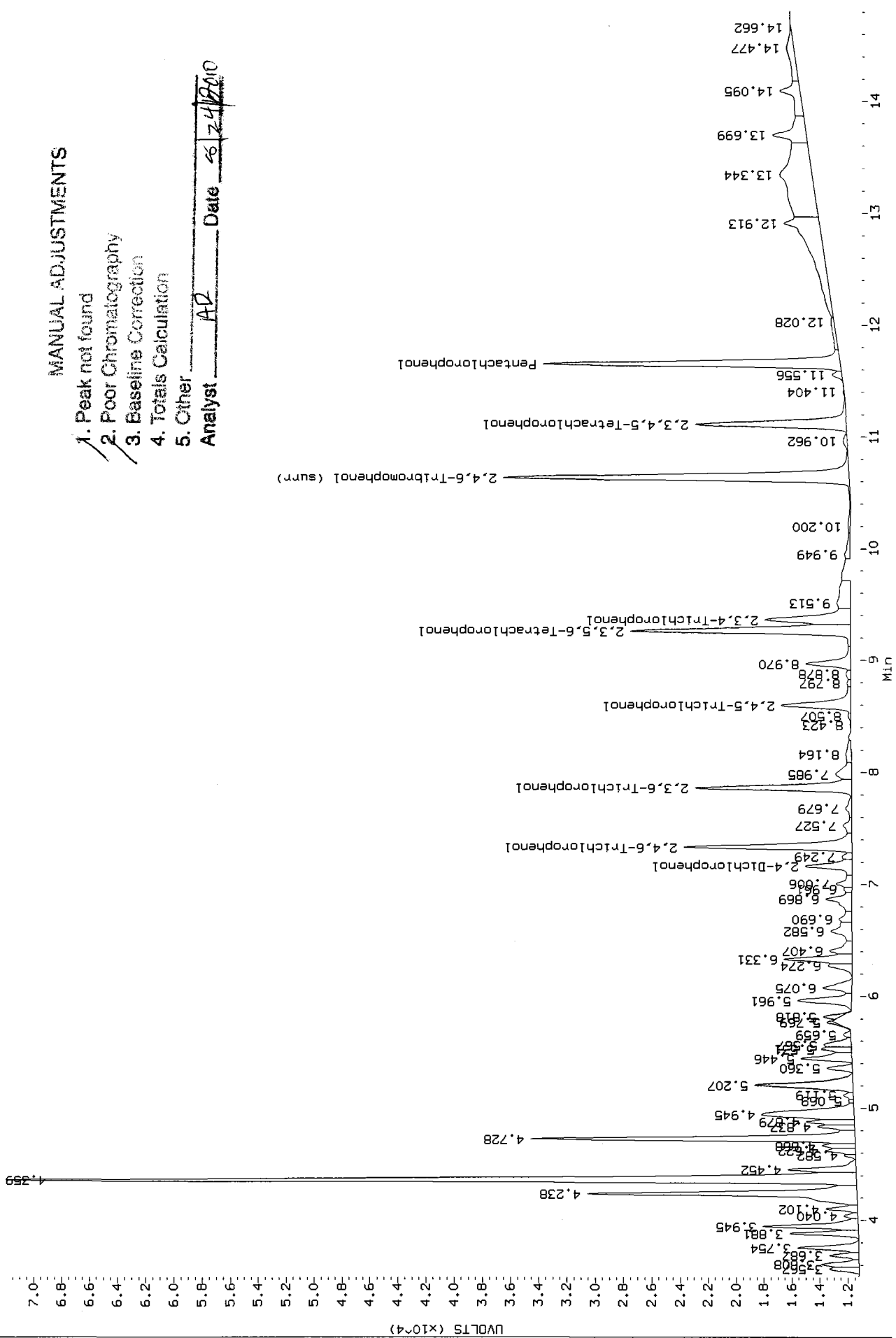
AIA 0823A022.cdf: 3.500 to 14.807 Min



RG79 : 00939

Data File: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A022.d/0823A022.cdf  
 Injection Date: 23-AUG-2010 19:12  
 Instrument: eccl.i  
 Client Sample ID: RG79LCCS1

AIA 0823A022.cdf: 3.500 to 14.807 Min



MANUAL ADJUSTMENTS

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

Analyst AD Date 24/8/10

Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

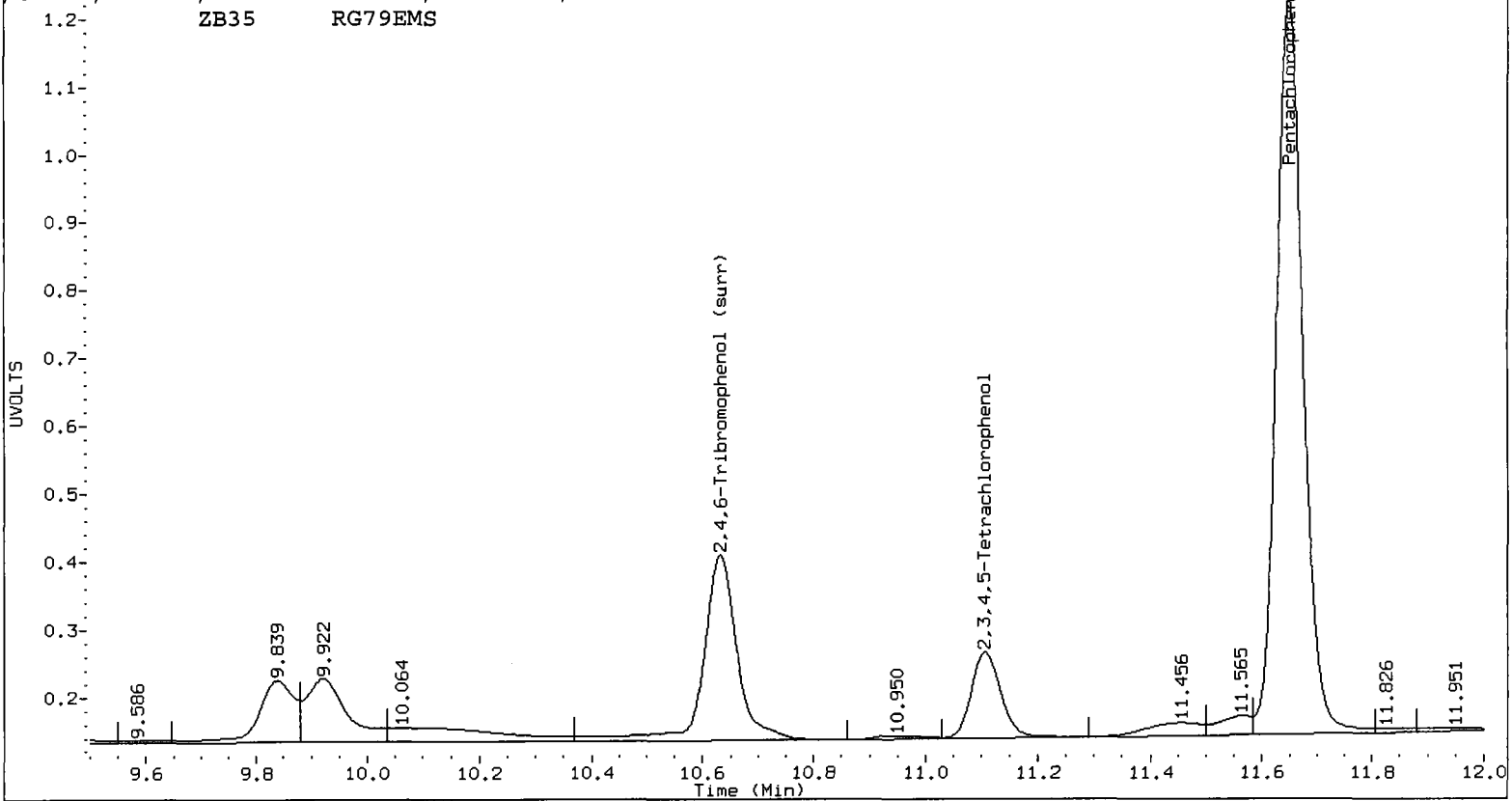
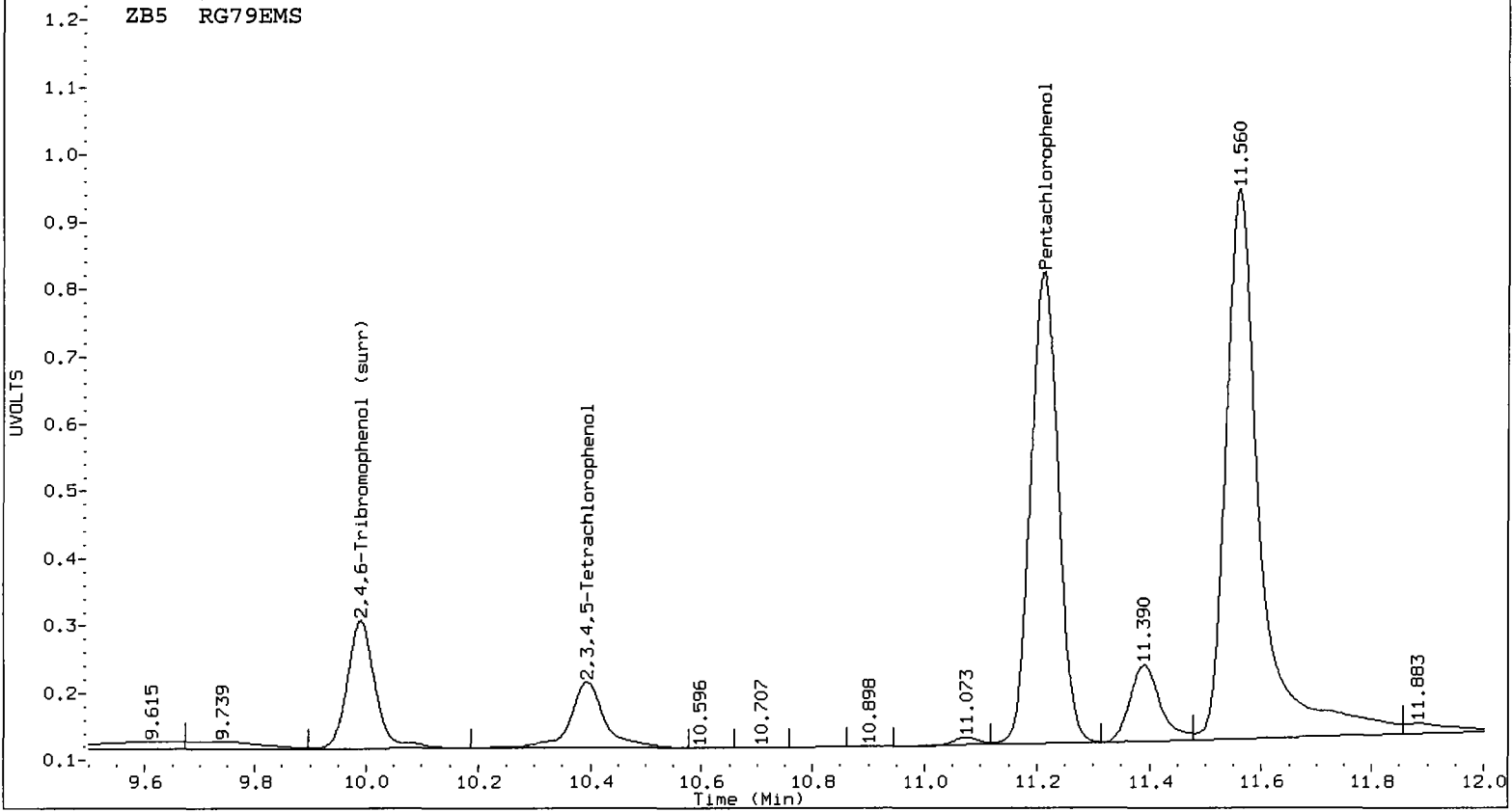
AR 8/25/2010

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A028.d ARI ID: RG79EMS  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A028.d Client ID: PSB11-4-6-07301 MS  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 23-AUG-2010 21:12  
 Compound Sublist: all Report Date: 08/25/2010 15:00  
 Instrument: ecdl.i Matrix: SOIL  
 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	1182805	11.650	-0.008	1845039	98.7585	80.3538	20.6	Pentachlorophenol
7.265	0.001	186957	7.334	0.001	230949	21.8201	18.4987	16.5	2,4,6-Trichlorophenol
7.618	-0.001	155618	7.861	-0.003	181963	17.1189	14.6644	15.4	2,3,6-Trichlorophenol
8.217	-0.025	100586	8.592	-0.023	91268	19.9278	13.8110	36.3	2,4,5-Trichlorophenol
8.767	-0.025	171681	9.357	-0.023	139858	25.0957	15.8213	45.3*	2,3,4-Trichlorophenol
9.006	-0.001	729615	9.268	-0.009	415382	51.7252	22.4351	79.0*	2,3,5,6-Tetrachlorophenol
10.393	-0.020	216433	11.107	-0.019	234824	20.3821	16.0941	23.5	2,3,4,5-Tetrachlorophenol
6.891	-0.002	25416	7.208	0.042	132289	42.0211	208.4270	132.9*	2,4-Dichlorophenol
9.990	-0.012	333024	10.632	-0.014	579045	27.2	31.0	13.1	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	395.0	321.4
2,4,6-Trichlorophenol	87.3	74.0
2,3,6-Trichlorophenol	68.5	58.7
2,4,5-Trichlorophenol	79.7	55.2
2,3,4-Trichlorophenol	100.4	63.3
2,3,5,6-Tetrachlorophenol	206.9	89.7
2,3,4,5-Tetrachlorophenol	81.5	64.4
2,4-Dichlorophenol	16.8	83.4
2,4,6-TBP (surr)	54.4	62.0



PCP/Chlorophenols Matrix Spike Dup-pcp101md  
Data By: Aron A. Rigg  
Created: 8/25/10

Worklist: 7429  
Analyst: AAR  
Comments:

1. RG79E MSD Soil 10-18509 PSB11-4-6-073010

Method: 8041 PCP Sample Amt: 9.21 g-dry-wt  
Ext Date: 8/12/10 EFV (mL): 25.0  
Ext Meth: SW3550C-Sonication Dilution: 5.0  
Instrument: ECD1 Date/Time: 8/23/10 21:32

Surrogate	On Col (ug/L)	Spiked (ug/L)	LCL-UCL (%)	Rec (%)	Q
2,4,6-Tribromophenol	4.53 9.71	50.0	10-146	45.3 97.1	

Analyte	On Col (ug/L)	RL/MDL (ug/kg)	Final (ug/kg)	RES Q	RPD (%)	RPD Q
Pentachlorophenol	27.23 27.82	33.9 13.5	370. 378.		2.1	

Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

AR 8/25/2010

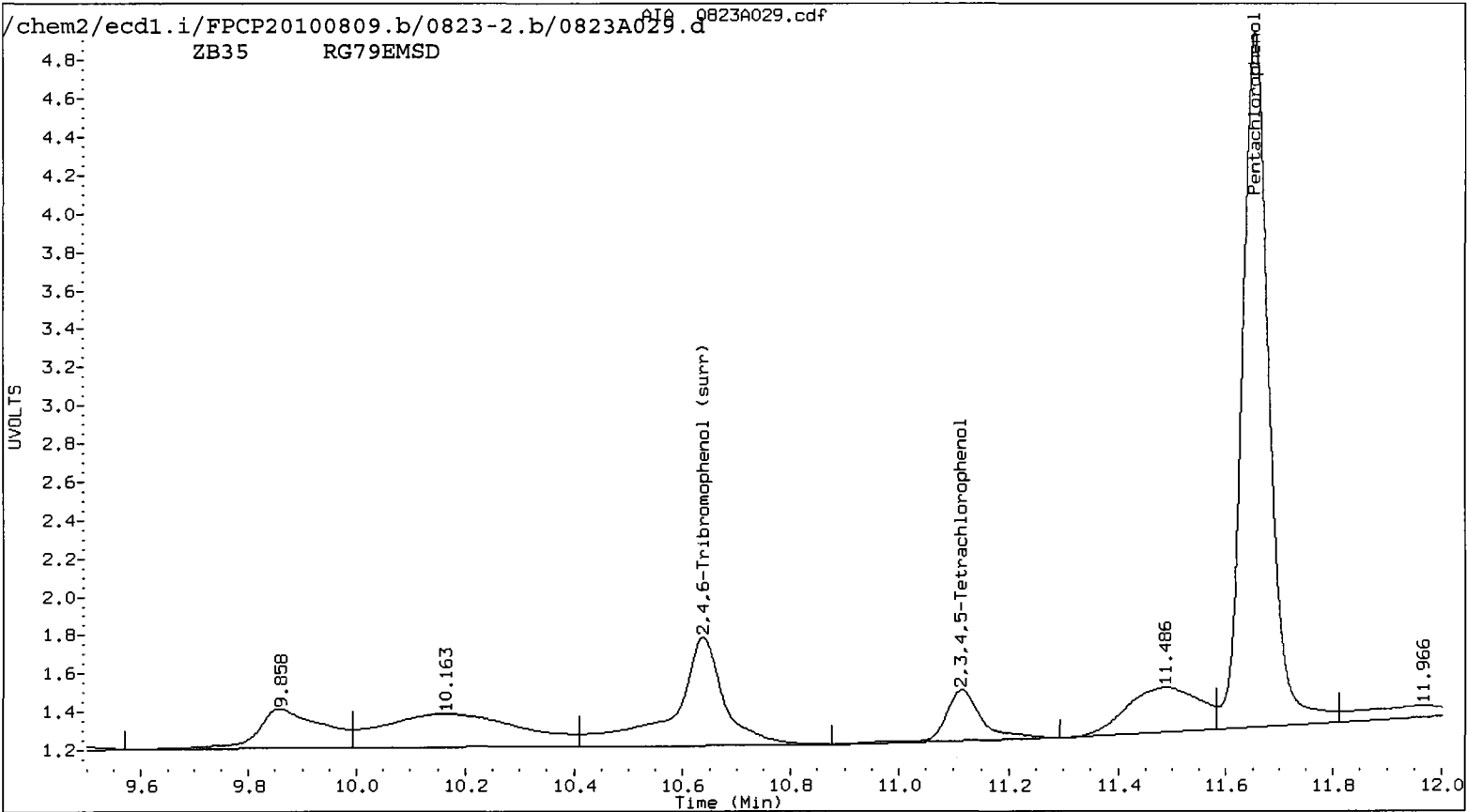
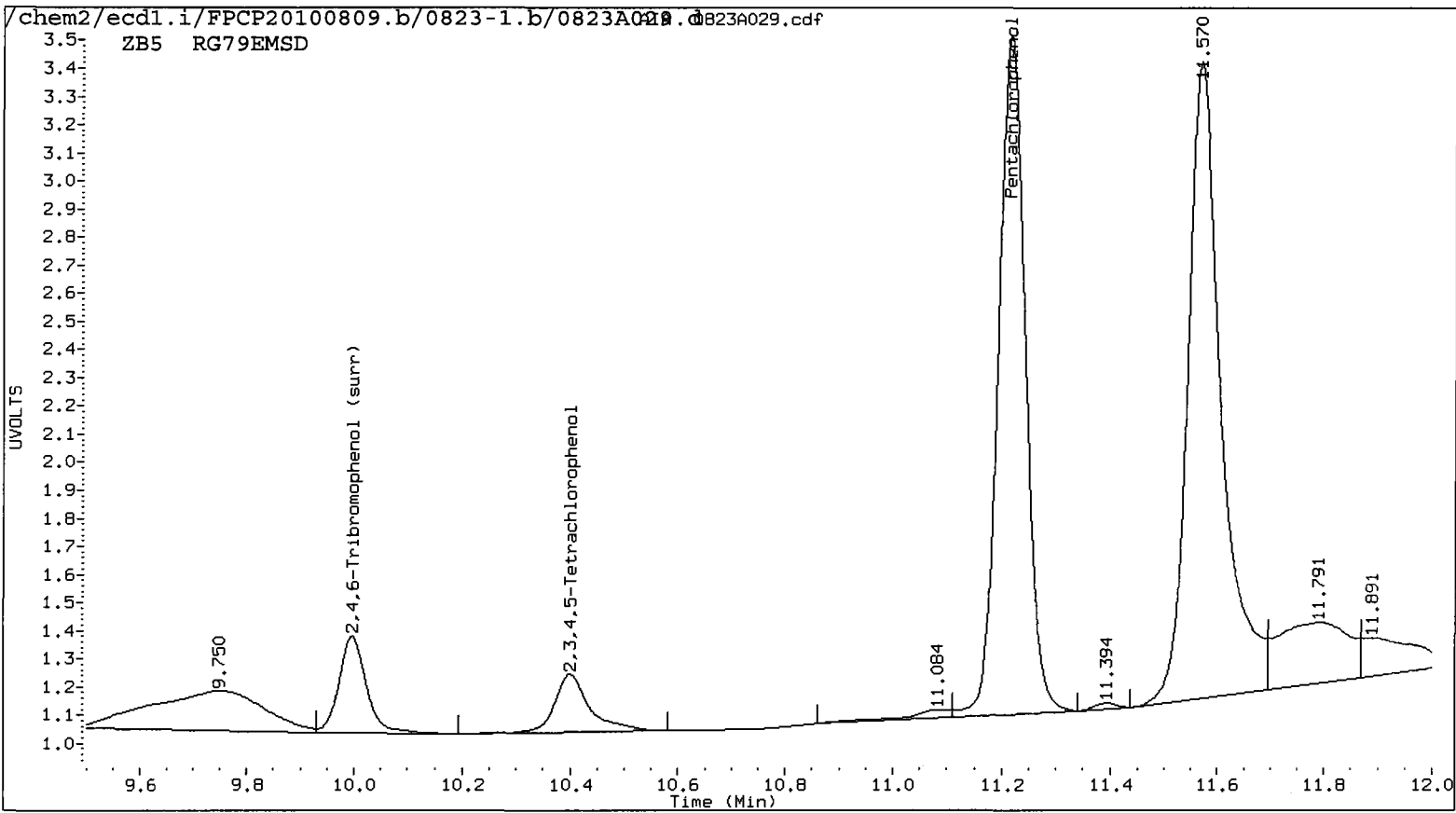
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 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A029.d Client ID: PSB11-4-6-07301 MSD  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 23-AUG-2010 21:32  
 Compound Sublist: all Report Date: 08/25/2010 15:00  
 Instrument: ecdl.i Matrix: SOIL  
 Operator: ar Dilution Factor: 5.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.217	-0.002	416941	11.654	-0.004	638827	<u>27.2286</u>	<u>27.8218</u>	2.2	Pentachlorophenol
7.268	0.004	147029	7.337	0.004	90589	16.7451	7.2561	79.1*	2,4,6-Trichlorophenol
7.622	0.003	29850	7.864	0.000	36135	3.0835	2.9121	5.7	2,3,6-Trichlorophenol
8.229	-0.013	15283	8.601	-0.014	17911	3.0278	2.5341	17.8	2,4,5-Trichlorophenol
8.780	-0.012	15023	9.364	-0.016	25671	2.1960	2.6966	20.5	2,3,4-Trichlorophenol
9.018	0.011	98786	9.276	-0.001	91906	7.0033	4.9639	34.1	2,3,5,6-Tetrachlorophenol
10.400	-0.013	47653	11.114	-0.012	59287	3.9370	4.0634	3.2	2,3,4,5-Tetrachlorophenol
6.897	0.004	4729	7.167	0.001	11851	7.4216	15.9786	73.1*	2,4-Dichlorophenol
9.997	-0.005	61334	10.637	-0.009	181286	<u>4.5</u>	<u>9.7</u>	72.8*	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	544.6	556.4 ✓
2,4,6-Trichlorophenol	334.9	145.1
2,3,6-Trichlorophenol	61.7	58.2
2,4,5-Trichlorophenol	60.6	50.7
2,3,4-Trichlorophenol	43.9	53.9
2,3,5,6-Tetrachlorophenol	140.1	99.3
2,3,4,5-Tetrachlorophenol	78.7	81.3
2,4-Dichlorophenol	14.8	32.0 ✓
2,4,6-TBP (surr)	45.3	97.1 ✓





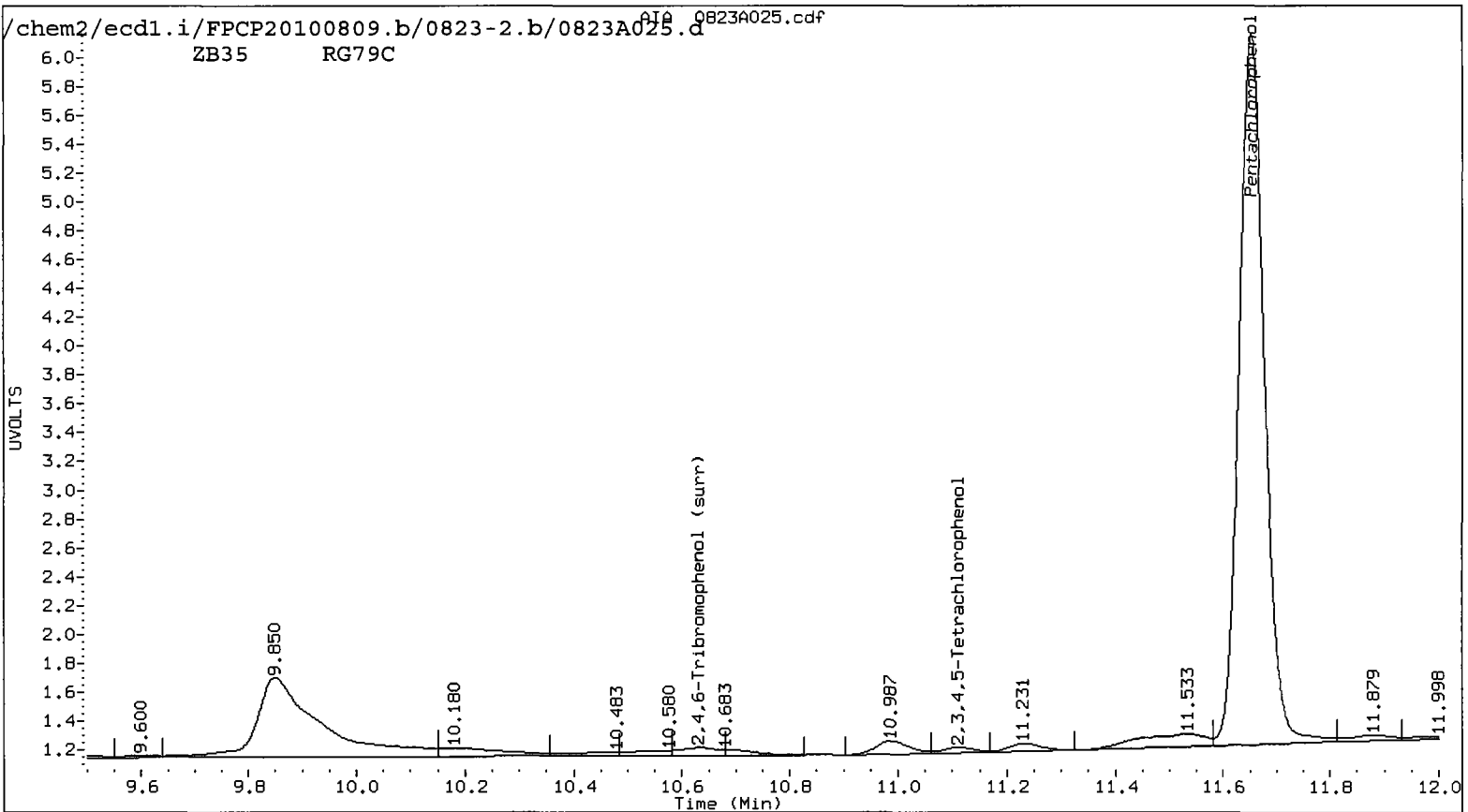
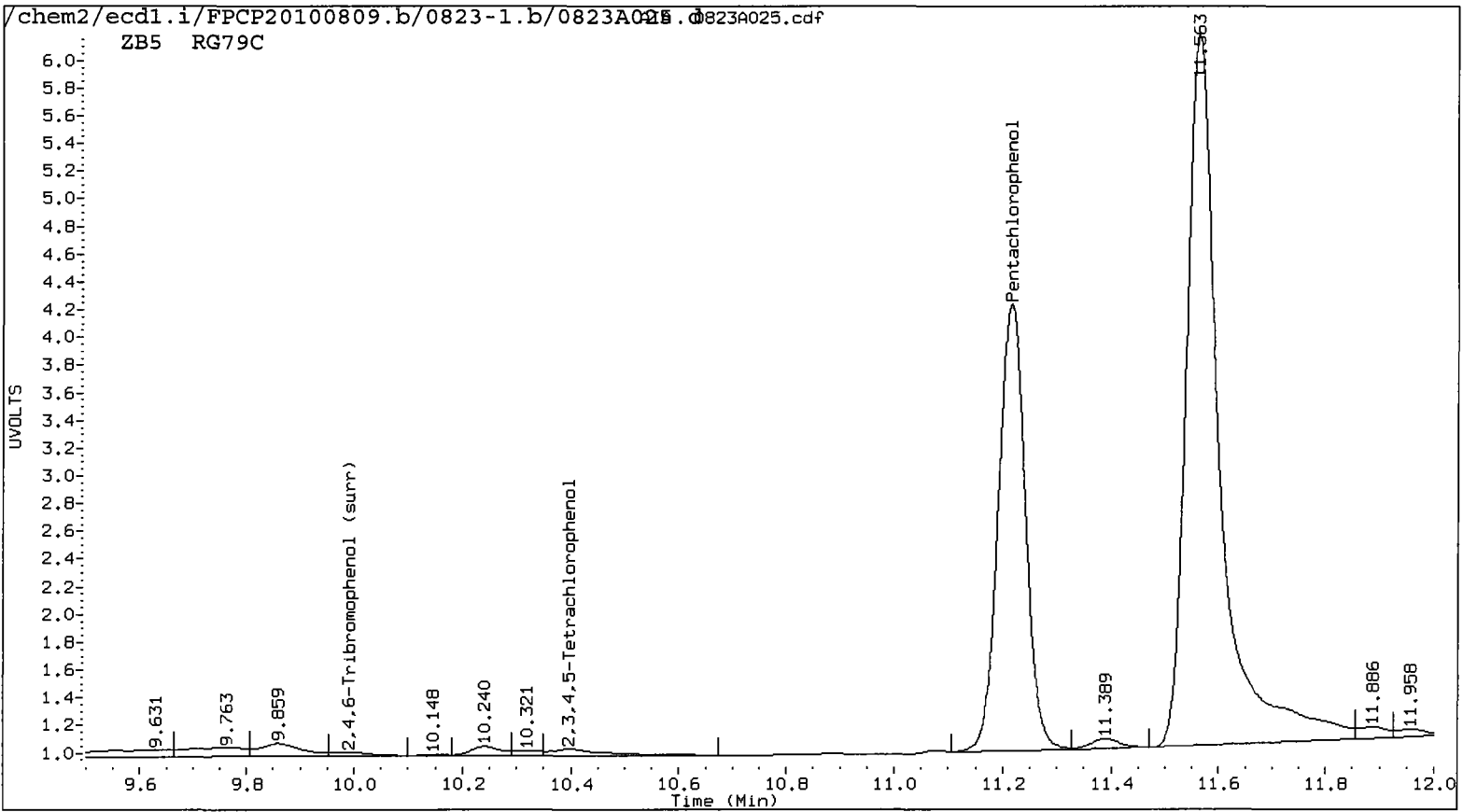
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A025.d ARI ID: RG79C  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A025.d Client ID: PSB11-2-4-073010  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 23-AUG-2010 20:12  
 Compound Sublist: all Report Date: 08/25/2010 15:29  
 Instrument: ecdl.i Matrix: SOIL  
 Operator: ar Dilution Factor: 10.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.215	-0.004	558318	11.653	-0.005	820370	<u>38.3360</u>	<u>35.7282</u>	7.0	Pentachlorophenol
7.196	-0.068	80809	7.376	0.043	13598	8.8252	1.0892	156.1*	2,4,6-Trichlorophenol
7.609	-0.010	7028	----			0.7175	0.0000	---	2,3,6-Trichlorophenol
8.206	-0.036	8441	8.583	-0.032	617	1.6724	0.0859	180.4*	2,4,5-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,4-Trichlorophenol
9.032	0.025	83407	9.285	0.008	51279	5.9131	2.7697	72.4*	2,3,5,6-Tetrachlorophenol
10.397	-0.016	17453	11.111	-0.015	7823	1.4059	0.5362	89.6*	2,3,4,5-Tetrachlorophenol
----			7.213	0.047	11804	0.0000	15.9142	---	2,4-Dichlorophenol
9.990	-0.012	7893	10.633	-0.013	14505	<u>0.6</u>	<u>0.8</u>	30.6	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	22.8	31.1



Data File: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A025.d

Date : 23-AUG-2010 20:12

Client ID: PSB11-2-4-073010

Sample Info: RG79C,,,10

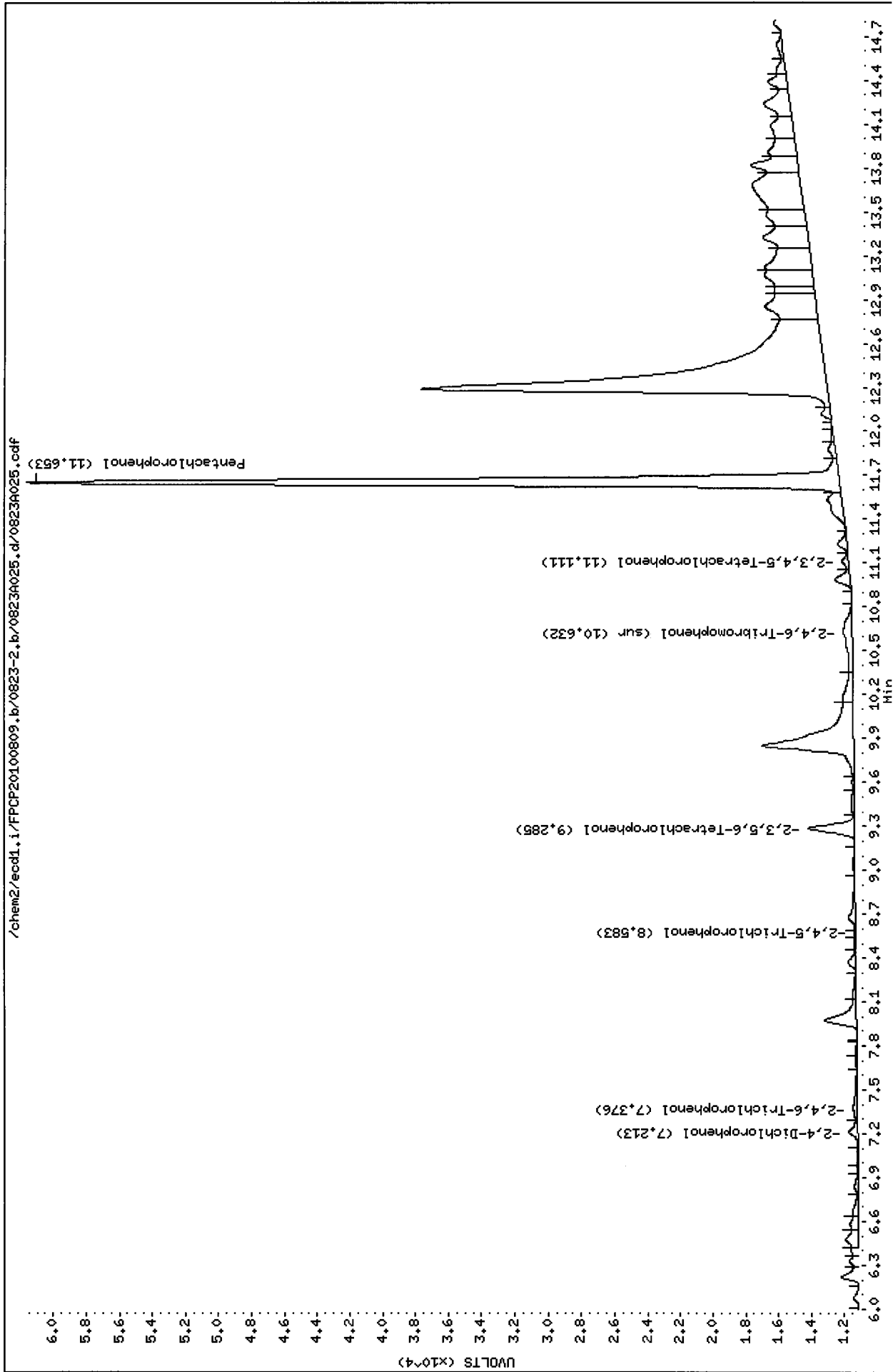
Instrument: ecdl.i

Operator: ar

Column diameter: 0.53

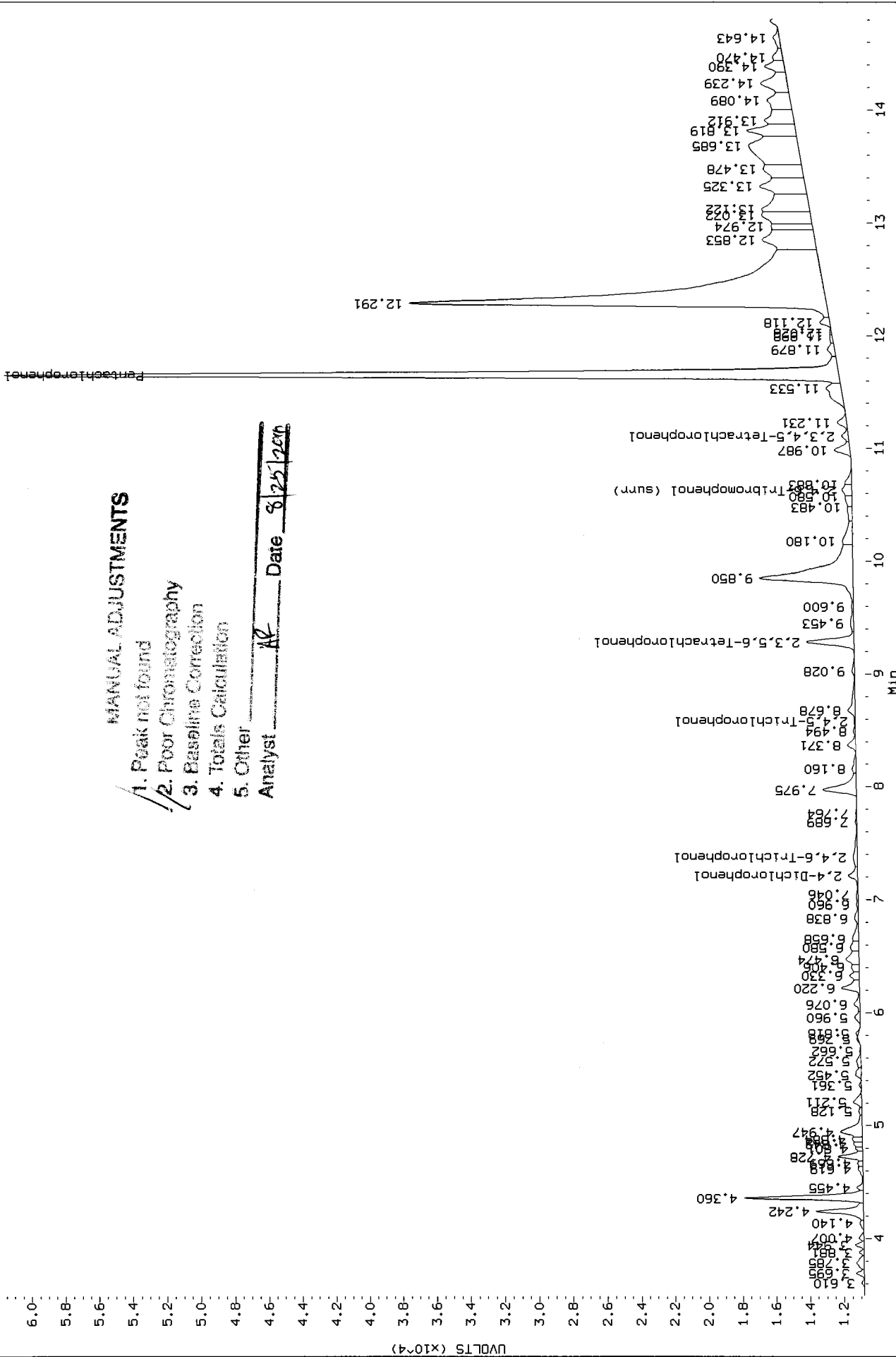
Column phase: ZB35

AR 8/25/2010



Data File: /chem2/ecdl1/FPCP20100809.b/0823-2.b/0823A025.d/0823A025.cdf  
 Injection Date: 23-AUG-2010 20:12  
 Instrument: ecdl1  
 Client Sample ID: PSB11-2-4-073010

AIA 0823A025.cdf: 3.500 to 14.810 Min



**MANUAL ADJUSTMENTS**

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

Analyst AK Date 8/25/2010

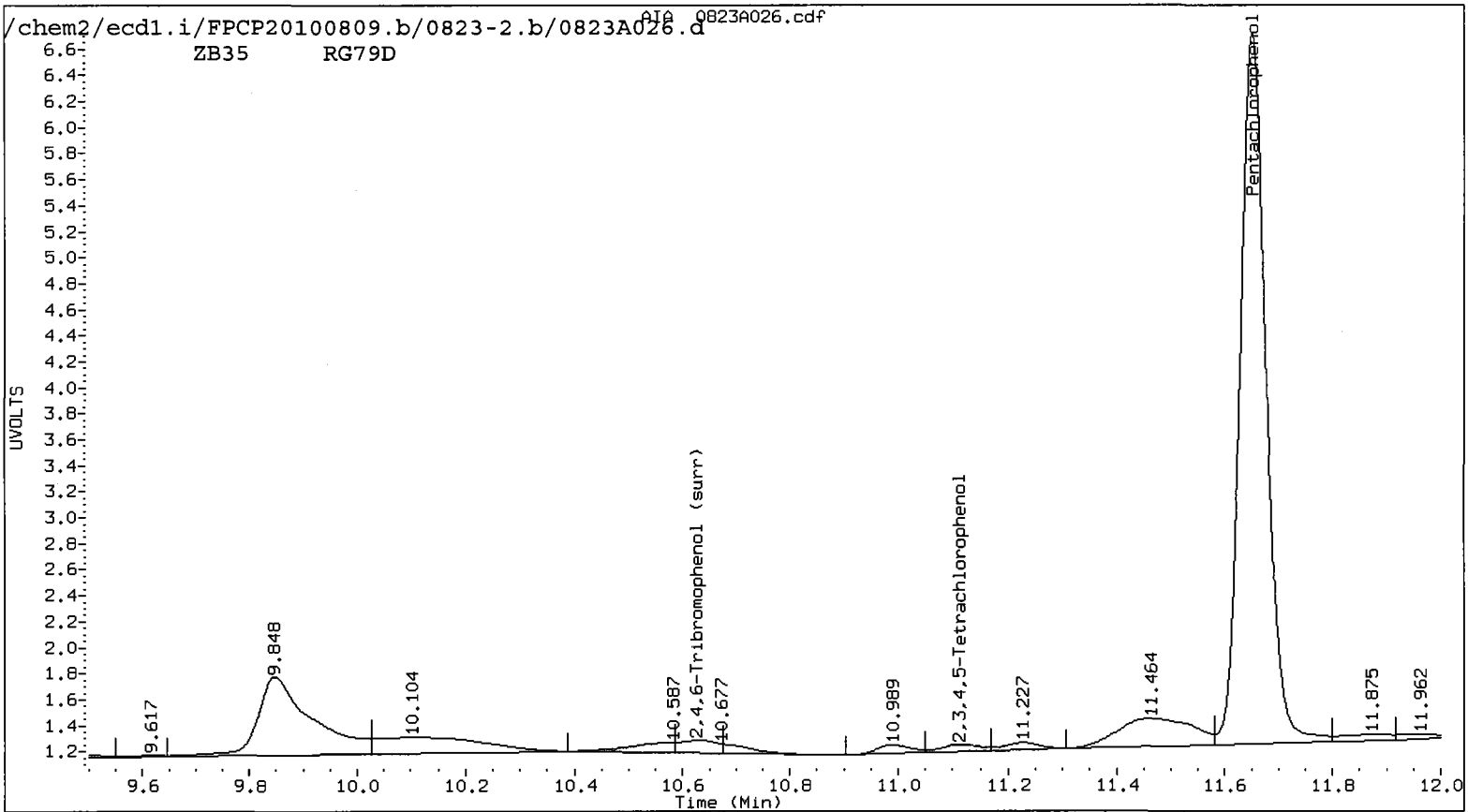
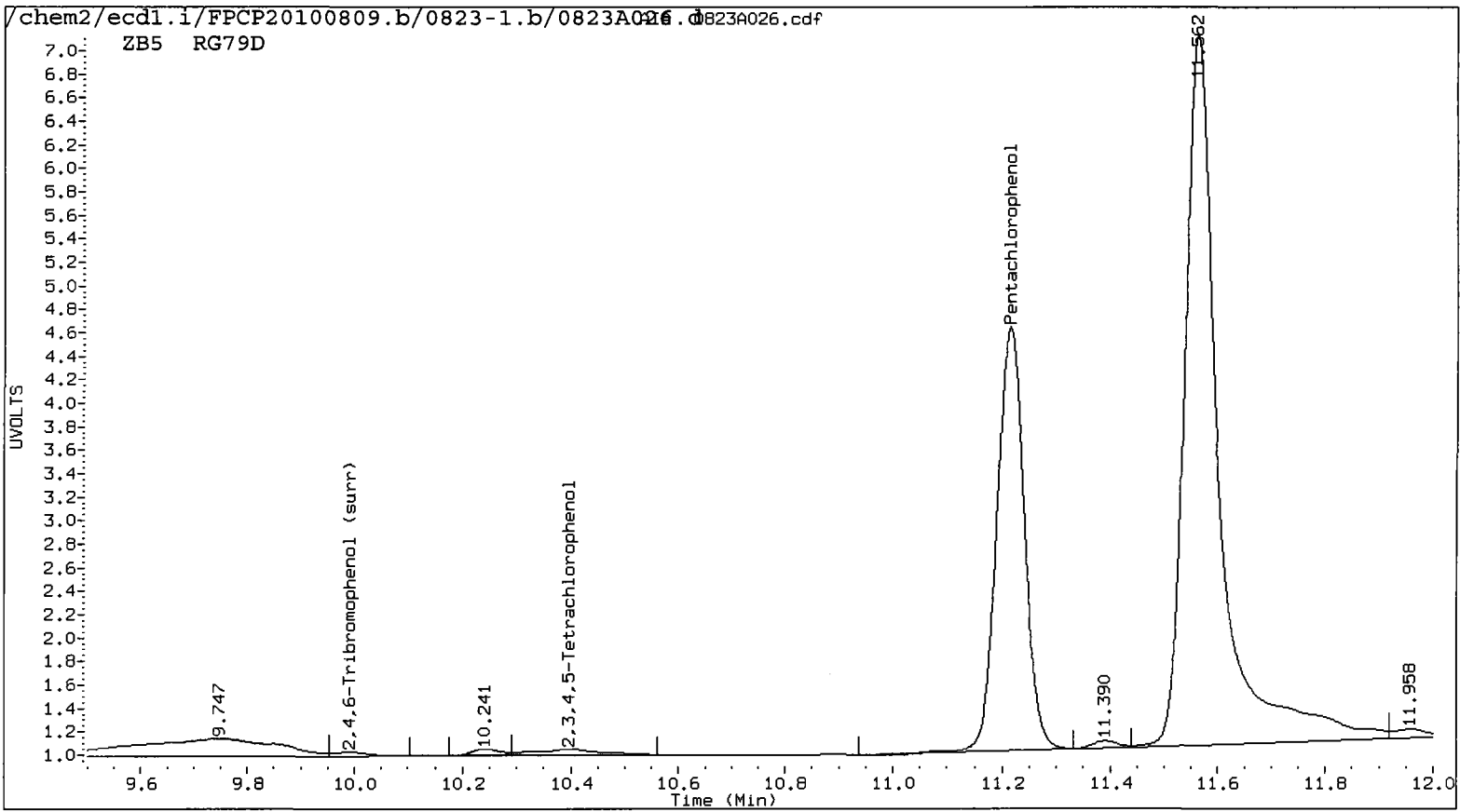
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A026.d    ARI ID: RG79D  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A026.d    Client ID: PSB11-2-4-073010-D  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m                      Injection Date: 23-AUG-2010 20:32  
 Compound Sublist: all    Report Date: 08/25/2010 15:56  
 Instrument: ecdl.i    Matrix: SOIL  
 Operator: ar    Dilution Factor: 10.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.214	-0.005	622821	11.652	-0.006	921213	<u>43.7192</u>	<u>40.1200</u>	8.6	Pentachlorophenol
7.206	-0.058	143157	7.379	0.046	46459	16.2650	3.7213	125.5*	2,4,6-Trichlorophenol
----	----	----	----	----	----	0.0000	0.0000	---	2,3,6-Trichlorophenol
8.206	-0.036	6227	8.685	0.070	13383	1.2338	1.8852	41.8*	2,4,5-Trichlorophenol
----	----	----	----	----	----	0.0000	0.0000	---	2,3,4-Trichlorophenol
9.032	0.025	91538	9.286	0.009	63999	6.4895	3.4567	61.0*	2,3,5,6-Tetrachlorophenol
10.396	-0.017	20415	11.113	-0.013	13851	1.6486	0.9493	53.8*	2,3,4,5-Tetrachlorophenol
----	----	----	7.216	0.050	11302	0.0000	15.2267	---	2,4-Dichlorophenol
9.990	-0.012	7710	10.630	-0.016	24187	<u>0.6</u>	<u>1.3</u>	<u>79.7*</u>	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	22.3	51.8



Data File: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A026.d

Date : 23-AUG-2010 20:32

Client ID: PSB11-2-4-073010-D

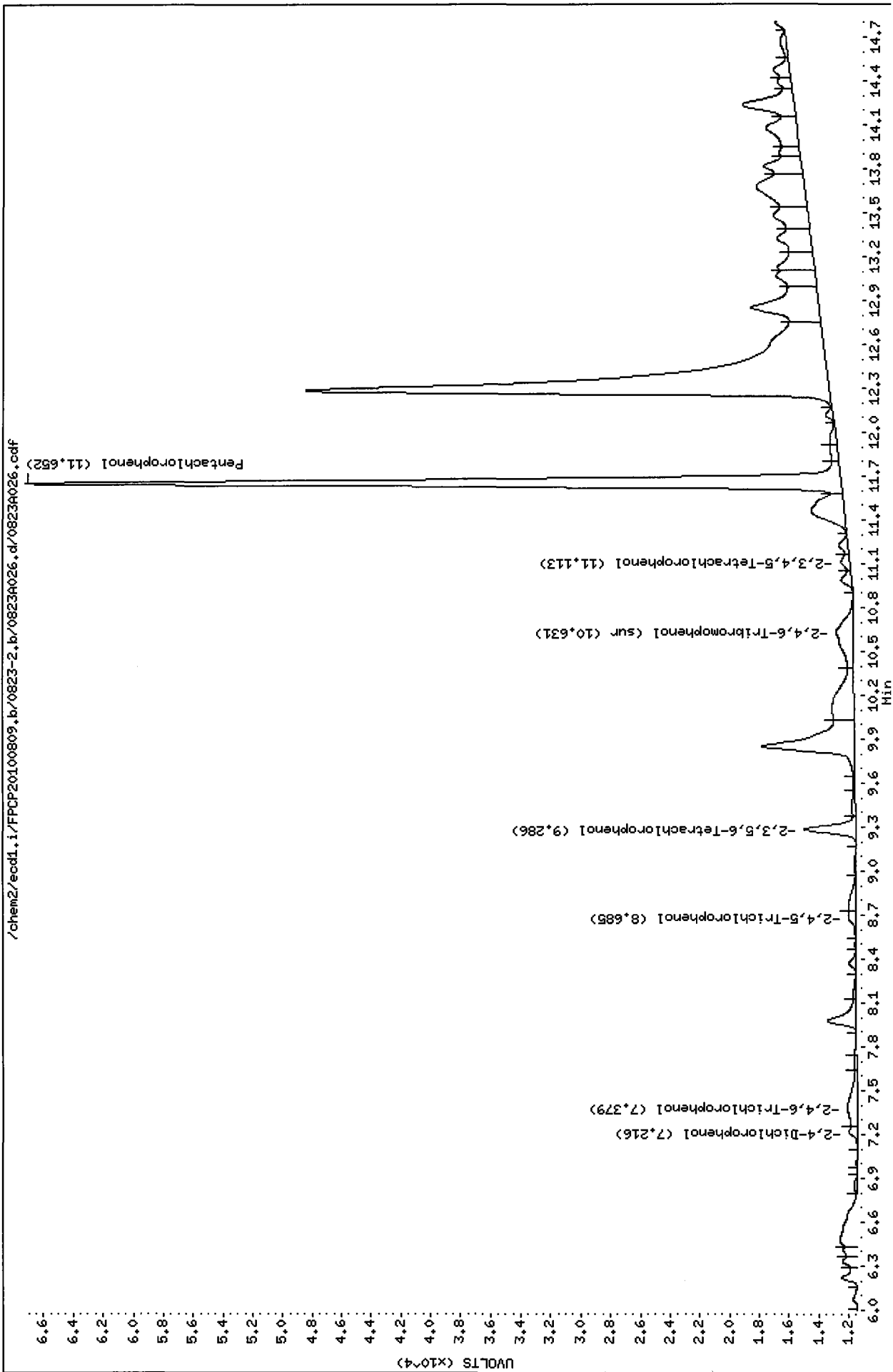
Sample Info: RG79D,,,10

Column phase: ZB35

Instrument: ecd1.i

Operator: ar

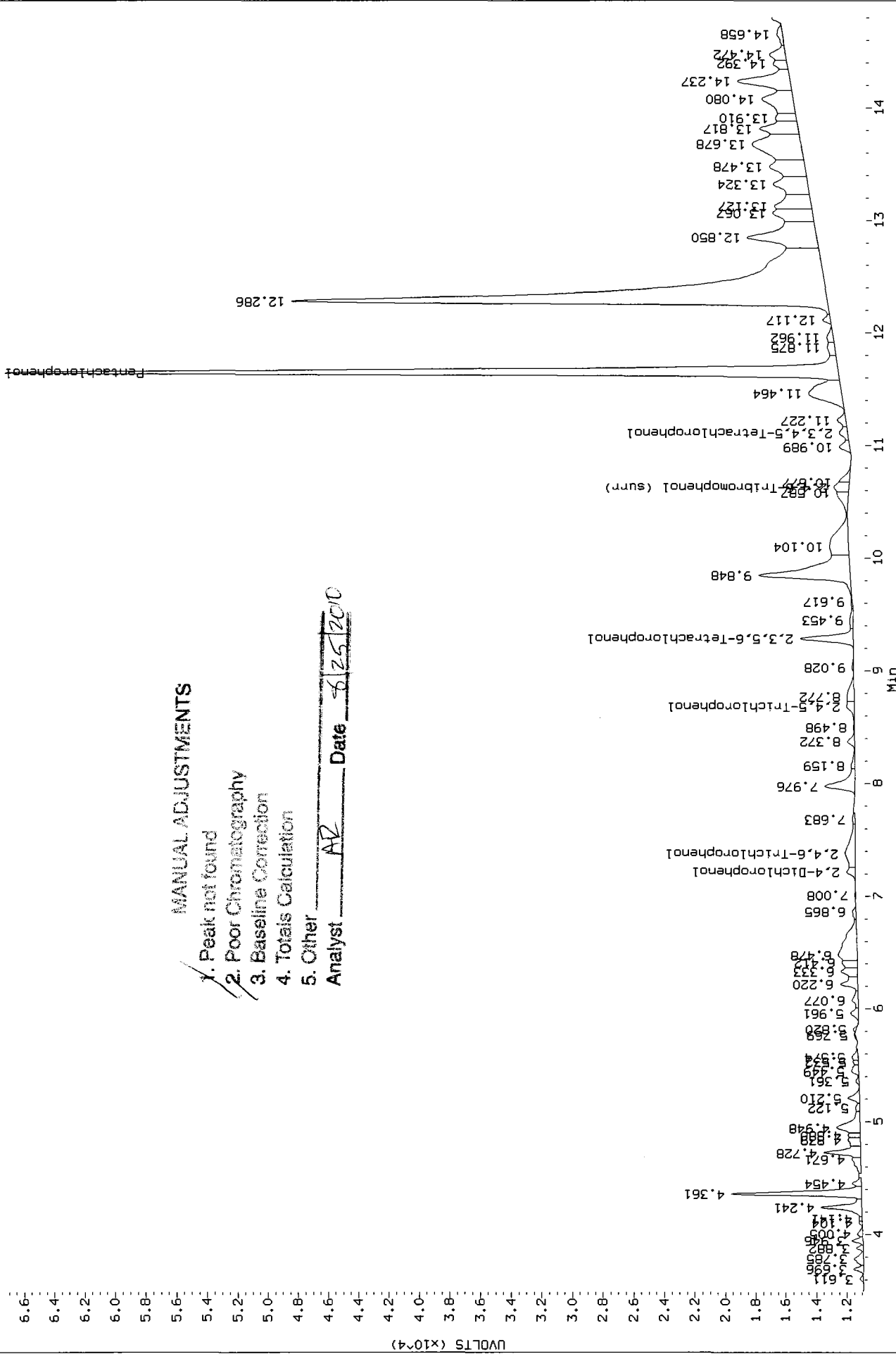
Column diameter: 0.53





Data File: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A026.d/0823A026.cdf  
 Injection Date: 23-AUG-2010 20:32  
 Instrument: ecld1.1  
 Client Sample ID: PSB11-2-4-073010-D

AIA 0823A026.cdf: 3.500 to 14.803 Min



MANUAL ADJUSTMENTS

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

Analyst AR Date 6/25/2010

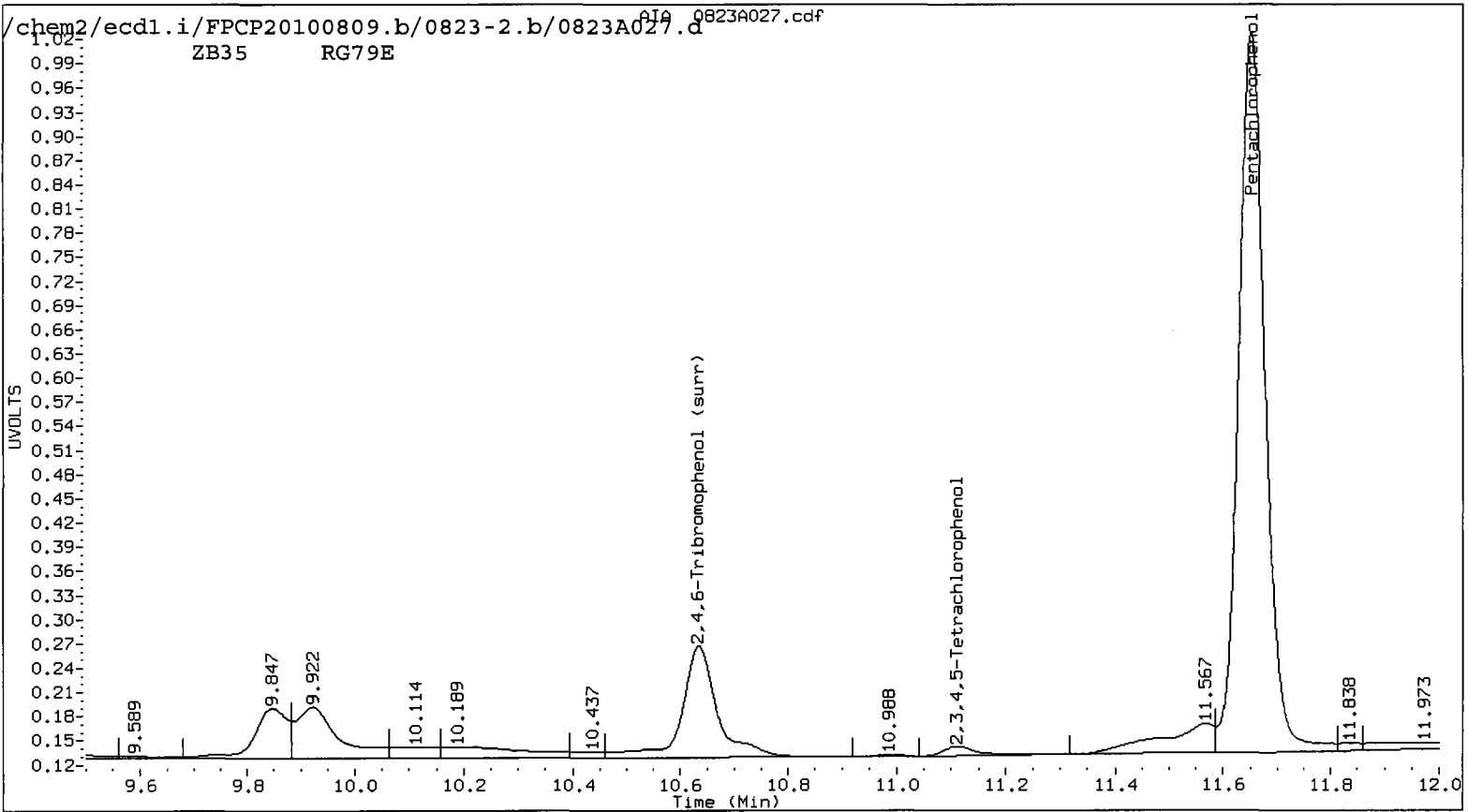
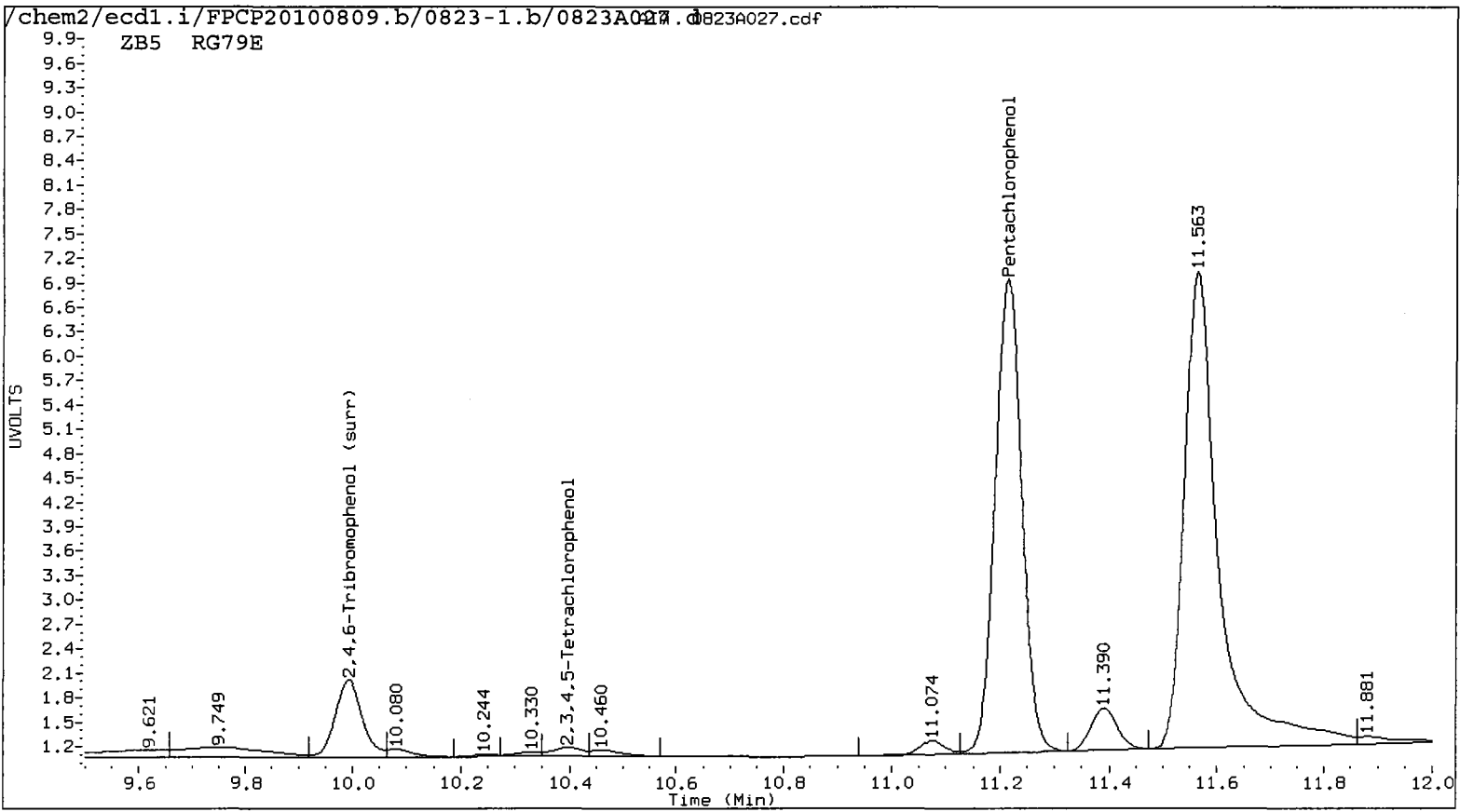
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A027.d ARI ID: RG79E  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A027.d Client ID: PSB11-4-6-073010  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 23-AUG-2010 20:52  
 Compound Sublist: all Report Date: 08/25/2010 15:00  
 Instrument: ecdl.i Matrix: SOIL  
 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		
11.214	-0.005	991657	11.652	-0.006	1541483	78.2966	67.1336	15.4	Pentachlorophenol
7.284	0.020	50837	7.373	0.040	37591	5.4442	3.0111	57.6*	2,4,6-Trichlorophenol
----			7.829	-0.035	4340	0.0000	0.3498	---	2,3,6-Trichlorophenol
8.202	-0.040	16437	8.677	0.062	32386	3.2565	4.6448	35.1	2,4,5-Trichlorophenol
----			9.418	0.038	34670	0.0000	3.6641	---	2,3,4-Trichlorophenol
9.027	0.020	184454	9.286	0.009	185874	13.0767	10.0392	26.3	2,3,5,6-Tetrachlorophenol
10.397	-0.016	21582	11.111	-0.015	28052	1.7446	1.9227	9.7	2,3,4,5-Tetrachlorophenol
6.857	-0.036	2072	7.212	0.046	78482	3.2296	115.6802	189.1*	2,4-Dichlorophenol
9.993	-0.009	163366	10.635	-0.011	315135	12.5	16.9	29.5	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	50.2	67.5



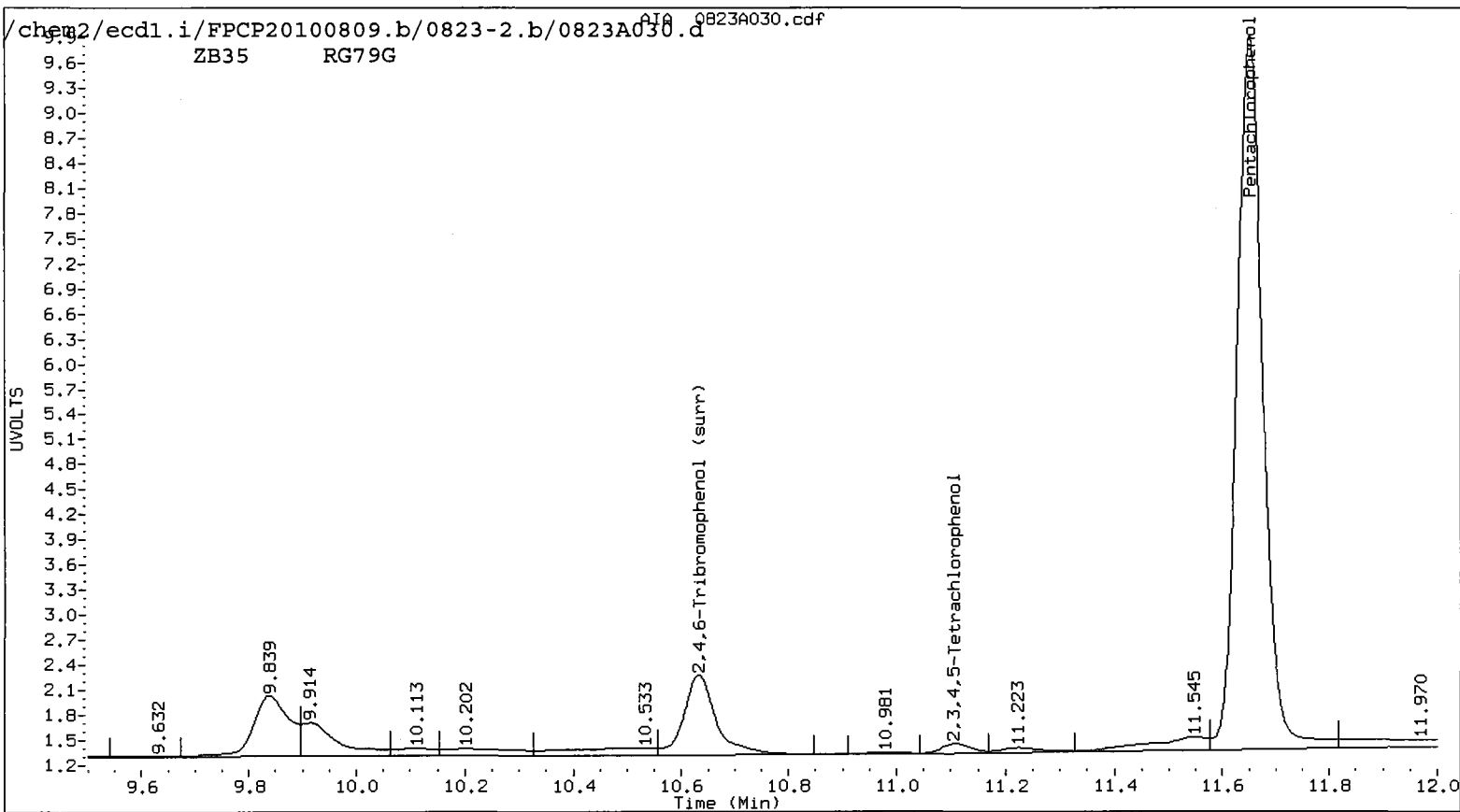
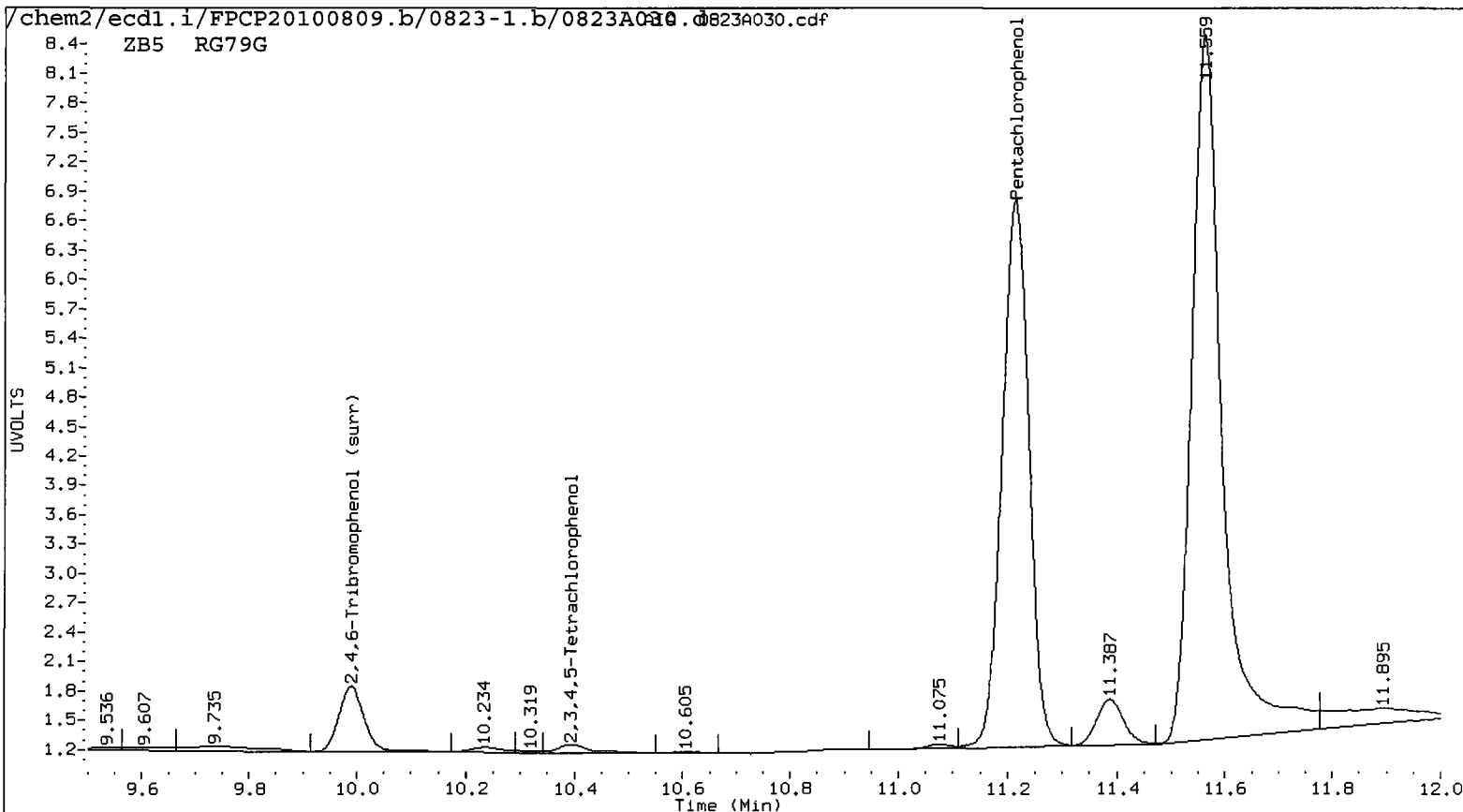
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A030.d ARI ID: RG79G  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A030.d Client ID: PSB11-11-13-073010  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 23-AUG-2010 21:52  
 Compound Sublist: all Report Date: 08/25/2010 15:00  
 Instrument: ecd1.i Matrix: SOIL  
 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	941924	11.650	-0.008	1460868	73.2574	63.6227	14.1	Pentachlorophenol
7.286	0.022	27283	7.371	0.038	25737	2.8763	2.0615	33.0	2,4,6-Trichlorophenol
----			7.828	-0.036	2473	0.0000	0.1993	---	2,3,6-Trichlorophenol
8.201	-0.041	8743	8.671	0.056	19928	1.7321	2.8248	48.0*	2,4,5-Trichlorophenol
----			9.400	0.020	2001	0.0000	0.2069	---	2,3,4-Trichlorophenol
9.028	0.021	321946	9.282	0.005	83837	22.8239	4.5281	133.8*	2,3,5,6-Tetrachlorophenol
10.393	-0.020	20842	11.108	-0.018	20847	1.6837	1.4288	16.4	2,3,4,5-Tetrachlorophenol
6.874	-0.019	1895	7.211	0.045	32994	2.9519	45.7991	175.8*	2,4-Dichlorophenol
9.990	-0.012	112221	10.632	-0.014	199463	8.5	10.7	23.4	2,4,6-Tribromophenol (surr)

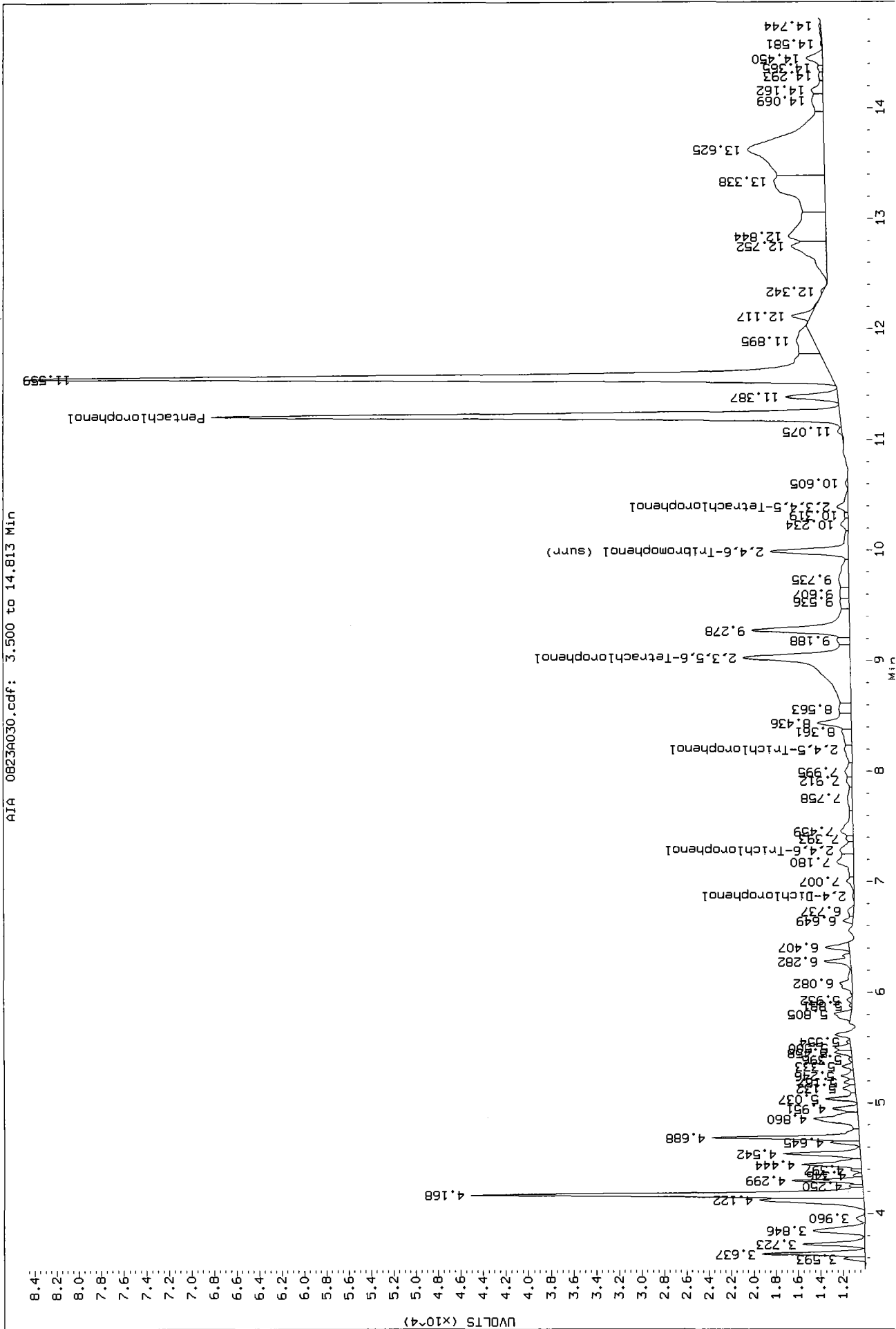
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	33.8	42.7



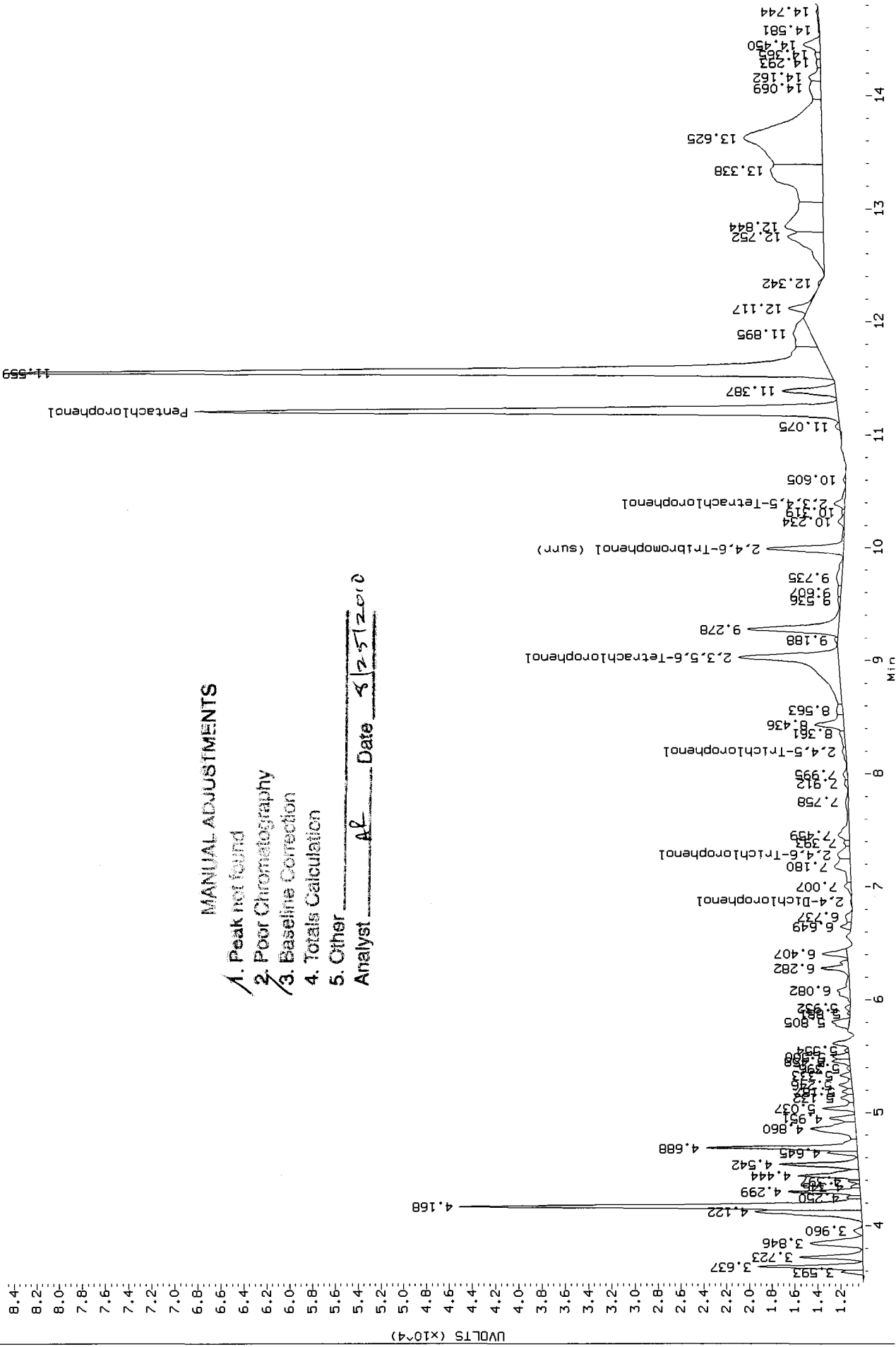
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Injection Date: 23-AUG-2010 21:52  
Instrument: ecdd1.1  
Client Sample ID: PSB11-11-13-073010

AR 8/25/2010



Data File: /chem2/ecdl1/FPCP20100809\_b/0823-1.b/0823A030.d/0823A030.cdf  
 Injection Date: 23-AUG-2010 21:52  
 Instrument: ecdl1  
 Client Sample ID: PSB11-11-13-073010

AIA 0823A030.cdf: 3.500 to 14.813 Min



MANUAL ADJUSTMENTS

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

Analyst AL Date 8/25/2010

Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

AR 8/25/2010

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A033.d ARI ID: PCPCCAL  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A033.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 23-AUG-2010 22:51  
 Compound Sublist: all Report Date: 08/24/2010 14:24  
 Instrument: ecdl.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

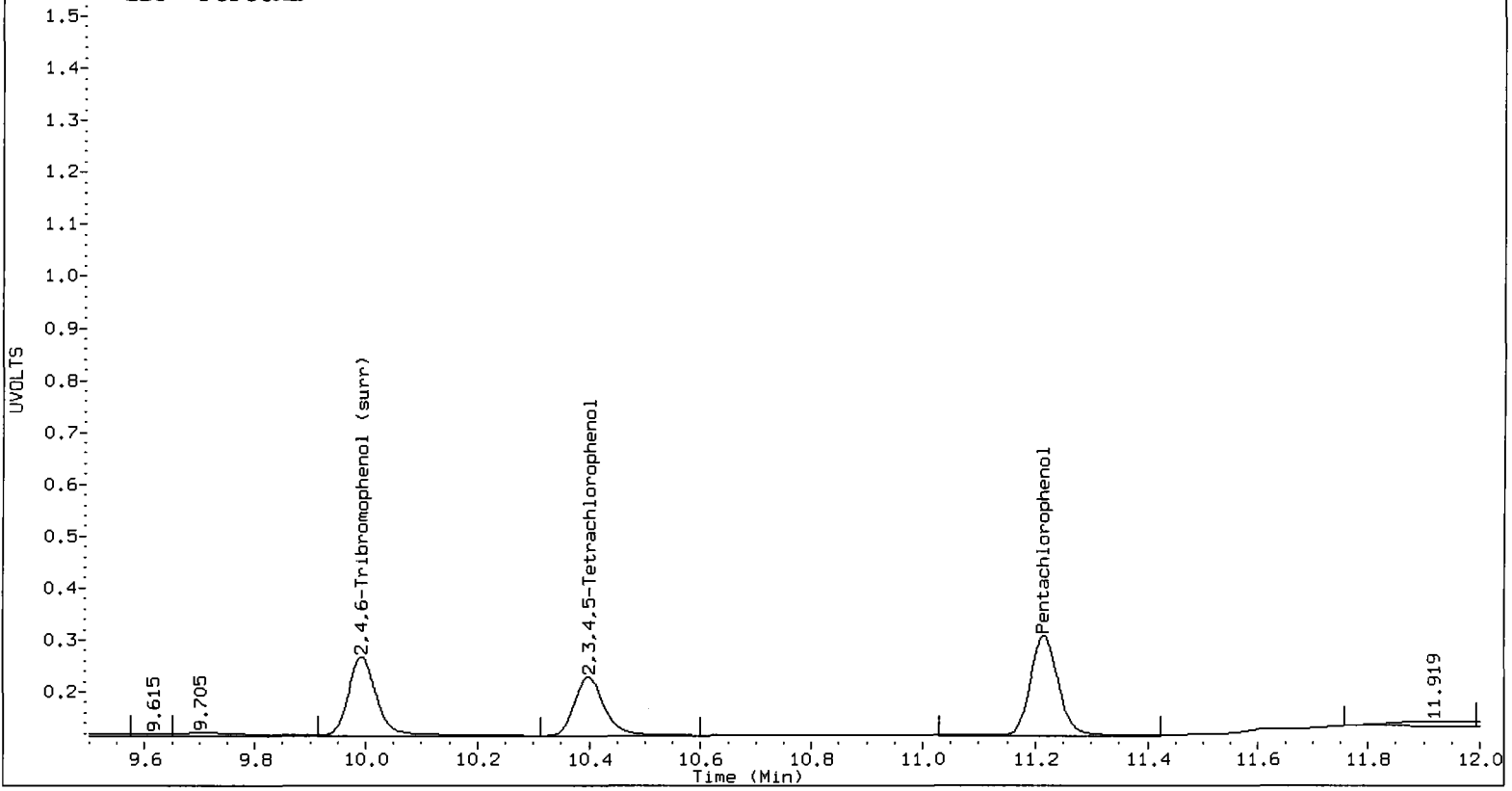
ZB-5 Col		ZB35 Col		ZB-5	ZB35	RPD	Compound
RT	Shift Response	RT	Shift Response	on col	on col		
11.217	-0.002/347168	11.654	-0.004/501901	22.0968	21.8585	1.1	Pentachlorophenol
7.265	0.001 196006	7.333	0.000 291567	23.0015	23.3542	1.5	2,4,6-Trichlorophenol
7.618	-0.001 200196	7.861	-0.003 271670	22.4985	21.8938	2.7	2,3,6-Trichlorophenol
8.221	-0.021 111987	8.593	-0.022 145328	22.1867	23.0462	3.8	2,4,5-Trichlorophenol
8.770	-0.022 176953	9.358	-0.022 193246	25.8662	22.5909	13.5	2,3,4-Trichlorophenol
8.999	-0.008 349162	9.265	-0.012 428348	24.7534	23.1354	6.8	2,3,5,6-Tetrachlorophenol
10.398	-0.015 208738	11.111	-0.015 308284	19.5474	21.1288	7.8	2,3,4,5-Tetrachlorophenol
6.890	-0.003/105644	7.160	-0.006/43840	209.0946	229.7617	9.4	2,4-Dichlorophenol
9.993	-0.009 274797	10.635	-0.011 398764	22.0	21.4	2.9	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

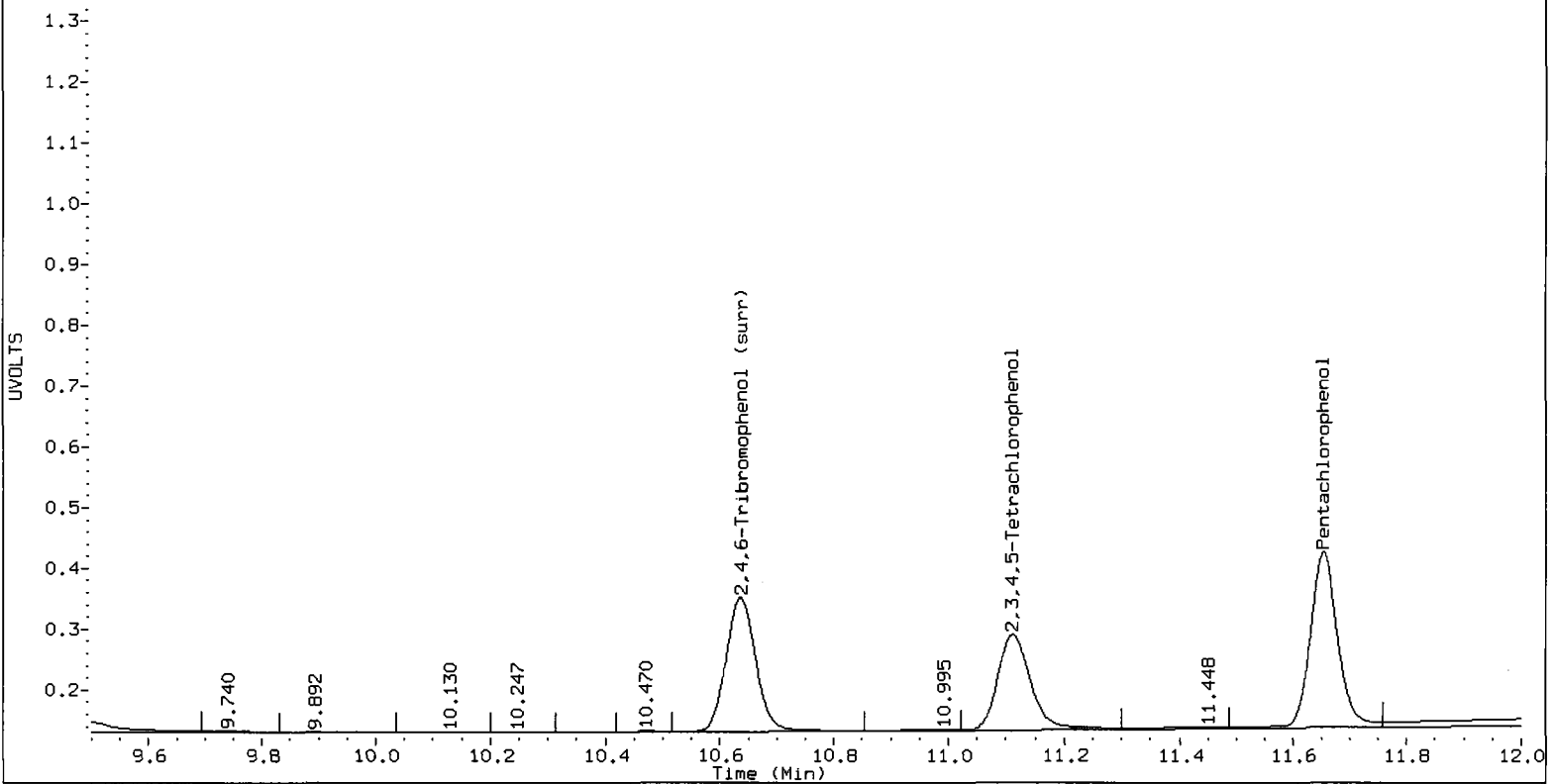
COMPOUND	Col1	Col2
Pentachlorophenol	88.4	87.4
2,4,6-Trichlorophenol	92.0	93.4
2,3,6-Trichlorophenol	90.0	87.6
2,4,5-Trichlorophenol	88.7	92.2
2,3,4-Trichlorophenol	103.5	90.4
2,3,5,6-Tetrachlorophenol	99.0	92.5
2,3,4,5-Tetrachlorophenol	78.2	84.5
2,4-Dichlorophenol	83.6	91.9
2,4,6-TBP (surr)	87.9	85.4



ZB5 PCPCAL

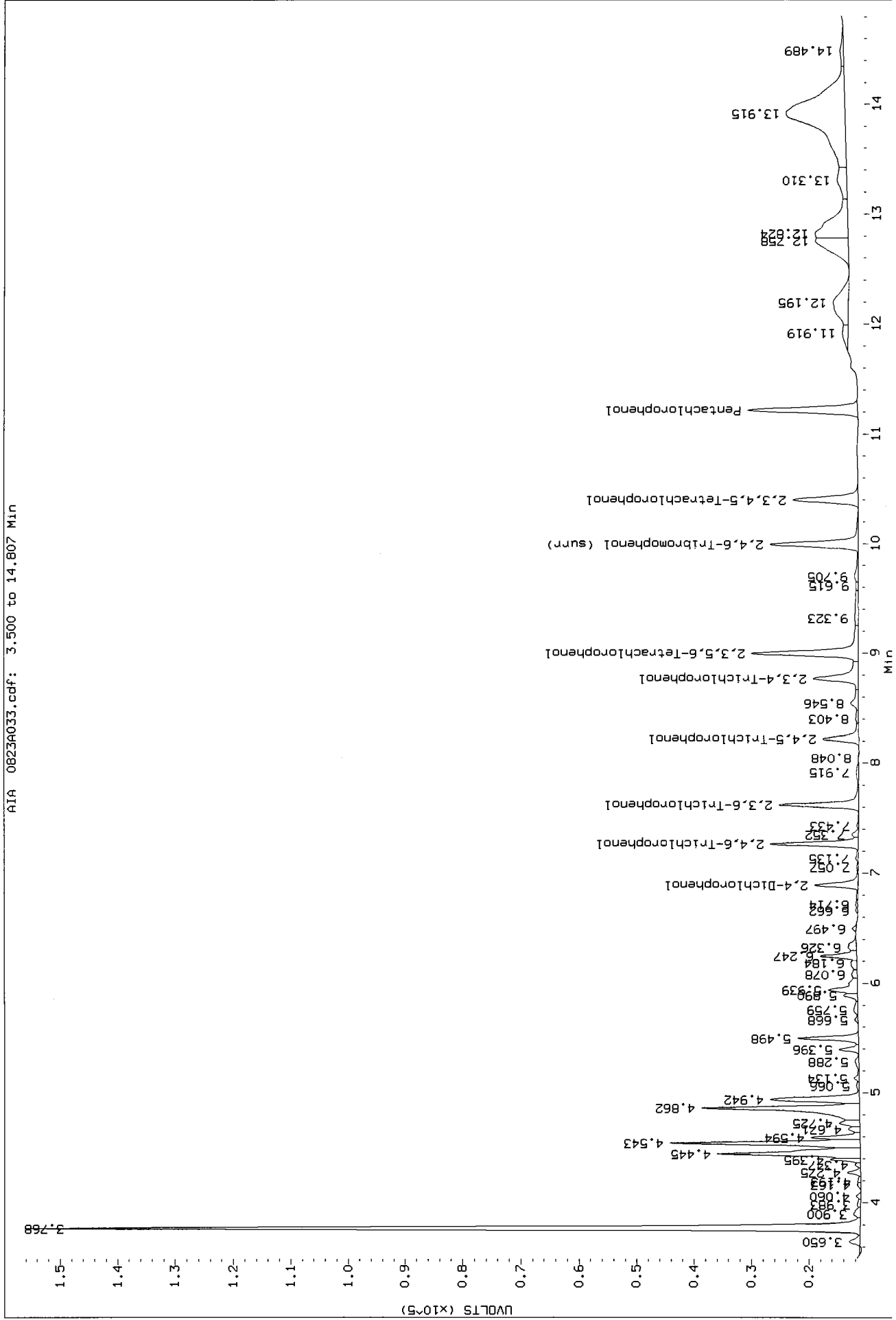


ZB35 PCPCAL



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Injection Date: 23-AUG-2010 22:51  
Instrument: ecd1.i  
Client Sample ID:

AR 8/25/2010



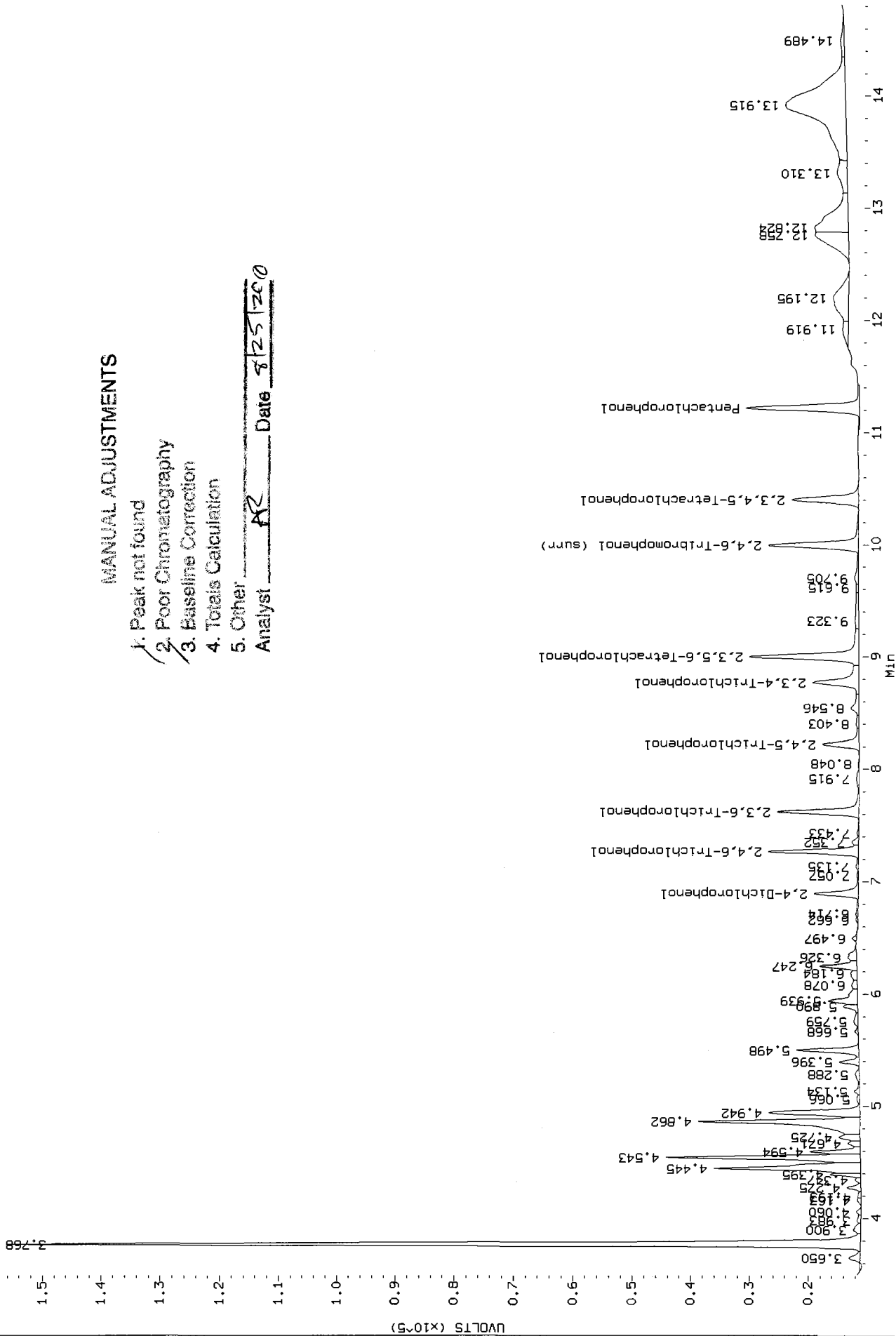
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 Injection Date: 23-AUG-2010 22:51  
 Instrument: ecd1.1  
 Client Sample ID:

AIA 0823A033.cdf: 3.500 to 14.807 Min

MANUAL ADJUSTMENTS

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

Analyst AR Date 8/25/2010



Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

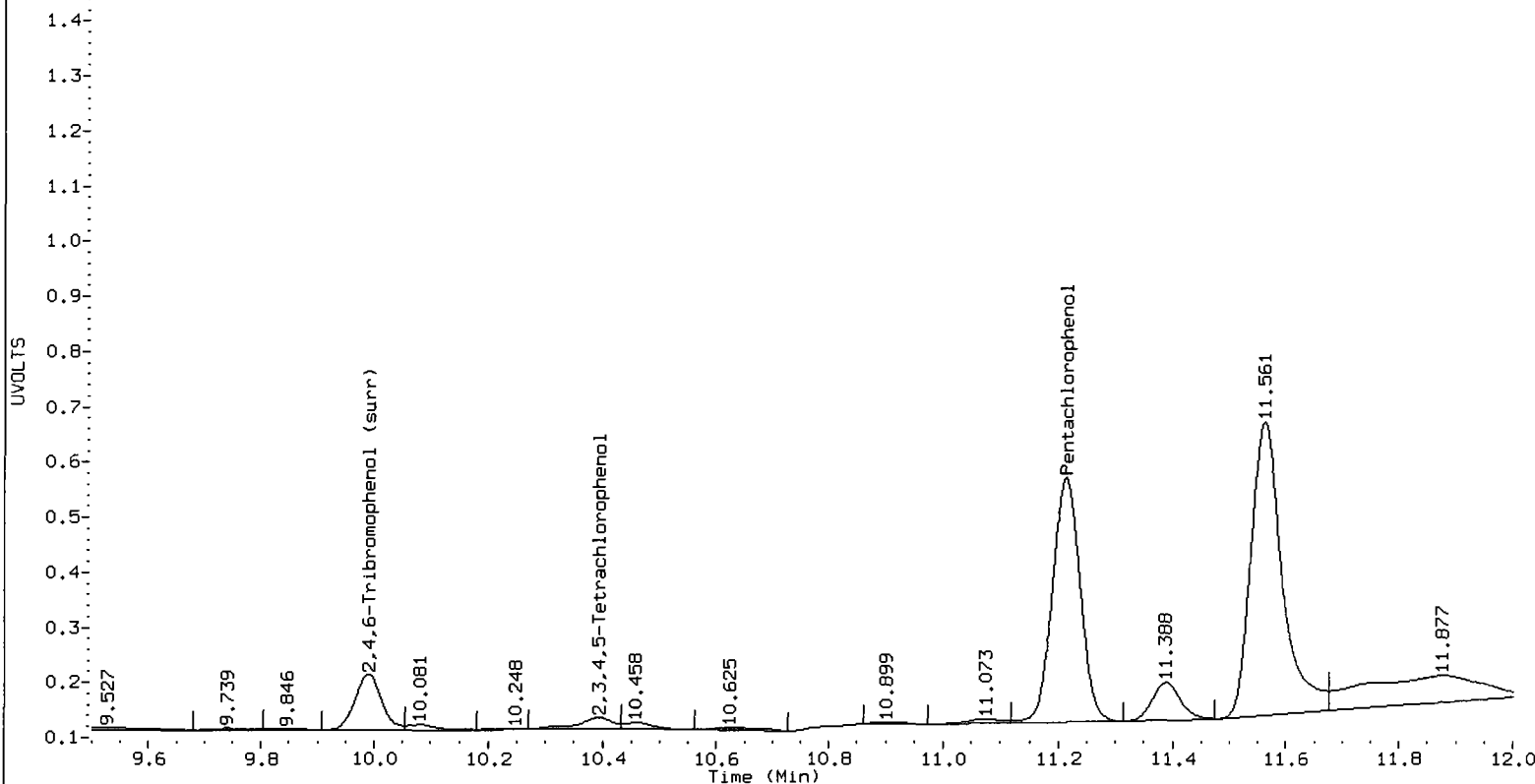
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 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 23-AUG-2010 23:11  
 Compound Sublist: all Report Date: 08/25/2010 15:00  
 Instrument: ecd1.i Matrix: SOIL  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.213	-0.006	744146	11.652	-0.006	1159209	54.3799	50.4851	7.4	Pentachlorophenol
7.286	0.022	12379	7.327	-0.006	20185	1.2920	1.6168	22.3	2,4,6-Trichlorophenol
7.621	0.002	7442	7.855	-0.009	16960	0.7599	1.3668	57.1*	2,3,6-Trichlorophenol
8.209	-0.033	8384	8.587	-0.028	8237	1.6610	1.1547	36.0	2,4,5-Trichlorophenol
---	---	---	9.416	0.036	88148	0.0000	9.6492	---	2,3,4-Trichlorophenol
9.025	0.018	138676	9.283	0.006	137167	9.8313	7.4085	28.1	2,3,5,6-Tetrachlorophenol
10.392	-0.021	47337	11.107	-0.019	40539	3.9099	2.7784	33.8	2,3,4,5-Tetrachlorophenol
6.886	-0.007	12473	7.210	0.044	118972	19.9653	184.4538	160.9*	2,4-Dichlorophenol
9.989	-0.013	163682	10.634	-0.012	270781	12.6	14.5	14.3	2,4,6-Tribromophenol (surr)

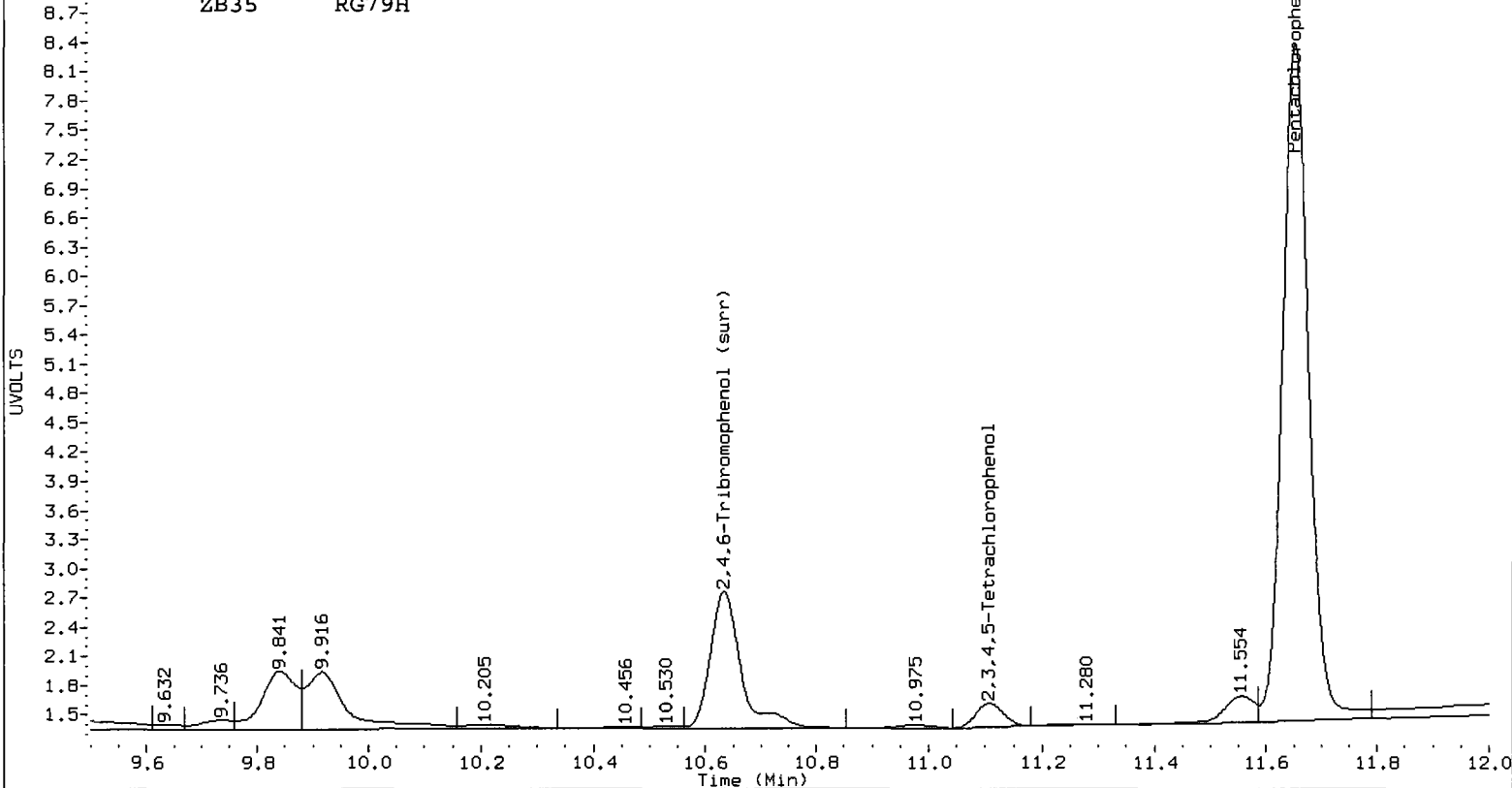
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	50.3	58.0

ZB5 RG79H



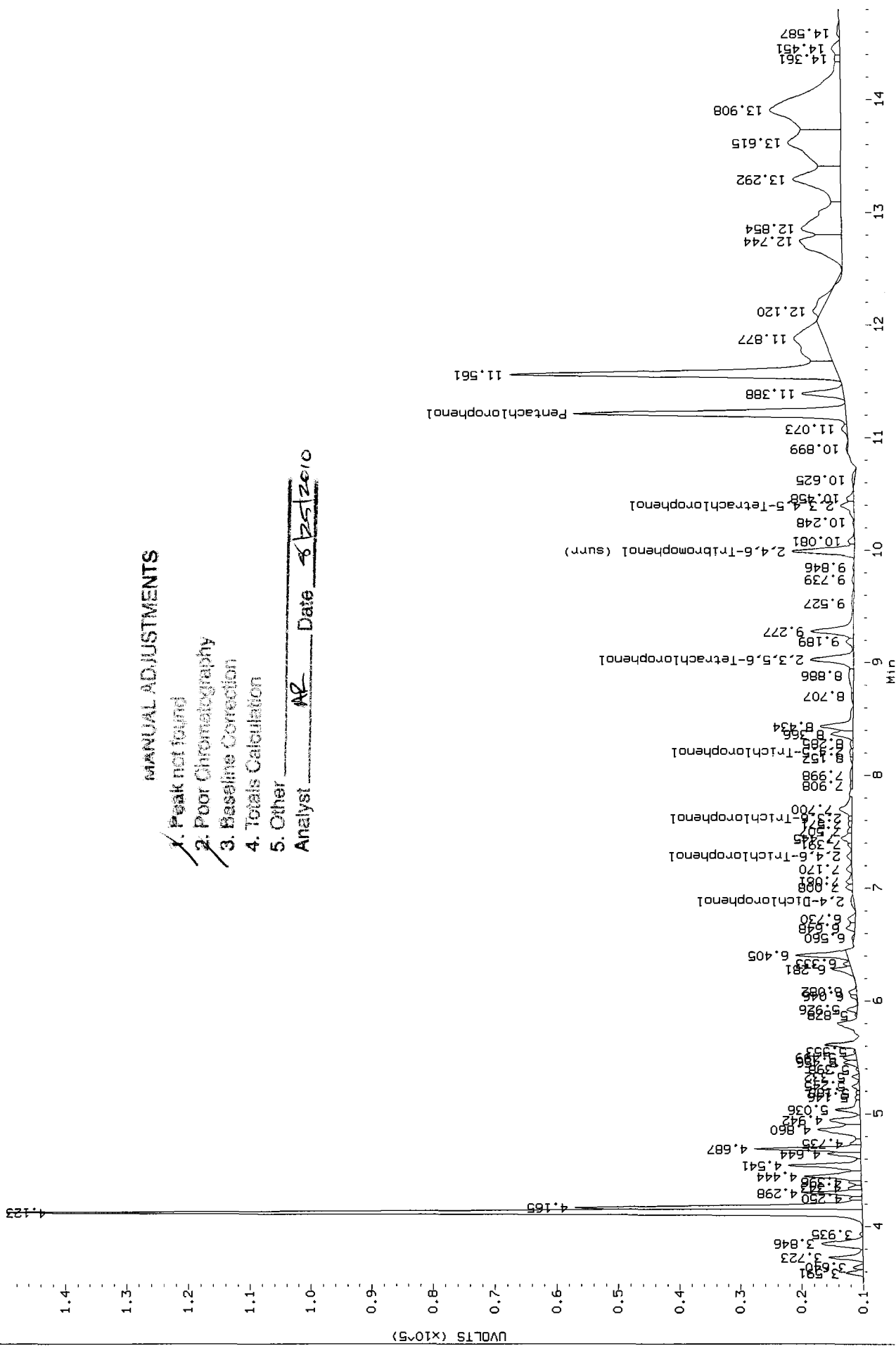
ZB35 RG79H





Data File: /chem2/ecd1.i/FPCP20100809.b/0823-1.b/0823A034.d/0823A034.cdf  
 Injection Date: 23-AUG-2010 23:11  
 Instrument: ecd1.1  
 Client Sample ID: PSB11-14-16-073010

AIA 0823A034.cdf: 3.500 to 14.800 Min



Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

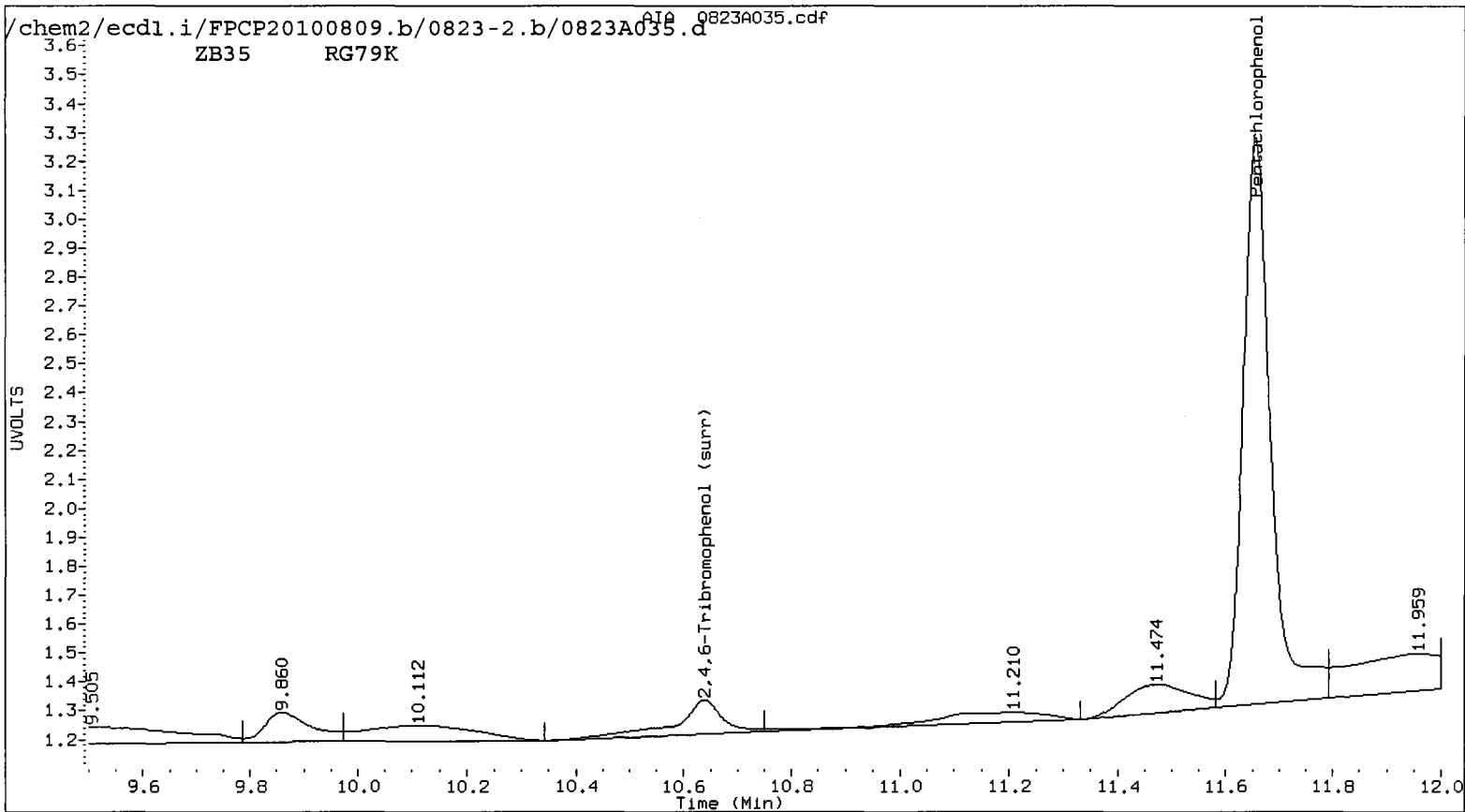
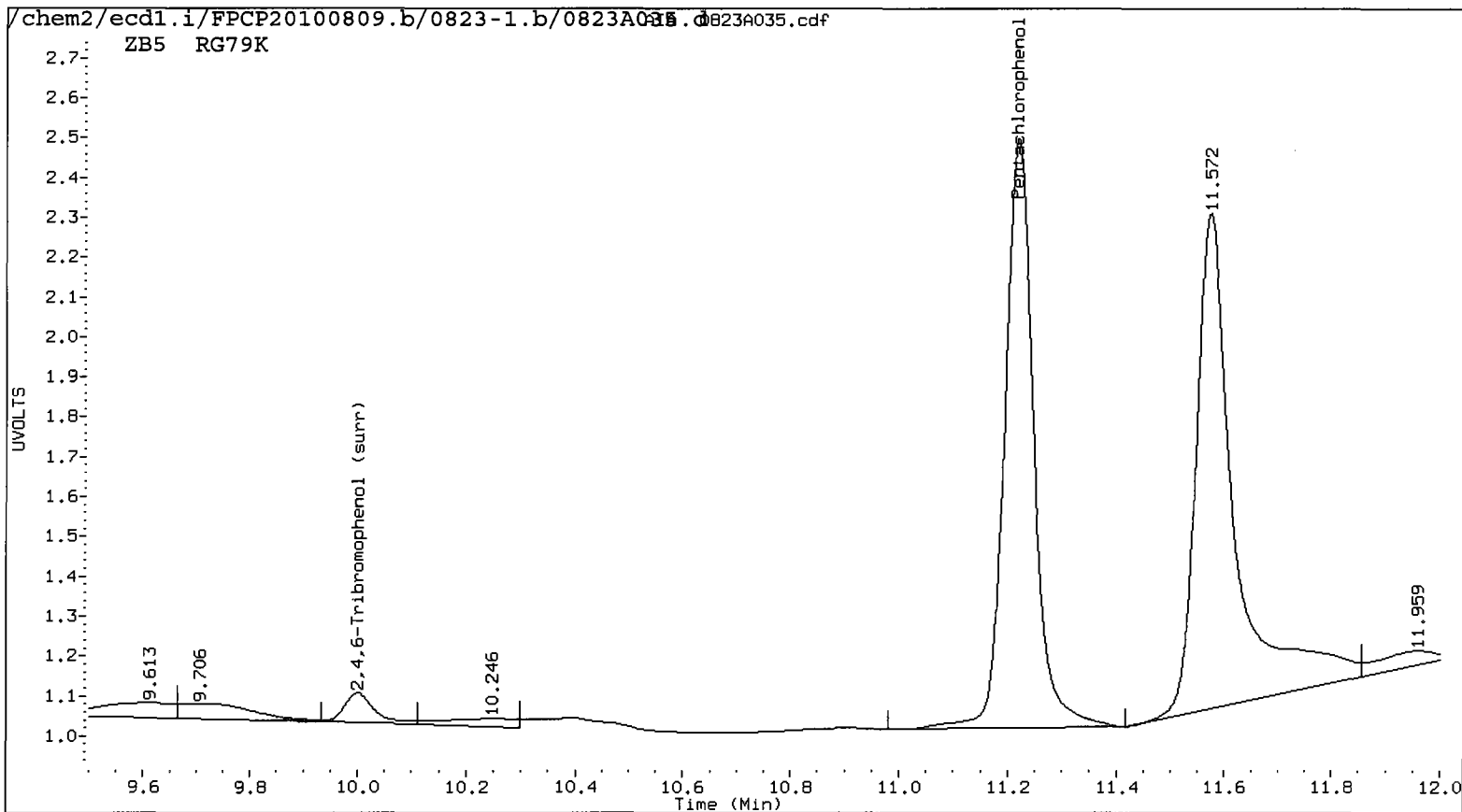
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 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 23-AUG-2010 23:31  
 Compound Sublist: all Report Date: 08/25/2010 15:00  
 Instrument: ecdl.i Matrix: SOIL  
 Operator: ar Dilution Factor: 10.0007

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.218	-0.001	272282	11.655	-0.003	356946	<u>16.8461</u>	<u>15.5455</u>	8.0	Pentachlorophenol
7.223	-0.041	42092	7.363	0.030	19137	4.4817	1.5329	98.1*	2,4,6-Trichlorophenol
----	----	----	----	----	----	0.0000	0.0000	---	2,3,6-Trichlorophenol
----	----	----	----	----	----	0.0000	0.0000	---	2,4,5-Trichlorophenol
9.030	0.023	32765	9.291	0.014	42476	0.0000	0.0000	---	2,3,4-Trichlorophenol
----	----	----	----	----	----	2.3228	2.2942	1.2	2,3,5,6-Tetrachlorophenol
----	----	----	----	----	----	0.0000	0.0000	---	2,3,4,5-Tetrachlorophenol
----	----	----	----	----	----	0.0000	0.0000	---	2,4-Dichlorophenol
10.000	-0.002	14639	10.639	-0.007	36414	<u>1.1</u>	<u>2.0</u>	<u>59.1*</u>	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	42.4	78.0

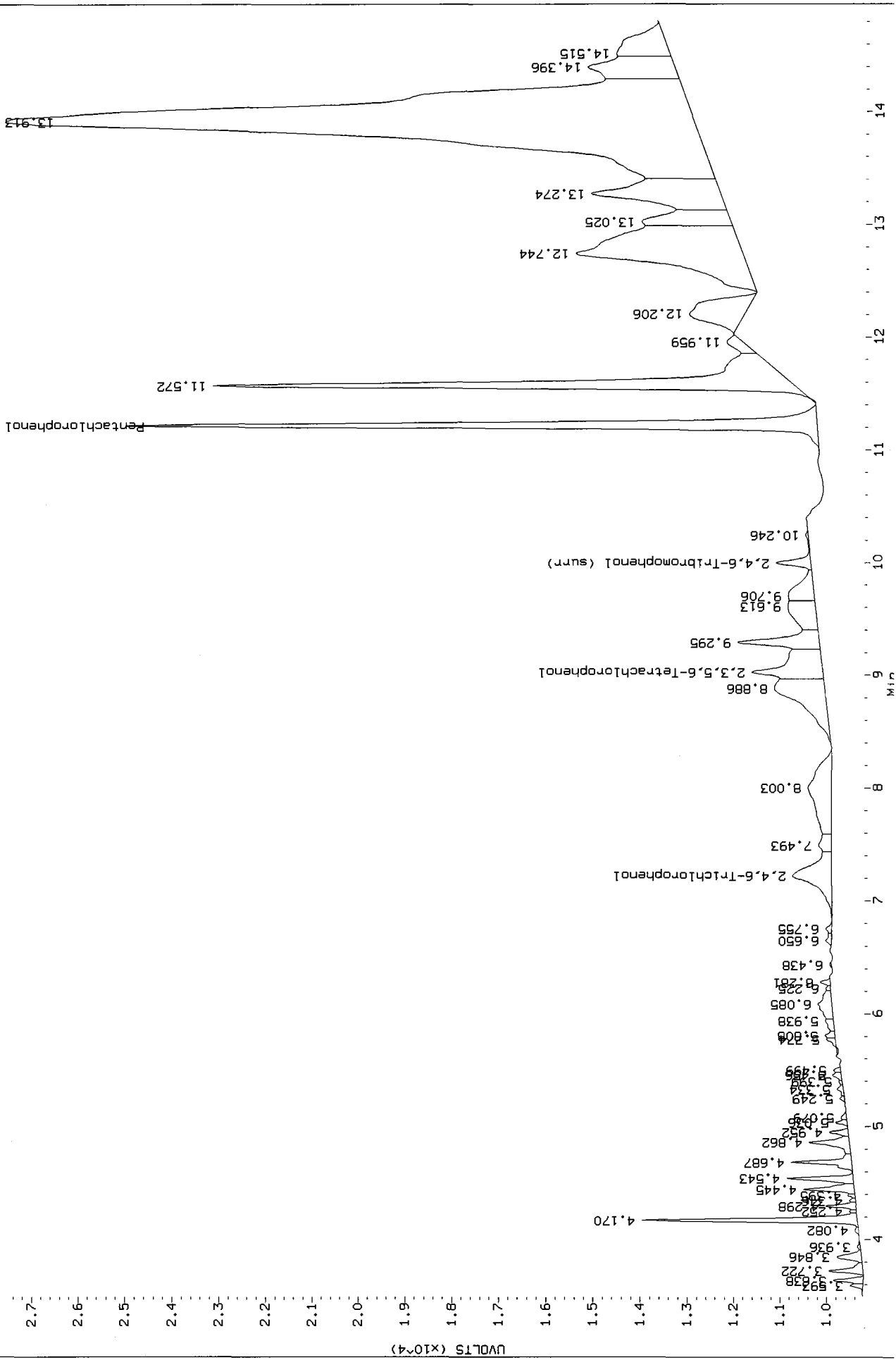




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Injection Date: 23-AUG-2010 23:31  
Instrument: eccl.i  
Client Sample ID: PSB15-0-0.5-073010

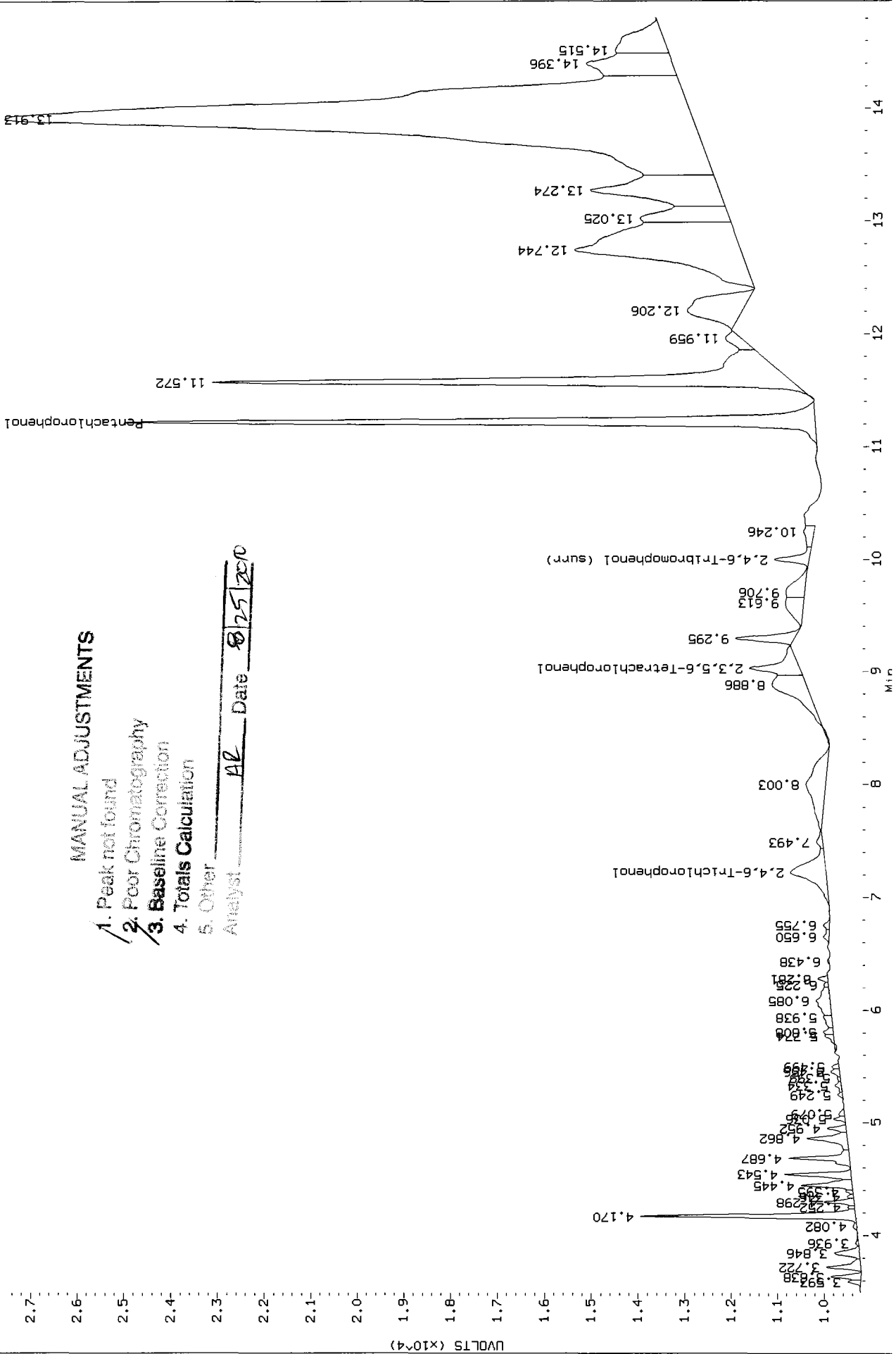
AR 8/25/2010

AIA 0823A035.cdf: 3.500 to 14.807 Min



Data File: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A035.d/0823A035.cdf  
 Injection Date: 23-AUG-2010 23:31  
 Instrument: ecld.i  
 Client Sample ID: PSB15-0-0.5-073010

AIA 0823A035.cdf: 3.500 to 14.807 Min



**MANUAL ADJUSTMENTS**

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

Analyst AR Date 8/25/2010

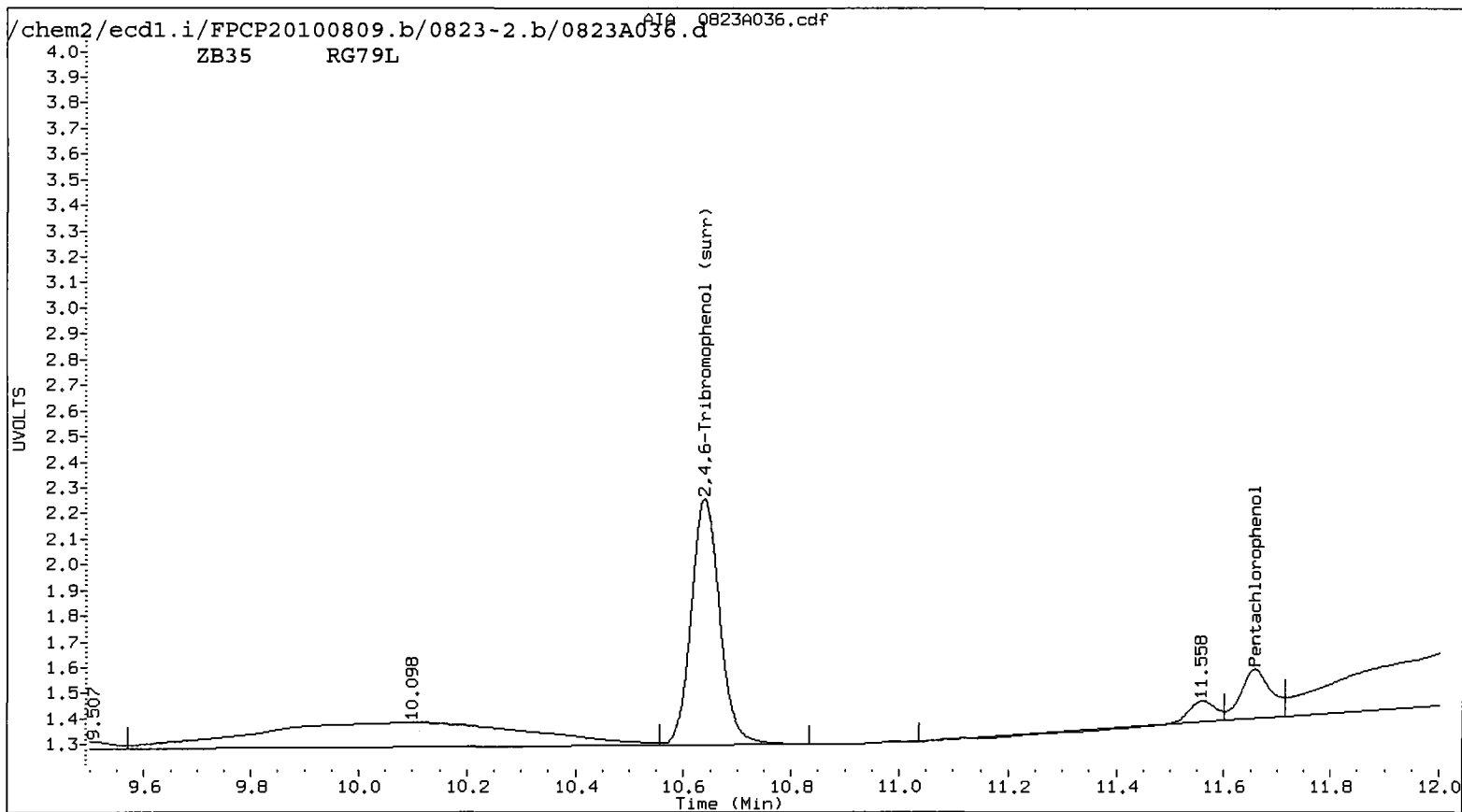
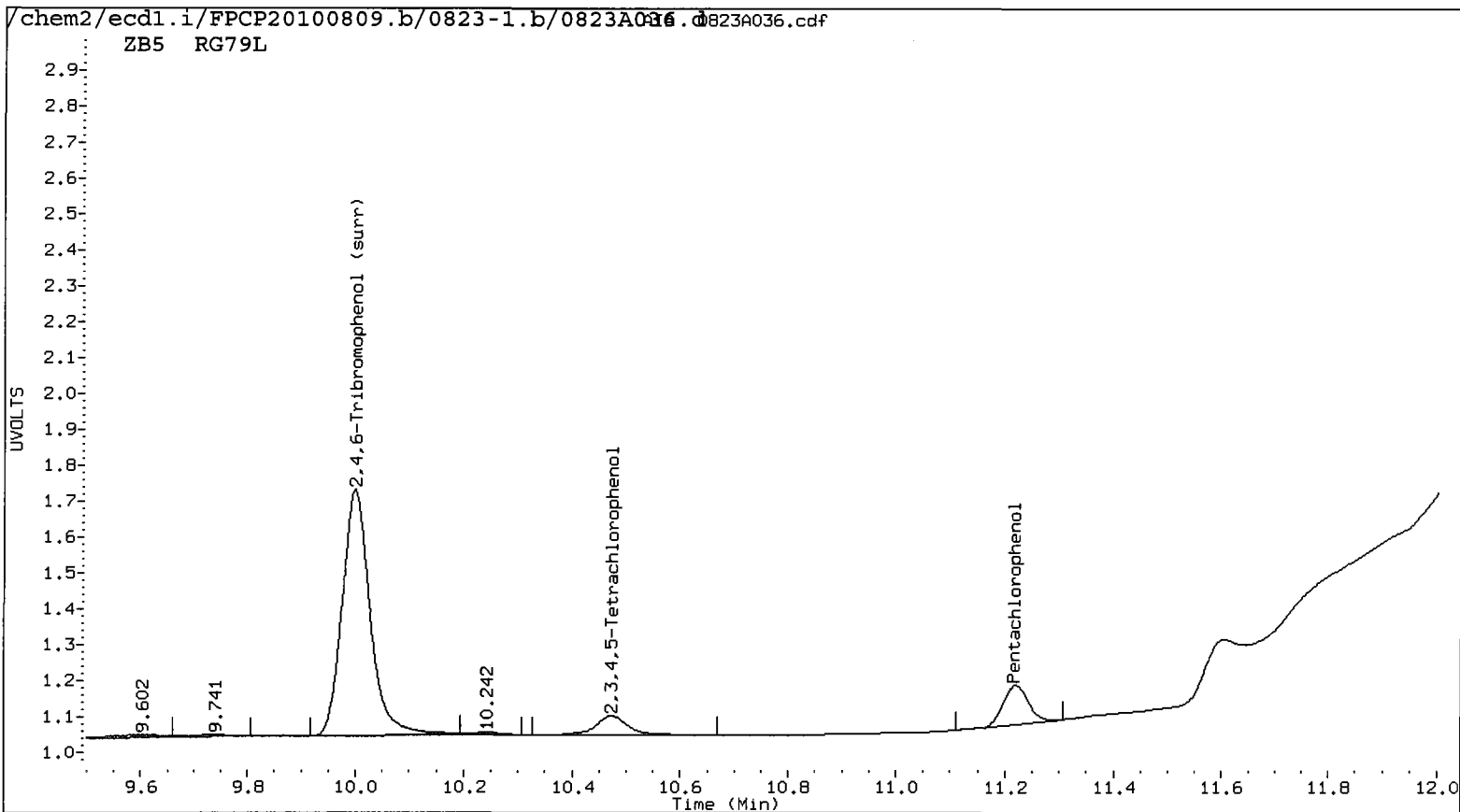
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A036.d    ARI ID: RG79L  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A036.d    Client ID: PSB15-1.5-2-073010  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m    Injection Date: 23-AUG-2010 23:51  
 Compound Sublist: all    Report Date: 08/25/2010 15:00  
 Instrument: ecd1.i    Matrix: SOIL  
 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		
11.220	0.001	17371	11.657	-0.001	38094	0.9696	1.6591 <i>RL</i>	52.5*	Pentachlorophenol
7.277	0.013	7640	7.370	0.037	10418	0.7949	0.8345	4.9	2,4,6-Trichlorophenol
----	----	----	----	----	----	0.0000	0.0000	---	2,3,6-Trichlorophenol
8.262	0.020	3145	----	----	----	0.6232	0.0000	---	2,4,5-Trichlorophenol
----	----	----	----	----	----	0.0000	0.0000	---	2,3,4-Trichlorophenol
9.030	0.023	4857	9.289	0.012	2259	0.3443	0.1220	95.3*	2,3,5,6-Tetrachlorophenol
10.473	0.060	11302	----	----	----	0.9056	0.0000	---	2,3,4,5-Tetrachlorophenol
----	----	----	7.158	-0.008	5315	0.0000	7.1006	---	2,4-Dichlorophenol
9.999	-0.003	124552	10.639	-0.007	176437	9.4	9.5	0.3	2,4,6-Tribromophenol (surr)

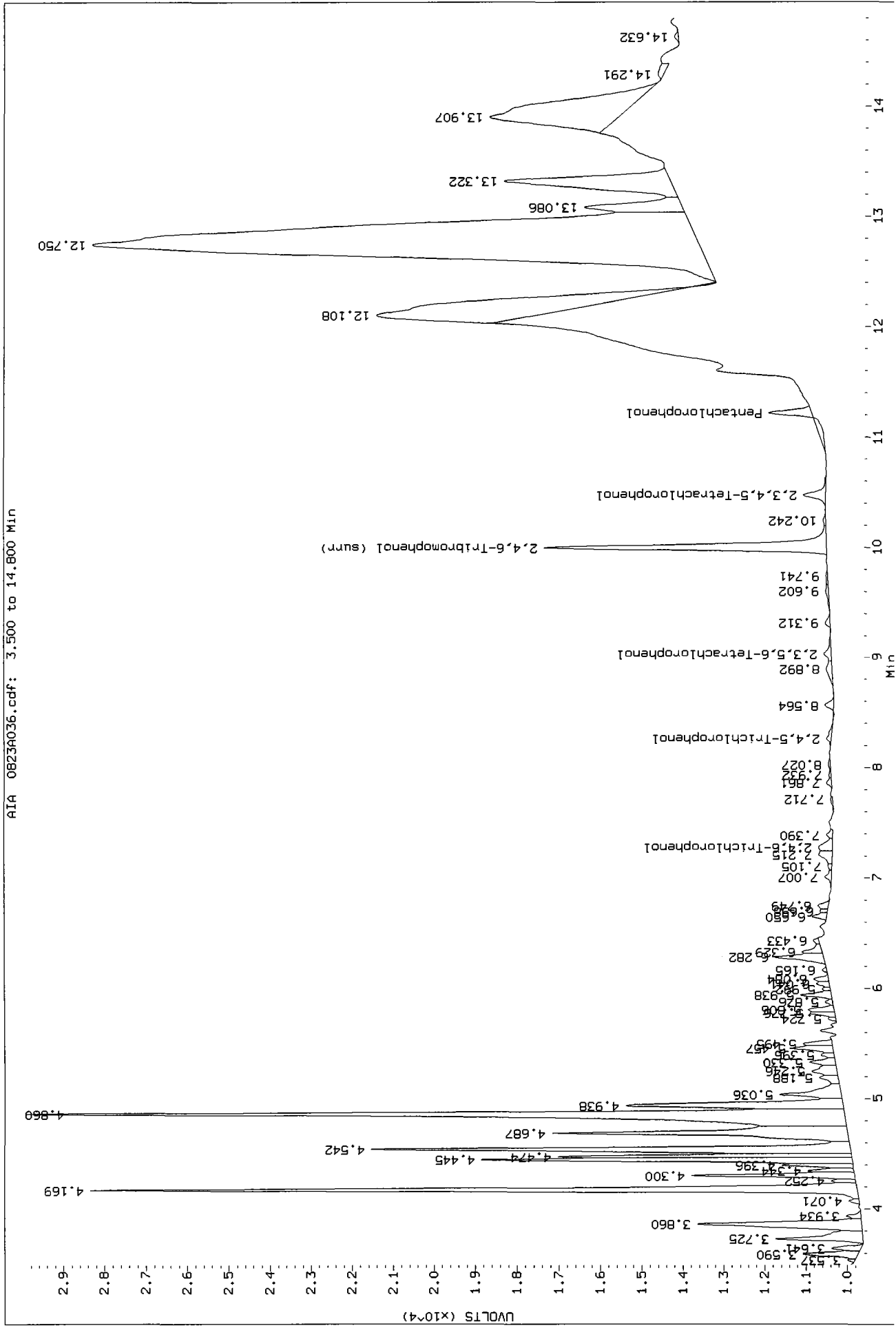
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	37.7	37.8



Data File: /chem2/ecd1.i/FPCP20100809.b/0823-1.b/0823A036.d/0823A036.cdf  
Injection Date: 23-AUG-2010 23:51  
Instrument: ecd1.1  
Client Sample ID: PSB15-1.5-2-073010

AR 8/25/2010



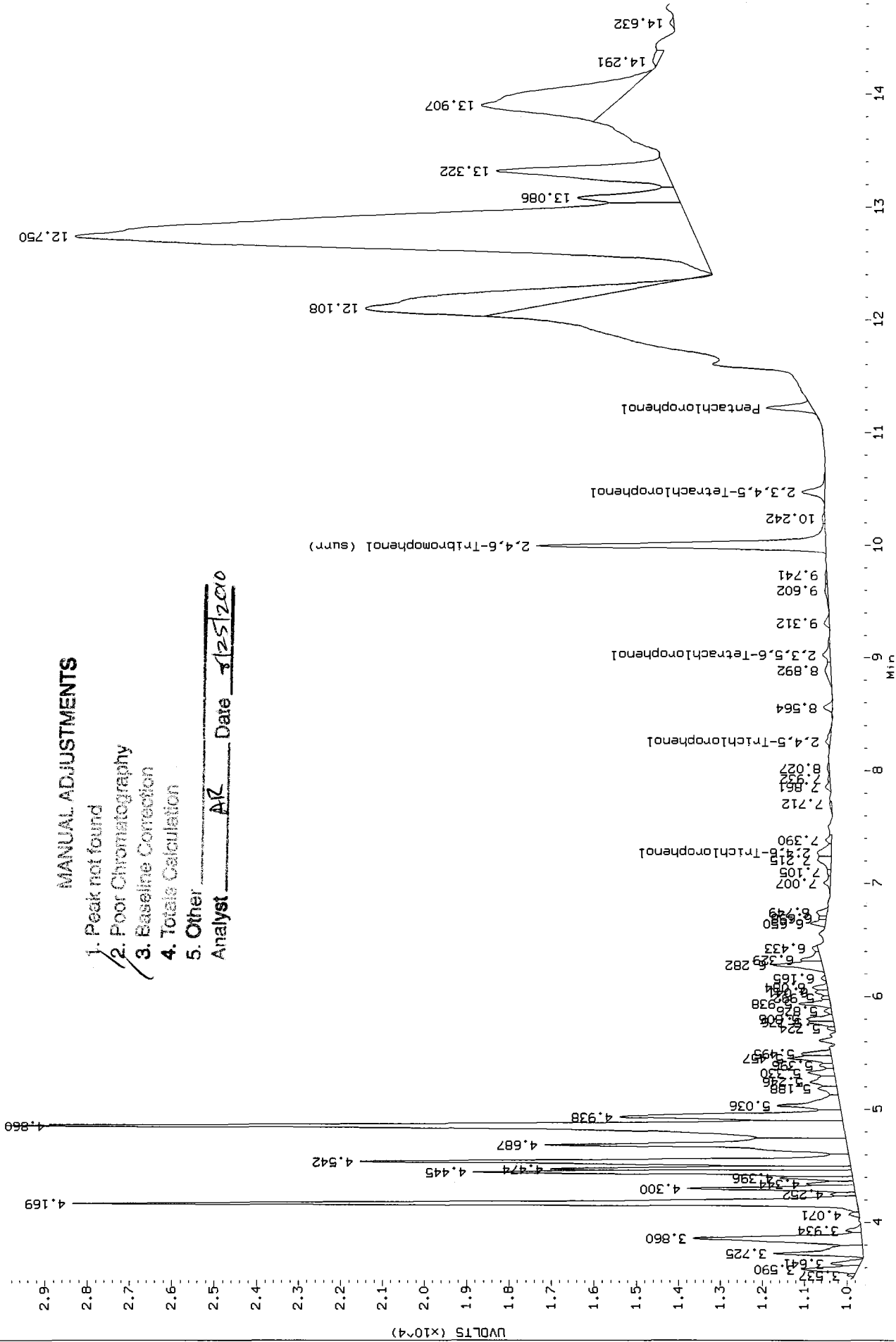
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 Injection Date: 23-AUG-2010 23:51  
 Instrument: ecd1.1  
 Client Sample ID: PSB15-1.5-2-073010

AIA 0823A036.cdf: 3.500 to 14.800 Min

**MANUAL ADJUSTMENTS**

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

Analyst AK Date 8/25/2010



Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

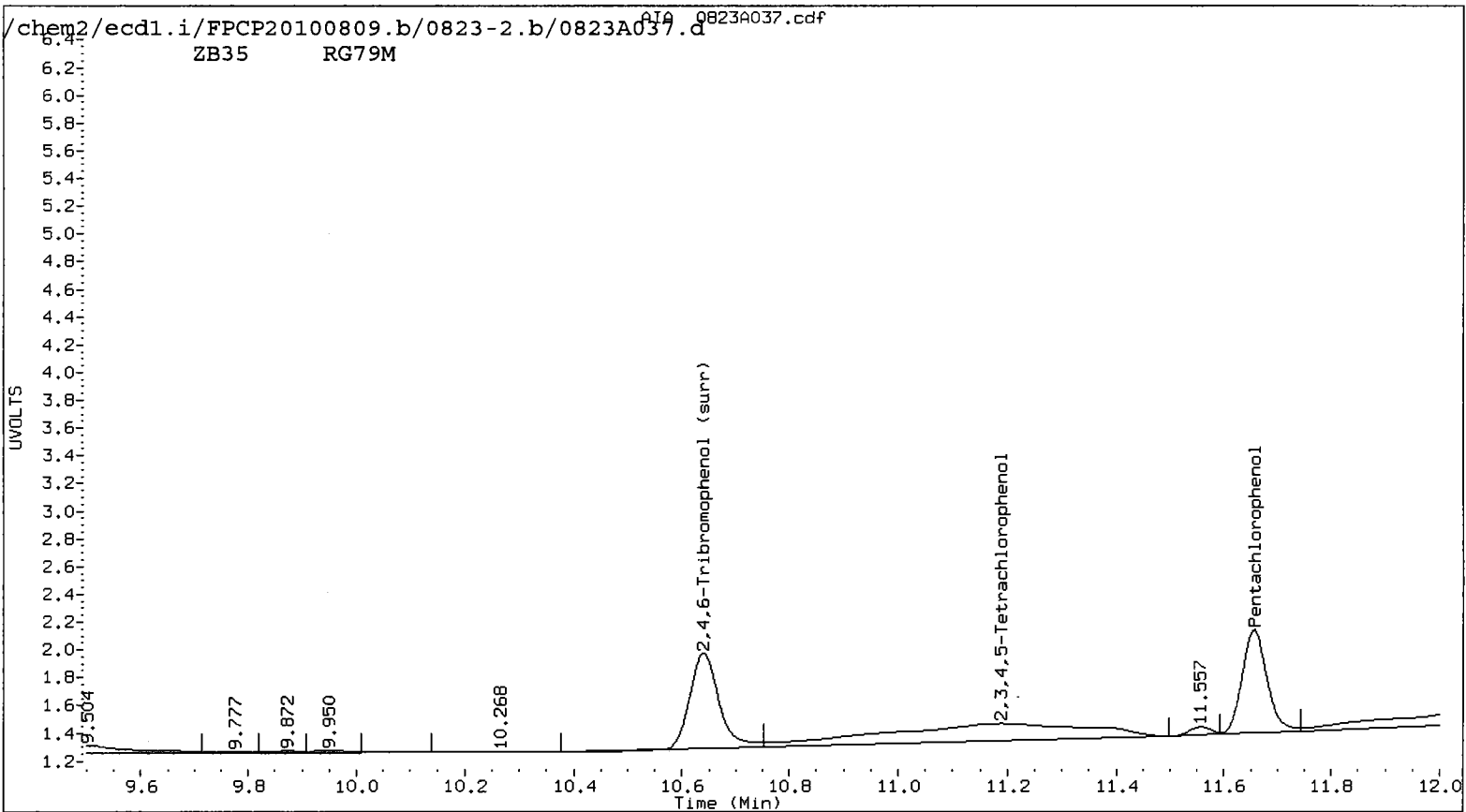
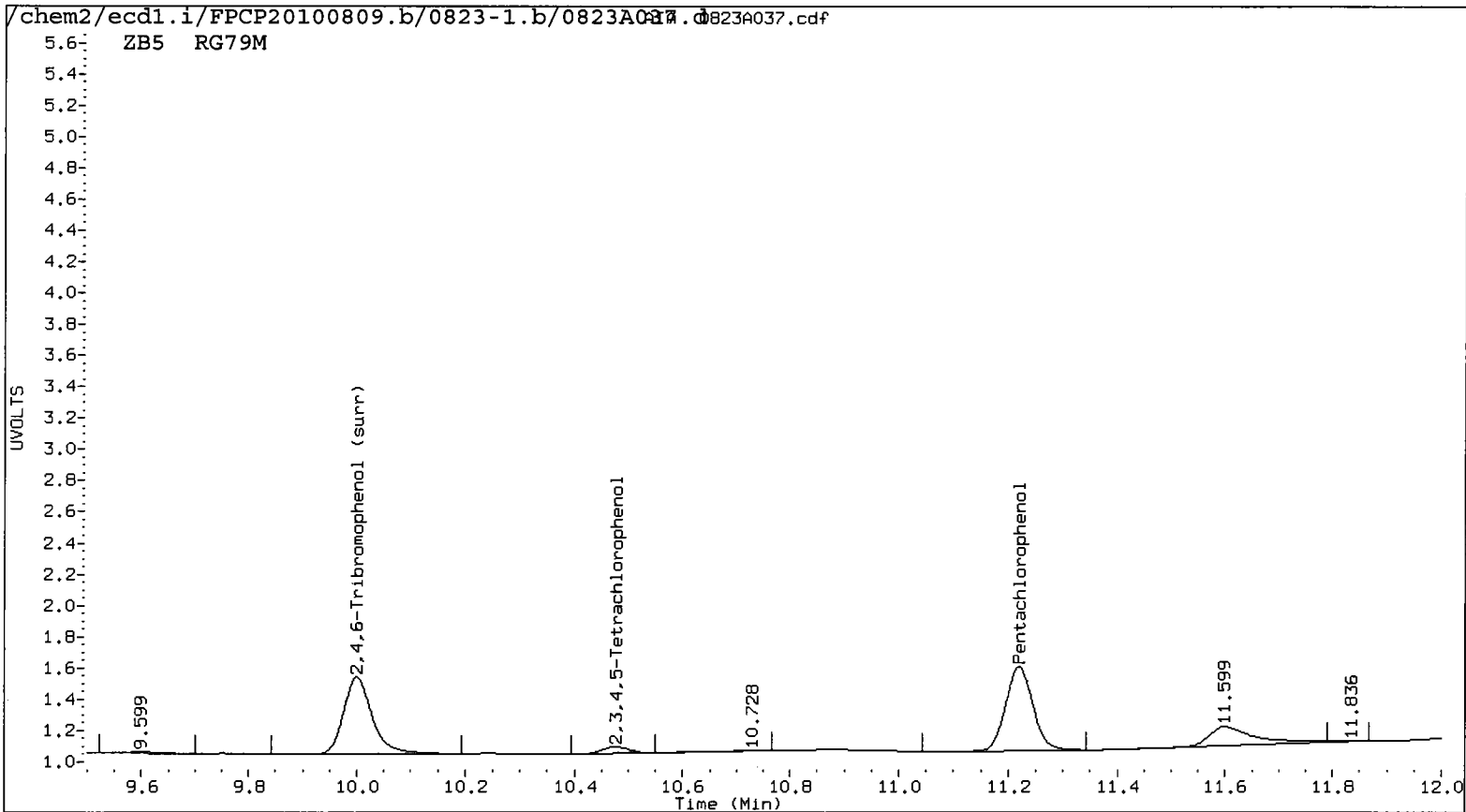
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 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 24-AUG-2010 00:11  
 Compound Sublist: all Report Date: 08/25/2010 15:00  
 Instrument: ecdl.i Matrix: SOIL  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.219	0.000	91620	11.656	-0.002	121529	5.2755	5.2928	0.3	Pentachlorophenol
7.289	0.025	15464	7.372	0.039	19272	1.6175	1.5437	4.7	2,4,6-Trichlorophenol
----			7.837	-0.027	16901	0.0000	1.3621	---	2,3,6-Trichlorophenol
8.266	0.024	4506	----			0.8927	0.0000	---	2,4,5-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,4-Trichlorophenol
9.030	0.023	25557	9.290	0.013	47278	1.8119	2.5535	34.0	2,3,5,6-Tetrachlorophenol
10.475	0.062	7262	11.189	0.063	161841	0.5799	11.0921	180.1*	2,3,4,5-Tetrachlorophenol
6.856	-0.037	1911	7.169	0.003	5122	2.9773	6.8403	78.7*	2,4-Dichlorophenol
9.999	-0.003	89071	10.639	-0.007	126370	6.6	6.8	1.8	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	26.6	27.1





Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

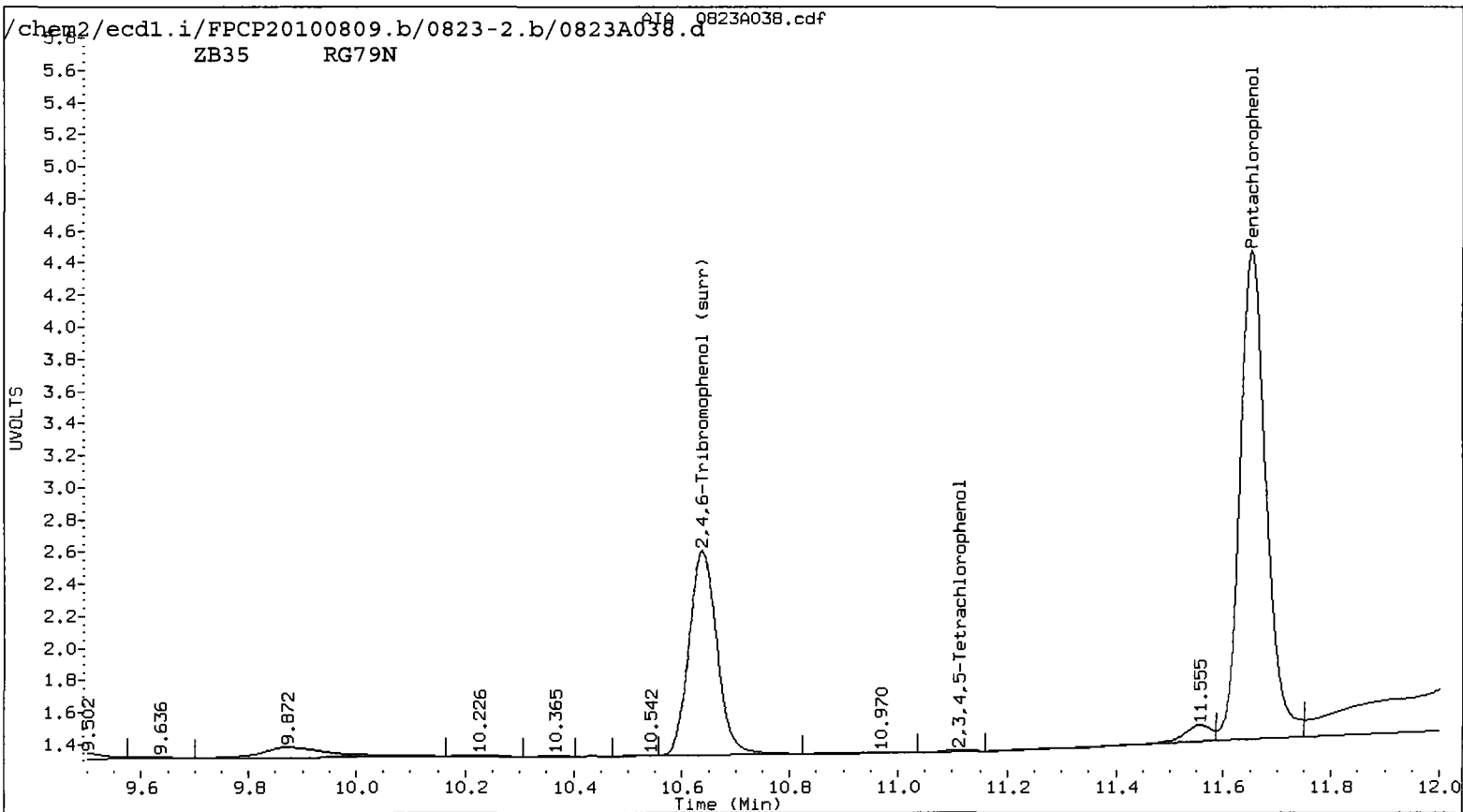
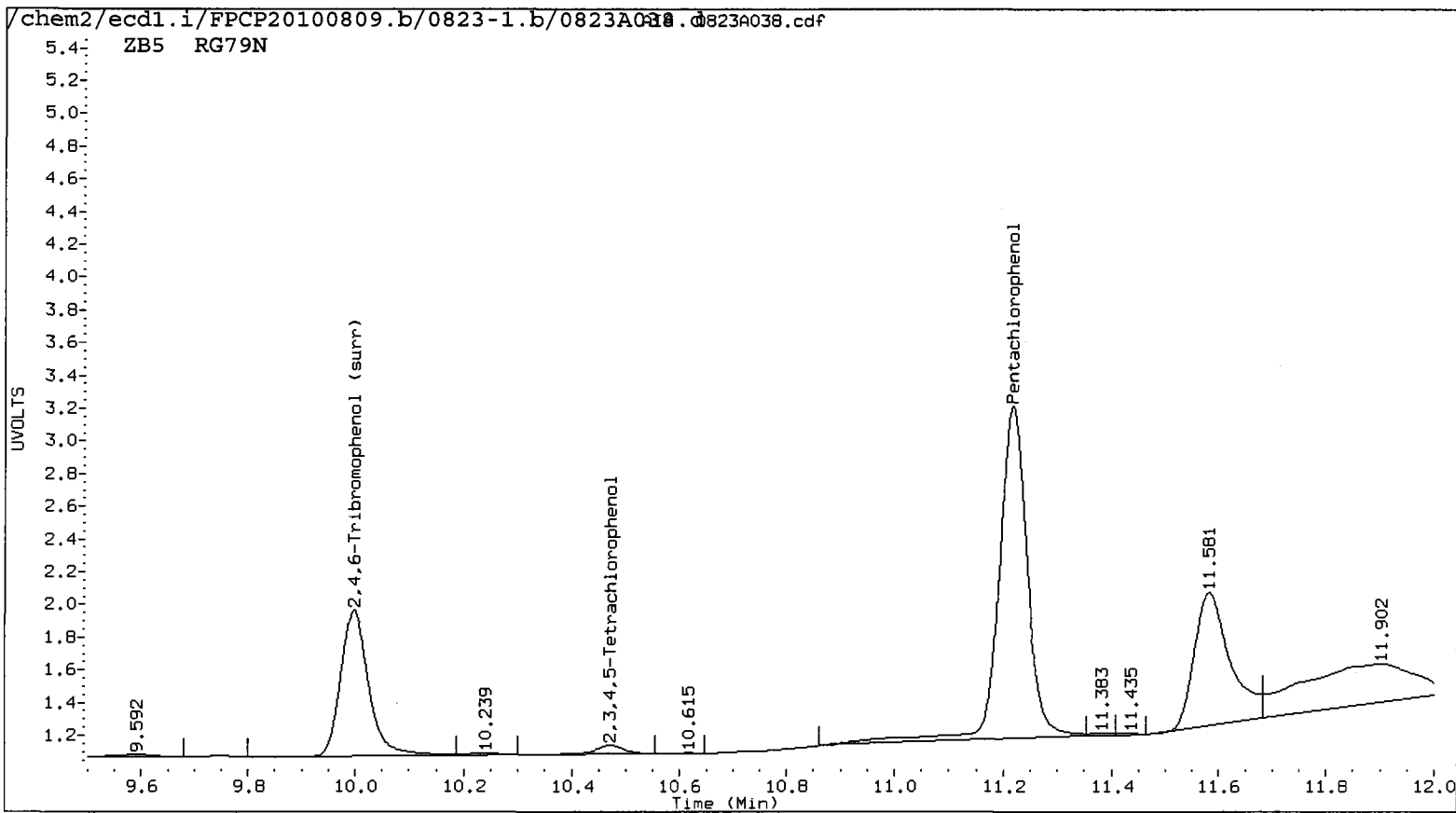
AR 8/25/2010

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 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 24-AUG-2010 00:31  
 Compound Sublist: all Report Date: 08/25/2010 15:00  
 Instrument: ecd1.i Matrix: SOIL  
 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		
11.216	-0.002	373117	11.653	-0.005	516828	23.9783	22.5085	6.3	Pentachlorophenol
7.283	0.019	15710	7.369	0.036	13514	1.6435	1.0825	41.2*	2,4,6-Trichlorophenol
---	---	---	7.836	-0.028	2516	0.0000	0.2028	---	2,3,6-Trichlorophenol
8.266	0.024	4080	8.682	0.067	3128	0.8085	0.4364	59.8*	2,4,5-Trichlorophenol
---	---	---	---	---	---	0.0000	0.0000	---	2,3,4-Trichlorophenol
9.030	0.023	43201	9.289	0.012	42201	3.0627	2.2794	29.3	2,3,5,6-Tetrachlorophenol
10.470	0.057	10358	11.114	-0.012	1730	0.8294	0.1186	149.9*	2,3,4,5-Tetrachlorophenol
---	---	---	7.158	-0.008	4903	0.0000	6.5465	---	2,4-Dichlorophenol
9.997	-0.005	160395	10.637	-0.009	230809	12.3	12.4	0.5	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	49.2	49.5



Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

AR 8/25/2010

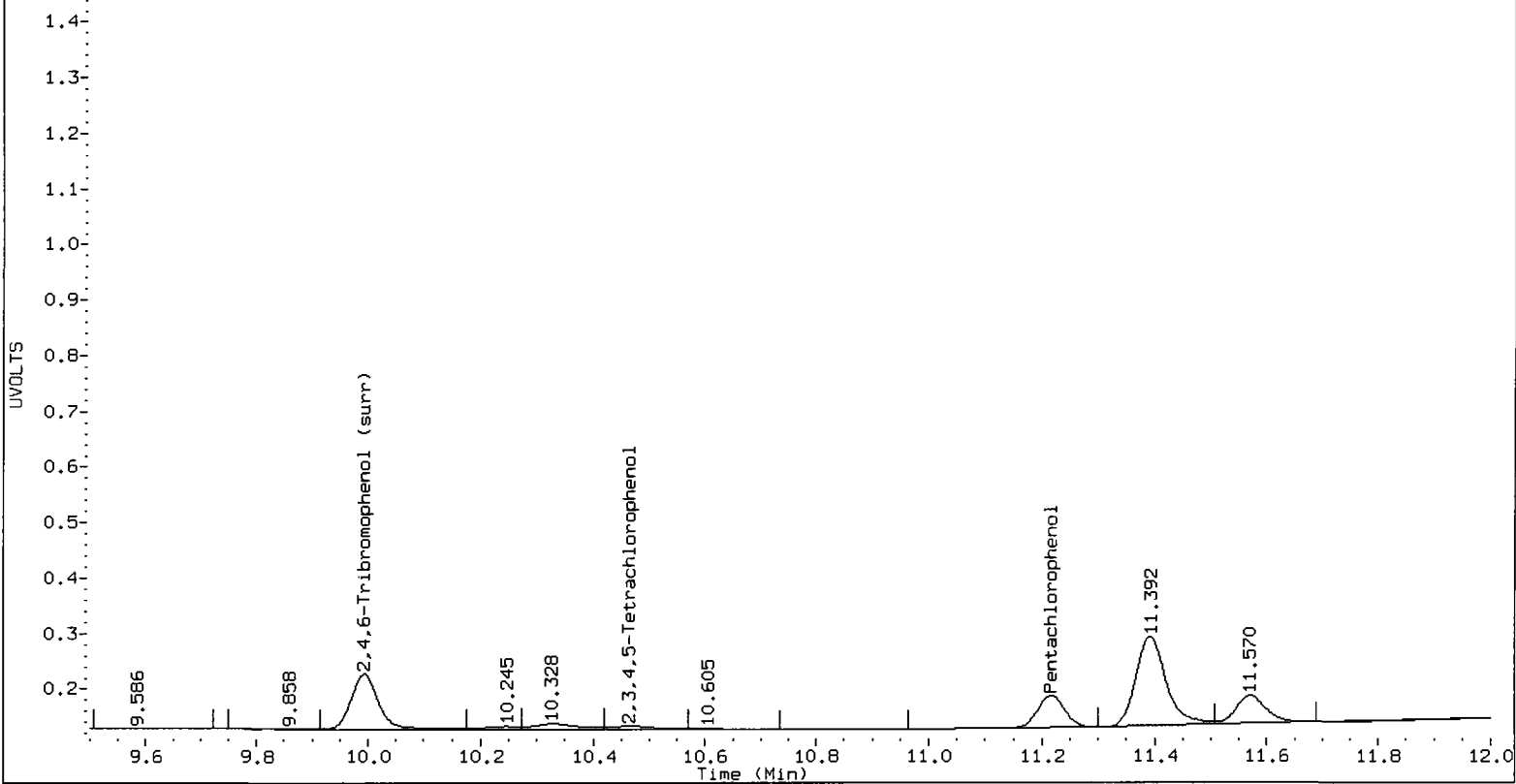
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 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 24-AUG-2010 00:51  
 Compound Sublist: all Report Date: 08/25/2010 15:00  
 Instrument: ecdl.i Matrix: SOIL  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.217	-0.002	94908	11.654	-0.004	160864	5.4722	7.0059	24.6	Pentachlorophenol
7.285	0.021	14985	7.372	0.039	10690	1.5668	0.8563	58.7*	2,4,6-Trichlorophenol
----	----	----	----	----	----	0.0000	0.0000	---	2,3,6-Trichlorophenol
8.300	0.058	14520	8.674	0.059	15921	2.8768	2.2482	24.5	2,4,5-Trichlorophenol
----	----	----	9.420	0.040	47074	0.0000	5.0162	---	2,3,4-Trichlorophenol
9.031	0.024	538812	9.284	0.007	19742	38.1984	1.0663	189.1*	2,3,5,6-Tetrachlorophenol
10.464	0.051	17828	11.122	-0.004	3357	1.4366	0.2301	144.8*	2,3,4,5-Tetrachlorophenol
----	----	----	7.210	0.044	96138	0.0000	144.9080	---	2,4-Dichlorophenol
9.993	-0.009	171417	10.636	-0.010	257939	13.2	13.8	4.6	2,4,6-Tribromophenol (surr)

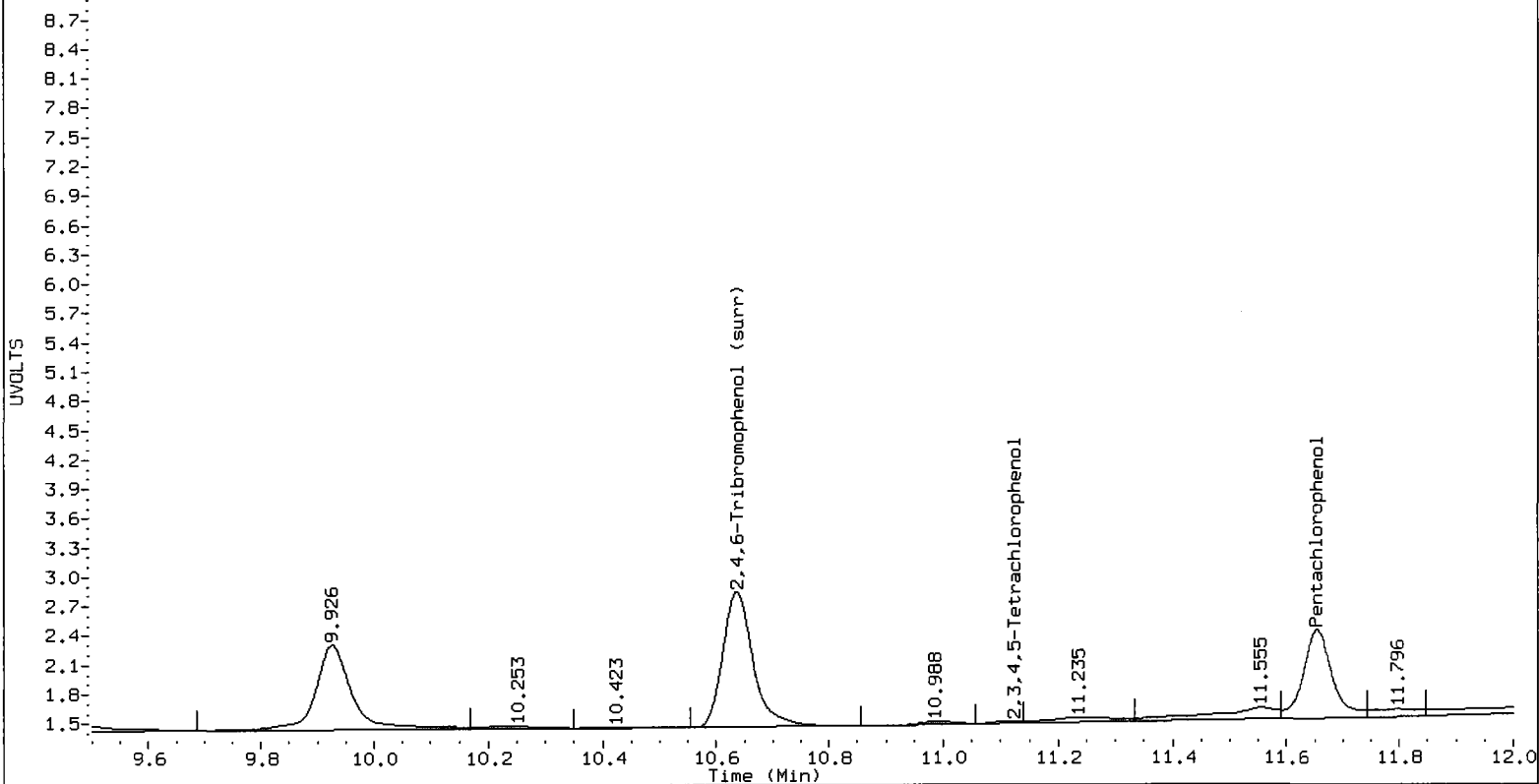
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	52.8	55.3

ZB5 RG790



ZB35 RG790



Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

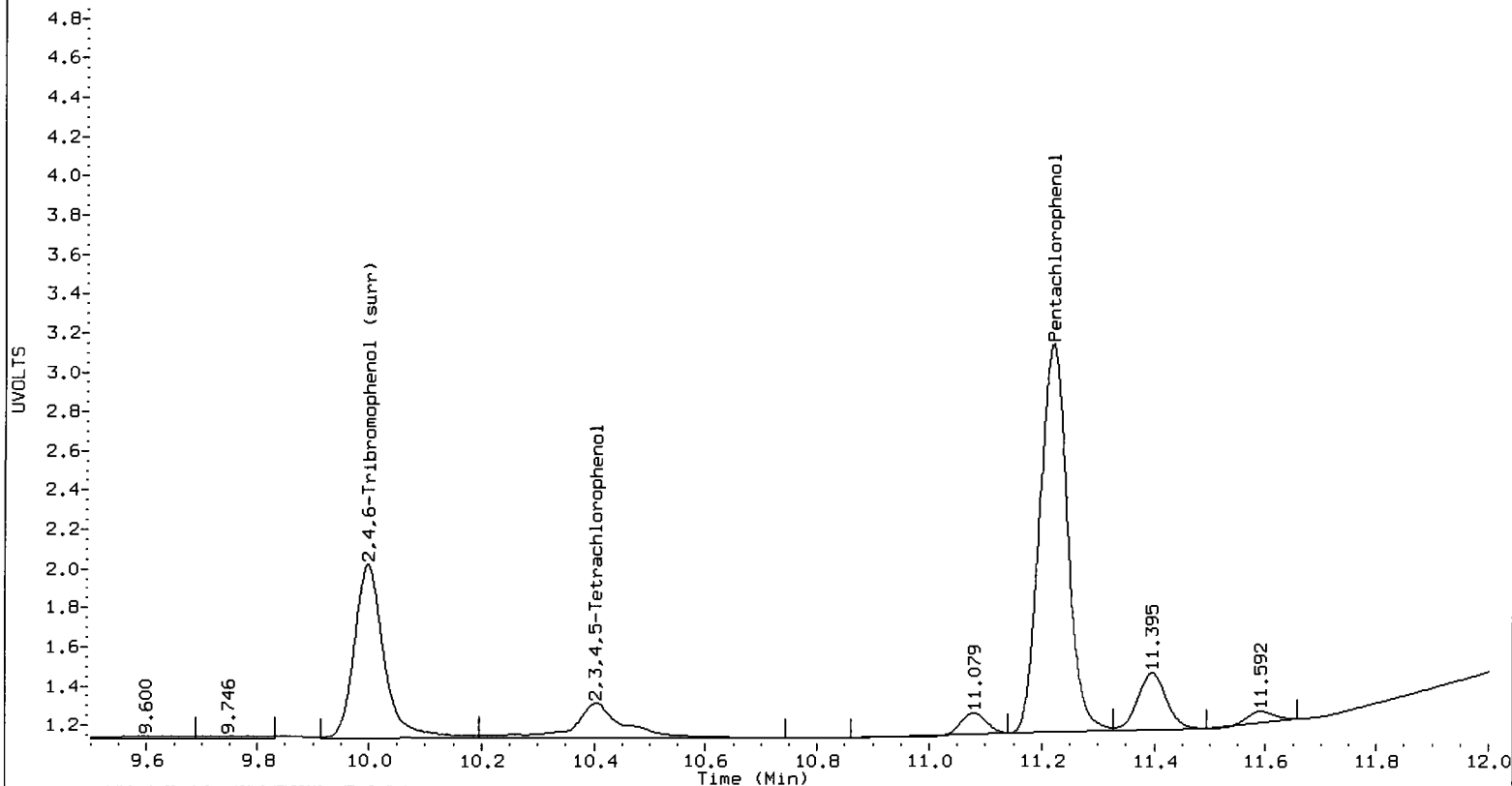
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 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 24-AUG-2010 01:11  
 Compound Sublist: all Report Date: 08/25/2010 15:00  
 Instrument: ecdl.i Matrix: SOIL  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col		ZB35 Col		ZB-5	ZB35	RPD	Compound
RT	Shift Response	RT	Shift Response	on col	on col		
11.219	0.000/338972	11.655	-0.003/497429	21.5091	21.6637	0.7	Pentachlorophenol
7.275	0.011 23193	7.361	0.028 17030	2.4384	1.3641	56.5*	2,4,6-Trichlorophenol
----	----	----	----	0.0000	0.0000	---	2,3,6-Trichlorophenol
8.264	0.022 7623	8.684	0.069 116771	1.5103	18.0700	169.1*	2,4,5-Trichlorophenol
----	----	9.428	0.048 40518	0.0000	4.2989	---	2,3,4-Trichlorophenol
9.031	0.024 84652	9.289	0.012 82311	6.0013	4.4457	29.8	2,3,5,6-Tetrachlorophenol
10.403	-0.010 58967	11.115	-0.011 63845	4.9174	4.3757	11.7	2,3,4,5-Tetrachlorophenol
----	----	7.211	0.045 65342	0.0000	94.6918	---	2,4-Dichlorophenol
9.999	-0.003 164888	10.639	-0.007 231779	12.7	12.4	2.0	2,4,6-Tribromophenol (surr)

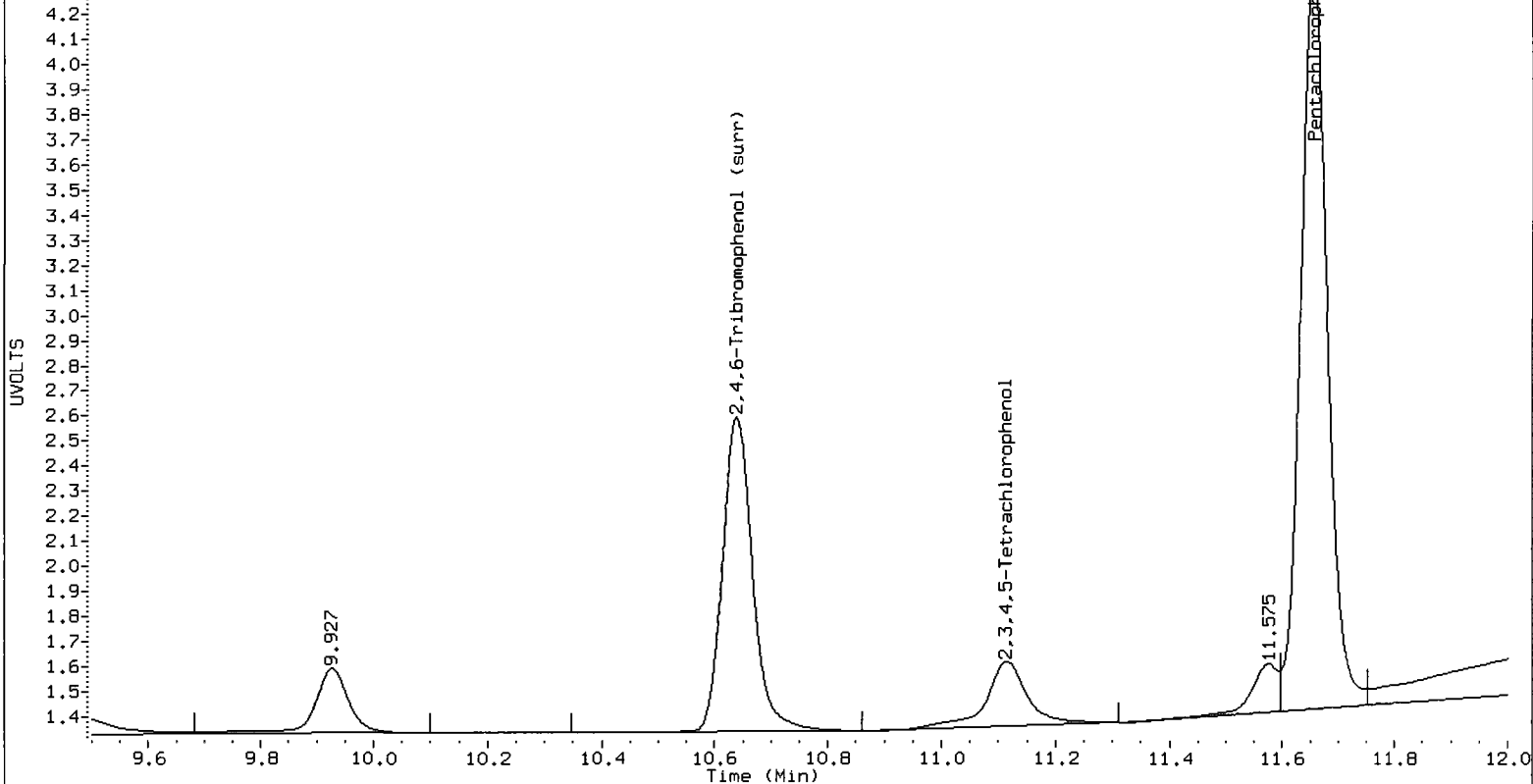
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	50.7	49.7

ZB5 RG79P



ZB35 RG79P



Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

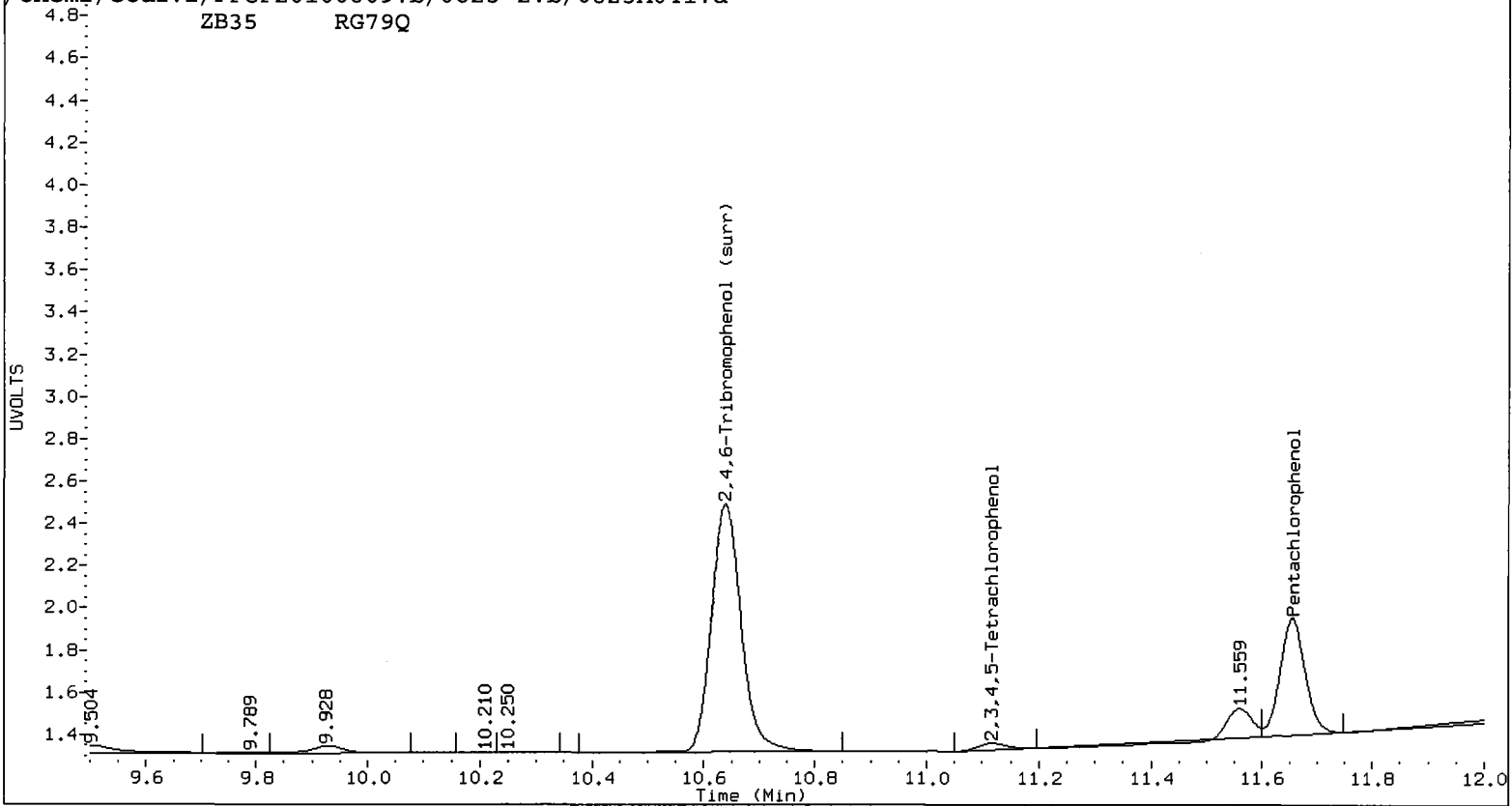
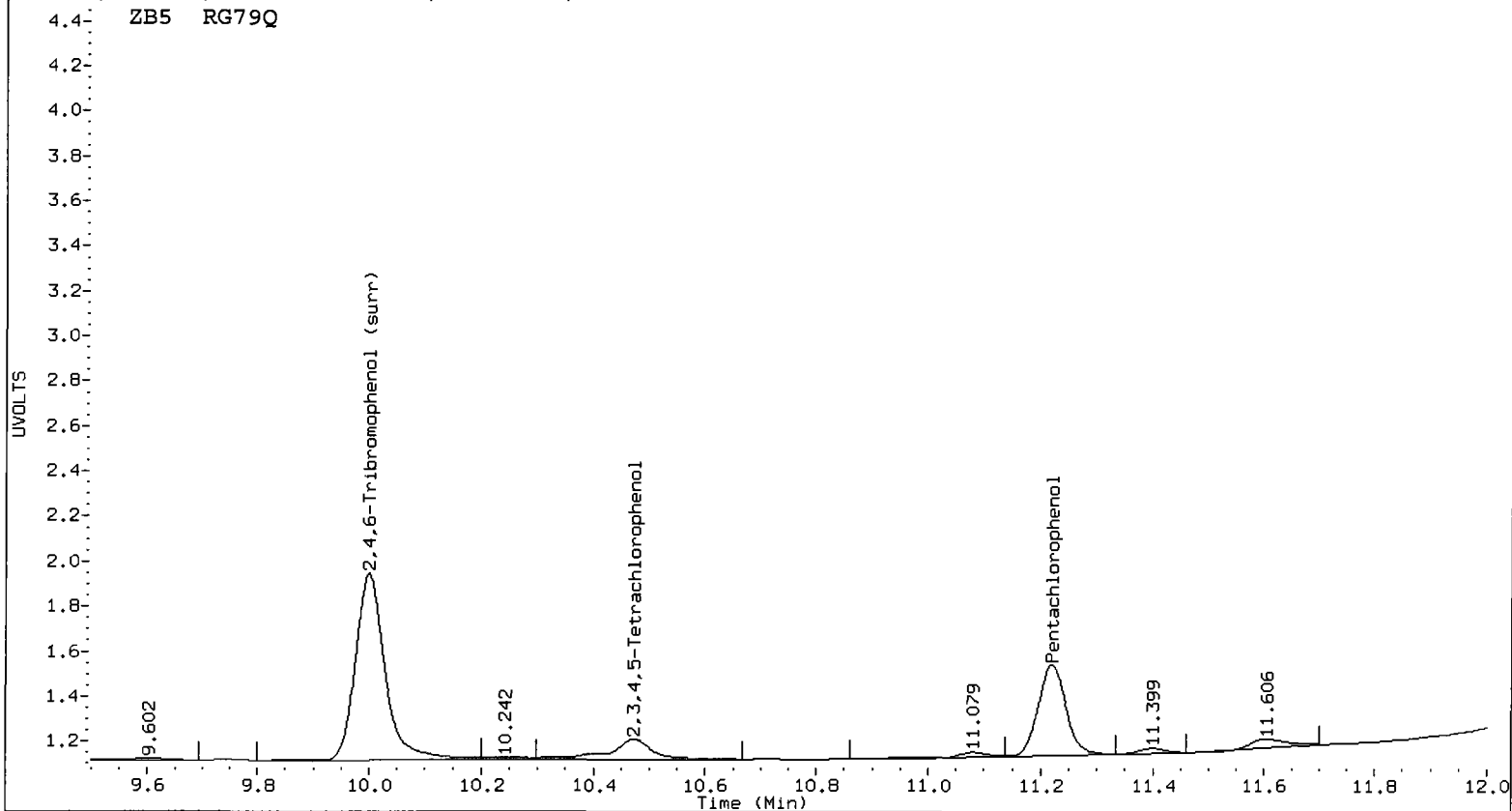
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 Compound Sublist: all Report Date: 08/25/2010 15:00  
 Instrument: ecdl.i Matrix: SOIL  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.219	0.000	68443	11.655	-0.003	87986	3.9032	3.8319	1.8	Pentachlorophenol
7.287	0.023	22518	7.371	0.038	11446	2.3665	0.9169	88.3*	2,4,6-Trichlorophenol
----			7.844	-0.020	1612	0.0000	0.1299	---	2,3,6-Trichlorophenol
8.264	0.022	5208	----			1.0320	0.0000	---	2,4,5-Trichlorophenol
----			9.432	0.052	4635	0.0000	0.4801	---	2,3,4-Trichlorophenol
9.033	0.026	29381	9.289	0.012	21145	2.0830	1.1421	58.3*	2,3,5,6-Tetrachlorophenol
10.473	0.060	26077	11.117	-0.009	5459	2.1159	0.3742	139.9*	2,3,4,5-Tetrachlorophenol
6.856	-0.037	1636	7.211	0.045	15881	2.5470	21.5313	157.7*	2,4-Dichlorophenol
9.999	-0.003	156170	10.639	-0.007	218149	12.0	11.7	2.3	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	47.8	46.7





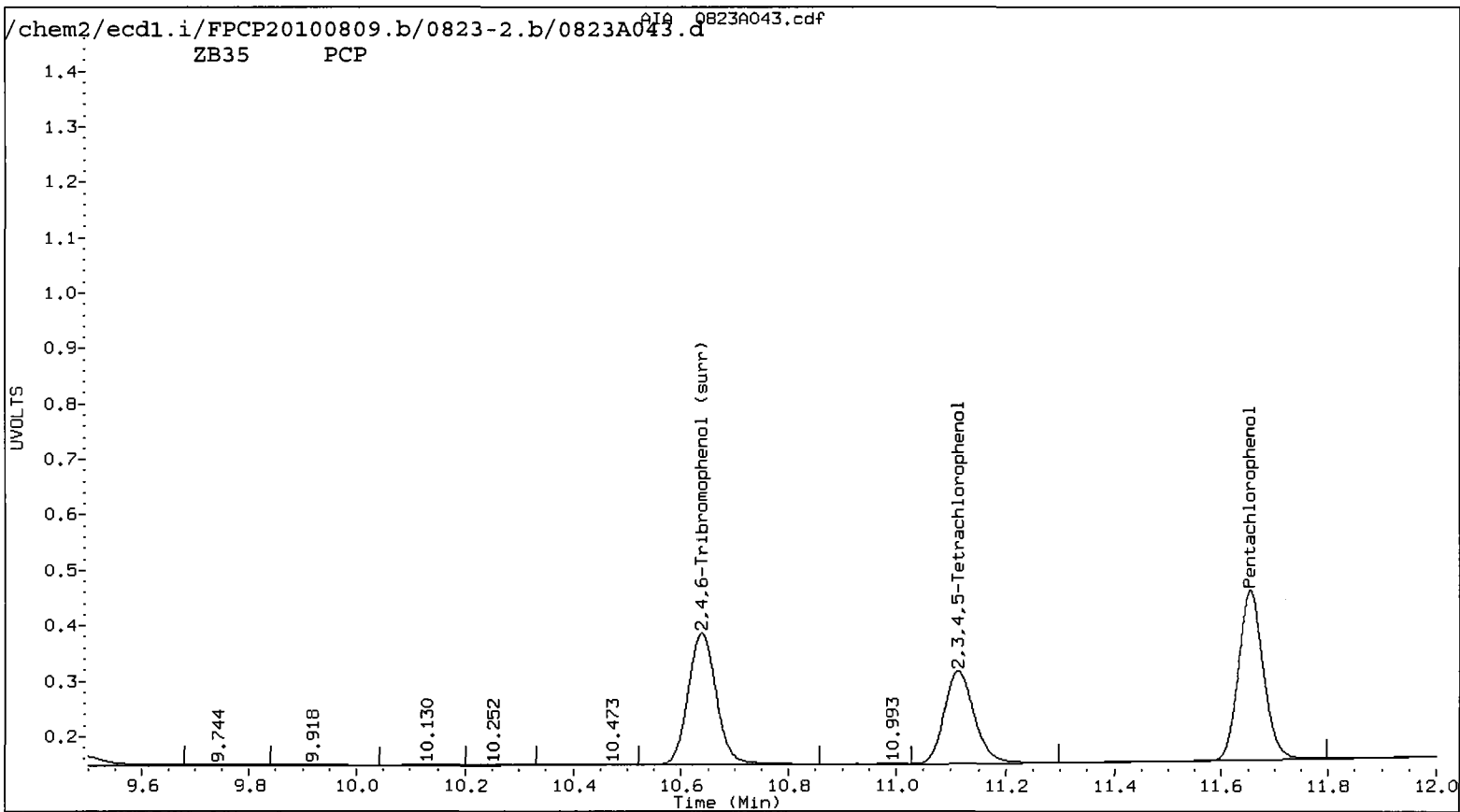
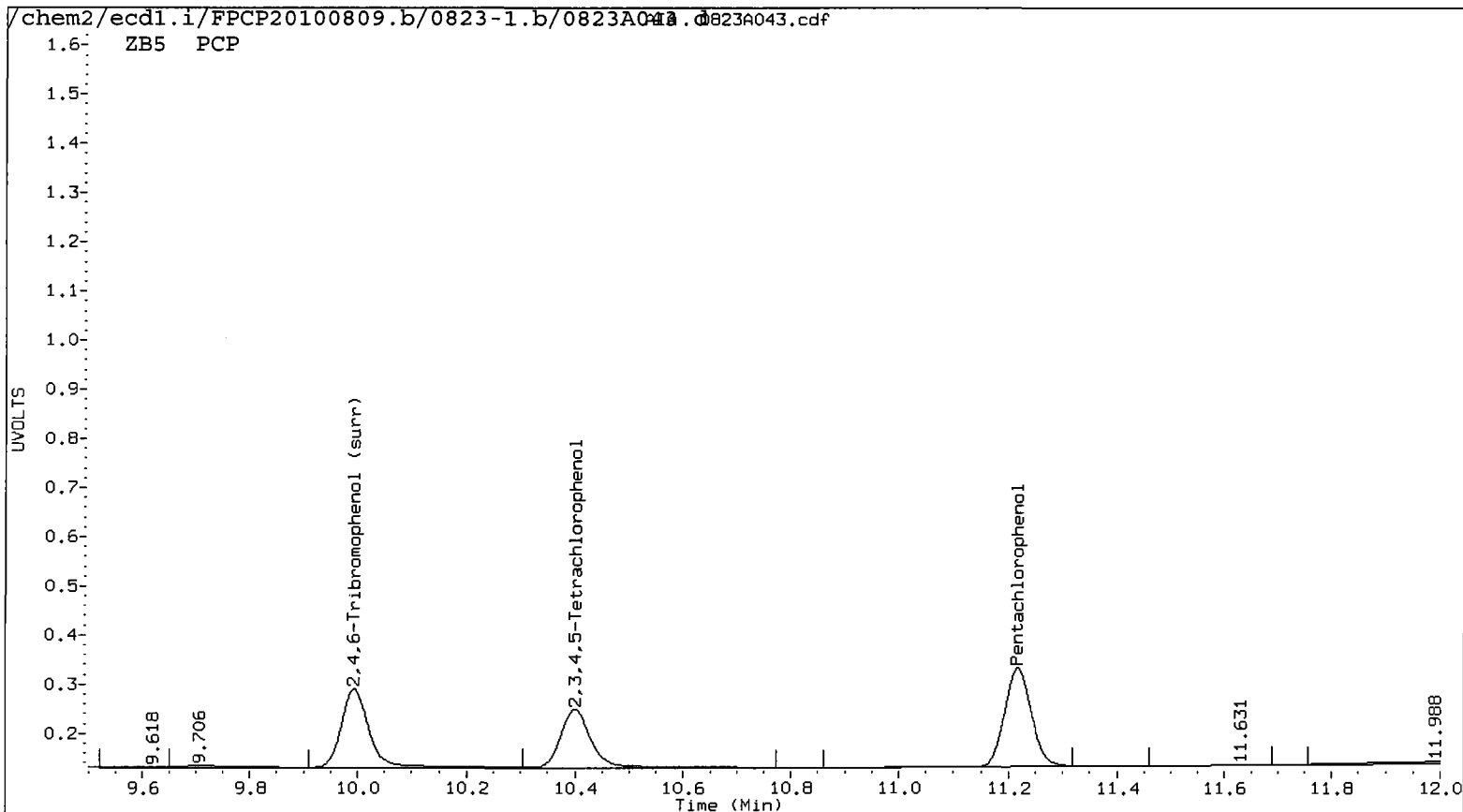
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A043.d    ARI ID: PCP  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A043.d    Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m                      Injection Date: 24-AUG-2010 02:11  
 Compound Sublist: all    Report Date: 08/25/2010 13:49  
 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		
11.217	-0.002	329169	11.654	-0.004	490178	20.8105	21.3479	2.5	Pentachlorophenol
7.266	0.002	205622	7.334	0.001	306079	24.2698	24.5166	1.0	2,4,6-Trichlorophenol
7.619	0.000	206986	7.862	-0.002	285246	23.3366	22.9879	1.5	2,3,6-Trichlorophenol
8.221	-0.021	114435	8.595	-0.020	153085	22.6716	24.4358	7.5	2,4,5-Trichlorophenol
8.770	-0.022	142947	9.360	-0.020	198069	20.8954	23.2222	10.5	2,3,4-Trichlorophenol
8.999	-0.008	321639	9.266	-0.011	442191	22.8022	23.8831	4.6	2,3,5,6-Tetrachlorophenol
10.400	-0.013	233814	11.112	-0.014	314691	22.2971	21.5680	3.3	2,3,4,5-Tetrachlorophenol
6.891	-0.002	107316	7.160	-0.006	146616	213.1323	234.9633	9.7	2,4-Dichlorophenol
9.994	-0.008	290502	10.637	-0.009	431004	23.4	23.1	1.2	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

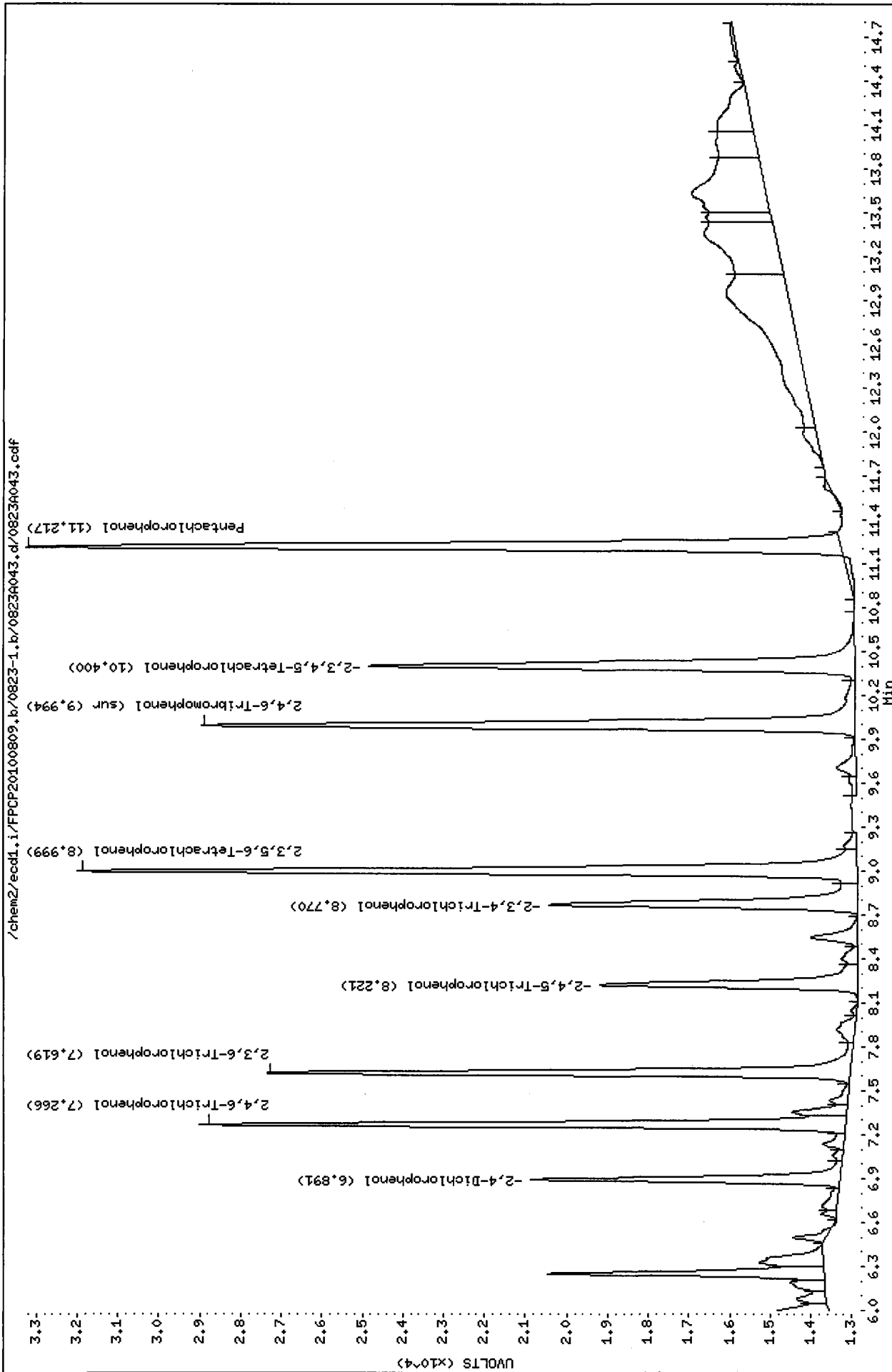
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	93.5	92.4



Data File: /chem2/ecd1.i/FPCP20100809.b/0823-1.b/0823A043.d  
Date : 24-AUG-2010 02:11  
Client ID:  
Sample Info: PCP  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: ecd1.i

Operator: ar  
Column diameter: 0.53



Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

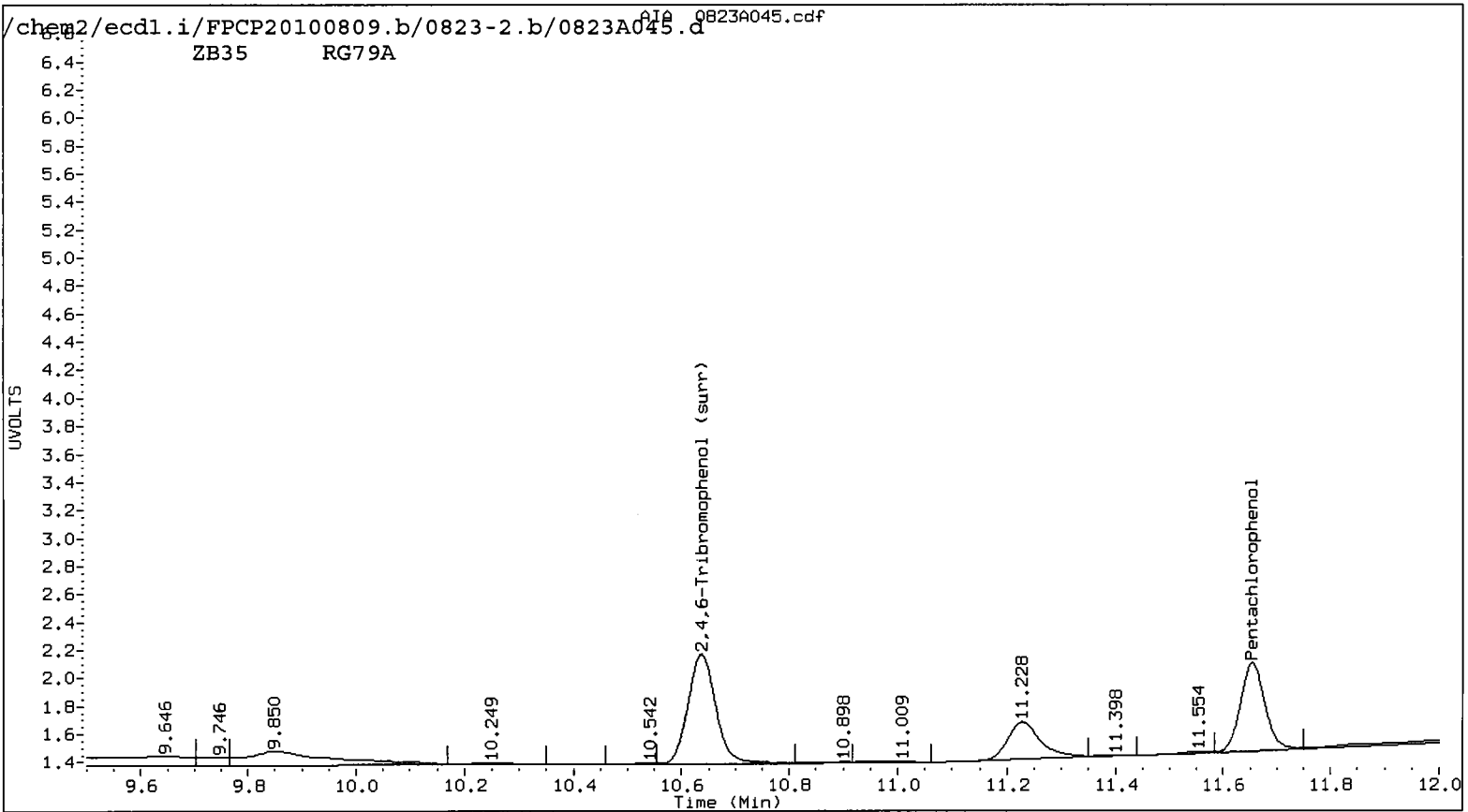
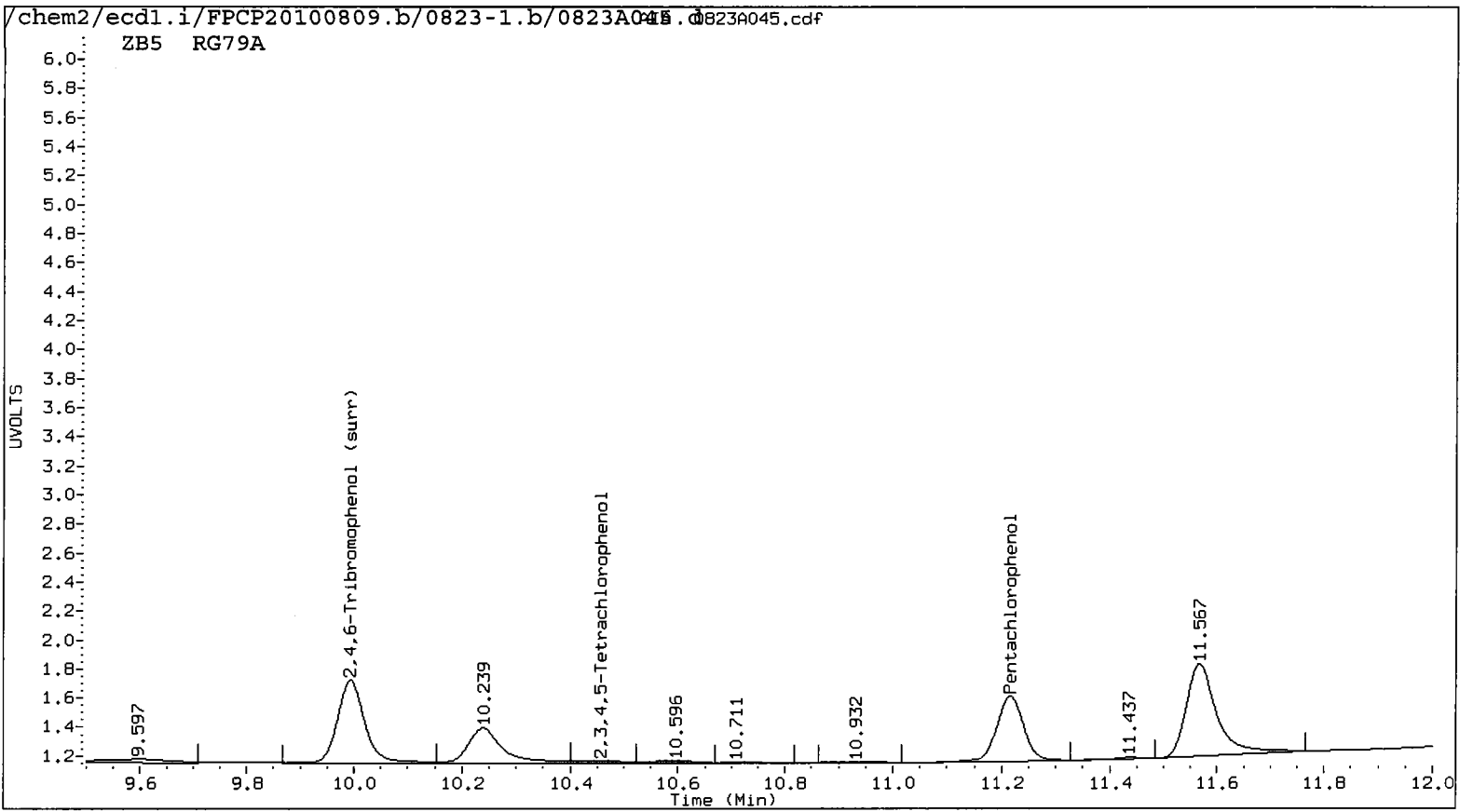
AR 8/25/10

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A045.d ARI ID: RG79A  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A045.d Client ID: PSB11-0-0.5-073010  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 24-AUG-2010 02:51  
 Compound Sublist: all Report Date: 08/25/2010 15:00  
 Instrument: ecdl.i Matrix: SOIL  
 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		
11.216	-0.003	75599	11.654	-0.004	99624	4.3242	4.3388	0.3	Pentachlorophenol
7.290	0.026	21329	7.373	0.040	26775	2.2398	2.1447	4.3	2,4,6-Trichlorophenol
----			7.830	-0.034	5868	0.0000	0.4729	---	2,3,6-Trichlorophenol
8.206	-0.036	10138	8.678	0.063	6408	2.0085	0.8968	76.5*	2,4,5-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,4-Trichlorophenol
9.026	0.019	21618	9.287	0.010	22102	1.5326	1.1937	24.9	2,3,5,6-Tetrachlorophenol
10.458	0.045	4935	----			0.3934	0.0000	---	2,3,4,5-Tetrachlorophenol
6.859	-0.034	1685	7.171	0.005	9131	2.6242	12.2647	129.5*	2,4-Dichlorophenol
9.994	-0.008	100501	10.636	-0.010	140602	7.5	7.5	0.0	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	30.1	30.1



Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

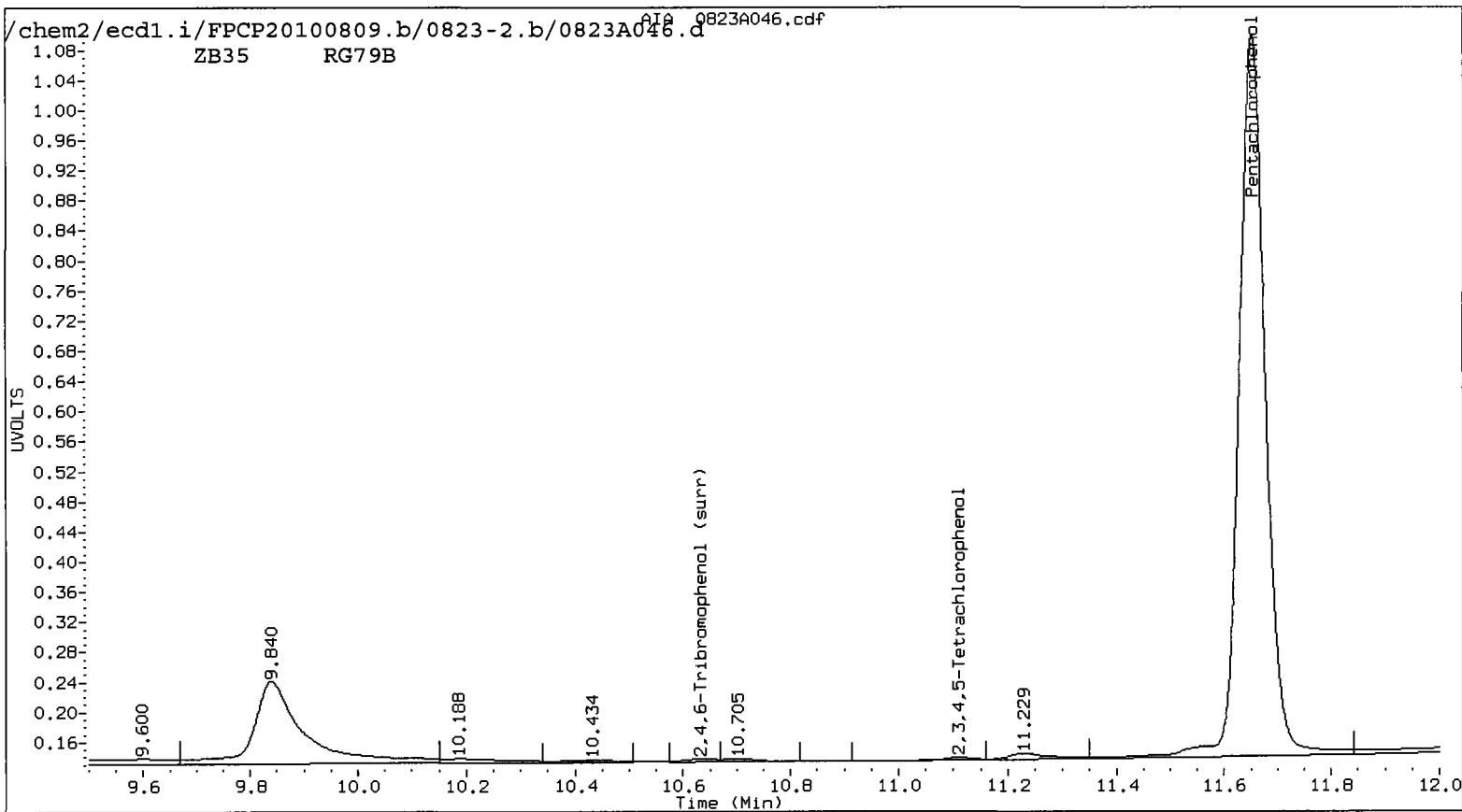
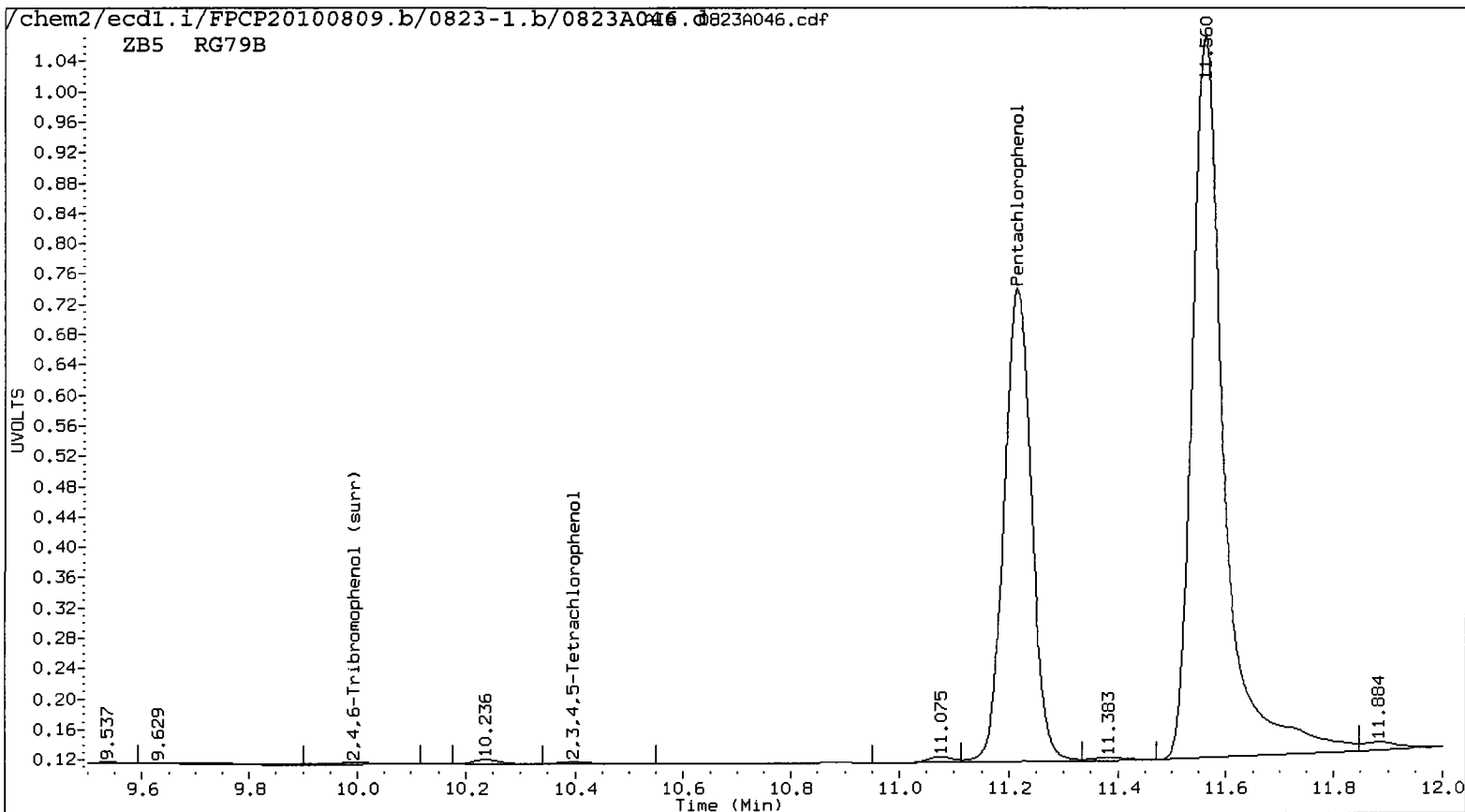
AR 8/25/10

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A046.d ARI ID: RG79B  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A046.d Client ID: PSB11-1.5-2-073010  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 24-AUG-2010 03:11  
 Compound Sublist: all Report Date: 08/25/2010 15:00  
 Instrument: ecd1.i Matrix: SOIL  
 Operator: ar Dilution Factor: 10.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.215	-0.004	1070356	11.652	-0.006	1654586	<u>86.5109</u>	<u>72.0594</u>	18.2	Pentachlorophenol
----			7.369	0.036	4730	0.0000	0.3789	---	2,4,6-Trichlorophenol
7.609	-0.010	1350	----			0.1374	0.0000	---	2,3,6-Trichlorophenol
8.197	-0.045	4755	8.676	0.061	7668	0.9420	1.0744	13.1	2,4,5-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,4-Trichlorophenol
9.029	0.022	189544	9.286	0.009	169488	13.4375	9.1542	37.9	2,3,5,6-Tetrachlorophenol
10.396	-0.017	6154	11.111	-0.015	3180	0.4909	0.2180	77.0*	2,3,4,5-Tetrachlorophenol
----			----			0.0000	0.0000	---	2,4-Dichlorophenol
9.995	-0.007	6489	10.635	-0.011	8595	<u>0.5</u>	<u>0.5</u>	1.8	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

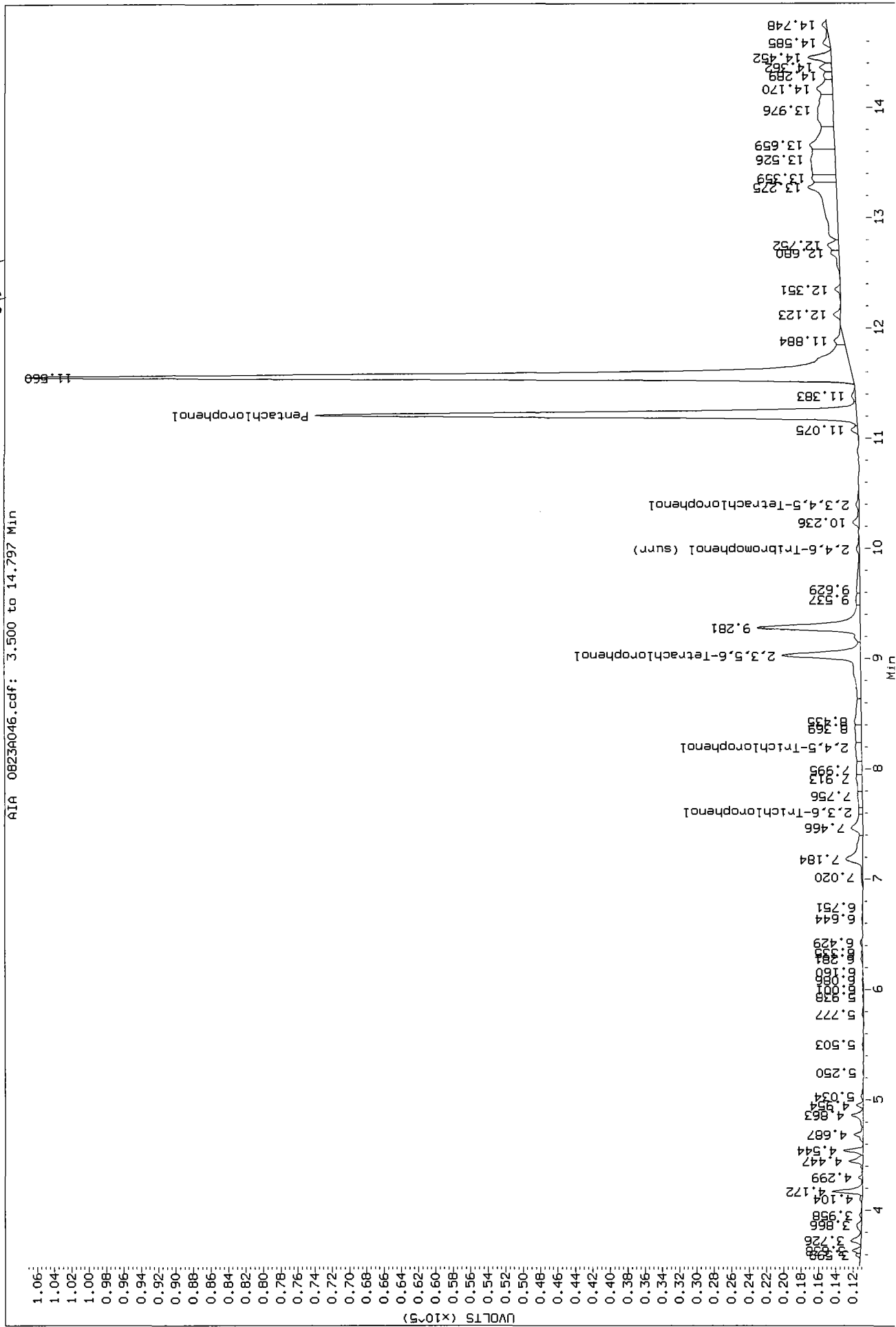
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	18.8	18.4





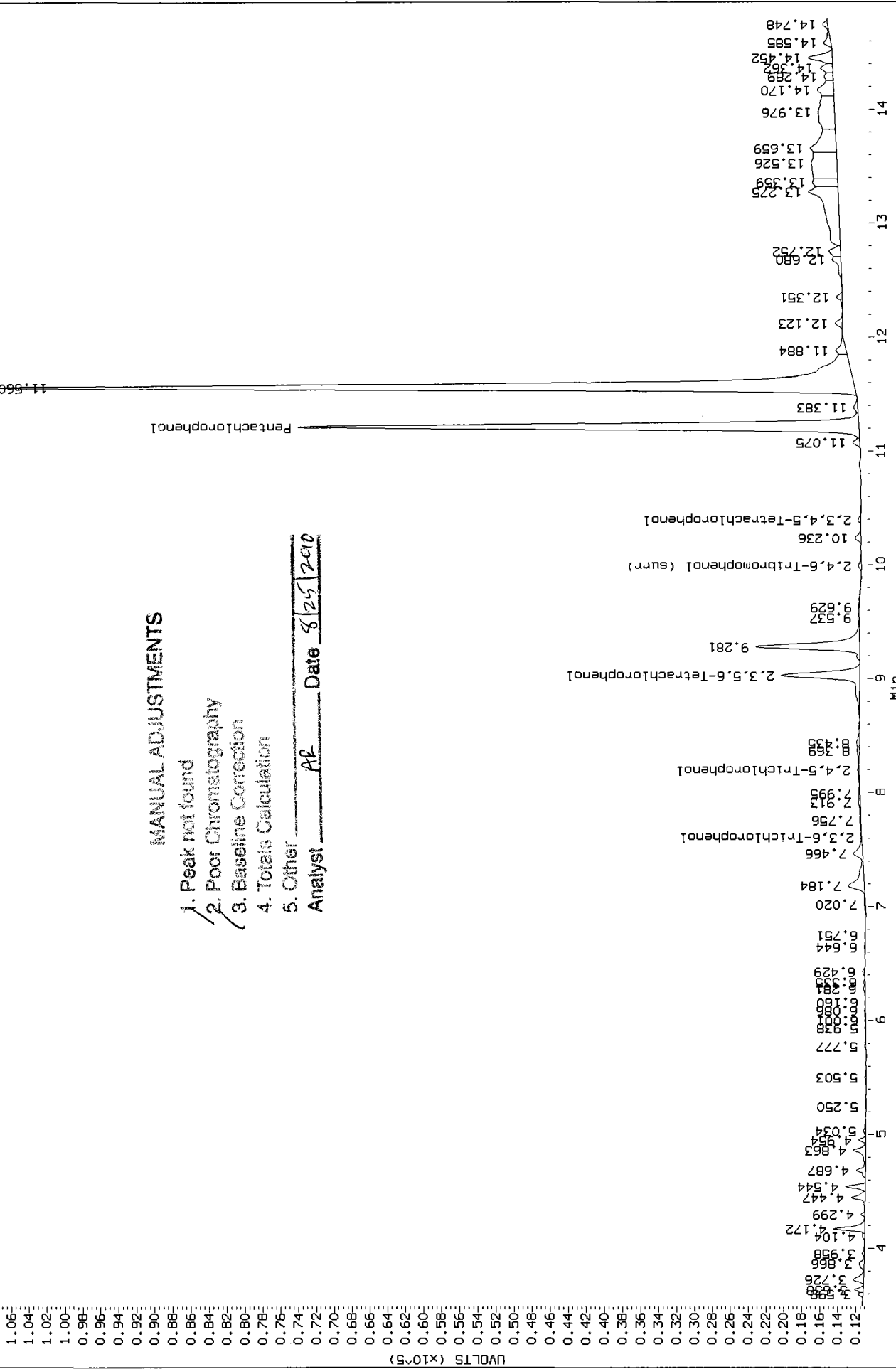
Data File: /chem2/ecdl.i/TPCP20100809.b/0823-1.b/0823A046.d/0823A046.cdf  
 Injection Date: 24-AUG-2010 03:11  
 Instrument: ecdl.i  
 Client Sample ID: PSB11-1.5-2-073010

AR 8/25/2010



Data File: /chem2/ecdl1/FPCP20100809\_b/0823-1.b/0823A046.d/0823A046.cdf  
 Injection Date: 24-AUG-2010 03:11  
 Instrument: ecdl1  
 Client Sample ID: PSB11-1.5-2-073010

AIA 0823A046.cdf: 3.500 to 14.797 Min



MANUAL ADJUSTMENTS

- 1. Peak not found
  - 2. Poor Chromatography
  - 3. Baseline Correction
  - 4. Totals Calculation
  - 5. Other
- Analyst AP Date 8/25/2010

Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

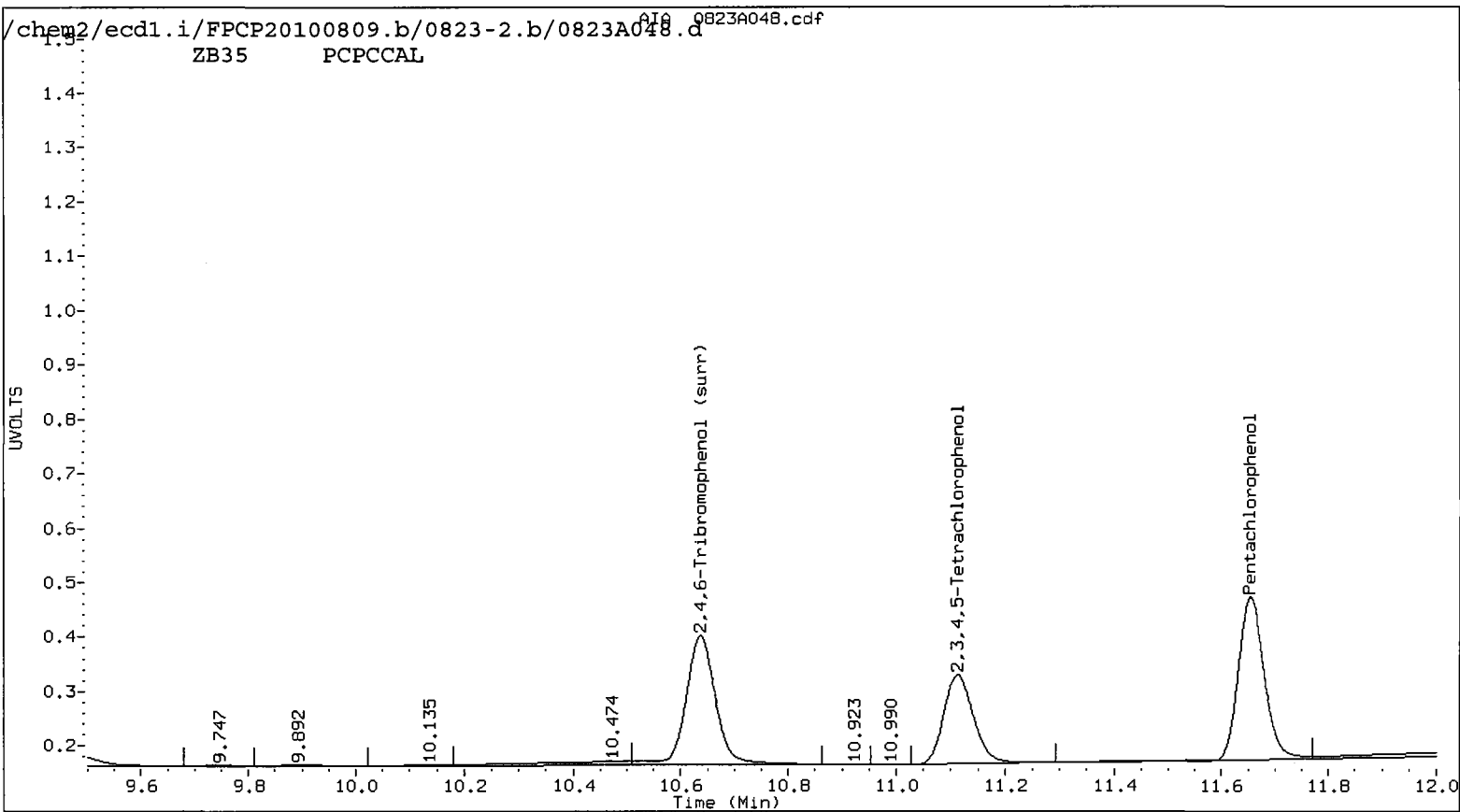
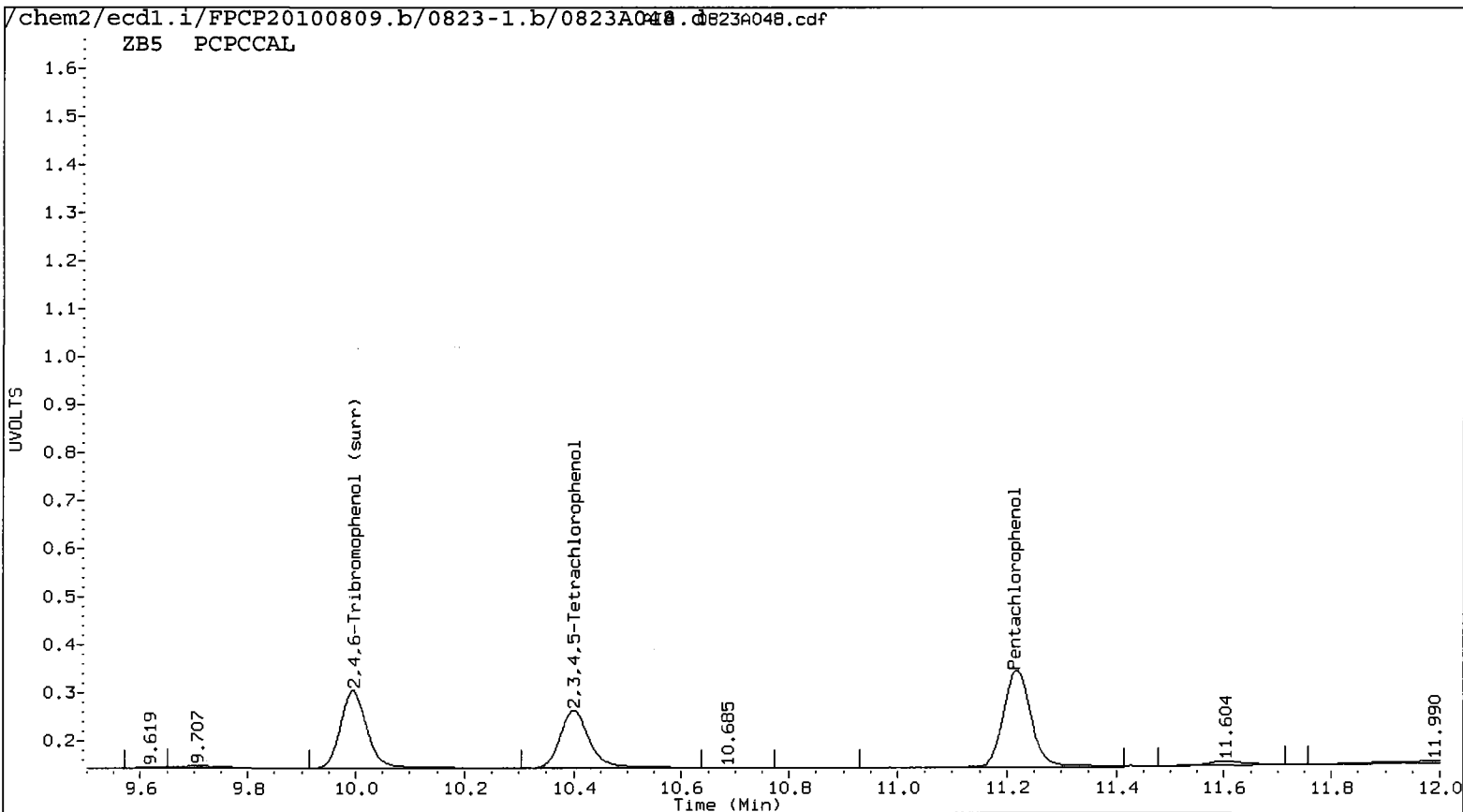
AR 8/25/2010

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A048.d ARI ID: PCPCCAL  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0823-2.b/0823A048.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 24-AUG-2010 03:50  
 Compound Sublist: all Report Date: 08/24/2010 14:23  
 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		
11.217	-0.002 359612	11.655	-0.003 496193	22.9951	21.6099	6.2	Pentachlorophenol
7.267	0.003 203524	7.334	0.001 303912	23.9919	24.3430	1.5	2,4,6-Trichlorophenol
7.620	0.001 204312	7.863	-0.001 285173	23.0059	22.9821	0.1	2,3,6-Trichlorophenol
8.222	-0.020 115500	8.595	-0.020 151140	22.8825	24.0857	5.1	2,4,5-Trichlorophenol
8.771	-0.021 145804	9.361	-0.019 191546	21.3130	22.3691	4.8	2,3,4-Trichlorophenol
9.000	-0.007 314415	9.266	-0.011 435452	22.2900	23.5191	5.4	2,3,5,6-Tetrachlorophenol
10.400	-0.013 229058	11.113	-0.013 309978	21.7689	21.2449	2.4	2,3,4,5-Tetrachlorophenol
6.891	-0.002 106792	7.161	-0.005 145388	211.8631	232.6594	9.4	2,4-Dichlorophenol
9.995	-0.007 282947	10.637	-0.009 459287	22.7	24.6	8.0	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

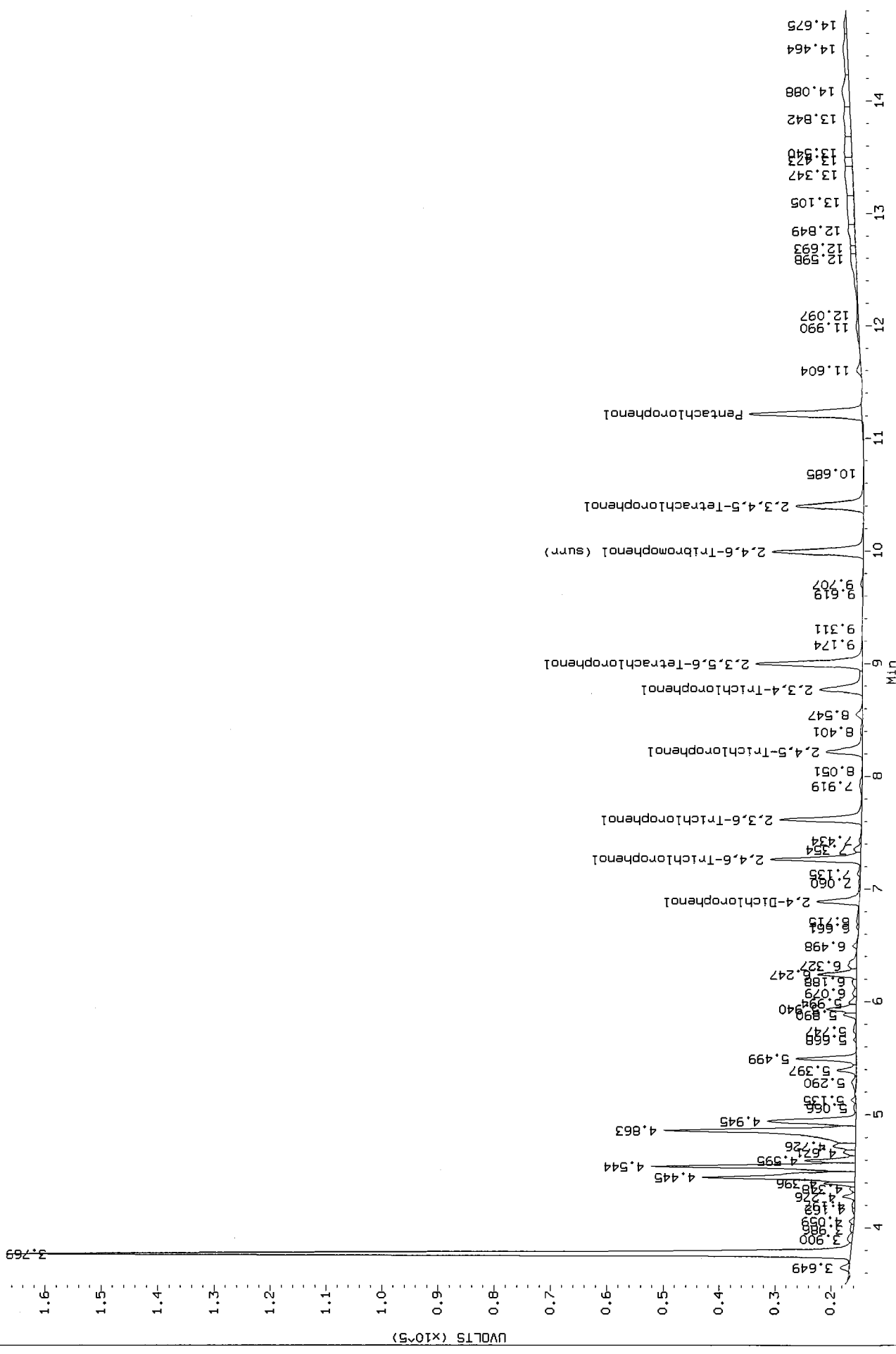
COMPOUND	Col1	Col2
Pentachlorophenol	92.0	86.4
2,4,6-Trichlorophenol	96.0	97.4
2,3,6-Trichlorophenol	92.0	91.9
2,4,5-Trichlorophenol	91.5	96.3
2,3,4-Trichlorophenol	85.3	89.5
2,3,5,6-Tetrachlorophenol	89.2	94.1
2,3,4,5-Tetrachlorophenol	87.1	85.0
2,4-Dichlorophenol	84.7	93.1
2,4,6-TBP (surr)	90.8	98.4



Data File: /chem2/ecdl.i/FPCP20100809.b/0823-1.b/0823A048.d/0823A048.cdf  
 Injection Date: 24-AUG-2010 03:50  
 Instrument: eccl.i  
 Client Sample ID:

AR 8/25/2010

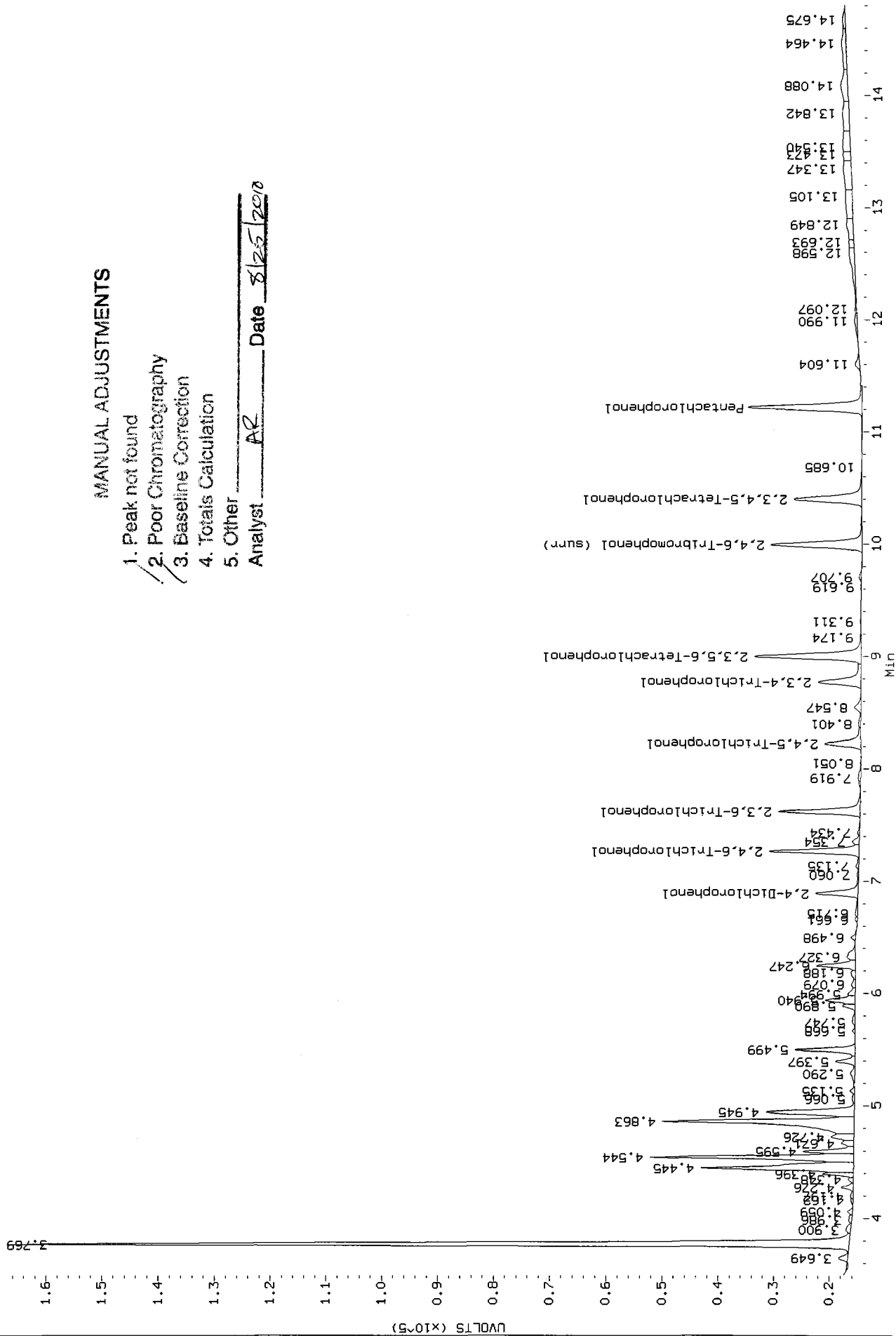
AIA 0823A048.cdf: 3.500 to 14.803 Min



RG79: 00997

Data File: /chem2/ecd1.i/FPCP20100809.b/0823-1.b/0823A048.d/0823A048.cdf  
 Injection Date: 24-AUG-2010 03:50  
 Instrument: ecd1.1  
 Client Sample ID:

AIA 0823A048.cdf: 3.500 to 14.803 Min



RG79: 00998

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

**ARI Job ID: RG79**



Preparation Test TPHD # 3

ARI Job No(s) RG79

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
	RG79 MBS	Date 8-11-10	10.00g	↓		Y		1mL	1mL	
	↓ SBS	↓	↓	↓				↓	↓	
	↓ SBS Dup.		↓					↓	↓	
7	RG79 A	verified	1φ. 45g	↓						
↓	B		1φ. 11g	↓						
↓	C		1φ. 41g	↓						
↓	D		1φ. 11g	↓						
18	E		1φ. 49g	↓						
↓	Ems		1φ. 16g	↓						
↓	Emsd		1φ. 49g	↓						
7	G		1φ. 18g	↓						
7	H		1φ. 32g	↓						
1	I		1φ. 13g	↓						
7	K		1φ. 11g	↓						
↓	L		1φ. 19g	↓						
↓	M		1φ. 48g	↓						
↓	N		1φ. 27g	↓						
↓	O		1φ. 44g	↓						
↓	P		1φ. 43g	↓						
↓	Q		1φ. 12g	↓						
Analyst/Date: PD 8-11-10				AC 8-11-10						

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	O <sub>1</sub>	100μL	6/27/11	PD	JH
Spike	11	100μL	4/26/11	PD	JH
Extraction Time: 0845			Balance ID: 21754526		

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.: RG 79

Client ID: Floyd/Snyder

Parameter: TPHD w/ACSI

Client Project: Lora Lake RI

Note problems, concerns, corrective actions	Analyst/Date
Screens: <u>Soil/Sediment/Solid/Other:</u> <u>Soil</u>	<u>WC 2/7/10</u>
<input checked="" type="checkbox"/> No Anomalies (standard soil/sediment) <u>G, L, M</u>	↓
<input type="checkbox"/> Wet sediment/sludge= <u>Moistured (H)</u>	
<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"/> Rocks/Organics= <u>Rock (A, B, C, D, E, H, I, K, N, Q, P, O)</u> <u>Organic (K)</u>	<u>WC 2/7/10</u>
<input checked="" type="checkbox"/> Oily, obvious fuel/sulfur odors= <u>Fuel odor (I)</u>	↓
<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: RG79**

**GC Analyst Notes / Corrective Action Log**

ARI Project ID: Diesel #2, 30wt MO | Client ID: ARI

ARI SOP: Strength in Gas 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 #2, 0.1 µg/µl, AK102, 30wt MO, n-Tetacosane

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: 7/30/10 Analysis Start: 7/30/10

Endrin/DDT Breakdown <15%?	YES / NO / <u>NA</u>	Method Blank In Control?	YES / NO <u>(N/A)</u>
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?	YES / 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):

Diesel ICal quants (310/250) = 124%.  
7/31/10

Additional Details on Reverse: Yes / No (No)  
 Analyst: MO Date: 8/3/10  
 Reviewer: MO Date: 8/14/10

6a  
NW DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20100730

Instrument: FID3B.I

Project:

Calibration Date: 30-JUL-2010

SDG No.: 20100730

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	22218	21170	21958	21565	21008	20465	21398	3.0
AK Diesel	25279	23959	24625	24161	23624	22975	24104	3.3
OR Diesel	25497	24108	24785	24317	23782	23134	24271	3.4
o-Terph	19592	19395	20002	19771	20130	20713	19934	2.3

<- Indicates %RSD outside limits  
Surrogate areas are not included in Diesel RF calculation.

Quant Ranges :   WA Diesel   C12-C24 (3.468-5.603)  
                  AK Diesel   C10-C25 (2.858-5.764)  
                  OR Diesel   C10-C28 (2.858-6.244)

Calibration Files      Analysis Time

---

0730b018.d	30-JUL-2010 20:23
0730b019.d	30-JUL-2010 20:42
0730b020.d	30-JUL-2010 21:01
0730b021.d	30-JUL-2010 21:20
0730b022.d	30-JUL-2010 21:39
0730b023.d	30-JUL-2010 21:58

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Batch File: /chem3/fid3b.i/20100730.b  
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	1.033	0.933-1.133	+++++	+++++
2 C8	+++++	+++++	+++++	+++++	+++++	+++++	1.329	1.229-1.429	+++++	+++++
3 C10	2.859	2.858	2.857	2.859	2.859	2.863	2.858	2.808-2.908	2.859	0.002
4 C12	3.468	3.467	3.467	3.467	3.468	3.470	3.468	3.418-3.518	3.468	0.001
5 C14	3.925	3.924	3.925	3.925	3.926	3.928	3.927	3.877-3.977	3.926	0.002
6 C16	4.321	4.320	4.321	4.321	4.323	4.326	4.321	4.271-4.371	4.322	0.002
7 C18	4.674	4.674	4.675	4.676	4.678	4.683	4.675	4.625-4.725	4.677	0.003
8 o-terph	4.759	4.761	4.763	4.766	4.774	4.787	4.762	4.712-4.812	4.768	0.011
9 C20	4.998	4.997	4.996	4.998	4.998	5.002	4.998	4.948-5.048	4.998	0.002
10 C22	5.299	5.295	5.293	5.294	5.295	5.298	5.296	5.246-5.346	5.296	0.002
11 C24	5.597	5.601	5.604	5.603	5.602	5.604	5.603	5.553-5.653	5.602	0.003
12 C25	5.760	5.767	5.766	5.764	5.763	5.764	5.764	5.714-5.814	5.764	0.002
13 C26	5.922	5.926	5.921	5.928	5.926	5.924	5.926	5.876-5.976	5.925	0.002
14 C28	6.242	6.242	6.242	6.244	6.246	6.241	6.244	6.194-6.294	6.243	0.002
15 Triacon Surr	6.558	6.562	6.553	6.562	6.558	6.558	6.559	6.509-6.609	6.559	0.003
16 C32	6.842	6.845	6.846	6.866	6.846	6.847	6.856	6.806-6.906	6.849	0.008
17 C34	7.141	7.140	7.139	7.138	7.142	7.140	7.141	7.091-7.191	7.140	0.002

Reviewer 1 Mo Date: 8/13/10  
Reviewer 2 RB Date: 8/14/10

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Batch File: /chem3/fid3b.i/20100730.b  
Inst ID: fid3b.i

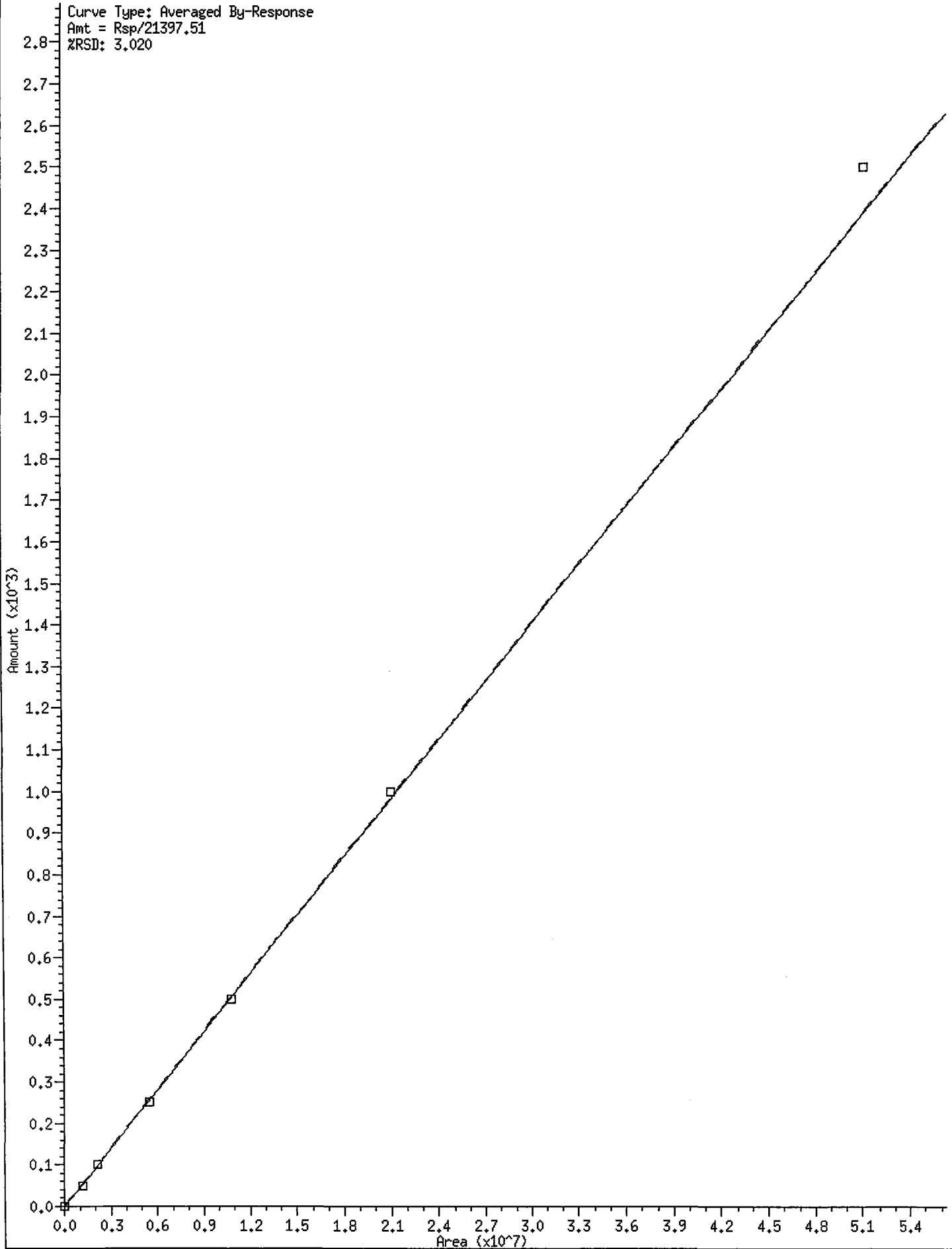
Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.120	11.020-11.220	+++++	+++++
19 C36	7.411	7.414	7.415	7.404	7.412	7.414	7.413	7.363-7.463	7.412	0.004
20 C38	7.672	7.670	7.668	7.673	7.673	7.669	7.670	7.620-7.720	7.671	0.002
21 C40	7.915	7.918	7.913	7.906	7.906	7.913	7.918	7.868-7.968	7.912	0.005
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

1 NW Diesel

Curve Type: Averaged By-Response

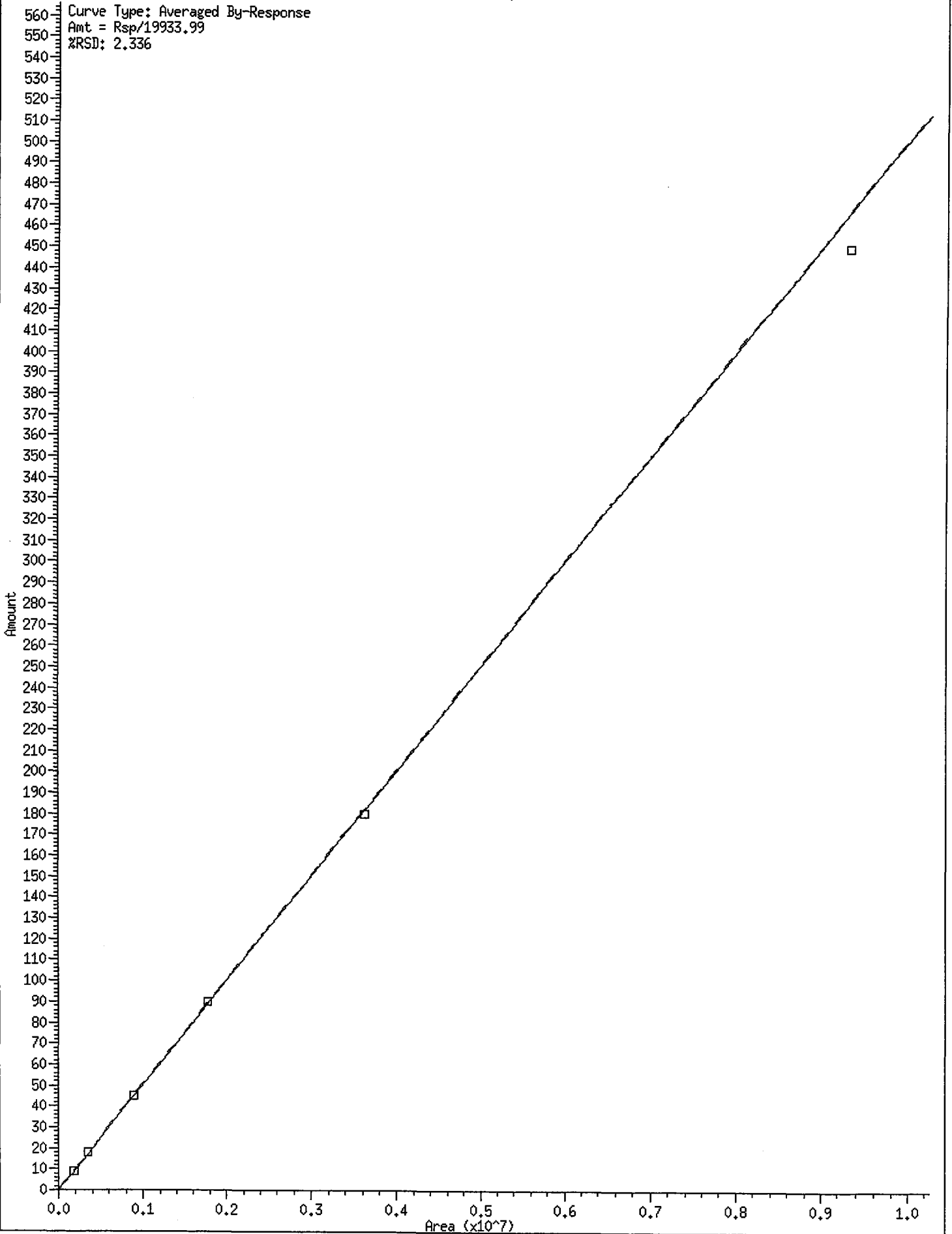
Amt = Rsp/21397.51

%RSD: 3.020



\* 8 o-terph

Curve Type: Averaged By-Response  
Amt = Rsp/19933.99  
%RSD: 2.336



RG79: 01008



6a  
NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20100730

Instrument: FID3B.I

Project:

Calibration Date: 31-JUL-2010

SDG No.: 20100730

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	12620	11767	11795	11887	11681	12739	12081	3.9
Triac Surr	14850	15844	16922	17487	16823	18431	16726	7.5

<- Indicates %RSD outside limits  
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files      Analysis Time

---

0730b025.d	30-JUL-2010 22:36
0730b026.d	30-JUL-2010 22:55
0730b027.d	30-JUL-2010 23:14
0730b028.d	30-JUL-2010 23:32
0730b030.d	31-JUL-2010 00:10
0730b032.d	31-JUL-2010 00:47

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Batch File: /chem3/fid3b.i/20100730.b  
Inst ID: fid3b.i

ID: RT01 RT02 RT03 RT04 RT05 RT06  
FILENAME: 0730b025 0730b026 0730b027 0730b028 0730b030 0730b032  
INJ. DATE: 30-JUL-2010 30-JUL-2010 30-JUL-2010 31-JUL-2010 31-JUL-2010 31-JUL-2010  
INJ. TIME: 22:36 22:55 23:14 23:32 00:10 00:47

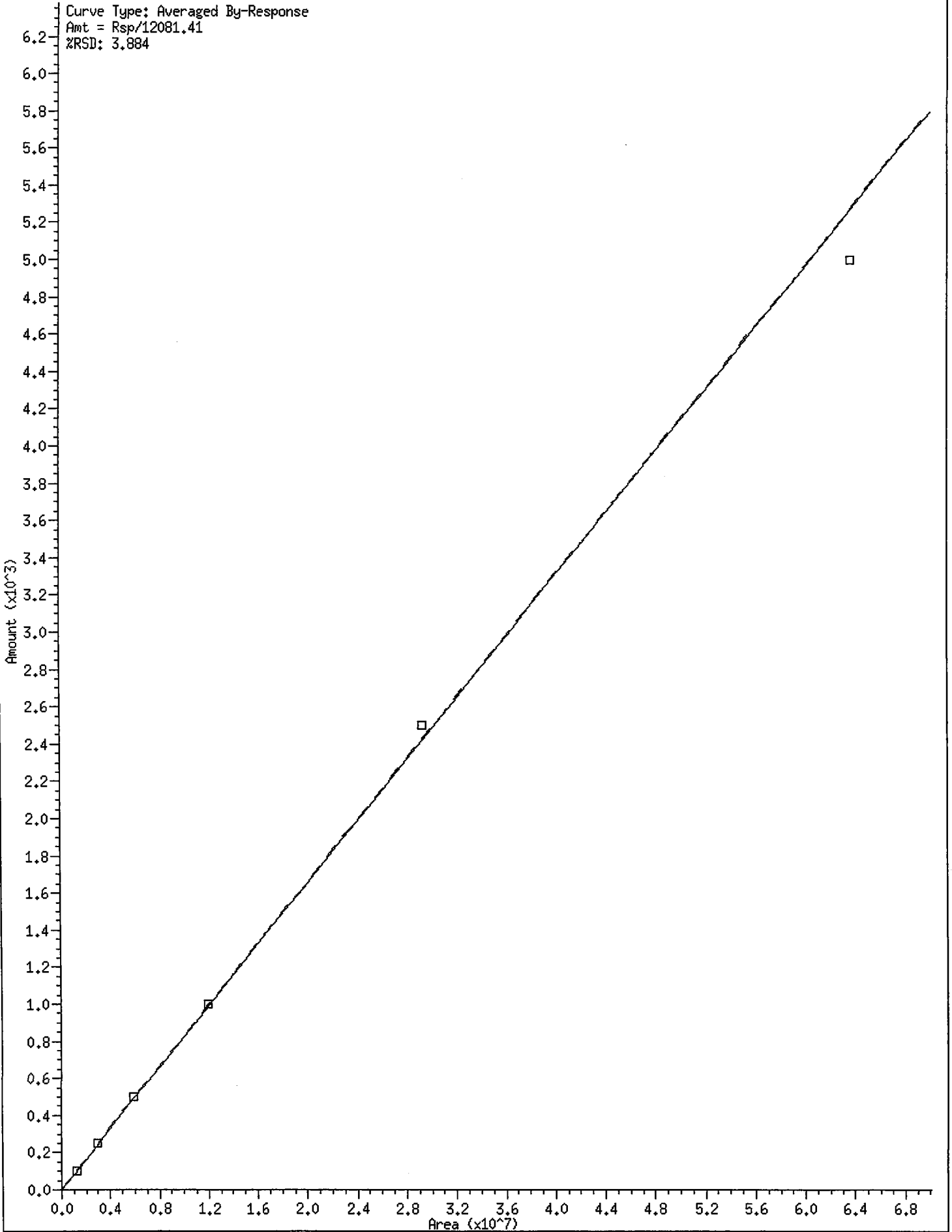
Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	1.033	0.933-1.133	+++++	+++++
2 C8	+++++	+++++	+++++	+++++	+++++	+++++	1.329	1.229-1.429	+++++	+++++
3 C10	2.861	2.860	2.856	2.858	2.857	2.860	2.858	2.808-2.908	2.859	0.002
4 C12	3.472	3.466	3.467	3.470	3.471	3.468	3.468	3.418-3.518	3.469	0.002
5 C14	3.925	3.923	3.922	3.925	3.927	3.927	3.927	3.877-3.977	3.925	0.002
6 C16	4.325	4.322	4.319	4.322	4.322	4.322	4.321	4.271-4.371	4.322	0.002
7 C18	4.673	4.673	4.674	4.677	4.676	4.674	4.675	4.625-4.725	4.674	0.002
8 o-terph	4.766	4.763	4.762	4.758	4.758	4.757	4.762	4.712-4.812	4.761	0.003
9 C20	5.000	4.999	4.998	5.000	4.996	4.996	4.998	4.948-5.048	4.998	0.002
10 C22	5.298	5.293	5.292	5.298	5.295	5.294	5.296	5.246-5.346	5.295	0.003
11 C24	5.605	5.603	5.604	5.601	5.605	5.606	5.603	5.553-5.653	5.604	0.002
12 C25	5.764	5.760	5.766	5.767	5.762	5.760	5.764	5.714-5.814	5.763	0.003
13 C26	5.924	5.923	5.924	5.924	5.928	5.924	5.926	5.876-5.976	5.924	0.002
14 C28	6.245	6.240	6.245	6.246	6.238	6.245	6.244	6.194-6.294	6.243	0.003
15 Triacon Surr	6.558	6.557	6.561	6.568	6.581	6.604	6.559	6.509-6.609	6.571	0.018
16 C32	6.858	6.855	6.858	6.854	6.857	6.855	6.856	6.806-6.906	6.856	0.002
17 C34	7.140	7.138	7.139	7.141	7.138	7.144	7.141	7.091-7.191	7.140	0.002

Reviewer 1 MJ Date: 8/23/10  
Reviewer 2 BB Date: 8/24/10

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

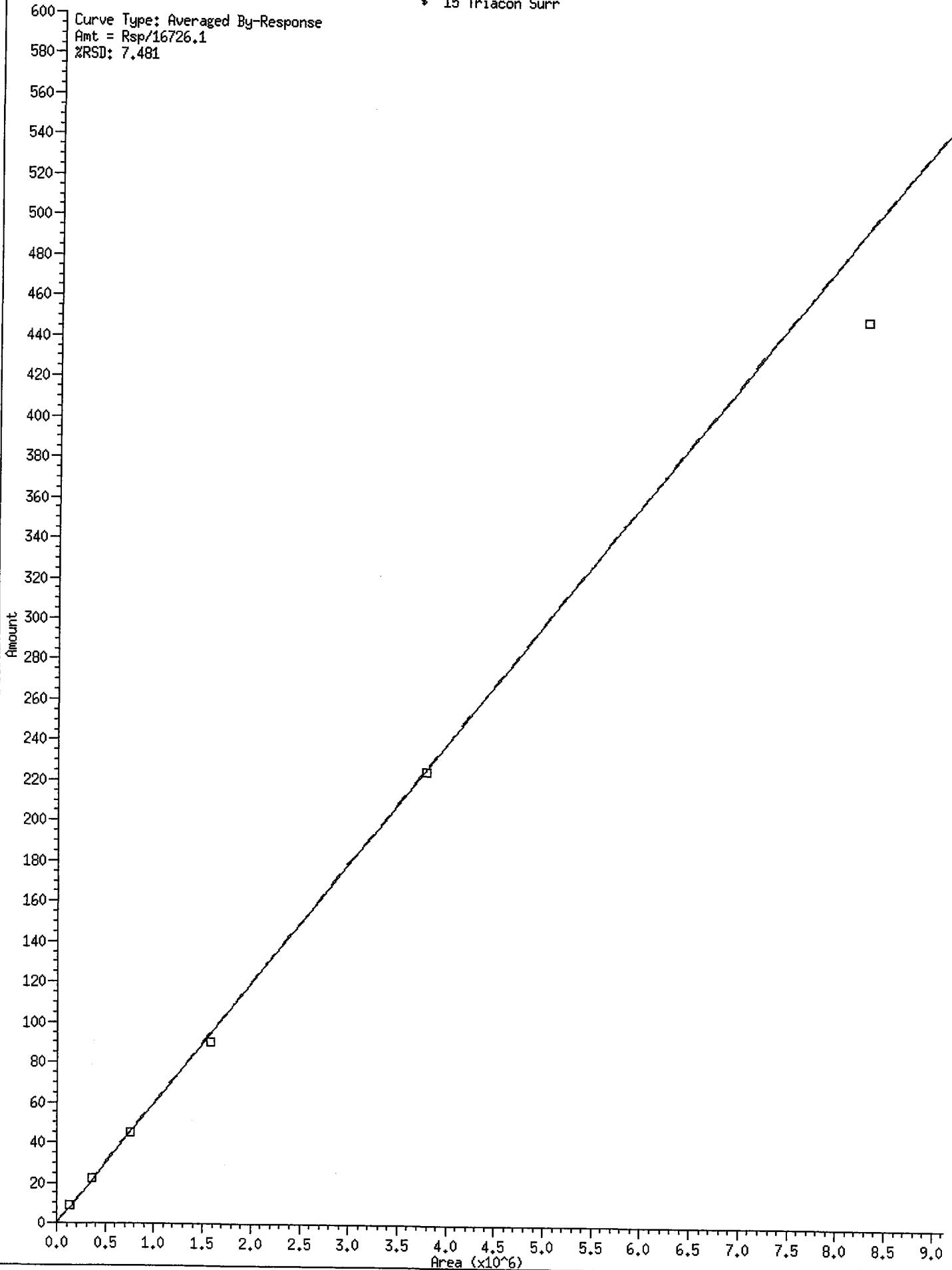
Method File: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Batch File: /chem3/fid3b.i/20100730.b  
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.120	11.020-11.220	+++++	+++++
19 C36	7.413	7.411	7.414	7.409	7.411	7.412	7.413	7.363-7.463	7.411	0.001
20 C38	7.672	7.671	7.668	7.668	7.670	7.669	7.670	7.620-7.720	7.670	0.002
21 C40	7.918	7.921	7.915	7.917	7.920	7.919	7.918	7.868-7.968	7.918	0.002
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++



\* 15 Triacon Surr

Curve Type: Averaged By-Response  
Amt = Rsp/16726.1  
%RSD: 7.481



RG79: 01013

# Analytical Resources Inc.: Organics Instrument Log

FID-3B Serial No.: US00003232

Date: 7/30/10  
 GC Program: TPHHT

Analysis: NWTHD  
 Column No: 162178

Analyst: ms  
 Column Type: 2R1HT

Instrument Tune (.U or .CT.): \_\_\_\_\_  
 Calibration File: \_\_\_\_\_

EM Voltage: \_\_\_\_\_  
 Curve Date: 7/30/10

IS/SS	Ical/Ccal	LCS/ICV
/	1700-1	/
/	1680-3	/
/	1730-3	/
/	1737-3	/

Time	Filename	LabID	ClientId	DF	Time	Filename	LabID	ClientId	DF
1	1336	0730b001.d	RINSE	1	23	2158	0730b023.d	DIESEL 2500	1
2	1355	0730b002.d	RINSE	1	24	2217	0730b024.d	DIESEL ICV	1
3	1414	0730b003.d	RINSE	1	25	2236	0730b025.d	MOIL 100	1
4	1433	0730b004.d	RINSE	1	26	2255	0730b026.d	MOIL 250	1
5	1453	0730b005.d	RINSE	1	27	2314	0730b027.d	MOIL 500	1
6	1512	0730b006.d	RINSE	1	28	2332	0730b028.d	MOIL 1000	1
7	1532	0730b007.d	RINSE	1	29	2351	0730b029.d	RINSE	1
8	1551	0730b008.d	RINSE	1	30	0010	0730b030.d	MOIL 2500	1
9	1611	0730b009.d	RINSE	1	31	0028	0730b031.d	RINSE	1
10	1631	0730b010.d	RINSE	1	32	0047	0730b032.d	MOIL 5000	1
11	1650	0730b011.d	RINSE	1	33	0106	0730b033.d	RINSE	1
12	1828	0730b012.d	RINSE	1	34	0125	0730b034.d	MOIL ICV	1
13	1846	0730b013.d	RINSE	1	35	0144	0730b035.d	RINSE	1
14	1906	0730b014.d	RINSE	1	36	0203	0730b036.d	RINSE	1
15	1925	0730b015.d	RINSE	1	37	0222	0730b037.d	DIESEL 250	1
16	1944	0730b016.d	RT	1	38	0240	0730b038.d	MOIL 500	1
17	2004	0730b017.d	IB	1					
18	2023	0730b018.d	DIESEL 50	1					
19	2042	0730b019.d	DIESEL 100	1					
20	2101	0730b020.d	DIESEL 250	1					
21	2120	0730b021.d	DIESEL 500	1					
22	2139	0730b022.d	DIESEL 1000	1					

*[Large handwritten scribble]*

*ms*  
 8/3/10

**Maintenance / Comments** The back injector is connected to the back detector. Clipped precolumn, detector column and changed presstight.

**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.

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b016.d  
Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: RT  
Client ID:  
Injection: 30-JUL-2010 19:44  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.033	0.000	456879	337608	GAS (Tol-C12)	1097687	40
C8	1.329	0.000	189901	240601	DIESEL (C12-C24)	1496059	70
C10	2.858	0.000	416657	232827	M.OIL (C24-C38)	1934119	160
C12	3.468	0.000	440250	214823	AK-102 (C10-C25)	1992788	83
C14	3.927	0.000	363188	216701	AK-103 (C25-C36)	1675056	188
C16	4.321	0.000	362104	222398	OR.DIES (C10-C28)	2818677	134
C18	4.675	0.000	368496	232634	OR.MOIL (C28-C40)	1352255	120
C20	4.998	0.000	363866	224926			
C22	5.296	0.000	339422	219901	STODDARD (C8-C12)	760079	27
C24	5.603	0.000	316031	231954			
C25	5.764	0.000	406879	323181			
C26	5.926	0.000	277906	237107			
C28	6.244	0.000	281413	242400			
C32	6.856	0.000	279045	260188			
C34	7.141	0.000	288583	263124	CREOSOT (C8-C22)	2002088	313
Filter Peak	----						
C36	7.413	0.000	290595	273201	BUNKERC (C10-C38)	3920470	454
o-terph	4.762	0.000	1421275	843115	JET-A (C10-C18)	1245736	79
Triacon Surr	6.559	0.000	941111	866222	IT.MOIL (C24-C40)	3050803	142

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

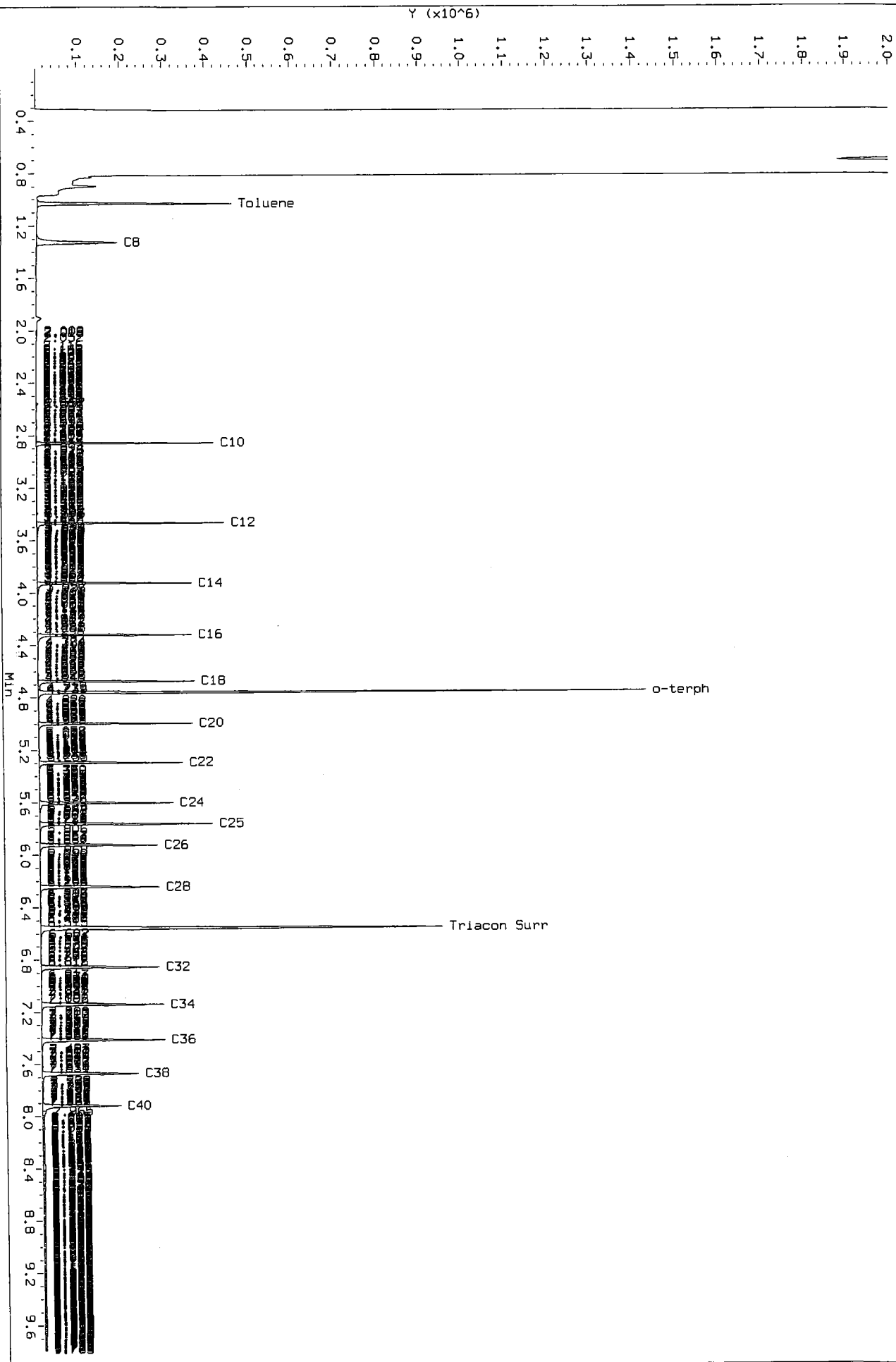
Surrogate	Area	Amount	%Rec
o-Terphenyl	843115	42.3	94.0
Triacontane	866222	51.8	115.1

*MS 8/31/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.1/20100730\_b/0730b016.d  
Injection Date: 30-JUL-2010 19:44  
Instrument: fid3b.1  
Client Sample ID:

HP6890 GC Data: 0730b016.d: 0.000 to 9.792 Min





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b017.d  
Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: IB  
Client ID:  
Injection: 30-JUL-2010 20:04  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.000	-1.033	0	0	GAS (Tol-C12)	53274	2
C8	----				DIESEL (C12-C24)	47392	2
C10	2.862	0.004	1018	855	M.OIL (C24-C38)	100239	8
C12	3.465	-0.003	808	432	AK-102 (C10-C25)	79393	3
C14	3.930	0.003	519	242	AK-103 (C25-C36)	76073	9
C16	4.323	0.002	239	128	OR.DIES (C10-C28)	81657	4
C18	4.670	-0.005	270	244	OR.MOIL (C28-C40)	127566	11
C20	4.988	-0.009	613	377			
C22	5.297	0.001	134	75	STODDARD (C8-C12)	53274	2
C24	5.602	-0.001	51	29			
C25	5.763	0.000	38	5			
C26	5.931	0.005	74	34			
C28	6.246	0.002	316	369			
C32	6.869	0.013	2077	3970			
C34	7.141	0.000	908	924	CREOSOT (C8-C22)	99784	16
Filter Peak	----						
C36	7.409	-0.004	1090	324	BUNKERC (C10-C38)	179595	21
o-terph	4.762	0.000	1553537	869035	JET-A (C10-C18)	60151	4
Triacon Surr	6.563	0.004	818399	711389	IT.MOIL (C24-C40)	841256	39

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	869035	43.6	96.9
Triacontane	711389	42.5	94.5

*MS 8/3/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Date : 30-JUL-2010 20:04

Client ID:

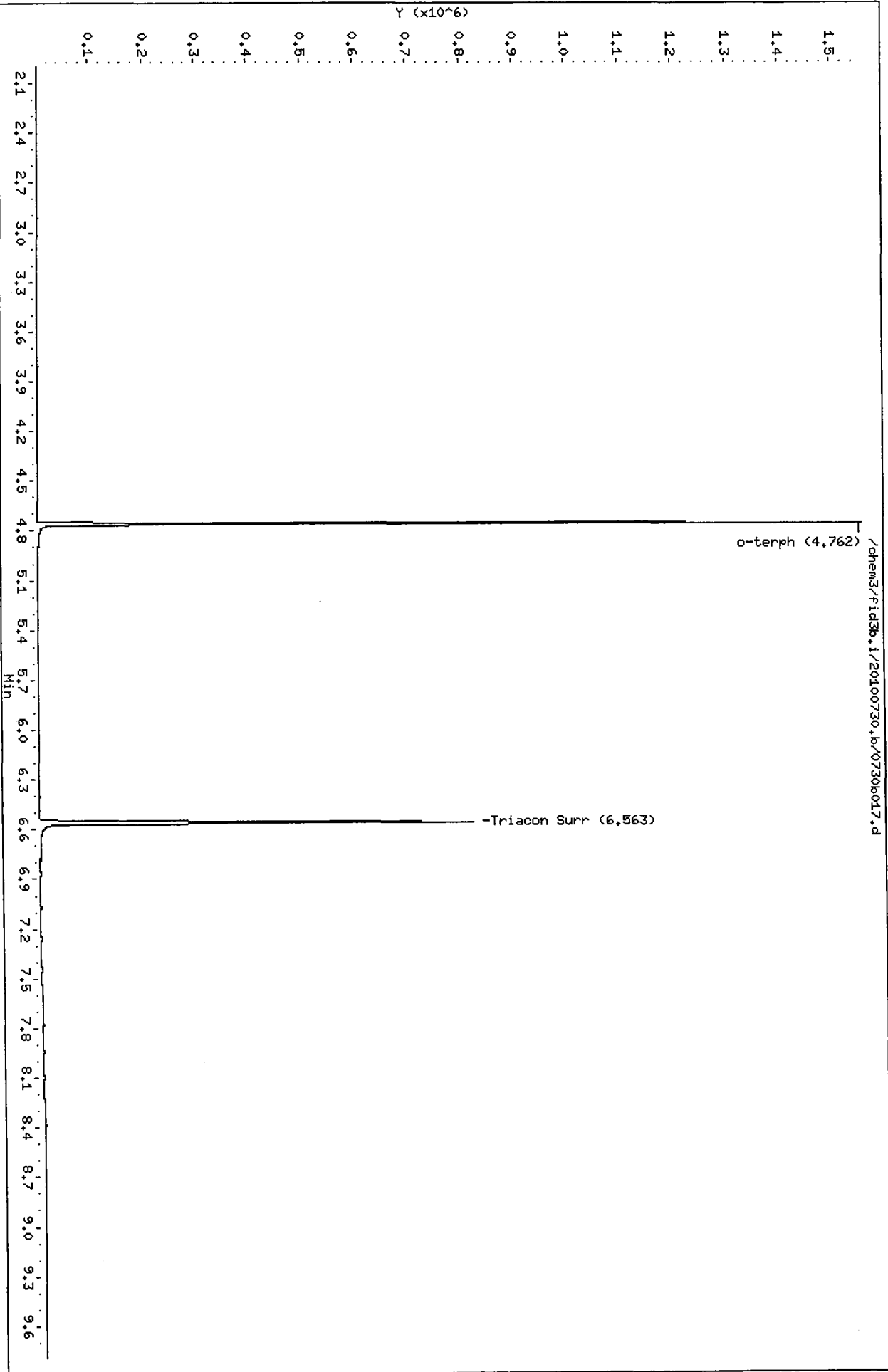
Instrument: fid3b.i

Sample Info: IB

Operator: HS

Column phase: RTX-1

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b018.d  
Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: DIESEL 50  
Client ID:  
Injection: 30-JUL-2010 20:23  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.000	-1.033	0	0	GAS (Tol-C12)	203100	7
C8	----				DIESEL (C12-C24)	1110903	52
C10	2.859	0.001	5638	4849	M.OIL (C24-C38)	63488	5
C12	3.468	0.001	8865	7583	AK-102 (C10-C25)	1263931	52
C14	3.925	-0.001	21926	23612	AK-103 (C25-C36)	40579	5
C16	4.321	0.000	39235	39802	OR.DIES (C10-C28)	1274848	60
C18	4.674	-0.001	39296	35683	OR.MOIL (C28-C40)	78683	7
C20	4.998	0.000	18246	22375			
C22	5.299	0.003	5339	5505	STODDARD (C8-C12)	203100	7
C24	5.597	-0.006	1196	621			
C25	5.760	-0.003	625	310			
C26	5.922	-0.003	296	159			
C28	6.242	-0.002	52	16			
C32	6.842	-0.013	172	67			
C34	7.141	0.000	373	160	CREOSOT (C8-C22)	1280826	200
Filter Peak	----						
C36	7.411	-0.002	735	302	BUNKERC (C10-C38)	1323852	153
o-terph	4.759	-0.003	369839	176329	JET-A (C10-C18)	945094	60
Triacon Surr	6.558	-0.001	38	9	IT.MOIL (C24-C40)	93176	4

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	176329	8.8	19.7
Triacantane	9	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

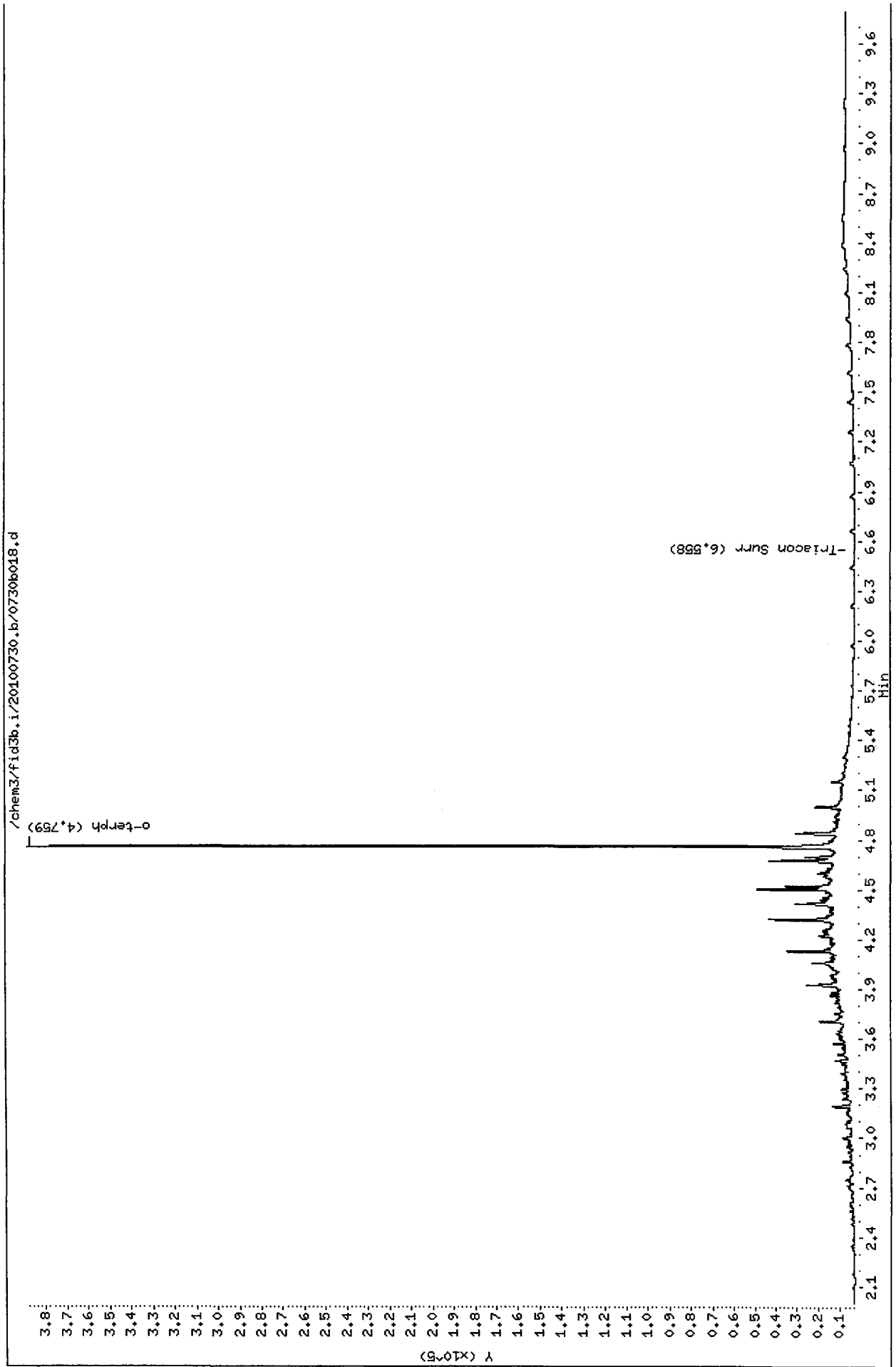
MANUAL ADJUSTMENTS

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

Analyst MS Date 8/3/10

Data File: /chem3/fid3b.i/20100730.b/0730b018.d  
Date : 30-JUL-2010 20:23  
Client ID:  
Sample Info: DIESEL 50  
Column phase: RTX-1

Instrument: fid3b.i  
Operator: MS  
Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b019.d  
Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: DIESEL 100  
Client ID:  
Injection: 30-JUL-2010 20:42  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.000	-1.033	0	0	GAS (Tol-C12)	357151	13
C8	----				DIESEL (C12-C24)	2117036	99
C10	2.858	0.000	10639	8623	M.OIL (C24-C38)	49930	4
C12	3.467	-0.001	21033	17918	AK-102 (C10-C25)	2395904	99
C14	3.924	-0.003	50684	48589	AK-103 (C25-C36)	30461	3
C16	4.320	-0.001	89321	73174	OR.DIES (C10-C28)	2410790	114
C18	4.674	-0.001	82793	68218	OR.MOIL (C28-C40)	55412	5
C20	4.997	-0.001	44397	37760			
C22	5.295	-0.001	15167	18309	STODDARD (C8-C12)	357151	13
C24	5.601	-0.003	2183	553			
C25	5.767	0.003	1066	252			
C26	5.926	0.000	515	99			
C28	6.242	-0.003	97	42			
C32	6.845	-0.010	124	24			
C34	7.140	-0.002	297	98	CREOSOT (C8-C22)	2410629	377
Filter Peak	----						
C36	7.414	0.000	654	220	BUNKERC (C10-C38)	2440659	282
o-terph	4.761	-0.001	724883	349103	JET-A (C10-C18)	1787874	113
Triacon Surr	6.562	0.003	35	12	IT.MOIL (C24-C40)	75484	4

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

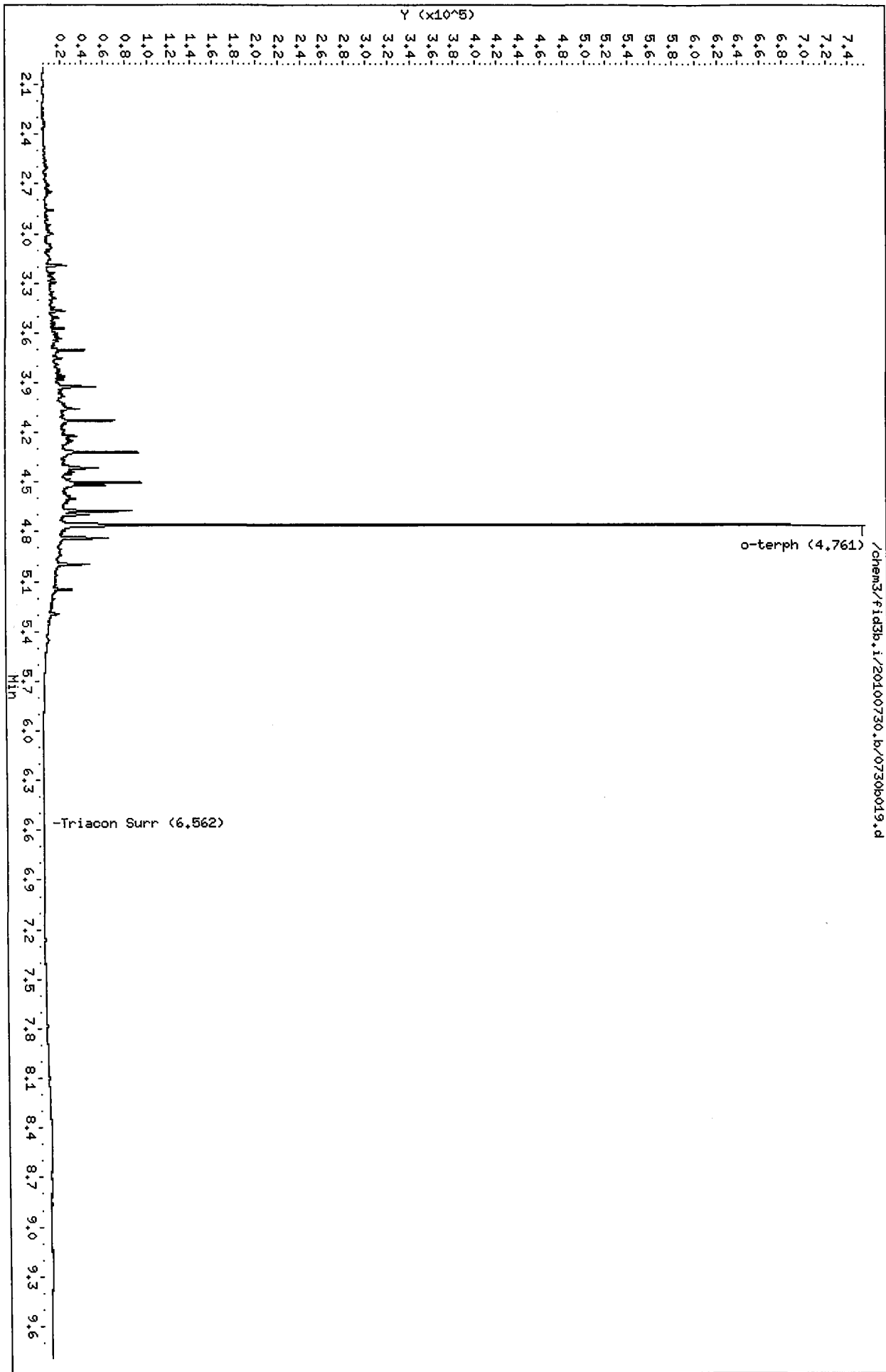
Surrogate	Area	Amount	%Rec
o-Terphenyl	349103	17.5	38.9
Triacontane	12	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst MS Date 8/3/10



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b020.d  
Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: DIESEL 250  
Client ID:  
Injection: 30-JUL-2010 21:01  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.000	-1.033	0	0	GAS (Tol-C12)	832540	30
C8	----				DIESEL (C12-C24)	5489470	257
C10	2.857	-0.001	26815	24142	M.OIL (C24-C38)	83893	7
C12	3.467	-0.001	68591	49107	AK-102 (C10-C25)	6156318	255
C14	3.925	-0.002	140104	127189	AK-103 (C25-C36)	56030	6
C16	4.321	0.000	232770	207768	OR.DIES (C10-C28)	6196310	294
C18	4.675	0.000	208305	168485	OR.MOIL (C28-C40)	57280	5
C20	4.996	-0.001	126032	107297			
C22	5.293	-0.003	50635	46451	STODDARD (C8-C12)	832540	30
C24	5.604	0.001	9772	11489			
C25	5.766	0.003	3129	1191			
C26	5.921	-0.004	1314	959			
C28	6.242	-0.002	220	92			
C32	6.846	-0.010	82	35			
C34	7.139	-0.002	240	125	CREOSOT (C8-C22)	6143951	961
Filter Peak	----						
C36	7.415	0.002	533	105	BUNKERC (C10-C38)	6227250	720
o-terph	4.763	0.001	1611540	900101	JET-A (C10-C18)	4563495	288
Triacon Surr	6.553	-0.006	23	12	IT.MOIL (C24-C40)	110245	5

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

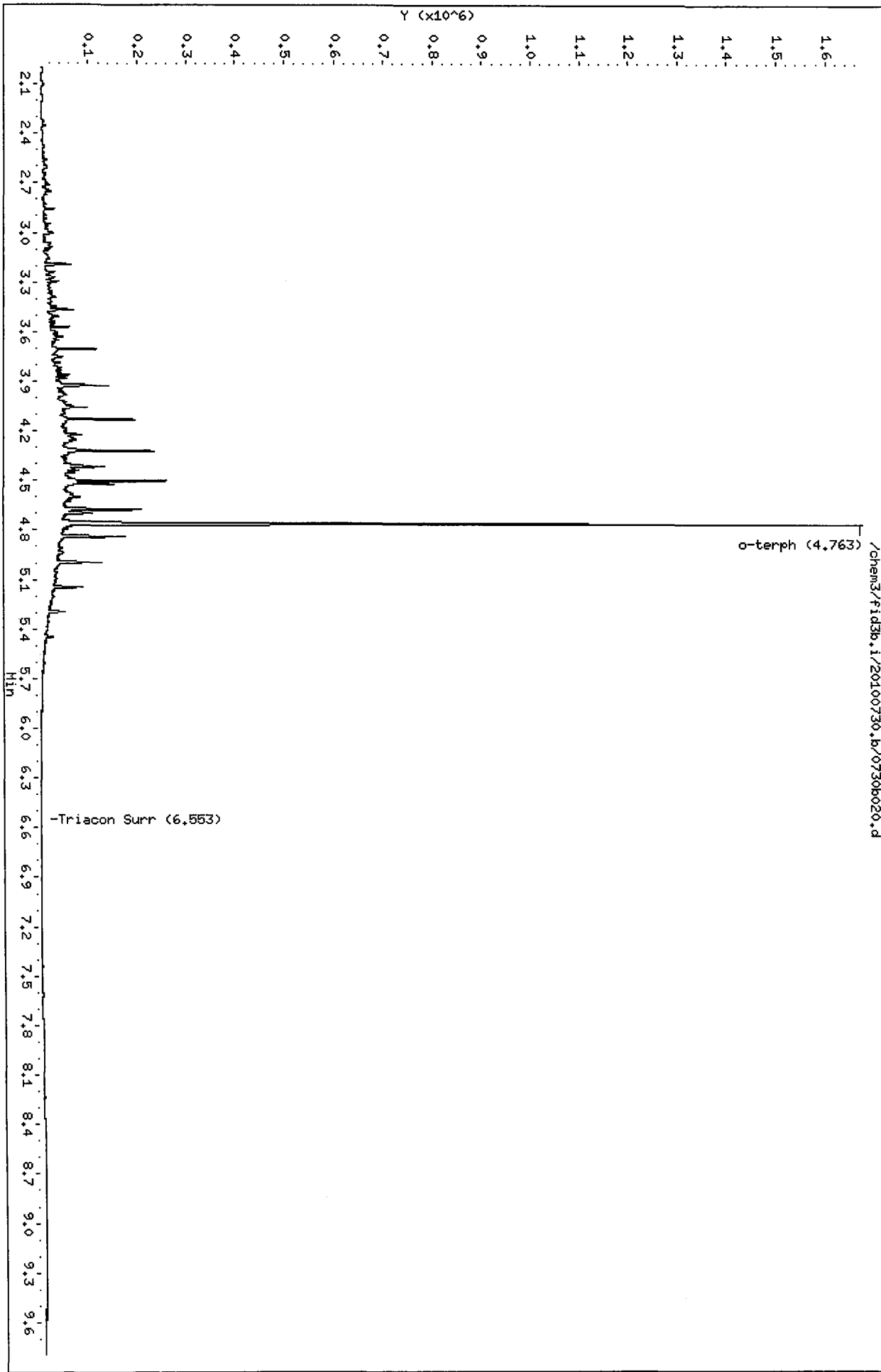
Surrogate	Area	Amount	%Rec
o-Terphenyl	900101	45.2	100.3
Triacotane	12	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst MS Date 8/3/10





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b021.d  
Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: DIESEL 500  
Client ID:  
Injection: 30-JUL-2010 21:20  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.000	-1.033	0	0	GAS (Tol-C12)	1605957	59
C8	----				DIESEL (C12-C24)	10782573	504
C10	2.859	0.001	57423	40767	M.OIL (C24-C38)	193569	16
C12	3.467	-0.001	150148	107232	AK-102 (C10-C25)	12080374	501
C14	3.925	-0.002	281705	192683	AK-103 (C25-C36)	138842	16
C16	4.321	0.000	459275	397727	OR.DIES (C10-C28)	12158488	577
C18	4.676	0.001	438078	346941	OR.MOIL (C28-C40)	138643	12
C20	4.998	0.000	247680	229025			
C22	5.294	-0.002	107189	91506	STODDARD (C8-C12)	1605957	58
C24	5.603	-0.001	25044	36788			
C25	5.764	0.000	8933	11255			
C26	5.928	0.002	2767	880			
C28	6.244	0.000	417	209			
C32	6.866	0.010	6270	6679			
C34	7.138	-0.003	199	114	CREOSOT (C8-C22)	12025891	1880
Filter Peak	----						
C36	7.404	-0.009	435	170	BUNKERC (C10-C38)	12247345	1417
o-terph	4.766	0.004	2832336	1779428	JET-A (C10-C18)	8975857	566
Triacon Surr	6.562	0.003	37	8	IT.MOIL (C24-C40)	243363	11

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

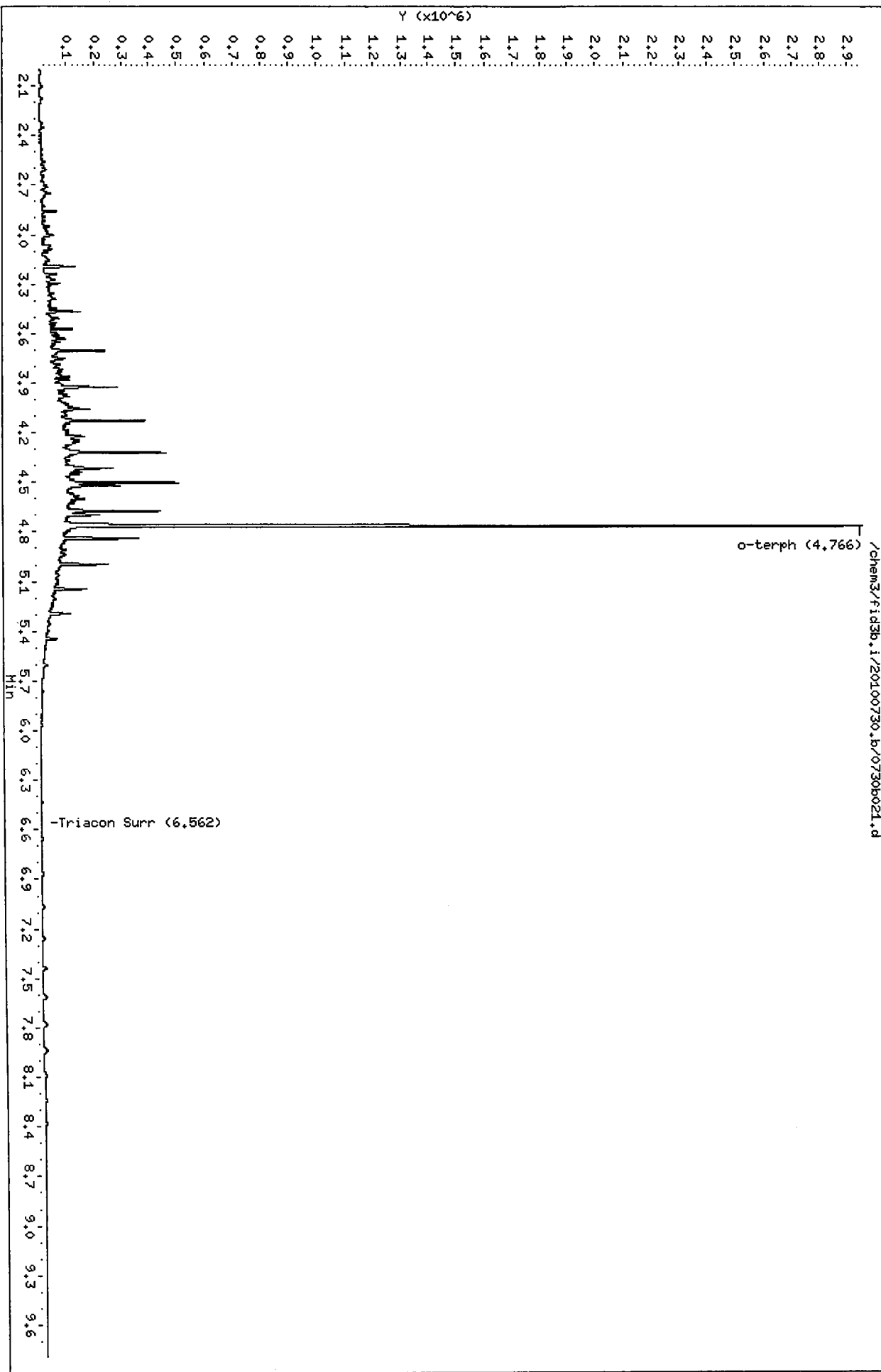
Surrogate	Area	Amount	%Rec
o-Terphenyl	1779428	89.3	198.4
Triacotane	8	0.0	0.0

MANUAL ADJUSTMENTS

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

Analyst MS Date 8/3/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010 ✓
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010 ✓
Diesel	21397.5	30-JUL-2010 ✓
Motor Oil	12081.4	30-JUL-2010 ✓
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b022.d  
Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: DIESEL 1000  
Client ID:  
Injection: 30-JUL-2010 21:39  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.000	-1.033	0	0	GAS (To1-C12)	3183656	116
C8	----				DIESEL (C12-C24)	21008398	982
C10	2.859	0.001	116245	79992	M.OIL (C24-C38)	246197	20
C12	3.468	0.000	303568	209857	AK-102 (C10-C25)	23623694	980
C14	3.926	-0.001	587854	482277	AK-103 (C25-C36)	175618	20
C16	4.323	0.002	905598	796869	OR.DIES (C10-C28)	23782497	1128
C18	4.678	0.002	807496	638826	OR.MOIL (C28-C40)	50889	5
C20	4.998	0.000	504752	389992			
C22	5.295	-0.001	227321	199991	STODDARD (C8-C12)	3183656	115
C24	5.602	-0.001	59793	78521			
C25	5.763	-0.001	23276	31928			
C26	5.926	0.000	7146	5485			
C28	6.246	0.002	980	756			
C32	6.846	-0.010	31	8			
C34	7.142	0.001	155	78	CREOSOT (C8-C22)	23499171	3674
Filter Peak	----						
C36	7.412	-0.001	462	183	BUNKERC (C10-C38)	23812236	2755
o-terph	4.774	0.012	5143602	3623484	JET-A (C10-C18)	17422692	1099
Triacon Surr	6.558	-0.001	143	74	IT.MOIL (C24-C40)	267420	12

Range Times: NW Diesel (3.518 - 5.653) NW Gas (0.983 - 3.518) NW M.Oil (5.653 - 7.720)  
AK102 (2.808 - 5.714) AK103 (5.714 - 7.463) Jet A (2.808 - 4.725)

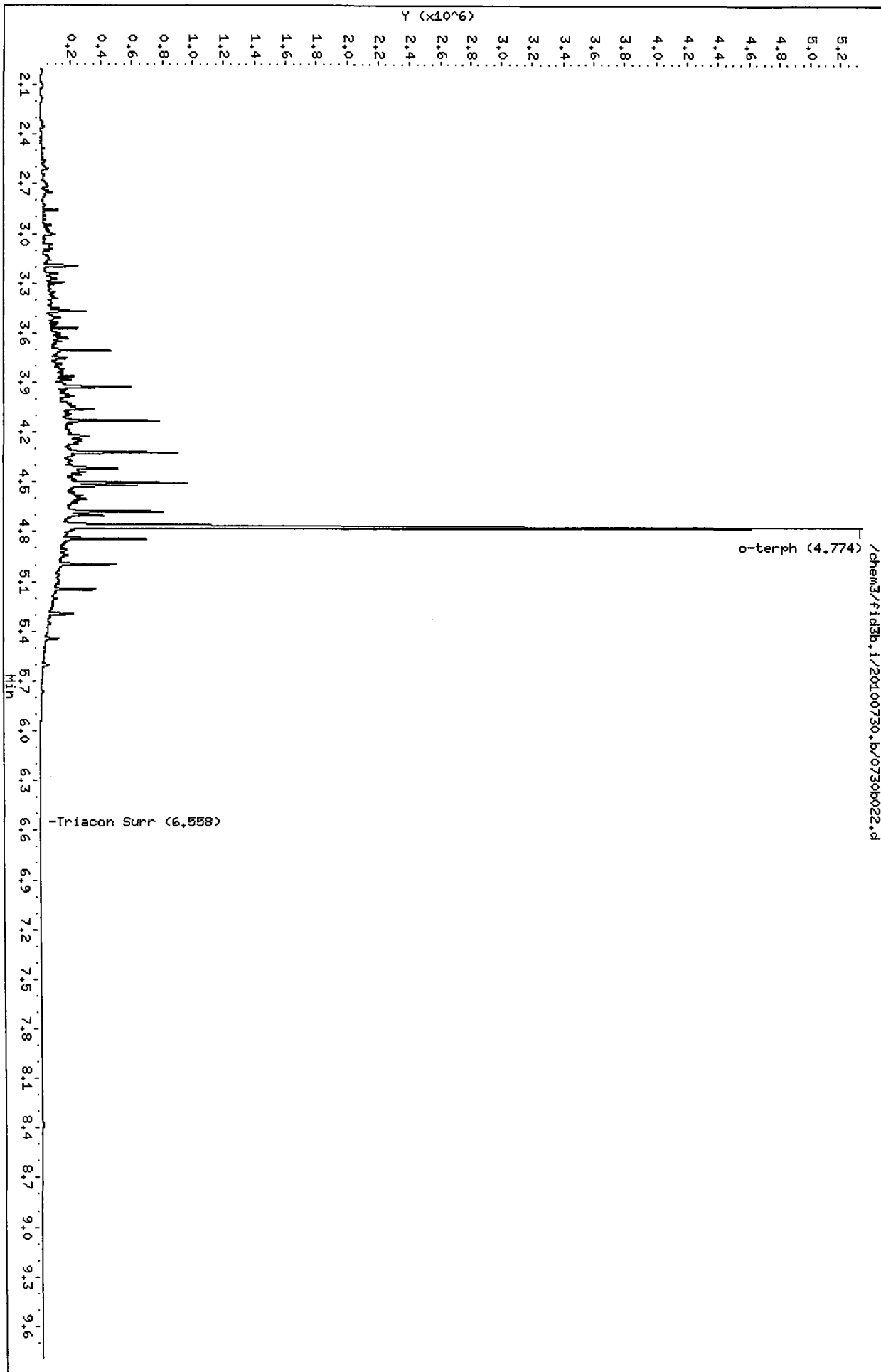
Surrogate	Area	Amount	%Rec
o-Terphenyl	3623484	181.8	403.9
Triacontane	74	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst MM Date 8/3/10



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b023.d  
Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: DIESEL 2500  
Client ID:  
Injection: 30-JUL-2010 21:58  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.000	-1.033	0	0	GAS (Tol-C12)	7659234	280
C8	----				DIESEL (C12-C24)	51163096	2391
C10	2.863	0.005	285421	198918	M.OIL (C24-C38)	572344	47
C12	3.470	0.002	694665	522755	AK-102 (C10-C25)	57436252	2383
C14	3.929	0.002	1273547	1199224	AK-103 (C25-C36)	425535	48
C16	4.326	0.004	2112542	1828650	OR.DIES (C10-C28)	57835068	2742
C18	4.683	0.007	1755535	1805295	OR.MOIL (C28-C40)	53128	5
C20	5.002	0.005	1242586	994726			
C22	5.298	0.002	554784	489931	STODDARD (C8-C12)	7659234	277
C24	5.604	0.001	157104	182807			
C25	5.764	0.000	68790	96490			
C26	5.924	-0.001	24943	35913			
C28	6.241	-0.003	2845	707			
C32	6.847	-0.009	103	17			
C34	7.140	-0.001	80	25	CREOSOT (C8-C22)	57023201	8915
Filter Peak	----						
C36	7.414	0.001	258	70	BUNKERC (C10-C38)	57869869	6695
o-terph	4.787	0.025	8993833	9320882	JET-A (C10-C18)	42325036	2671
Triacon Surr	6.558	-0.002	576	210	IT.MOIL (C24-C40)	590881	27

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	9320882	467.6	1039.1
Triacontane	210	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

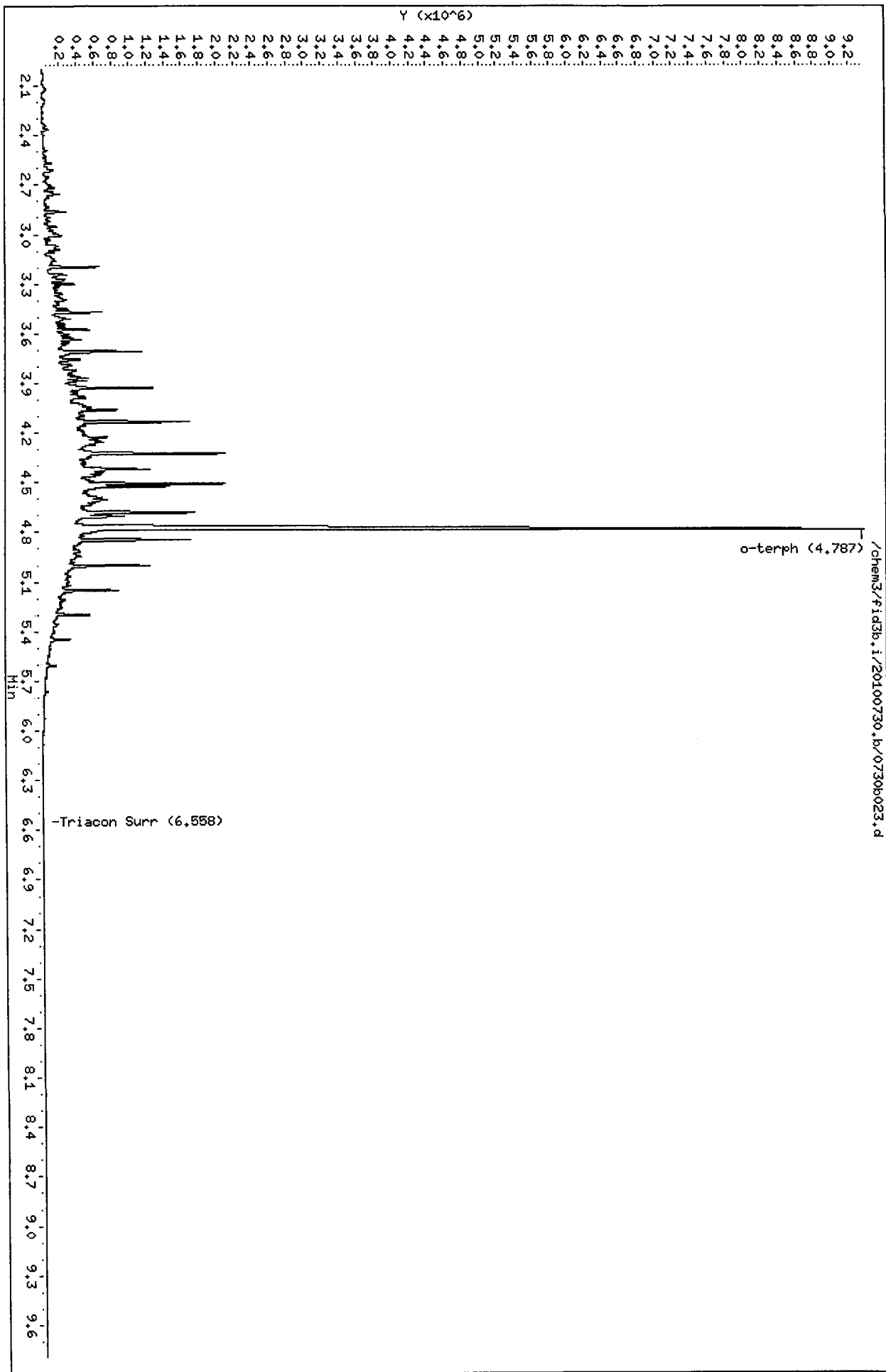
MANUAL ADJUSTMENTS

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

Analyst DM Date 8/3/10

Data File: /chem3/fid3b.i/20100730.b/0730b023.d  
Date: 30-JUL-2010 21:58  
Client ID:  
Sample Info: DIESEL 2500  
Column phase: RTX-1

Instrument: fid3b.i  
Operator: HS  
Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b024.d  
Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: DIESEL ICV  
Client ID:  
Injection: 30-JUL-2010 22:17  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	1033627	38
C8	----				DIESEL (C12-C24)	6633491	310
C10	2.859	0.001	35248	24957	M.OIL (C24-C38)	127459	11
C12	3.467	0.000	86410	59948	AK-102 (C10-C25)	7469067	310
C14	3.926	-0.001	173324	148864	AK-103 (C25-C36)	93021	10
C16	4.320	-0.001	296816	249967	OR.DIES (C10-C28)	7515320	356
C18	4.676	0.000	273795	228555	OR.MOIL (C28-C40)	99093	9
C20	4.997	-0.001	155638	143379			
C22	5.294	-0.002	60394	56049	STODDARD (C8-C12)	1033627	37
C24	5.605	0.002	13282	16336			
C25	5.765	0.001	4054	633			
C26	5.927	0.001	1441	1201			
C28	6.248	0.004	261	48			
C32	6.870	0.014	5168	4822			
C34	7.140	-0.001	246	62	CREOSOT (C8-C22)	7455713	1166
Filter Peak	----						
C36	7.410	-0.003	515	121	BUNKERC (C10-C38)	7579454	877
o-terph	4.764	0.002	2022776	1079874	JET-A (C10-C18)	5495826	347
Triacon Surr	6.562	0.003	18	7	IT.MOIL (C24-C40)	162424	8

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1079874	54.2	120.4
Triacontane	7	0.0	0.0

MANUAL ADJUSTMENTS

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

Analyst MS Date 8/3/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Date: 30-JUL-2010 22:17

Instrument: fid3b.i

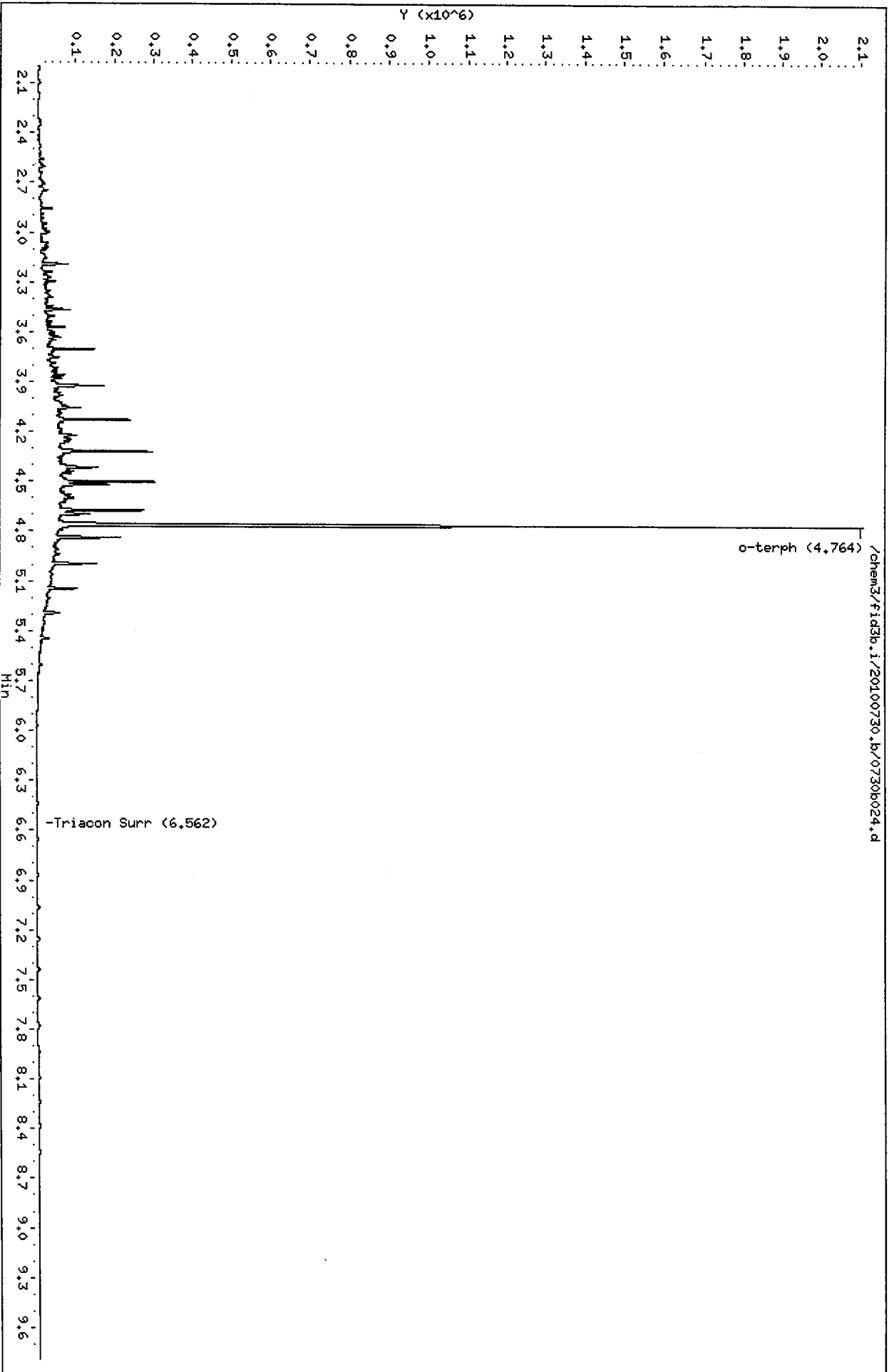
Client ID:

Sample Info: DIESEL ICV

Operator: HS

Column phase: RTX-1

Column diameter: 2.00





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b025.d  
Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: MOIL 100  
Client ID:  
Injection: 30-JUL-2010 22:36  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.000	-1.033	0	0	GAS (Tol-C12)	59389	2
C8	----				DIESEL (C12-C24)	136639	6
C10	2.861	0.003	1070	391	M.OIL (C24-C38)	1262007	104
C12	3.472	0.004	808	323	AK-102 (C10-C25)	192127	8
C14	3.925	-0.002	408	197	AK-103 (C25-C36)	1074099	120
C16	4.325	0.003	148	52	OR.DIES (C10-C28)	467661	22
C18	4.673	-0.002	50	17	OR.MOIL (C28-C40)	1110594	99
C20	5.000	0.003	534	84			
C22	5.298	0.002	2675	836	STODDARD (C8-C12)	59389	2
C24	5.605	0.002	5233	917			
C25	5.764	0.000	6238	1108			
C26	5.924	-0.002	7918	3299			
C28	6.245	0.001	9206	1987			
C32	6.858	0.002	12172	4066			
C34	7.140	-0.001	12960	3267	CREOSOT (C8-C22)	118096	18
Filter Peak	----						
C36	7.413	-0.001	11888	4717	BUNKERC (C10-C38)	1435110	166
o-terph	4.766	0.004	653	656	JET-A (C10-C18)	58172	4
Triacon Surr	6.558	-0.001	177130	133653	IT.MOIL (C24-C40)	1538805	72

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

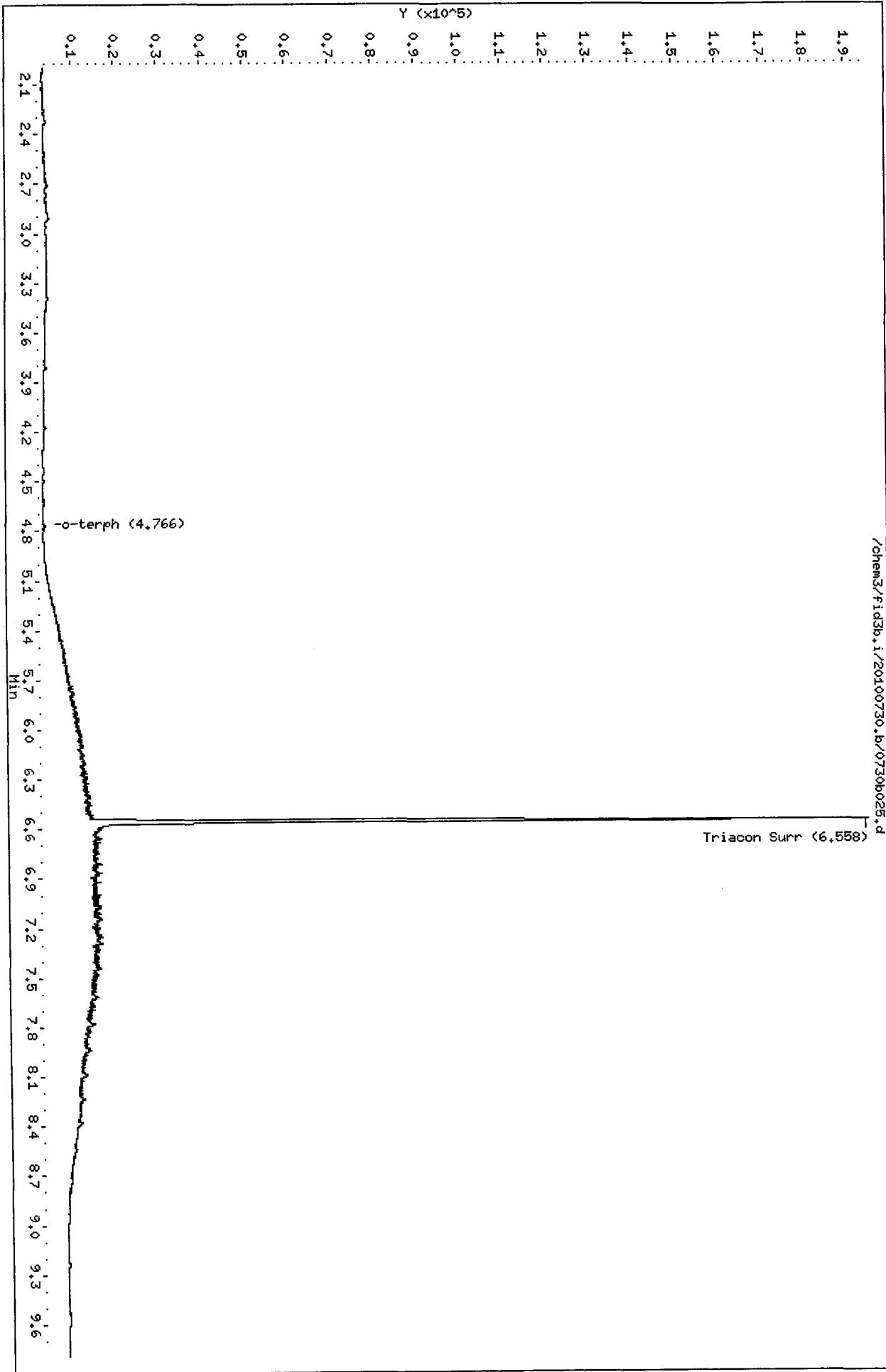
Surrogate	Area	Amount	%Rec
o-Terphenyl	656	0.0	0.1
Triacontane	133653	8.0	17.8

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

1. Peak not found
  2. Poor Chromatography
  3. Baseline Correction
  4. Totals Calculation
  5. Other
- Analyst: MS Date: 8/3/10

/chem3/fid3b.i/20100730.b/0730025.d



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b026.d  
Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: MOIL 250  
Client ID:  
Injection: 30-JUL-2010 22:55  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.000	-1.033	0	0	GAS (Tol-C12)	54421	2
C8	----				DIESEL (C12-C24)	322420	15
C10	2.860	0.002	1106	911	M.OIL (C24-C38)	2941763	243
C12	3.466	-0.001	692	284	AK-102 (C10-C25)	405267	17
C14	3.923	-0.003	393	183	AK-103 (C25-C36)	2523700	283
C16	4.322	0.001	138	66	OR.DIES (C10-C28)	1063179	50
C18	4.673	-0.002	150	79	OR.MOIL (C28-C40)	2531012	224
C20	4.999	0.002	1661	707			
C22	5.293	-0.003	6646	2620	STODDARD (C8-C12)	54421	2
C24	5.603	0.000	12926	3044			
C25	5.760	-0.003	15791	3992			
C26	5.923	-0.002	18737	5063			
C28	6.240	-0.004	22766	17103			
C32	6.855	0.000	29395	10185			
C34	7.138	-0.003	29817	13225	CREOSOT (C8-C22)	176037	28
Filter Peak	----						
C36	7.411	-0.002	26300	7168	BUNKERC (C10-C38)	3299187	382
o-terph	4.763	0.002	758	732	JET-A (C10-C18)	56598	4
Triacon Surr	6.557	-0.002	441016	356482	IT.MOIL (C24-C40)	3593249	167

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	732	0.0	0.1
Triacantane	356482	21.3	47.4

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst JM Date 8/3/10

Date : 30-JUL-2010 22:55

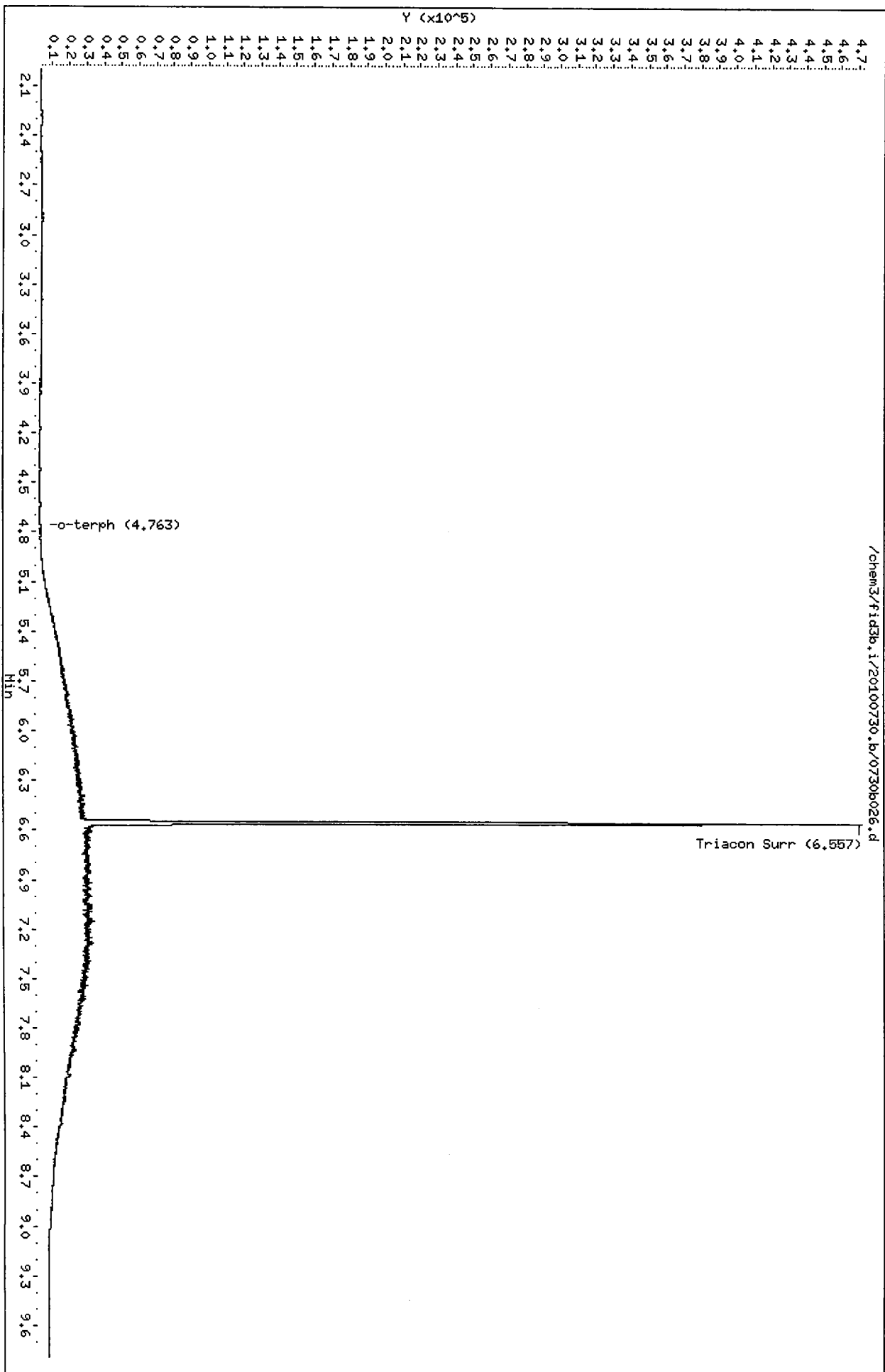
Client ID:

Instrument: fid3b.i

Sample Info: M01L 250

Column phase: RTX-1

Operator: MS  
Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b027.d  
Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: MOIL 500  
Client ID:  
Injection: 30-JUL-2010 23:14  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.000	-1.033	0	0	GAS (Tol-C12)	61429	2
C8	----				DIESEL (C12-C24)	661397	31
C10	2.856	-0.002	1273	310	M.OIL (C24-C38)	5897444	488
C12	3.467	-0.001	772	289	AK-102 (C10-C25)	796757	33
C14	3.922	-0.005	525	176	AK-103 (C25-C36)	5098876	571
C16	4.319	-0.002	278	113	OR.DIES (C10-C28)	2129868	101
C18	4.674	-0.001	552	196	OR.MOIL (C28-C40)	5025371	446
C20	4.998	0.000	3647	716			
C22	5.292	-0.004	14044	4392	STODDARD (C8-C12)	61429	2
C24	5.604	0.000	27326	15789			
C25	5.766	0.002	33190	10855			
C26	5.924	-0.002	38046	12688			
C28	6.245	0.000	48533	19176			
C32	6.858	0.002	63236	21003			
C34	7.139	-0.002	59785	13961	CREOSOT (C8-C22)	311324	49
Filter Peak	----						
C36	7.414	0.000	57110	39334	BUNKERC (C10-C38)	6597535	763
o-terph	4.762	0.000	1198	1526	JET-A (C10-C18)	73818	5
Triacon Surr	6.561	0.001	859319	761480	IT.MOIL (C24-C40)	7216629	336

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1526	0.1	0.2
Triacotane	761480	45.5	101.2

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst JMS Date 8/3/10

Date : 30-JUL-2010 23:14

Client ID:

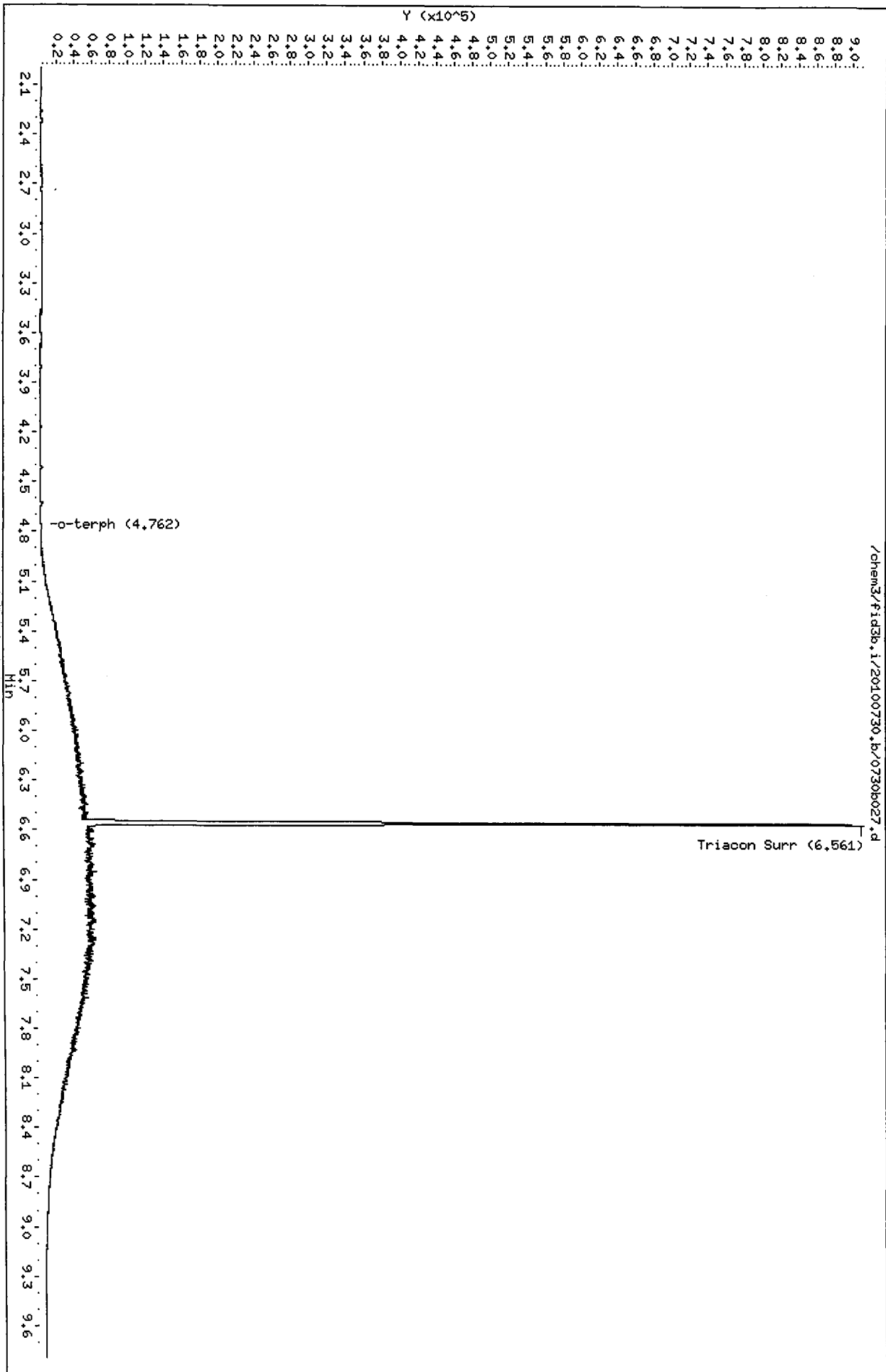
Sample Info: M01L 500

Column phase: RTX-1

Instrument: fid3b.i

Operator: MS

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b028.d  
Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: MOIL 1000  
Client ID:  
Injection: 30-JUL-2010 23:32  
Dilution Factor: 1

FID:3B RESULTS							
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.000	-1.033	0	0	GAS (Tol-C12)	72637	3
C8	----				DIESEL (C12-C24)	1386989	65
C10	2.858	0.001	1897	1836	M.OIL (C24-C38)	11886809	984
C12	3.470	0.002	1037	577	AK-102 (C10-C25)	1637290	68
C14	3.925	-0.001	834	432	AK-103 (C25-C36)	10178714	1140
C16	4.322	0.001	584	148	OR.DIES (C10-C28)	4288810	203
C18	4.677	0.002	1434	588	OR.MOIL (C28-C40)	10179667	903
C20	5.000	0.003	8627	6697			
C22	5.298	0.003	30407	15588	STODDARD (C8-C12)	72637	3
C24	5.601	-0.002	56341	40257			
C25	5.767	0.003	70210	55090			
C26	5.924	-0.001	76118	32730			
C28	6.246	0.002	93898	37136			
C32	6.854	-0.002	121094	45621			
C34	7.141	0.000	119577	41572	CREOSOT (C8-C22)	609564	95
Filter Peak	----						
C36	7.409	-0.004	114138	61669	BUNKERC (C10-C38)	13321155	1541
o-terph	4.758	-0.003	2740	1977	JET-A (C10-C18)	111596	7
Triacon Surr	6.568	0.009	1661068	1573813	IT.MOIL (C24-C40)	14607944	680

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

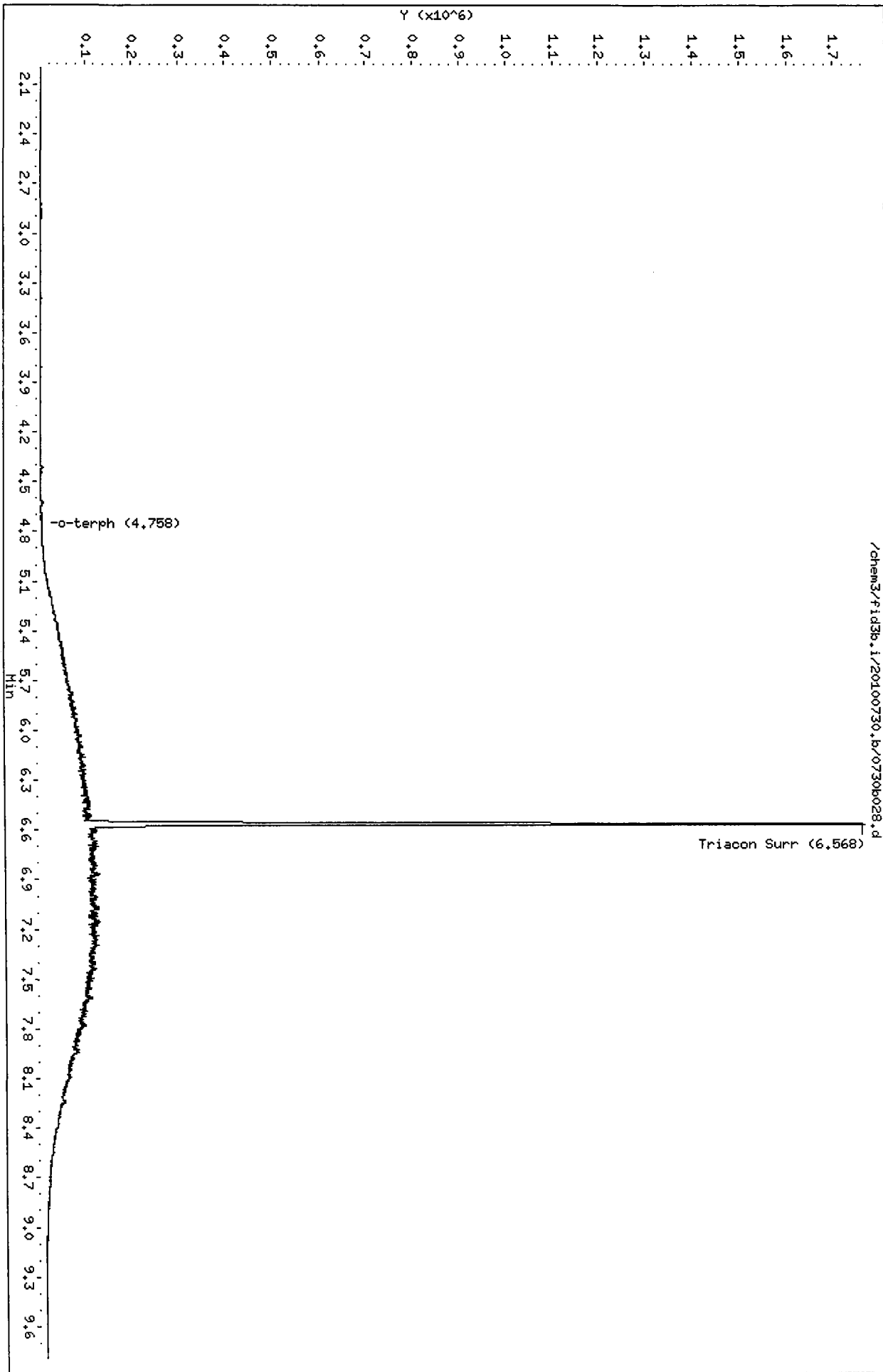
Surrogate	Area	Amount	%Rec
o-Terphenyl	1977	0.1	0.2
Triacantane	1573813	94.1	209.1

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst: MS Date: 8/2/10





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b030.d  
Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: MOIL 2500  
Client ID:  
Injection: 31-JUL-2010 00:10  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.000	-1.033	0	0	GAS (Tol-C12)	95636	3
C8	----				DIESEL (C12-C24)	3379394	158
C10	2.857	-0.001	3357	3375	M.OIL (C24-C38)	29202636	2417
C12	3.471	0.003	1596	1868	AK-102 (C10-C25)	3927075	163
C14	3.927	0.001	1514	356	AK-103 (C25-C36)	25147326	2815
C16	4.322	0.001	1563	1411	OR.DIES (C10-C28)	10612044	503
C18	4.676	0.001	3568	4270	OR.MOIL (C28-C40)	24702816	2191
C20	4.996	-0.001	22446	7349			
C22	5.295	-0.001	73882	30652	STODDARD (C8-C12)	95636	3
C24	5.605	0.002	133400	26133			
C25	5.762	-0.001	165074	51876			
C26	5.928	0.002	188516	86981			
C28	6.238	-0.006	233688	182539			
C32	6.857	0.001	290957	171974			
C34	7.138	-0.003	286943	126318	CREOSOT (C8-C22)	1390131	217
Filter Peak	----						
C36	7.411	-0.002	275697	173060	BUNKERC (C10-C38)	32647668	3777
o-terph	4.758	-0.004	6196	3899	JET-A (C10-C18)	200291	13
Triacon Surr	6.581	0.022	3417562	3785244	IT.MOIL (C24-C40)	35655072	1659

Range Times: NW Diesel (3.518 - 5.653) NW Gas (0.983 - 3.518) NW M.Oil (5.653 - 7.720)  
AK102 (2.808 - 5.714) AK103 (5.714 - 7.463) Jet A (2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	3899	0.2	0.4
Triacantane	3785244	226.3	502.9

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

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

Analyst MS Date 8/3/10

Date : 31-JUL-2010 00:10

Client ID:

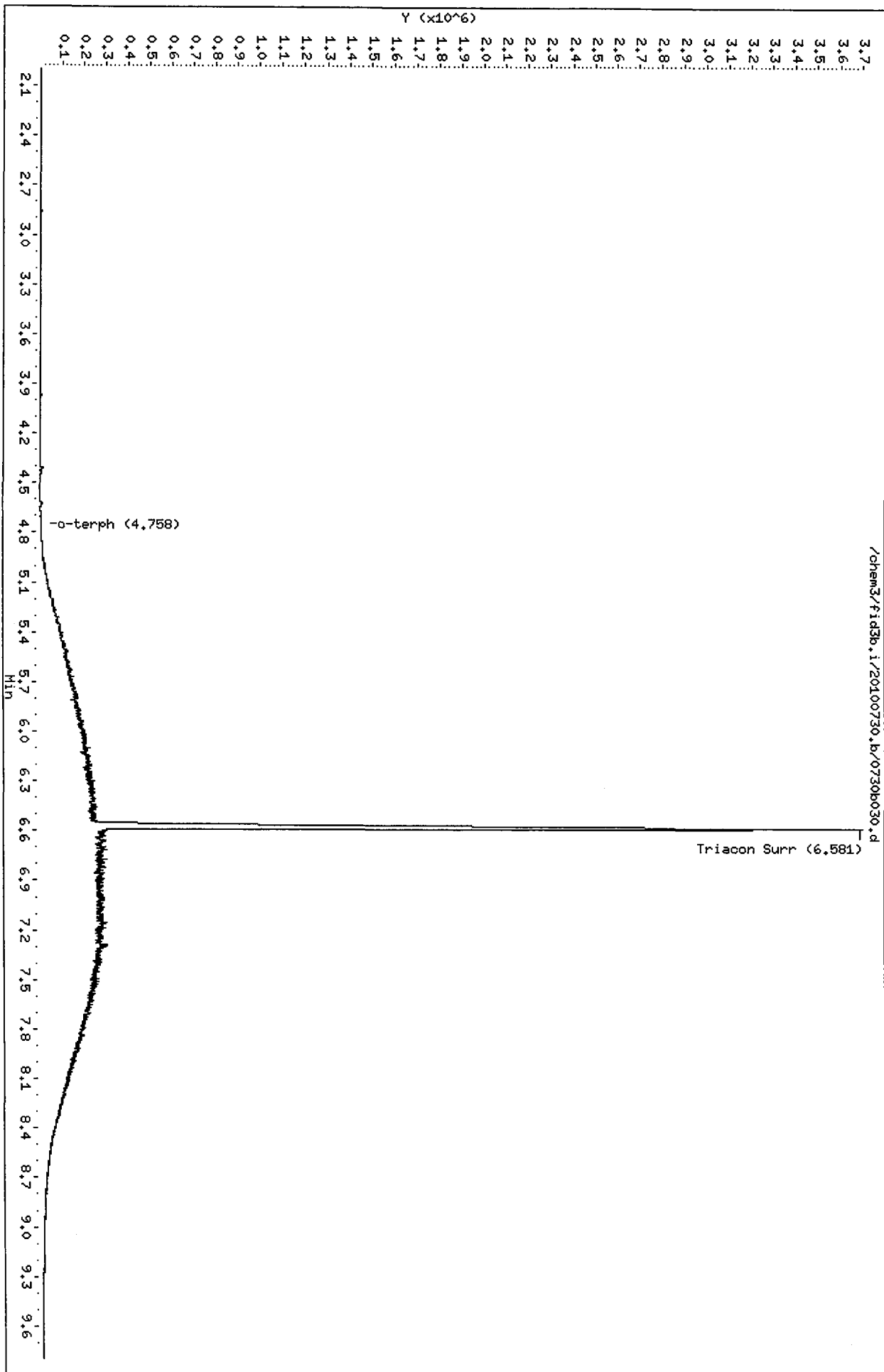
Instrument: fid3b.i

Sample Info: M01L 2500

Operator: MS

Column phase: RTX-1

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b032.d  
Method: /chem3/fid3b.i/20100803.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: MOIL 5000  
Client ID:  
Injection: 31-JUL-2010 00:47  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	0.000	-1.031	0	0	GAS (Tol-C12)	136516	5
C8	----				DIESEL (C12-C24)	7391085	345
C10	2.860	0.002	6390	7826	M.OIL (C24-C38)	63692911	5272
C12	3.468	0.001	3090	3308	AK-102 (C10-C25)	8576883	356
C14	3.927	0.001	2902	3119	AK-103 (C25-C36)	55274954	6188
C16	4.322	0.002	3356	5579	OR.DIES (C10-C28)	23215807	1101
C18	4.674	0.000	7922	8796	OR.MOIL (C28-C40)	53459904	4742
C20	4.996	-0.002	47935	10434			
C22	5.294	-0.001	159044	57913	STODDARD (C8-C12)	136516	5
C24	5.606	0.003	294534	135002			
C25	5.760	-0.004	341829	114396			
C26	5.924	0.001	403139	246862			
C28	6.245	0.001	500056	192227			
C32	6.855	0.000	584755	116103			
C34	7.144	0.002	614284	191733	CREOSOT (C8-C22)	2916422	456
Filter Peak	----						
C36	7.412	-0.002	608306	208570	BUNKERC (C10-C38)	71180905	8235
o-terph	4.757	-0.005	12189	7421	JET-A (C10-C18)	369371	23
Triacon Surr	6.604	0.043	5116443	8293814	IT.MOIL (C24-C40)	77481531	3606

Range Times: NW Diesel(3.517 - 5.653) NW Gas(0.981 - 3.517) NW M.Oil(5.653 - 7.721)  
AK102(2.808 - 5.714) AK103(5.714 - 7.464) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	7421	0.4	0.8
Triacotane	8293814	495.9	1101.9

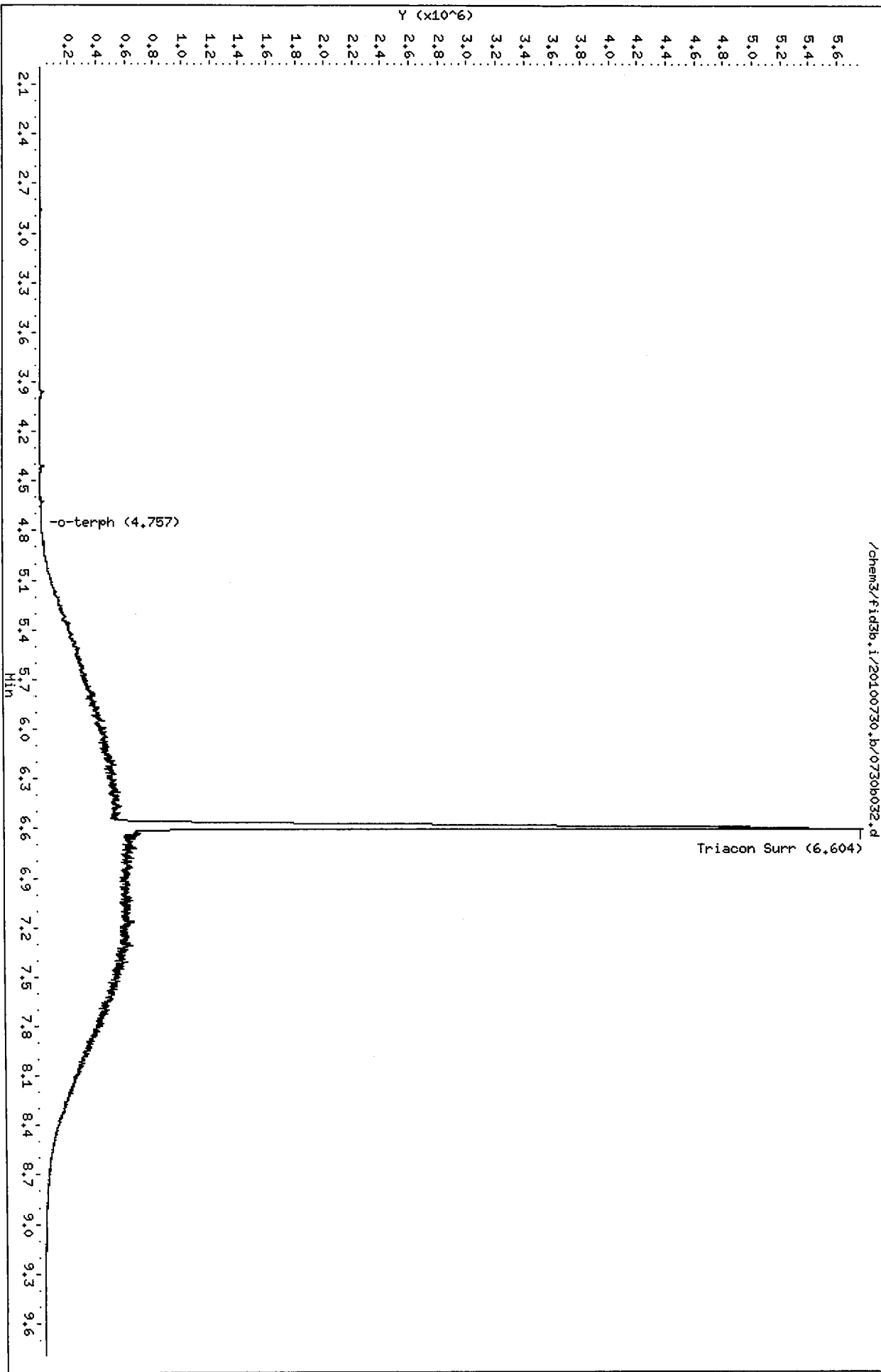
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst *[Signature]* Date *8/3/10*

/chem3/fid3b.i/20100730.b/0730b032.d



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730b034.d  
Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: MS  
Report Date: 08/03/2010  
Macro: FID:3B073010

ARI ID: MOIL ICV  
Client ID:  
Injection: 31-JUL-2010 01:25  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	69710	3
C8	----				DIESEL (C12-C24)	654549	31
C10	2.860	0.002	1401	800	M.OIL (C24-C38)	5780310	478
C12	3.466	-0.002	844	283	AK-102 (C10-C25)	785151	33
C14	3.928	0.001	611	154	AK-103 (C25-C36)	4978956	557
C16	4.325	0.004	330	255	OR.DIES (C10-C28)	2137357	101
C18	4.676	0.001	610	174	OR.MOIL (C28-C40)	4899131	435
C20	4.999	0.002	3728	881			
C22	5.295	-0.001	14759	8671	STODDARD (C8-C12)	69710	3
C24	5.604	0.001	26635	20138			
C25	5.767	0.003	34354	20126			
C26	5.925	-0.001	38360	10923			
C28	6.242	-0.003	45237	26594			
C32	6.858	0.003	58973	16709			
C34	7.142	0.000	60409	28174	CREOSOT (C8-C22)	326198	51
Filter Peak	----						
C36	7.410	-0.003	54496	40370	BUNKERC (C10-C38)	6478679	750
o-terph	4.761	-0.001	1177	942	JET-A (C10-C18)	83224	5
Triacon Surr	6.561	0.002	862303	736311	IT.MOIL (C24-C40)	7074431	329

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	942	0.0	0.1
Triacotane	736311	44.0	97.8

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst MS Date 8/3/10

Data File: /chem3/fid3b.i/20100730.b/0730b034.d

Date: 31-JUL-2010 01:25

Client ID:

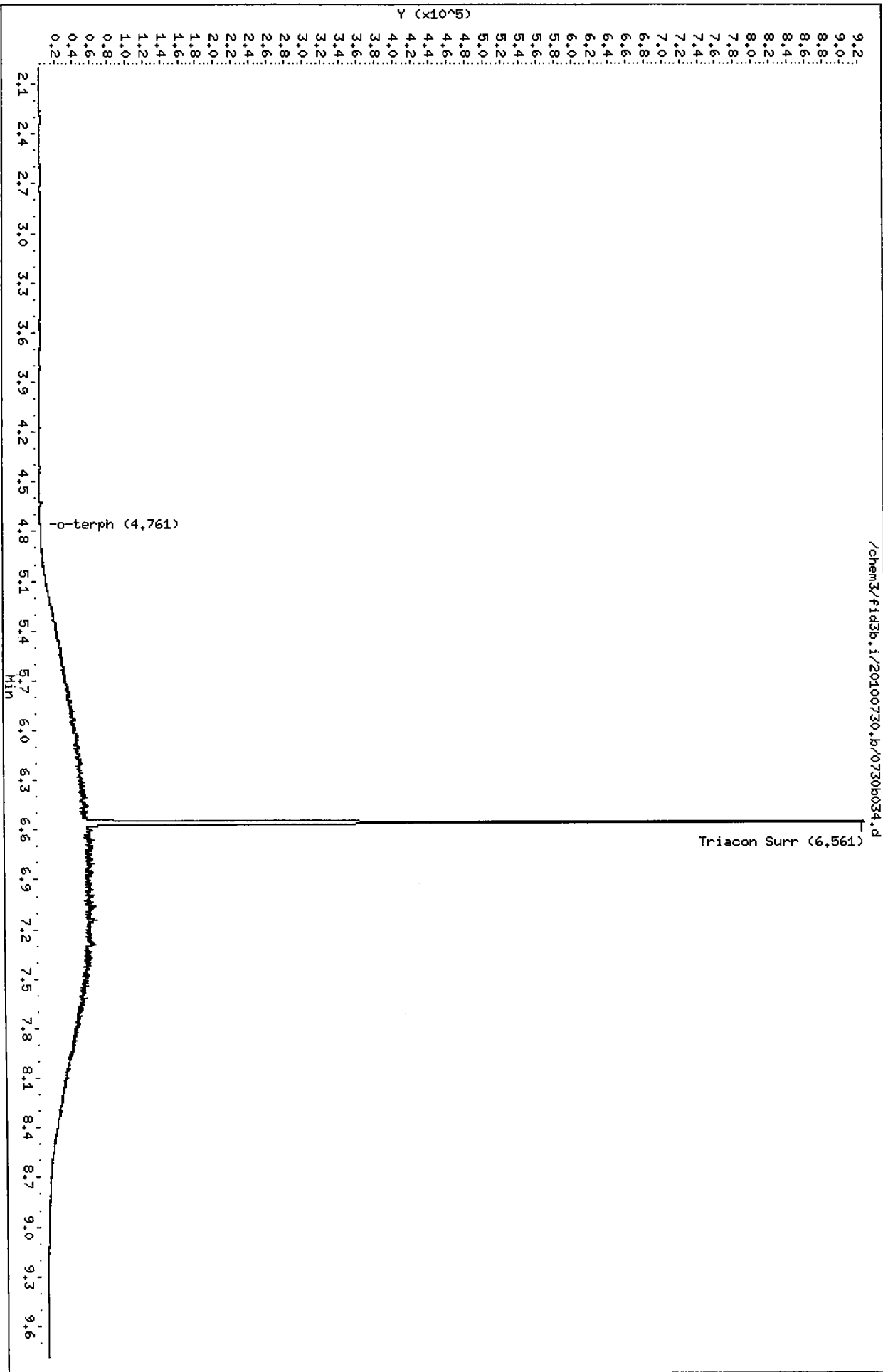
Sample Info: HOIL ICV

Column phase: RTX-1

Instrument: fid3b.i

Operator: HS

Column diameter: 2.00



MANUAL INTEGRATION SUMMARY FOR DATA BATCH - /chem3/fid3b.i/20100730.b

ARI Job No.: DIES Method: i/20100730.b/ftphfid3b.m Instrument: fid3b.i Date: 30-JUL-2010

Time	Filename	LabID	ClientID	DF	Manually Integrated Compounds
1023	0730B018.d	DIESEL 50		1	o-terph,
1042	0730B019.d	DIESEL 100		1	o-terph,
1101	0730B020.d	DIESEL 250		1	o-terph,
1120	0730B021.d	DIESEL 500		1	o-terph,
1139	0730B022.d	DIESEL 1000		1	o-terph,
1158	0730B023.d	DIESEL 2500		1	o-terph,
1217	0730B024.d	DIESEL ICV		1	o-terph,
1236	0730B025.d	MOIL 100		1	Triacon Surr,
1255	0730B026.d	MOIL 250		1	Triacon Surr,
1314	0730B027.d	MOIL 500		1	Triacon Surr,
1332	0730B028.d	MOIL 1000		1	Triacon Surr,
1351	0730B029.d	RINSE		1	NO MANUAL INTEGRATION
0110	0730B030.d	MOIL 2500		1	Triacon Surr,
0228	0730B031.d	RINSE		1	NO MANUAL INTEGRATION
0447	0730B032.d	MOIL 5000		1	Triacon Surr,
1106	0730B033.d	RINSE		1	NO MANUAL INTEGRATION
1255	0730B034.d	MOIL ICV		1	Triacon Surr,

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730raw.b/0730b018.d ARI ID: DIESEL 50  
 Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 30-JUL-2010 20:23  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/03/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	203100	7
C8	----				DIESEL (C12-C24)	1073736	50
C10	2.859	0.001	5638	4849	M.OIL (C24-C38)	63488	5
C12	3.468	0.001	8865	7583	AK-102 (C10-C25)	1226764	51
C14	3.925	-0.001	21926	23612	AK-103 (C25-C36)	40579	5
C16	4.321	0.000	39235	39802	OR.DIES (C10-C28)	1237681	59
C18	4.674	-0.001	39296	35683	OR.MOIL (C28-C40)	78683	7
C20	4.998	0.000	18246	22375			
C22	5.299	0.003	5339	5505	STODDARD (C8-C12)	203100	7
C24	5.597	-0.006	1196	621			
C25	5.760	-0.003	625	310			
C26	5.922	-0.003	296	159			
C28	6.242	-0.002	52	16			
C32	6.842	-0.013	172	67			
C34	7.141	0.000	373	160	CREOSOT (C8-C22)	1243658	194
Filter Peak	----						
C36	7.411	-0.002	735	302	BUNKERC (C10-C38)	1286685	149
o-terph	4.759	-0.003	385477	213275	JET-A (C10-C18)	945094	60
Triacon Surr	6.558	-0.001	38	9	IT.MOIL (C24-C40)	93176	4

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
 AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	213275	10.7	23.8
Triacotane	9	0.0	0.0

*M8/310*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Date: 30-JUL-2010 20:23

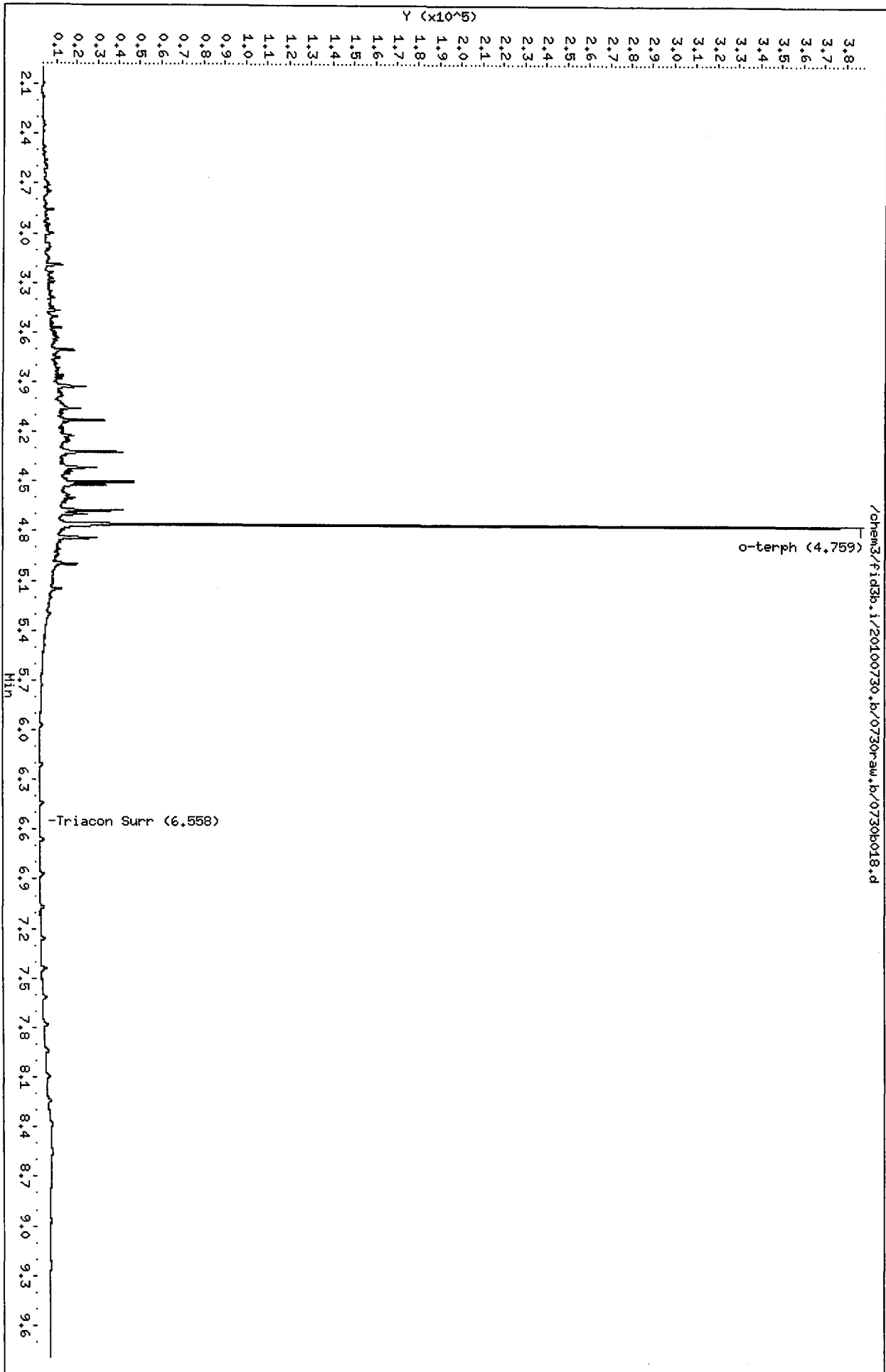
Client ID:

Instrument: fid3b.i

Sample Info: DIESEL 50

Column phase: RTX-1

Operator: MS  
Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730raw.b/0730b019.d ARI ID: DIESEL 100  
 Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 30-JUL-2010 20:42  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/03/2010  
 Macro: FID:3B073010

FID:3B RESULTS

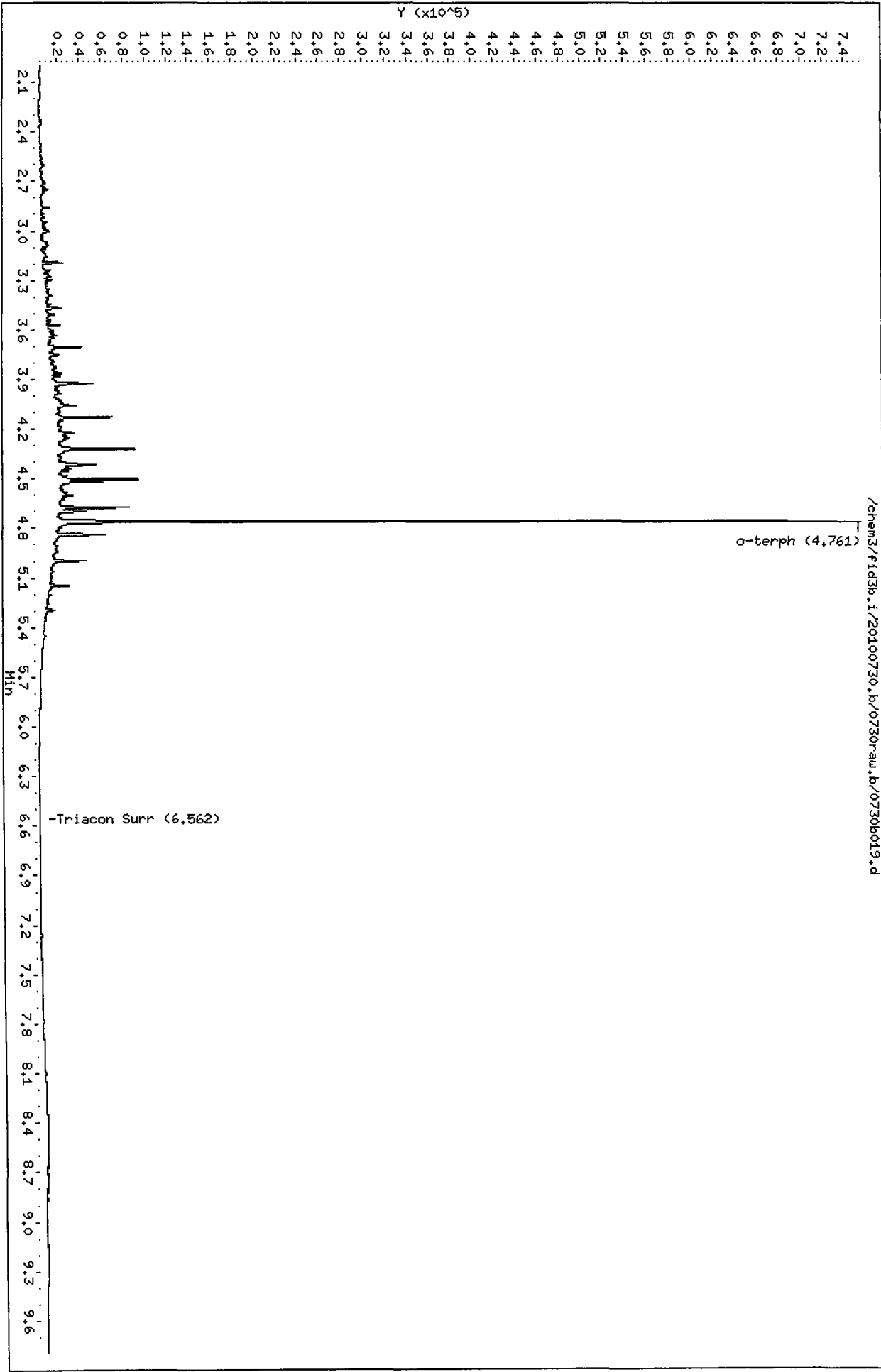
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	357151	13
C8	----				DIESEL (C12-C24)	2033528	95
C10	2.858	0.000	10639	8623	M.OIL (C24-C38)	49930	4
C12	3.467	-0.001	21033	17918	AK-102 (C10-C25)	2312396	96
C14	3.924	-0.003	50684	48589	AK-103 (C25-C36)	30461	3
C16	4.320	-0.001	89321	73174	OR.DIES (C10-C28)	2327282	110
C18	4.674	-0.001	82793	68218	OR.MOIL (C28-C40)	55412	5
C20	4.997	-0.001	44397	37760			
C22	5.295	-0.001	15167	18309	STODDARD (C8-C12)	357151	13
C24	5.601	-0.003	2183	553			
C25	5.767	0.003	1066	252			
C26	5.926	0.000	515	99			
C28	6.242	-0.003	97	42			
C32	6.845	-0.010	124	24			
C34	7.140	-0.002	297	98	CREOSOT (C8-C22)	2327121	364
Filter Peak	----						
C36	7.414	0.000	654	220	BUNKERC (C10-C38)	2357151	273
o-terph	4.761	-0.001	752336	432246	JET-A (C10-C18)	1787874	113
Triacon Surr	6.562	0.003	35	12	IT.MOIL (C24-C40)	75484	4

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
 AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	432246	21.7	48.2
Triacontane	12	0.0	0.0

*ms 8/3/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730raw.b/0730b020.d ARI ID: DIESEL 250  
 Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 30-JUL-2010 21:01  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/03/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	832540	30
C8	----				DIESEL (C12-C24)	5381486	252
C10	2.857	-0.001	26815	24142	M.OIL (C24-C38)	83893	7
C12	3.467	-0.001	68591	49107	AK-102 (C10-C25)	6048334	251
C14	3.925	-0.002	140104	127189	AK-103 (C25-C36)	56030	6
C16	4.321	0.000	232770	207768	OR.DIES (C10-C28)	6088325	289
C18	4.675	0.000	208305	168485	OR.MOIL (C28-C40)	57280	5
C20	4.996	-0.001	126032	107297			
C22	5.293	-0.003	50635	46451	STODDARD (C8-C12)	832540	30
C24	5.604	0.001	9772	11489			
C25	5.766	0.003	3129	1191			
C26	5.921	-0.004	1314	959			
C28	6.242	-0.002	220	92			
C32	6.846	-0.010	82	35			
C34	7.139	-0.002	240	125	CREOSOT (C8-C22)	6035967	944
Filter Peak	----						
C36	7.415	0.002	533	105	BUNKERC (C10-C38)	6119266	708
o-terph	4.763	0.001	1673183	1006880	JET-A (C10-C18)	4563495	288
Triacon Surr	6.553	-0.006	23	12	IT.MOIL (C24-C40)	110245	5

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
 AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

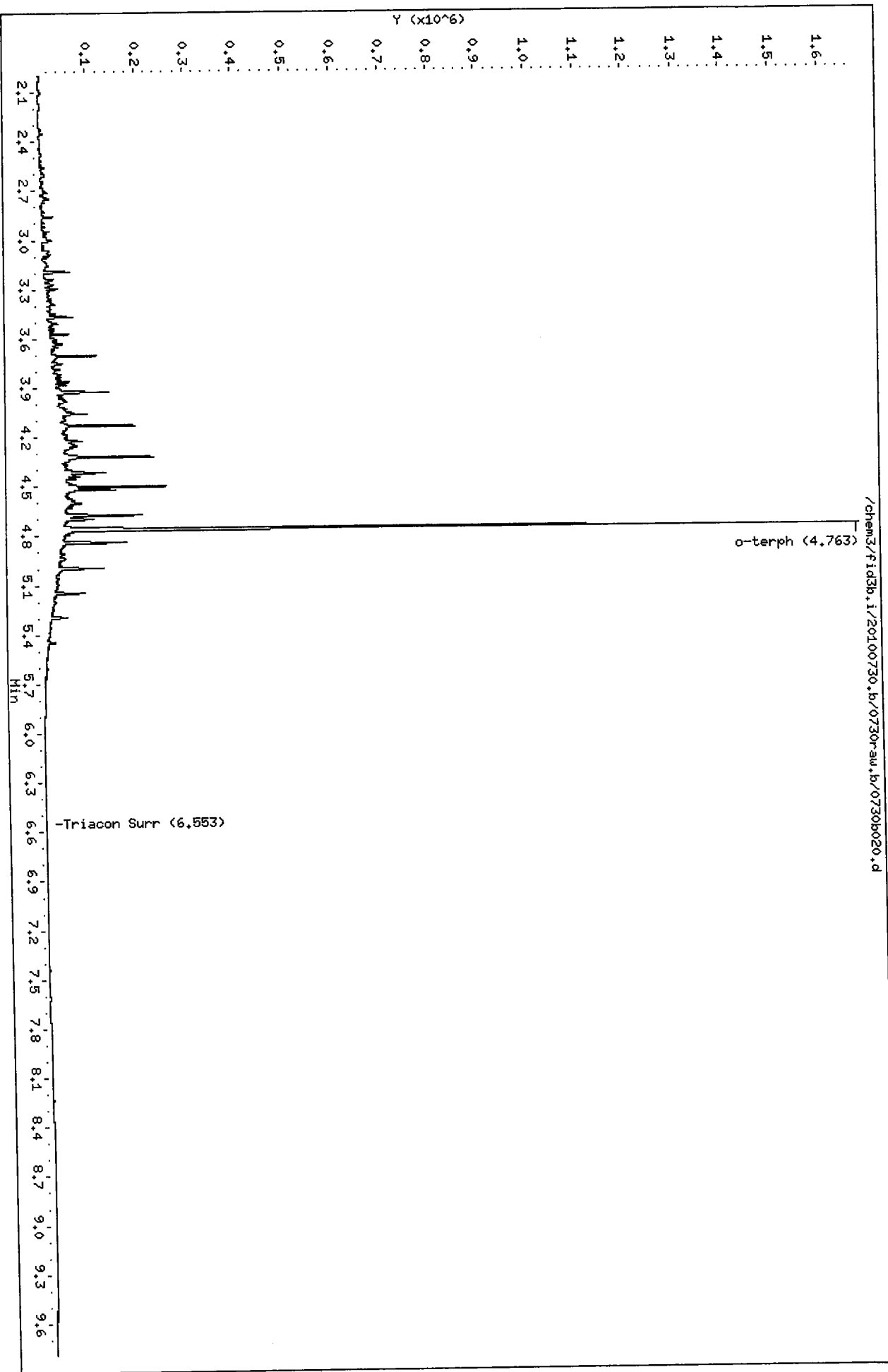
Surrogate	Area	Amount	%Rec
o-Terphenyl	1006880	50.5	112.2
Triacontane	12	0.0	0.0

*ms 8/3/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100730.b/0730raw.b/0730b020.d  
Date : 30-JUL-2010 21:01  
Client ID:  
Sample Info: DIESEL 250  
Column phase: RTX-1

Instrument: fid3b.i  
Operator: HS  
Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730raw.b/0730b021.d ARI ID: DIESEL 500  
 Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 30-JUL-2010 21:20  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/03/2010  
 Macro: FID:3B073010

FID:3B RESULTS

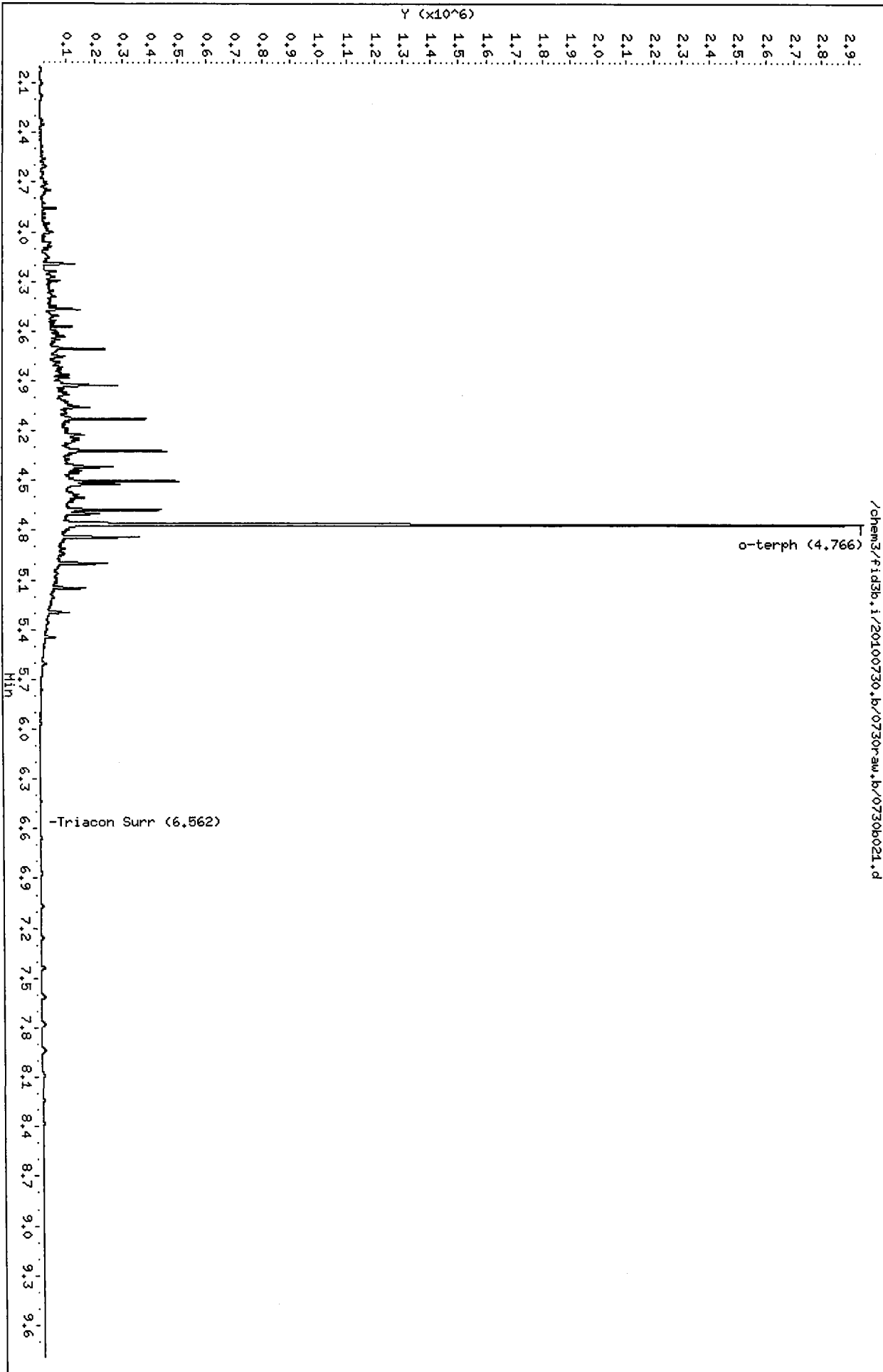
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	1605957	59
C8	----				DIESEL (C12-C24)	10474813	490
C10	2.859	0.001	57423	40767	M.OIL (C24-C38)	193569	16
C12	3.467	-0.001	150148	107232	AK-102 (C10-C25)	11772614	488
C14	3.925	-0.002	281705	192683	AK-103 (C25-C36)	138842	16
C16	4.321	0.000	459275	397727	OR.DIES (C10-C28)	11850728	562
C18	4.676	0.001	438078	346941	OR.MOIL (C28-C40)	138643	12
C20	4.998	0.000	247680	229025			
C22	5.294	-0.002	107189	91506	STODDARD (C8-C12)	1605957	58
C24	5.603	-0.001	25044	36788			
C25	5.764	0.000	8933	11255			
C26	5.928	0.002	2767	880			
C28	6.244	0.000	417	209			
C32	6.866	0.010	6270	6679			
C34	7.138	-0.003	199	114	CREOSOT (C8-C22)	11718131	1832
Filter Peak	----						
C36	7.404	-0.009	435	170	BUNKERC (C10-C38)	11939585	1381
o-terph	4.766	0.004	2949322	2085108	JET-A (C10-C18)	8975857	566
Triacon Surr	6.562	0.003	37	8	IT.MOIL (C24-C40)	243363	11

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
 AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2085108	104.6	232.4
Triacotane	8	0.0	0.0

*ms 8/376*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730raw.b/0730b022.d ARI ID: DIESEL 1000  
 Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 30-JUL-2010 21:39  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/03/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	3183656	116
C8	----				DIESEL (C12-C24)	20461552	956
C10	2.859	0.001	116245	79992	M.OIL (C24-C38)	246197	20
C12	3.468	0.000	303568	209857	AK-102 (C10-C25)	23076848	957
C14	3.926	-0.001	587854	482277	AK-103 (C25-C36)	175618	20
C16	4.323	0.002	905598	796869	OR.DIES (C10-C28)	23235650	1102
C18	4.678	0.002	807496	638826	OR.MOIL (C28-C40)	50889	5
C20	4.998	0.000	504752	389992			
C22	5.295	-0.001	227321	199991	STODDARD (C8-C12)	3183656	115
C24	5.602	-0.001	59793	78521			
C25	5.763	-0.001	23276	31928			
C26	5.926	0.000	7146	5485			
C28	6.246	0.002	980	756			
C32	6.846	-0.010	31	8			
C34	7.142	0.001	155	78	CREOSOT (C8-C22)	22952325	3589
Filter Peak	----						
C36	7.412	-0.001	462	183	BUNKERC (C10-C38)	23265390	2692
o-terph	4.774	0.012	5344672	4166432	JET-A (C10-C18)	17422692	1099
Triacon Surr	6.558	-0.001	143	74	IT.MOIL (C24-C40)	267420	12

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
 AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	4166432	209.0	464.5
Triacotane	74	0.0	0.0

*M 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3b.i/20100730.b/0730r-aw.b/0730b022.d

Page 1

Date: 30-JUL-2010 21:39

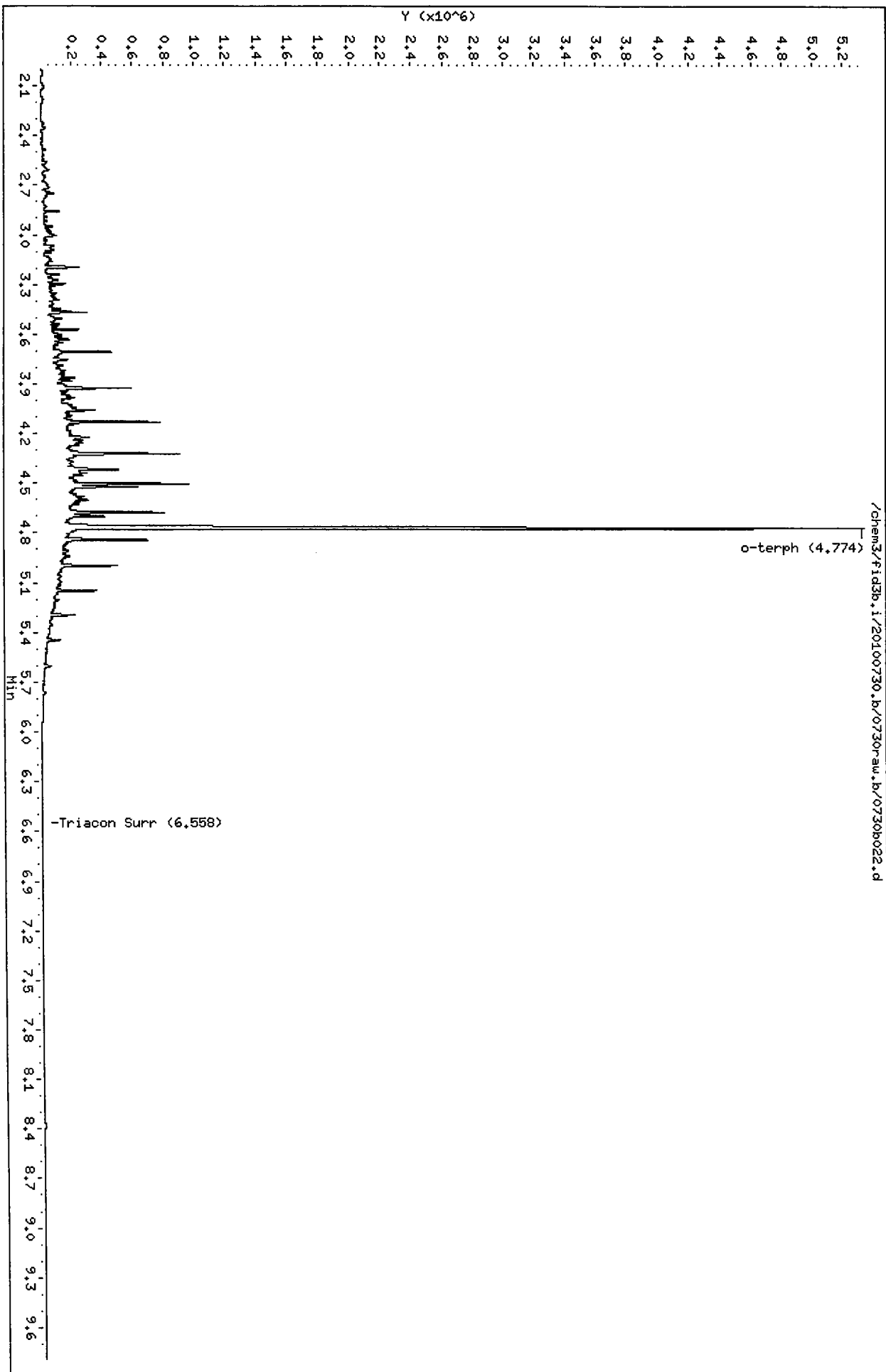
Client ID:

Instrument: fid3b.i

Sample Info: DIESEL 1000

Column phase: RTX-1

Operator: HS  
Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730raw.b/0730b023.d ARI ID: DIESEL 2500  
 Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 30-JUL-2010 21:58  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/03/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	7659234	280
C8	----				DIESEL (C12-C24)	50026991	2338
C10	2.863	0.005	285421	198918	M.OIL (C24-C38)	572344	47
C12	3.470	0.002	694665	522755	AK-102 (C10-C25)	56300148	2336
C14	3.929	0.002	1273547	1199224	AK-103 (C25-C36)	425535	48
C16	4.326	0.004	2112542	1828650	OR.DIES (C10-C28)	56698963	2688
C18	4.683	0.007	1755535	1805295	OR.MOIL (C28-C40)	53128	5
C20	5.002	0.005	1242586	994726			
C22	5.298	0.002	554784	489931	STODDARD (C8-C12)	7659234	277
C24	5.604	0.001	157104	182807			
C25	5.764	0.000	68790	96490			
C26	5.924	-0.001	24943	35913			
C28	6.241	-0.003	2845	707			
C32	6.847	-0.009	103	17			
C34	7.140	-0.001	80	25	CREOSOT (C8-C22)	55887097	8738
Filter Peak	----						
C36	7.414	0.001	258	70	BUNKERC (C10-C38)	56733764	6564
o-terph	4.787	0.025	9374342	10447481	JET-A (C10-C18)	42325036	2671
Triacon Surr	6.558	-0.002	576	210	IT.MOIL (C24-C40)	590881	27

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
 AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	10447481	524.1	1164.7
Triacotane	210	0.0	0.0

*M 8/3/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100730.b/0730raw.b/0730b023.d

Date: 30-JUL-2010 21:58

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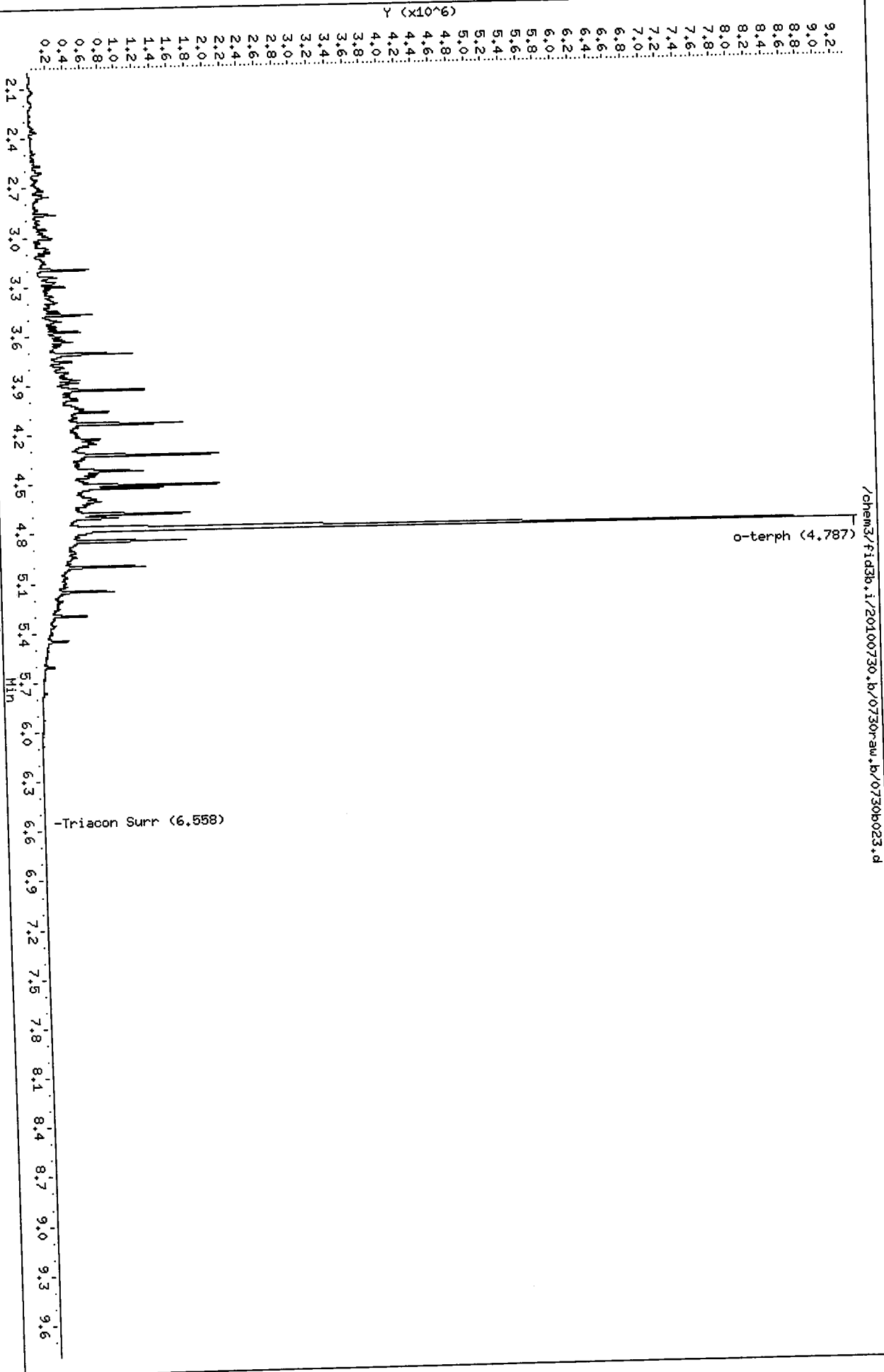
Sample Info: DIESEL 2500

Column phase: RTX-1

Instrument: fid3b.i

Operator: HS

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730raw.b/0730b024.d ARI ID: DIESEL ICV  
 Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 30-JUL-2010 22:17  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/03/2010  
 Macro: FID:3B073010

FID:3B RESULTS

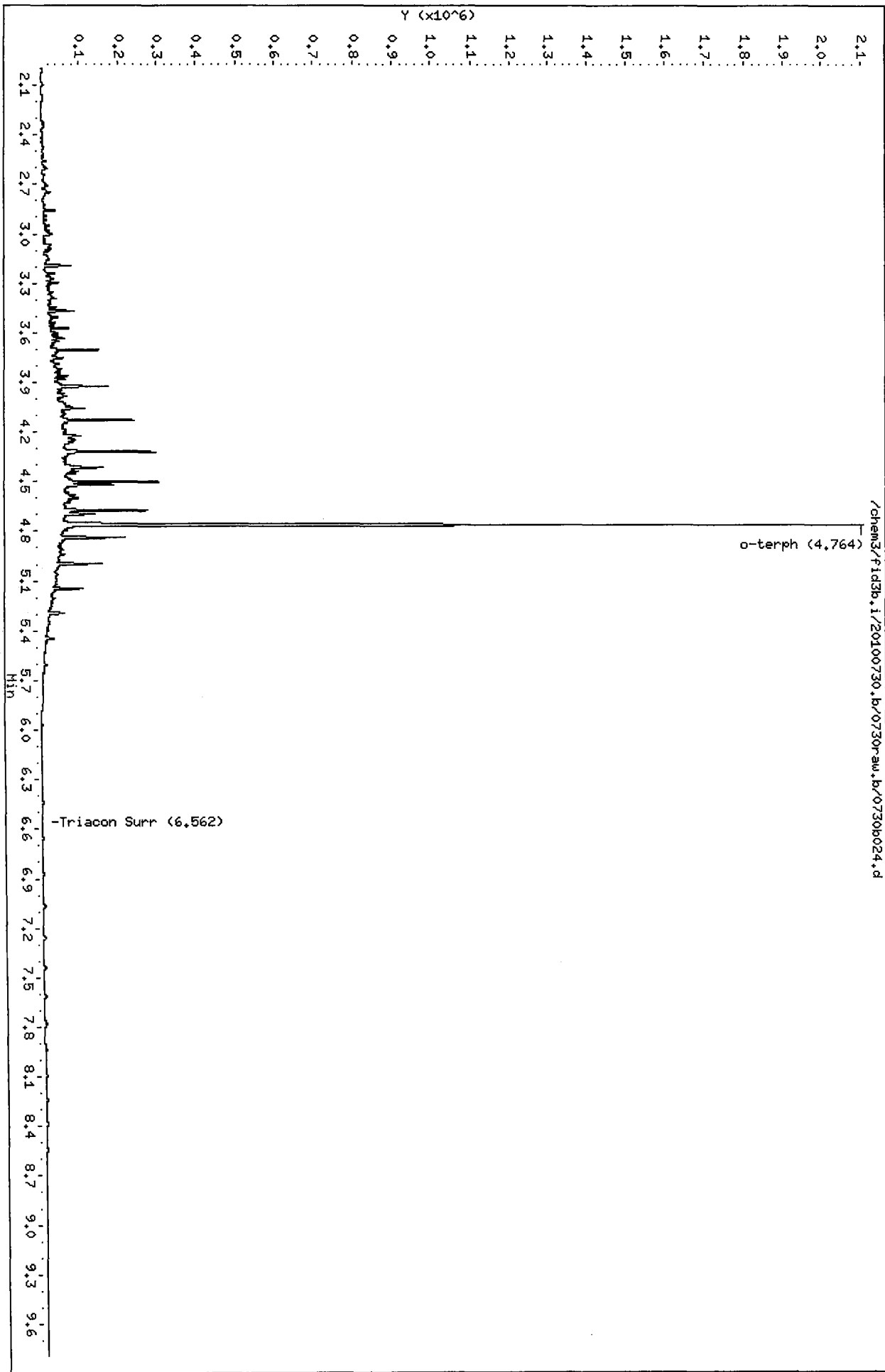
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	1033627	38
C8	----				DIESEL (C12-C24)	6390782	299
C10	2.859	0.001	35248	24957	M.OIL (C24-C38)	127459	11
C12	3.467	0.000	86410	59948	AK-102 (C10-C25)	7226358	300
C14	3.926	-0.001	173324	148864	AK-103 (C25-C36)	93021	10
C16	4.320	-0.001	296816	249967	OR.DIES (C10-C28)	7272611	345
C18	4.676	0.000	273795	228555	OR.MOIL (C28-C40)	99093	9
C20	4.997	-0.001	155638	143379			
C22	5.294	-0.002	60394	56049	STODDARD (C8-C12)	1033627	37
C24	5.605	0.002	13282	16336			
C25	5.765	0.001	4054	633			
C26	5.927	0.001	1441	1201			
C28	6.248	0.004	261	48			
C32	6.870	0.014	5168	4822			
C34	7.140	-0.001	246	62	CREOSOT (C8-C22)	7213004	1128
Filter Peak	----						
C36	7.410	-0.003	515	121	BUNKERC (C10-C38)	7336745	849
o-terph	4.764	0.002	2104321	1321409	JET-A (C10-C18)	5495826	347
Triacon Surr	6.562	0.003	18	7	IT.MOIL (C24-C40)	162424	8

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
 AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1321409	66.3	147.3
Triacotane	7	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

*MS 8/3/10*



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730raw.b/0730b025.d ARI ID: MOIL 100  
 Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 30-JUL-2010 22:36  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/03/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	59389	2
C8	----				DIESEL (C12-C24)	136639	6
C10	2.861	0.003	1070	391	M.OIL (C24-C38)	1224724	101
C12	3.472	0.004	808	323	AK-102 (C10-C25)	192127	8
C14	3.925	-0.002	408	197	AK-103 (C25-C36)	1036816	116
C16	4.325	0.003	148	52	OR.DIES (C10-C28)	467661	22
C18	4.673	-0.002	50	17	OR.MOIL (C28-C40)	1073312	95
C20	5.000	0.003	534	84			
C22	5.298	0.002	2675	836	STODDARD (C8-C12)	59389	2
C24	5.605	0.002	5233	917			
C25	5.764	0.000	6238	1108			
C26	5.924	-0.002	7918	3299			
C28	6.245	0.001	9206	1987			
C32	6.858	0.002	12172	4066			
C34	7.140	-0.001	12960	3267	CREOSOT (C8-C22)	118096	18
Filter Peak	----						
C36	7.413	-0.001	11888	4717	BUNKERC (C10-C38)	1397827	162
o-terph	4.766	0.004	653	656	JET-A (C10-C18)	58172	4
Triacon Surr	6.558	-0.001	191299	170692	IT.MOIL (C24-C40)	1538562	72

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
 AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	656	0.0	0.1
Triacontane	170692	10.2	22.7

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

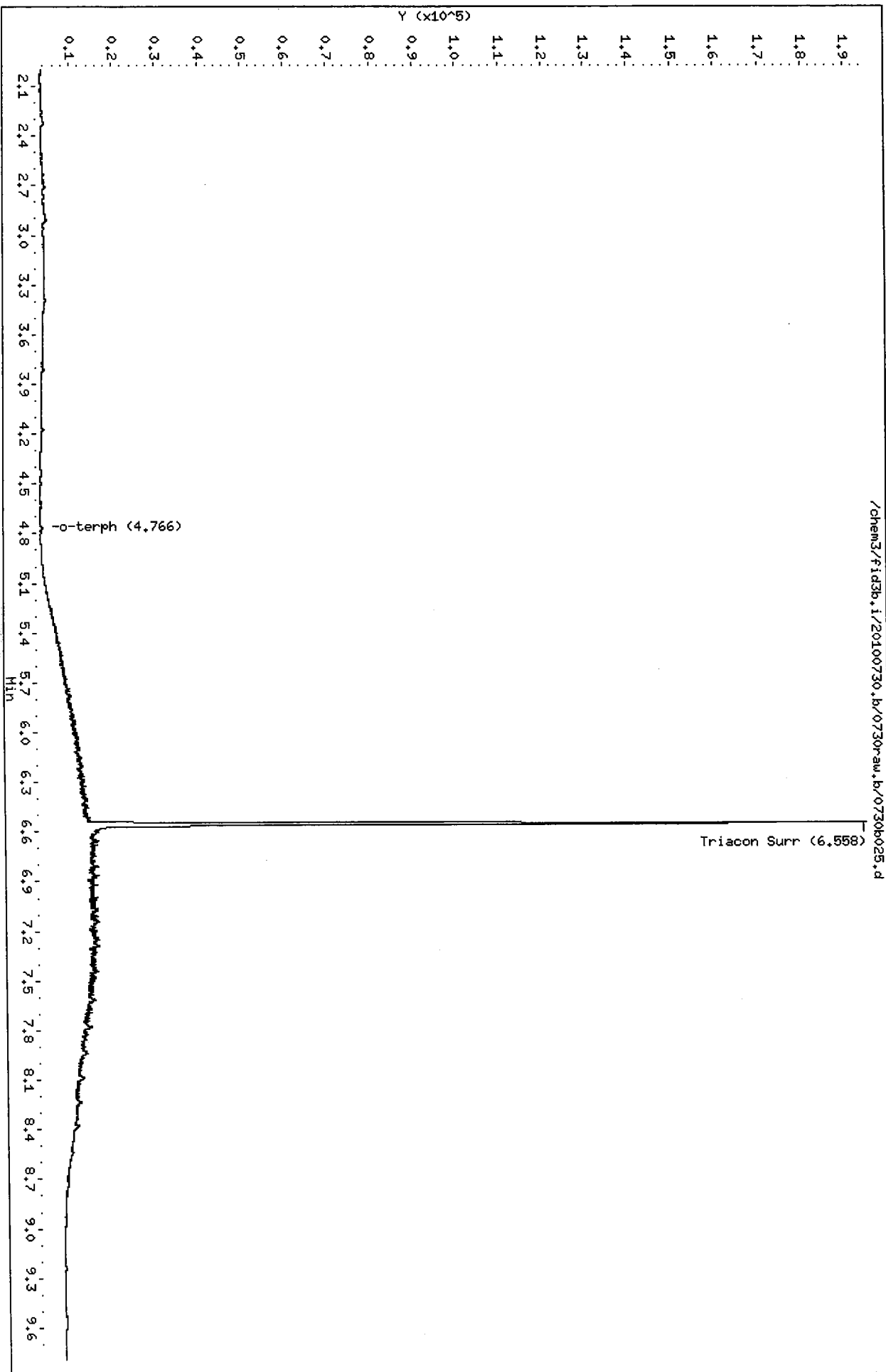
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Date: 30-JUL-2010 22:36

Client ID:  
Sample Info: H01L 100

Column phase: RTX-1

Instrument: fid3b.i

Operator: MS  
Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730raw.b/0730b026.d ARI ID: MOIL 250  
 Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 30-JUL-2010 22:55  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/03/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	54421	2
C8	----				DIESEL (C12-C24)	322420	15
C10	2.860	0.002	1106	911	M.OIL (C24-C38)	2867075	237
C12	3.466	-0.001	692	284	AK-102 (C10-C25)	405267	17
C14	3.923	-0.003	393	183	AK-103 (C25-C36)	2449011	274
C16	4.322	0.001	138	66	OR.DIES (C10-C28)	1063179	50
C18	4.673	-0.002	150	79	OR.MOIL (C28-C40)	2456323	218
C20	4.999	0.002	1661	707			
C22	5.293	-0.003	6646	2620	STODDARD (C8-C12)	54421	2
C24	5.603	0.000	12926	3044			
C25	5.760	-0.003	15791	3992			
C26	5.923	-0.002	18737	5063			
C28	6.240	-0.004	22766	17103			
C32	6.855	0.000	29395	10185			
C34	7.138	-0.003	29817	13225	CREOSOT (C8-C22)	176037	28
Filter Peak	----						
C36	7.411	-0.002	26300	7168	BUNKERC (C10-C38)	3224498	373
o-terph	4.763	0.002	758	732	JET-A (C10-C18)	56598	4
Triacon Surr	6.557	-0.002	469017	430625	IT.MOIL (C24-C40)	3592703	167

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
 AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	732	0.0	0.1
Triacontane	430625	25.7	57.2

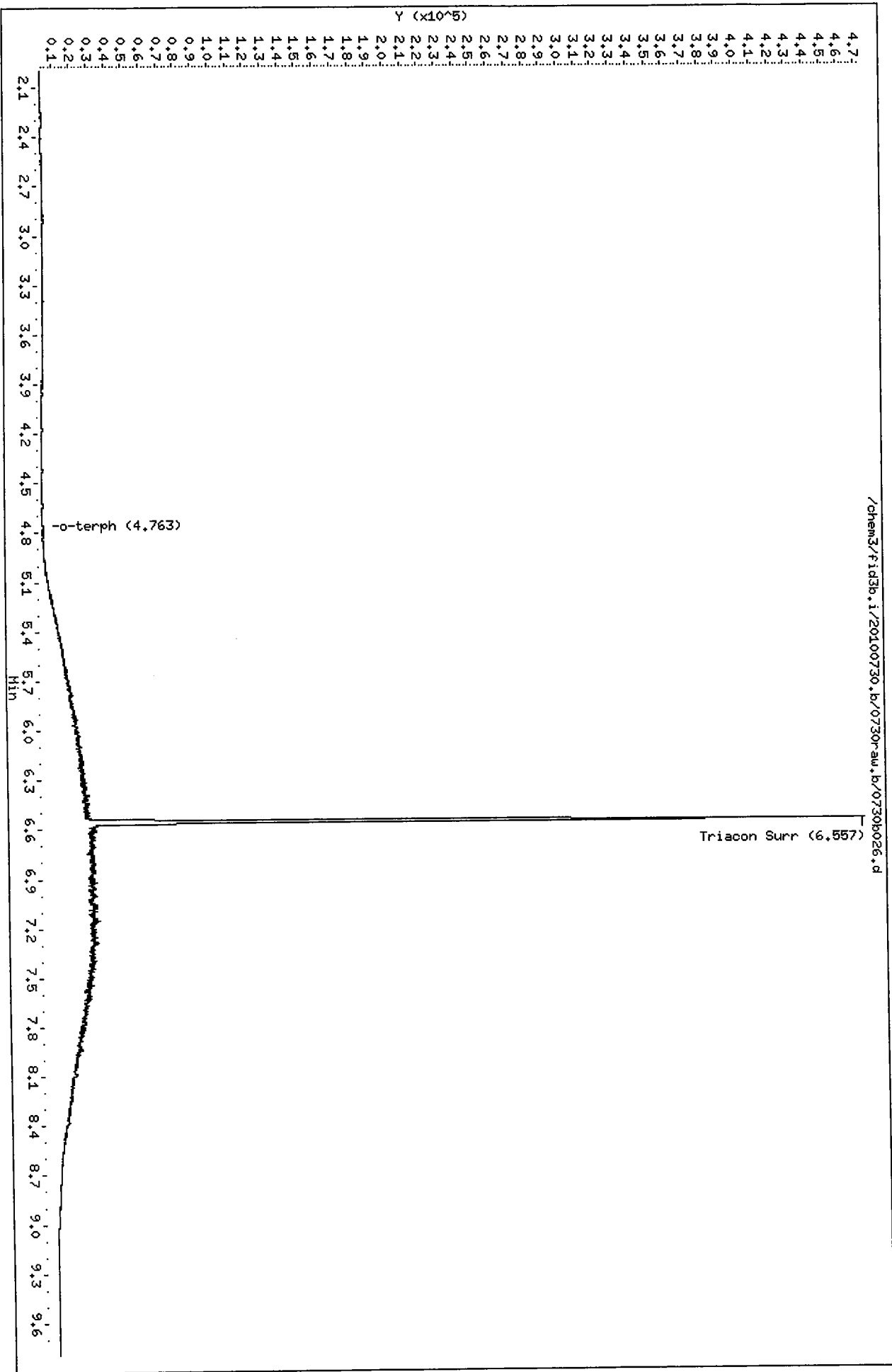
*ms/210*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3b.i/20100730.b/0730r-aw.b/0730b026.d  
Date : 30-JUL-2010 22:55  
Client ID:  
Sample Info: MOIL 250  
Column phase: RTX-1

Instrument: fid3b.i  
Operator: HS  
Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730raw.b/0730b027.d ARI ID: MOIL 500  
 Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 30-JUL-2010 23:14  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/03/2010  
 Macro: FID:3B073010

FID:3B RESULTS

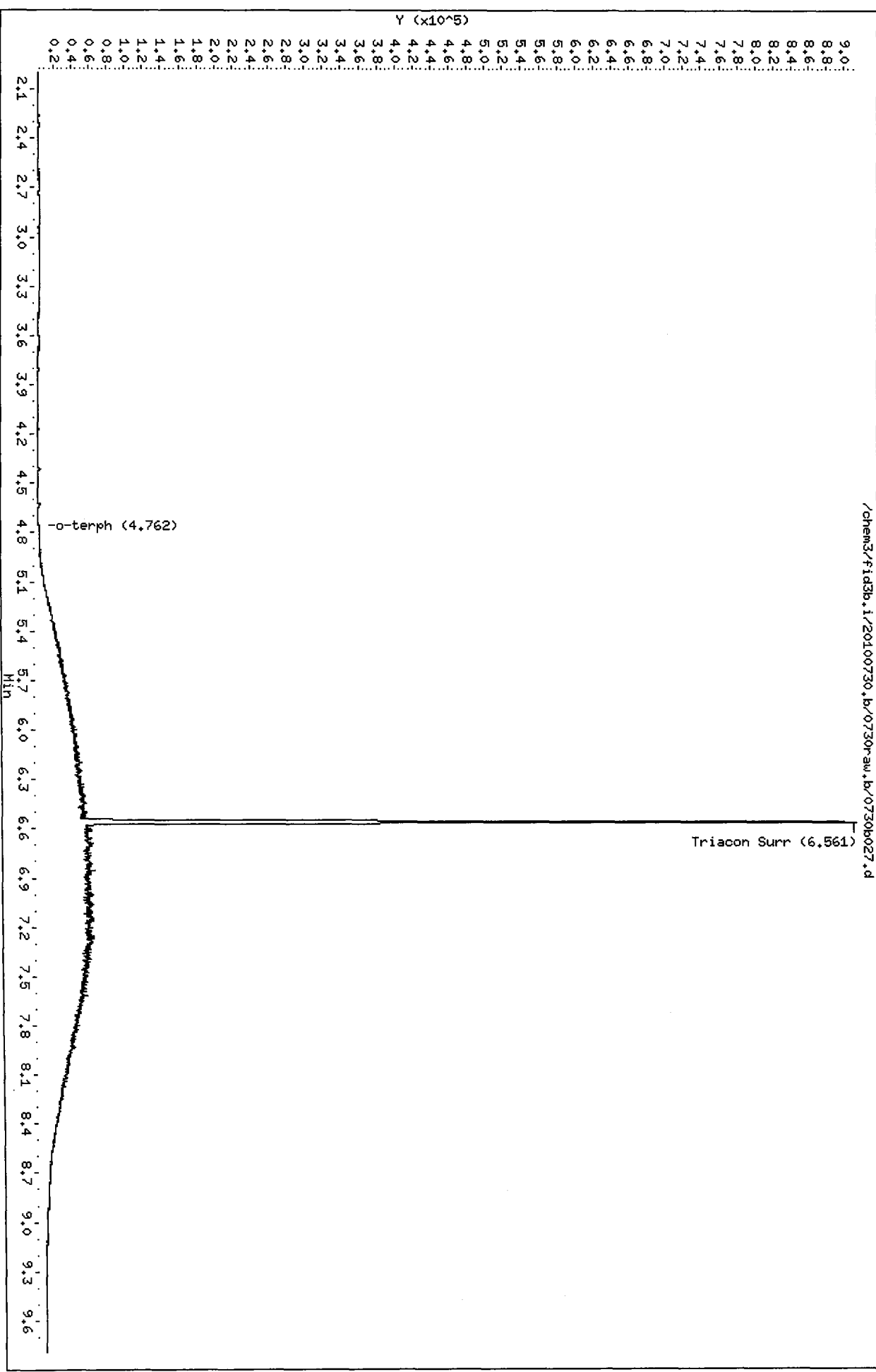
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	61429	2
C8	----				DIESEL (C12-C24)	661397	31
C10	2.856	-0.002	1273	310	M.OIL (C24-C38)	5757000	477
C12	3.467	-0.001	772	289	AK-102 (C10-C25)	796757	33
C14	3.922	-0.005	525	176	AK-103 (C25-C36)	4958432	555
C16	4.319	-0.002	278	113	OR.DIES (C10-C28)	2129868	101
C18	4.674	-0.001	552	196	OR.MOIL (C28-C40)	4884926	433
C20	4.998	0.000	3647	716			
C22	5.292	-0.004	14044	4392	STODDARD (C8-C12)	61429	2
C24	5.604	0.000	27326	15789			
C25	5.766	0.002	33190	10855			
C26	5.924	-0.002	38046	12688			
C28	6.245	0.000	48533	19176			
C32	6.858	0.002	63236	21003			
C34	7.139	-0.002	59785	13961	CREOSOT (C8-C22)	311324	49
Filter Peak	----						
C36	7.414	0.000	57110	39334	BUNKERC (C10-C38)	6457090	747
o-terph	4.762	0.000	1198	1526	JET-A (C10-C18)	73818	5
Triacon Surr	6.561	0.001	910045	900916	IT.MOIL (C24-C40)	7215620	336

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
 AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1526	0.1	0.2
Triacotane	900916	53.9	119.7

*08/31/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730raw.b/0730b028.d ARI ID: MOIL 1000  
 Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 30-JUL-2010 23:32  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/03/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	72637	3
C8	----				DIESEL (C12-C24)	1386989	65
C10	2.858	0.001	1897	1836	M.OIL (C24-C38)	11563694	957
C12	3.470	0.002	1037	577	AK-102 (C10-C25)	1637290	68
C14	3.925	-0.001	834	432	AK-103 (C25-C36)	9855599	1103
C16	4.322	0.001	584	148	OR.DIES (C10-C28)	4288810	203
C18	4.677	0.002	1434	588	OR.MOIL (C28-C40)	9856552	874
C20	5.000	0.003	8627	6697			
C22	5.298	0.003	30407	15588	STODDARD (C8-C12)	72637	3
C24	5.601	-0.002	56341	40257			
C25	5.767	0.003	70210	55090			
C26	5.924	-0.001	76118	32730			
C28	6.246	0.002	93898	37136			
C32	6.854	-0.002	121094	45621			
C34	7.141	0.000	119577	41572	CREOSOT (C8-C22)	609564	95
Filter Peak	----						
C36	7.409	-0.004	114138	61669	BUNKERC (C10-C38)	12998040	1504
o-terph	4.758	-0.003	2740	1977	JET-A (C10-C18)	111596	7
Triacon Surr	6.568	0.009	1763841	1894900	IT.MOIL (C24-C40)	14605916	680

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
 AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1977	0.1	0.2
Triacantane	1894900	113.3	251.8

*Mud/27*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Date : 30-JUL-2010 23:32

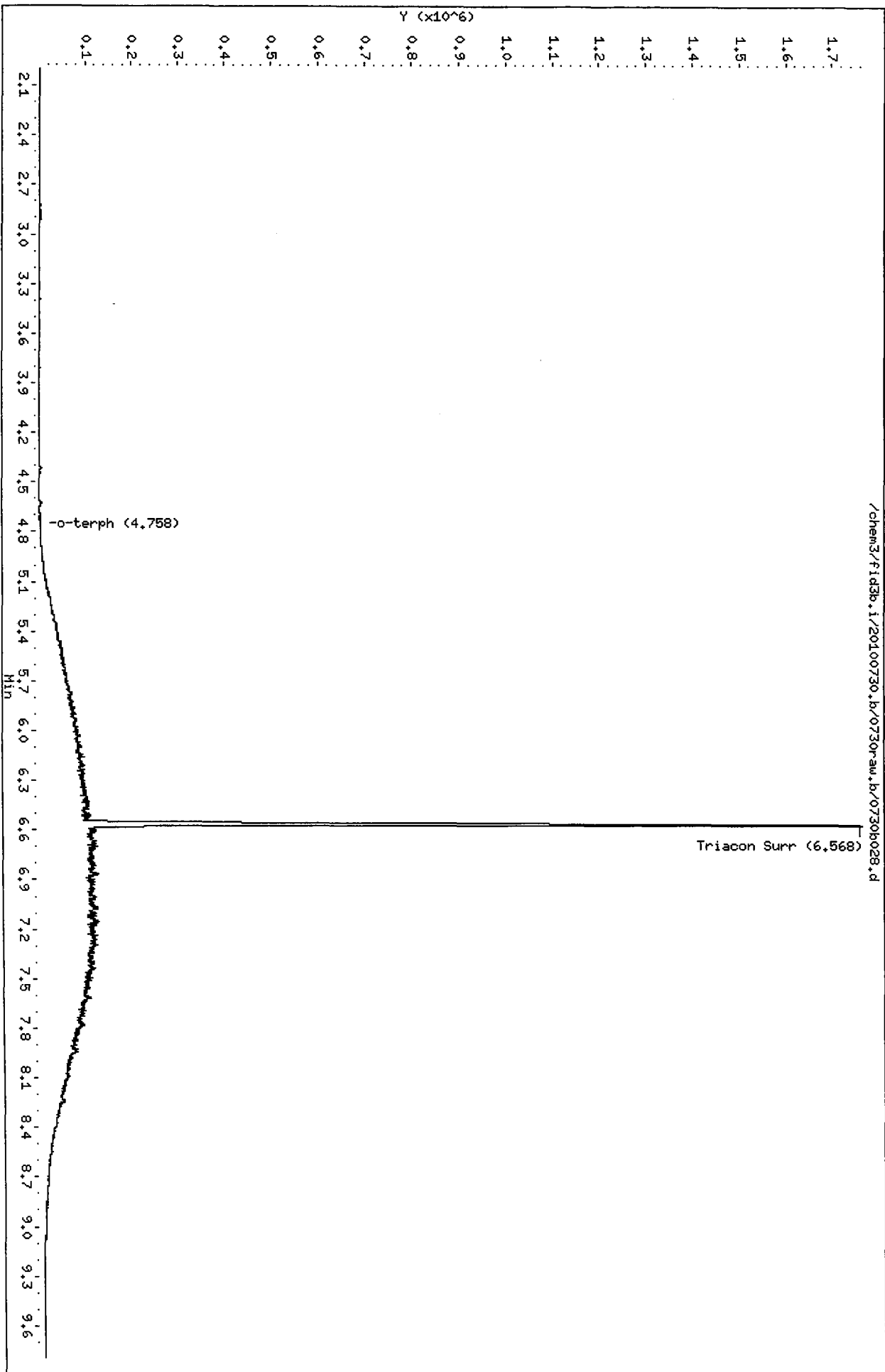
Client ID:

Instrument: fid3b.i

Sample Info: MOIL 1000

Column phase: RTX-1

Operator: HS  
Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730raw.b/0730b030.d ARI ID: MOIL 2500  
 Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 31-JUL-2010 00:10  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/03/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	95636	3
C8	----				DIESEL (C12-C24)	3379394	158
C10	2.857	-0.001	3357	3375	M.OIL (C24-C38)	32896882	2723
C12	3.471	0.003	1596	1868	AK-102 (C10-C25)	3927075	163
C14	3.927	0.001	1514	356	AK-103 (C25-C36)	28841572	3229
C16	4.322	0.001	1563	1411	OR.DIES (C10-C28)	10612044	503
C18	4.676	0.001	3568	4270	OR.MOIL (C28-C40)	28397062	2519
C20	4.996	-0.001	22446	7349			
C22	5.295	-0.001	73882	30652	STODDARD (C8-C12)	95636	3
C24	5.605	0.002	133400	26133			
C25	5.762	-0.001	165074	51876			
C26	5.928	0.002	188516	86981			
C28	6.238	-0.006	233688	182539			
C32	6.857	0.001	290957	171974			
C34	7.138	-0.003	286943	126318	CREOSOT (C8-C22)	1390131	217
Filter Peak	----						
C36	7.411	-0.002	275697	173060	BUNKERC (C10-C38)	36341914	4205
o-terph	4.758	-0.004	6196	3899	JET-A (C10-C18)	200291	13
Triacon Surr	6.545	-0.014	262776	85419	IT.MOIL (C24-C40)	35649493	1659

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
 AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	3899	0.2	0.4
Triacontane	85419	5.1	11.3

*08/31/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100730.b/0730rsw.b/0730b030.d  
Date : 31-JUL-2010 00:10

Client ID:

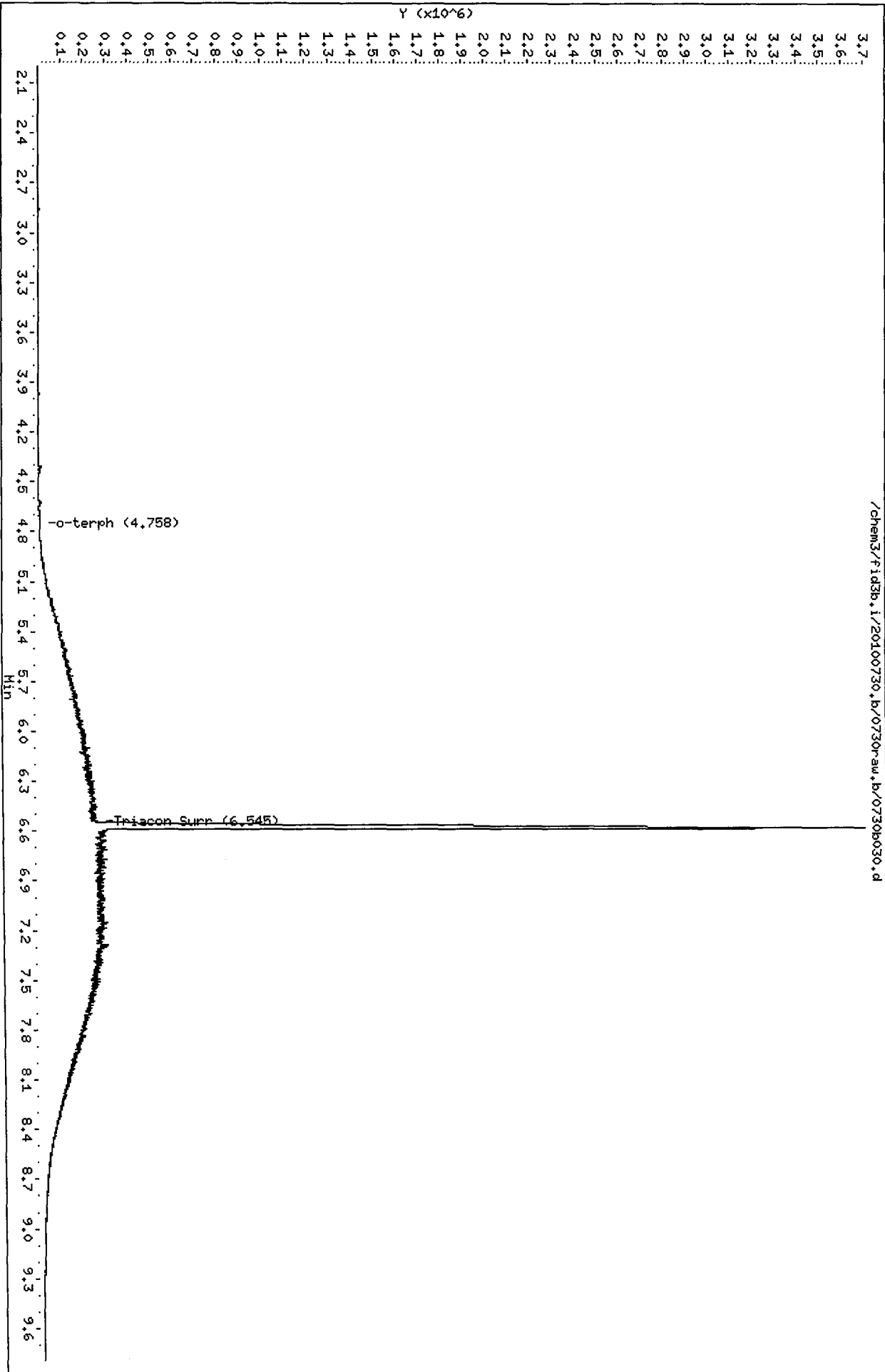
Sample Info: HDIL 2500

Column Phase: RTX-1

Instrument: fid3b.i

Operator: HS

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730raw.b/0730b032.d ARI ID: MOIL 5000  
 Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 31-JUL-2010 00:47  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/03/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	136516	5
C8	----				DIESEL (C12-C24)	7391085	345
C10	2.860	0.002	6390	7826	M.OIL (C24-C38)	71834393	5946
C12	3.468	0.000	3090	3308	AK-102 (C10-C25)	8576883	356
C14	3.927	0.000	2902	3119	AK-103 (C25-C36)	63299858	7086
C16	4.322	0.001	3356	5579	OR.DIES (C10-C28)	23215807	1101
C18	4.674	-0.001	7922	8796	OR.MOIL (C28-C40)	61601385	5464
C20	4.996	-0.002	47935	10434			
C22	5.294	-0.002	159044	57913	STODDARD (C8-C12)	136516	5
C24	5.606	0.002	294534	135002			
C25	5.760	-0.004	341829	114396			
C26	5.924	-0.002	403139	246862			
C28	6.245	0.000	500056	192227			
C32	6.855	0.000	584755	116103			
C34	7.144	0.003	614284	191733	CREOSOT (C8-C22)	2916422	456
Filter Peak	----						
C36	7.412	-0.002	608306	208570	BUNKERC (C10-C38)	79322386	9177
o-terph	4.757	-0.005	12189	7421	JET-A (C10-C18)	369371	23
Triacon Surr	6.548	-0.012	568152	143228	IT.MOIL (C24-C40)	77472427	3605

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
 AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	7421	0.4	0.8
Triacontane	143228	8.6	19.0

*ms 8/2/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3b.i/20100730.b/0730raw.b/0730b032.d

Date: 31-JUL-2010 00:47

Client ID:

Sample Info: H01L 5000

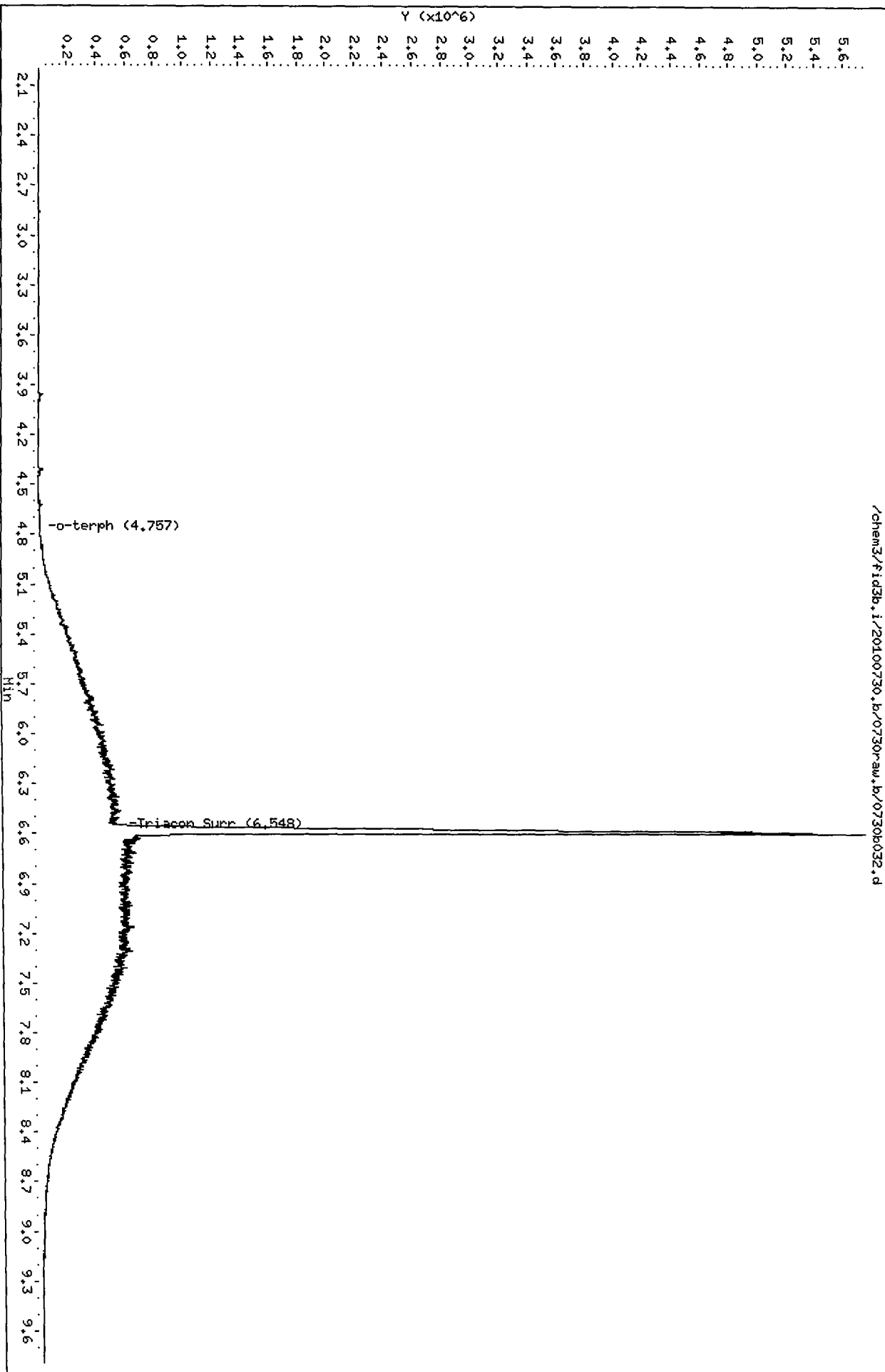
Column phase: RTX-1

Instrument: fid3b.i

Operator: HS

Column diameter: 2.00

/chem3/fid3b.i/20100730.b/0730raw.b/0730b032.d



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100730.b/0730raw.b/0730b034.d ARI ID: MOIL ICV  
 Method: /chem3/fid3b.i/20100730.b/ftphfid3b.m Client ID:  
 Instrument: fid3b.i Injection: 31-JUL-2010 01:25  
 Operator: MS Dilution Factor: 1  
 Report Date: 08/03/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	69710	3
C8	----				DIESEL (C12-C24)	654549	31
C10	2.860	0.002	1401	800	M.OIL (C24-C38)	5643801	467
C12	3.466	-0.002	844	283	AK-102 (C10-C25)	785151	33
C14	3.928	0.001	611	154	AK-103 (C25-C36)	4842447	542
C16	4.325	0.004	330	255	OR.DIES (C10-C28)	2137357	101
C18	4.676	0.001	610	174	OR.MOIL (C28-C40)	4762622	422
C20	4.999	0.002	3728	881			
C22	5.295	-0.001	14759	8671	STODDARD (C8-C12)	69710	3
C24	5.604	0.001	26635	20138			
C25	5.767	0.003	34354	20126			
C26	5.925	-0.001	38360	10923			
C28	6.242	-0.003	45237	26594			
C32	6.858	0.003	58973	16709			
C34	7.142	0.000	60409	28174	CREOSOT (C8-C22)	326198	51
Filter Peak	----						
C36	7.410	-0.003	54496	40370	BUNKERC (C10-C38)	6342170	734
o-terph	4.761	-0.001	1177	942	JET-A (C10-C18)	83224	5
Triacon Surr	6.560	0.000	917980	752053	IT.MOIL (C24-C40)	6953664	324

Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)  
 AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

Surrogate	Area	Amount	%Rec
o-Terphenyl	942	0.0	0.1
Triacotane	752053	45.0	99.9

*M 8/2/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Date : 31-JUL-2010 01:25

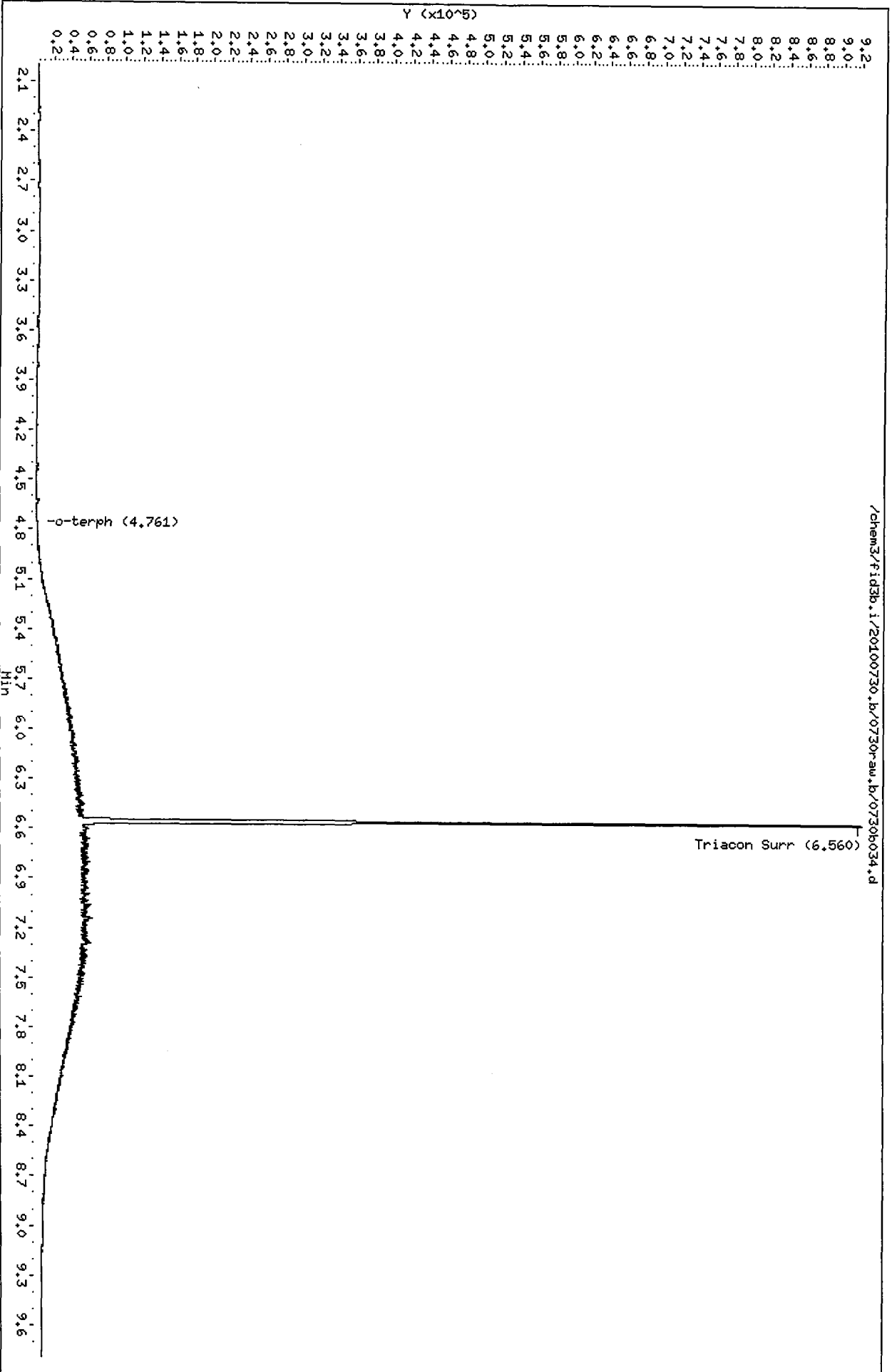
Instrument: fid3b.i

Client ID:

Sample Info: HDIL ICV

Operator: HS  
Column diameter: 2.00

Column phase: RTX-1



**TPHD Raw Data  
Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: RG79**

# Analytical Resources Inc.: Organics Instrument Log

FID-3B Serial No.: US00003232

Date: 8/12/10

Analysis: NWTPHD

Analyst: ms

GC Program: TPHHT

Column No.: 162178

Column Type: ZBLHT

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

EM Voltage: \_\_\_\_\_

Calibration File: \_\_\_\_\_

Curve Date: 7/30/10

IS/SS	Ical/Ccal	LCS/ICV
	<u>1700-1</u>	
	<u>1751-2</u>	
	<u>1730-3</u>	
	<u>1755-2</u>	

Time	Filename	LabID	ClientID	DF	Time	Filename	LabID	ClientID	DF	Time	Filename	LabID	ClientID	DF
1246	0812b001.d	RINSE		1	23 1956	0812b023.d	RI44B	081210-FL978	20	46	0314	0812b046.d	RG79LCSS1	1
1305	0812b002.d	RT	RT	1	24 2015	0812b024.d	RI44C	081210-FL978	10	47	0333	0812b047.d	RG79MBS1	1
1324	0812b003.d	IB	IB	1	25 2035	0812b025.d	RI44LCSDS1	RI44LCSDS1	1	48	0352	0812b048.d	DIESEL#5	1
1344	0812b004.d	DIESEL#1		1	26 2054	0812b026.d	RI44LCSS1	RI44LCSS1	1	49	0411	0812b049.d	MOIL#5	1
1403	0812b005.d	MOIL#1		1	27 2113	0812b027.d	RI44MBS1	RI44MBS1	1	50	0430	0812b050.d	RG79G	1
1422	0812b006.d	RI10A	DW Pond	1	28 2132	0812b028.d	DIESEL#3	FY09 FORT LE	1	51	0449	0812b051.d	RG79H	1
1442	0812b007.d	RI10LCSW1	RI10LCSW1	1	29 2151	0812b029.d	MOIL#3	FY09 FORT LE	1	52	0508	0812b052.d	RG79O	1
1502	0812b008.d	RI10MBW1	RI10MBW1	1	30 2210	0812b030.d	RG79A		2	53	0527	0812b053.d	DIESEL#6	1
1522	0812b009.d	RH80A	KP-1	1	31 2230	0812b031.d	RG79E		1	54	0546	0812b054.d	MOIL#6	1
1542	0812b010.d	RH80B	KP-2	5	32 2249	0812b032.d	RG79EMS		1					
1601	0812b011.d	RH80A	KP-1	5	33 2308	0812b033.d	RG79EMSD		1					
1621	0812b012.d	RINSE		1	34 2326	0812b034.d	RG79G		10					
1641	0812b013.d	RINSE		1	35 2345	0812b035.d	RG79H		10					
1700	0812b014.d	RH80LCSS1	RH80LCSS1	1	36 0004	0812b036.d	RG79O		10					
1720	0812b015.d	RH80MBS1	RH80MBS1	1	37 0023	0812b037.d	RG79B		20					
1739	0812b016.d	DIESEL#2	FY09 FORT LE	1	38 0042	0812b038.d	DIESEL#4		1					
1759	0812b017.d	MOIL#2	FY09 FORT LE	1	39 0101	0812b039.d	MOIL#4		1					
1818	0812b018.d	RG79I		1	40 0120	0812b040.d	RG79K		1					
1838	0812b019.d	RG79B		1	41 0139	0812b041.d	RG79L		1					
1857	0812b020.d	RG79C		20	42 0158	0812b042.d	RG79M		1					
1917	0812b021.d	RG79D		10	43 0217	0812b043.d	RG79N		1					
1936	0812b022.d	RI44A	081210-FL978	10	44 0236	0812b044.d	RG79P		1					
					45 0255	0812b045.d	RG79Q		1					

*ms*

*ms*

*8/13/10*

Maintenance / Comment

**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: RG79 Client ID: FLOYD/SHIDER

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): Diesel, Mail, 6 Teph.

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: 7/30/10 Analysis Start: 8/12/10

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):**

Samples RG79 B, D, E, G and H are weathered diesel.  
M 8/13/10

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

Analyst: M 2 Date: 8/13/10

Reviewer: [Signature] Date: 8/13/10

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b002.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RT  
Client ID: RT  
Injection: 12-AUG-2010 13:05  
Dilution Factor: 1

FID:3B RESULTS

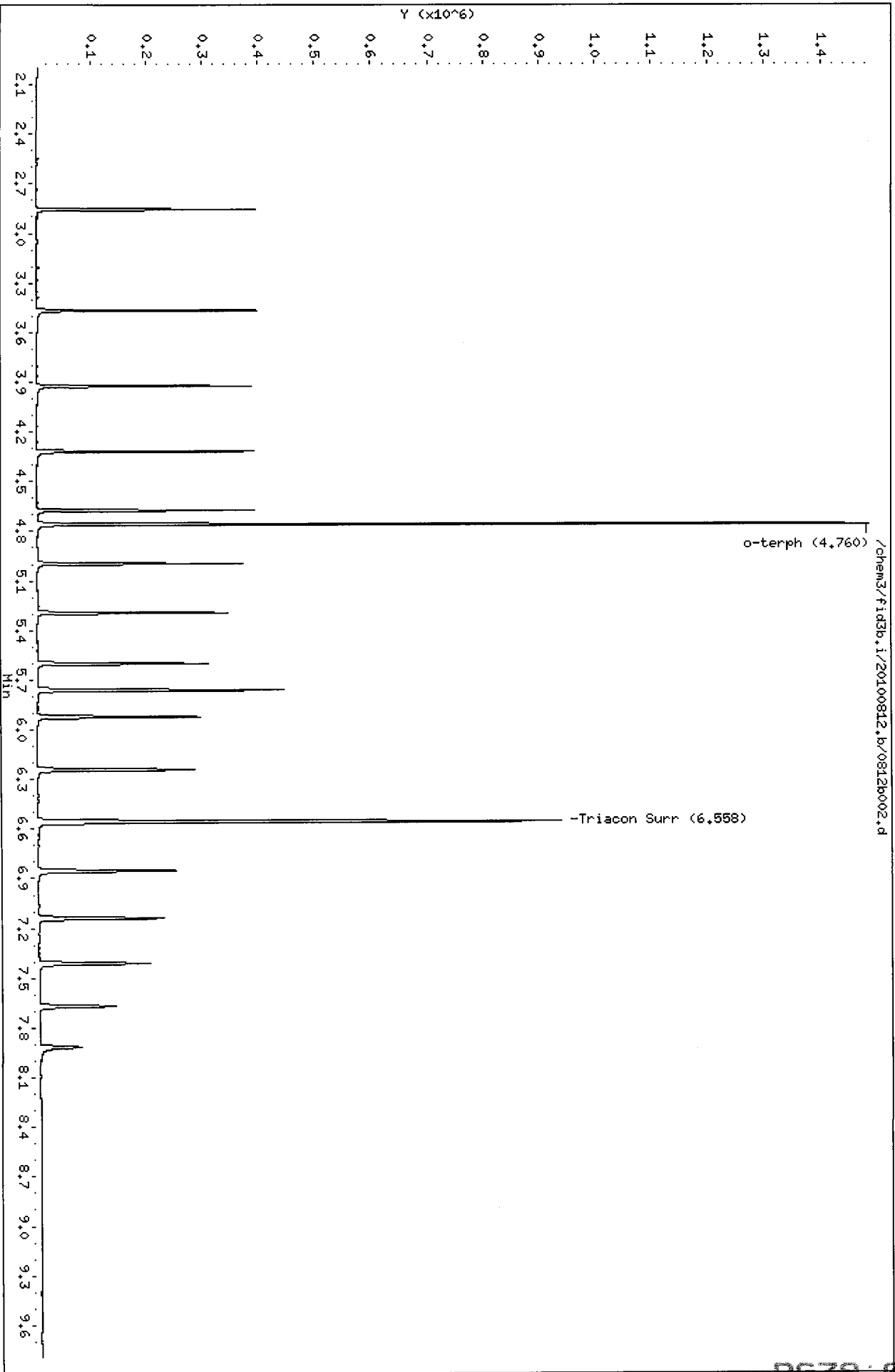
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.024	0.000	410017	317809	GAS (Tol-C12)	1036942	38
C8	1.316	0.000	179310	213741	DIESEL (C12-C24)	1448025	68
C10	2.854	0.000	394164	229952	M.OIL (C24-C38)	1664607	138
C12	3.465	0.000	396296	213547	AK-102 (C10-C25)	1933664	80
C14	3.923	0.000	386008	217623	AK-103 (C25-C36)	1490750	167
C16	4.318	0.000	391163	220651	OR.DIES (C10-C28)	2748430	130
C18	4.672	0.000	391497	230469	OR.MOIL (C28-C40)	974941	86
C20	4.995	0.000	371224	229692			
C22	5.291	0.000	343720	225996	STODDARD (C8-C12)	719132	26
C24	5.599	0.000	309629	213316			
C25	5.761	0.000	443923	334656			
C26	5.920	0.000	285888	214507			
C28	6.241	0.000	284311	246516			
C32	6.850	0.000	248318	200717			
C34	7.140	0.000	226102	224954	CREOSOT (C8-C22)	1933416	302
Filter Peak	----						
C36	7.409	0.000	202217	198807	BUNKERC (C10-C38)	3592593	416
o-terph	4.760	0.000	1485286	853161	JET-A (C10-C18)	1205659	76
Triacon Surr	6.558	0.000	937297	856709	IT.MOIL (C24-C40)	2652095	123

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	853161	42.8	95.1
Triacontane	856709	51.2	113.8

*M 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b003.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: IB  
Client ID: IB  
Injection: 12-AUG-2010 13:24  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	44658	2
C8	----				DIESEL (C12-C24)	38249	2
C10	2.857	0.003	949	1245	M.OIL (C24-C38)	74258	6
C12	3.467	0.002	790	371	AK-102 (C10-C25)	70695	3
C14	3.930	0.007	400	149	AK-103 (C25-C36)	56090	6
C16	4.313	-0.005	174	62	OR.DIES (C10-C28)	74909	4
C18	4.673	0.000	228	154	OR.MOIL (C28-C40)	91202	8
C20	5.001	0.007	397	61			
C22	5.288	-0.004	180	166	STODDARD (C8-C12)	44658	2
C24	5.597	-0.002	63	25			
C25	5.756	-0.005	57	17			
C26	5.912	-0.008	59	7			
C28	6.242	0.001	938	1025			
C32	6.844	-0.006	819	218			
C34	7.139	-0.001	773	555	CREOSOT (C8-C22)	81959	13
Filter Peak	----						
C36	7.411	0.002	808	348	BUNKERC (C10-C38)	144896	17
o-terph	4.760	0.001	1406890	804924	JET-A (C10-C18)	52992	3
Triacon Surr	6.556	-0.002	699549	668835	IT.MOIL (C24-C40)	764307	36

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	804924	40.4	89.7
Triacontane	668835	40.0	88.9

*MS 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100812.b/0812b003.d  
Date: 12-AUG-2010 13:24

Client ID: IB

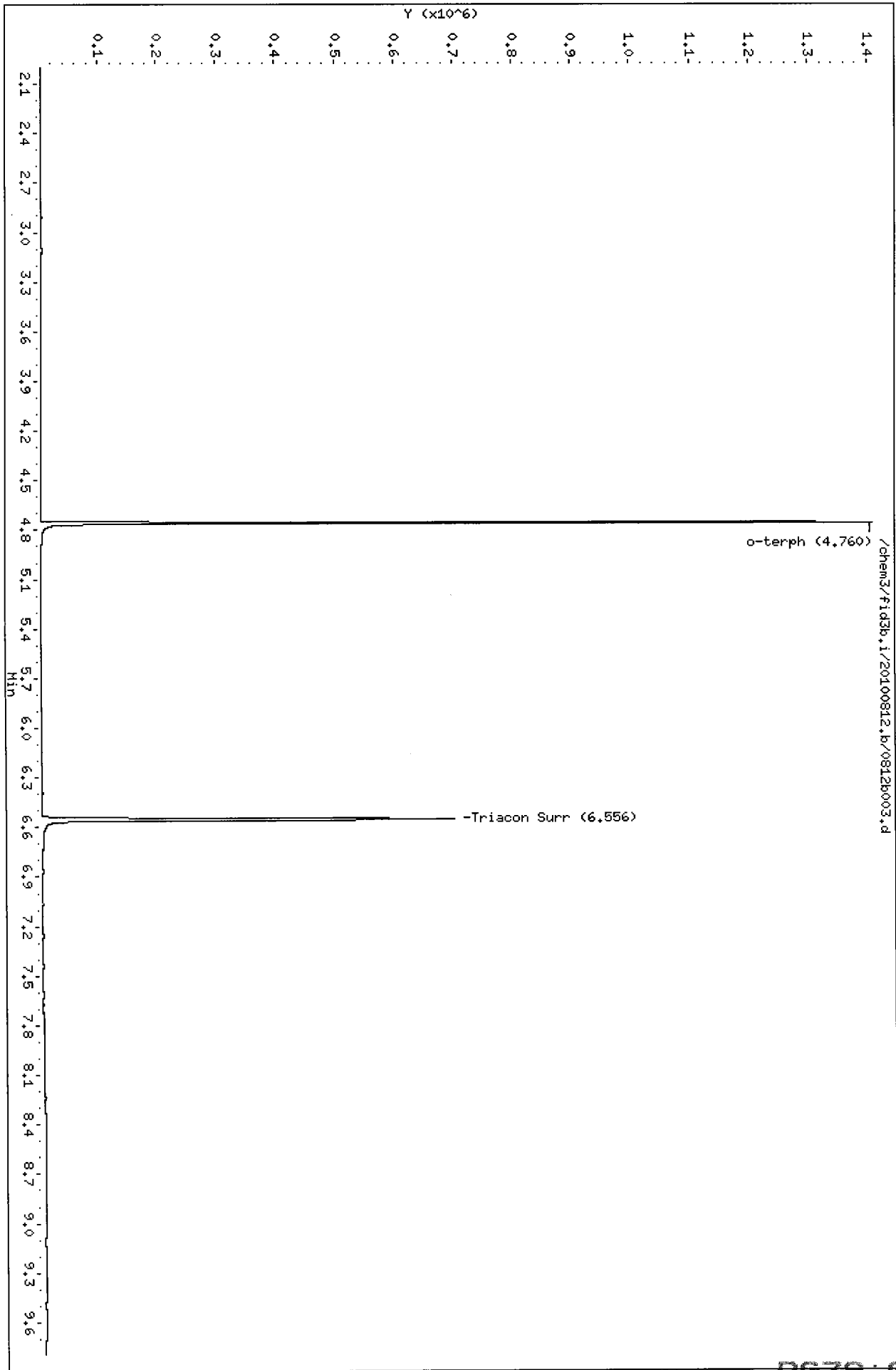
Sample Info: IB

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b016.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: DIESEL#2  
Client ID: DIESEL#2  
Injection: 12-AUG-2010 17:39  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	767633	28
C8	----				DIESEL (C12-C24)	5270925	246
C10	2.855	0.001	27910	20158	M.OIL (C24-C38)	108916	9
C12	3.465	0.000	63509	46960	AK-102 (C10-C25)	5897909	245
C14	3.923	-0.001	127471	89549	AK-103 (C25-C36)	77599	9
C16	4.318	0.000	224683	203984	OR.DIES (C10-C28)	5941063	282
C18	4.673	0.001	220324	171095	OR.MOIL (C28-C40)	84500	7
C20	4.994	-0.001	127981	103933			
C22	5.293	0.001	53987	45143	STODDARD (C8-C12)	767633	28
C24	5.603	0.003	11806	12338			
C25	5.765	0.004	4324	8696			
C26	5.914	-0.007	1375	518			
C28	6.240	-0.001	261	70			
C32	6.841	-0.009	350	170			
C34	7.142	0.002	595	82	CREOSOT (C8-C22)	5854472	915
Filter Peak	----						
C36	7.413	0.004	876	463	BUNKERC (C10-C38)	5993065	693
o-terph	4.762	0.002	1620171	875844	JET-A (C10-C18)	4287898	271
Triacon Surr	6.556	-0.002	360	179	IT.MOIL (C24-C40)	141593	7

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	875844	43.9	97.6
Triacantane	179	0.0	0.0

MANUAL ADJUSTMENTS

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

Analyst *MS* Date *8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100812.br/0812b016.d  
Date: 12-AUG-2010 17:39

Client ID: DIESEL#2

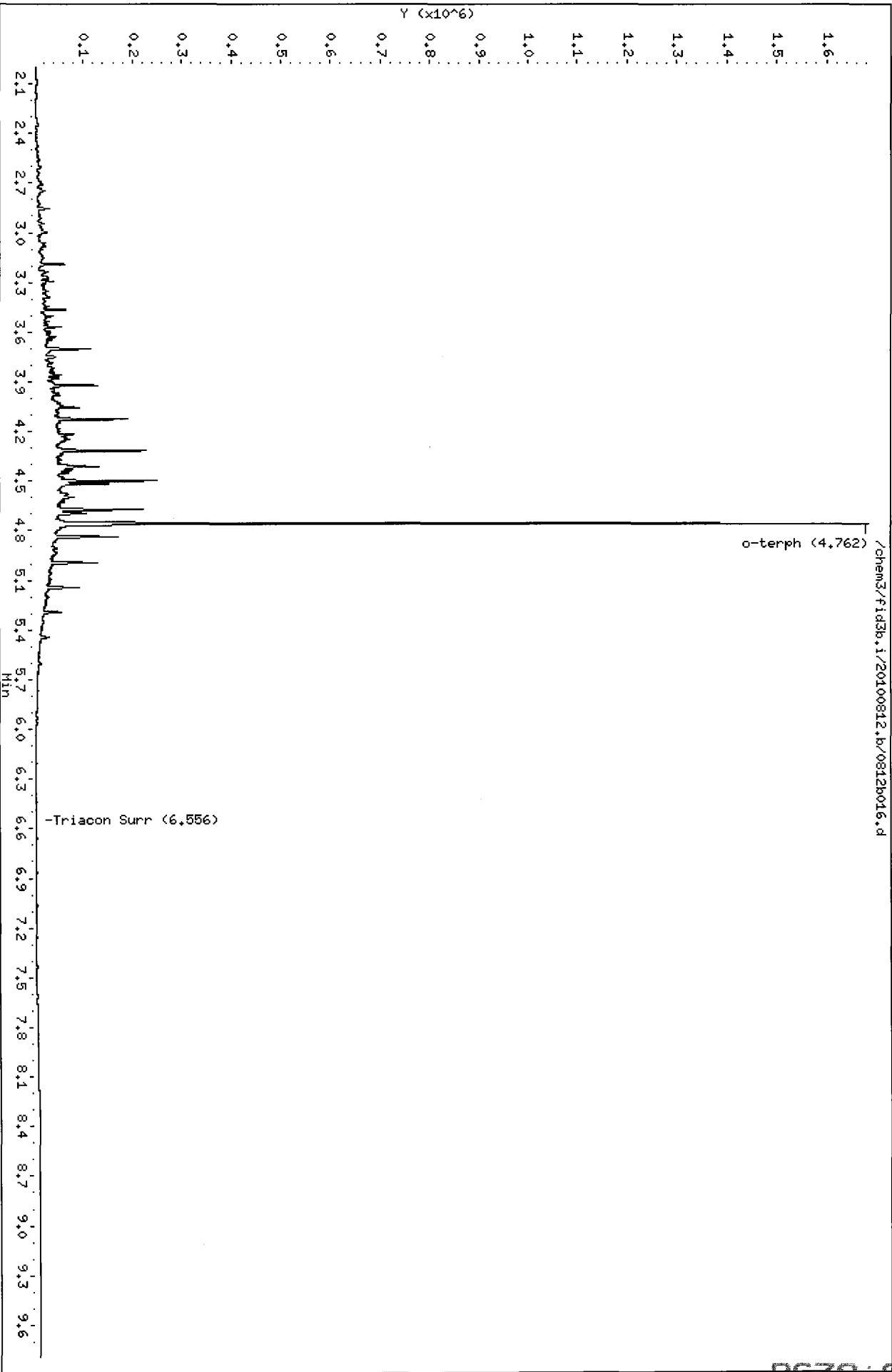
Sample Info: DIESEL#2

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b017.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: MOIL#2  
Client ID: MOIL#2  
Injection: 12-AUG-2010 17:59  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	38668	1
C8	----				DIESEL (C12-C24)	674703	32
C10	2.856	0.002	908	989	M.OIL (C24-C38)	5530111	458
C12	3.466	0.001	626	99	AK-102 (C10-C25)	812814	34
C14	3.919	-0.004	421	171	AK-103 (C25-C36)	4871526	545
C16	4.314	-0.004	284	82	OR.DIES (C10-C28)	2157022	102
C18	4.667	-0.005	597	128	OR.MOIL (C28-C40)	4420820	392
C20	4.994	0.000	4287	919			
C22	5.292	0.001	14575	2880	STODDARD (C8-C12)	38668	1
C24	5.597	-0.002	27370	17422			
C25	5.760	-0.001	33749	9191			
C26	5.923	0.002	37676	10379			
C28	6.242	0.001	47223	33671			
C32	6.851	0.001	57758	27400			
C34	7.137	-0.002	56359	38411	CREOSOT (C8-C22)	300098	47
Filter Peak	----						
C36	7.411	0.002	43445	13744	BUNKERC (C10-C38)	6231249	721
o-terph	4.762	0.003	1973	2086	JET-A (C10-C18)	60419	4
Triacon Surr	6.559	0.001	874159	763915	IT.MOIL (C24-C40)	6640619	309

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2086	0.1	0.2
Triacantane	763915	45.7	101.5

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS  
 1. Peak not found  
 2. Poor Chromatography  
 3. Baseline Correction  
 4. Totals Calculation  
 5. Other  
 Analyst: *JR* Date: *8/13/10*

Data File: /chem3/fid3b.i/20100812.br/0812b017.d  
Date: 12-AUG-2010 17:59

Client ID: H01L#2

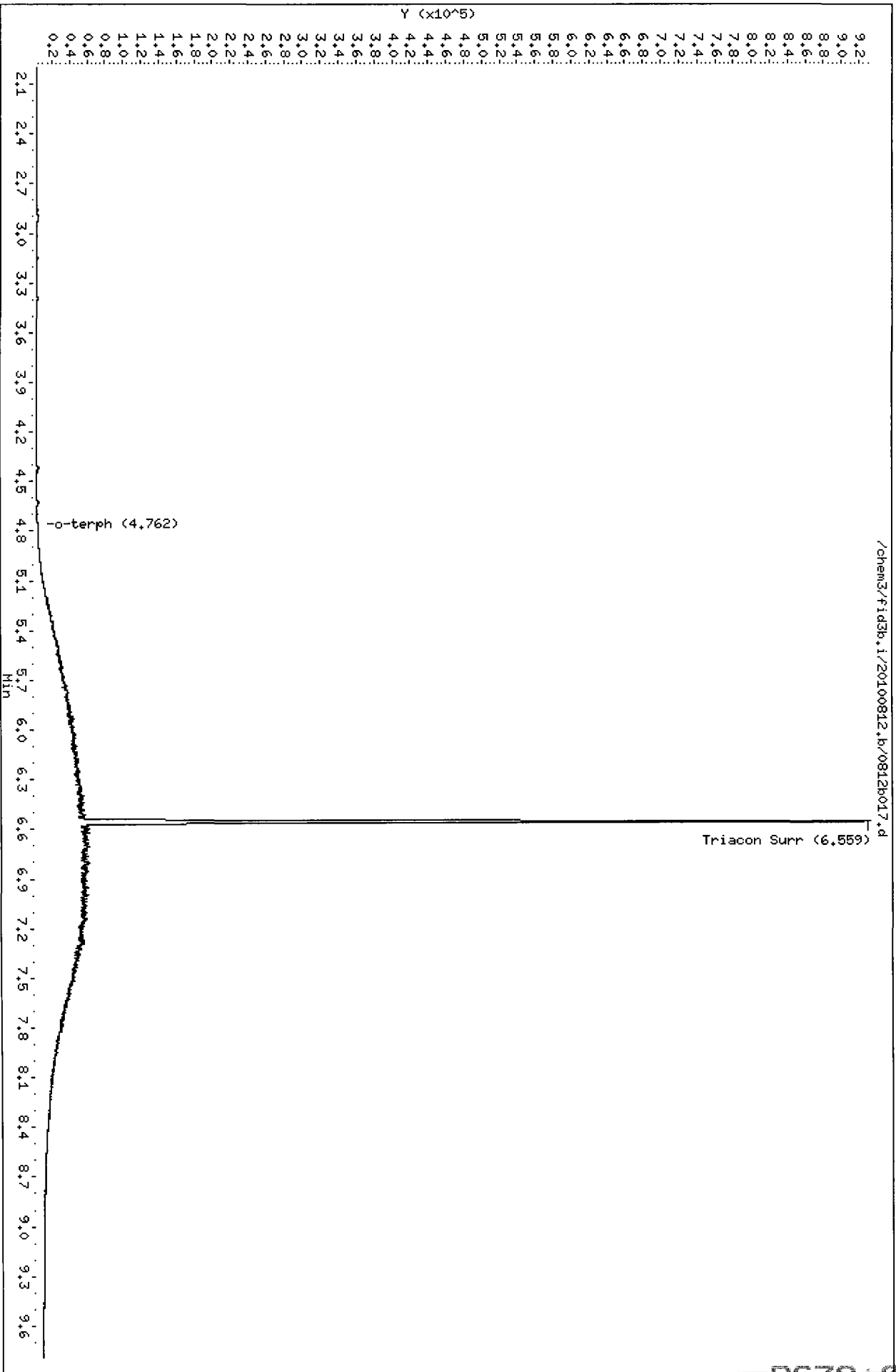
Sample Info: H01L#2

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b018.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79I  
Client ID: PSB11-23-24-073010  
Injection: 12-AUG-2010 18:18  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	323963	12
C8	----				DIESEL (C12-C24)	932498	44
C10	2.856	0.002	11223	9776	M.OIL (C24-C38)	1017028	84
C12	3.468	0.003	6012	5919	AK-102 (C10-C25)	1240008	51
C14	3.927	0.004	7938	6976	AK-103 (C25-C36)	915354	102
C16	4.320	0.002	10990	12079	OR.DIES (C10-C28)	1585301	75
C18	4.673	0.001	12509	10544	OR.MOIL (C28-C40)	702660	62
C20	4.996	0.001	13352	16737			
C22	5.292	0.001	13968	12186	STODDARD (C8-C12)	323963	12
C24	5.603	0.004	13814	19492			
C25	5.764	0.003	14451	24843			
C26	5.919	-0.002	11753	4254			
C28	6.240	-0.001	13491	6260			
C32	6.849	-0.002	9100	5989			
C34	7.139	0.000	7893	4217	CREOSOT (C8-C22)	1089551	170
Filter Peak	----						
C36	7.408	-0.001	5752	903	BUNKERC (C10-C38)	2227714	258
o-terph	4.762	0.002	1451257	791594	JET-A (C10-C18)	710960	45
Triacon Surr	6.558	0.001	743240	657110	IT.MOIL (C24-C40)	1734386	81

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

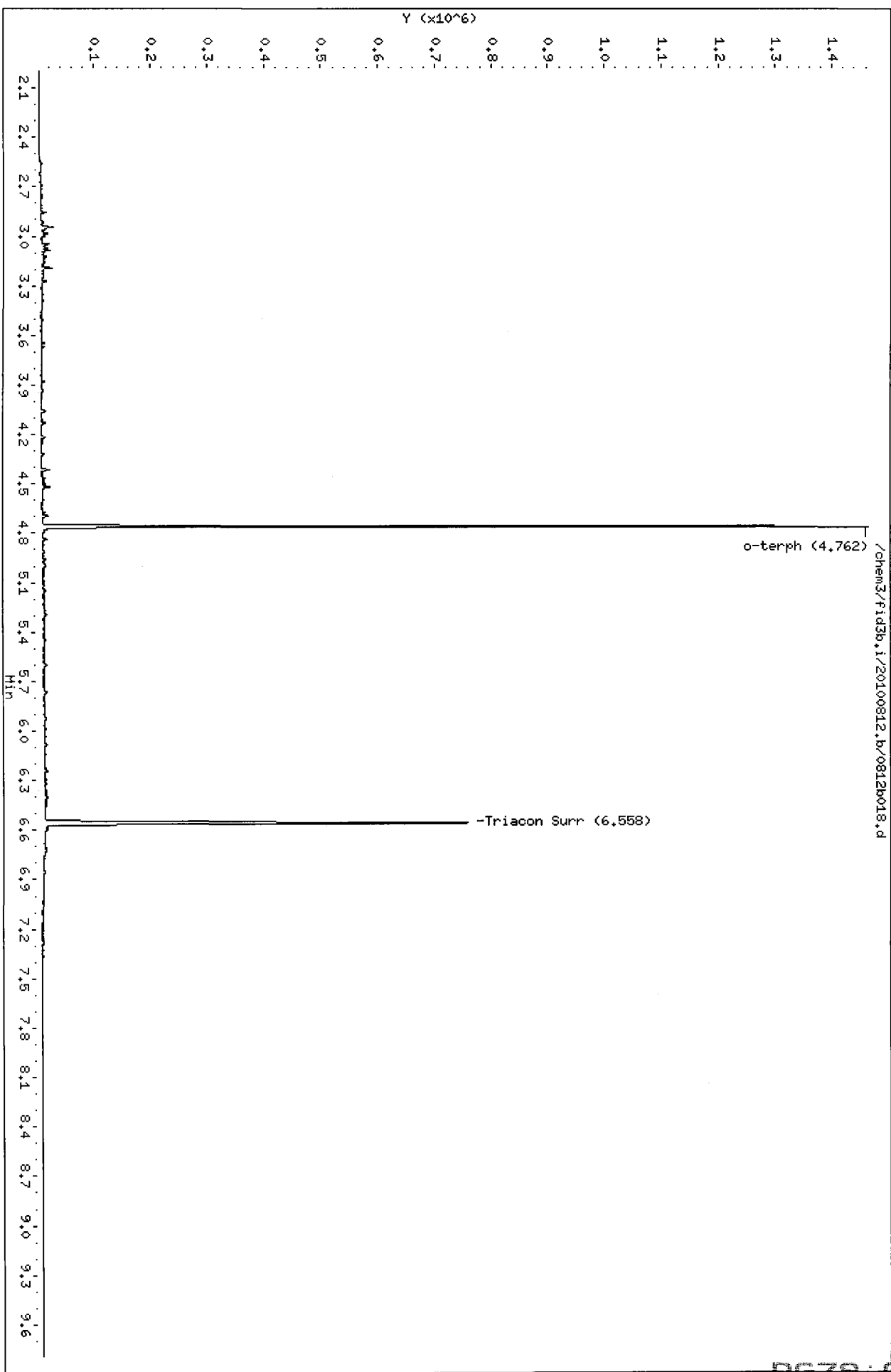
Surrogate	Area	Amount	%Rec
o-Terphenyl	791594	39.7	88.2
Triacantane	657110	39.3	87.3

MANUAL ADJUSTMENTS

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

Analyst ms Date 8/13/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b020.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79C  
Client ID: PSB11-2-4-073010  
Injection: 12-AUG-2010 18:57  
Dilution Factor: 20

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	486950	18
C8	----				DIESEL (C12-C24)	3952025	185
C10	2.856	0.002	11813	8884	M.OIL (C24-C38)	14052160	1163
C12	3.469	0.004	5757	3457	AK-102 (C10-C25)	4656042	193
C14	3.929	0.005	11985	9570	AK-103 (C25-C36)	12771497	1430
C16	4.320	0.001	15297	15134	OR.DIES (C10-C28)	8953842	425
C18	4.673	0.000	27195	25878	OR.MOIL (C28-C40)	10045597	891
C20	4.997	0.002	46804	29355			
C22	5.294	0.002	82150	93991	STODDARD (C8-C12)	486950	18
C24	5.601	0.002	135705	148006			
C25	5.764	0.003	170372	199181			
C26	5.923	0.002	193543	179226			
C28	6.245	0.004	278210	332916			
C32	6.849	-0.002	129066	70823			
C34	7.144	0.004	116735	92618	CREOSOT (C8-C22)	3028494	474
Filter Peak	----						
C36	7.407	-0.002	77009	27008	BUNKERC (C10-C38)	18385660	2127
o-terph	4.758	-0.002	60501	37351	JET-A (C10-C18)	1306852	82
Triacon Surr	----				IT.MOIL (C24-C40)	14665939	683

Range Times: NW Diesel (3.515 - 5.649) NW Gas (0.974 - 3.515) NW M.Oil (5.649 - 7.717)  
AK102 (2.804 - 5.711) AK103 (5.711 - 7.459) Jet A (2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	37351	1.9	83.3
Triacantane	0	0.0	0.0

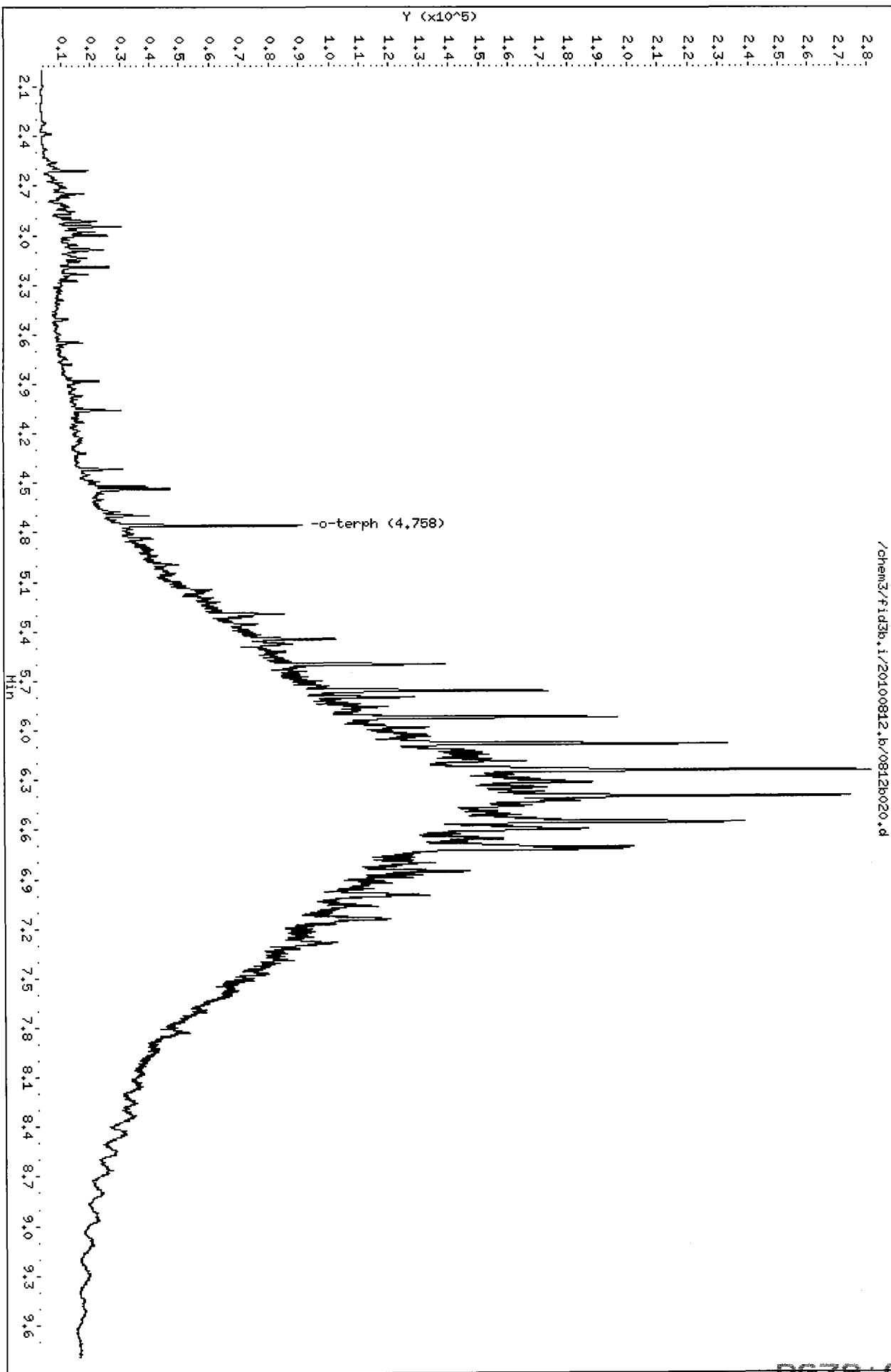
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst *JR* Date *8/13/10*

/chem3/fid3b.i/20100812.br/0812h020.d



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b021.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79D  
Client ID: PSB11-2-4-073010-D  
Injection: 12-AUG-2010 19:17  
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	356624	13
C8	----				DIESEL (C12-C24)	7930972	371
C10	2.855	0.002	8477	6417	M.OIL (C24-C38)	28412053	2352
C12	3.470	0.005	7681	7627	AK-102 (C10-C25)	8883118	369
C14	3.923	0.000	27746	21825	AK-103 (C25-C36)	25863244	2895
C16	4.318	0.000	34737	33229	OR.DIES (C10-C28)	17420952	826
C18	4.673	0.001	53820	53975	OR.MOIL (C28-C40)	20267355	1798
C20	4.995	0.000	88856	46531			
C22	5.289	-0.002	128592	65193	STODDARD (C8-C12)	356624	13
C24	5.604	0.005	195690	125709			
C25	5.764	0.003	236155	128927			
C26	5.921	0.000	242309	99267			
C28	6.242	0.001	358161	110418			
C32	6.851	0.001	251029	48446			
C34	7.137	-0.002	211170	61230	CREOSOT (C8-C22)	5365008	839
Filter Peak	----						
C36	7.406	-0.003	158343	86969	BUNKERC (C10-C38)	36619937	4237
o-terph	4.757	-0.003	120512	69244	JET-A (C10-C18)	2196842	139
Triacon Surr	----				IT.MOIL (C24-C40)	29480423	1372

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	69244	3.5	77.2
Triacontane	0	0.0	0.0

MANUAL ADJUSTMENTS

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

Analyst MS Date 8/13/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

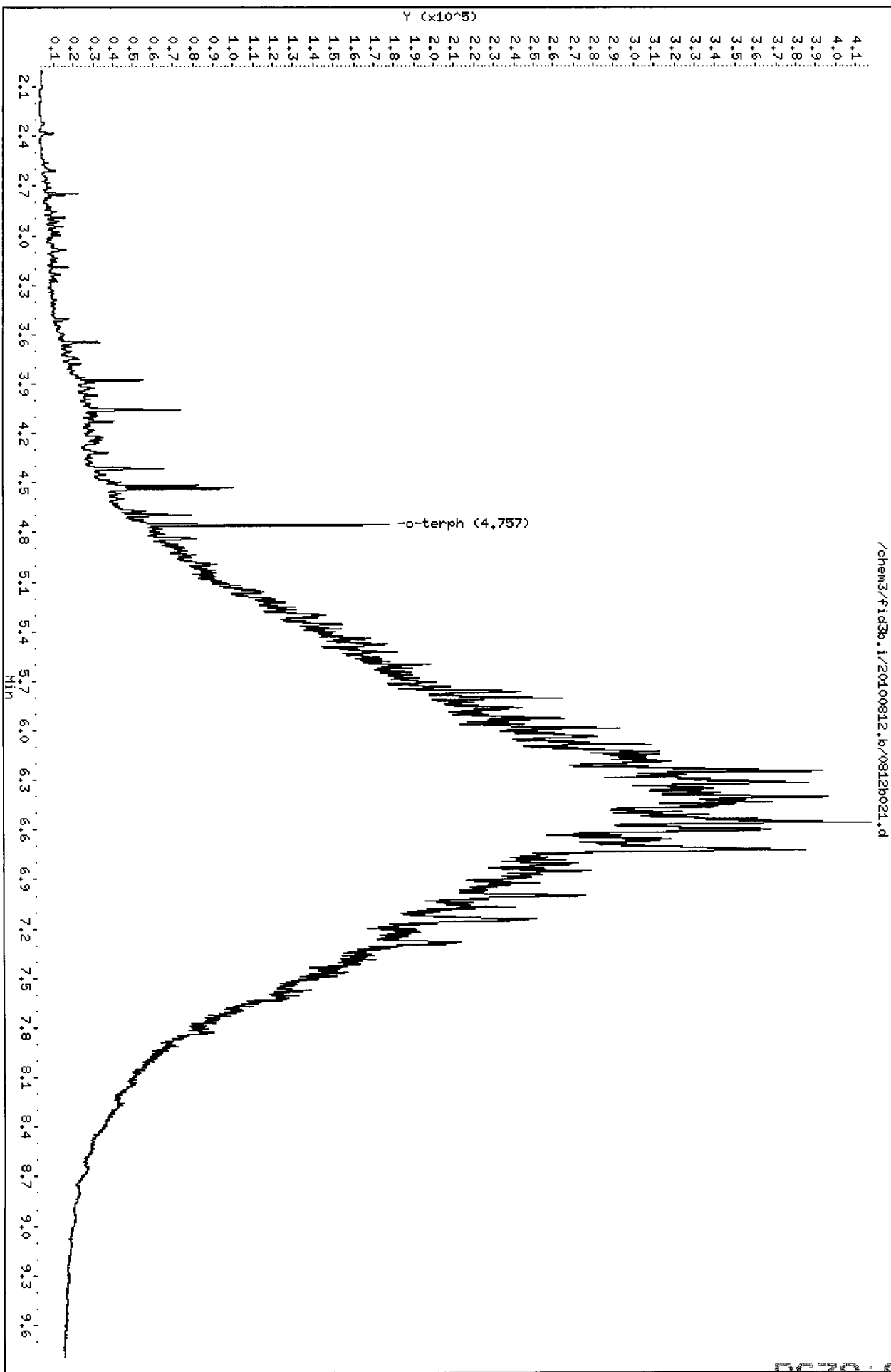
Instrument: fid3b.i

Operator: JR

Column diameter: 2.00

Column phase: RTX-1

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Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b028.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: DIESEL#3  
Client ID: DIESEL#3  
Injection: 12-AUG-2010 21:32  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	767376	28
C8	----				DIESEL (C12-C24)	5234714	245
C10	2.855	0.001	27803	19257	M.OIL (C24-C38)	102226	8
C12	3.466	0.001	70504	48693	AK-102 (C10-C25)	5862598	243
C14	3.924	0.000	136922	107275	AK-103 (C25-C36)	68248	8
C16	4.319	0.001	235800	213184	OR.DIES (C10-C28)	5901993	280
C18	4.674	0.001	209068	160873	OR.MOIL (C28-C40)	78804	7
C20	4.995	0.000	130101	103934			
C22	5.292	0.001	53748	50096	STODDARD (C8-C12)	767376	28
C24	5.602	0.003	11981	6987			
C25	5.767	0.006	4623	4904			
C26	5.923	0.003	1297	275			
C28	6.242	0.001	256	57			
C32	6.850	-0.001	294	57			
C34	7.143	0.003	527	103	CREOSOT (C8-C22)	5828041	911
Filter Peak	----						
C36	7.410	0.000	972	210	BUNKERC (C10-C38)	5950089	688
o-terph	4.762	0.002	1664530	887235	JET-A (C10-C18)	4292452	271
Triacon Surr	6.563	0.005	441	421	IT.MOIL (C24-C40)	133355	6

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	887235	44.5	98.9
Triacantane	421	0.0	0.1

MANUAL ADJUSTMENTS

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

Analyst MS Date 8/13/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100812.b/0812b028.d  
Date: 12-AUG-2010 21:32

Client ID: DIESEL#3

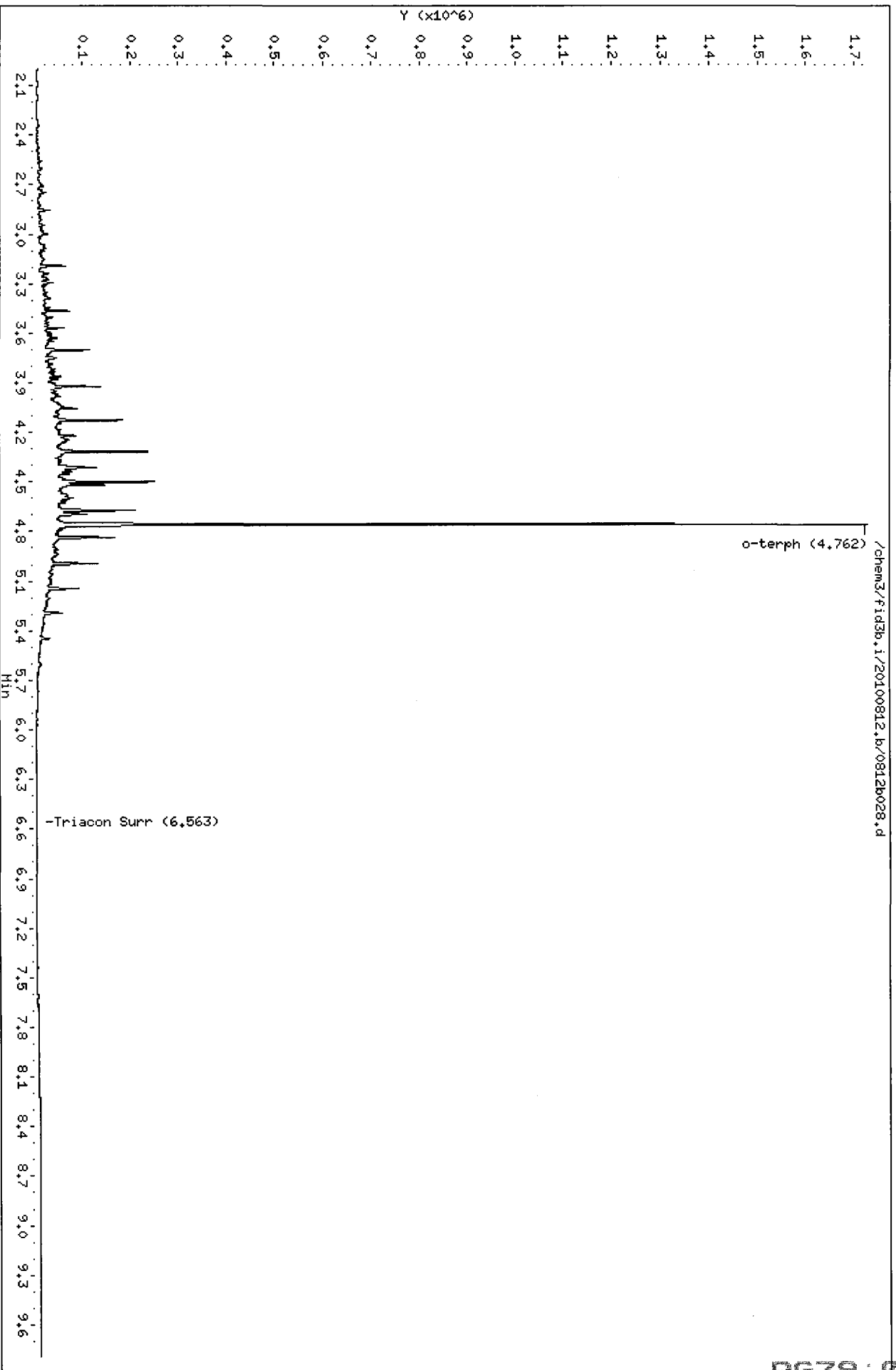
Sample Info: DIESEL#3

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



R679:01094

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b029.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: MOIL#3  
Client ID: MOIL#3  
Injection: 12-AUG-2010 21:51  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	39450	1
C8	----				DIESEL (C12-C24)	677860	32
C10	2.858	0.004	914	1153	M.OIL (C24-C38)	5513187	456
C12	3.472	0.007	598	312	AK-102 (C10-C25)	807025	33
C14	3.925	0.002	409	110	AK-103 (C25-C36)	4911932	550
C16	4.323	0.005	291	64	OR.DIES (C10-C28)	2175469	103
C18	4.678	0.006	778	861	OR.MOIL (C28-C40)	4371613	388
C20	4.995	0.000	4184	993			
C22	5.288	-0.004	14598	6242	STODDARD (C8-C12)	39450	1
C24	5.600	0.001	28397	13158			
C25	5.764	0.003	34815	20883			
C26	5.920	0.000	39316	24675			
C28	6.240	-0.001	46423	10874			
C32	6.854	0.003	57095	29637			
C34	7.141	0.002	55905	27127	CREOSOT (C8-C22)	300288	47
Filter Peak	----						
C36	7.411	0.001	43659	7573	BUNKERC (C10-C38)	6219035	720
o-terph	4.762	0.002	1832	1809	JET-A (C10-C18)	60810	4
Triacon Surr	6.557	-0.001	847763	778735	IT.MOIL (C24-C40)	6619968	308

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1809	0.1	0.2
Triacantane	778735	46.6	103.5

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst *[Signature]* Date 8/13/10

Data File: /chem3/fid3b.i/20100812.b/0812b029.d  
Date: 12-AUG-2010 21:51

Client ID: MOIL#3

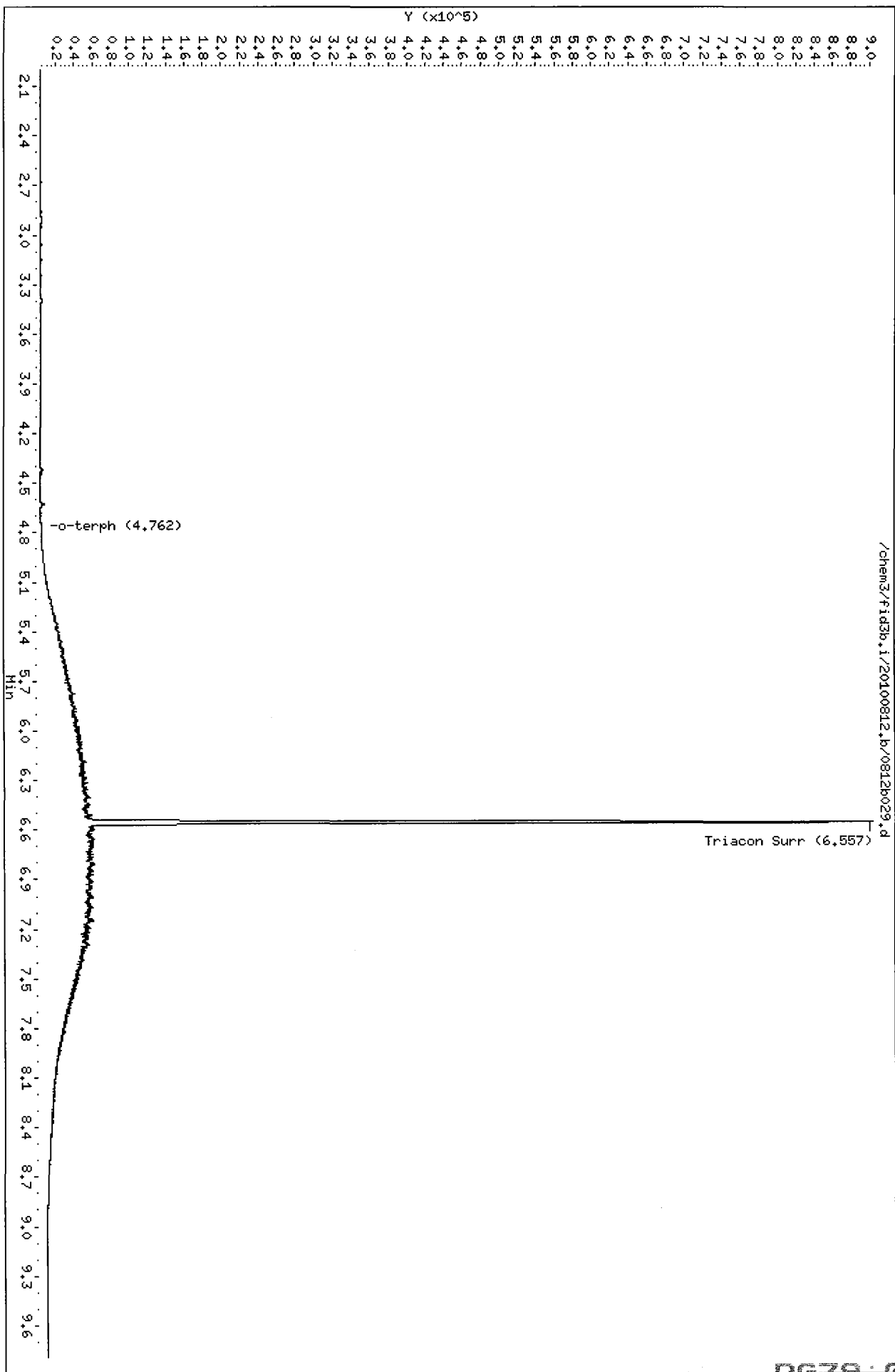
Sample Info: MOIL#3

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



RG79: 01096



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b030.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79A  
Client ID: PSB11-0-0.5-073010  
Injection: 12-AUG-2010 22:10  
Dilution Factor: 2

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	122645	4
C8	----				DIESEL (C12-C24)	3155458	147
C10	2.855	0.001	1932	2360	M.OIL (C24-C38)	20491266	1696
C12	3.455	-0.010	1634	1498	AK-102 (C10-C25)	3551679	147
C14	3.930	0.007	2536	3791	AK-103 (C25-C36)	17983245	2013
C16	4.319	0.001	7501	5599	OR.DIES (C10-C28)	7944210	377
C18	4.674	0.002	21303	13171	OR.MOIL (C28-C40)	17234329	1529
C20	4.994	-0.001	47797	43820			
C22	5.293	0.002	69387	19036	STODDARD (C8-C12)	122645	4
C24	5.601	0.002	91774	63989			
C25	5.760	-0.001	105658	22758			
C26	5.919	-0.002	123561	21670			
C28	6.242	0.001	222986	99842			
C32	6.849	-0.002	214838	177324			
C34	7.137	-0.003	213919	101178	CREOSOT (C8-C22)	1985221	310
Filter Peak	----						
C36	7.405	-0.005	172230	76324	BUNKERC (C10-C38)	23732965	2746
o-terph	4.758	-0.002	693124	390516	JET-A (C10-C18)	524861	33
Triacon Surr	6.562	0.004	409705	362888	IT.MOIL (C24-C40)	22299727	1038

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	390516	19.6	87.1
Triacontane	362888	21.7	96.4

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst JM Date 8/13/10

Date: 12-AUG-2010 22:10

Client ID: PSB14-0-0.5-073010

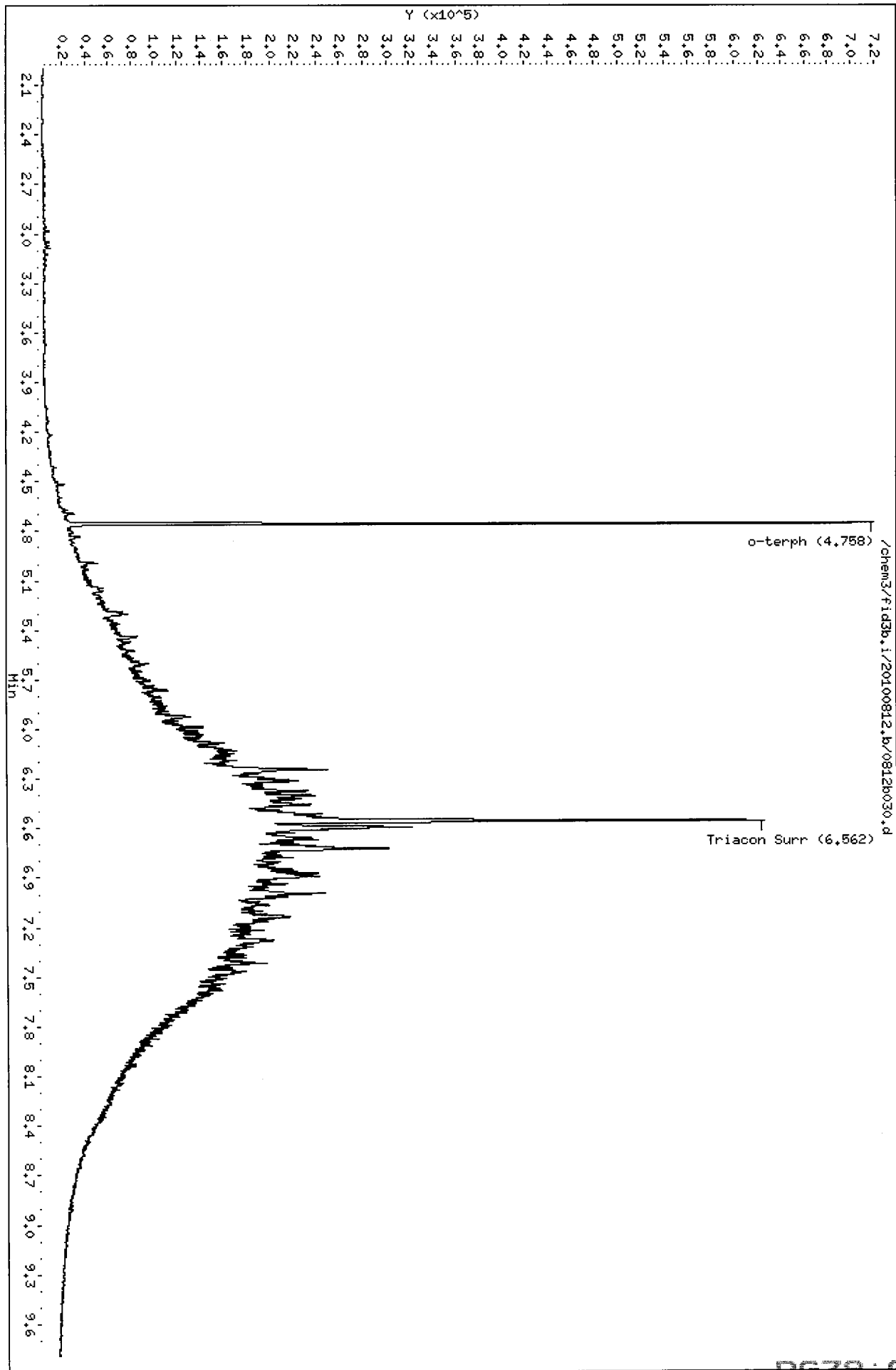
Sample Info: RG79A,2

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b031.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79E  
Client ID: PSB11-4-6-073010  
Injection: 12-AUG-2010 22:30  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	450999	16
C8	----				DIESEL (C12-C24)	8155901	381
C10	2.855	0.001	13744	13543	M.OIL (C24-C38)	18965604	1570
C12	3.466	0.001	9106	9633	AK-102 (C10-C25)	9016758	374
C14	3.924	0.001	24654	19238	AK-103 (C25-C36)	17269518	1933
C16	4.319	0.001	43149	42855	OR.DIES (C10-C28)	15184743	720
C18	4.672	-0.001	78562	60666	OR.MOIL (C28-C40)	13033100	1156
C20	4.998	0.003	105126	59127			
C22	5.295	0.003	151514	120640	STODDARD (C8-C12)	450999	16
C24	5.601	0.002	188272	252776			
C25	5.762	0.001	225798	262790			
C26	5.921	0.000	211837	132477			
C28	6.241	-0.001	293653	94442			
C32	6.855	0.004	233615	300101			
C34	7.139	-0.001	175948	210339	CREOSOT (C8-C22)	6111501	956
Filter Peak	----						
C36	7.410	0.000	112059	50379	BUNKERC (C10-C38)	27469875	3178
o-terph	4.761	0.001	1288670	765642	JET-A (C10-C18)	2320135	146
Triacon Surr	6.563	0.005	968093	802198	IT.MOIL (C24-C40)	20515771	955

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	765642	38.4	85.4
Triacantane	802198	48.0	106.6

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst MS Date 8/13/10

Data File: /chem3/fid3b.i/20100812.b/0812b031.d

Date: 12-AUG-2010 22:30

Client ID: PSB11-4-6-073010

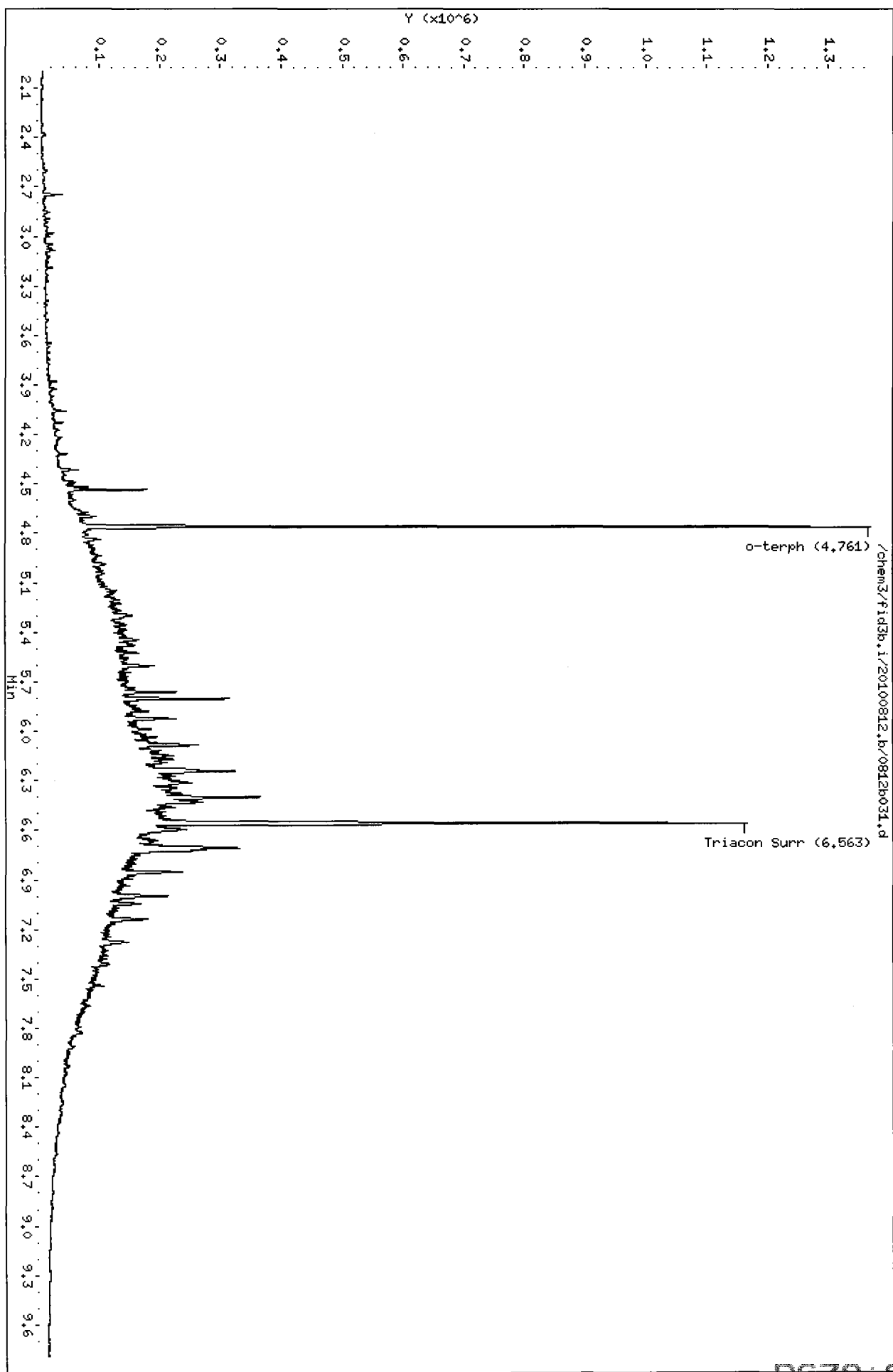
Sample Info: RG79E

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b032.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79EMS  
Client ID: PSB11-4-6-07301 MS  
Injection: 12-AUG-2010 22:49  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	3414175	125
C8	----				DIESEL (C12-C24)	33628156	1572
C10	2.857	0.003	116559	93169	M.OIL (C24-C38)	20772324	1719
C12	3.466	0.001	347241	260155	AK-102 (C10-C25)	37019867	1536
C14	3.925	0.002	652914	582320	AK-103 (C25-C36)	18908837	2117
C16	4.323	0.005	1290841	950677	OR.DIES (C10-C28)	43906235	2082
C18	4.676	0.004	1108606	1006976	OR.MOIL (C28-C40)	14085735	1249
C20	4.999	0.005	843221	767359			
C22	5.296	0.004	473648	484395	STODDARD (C8-C12)	3414175	123
C24	5.605	0.006	287268	332156			
C25	5.763	0.002	257754	132709			
C26	5.915	-0.005	188574	116518			
C28	6.245	0.004	344562	379971			
C32	6.853	0.003	208566	69409			
C34	7.140	0.000	178114	110178	CREOSOT (C8-C22)	33280421	5203
Filter Peak	----						
C36	7.411	0.002	121801	35483	BUNKERC (C10-C38)	57225509	6621
o-terph	4.764	0.005	1541497	781455	JET-A (C10-C18)	21818329	1377
Triacon Surr	6.565	0.007	907039	777490	IT.MOIL (C24-C40)	22316275	1039

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

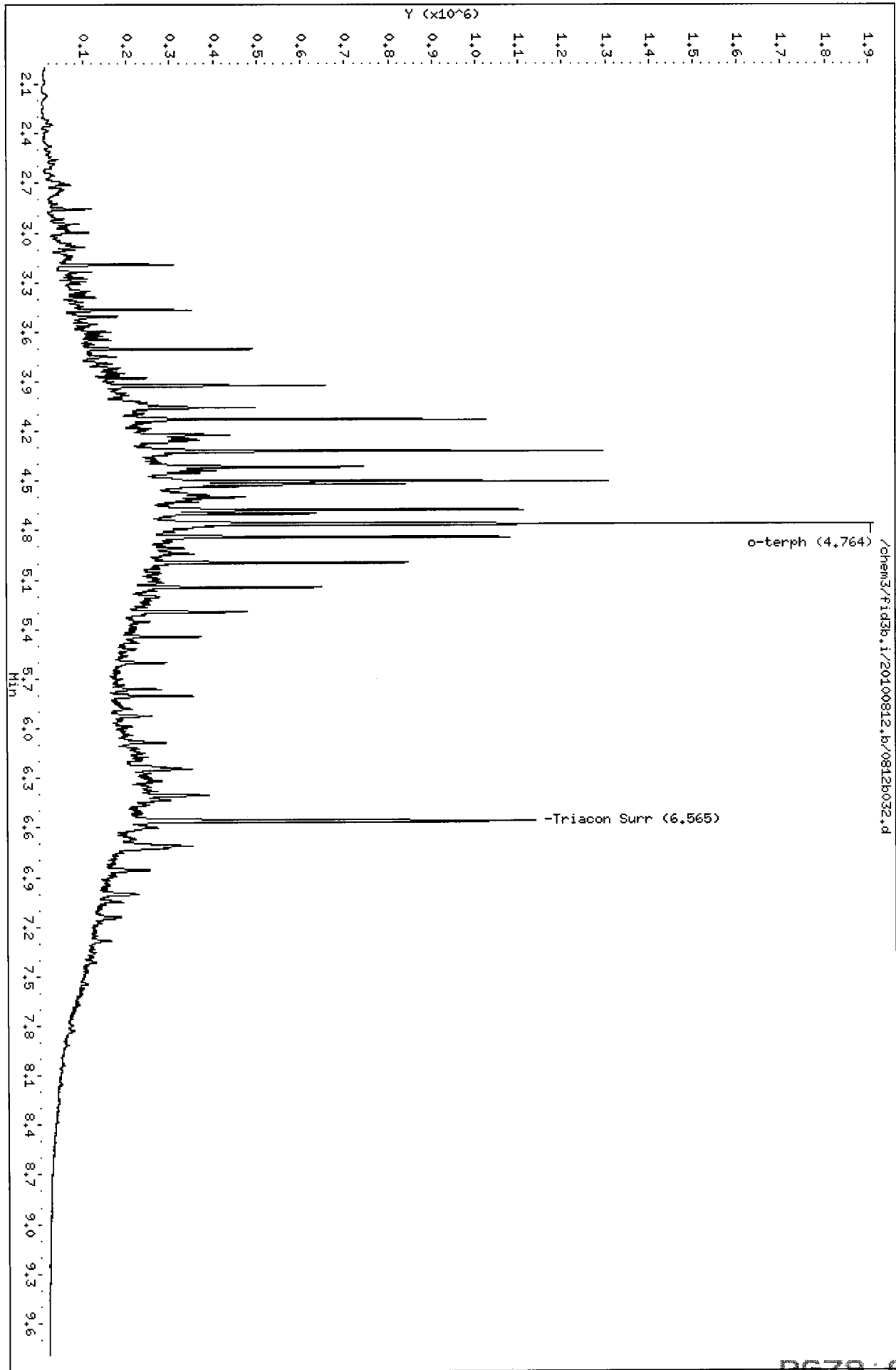
Surrogate	Area	Amount	%Rec
o-Terphenyl	781455	39.2	87.1
Triacantane	777490	46.5	103.3

MANUAL ADJUSTMENTS

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

Analyst MS Date 8/13/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b033.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79EMSD  
Client ID: PSB11-4-6-07301 MSD  
Injection: 12-AUG-2010 23:08  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	3514203	128
C8	----				DIESEL (C12-C24)	33476777	1565
C10	2.858	0.004	120195	97778	M.OIL (C24-C38)	18964217	1570
C12	3.467	0.003	354305	279410	AK-102 (C10-C25)	36951177	1533
C14	3.926	0.003	708322	505517	AK-103 (C25-C36)	17244683	1931
C16	4.323	0.005	1250152	1037561	OR.DIES (C10-C28)	43246078	2051
C18	4.679	0.006	1120608	966686	OR.MOIL (C28-C40)	12830828	1138
C20	4.998	0.003	796576	803203			
C22	5.296	0.004	484957	495390	STODDARD (C8-C12)	3514203	127
C24	5.606	0.007	261669	392293			
C25	5.763	0.002	255676	343045			
C26	5.925	0.005	243252	341156			
C28	6.245	0.004	343980	407184			
C32	6.847	-0.004	155652	57941			
C34	7.143	0.003	162295	215246	CREOSOT (C8-C22)	33708903	5270
Filter Peak	----						
C36	7.409	-0.001	104365	37908	BUNKERC (C10-C38)	55315342	6400
o-terph	4.764	0.004	1494553	787553	JET-A (C10-C18)	22548906	1423
Triacon Surr	6.564	0.006	887640	778921	IT.MOIL (C24-C40)	20504701	954

Range Times: NW Diesel (3.515 - 5.649) NW Gas (0.974 - 3.515) NW M.Oil (5.649 - 7.717)  
AK102 (2.804 - 5.711) AK103 (5.711 - 7.459) Jet A (2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	787553	39.5	87.8
Triacantane	778921	46.6	103.5

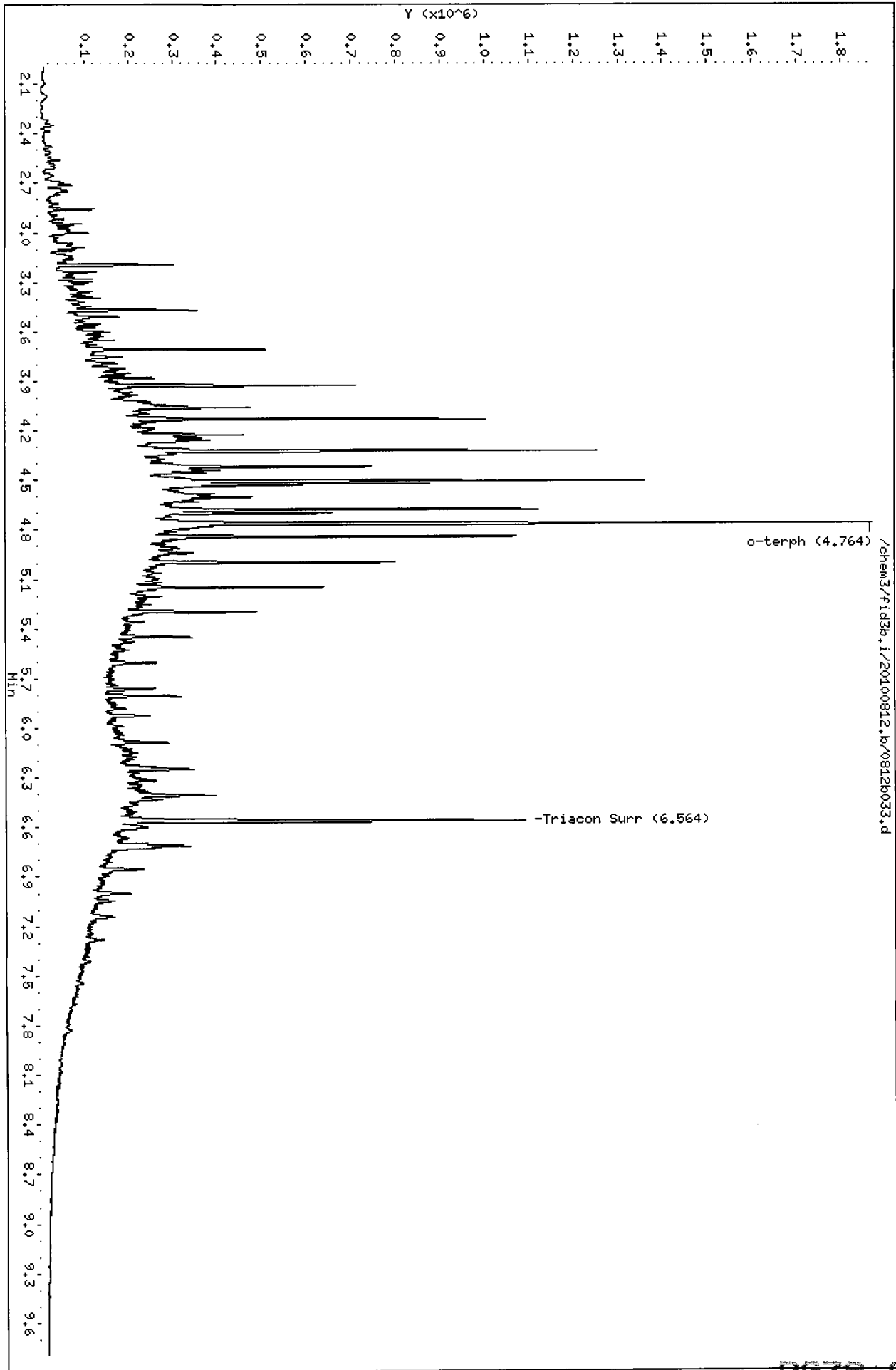
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst JR Date 8/13/10

/chem3/fid3b.i/20100812.br/0812b033.d





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b034.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79G  
Client ID: PSB11-11-13-073010  
Injection: 12-AUG-2010 23:26  
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	84768	3
C8	----				DIESEL (C12-C24)	1875513	88
C10	2.856	0.002	1620	2323	M.OIL (C24-C38)	5508054	456
C12	3.475	0.010	1419	1459	AK-102 (C10-C25)	2069187	86
C14	3.920	-0.004	2733	650	AK-103 (C25-C36)	4950692	554
C16	4.321	0.003	5943	3943	OR.DIES (C10-C28)	3678685	174
C18	4.673	0.000	13899	9738	OR.MOIL (C28-C40)	4078352	362
C20	4.996	0.001	25933	15516			
C22	5.295	0.003	36477	22720	STODDARD (C8-C12)	84768	3
C24	5.603	0.003	43763	47886			
C25	5.761	-0.001	47913	26558			
C26	5.920	-0.001	53576	50754			
C28	6.243	0.002	86854	101566			
C32	6.852	0.002	62840	84597			
C34	7.136	-0.004	49675	30742	CREOSOT (C8-C22)	1318772	206
Filter Peak	----						
C36	7.408	-0.002	37968	11728	BUNKERC (C10-C38)	7444006	861
o-terph	4.758	-0.002	143403	73440	JET-A (C10-C18)	441869	28
Triacon Surr	6.555	-0.003	88791	75423	IT.MOIL (C24-C40)	5896507	274

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

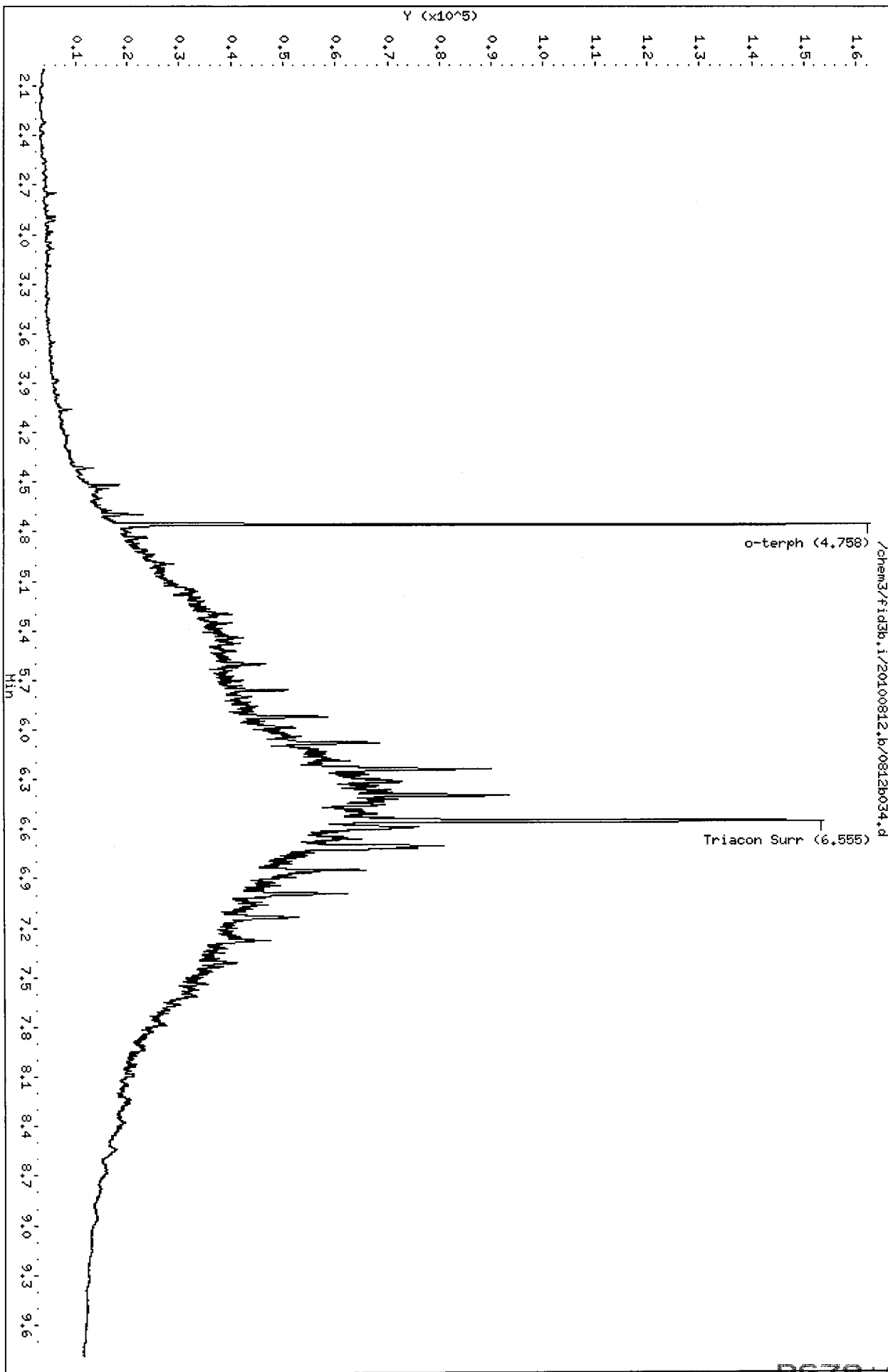
Surrogate	Area	Amount	%Rec
o-Terphenyl	73440	3.7	81.9
Triacantane	75423	4.5	100.2

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst JMS Date 8/13/10



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b035.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79H  
Client ID: PSB11-14-16-073010  
Injection: 12-AUG-2010 23:45  
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	158452	6
C8	----				DIESEL (C12-C24)	2347246	110
C10	2.855	0.001	2336	1803	M.OIL (C24-C38)	4672355	387
C12	3.465	0.000	2478	437	AK-102 (C10-C25)	2588361	107
C14	3.926	0.003	6583	5031	AK-103 (C25-C36)	4203633	471
C16	4.318	0.000	11290	8621	OR.DIES (C10-C28)	4015276	190
C18	4.672	-0.001	19949	20267	OR.MOIL (C28-C40)	3369821	299
C20	4.995	0.000	31989	18596			
C22	5.290	-0.001	39642	29138	STODDARD (C8-C12)	158452	6
C24	5.603	0.004	43674	46060			
C25	5.761	0.000	45277	27433			
C26	5.920	-0.001	48535	46928			
C28	6.243	0.002	72517	85950			
C32	6.853	0.003	57538	95231			
C34	7.140	0.000	48172	36374	CREOSOT (C8-C22)	1879381	294
Filter Peak	----						
C36	7.410	0.001	33870	16343	BUNKERC (C10-C38)	7143239	826
o-terph	4.758	-0.002	127410	68759	JET-A (C10-C18)	748162	47
Triacon Surr	6.554	-0.003	94834	73828	IT.MOIL (C24-C40)	4988042	232

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	68759	3.4	76.7
Triacantane	73828	4.4	98.1

MANUAL ADJUSTMENTS

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

Analyst JMS Date 8/13/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100812.b/0812b035.d

Page 1

Date: 12-AUG-2010 23:45

Client ID: PSB11-14-16-073010

Sample Info: RG79H,10

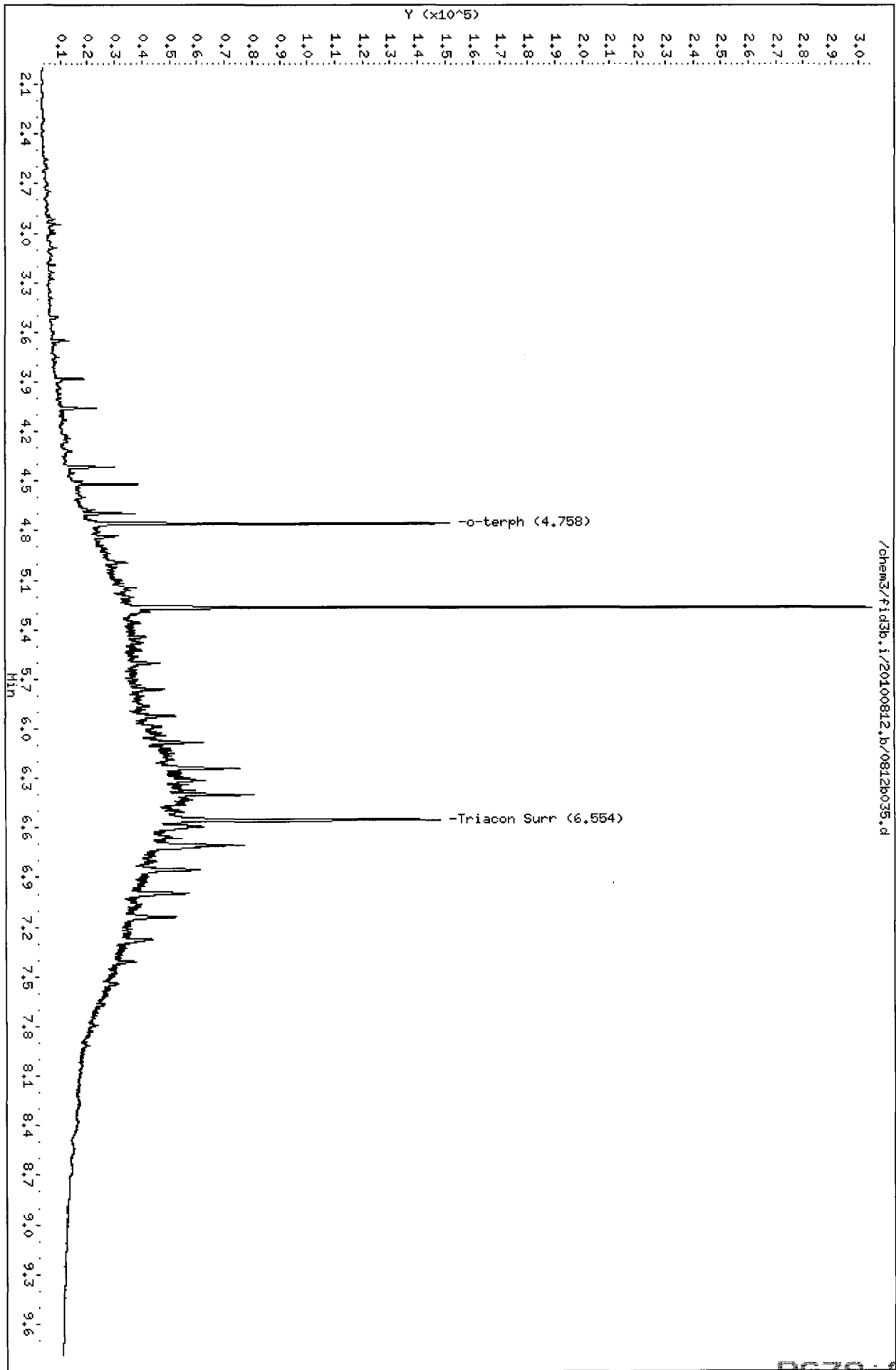
Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00

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RG79: 01108



Data File: /chem3/fid3b.i/20100812.br/0812b037.d

Date: 13-AUG-2010 00:23

Client ID: PSB11-1.5-2-073010

Sample Info: RG79B,20

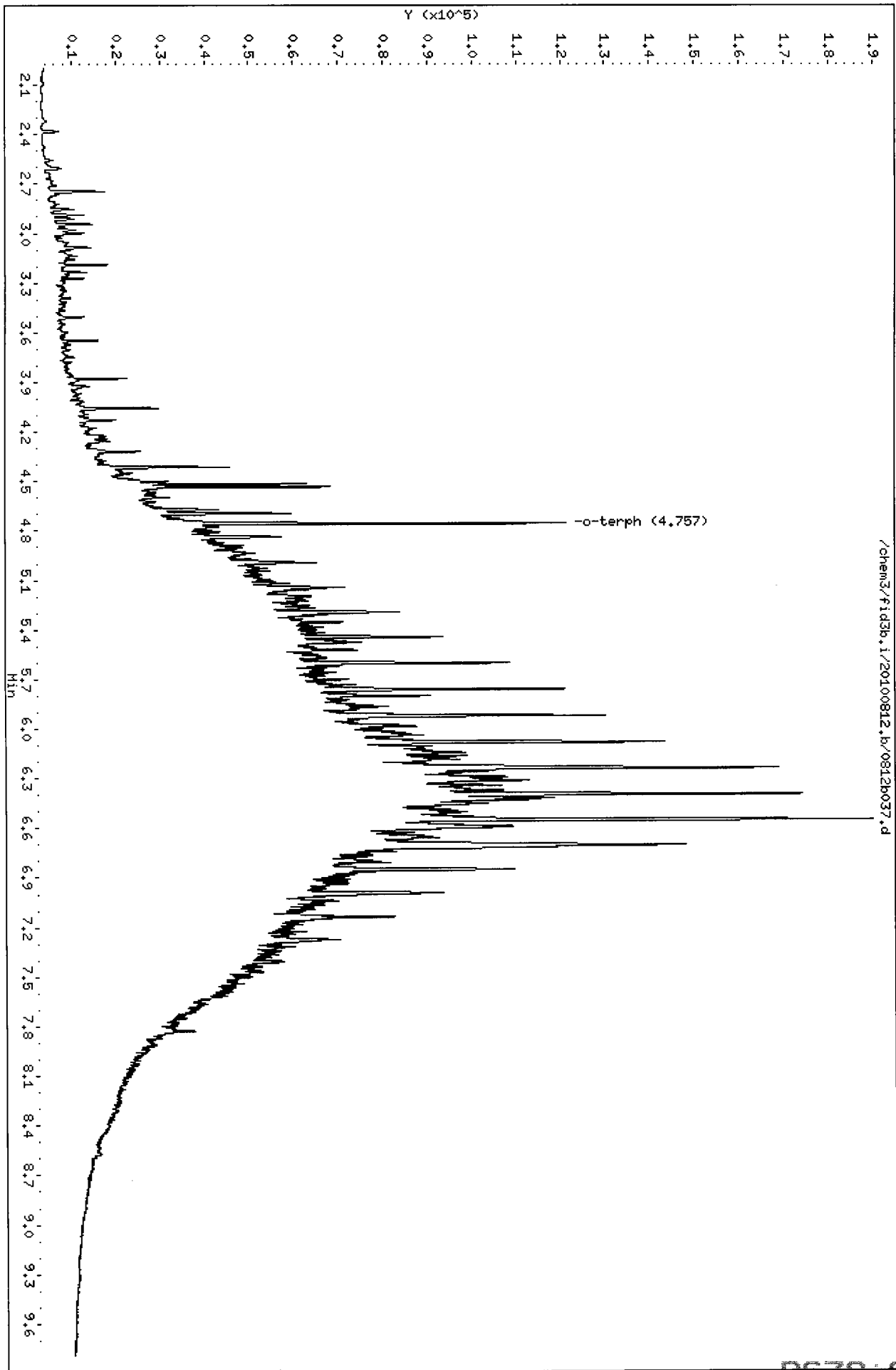
Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00

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Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b038.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: DIESEL#4  
Client ID: DIESEL#4  
Injection: 13-AUG-2010 00:42  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	786991	29
C8	----				DIESEL (C12-C24)	5361453	251
C10	2.854	0.001	27595	19472	M.OIL (C24-C38)	119447	10
C12	3.465	0.000	69087	51105	AK-102 (C10-C25)	6008562	249
C14	3.922	-0.001	135243	92567	AK-103 (C25-C36)	83605	9
C16	4.319	0.001	230264	207012	OR.DIES (C10-C28)	6055549	287
C18	4.674	0.002	213746	184864	OR.MOIL (C28-C40)	95423	8
C20	4.994	0.000	131207	106644			
C22	5.294	0.002	54098	53422	STODDARD (C8-C12)	786991	28
C24	5.606	0.007	12899	19076			
C25	5.770	0.009	4545	5323			
C26	5.925	0.005	1437	563			
C28	6.236	-0.005	341	186			
C32	6.848	-0.002	390	149			
C34	7.142	0.002	704	658	CREOSOT (C8-C22)	5960754	932
Filter Peak	----						
C36	7.407	-0.003	1148	590	BUNKERC (C10-C38)	6113641	707
o-terph	4.763	0.003	1688430	908813	JET-A (C10-C18)	4394426	277
Triacon Surr	6.551	-0.007	226	62	IT.MOIL (C24-C40)	156840	7

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	908813	45.6	101.3
Triacotane	62	0.0	0.0

MANUAL ADJUSTMENTS

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

Analyst *[Signature]* Date 8/13/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100812.b/0812b038.d  
Date: 13-AUG-2010 00:42

Client ID: DIESEL#4

Sample Info: DIESEL#4

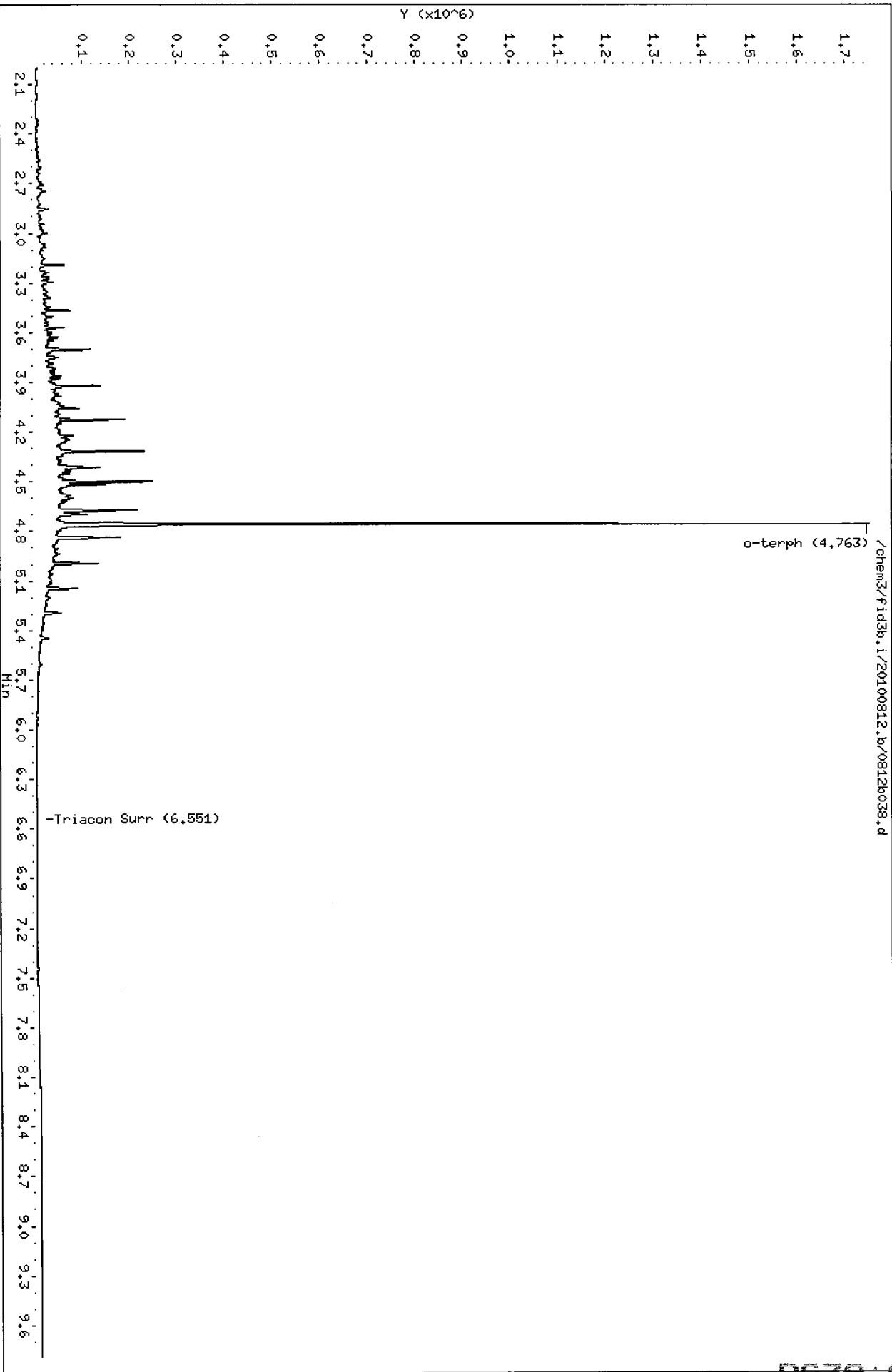
Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00

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Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b039.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: MOIL#4  
Client ID: MOIL#4  
Injection: 13-AUG-2010 01:01  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	40733	1
C8	----				DIESEL (C12-C24)	702438	33
C10	2.854	0.000	887	933	M.OIL (C24-C38)	5625764	466
C12	3.466	0.001	659	357	AK-102 (C10-C25)	835481	35
C14	3.928	0.004	429	125	AK-103 (C25-C36)	4982941	558
C16	4.315	-0.003	295	143	OR.DIES (C10-C28)	2263210	107
C18	4.672	-0.001	687	175	OR.MOIL (C28-C40)	4420328	392
C20	4.994	-0.001	4355	1030			
C22	5.291	-0.001	15040	5751	STODDARD (C8-C12)	40733	1
C24	5.599	-0.001	29273	16573			
C25	5.762	0.001	34655	13485			
C26	5.921	0.001	38639	19666			
C28	6.242	0.001	47518	13067			
C32	6.846	-0.004	57264	32126			
C34	7.142	0.002	54693	26054	CREOSOT (C8-C22)	308634	48
Filter Peak	----						
C36	7.409	0.000	45362	25734	BUNKERC (C10-C38)	6356778	735
o-terph	4.761	0.001	2059	2631	JET-A (C10-C18)	64414	4
Triacon Surr	6.561	0.003	942637	785304	IT.MOIL (C24-C40)	6737827	314

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2631	0.1	0.3
Triacantane	785304	47.0	104.3

MANUAL ADJUSTMENTS

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

Analyst JR Date 8/13/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

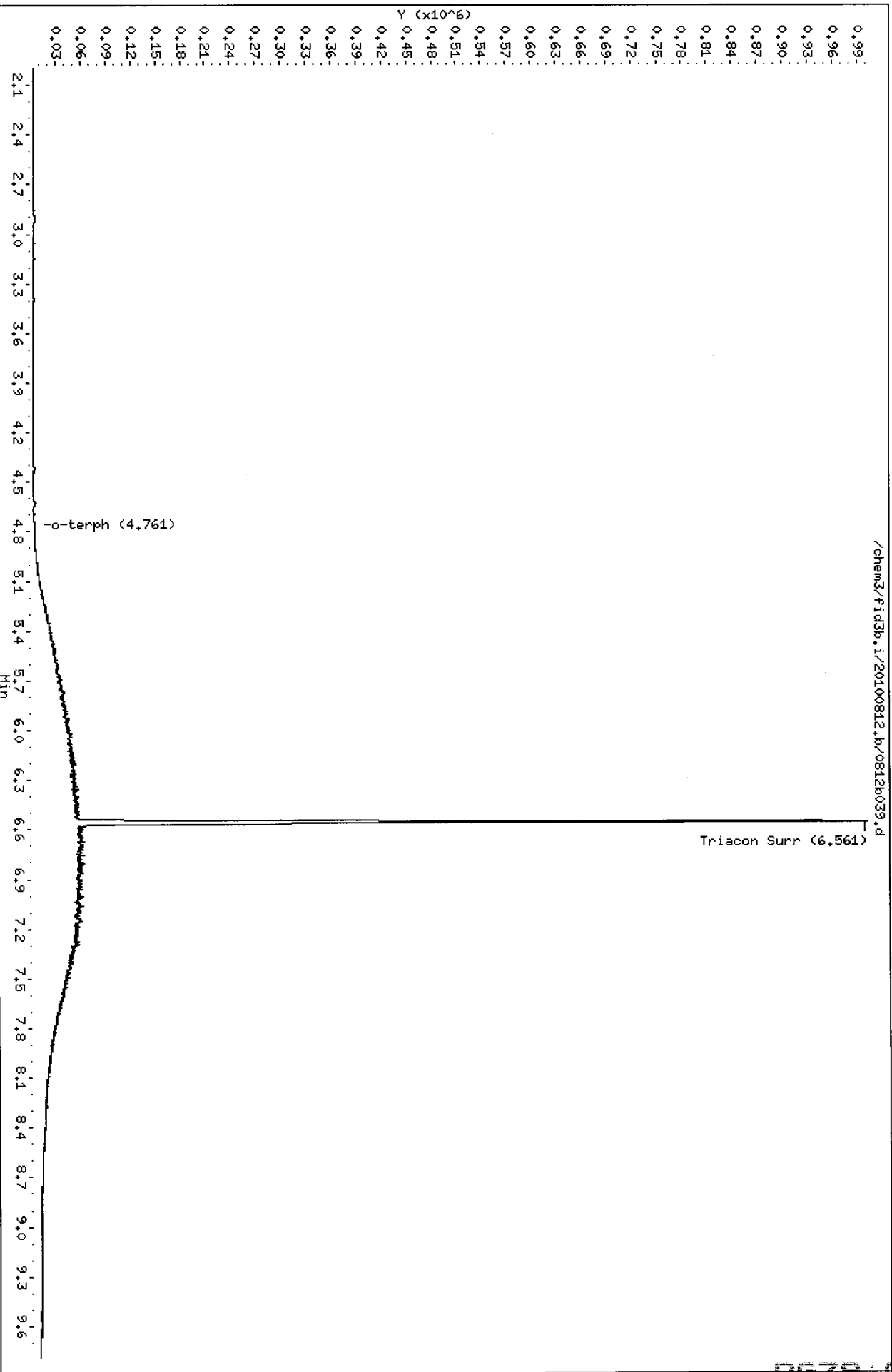
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Date: 13-AUG-2010 01:01  
Client ID: H01L#4  
Sample Info: H01L#4

Instrument: fid3b.i

Column phase: RTX-1

Operator: JR  
Column diameter: 2.00

/chem3/fid3b.i/20100812.b/0812b039.d



RG79:01114

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b040.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79K  
Client ID: PSB15-0-0.5-073010  
Injection: 13-AUG-2010 01:20  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	331057	12
C8	----				DIESEL (C12-C24)	3838274	179
C10	2.854	0.000	8300	8109	M.OIL (C24-C38)	12432917	1029
C12	3.472	0.007	4911	5340	AK-102 (C10-C25)	4327947	180
C14	3.928	0.005	6197	8399	AK-103 (C25-C36)	11385637	1275
C16	4.320	0.002	8182	7293	OR.DIES (C10-C28)	8184357	388
C18	4.673	0.001	24712	23978	OR.MOIL (C28-C40)	8826164	783
C20	4.996	0.001	45725	25365			
C22	5.292	0.001	82210	74601	STODDARD (C8-C12)	331057	12
C24	5.601	0.002	109093	147775			
C25	5.762	0.001	130804	168887			
C26	5.920	-0.001	119874	58397			
C28	6.242	0.001	168627	68539			
C32	6.853	0.003	124373	123258			
C34	7.136	-0.004	88931	56788	CREOSOT (C8-C22)	2715585	425
Filter Peak	----						
C36	7.410	0.001	67079	34587	BUNKERC (C10-C38)	16471434	1906
o-terph	4.761	0.001	1244486	738980	JET-A (C10-C18)	868255	55
Triacon Surr	6.561	0.003	740761	625688	IT.MOIL (C24-C40)	13597692	633

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

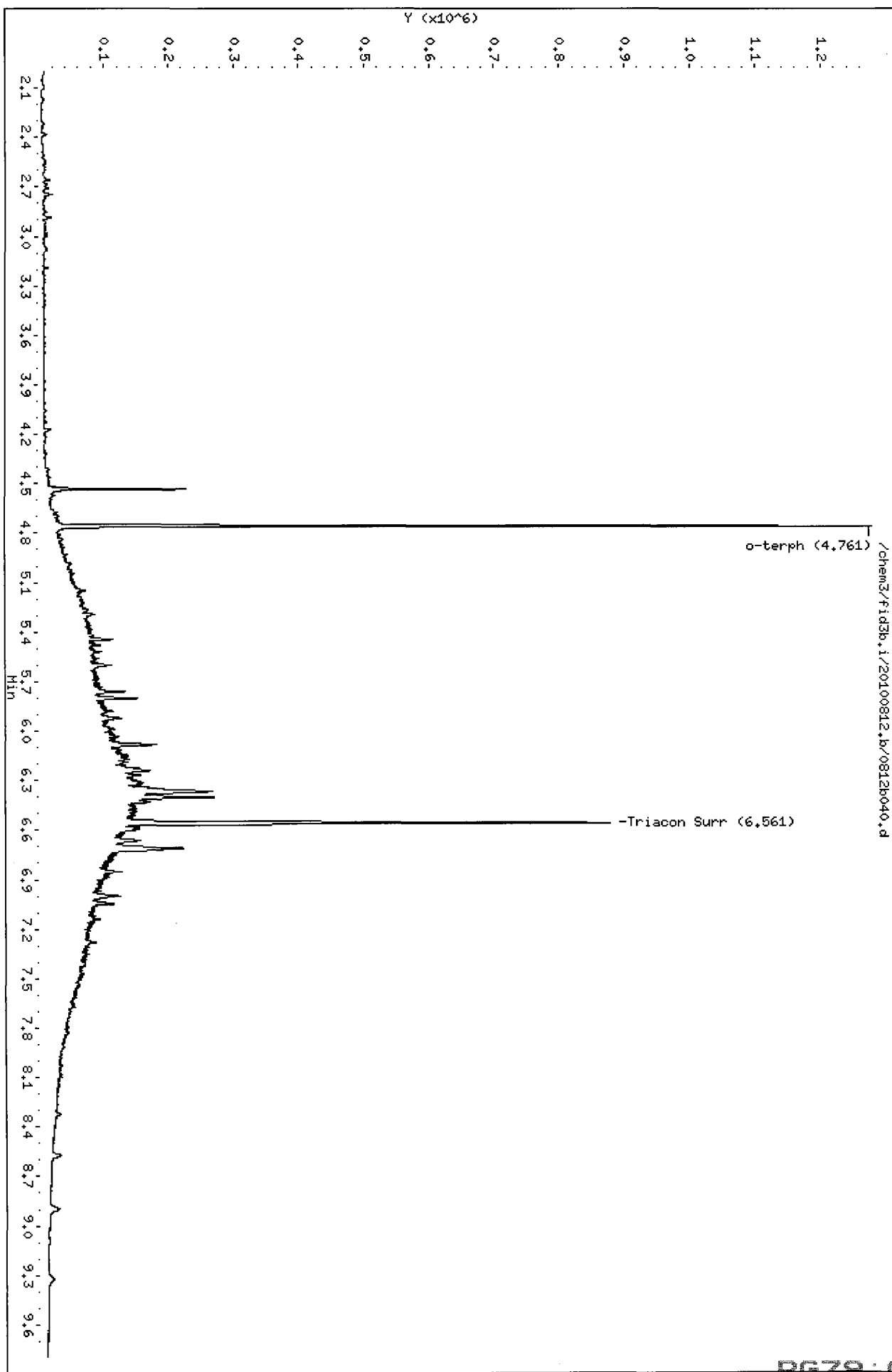
Surrogate	Area	Amount	%Rec
o-Terphenyl	738980	37.1	82.4
Triacontane	625688	37.4	83.1

MANUAL ADJUSTMENTS

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

Analyst *MS* Date *8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b041.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79L  
Client ID: PSB15-1.5-2-073010  
Injection: 13-AUG-2010 01:39  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	128338	5
C8	----				DIESEL (C12-C24)	215133	10
C10	2.855	0.002	2232	2419	M.OIL (C24-C38)	599432	50
C12	3.460	-0.005	1460	915	AK-102 (C10-C25)	334018	14
C14	3.922	-0.001	1136	513	AK-103 (C25-C36)	519095	58
C16	4.318	0.000	1597	744	OR.DIES (C10-C28)	469415	22
C18	4.674	0.002	1902	1089	OR.MOIL (C28-C40)	518562	46
C20	4.999	0.004	2124	1075			
C22	5.296	0.005	2823	1084	STODDARD (C8-C12)	128338	5
C24	5.594	-0.005	3117	1060			
C25	5.758	-0.003	3754	1064			
C26	5.920	0.000	3959	856			
C28	6.241	0.000	6953	9036			
C32	6.845	-0.006	5415	2853			
C34	7.138	-0.002	5480	3562	CREOSOT (C8-C22)	296636	46
Filter Peak	----						
C36	7.410	0.001	4723	2089	BUNKERC (C10-C38)	922450	107
o-terph	4.762	0.002	1465880	784265	JET-A (C10-C18)	213379	13
Triacon Surr	6.558	0.000	740901	631281	IT.MOIL (C24-C40)	1296240	60

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	784265	39.3	87.4
Triacantane	631281	37.7	83.9

MANUAL ADJUSTMENTS

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

Analyst *JM* Date *8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100812.b/0812B041.d

Page 1

Date: 13-AUG-2010 01:39

Client ID: PSB15-1.5-2-073010

Instrument: fid3b.i

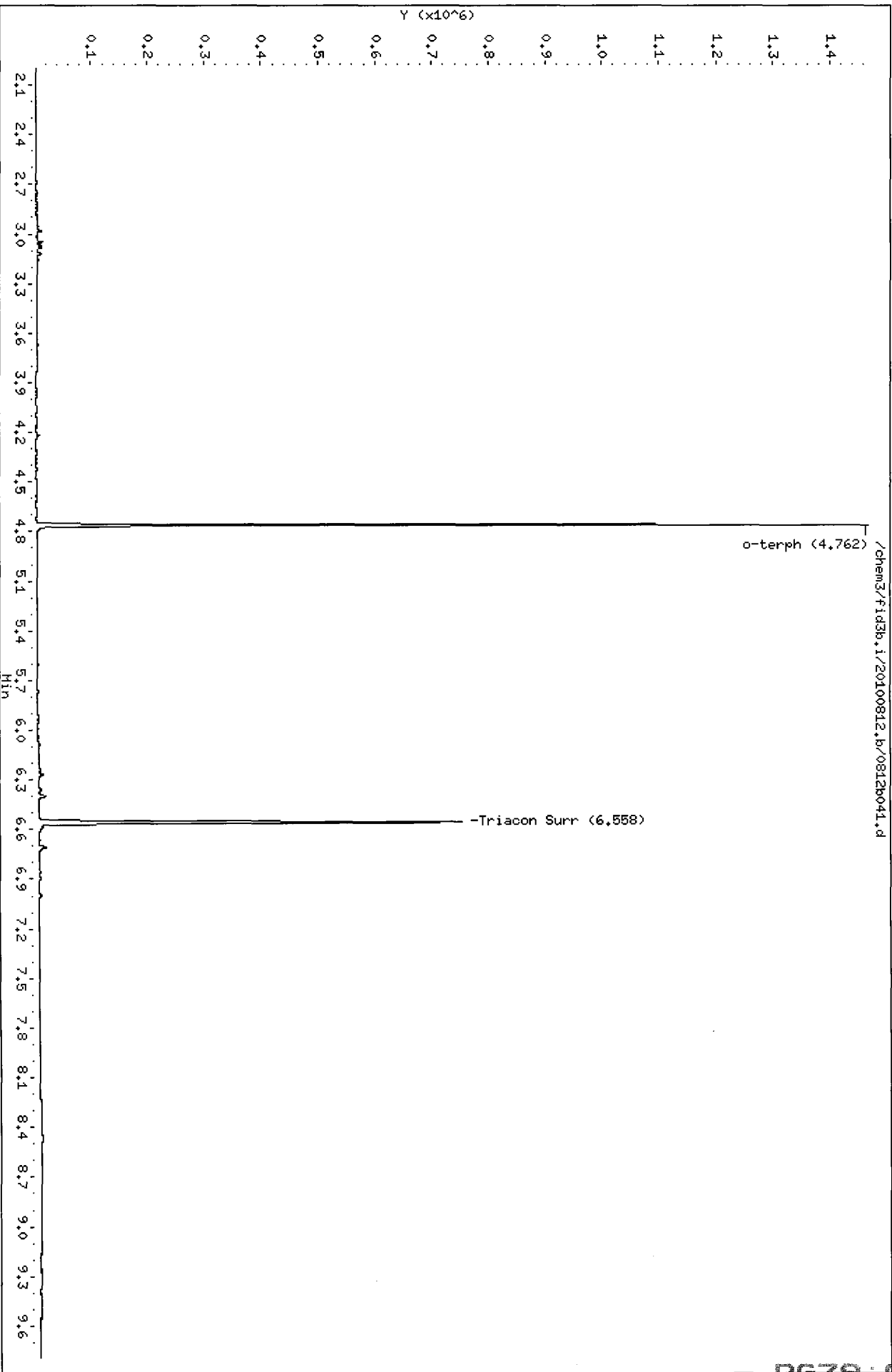
Sample Info: RG79L

Operator: JR

Column phase: RTX-1

Column diameter: 2.00

/chem3/fid3b.i/20100812.b/0812B041.d



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b042.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79M  
Client ID: PSB15-2-4-073010  
Injection: 13-AUG-2010 01:58  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	136206	5
C8	----				DIESEL (C12-C24)	425362	20
C10	2.854	0.001	2582	2547	M.OIL (C24-C38)	1388693	115
C12	3.467	0.002	1403	250	AK-102 (C10-C25)	567087	24
C14	3.918	-0.005	1240	387	AK-103 (C25-C36)	1250129	140
C16	4.314	-0.004	1422	307	OR.DIES (C10-C28)	968098	46
C18	4.673	0.001	2733	1563	OR.MOIL (C28-C40)	1045130	93
C20	4.993	-0.001	4373	2517			
C22	5.290	-0.002	7085	1771	STODDARD (C8-C12)	136206	5
C24	5.603	0.004	11112	10164			
C25	5.759	-0.002	11498	7957			
C26	5.920	0.000	11800	3018			
C28	6.239	-0.002	19032	13239			
C32	6.850	0.000	13602	7784			
C34	7.141	0.001	10370	7611	CREOSOT (C8-C22)	417035	65
Filter Peak	----						
C36	7.405	-0.004	8426	5202	BUNKERC (C10-C38)	1924650	223
o-terph	4.761	0.001	1409488	784708	JET-A (C10-C18)	231674	15
Triacon Surr	6.557	-0.001	758151	634847	IT.MOIL (C24-C40)	2112118	98

Range Times: NW Diesel (3.515 - 5.649) NW Gas (0.974 - 3.515) NW M.Oil (5.649 - 7.717)  
AK102 (2.804 - 5.711) AK103 (5.711 - 7.459) Jet A (2.804 - 4.722)

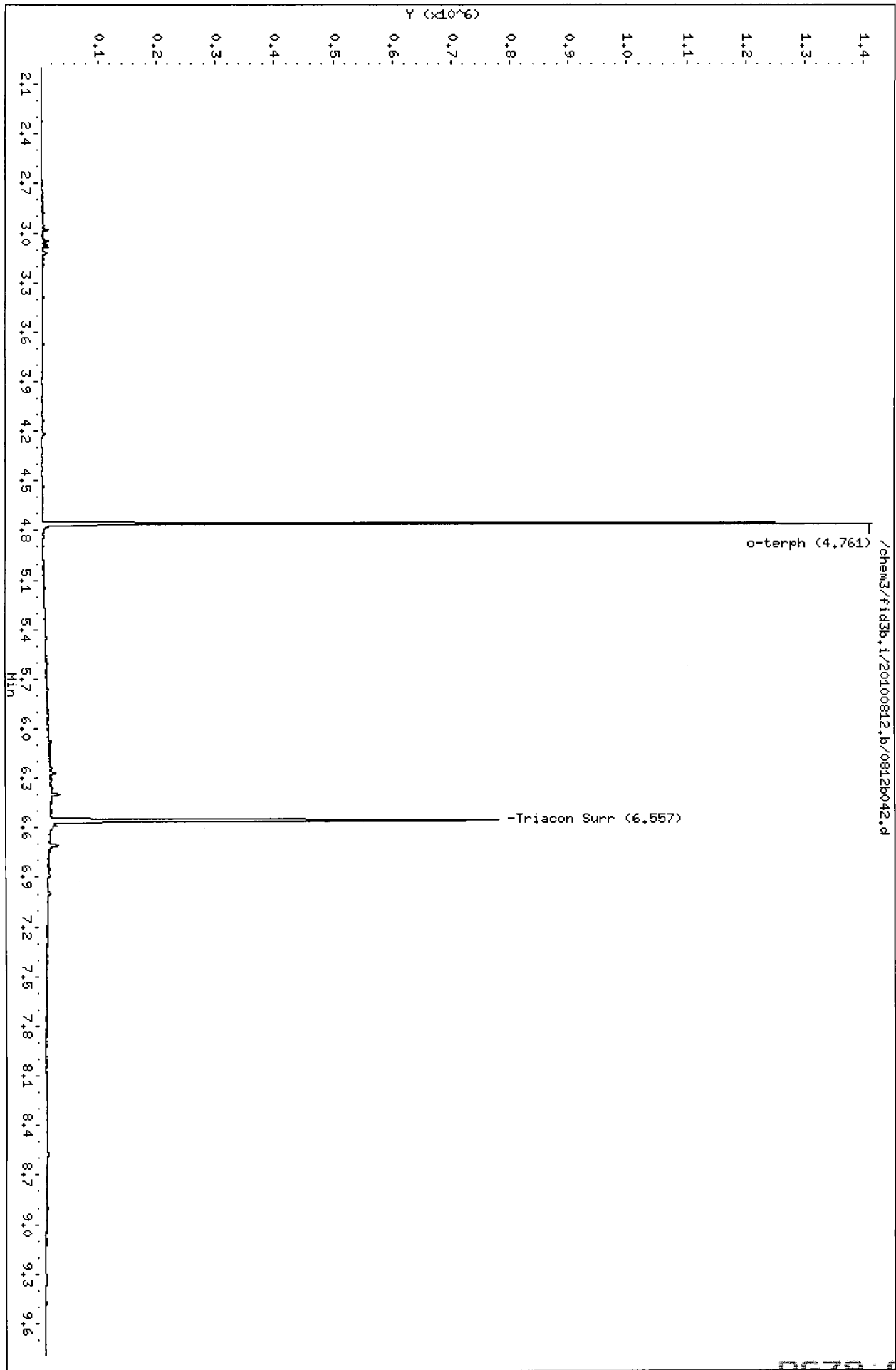
Surrogate	Area	Amount	%Rec
o-Terphenyl	784708	39.4	87.5
Triacontane	634847	38.0	84.3

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst: *[Signature]* Date: *[Signature]*





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b043.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79N  
Client ID: PSB15-4-6-073010  
Injection: 13-AUG-2010 02:17  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	145649	5
C8	----				DIESEL (C12-C24)	576775	27
C10	2.854	0.000	3797	3482	M.OIL (C24-C38)	1982660	164
C12	3.475	0.010	1656	1526	AK-102 (C10-C25)	734409	30
C14	3.923	0.000	1338	495	AK-103 (C25-C36)	1771353	198
C16	4.324	0.006	1910	1933	OR.DIES (C10-C28)	1291597	61
C18	4.673	0.001	4250	3891	OR.MOIL (C28-C40)	1504098	133
C20	4.995	0.000	6348	3670			
C22	5.288	-0.003	9175	1817	STODDARD (C8-C12)	145649	5
C24	5.599	0.000	14095	8869			
C25	5.761	0.000	16358	20723			
C26	5.916	-0.004	16123	12600			
C28	6.239	-0.002	26150	10938			
C32	6.850	0.000	18938	7919			
C34	7.137	-0.003	16027	9504	CREOSOT (C8-C22)	525901	82
Filter Peak	----						
C36	7.409	-0.001	13012	3311	BUNKERC (C10-C38)	2676448	310
o-terph	4.762	0.002	1409698	784072	JET-A (C10-C18)	260635	16
Triacon Surr	6.558	0.000	726922	628146	IT.MOIL (C24-C40)	2730052	127

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	784072	39.3	87.4
Triacantane	628146	37.6	83.5

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst MM Date 8/13/10

Data File: /chem3/fid3b.i/20100812.b/0812b043.d

Date: 13-AUG-2010 02:17

Client ID: PSB15-4-6-073010

Sample Info: RG79N

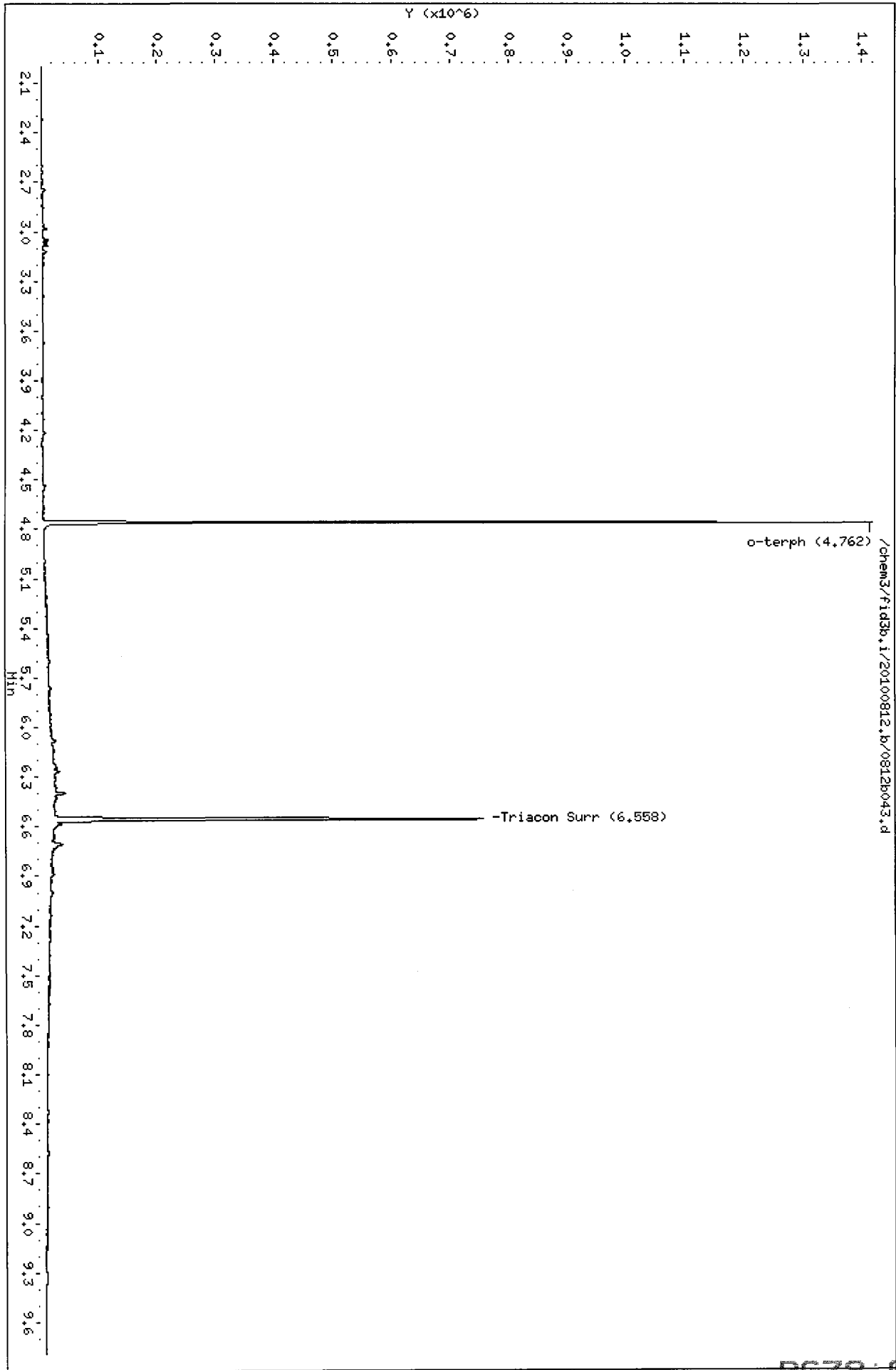
Instrument: fid3b.i

Operator: JR

Column diameter: 2.00

Column phase: RTX-1

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Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b044.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79P  
Client ID: PSB15-17-19-073010  
Injection: 13-AUG-2010 02:36  
Dilution Factor: 1

FID:3B RESULTS

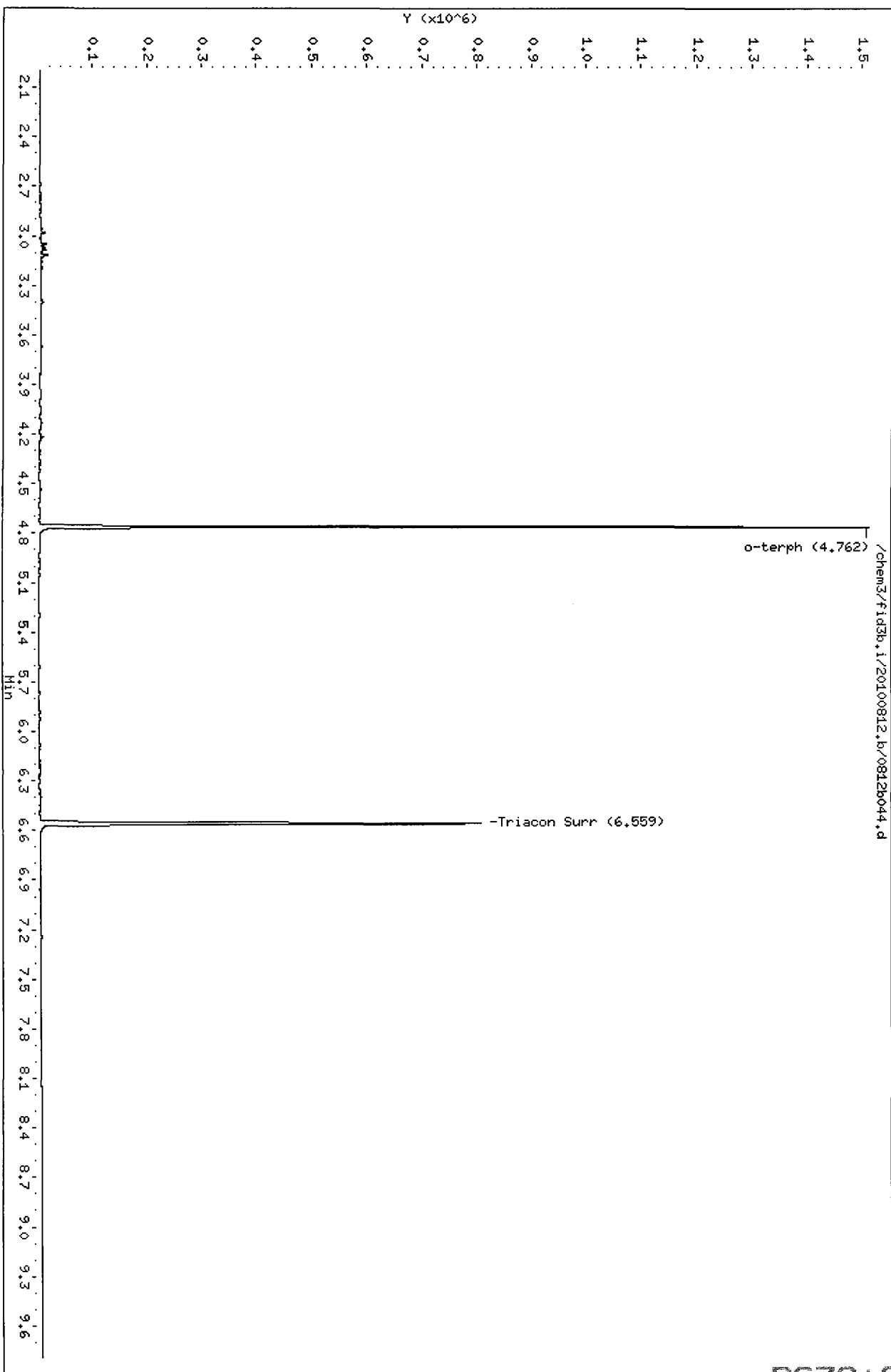
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	148902	5
C8	----				DIESEL (C12-C24)	172137	8
C10	2.855	0.001	2265	2513	M.OIL (C24-C38)	175996	15
C12	3.458	-0.006	1891	938	AK-102 (C10-C25)	302483	13
C14	3.920	-0.003	1188	591	AK-103 (C25-C36)	146277	16
C16	4.325	0.007	1294	1729	OR.DIES (C10-C28)	337119	16
C18	4.673	0.001	1966	1038	OR.MOIL (C28-C40)	176908	16
C20	4.990	-0.005	1492	1695			
C22	5.295	0.003	1352	159	STODDARD (C8-C12)	148902	5
C24	5.609	0.010	1992	3253			
C25	5.763	0.002	1273	421			
C26	5.921	0.001	1542	1087			
C28	6.239	-0.002	1986	342			
C32	6.859	0.009	2661	3173			
C34	7.133	-0.007	1521	531	CREOSOT (C8-C22)	305303	48
Filter Peak	----						
C36	7.410	0.001	1737	640	BUNKERC (C10-C38)	476002	55
o-terph	4.762	0.002	1511736	859240	JET-A (C10-C18)	241400	15
Triacon Surr	6.559	0.001	807322	733478	IT.MOIL (C24-C40)	947499	44

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	859240	43.1	95.8
Triacontane	733478	43.9	97.4

*ms 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b045.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79Q  
Client ID: PSB15-17-19-073010-  
Injection: 13-AUG-2010 02:55  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	132837	5
C8	----				DIESEL (C12-C24)	195739	9
C10	2.855	0.001	2184	2284	M.OIL (C24-C38)	247480	20
C12	3.460	-0.005	1583	878	AK-102 (C10-C25)	310322	13
C14	3.927	0.003	1212	304	AK-103 (C25-C36)	211941	24
C16	4.323	0.005	2037	1643	OR.DIES (C10-C28)	368788	17
C18	4.674	0.001	3124	3014	OR.MOIL (C28-C40)	220780	20
C20	4.988	-0.007	1845	1115			
C22	5.288	-0.003	2013	424	STODDARD (C8-C12)	132837	5
C24	5.607	0.008	3266	4405			
C25	5.755	-0.006	1276	289			
C26	5.925	0.005	3228	4649			
C28	6.241	-0.001	4784	6913			
C32	6.856	0.005	4610	9048			
C34	7.142	0.002	3518	5624	CREOSOT (C8-C22)	303401	47
Filter Peak	----						
C36	7.416	0.007	3238	6257	BUNKERC (C10-C38)	554173	64
o-terph	4.761	0.001	1489636	808148	JET-A (C10-C18)	224176	14
Triacon Surr	6.556	-0.002	764107	696278	IT.MOIL (C24-C40)	979154	46

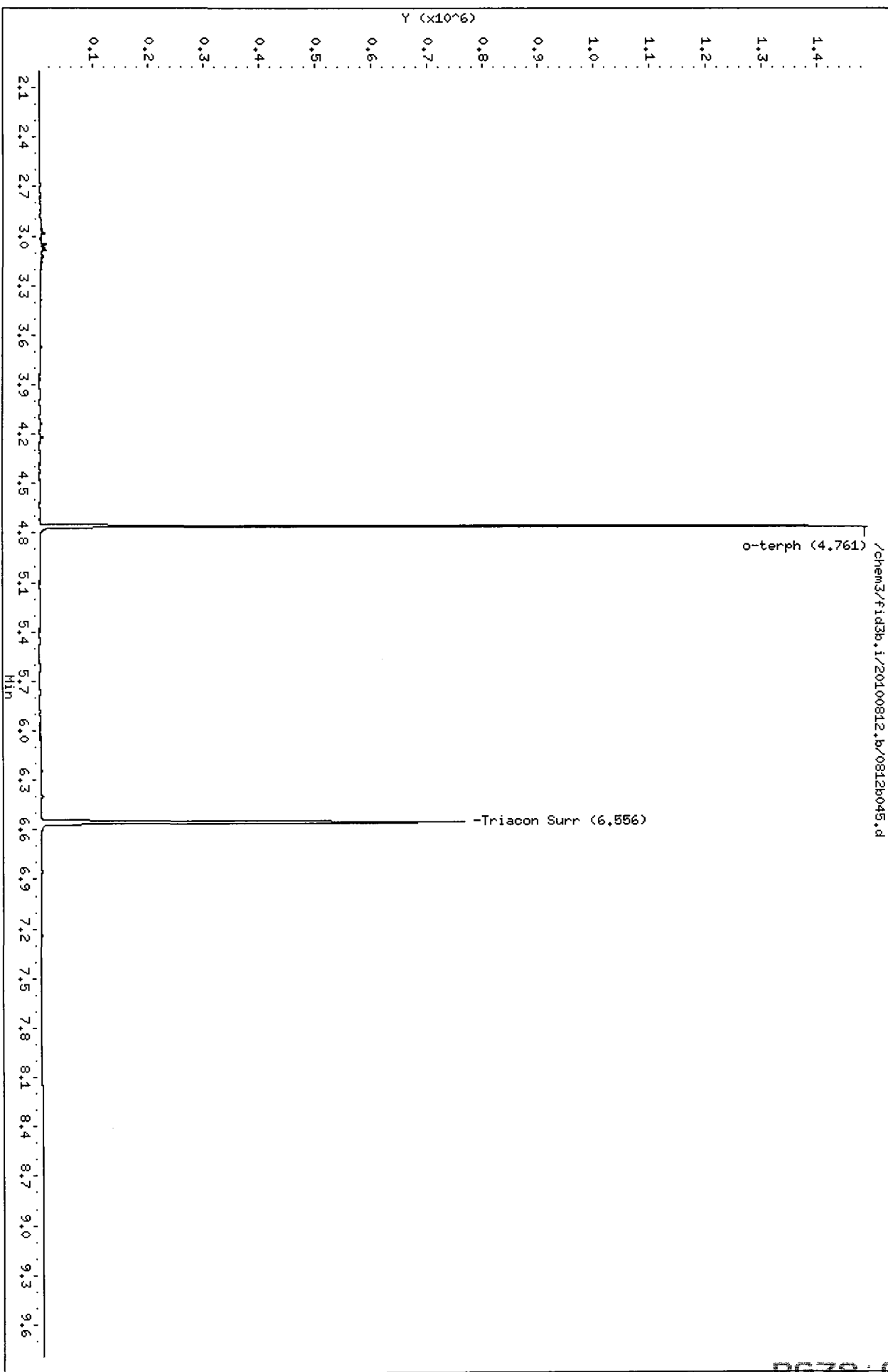
Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	808148	40.5	90.1
Triacantane	696278	41.6	92.5

*ms 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

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Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b046.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79LCSS1  
Client ID: RG79LCSS1  
Injection: 13-AUG-2010 03:14  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	3912147	143
C8	----				DIESEL (C12-C24)	28597627	1336
C10	2.855	0.001	144175	98571	M.OIL (C24-C38)	389184	32
C12	3.464	0.000	381045	272944	AK-102 (C10-C25)	31911158	1324
C14	3.925	0.002	707202	607736	AK-103 (C25-C36)	297471	33
C16	4.322	0.004	1310213	1093943	OR.DIES (C10-C28)	32156866	1525
C18	4.677	0.005	1170300	892260	OR.MOIL (C28-C40)	86210	8
C20	4.997	0.003	767673	641189			
C22	5.295	0.003	330181	290429	STODDARD (C8-C12)	3912147	141
C24	5.602	0.003	95635	94654			
C25	5.762	0.001	42408	54345			
C26	5.924	0.004	16763	20646			
C28	6.241	0.000	3136	4723			
C32	6.843	-0.007	645	179			
C34	7.141	0.001	858	955	CREOSOT (C8-C22)	31505071	4926
Filter Peak	----						
C36	7.404	-0.005	736	265	BUNKERC (C10-C38)	32221973	3728
o-terph	4.763	0.003	1579424	862811	JET-A (C10-C18)	23203461	1464
Triacon Surr	6.559	0.001	829247	762926	IT.MOIL (C24-C40)	1173213	55

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

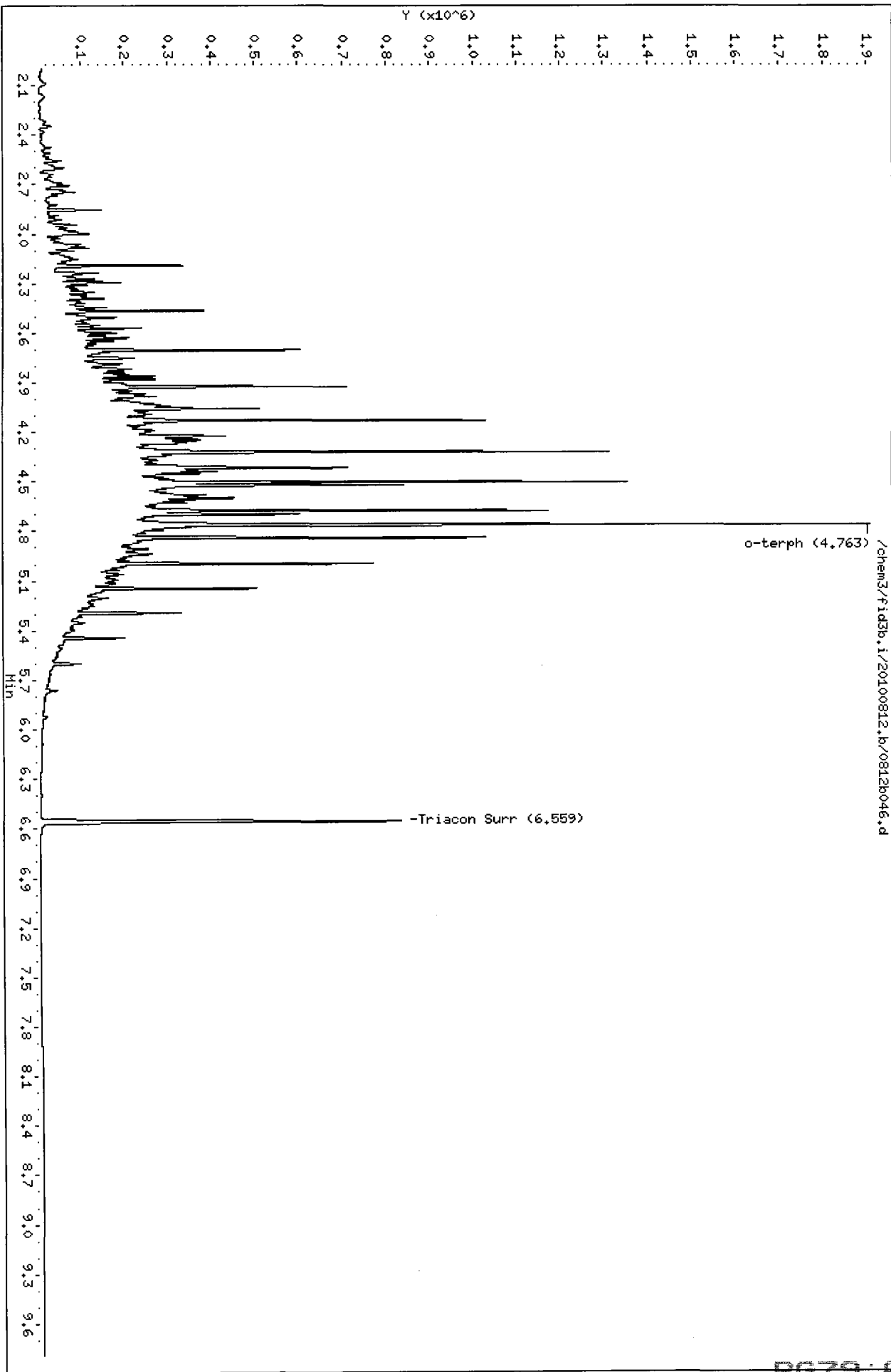
Surrogate	Area	Amount	%Rec
o-Terphenyl	862811	43.3	96.2
Triacantane	762926	45.6	101.4

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst ms Date 8/13/10





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b047.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79MBS1  
Client ID: RG79MBS1  
Injection: 13-AUG-2010 03:33  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	63657	2
C8	----				DIESEL (C12-C24)	73362	3
C10	2.854	0.000	1217	1344	M.OIL (C24-C38)	69988	6
C12	3.462	-0.003	953	490	AK-102 (C10-C25)	119632	5
C14	3.921	-0.002	604	200	AK-103 (C25-C36)	52143	6
C16	4.325	0.007	488	262	OR.DIES (C10-C28)	124669	6
C18	4.673	0.001	479	416	OR.MOIL (C28-C40)	92011	8
C20	5.006	0.011	544	319			
C22	5.287	-0.004	377	228	STODDARD (C8-C12)	63657	2
C24	5.593	-0.006	157	32			
C25	5.760	-0.001	187	48			
C26	5.922	0.001	258	157			
C28	6.242	0.001	580	551			
C32	6.855	0.004	807	396			
C34	7.139	-0.001	687	201	CREOSOT (C8-C22)	131928	21
Filter Peak	----						
C36	7.413	0.004	953	301	BUNKERC (C10-C38)	189313	22
o-terph	4.762	0.002	1637296	889076	JET-A (C10-C18)	94837	6
Triacon Surr	6.559	0.001	887423	747404	IT.MOIL (C24-C40)	844759	39

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	889076	44.6	99.1
Triacontane	747404	44.7	99.3

*Mrs 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

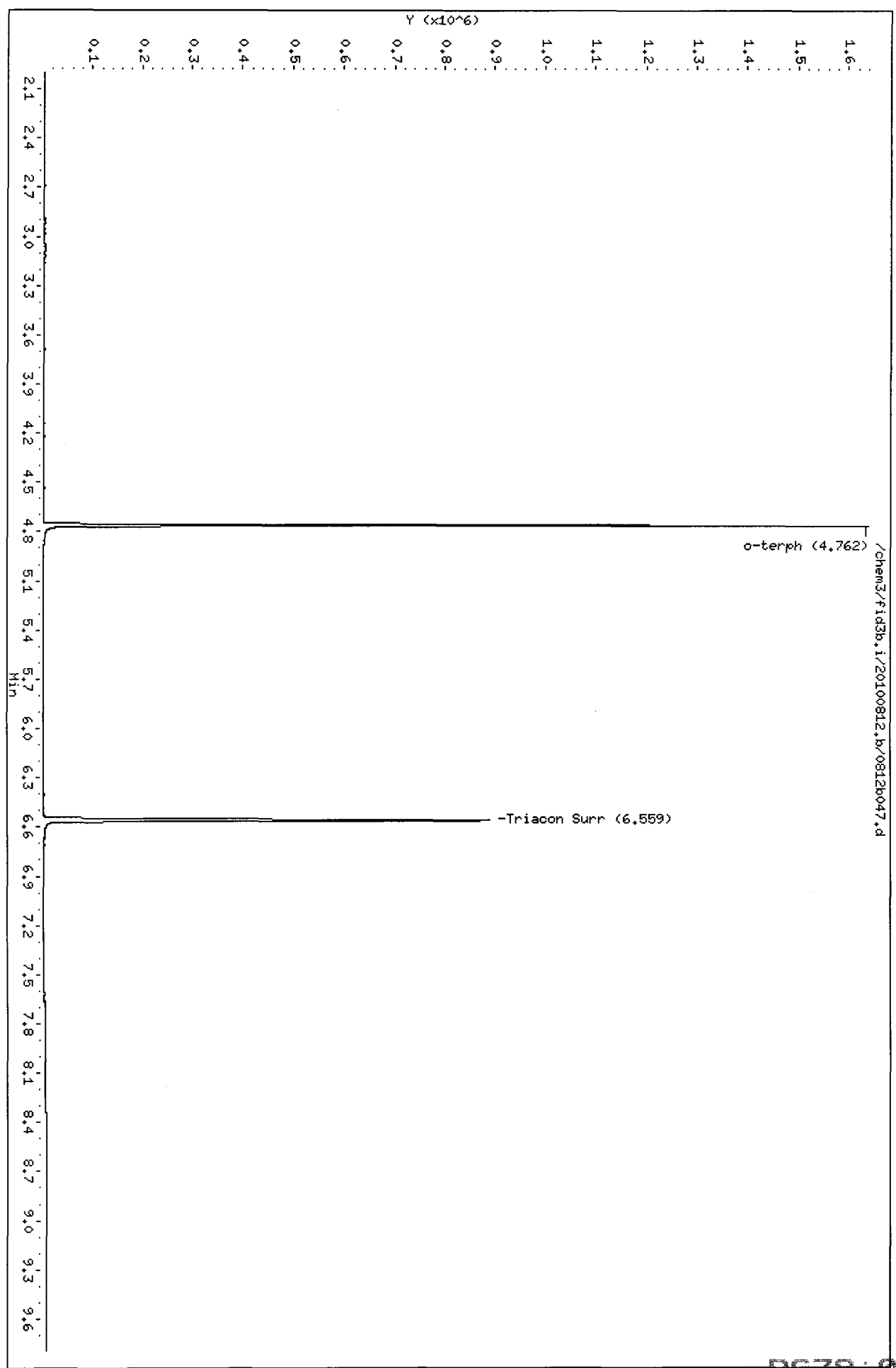
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Date: 13-AUG-2010 03:33

Client ID: RG79MBS1  
Sample Info: RG79MBS1

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR  
Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b048.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: DIESEL#5  
Client ID: DIESEL#5  
Injection: 13-AUG-2010 03:52  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	804102	29
C8	----				DIESEL (C12-C24)	5418177	253
C10	2.854	0.000	28401	19569	M.OIL (C24-C38)	85760	7
C12	3.465	0.000	67040	49882	AK-102 (C10-C25)	6078635	252
C14	3.923	0.000	140171	117082	AK-103 (C25-C36)	59550	7
C16	4.319	0.001	238284	191822	OR.DIES (C10-C28)	6120027	290
C18	4.673	0.000	215638	173727	OR.MOIL (C28-C40)	48494	4
C20	4.994	0.000	123487	112595			
C22	5.293	0.002	55758	52356	STODDARD (C8-C12)	804102	29
C24	5.605	0.006	11875	19520			
C25	5.761	-0.001	3248	1713			
C26	5.919	-0.002	1310	778			
C28	6.241	0.000	244	87			
C32	6.849	-0.002	130	40			
C34	7.146	0.006	231	58	CREOSOT (C8-C22)	6031857	943
Filter Peak	----						
C36	7.407	-0.002	522	409	BUNKERC (C10-C38)	6149865	712
o-terph	4.763	0.003	1726428	906534	JET-A (C10-C18)	4431615	280
Triacon Surr	6.559	0.001	201	47	IT.MOIL (C24-C40)	104463	5

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	906534	45.5	101.1
Triacotane	47	0.0	0.0

MANUAL ADJUSTMENTS

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

Analyst *MS* Date *8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100812.br/0812b048.d

Page 1

Date: 13-AUG-2010 03:52

Instrument: fid3b.i

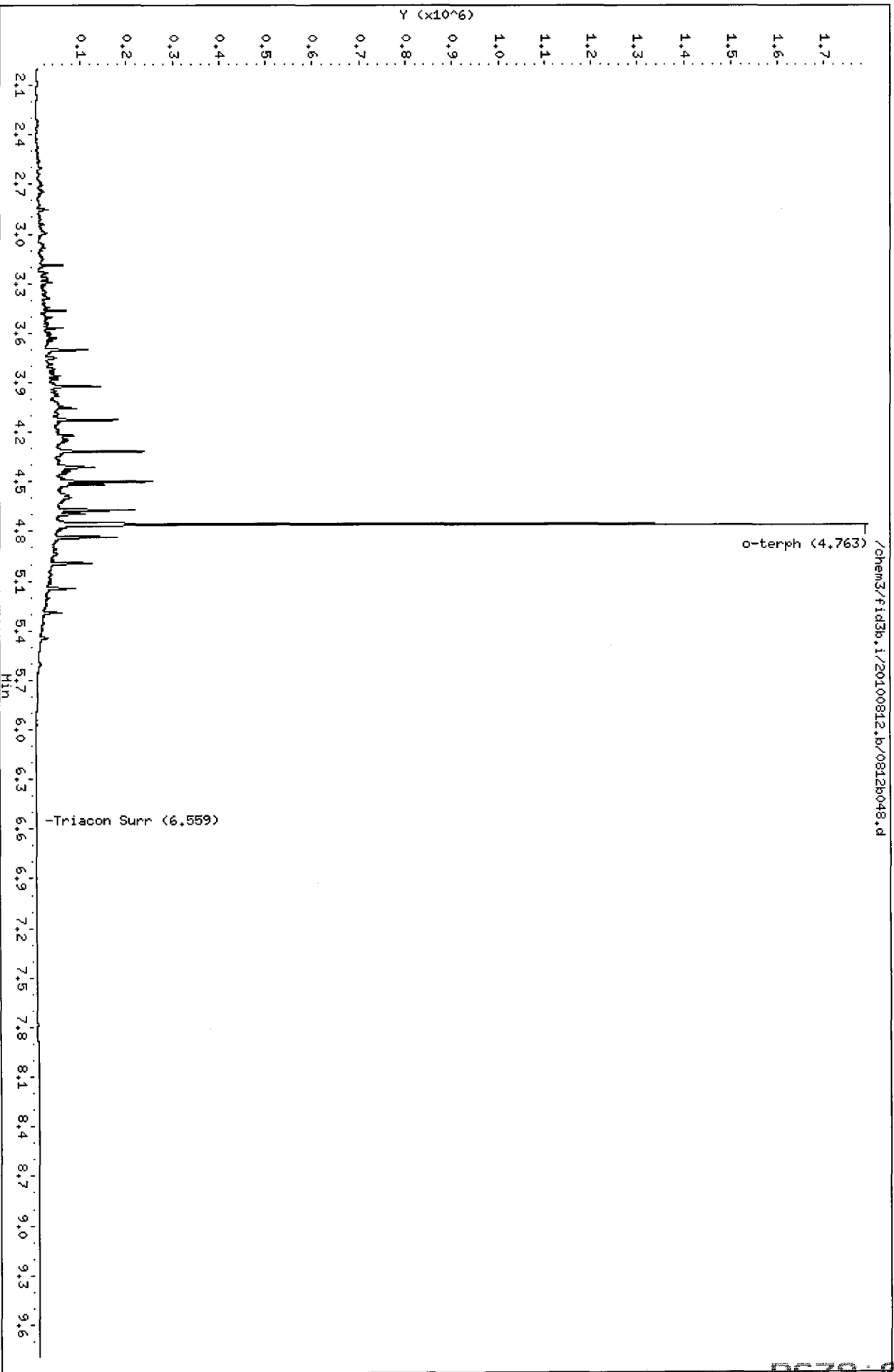
Client ID: DIESEL#5

Operator: JR

Sample Info: DIESEL#5

Column diameter: 2.00

Column phase: RTX-1



RG79: 01132

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b049.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: MOIL#5  
Client ID: MOIL#5  
Injection: 13-AUG-2010 04:11  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	45047	2
C8	----				DIESEL (C12-C24)	708214	33
C10	2.854	0.001	995	1211	M.OIL (C24-C38)	5633796	466
C12	3.467	0.002	694	535	AK-102 (C10-C25)	853891	35
C14	3.918	-0.005	464	423	AK-103 (C25-C36)	4986078	558
C16	4.320	0.002	284	132	OR.DIES (C10-C28)	2239148	106
C18	4.674	0.002	685	204	OR.MOIL (C28-C40)	4435824	393
C20	4.997	0.002	4447	1466			
C22	5.287	-0.004	15173	7975	STODDARD (C8-C12)	45047	2
C24	5.598	-0.001	29317	12433			
C25	5.762	0.001	33634	4669			
C26	5.922	0.002	39252	6951			
C28	6.244	0.003	48137	6621			
C32	6.851	0.001	59029	27032			
C34	7.137	-0.002	54469	29441	CREOSOT (C8-C22)	317883	50
Filter Peak	----						
C36	7.413	0.004	45178	27464	BUNKERC (C10-C38)	6373422	737
o-terph	4.761	0.002	1917	2364	JET-A (C10-C18)	67297	4
Triacon Surr	6.560	0.002	900412	786849	IT.MOIL (C24-C40)	6722194	313

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2364	0.1	0.3
Triacantane	786849	47.0	104.5

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst Ma Date 8/13/10

Data File: /chem3/fid3b.i/20100812.b/0812b049.d  
Date: 13-AUG-2010 04:11

Client ID: M01L#5

Sample Info: M01L#5

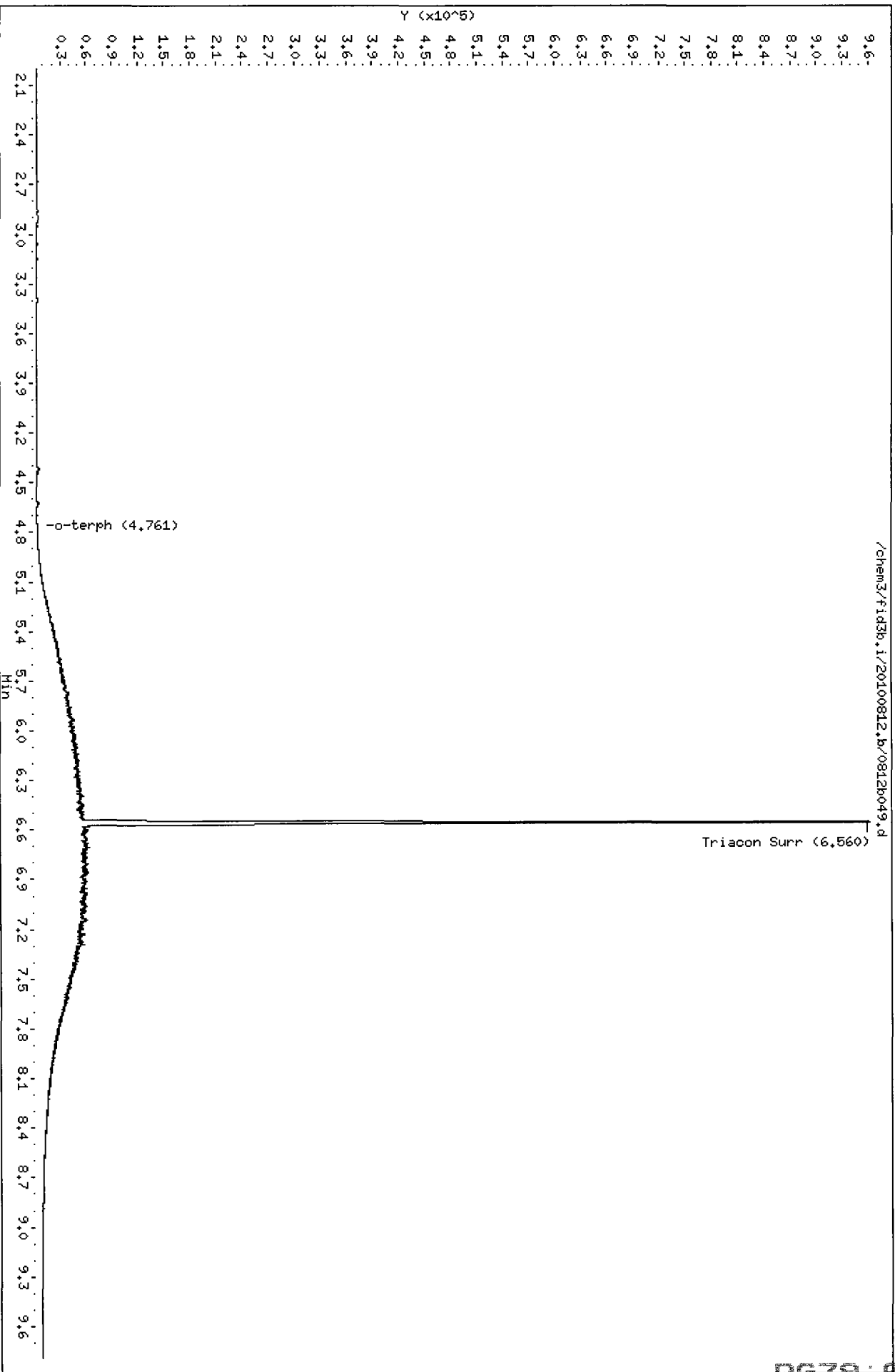
Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00

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Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b052.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG790  
Client ID:  
Injection: 13-AUG-2010 05:08  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	172220	6
C8	----				DIESEL (C12-C24)	4401592	206
C10	2.855	0.001	2647	2783	M.OIL (C24-C38)	23416264	1938
C12	3.467	0.002	4391	5021	AK-102 (C10-C25)	4949245	205
C14	3.928	0.005	7663	8746	AK-103 (C25-C36)	21123500	2365
C16	4.318	0.000	10421	8687	OR.DIES (C10-C28)	11273112	535
C18	4.674	0.002	24461	9043	OR.MOIL (C28-C40)	17818733	1581
C20	4.994	-0.001	43434	10294			
C22	5.289	-0.002	81041	19274	STODDARD (C8-C12)	172220	6
C24	5.603	0.004	127321	72565			
C25	5.763	0.002	155748	120375			
C26	5.924	0.004	165594	78308			
C28	6.239	-0.002	263761	36545			
C32	6.851	0.001	215802	54798			
C34	7.145	0.006	180626	35232	CREOSOT (C8-C22)	2611202	408
Filter Peak	----						
C36	7.410	0.000	139829	24788	BUNKERC (C10-C38)	27930799	3232
o-terph	4.760	0.000	1405364	799142	JET-A (C10-C18)	736947	47
Triacon Surr	6.565	0.007	836639	686907	IT.MOIL (C24-C40)	25264217	1176

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	799142	40.1	89.1
Triacantane	686907	41.1	91.3

MANUAL ADJUSTMENTS

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

Analyst ms Date 8/13/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100812.b/0812b052.d  
Date: 13-AUG-2010 05:08

Client ID:

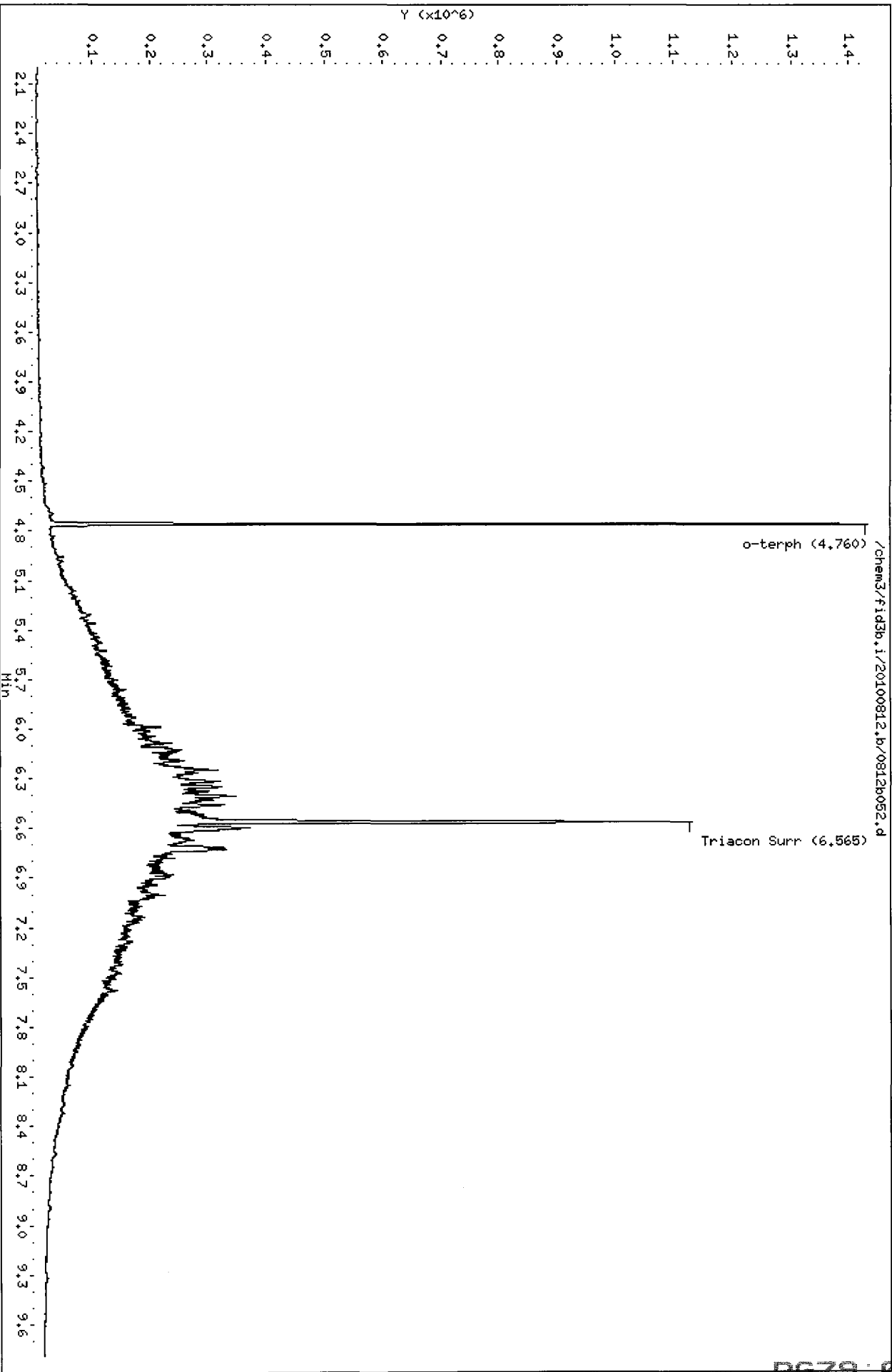
Sample Info: RG790

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b053.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: DIESEL#6  
Client ID: DIESEL#6  
Injection: 13-AUG-2010 05:27  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	801010	29
C8	----				DIESEL (C12-C24)	5342151	250
C10	2.854	0.000	27668	19472	M.OIL (C24-C38)	203862	17
C12	3.464	-0.001	69084	50527	AK-102 (C10-C25)	6002153	249
C14	3.924	0.000	134027	113685	AK-103 (C25-C36)	140309	16
C16	4.318	0.000	247341	186492	OR.DIES (C10-C28)	6055273	287
C18	4.673	0.001	220690	164137	OR.MOIL (C28-C40)	213217	19
C20	4.996	0.001	122794	96672			
C22	5.292	0.001	51905	51522	STODDARD (C8-C12)	801010	29
C24	5.606	0.007	12808	18440			
C25	5.768	0.006	4980	6983			
C26	5.920	-0.001	1626	415			
C28	6.245	0.003	714	225			
C32	6.845	-0.006	1073	355			
C34	7.143	0.003	1778	2022	CREOSOT (C8-C22)	5961027	932
Filter Peak	----						
C36	7.407	-0.002	2163	472	BUNKERC (C10-C38)	6191615	716
o-terph	4.763	0.003	1613140	897950	JET-A (C10-C18)	4420639	279
Triacon Surr	6.548	-0.010	617	277	IT.MOIL (C24-C40)	281014	13

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	897950	45.0	100.1
Triacotane	277	0.0	0.0

MANUAL ADJUSTMENTS

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

Analyst  Date 8/13/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Date: 13-AUG-2010 05:27

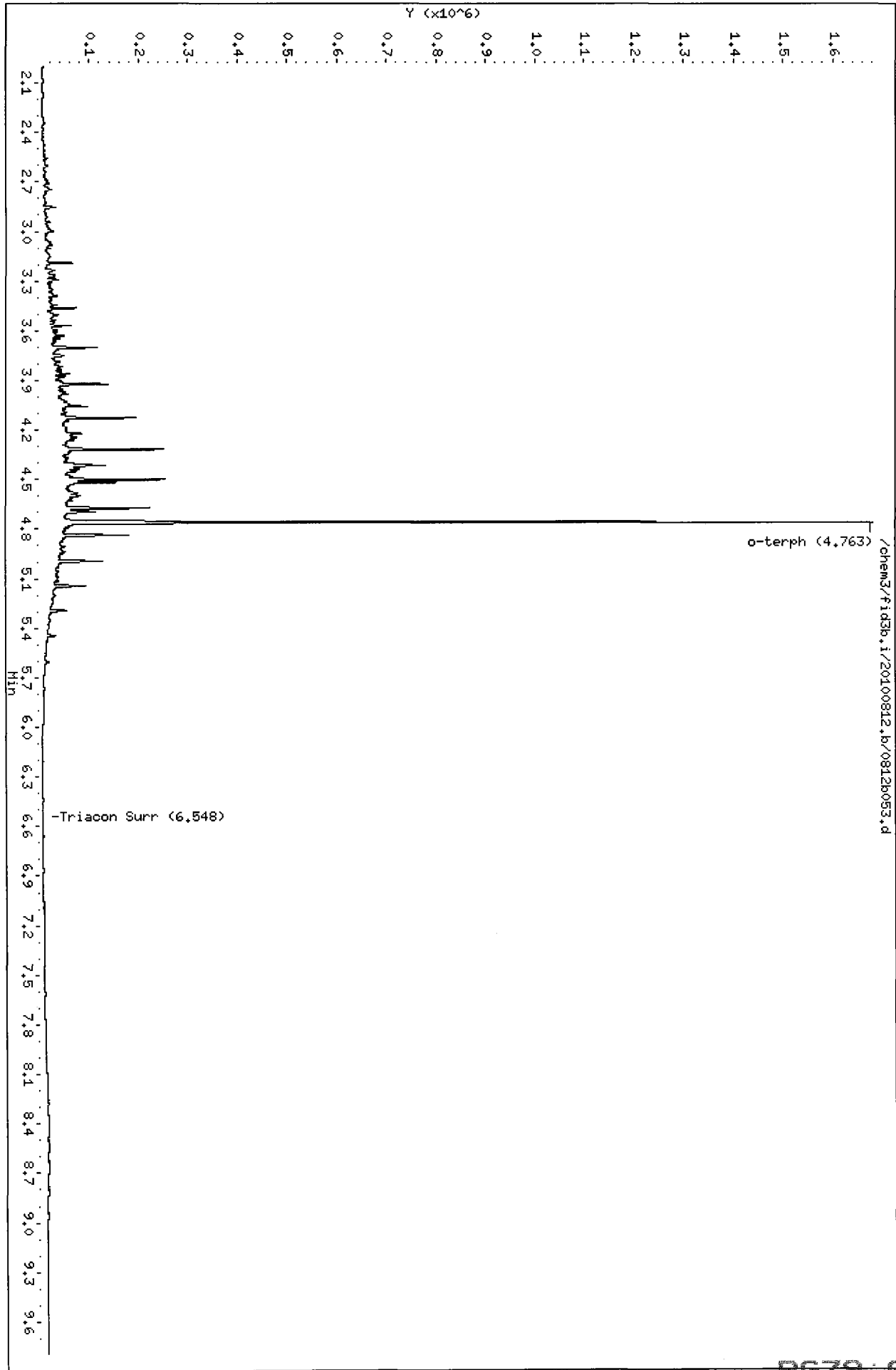
Client ID: DIESEL#6

Instrument: fid3b.1

Sample Info: DIESEL#6

Column phase: RTX-1

Operator: JR  
Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b054.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: MOIL#6  
Client ID: MOIL#6  
Injection: 13-AUG-2010 05:46  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	44711	2
C8	----				DIESEL (C12-C24)	718054	34
C10	2.855	0.002	994	1133	M.OIL (C24-C38)	5681583	470
C12	3.461	-0.003	699	484	AK-102 (C10-C25)	861530	36
C14	3.922	-0.001	468	189	AK-103 (C25-C36)	5030526	563
C16	4.321	0.003	339	172	OR.DIES (C10-C28)	2260561	107
C18	4.664	-0.008	725	405	OR.MOIL (C28-C40)	4508262	400
C20	4.995	0.000	4521	707			
C22	5.294	0.003	15529	4803	STODDARD (C8-C12)	44711	2
C24	5.599	0.000	29837	7557			
C25	5.761	0.000	35901	16842			
C26	5.922	0.002	38558	4598			
C28	6.245	0.004	50652	19270			
C32	6.850	0.000	57487	10197			
C34	7.140	0.000	58447	18085	CREOSOT (C8-C22)	319782	50
Filter Peak	----						
C36	7.414	0.005	42846	7560	BUNKERC (C10-C38)	6430574	744
o-terph	4.761	0.001	1887	2033	JET-A (C10-C18)	67799	4
Triacon Surr	6.558	0.001	877340	804367	IT.MOIL (C24-C40)	6824199	318


Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

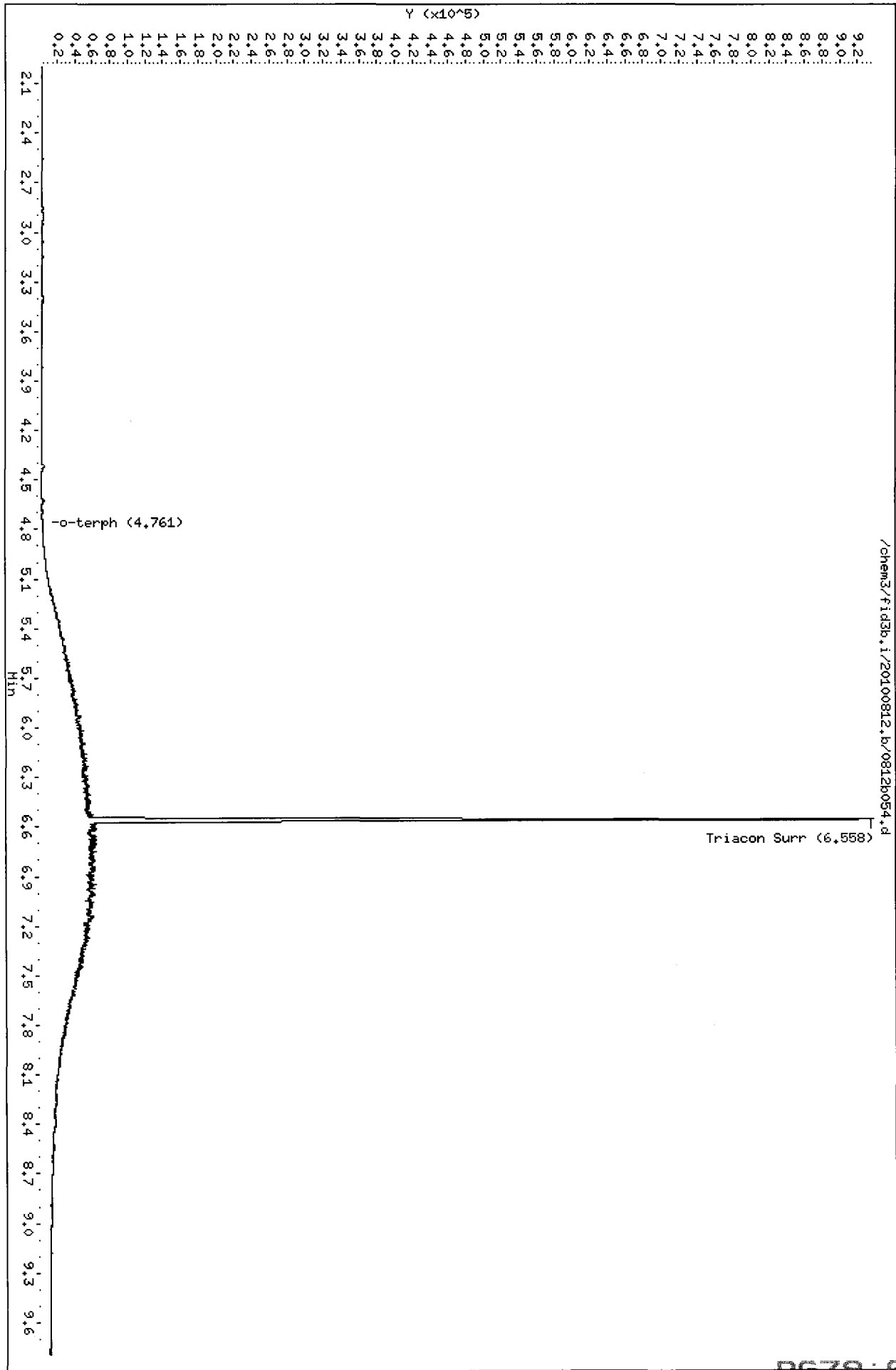
Surrogate	Area	Amount	%Rec
o-Terphenyl	2033	0.1	0.2
Triacontane	804367	48.1	106.9

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

MANUAL ADJUSTMENTS

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

Analyst  Date 8/12/10



MANUAL INTEGRATION SUMMARY FOR DATAATCH - /chem3/fid3b.i/20100812.b

ARI Job No. : RINS Method: i/20100812.b/ftp/fid3b.m Instrument: fid3b.i Date: 12-AUG-2010

Time Filename LabID ClientID DF Manually Integrated Compounds

1246 0812b001.d RINSE 1 NO MANUAL INTEGRATION

1305 0812b002.d RT RT 1 Toluene, C8,

1324 0812b003.d IB IB 1 NO MANUAL INTEGRATION

1344 0812b004.d DISEL#1 1 o-terph,

1403 0812b005.d MOIL#1 1 Triacon Surr,

1422 0812b006.d RI10A DW Pond 1 NO MANUAL INTEGRATION

1442 0812b007.d RI10LCSW1 RI10LCSW1 1 o-terph,

1502 0812b008.d RI10MBW1 RI10MBW1 1 NO MANUAL INTEGRATION

1522 0812b009.d RH80A KP-1 1 o-terph, Triacon Surr,

1542 0812b010.d RH80B KP-2 5 o-terph, Triacon Surr,

1601 0812b011.d RH80A KP-1 5 o-terph, Triacon Surr,

1621 0812b012.d RINSE 1 NO MANUAL INTEGRATION

1641 0812b013.d RINSE 1 NO MANUAL INTEGRATION

1700 0812b014.d RH80LCS1 RH80LCS1 1 o-terph,

1720 0812b015.d RH80MBS1 RH80MBS1 1 NO MANUAL INTEGRATION

1739 0812b016.d DISEL#2 FY09 FORT 1 o-terph,

1759 0812b017.d MOIL#2 FY09 FORT 1 Triacon Surr,

1818 0812b018.d RG79I PSB11-23-2 1 o-terph, Triacon Surr,

1838 0812b019.d RG79B 1 NO MANUAL INTEGRATION

1857 0812b020.d RG79C PSB11-2-4- 20 o-terph,

1917 0812b021.d RG79D PSB11-2-4- 10 o-terph,

1936 0812b022.d RI44A 081210-FL9 10 o-terph, Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATAATCH - /chem3/fid3b.1/20100812.b

Time Filename LabID ClientID DF Manually Integrated Compounds

1956	0812b023.d	RI44B	081210-FL9	20	o-terph, Triacon Surr,
2015	0812b024.d	RI44C	081210-FL9	10	o-terph, Triacon Surr,
2035	0812b025.d	RI44LCSDS1	RI44LCSDS1	1	o-terph,
2054	0812b026.d	RI44LCSS1	RI44LCSS1	1	o-terph,
2113	0812b027.d	RI44MBS1	RI44MBS1	1	NO MANUAL INTEGRATION
2132	0812b028.d	DISEL#3	FY09 FORT	1	o-terph,
2151	0812b029.d	MOIL#3	FY09 FORT	1	Triacon Surr,
2210	0812b030.d	RG79A	PSB11-0-0.	2	o-terph, Triacon Surr,
2230	0812b031.d	RG79E	PSB11-4-6-	1	o-terph, Triacon Surr,
2249	0812b032.d	RG79EMS	PSB11-4-6-	1	o-terph, Triacon Surr,
2308	0812b033.d	RG79EMSD	PSB11-4-6-	1	o-terph, Triacon Surr,
2326	0812b034.d	RG79G	PSB11-11-1	10	o-terph, Triacon Surr,
2345	0812b035.d	RG79H	PSB11-14-1	10	o-terph, Triacon Surr,
0004	0812b036.d	RG79O		10	NO MANUAL INTEGRATION
0023	0812b037.d	RG79B	PSB11-1-5-	20	o-terph,
0042	0812b038.d	DISEL#4		1	o-terph,
0101	0812b039.d	MOIL#4		1	Triacon Surr,
0120	0812b040.d	RG79K	PSB15-0-0.	1	o-terph, Triacon Surr,
0139	0812b041.d	RG79L	PSB15-1-5-	1	Triacon Surr,
0158	0812b042.d	RG79M	PSB15-2-4-	1	o-terph, Triacon Surr,
0217	0812b043.d	RG79N	PSB15-4-6-	1	o-terph, Triacon Surr,
0236	0812b044.d	RG79P	PSB15-17-1	1	NO MANUAL INTEGRATION
0255	0812b045.d	RG79Q	PSB15-17-1	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATAATCH - /chem3/fid3b.i/20100812.b

Time	Filename	LabID	ClientID	DF	Manually Integrated Compounds
0314	0812b046.d	RG79LCSS1	RG79LCSS1	1	o-terph,
0333	0812b047.d	RG79MBS1	RG79MBS1	1	NO MANUAL INTEGRATION
0352	0812b048.d	DIESEL#5		1	o-terph,
0411	0812b049.d	MOIL#5		1	Triacon Surr,
0430	0812b050.d	RG79G		1	NO MANUAL INTEGRATION
0449	0812b051.d	RG79H		1	NO MANUAL INTEGRATION
0508	0812b052.d	RG79O		1	o-terph, Triacon Surr,
0527	0812b053.d	DIESEL#6		1	o-terph,
0546	0812b054.d	MOIL#6		1	Triacon Surr,

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812raw.b/0812b016.d ARI ID: DIESEL#2  
 Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m Client ID: DIESEL#2  
 Instrument: fid3b.i Injection: 12-AUG-2010 17:39  
 Operator: JR Dilution Factor: 1  
 Report Date: 08/13/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	767633	28
C8	----				DIESEL (C12-C24)	5126289	240
C10	2.855	0.001	27910	20158	M.OIL (C24-C38)	108916	9
C12	3.465	0.000	63509	46960	AK-102 (C10-C25)	5753273	239
C14	3.923	-0.001	127471	89549	AK-103 (C25-C36)	77599	9
C16	4.318	0.000	224683	203984	OR.DIES (C10-C28)	5796427	275
C18	4.673	0.001	220324	171095	OR.MOIL (C28-C40)	84500	7
C20	4.994	-0.001	127981	103933			
C22	5.293	0.001	53987	45143	STODDARD (C8-C12)	767633	28
C24	5.603	0.003	11806	12338			
C25	5.765	0.004	4324	8696			
C26	5.914	-0.007	1375	518			
C28	6.240	-0.001	261	70			
C32	6.841	-0.009	350	170			
C34	7.142	0.002	595	82	CREOSOT (C8-C22)	5709836	893
Filter Peak	----						
C36	7.413	0.004	876	463	BUNKERC (C10-C38)	5848429	677
o-terph	4.762	0.002	1682816	1019396	JET-A (C10-C18)	4287898	271
Triacon Surr	6.556	-0.002	360	179	IT.MOIL (C24-C40)	141593	7

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
 AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1019396	51.1	113.6
Triacotane	179	0.0	0.0

*M/E/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3b.i/20100812.b/0812rsw.b/0812b016.d  
Date: 12-AUG-2010 17:39

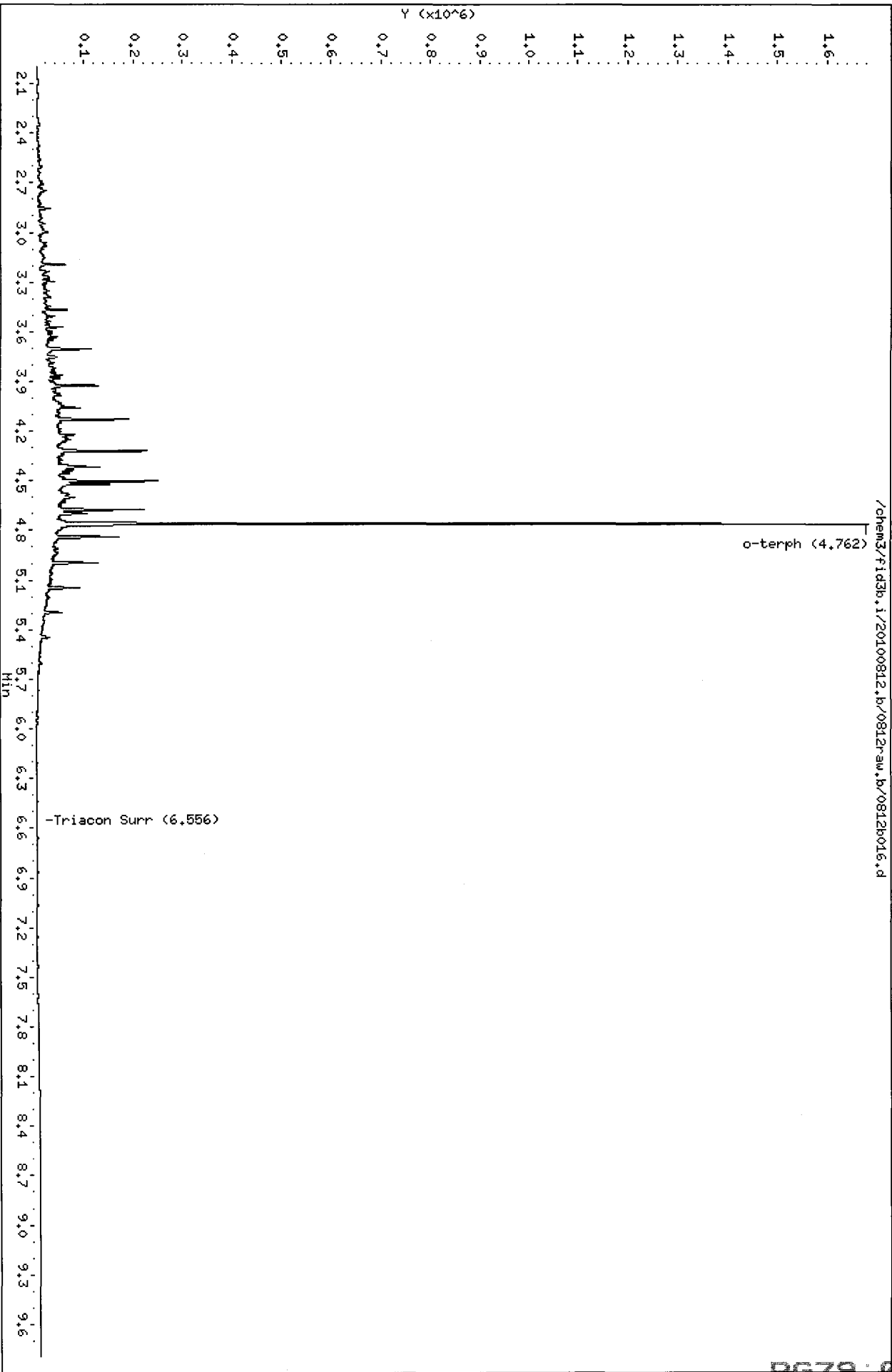
Client ID: DIESEL#2  
Sample Info: DIESEL#2

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812raw.b/0812b017.d ARI ID: MOIL#2  
 Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m Client ID: MOIL#2  
 Instrument: fid3b.i Injection: 12-AUG-2010 17:59  
 Operator: JR Dilution Factor: 1  
 Report Date: 08/13/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	38668	1
C8	----				DIESEL (C12-C24)	674703	32
C10	2.856	0.002	908	989	M.OIL (C24-C38)	5376961	445
C12	3.466	0.001	626	99	AK-102 (C10-C25)	812814	34
C14	3.919	-0.004	421	171	AK-103 (C25-C36)	4718376	528
C16	4.314	-0.004	284	82	OR.DIES (C10-C28)	2157022	102
C18	4.667	-0.005	597	128	OR.MOIL (C28-C40)	4267669	379
C20	4.994	0.000	4287	919			
C22	5.292	0.001	14575	2880	STODDARD (C8-C12)	38668	1
C24	5.597	-0.002	27370	17422			
C25	5.760	-0.001	33749	9191			
C26	5.923	0.002	37676	10379			
C28	6.242	0.001	47223	33671			
C32	6.851	0.001	57758	27400			
C34	7.137	-0.002	56359	38411	CREOSOT (C8-C22)	300098	47
Filter Peak	----						
C36	7.411	0.002	43445	13744	BUNKERC (C10-C38)	6078098	703
o-terph	4.762	0.003	1973	2086	JET-A (C10-C18)	60419	4
Triacon Surr	6.559	0.001	929282	916039	IT.MOIL (C24-C40)	6639593	309

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
 AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2086	0.1	0.2
Triacontane	916039	54.8	121.7

*Mrs/B/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100812.b/0812rsw.b/0812b017.d  
Date: 12-AUG-2010 17:59

Client ID: M01L#2

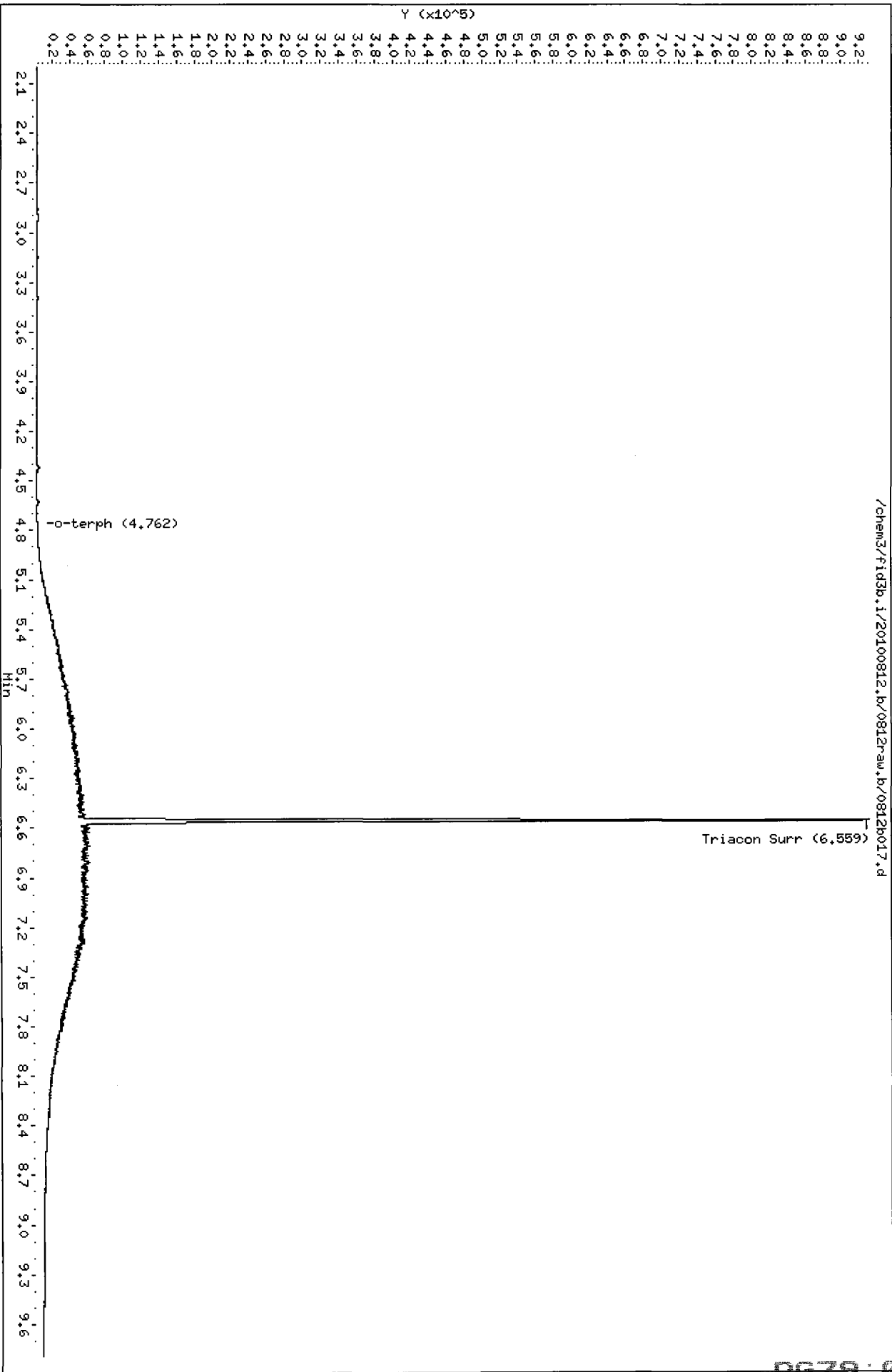
Sample Info: M01L#2

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



RG79: 01147

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b018.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79I  
Client ID: PSB11-23-24-073010  
Injection: 12-AUG-2010 18:18  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	323963	12
C8	----				DIESEL (C12-C24)	894260	42
C10	2.856	0.002	11223	9776	M.OIL (C24-C38)	979501	81
C12	3.468	0.003	6012	5919	AK-102 (C10-C25)	1201770	50
C14	3.927	0.004	7938	6976	AK-103 (C25-C36)	877827	98
C16	4.320	0.002	10990	12079	OR.DIES (C10-C28)	1547062	73
C18	4.673	0.001	12509	10544	OR.MOIL (C28-C40)	665132	59
C20	4.996	0.001	13352	16737			
C22	5.292	0.001	13968	12186	STODDARD (C8-C12)	323963	12
C24	5.603	0.004	13814	19492			
C25	5.764	0.003	14451	24843			
C26	5.919	-0.002	11753	4254			
C28	6.240	-0.001	13491	6260			
C32	6.849	-0.002	9100	5989			
C34	7.139	0.000	7893	4217	CREOSOT (C8-C22)	1051313	164
Filter Peak	----						
C36	7.408	-0.001	5752	903	BUNKERC (C10-C38)	2151948	249
o-terph	4.762	0.002	1462758	829672	JET-A (C10-C18)	710960	45
Triacon Surr	6.558	0.001	756235	694408	IT.MOIL (C24-C40)	1734156	81

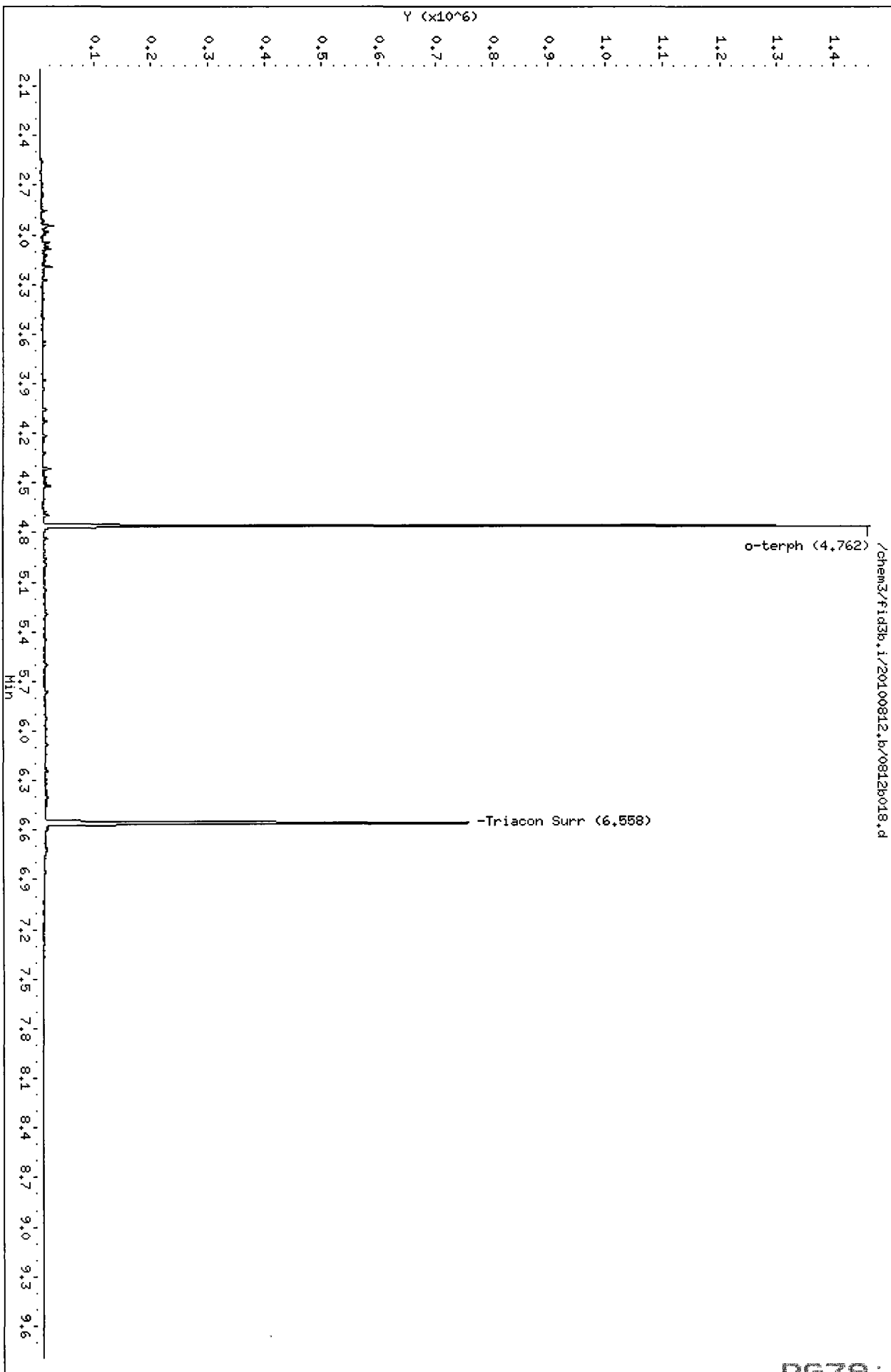
Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	829672	41.6	92.5
Triacantane	694408	41.5	92.3

*Mos/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

/chem3/fid3b.i/20100812.br/0812b018.d



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b020.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79C  
Client ID: PSB11-2-4-073010  
Injection: 12-AUG-2010 18:57  
Dilution Factor: 20

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	486950	18
C8	----				DIESEL (C12-C24)	3906450	183
C10	2.856	0.002	11813	8884	M.OIL (C24-C38)	13857640	1147
C12	3.469	0.004	5757	3457	AK-102 (C10-C25)	4610467	191
C14	3.929	0.005	11985	9570	AK-103 (C25-C36)	12576977	1408
C16	4.320	0.001	15297	15134	OR.DIES (C10-C28)	8908267	422
C18	4.673	0.000	27195	25878	OR.MOIL (C28-C40)	9851077	874
C20	4.997	0.002	46804	29355			
C22	5.294	0.002	82150	93991	STODDARD (C8-C12)	486950	18
C24	5.601	0.002	135705	148006			
C25	5.764	0.003	170372	199181			
C26	5.923	0.002	193543	179226			
C28	6.245	0.004	278210	332916			
C32	6.849	-0.002	129066	70823			
C34	7.144	0.004	116735	92618	CREOSOT (C8-C22)	2982918	466
Filter Peak	----						
C36	7.407	-0.002	77009	27008	BUNKERC (C10-C38)	18145564	2099
o-terph	4.758	-0.002	88213	82384	JET-A (C10-C18)	1306852	82
Triacon Surr	6.557	-0.001	235602	194520	IT.MOIL (C24-C40)	14665939	683

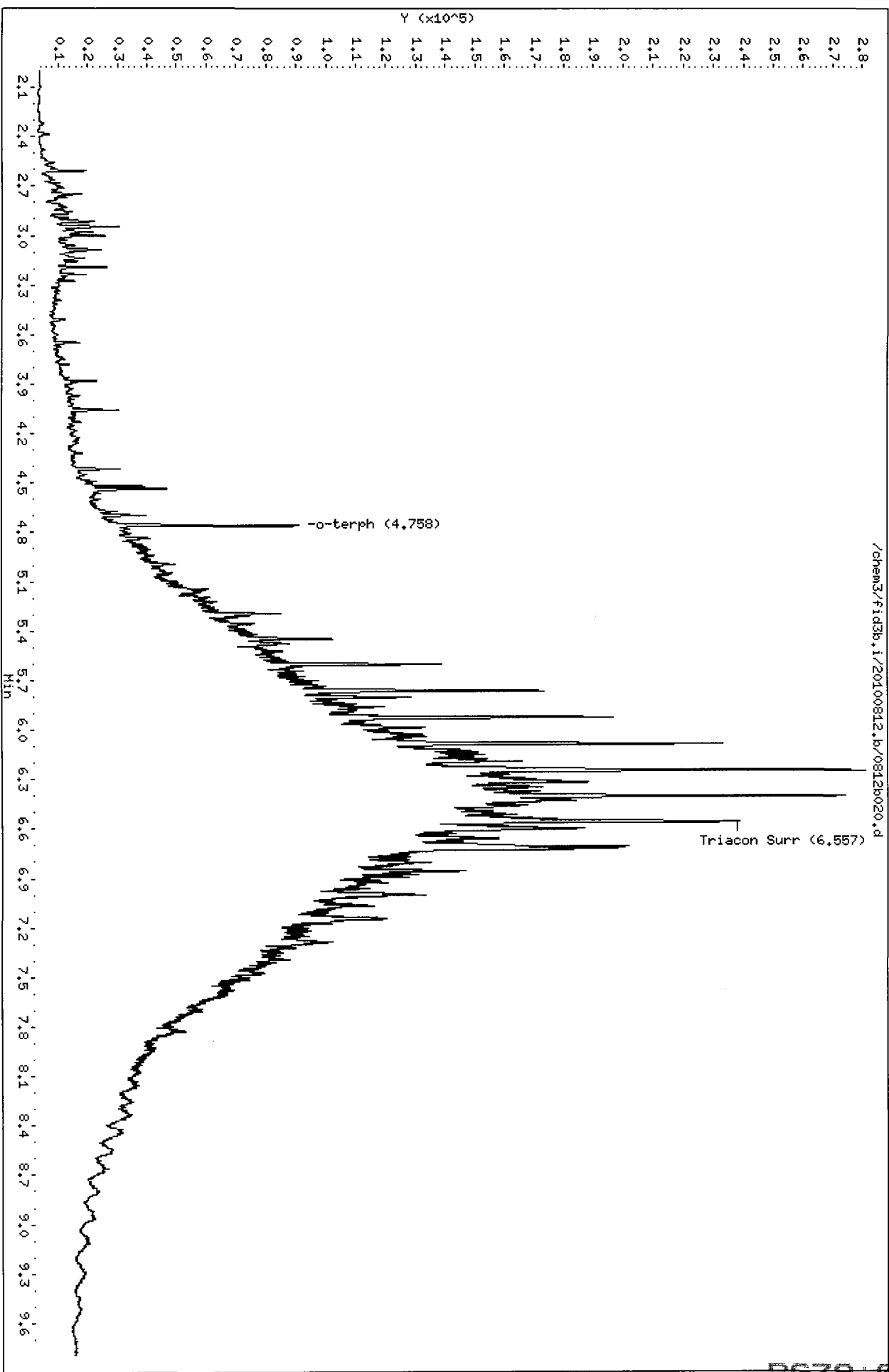
Range Times: NW Diesel (3.515 - 5.649) NW Gas (0.974 - 3.515) NW M.Oil (5.649 - 7.717)  
AK102 (2.804 - 5.711) AK103 (5.711 - 7.459) Jet A (2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	82384	4.1	183.7
Triacontane	194520	11.6	516.9

*08/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

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Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b021.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79D  
Client ID: PSB11-2-4-073010-D  
Injection: 12-AUG-2010 19:17  
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	356624	13
C8	----				DIESEL (C12-C24)	7837123	366
C10	2.855	0.002	8477	6417	M.OIL (C24-C38)	28328678	2345
C12	3.470	0.005	7681	7627	AK-102 (C10-C25)	8789270	365
C14	3.923	0.000	27746	21825	AK-103 (C25-C36)	25779869	2886
C16	4.318	0.000	34737	33229	OR.DIES (C10-C28)	17327104	822
C18	4.673	0.001	53820	53975	OR.MOIL (C28-C40)	20183980	1790
C20	4.995	0.000	88856	46531			
C22	5.289	-0.002	128592	65193	STODDARD (C8-C12)	356624	13
C24	5.604	0.005	195690	125709			
C25	5.764	0.003	236155	128927			
C26	5.921	0.000	242309	99267			
C28	6.242	0.001	358161	110418			
C32	6.851	0.001	251029	48446			
C34	7.137	-0.002	211170	61230	CREOSOT (C8-C22)	5271160	824
Filter Peak	----						
C36	7.406	-0.003	158343	86969	BUNKERC (C10-C38)	36442714	4216
o-terph	4.757	-0.003	174310	162033	JET-A (C10-C18)	2196842	139
Triacon Surr	6.559	0.001	390075	83375	IT.MOIL (C24-C40)	29480423	1372

Range Times: NW Diesel (3.515 - 5.649) NW Gas (0.974 - 3.515) NW M.Oil (5.649 - 7.717)  
AK102 (2.804 - 5.711) AK103 (5.711 - 7.459) Jet A (2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	162033	8.1	180.6
Triacantane	83375	5.0	110.8

*MO 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3b.i/20100812.b/0812b021.d

Date: 12-AUG-2010 19:17

Client ID: PSB11-2-4-073010-D

Sample Info: RG79D,10

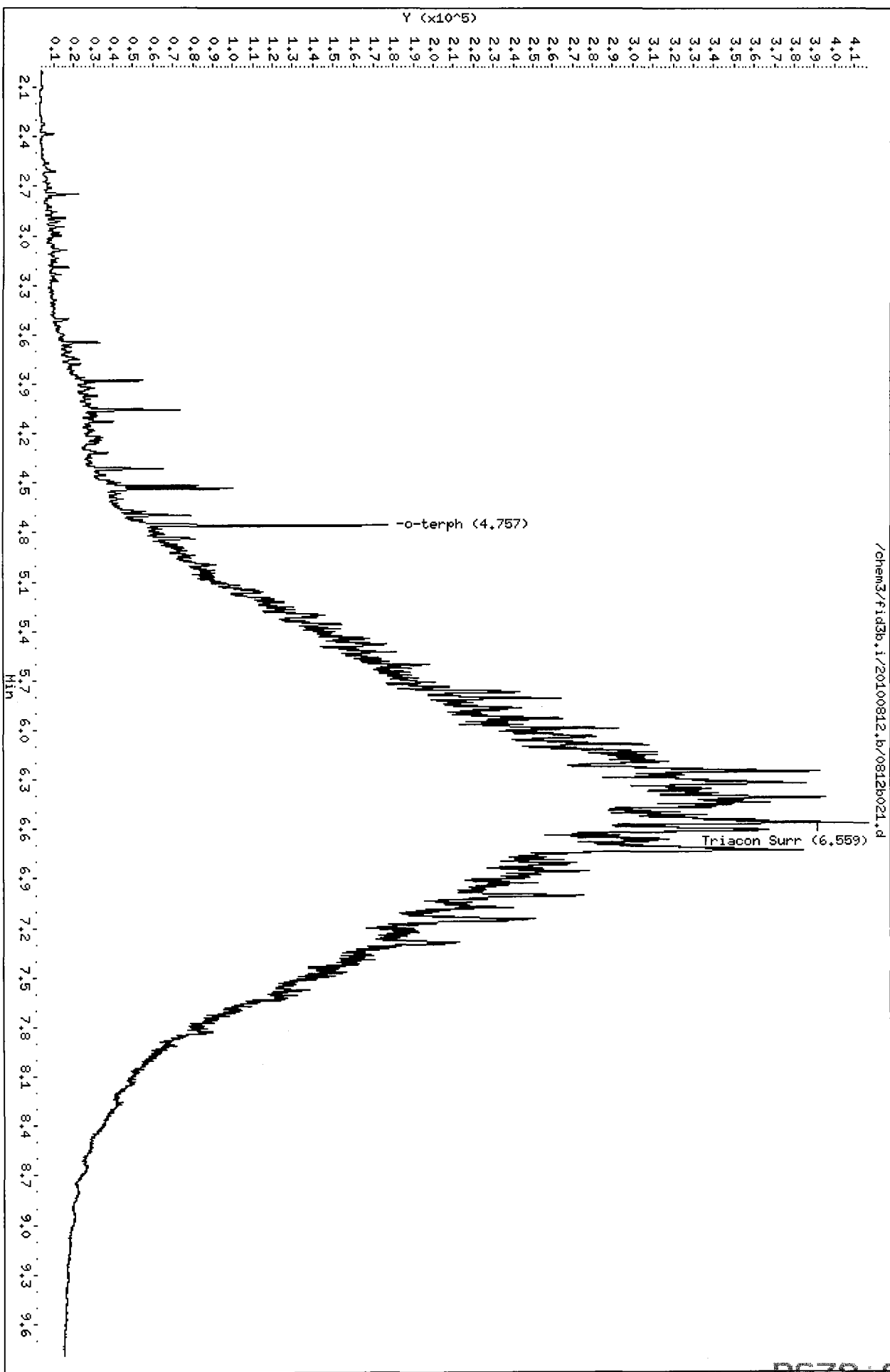
Instrument: fid3b.i

Operator: JR

Column diameter: 2.00

Column phase: RTX-1

/chem3/fid3b.i/20100812.b/0812b021.d



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812raw.b/0812b028.d ARI ID: DIESEL#3  
 Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m Client ID: DIESEL#3  
 Instrument: fid3b.i Injection: 12-AUG-2010 21:32  
 Operator: JR Dilution Factor: 1  
 Report Date: 08/13/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	767376	28
C8	----				DIESEL (C12-C24)	5055574	236
C10	2.855	0.001	27803	19257	M.OIL (C24-C38)	102226	8
C12	3.466	0.001	70504	48693	AK-102 (C10-C25)	5683458	236
C14	3.924	0.000	136922	107275	AK-103 (C25-C36)	68248	8
C16	4.319	0.001	235800	213184	OR.DIES (C10-C28)	5722852	271
C18	4.674	0.001	209068	160873	OR.MOIL (C28-C40)	78804	7
C20	4.995	0.000	130101	103934			
C22	5.292	0.001	53748	50096	STODDARD (C8-C12)	767376	28
C24	5.602	0.003	11981	6987			
C25	5.767	0.006	4623	4904			
C26	5.923	0.003	1297	275			
C28	6.242	0.001	256	57			
C32	6.850	-0.001	294	57			
C34	7.143	0.003	527	103	CREOSOT (C8-C22)	5648900	883
Filter Peak	----						
C36	7.410	0.000	972	210	BUNKERC (C10-C38)	5770949	668
o-terph	4.762	0.002	1727014	1065399	JET-A (C10-C18)	4292452	271
Triacon Surr	6.563	0.005	441	421	IT.MOIL (C24-C40)	133355	6

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
 AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1065399	53.4	118.8
Triacontane	421	0.0	0.1

*Mos/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100812.b/0812rsw.b/0812b028.d  
Date: 12-AUG-2010 21:32

Client ID: DIESEL#3

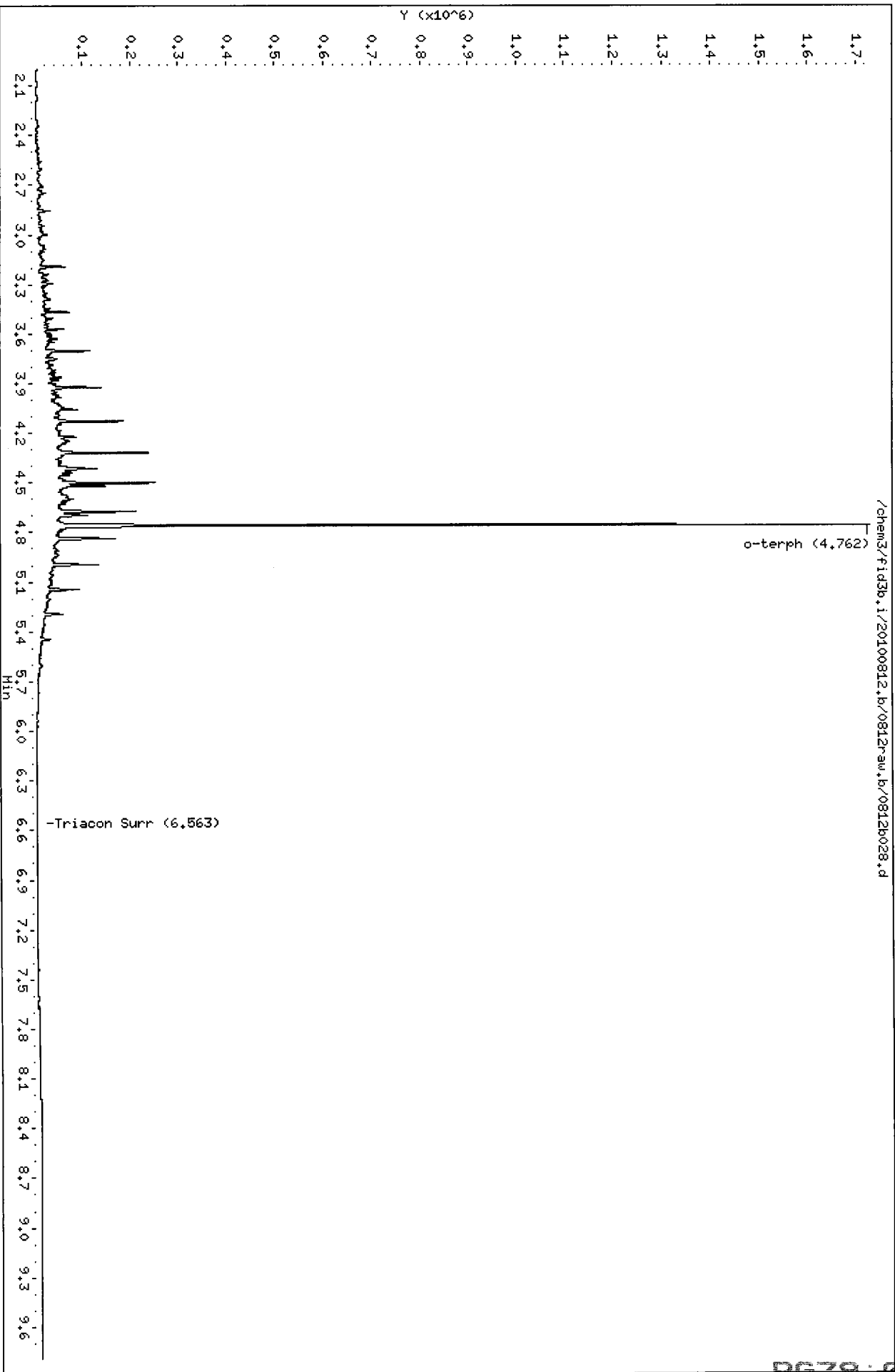
Sample Info: DIESEL#3

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812raw.b/0812b029.d ARI ID: MOIL#3  
 Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m Client ID: MOIL#3  
 Instrument: fid3b.i Injection: 12-AUG-2010 21:51  
 Operator: JR Dilution Factor: 1  
 Report Date: 08/13/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	39450	1
C8	----				DIESEL (C12-C24)	677860	32
C10	2.858	0.004	914	1153	M.OIL (C24-C38)	5349067	443
C12	3.472	0.007	598	312	AK-102 (C10-C25)	807025	33
C14	3.925	0.002	409	110	AK-103 (C25-C36)	4747812	532
C16	4.323	0.005	291	64	OR.DIES (C10-C28)	2175469	103
C18	4.678	0.006	778	861	OR.MOIL (C28-C40)	4207493	373
C20	4.995	0.000	4184	993			
C22	5.288	-0.004	14598	6242	STODDARD (C8-C12)	39450	1
C24	5.600	0.001	28397	13158			
C25	5.764	0.003	34815	20883			
C26	5.920	0.000	39316	24675			
C28	6.240	-0.001	46423	10874			
C32	6.854	0.003	57095	29637			
C34	7.141	0.002	55905	27127	CREOSOT (C8-C22)	300288	47
Filter Peak	----						
C36	7.411	0.001	43659	7573	BUNKERC (C10-C38)	6054915	701
o-terph	4.762	0.002	1832	1809	JET-A (C10-C18)	60810	4
Triacon Surr	6.557	-0.001	900448	941827	IT.MOIL (C24-C40)	6618940	308

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
 AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1809	0.1	0.2
Triacantane	941827	56.3	125.1

*MW 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100812.b/0812rsw.b/0812b029.d  
Date: 12-AUG-2010 21:51

Client ID: H01L#3

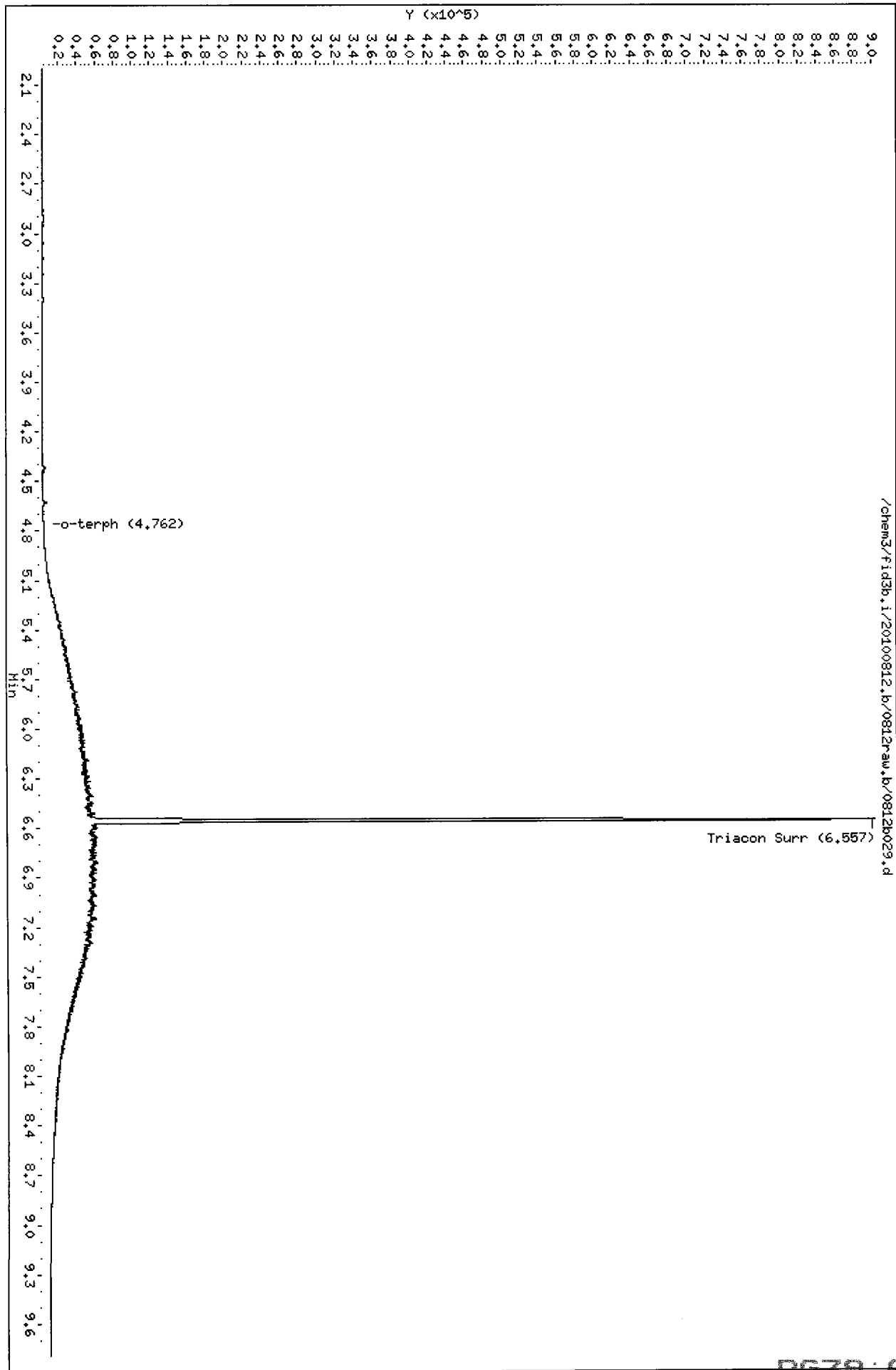
Sample Info: H01L#3

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b030.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79A  
Client ID: PSB11-0-0.5-073010  
Injection: 12-AUG-2010 22:10  
Dilution Factor: 2

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	122645	4
C8	----				DIESEL (C12-C24)	3099738	145
C10	2.855	0.001	1932	2360	M.OIL (C24-C38)	20017416	1657
C12	3.455	-0.010	1634	1498	AK-102 (C10-C25)	3495959	145
C14	3.930	0.007	2536	3791	AK-103 (C25-C36)	17509395	1960
C16	4.319	0.001	7501	5599	OR.DIES (C10-C28)	7888491	374
C18	4.674	0.002	21303	13171	OR.MOIL (C28-C40)	16760479	1487
C20	4.994	-0.001	47797	43820			
C22	5.293	0.002	69387	19036	STODDARD (C8-C12)	122645	4
C24	5.601	0.002	91774	63989			
C25	5.760	-0.001	105658	22758			
C26	5.919	-0.002	123561	21670			
C28	6.242	0.001	222986	99842			
C32	6.849	-0.002	214838	177324			
C34	7.137	-0.003	213919	101178	CREOSOT (C8-C22)	1929501	302
Filter Peak	----						
C36	7.405	-0.005	172230	76324	BUNKERC (C10-C38)	23203396	2685
o-terph	4.758	-0.002	717247	445787	JET-A (C10-C18)	524861	33
Triacon Surr	6.562	0.004	622677	832397	IT.MOIL (C24-C40)	22295387	1038

Range Times: NW Diesel (3.515 - 5.649) NW Gas (0.974 - 3.515) NW M.Oil (5.649 - 7.717)  
AK102 (2.804 - 5.711) AK103 (5.711 - 7.459) Jet A (2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	445787	22.4	99.4
Triacantane	832397	49.8	221.2

*M 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100812.b/0812b030.d

Date: 12-AUG-2010 22:10

Client ID: PSB11-0-0.5-073010

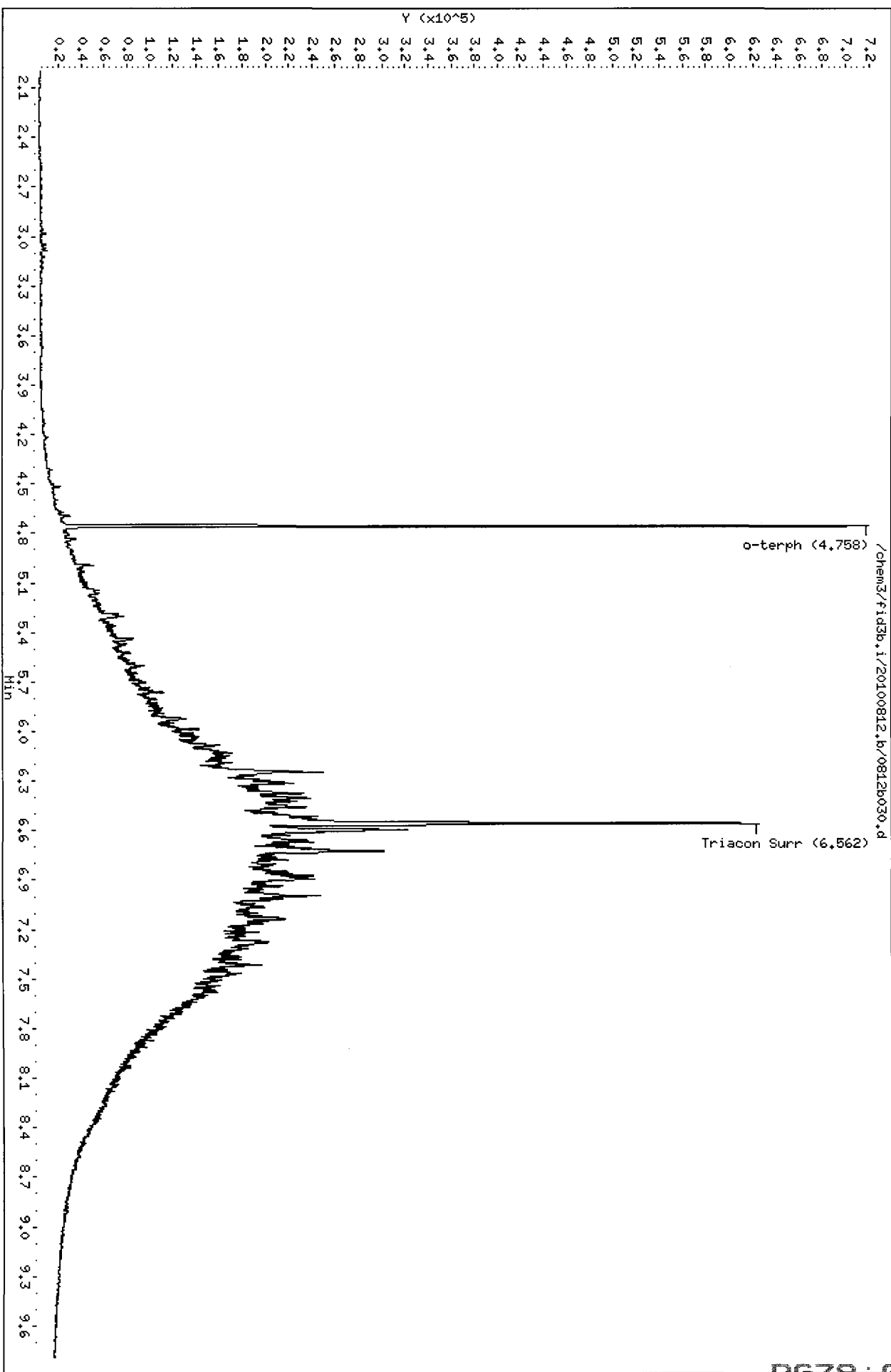
Sample Info: RG79A,2

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b031.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79E  
Client ID: PSB11-4-6-073010  
Injection: 12-AUG-2010 22:30  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	450999	16
C8	----				DIESEL (C12-C24)	8000697	374
C10	2.855	0.001	13744	13543	M.OIL (C24-C38)	18497382	1531
C12	3.466	0.001	9106	9633	AK-102 (C10-C25)	8861554	368
C14	3.924	0.001	24654	19238	AK-103 (C25-C36)	16801295	1881
C16	4.319	0.001	43149	42855	OR.DIES (C10-C28)	15029539	713
C18	4.672	-0.001	78562	60666	OR.MOIL (C28-C40)	12564877	1115
C20	4.998	0.003	105126	59127			
C22	5.295	0.003	151514	120640	STODDARD (C8-C12)	450999	16
C24	5.601	0.002	188272	252776			
C25	5.762	0.001	225798	262790			
C26	5.921	0.000	211837	132477			
C28	6.241	-0.001	293653	94442			
C32	6.855	0.004	233615	300101			
C34	7.139	-0.001	175948	210339	CREOSOT (C8-C22)	5956297	931
Filter Peak	----						
C36	7.410	0.000	112059	50379	BUNKERC (C10-C38)	26846449	3106
o-terph	4.761	0.001	1367275	919340	JET-A (C10-C18)	2320135	146
Triacon Surr	6.563	0.005	1163067	1266503	IT.MOIL (C24-C40)	20511853	955

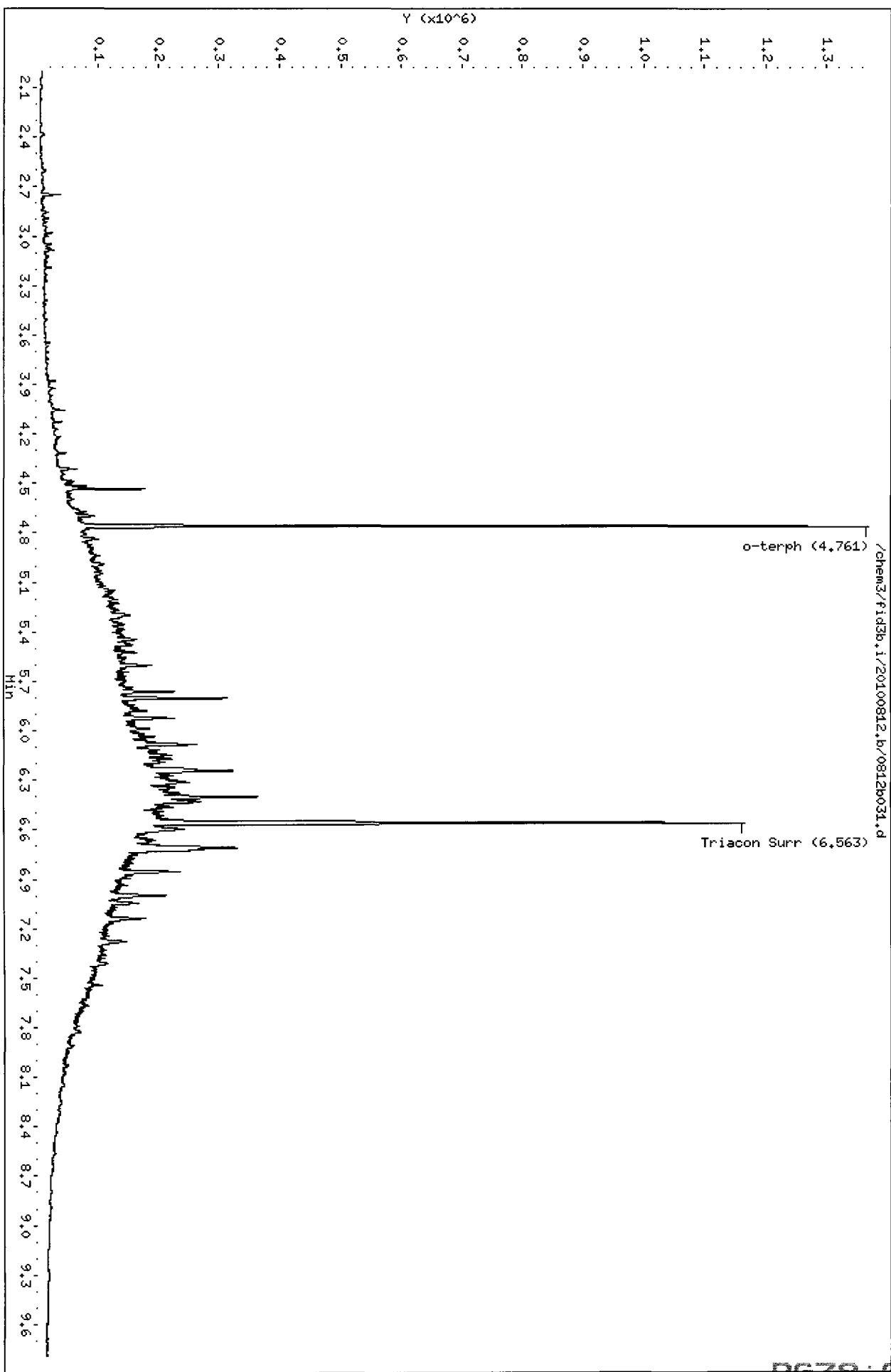
Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	919340	46.1	102.5
Triacantane	1266503	75.7	168.3

*M 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b032.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79EMS  
Client ID: PSB11-4-6-07301 MS  
Injection: 12-AUG-2010 22:49  
Dilution Factor: 1

FID:3B RESULTS

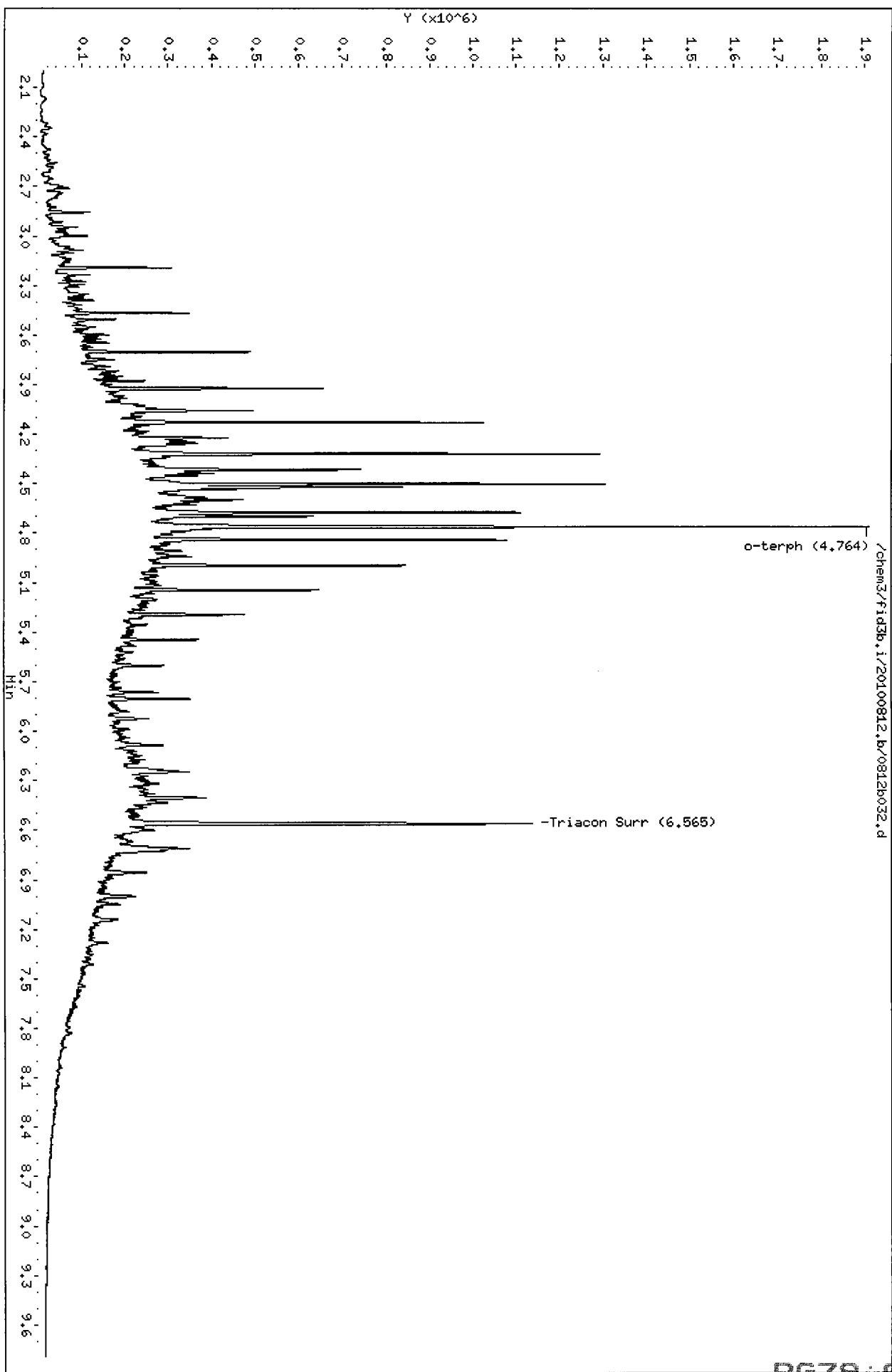
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	3414175	125
C8	----				DIESEL (C12-C24)	32921586	1539
C10	2.857	0.003	116559	93169	M.OIL (C24-C38)	20208223	1673
C12	3.466	0.001	347241	260155	AK-102 (C10-C25)	36313297	1507
C14	3.925	0.002	652914	582320	AK-103 (C25-C36)	18344736	2054
C16	4.323	0.005	1290841	950677	OR.DIES (C10-C28)	43199666	2048
C18	4.676	0.004	1108606	1006976	OR.MOIL (C28-C40)	13521634	1199
C20	4.999	0.005	843221	767359			
C22	5.296	0.004	473648	484395	STODDARD (C8-C12)	3414175	123
C24	5.605	0.006	287268	332156			
C25	5.763	0.002	257754	132709			
C26	5.915	-0.005	188574	116518			
C28	6.245	0.004	344562	379971			
C32	6.853	0.003	208566	69409			
C34	7.140	0.000	178114	110178	CREOSOT (C8-C22)	32573852	5093
Filter Peak	----						
C36	7.411	0.002	121801	35483	BUNKERC (C10-C38)	55954838	6474
o-terph	4.764	0.005	1909781	1481382	JET-A (C10-C18)	21818329	1377
Triacon Surr	6.565	0.007	1133453	1337178	IT.MOIL (C24-C40)	22311862	1038

Range Times: NW Diesel (3.515 - 5.649) NW Gas (0.974 - 3.515) NW M.Oil (5.649 - 7.717)  
AK102 (2.804 - 5.711) AK103 (5.711 - 7.459) Jet A (2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1481382	74.3	165.1
Triacontane	1337178	79.9	177.7

*ms 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b033.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79EMSD  
Client ID: PSB11-4-6-07301 MSD  
Injection: 12-AUG-2010 23:08  
Dilution Factor: 1

FID:3B RESULTS

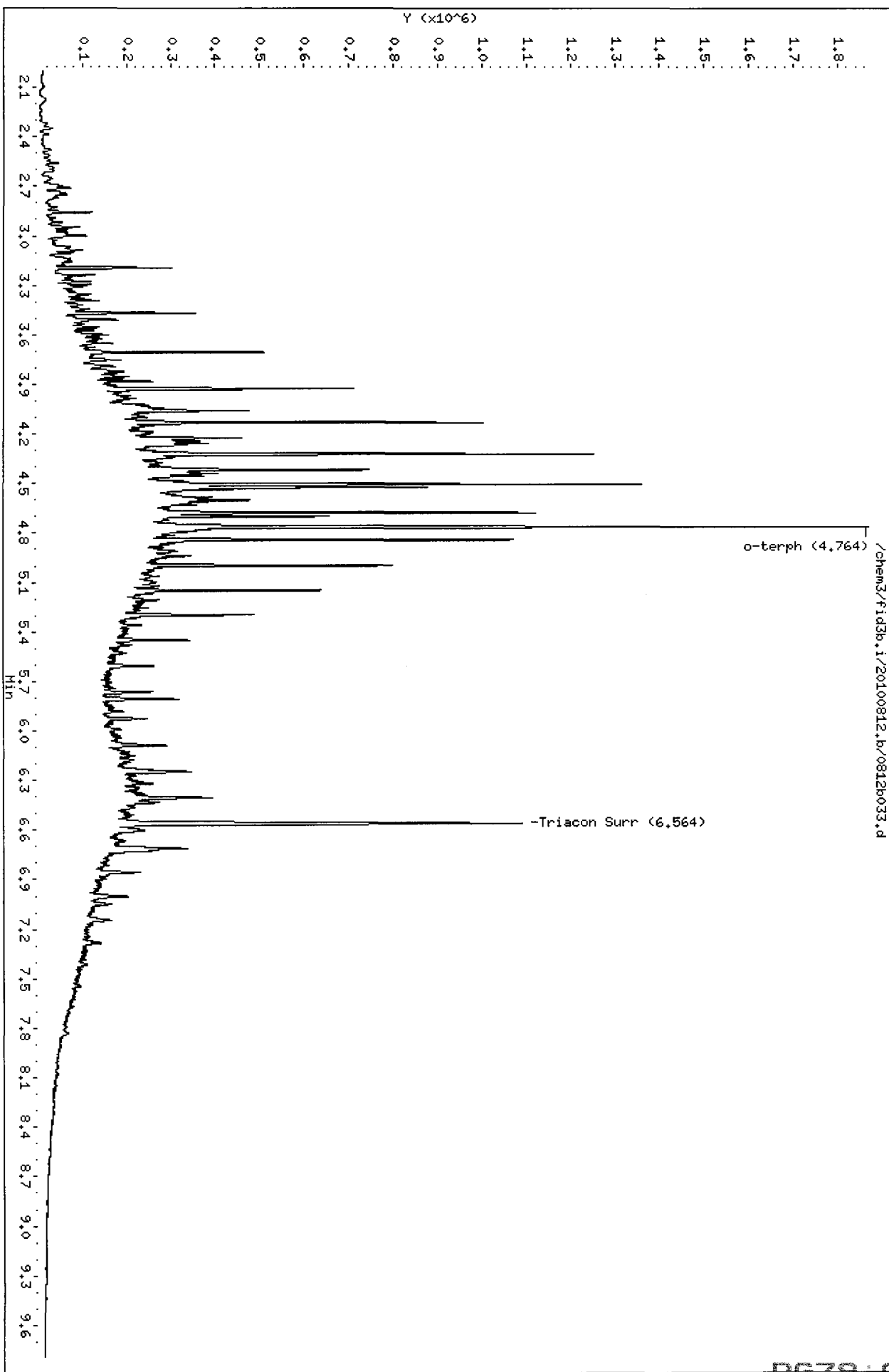
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	3514203	128
C8	----				DIESEL (C12-C24)	32598900	1523
C10	2.858	0.004	120195	97778	M.OIL (C24-C38)	18514093	1532
C12	3.467	0.003	354305	279410	AK-102 (C10-C25)	36073301	1497
C14	3.926	0.003	708322	505517	AK-103 (C25-C36)	16794560	1880
C16	4.323	0.005	1250152	1037561	OR.DIES (C10-C28)	42368201	2009
C18	4.679	0.006	1120608	966686	OR.MOIL (C28-C40)	12380705	1098
C20	4.998	0.003	796576	803203			
C22	5.296	0.004	484957	495390	STODDARD (C8-C12)	3514203	127
C24	5.606	0.007	261669	392293			
C25	5.763	0.002	255676	343045			
C26	5.925	0.005	243252	341156			
C28	6.245	0.004	343980	407184			
C32	6.847	-0.004	155652	57941			
C34	7.143	0.003	162295	215246	CREOSOT (C8-C22)	32831027	5133
Filter Peak	----						
C36	7.409	-0.001	104365	37908	BUNKERC (C10-C38)	53987343	6246
o-terph	4.764	0.004	1868241	1658979	JET-A (C10-C18)	22548906	1423
Triacon Surr	6.564	0.006	1087276	1225017	IT.MOIL (C24-C40)	20500674	954

Range Times: NW Diesel (3.515 - 5.649) NW Gas (0.974 - 3.515) NW M.Oil (5.649 - 7.717)  
AK102 (2.804 - 5.711) AK103 (5.711 - 7.459) Jet A (2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1658979	83.2	184.9
Triacontane	1225017	73.2	162.8

*M 08/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b034.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79G  
Client ID: PSB11-11-13-073010  
Injection: 12-AUG-2010 23:26  
Dilution Factor: 10

FID:3B RESULTS

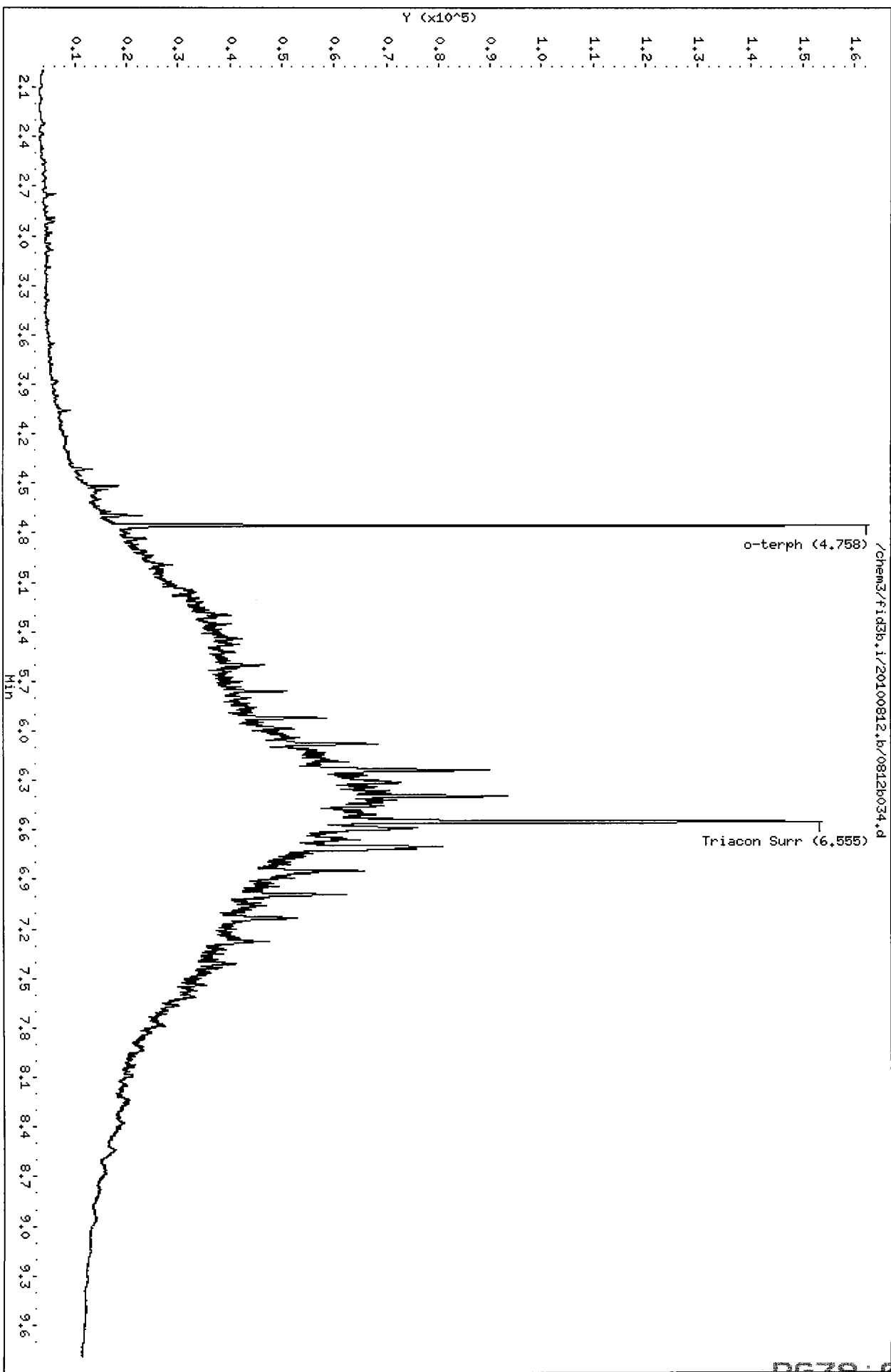
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	84768	3
C8	----				DIESEL (C12-C24)	1842452	86
C10	2.856	0.002	1620	2323	M.OIL (C24-C38)	5388828	446
C12	3.475	0.010	1419	1459	AK-102 (C10-C25)	2036127	84
C14	3.920	-0.004	2733	650	AK-103 (C25-C36)	4831466	541
C16	4.321	0.003	5943	3943	OR.DIES (C10-C28)	3645624	173
C18	4.673	0.000	13899	9738	OR.MOIL (C28-C40)	3959126	351
C20	4.996	0.001	25933	15516			
C22	5.295	0.003	36477	22720	STODDARD (C8-C12)	84768	3
C24	5.603	0.003	43763	47886			
C25	5.761	-0.001	47913	26558			
C26	5.920	-0.001	53576	50754			
C28	6.243	0.002	86854	101566			
C32	6.852	0.002	62840	84597			
C34	7.136	-0.004	49675	30742	CREOSOT (C8-C22)	1285712	201
Filter Peak	----						
C36	7.408	-0.002	37968	11728	BUNKERC (C10-C38)	7291720	844
o-terph	4.758	-0.002	159845	106184	JET-A (C10-C18)	441869	28
Triacon Surr	6.555	-0.003	150686	193431	IT.MOIL (C24-C40)	5895289	274

Range Times: NW Diesel (3.515 - 5.649) NW Gas (0.974 - 3.515) NW M.Oil (5.649 - 7.717)  
AK102 (2.804 - 5.711) AK103 (5.711 - 7.459) Jet A (2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	106184	5.3	118.4
Triacantane	193431	11.6	257.0

*M 08/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b035.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79H  
Client ID: PSB11-14-16-073010  
Injection: 12-AUG-2010 23:45  
Dilution Factor: 10

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	158452	6
C8	----				DIESEL (C12-C24)	2312423	108
C10	2.855	0.001	2336	1803	M.OIL (C24-C38)	4563246	378
C12	3.465	0.000	2478	437	AK-102 (C10-C25)	2553537	106
C14	3.926	0.003	6583	5031	AK-103 (C25-C36)	4094524	458
C16	4.318	0.000	11290	8621	OR.DIES (C10-C28)	3980453	189
C18	4.672	-0.001	19949	20267	OR.MOIL (C28-C40)	3260712	289
C20	4.995	0.000	31989	18596			
C22	5.290	-0.001	39642	29138	STODDARD (C8-C12)	158452	6
C24	5.603	0.004	43674	46060			
C25	5.761	0.000	45277	27433			
C26	5.920	-0.001	48535	46928			
C28	6.243	0.002	72517	85950			
C32	6.853	0.003	57538	95231			
C34	7.140	0.000	48172	36374	CREOSOT (C8-C22)	1844558	288
Filter Peak	----						
C36	7.410	0.001	33870	16343	BUNKERC (C10-C38)	6999306	810
o-terph	4.758	-0.002	148587	103166	JET-A (C10-C18)	748162	47
Triacon Surr	6.554	-0.003	144970	181972	IT.MOIL (C24-C40)	4987077	232

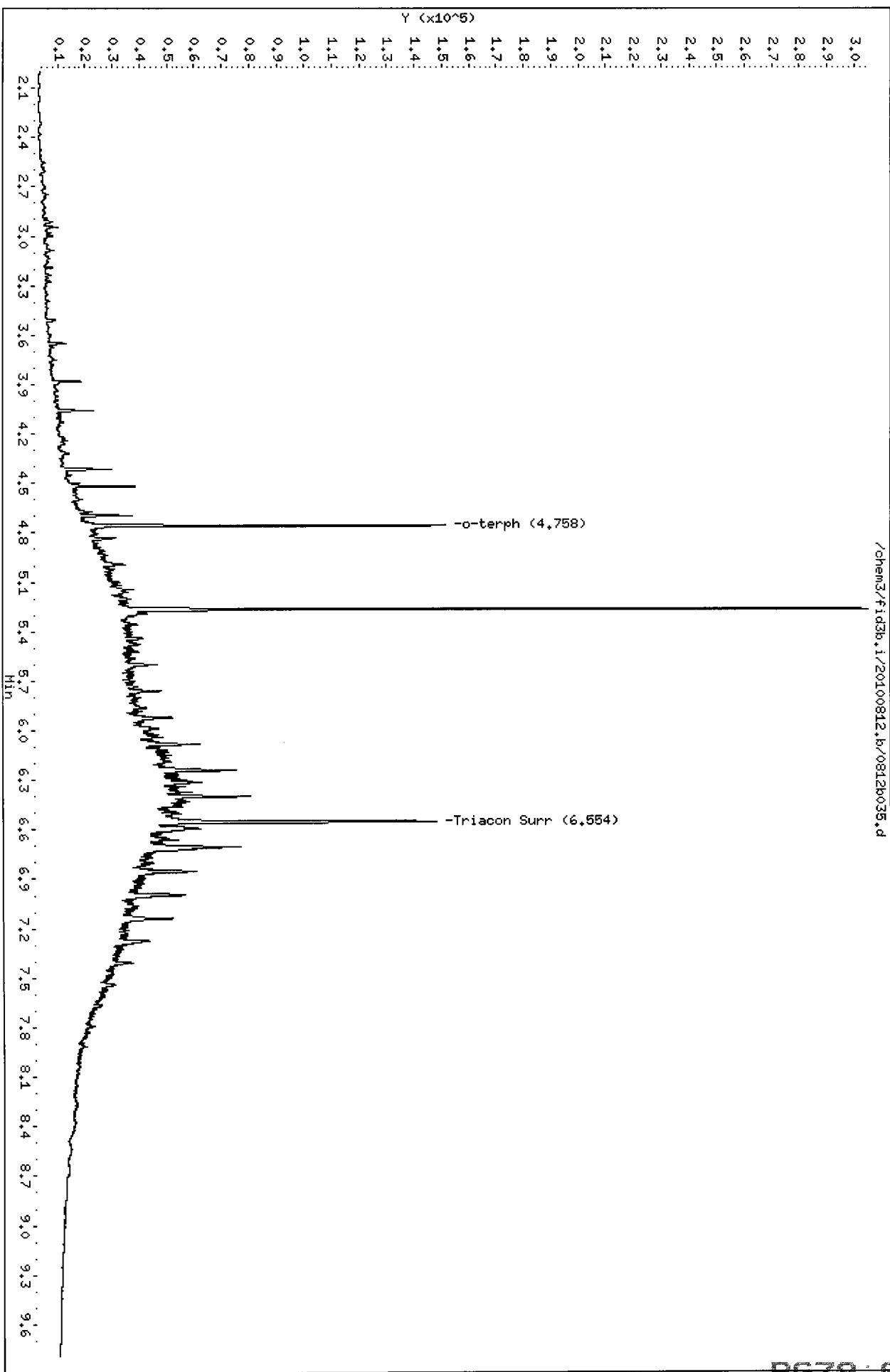
Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	103166	5.2	115.0
Triacantane	181972	10.9	241.8

*Ms 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b037.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79B  
Client ID: PSB11-1.5-2-073010  
Injection: 13-AUG-2010 00:23  
Dilution Factor: 20

FID:3B RESULTS

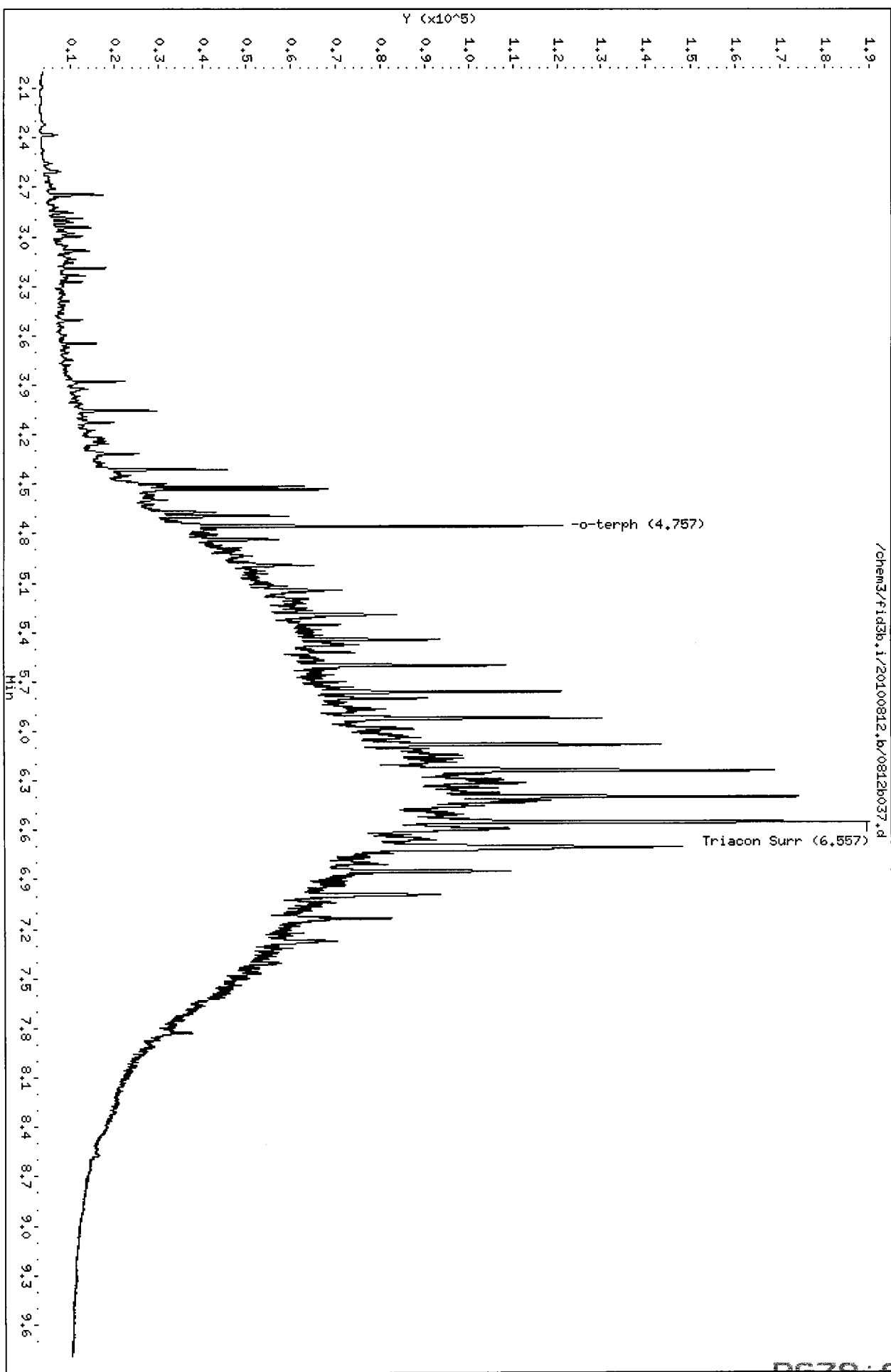
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	284438	10
C8	----				DIESEL (C12-C24)	3843500	180
C10	2.853	-0.001	7499	8233	M.OIL (C24-C38)	8595089	711
C12	3.467	0.002	5250	5904	AK-102 (C10-C25)	4307285	179
C14	3.924	0.001	11130	7529	AK-103 (C25-C36)	7744811	867
C16	4.318	0.000	22565	31351	OR.DIES (C10-C28)	7117627	337
C18	4.672	0.000	40195	42362	OR.MOIL (C28-C40)	5930915	526
C20	4.995	0.000	62021	69546			
C22	5.295	0.003	80785	98092	STODDARD (C8-C12)	284438	10
C24	5.602	0.003	104593	94869			
C25	5.762	0.001	117894	165786			
C26	5.923	0.003	127167	156505			
C28	6.244	0.003	165602	185013			
C32	6.851	0.001	102076	66347			
C34	7.139	-0.001	79436	48270	CREOSOT (C8-C22)	2998187	469
Filter Peak	----						
C36	7.409	0.000	52844	10498	BUNKERC (C10-C38)	12669885	1466
o-terph	4.757	-0.002	118305	128219	JET-A (C10-C18)	1215364	77
Triacon Surr	6.557	-0.001	187035	237158	IT.MOIL (C24-C40)	9210904	429

Range Times: NW Diesel (3.515 - 5.649) NW Gas (0.974 - 3.515) NW M.Oil (5.649 - 7.717)  
AK102 (2.804 - 5.711) AK103 (5.711 - 7.459) Jet A (2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	128219	6.4	285.9
Triacotane	237158	14.2	630.2

*M 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812raw.b/0812b038.d ARI ID: DIESEL#4  
 Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m Client ID: DIESEL#4  
 Instrument: fid3b.i Injection: 13-AUG-2010 00:42  
 Operator: JR Dilution Factor: 1  
 Report Date: 08/13/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	786991	29
C8	----				DIESEL (C12-C24)	5172075	242
C10	2.854	0.001	27595	19472	M.OIL (C24-C38)	119447	10
C12	3.465	0.000	69087	51105	AK-102 (C10-C25)	5819185	241
C14	3.922	-0.001	135243	92567	AK-103 (C25-C36)	83605	9
C16	4.319	0.001	230264	207012	OR.DIES (C10-C28)	5866172	278
C18	4.674	0.002	213746	184864	OR.MOIL (C28-C40)	95423	8
C20	4.994	0.000	131207	106644			
C22	5.294	0.002	54098	53422	STODDARD (C8-C12)	786991	28
C24	5.606	0.007	12899	19076			
C25	5.770	0.009	4545	5323			
C26	5.925	0.005	1437	563			
C28	6.236	-0.005	341	186			
C32	6.848	-0.002	390	149			
C34	7.142	0.002	704	658	CREOSOT (C8-C22)	5771377	902
Filter Peak	----						
C36	7.407	-0.003	1148	590	BUNKERC (C10-C38)	5924264	685
o-terph	4.763	0.003	1749764	1097217	JET-A (C10-C18)	4394426	277
Triacon Surr	6.551	-0.007	226	62	IT.MOIL (C24-C40)	156840	7

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
 AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1097217	55.0	122.3
Triacontane	62	0.0	0.0

*ms/13/c*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100812.b/0812rsw.b/0812b038.d  
Date: 13-AUG-2010 00:42

Client ID: DIESEL#4

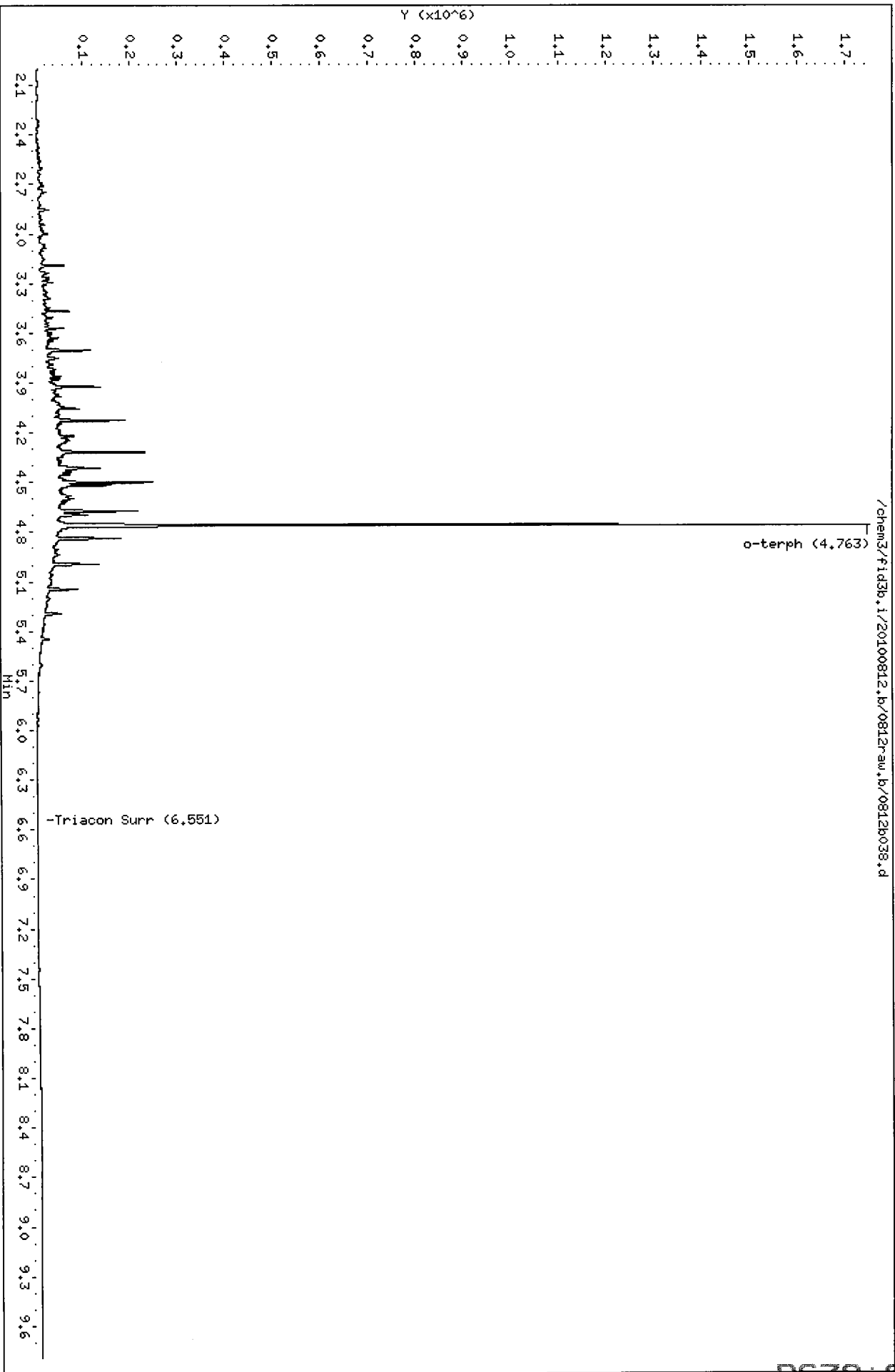
Sample Info: DIESEL#4

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812raw.b/0812b039.d ARI ID: MOIL#4  
 Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m Client ID: MOIL#4  
 Instrument: fid3b.i Injection: 13-AUG-2010 01:01  
 Operator: JR Dilution Factor: 1  
 Report Date: 08/13/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	40733	1
C8	----				DIESEL (C12-C24)	702438	33
C10	2.854	0.000	887	933	M.OIL (C24-C38)	5447546	451
C12	3.466	0.001	659	357	AK-102 (C10-C25)	835481	35
C14	3.928	0.004	429	125	AK-103 (C25-C36)	4804724	538
C16	4.315	-0.003	295	143	OR.DIES (C10-C28)	2263210	107
C18	4.672	-0.001	687	175	OR.MOIL (C28-C40)	4242111	376
C20	4.994	-0.001	4355	1030			
C22	5.291	-0.001	15040	5751	STODDARD (C8-C12)	40733	1
C24	5.599	-0.001	29273	16573			
C25	5.762	0.001	34655	13485			
C26	5.921	0.001	38639	19666			
C28	6.242	0.001	47518	13067			
C32	6.846	-0.004	57264	32126			
C34	7.142	0.002	54693	26054	CREOSOT (C8-C22)	308634	48
Filter Peak	----						
C36	7.409	0.000	45362	25734	BUNKERC (C10-C38)	6178561	715
o-terph	4.761	0.001	2059	2631	JET-A (C10-C18)	64414	4
Triacon Surr	6.561	0.003	999095	962462	IT.MOIL (C24-C40)	6736768	314

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
 AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2631	0.1	0.3
Triacontane	962462	57.5	127.9

*MW 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100812.b/0812rsw.b/0812b039.d  
Date: 13-AUG-2010 01:01

Client ID: M01L#4

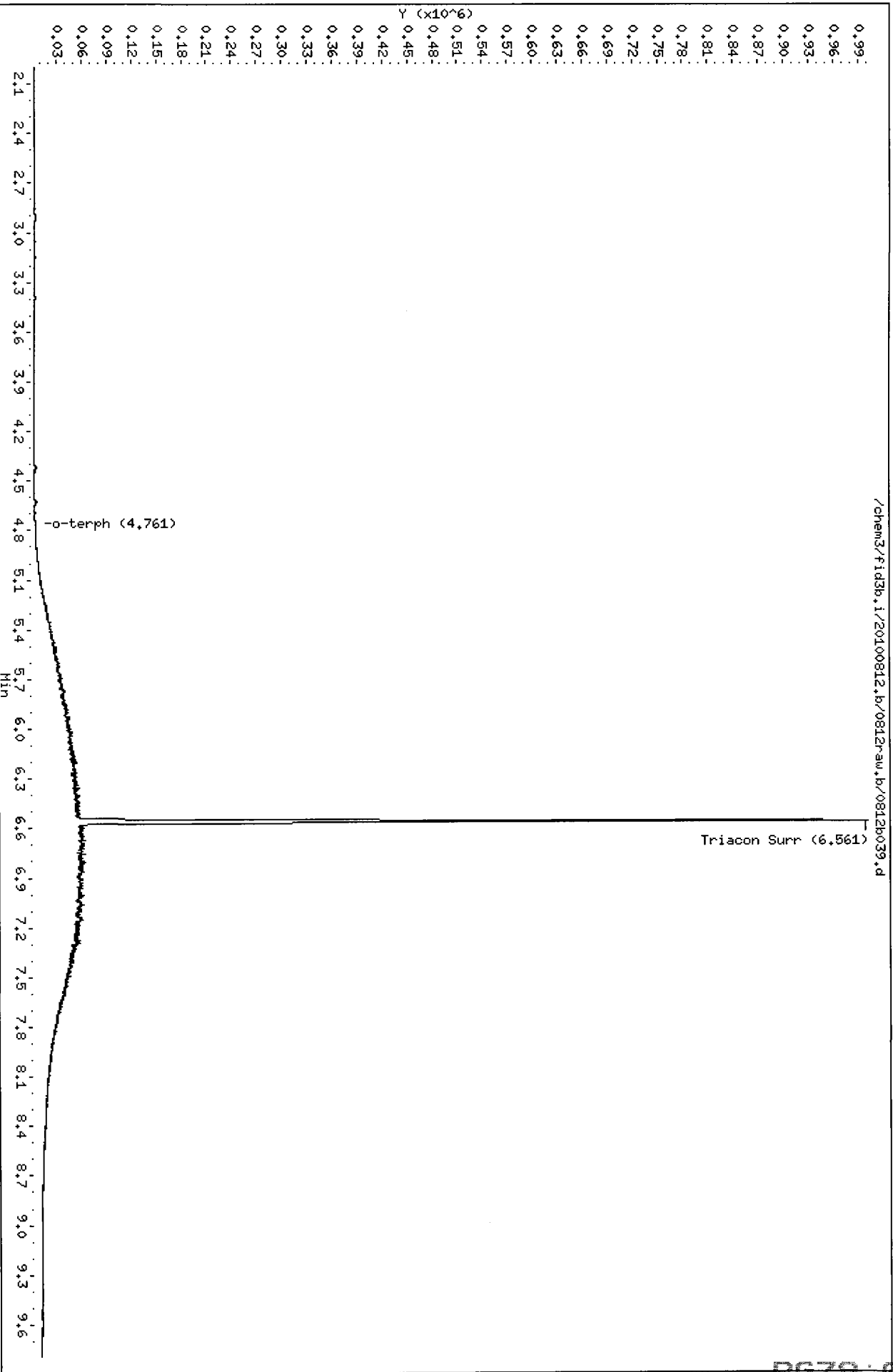
Sample Info: M01L#4

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b040.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79K  
Client ID: PSB15-0-0.5-073010  
Injection: 13-AUG-2010 01:20  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	331057	12
C8	----				DIESEL (C12-C24)	3754874	175
C10	2.854	0.000	8300	8109	M.OIL (C24-C38)	12075492	1000
C12	3.472	0.007	4911	5340	AK-102 (C10-C25)	4244547	176
C14	3.928	0.005	6197	8399	AK-103 (C25-C36)	11028212	1235
C16	4.320	0.002	8182	7293	OR.DIES (C10-C28)	8100957	384
C18	4.673	0.001	24712	23978	OR.MOIL (C28-C40)	8468738	751
C20	4.996	0.001	45725	25365			
C22	5.292	0.001	82210	74601	STODDARD (C8-C12)	331057	12
C24	5.601	0.002	109093	147775			
C25	5.762	0.001	130804	168887			
C26	5.920	-0.001	119874	58397			
C28	6.242	0.001	168627	68539			
C32	6.853	0.003	124373	123258			
C34	7.136	-0.004	88931	56788	CREOSOT (C8-C22)	2632185	412
Filter Peak	----						
C36	7.410	0.001	67079	34587	BUNKERC (C10-C38)	16030608	1855
o-terph	4.761	0.001	1275900	821817	JET-A (C10-C18)	868255	55
Triacon Surr	6.561	0.003	876489	980413	IT.MOIL (C24-C40)	13594992	633

Range Times: NW Diesel (3.515 - 5.649) NW Gas (0.974 - 3.515) NW M.Oil (5.649 - 7.717)  
AK102 (2.804 - 5.711) AK103 (5.711 - 7.459) Jet A (2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	821817	41.2	91.6
Triacantane	980413	58.6	130.3

*Mrs 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Data File: /chem3/fid3b.i/20100812.b/0812b040.d

Date: 13-AUG-2010 01:20

Client ID: PSB15-0-0.5-073010

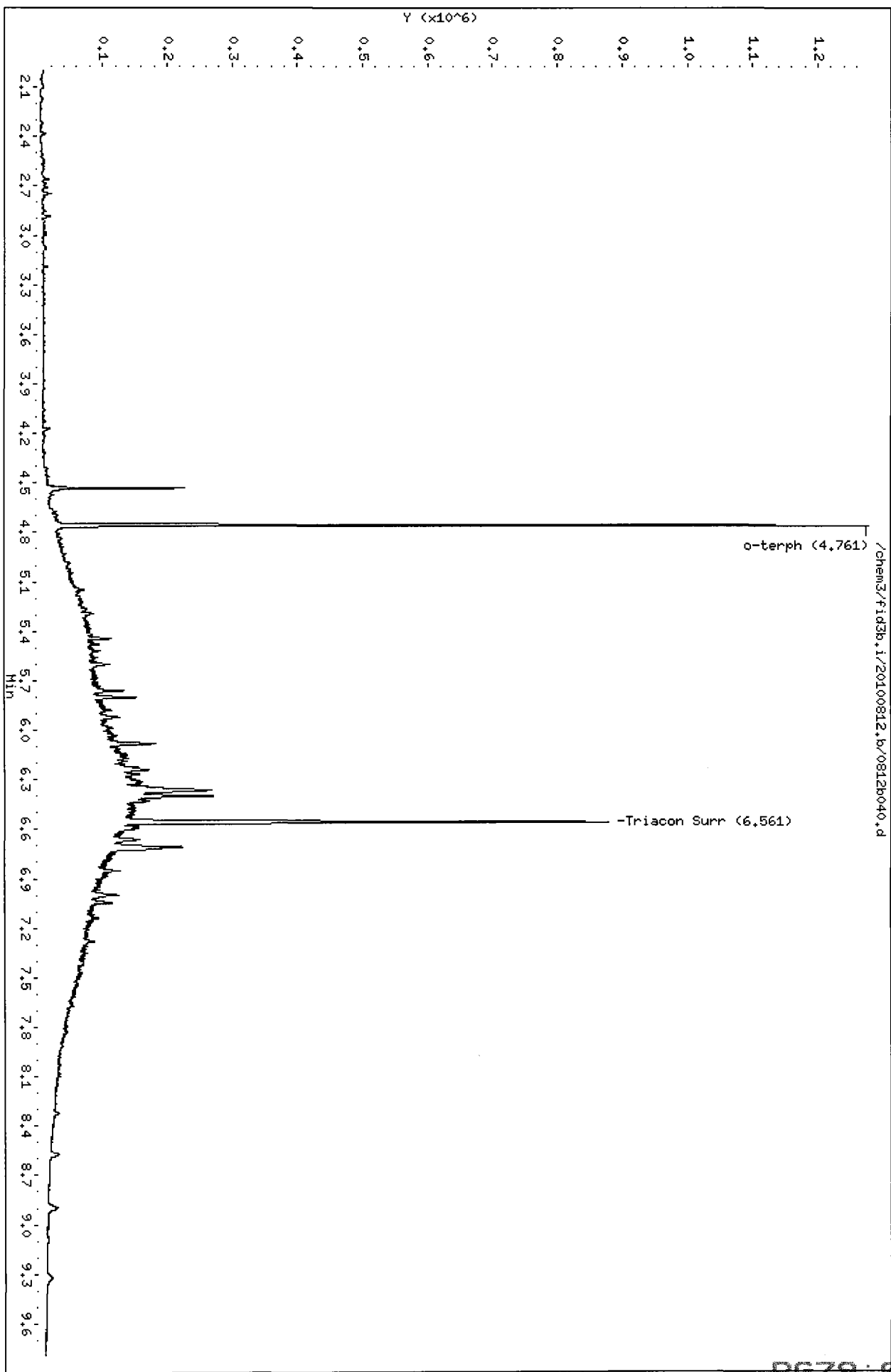
Sample Info: RG79K

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b041.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79L  
Client ID: PSB15-1.5-2-073010  
Injection: 13-AUG-2010 01:39  
Dilution Factor: 1

FID:3B RESULTS

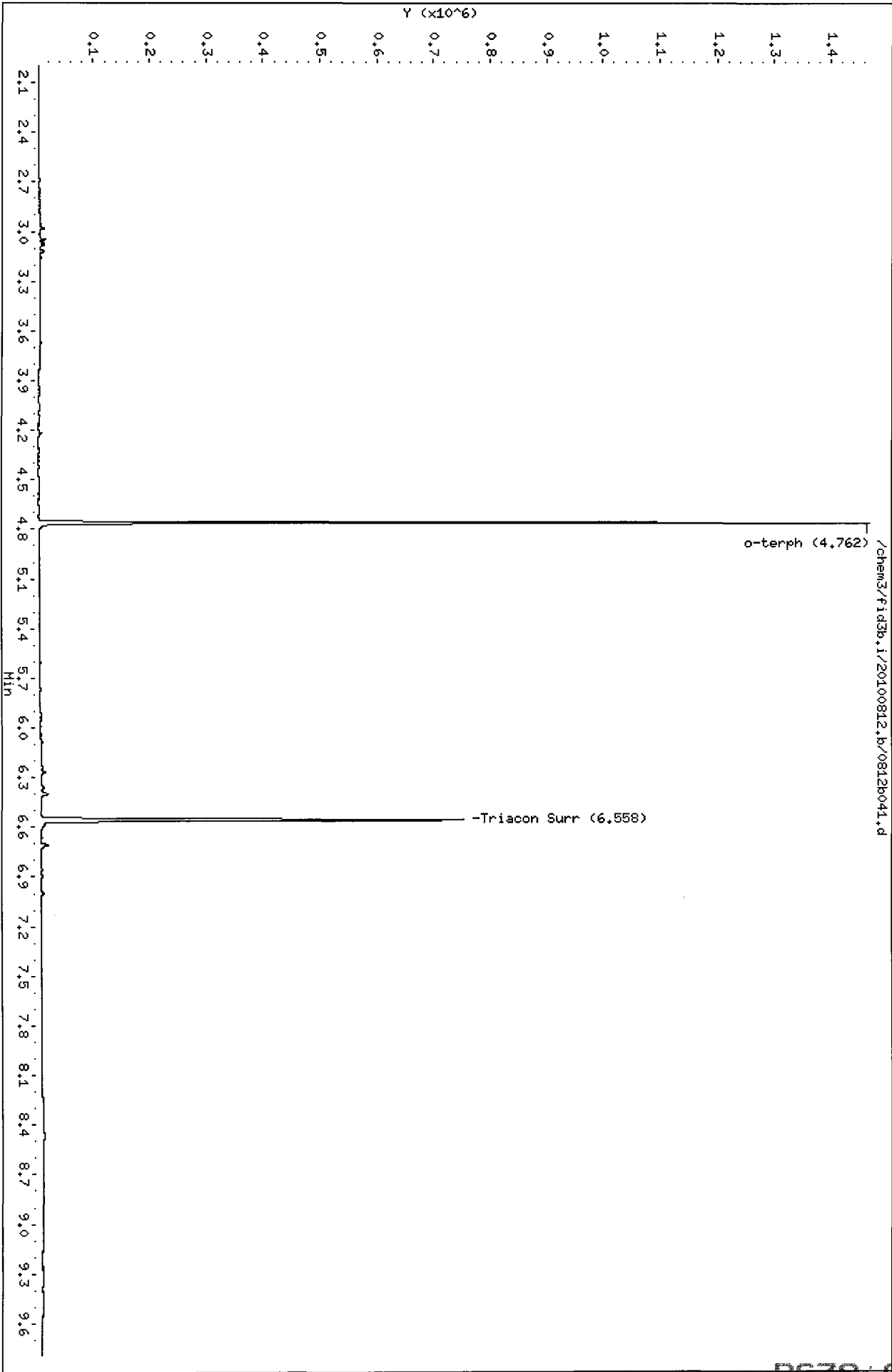
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	128338	5
C8	----				DIESEL (C12-C24)	215133	10
C10	2.855	0.002	2232	2419	M.OIL (C24-C38)	573880	48
C12	3.460	-0.005	1460	915	AK-102 (C10-C25)	334018	14
C14	3.922	-0.001	1136	513	AK-103 (C25-C36)	493543	55
C16	4.318	0.000	1597	744	OR.DIES (C10-C28)	469415	22
C18	4.674	0.002	1902	1089	OR.MOIL (C28-C40)	493010	44
C20	4.999	0.004	2124	1075			
C22	5.296	0.005	2823	1084	STODDARD (C8-C12)	128338	5
C24	5.594	-0.005	3117	1060			
C25	5.758	-0.003	3754	1064			
C26	5.920	0.000	3959	856			
C28	6.241	0.000	6953	9036			
C32	6.845	-0.006	5415	2853			
C34	7.138	-0.002	5480	3562	CREOSOT (C8-C22)	296636	46
Filter Peak	----						
C36	7.410	0.001	4723	2089	BUNKERC (C10-C38)	896898	104
o-terph	4.762	0.002	1465880	784265	JET-A (C10-C18)	213379	13
Triacon Surr	6.558	0.000	749558	656683	IT.MOIL (C24-C40)	1296090	60

Range Times: NW Diesel (3.515 - 5.649) NW Gas (0.974 - 3.515) NW M.Oil (5.649 - 7.717)  
AK102 (2.804 - 5.711) AK103 (5.711 - 7.459) Jet A (2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	784265	39.3	87.4
Triacotane	656683	39.3	87.2

*M 08/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b042.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79M  
Client ID: PSB15-2-4-073010  
Injection: 13-AUG-2010 01:58  
Dilution Factor: 1

FID:3B RESULTS

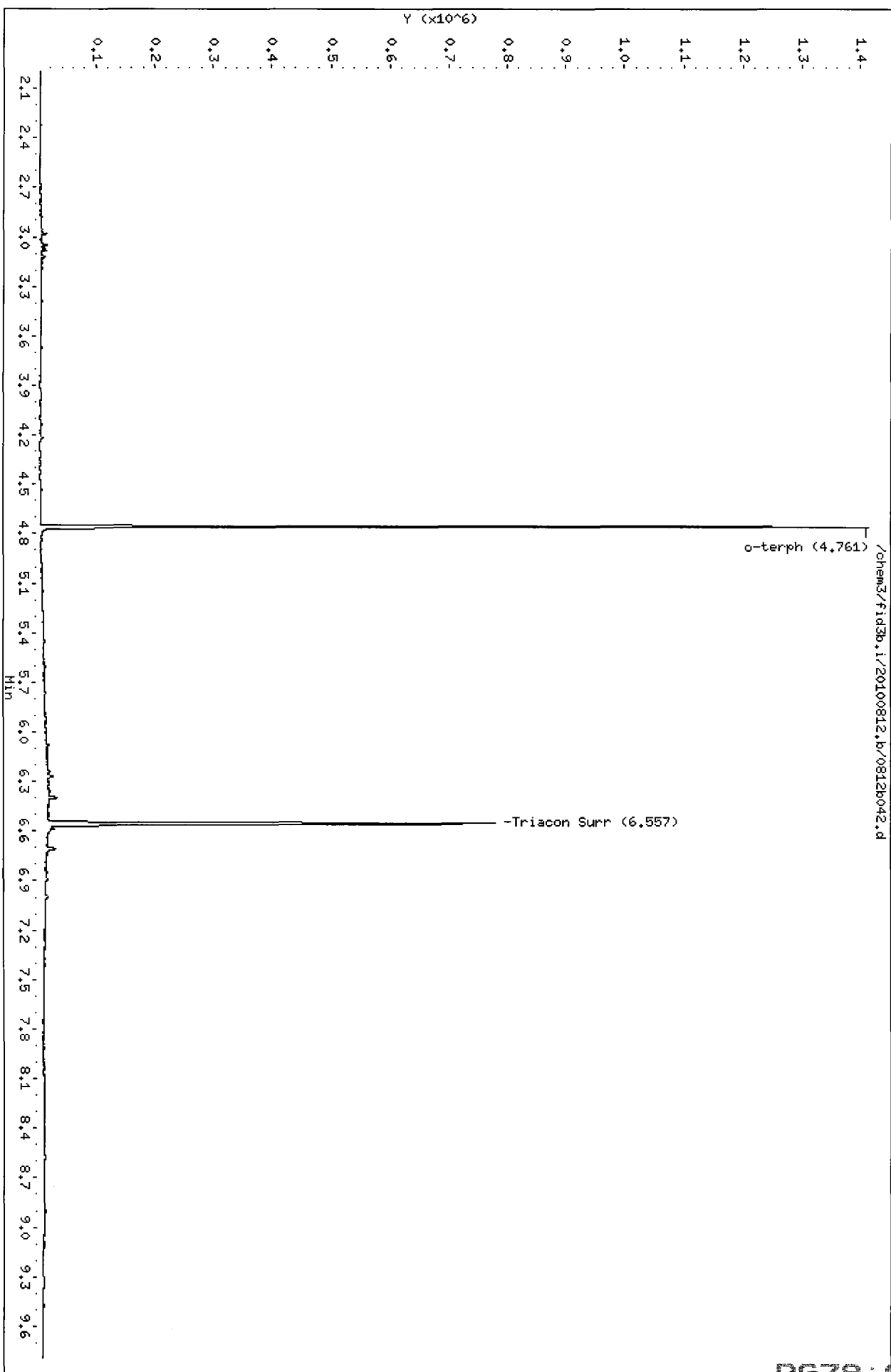
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	136206	5
C8	----				DIESEL (C12-C24)	409367	19
C10	2.854	0.001	2582	2547	M.OIL (C24-C38)	1330837	110
C12	3.467	0.002	1403	250	AK-102 (C10-C25)	551092	23
C14	3.918	-0.005	1240	387	AK-103 (C25-C36)	1192274	133
C16	4.314	-0.004	1422	307	OR.DIES (C10-C28)	952104	45
C18	4.673	0.001	2733	1563	OR.MOIL (C28-C40)	987274	88
C20	4.993	-0.001	4373	2517			
C22	5.290	-0.002	7085	1771	STODDARD (C8-C12)	136206	5
C24	5.603	0.004	11112	10164			
C25	5.759	-0.002	11498	7957			
C26	5.920	0.000	11800	3018			
C28	6.239	-0.002	19032	13239			
C32	6.850	0.000	13602	7784			
C34	7.141	0.001	10370	7611	CREOSOT (C8-C22)	401041	63
Filter Peak	----						
C36	7.405	-0.004	8426	5202	BUNKERC (C10-C38)	1850799	214
o-terph	4.761	0.001	1413315	800641	JET-A (C10-C18)	231674	15
Triacon Surr	6.557	-0.001	777970	692344	IT.MOIL (C24-C40)	2111759	98

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	800641	40.2	89.3
Triacontane	692344	41.4	92.0

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

*ms 8/13/10*



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b043.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79N  
Client ID: PSB15-4-6-073010  
Injection: 13-AUG-2010 02:17  
Dilution Factor: 1

FID:3B RESULTS

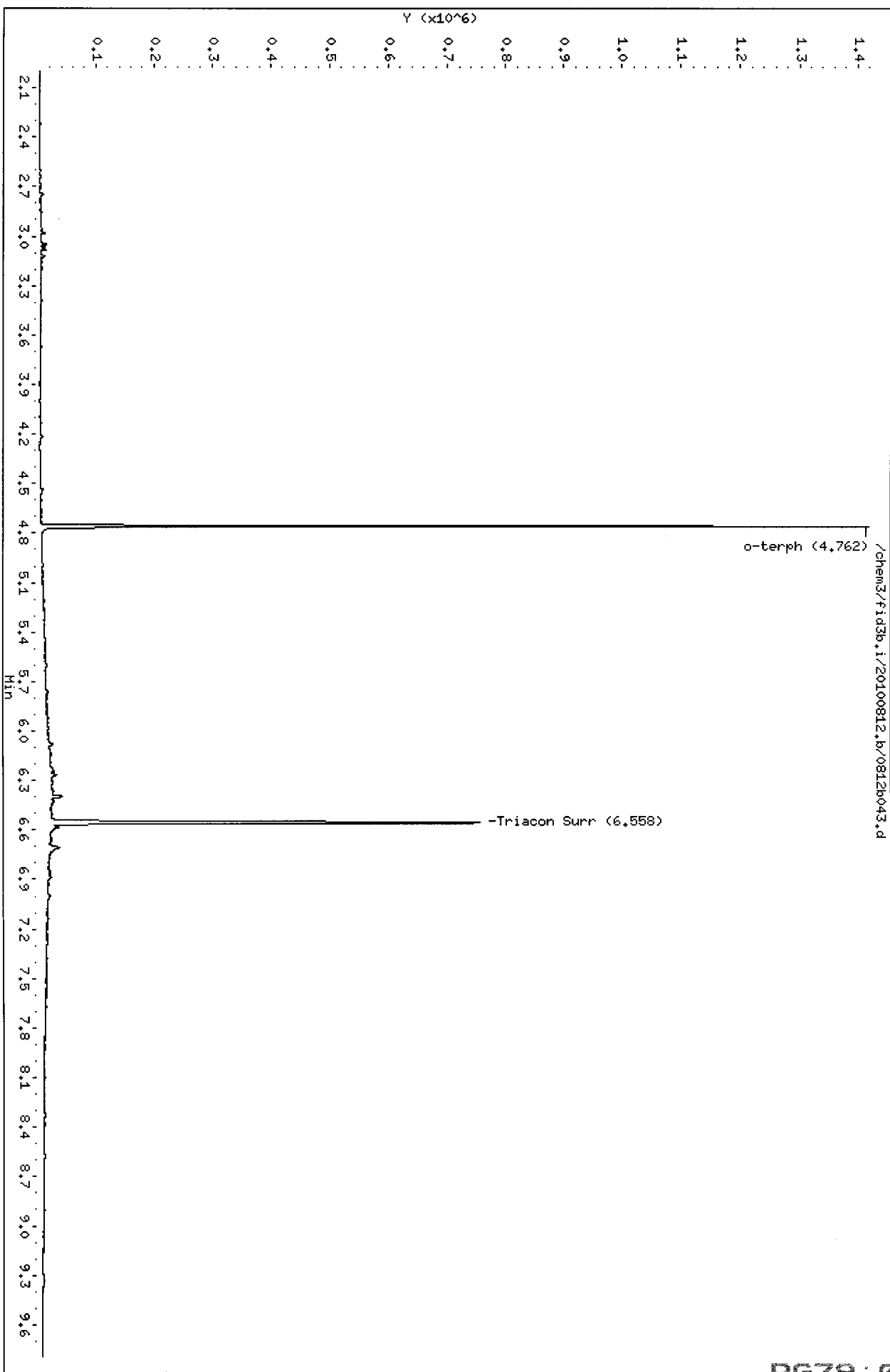
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	145649	5
C8	----				DIESEL (C12-C24)	552121	26
C10	2.854	0.000	3797	3482	M.OIL (C24-C38)	1914304	158
C12	3.475	0.010	1656	1526	AK-102 (C10-C25)	709755	29
C14	3.923	0.000	1338	495	AK-103 (C25-C36)	1702997	191
C16	4.324	0.006	1910	1933	OR.DIES (C10-C28)	1266943	60
C18	4.673	0.001	4250	3891	OR.MOIL (C28-C40)	1435742	127
C20	4.995	0.000	6348	3670			
C22	5.288	-0.003	9175	1817	STODDARD (C8-C12)	145649	5
C24	5.599	0.000	14095	8869			
C25	5.761	0.000	16358	20723			
C26	5.916	-0.004	16123	12600			
C28	6.239	-0.002	26150	10938			
C32	6.850	0.000	18938	7919			
C34	7.137	-0.003	16027	9504	CREOSOT (C8-C22)	501247	78
Filter Peak	----						
C36	7.409	-0.001	13012	3311	BUNKERC (C10-C38)	2583439	299
o-terph	4.762	0.002	1416900	808638	JET-A (C10-C18)	260635	16
Triacon Surr	6.558	0.000	753380	696009	IT.MOIL (C24-C40)	2729560	127

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	808638	40.6	90.1
Triacantane	696009	41.6	92.5

*Mos 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812b046.d  
Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m  
Instrument: fid3b.i  
Operator: JR  
Report Date: 08/13/2010  
Macro: FID:3B073010

ARI ID: RG79LCSS1  
Client ID: RG79LCSS1  
Injection: 13-AUG-2010 03:14  
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	3912147	143
C8	----				DIESEL (C12-C24)	27950957	1306
C10	2.855	0.001	144175	98571	M.OIL (C24-C38)	389184	32
C12	3.464	0.000	381045	272944	AK-102 (C10-C25)	31264488	1297
C14	3.925	0.002	707202	607736	AK-103 (C25-C36)	297471	33
C16	4.322	0.004	1310213	1093943	OR.DIES (C10-C28)	31510196	1494
C18	4.677	0.005	1170300	892260	OR.MOIL (C28-C40)	86210	8
C20	4.997	0.003	767673	641189			
C22	5.295	0.003	330181	290429	STODDARD (C8-C12)	3912147	141
C24	5.602	0.003	95635	94654			
C25	5.762	0.001	42408	54345			
C26	5.924	0.004	16763	20646			
C28	6.241	0.000	3136	4723			
C32	6.843	-0.007	645	179			
C34	7.141	0.001	858	955	CREOSOT (C8-C22)	30858401	4825
Filter Peak	----						
C36	7.404	-0.005	736	265	BUNKERC (C10-C38)	31575303	3653
o-terph	4.763	0.003	1906005	1503694	JET-A (C10-C18)	23203461	1464
Triacon Surr	6.559	0.001	829247	762926	IT.MOIL (C24-C40)	1173213	55

Range Times: NW Diesel (3.515 - 5.649) NW Gas (0.974 - 3.515) NW M.Oil (5.649 - 7.717)  
AK102 (2.804 - 5.711) AK103 (5.711 - 7.459) Jet A (2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1503694	75.4	167.6
Triacontane	762926	45.6	101.4

*Mrs F/13710*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Date : 13-AUG-2010 03:14

Client ID: RG79LCSS1

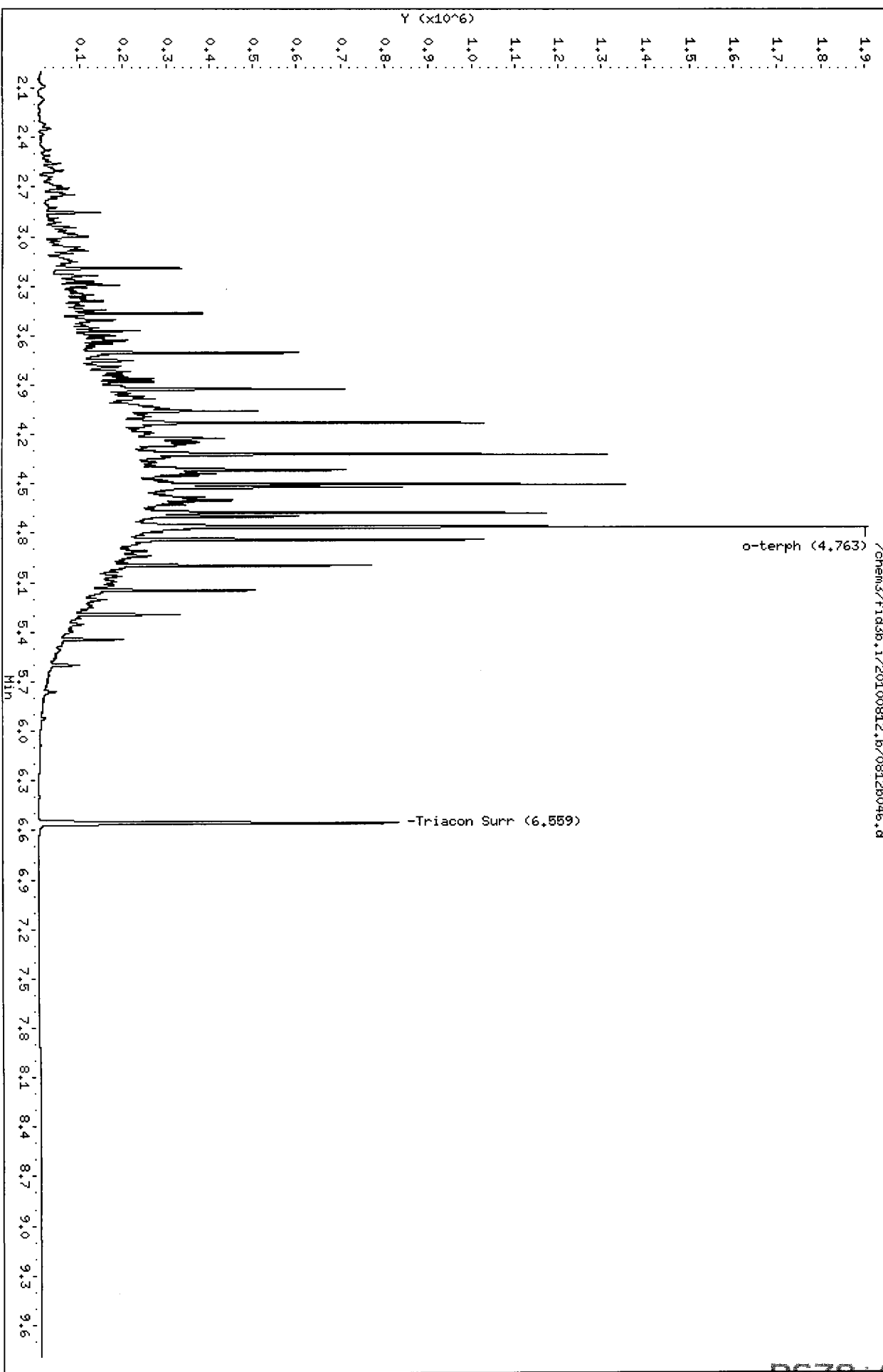
Sample Info: RG79LCSS1

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812raw.b/0812b048.d ARI ID: DIESEL#5  
 Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m Client ID: DIESEL#5  
 Instrument: fid3b.i Injection: 13-AUG-2010 03:52  
 Operator: JR Dilution Factor: 1  
 Report Date: 08/13/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	804102	29
C8	----				DIESEL (C12-C24)	5230766	244
C10	2.854	0.000	28401	19569	M.OIL (C24-C38)	85760	7
C12	3.465	0.000	67040	49882	AK-102 (C10-C25)	5891224	244
C14	3.923	0.000	140171	117082	AK-103 (C25-C36)	59550	7
C16	4.319	0.001	238284	191822	OR.DIES (C10-C28)	5932615	281
C18	4.673	0.000	215638	173727	OR.MOIL (C28-C40)	48494	4
C20	4.994	0.000	123487	112595			
C22	5.293	0.002	55758	52356	STODDARD (C8-C12)	804102	29
C24	5.605	0.006	11875	19520			
C25	5.761	-0.001	3248	1713			
C26	5.919	-0.002	1310	778			
C28	6.241	0.000	244	87			
C32	6.849	-0.002	130	40			
C34	7.146	0.006	231	58	CREOSOT (C8-C22)	5844446	914
Filter Peak	----						
C36	7.407	-0.002	522	409	BUNKERC (C10-C38)	5962454	690
o-terph	4.763	0.003	1791766	1092959	JET-A (C10-C18)	4431615	280
Triacon Surr	6.559	0.001	201	47	IT.MOIL (C24-C40)	104463	5

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
 AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1092959	54.8	121.8
Triacontane	47	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

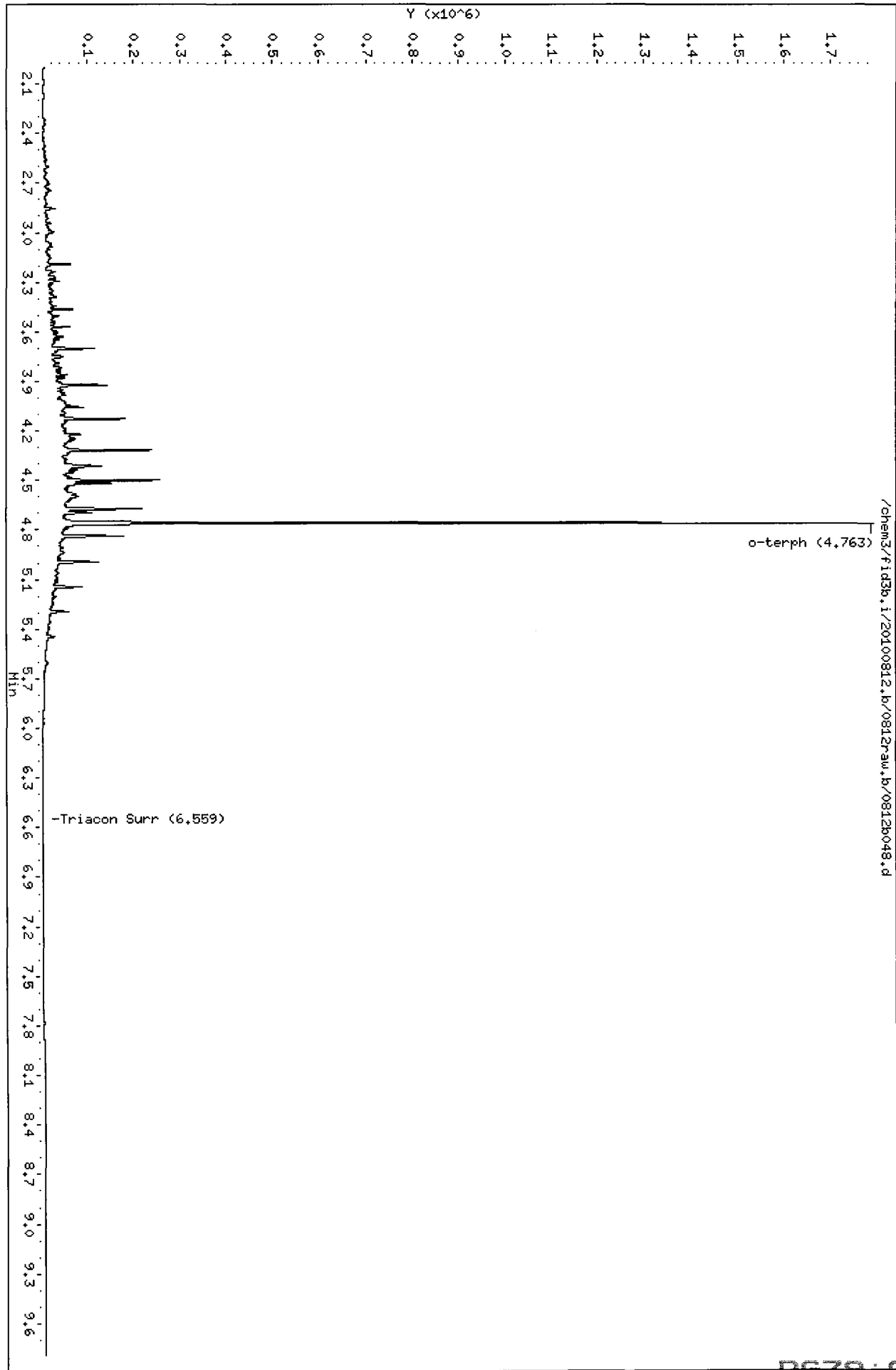
*M 8/13/10*

Data File: /chem3/fid3b.i/20100812.b/0812rsw.b/0812b048.d  
Date: 13-AUG-2010 03:52

Client ID: DIESEL#5  
Sample Info: DIESEL#5

Column phase: RTX-1

Instrument: fid3b.i  
Operator: JR  
Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812raw.b/0812b049.d ARI ID: MOIL#5  
 Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m Client ID: MOIL#5  
 Instrument: fid3b.i Injection: 13-AUG-2010 04:11  
 Operator: JR Dilution Factor: 1  
 Report Date: 08/13/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	45047	2
C8	----				DIESEL (C12-C24)	708214	33
C10	2.854	0.001	995	1211	M.OIL (C24-C38)	5450668	451
C12	3.467	0.002	694	535	AK-102 (C10-C25)	853891	35
C14	3.918	-0.005	464	423	AK-103 (C25-C36)	4802951	538
C16	4.320	0.002	284	132	OR.DIES (C10-C28)	2239148	106
C18	4.674	0.002	685	204	OR.MOIL (C28-C40)	4252697	377
C20	4.997	0.002	4447	1466			
C22	5.287	-0.004	15173	7975	STODDARD (C8-C12)	45047	2
C24	5.598	-0.001	29317	12433			
C25	5.762	0.001	33634	4669			
C26	5.922	0.002	39252	6951			
C28	6.244	0.003	48137	6621			
C32	6.851	0.001	59029	27032			
C34	7.137	-0.002	54469	29441	CREOSOT (C8-C22)	317883	50
Filter Peak	----						
C36	7.413	0.004	45178	27464	BUNKERC (C10-C38)	6190295	716
o-terph	4.761	0.002	1917	2364	JET-A (C10-C18)	67297	4
Triacon Surr	6.560	0.002	959081	968930	IT.MOIL (C24-C40)	6721148	313

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
 AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2364	0.1	0.3
Triacantane	968930	57.9	128.7

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

*MS/13/10*

Data File: /chem3/fid3b.i/20100812.b/0812raw.b/0812b049.d  
Date: 13-AUG-2010 04:11

Client ID: MOIL#5

Sample Info: MOIL#5

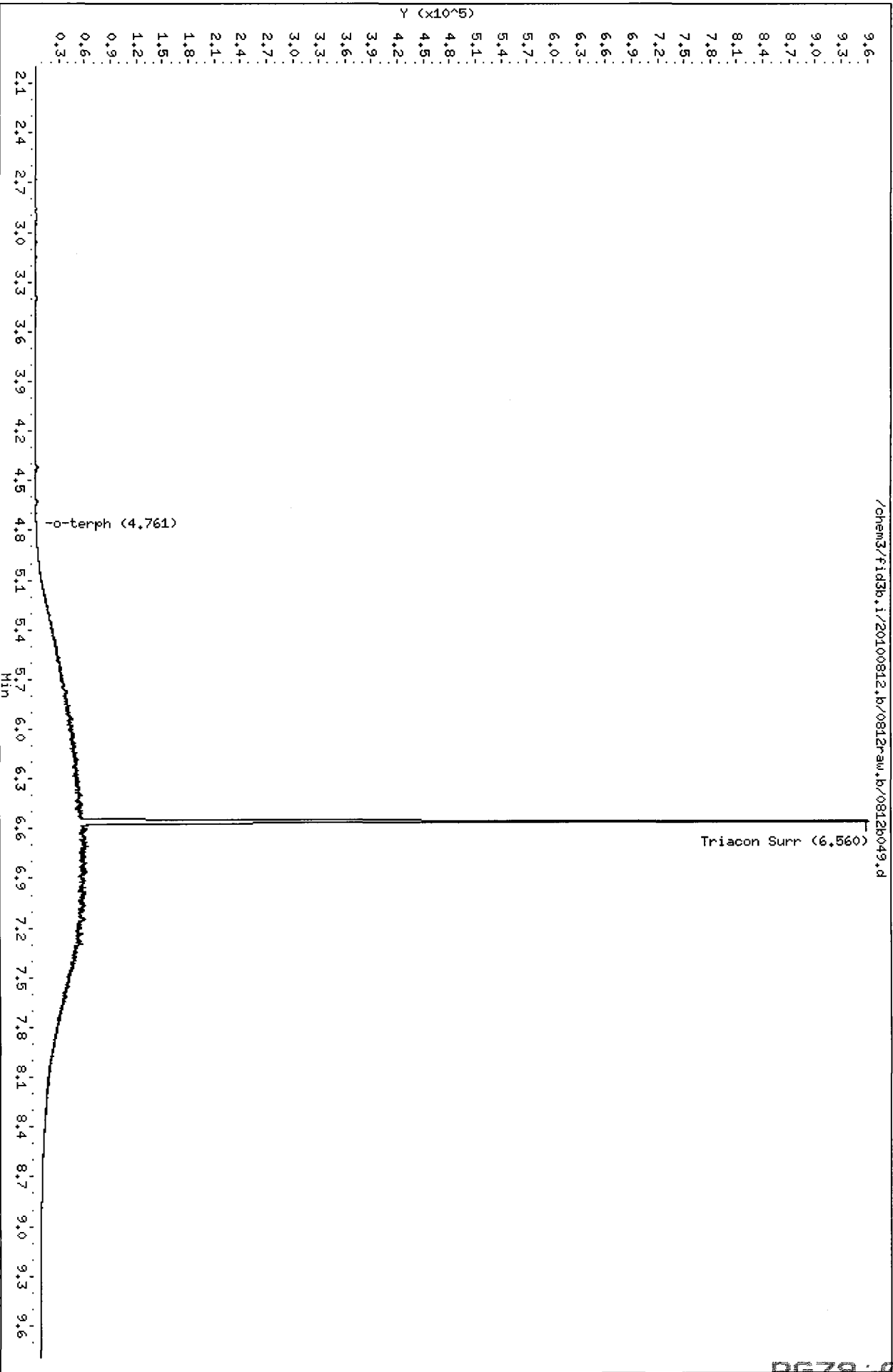
Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00

/chem3/fid3b.i/20100812.b/0812raw.b/0812b049.d



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812raw.b/0812b052.d ARI ID: RG790  
 Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m Client ID: PSB15-13-15-073010  
 Instrument: fid3b.i Injection: 13-AUG-2010 05:08  
 Operator: JR Dilution Factor: 1  
 Report Date: 08/13/2010  
 Macro: FID:3B073010

FID:3B RESULTS

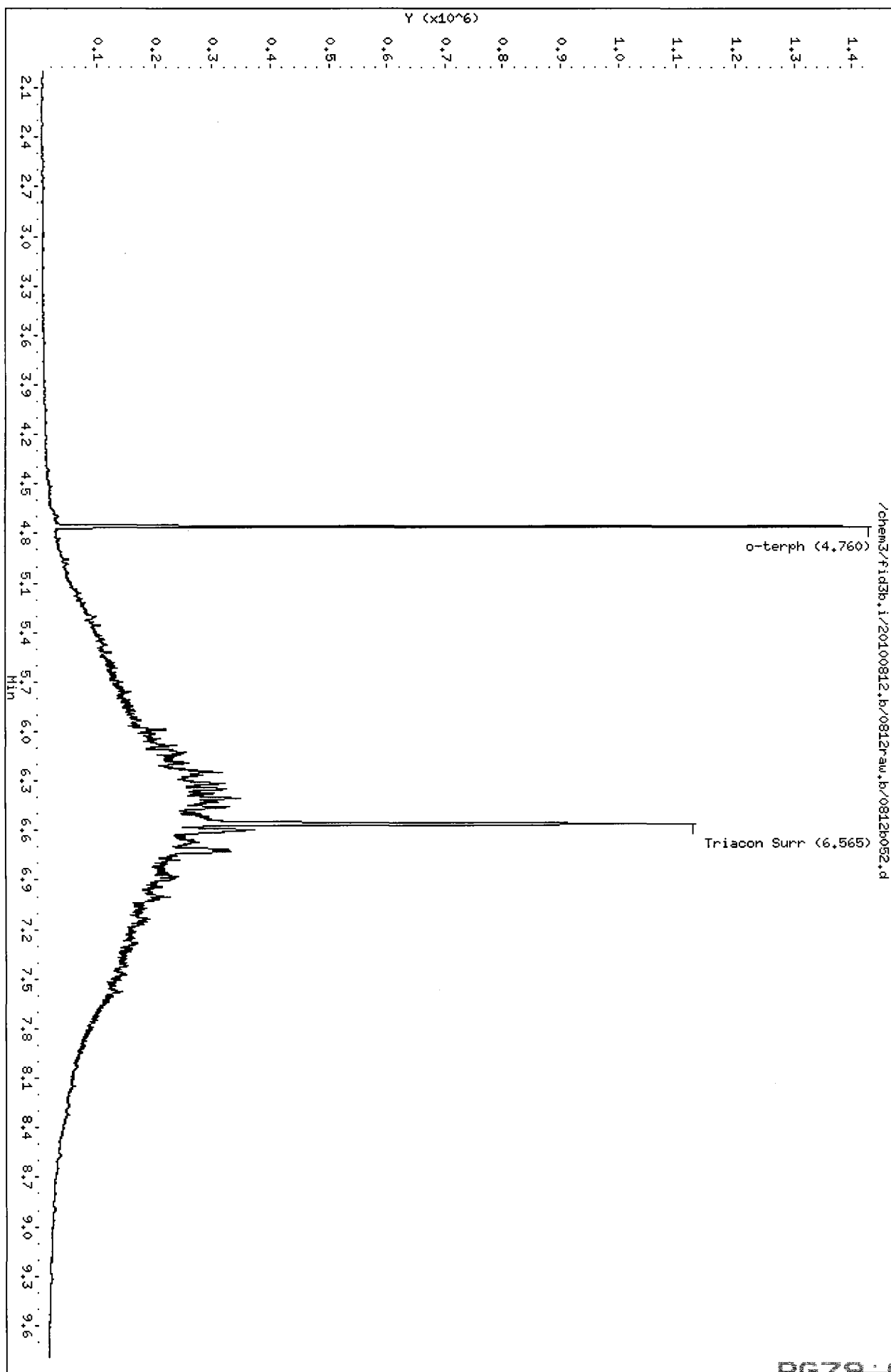
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	172220	6
C8	----				DIESEL (C12-C24)	4323998	202
C10	2.855	0.001	2647	2783	M.OIL (C24-C38)	22772359	1885
C12	3.467	0.002	4391	5021	AK-102 (C10-C25)	4871651	202
C14	3.928	0.005	7663	8746	AK-103 (C25-C36)	20479595	2293
C16	4.318	0.000	10421	8687	OR.DIES (C10-C28)	11195518	531
C18	4.674	0.002	24461	9043	OR.MOIL (C28-C40)	17174828	1523
C20	4.994	-0.001	43434	10294			
C22	5.289	-0.002	81041	19274	STODDARD (C8-C12)	172220	6
C24	5.603	0.004	127321	72565			
C25	5.763	0.002	155748	120375			
C26	5.924	0.004	165594	78308			
C28	6.239	-0.002	263761	36545			
C32	6.851	0.001	215802	54798			
C34	7.145	0.006	180626	35232	CREOSOT (C8-C22)	2533608	396
Filter Peak	----						
C36	7.410	0.000	139829	24788	BUNKERC (C10-C38)	27209300	3148
o-terph	4.760	0.000	1432548	876216	JET-A (C10-C18)	736947	47
Triacon Surr	6.565	0.007	1128597	1325203	IT.MOIL (C24-C40)	25258608	1175

Range Times: NW Diesel (3.515 - 5.649) NW Gas (0.974 - 3.515) NW M.Oil (5.649 - 7.717)  
 AK102 (2.804 - 5.711) AK103 (5.711 - 7.459) Jet A (2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	876216	44.0	97.7
Triacontane	1325203	79.2	176.1

*M 8/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812raw.b/0812b053.d ARI ID: DIESEL#6  
 Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m Client ID: DIESEL#6  
 Instrument: fid3b.i Injection: 13-AUG-2010 05:27  
 Operator: JR Dilution Factor: 1  
 Report Date: 08/13/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	801010	29
C8	----				DIESEL (C12-C24)	5139684	240
C10	2.854	0.000	27668	19472	M.OIL (C24-C38)	203862	17
C12	3.464	-0.001	69084	50527	AK-102 (C10-C25)	5799686	241
C14	3.924	0.000	134027	113685	AK-103 (C25-C36)	140309	16
C16	4.318	0.000	247341	186492	OR.DIES (C10-C28)	5852805	278
C18	4.673	0.001	220690	164137	OR.MOIL (C28-C40)	213217	19
C20	4.996	0.001	122794	96672			
C22	5.292	0.001	51905	51522	STODDARD (C8-C12)	801010	29
C24	5.606	0.007	12808	18440			
C25	5.768	0.006	4980	6983			
C26	5.920	-0.001	1626	415			
C28	6.245	0.003	714	225			
C32	6.845	-0.006	1073	355			
C34	7.143	0.003	1778	2022	CREOSOT (C8-C22)	5758560	900
Filter Peak	----						
C36	7.407	-0.002	2163	472	BUNKERC (C10-C38)	5989148	693
o-terph	4.763	0.003	1679593	1099480	JET-A (C10-C18)	4420639	279
Triacon Surr	6.548	-0.010	617	277	IT.MOIL (C24-C40)	281014	13

Range Times: NW Diesel (3.515 - 5.649) NW Gas (0.974 - 3.515) NW M.Oil (5.649 - 7.717)  
 AK102 (2.804 - 5.711) AK103 (5.711 - 7.459) Jet A (2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1099480	55.2	122.6
Triacontane	277	0.0	0.0

*Aug/13/10*

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009



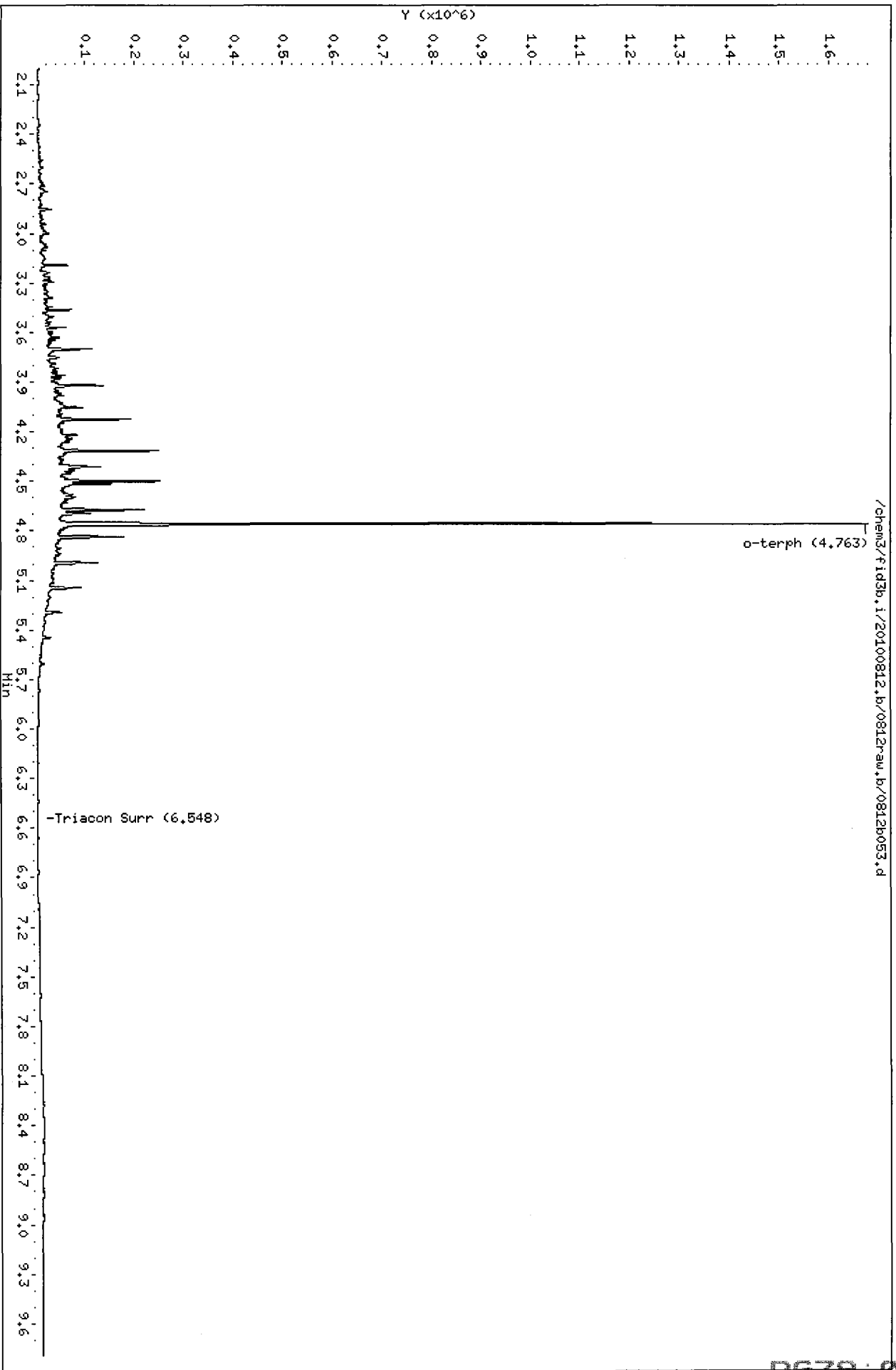
Data File: /chem3/fid3b.i/20100812.b/0812raw.b/0812b053.d  
Date: 13-AUG-2010 05:27

Client ID: DIESEL#6  
Sample Info: DIESEL#6

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR  
Column diameter: 2.00



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100812.b/0812raw.b/0812b054.d ARI ID: MOIL#6  
 Method: /chem3/fid3b.i/20100812.b/ftphfid3b.m Client ID: MOIL#6  
 Instrument: fid3b.i Injection: 13-AUG-2010 05:46  
 Operator: JR Dilution Factor: 1  
 Report Date: 08/13/2010  
 Macro: FID:3B073010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	44711	2
C8	----				DIESEL (C12-C24)	718054	34
C10	2.855	0.002	994	1133	M.OIL (C24-C38)	5528136	458
C12	3.461	-0.003	699	484	AK-102 (C10-C25)	861530	36
C14	3.922	-0.001	468	189	AK-103 (C25-C36)	4877079	546
C16	4.321	0.003	339	172	OR.DIES (C10-C28)	2260561	107
C18	4.664	-0.008	725	405	OR.MOIL (C28-C40)	4354816	386
C20	4.995	0.000	4521	707			
C22	5.294	0.003	15529	4803	STODDARD (C8-C12)	44711	2
C24	5.599	0.000	29837	7557			
C25	5.761	0.000	35901	16842			
C26	5.922	0.002	38558	4598			
C28	6.245	0.004	50652	19270			
C32	6.850	0.000	57487	10197			
C34	7.140	0.000	58447	18085	CREOSOT (C8-C22)	319782	50
Filter Peak	----						
C36	7.414	0.005	42846	7560	BUNKERC (C10-C38)	6277127	726
o-terph	4.761	0.001	1887	2033	JET-A (C10-C18)	67799	4
Triacon Surr	6.558	0.001	935103	956720	IT.MOIL (C24-C40)	6823106	318

Range Times: NW Diesel(3.515 - 5.649) NW Gas(0.974 - 3.515) NW M.Oil(5.649 - 7.717)  
 AK102(2.804 - 5.711) AK103(5.711 - 7.459) Jet A(2.804 - 4.722)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2033	0.1	0.2
Triacantane	956720	57.2	127.1

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

*M 8/13/10*

Data File: /chem3/fid3b.i/20100812.b/0812raw.b/0812b054.d  
Date: 13-AUG-2010 05:46

Client ID: M01L#6

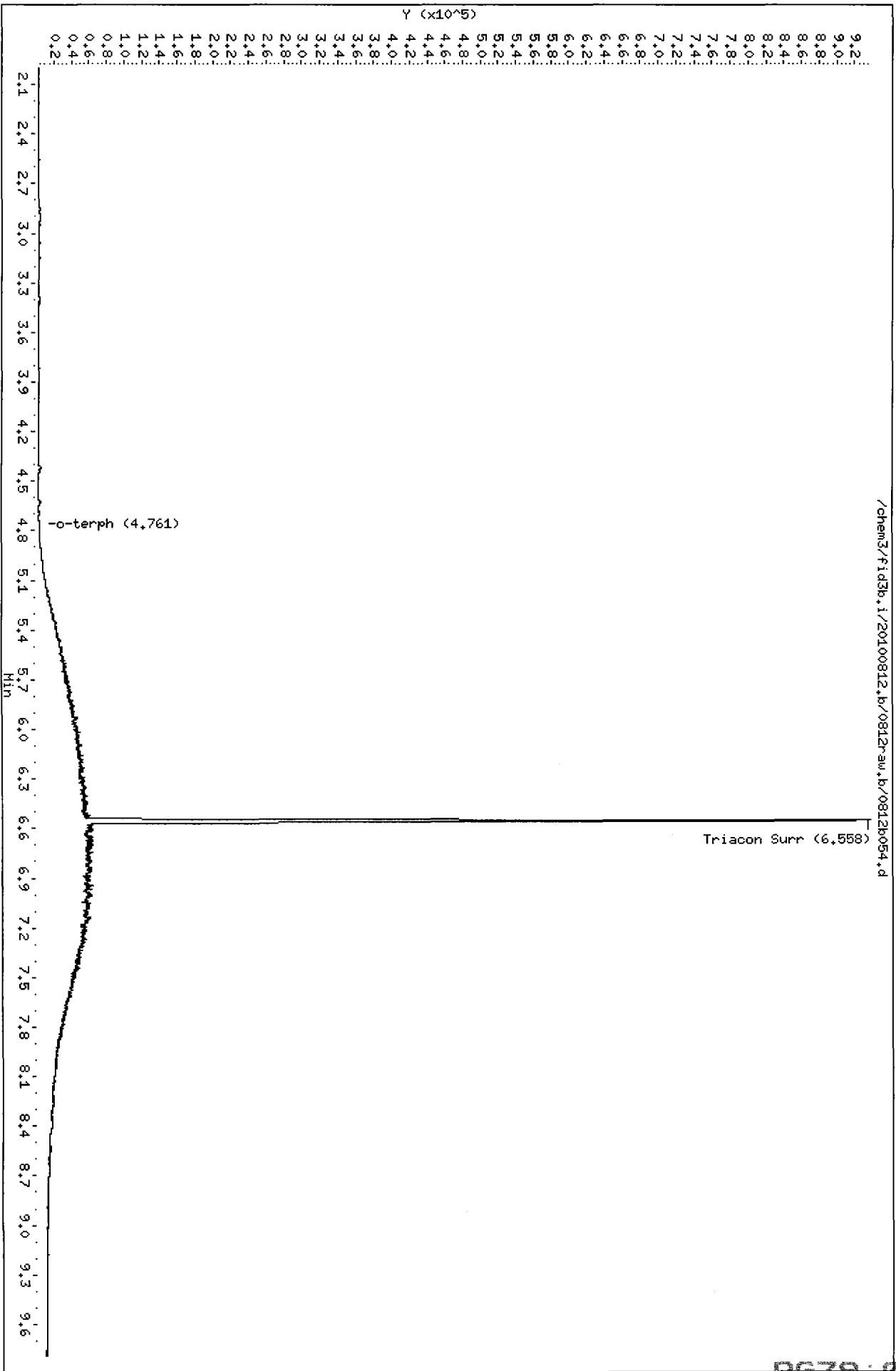
Sample Info: M01L#6

Column phase: RTX-1

Instrument: fid3b.i

Operator: JR

Column diameter: 2.00



**TPHG/BETX Raw Data  
Preparation Log**

**ARI Job ID: RG79**



# 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  
*MH*

1<sup>st</sup> Extraction: *8/5/00*

2<sup>nd</sup> Extraction: \_\_\_\_\_

Lab ID	Vial No.	Preservative		Method 5035 Sample Weight					Comments
		NaHSO <sub>3</sub>	CH <sub>3</sub> OH	Vial Weight	Tare (from vial)	Sample Weight	Extract Volume	MeOH Spilt Volume	
1	<i>RG79 A</i>		<i>X</i>	38.190	28.190	10.00	<i>S</i>	900	
2	<i>B</i>		<i>X</i>	36.93	28.096	8.834			
3	<i>C</i>		<i>X</i>	38.24	28.116	10.124			
4	<i>D</i>		<i>X</i>	38.08	28.179	9.901			
5	<i>E</i>		<i>X</i>	36.93	28.116	8.814			<i>ms/msd</i>
6	<i>F</i>		<i>X</i>	38.40	28.253	10.147			
7	<i>H</i>		<i>X</i>	37.20	28.167	11.033			
8	<i>K</i>		<i>X</i>	37.29	28.294	8.996			
9	<i>L</i>		<i>X</i>	36.80	28.200	8.58			
10	<del><i>K</i></del> <i>M</i>		<i>X</i>	37.24	27.983	9.257			
11	<i>N</i>		<i>X</i>	36.89	27.999	8.891			
12	<i>O</i>		<i>X</i>	38.26	28.043	10.217			
13	<i>P</i>		<i>X</i>	39.46	28.072	11.388			
14	<i>Q</i>		<i>X</i>	38.66	28.190	10.47			
15									
16									
17									
18									
19									
20									
Balance ID:									

Surrogate: \_\_\_\_\_

Spike: \_\_\_\_\_

Solution ID \_\_\_\_\_

Concentration \_\_\_\_\_

Amount Spiked \_\_\_\_\_

Analyst \_\_\_\_\_

Witness \_\_\_\_\_

RG79 : 01197

**TPHG/BETX Raw Data  
Initial Calibration Notes and Raw Data**

**ARI Job ID: RG79**



### VOA Analyst Notes / Corrective Action Log

ARI Project ID: Gas/BTEX CURV Client ID: \_\_\_\_\_

ARI SOP: ~~404S(Gas)~~ ~~410S(BTEX)~~ 430S(VPH) 700S(8260C) 703S(SIM) 706S(524.2) 710S(RSK-175)

Parameter(s): Gas/BTEX

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 <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?	<u>(Yes)</u> / NO
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):

Gas ICU Targeted 2.5  
BTEX ICU Targeted 25

Additional Details on Reverse: Yes / No

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

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

# Analytical Resources Inc.: Organics Instrument Log

PID-2 Serial No.: 33033A-33620

Date: 7/28/10 Analysis: NWTP#6/BETX Analyst: MH  
 GC Program: BETX1 Column No: 832217 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>VW631-3</u>
	<u>VW647-2</u>	

Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0604	0728a001.d	RINSE			1
2	0629	0728a002.d	RT-BCAL 1			1
3	0655	0728a003.d	GCAL 1			1
4	0904	0728a004.d	RINSE			1
5	0930	0728a005.d	BETX .25			1
6	0956	0728a006.d	BETX .5			1
7	1022	0728a007.d	BETX 5			1
8	1048	0728a008.d	BETX 25			1
9	1114	0728a009.d	BETX 50			1
10	1140	0728a010.d	BETX 100			1
11	1206	0728a011.d	BETX 200			1
12	1232	0728a012.d	BETX ICV			1
13	1258	0728a013.d	RINSE			1
14	1324	0728a014.d	GAS .1			1
15	1350	0728a015.d	GAS .25			1
16	1416	0728a016.d	GAS 1			1
17	1442	0728a017.d	GAS 2.5			1
18	1508	0728a018.d	GAS 5			1
19	1534	0728a019.d	GAS 20			1
20	1600	0728a020.d	RINSE			1
21	1626	0728a021.d	GAS ICV			1

MH 7/30/10

## 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/pid2.i/072810-1.b

ARI Job No.: RINS Method: FID.m Instrument: pid2.i Date: 28-JUL-2010

Time	Filename	LabID	ClientID	DF	Manually Integrated Compounds
0604	0728a001.d	RINSE		1	NO MANUAL INTEGRATION
0629	0728a002.d	RT+BCAL 1		1	NO MANUAL INTEGRATION
0655	0728a003.d	GCAL 1		1	NO MANUAL INTEGRATION
0904	0728a004.d	RINSE		1	NO MANUAL INTEGRATION
0930	0728a005.d	BETX .25		1	NO MANUAL INTEGRATION
0956	0728a006.d	BETX .5		1	Toluene, TFT(Surr),
1022	0728a007.d	BETX 5		1	NO MANUAL INTEGRATION
1048	0728a008.d	BETX 25		1	NO MANUAL INTEGRATION
1114	0728a009.d	BETX 50		1	NO MANUAL INTEGRATION
1140	0728a010.d	BETX 100		1	NO MANUAL INTEGRATION
1206	0728a011.d	BETX 200		1	NO MANUAL INTEGRATION
1232	0728a012.d	BETX ICV		1	NO MANUAL INTEGRATION
1258	0728a013.d	RINSE		1	NO MANUAL INTEGRATION
1324	0728a014.d	GAS .1		1	nc9, Naphthalene, nc13,
1350	0728a015.d	GAS .25		1	nc13,
1416	0728a016.d	GAS 1		1	NO MANUAL INTEGRATION
1442	0728a017.d	GAS 2.5		1	NO MANUAL INTEGRATION
1508	0728a018.d	GAS 5		1	NO MANUAL INTEGRATION
1534	0728a019.d	GAS 20		1	NO MANUAL INTEGRATION
1600	0728a020.d	RINSE		1	NO MANUAL INTEGRATION
1626	0728a021.d	GAS ICV		1	NO MANUAL INTEGRATION

0079 01201

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid2.i/072810-2.b

ARI Job No.: RINS Method: PIDB.m Instrument: pid2.i Date: 28-JUL-2010

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0604	0728a001.d	RINSE		1	NO MANUAL INTEGRATION
0629	0728a002.d	RT+BCAL		1	NO MANUAL INTEGRATION
0655	0728a003.d	GCAL		1	NO MANUAL INTEGRATION
0904	0728a004.d	RINSE		1	NO MANUAL INTEGRATION
0930	0728a005.d	BETX .25		1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
0956	0728a006.d	BETX .5		1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1022	0728a007.d	BETX 5		1	Benzene, Toluene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1048	0728a008.d	BETX 25		1	Benzene, Toluene, M/P-Xylene, MTBE, TFT(Surr), BB(Surr),
1114	0728a009.d	BETX 50		1	Benzene, Toluene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1140	0728a010.d	BETX 100		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr),
1206	0728a011.d	BETX 200		1	Benzene, Toluene, MTBE,
1232	0728a012.d	BETX ICV		1	NO MANUAL INTEGRATION
1258	0728a013.d	RINSE		1	NO MANUAL INTEGRATION
1324	0728a014.d	GAS .1		1	NO MANUAL INTEGRATION
1350	0728a015.d	GAS .25		1	NO MANUAL INTEGRATION
1416	0728a016.d	GAS 1		1	NO MANUAL INTEGRATION
1442	0728a017.d	GAS 2.5		1	NO MANUAL INTEGRATION
1508	0728a018.d	GAS 5		1	NO MANUAL INTEGRATION
1534	0728a019.d	GAS 20		1	NO MANUAL INTEGRATION

0728 01202

1600 0728a020.d RINSE 1 NO MANUAL INTEGRATION

1626 0728a021.d GAS ICV 1 NO MANUAL INTEGRATION

Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a014.d  
 Data file 2: /chem3/pid2.i/072810-2.b/0728a014.d  
 Method: /chem3/pid2.i/072810-2.b/PIDB.m  
 Instrument: pid2.i  
 Gas Ical Date: 28-JUL-2010  
 BETX Ical Date: 28-JUL-2010

ARI ID: GAS .1  
 Client ID:  
 Injection Date: 28-JUL-2010 13:24  
 Matrix: WATER  
 Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.176	-0.001	3976	66213	95.8	TFT (Surr)
14.798	0.000	2842	25946	94.1	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	64528	0.112
8015B (2MP-TMB)	145592	0.112
AKGas (nC6-nC10)	100578	0.113
NWGas (Tol-Nap)	68968	0.115

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.223	-0.002	1416	98.5	TFT (Surr)
14.824	-0.001	5581	96.0	BB (Surr)

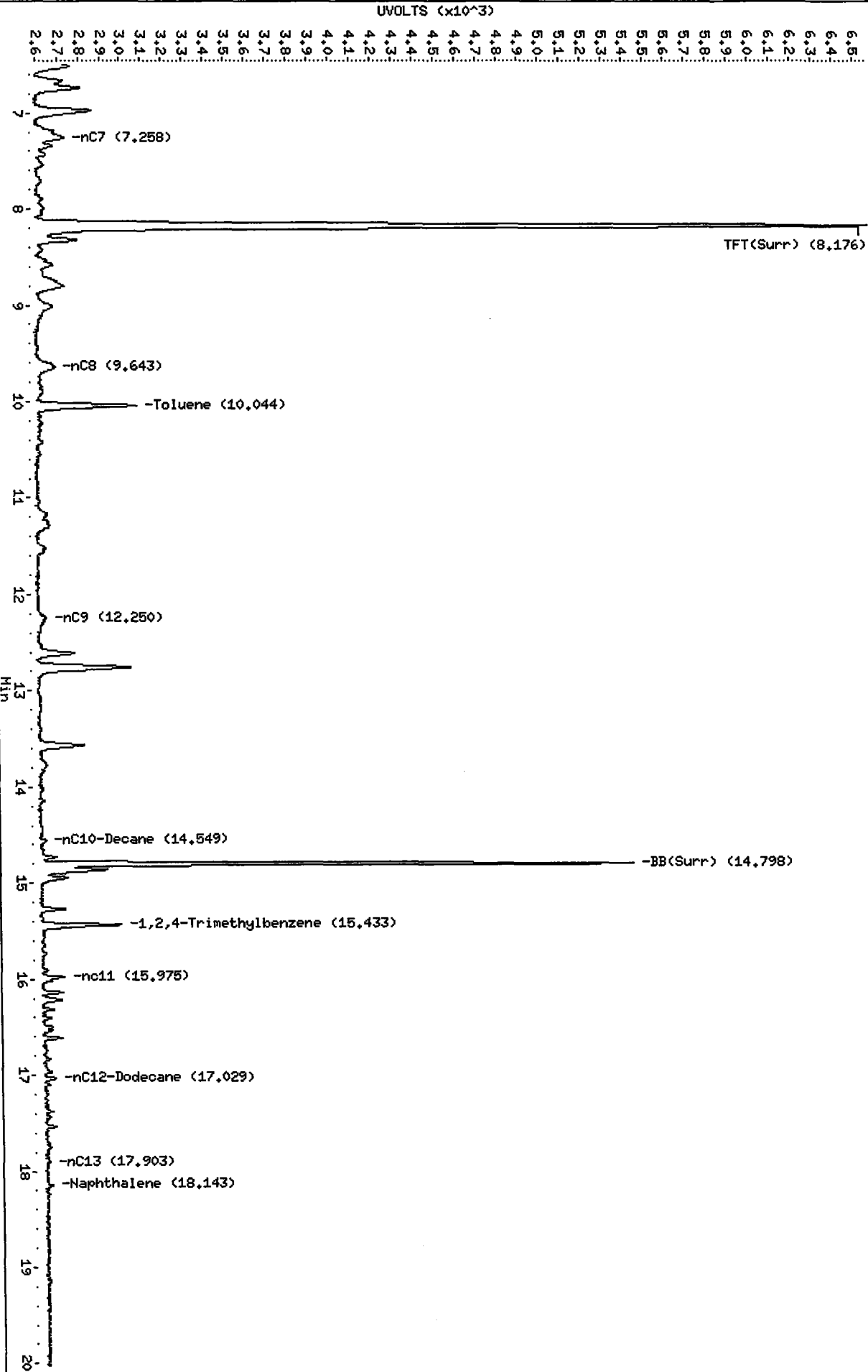
AROMATICS (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.091	-0.003	285	2.75	Toluene
ND	---	---	---	Ethylbenzene
12.797	-0.005	318	3.28	M/P-Xylene
ND	---	---	---	O-Xylene
5.094	-0.006	398	9.48	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

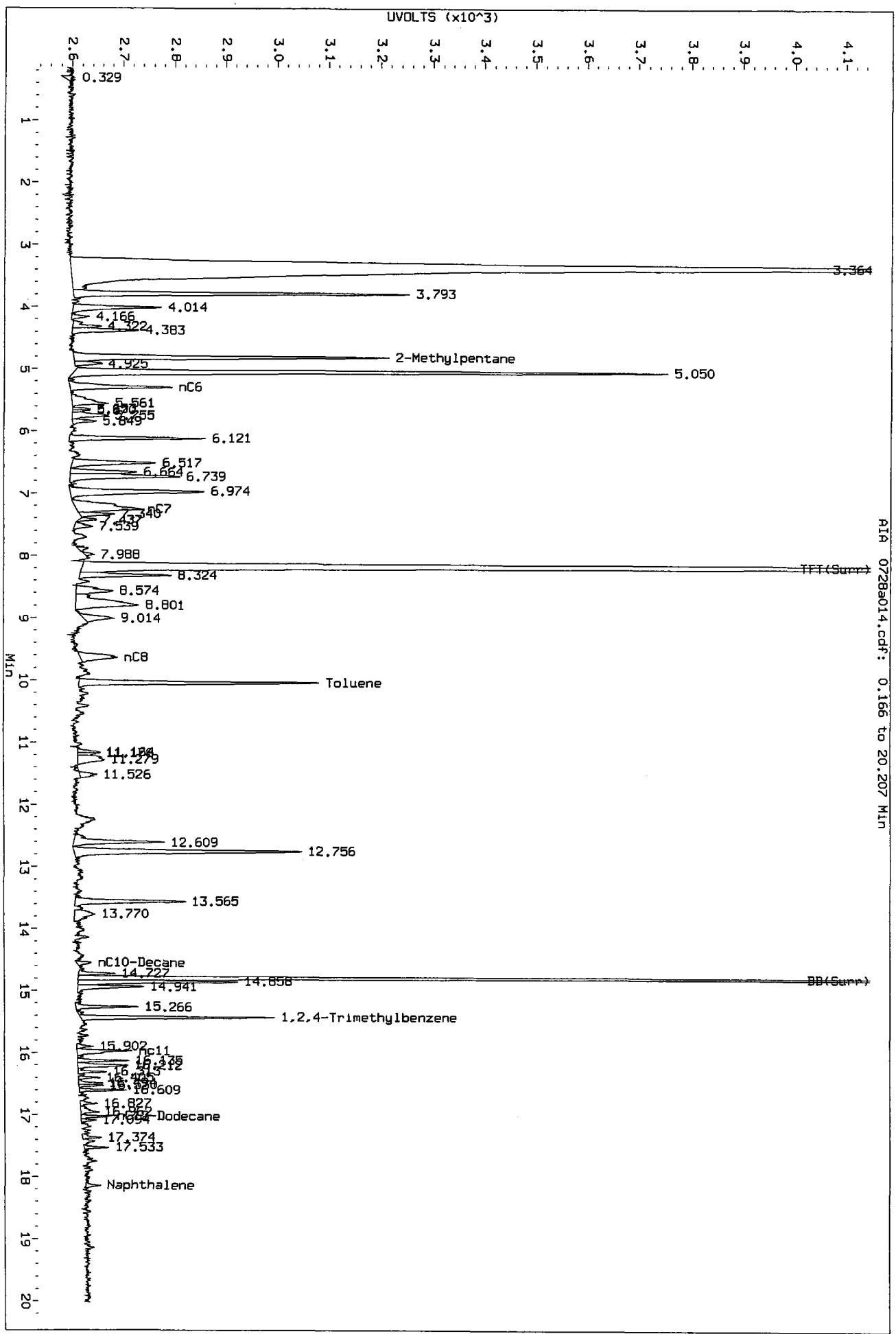
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Date: 28-JUL-2010 13:24  
Client ID:  
Sample Info: GAS .1  
Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid2.i/072810-1.b/0728a014.d/0728a014.cdf

Data File: /chem3/pid2.1/072810-1.b/0728a014.d/0728a014.cdf  
 Injection Date: 28-JUL-2010 13:24  
 Instrument: pid2.1  
 Client Sample ID:



Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a015.d  
 Data file 2: /chem3/pid2.i/072810-2.b/0728a015.d  
 Method: /chem3/pid2.i/072810-2.b/PIDB.m  
 Instrument: pid2.i  
 Gas Ical Date: 28-JUL-2010  
 BETX Ical Date: 28-JUL-2010

ARI ID: GAS .25  
 Client ID:  
 Injection Date: 28-JUL-2010 13:50  
 Matrix: WATER  
 Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	-----	-----	-----
8.176	-0.001	4158	69618	100.2	TFT(Surr)
14.798	0.001	2982	27495	98.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	145090	0.252
8015B (2MP-TMB)	337846	0.259
AKGas (nC6-nC10)	228828	0.257
NWGas (Tol-Nap)	151421	0.252

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.224	-0.002	1455	101.2	TFT(Surr)
14.824	-0.001	5909	101.6	BB(Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
10.090	-0.004	713	6.87	Toluene
12.650	-0.006	237	2.07	Ethylbenzene
12.798	-0.005	806	8.32	M/P-Xylene
13.601	-0.004	359	3.54	O-Xylene
5.096	-0.004	968	23.06	MTBE

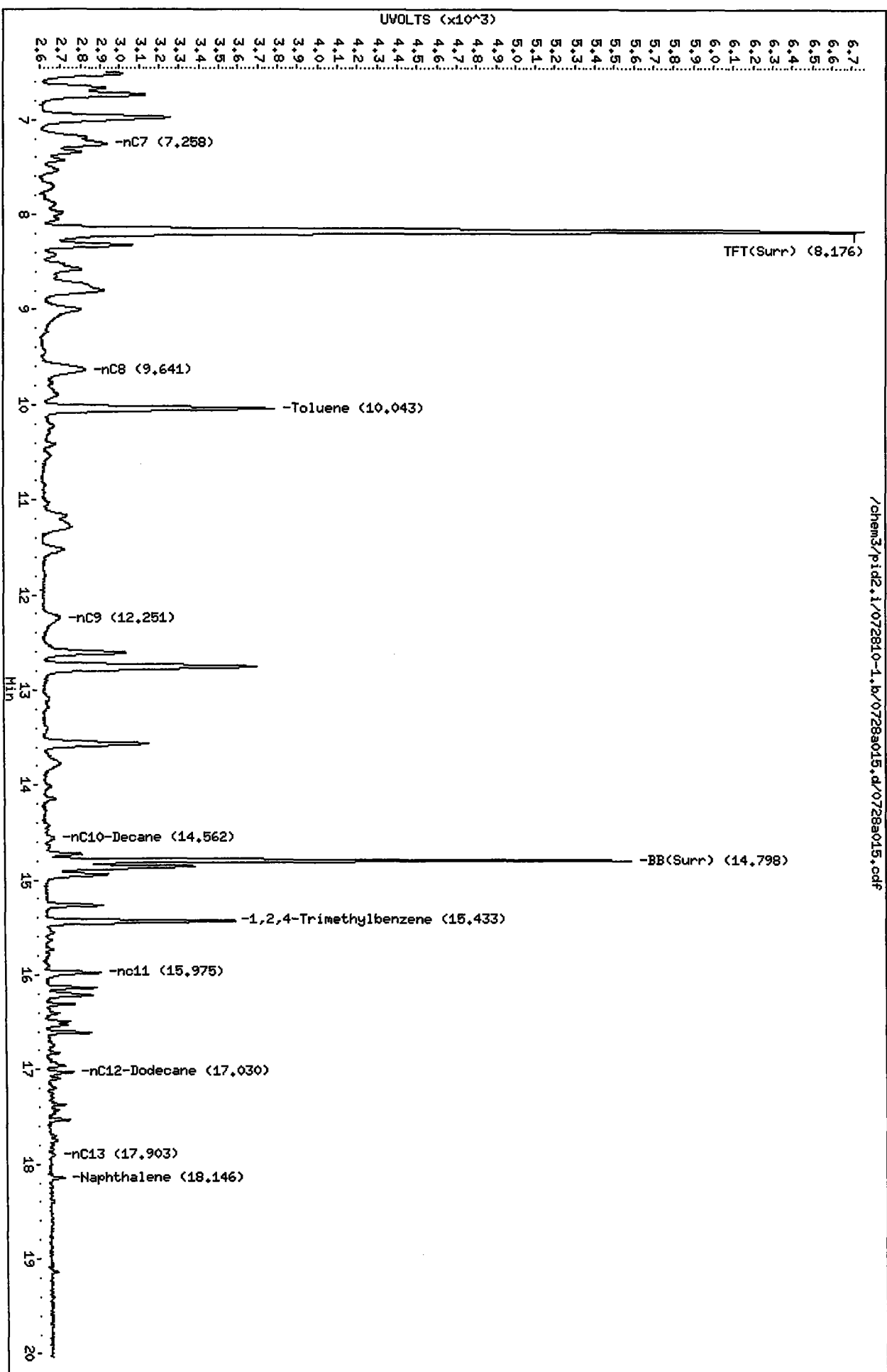
A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a015.d  
Date: 28-JUL-2010 13:50  
Client ID:  
Sample Infor GAS .25

Column phase: RTX 502-2 FID

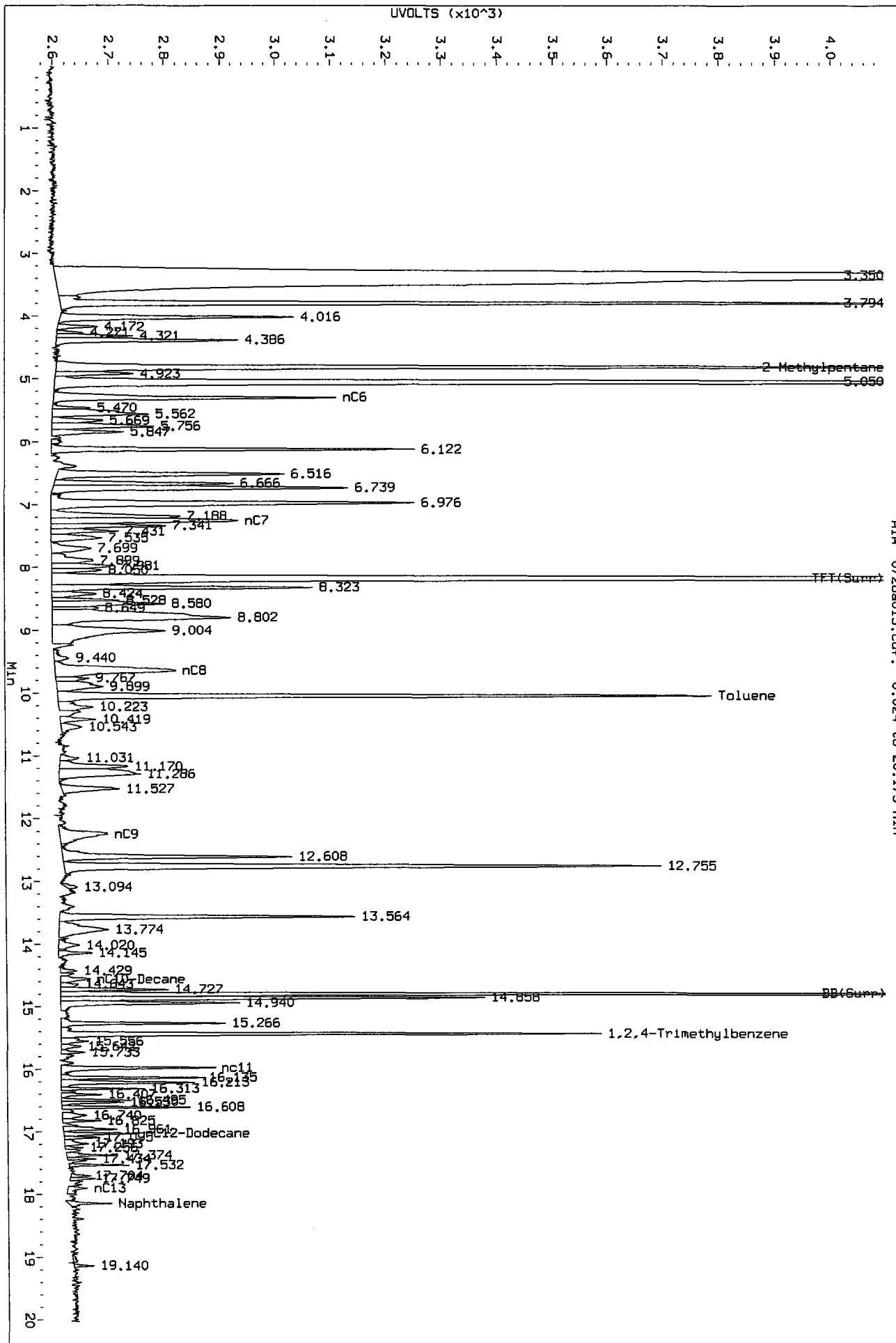
Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/072810-1.b/0728a015.d/0728a015.pdf





Data File: /chem3/pid2.1/072810-1.b/0728a015.d/0728a015.cdf  
Injection Date: 28-JUL-2010 13:50  
Instrument: pid2.1  
Client Sample ID:



AIA 0728a015.cdf: 0.024 to 20.173 Min

Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a016.d      ARI ID: GAS 1  
 Data file 2: /chem3/pid2.i/072810-2.b/0728a016.d      Client ID:  
 Method: /chem3/pid2.i/072810-2.b/PIDB.m              Injection Date: 28-JUL-2010 14:16  
 Instrument: pid2.i    Matrix: WATER  
 Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
 BETX Ical Date: 28-JUL-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.175	-0.001	3997	66136	96.3	TFT (Surr)
14.798	0.001	2850	26572	94.4	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	562860	0.976
8015B (2MP-TMB)	1309436	1.004
AKGas (nC6-nC10)	886524	0.997
NWGas (Tol-Nap)	586542	0.974

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.223	-0.003	1399	97.3	TFT (Surr)
14.824	0.000	5508	94.7	BB (Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.478	-0.005	202	1.73	Benzene
10.089	-0.004	2948	28.42	Toluene
12.650	-0.006	993	8.66	Ethylbenzene
12.798	-0.005	3241	33.45	M/P-Xylene
13.602	-0.003	1404	13.83	O-Xylene
5.096	-0.004	3894	92.75	MTBE

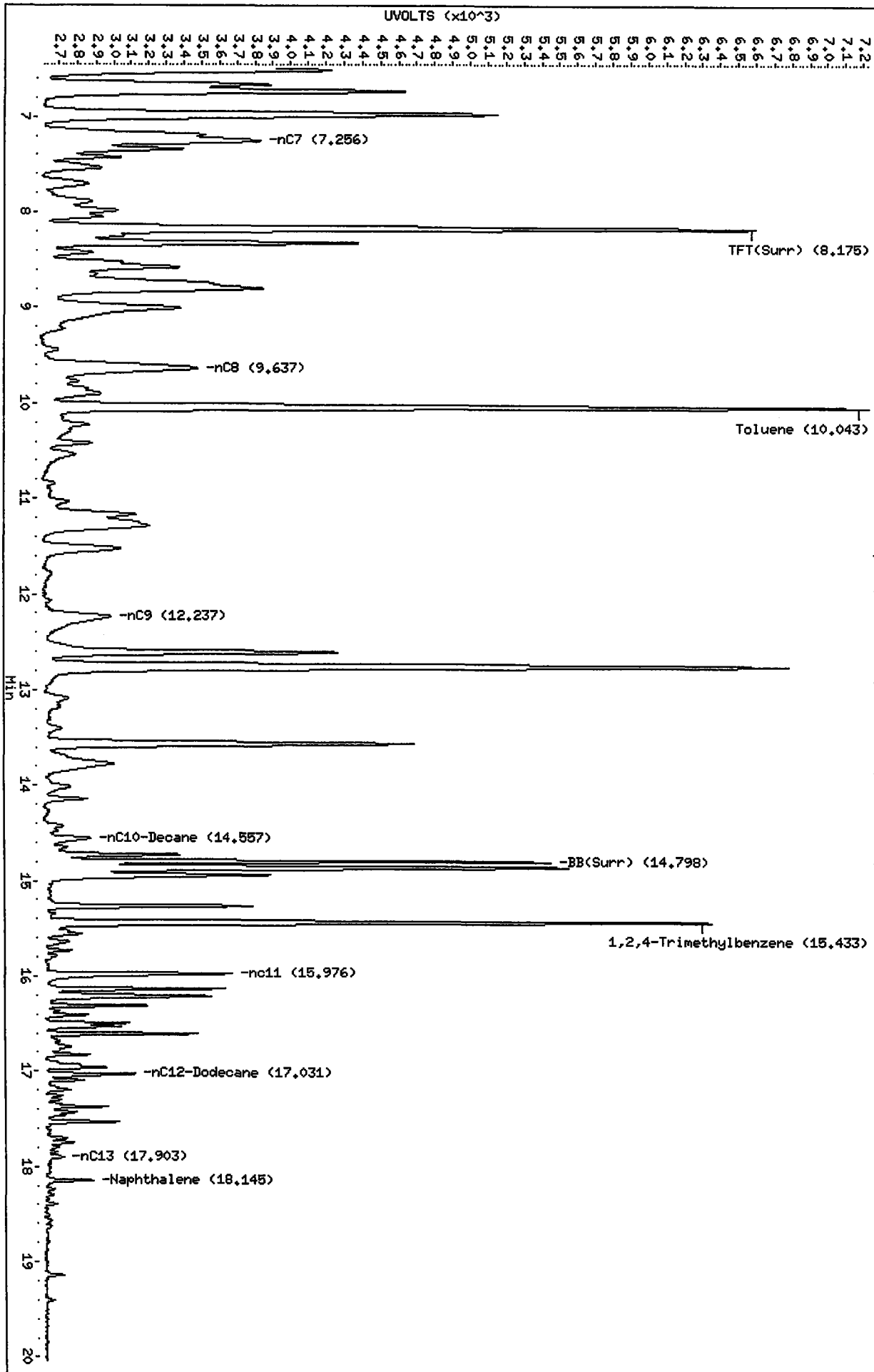
A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a016.d  
Date : 28-JUL-2010 14:16  
Client ID:  
Sample Info: GAS 1

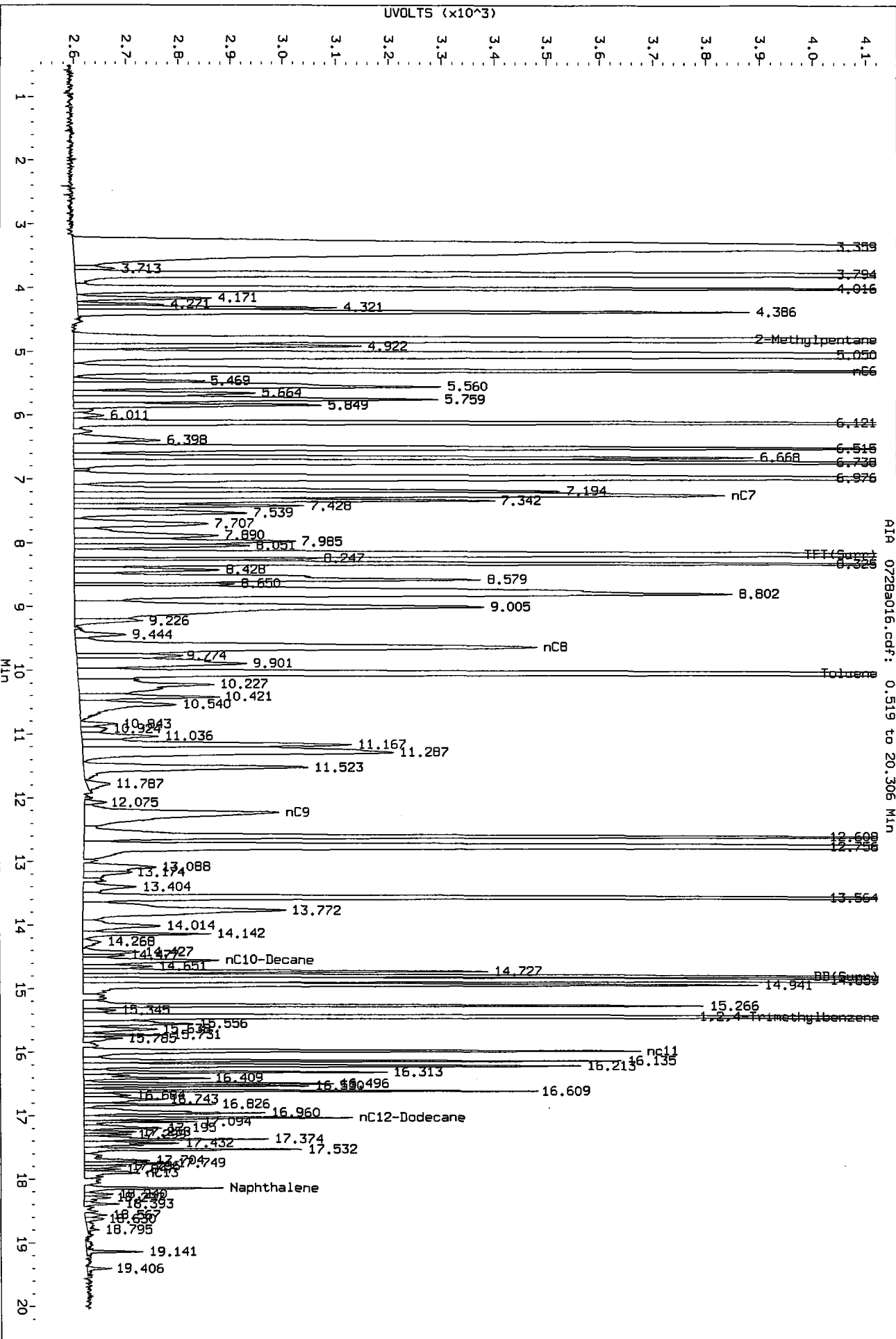
Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid2.i/072810-1.b/0728a016.d/0728a016.cdf



Data File: /chem3/pid2.1/072810-1.b/0728a016.d/0728a016.cdf  
 Injection Date: 28-JUL-2010 14:16  
 Instrument: pid2.1  
 Client Sample ID:



AIR 0728a016.cdf: 0.519 to 20.306 MIN

Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a017.d  
 Data file 2: /chem3/pid2.i/072810-2.b/0728a017.d  
 Method: /chem3/pid2.i/072810-2.b/PIDB.m  
 Instrument: pid2.i  
 Gas Ical Date: 28-JUL-2010  
 BETX Ical Date: 28-JUL-2010

ARI ID: GAS 2.5  
 Client ID:  
 Injection Date: 28-JUL-2010 14:42  
 Matrix: WATER  
 Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.176	-0.001	4302	70595	103.6	TFT(Surr)
14.798	0.000	3065	29826	101.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	1399722	2.426
8015B (2MP-TMB)	3161184	2.423
AKGas (nC6-nC10)	2144321	2.412
NWGas (Tol-Nap)	1456098	2.419

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.224	-0.002	1473	102.5	TFT(Surr)
14.824	-0.001	5786	99.5	BB(Surr)

AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.480	-0.003	578	4.96	Benzene
10.090	-0.004	7110	68.55	Toluene
12.650	-0.006	2425	21.16	Ethylbenzene
12.798	-0.005	7837	80.88	M/P-Xylene
13.601	-0.004	3439	33.87	O-Xylene
5.099	0.000	9262	220.60	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

Data File: /chem3/pid2.1/072810-1.b/0728a017.d

Date: 28-JUL-2010 14:42

Client ID:

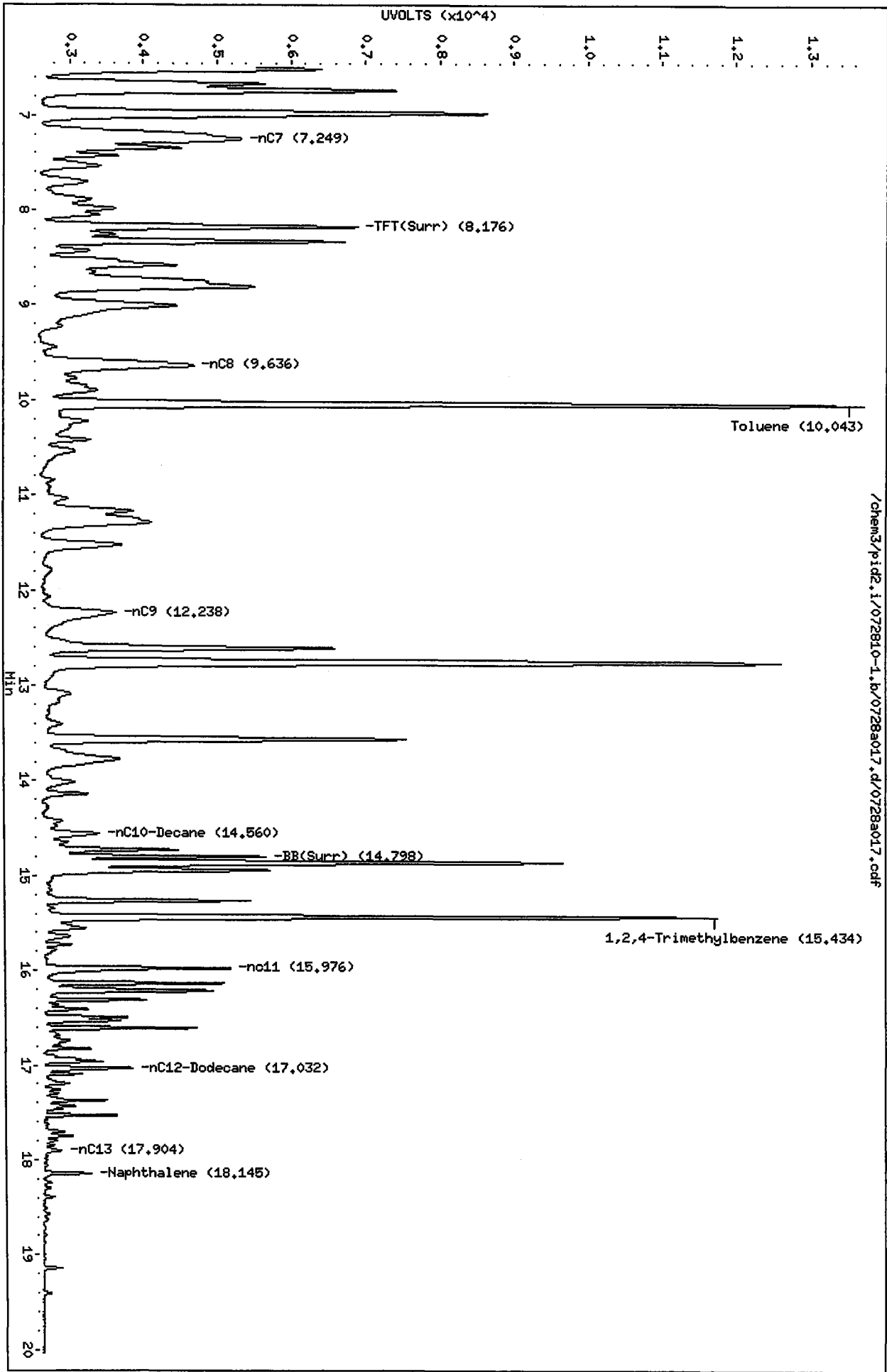
Sample Info: GAS 2.5

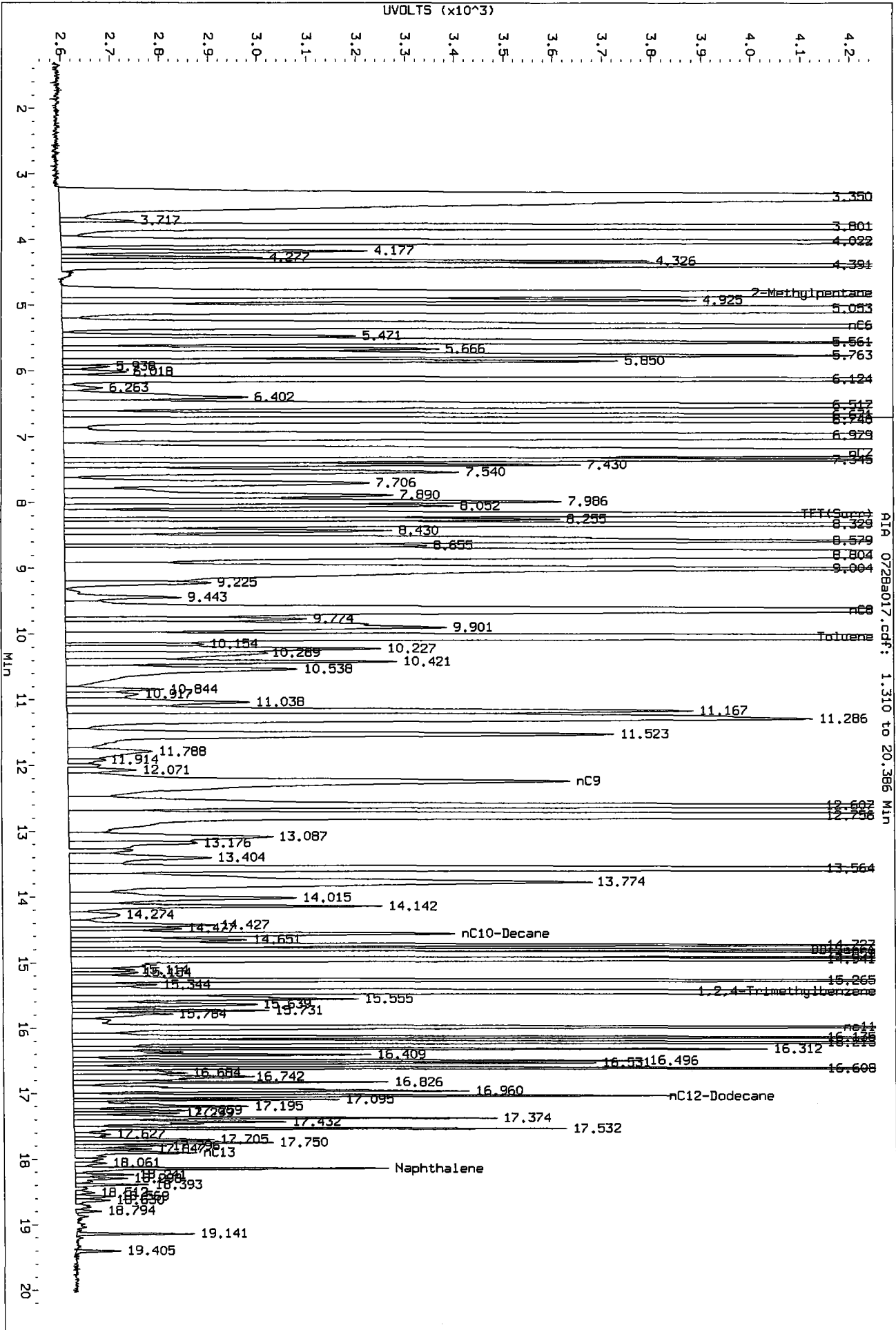
Column phase: RTX 502-2 FID

Instrument: pid2.1

Operator: MH  
Column diameter: 0.18

/chem3/pid2.1/072810-1.b/0728a017.d/0728a017.cdf





Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a018.d  
 Data file 2: /chem3/pid2.i/072810-2.b/0728a018.d  
 Method: /chem3/pid2.i/072810-2.b/PIDB.m  
 Instrument: pid2.i  
 Gas Ical Date: 28-JUL-2010  
 BETX Ical Date: 28-JUL-2010

ARI ID: GAS 5  
 Client ID:  
 Injection Date: 28-JUL-2010 15:08  
 Matrix: WATER  
 Dilution Factor: 1.000

=====  
 FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.178	0.001	4573	75790	110.1	TFT(Surr)
14.798	0.001	3308	33380	109.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	2850504	4.941
8015B (2MP-TMB)	6341363	4.860
AKGas (nC6-nC10)	4348496	4.890
NWGas (Tol-Nap)	2956550	4.911

\* Surrogate areas are subtracted from Total Area

=====  
 PID Surrogates

RT	Shift	Response	%Rec	Compound
8.226	0.000	1514	105.4	TFT(Surr)
14.824	0.000	5973	102.7	BB(Surr)

AROMATICICS (PID)

RT	Shift	Response	Amount	Compound
7.483	0.000	1108	9.51	Benzene
10.092	-0.002	14105	135.99	Toluene
12.652	-0.004	4779	41.70	Ethylbenzene
12.800	-0.003	15512	160.08	M/P-Xylene
13.603	-0.002	6714	66.13	O-Xylene
5.105	0.005	17292	411.85	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated



Data File: /chem3/pid2.i/072810-1.b/0728a018.d

Date: 28-JUL-2010 15:08

Client ID:

Sample Info: GAS 5

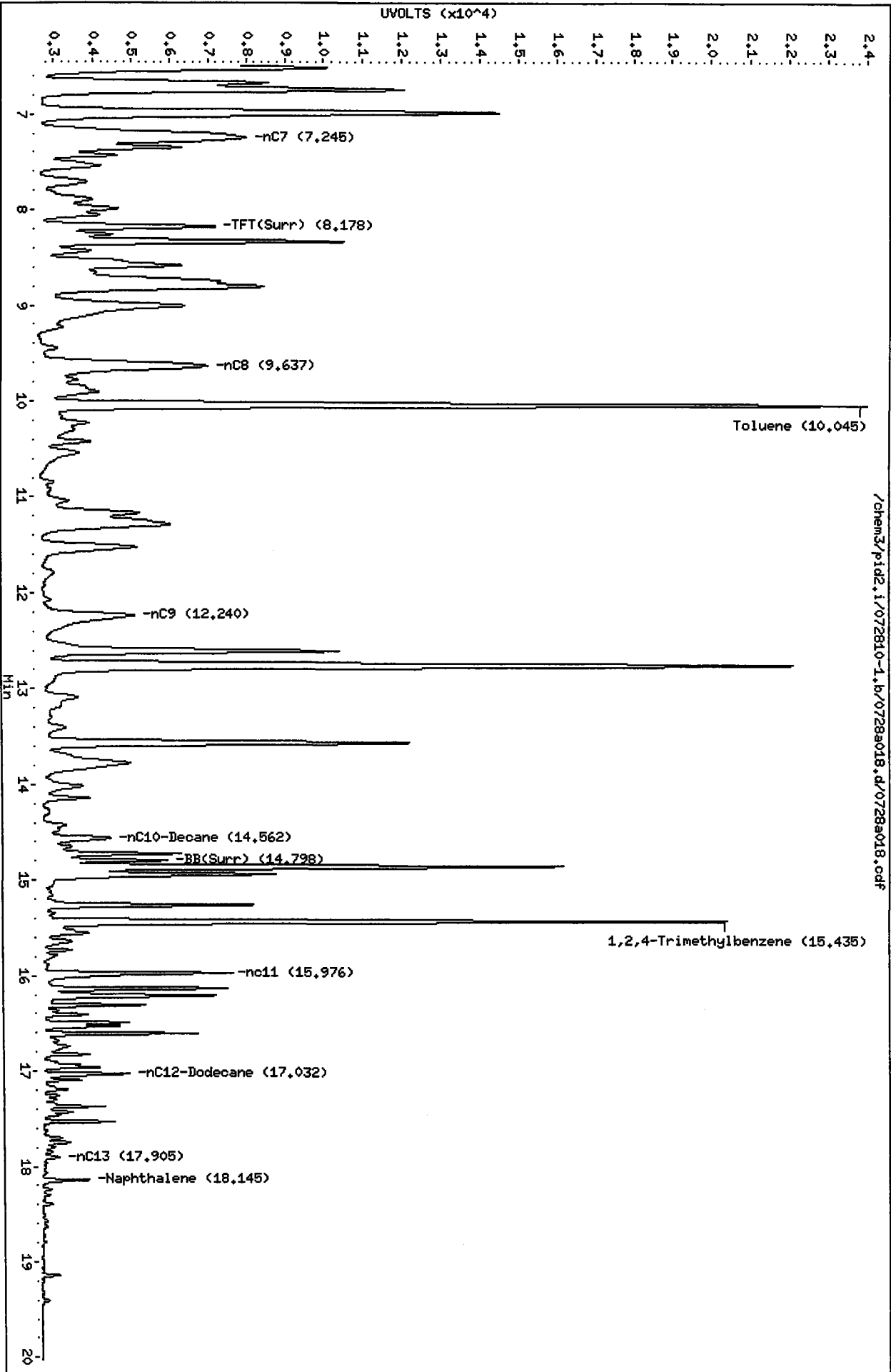
Column phase: RTX 502-2 FID

Instrument: pid2.i

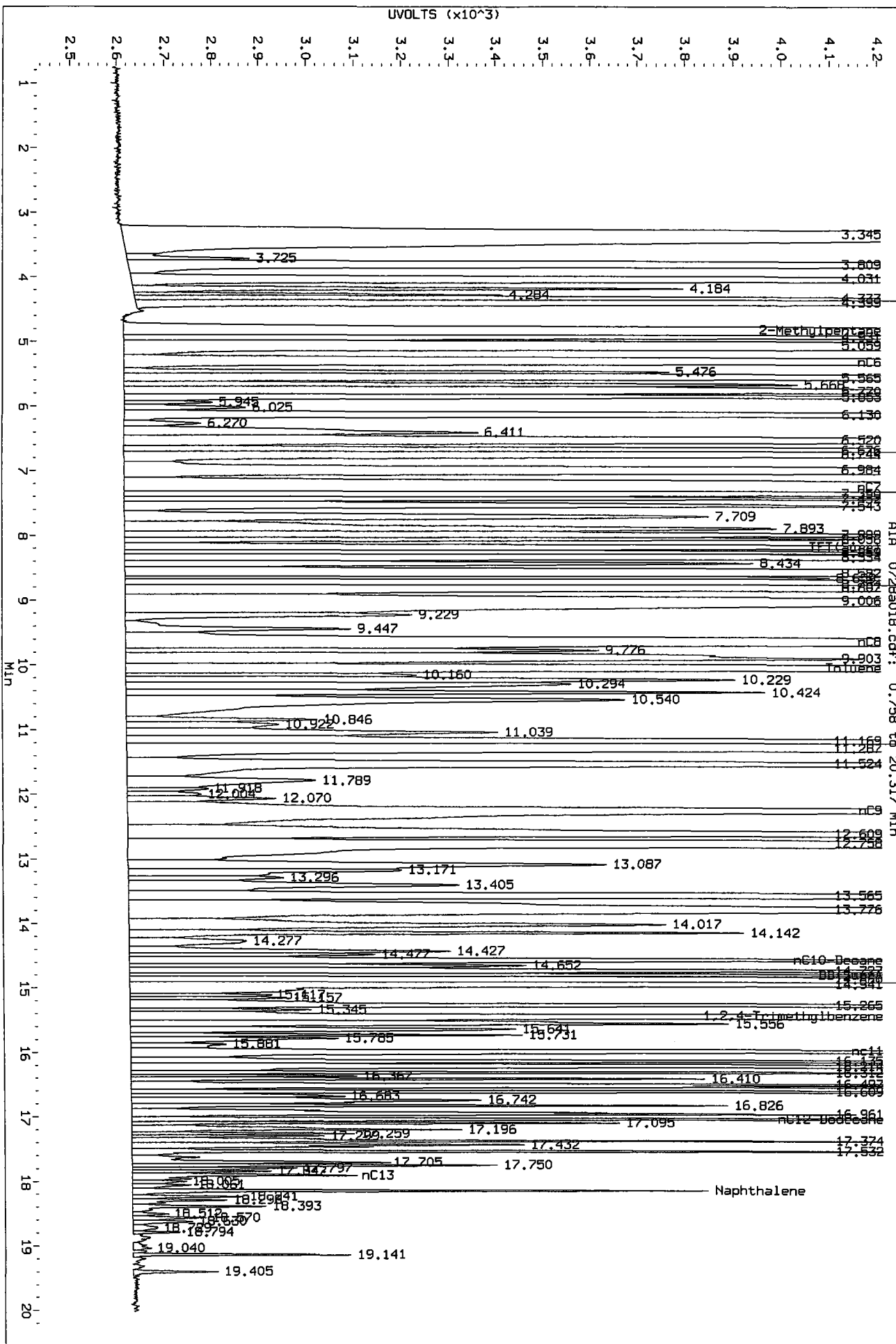
Operator: MH

Column diameter: 0.18

/chem3/pid2.i/072810-1.b/0728a018.d/0728a018.cdf



Data File: /chem3/p1d2.1/072810-1.b/0728a018.d/0728a018.cdf  
 Injection Date: 28-JUL-2010 15:08  
 Instrument: pid2.1  
 Client Sample ID:



Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a019.d  
 Data file 2: /chem3/pid2.i/072810-2.b/0728a019.d  
 Method: /chem3/pid2.i/072810-2.b/PIDB.m  
 Instrument: pid2.i  
 Gas Ical Date: 28-JUL-2010  
 BETX Ical Date: 28-JUL-2010

ARI ID: GAS 20  
 Client ID:  
 Injection Date: 28-JUL-2010 15:34  
 Matrix: WATER  
 Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.178	0.001	5733	96643	138.1	TFT(Surr)
14.798	0.001	4453	52847	147.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	10855160	18.817
8015B (2MP-TMB)	23588919	18.078
AKGas (nC6-nC10)	16001306	17.995
NWGas (Tol-Nap)	11122738	18.477

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.225	-0.001	1790	124.6	TFT(Surr)
14.826	0.002	6439	110.7	BB(Surr)

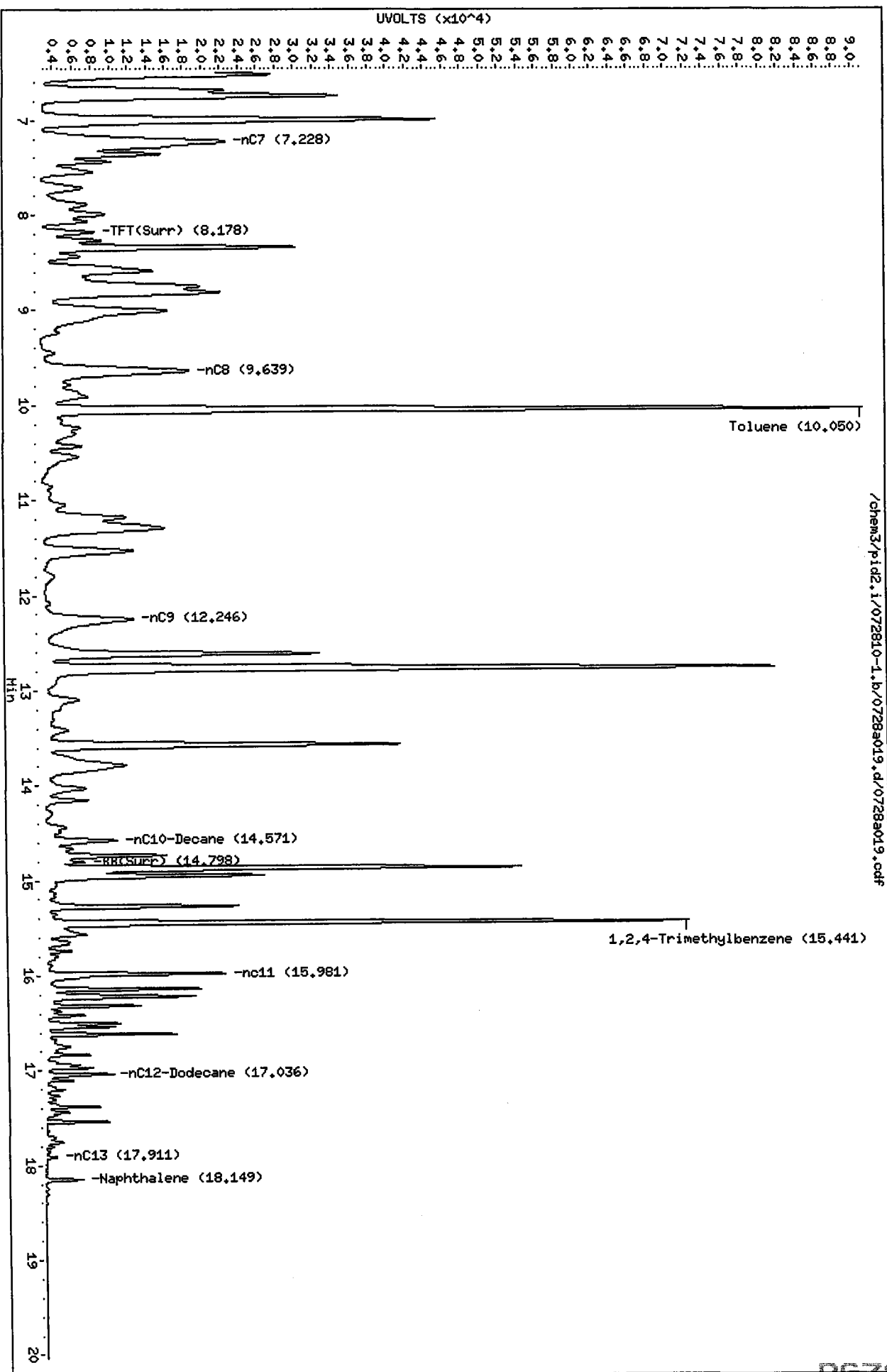
AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.486	0.002	4617	39.65	Benzene
10.096	0.003	60197	580.37	Toluene
12.657	0.001	19280	168.21	Ethylbenzene
12.809	0.006	65293	673.82	M/P-Xylene
13.608	0.003	28202	277.77	O-Xylene
5.122	0.022	65267	1554.50	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

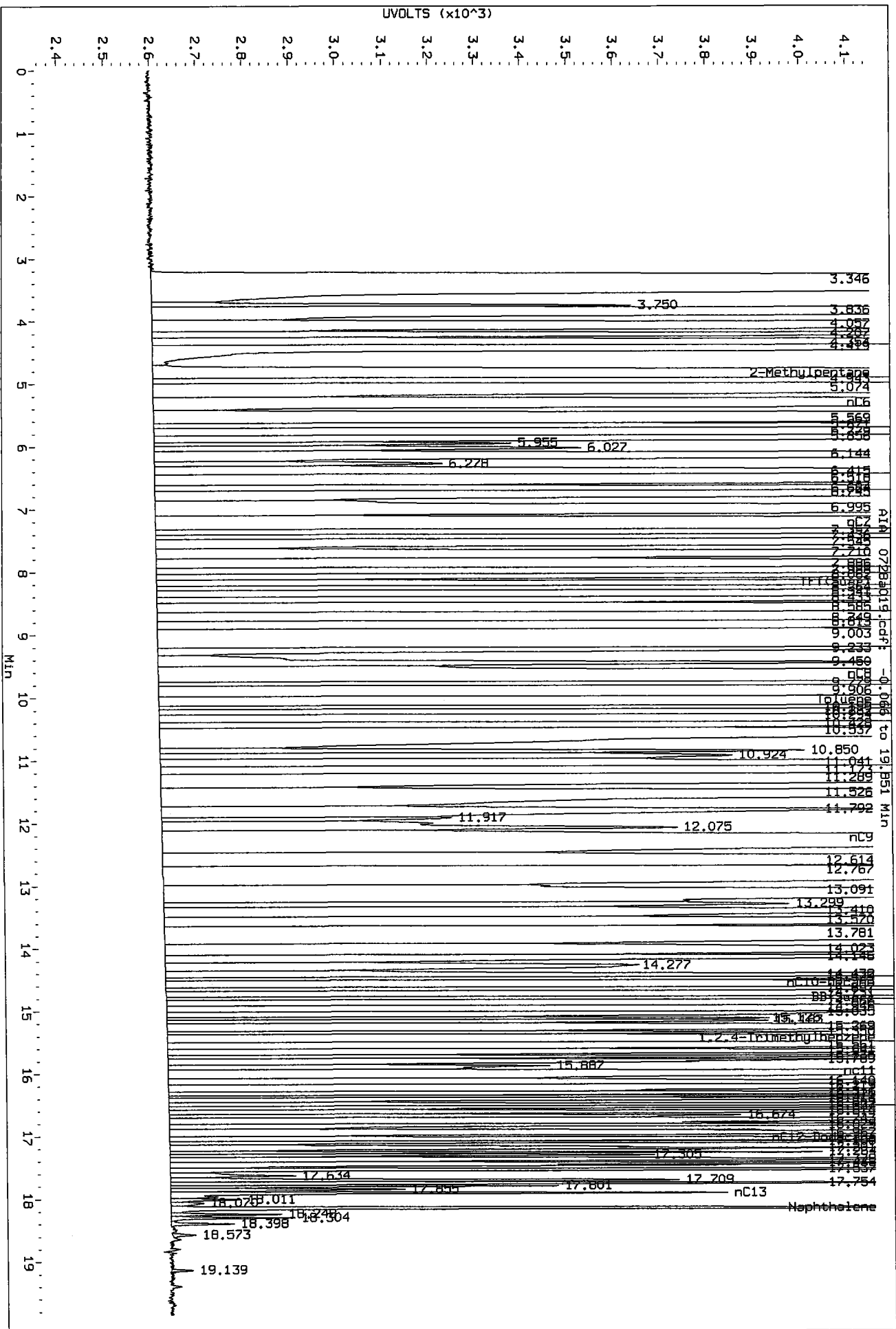
Data File: /chem3/pid2.i/072810-1.b/0728a019.d  
Date: 28-JUL-2010 15:34  
Client ID:  
Sample Info: GAS 20  
Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



/chem3/pid2.i/072810-1.b/0728a019.d/0728a019.cdf

Data File: /chem3/pid2.1/072810-1.b/0728a019.d/0728a019.cdf  
Injection Date: 28-JUL-2010 15:34  
Instrument: pid2.1  
Client Sample ID:



Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a021.d  
 Data file 2: /chem3/pid2.i/072810-2.b/0728a021.d  
 Method: /chem3/pid2.i/072810-2.b/PIDB.m  
 Instrument: pid2.i  
 Gas Ical Date: 28-JUL-2010  
 BETX Ical Date: 28-JUL-2010

ARI ID: GAS ICV  
 Client ID:  
 Injection Date: 28-JUL-2010 16:26  
 Matrix: WATER  
 Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.183	0.006	4084	68079	98.4	TFT(Surr)
14.800	0.002	2936	26233	97.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	1723268	2.987
8015B (2MP-TMB)	2869302	2.199
AKGas (nC6-nC10)	2201780	2.476
NWGas (Tol-Nap)	1751023	2.909

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.230	0.005	1416	98.5	TFT(Surr)
14.826	0.002	5739	98.7	BB(Surr)

AROMATICS (PID)

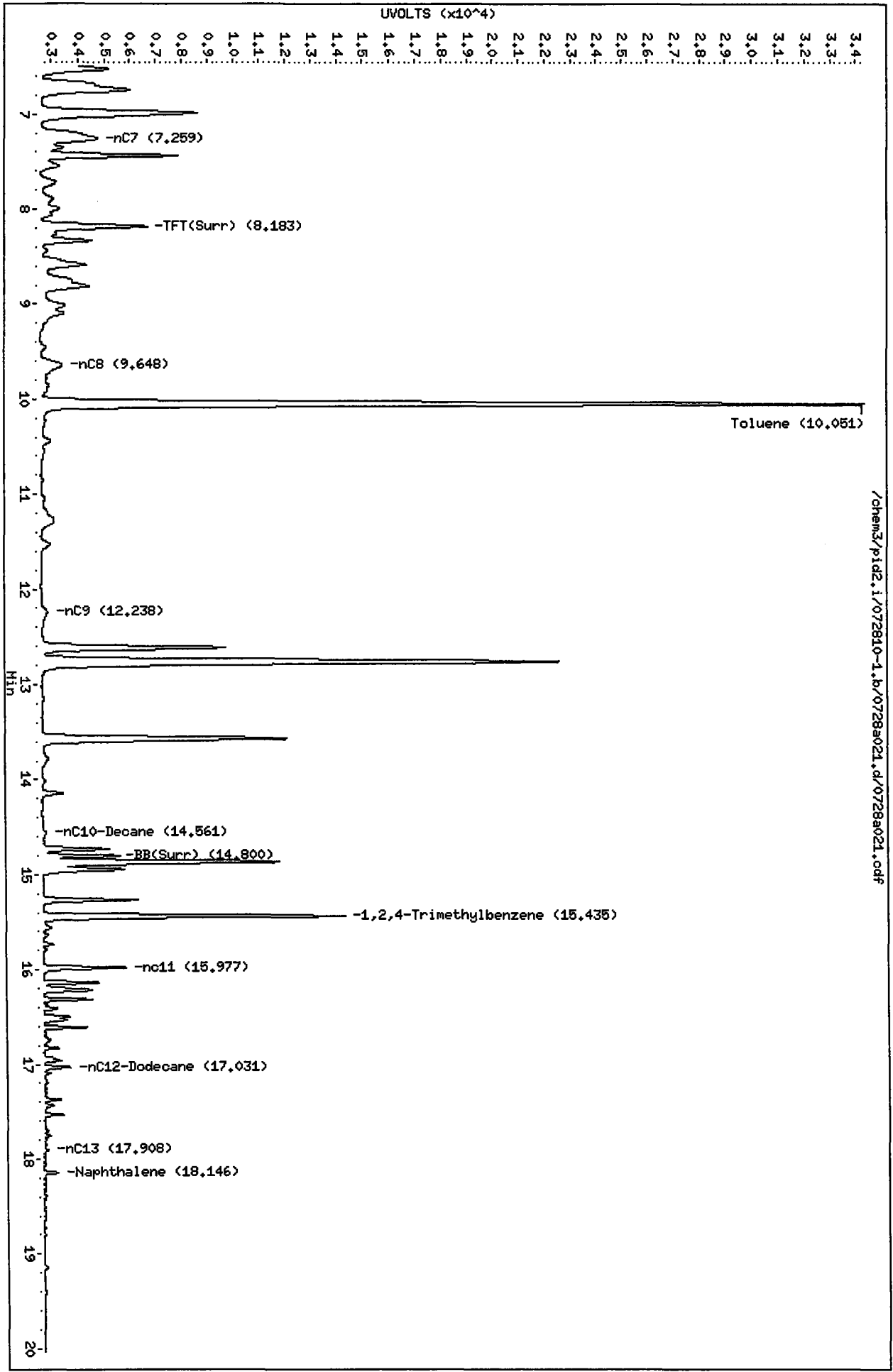
RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.487	0.004	3113	26.73	Benzene
10.097	0.004	21465	206.95	Toluene
12.656	0.000	4672	40.76	Ethylbenzene
12.804	0.001	15816	163.22	M/P-Xylene
13.606	0.001	6750	66.48	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

Data File: /chem3/pid2.1/072810-1.b/0728a021.d  
Date : 28-JUL-2010 16:26  
Client ID:  
Sample Info: GAS ICV  
Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid2.1/072810-1.b/0728a021.d/0728a021.odf



Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid2.i/072810-1.b/FID.m  
Batch File: /chem3/pid2.i/072810-1.b  
Inst ID: pid2.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT06
FILENAME:	0728a014	0728a015	0728a016	0728a017	0728a018	0728a019	0728a019
INJ. DATE:	28-JUL-2010	28-JUL-2010	28-JUL-2010	28-JUL-2010	28-JUL-2010	28-JUL-2010	28-JUL-2010
INJ. TIME:	13:24	13:50	14:16	14:42	15:08	15:34	15:34

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 NWPFG	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
20 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
19 AK101	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
21 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
1 2-Methylpentane	4.813	4.816	4.815	4.818	4.823	4.832	4.834	4.764-4.904	4.819	0.007
2 nC6	5.300	5.301	5.305	5.311	5.315	5.316	5.321	5.251-5.391	5.308	0.007
3 nC7	7.258	7.258	7.256	7.249	7.245	7.228	7.254	7.184-7.324	7.249	0.012
4 TFT(Surr)	8.176	8.176	8.175	8.176	8.178	8.178	8.177	8.107-8.247	8.177	0.001
5 nC8	9.643	9.641	9.637	9.636	9.637	9.639	9.659	9.589-9.729	9.639	0.003
6 Toluene	10.044	10.043	10.043	10.043	10.045	10.050	10.046	9.976-10.116	10.045	0.003
7 nC9	12.250	12.251	12.237	12.238	12.240	12.246	12.245	12.175-12.315	12.244	0.006
22 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
8 nC10-Decane	14.549	14.562	14.557	14.560	14.562	14.571	14.563	14.493-14.633	14.560	0.007
9 BB(Surr)	14.798	14.798	14.798	14.798	14.798	14.798	14.797	14.727-14.867	14.798	0.000
10 1,2,4-Trimethylbenzene	15.433	15.433	15.433	15.434	15.435	15.441	15.438	15.368-15.508	15.435	0.003
11 nC11	15.975	15.975	15.976	15.976	15.976	15.981	16.014	15.944-16.084	15.977	0.002
12 nC12-Dodecane	17.029	17.030	17.031	17.032	17.032	17.036	17.048	16.978-17.118	17.032	0.002

Reviewer 1 MH Date: 7/29/10  
 Reviewer 2 [Signature] Date: 7/30/10



Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid2.i/072810-1.b/FID.m  
Batch File: /chem3/pid2.i/072810-1.b  
Inst ID: pid2.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 nCl3	17.903	17.903	17.903	17.904	17.905	17.911	17.890	17.820-17.960	17.905	0.003
14 Naphthalene	18.143	18.146	18.145	18.145	18.145	18.149	18.148	18.078-18.218	18.145	0.002

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUL-2010 09:30  
 End Cal Date : 28-JUL-2010 12:06  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid2.i/072810-2.b/PIDB.m  
 Cal Date : 29-Jul-2010 10:17 monicah  
 Curve Type : Average

Calibration File Names:

Level 1: /chem3/pid2.i/072810-2.b/0728a005.d/0728a005.cdf  
 Level 2: /chem3/pid2.i/072810-2.b/0728a006.d/0728a006.cdf  
 Level 3: /chem3/pid2.i/072810-2.b/0728a007.d/0728a007.cdf  
 Level 4: /chem3/pid2.i/072810-2.b/0728a008.d/0728a008.cdf  
 Level 5: /chem3/pid2.i/072810-2.b/0728a009.d/0728a009.cdf  
 Level 6: /chem3/pid2.i/072810-2.b/0728a010.d/0728a010.cdf  
 Level 7: /chem3/pid2.i/072810-2.b/0728a011.d/0728a011.cdf

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	44.00000 41.03000	44.00000	42.20000	41.80000	41.32000	39.55000	41.98571	3.826
2 Benzene	124 115	116	118	115	116	111	116	3.402
4 Toluene	120 106	96.00000	102	102	101	100	104	7.490
15 Chlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
5 Ethylbenzene	136 109	128	110	108	107	105	115	10.663
6 M/P-Xylene	84.00000 104	95.00000	101	99	97.50000	97.81000	96.89964	6.533

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUL-2010 09:30  
 End Cal Date : 28-JUL-2010 12:06  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid2.i/072810-2.b/PIDB.m  
 Cal Date : 29-Jul-2010 10:17 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	80.00000 106	110	106	105	102	102	102	9.740
13 1,3,5 Trimethyl Benzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
14 1,2,4 Trimethyl Benzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
16 1,3 Dichlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
17 1,4 Dichlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
18 1,2 Dichlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
\$ 3 TFT(Surr)	15.31818 14.22500	14.15909	14.31343	14.24000	14.21805	14.12360	14.37105	2.936
\$ 19 BFB(Surr)	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
\$ 8 BB(Surr)	62.00000 55.53000	58.52273	58.86567	57.65000	57.45865	57.10112	58.16117	3.451

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUL-2010 09:30  
 End Cal Date : 28-JUL-2010 12:06  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid2.i/072810-1.b/FID.m  
 Cal Date : 28-Jul-2010 15:04 monicah  
 Curve Type : Average

Compound	0.000e+00	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 TFT(Surr)	45.63636	42.52273	41.85075	40.65000	40.39098	40.27528			
	39.29000						41.51659		5.073
\$ 22 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
	+++++							+++++	+++++
\$ 9 BB(Surr)	33.22727	31.04545	30.40299	29.69000	29.64662	29.08989			
	28.20000						30.18603		5.362

7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a002.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a002.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: RT+BCAL 1  
Client ID:  
Injection Date: 28-JUL-2010 06:29  
Matrix: WATER  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.187	0.010	4132	68784	99.5	TFT (Surr)
14.805	0.007	3016	27442	99.9	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	754578	1.308
8015B (2MP-TMB)	1059107	0.812
AKGas (nC6-nC10)	754838	0.849
NWGas (Tol-Nap)	805197	1.338

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.235	0.009	1481	103.1	TFT (Surr)
14.831	0.006	5941	102.1	BB (Surr)

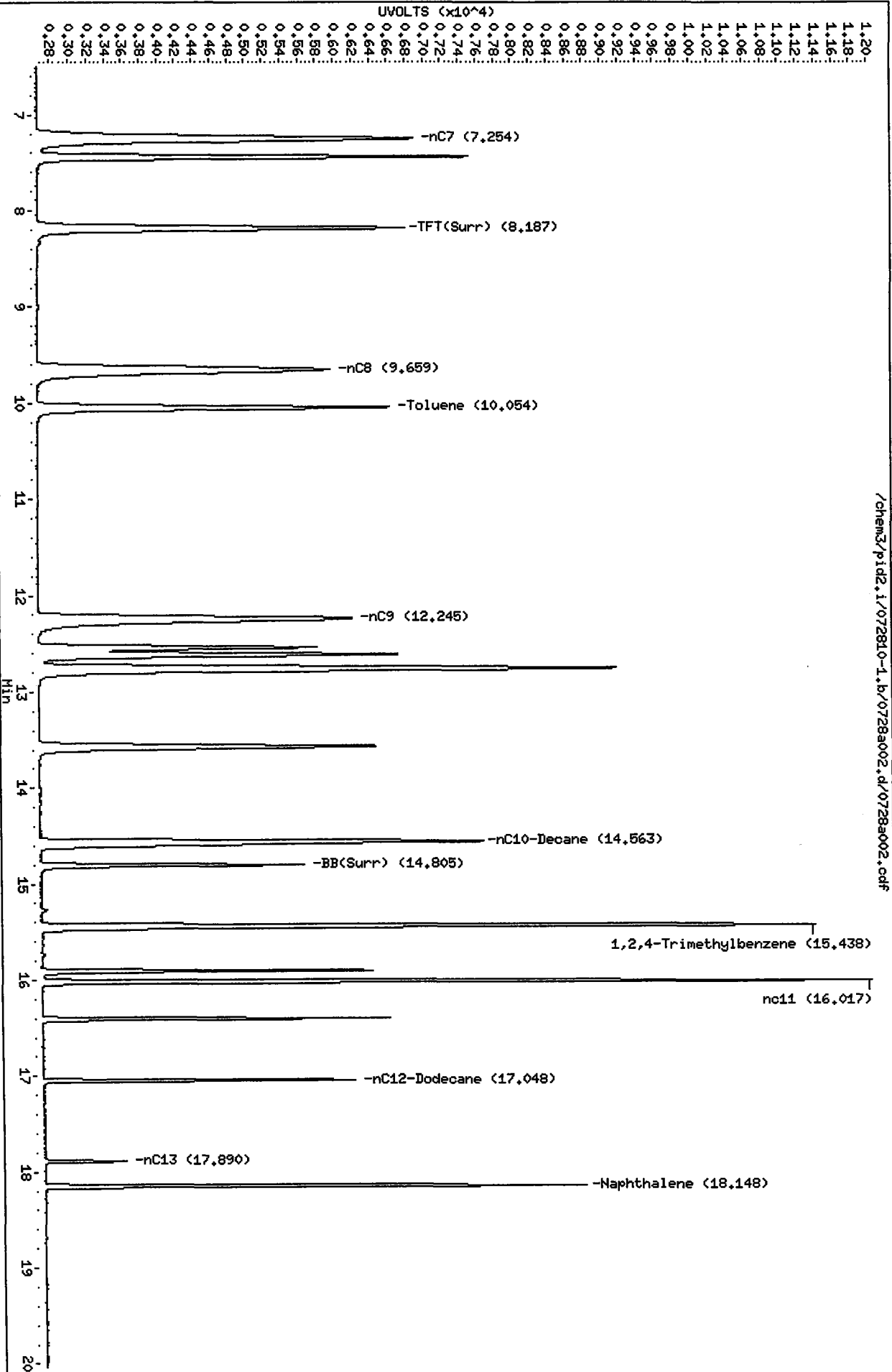
AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.493	0.010	2893	24.84	Benzene
10.101	0.007	2542	24.51	Toluene
12.661	0.005	2709	23.64	Ethylbenzene
12.806	0.003	5087	52.50	M/P-Xylene
13.610	0.005	2678	26.38	O-Xylene
5.108	0.008	1047	24.94	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a002.d  
Date : 28-JUL-2010 06:29  
Client ID:  
Sample Infol: RT+BCAL 1  
Column phase: RTX 502-2 FID

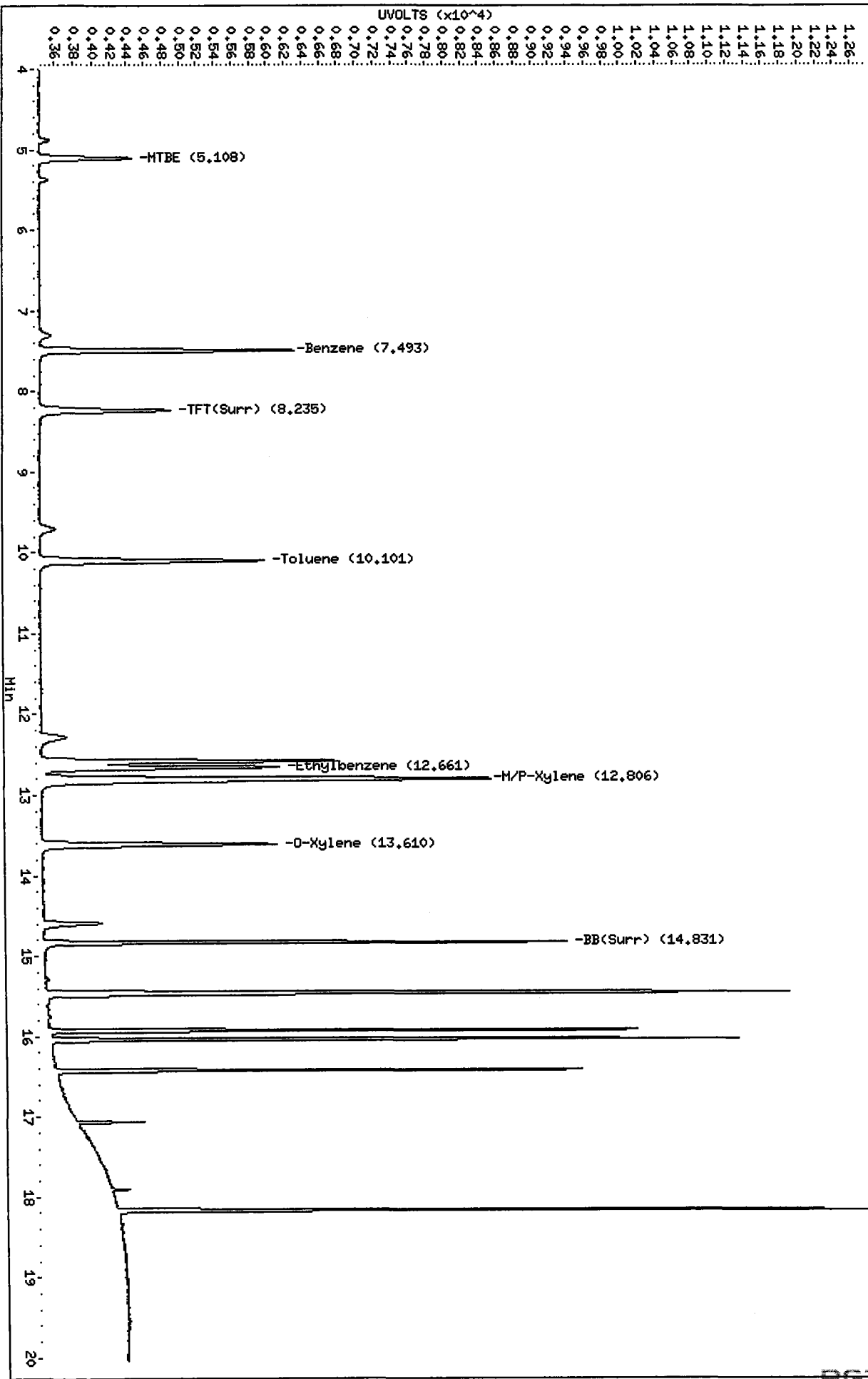
Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18



Data File: /chem3/pid2.i/072810-2.b/0728a002.d  
Date: 28-JUL-2010 06:29  
Client ID:  
Sample Info: RT+BCAL 1  
Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/072810-2.b/0728a002.d/0728a002.cdf



MH  
7/27/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a005.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a005.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX .25  
Client ID:  
Injection Date: 28-JUL-2010 09:30  
Matrix: WATER  
Dilution Factor: 1.000

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.186	0.009	1004	17704	24.2	TFT (Surr)
14.805	0.007	731	6984	24.2	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
WAGas (Tol-C12)	7288	0.013
8015B (2MP-TMB)	7236	0.006
AKGas (nC6-nC10)	6650	0.007
NWGas (Tol-Nap)	7288	0.012

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.237	0.011	337	23.4	TFT (Surr)
14.830	0.005	1364	23.5	BB (Surr)

AROMATICS (PID)

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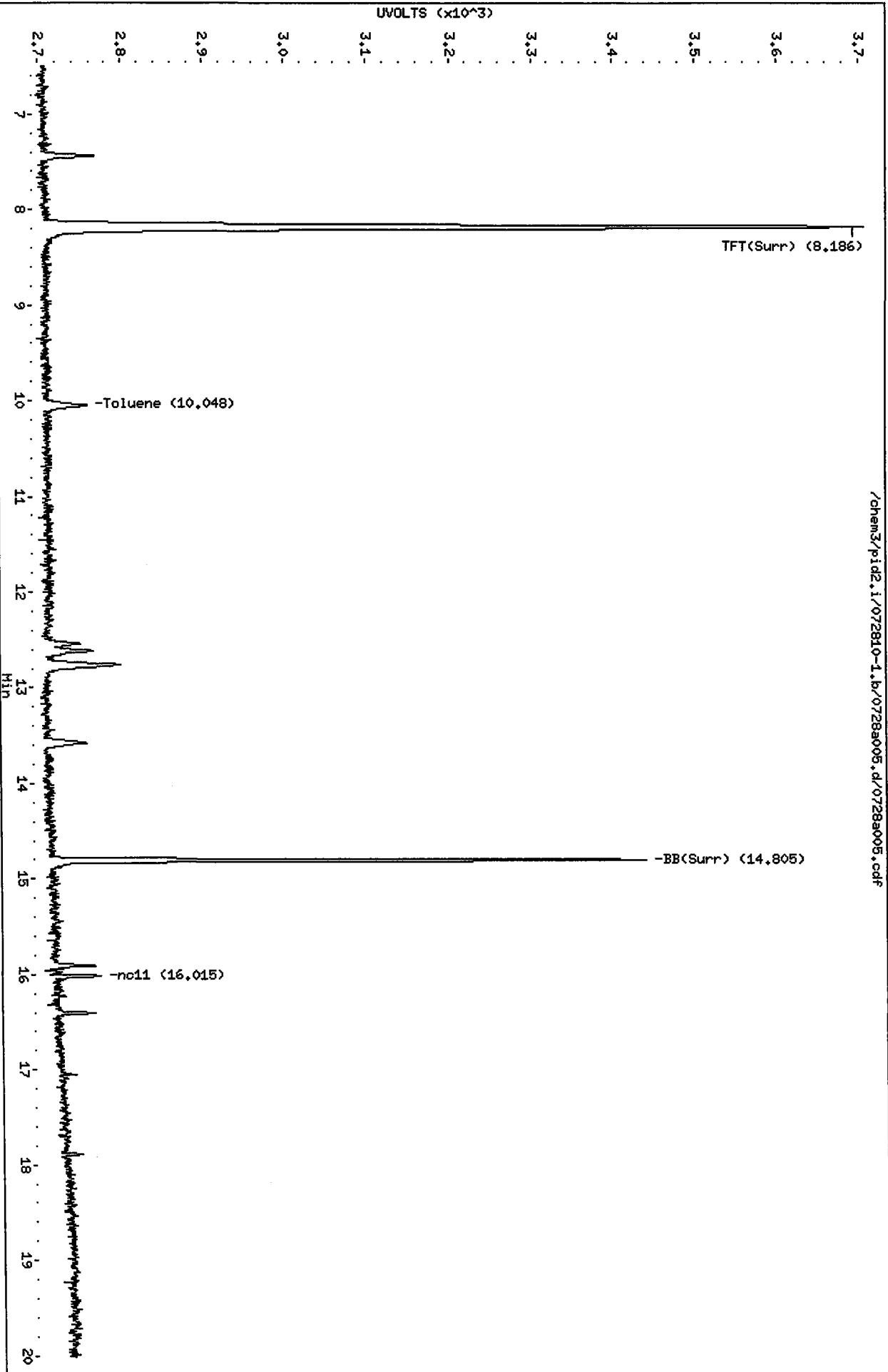
RT	Shift	Response	Amount	Compound
7.490	0.007	31	0.27N	Benzene
10.093	0.000	30	0.29N	Toluene
12.660	0.004	34	0.30N	Ethylbenzene
12.813	0.011	42	0.43N	M/P-Xylene
13.617	0.012	20	0.20N	O-Xylene
5.117	0.017	11	0.26N	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/p1d2.i/072810-1.b/0728a005.d  
Date : 28-JUL-2010 09:30  
Client ID:  
Sample Info: BETX .25  
Column phase: RTX 502-2 FID

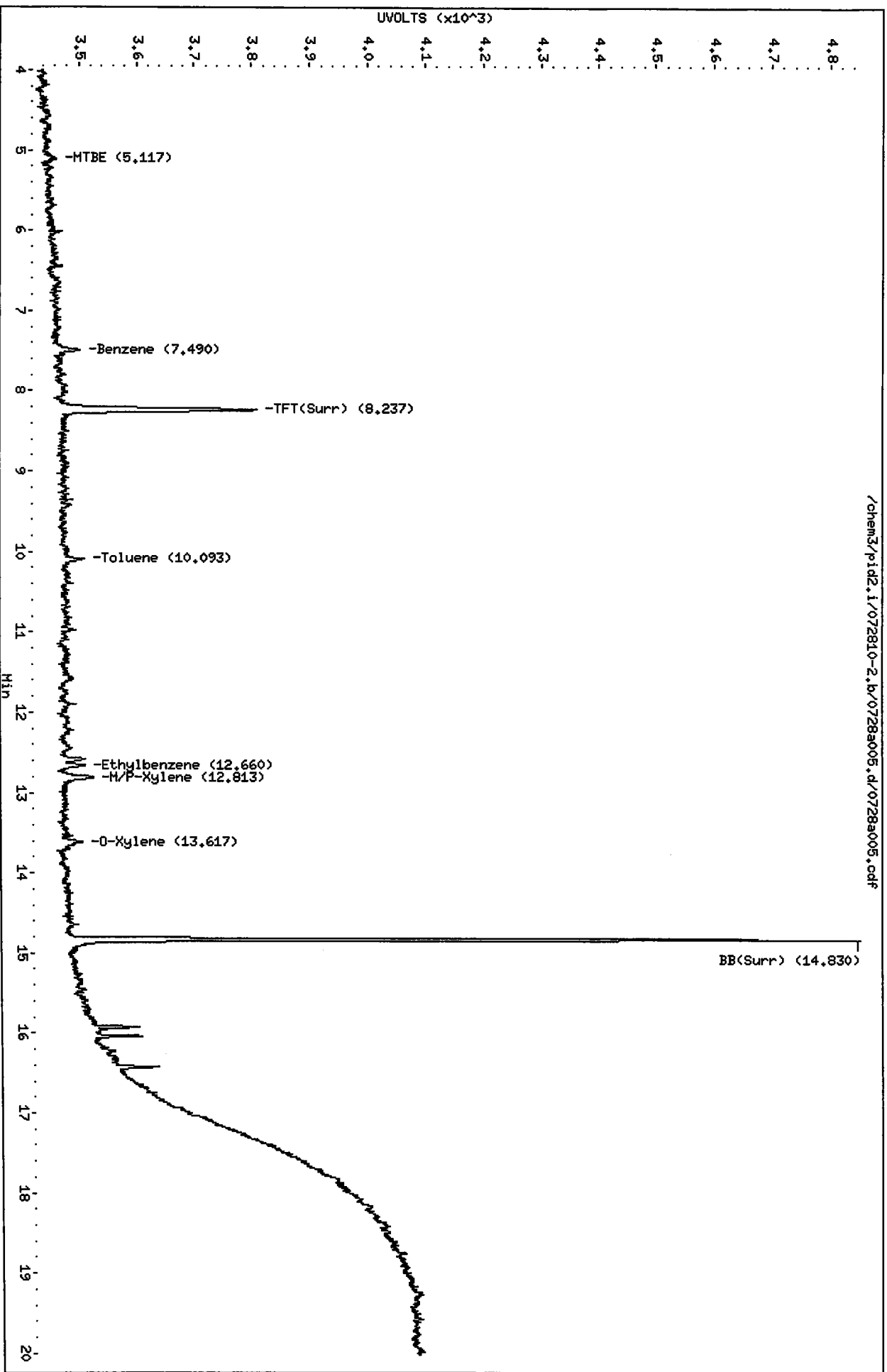
Instrument: p1d2.i  
Operator: MH  
Column diameter: 0.18



Data File: /chem3/pid2.i/072810-2.b/0728a005.d  
Date: 28-JUL-2010 09:30  
Client ID:  
Sample Info: BETX .25  
Column phase: RTX 502-2 PID

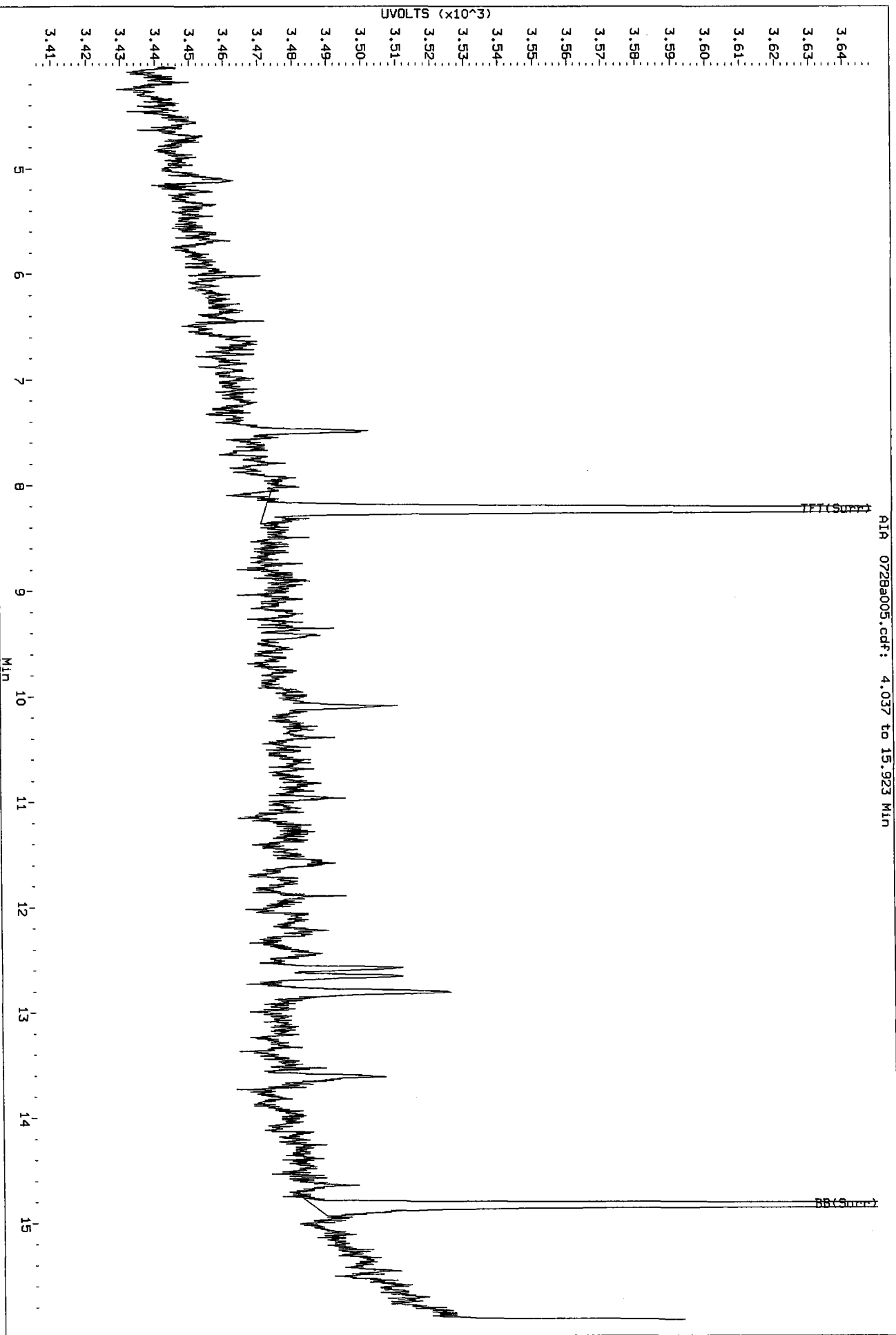
Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/072810-2.b/0728a005.d/0728a005.cdf

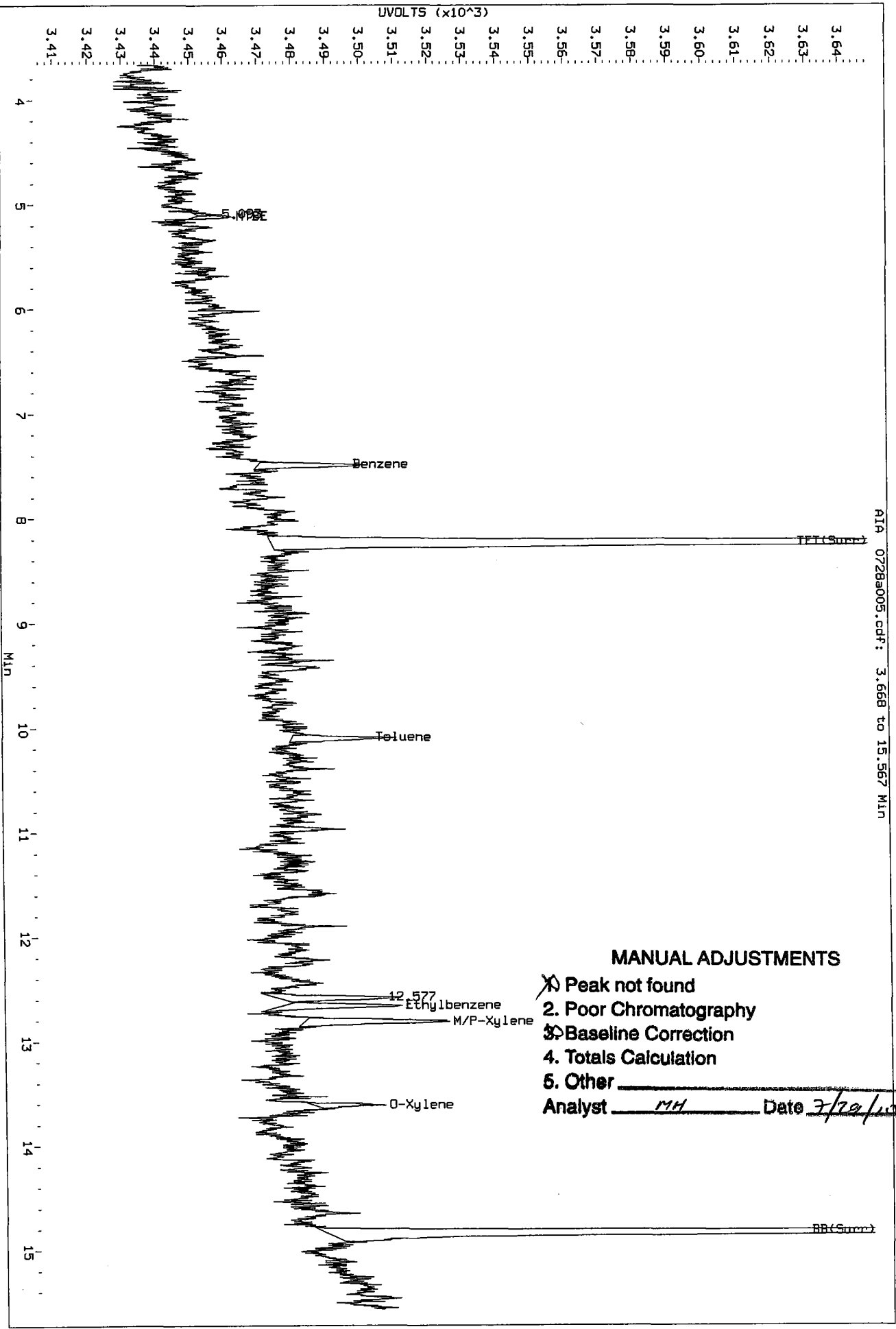


HW  
XPL/ML

Data File: /chem3/pid2.1/072810-2.b/0728a005.d/0728a005.cdf  
Injection Date: 28-JUL-2010 09:30  
Instrument: pid2.1  
Client Sample ID:



Data File: /chem3/p1d2.1/072810-2.b/0728a005.d/0728a005.cdf  
 Injection Date: 28-JUL-2010 09:30  
 Instrument: p1d2.1  
 Client Sample ID:



AIA 0728a005.cdf: 3.668 to 15.567 MIN

**MANUAL ADJUSTMENTS**

- Peak not found
  - 2. Poor Chromatography
  - Baseline Correction
  - 4. Totals Calculation
  - 5. Other \_\_\_\_\_
- Analyst MH Date 7/29/10

MH  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a006.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a006.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX .5  
Client ID:  
Injection Date: 28-JUL-2010 09:56  
Matrix: WATER  
Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.183	0.007	1871	31844	45.1	TFT(Surr)
14.803	0.006	1366	12485	45.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
WAGas (Tol-C12)	10591	0.018
8015B (2MP-TMB)	11287	0.009
AKGas (nC6-nC10)	10286	0.012
NWGas (Tol-Nap)	10591	0.018

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.230	0.004	623	43.4	TFT(Surr)
14.830	0.005	2575	44.3	BB(Surr)

AROMATICS (PID)

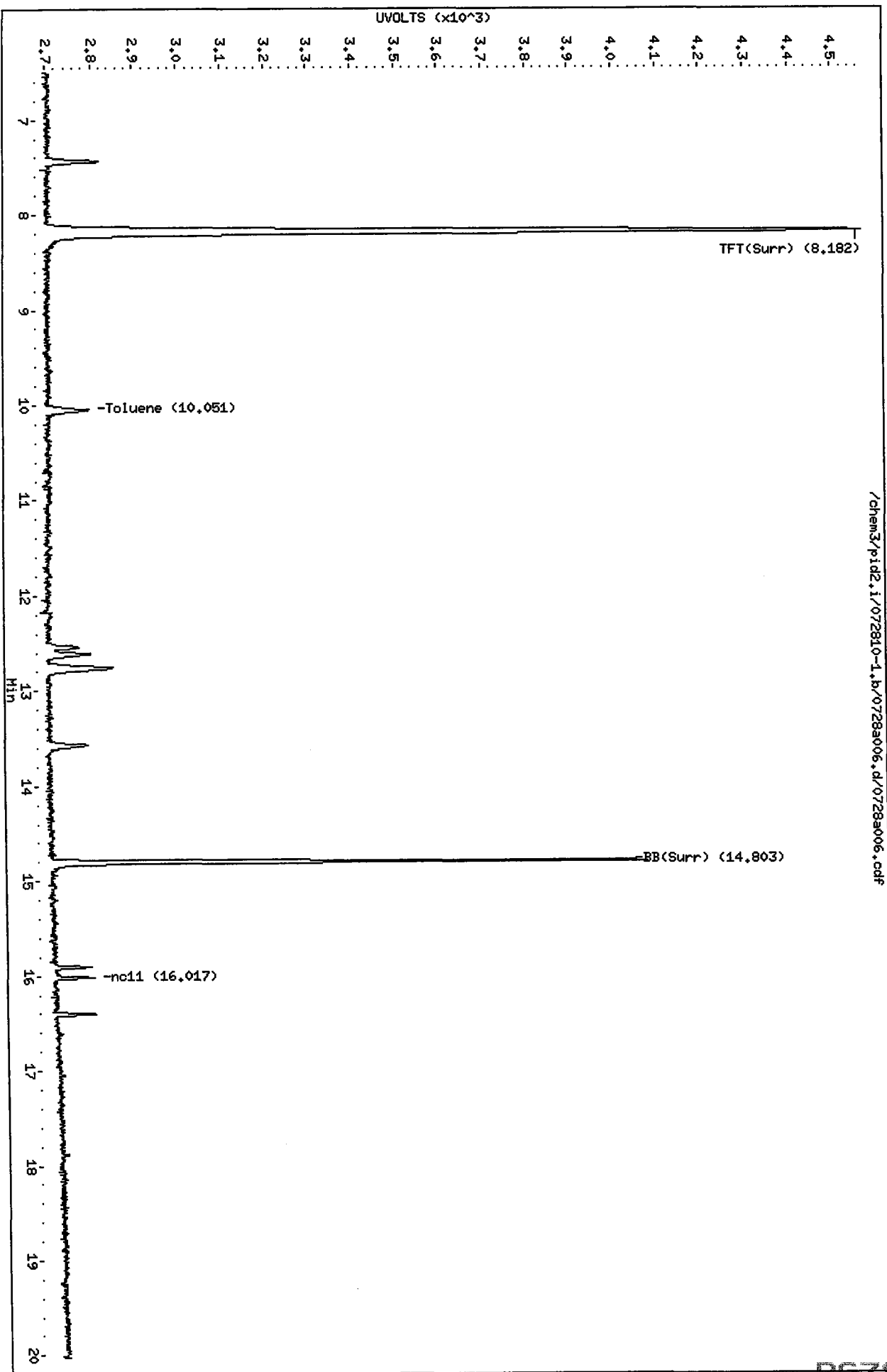
-----

RT	Shift	Response	Amount	Compound
7.483	0.000	58	0.50N	Benzene
10.090	-0.003	48	0.46N	Toluene
12.660	0.004	64	0.56N	Ethylbenzene
12.810	0.007	95	0.98N	M/P-Xylene
13.603	-0.002	55	0.54N	O-Xylene
5.110	0.010	22	0.52N	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a006.d  
Date : 28-JUL-2010 09:56  
Client ID:  
Sample Info: BETX .5  
Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



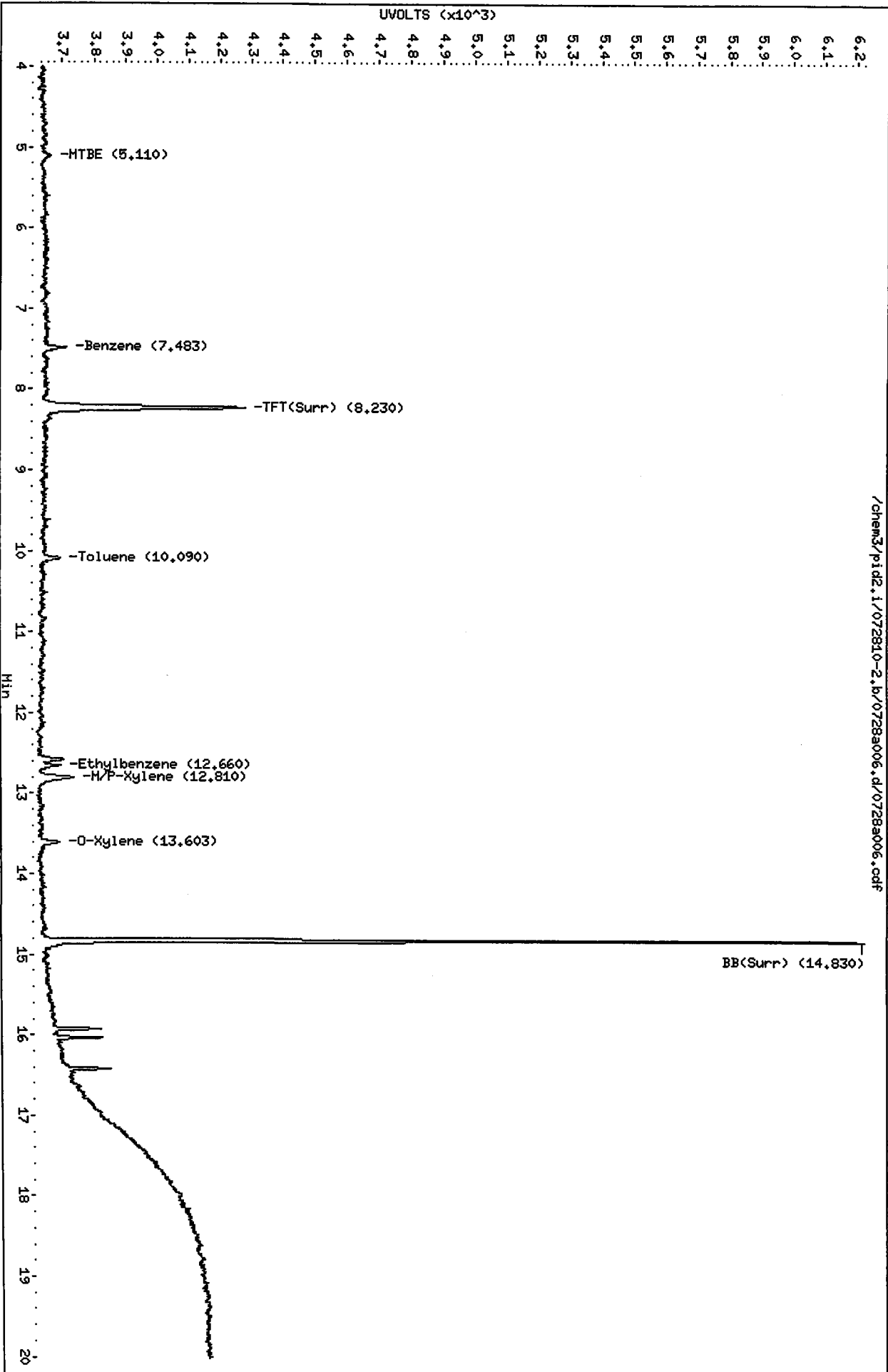
/chem3/pid2.i/072810-1.b/0728a006.d/0728a006.cdf

Data File: /chem3/pid2.i/072810-2.b/0728a006.d  
Date : 28-JUL-2010 09:56  
Client ID:  
Sample Info: BETX .5

Column phaset: RTX 502-2 PID

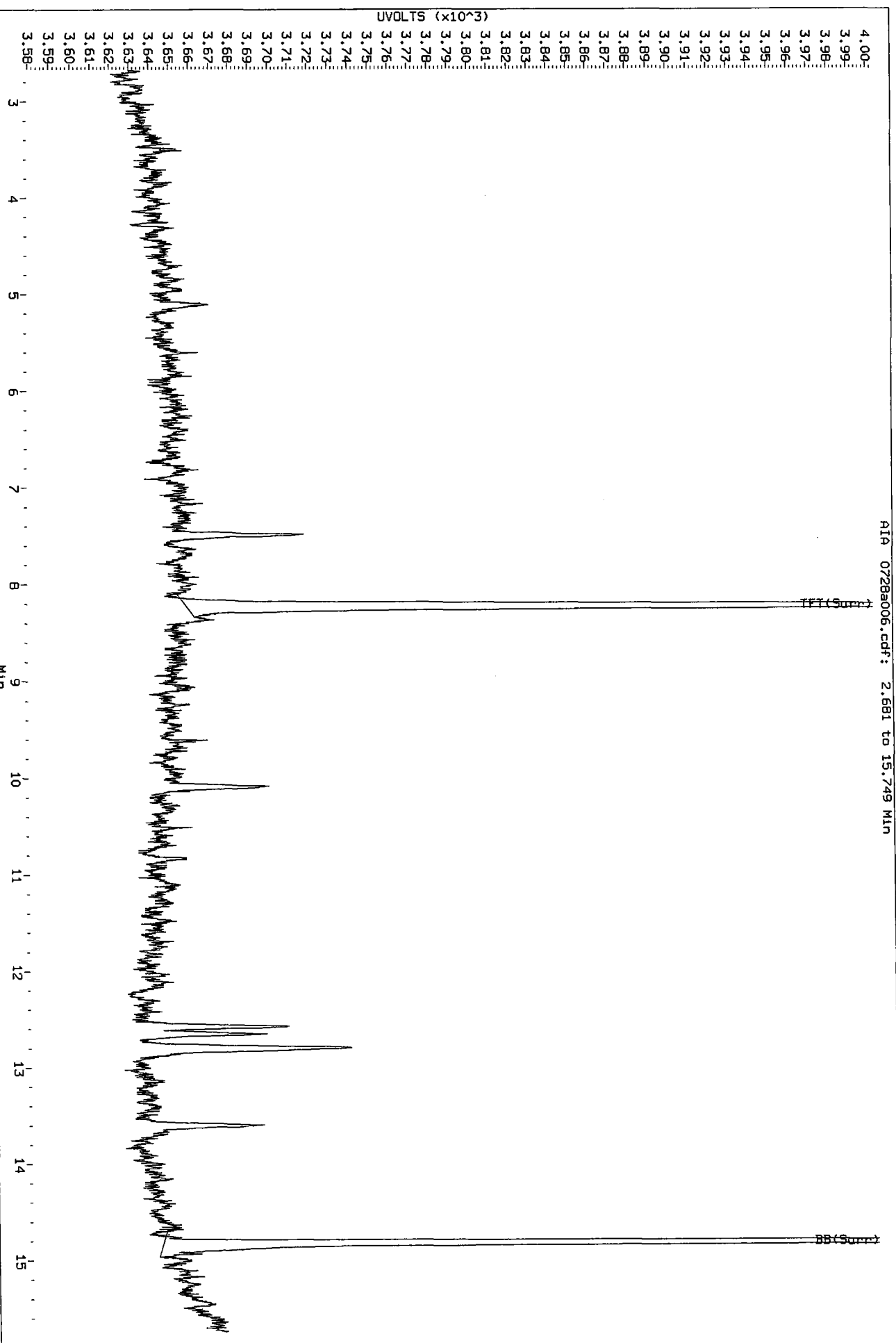
Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid2.i/072810-2.b/0728a006.d/0728a006.cdf



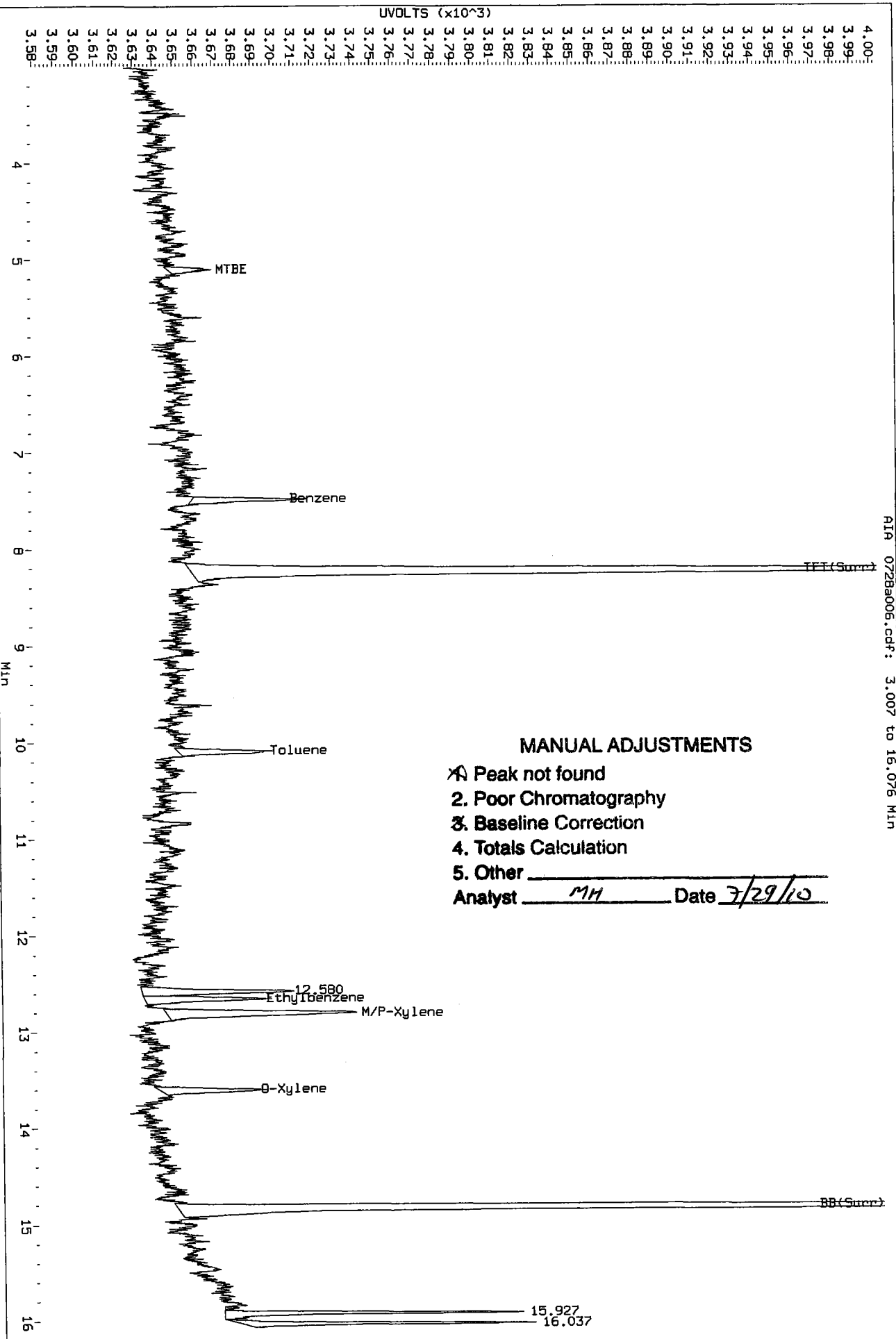
MH  
7/21/10

Data File: /chem3/pid2.1/072810-2\_b/0728a006.d/0728a006.cdf  
Injection Date: 28-JUL-2010 09:56  
Instrument: pid2.1  
Client Sample ID:





Data File: /chem3/pid2.1/072810-2.b/0728a006.d/0728a006.cdf  
 Injection Date: 28-JUL-2010 09:56  
 Instrument: pid2.1  
 Client Sample ID:



AIA 0728a006.cdf: 3.007 to 16.076 MIN

7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a007.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a007.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX 5  
Client ID:  
Injection Date: 28-JUL-2010 10:22  
Matrix: WATER  
Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.183	0.006	2804	47731	67.5	TFT (Surr)
14.802	0.004	2037	19317	67.5	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	91696	0.159
8015B (2MP-TMB)	94785	0.073
AKGas (nC6-nC10)	86610	0.097
NWGas (Tol-Nap)	91696	0.152

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.233	0.008	959	66.7	TFT (Surr)
14.830	0.005	3944	67.8	BB (Surr)

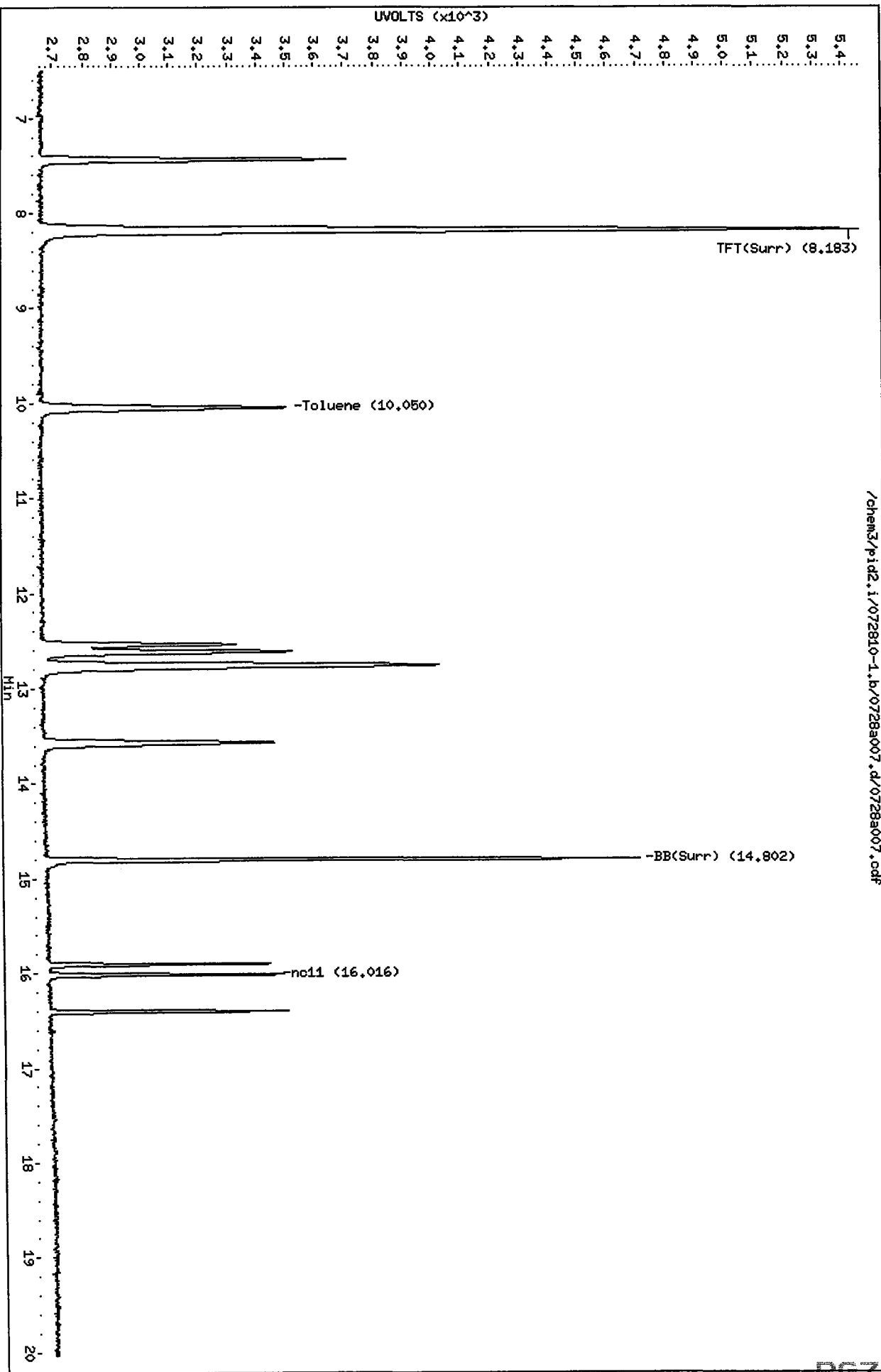
AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.490	0.007	591	5.08N	Benzene
10.097	0.003	509	4.91N	Toluene
12.658	0.002	551	4.81	Ethylbenzene
12.803	0.001	1008	10.40N	M/P-Xylene
13.610	0.005	529	5.21N	O-Xylene
5.103	0.003	211	5.03N	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a007.d  
Date : 28-JUL-2010 10:22  
Client ID:  
Sample Info: BEIX 5  
Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: NH  
Column diameter: 0.18



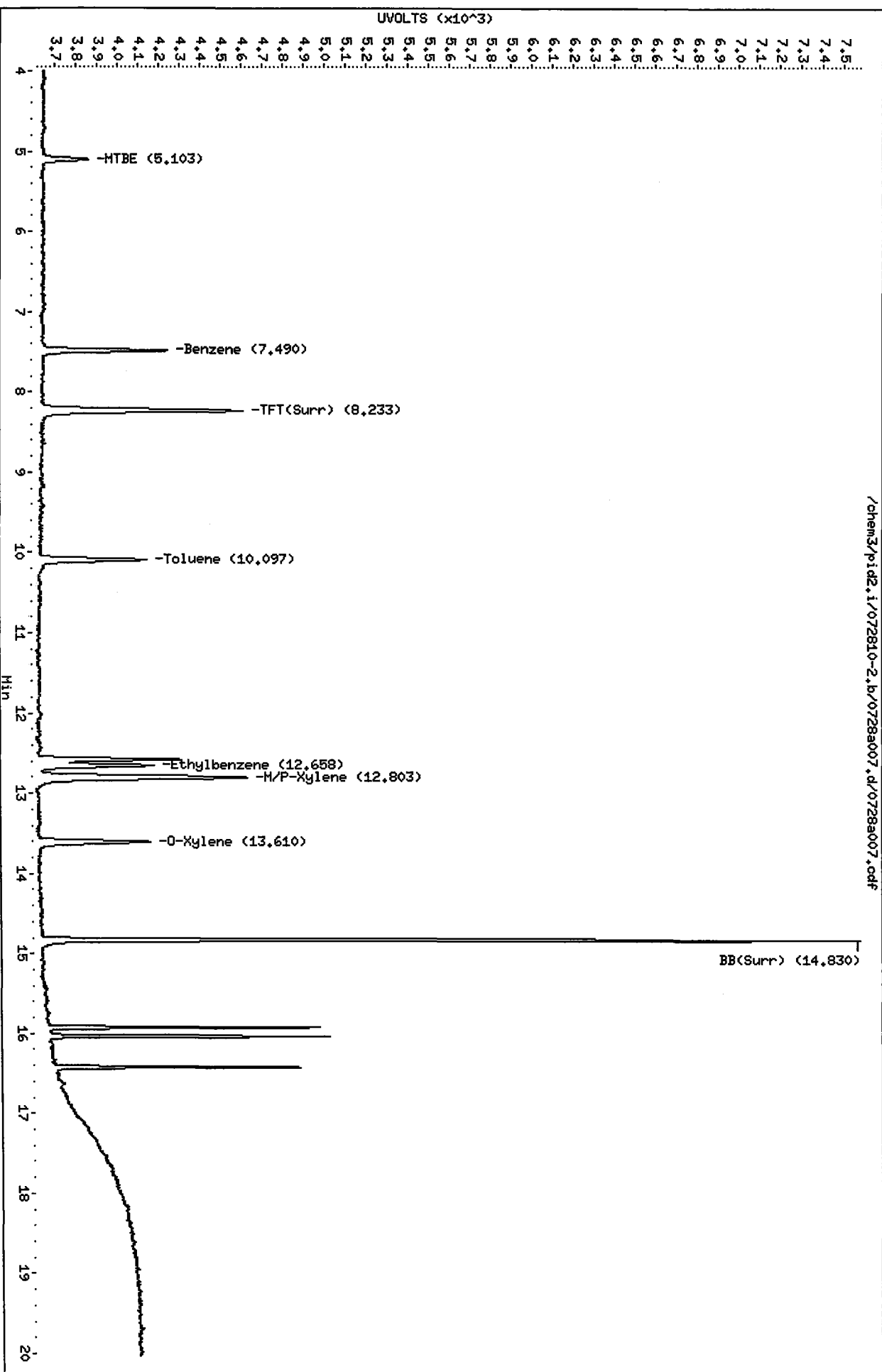
/chem3/pid2.i/072810-1.b/0728a007.d/0728a007.cdf

M4  
7/27/04

Data File: /chem3/pid2.i/072810-2.b/0728a007.d  
Date: 28-JUL-2010 10:22  
Client ID:  
Sample Info: BETX 5  
Column phase: RTX 502-2 P10

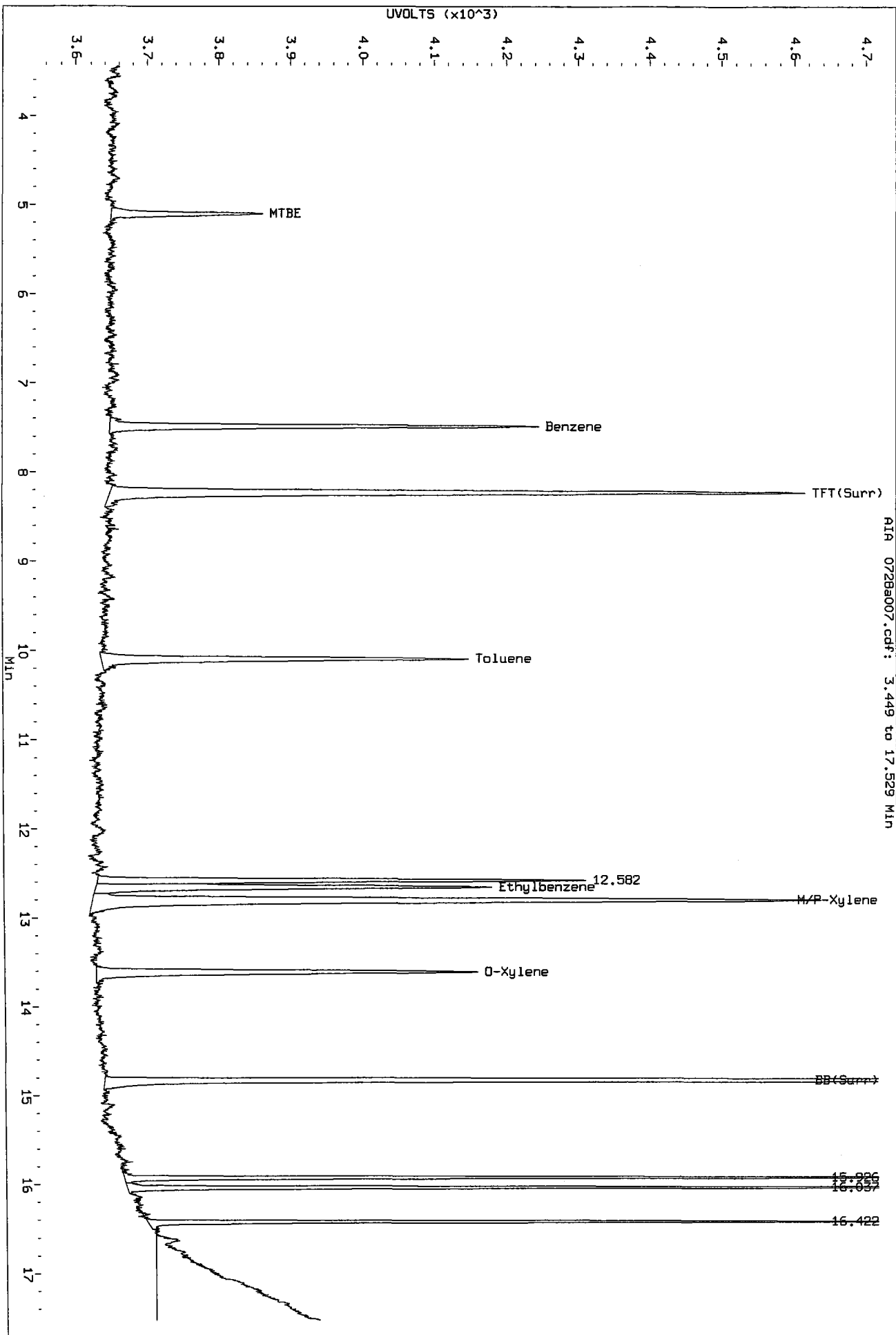
Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/072810-2.b/0728a007.d/0728a007.pdf



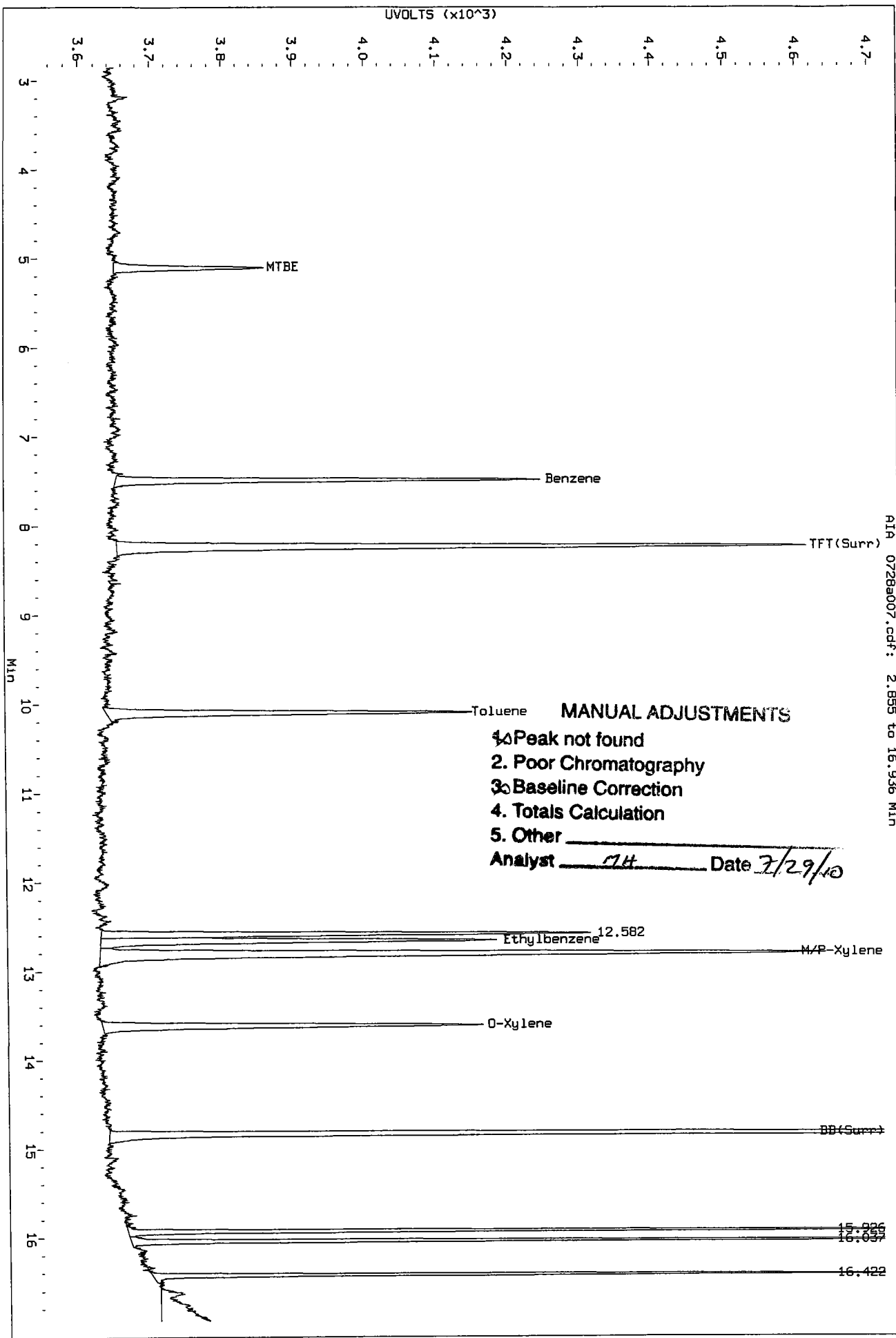
MH  
7/29/10

Data File: /chem3/pid2.1/072810-2\_b/0728a007.d/0728a007.cdf  
Injection Date: 28-JUL-2010 10:22  
Instrument: pid2.1  
Client Sample ID:



AIR 0728a007.cdf: 3.449 to 17.529 MIN

Data File: /chem3/pid2.1/072810-2.b/0728a007.d/0728a007.cdf  
Injection Date: 28-JUL-2010 10:22  
Instrument: pid2.1  
Client Sample ID:



7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a008.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a008.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX 25  
Client ID:  
Injection Date: 28-JUL-2010 10:48  
Matrix: WATER  
Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.180	0.003	4065	67933	97.9	TFT (Surr)
14.801	0.004	2969	27339	98.4	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	427992	0.742
8015B (2MP-TMB)	442018	0.339
AKGas (nC6-nC10)	405644	0.456
NWGas (Tol-Nap)	427992	0.711

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.230	0.004	1424	99.1	TFT (Surr)
14.827	0.002	5765	99.1	BB (Surr)

AROMATICS (PID)

-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.487	0.003	2869	24.64N	Benzene
10.093	0.000	2541	24.50N	Toluene
12.656	0.000	2692	23.49	Ethylbenzene
12.800	-0.003	4968	51.27N	M/P-Xylene
13.607	0.001	2617	25.78	O-Xylene
5.103	0.003	1045	24.89N	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

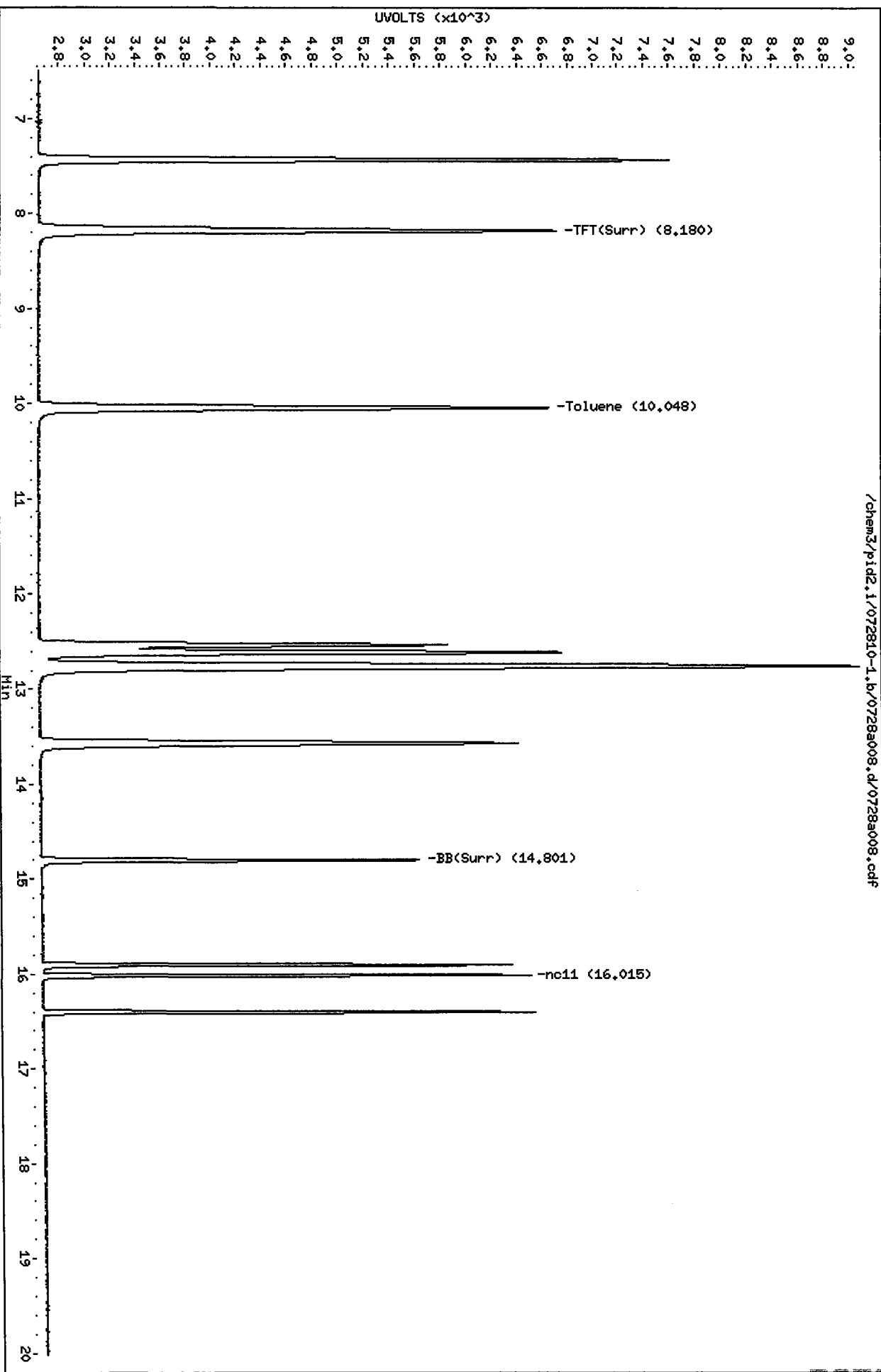
Data File: /chem3/pid2.1/072810-1.b/0728a008.d  
Date: 28-JUL-2010 10:48

Client ID:  
Sample Info: BETX 25

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid2.1/072810-1.b/0728a008.d/0728a008.cdf





Data File: /chem3/pid2.1/072810-2.b/0728a008.d

Date: 28-JUL-2010 10:48

Client ID:

Sample Info: BETX 25

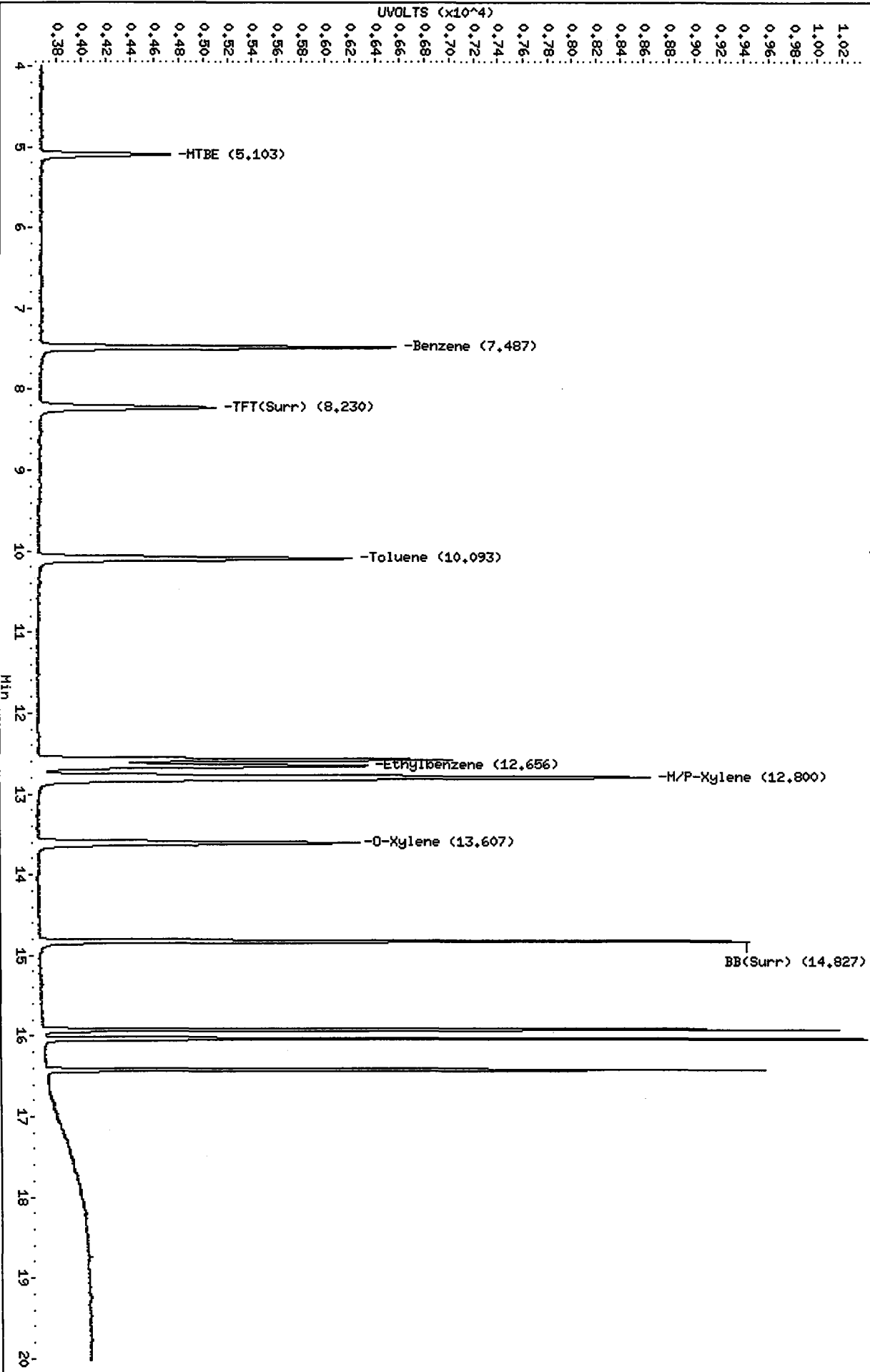
Column phase: RTX 502-2 PID

Instrument: pid2.1

Operator: MH

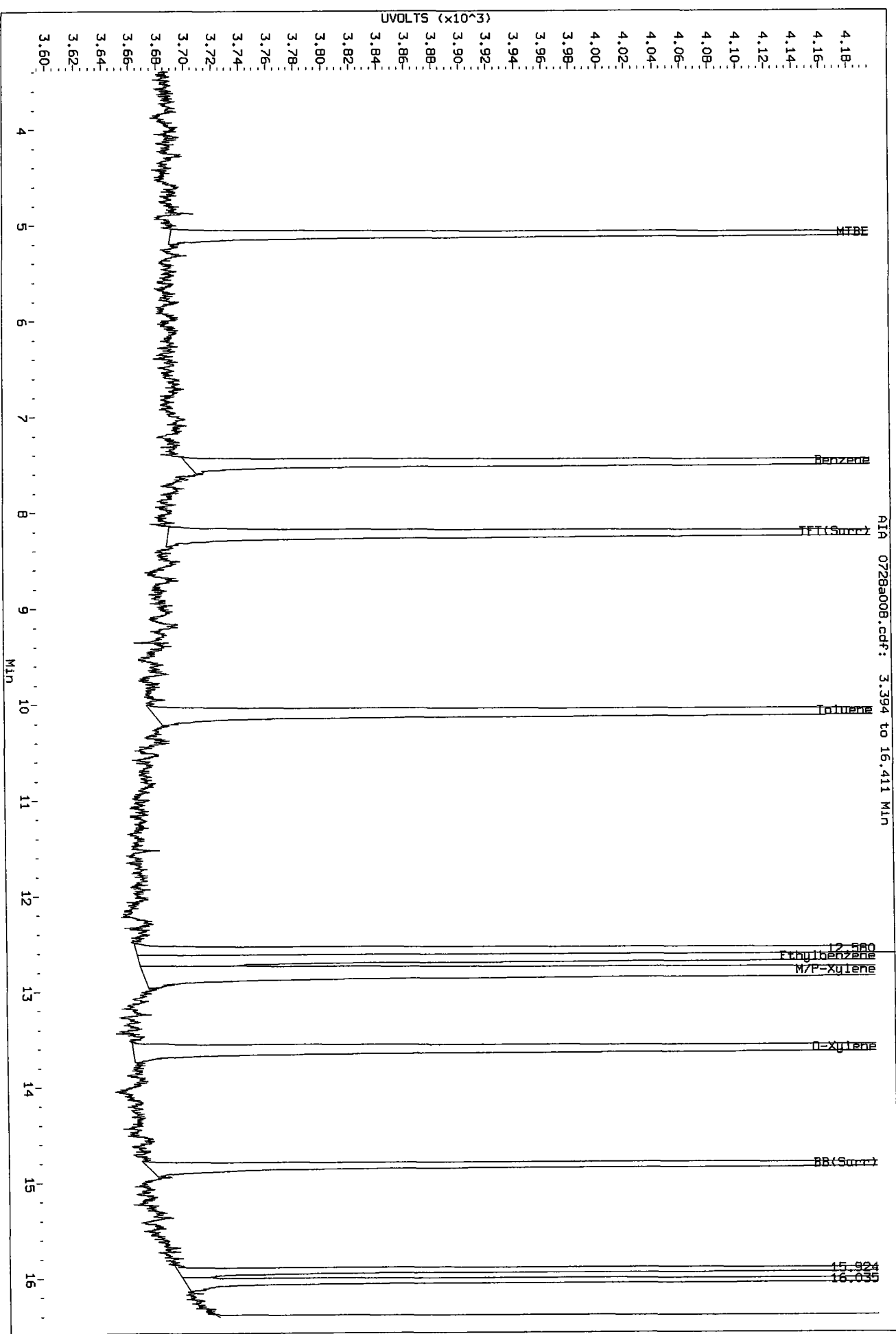
Column diameter: 0.18

/chem3/pid2.1/072810-2.b/0728a008.d/0728a008.cdf

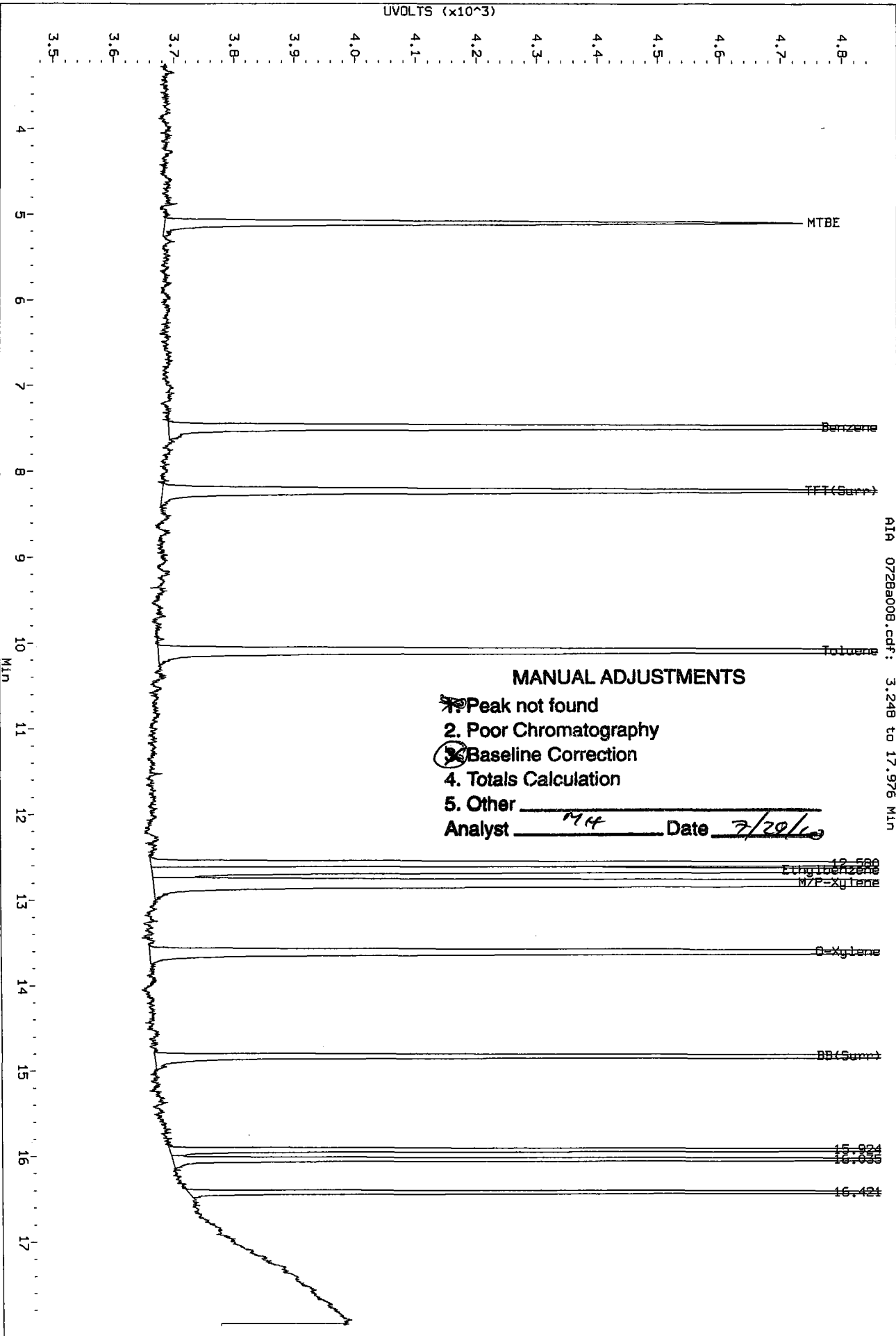


MH  
7/29/10

Data File: /chem3/pid2.1/072810-2.b/0728a008.d/0728a008.cdf  
Injection Date: 28-JUL-2010 10:48  
Instrument: pid2.1  
Client Sample ID:



Data File: /chem3/pid2.1/072810-2.b/0728a008.d/0728a008.cdf  
 Injection Date: 28-JUL-2010 10:48  
 Instrument: pid2.1  
 Client Sample ID:



A19 0728a008.cdf: 3.248 to 17.976 MIN

7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a009.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a009.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX 50  
Client ID:  
Injection Date: 28-JUL-2010 11:14  
Matrix: WATER  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.180	0.004	5372	89588	129.4	TFT (Surr)
14.801	0.004	3943	36392	130.6	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	831925	1.442
8015B (2MP-TMB)	861504	0.660
AKGas (nC6-nC10)	790482	0.889
NWGas (Tol-Nap)	831925	1.382

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.230	0.004	1891	131.6	TFT (Surr)
14.827	0.002	7642	131.4	BB (Surr)

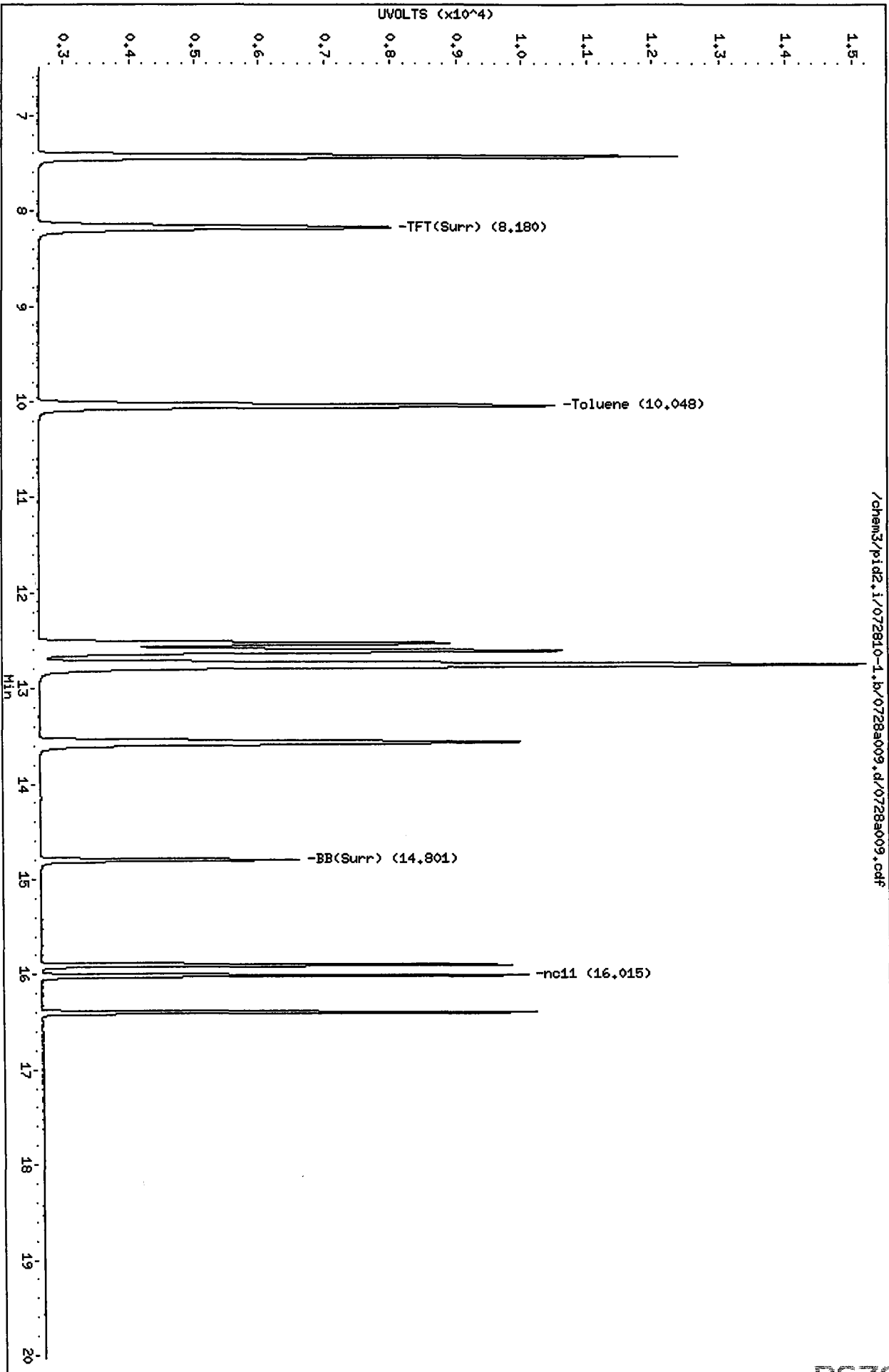
AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.487	0.003	5787	49.70N	Benzene
10.097	0.003	5047	48.66N	Toluene
12.656	0.000	5333	46.53	Ethylbenzene
12.803	0.001	9750	100.62N	M/P-Xylene
13.607	0.002	5118	50.41N	O-Xylene
5.100	0.000	2066	49.21N	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

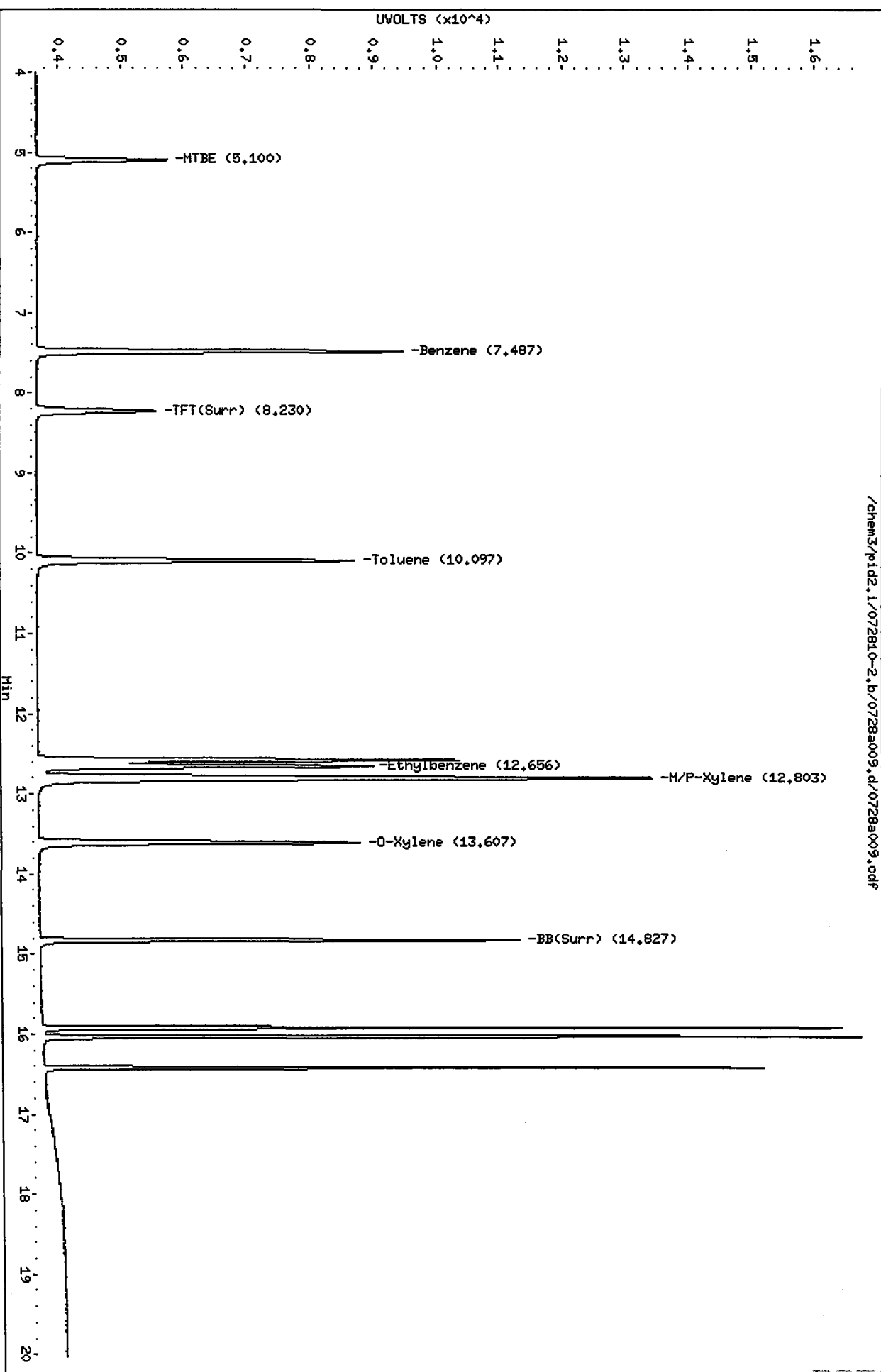
Data File: /chem3/pid2.i/072810-1.b/0728a009.d  
Date : 28-JUL-2010 11:14  
Client ID:  
Sample Info: BETX 50  
Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



Data File: /chem3/pid2.i/072810-2.b/0728a009.d  
Date : 28-JUL-2010 11:14  
Client ID:  
Sample Info: BETX 50  
Column phase: RTX 502-2 PID

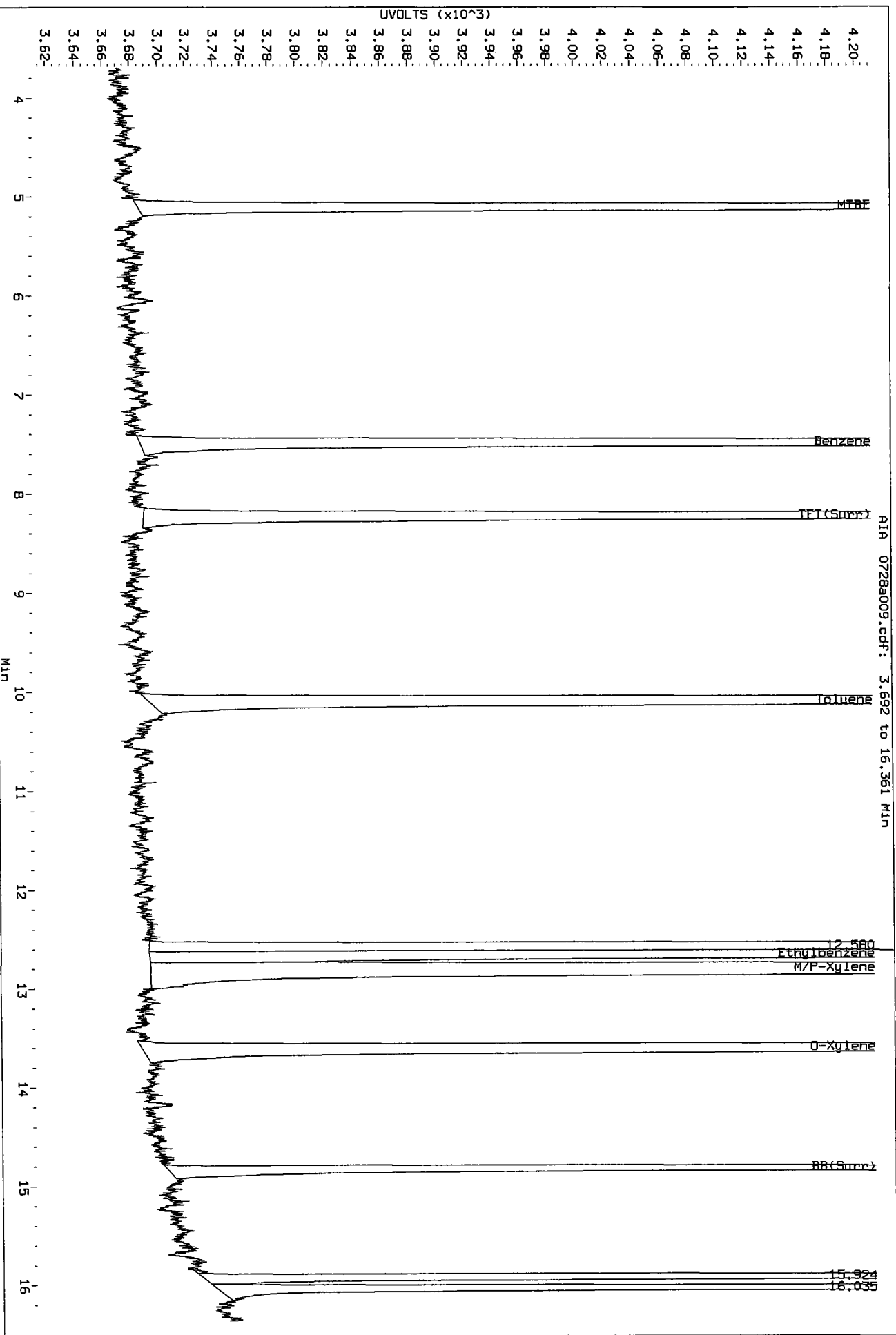
Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18



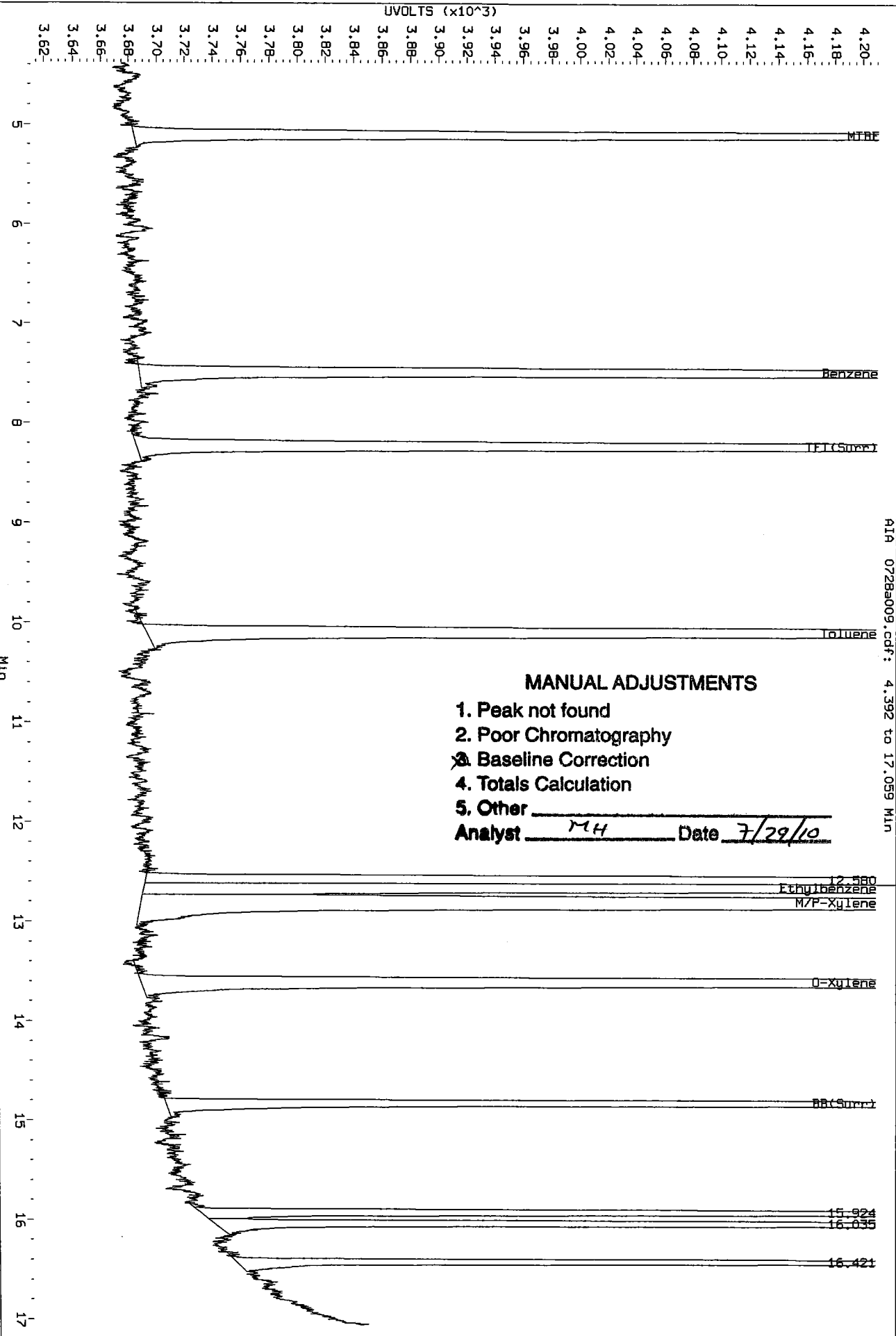
/chem3/pid2.i/072810-2.b/0728a009.d/0728a009.cdf

MH  
7/29/10

Data File: /chem3/pid2.1/072810-2.b/0728a009.d/0728a009.cdf  
Injection Date: 28-JUL-2010 11:14  
Instrument: pid2.1  
Client Sample ID:



Data File: /chem3/pid2.1/072810-2.b/0728a009.d/0728a009.cdf  
 Injection Date: 28-JUL-2010 11:14  
 Instrument: pid2.1  
 Client Sample ID:





7/28/10  
MH

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a010.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a010.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX 100  
Client ID:  
Injection Date: 28-JUL-2010 11:40  
Matrix: WATER  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.177	0.000	7169	115611	172.7	TFT(Surr)
14.799	0.001	5178	46881	171.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas (Tol-C12)	1573798	2.728
8015B (2MP-TMB)	1626264	1.246
AKGas (nC6-nC10)	1492490	1.678
NWGas (Tol-Nap)	1573798	2.614

\* Surrogate areas are subtracted from Total Area

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.223	-0.002	2514	174.9	TFT(Surr)
14.825	0.000	10164	174.8	BB(Surr)

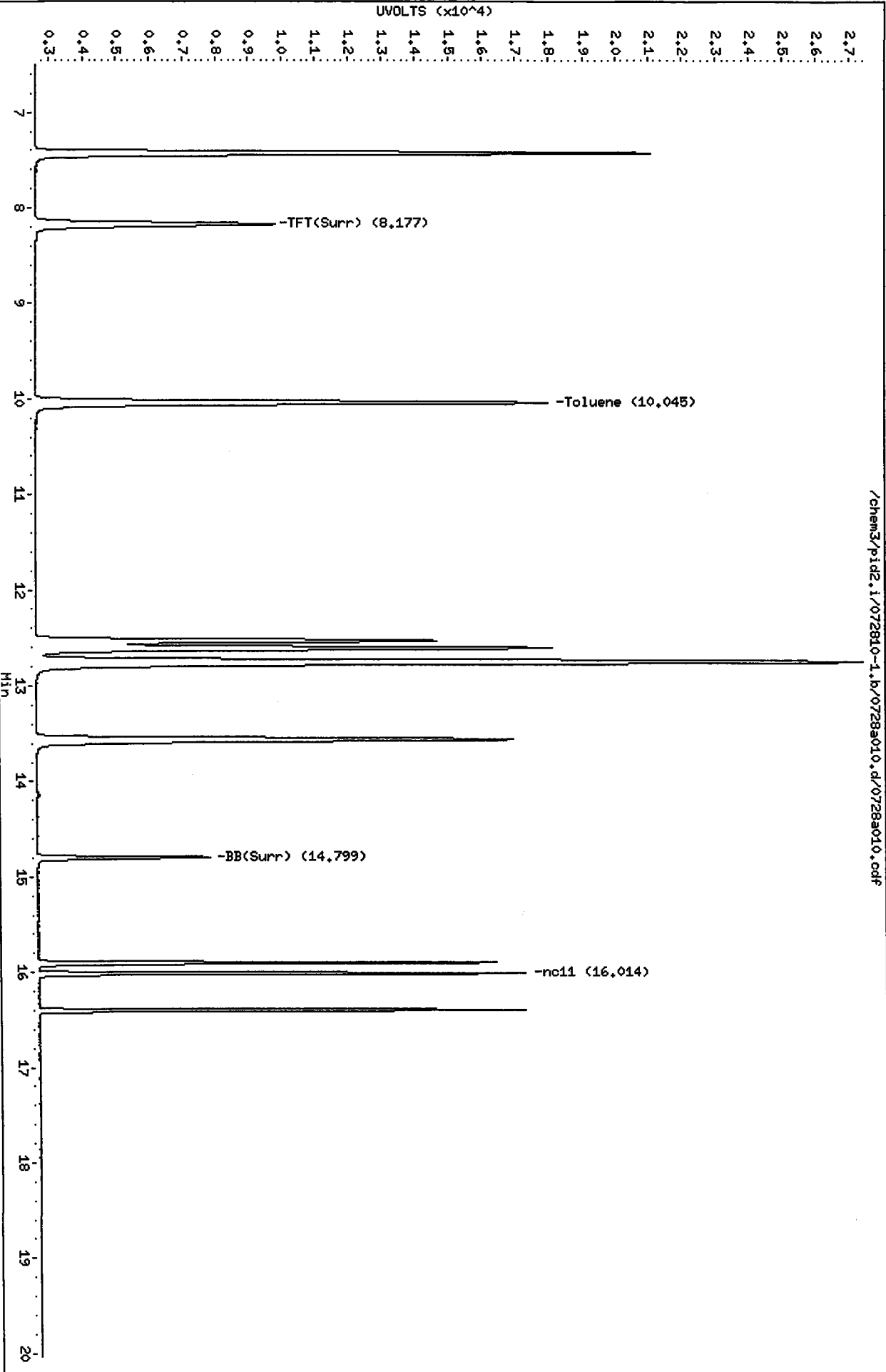
AROMATICS (PID)

RT	Shift	Response	Amount	Compound
7.483	0.000	11102	95.34N	Benzene
10.093	0.000	9966	96.08N	Toluene
12.654	-0.002	10471	91.36	Ethylbenzene
12.799	-0.003	19562	201.88	M/P-Xylene
13.603	-0.002	10159	100.06N	O-Xylene
5.100	0.000	3955	94.20N	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a010.d  
Date : 28-JUL-2010 11:40  
Client ID:  
Sample Info: BETX 100  
Column phase: RTX 502-2 FID

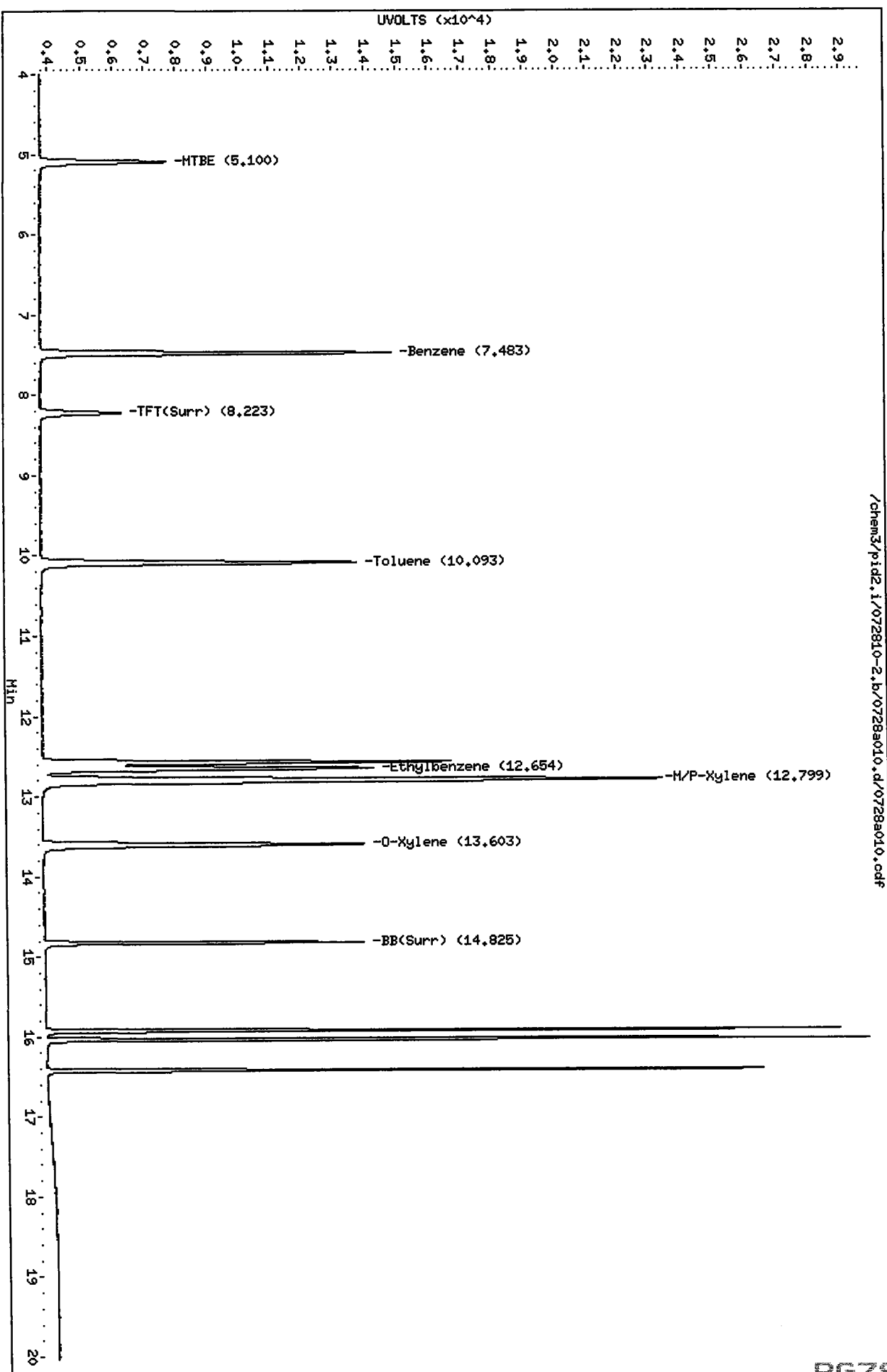
Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid2.i/072810-1.b/0728a010.d/0728a010.cdf

Data File: /chem3/pid2.i/072810-2.b/0728a010.d  
Date: 28-JUL-2010 11:40  
Client ID:  
Sample Info: BETX 100  
Column phase: RTX 502-2 PID

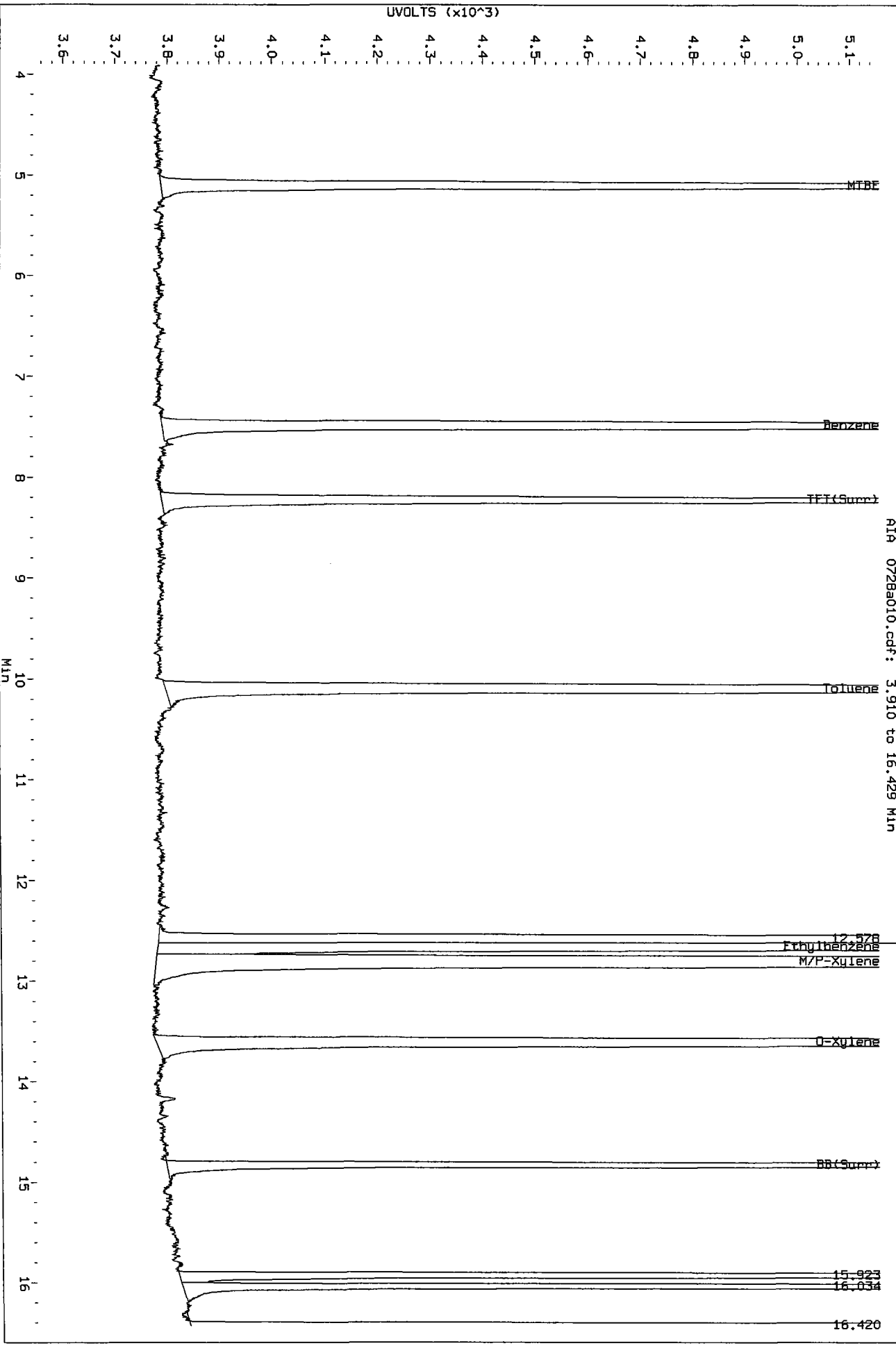
Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



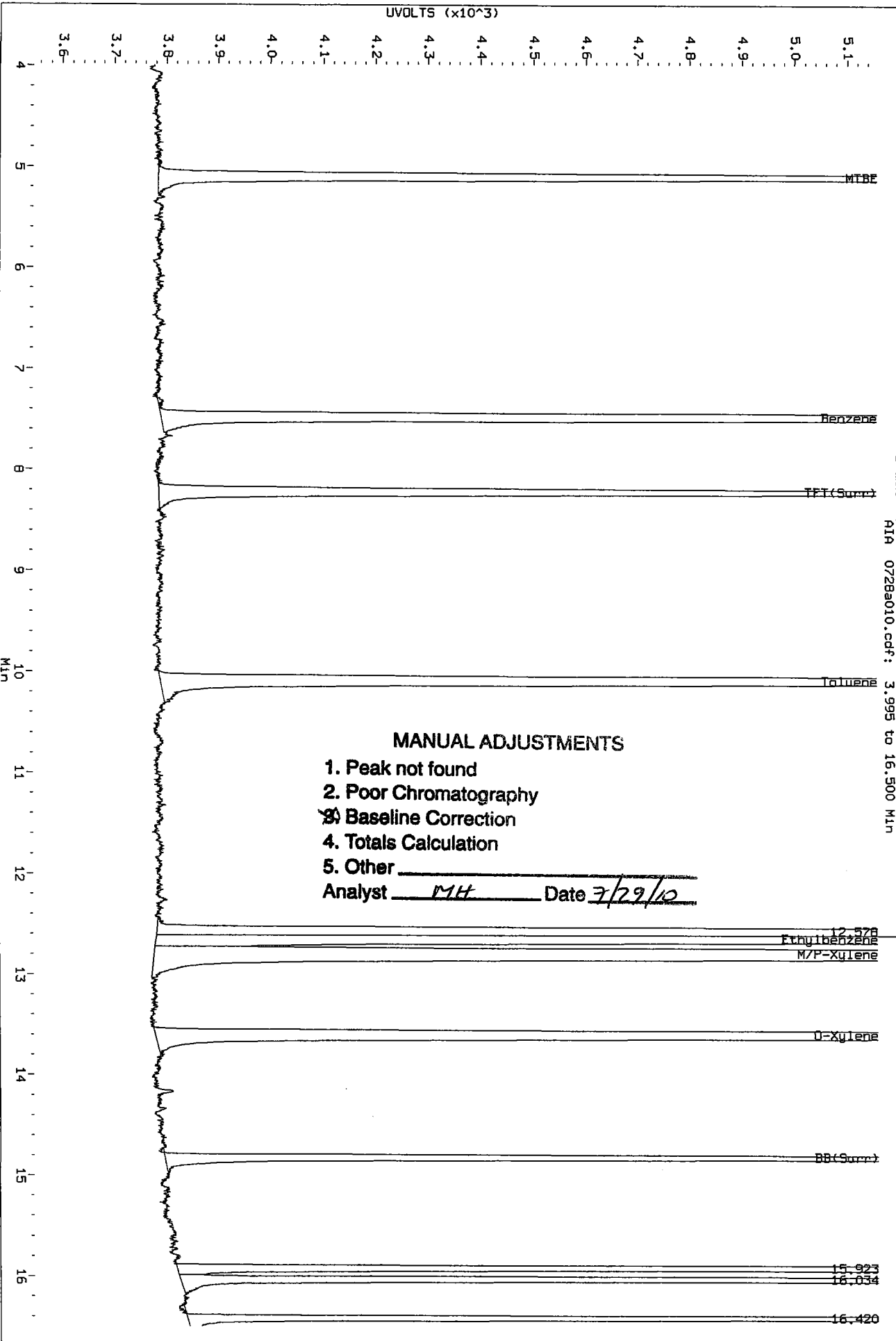
/chem3/pid2.i/072810-2.b/0728a010.d/0728a010.cdf

7/2/2010

Data File: /chem3/p1d2.1/072810-2.b/0728a010.d/0728a010.cdf  
Injection Date: 28-JUL-2010 11:40  
Instrument: p1d2.1  
Client Sample ID:



Data File: /chem3/pid2.1/072810-2.b/0728a010.d/0728a010.cdf  
Injection Date: 28-JUL-2010 11:40  
Instrument: pid2.1  
Client Sample ID:



MH  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a011.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a011.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX 200  
Client ID:  
Injection Date: 28-JUL-2010 12:06  
Matrix: WATER  
Dilution Factor: 1.000

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	-----	-----	-----
8.177	0.000	7858	125529	189.3	TFT(Surr)
14.797	0.000	5640	51262	186.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	3212803	5.569
8015B (2MP-TMB)	3316294	2.542
AKGas (nC6-nC10)	3042318	3.421
NWGas (Tol-Nap)	3212803	5.337

\* Surrogate areas are subtracted from Total Area

=====  
PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	-----	-----
8.226	0.000	2845	198.0	TFT(Surr)
14.825	0.000	11106	191.0	BB(Surr)

AROMATICICS (PID)

-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.483	0.000	23086	198.25N	Benzene
10.093	0.000	21202	204.41N	Toluene
12.656	0.000	21813	190.31	Ethylbenzene
12.803	0.000	41531	428.60	M/P-Xylene
13.605	0.000	21257	209.37	O-Xylene
5.100	0.000	8206	195.45N	MTBE

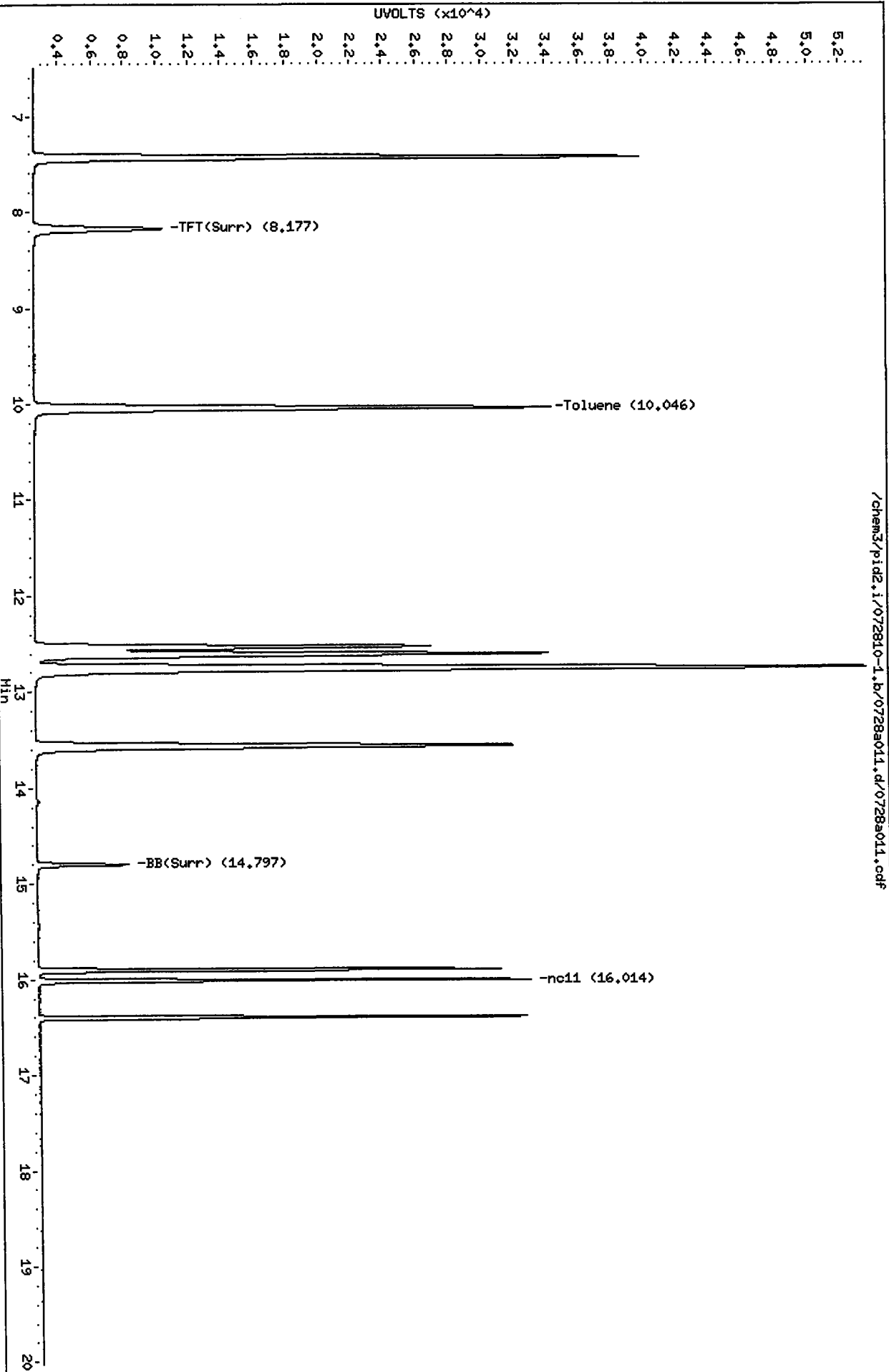
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728s011.d  
Date: 28-JUL-2010 12:06

Client ID:  
Sample Info: BETX 200

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid2.i/072810-1.b/0728s011.d/0728s011.cdf

Data File: /chem3/pid2.i/072810-2.b/0728a011.d

Date : 28-JUL-2010 12:06

Client ID:

Sample Info: BETX 200

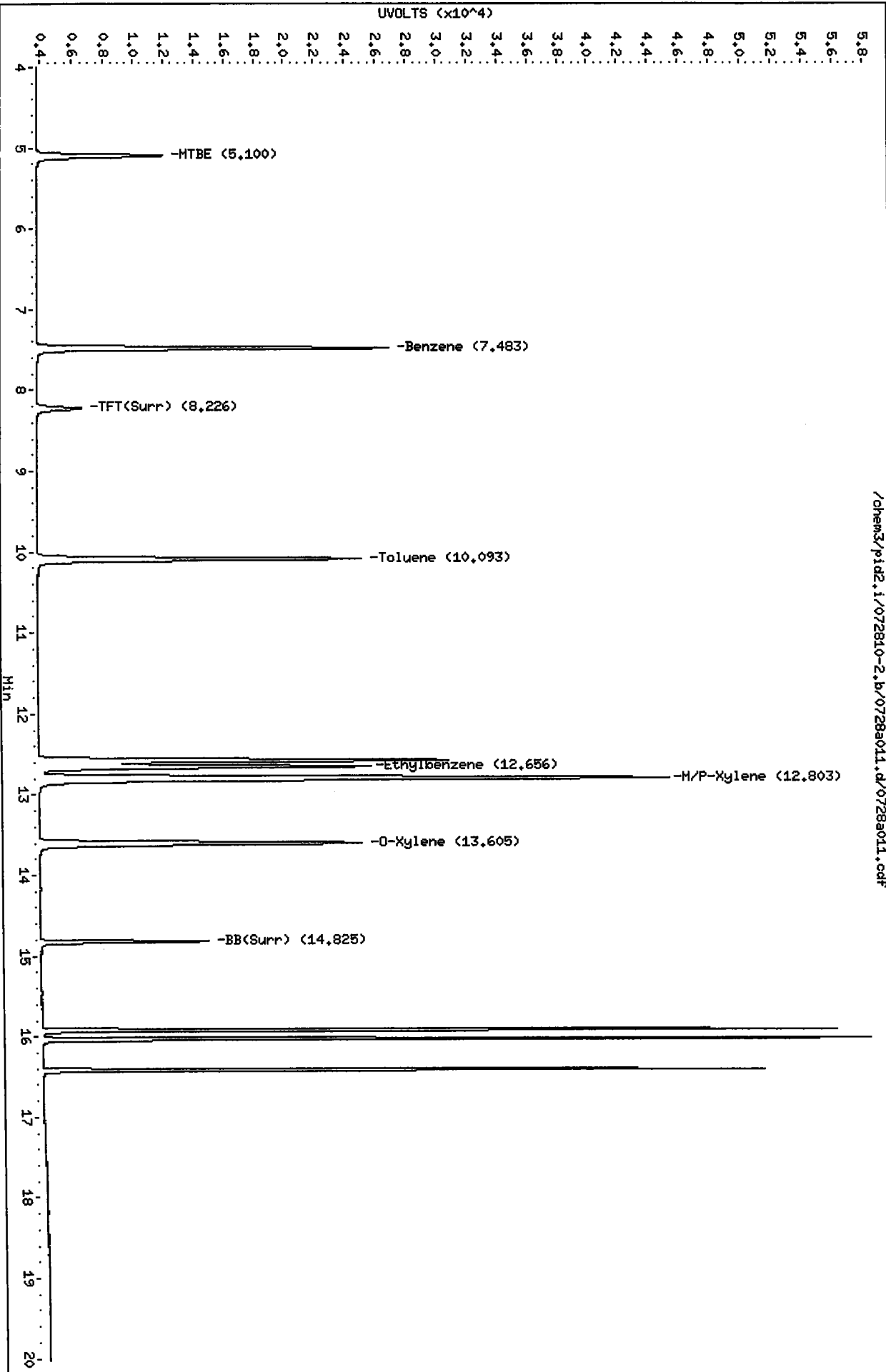
Column phase: RTX 502-2 PID

Instrument: pid2.i

Operator: MH

Column diameter: 0.18

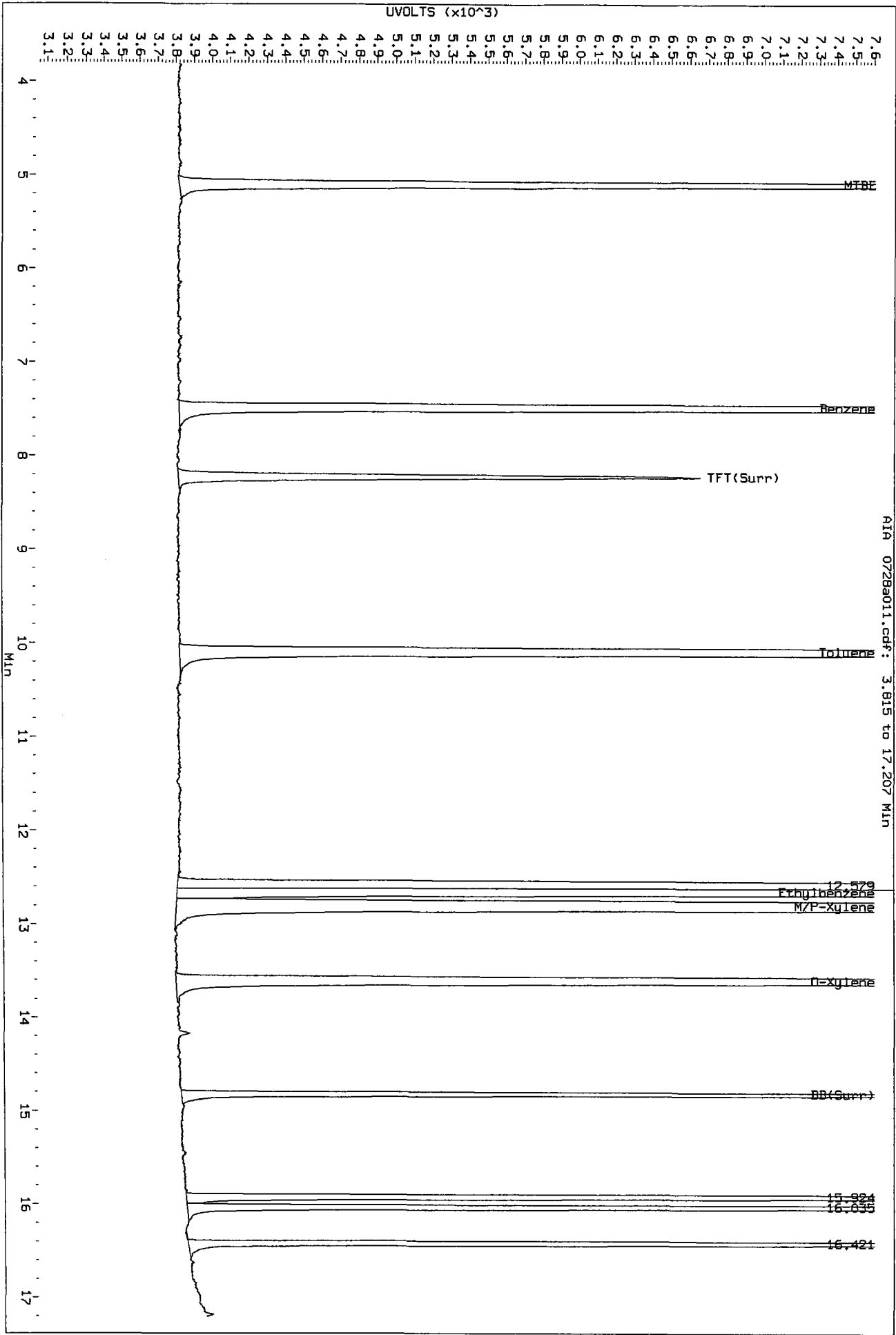
/chem3/pid2.i/072810-2.b/0728a011.d/0728a011.cdf





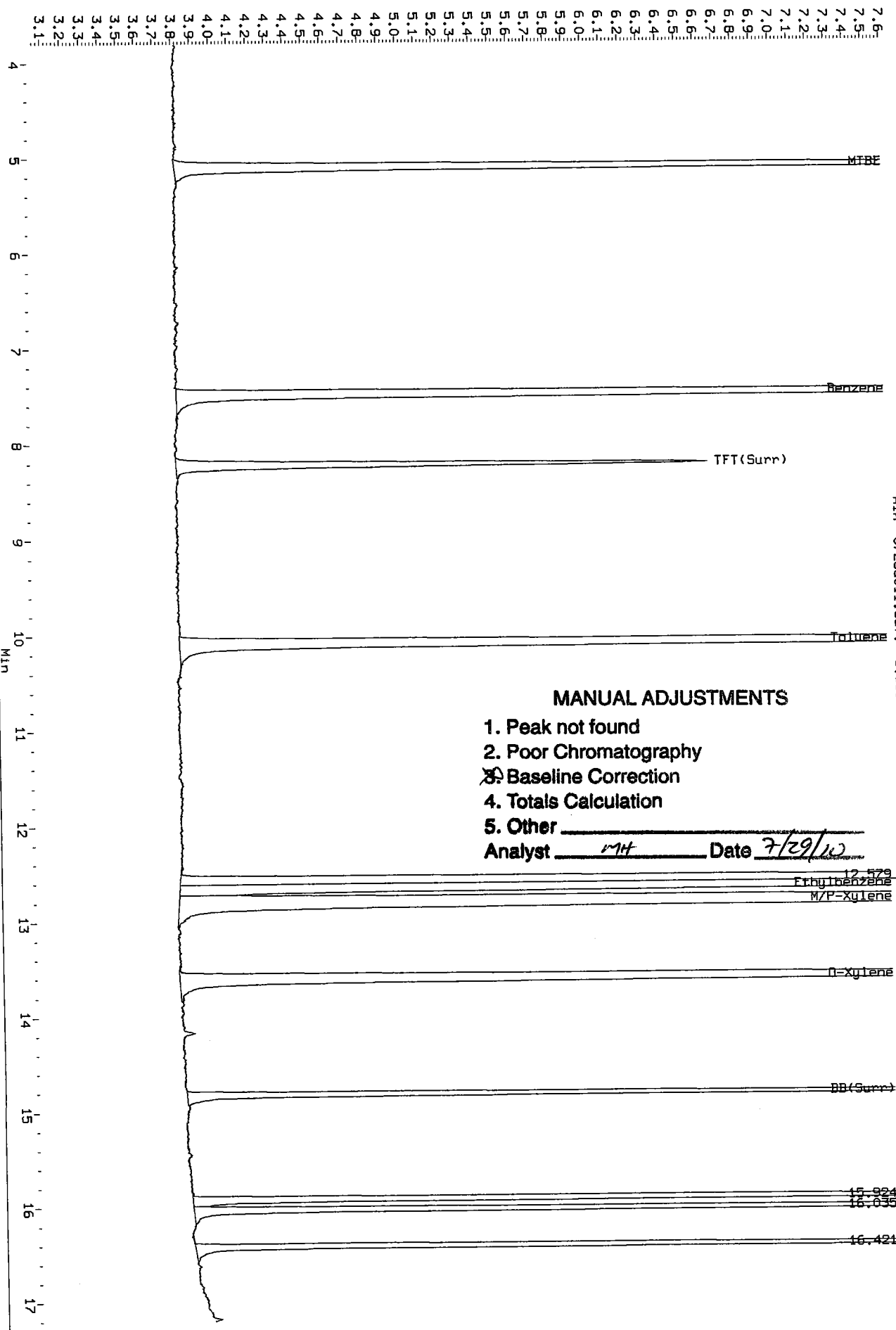
MH  
7/6/10  
01/6/10

Data File: /chem3/pid2.1/072810-2.b/0728a011.d/0728a011.cdf  
Injection Date: 28-JUL-2010 12:06  
Instrument: pid2.1  
Client Sample ID:



Data File: /chem3/pid2.1/072810-2.b/0728a011.d/0728a011.cdf  
 Injection Date: 28-JUL-2010 12:06  
 Instrument: pid2.1  
 Client Sample ID:

UVOLTS (x10<sup>3</sup>)



AIA 0728a011.cdf: 3.815 to 17.207 Min

**MANUAL ADJUSTMENTS**

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

Analyst MLH Date 7/29/10

12.529 Ethylbenzene  
 12.636 M/P-Xylene

n-Xylene

BB(Surr)

15.924  
 16.036

16.421

144  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/072810-1.b/0728a012.d  
Data file 2: /chem3/pid2.i/072810-2.b/0728a012.d  
Method: /chem3/pid2.i/072810-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: BETX ICV  
Client ID:  
Injection Date: 28-JUL-2010 12:32  
Matrix: WATER  
Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	-----	----	-----
8.174	-0.003	3960	64107	95.4	TFT (Surr)
14.797	-0.001	2909	26209	96.4	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas (Tol-C12)	401291	0.696
8015B (2MP-TMB)	412324	0.316
AKGas (nC6-nC10)	378602	0.426
NWGas (Tol-Nap)	401291	0.667

\* Surrogate areas are subtracted from Total Area

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.222	-0.003	1379	96.0	TFT (Surr)
14.823	-0.002	5651	97.2	BB (Surr)

AROMATICS (PID)

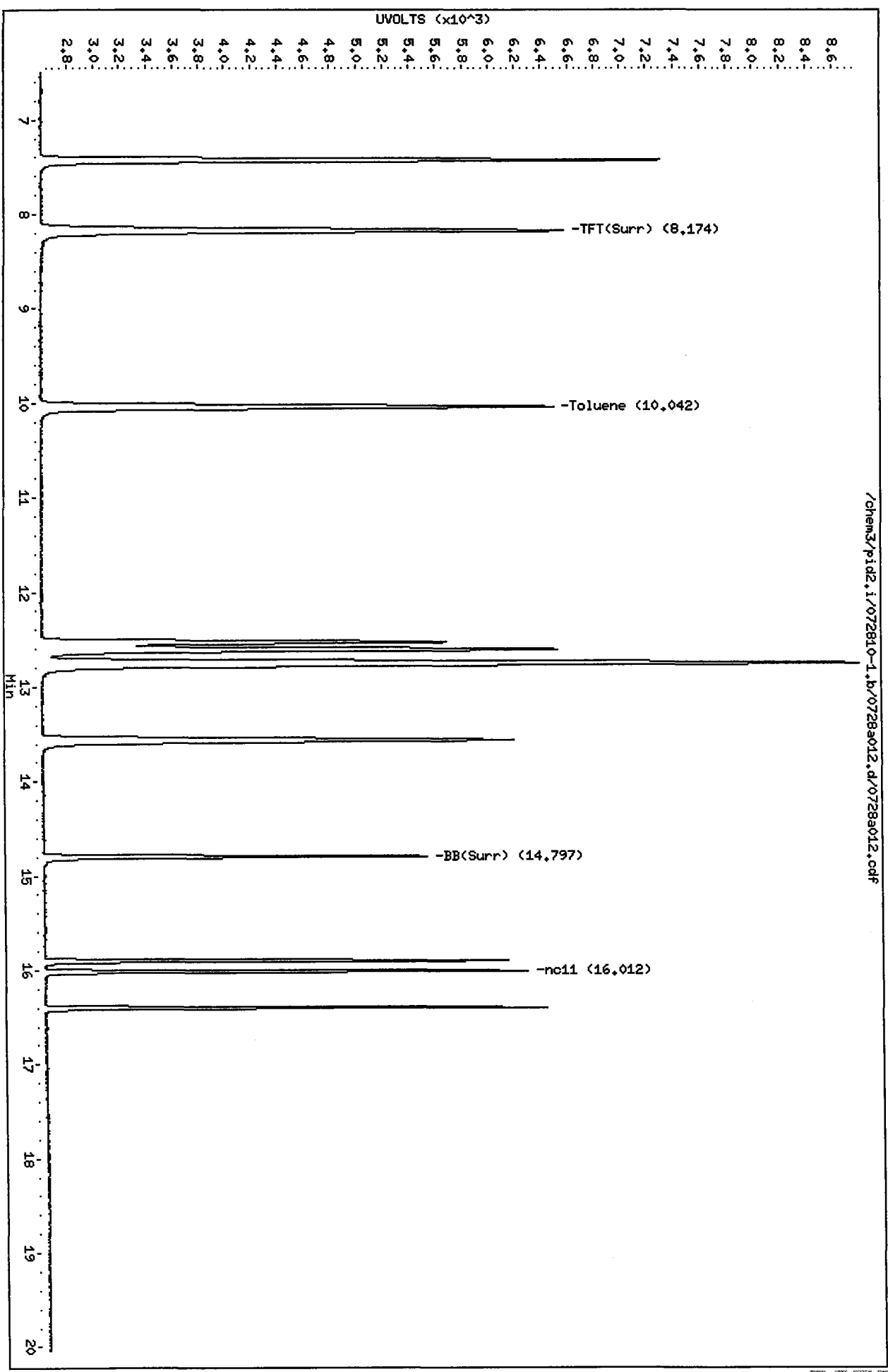
-----

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.478	-0.005	2772	23.80	Benzene
10.088	-0.005	2468	23.79	Toluene
12.649	-0.007	2598	22.67	Ethylbenzene
12.795	-0.008	4827	49.81	M/P-Xylene
13.600	-0.005	2498	24.60	O-Xylene
5.094	-0.006	1016	24.20	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/072810-1.b/0728a012.d  
Date: 28-JUL-2010 12:32  
Client ID:  
Sample Info: BETX ICV  
Column phase: RTX 502-2 FID

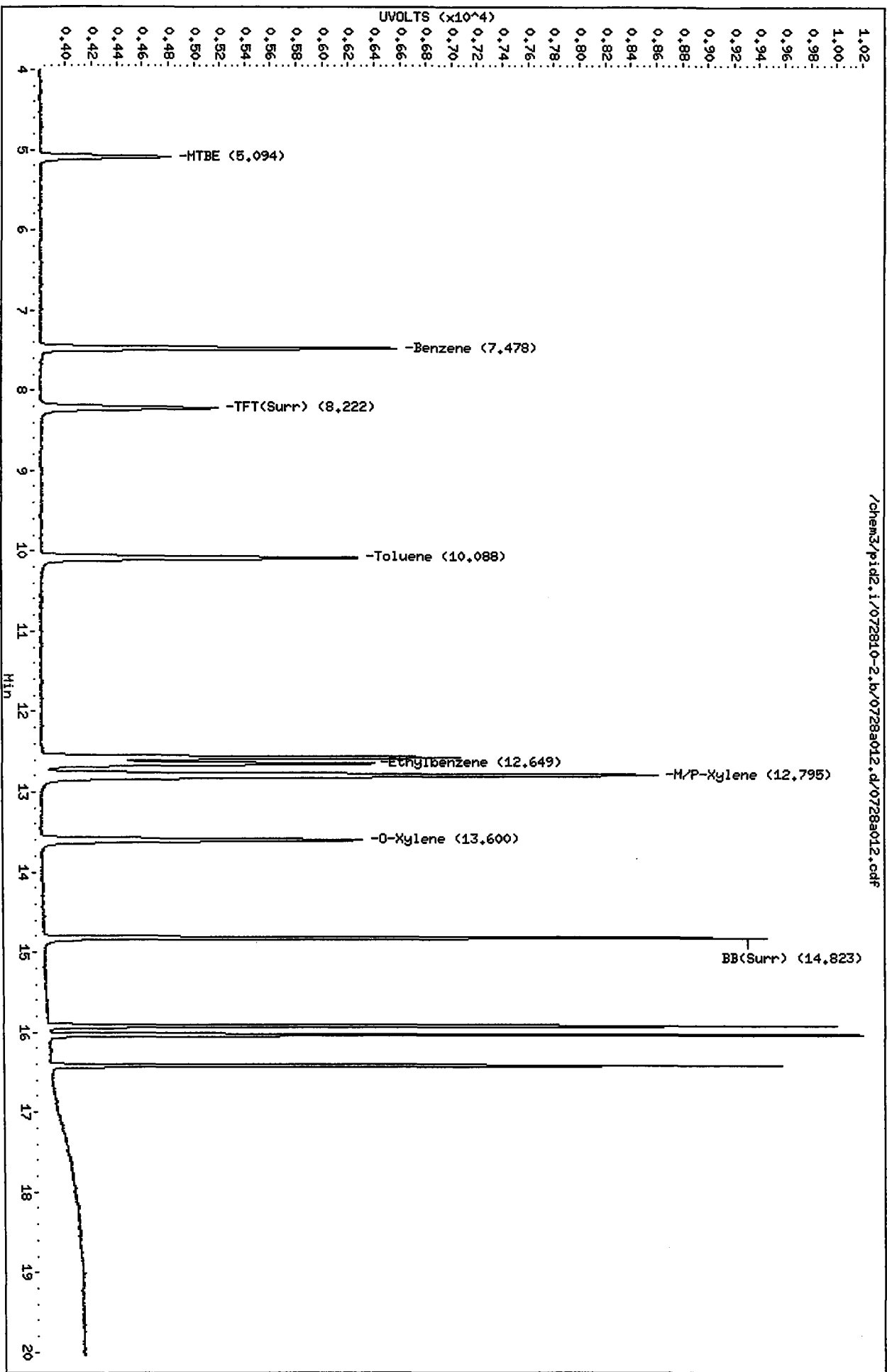
Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



Data File: /chem3/pid2.i/072810-2.b/0728a012.d  
Date : 28-JUL-2010 12:32  
Client ID:  
Sample Info: BETX ICV  
Column phaset: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/072810-2.b/0728a012.d/0728a012.cdf



Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid2.i/072810-1.b/FID.m  
Batch File: /chem3/pid2.i/072810-1.b  
Inst ID: pid2.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 NMTPHG	0728a006	0728a007	0728a008	0728a009	0728a010	0728a011	0728a011	0.492	0.422-0.562	0.937	0.867-1.007
20 WAGAS	28-JUL-2010 09:56	28-JUL-2010 10:22	28-JUL-2010 10:48	28-JUL-2010 11:14	28-JUL-2010 11:40	28-JUL-2010 12:06	28-JUL-2010 12:06	1.251	1.181-1.321	1.539	1.469-1.609
19 AK101	09:56	10:22	10:48	11:14	11:40	12:06	12:06	4.834	4.764-4.904	5.321	5.251-5.391
21 8015GAS	09:56	10:22	10:48	11:14	11:40	12:06	12:06	7.254	7.184-7.324	8.186	8.116-8.256
1 2-Methylpentane	09:56	10:22	10:48	11:14	11:40	12:06	12:06	8.177	8.116-8.256	9.659	9.589-9.729
2 nC6	09:56	10:22	10:48	11:14	11:40	12:06	12:06	10.046	9.978-10.118	12.245	12.175-12.315
3 nC7	09:56	10:22	10:48	11:14	11:40	12:06	12:06	16.027	15.957-16.097	14.563	14.493-14.633
4 TET(Surr)	09:56	10:22	10:48	11:14	11:40	12:06	12:06	14.797	14.735-14.875	14.805	14.801
5 nC8	09:56	10:22	10:48	11:14	11:40	12:06	12:06	15.438	15.368-15.508	16.015	16.015
6 Toluene	09:56	10:22	10:48	11:14	11:40	12:06	12:06	17.048	16.978-17.118	17.048	17.048
7 nC9	09:56	10:22	10:48	11:14	11:40	12:06	12:06	18.003	18.003	18.003	18.003
22 BFB(Surr)	09:56	10:22	10:48	11:14	11:40	12:06	12:06	19.000	19.000	19.000	19.000
8 nC10-Decane	09:56	10:22	10:48	11:14	11:40	12:06	12:06	20.000	20.000	20.000	20.000
9 BB(Surr)	09:56	10:22	10:48	11:14	11:40	12:06	12:06	21.000	21.000	21.000	21.000
10 1,2,4-Trimethylbenzene	09:56	10:22	10:48	11:14	11:40	12:06	12:06	22.000	22.000	22.000	22.000
11 nC11	09:56	10:22	10:48	11:14	11:40	12:06	12:06	23.000	23.000	23.000	23.000
12 nC12-Dodecane	09:56	10:22	10:48	11:14	11:40	12:06	12:06	24.000	24.000	24.000	24.000

Reviewer 1 MH Date: 7/29/10  
Reviewer 2 [Signature] Date: 7/30/10

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid2.i/072810-1.b/FID.m  
Batch File: /chem3/pid2.i/072810-1.b  
Inst ID: pid2.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 nC13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.890	17.820-17.960	+++++	+++++
14 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.148	18.078-18.218	+++++	+++++

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid2.i/072810-2.b/PIDB.m  
Batch File: /chem3/pid2.i/072810-2.b  
Inst ID: pid2.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 MTBE	5.117	5.110	5.103	5.103	5.100	5.100	5.100	5.117	5.067-5.167	5.105	0.006
2 Benzene	7.490	7.483	7.490	7.487	7.487	7.483	7.483	7.490	7.440-7.540	7.486	0.003
3 TFF(Surr)	8.237	8.230	8.233	8.230	8.230	8.223	8.226	8.237	8.187-8.287	8.230	0.004
4 Toluene	10.093	10.090	10.097	10.093	10.097	10.093	10.093	10.093	10.043-10.143	10.094	0.002
15 Chlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.068	13.018-13.118	+++++	+++++
5 Ethylbenzene	12.660	12.660	12.658	12.656	12.656	12.654	12.656	12.660	12.610-12.710	12.657	0.002
6 M/P-Xylene	12.813	12.810	12.803	12.800	12.803	12.799	12.803	12.813	12.763-12.863	12.805	0.005
7 O-Xylene	13.617	13.603	13.610	13.607	13.607	13.603	13.605	13.617	13.587-13.647	13.607	0.005
19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.006	15.976-16.036	+++++	+++++
8 BB(Surr)	14.830	14.830	14.830	14.827	14.827	14.825	14.825	14.830	14.780-14.880	14.828	0.002
13 1,3,5 Trimethyl Benzen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.433	16.403-16.463	+++++	+++++
14 1,2,4 Trimethyl Benzen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.905	16.875-16.935	+++++	+++++
16 1,3 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.863	16.833-16.893	+++++	+++++
17 1,4 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.979	16.949-17.009	+++++	+++++
18 1,2 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.371	17.341-17.401	+++++	+++++

Reviewer 1          Date: 7/29/10  
 Reviewer 2          Date: 7/30/10



**TPHG/BETX Raw Data  
Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: RG79**



### VOA Analyst Notes / Corrective Action Log

ARI Project ID: RG79 Client ID: Floyd / Snider

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: 7/28/10 Analysis Start Date: 8/5/10

pH ≤ 2.0	<u>YES</u> / 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?	<u>Yes</u> / NO
Special Analysis Criteria Met?	YES / NO / <u>NA</u>		
Bubbles/Headspace:	None	SM (≤ 2mm ●)	PB (2-4mm) <sup>JIS</sup> LG (> 4mm ●) Head Space

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

Sample C re-run on PID3 8/6/10 to confirm for C10 no C10 detected raw data attached just as reference

Additional Details on Reverse: Yes / No

Analyst: [Signature] mlt Date: 8/11/10

Reviewer: [Signature] B Date: 8/11/10

# Analytical Resources Inc.: Organics Instrument Log

PID-2 Serial No.: 33033A-33620

Date: 8/5/10 Analysis: NWTPH6/BETR Analyst: MH

GC Program: BETR1 Column No: 832217 Column Type: \_\_\_\_\_

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>VW647-2</u>
_____	<u>VW644-3</u>	_____
_____	<u>VW647-2</u>	_____
_____	_____	_____
_____	_____	_____

Time	Filename	LabID	ClientID	Vial#	pH	DF						
1	0751	0805a001.d	RINSE				23	1750	0805a023.d	RG79M	PSB15-2-4-073010	0.00
2	0817	0805a002.d	RT+BCAL 1				24	1816	0805a024.d	RG79N	PSB15-4-6-073010	0.00
3	0843	0805a003.d	GCAL 1				25	1842	0805a025.d	RINSE		1
4	0909	0805a004.d	LCS0805				26	1908	0805a026.d	BCAL 3		1
5	0935	0805a005.d	LCS0805				27	1934	0805a027.d	GCAL 3		1
6	1001	0805a006.d	MB0805				28	2000	0805a028.d	RG79O	PSB15-13-15-073010	0.00
7	1054	0805a007.d	RG79J	PSB11-TB			29	2026	0805a029.d	RG79P	PSB15-17-19-073010	0.00
8	1120	0805a008.d	RG79S	PB15-TB			30	2052	0805a030.d	RG79Q	PSB15-17-19-073010-	0.00
9	1146	0805a009.d	RG79A	PSB11-0-0.5-073010		0.00	31	2118	0805a031.d	RG60A		1
10	1212	0805a010.d	RG79B	PSB11-1.5-2-073010		0.00	32	2144	0805a032.d	RINSE		1
11	1238	0805a011.d	RG79C	PSB11-2-4-073010		0.00	33	2209	0805a033.d	BCAL 4		1
12	1304	0805a012.d	RG79D	PSB11-2-4-073010-D		0.00	34	2235	0805a034.d	GCAL 4		1
13	1330	0805a013.d	RINSE									
14	1356	0805a014.d	BCAL 2									
15	1422	0805a015.d	GCAL 2									
16	1448	0805a016.d	RG79E	PSB11-4-6-073010		0.00						
17	1514	0805a017.d	RG79EMS	PSB11-4-6-07301 MS		0.00						
18	1540	0805a018.d	RG79EMSD	PSB11-4-6-07301 MSD		0.00						
19	1606	0805a019.d	RG79G	PSB11-11-13-073010		0.00						
20	1632	0805a020.d	RG79H	PSB11-14-16-073010		0.00						
21	1658	0805a021.d	RG79K	PSB15-0-0.5-073010		0.00						
22	1724	0805a022.d	RG79L	PSB15-1.5-2-073010		0.00						

*[Handwritten scribbles and signature]*  
 MH  
 8/6/10

**Maintenance / Comments** RC79C was run on PID3 on 8/6/10 To see for  
clo no cfs found.

**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

Mr  
8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a002.d      ARI ID: RT+BCAL 1  
Data file 2: /chem3/pid2.i/080510-2.b/0805a002.d      Client ID: RT+BCAL 1  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 08:17  
Instrument: pid2.i                                      Matrix: WATER  
Gas Ical Date: 28-JUL-2010                          Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.187	0.000	3965	66048	95.5	TFT(Surr)
14.803	0.000	2863	26738	94.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	715583	1.240
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	1029215	0.789
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	742537	0.835
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	756110	1.256

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
8.236	0.010	1362	94.8	TFT(Surr)
14.829	0.004	5501	94.6	BB(Surr)

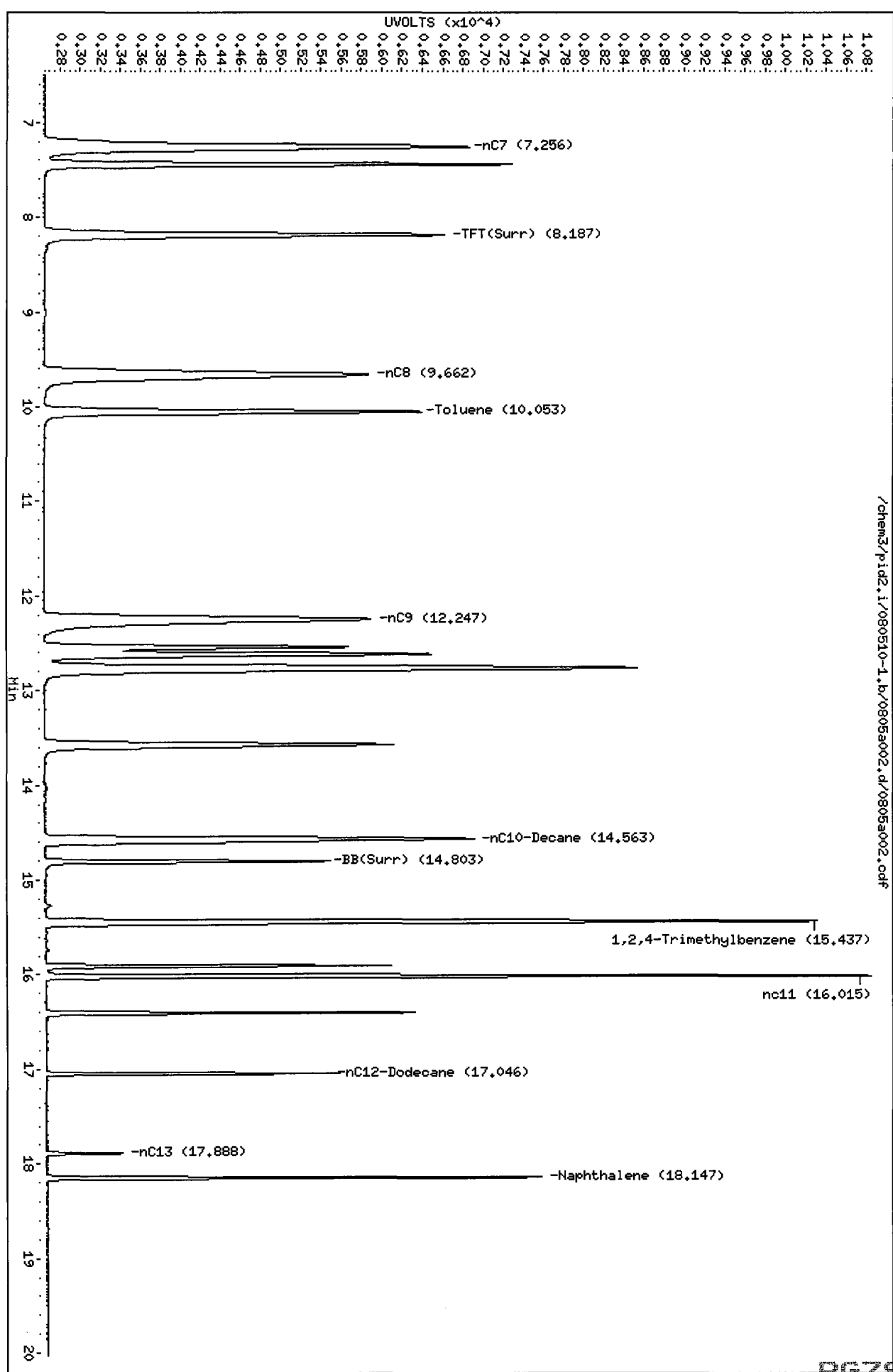
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.492	0.009	2676	22.98	Benzene
10.100	0.007	2350	22.66	Toluene
12.659	0.003	2504	21.85	Ethylbenzene
12.806	0.003	4518	46.63	M/P-Xylene
13.610	0.005	2393	23.57	O-Xylene
5.109	0.009	955	22.75	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a002.d  
Date: 05-AUG-2010 08:17  
Client ID:  
Sample Info: RT+BCAL 1  
Column phase: RTX 502-2 FID

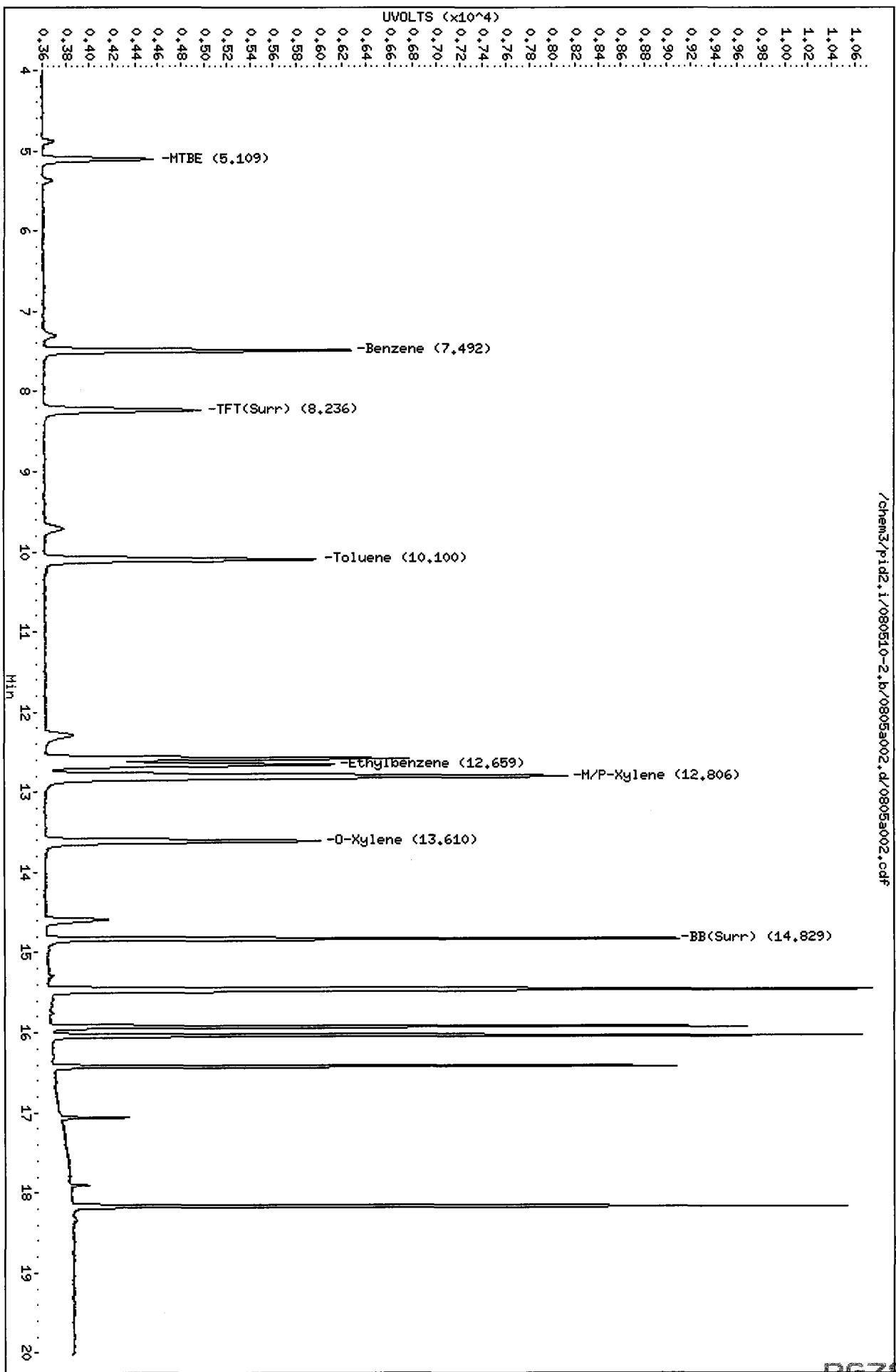
Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



Data File: /chem3/pid2.i/080510-2.b/0805a002.d  
Date : 05-AUG-2010 08:17  
Client ID: RT+BCAL 1  
Sample Info: RT+BCAL 1

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



/chem3/pid2.i/080510-2.b/0805a002.d/0805a002.cdf

Ma  
8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a003.d      ARI ID: GCAL 1  
Data file 2: /chem3/pid2.i/080510-2.b/0805a003.d      Client ID: GCAL 1  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 08:43  
Instrument: pid2.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.183	-0.004	4231	70266	101.9	TFT(Surr)
14.800	-0.003	3028	29802	100.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	1427774	2.475 M
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	3268248	2.505 M
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	2253604	2.534 M
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	1482747	2.463 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
8.232	0.006	1375	95.7	TFT(Surr)
14.826	0.002	5470	94.0	BB(Surr)

SW8021 (PID)

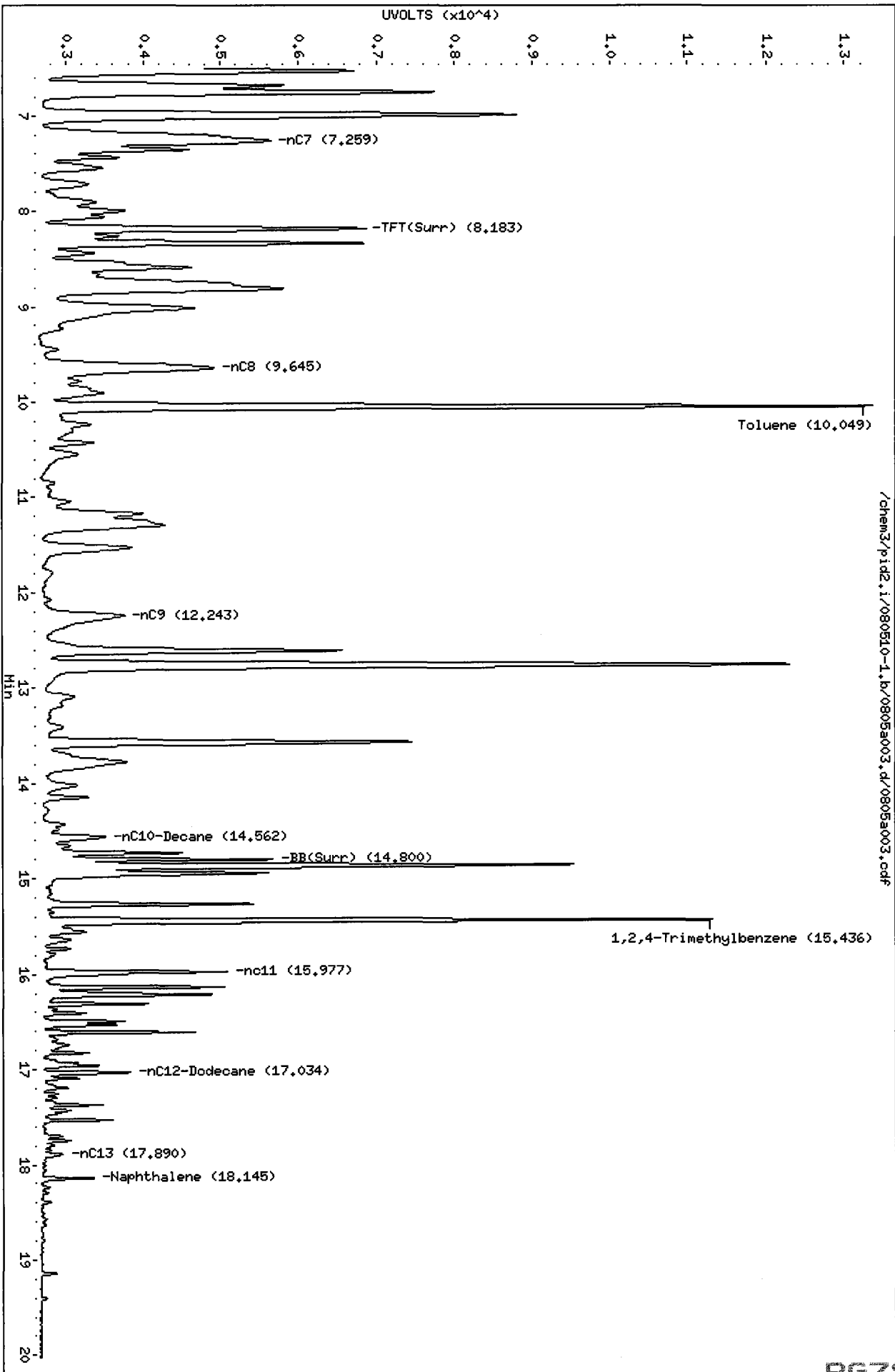
RT	Shift	Response	Amount	Compound
7.488	0.005	552	4.74	Benzene
10.096	0.003	6687	64.47	Toluene
12.655	-0.001	2299	20.06	Ethylbenzene
12.803	0.001	7277	75.10	M/P-Xylene
13.607	0.002	3206	31.58	O-Xylene
5.110	0.010	8515	202.81	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a003.d  
Date: 05-AUG-2010 08:43  
Client ID: LORA LAKE  
Sample Info: GCAL 1

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



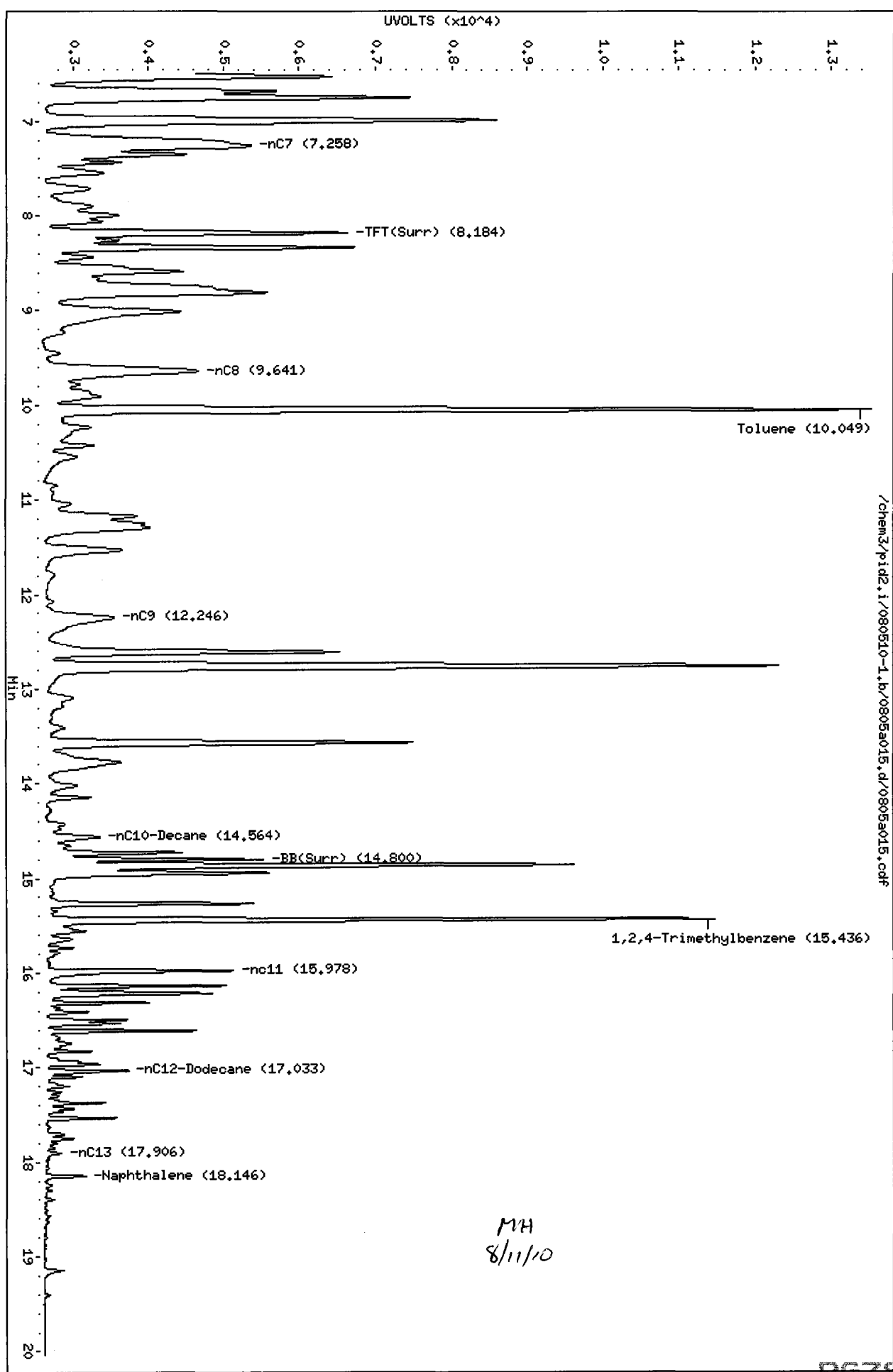
/chem3/pid2.i/080510-1.b/0805a003.d/0805a003.cdf



Data File: /chem3/pid2.i/080510-1.b/0805a015.d  
Date: 05-AUG-2010 14:22  
Client ID: LORA LAKE  
Sample Info: GCAL 2

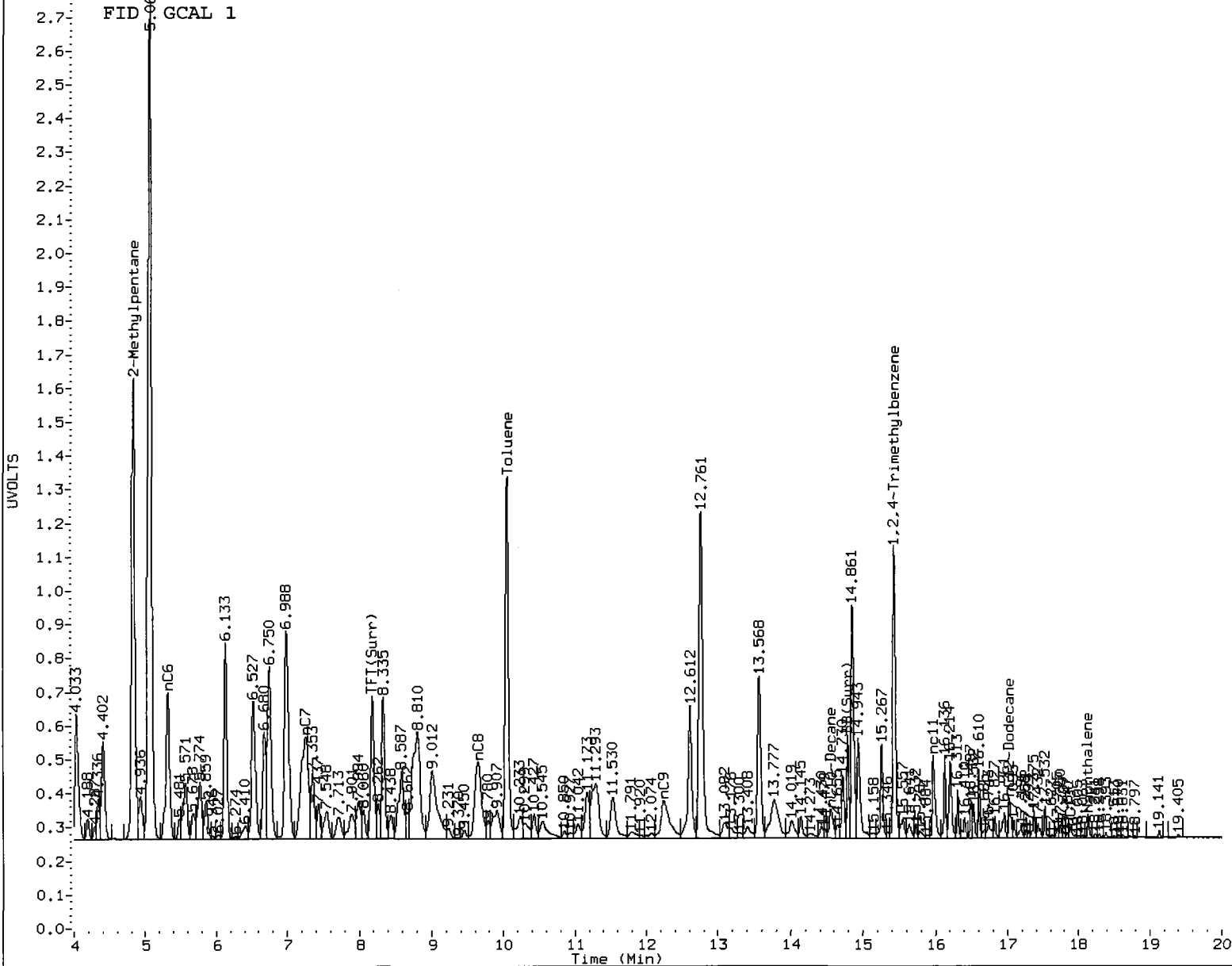
Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid2.i/080510-1.b/0805a015.d/0805a015.cdf

MH  
8/11/10



MANUAL INTEGRATION

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

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

Analyst: MH Date: 8/11/10

MA  
8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a004.d      ARI ID: LCS0805  
Data file 2: /chem3/pid2.i/080510-2.b/0805a004.d      Client ID: LCS0805S1  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 09:09  
Instrument: pid2.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.180	-0.007	4052	67139	97.6	TFT(Surr)
14.799	-0.003	2931	27146	97.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	583254	1.011 M
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	1347694	1.033 M
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	923118	1.038 M
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	608484	1.011 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
8.229	0.003	1346	93.7	TFT(Surr)
14.825	0.001	5477	94.2	BB(Surr)

SW8021 (PID)

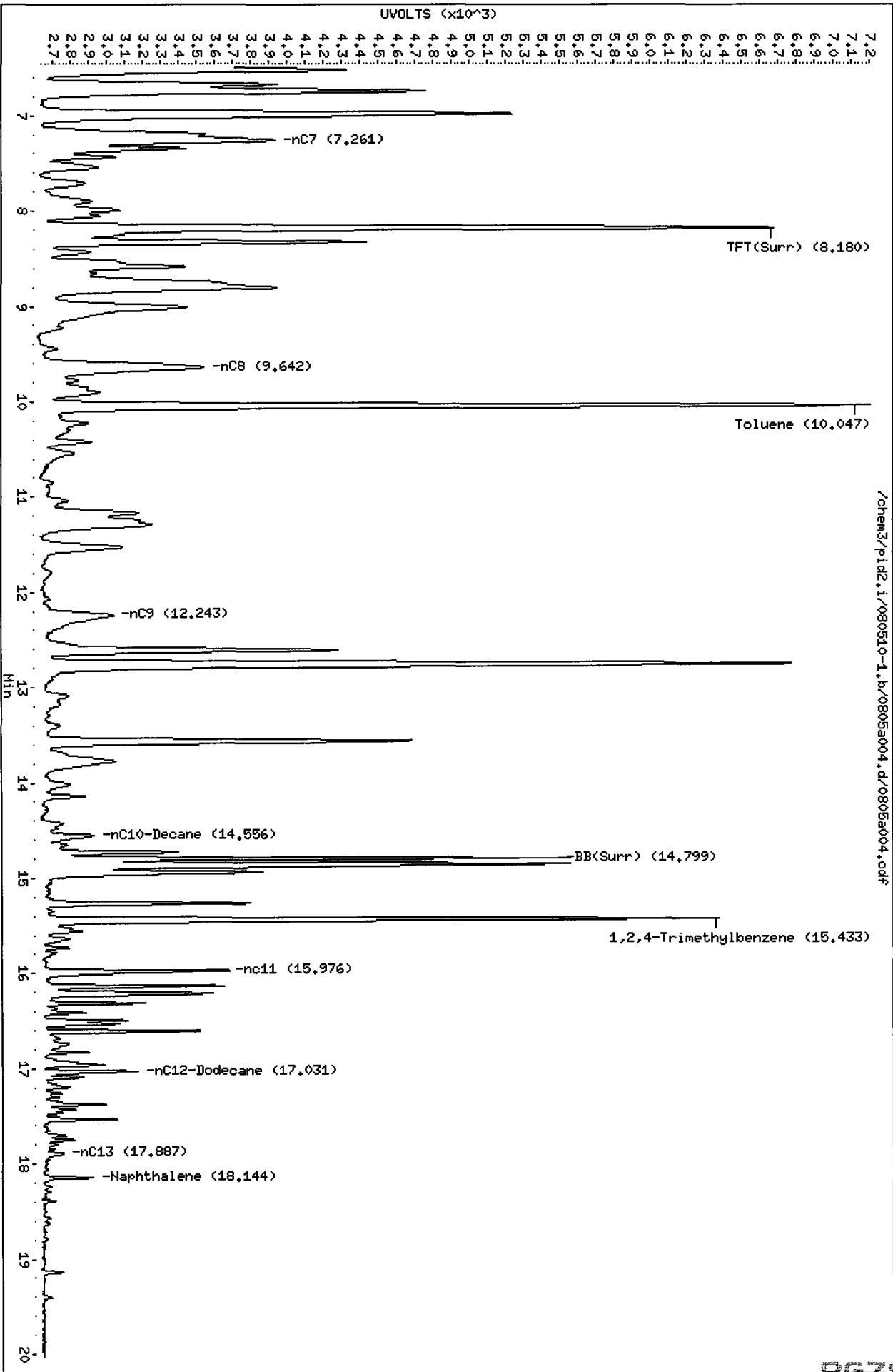
RT	Shift	Response	Amount	Compound
7.484	0.001	222	1.91	Benzene
10.094	0.001	2745	26.47	Toluene
12.654	-0.002	952	8.31	Ethylbenzene
12.802	-0.001	3079	31.78	M/P-Xylene
13.605	-0.001	1349	13.29	O-Xylene
5.105	0.005	3593	85.58	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a004.d  
Date: 05-AUG-2010 09:09  
Client ID:  
Sample Info: LCS0805

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

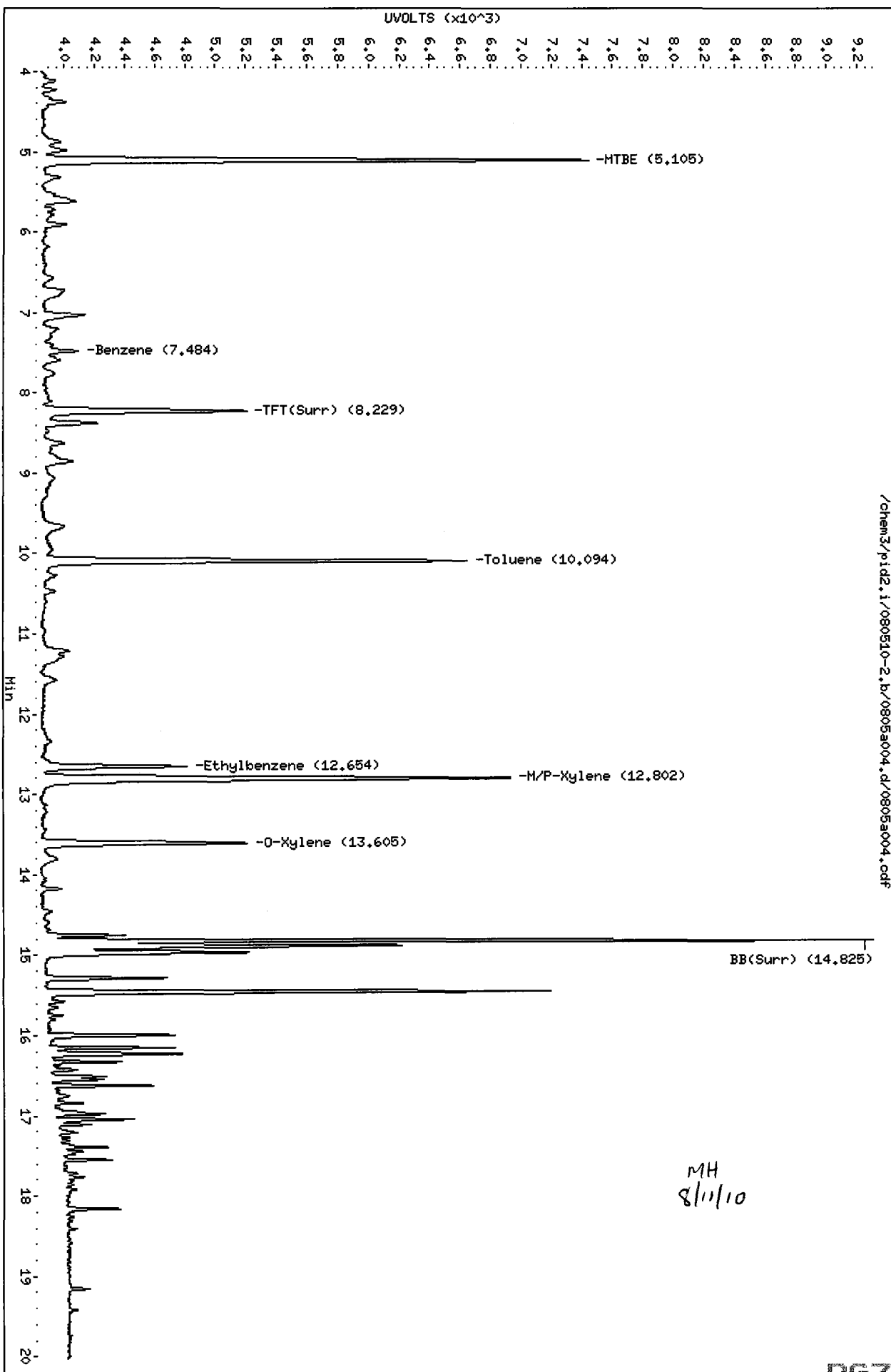


/chem3/pid2.i/080510-1.b/0805a004.d/0805a004.cdf

Data File: /chem3/pid2.i/080510-2.b/0805a004.d  
Date: 05-AUG-2010 09:09  
Client ID: LCS080851  
Sample Info: LCS0805

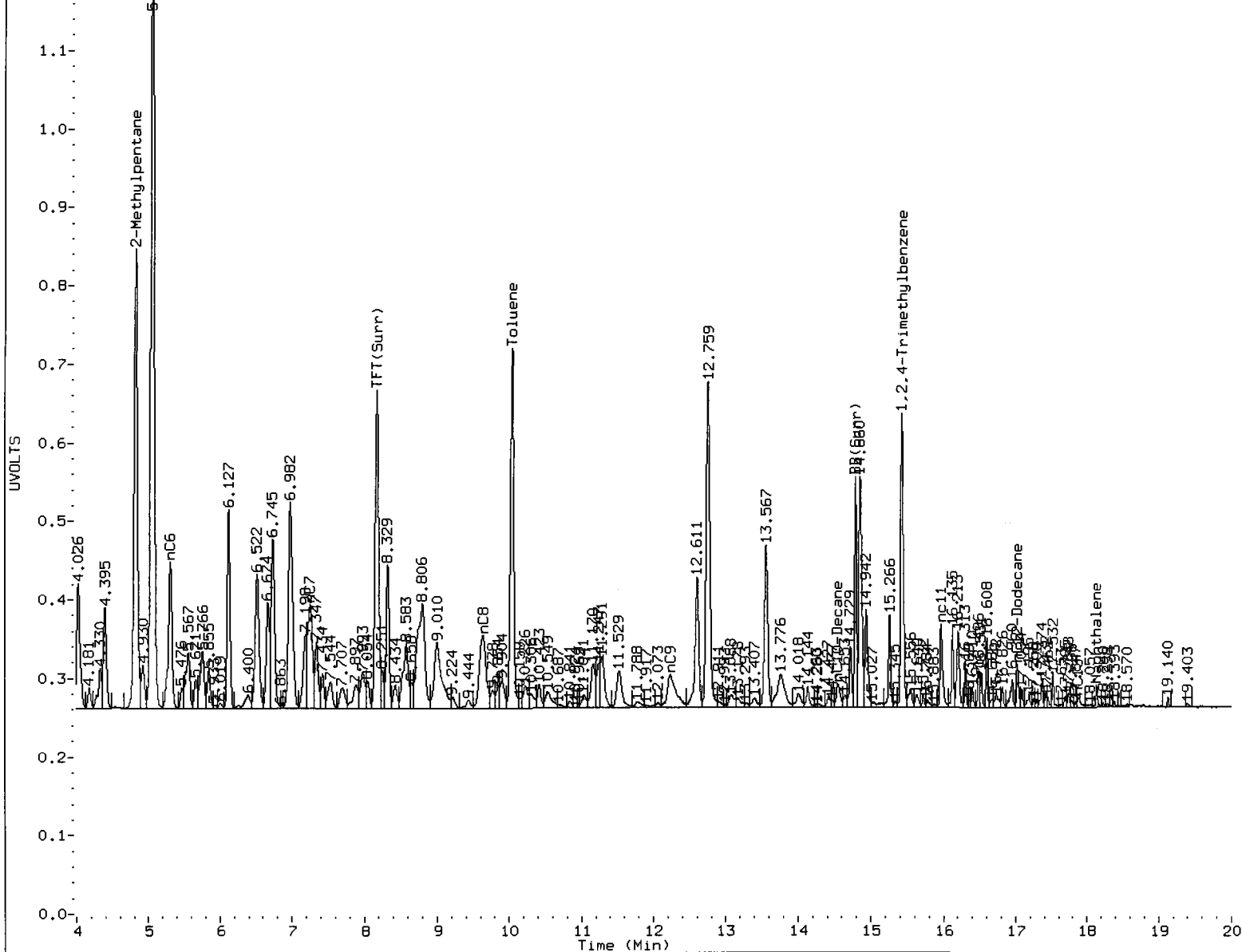
Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid2.i/080510-2.b/0805a004.d/0805a004.cdf

MH  
8/11/10



MANUAL INTEGRATION

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

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

Analyst:   MH  

Date:   8/11/10

Mr  
8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a005.d      ARI ID: LCSD0805  
Data file 2: /chem3/pid2.i/080510-2.b/0805a005.d      Client ID: LCSD0805S1  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 09:35  
Instrument: pid2.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.179	-0.008	3981	65489	95.9	TFT(Surr)
14.798	-0.004	2848	26456	94.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	560488	0.971 M
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	1299928	0.996 M
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	889096	1.000 M
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	584447	0.971 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
8.227	0.001	1336	93.0	TFT(Surr)
14.825	0.000	5405	92.9	BB(Surr)

SW8021 (PID)

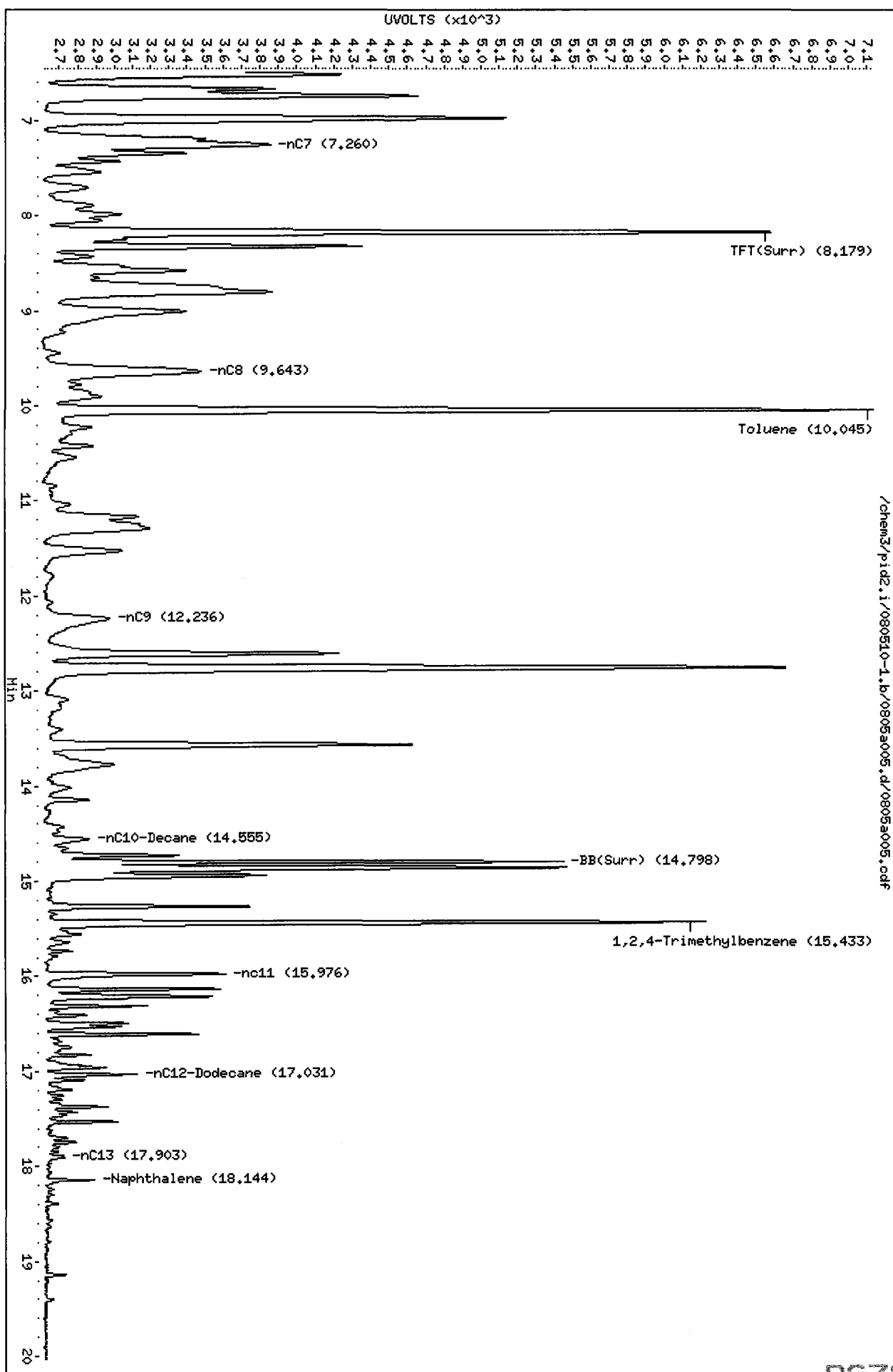
RT	Shift	Response	Amount	Compound
7.483	0.000	189	1.62	Benzene
10.092	-0.001	2760	26.61	Toluene
12.652	-0.004	942	8.22	Ethylbenzene
12.800	-0.003	3019	31.16	M/P-Xylene
13.604	-0.001	1312	12.92	O-Xylene
5.102	0.002	3650	86.93	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/08053005.d  
Date: 05-AUG-2010 09:35  
Client ID:  
Sample Info: LCSD0805

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

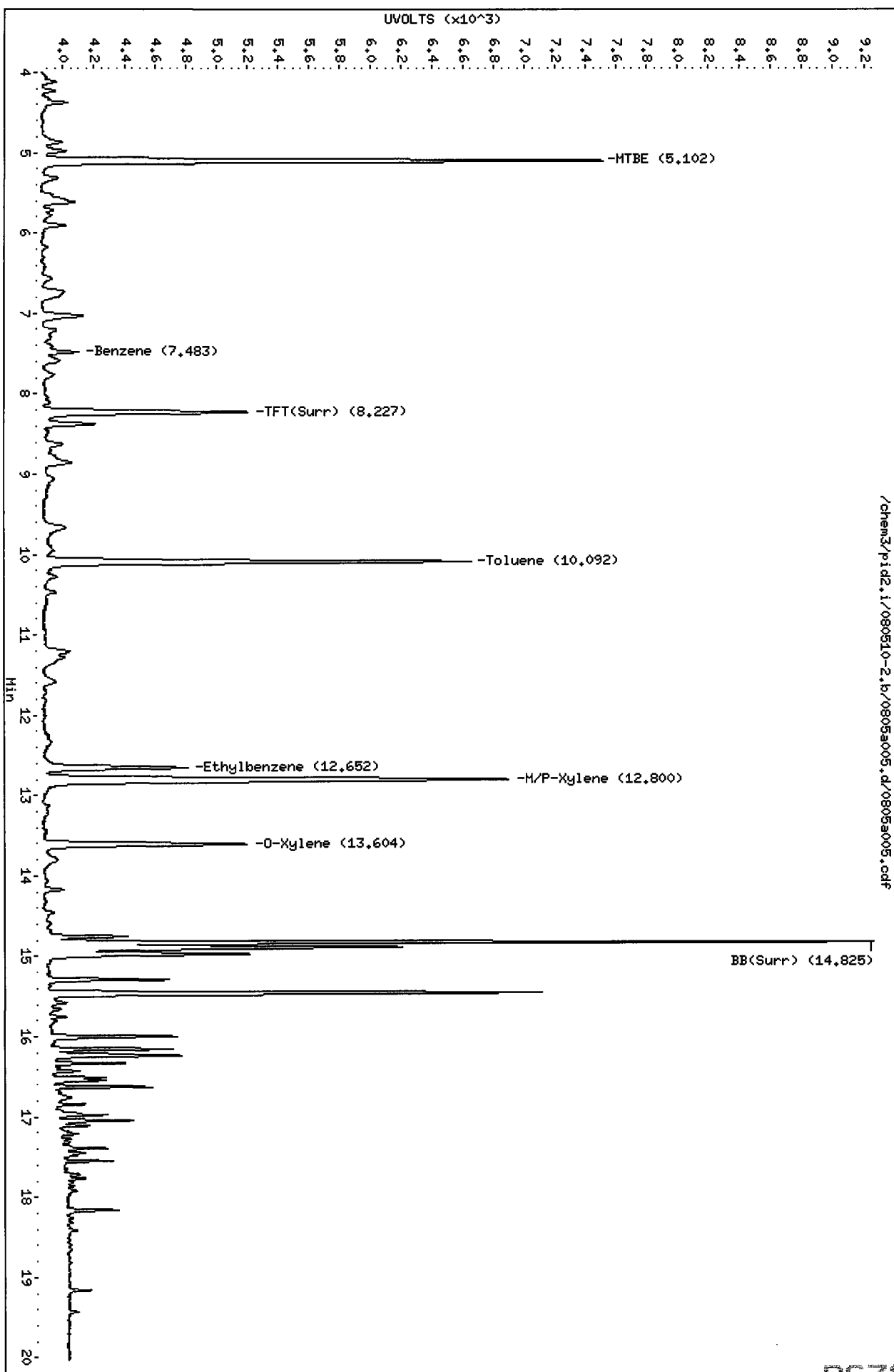




Data File: /chem3/pid2.i/080510-2.b/0805a005.d  
Date: 05-AUG-2010 09:35  
Client ID: LCSD0805S1  
Sample Info: LCSD0805

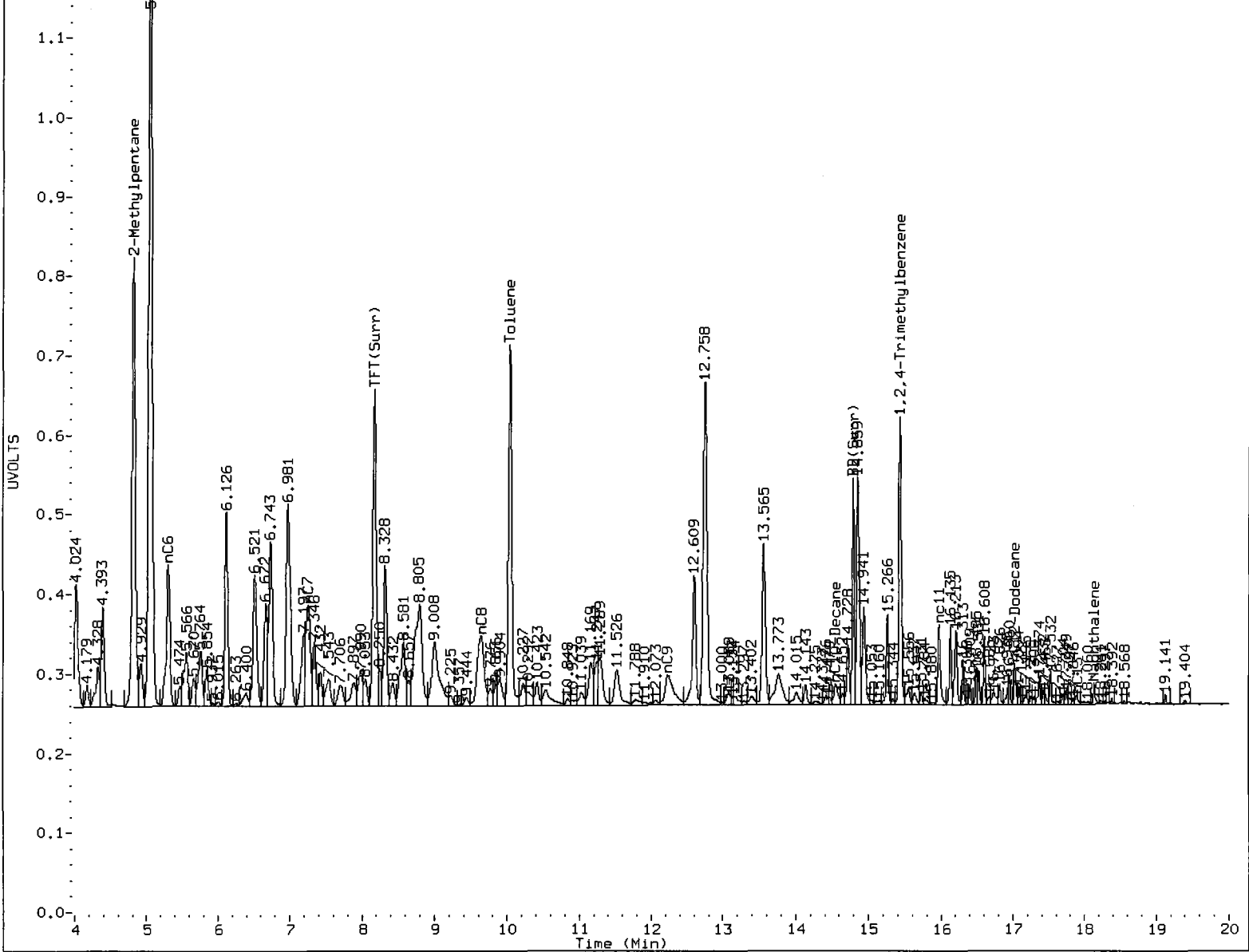
Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid2.i/080510-2.b/0805a005.d/0805a005.cdf

FID LCSD0805



MANUAL INTEGRATION

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

Analyst: MH Date: 8/11/10

M.  
8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a006.d      ARI ID: MB0805  
Data file 2: /chem3/pid2.i/080510-2.b/0805a006.d      Client ID: MB0805S1  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 10:01  
Instrument: pid2.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.179	-0.008	3695	61611	89.0	TFT(Surr)
14.798	-0.005	2715	25159	89.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	270	0.000
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	1393	0.001
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	1	0.000
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	481	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
8.227	0.001	1270	88.4	TFT(Surr)
14.824	0.000	5176	89.0	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/pid2.i/080510-1.b/0805a006.d  
Date : 05-AUG-2010 10:01

Client ID:

Sample Info: MB0805

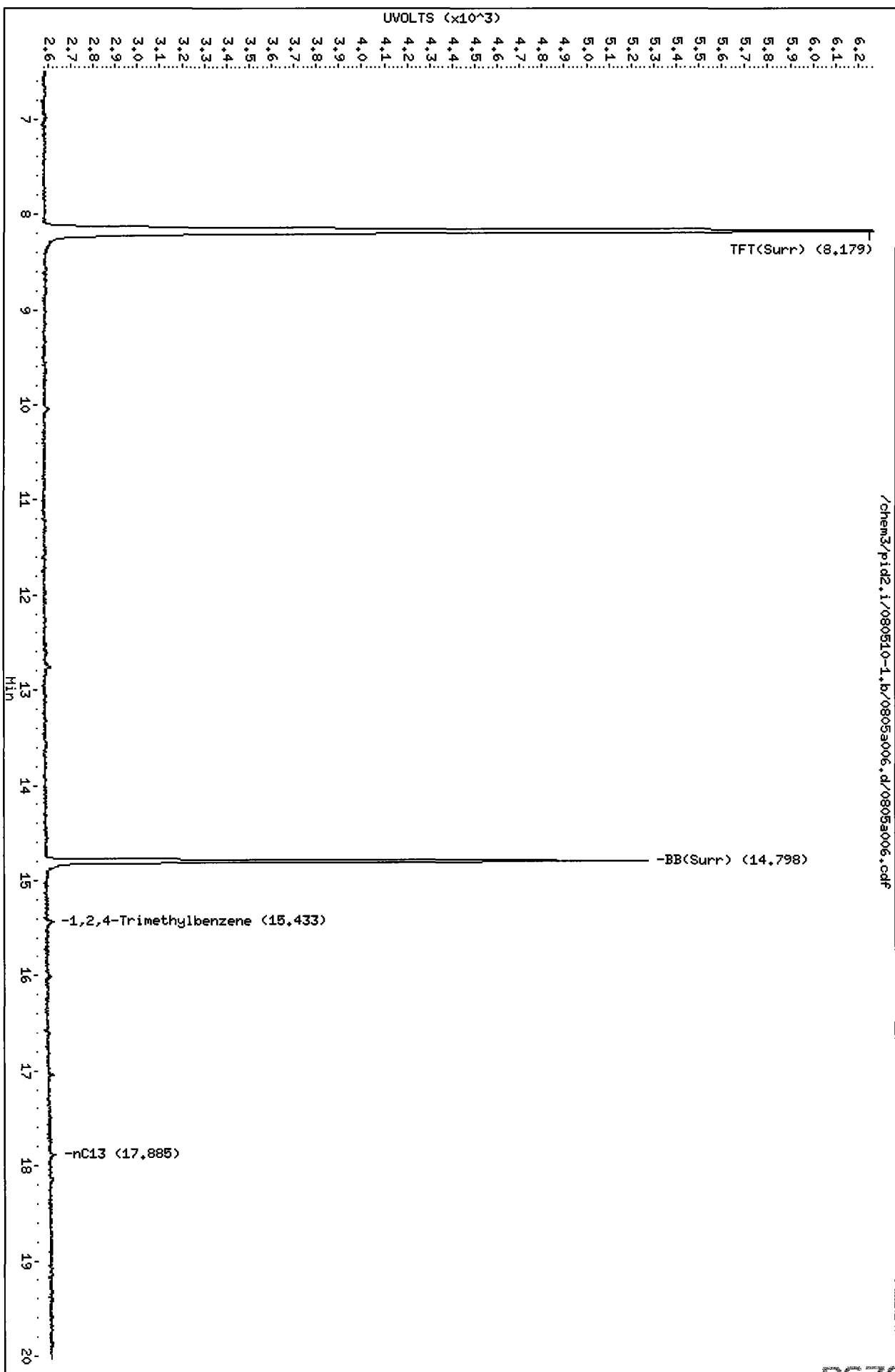
Column phase: RTX 502-2 FID

Instrument: pid2.i

Operator: HH

Column diameter: 0.18

Page 1

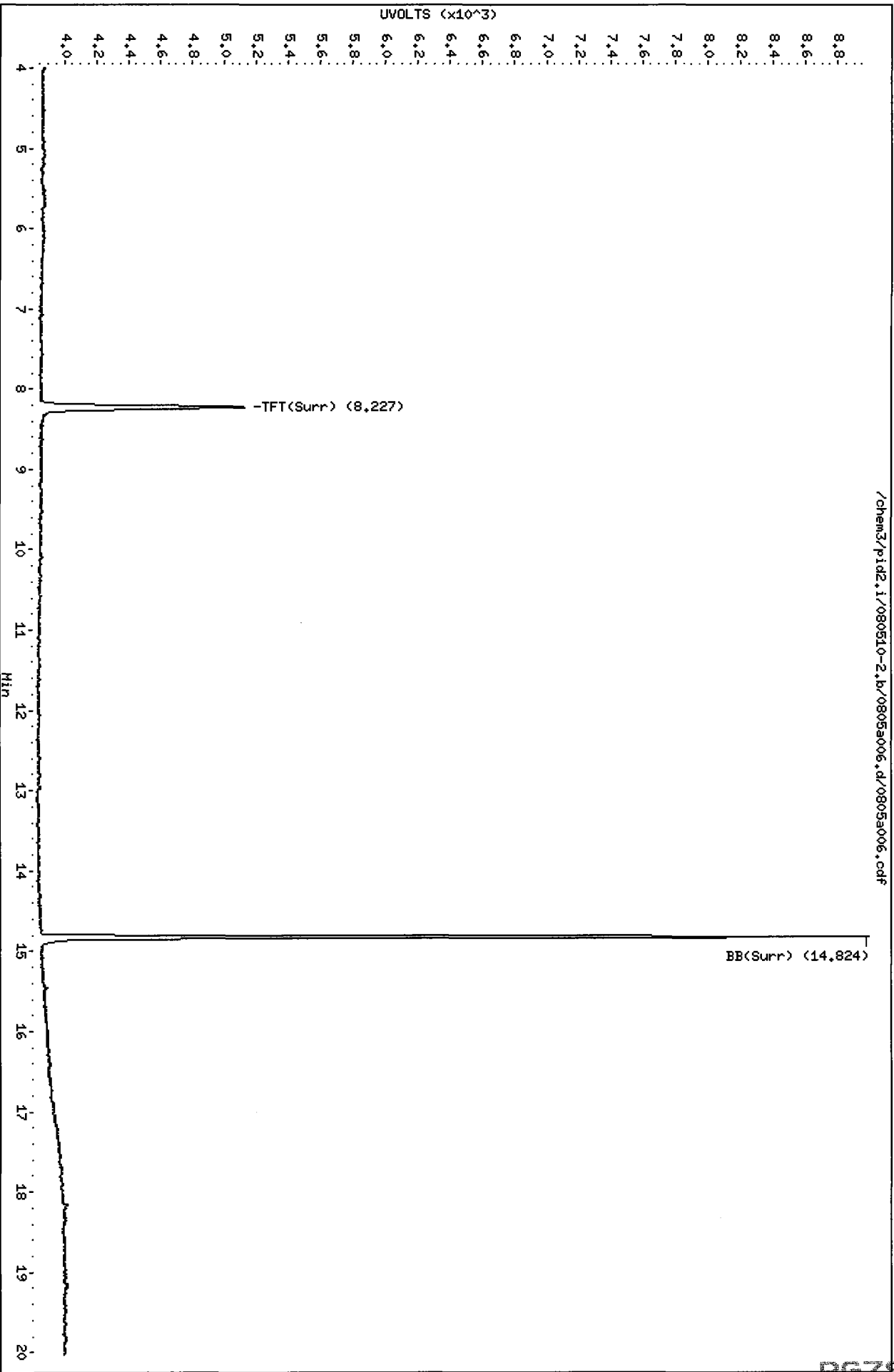


RG79 : 01292

Data File: /chem3/pid2.i/080510-2.b/0805a006.d  
Date : 05-AUG-2010 10:01  
Client ID: HB0805S1  
Sample Info: HB0805

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



Mr. 8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a007.d      ARI ID: RG79J  
Data file 2: /chem3/pid2.i/080510-2.b/0805a007.d      Client ID: PSB11-TB  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 10:54  
Instrument: pid2.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.180	-0.007	4053	67433	97.6	TFT(Surr)
14.800	-0.003	2902	26886	96.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	0	0.000
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	0	0.000
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	0	0.000
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	172	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
8.227	0.002	1451	101.0	TFT(Surr)
14.825	0.001	5661	97.3	BB(Surr)

SW8021 (PID)

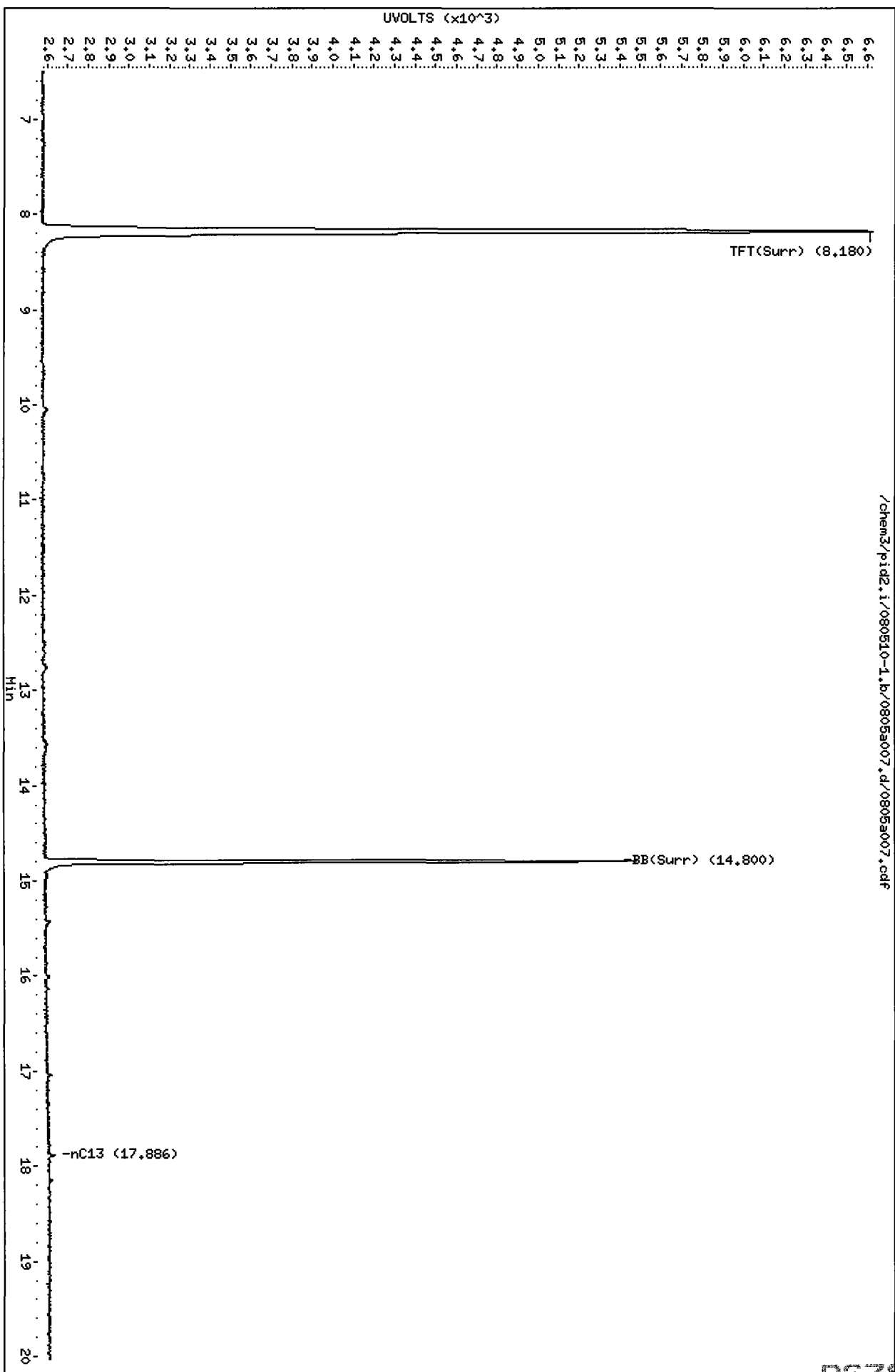
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a007.d  
Date: 05-AUG-2010 10:54  
Client ID: PSB11-TB  
Sample Info: RG79J

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

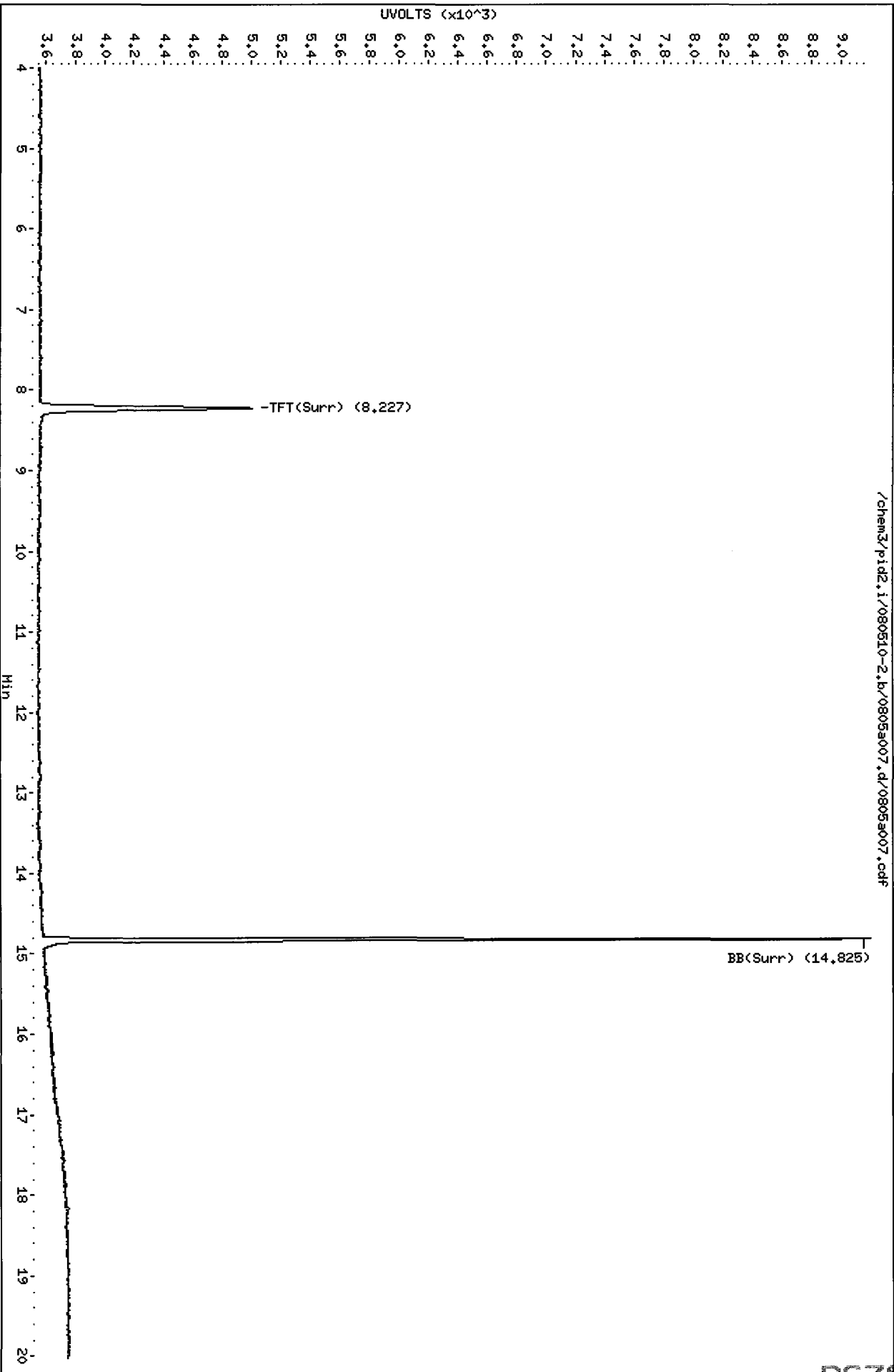


Data File: /chem3/pid2,i/080510-2.b/0805a007.d  
Date : 05-AUG-2010 10:54  
Client ID: PSB11-TB  
Sample Info: RG79J

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid2,i/080510-2.b/0805a007.d/0805a007.cdf





Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a008.d      ARI ID: RG79S  
 Data file 2: /chem3/pid2.i/080510-2.b/0805a008.d      Client ID: PB15-TB  
 Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 11:20  
 Instrument: pid2.i    Matrix: WATER  
 Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
 BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.181	-0.006	3797	63484	91.5	TFT(Surr)
14.800	-0.003	2740	25569	90.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	0	0.000
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	0	0.000
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	0	0.000
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	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
8.229	0.003	1343	93.5	TFT(Surr)
14.826	0.002	5278	90.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

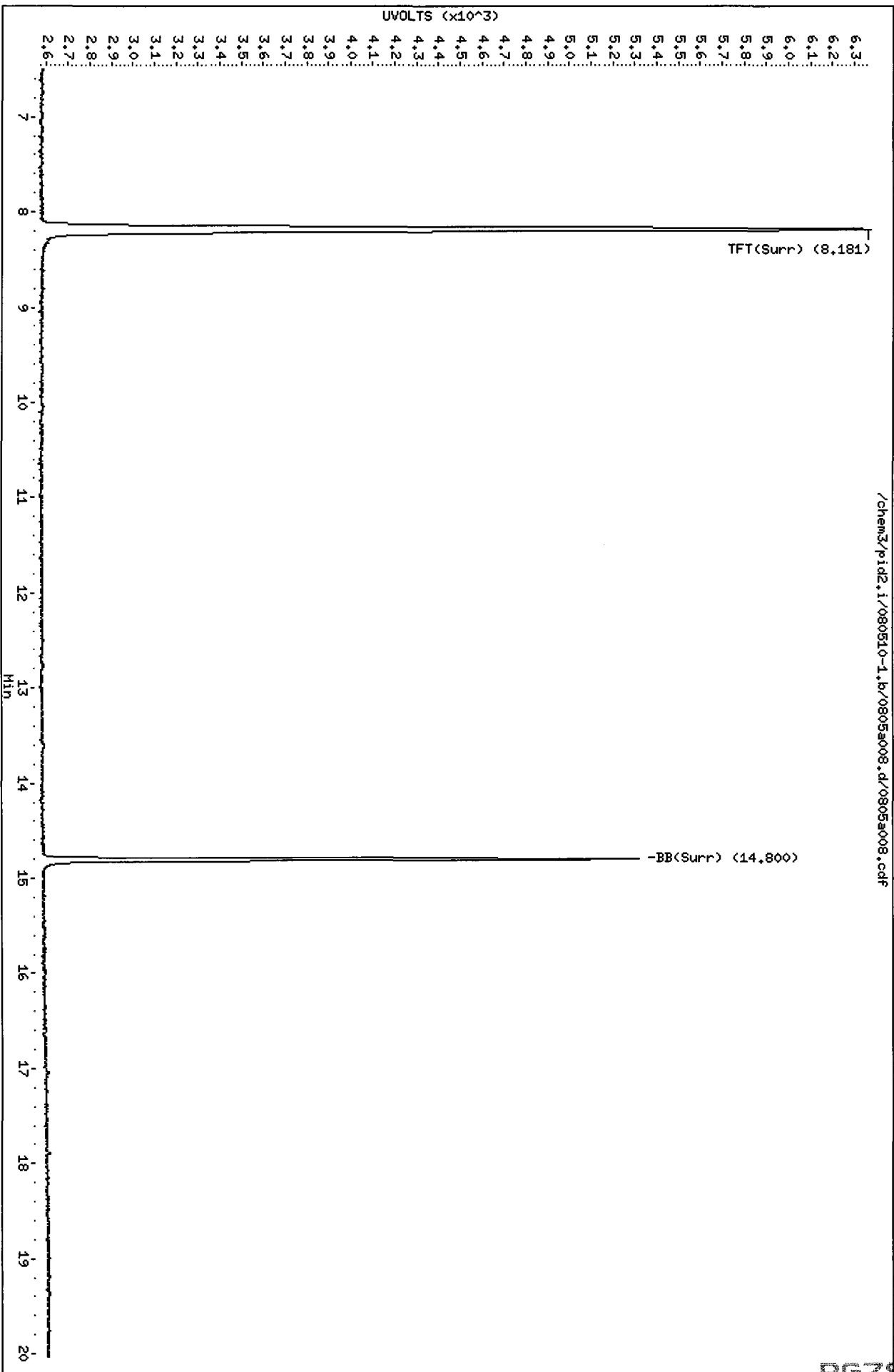
A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a008.d  
Date: 05-AUG-2010 11:20  
Client ID: PB15-TB  
Sample Info: RG79S

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid2.i/080510-1.b/0805a008.d/0805a008.cdf

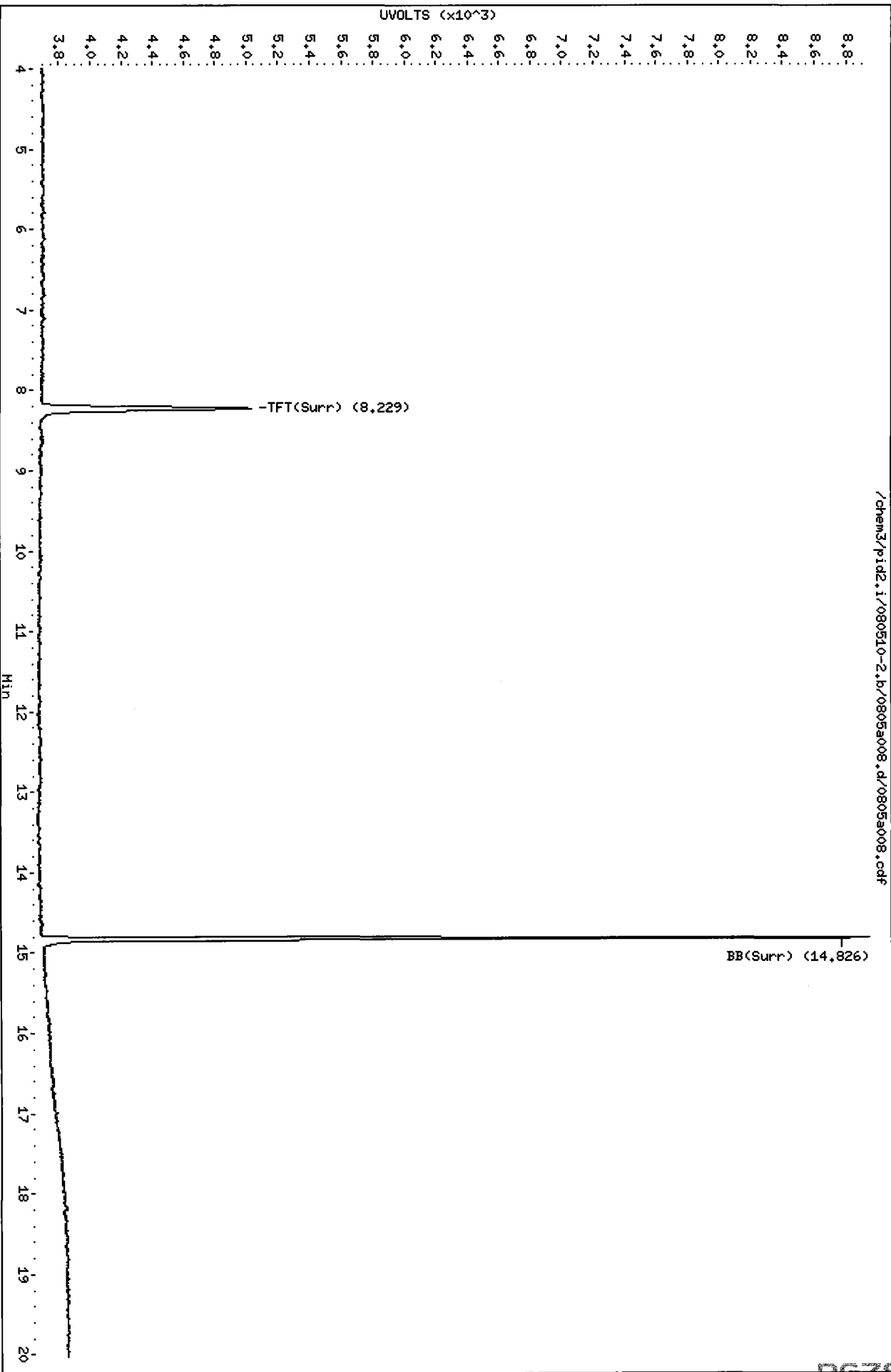


Data File: /chem3/pid2.i/080510-2.b/0805a008.d  
Date: 05-AUG-2010 11:20  
Client ID: PB15-TB  
Sample Info: RG79S

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/080510-2.b/0805a008.d/0805a008.cdf



8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a009.d  
Data file 2: /chem3/pid2.i/080510-2.b/0805a009.d  
Method: /chem3/pid2.i/080510-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: RG79A  
Client ID: PSB11-0-0.5-073010  
Injection Date: 05-AUG-2010 11:46  
Matrix: SOIL  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.179	-0.008	3733	62613	89.9	TFT(Surr)
14.799	-0.004	2716	25366	90.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	1	0.000
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	1	0.000
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	0	0.000
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	1	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
8.228	0.002	1287	89.6	TFT(Surr)
14.826	0.001	5200	89.4	BB(Surr)

SW8021 (PID)

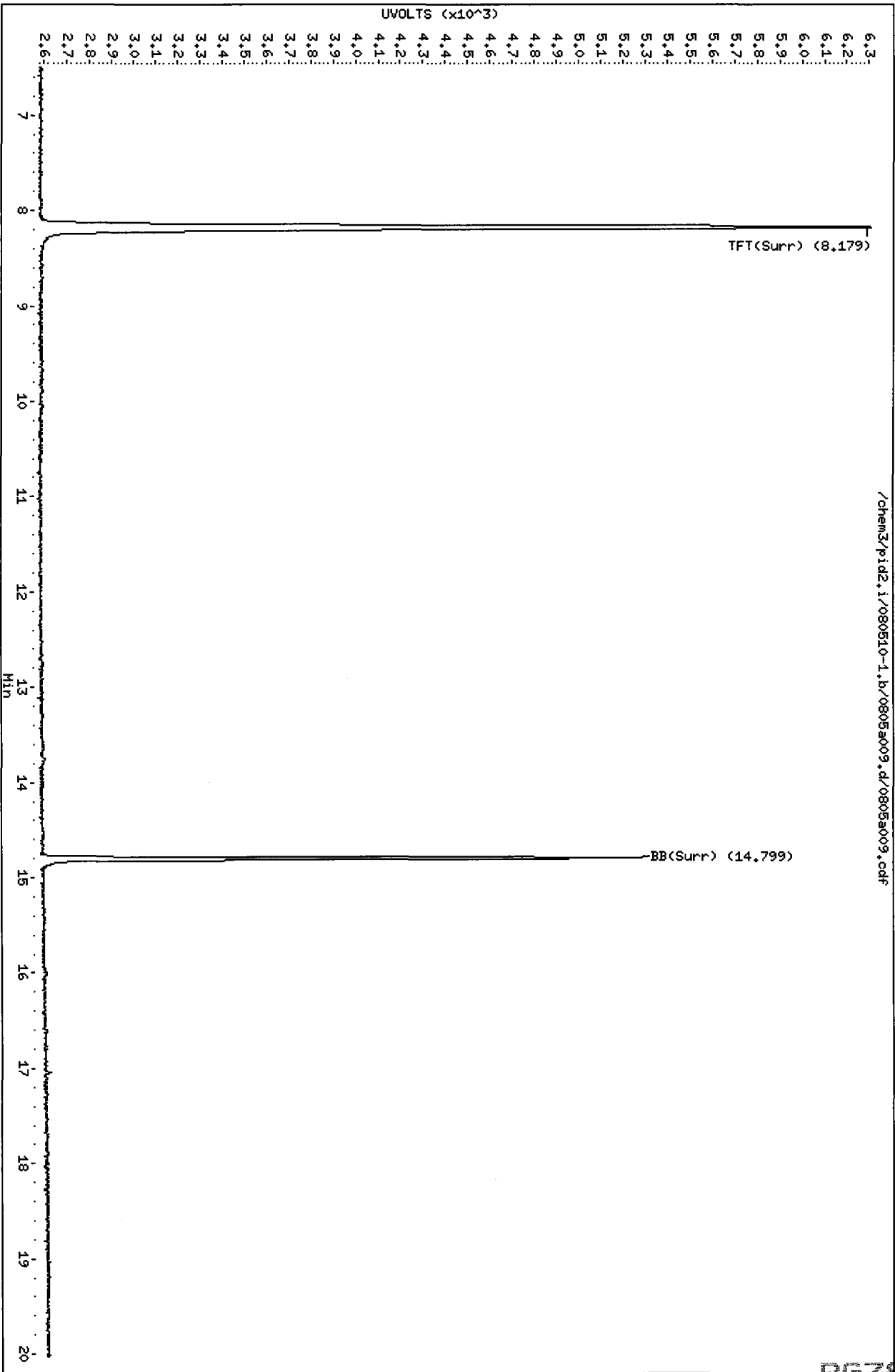
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a009.d  
Date: 05-AUG-2010 11:46  
Client ID: PSB11-0-0.5-073010  
Sample Info: RG79a

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

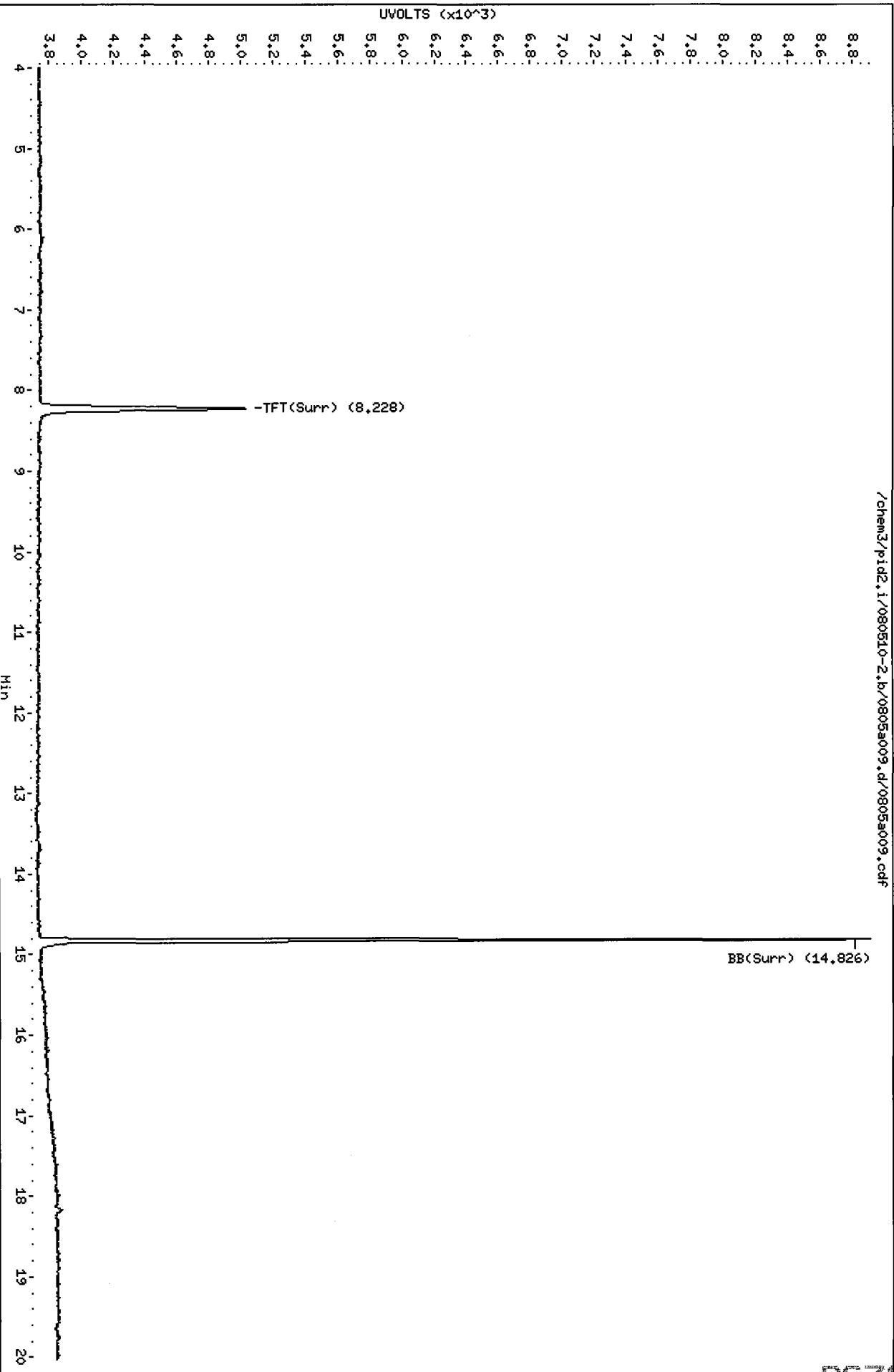


Data File: /chem3/pid2.i/080510-2.b/0805a009.d  
Date : 05-AUG-2010 11:46  
Client ID: PSB11-0-0.5-073010  
Sample Info: RG79A

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid2.i/080510-2.b/0805a009.d/0805a009.cdf



Ms  
8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a010.d      ARI ID: RG79B  
Data file 2: /chem3/pid2.i/080510-2.b/0805a010.d      Client ID: PSB11-1.5-2-073010  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 12:12  
Instrument: pid2.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.180	-0.007	3911	65838	94.2	TFT (Surr)
14.800	-0.003	2848	27403	94.3	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	2219339	3.847 M
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	786312	0.603 M
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	195315	0.220 M
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	2550752	4.237 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
--	----	-----	----	-----
8.228	0.002	1372	95.5	TFT (Surr)
14.825	0.001	5869	100.9	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

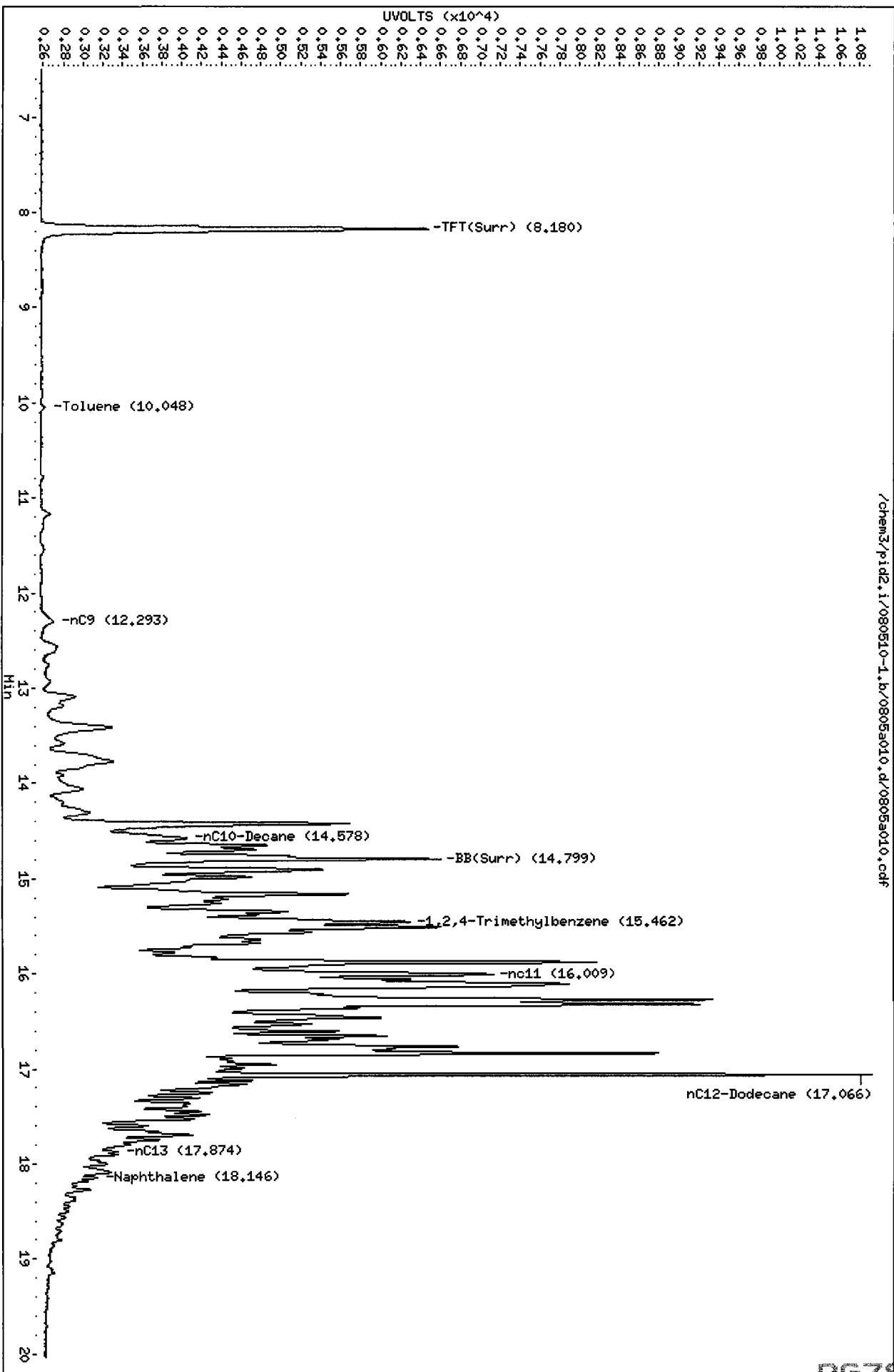
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a010.d  
Date: 05-AUG-2010 12:12  
Client ID: PSB11-1.5-2-073010  
Sample Info: RG79B

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/080510-1.b/0805a010.d/0805a010.cdf



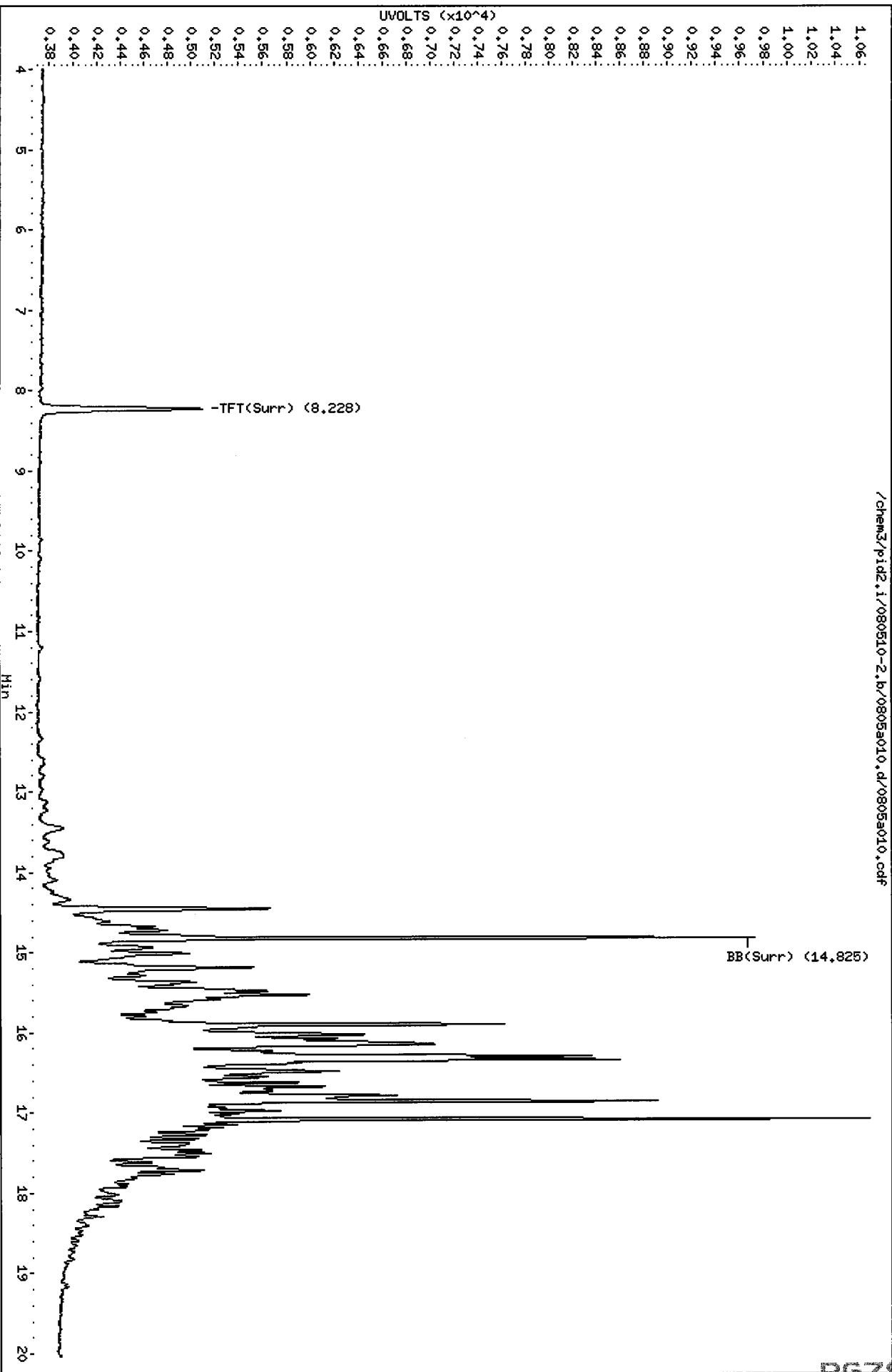


Data File: /chem3/pid2.i/080510-2.b/0805a010.d  
Date: 05-AUG-2010 12:12  
Client ID: PSB11-1.5-2-073010  
Sample Info: RG79B

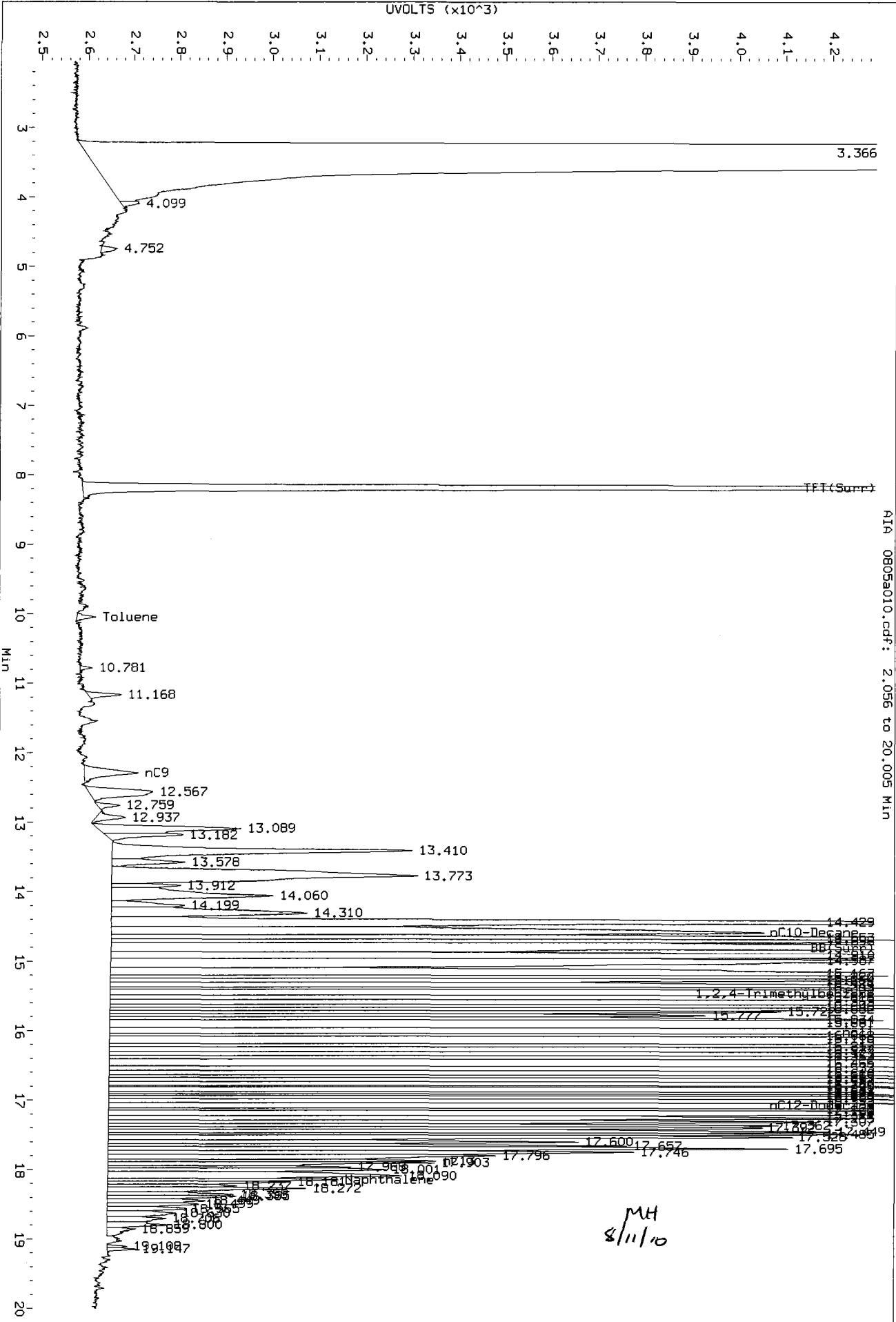
Column phase: RTX 502-2 PID

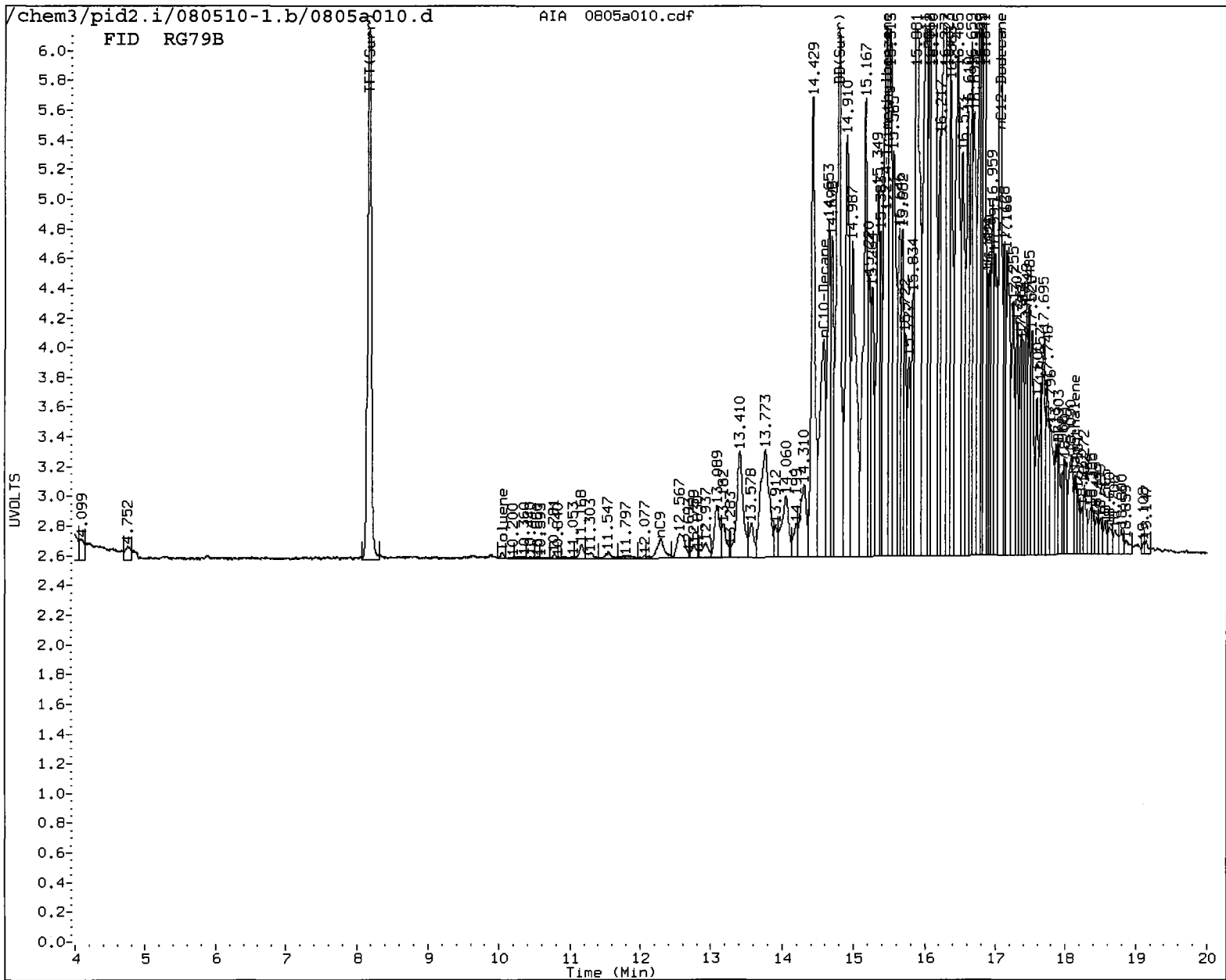
Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/080510-2.b/0805a010.d/0805a010.cdf



Data File: /chem3/pid2.1/080510-1.b/0805a010.d/0805a010.cdf  
Injection Date: 05-AUG-2010 12:12  
Instrument: pid2.1  
Client Sample ID: PSB11-1.5-2-073010





MANUAL INTEGRATION

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

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

Analyst:   MH  

Date:   8/11/10

8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a011.d  
Data file 2: /chem3/pid2.i/080510-2.b/0805a011.d  
Method: /chem3/pid2.i/080510-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: RG79C  
Client ID: PSB11-2-4-073010  
Injection Date: 05-AUG-2010 12:38  
Matrix: SOIL  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.181	-0.006	3846	64412	92.6	TFT(Surr)
14.799	-0.003	2896	30292	95.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	129132	0.224 M
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	51204	0.039 M
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	17602	0.020 M
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	165754	0.275 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
8.229	0.003	1328	92.4	TFT(Surr)
14.825	0.001	5369	92.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

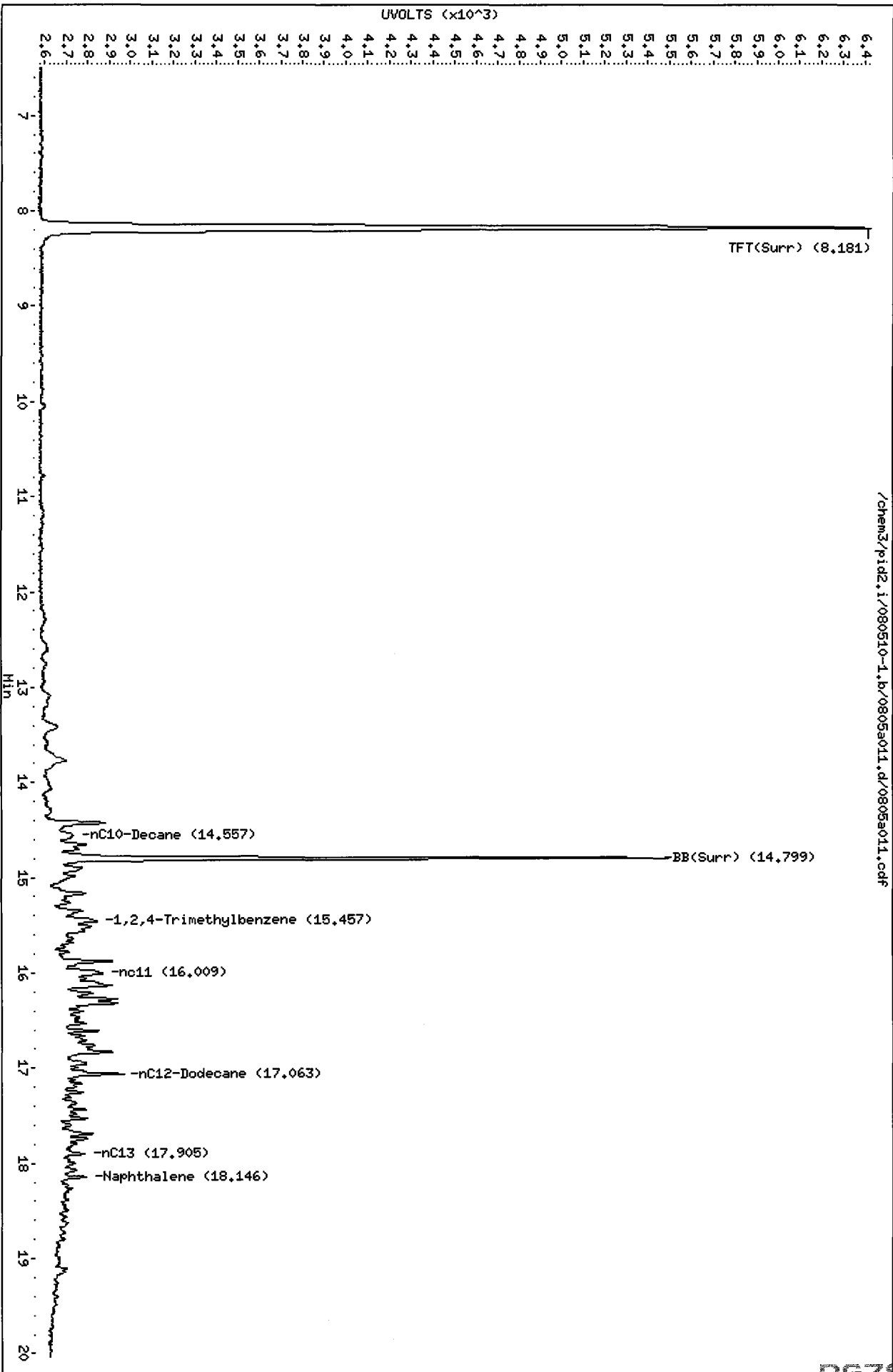
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a011.d  
Date : 05-AUG-2010 12:38  
Client ID: PSB11-2-4-073010  
Sample Info: RG79C

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/080510-1.b/0805a011.d/0805a011.cdf

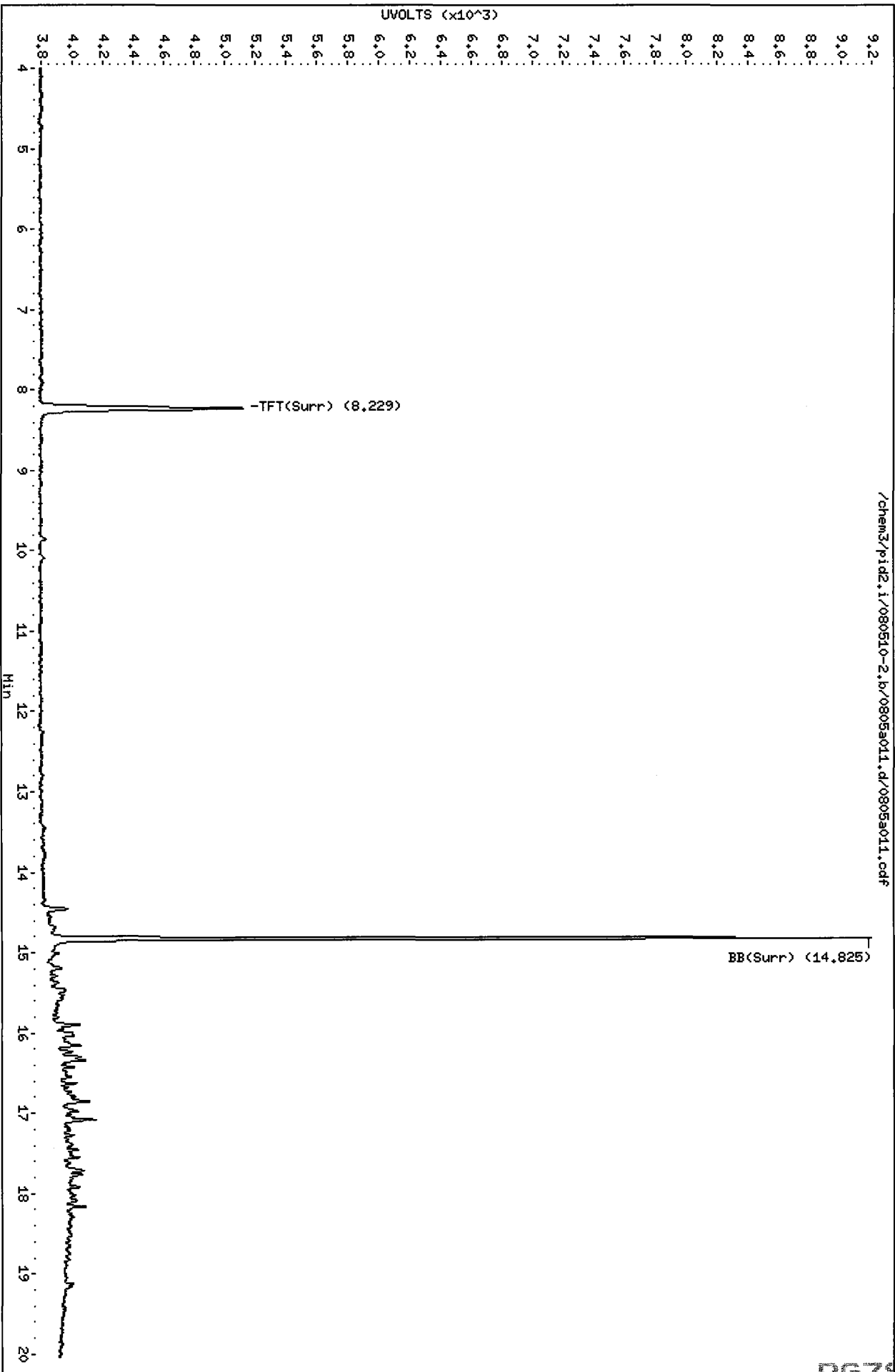


Data File: /chem3/pid2.i/080510-2.b/0805a011.d  
Date: 05-AUG-2010 12:38  
Client ID: PSB11-2-4-073010  
Sample Info: RG79C

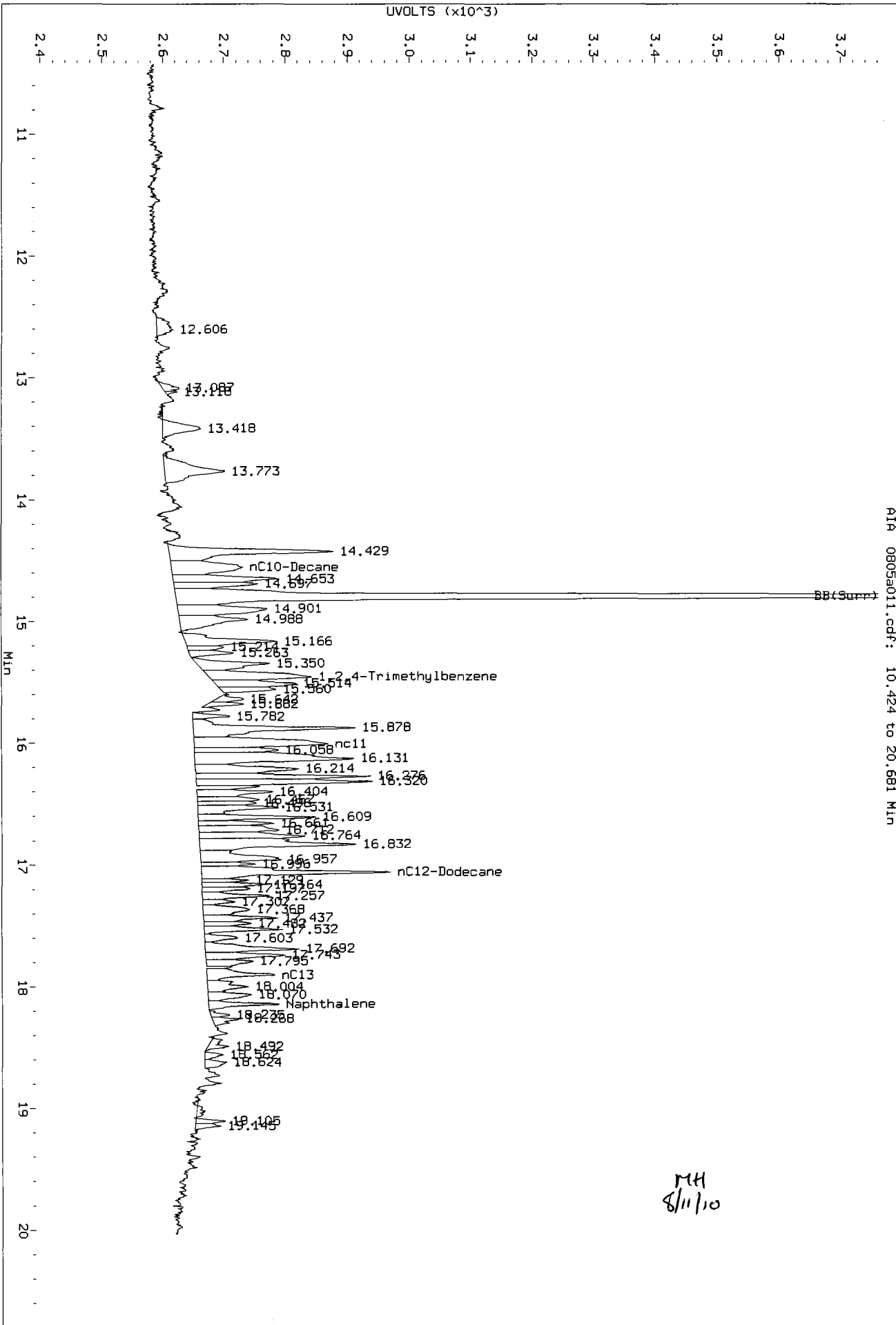
Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

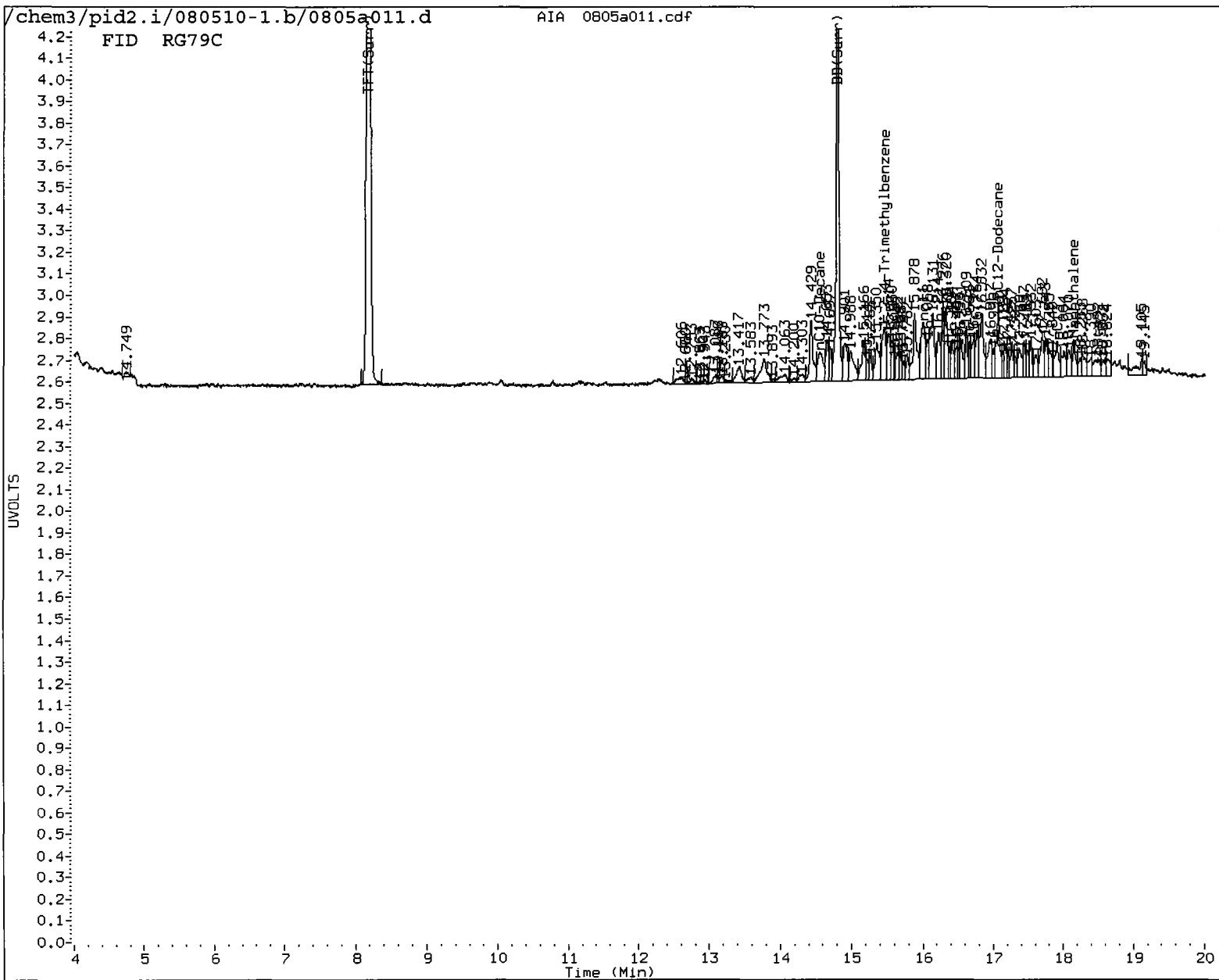
/chem3/pid2.i/080510-2.b/0805a011.d/0805a011.cdf



Data File: /chem3/pid2.1/080510-1.b/0805a011.d/0805a011.cdf  
Injection Date: 05-AUG-2010 12:38  
Instrument: pid2.1  
Client Sample ID: PSB11-2-4-073010



ML  
8/11/10



MANUAL INTEGRATION

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

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

Analyst: MT

Date: 8/11/10



Mt.  
8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a012.d      ARI ID: RG79D  
Data file 2: /chem3/pid2.i/080510-2.b/0805a012.d      Client ID: PSB11-2-4-073010-D  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 13:04  
Instrument: pid2.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.182	-0.005	3949	66357	95.1	TFT(Surr)
14.800	-0.002	3035	34356	100.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	217610	0.377 M
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	99191	0.076 M
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	40252	0.045 M
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	269450	0.448 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
8.230	0.004	1369	95.3	TFT(Surr)
14.826	0.002	5560	95.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

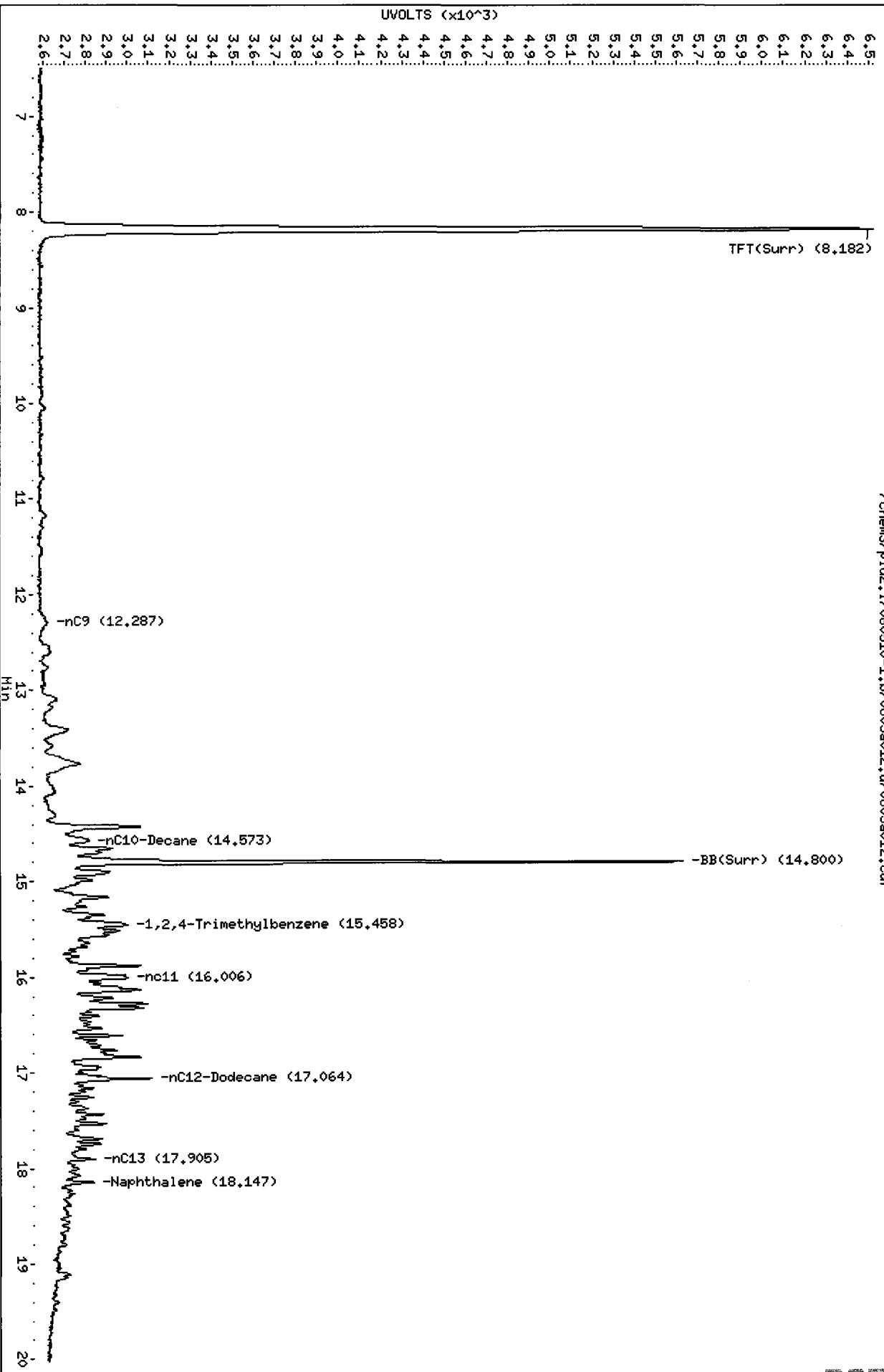
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a012.d  
Date : 05-AUG-2010 13:04  
Client ID: PSB11-2-4-073010-D  
Sample Info: RG79D

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/080510-1.b/0805a012.d/0805a012.cdf

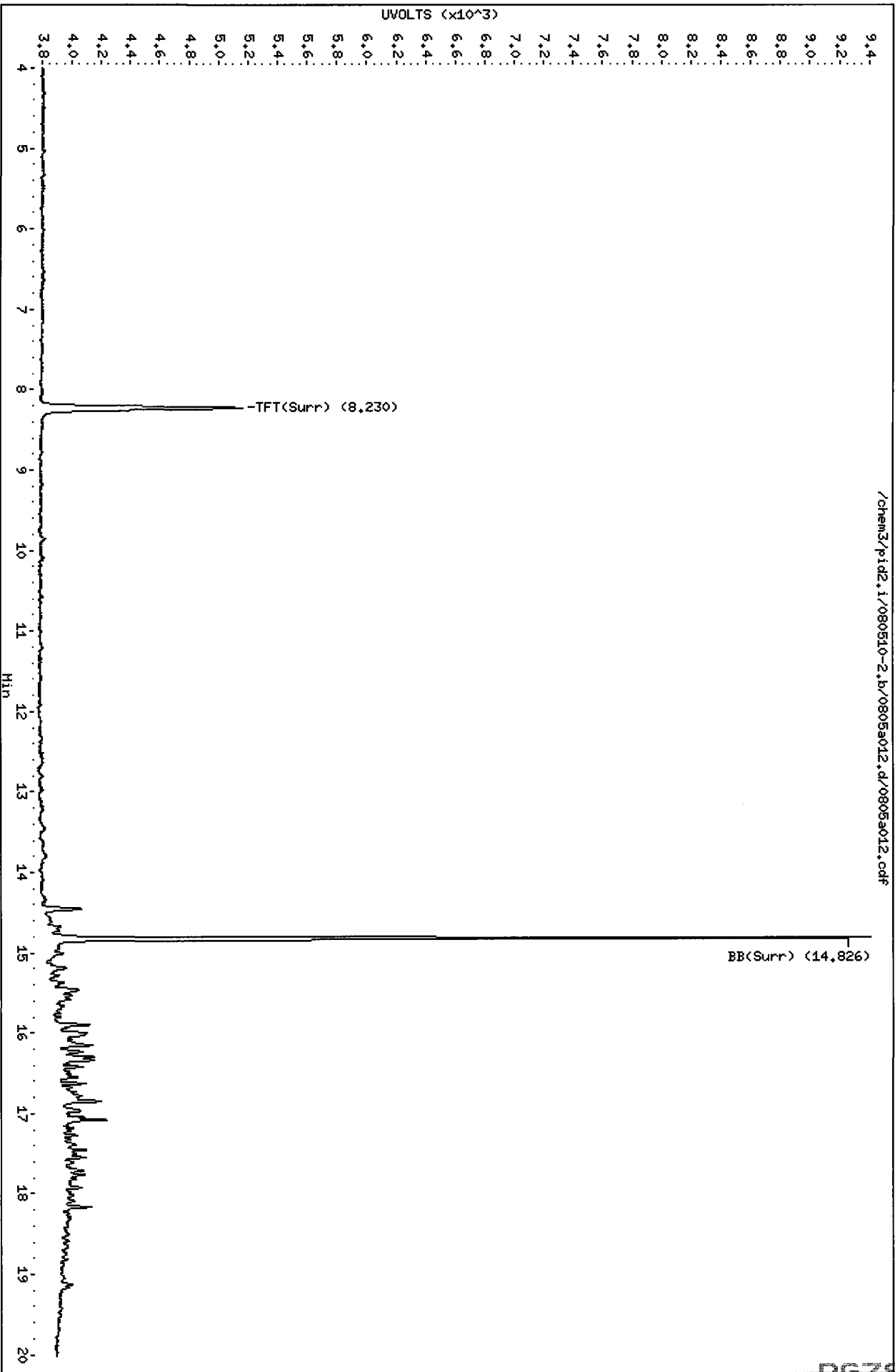


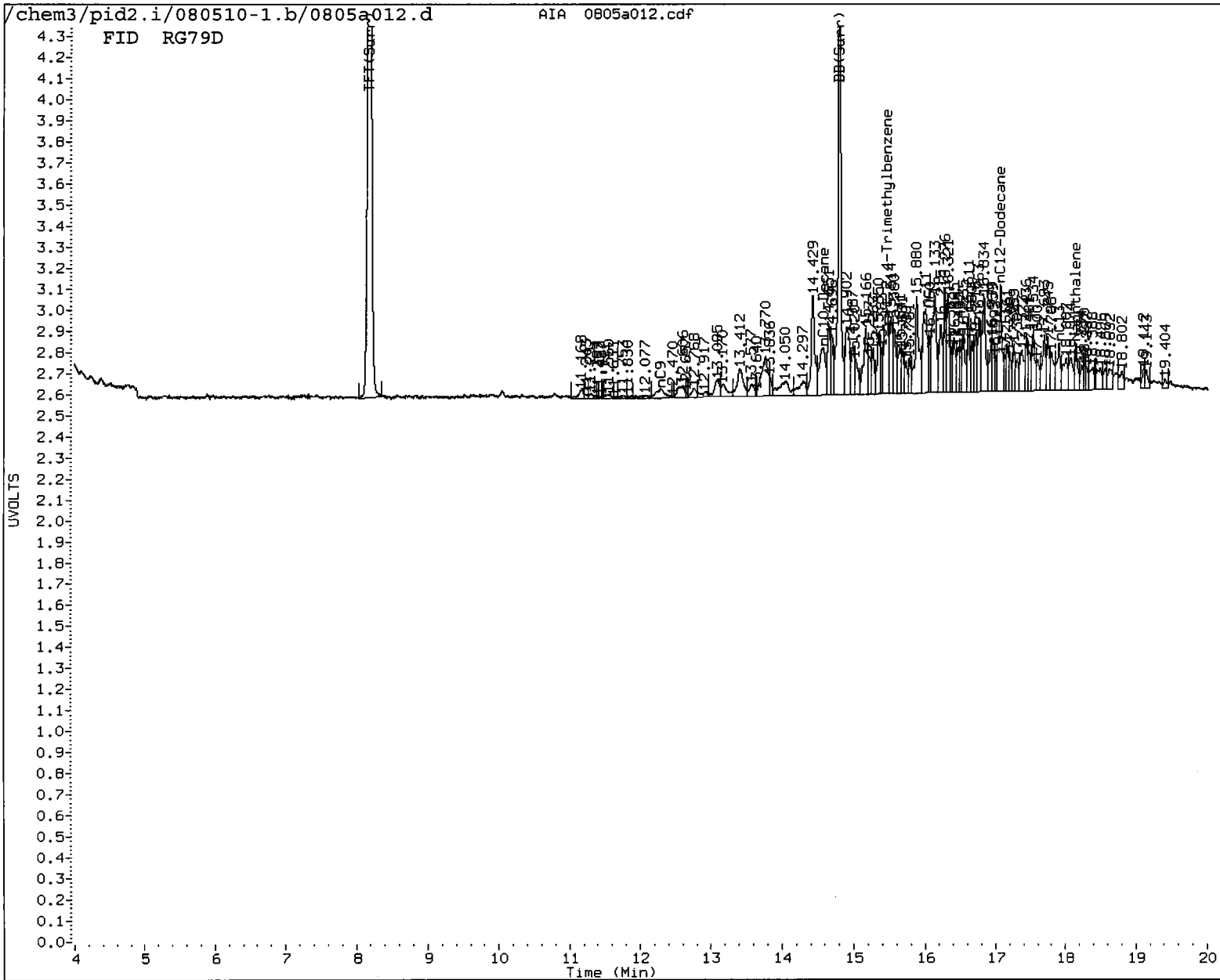
Data File: /chem3/pid2.i/080510-2.b/0805a012.d  
Date : 05-AUG-2010 13:04  
Client ID: PSB11-2-4-073010-D  
Sample Info: RG79D

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/080510-2.b/0805a012.d/0805a012.cdf





MANUAL INTEGRATION

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

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

Analyst: MH

Date: 8/11/10

Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a014.d      ARI ID: BCAL 2  
 Data file 2: /chem3/pid2.i/080510-2.b/0805a014.d      Client ID: BCAL 2  
 Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 13:56  
 Instrument: pid2.i    Matrix: WATER  
 Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
 BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.182	-0.005	3848	64309	92.7	TFT(Surr)
14.800	-0.003	2828	26101	93.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	412338	0.715
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	423621	0.325
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	389754	0.438
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	412633	0.685

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
8.229	0.004	1331	92.6	TFT(Surr)
14.826	0.001	5396	92.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.485	0.002	2776	23.84	Benzene
10.095	0.001	2394	23.08	Toluene
12.654	-0.002	2559	22.33	Ethylbenzene
12.800	-0.003	4614	47.62	M/P-Xylene
13.605	0.000	2421	23.85	O-Xylene
5.105	0.005	955	22.75	MTBE

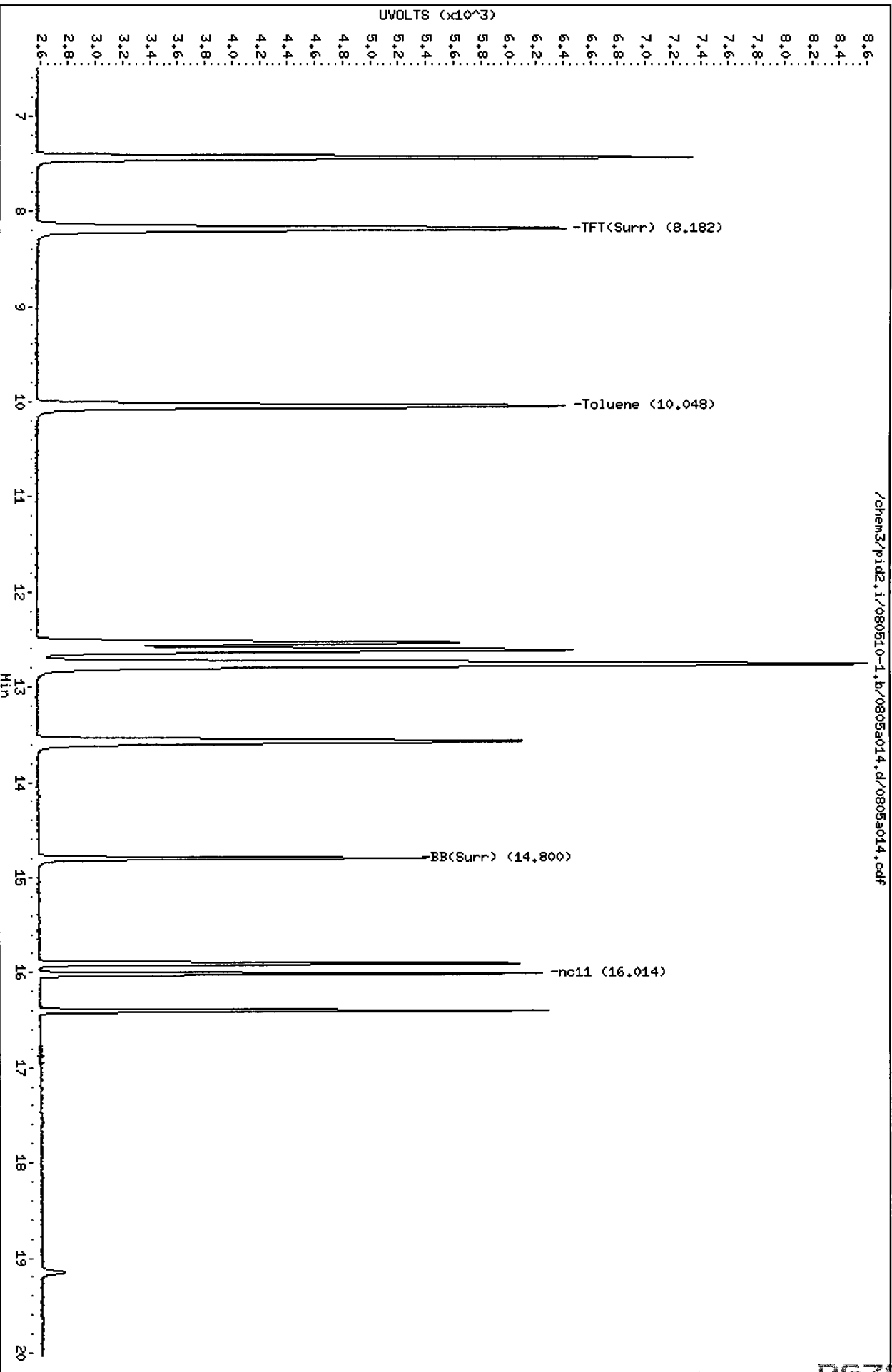
A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a014.d  
Date: 05-AUG-2010 13:56  
Client ID:  
Sample Info: BCAL 2

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

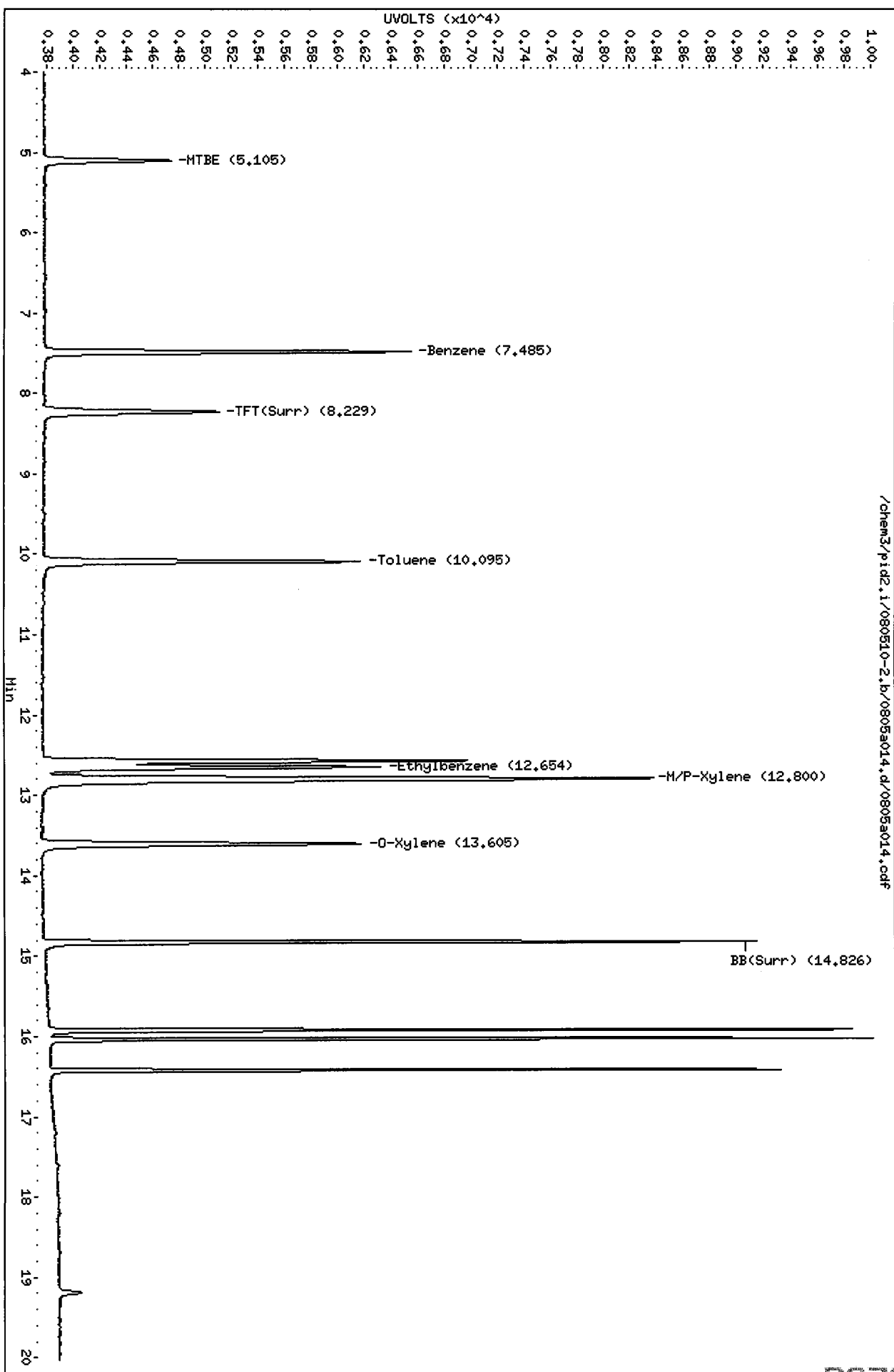
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Data File: /chem3/pid2.i/080510-2.b/0805a014.d  
Date: 05-AUG-2010 13:56  
Client ID: BCAL 2  
Sample Info: BCAL 2

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



/chem3/pid2.i/080510-2.b/0805a014.d/0805a014.cdf

Mh  
8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a015.d      ARI ID: GCAL 2  
Data file 2: /chem3/pid2.i/080510-2.b/0805a015.d      Client ID: GCAL 2  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 14:22  
Instrument: pid2.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	-----	-----
8.184	-0.003	4048	67868	97.5	TFT(Surr)
14.800	-0.003	2934	28997	97.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	1397650	2.422 M
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	3191402	2.446 M
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	2174980	2.446 M
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	1450054	2.409 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
--	----	-----	-----	-----
8.231	0.005	1340	93.2	TFT(Surr)
14.826	0.002	5421	93.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.488	0.005	564	4.84	Benzene
10.096	0.002	6992	67.41	Toluene
12.655	-0.001	2358	20.57	Ethylbenzene
12.803	0.000	7507	77.47	M/P-Xylene
13.606	0.001	3312	32.62	O-Xylene
5.110	0.010	8696	207.12	MTBE

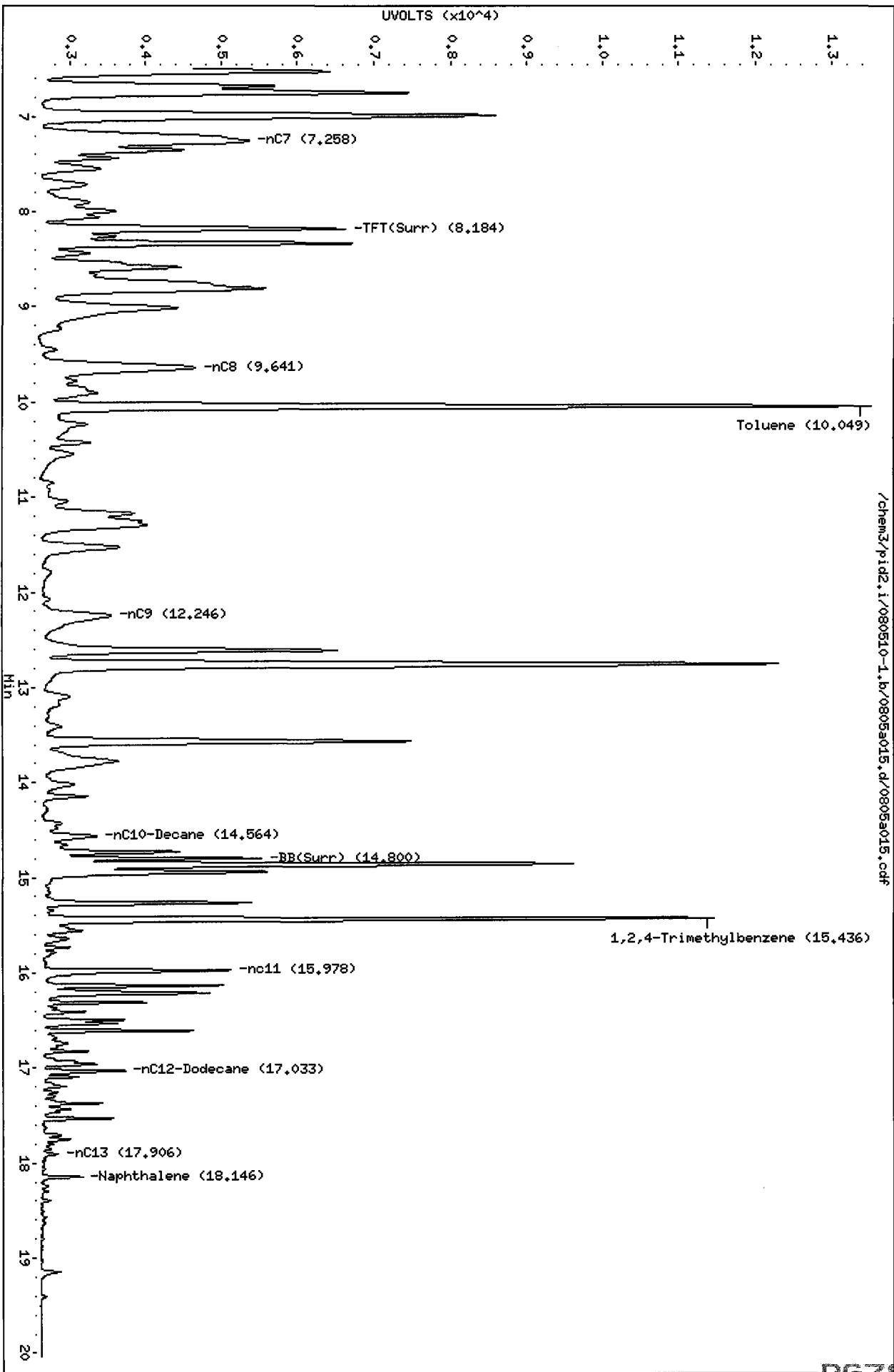
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid2.i/080510-1.b/0805a015.d  
Date: 05-AUG-2010 14:22  
Client ID: LORA LAKE  
Sample Info: GCAL 2

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

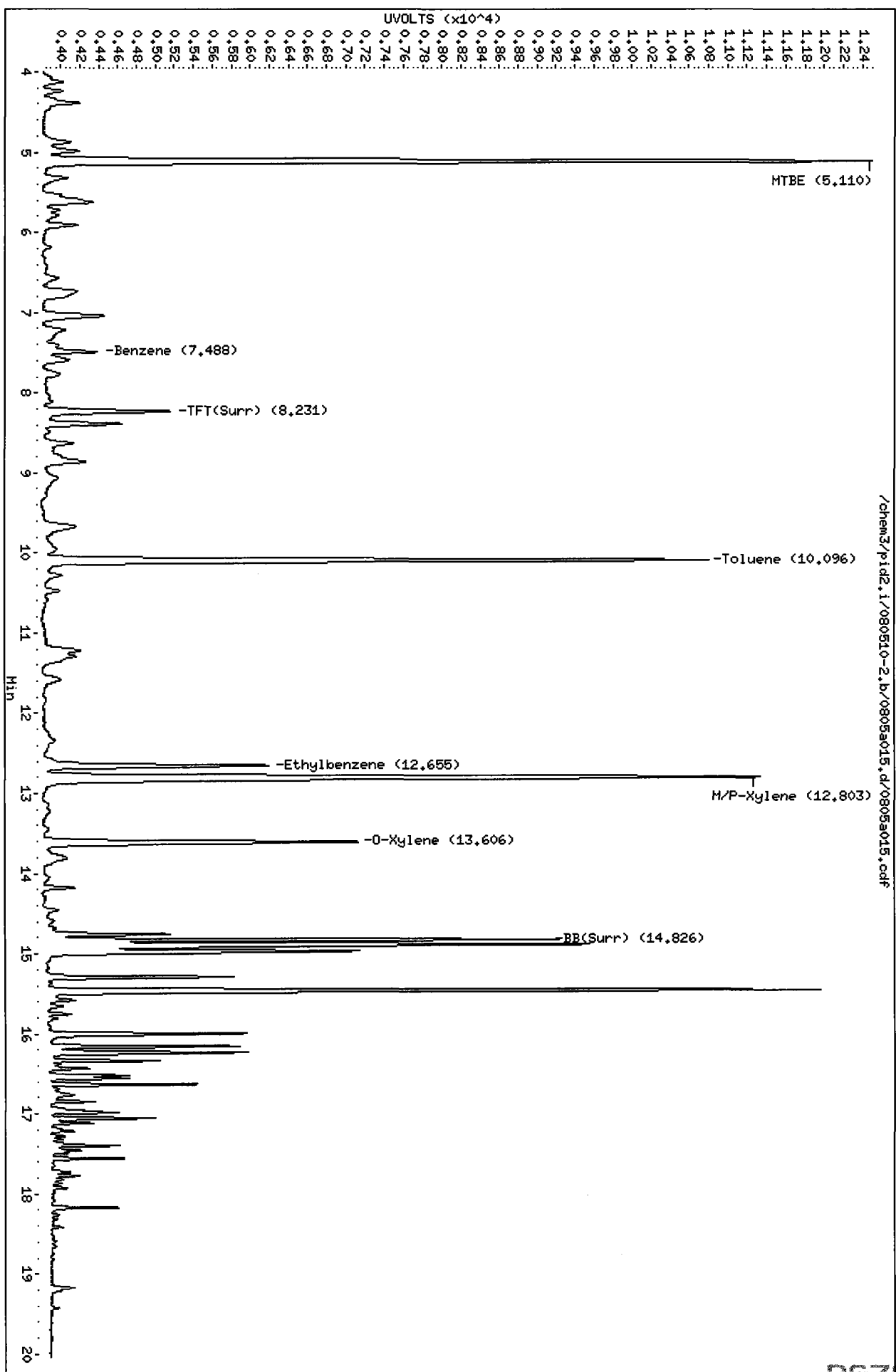


/chem3/pid2.i/080510-1.b/0805a015.d

Data File: /chem3/pid2.i/080510-2.b/0805a015.d  
Date: 05-AUG-2010 14:22  
Client ID: GCAL 2  
Sample Info: GCAL 2

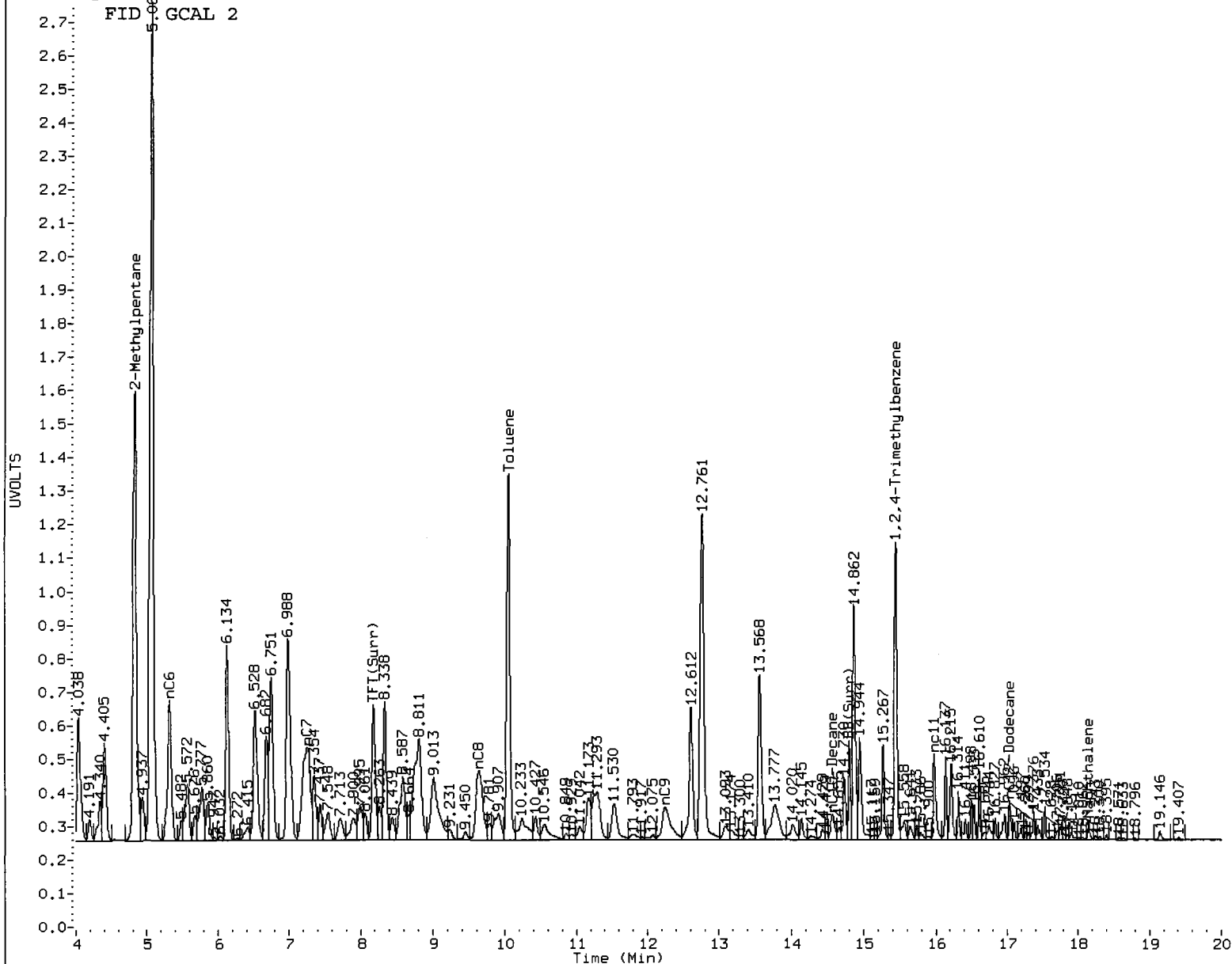
Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



/chem3/pid2.i/080510-2.b/0805a015.d/0805a015.cdf

FID GCAL 2



MANUAL INTEGRATION

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

Analyst: MH

Date: 8/11/10

Mr  
8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a016.d      ARI ID: RG79E  
Data file 2: /chem3/pid2.i/080510-2.b/0805a016.d      Client ID: PSB11-4-6-073010  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 14:48  
Instrument: pid2.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.183	-0.004	3729	64014	89.8	TFT(Surr)
14.801	-0.001	2830	28670	93.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	111032	0.192 M
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	75736	0.058 M
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	44916	0.051 M
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	137534	0.228 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
8.232	0.006	1293	90.0	TFT(Surr)
14.827	0.003	5365	92.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

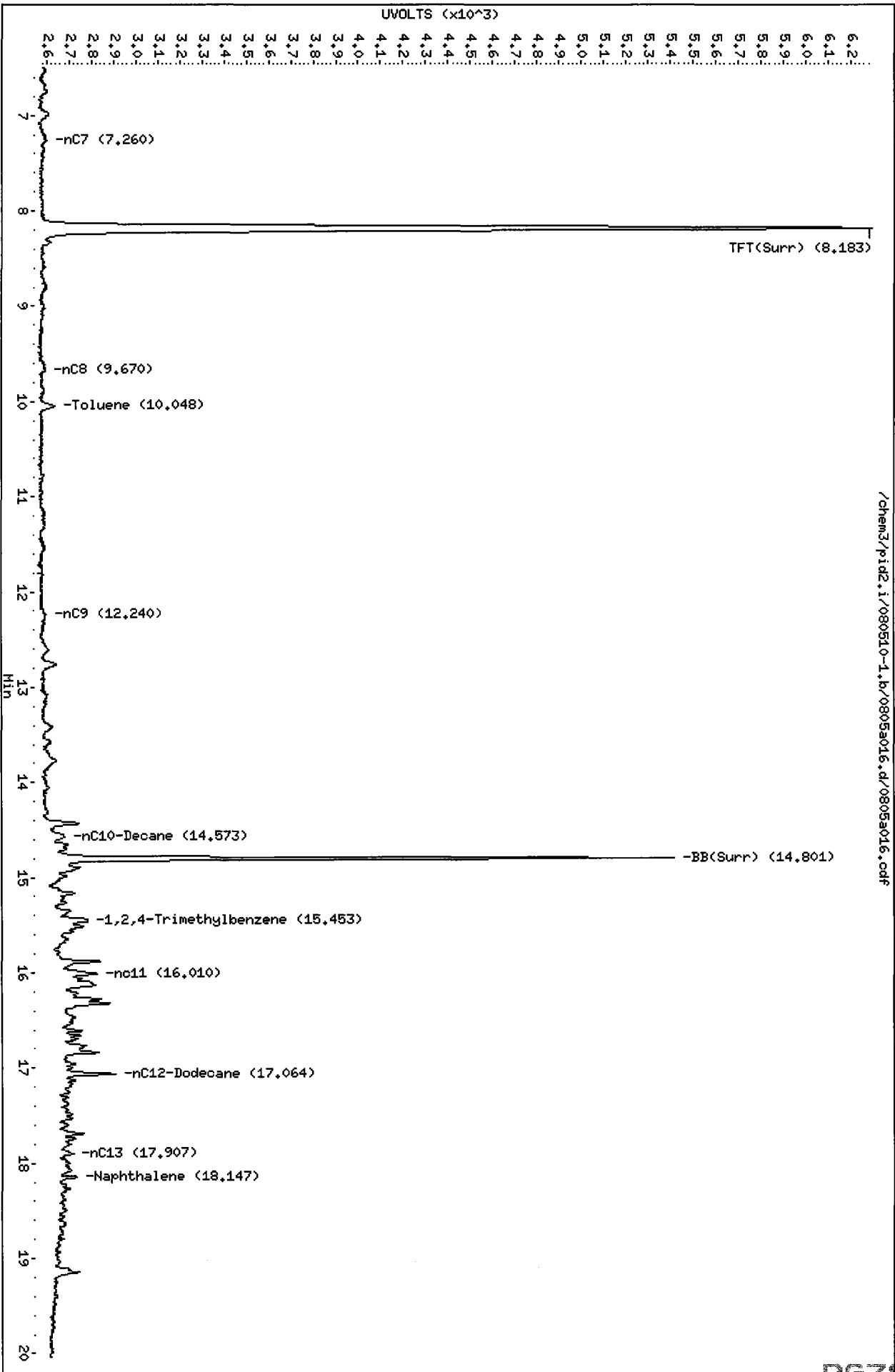
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a016.d  
Date: 05-AUG-2010 14:48  
Client ID: PSB11-4-6-073010  
Sample Info: RG79E

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/080510-1.b/0805a016.d/0805a016.cdf

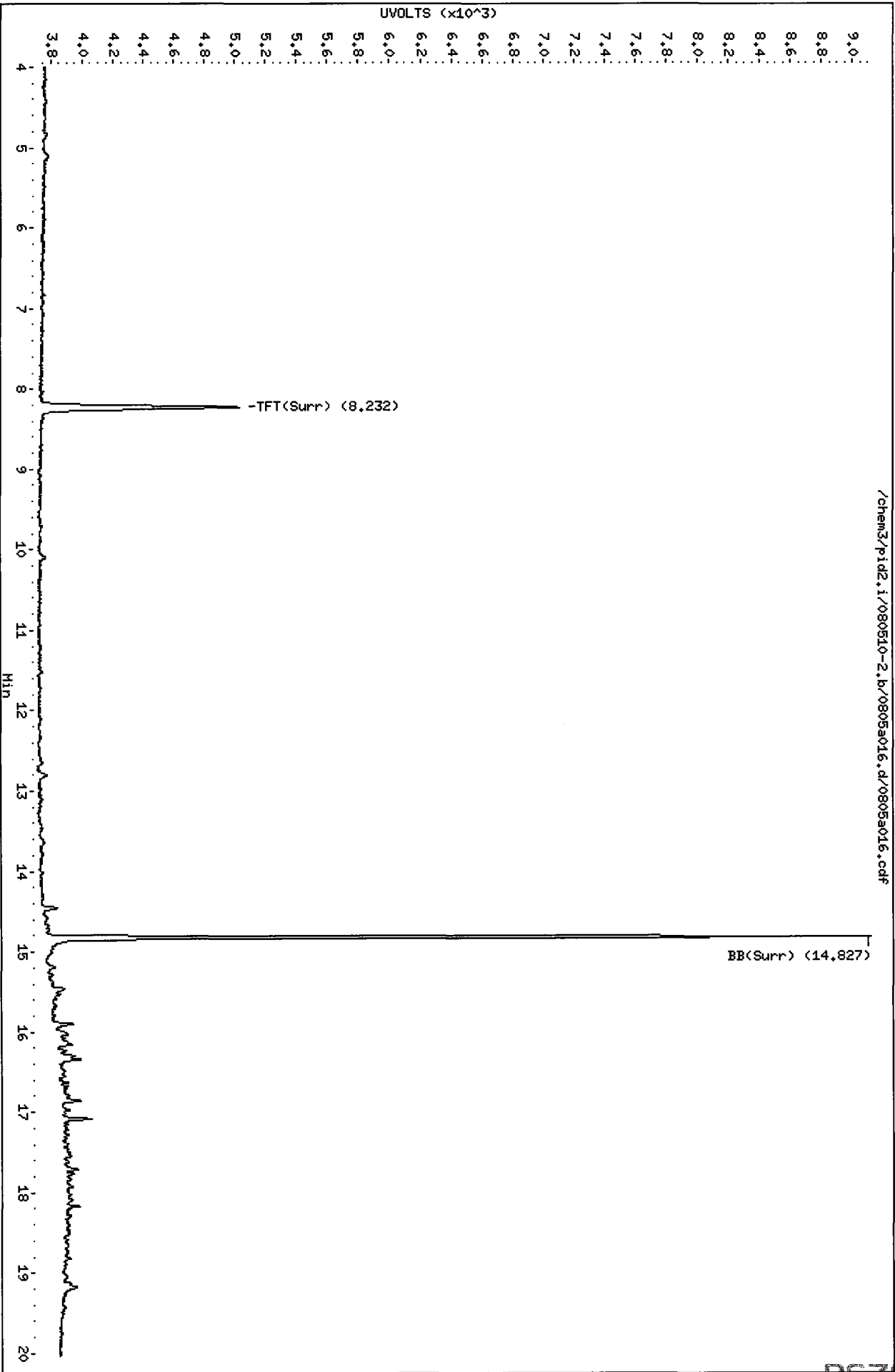


Data File: /chem3/pid2.i/080510-2.b/0805a016.d  
Date : 05-AUG-2010 14:48  
Client ID: PSB11-4-6-073010  
Sample Info: RG79E

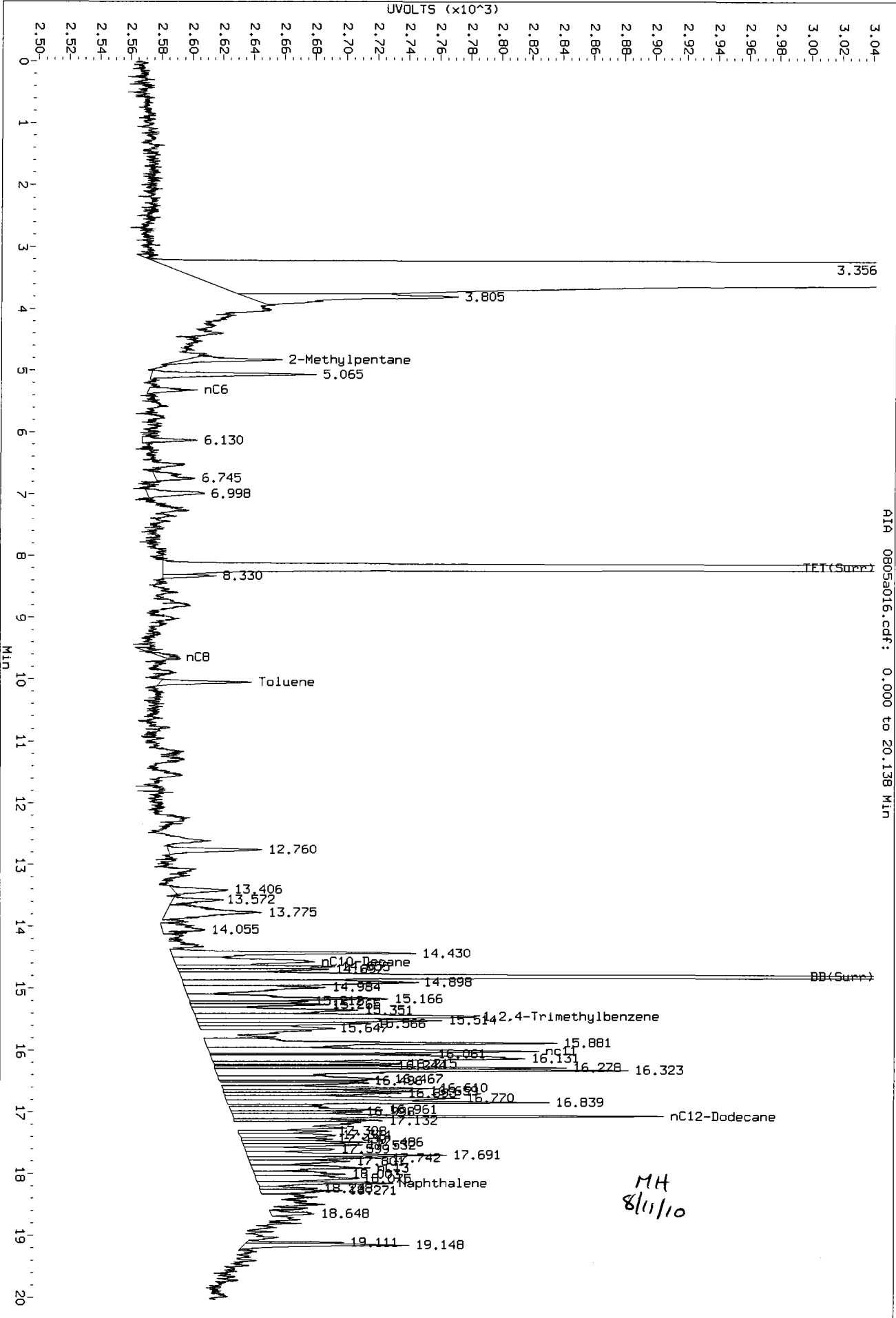
Column phase: RTX 502-2 PID

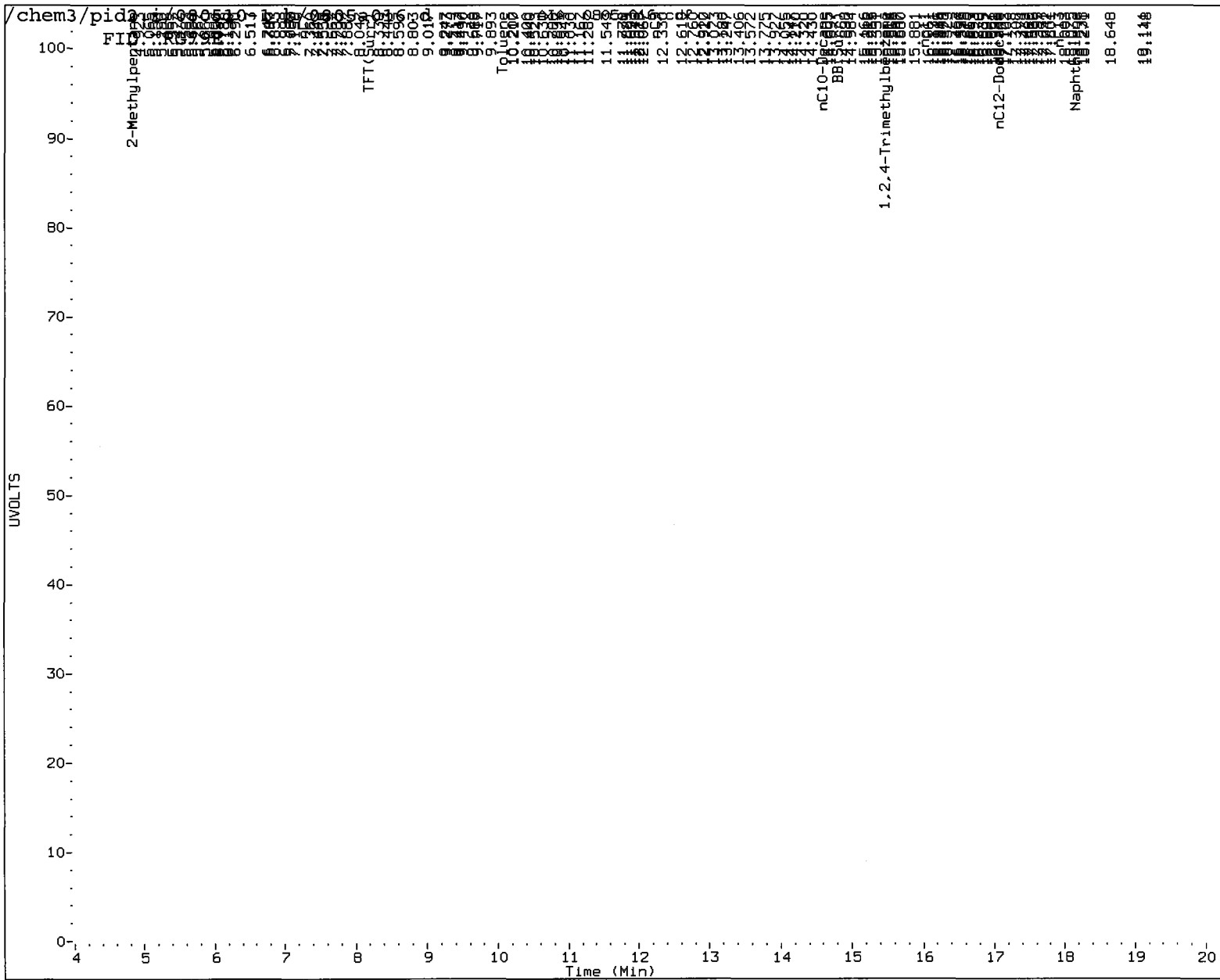
Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid2.i/080510-2.b/0805a016.d/0805a016.cdf



Data File: /chem3/pid2.1/080510-1.b/0805a016.d/0805a016.cdf  
Injection Date: 05-AUG-2010 14:48  
Instrument: pid2.1  
Client Sample ID: PSB11-4-6-073010





MANUAL INTEGRATION

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

Analyst: mtt

Date: 8/11/10



Mh  
8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a017.d  
Data file 2: /chem3/pid2.i/080510-2.b/0805a017.d  
Method: /chem3/pid2.i/080510-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: RG79EMS  
Client ID: PSB11-4-6-07301 MS  
Injection Date: 05-AUG-2010 15:14  
Matrix: SOIL  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.185	-0.002	3941	66638	94.9	TFT(Surr)
14.801	-0.001	3013	29678	99.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	691845	1.199 M
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	1414559	1.084 M
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	963302	1.083 M
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	736138	1.223 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
8.233	0.007	1333	92.8	TFT(Surr)
14.827	0.003	5639	97.0	BB(Surr)

SW8021 (PID)

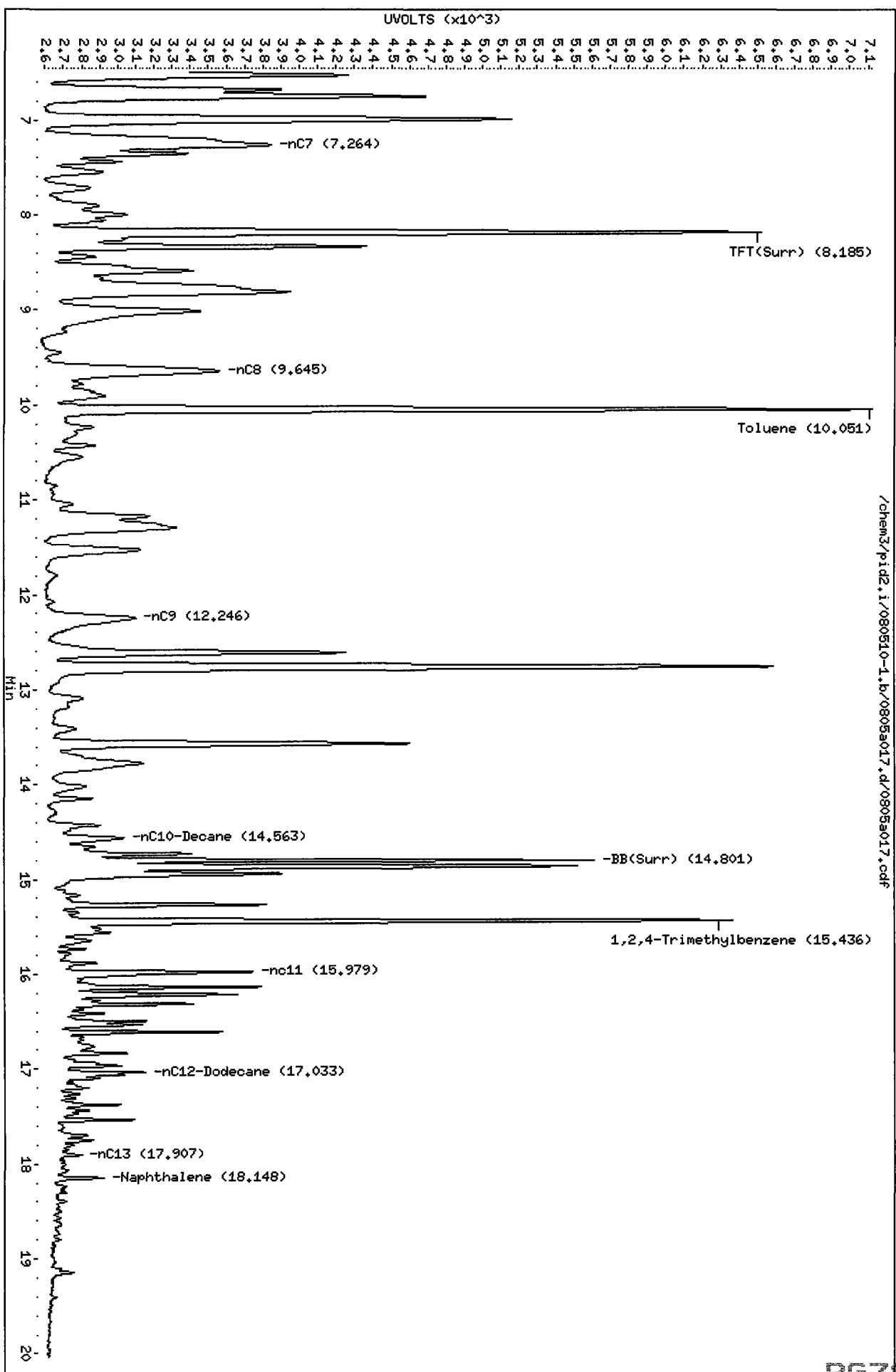
RT	Shift	Response	Amount	Compound
7.489	0.006	193	1.66	Benzene
10.097	0.004	2784	26.84	Toluene
12.656	0.000	954	8.32	Ethylbenzene
12.805	0.002	2999	30.95	M/P-Xylene
13.608	0.002	1320	13.00	O-Xylene
5.109	0.009	3607	85.91	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a017.d  
Date: 05-AUG-2010 15:14  
Client ID: PSB11-4-6-07301 MS  
Sample Info: RG79EHS

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

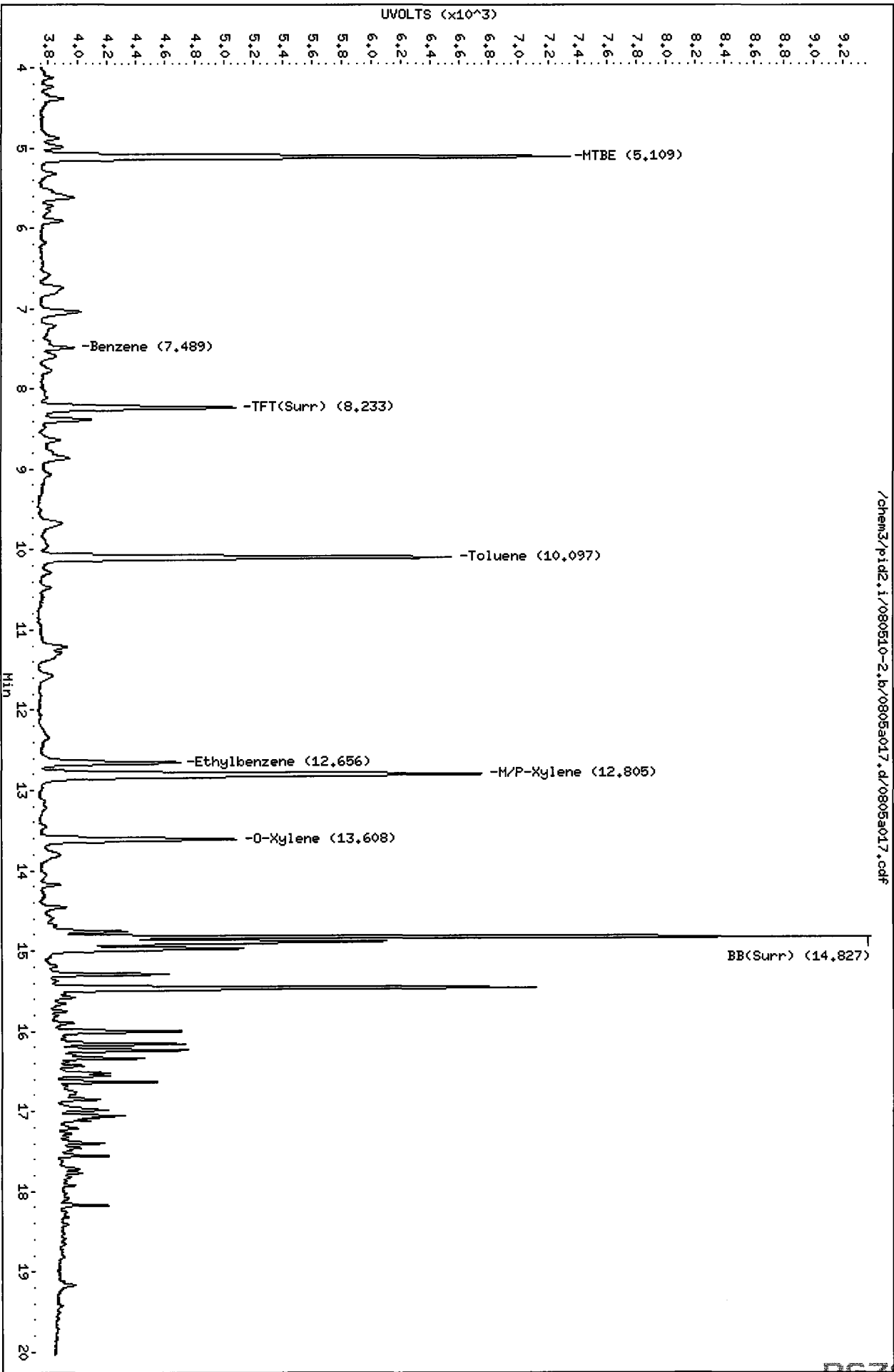


/chem3/pid2.i/080510-1.b/0805a017.d/0805a017.cdf

Data File: /chem3/pid2.i/080510-2.b/0805a017.d  
Date: 05-AUG-2010 15:14  
Client ID: PSB11-4-6-07301 MS  
Sample Info: RG79ENS

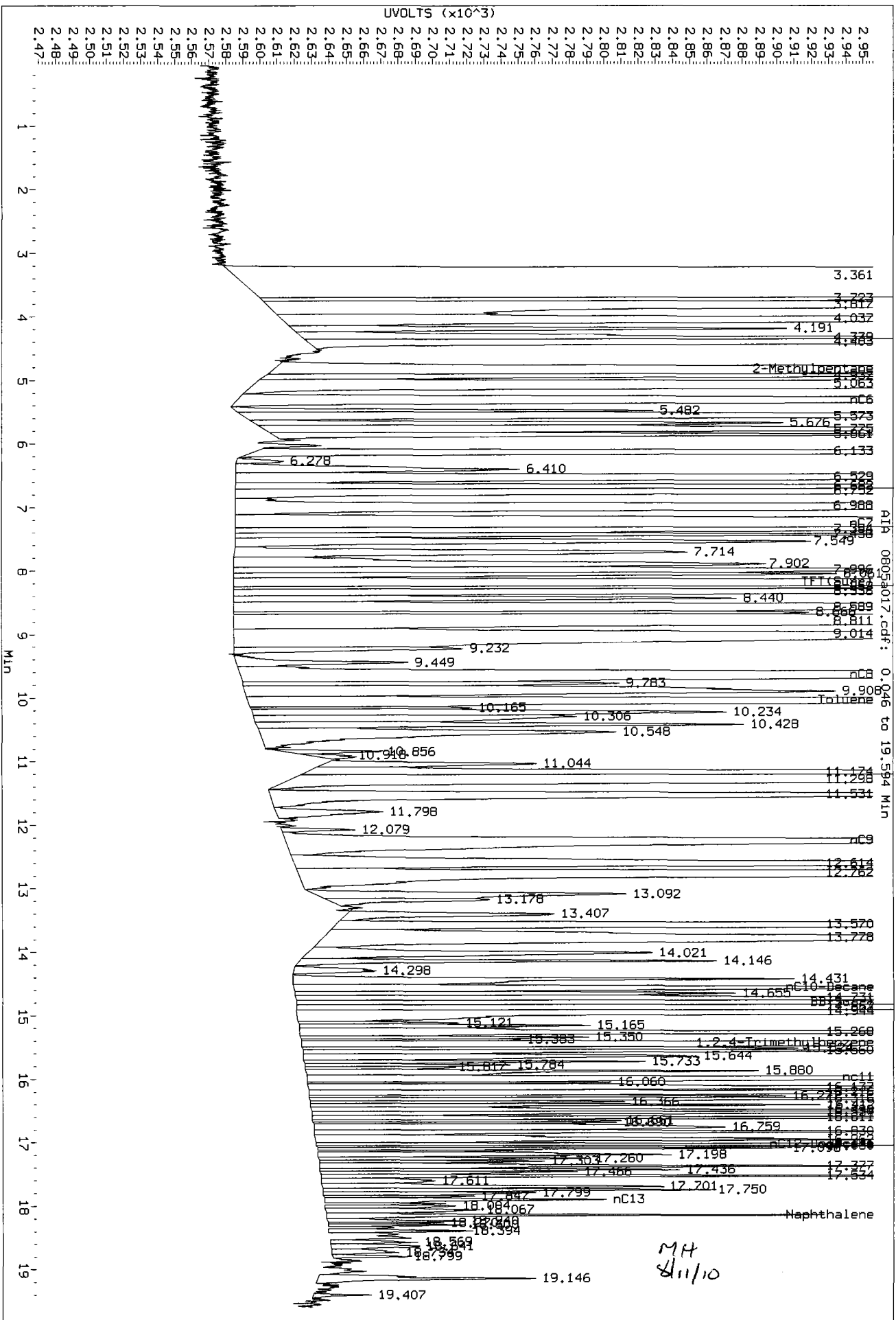
Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



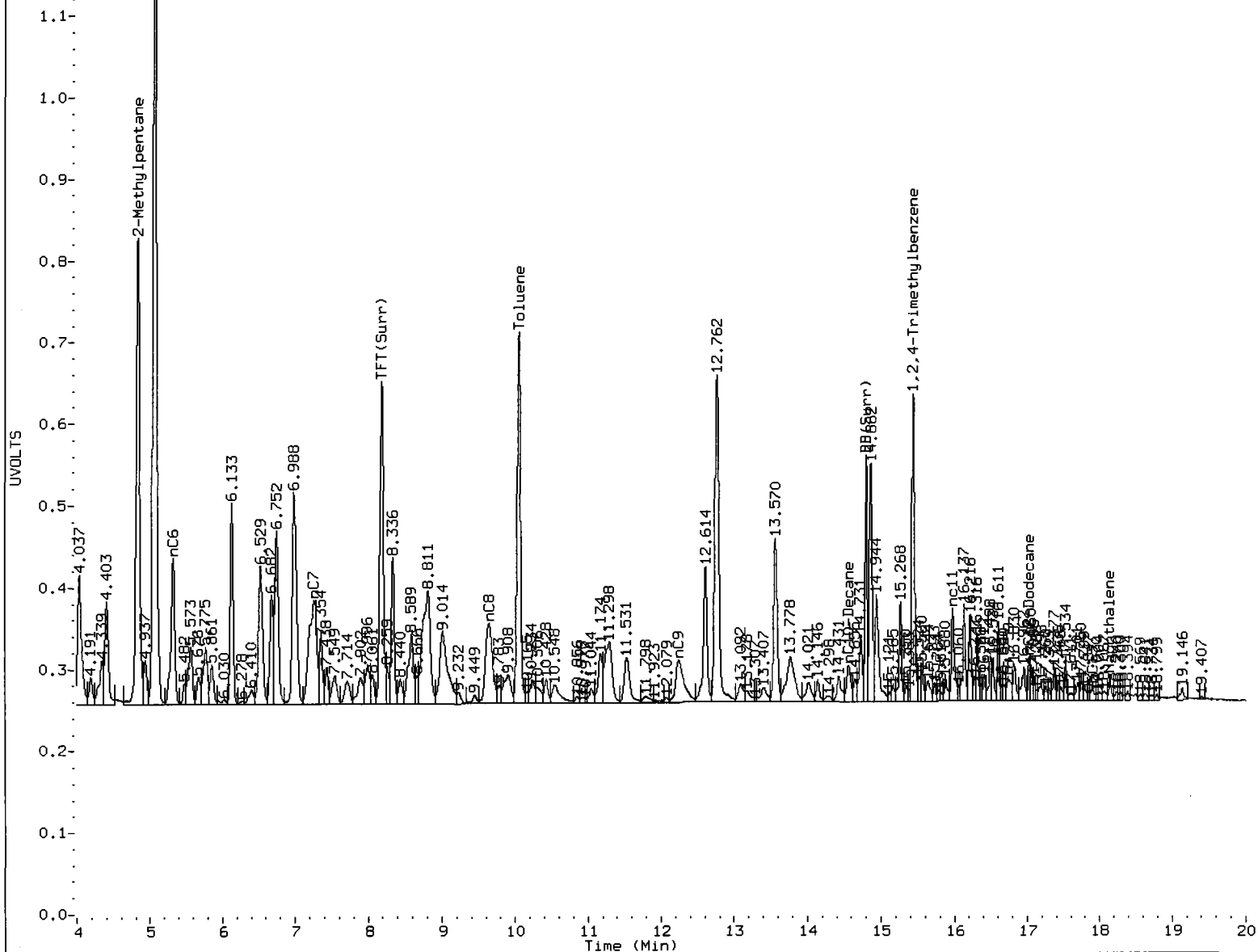
/chem3/pid2.i/080510-2.b/0805a017.d/0805a017.cdf

Data File: /chem3/pid2.1/080510-1.b/0805a017.d/0805a017.cdf  
 Injection Date: 05-AUG-2010 15:14  
 Instrument: pid2.1  
 Client Sample ID: PSB11-4-6-07301 MS



MH  
8/11/10

FID RG79EMS



MANUAL INTEGRATION

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

Analyst: ML

Date: 8/11/10

MH  
8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a018.d  
Data file 2: /chem3/pid2.i/080510-2.b/0805a018.d  
Method: /chem3/pid2.i/080510-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: RG79EMSD  
Client ID: PSB11-4-6-07301 MSD  
Injection Date: 05-AUG-2010 15:40  
Matrix: SOIL  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.183	-0.004	4173	69928	100.5	TFT(Surr)
14.801	-0.002	3118	30354	103.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	675930	1.172 M
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	1382966	1.060 M
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	941591	1.059 M
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	720830	1.197 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
--	----	-----	----	-----
8.231	0.006	1394	97.0	TFT(Surr)
14.827	0.002	5734	98.6	BB(Surr)

SW8021 (PID)

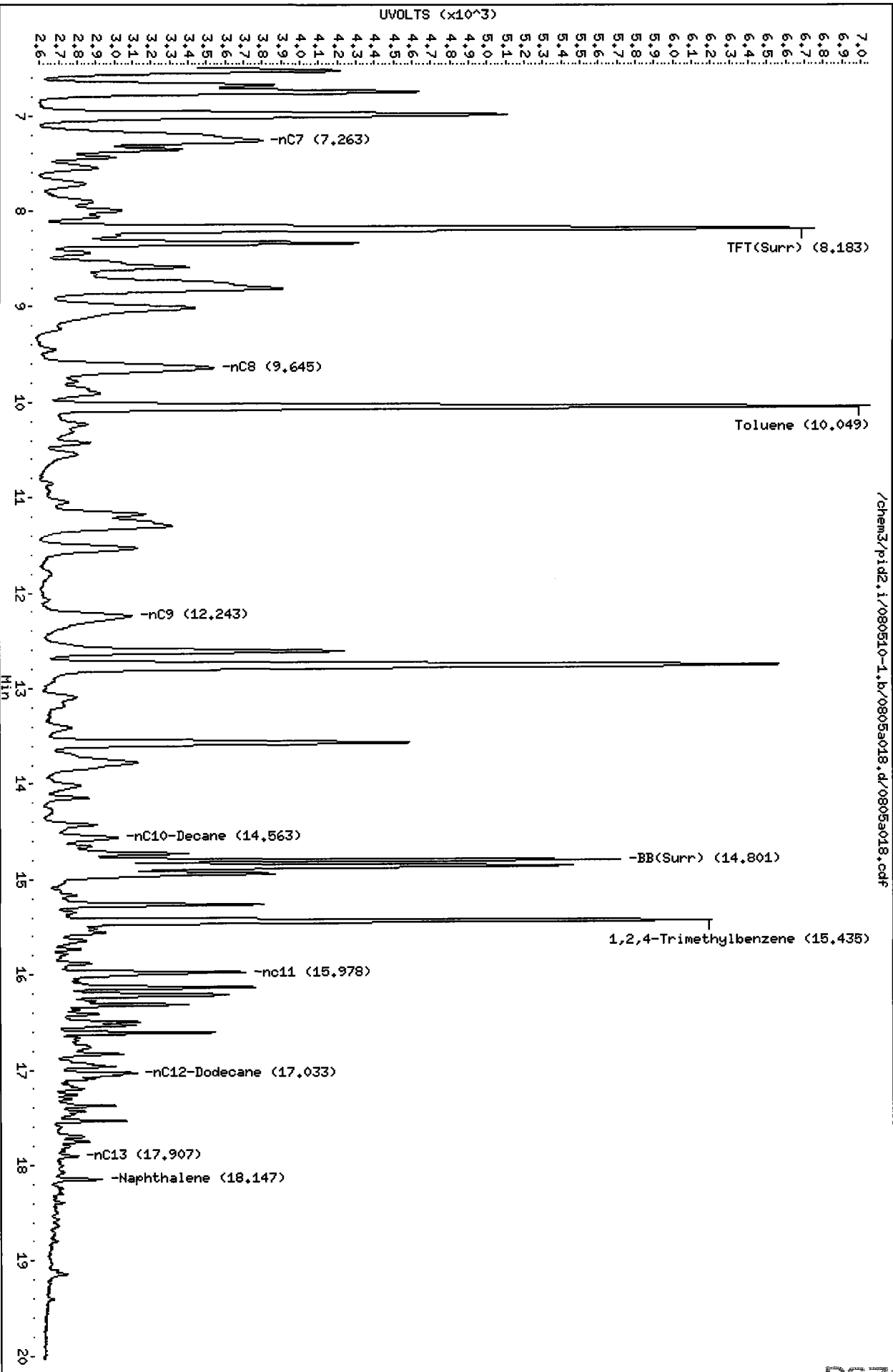
RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
7.487	0.004	186	1.60	Benzene
10.096	0.003	2734	26.36	Toluene
12.655	-0.001	949	8.28	Ethylbenzene
12.803	0.000	3002	30.98	M/P-Xylene
13.607	0.001	1278	12.59	O-Xylene
5.107	0.007	3547	84.48	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a018.d  
Date: 05-AUG-2010 15:40  
Client ID: PSB11-4-6-07301 HSD  
Sample Info: RC79EHSU

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

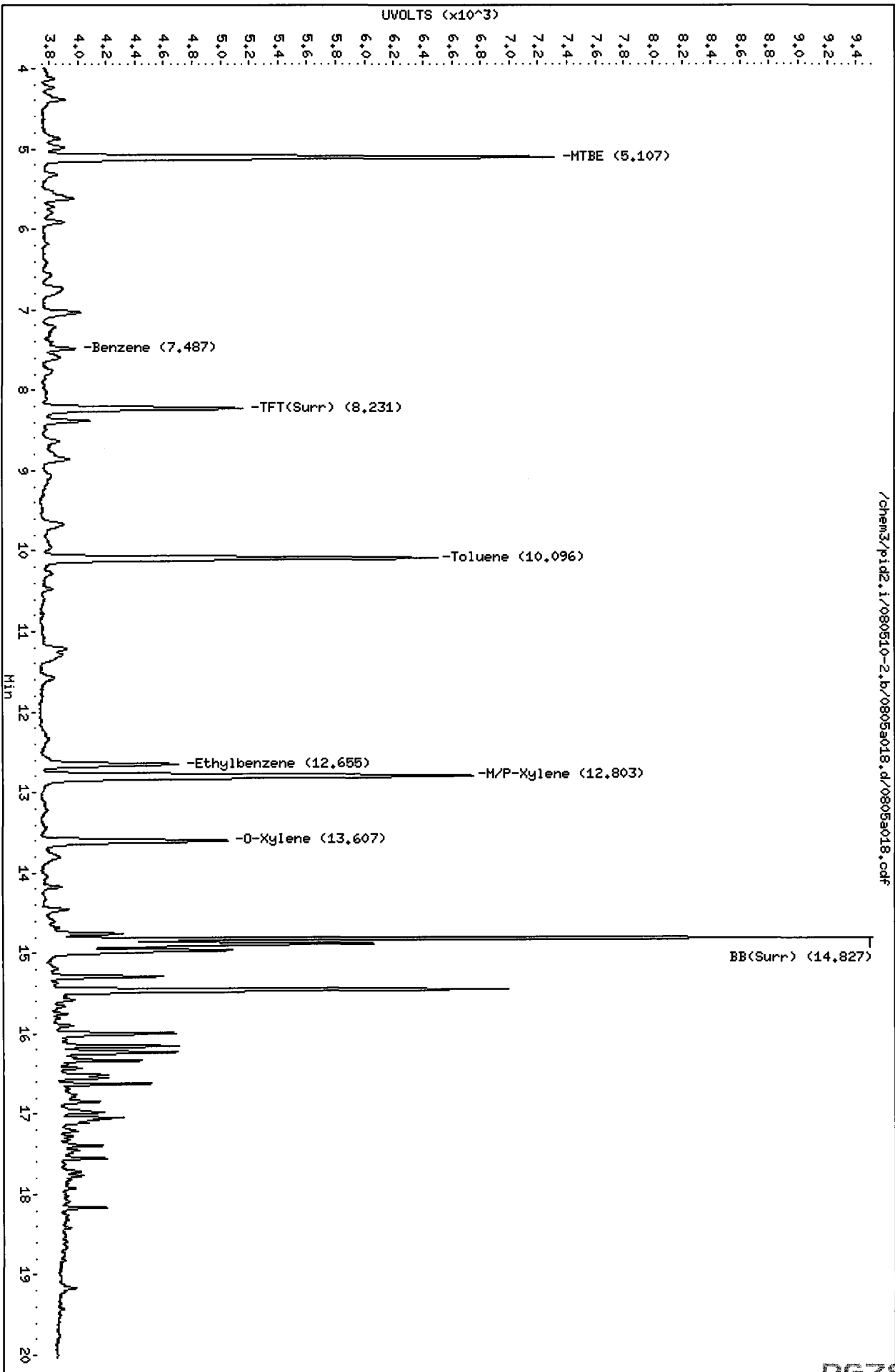


/chem3/pid2.i/080510-1.b/0805a018.d/0805a018.cdf

Data File: /chem3/pid2.i/080510-2.b/0805a018.d  
Date: 05-AUG-2010 15:40  
Client ID: PSB11-4-6-07301 MSD  
Sample Info: RC79EHSD

Column phase: RTX 502-2 PID

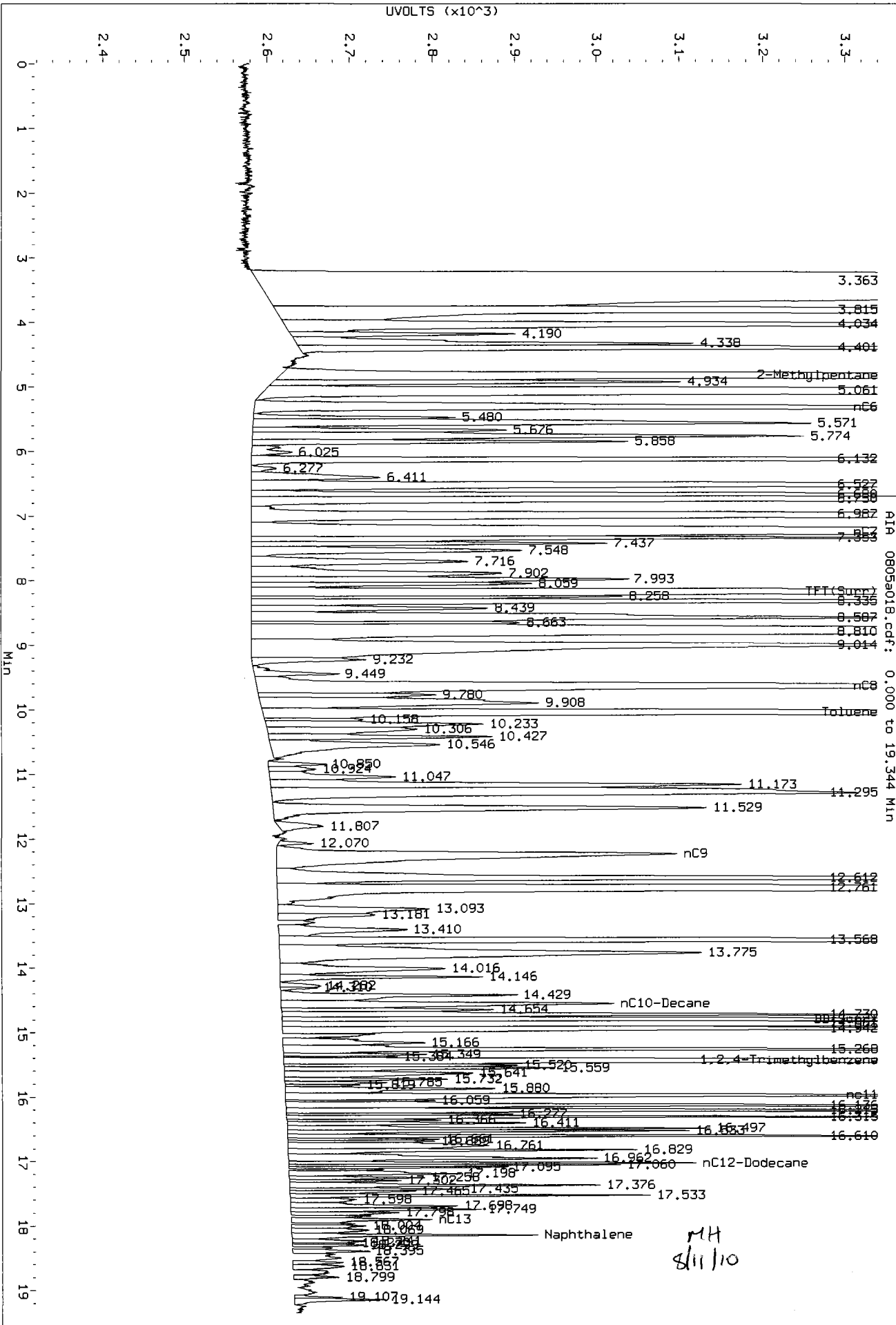
Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



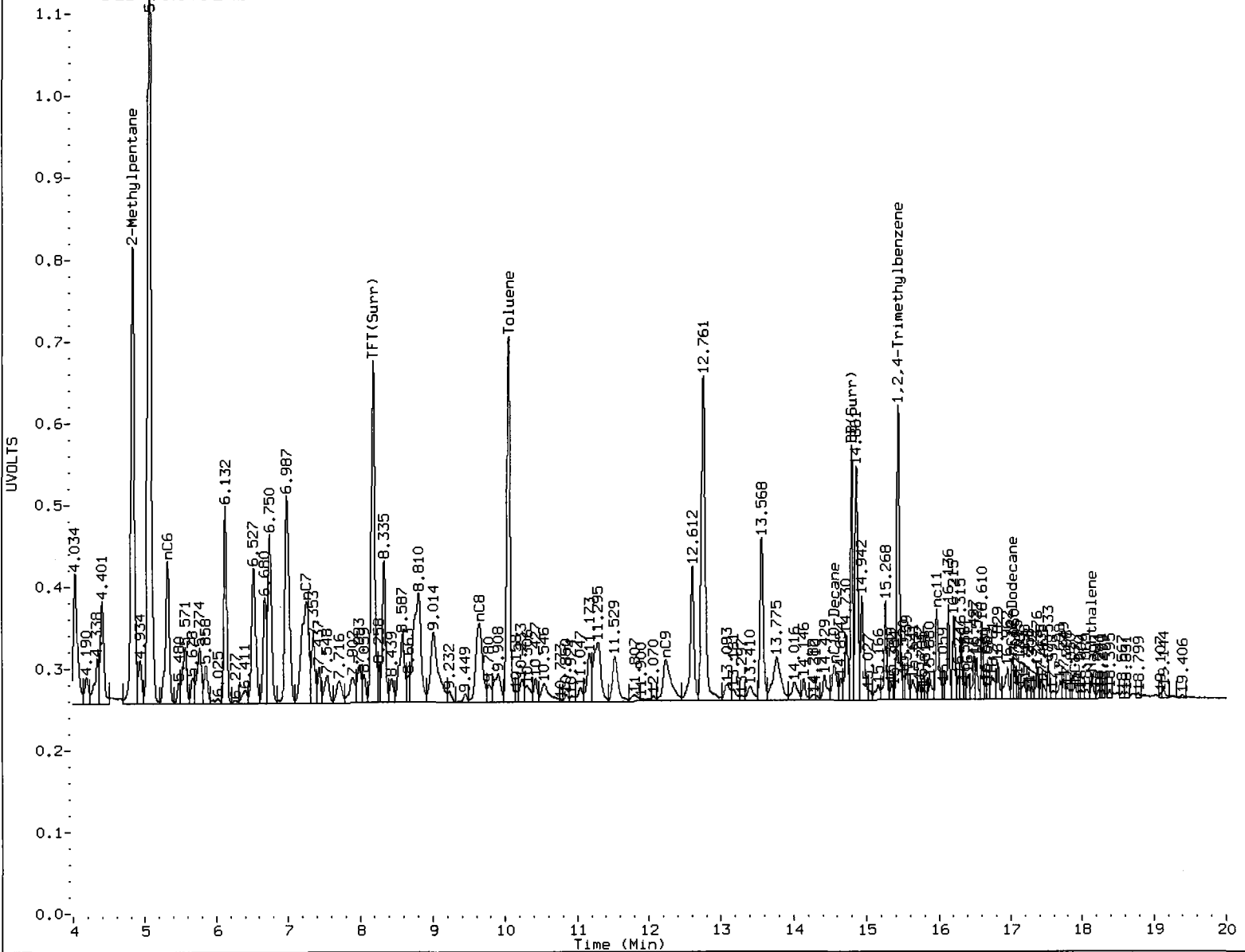
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Data File: /chem3/pid2.1/080510-1.b/0805a018.d/0805a018.cdf  
 Injection Date: 05-AUG-2010 15:40  
 Instrument: pid2.1  
 Client Sample ID: PSB11-4-6-07301 MSD



FID RG79EMSD



MANUAL INTEGRATION

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

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

Analyst: MA

Date: 8/11/10

Ms  
8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a019.d      ARI ID: RG79G  
Data file 2: /chem3/pid2.i/080510-2.b/0805a019.d      Client ID: PSB11-11-13-073010  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 16:06  
Instrument: pid2.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.181	-0.006	3973	66067	95.7	TFT(Surr)
14.801	-0.002	2900	26403	96.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	5319	0.009
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	1824	0.001
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	1447	0.002
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	5889	0.010

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
8.229	0.004	1374	95.6	TFT(Surr)
14.826	0.002	5563	95.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

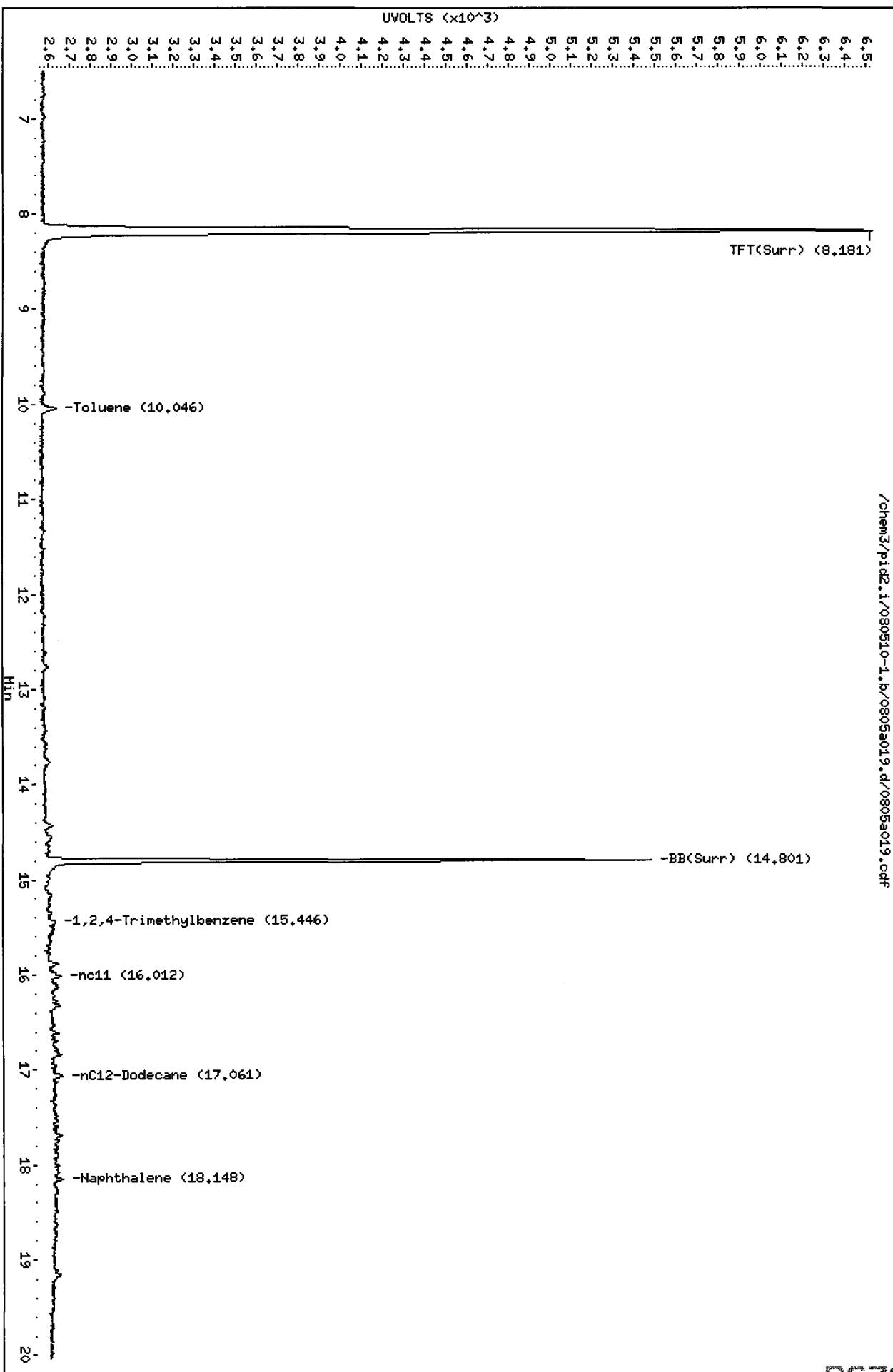
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a019.d  
Date : 05-AUG-2010 16:06  
Client ID: PSB11-11-13-073010  
Sample Info: RG79C

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

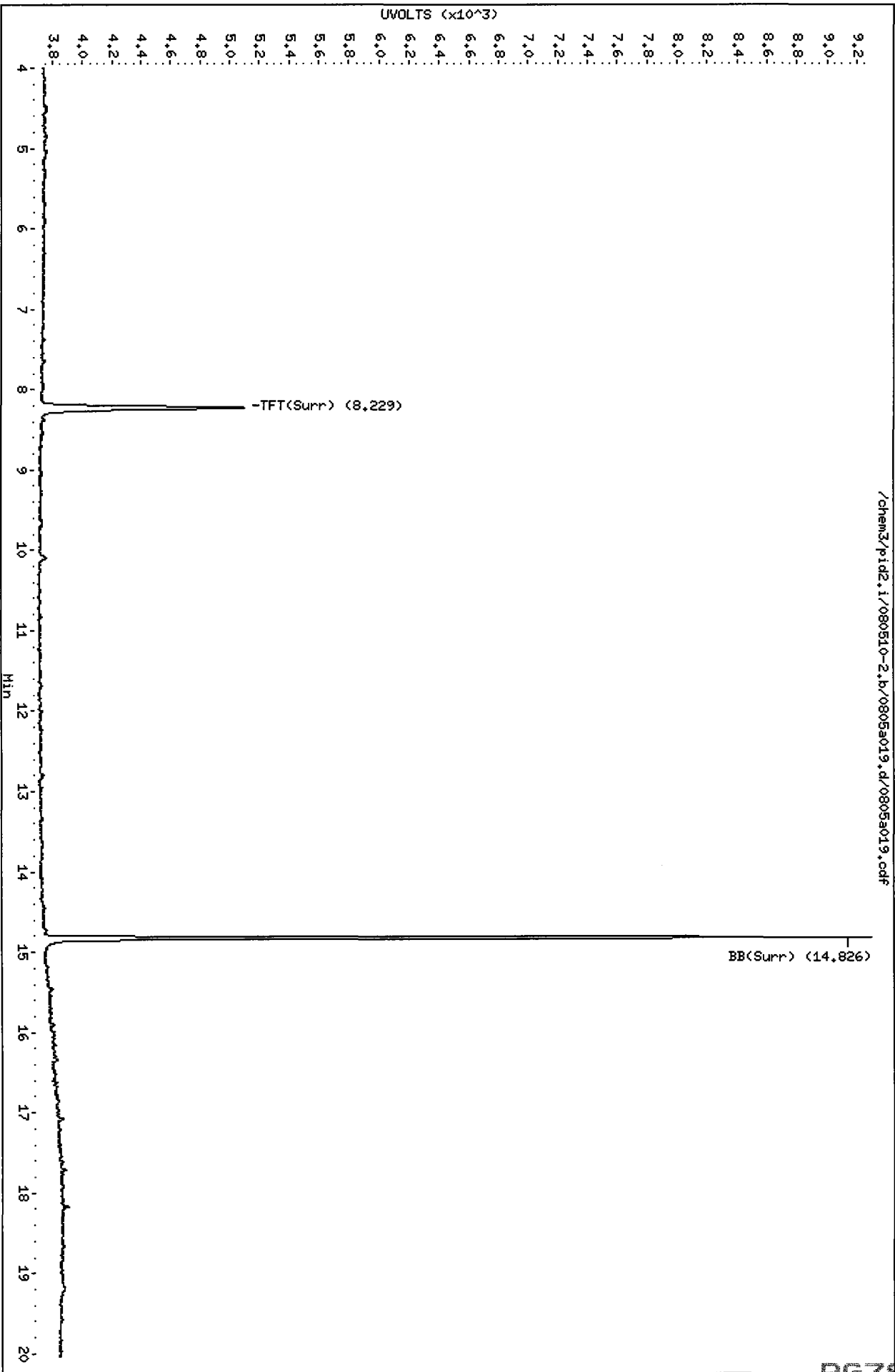
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Data File: /chem3/pid2.i/080510-2.b/0805a019.d  
Date: 05-AUG-2010 16:06  
Client ID: PSB11-11-13-073010  
Sample Info: RG79C

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



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8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a020.d      ARI ID: RG79H  
Data file 2: /chem3/pid2.i/080510-2.b/0805a020.d      Client ID: PSB11-14-16-073010  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 16:32  
Instrument: pid2.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.183	-0.003	3997	66292	96.3	TFT(Surr)
14.801	-0.002	3118	38802	103.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	357214	0.619 M
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	173902	0.133 M
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	76648	0.086 M
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	423094	0.703 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
8.232	0.006	1364	94.9	TFT(Surr)
14.827	0.002	5615	96.5	BB(Surr)

SW8021 (PID)

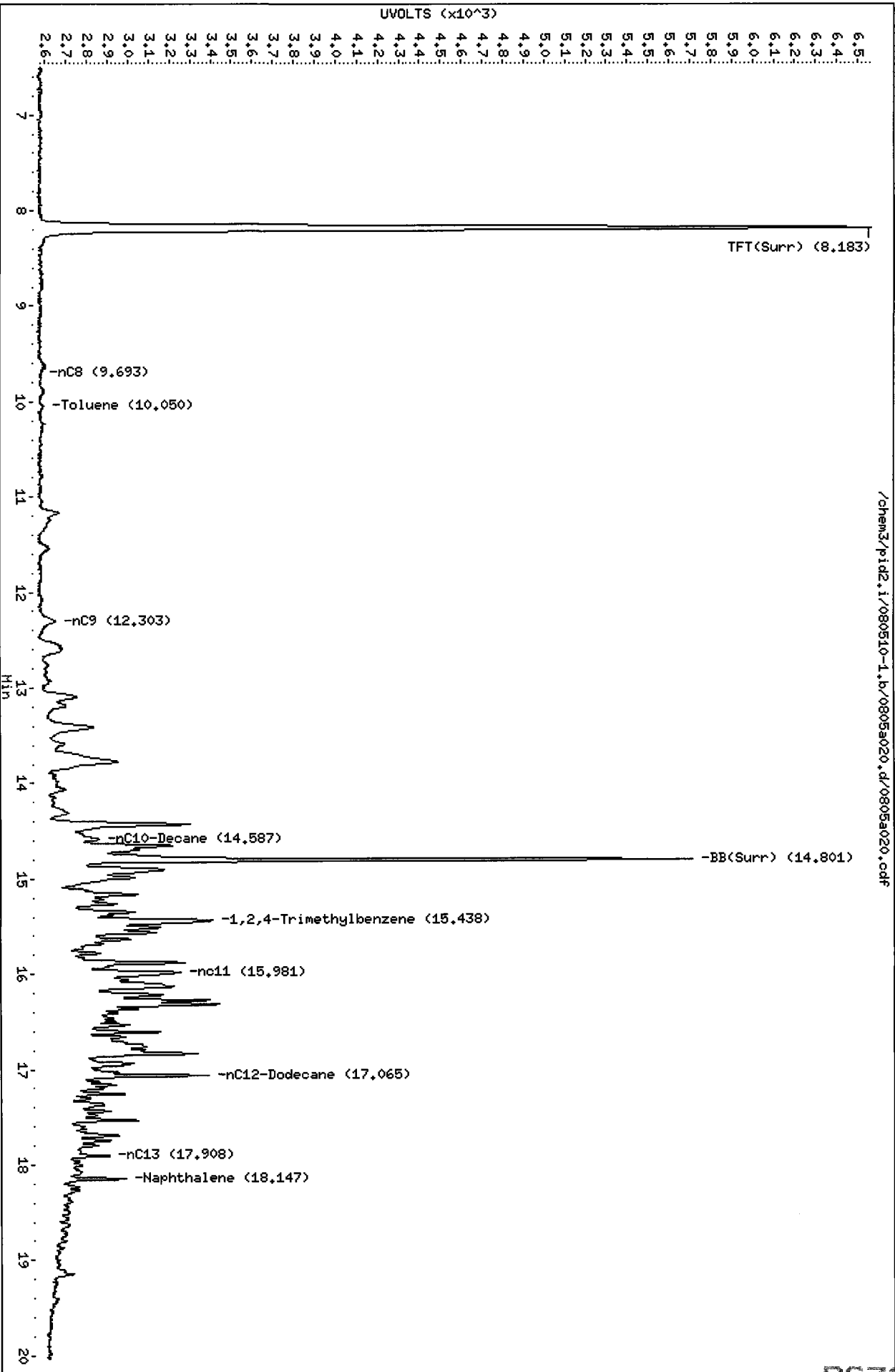
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a020.d  
Date : 05-AUG-2010 16:32  
Client ID: PSB11-14-16-073010  
Sample Info: RG79H

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

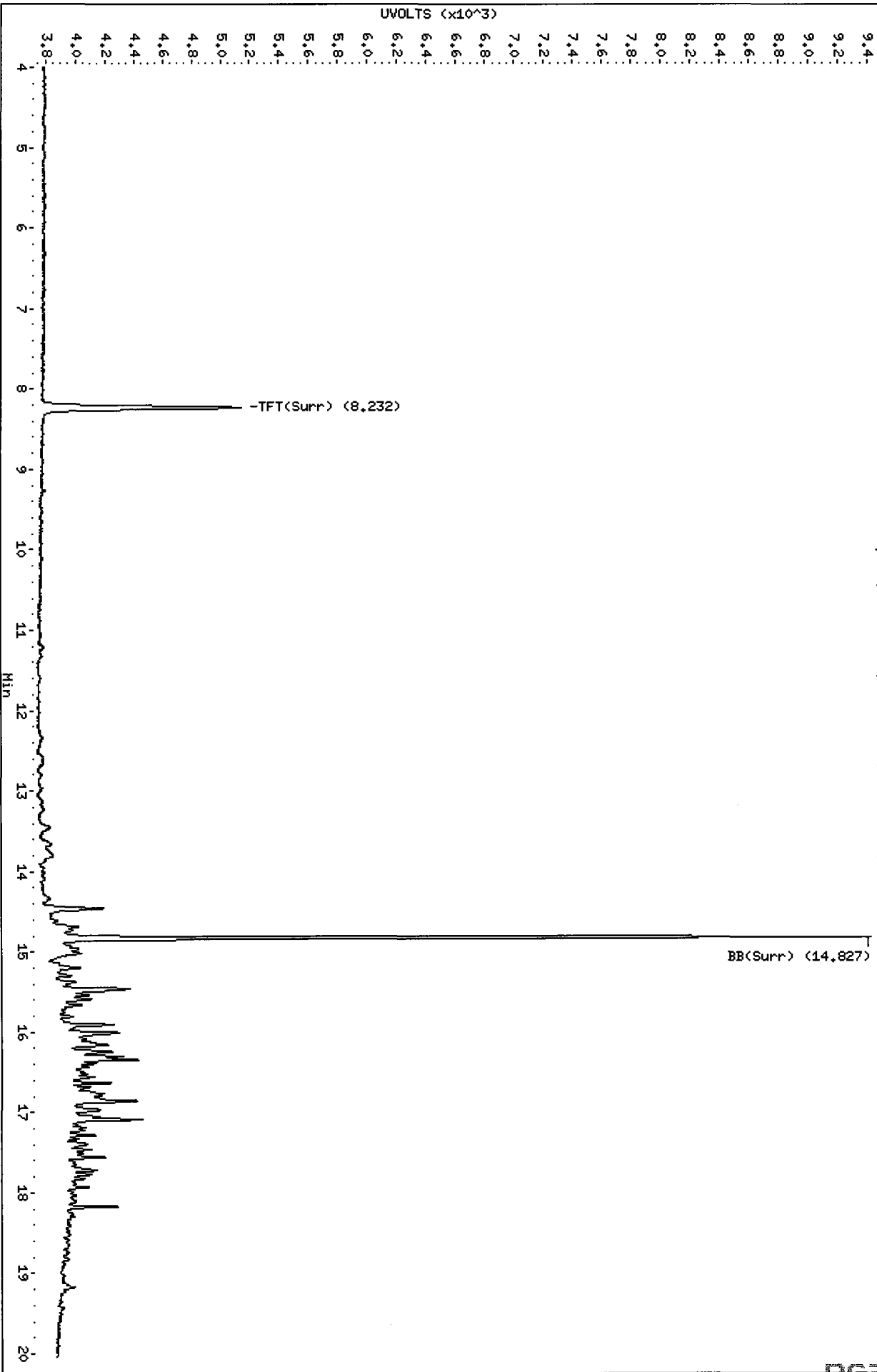


Data File: /chem3/pid2.i/080510-2.b/0805a020.d  
Date: 05-AUG-2010 16:32  
Client ID: PSB11-14-16-073010  
Sample Info: RG79H

Column phase: RTX 502-2 PID

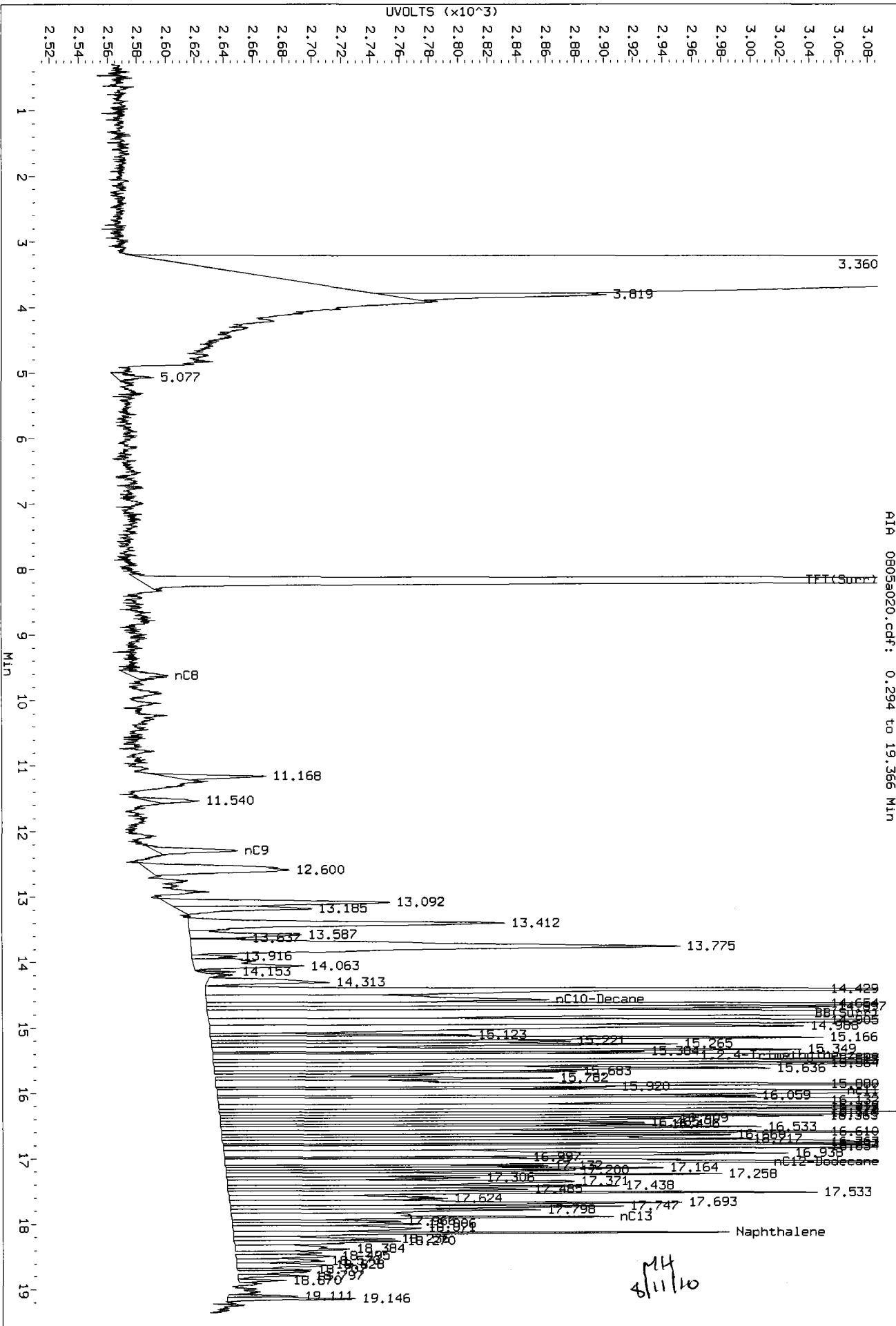
Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

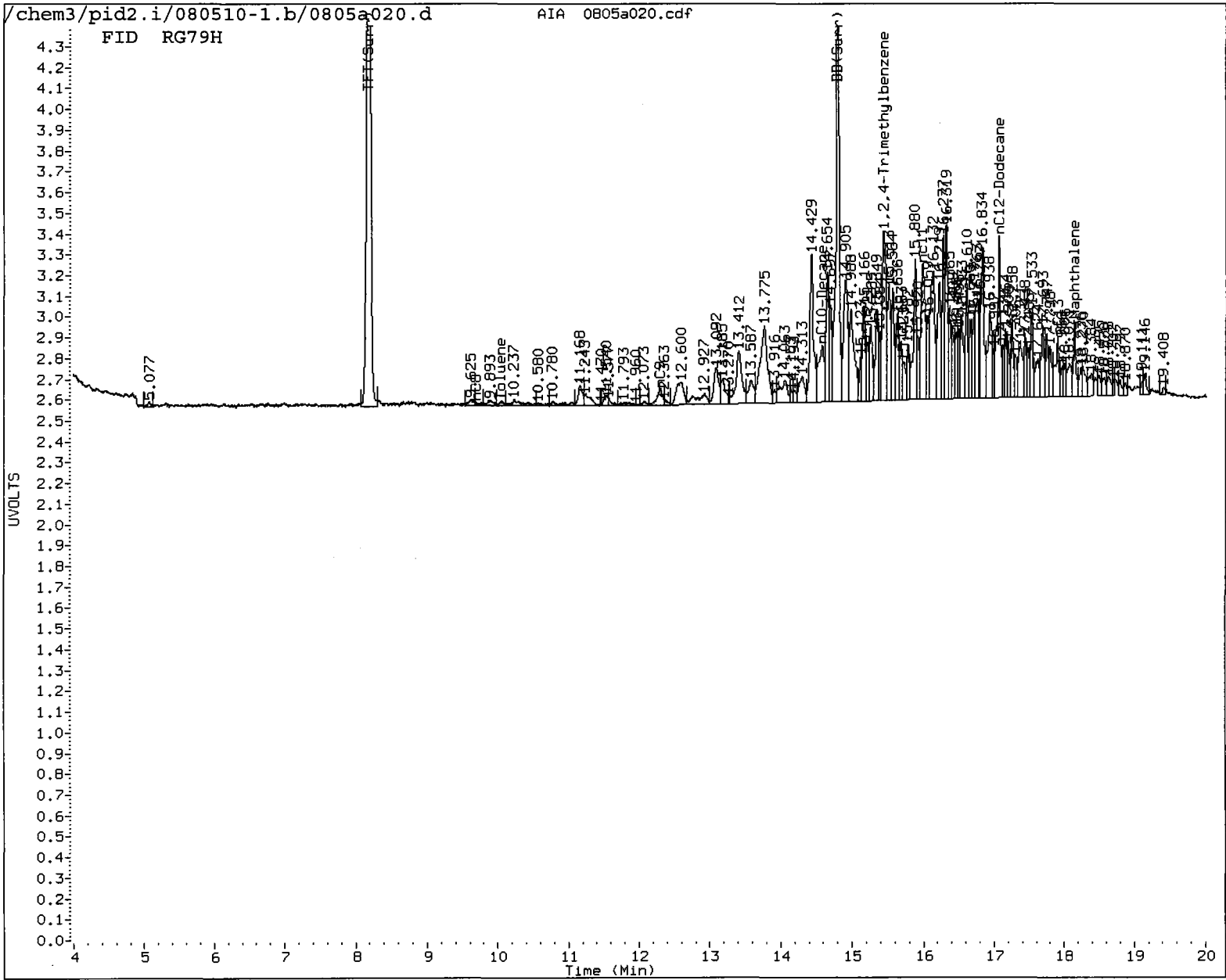
/chem3/pid2.i/080510-2.b/0805a020.d/0805a020.cdf





Data File: /chem3/pid2.1/080510-1.b/0805a020.d/0805a020.cdf  
 Injection Date: 05-AUG-2010 16:32  
 Instrument: pid2.1  
 Client Sample ID: PSB11-14-16-073010





MANUAL INTEGRATION

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

Analyst: MA Date: 8/11/10

Ms. 8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a021.d      ARI ID: RG79K  
Data file 2: /chem3/pid2.i/080510-2.b/0805a021.d      Client ID: PSB15-0-0.5-073010  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 16:58  
Instrument: pid2.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.184	-0.003	3944	65317	95.0	TFT(Surr)
14.801	-0.002	2856	26369	94.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	12986	0.023
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	9535	0.007
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	6673	0.008
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	13511	0.022

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
8.232	0.006	1351	94.0	TFT(Surr)
14.827	0.002	5491	94.4	BB(Surr)

SW8021 (PID)

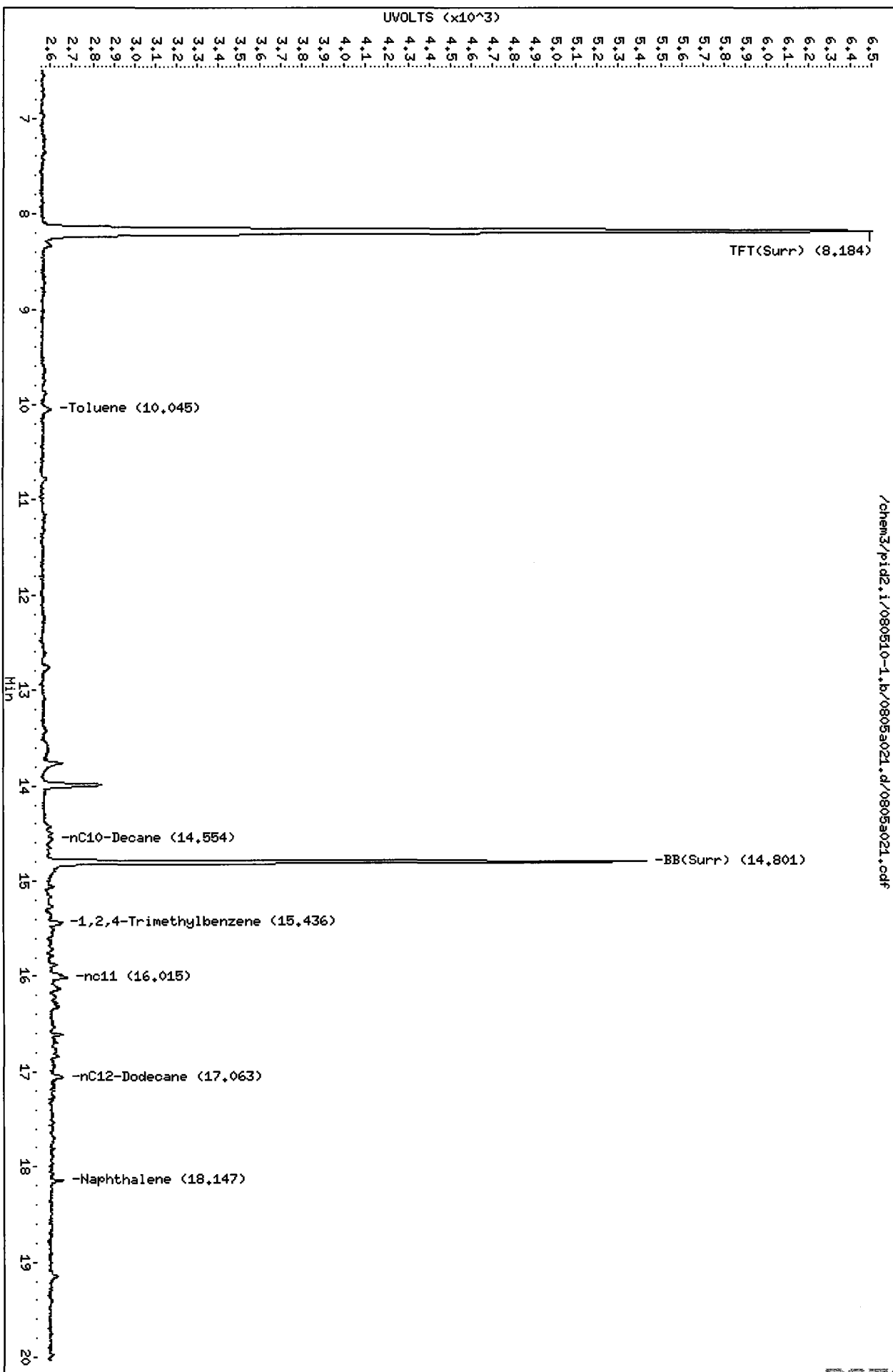
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a021.d  
Date : 05-AUG-2010 16:58  
Client ID: PSB15-0-0.5-073010  
Sample Info: RG79K

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

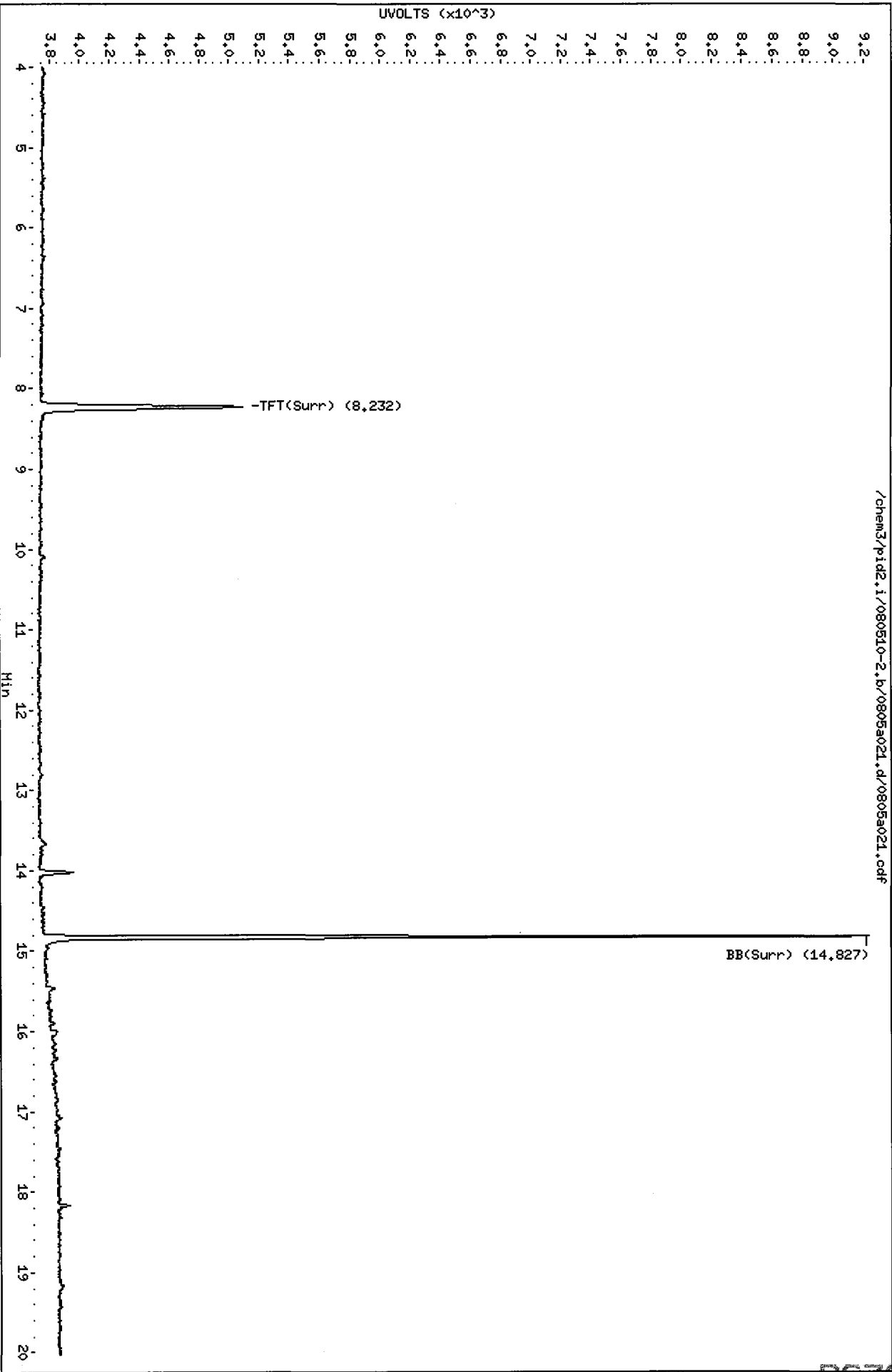


Data File: /chem3/pid2.i/080510-2.b/0805a021.d  
Date: 05-AUG-2010 16:58  
Client ID: PSB15-0-0,5-073010  
Sample Info: RG79K

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/080510-2.b/0805a021.d/0805a021.cdf



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8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a022.d      ARI ID: RG79L  
Data file 2: /chem3/pid2.i/080510-2.b/0805a022.d      Client ID: PSB15-1.5-2-073010  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 17:24  
Instrument: pid2.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.183	-0.003	3938	65470	94.9	TFT(Surr)
14.800	-0.003	2879	26907	95.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	2499	0.004
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	1654	0.001
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	1654	0.002
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	2499	0.004

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
8.231	0.006	1356	94.4	TFT(Surr)
14.826	0.002	5491	94.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

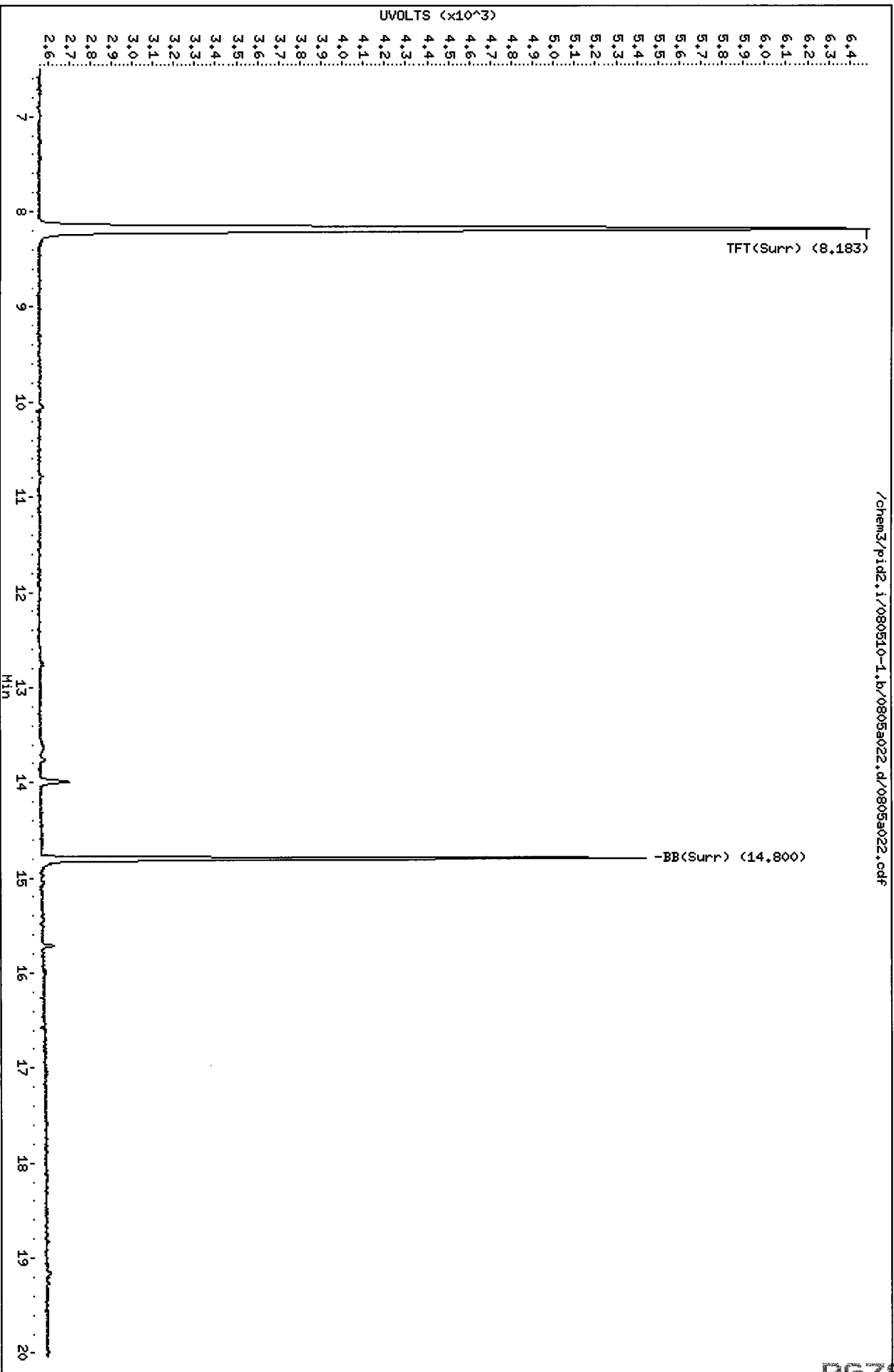
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a022.d  
Date : 05-AUG-2010 17:24  
Client ID: PSB15-1.5-2-073010  
Sample Info: RG79L

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid2.i/080510-1.b/0805a022.d/0805a022.cdf

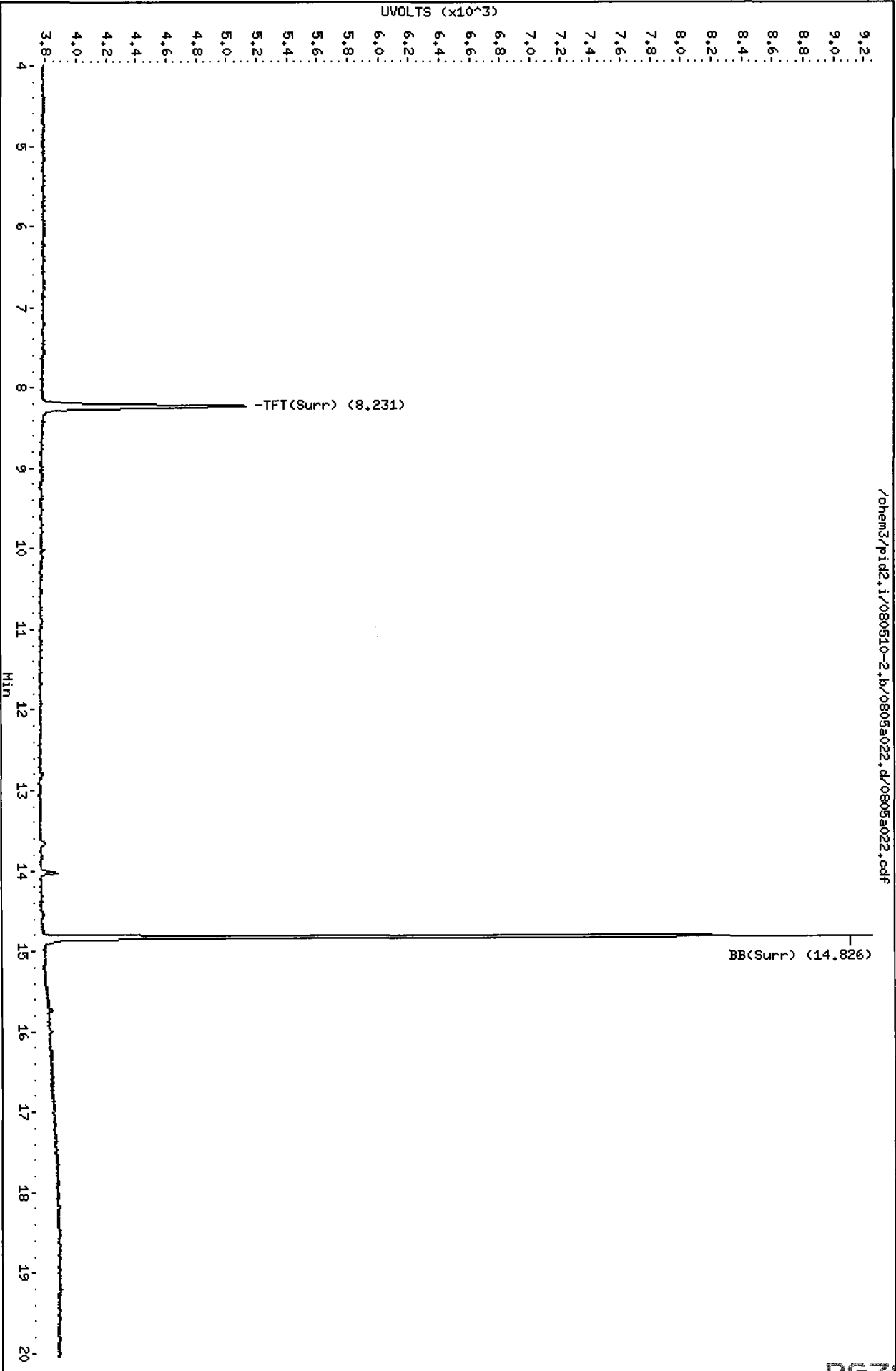


Data File: /chem3/pid2.i/080510-2.b/0805a022.d  
Date: 05-AUG-2010 17:24  
Client ID: PSB15-1.5-2-073010  
Sample Info: RG79L

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/080510-2.b/0805a022.d/0805a022.cdf





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8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a023.d      ARI ID: RG79M  
Data file 2: /chem3/pid2.i/080510-2.b/0805a023.d      Client ID: PSB15-2-4-073010  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 17:50  
Instrument: pid2.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.182	-0.005	3979	65461	95.8	TFT (Surr)
14.800	-0.003	2873	26164	95.2	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	107364	0.186
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	97815	0.075
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	91661	0.103
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	107364	0.178

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
8.230	0.004	1377	95.8	TFT (Surr)
14.825	0.001	5449	93.7	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

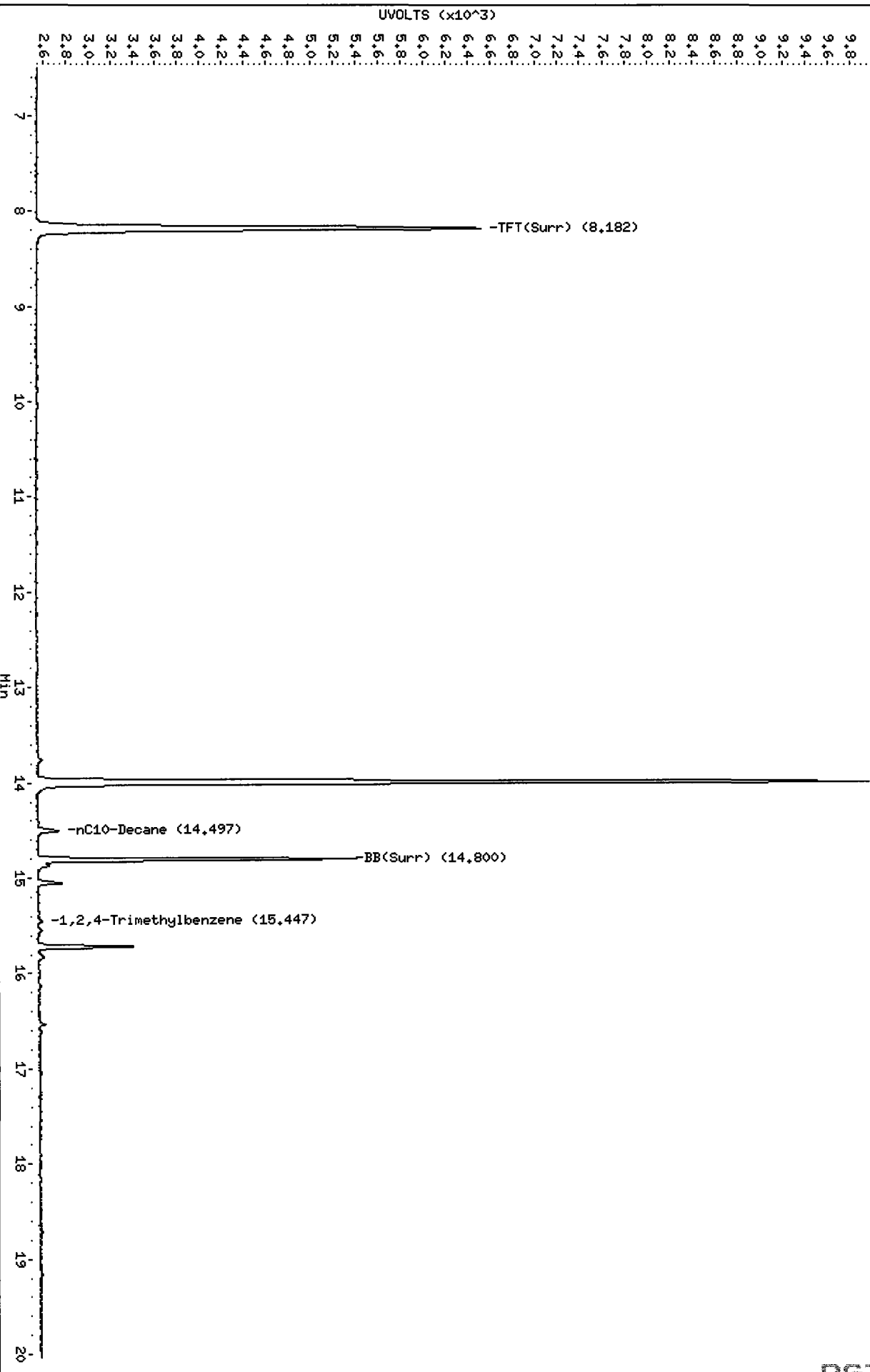
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a023.d  
Date : 05-AUG-2010 17:50  
Client ID: PSB15-2-4-073010  
Sample Info: RG79M

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

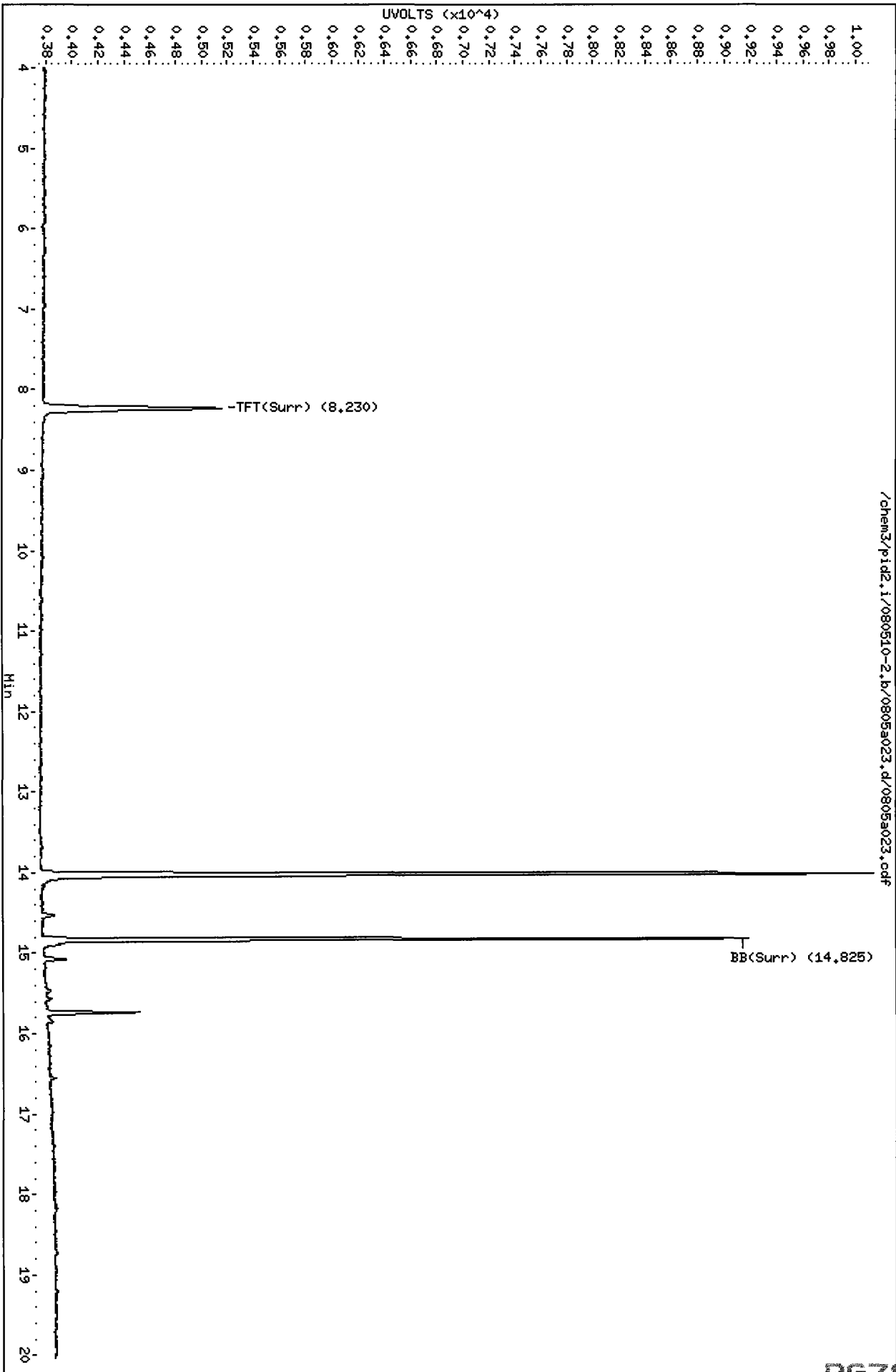
/chem3/pid2.i/080510-1.b/0805a023.d/0805a023.cdf



Data File: /chem3/pid2.i/080510-2.b/0805a023.d  
Date: 05-AUG-2010 17:50  
Client ID: PSB15-2-4-073010  
Sample Info: RG79H

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



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Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a024.d      ARI ID: RG79N  
Data file 2: /chem3/pid2.i/080510-2.b/0805a024.d      Client ID: PSB15-4-6-073010  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 18:16  
Instrument: pid2.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.185	-0.002	3911	65381	94.2	TFT(Surr)
14.801	-0.002	2868	27205	95.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	11370	0.020
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	10646	0.008
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	9379	0.011
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	11370	0.019

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
8.232	0.007	1332	92.7	TFT(Surr)
14.826	0.002	5540	95.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

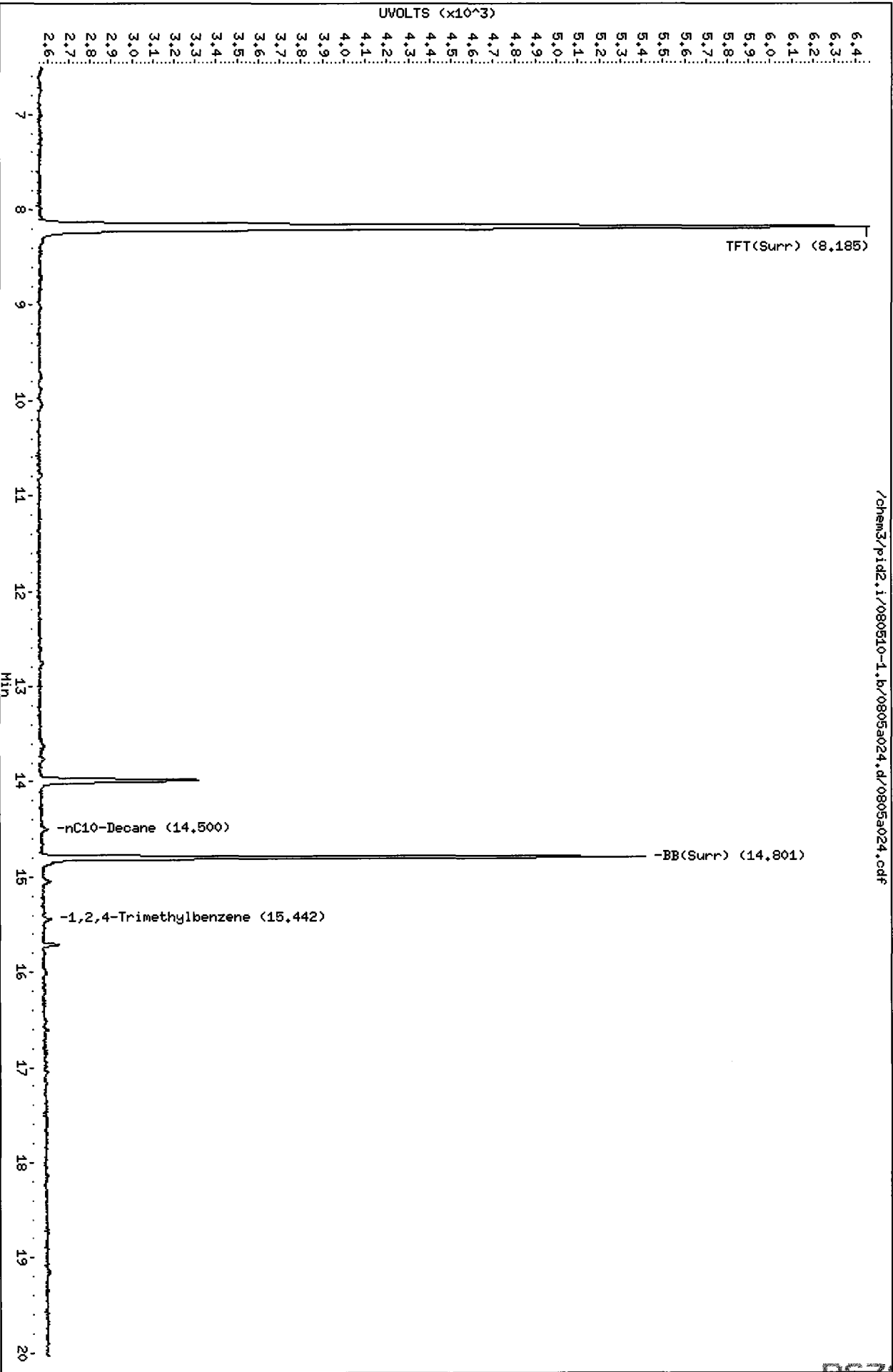
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a024.d  
Date : 05-AUG-2010 18:16  
Client ID: PSB15-4-6-073010  
Sample Info: RG79N

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

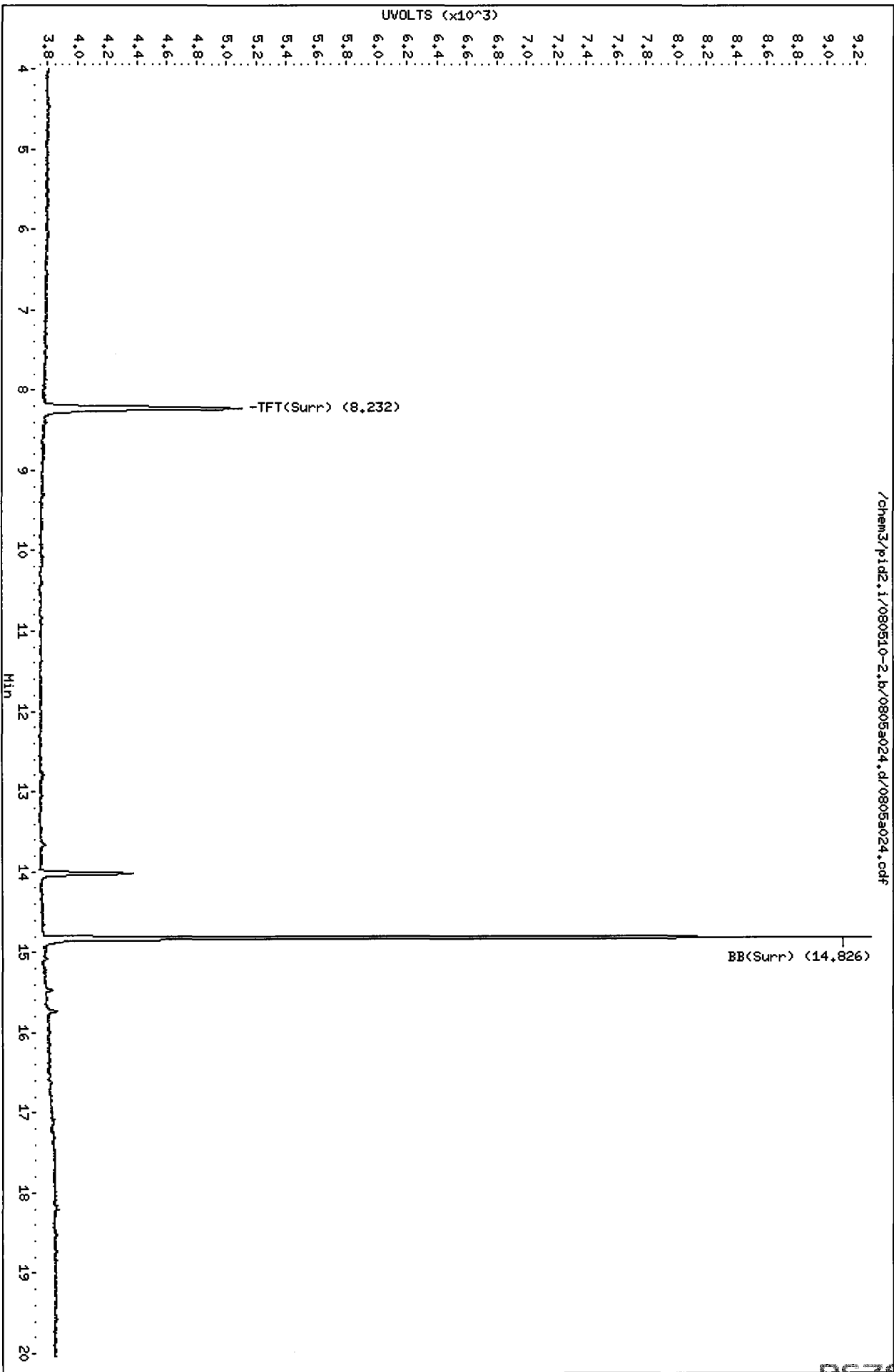
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Data File: /chem3/pid2.i/080510-2.b/0805a024.d  
Date: 05-AUG-2010 18:16  
Client ID: PSB15-4-6-073010  
Sample Info: RG79N

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



/chem3/pid2.i/080510-2.b/0805a024.d/0805a024.cdf

M.  
8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a026.d      ARI ID: BCAL 3  
Data file 2: /chem3/pid2.i/080510-2.b/0805a026.d      Client ID:  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 19:08  
Instrument: pid2.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.184	-0.003	3834	63658	92.3	TFT(Surr)
14.802	0.000	2913	26922	96.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	406135	0.704
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	419559	0.322
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	384952	0.433
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	406135	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
8.232	0.007	1331	92.6	TFT(Surr)
14.828	0.004	5561	95.6	BB(Surr)

SW8021 (PID)

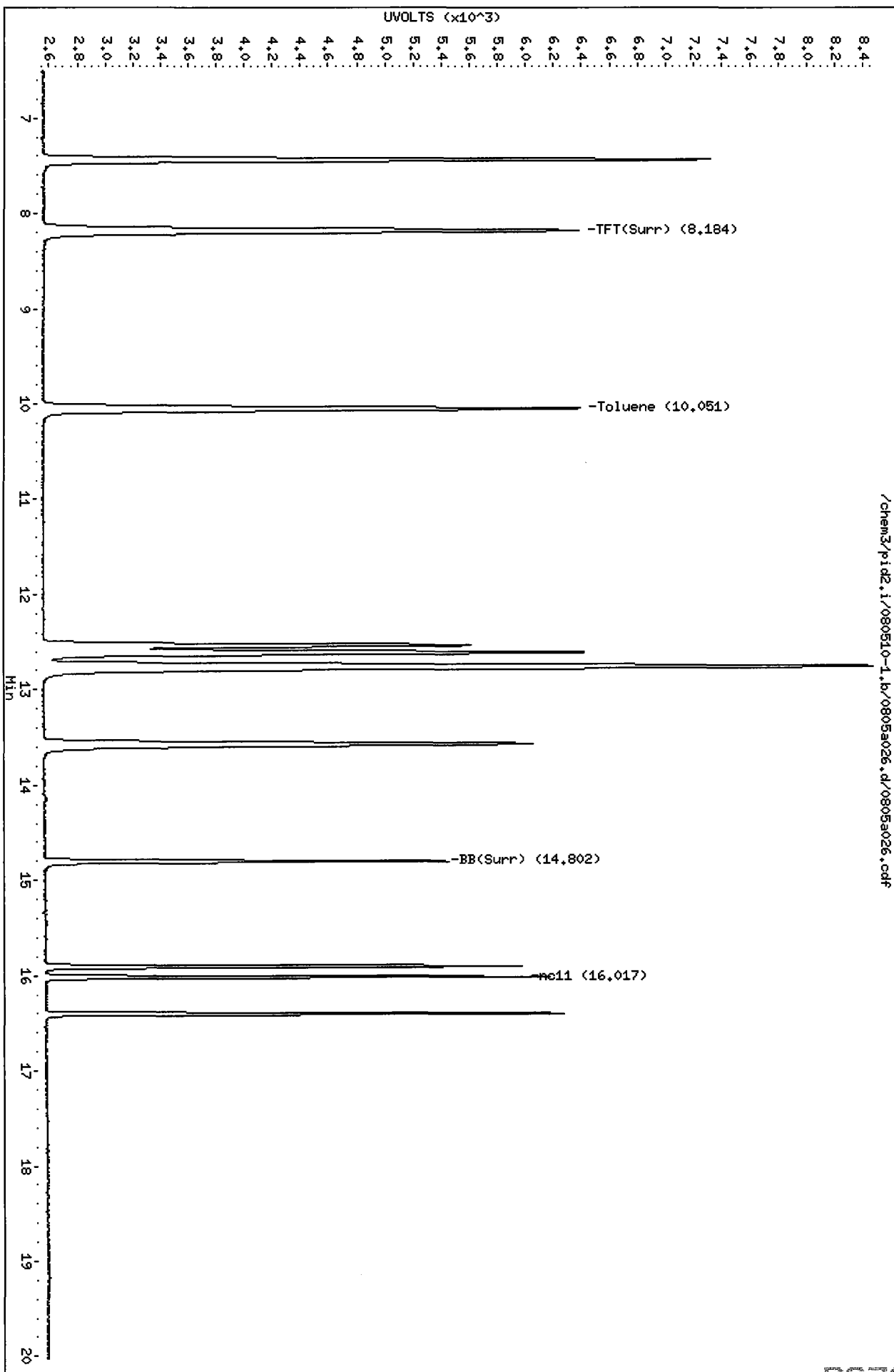
RT	Shift	Response	Amount	Compound
7.488	0.005	2792	23.98	Benzene
10.097	0.003	2432	23.45	Toluene
12.657	0.001	2532	22.09	Ethylbenzene
12.803	0.001	4524	46.69	M/P-Xylene
13.608	0.003	2415	23.79	O-Xylene
5.108	0.008	968	23.06	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a026.d  
Date : 05-AUG-2010 19:08  
Client ID:  
Sample Info: BCL 3

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



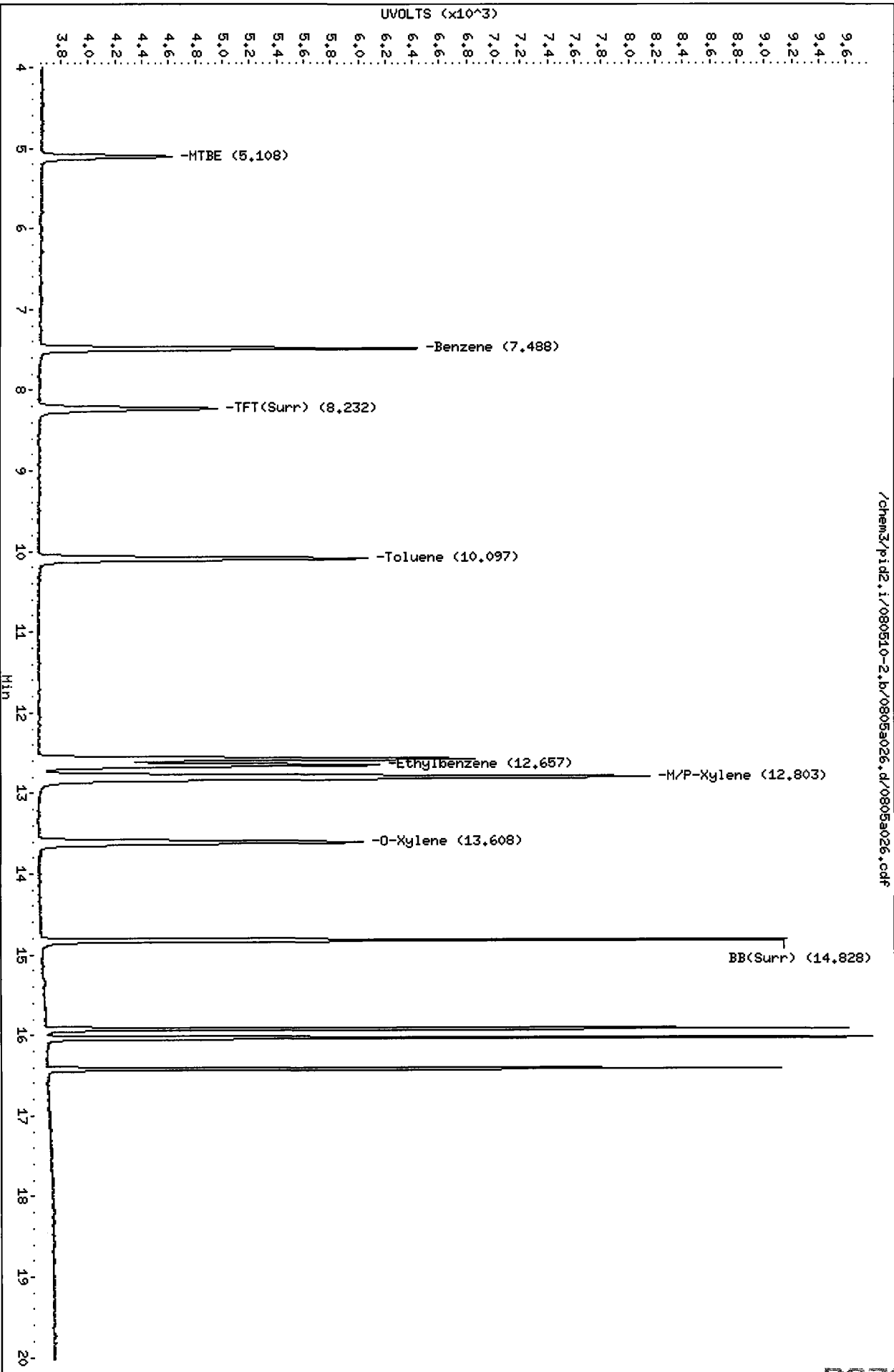


Data File: /chem3/pid2.i/080510-2.b/0805a026.d  
Date: 05-AUG-2010 19:08  
Client ID:  
Sample Info: BCL 3

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/080510-2.b/0805a026.d/0805a026.cdf



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8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a027.d  
Data file 2: /chem3/pid2.i/080510-2.b/0805a027.d  
Method: /chem3/pid2.i/080510-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: GCAL 3  
Client ID:  
Injection Date: 05-AUG-2010 19:34  
Matrix: WATER  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	-----	-----	-----
8.188	0.001	4099	69169	98.7	TFT(Surr)
14.803	0.001	3025	29640	100.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	1368488	2.372 M
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	3099548	2.375 M
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	2110338	2.373 M
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	1416771	2.353 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
--	----	-----	-----	-----
8.235	0.010	1393	96.9	TFT(Surr)
14.829	0.004	5592	96.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.492	0.008	569	4.89	Benzene
10.099	0.006	6903	66.55	Toluene
12.659	0.003	2327	20.30	Ethylbenzene
12.807	0.005	7391	76.27	M/P-Xylene
13.610	0.005	3268	32.19	O-Xylene
5.114	0.014	8705	207.33	MTBE

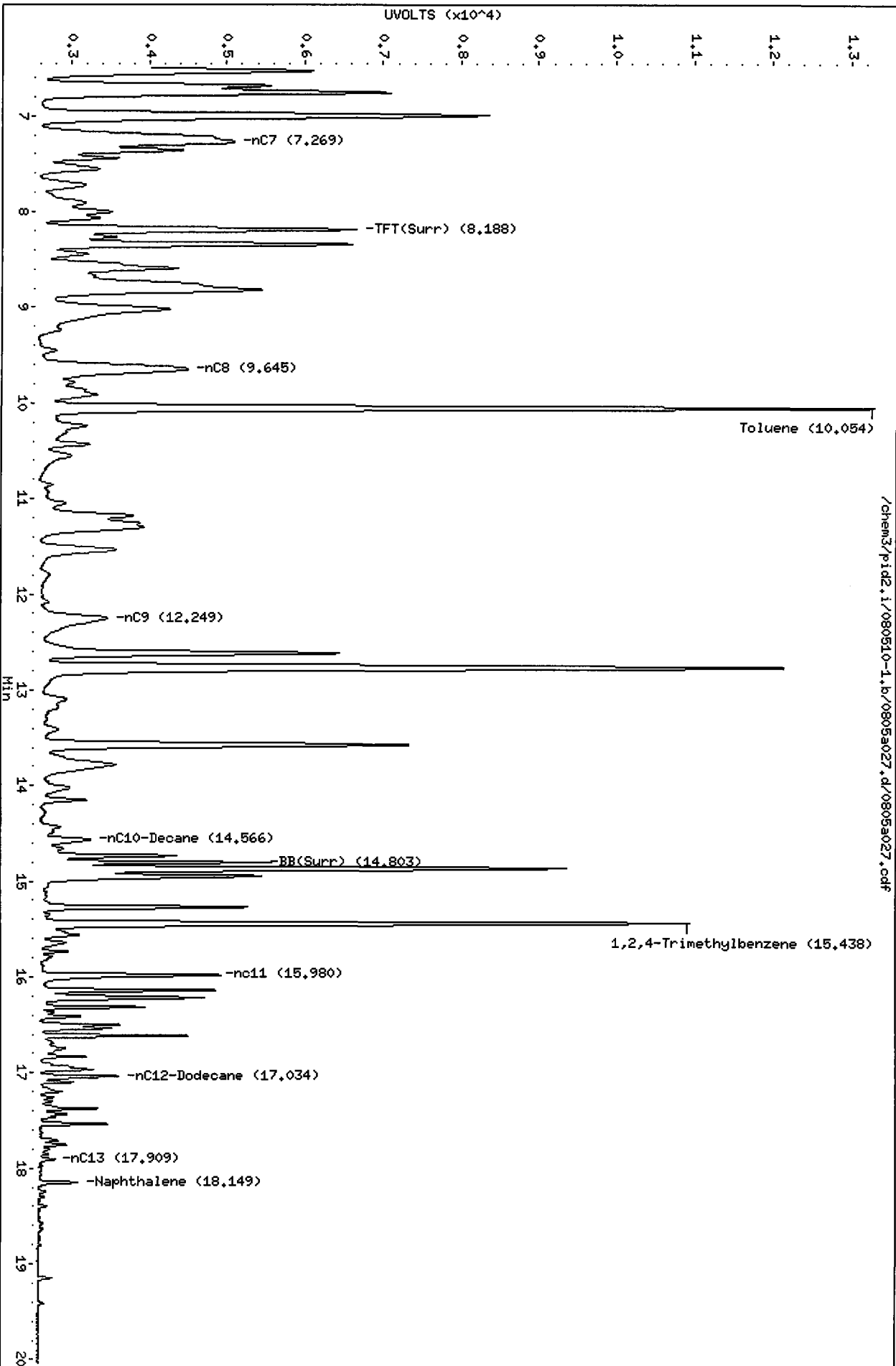
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a027.d  
Date: 05-AUG-2010 19:34  
Client ID: LORA LAKE  
Sample Info: GCAL 3

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

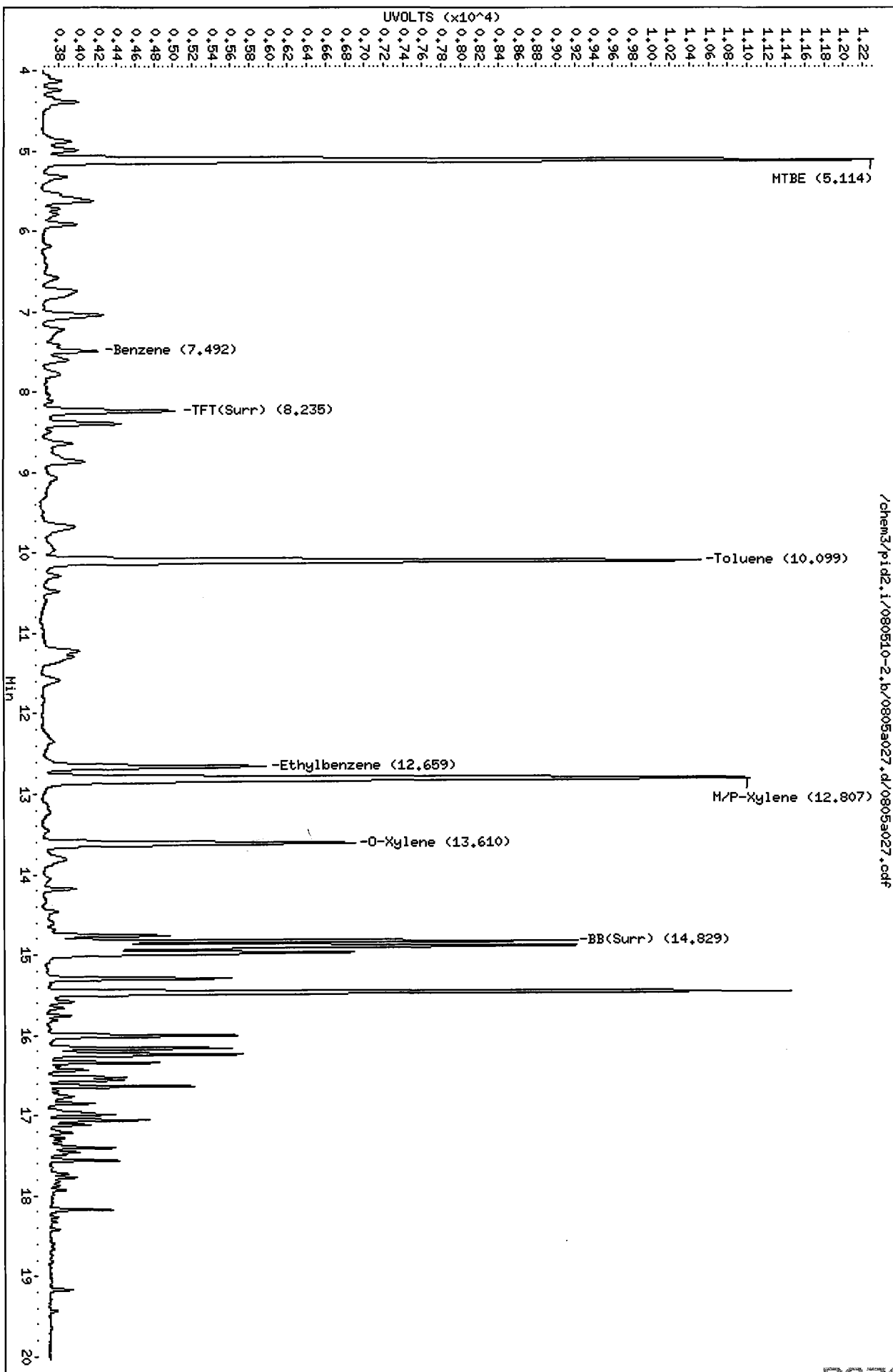
/chem3/pid2.i/080510-1.b/0805a027.d/0805a027.cdf



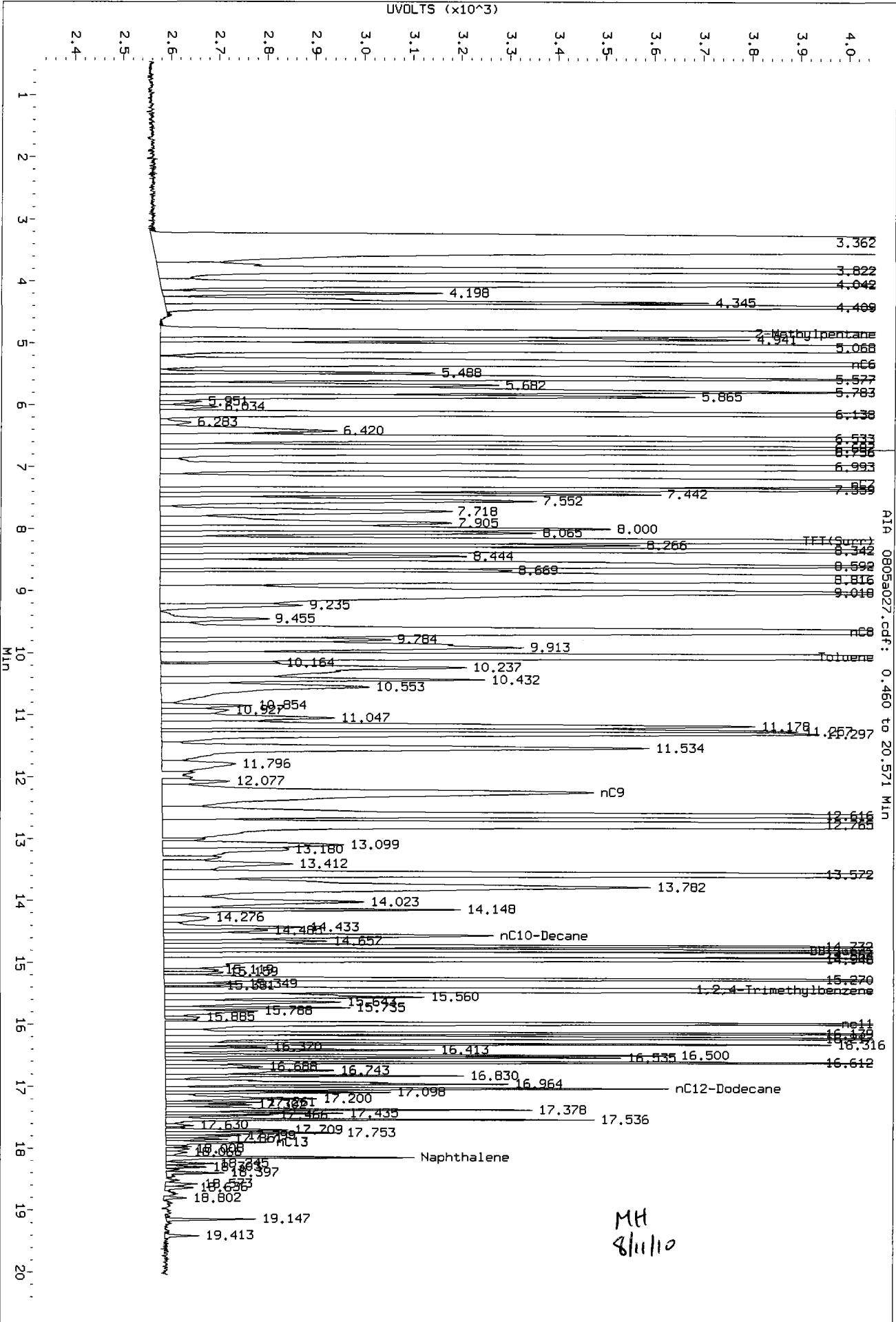
Data File: /chem3/pid2.i/080510-2.b/0805a027.d  
Date: 05-AUG-2010 19:34  
Client ID:  
Sample Info: GCAL 3

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



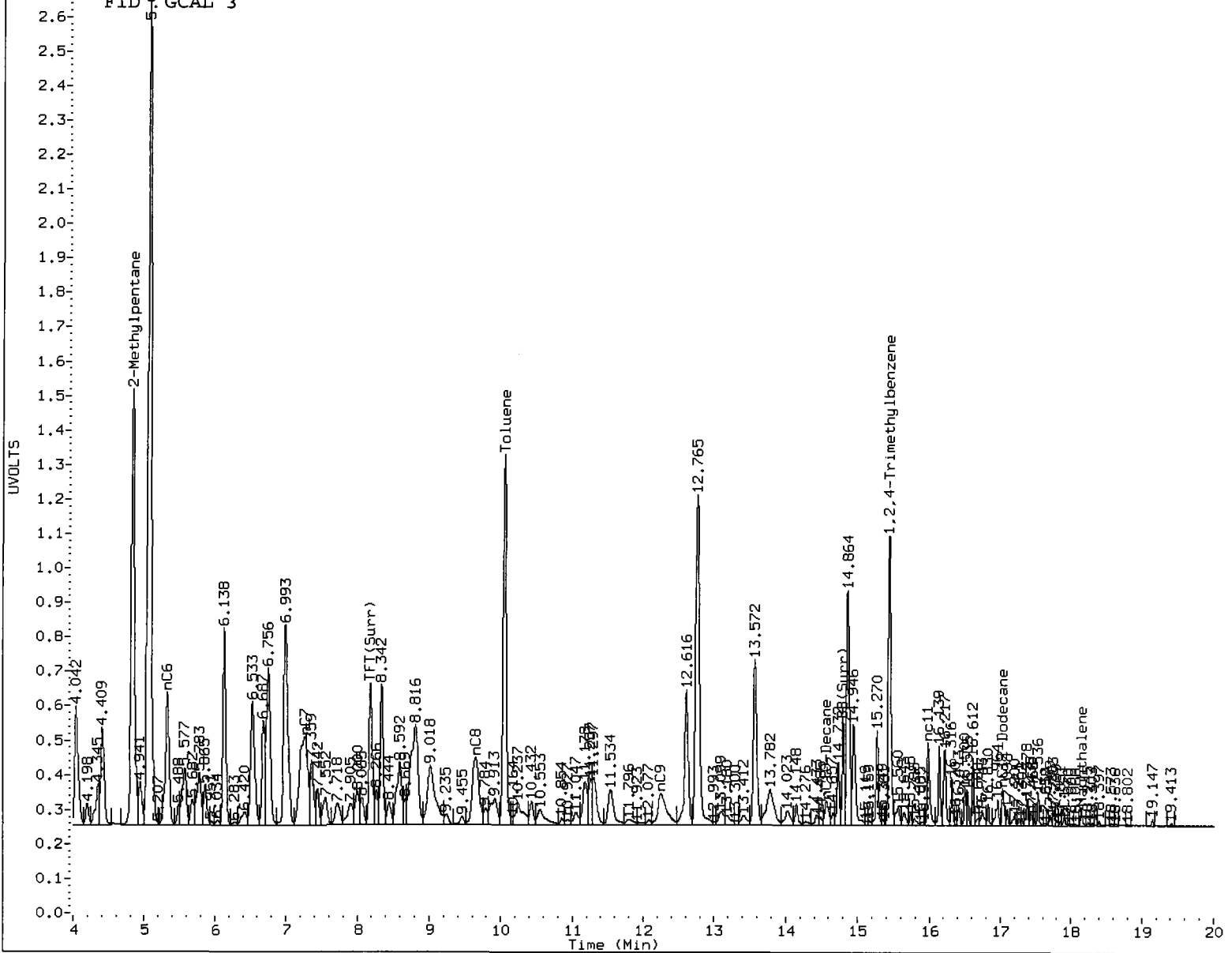
Data File: /chem3/pid2.1/080510-1.b/0805a027.d/0805a027.cdf  
 Injection Date: 05-AUG-2010 19:34  
 Instrument: pid2.1  
 Client Sample ID: LORA LAKE



AIA 0805a027.cdf: 0.460 to 20.571 MIN

MH  
8/11/10

FID GCAL 3



MANUAL INTEGRATION

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

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

Analyst: MH

Date: 8/11/00

8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a028.d      ARI ID: RG790  
Data file 2: /chem3/pid2.i/080510-2.b/0805a028.d      Client ID: PSB15-13-15-073010  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 20:00  
Instrument: pid2.i                                      Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                          Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.188	0.002	3796	63354	91.4	TFT (Surr)
14.804	0.002	2885	26903	95.6	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	3253	0.006
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	2598	0.002
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	1012	0.001
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	3253	0.005

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
8.236	0.011	1322	92.0	TFT (Surr)
14.830	0.006	5538	95.2	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

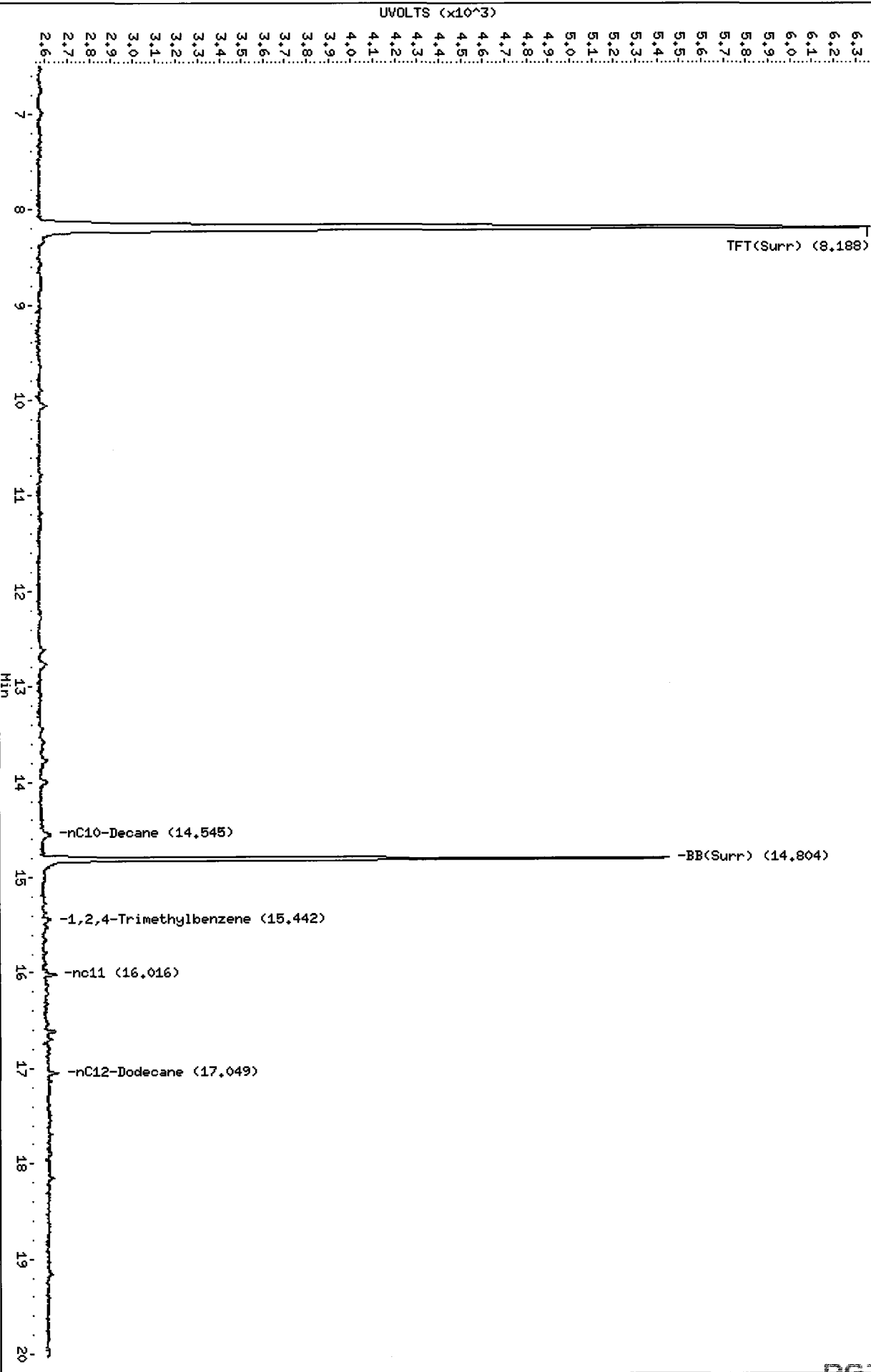
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a028.d  
Date : 05-AUG-2010 20:00  
Client ID: PSB15-13-15-073010  
Sample Info: RG790

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/080510-1.b/0805a028.d/0805a028.cdf



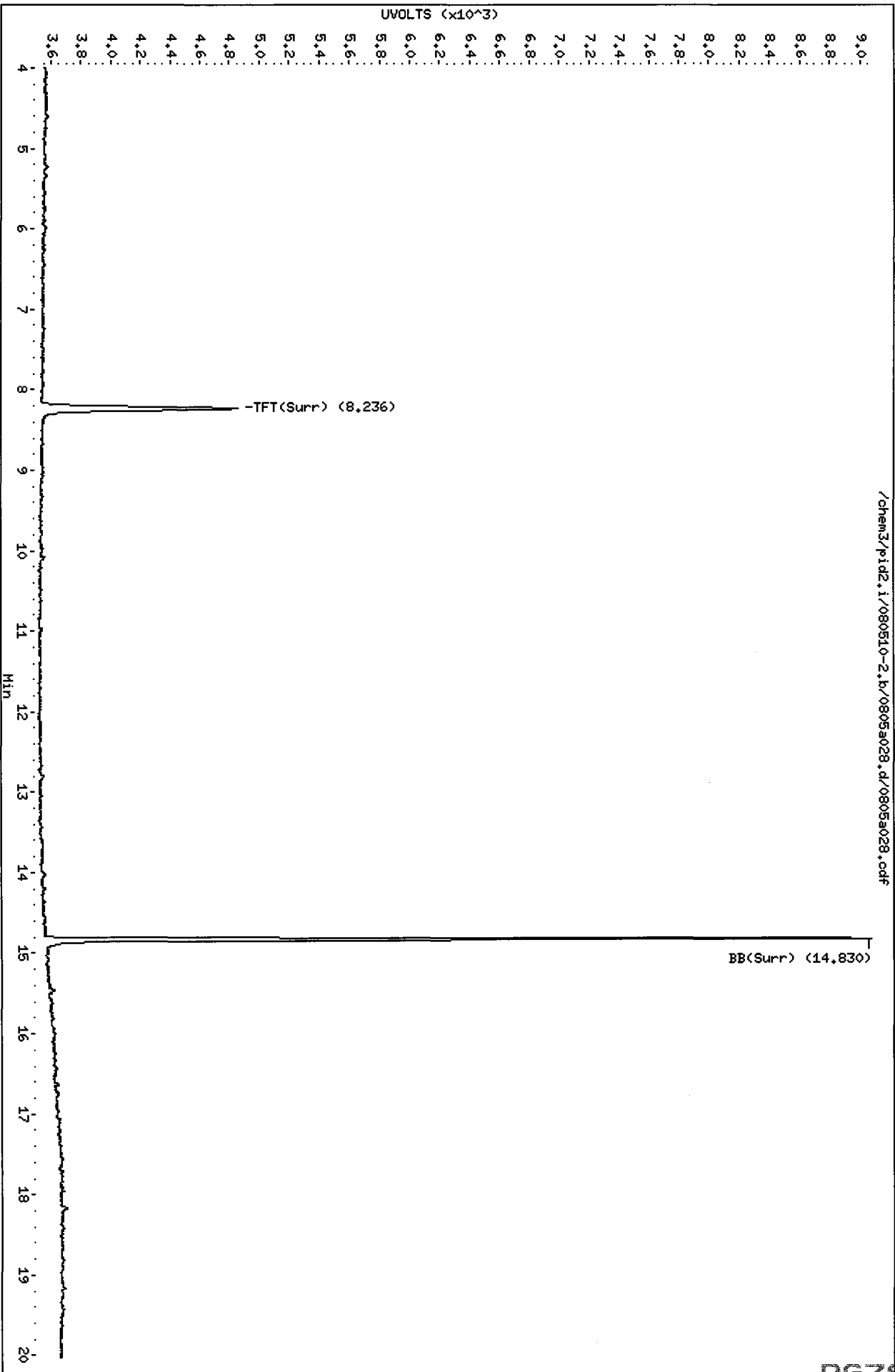


Data File: /chem3/pid2.i/080510-2.b/0805a028.d  
Date : 05-AUG-2010 20:00  
Client ID: PSB15-13-15-073010  
Sample Info: RG790

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/080510-2.b/0805a028.d/0805a028.cdf



8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a029.d      ARI ID: RG79P  
Data file 2: /chem3/pid2.i/080510-2.b/0805a029.d      Client ID: PSB15-17-19-073010  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 20:26  
Instrument: pid2.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.188	0.001	3837	64524	92.4	TFT(Surr)
14.805	0.002	2924	27489	96.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	456	0.001
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	1061	0.001
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	197	0.000
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	456	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
8.236	0.010	1363	94.8	TFT(Surr)
14.830	0.006	5666	97.4	BB(Surr)

SW8021 (PID)

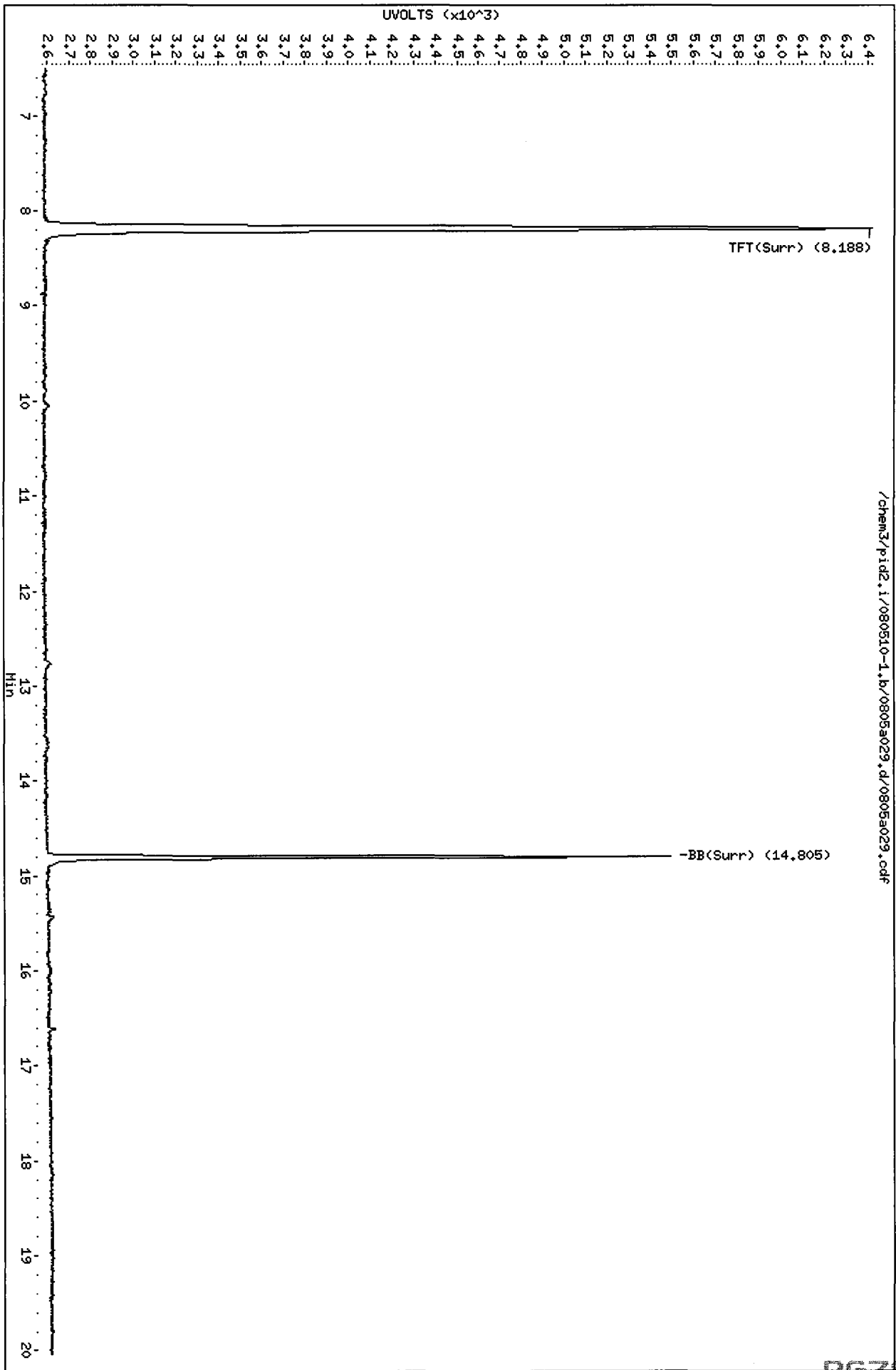
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a029.d  
Date: 05-AUG-2010 20:26  
Client ID: PSB15-17-19-073010  
Sample Info: RG79P

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18



Data File: /chem3/pid2.i/080510-2.b/0805a029.d

Date: 05-AUG-2010 20:26

Client ID: PSB15-17-19-073010

Sample Info: RG79P

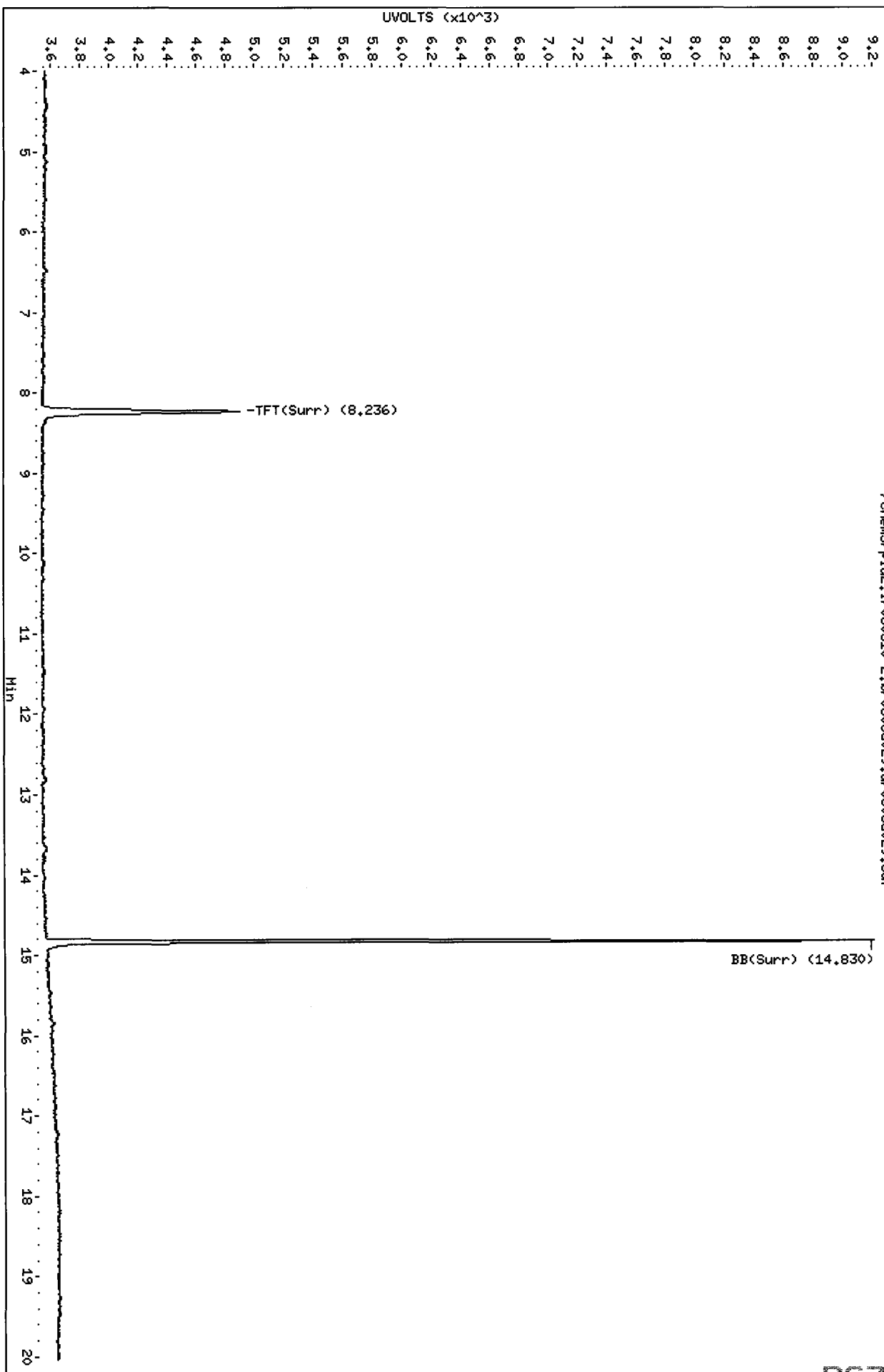
Column phase: RTX 502-2 PID

Instrument: pid2.i

Operator: HH

Column diameter: 0.18

/chem3/pid2.i/080510-2.b/0805a029.d/0805a029.cdf



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8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a030.d      ARI ID: RG79Q  
Data file 2: /chem3/pid2.i/080510-2.b/0805a030.d      Client ID: PSB15-17-19-073010-  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 20:52  
Instrument: pid2.i    Matrix: SOIL  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.187	0.000	3856	64624	92.9	TFT(Surr)
14.804	0.001	2932	27129	97.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	1315	0.002
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	1037	0.001
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	1037	0.001
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	1315	0.002

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
8.235	0.009	1335	92.9	TFT(Surr)
14.830	0.005	5658	97.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

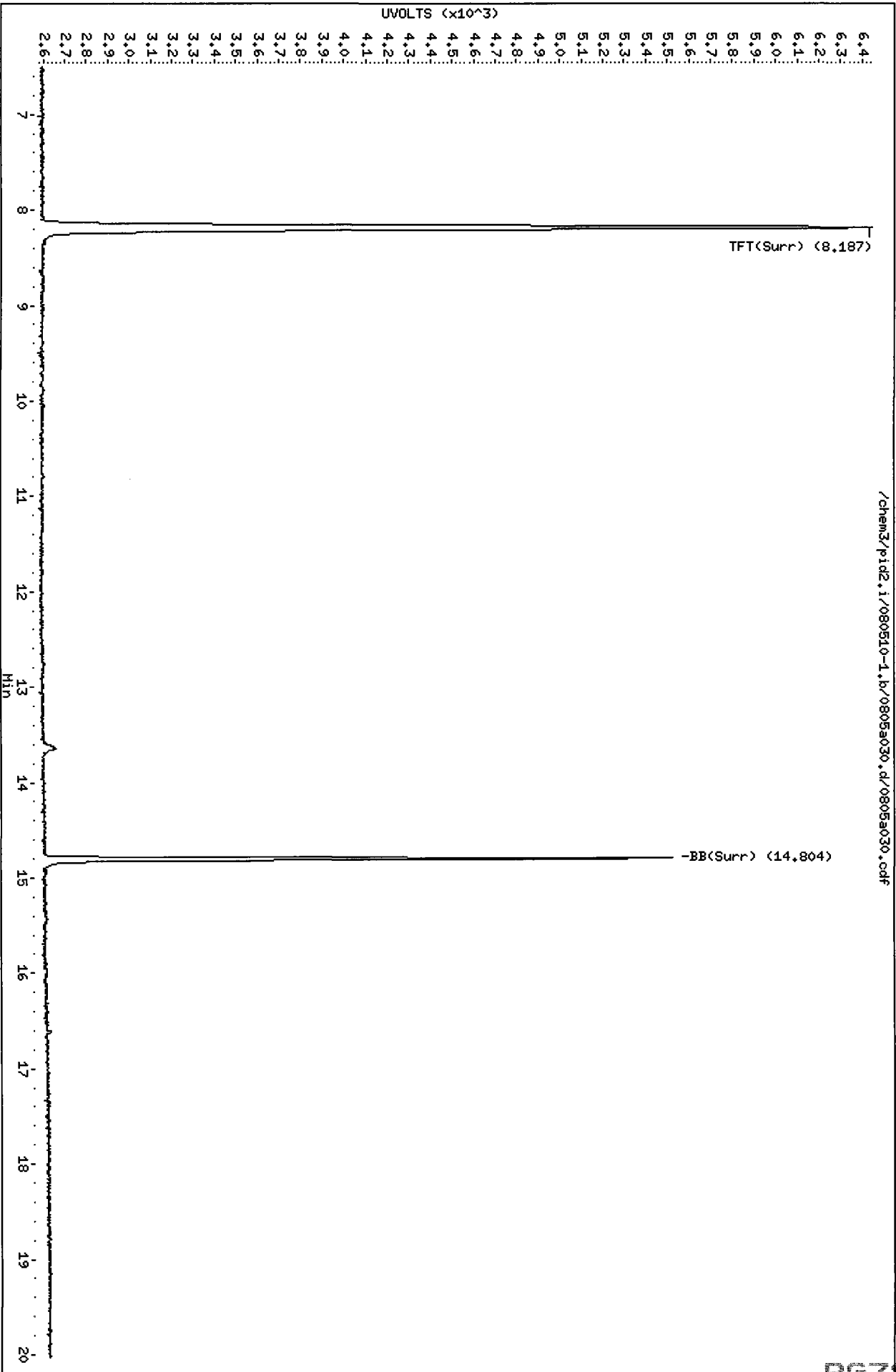
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a030.d  
Date : 05-AUG-2010 20:52  
Client ID: PSB15-17-19-073010-  
Sample Info: RG790

Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/080510-1.b/0805a030.d/0805a030.cdf



Data File: /chem3/pid2.i/080510-2.b/0805a030.d

Date: 05-AUG-2010 20:52

Client ID: PSB15-17-19-073010-

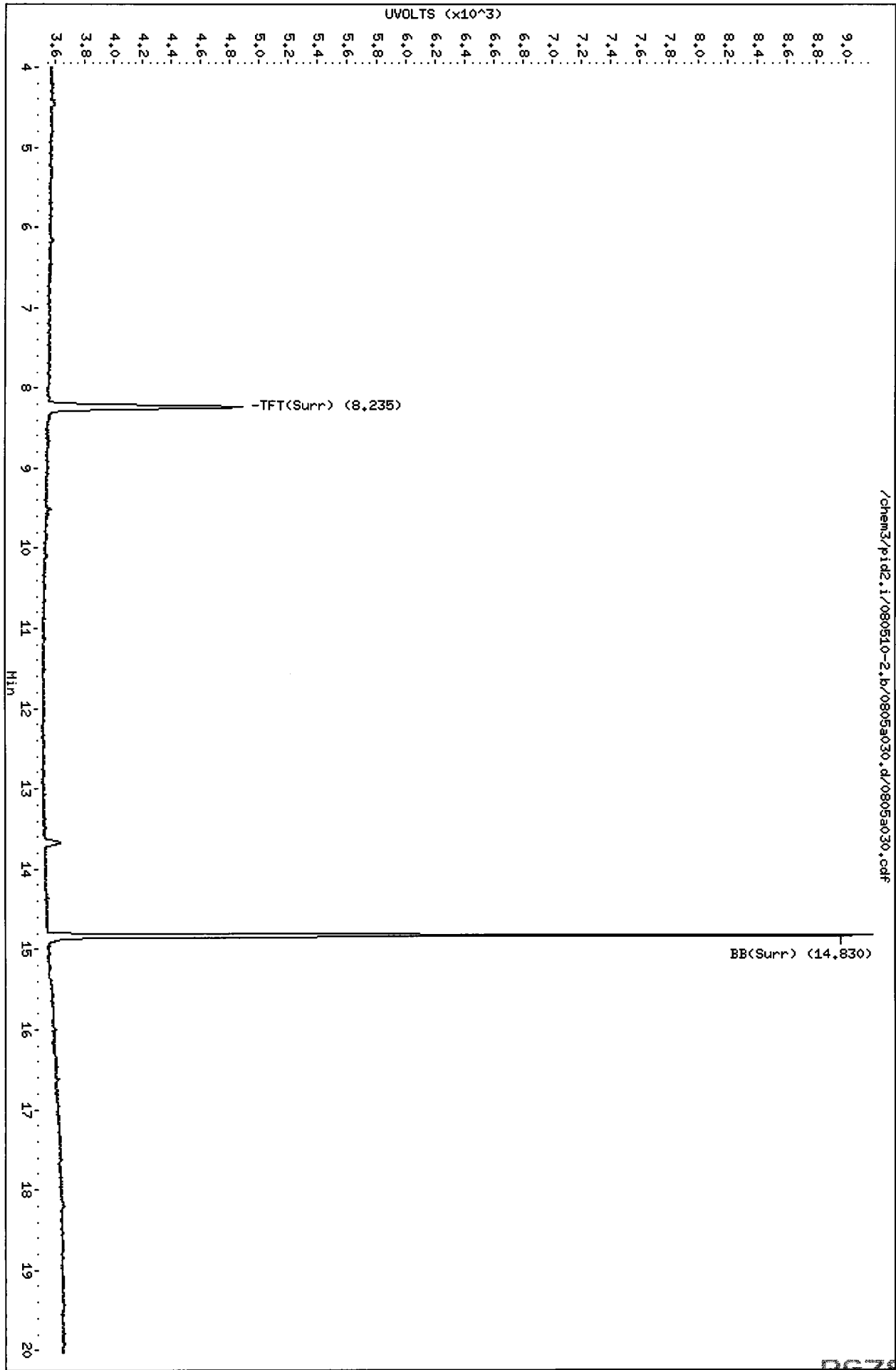
Sample Info: RG79Q

Column phase: RTX 502-2 PID

Instrument: pid2.i

Operator: HH

Column diameter: 0.18



/chem3/pid2.i/080510-2.b/0805a030.d/0805a030.cdf

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8/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a033.d      ARI ID: BCAL 4  
Data file 2: /chem3/pid2.i/080510-2.b/0805a033.d      Client ID: BCAL 4  
Method: /chem3/pid2.i/080510-2.b/PIDB.m              Injection Date: 05-AUG-2010 22:09  
Instrument: pid2.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                              Dilution Factor: 1.000  
BETX Ical Date: 28-JUL-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.188	0.001	3820	64477	92.0	TFT(Surr)
14.804	0.002	2928	26855	97.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	405758	0.703
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	418253	0.321
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	384632	0.433
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	405758	0.674

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
8.236	0.011	1312	91.3	TFT(Surr)
14.830	0.006	5573	95.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.493	0.010	2711	23.28	Benzene
10.101	0.007	2364	22.79	Toluene
12.660	0.004	2495	21.77	Ethylbenzene
12.807	0.004	4422	45.63	M/P-Xylene
13.611	0.006	2349	23.14	O-Xylene
5.113	0.013	935	22.27	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid2.i/080510-1.b/0805a033.d

Date: 05-AUG-2010 22:09

Client ID:

Sample Info: BCRL 4

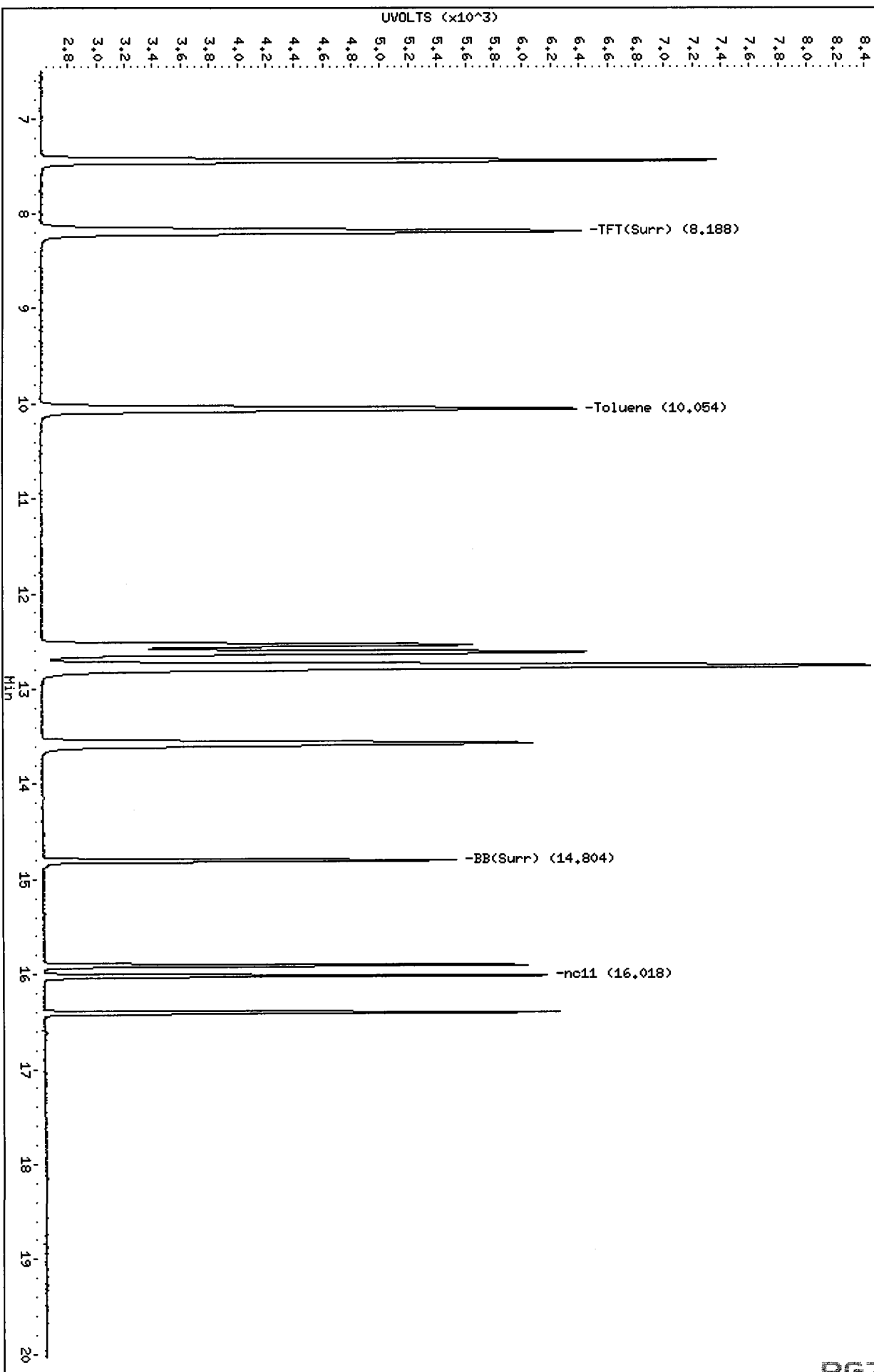
Column phase: RTX 502-2 FID

Instrument: pid2.i

Operator: HH

Column diameter: 0.18

/chem3/pid2.i/080510-1.b/0805a033.d/0805a033.cdf

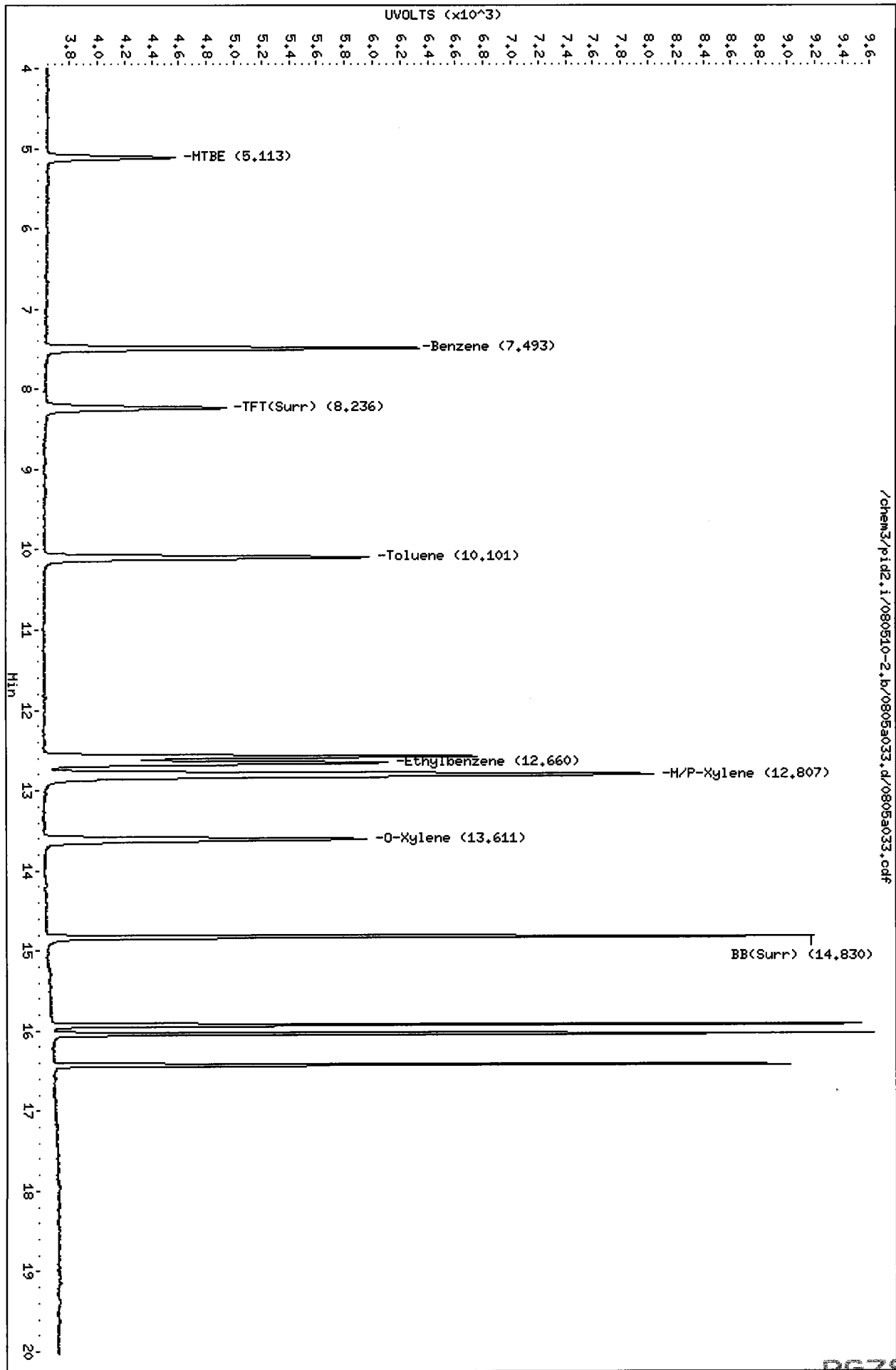


Data File: /chem3/pid2.i/080510-2.b/0805a033.d  
Date : 05-AUG-2010 22:09  
Client ID: BQAL 4  
Sample Info: BQAL 4

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid2.i/080510-2.b/0805a033.d/0805a033.cdf



MH  
8/11/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid2.i/080510-1.b/0805a034.d  
Data file 2: /chem3/pid2.i/080510-2.b/0805a034.d  
Method: /chem3/pid2.i/080510-2.b/PIDB.m  
Instrument: pid2.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 28-JUL-2010

ARI ID: GCAL 4  
Client ID: GCAL 4  
Injection Date: 05-AUG-2010 22:35  
Matrix: WATER  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.186	-0.001	4097	68500	98.7	TFT(Surr)
14.801	-0.001	3071	29603	101.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.95 to 17.15)	576960	1310244	2.271 M
8015B 2MP-TMB ( 4.73 to 15.54)	1304891	2899900	2.222 M
AK101 nC6-nC10 ( 5.22 to 14.46)	889246	1939518	2.181 M
NWTPHG Tol-Nap ( 9.95 to 18.25)	602047	1357790	2.255 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
8.234	0.009	1346	93.7	TFT(Surr)
14.828	0.004	5631	96.8	BB(Surr)

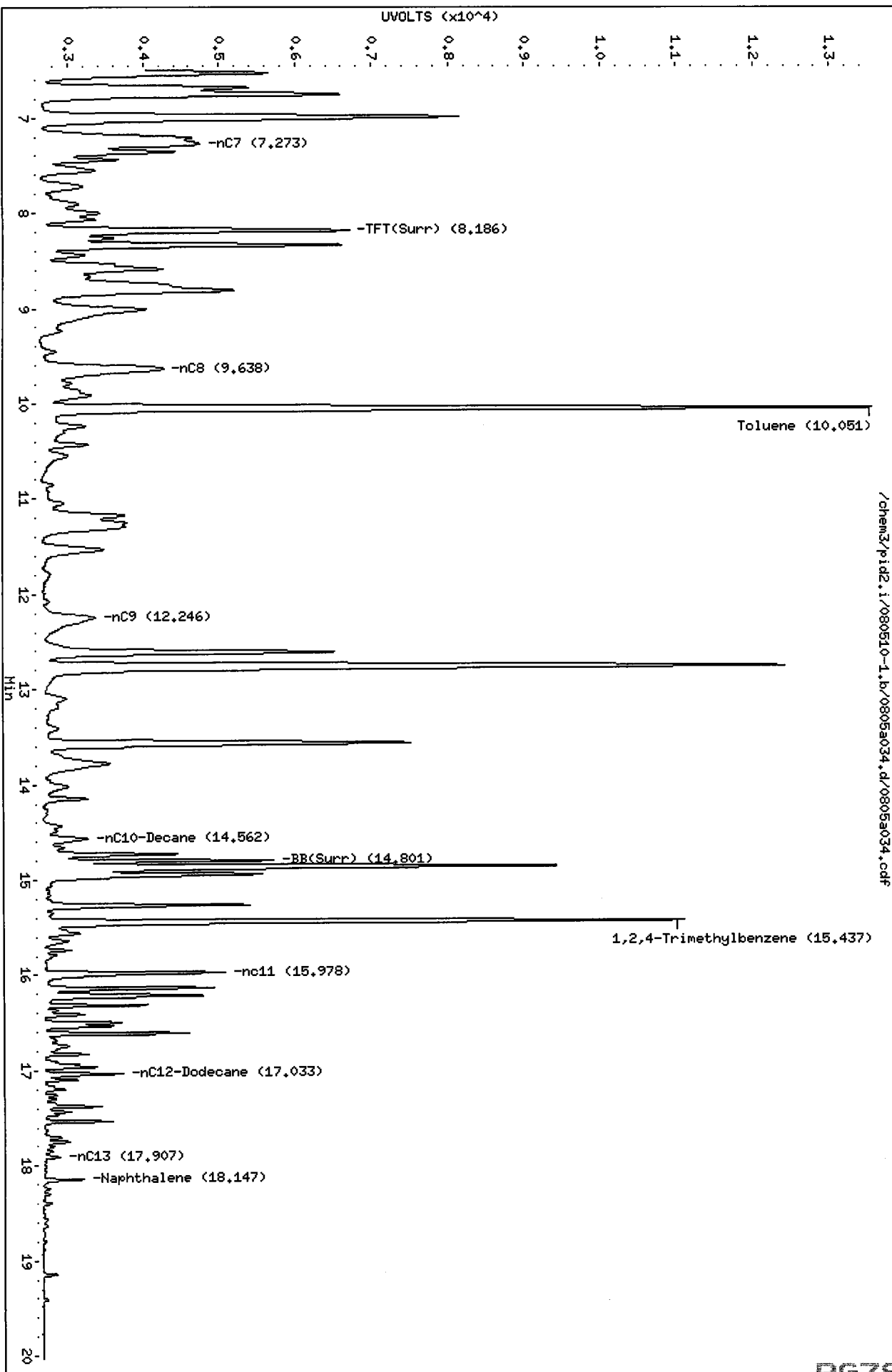
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.492	0.008	561	4.82	Benzene
10.098	0.005	6865	66.19	Toluene
12.658	0.002	2296	20.03	Ethylbenzene
12.805	0.002	7404	76.41	M/P-Xylene
13.608	0.003	3259	32.10	O-Xylene
5.116	0.016	8695	207.09	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid2.i/080510-1.b/0805a034.d  
Date: 05-AUG-2010 22:35  
Client ID: LORA LAKE  
Sample Info: GCAL 4  
Column phase: RTX 502-2 FID

Instrument: pid2.i  
Operator: MH  
Column diameter: 0.18

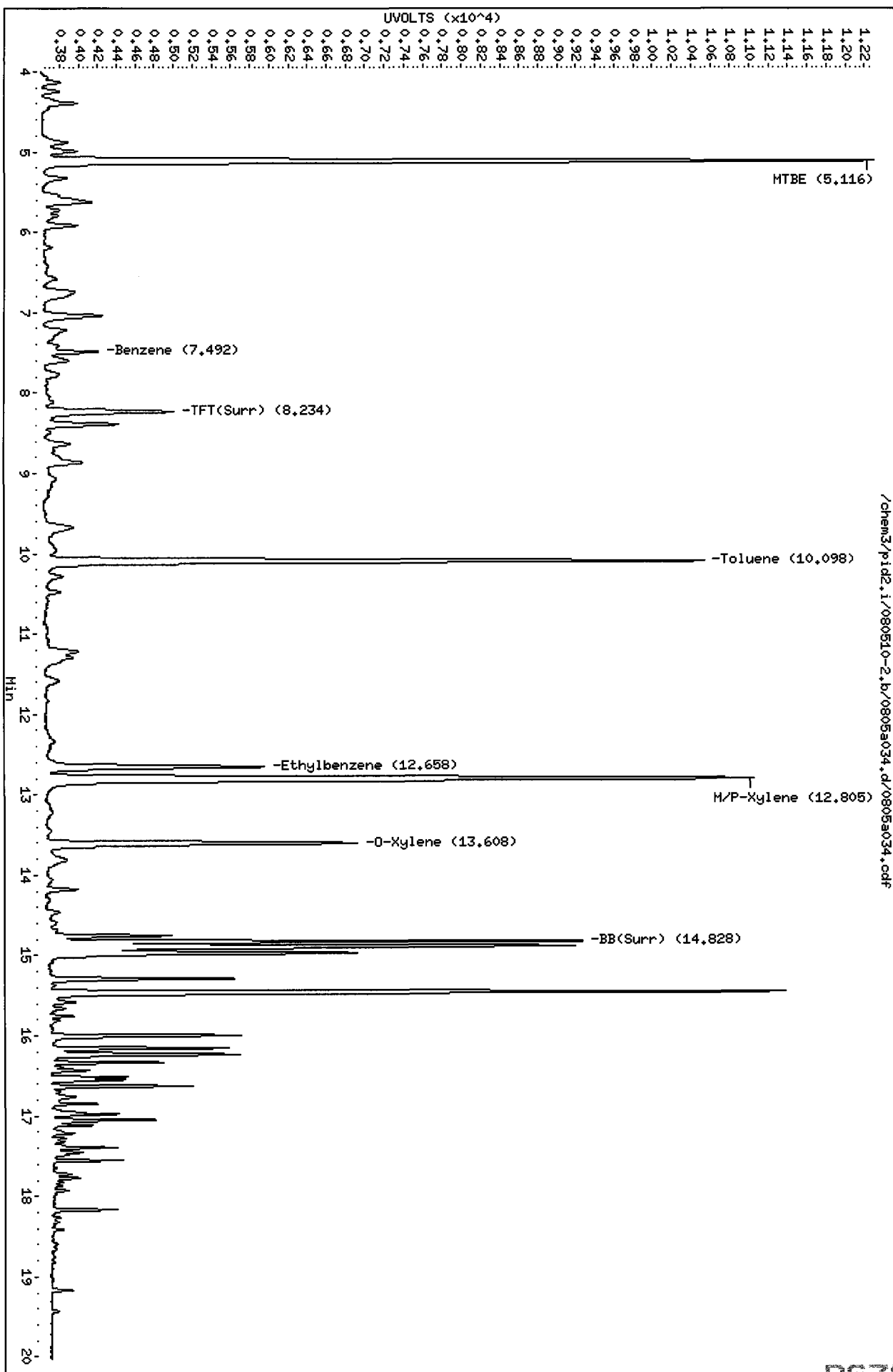


/chem3/pid2.i/080510-1.b/0805a034.d/0805a034.cdf

Data File: /chem3/pid2.i/080510-2.b/0805a034.d  
Date : 05-AUG-2010 22:35  
Client ID: GCAL 4  
Sample Info: GCAL 4

Column phase: RTX 502-2 PID

Instrument: pid2.i  
Operator: HH  
Column diameter: 0.18





Analytical Resources Inc.  
 BETX/Gas Quantitation Report

*Yqw L  
 Just to  
 keep on file*

Data file 1: /chem3/pid3.i/20100806-2.b/0806a012.d      ARI ID: RG79C  
 Data file 2: /chem3/pid3.i/20100806-1.b/0806a012.d      Client ID: PSB11-2-4-073010  
 Method: /chem3/pid3.i/20100806-1.b/PIDB.m              Injection Date: 06-AUG-2010 10:12  
 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	0.002	7035	83590	97.7	TFT(Surr)
14.911	0.000	4416	36911	102.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.12)	827807	205160	0.248
8015B 2MP-TMB ( 4.94 to 15.60)	1664107	83687	0.050
AK101 nC6-nC10 ( 5.43 to 14.51)	1131784	21262	0.019
NWTPHG Tol-Nap (10.21 to 18.19)	882029	277741	0.315

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	0.033	20242	92.1	TFT(Surr)
14.909	0.023	43970	96.4	BB(Surr)

SW8021 (PID)

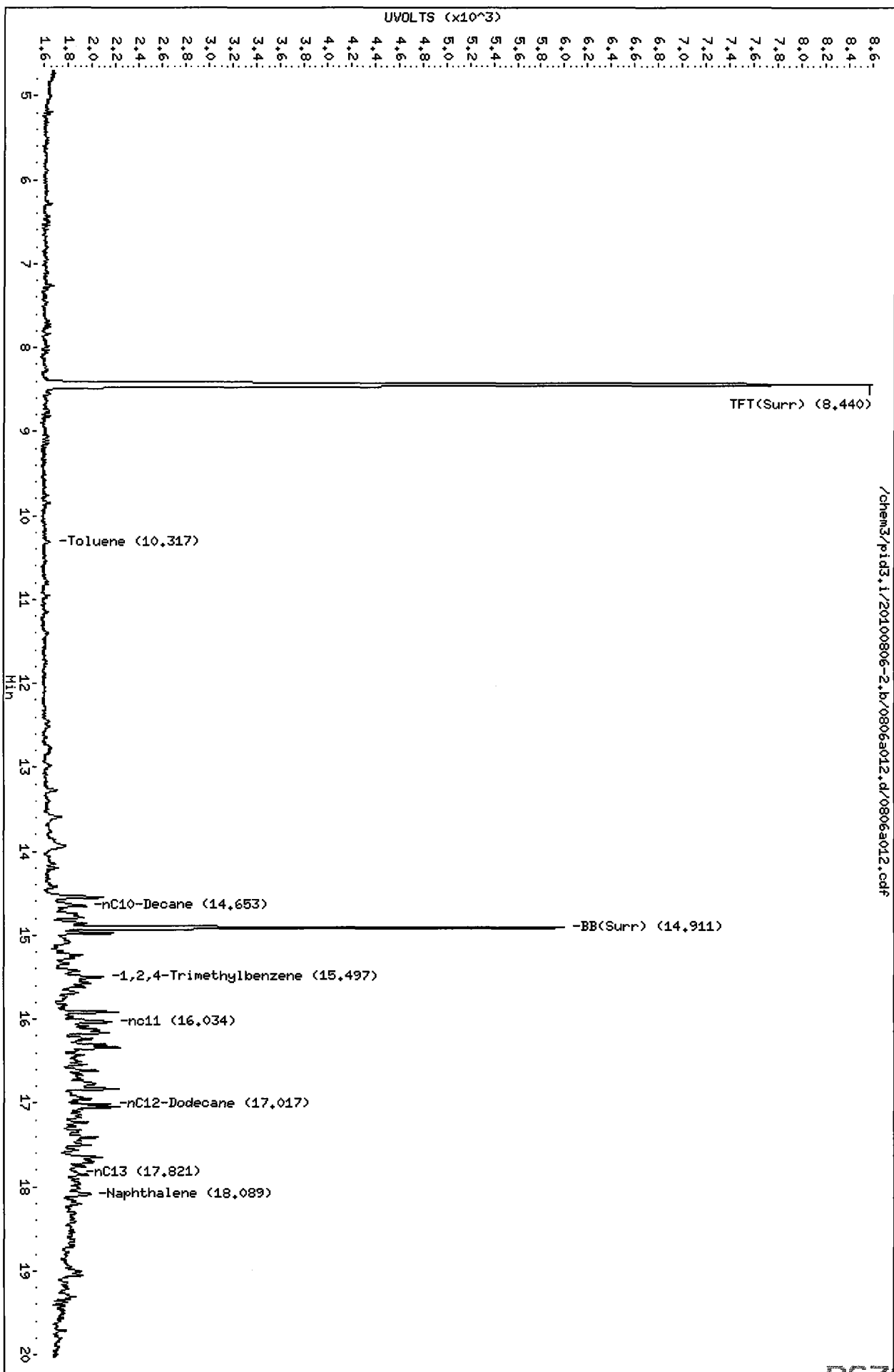
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100806-2.b/0806a012.d  
Date : 06-AUG-2010 10:12  
Client ID: PSB11-2-4-073010  
Sample Info: RG79C

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

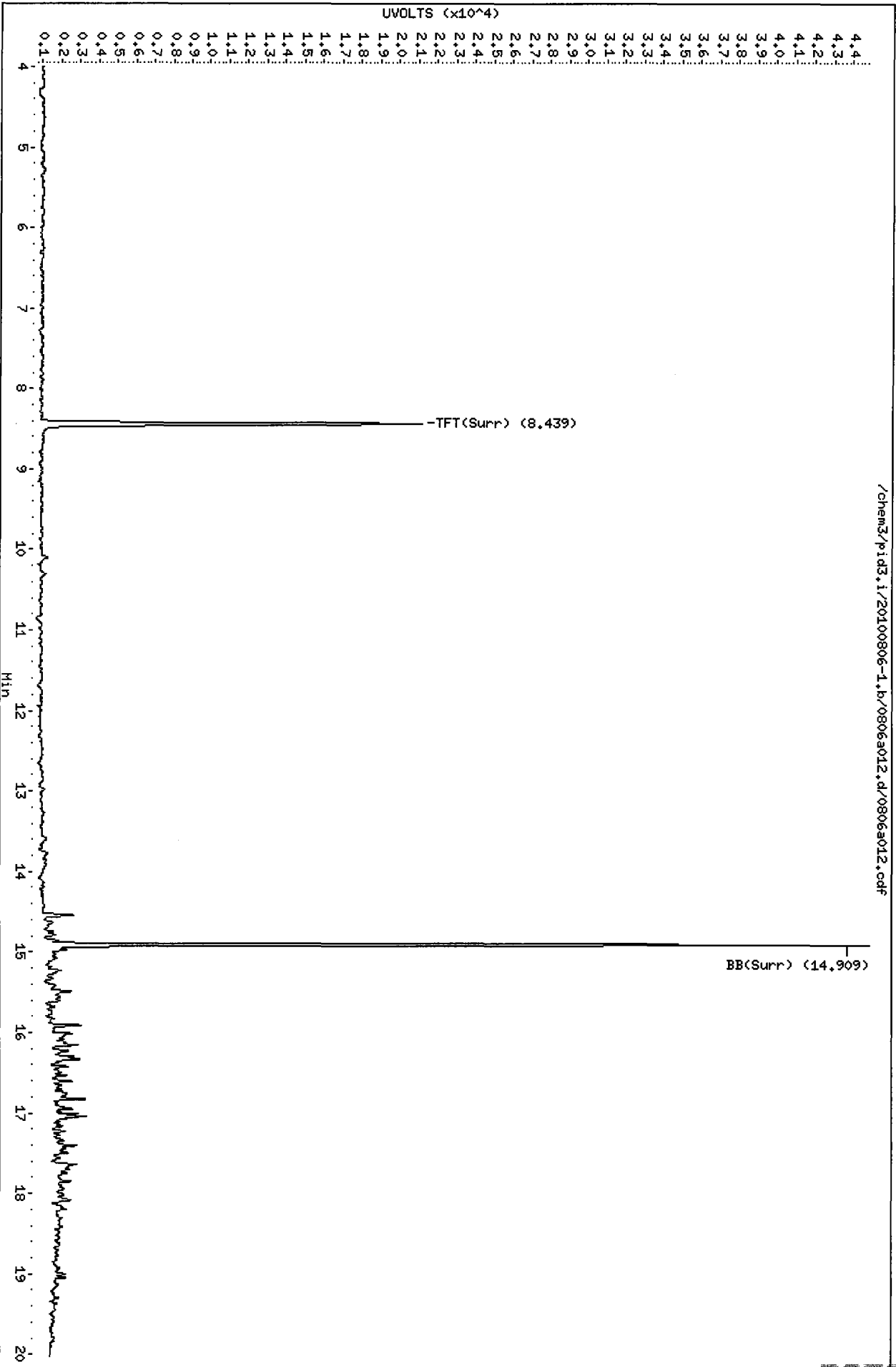




Data File: /chem3/pid3.i/20100806-1.b/0806a012.d  
Date : 06-AUG-2010 10:12  
Client ID: PSB11-2-4-073010  
Sample Info: RG79C

Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



**Metals Raw Data  
Preparation Bench Sheets and Notes**

**ARI Job ID: RG79**





# Digestion Log

Analyst: KM  
Matrix: soil

Date: 8/06/10

Block Temp: 91°C

ARI Sample ID	Btl #	pH<2	Prep Code: <u>SNC</u>		Prep Code:		Comments
			Initial Wt (g) Vol (mL)	Final Vol (mL)	Initial Wt (g) Vol (mL)	Final Vol (mL)	
RG79 A	6	—	1.062	50.0			
" B	6	—	1.060				
" C	6	—	1.047				
" D	6	—	1.029				
" E	16	—	1.076				
" EDUP	16	—	1.074				
" ESPK	16	—	1.078				
" G	6	—	1.096				
" H	6	—	1.032				
" K	6	—	1.065				
" L	6	—	1.044				
" M	6	—	1.045				
" N	6	—	1.024				
" O	6	—	1.033				
" P	6	—	1.037				
" Q	6	—	1.071				
" REF1	D053	—	1.000				
" MBI	—	—	—				
" MBISPK	—	—	—				
RH30 A	1	—	1.012				
" B	1	—	1.070				
" C	1	—	1.044				
" MB	—	—	—	↓			
" MBSPK	—	—	—	50.0			
			KM	8/06/10			

Chemical/Reagent ID:

HNO<sub>3</sub>: MP1926 HCl: I5548 H<sub>2</sub>O<sub>2</sub>: I5512 Tube Lot #: 1005282  
I5547