

Data File: /chem1/nt7.i/23AUG2010.b/08231006.d  
 Report Date: 23-Aug-2010 15:30

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

Instrument ID: nt7.i  
 Lab File ID: 08231006.d  
 Lab Smp Id: IC4000  
 Analysis Type: VOA  
 Quant Type: ISTD  
 Operator: PC  
 Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Misc Info: 10-

Calibration Date: 23-AUG-2010  
 Calibration Time: 11:18  
 Client Smp ID: IC4000  
 Level: LOW  
 Sample Type: WATER

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	96493	1.94
7 1,4-Difluorobenze	166153	83076	332306	169889	2.25

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.31	-0.02
7 1,4-Difluorobenze	5.75	5.25	6.25	5.74	-0.19

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

Data File: /chem1/nt7.1/23AUG2010.b/08231006.d

Date: 23-AUG-2010 10:27

Client ID: IC4000

Sample Info: IC4000,10,10,0,

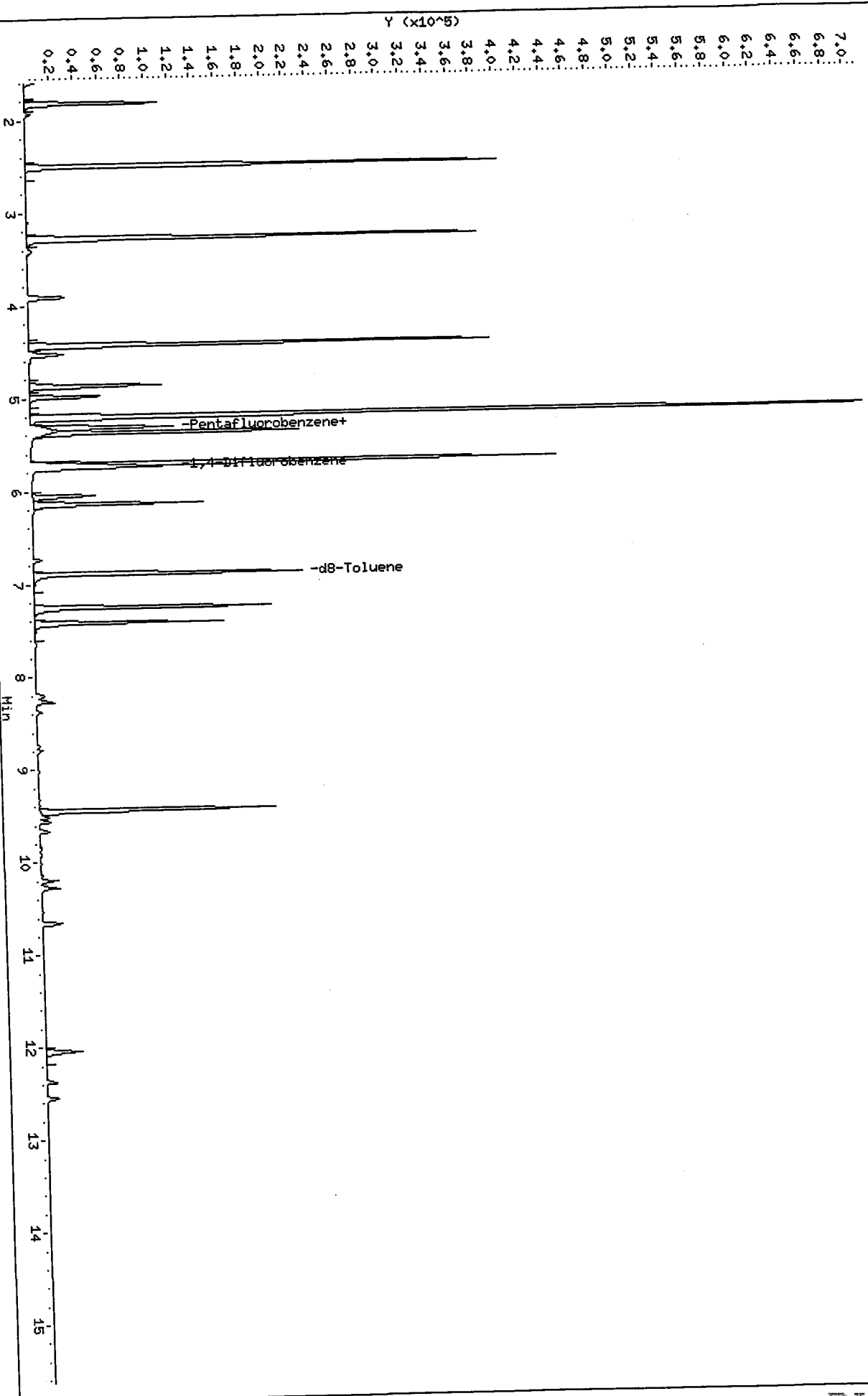
Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18

/chem1/nt7.1/23AUG2010.b/08231006.d



PG  
8/23/10

Data File: /chem1/nt7.i/23AUG2010.b/08231007.d  
Report Date: 23-Aug-2010 15:30

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/23AUG2010.b/08231007.d  
Lab Smp Id: IC2000 Client Smp ID: IC2000  
Inj Date : 23-AUG-2010 10:52 Inst ID: nt7.i  
Operator : PC  
Smp Info : IC2000,10,10,0,  
Misc Info : 10-  
Comment :  
Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
Meth Date : 23-Aug-2010 15:29 paul Quant Type: ISTD  
Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
Als bottle: 1 Calibration Sample, Level: 6  
Dil Factor: 1.00000 Compound Sublist: sim12dca.sub  
Integrator: HP RTE  
Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT ( ng/L)	ON-COL ( ng/L)
1 Vinyl Chloride	62	1.551	1.552	(0.292)	173040	2000.00	2018.6
2 1,1-Dichloroethene	96	2.510	2.510	(0.472)	98142	2000.00	2010.8
175 Trans-1,2-Dichloroethene	96	3.289	3.289	(0.619)	115001	2000.00	2018.6
3 cis-1,2-dichloroethene	96	4.439	4.439	(0.835)	118274	2000.00	2027.6
6 Benzene	78	5.211	5.212	(0.905)	544940	2000.00	1924.4
* 4 Pentafluorobenzene	168	5.315	5.316	(1.000)	95583	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	62166	1000.00	946.94
176 1,2-Dichloroethane	62	5.382	5.382	(1.012)	166000	2000.00	2076.2
8 Trichloroethene	130	5.710	5.720	(0.992)	107905	2000.00	2000.6 (Q)
* 7 1,4-Difluorobenzene	114	5.756	5.754	(1.000)	166703	1000.00	
\$ 9 d8-Toluene	98	6.902	6.903	(1.199)	230670	1000.00	1003.6
10 Tetrachloroethene	166	7.259	7.260	(1.261)	89498	2000.00	2010.6
11 1,1,2,2-Tetrachloroethane	83	9.446	9.447	(1.641)	96416	2000.00	2248.2

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i  
 Lab File ID: 08231007.d  
 Lab Smp Id: IC2000  
 Analysis Type: VOA  
 Quant Type: ISTD  
 Operator: PC  
 Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Misc Info: 10-

Calibration Date: 23-AUG-2010  
 Calibration Time: 11:18  
 Client Smp ID: IC2000  
 Level: LOW  
 Sample Type: WATER

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	95583	0.98
7 1,4-Difluorobenze	166153	83076	332306	166703	0.33

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	-0.01
7 1,4-Difluorobenze	5.75	5.25	6.25	5.76	0.03

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

Data File: /chem1/nt7.i/23AUG2010.b/08231007.d

Date: 23-AUG-2010 10:52

Client ID: IC2000

Sample Info: IC2000,10,10,0,

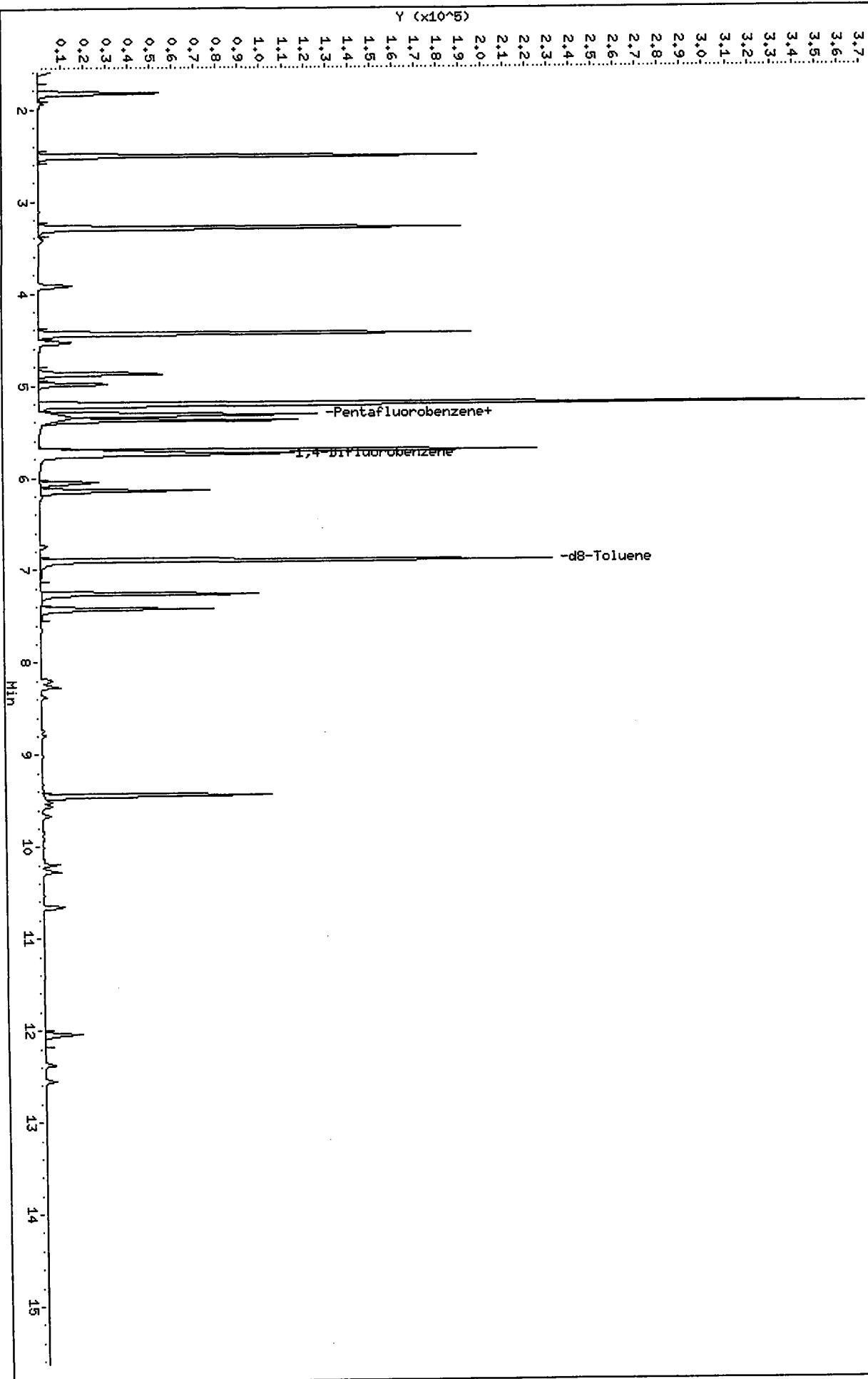
Column phase: RTXVHS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18

/chem1/nt7.i/23AUG2010.b/08231007.d



HC  
8/23/10

Data File: /chem1/nt7.i/23AUG2010.b/08231008.d  
Report Date: 23-Aug-2010 15:30

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/23AUG2010.b/08231008.d  
Lab Smp Id: IC1000 Client Smp ID: IC1000  
Inj Date : 23-AUG-2010 11:18 Inst ID: nt7.i  
Operator : PC  
Smp Info : IC1000,10,10,0,  
Misc Info : 10-  
Comment :  
Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
Meth Date : 23-Aug-2010 15:29 paul Quant Type: ISTD  
Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
Als bottle: 1 Calibration Sample, Level: 5  
Dil Factor: 1.00000 Compound Sublist: sim12dca.sub  
Integrator: HP RTE  
Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (ng/L)	ON-COL (ng/L)
1 Vinyl Chloride	62	1.552	1.552	(0.292)	82106	1000.00	967.21
2 1,1-Dichloroethene	96	2.510	2.510	(0.472)	46757	1000.00	967.40
175 Trans-1,2-Dichloroethene	96	3.289	3.289	(0.619)	54601	1000.00	967.82
3 cis-1,2-dichloroethene	96	4.439	4.439	(0.835)	56880	1000.00	984.69
6 Benzene	78	5.212	5.212	(0.906)	261994	1000.00	928.29
* 4 Pentafluorobenzene	168	5.316	5.316	(1.000)	94653	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	61659	1000.00	948.44
176 1,2-Dichloroethane	62	5.382	5.382	(1.012)	77654	1000.00	980.79
8 Trichloroethene	130	5.720	5.720	(0.994)	50721	1000.00	943.52(Q)
* 7 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	166153	1000.00	
\$ 9 d8-Toluene	98	6.903	6.903	(1.200)	230787	1000.00	1007.4
10 Tetrachloroethene	166	7.260	7.260	(1.262)	42427	1000.00	956.28
11 1,1,2,2-Tetrachloroethane	83	9.447	9.447	(1.642)	43172	1000.00	1010.0

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i  
 Lab File ID: 08231008.d  
 Lab Smp Id: IC1000  
 Analysis Type: VOA  
 Quant Type: ISTD  
 Operator: PC  
 Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Misc Info: 10-

Calibration Date: 23-AUG-2010  
 Calibration Time: 11:18  
 Client Smp ID: IC1000  
 Level: LOW  
 Sample Type: WATER

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	94653	0.00
7 1,4-Difluorobenze	166153	83076	332306	166153	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.00
7 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.00

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



Data File: /chem1/nt7.i/23AUG2010.b/08231008.d

Date : 23-AUG-2010 14:18

Client ID: IC1000

Sample Info: IC1000,10,10,0,

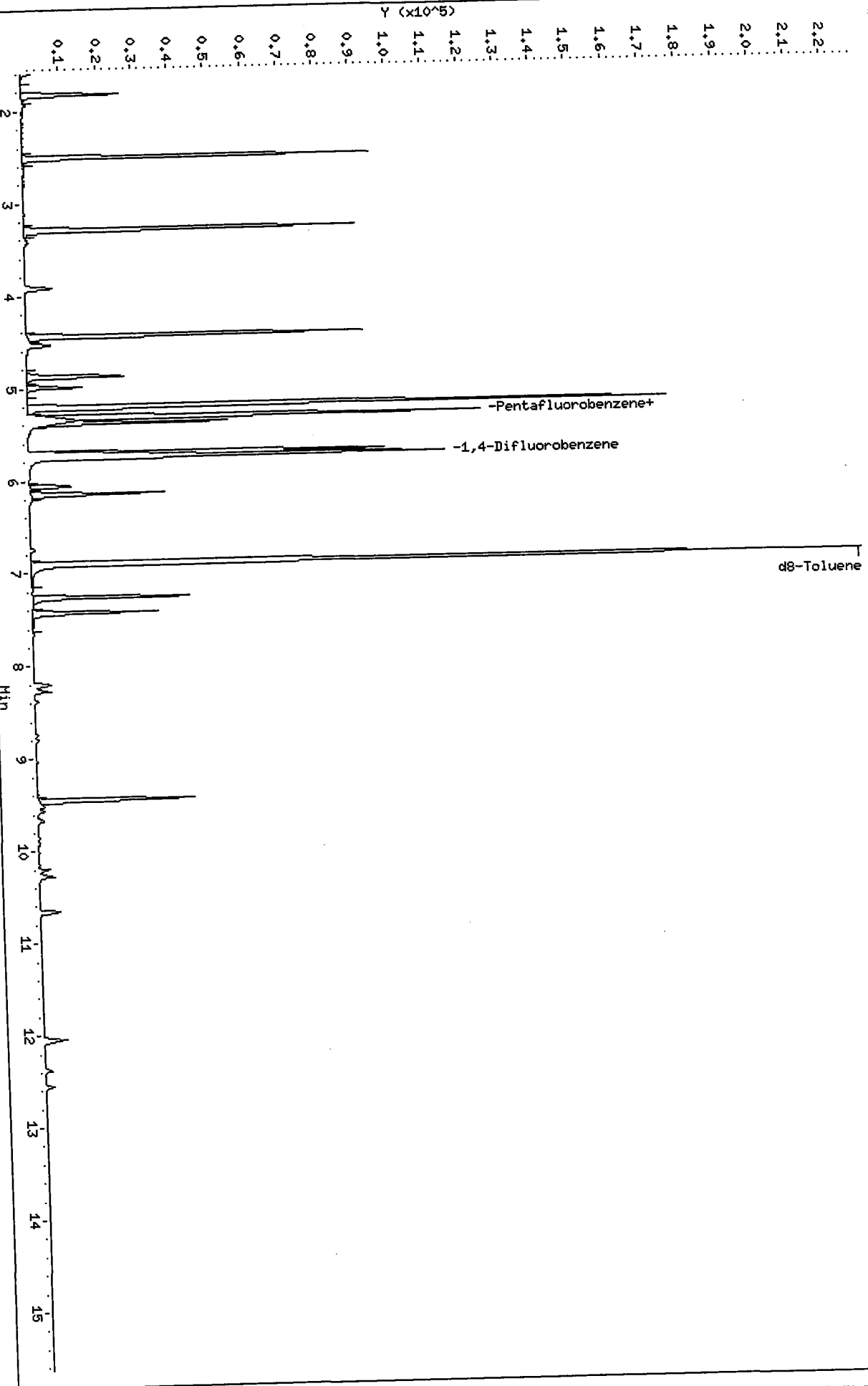
Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18

/chem1/nt7.i/23AUG2010.b/08231008.d



PS  
8/23/10

Data File: /chem1/nt7.i/23AUG2010.b/08231009.d  
Report Date: 23-Aug-2010 15:30

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/23AUG2010.b/08231009.d  
Lab Smp Id: IC500 Client Smp ID: IC500  
Inj Date : 23-AUG-2010 11:44 Inst ID: nt7.i  
Operator : MH  
Smp Info : IC500,10,10,0,  
Misc Info : 10-  
Comment :  
Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
Meth Date : 23-Aug-2010 15:29 paul Quant Type: ISTD  
Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
Als bottle: 1 Calibration Sample, Level: 4  
Dil Factor: 1.00000 Compound Sublist: sim12dca.sub  
Integrator: HP RTE  
Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (ng/L)	ON-COL (ng/L)
1 Vinyl Chloride	62	1.552	1.552	(0.292)	41360	500.000	488.50
2 1,1-Dichloroethene	96	2.511	2.510	(0.472)	23943	500.000	496.68
175 Trans-1,2-Dichloroethene	96	3.290	3.289	(0.618)	28231	500.000	501.72
3 cis-1,2-dichloroethene	96	4.440	4.439	(0.834)	29069	500.000	504.55
6 Benzene	78	5.210	5.212	(0.905)	134060	500.000	479.99
* 4 Pentafluorobenzene	168	5.324	5.316	(1.000)	94405	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.334	5.325	(1.002)	61362	1000.00	946.35
176 1,2-Dichloroethane	62	5.381	5.382	(1.011)	40132	500.000	508.21
8 Trichloroethene	130	5.721	5.720	(0.994)	25845	500.000	485.83 (Q)
* 7 1,4-Difluorobenzene	114	5.755	5.754	(1.000)	164423	1000.00	
\$ 9 d8-Toluene	98	6.902	6.903	(1.199)	228324	1000.00	1007.1
10 Tetrachloroethene	166	7.270	7.260	(1.263)	21823	500.000	497.05
11 1,1,2,2-Tetrachloroethane	83	9.446	9.447	(1.641)	21061	500.000	497.89

Data File: /chem1/nt7.i/23AUG2010.b/08231009.d  
 Report Date: 23-Aug-2010 15:30

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

Instrument ID: nt7.i  
 Lab File ID: 08231009.d  
 Lab Smp Id: IC500  
 Analysis Type: VOA  
 Quant Type: ISTD  
 Operator: MH  
 Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Misc Info: 10-

Calibration Date: 23-AUG-2010  
 Calibration Time: 11:18  
 Client Smp ID: IC500  
 Level: LOW  
 Sample Type: WATER

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	94405	-0.26
7 1,4-Difluorobenze	166153	83076	332306	164423	-1.04

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.15
7 1,4-Difluorobenze	5.75	5.25	6.25	5.76	0.02

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

Data File: /chem1/nt7.i/23AUG2010.b/08231009.d

Date : 23-AUG-2010 11:44

Client ID: IC500

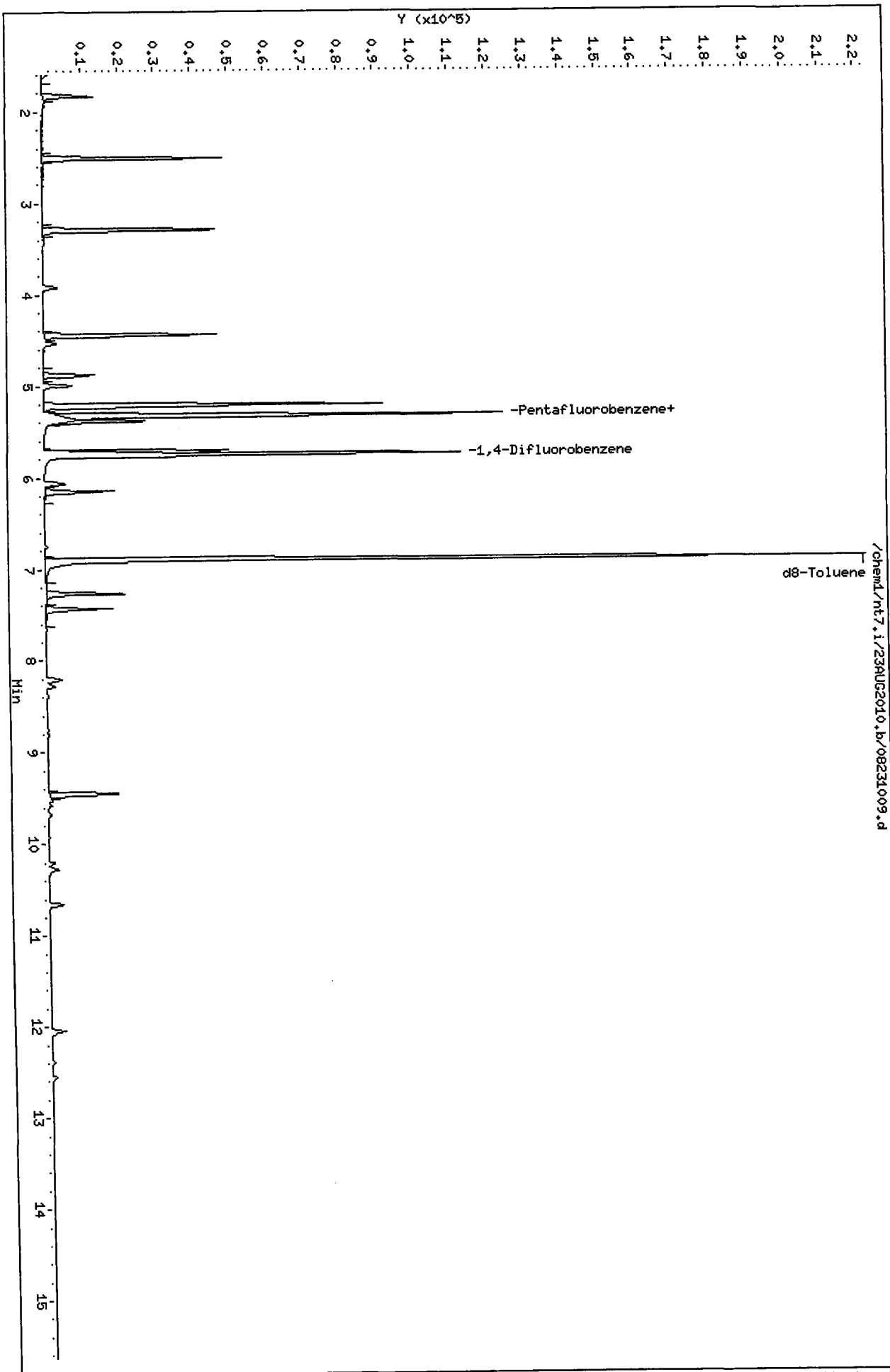
Sample Info: IC500,10,10,0,

Column phase: RTXVMS

Instrument: nt7.i

Operator: MH

Column diameter: 0.18



KG  
8/23/10

Data File: /chem1/nt7.i/23AUG2010.b/08231010.d  
Report Date: 23-Aug-2010 15:30

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/23AUG2010.b/08231010.d  
 Lab Smp Id: IC100 Client Smp ID: IC100  
 Inj Date : 23-AUG-2010 12:09 Inst ID: nt7.i  
 Operator : PC  
 Smp Info : IC100,10,10,0,  
 Misc Info : 10-  
 Comment :  
 Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Meth Date : 23-Aug-2010 15:29 paul Quant Type: ISTD  
 Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
 Als bottle: 1 Calibration Sample, Level: 3  
 Dil Factor: 1.00000 Compound Sublist: sim12dca.sub  
 Integrator: HP RTE  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT ( ng/L)	ON-COL ( ng/L)
1 Vinyl Chloride	62	1.552	1.552	(0.292)	8706	100.000	103.20	
2 1,1-Dichloroethene	96	2.511	2.510	(0.472)	5096	100.000	106.09	
175 Trans-1,2-Dichloroethene	96	3.290	3.289	(0.618)	6050	100.000	107.91	
3 cis-1,2-dichloroethene	96	4.440	4.439	(0.834)	5990	100.000	104.34	
6 Benzene	78	5.211	5.212	(0.905)	29171	100.000	105.19	
* 4 Pentafluorobenzene	168	5.324	5.316	(1.000)	94066	1000.00		
\$ 5 d4-1,2-Dichloroethane	65	5.324	5.325	(1.000)	71832	1000.00	1111.8	
176 1,2-Dichloroethane	62	5.381	5.382	(1.011)	8615	100.000	109.49	
8 Trichloroethene	130	5.721	5.720	(0.994)	5580	100.000	105.64(Q)	
* 7 1,4-Difluorobenzene	114	5.756	5.754	(1.000)	163266	1000.00		
\$ 9 d8-Toluene	98	6.902	6.903	(1.199)	225284	1000.00	1000.8	
10 Tetrachloroethene	166	7.270	7.260	(1.263)	4646	100.000	106.57	
11 1,1,2,2-Tetrachloroethane	83	9.457	9.447	(1.643)	4478	100.000	106.61	

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i  
 Lab File ID: 08231010.d  
 Lab Smp Id: IC100  
 Analysis Type: VOA  
 Quant Type: ISTD  
 Operator: PC  
 Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Misc Info: 10-

Calibration Date: 23-AUG-2010  
 Calibration Time: 11:18  
 Client Smp ID: IC100  
 Level: LOW  
 Sample Type: WATER

Test Mode: Use Initial Calibration Level 5.

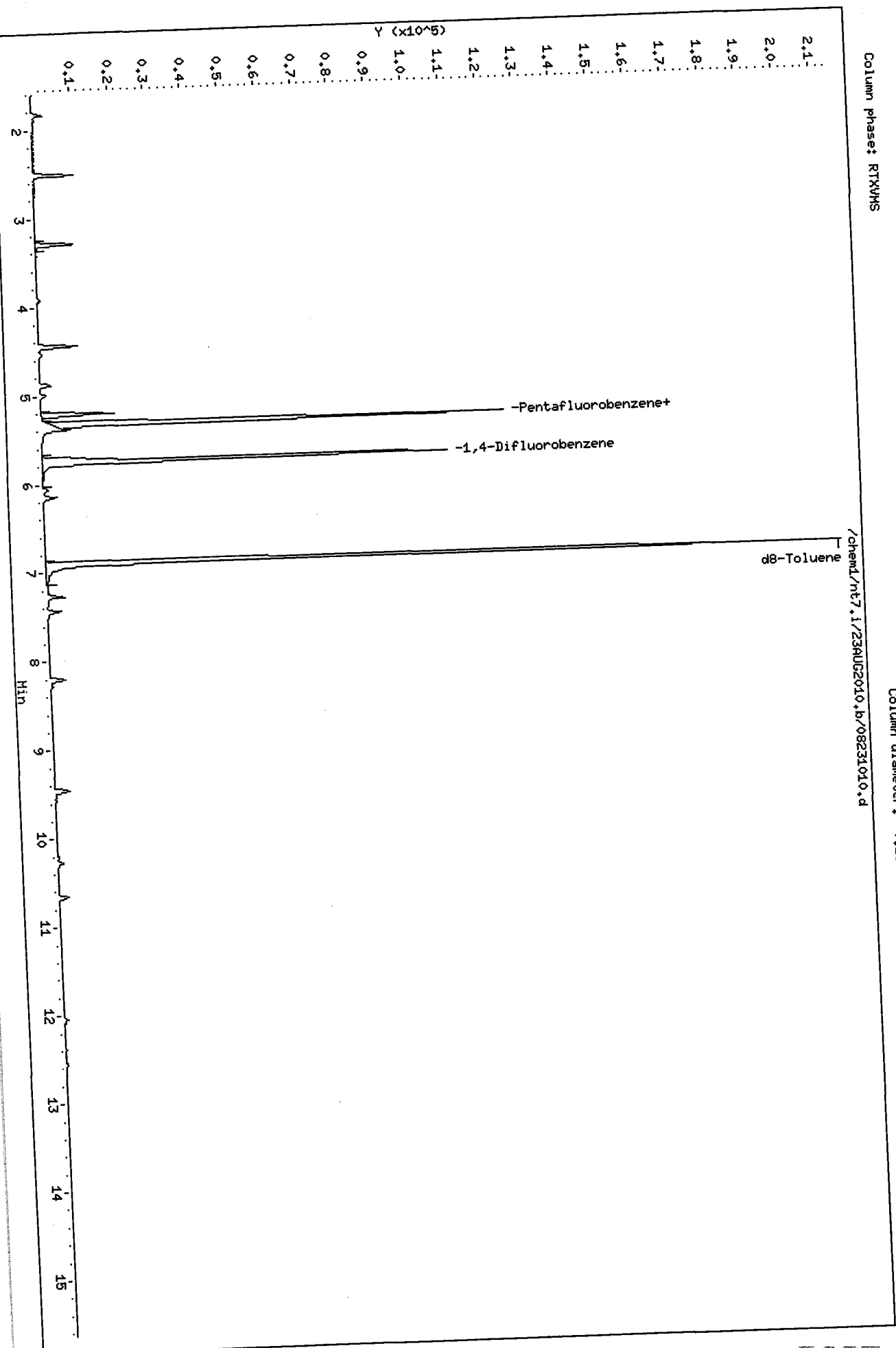
COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	94066	-0.62
7 1,4-Difluorobenze	166153	83076	332306	163266	-1.74

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.16
7 1,4-Difluorobenze	5.75	5.25	6.25	5.76	0.02

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

Data File: /chem1/nt7.1/23AUG2010.b/08231010.d  
Date: 23-AUG-2010 12:09  
Client ID: IC100  
Sample Info: IC100,10,10,0,  
Column phase: RTXVMS

Instrument: nt7.1  
Operator: PC  
Column diameter: 0.18



*Handwritten initials/signature*

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/23AUG2010.b/08231011.d  
 Lab Smp Id: IC50 Client Smp ID: IC50  
 Inj Date : 23-AUG-2010 12:35  
 Operator : PC Inst ID: nt7.i  
 Smp Info : IC50,10,10,0,  
 Misc Info : 10-  
 Comment :  
 Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Meth Date : 23-Aug-2010 15:29 paul Quant Type: ISTD  
 Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
 Als bottle: 1 Calibration Sample, Level: 2  
 Dil Factor: 1.00000 Compound Sublist: sim12dca.sub  
 Integrator: HP RTE  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT ( ng/L)	ON-COL ( ng/L)
1 Vinyl Chloride	62	1.552	1.552	(0.291)	3920	50.0000	47.401
2 1,1-Dichloroethene	96	2.509	2.510	(0.471)	2353	50.0000	49.973
175 Trans-1,2-Dichloroethene	96	3.289	3.289	(0.618)	2667	50.0000	48.526
3 cis-1,2-dichloroethene	96	4.444	4.439	(0.834)	2668	50.0000	47.411
6 Benzene	78	5.211	5.212	(0.906)	13623	50.0000	49.434
* 4 Pentafluorobenzene	168	5.325	5.316	(1.000)	92210	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.000)	65489	1000.00	1034.0
176 1,2-Dichloroethane	62	5.382	5.382	(1.011)	3491	50.0000	45.260
8 Trichloroethene	130	5.720	5.720	(0.994)	2597	50.0000	49.476
* 7 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	162236	1000.00	
\$ 9 d8-Toluene	98	6.903	6.903	(1.200)	221181	1000.00	988.79
10 Tetrachloroethene	166	7.271	7.260	(1.264)	2058	50.0000	47.506
11 1,1,2,2-Tetrachloroethane	83	9.458	9.447	(1.644)	1759	50.0000	42.144



Data File: /chem1/nt7.i/23AUG2010.b/08231011.d  
Report Date: 23-Aug-2010 15:30

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

Instrument ID: nt7.i  
Lab File ID: 08231011.d  
Lab Smp Id: IC50  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: PC  
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
Misc Info: 10-

Calibration Date: 23-AUG-2010  
Calibration Time: 11:18  
Client Smp ID: IC50  
Level: LOW  
Sample Type: WATER

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	92210	-2.58
7 1,4-Difluorobenze	166153	83076	332306	162236	-2.36

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.17
7 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.00

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

Data File: /chem1/nt7.i/23AUG2010.b/08231011.d

Date: 23-AUG-2010 12:35

Client ID: IC50

Sample Info: IC50,10,10,0,

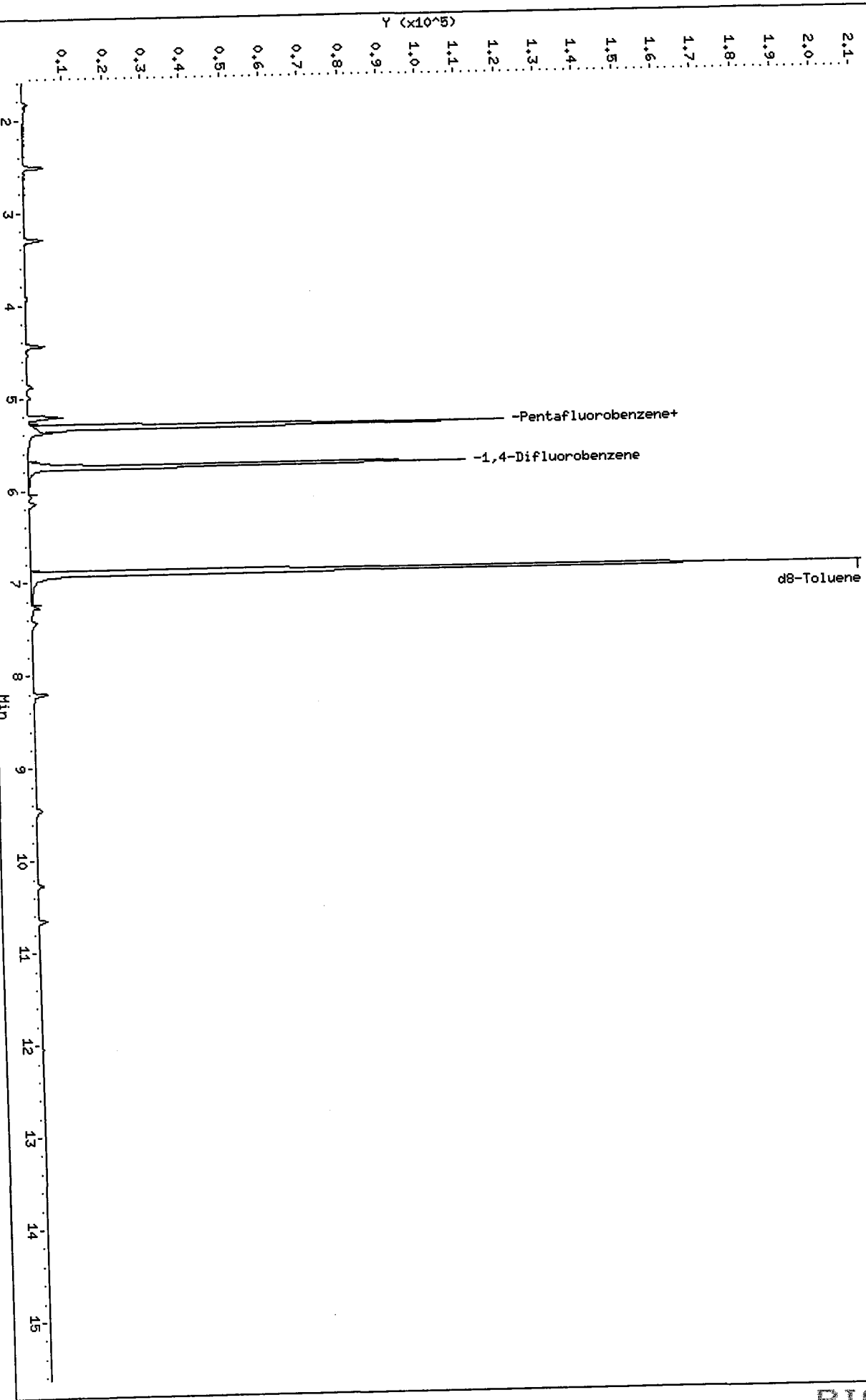
Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18

/chem1/nt7.i/23AUG2010.b/08231011.d



PG  
8/23/10

Data File: /chem1/nt7.i/23AUG2010.b/08231012.d  
Report Date: 23-Aug-2010 15:30

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/23AUG2010.b/08231012.d  
 Lab Smp Id: IC20 Client Smp ID: IC20  
 Inj Date : 23-AUG-2010 13:01 Inst ID: nt7.i  
 Operator : PC  
 Smp Info : IC20,10,10,0,  
 Misc Info : 10-  
 Comment :  
 Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Meth Date : 23-Aug-2010 15:29 paul Quant Type: ISTD  
 Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
 Als bottle: 1 Calibration Sample, Level: 1  
 Dil Factor: 1.00000 Compound Sublist: sim12dca.sub  
 Integrator: HP RTE  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT ( ng/L)	ON-COL ( ng/L)
1 Vinyl Chloride	62	1.552	1.552	(0.292)	1628	20.0000	19.643
2 1,1-Dichloroethene	96	2.510	2.510	(0.472)	918	20.0000	19.454
175 Trans-1,2-Dichloroethene	96	3.295	3.289	(0.620)	1072	20.0000	19.462
3 cis-1,2-dichloroethene	96	4.439	4.439	(0.835)	1123	20.0000	19.912
6 Benzene	78	5.212	5.212	(0.906)	6372	20.0000	23.174
* 4 Pentafluorobenzene	168	5.316	5.316	(1.000)	92413	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	69172	1000.00	1089.8
176 1,2-Dichloroethane	62	5.382	5.382	(1.012)	1489	20.0000	19.262
8 Trichloroethene	130	5.720	5.720	(0.994)	1109	20.0000	21.176
* 7 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	161871	1000.00	
\$ 9 d8-Toluene	98	6.903	6.903	(1.200)	220790	1000.00	989.27
10 Tetrachloroethene	166	7.272	7.260	(1.264)	916	20.0000	21.192
11 1,1,2,2-Tetrachloroethane	83	9.458	9.447	(1.644)	752	20.0000	18.058

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

Instrument ID: nt7.i  
 Lab File ID: 08231012.d  
 Lab Smp Id: IC20  
 Analysis Type: VOA  
 Quant Type: ISTD  
 Operator: PC  
 Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Misc Info: 10-

Calibration Date: 23-AUG-2010  
 Calibration Time: 11:18  
 Client Smp ID: IC20  
 Level: LOW  
 Sample Type: WATER

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	92413	-2.37
7 1,4-Difluorobenze	166153	83076	332306	161871	-2.58

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.00
7 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.00

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

Data File: /chem1/nt7.1/23AUG2010.b/08231012.d

Date: 23-AUG-2010 13:01

Client ID: IC20

Sample Info: IC20,10,10,0,

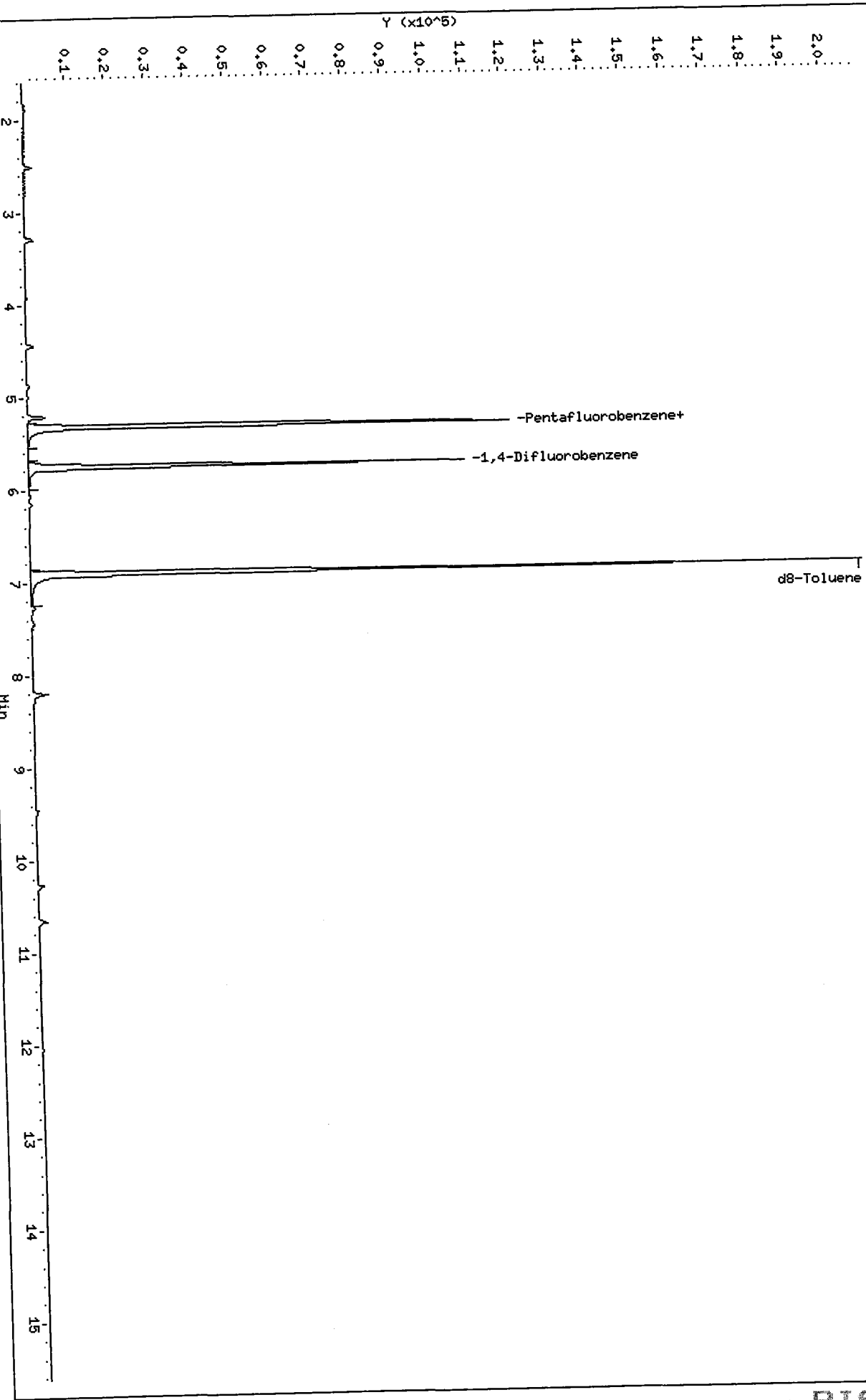
Column phase: RTXVMS

Instrument: nt7.1

Operator: PC

Column diameter: 0.18

/chem1/nt7.1/23AUG2010.b/08231012.d



PC  
8/23/10

Data File: /chem1/nt7.i/23AUG2010.b/08231013.d  
Report Date: 23-Aug-2010 15:30

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/23AUG2010.b/08231013.d  
 Lab Smp Id: ICV1000 Client Smp ID: ICV1000  
 Inj Date : 23-AUG-2010 13:26  
 Operator : PC Inst ID: nt7.i  
 Smp Info : ICV1000,10,10,0,  
 Misc Info : 10-  
 Comment :  
 Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Meth Date : 23-Aug-2010 15:29 paul Quant Type: ISTD  
 Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
 Als bottle: 1 QC Sample: LCS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62		1.551	1.552	(0.292)	81729	973.637	973.64
2 1,1-Dichloroethene	96		2.511	2.510	(0.472)	47233	988.296	988.30
175 Trans-1,2-Dichloroethene	96		3.291	3.289	(0.619)	54739	981.228	981.23
3 cis-1,2-dichloroethene	96		4.440	4.439	(0.835)	54966	962.302	962.30
6 Benzene	78		5.210	5.212	(0.905)	244095	878.098	878.10
* 4 Pentafluorobenzene	168		5.315	5.316	(1.000)	93596	1000.00	
\$ 5 d4-1,2-Dichloroethane	65		5.324	5.325	(1.002)	61887	962.712	962.71
176 1,2-Dichloroethane	62		5.381	5.382	(1.012)	73509	938.929	938.93
8 Trichloroethene	130		5.709	5.720	(0.992)	47718	901.244	901.24(Q)
* 7 1,4-Difluorobenzene	114		5.755	5.754	(1.000)	163650	1000.00	
\$ 9 d8-Toluene	98		6.902	6.903	(1.199)	225415	999.011	999.01
10 Tetrachloroethene	166		7.270	7.260	(1.263)	38371	878.093	878.09
11 1,1,2,2-Tetrachloroethane	83		9.445	9.447	(1.641)	37060	880.261	880.26

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08231013.d  
Lab Smp Id: ICV1000  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: PC  
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
Misc Info: 10-

Calibration Date: 23-AUG-2010  
Calibration Time: 11:18  
Client Smp ID: ICV1000  
Level: LOW  
Sample Type: WATER

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	93596	-1.12
7 1,4-Difluorobenze	166153	83076	332306	163650	-1.51

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.31	-0.02
7 1,4-Difluorobenze	5.75	5.25	6.25	5.76	0.02

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 23AUG2010  
 Sample Matrix: LIQUID Fraction: VOA  
 Lab Smp Id: ICV1000 Client Smp ID: ICV1000  
 Level: LOW Operator: PC  
 Data Type: MS DATA SampleType: LCS  
 SpikeList File: special.spk Quant Type: ISTD  
 Sublist File: sim12dca.sub  
 Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Misc Info: 10-

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Vinyl Chloride	1000.0	973.64	97.36	74-120
176 1,2-Dichloroethane	1000.0	938.93	93.89	79-134
175 Trans-1,2-Dichloro	1000.0	981.23	98.12	80-120
2 1,1-Dichloroethene	1000.0	988.30	98.83	80-120
3 cis-1,2-dichloroet	1000.0	962.30	96.23	80-120
6 Benzene	1000.0	878.10	87.81	80-120
8 Trichloroethene	1000.0	901.24	90.12	80-120
10 Tetrachloroethene	1000.0	878.09	87.81	80-122
11 1,1,2,2-Tetrachlor	1000.0	880.26	88.03	80-125

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	962.71	96.27	80-120
\$ 9 d8-Toluene	1000.0	999.01	99.90	80-120



Data File: /chem1/nt7.i/23AUG2010.b/08231013.d

Date: 23-AUG-2010 13:26

Client ID: ICV4000

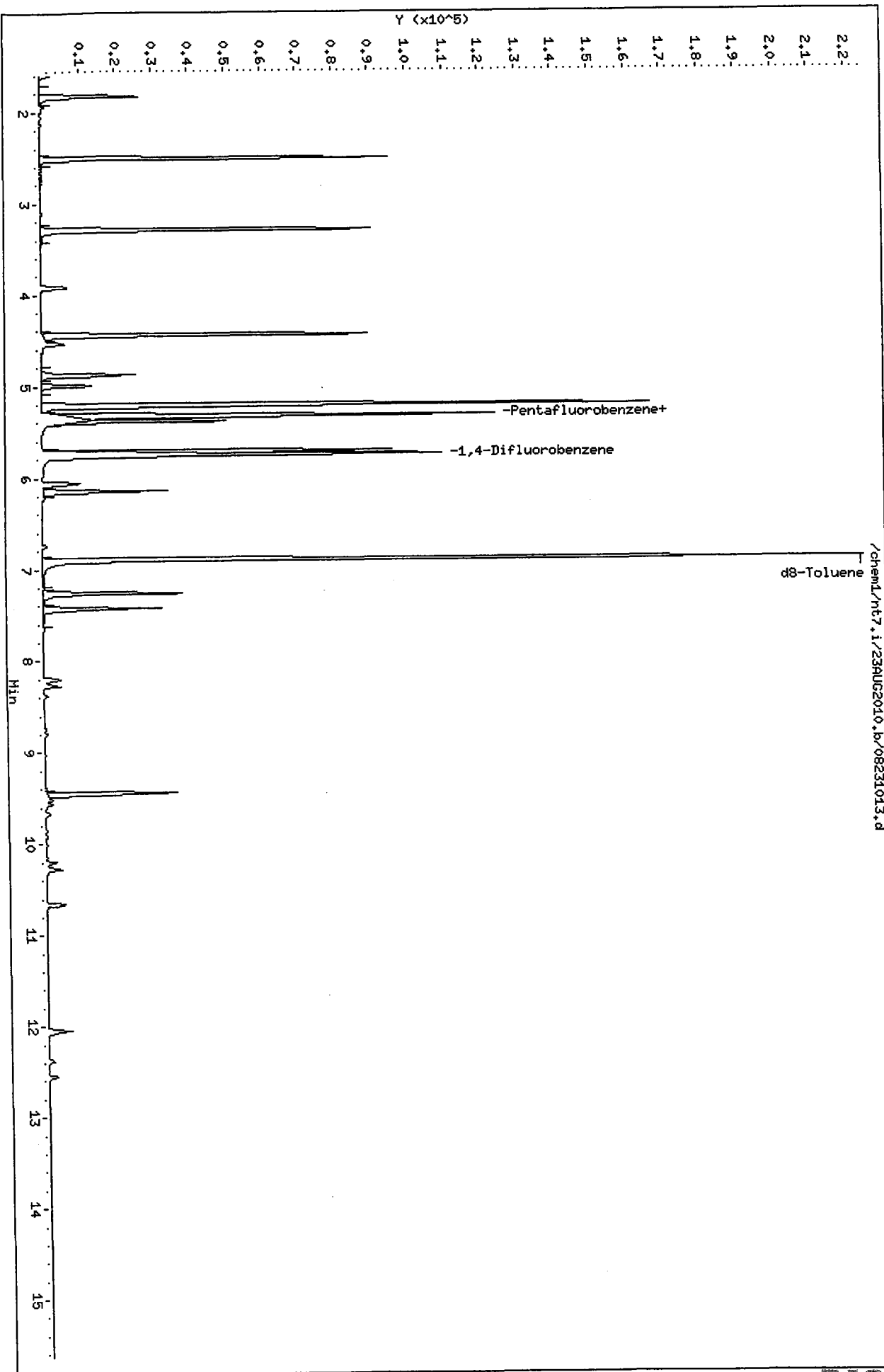
Sample Info: ICV4000,10,10,0,

Column phase: RTXVHS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18



**SIM Volatile Raw Data**  
**Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: RI65**



### VOA Analyst Notes / Corrective Action Log

ARI Project ID: RJ65 Client ID: Floyd/ Sider

ARI SOP: ~~404S~~(Gas) ~~410S~~(BTEX) ~~430S~~(VPH) ~~700S~~(8260C) 703S(SIM) ~~706S~~(524.2) ~~710S~~(RSK-175)

Parameter(s): SIM VOA

Instrument: NT-3 NT-5 NT-7 NT-9 NT-10 PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 10 Curve Date: 8/23/10 Analysis Start Date: 8/20/10

pH ≤ 2.0	<u>YES</u> / NO / NA	Method Blank In Control?	<u>YES</u> / NO
BFB Tune Meets Criteria?	<u>YES</u> / NO / NA	LCS / LCSD Recovery In Control?	<u>YES</u> / NO
Internal Standard Meets Criteria?	<u>YES</u> / NO / NA	Surrogate Recovery In Control?	YES / <u>NO</u>
ICal acceptable?	<u>YES</u> / NO	CCal acceptable?	<u>YES</u> / NO
Q flag applied?	YES / <u>NO</u> / NA	Q flag applied?	YES / <u>NO</u> / NA
Manual Integrations for ICal?	YES / <u>NO</u>	Manual Integrations for Samples?	Yes / <u>NO</u>
Special Analysis Criteria Met?	<u>YES</u> / NO / NA		
Bubbles/Headspace:	<u>None</u> SM (≤ 2mm ●) PB (2-4mm) LG (> 4mm ●) Head Space		

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

*14 62 DGA surrogate > 120% in samples B, C, These samples were ion-detected. OK to report SW846 (not Protect)*

Additional Details on Reverse: Yes / No

Analyst: Paul Campbell Date: 8/25/10

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

# Analytical Resources Inc.: Volatile Organics Instrument Log

NT-7 Serial No.: GC=US00024417, MS=US72821196 *rc 8/25/10*

Date: 8/20/10 Analysis: SIA chbr Analyst: PE MA  
 GC Program: VC Column No: 850322 Column Type: RFXVMS  
 Instrument Tune (.U or .CT.): 0829001 EM Voltage: 2447  
 Calibration File: 0829002 Curve Date: 7/26/10

IS/SS VW651-3 Ical/Ccal VW644-1 LCS/ICV VW644-1

## INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt7.i/20AUG2010.b

Time	Filename	LabID	ClientID	WT
1	0827	08201001.d	BFB0820	0.00
2	0905	08201002.d	CC0820	
3	0944	08201003.d	LCS0820	1   5.32 121100   5.74 205229
4	1010	08201004.d	LCS0820	1   5.32 119311   5.74 199529
5	1035	08201005.d	MB0820	1   5.32 117492   5.76 198297
6	1107	08201006.d	RI46J	081110-TB 1   5.32 117096   5.75 193817
7	1132	08201007.d	RI46K	081210-TB 1   5.32 117375   5.75 193889
8	1158	08201008.d	RI65P	081110-TB 1   5.32 115673   5.76 190521
9	1223	08201009.d	RI46A	MW-02-081110 1   5.32 116375   5.76 190955
10	1249	08201010.d	RI46B	MW-03-081110 1   5.32 116319   5.75 190925
11	1315	08201011.d	RI46C	MW-03-081110-D 1   5.32 120282   5.76 188302
12	1340	08201012.d	RI46D	MW-04-081110 1   5.32 113954   5.76 187693
13	1406	08201013.d	RI46E	MW-14-081110 1   5.32 113191   5.75 186030
14	1432	08201014.d	RI46F	MW-12-081210 1   5.32 113871   5.75 186671
15	1457	08201015.d	RI46G	MW-13-081210 1   5.32 112477   5.76 185162
16	1523	08201016.d	RI46H	MW-10-081210 1   5.32 112646   5.76 184912   <i>high D4-1,2 Dichlor</i>
17	1549	08201017.d	RI46I	MW-11-081210 1   5.32 110944   5.75 184565
18	1614	08201018.d	RI65A	MW-09-081310 1   5.32 110555   5.76 182706
19	1640	08201019.d	RI65B	MW-08-081310 1   5.32 20204   5.76 33577   <i>IS</i>
20	1705	08201020.d	RI65C	MW-07-081310 1   5.32 99955   5.75 168882
21	1731	08201021.d	RI65D	MW-01-081310 1   5.32 97293   5.76 164303
22	1757	08201022.d	RI65E	MW-05-081310 1   5.32 96603   5.76 163271   <i>high D4-1,2 Dichlor</i>
23	1822	08201023.d	RI65BMS	MW-08-081310 MS 1   5.32 96686   5.75 165378   <i>11</i>
24	1848	08201024.d	RI65BMSD	MW-08-081310 MSD 1   5.32 99867   5.76 163693
25	1914	08201025.d	RI46FMS	1   5.32 99451   5.76 162894
26	1939	08201026.d	RI46FMSD	1   5.32 19922   5.75 34783   <i>IS</i>
				1   5.32 86130   5.75 151285

### Maintenance / Comments

*rc 8/25/10*

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

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt7.i/20AUG2010.b

ARI Job No.: CC08 Method: sim072110.m Instrument: nt7.i Date: 20-AUG-2010

Time Filename LabID ClientId DF Manually Integrated Compounds

0905	08201002.d	CC0820	CC0820	1	NO MANUAL INTEGRATION
0944	08201003.d	LCS0820	LCS0820	1	NO MANUAL INTEGRATION
1010	08201004.d	LCS0820	LCS0820	1	NO MANUAL INTEGRATION
1035	08201005.d	MB0820	MB0820	1	NO MANUAL INTEGRATION
1107	08201006.d	RI46J	081110-TB	1	NO MANUAL INTEGRATION
1132	08201007.d	RI46K	081210-TB	1	NO MANUAL INTEGRATION
1158	08201008.d	RI65F	081310-TB	1	NO MANUAL INTEGRATION
1223	08201009.d	RI46A	MW-02-0811	1	NO MANUAL INTEGRATION
1249	08201010.d	RI46B	MW-03-0811	1	NO MANUAL INTEGRATION
1315	08201011.d	RI46C	MW-03-0811	1	NO MANUAL INTEGRATION
1340	08201012.d	RI46D	MW-04-0811	1	NO MANUAL INTEGRATION
1406	08201013.d	RI46E	MW-14-0811	1	NO MANUAL INTEGRATION
1432	08201014.d	RI46F	MW-12-0812	1	NO MANUAL INTEGRATION
1523	08201016.d	RI46H	MW-10-0812	1	NO MANUAL INTEGRATION
1549	08201017.d	RI46I	MW-11-0812	1	NO MANUAL INTEGRATION
1640	08201019.d	RI65B	MW-08-0813	1	NO MANUAL INTEGRATION
1705	08201020.d	RI65C	MW-07-0813	1	NO MANUAL INTEGRATION
1822	08201023.d	RI65BMS	MW-08-0813	1	NO MANUAL INTEGRATION
1848	08201024.d	RI65BMSD	MW-08-0813	1	NO MANUAL INTEGRATION
1939	08201026.d	RI46FMSD	MW-12-0812	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt7.i/20AUG2010.b

Instrument: nt7.i Date: 20-AUG-2010 Method: sim072110.m

INITIAL CAL: 21-JUL-2010

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

CONTINUING CAL: 20-AUG-2010

Compound	%D
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-----  
NO Q-FLAGS  
-----

RI55:00253

PC  
8/25/10

Date : 20-AUG-2010 08:27

Client ID: BFB0820

Instrument: nt7.i

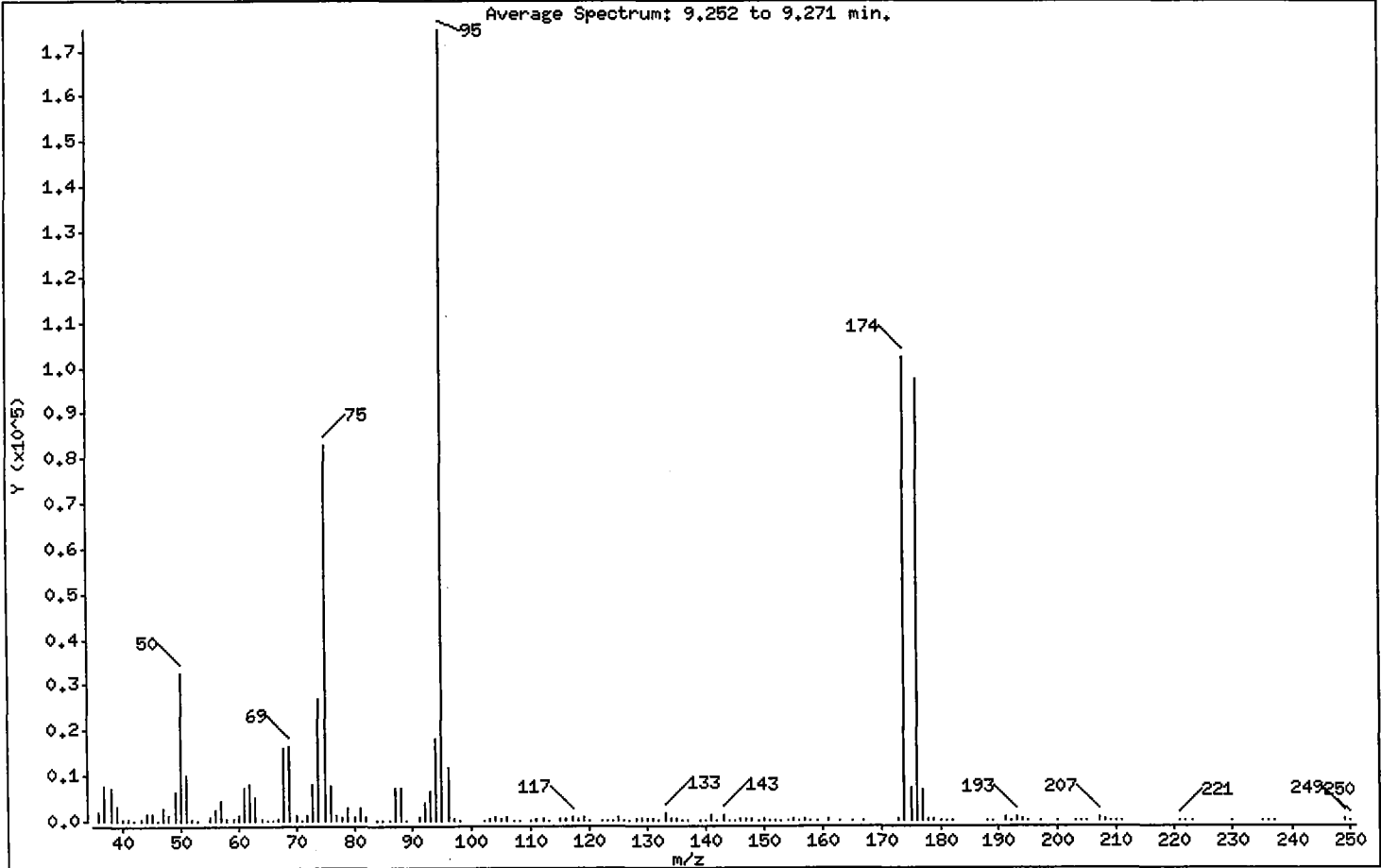
Sample Info: BFB0820,BFB0820,1,082010,

Operator: MH

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	18.67
75	30.00 - 66.00% of mass 95	47.42
96	5.00 - 9.00% of mass 95	6.71
173	Less than 2.00% of mass 174	0.13 ( 0.22)
174	50.00 - 101.00% of mass 95	58.51
175	4.00 - 9.00% of mass 174	4.15 ( 7.10)
176	93.00 - 101.00% of mass 174	55.80 ( 95.37)
177	5.00 - 9.00% of mass 176	3.85 ( 6.90)

Date : 20-AUG-2010 08:27

Client ID: BFB0820

Instrument: nt7.i

Sample Info: BFB0820,BFB0820,1,082010,

Operator: MH

Column phase: RTXVMS

Column diameter: 0.18

Data File: 08201001.d

Spectrum: Average Spectrum: 9.252 to 9.271 min.

Location of Maximum: 95.00

Number of points: 154

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1818	76.00	7508	123.00	26	167.00	70
37.00	7563	77.00	1341	124.00	87	173.00	224
38.00	7184	78.00	765	125.00	677	174.00	102208
39.00	3192	79.00	2840	126.00	123	175.00	7255
40.00	440	80.00	892	127.00	69	176.00	97472
41.00	422	81.00	2657	128.00	570	177.00	6722
42.00	38	82.00	717	129.00	253	178.00	266
43.00	282	84.00	74	130.00	559	179.00	239
44.00	1580	85.00	65	131.00	227	180.00	25
45.00	1601	86.00	170	132.00	25	181.00	72
46.00	52	87.00	7246	133.00	1438	182.00	23
47.00	2888	88.00	7293	134.00	238	188.00	29
48.00	1057	89.00	138	135.00	224	189.00	75
49.00	6625	91.00	635	136.00	85	191.00	838
50.00	32616	92.00	3986	137.00	107	192.00	197
51.00	9975	93.00	6394	139.00	27	193.00	888
52.00	548	94.00	18000	140.00	81	194.00	220
53.00	40	95.00	174656	141.00	1260	195.00	55
55.00	622	96.00	11714	142.00	174	197.00	41
56.00	2219	97.00	364	143.00	1340	200.00	22
57.00	4293	98.00	82	144.00	57	203.00	85
58.00	320	102.00	63	145.00	186	204.00	22
59.00	209	103.00	305	146.00	205	205.00	111
60.00	1179	104.00	678	147.00	235	207.00	860
61.00	7257	105.00	327	148.00	303	208.00	232
62.00	7873	106.00	604	149.00	180	209.00	71
63.00	5357	107.00	143	150.00	204	210.00	20
64.00	569	108.00	46	151.00	41	211.00	26
65.00	93	110.00	119	152.00	55	221.00	87
66.00	40	111.00	242	153.00	113	222.00	19
67.00	536	112.00	251	154.00	164	223.00	52
68.00	16266	113.00	21	155.00	349	230.00	22
69.00	16472	115.00	318	156.00	27	235.00	24
70.00	1197	116.00	391	157.00	238	236.00	50
71.00	114	117.00	993	158.00	44	237.00	21



Date : 20-AUG-2010 08:27

Client ID: BFB0820

Instrument: nt7.i

Sample Info: BFB0820,BFB0820,1,082010,

Operator: MH

Column phase: RTXVMS

Column diameter: 0.18

Data File: 08201001.d

Spectrum: Average Spectrum: 9.252 to 9.271 min.

Location of Maximum: 95.00

Number of points: 154

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	1050	118.00	511	159.00	171	249.00	522
73.00	7877	119.00	954	161.00	256	250.00	62
74.00	26888	120.00	21	163.00	131		
75.00	82840	122.00	65	165.00	85		

Data File: /chem1/nt7.i/20AUG2010.b/08201001.d

Date: 20-AUG-2010 08:27

Client ID: BFB0820

Sample Info: BFB0820,BFB0820.1,082010,

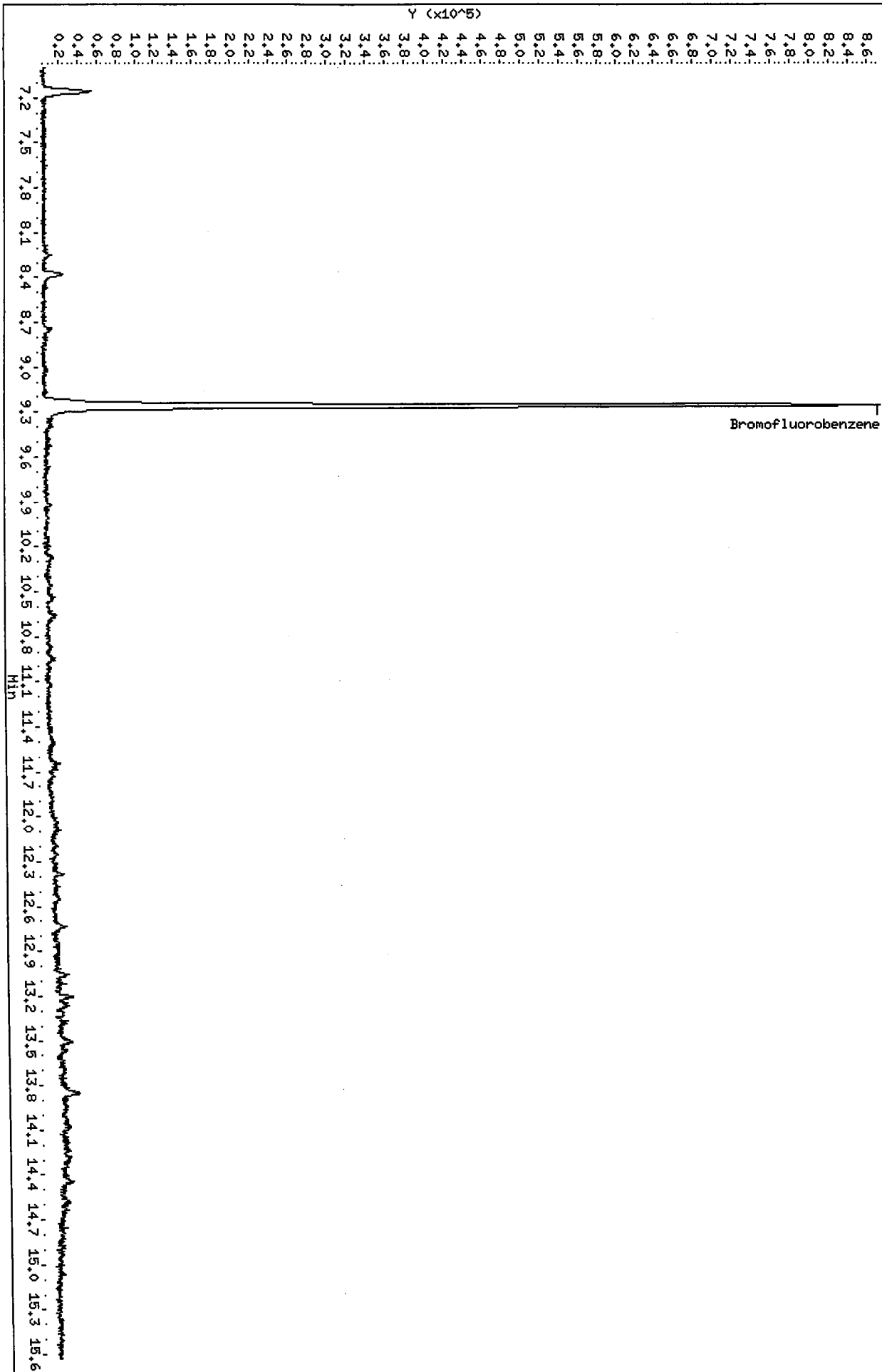
Column phase: RTXVMS

Instrument: nt7.i

Operator: MH

Column diameter: 0.18

/chem1/nt7.i/20AUG2010.b/08201001.d



*PC  
8/25/10*

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201002.d  
 Lab Smp Id: CC0820 Client Smp ID: CC0820  
 Inj Date : 20-AUG-2010 09:05  
 Operator : MH Inst ID: nt7.i  
 Smp Info : CC0820,10,10,0,  
 Misc Info : 10-  
 Comment :  
 Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Meth Date : 25-Aug-2010 14:08 paul Quant Type: ISTD  
 Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
 Als bottle: 1 Continuing Calibration Sample  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT ( ng/L)	ON-COL ( ng/L)
1 Vinyl Chloride	62	1.552	1.552	(0.292)	87823	1000.00	928.25
2 1,1-Dichloroethene	96	2.504	2.504	(0.471)	64107	1000.00	965.36
175 Trans-1,2-Dichloroethene	96	3.283	3.283	(0.618)	71754	1000.00	971.87
3 cis-1,2-dichloroethene	96	4.433	4.433	(0.834)	74454	1000.00	971.84
6 Benzene	78	5.202	5.202	(0.906)	333065	1000.00	1047.1
* 4 Pentafluorobenzene	168	5.316	5.316	(1.000)	121108	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	68741	1000.00	1100.3
176 1,2-Dichloroethane	62	5.373	5.373	(1.011)	92142	1000.00	1010.7
8 Trichloroethene	130	5.708	5.708	(0.994)	70789	1000.00	902.13
* 7 1,4-Difluorobenzene	114	5.743	5.743	(1.000)	205229	1000.00	
\$ 9 d8-Toluene	98	6.901	6.901	(1.202)	278982	1000.00	1065.9
10 Tetrachloroethene	166	7.258	7.258	(1.264)	60049	1000.00	1023.1
11 1,1,2,2-Tetrachloroethane	83	9.445	9.445	(1.645)	55490	1000.00	932.23

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt7.i                      Injection Date: 20-AUG-2010 09:05  
 Lab File ID: 08201002.d                Init. Cal. Date(s): 21-JUL-2010    21-JUL-2010  
 Analysis Type: WATER                    Init. Cal. Times:    11:04            13:38  
 Lab Sample ID: CC0820                    Quant Type:    ISTD  
 Method: /chem1/nt7.i/20AUG2010.b/sim072110.m

COMPOUND	RRF / AMOUNT	RF1000	CCAL RRF1000	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
1 Vinyl Chloride	0.78122	0.72516	0.72516	0.040	-7.17507	20.00000	Averaged
2 1,1-Dichloroethene	0.54833	0.52934	0.52934	0.040	-3.46440	20.00000	Averaged
175 Trans-1,2-Dichloroethene	0.60963	0.59248	0.59248	0.040	-2.81277	20.00000	Averaged
3 cis-1,2-dichloroethene	0.63258	0.61477	0.61477	0.040	-2.81551	20.00000	Averaged
6 Benzene	1047	1000	1.62289	0.040	4.71273	20.00000	Linear
\$ 5 d4-1,2-Dichloroethane	0.51587	0.56760	0.56760	0.040	10.02754	20.00000	Averaged
176 1,2-Dichloroethane	0.75278	0.76083	0.76083	0.040	1.06812	20.00000	Averaged
8 Trichloroethene	0.38235	0.34493	0.34493	0.040	-9.78699	20.00000	Averaged
\$ 9 d8-Toluene	1.27532	1.35937	1.35937	0.040	6.59085	20.00000	Averaged
10 Tetrachloroethene	1023	1000	0.29260	0.040	2.31179	20.00000	Linear
11 1,1,2,2-Tetrachloroethane	0.29004	0.27038	0.27038	0.040	-6.77739	20.00000	Averaged

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201002.d  
Lab Smp Id: CC0820  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-

Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: CC0820  
Level: LOW  
Sample Type: WATER

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	121108	32.12
7 1,4-Difluorobenze	147386	73693	294772	205229	39.25

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.00
7 1,4-Difluorobenze	5.74	5.24	6.24	5.74	0.00

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

Data File: /chem1/nt7.i/20AUG2010.b/08201002.d

Date : 20-AUG-2010 09:05

Client ID: CC0820

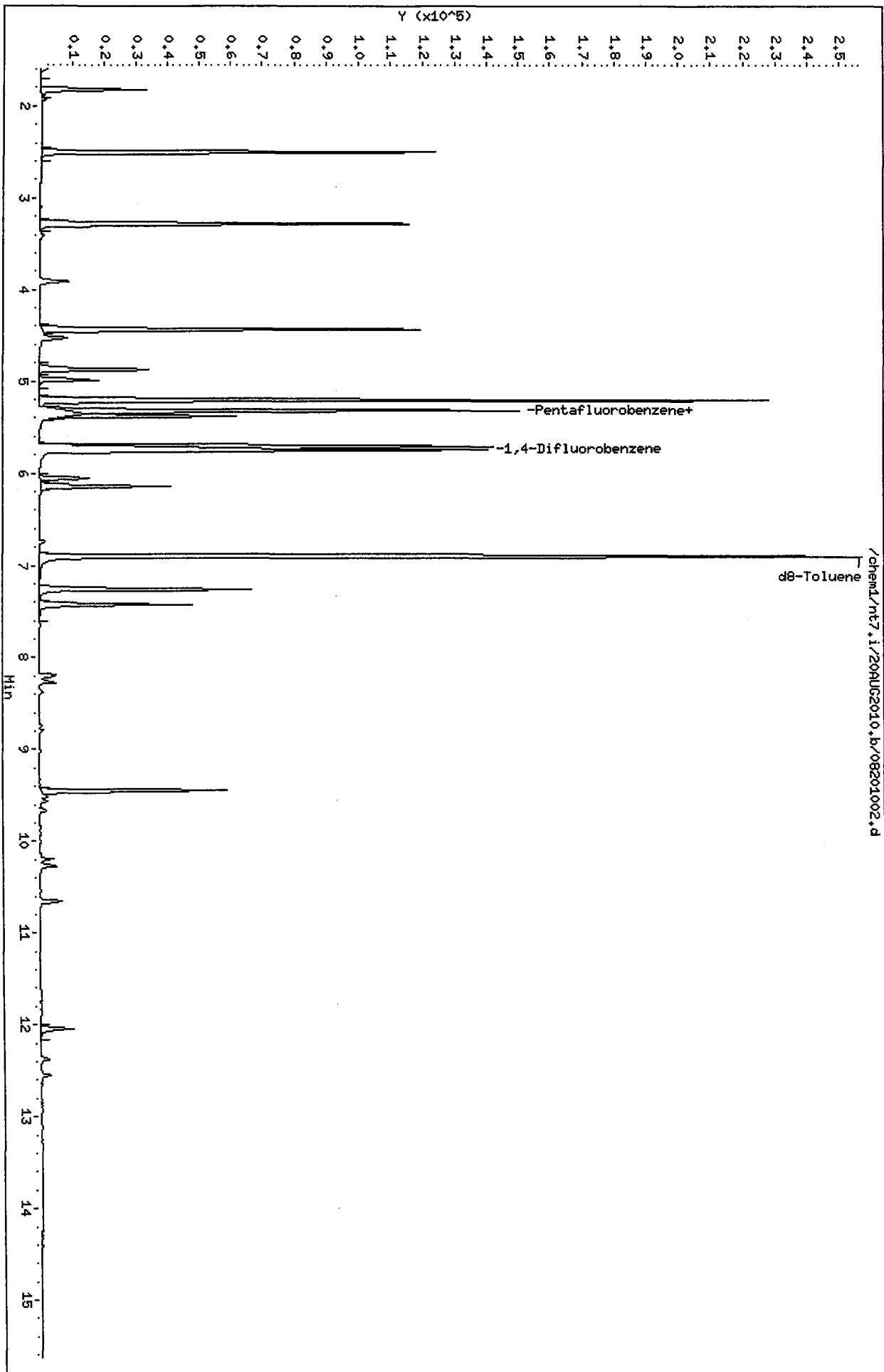
Sample Info: CC0820,10,10,0,

Column phase: RTXVMS

Instrument: nt7.i

Operator: HH

Column diameter: 0.18



*RK*  
*8/25/10*

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201003.d  
Lab Smp Id: LCS0820 Client Smp ID: LCS0820  
Inj Date : 20-AUG-2010 09:44  
Operator : MH Inst ID: nt7.i  
Smp Info : LCS0820,10,10,0,  
Misc Info : 10-  
Comment :  
Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
Meth Date : 25-Aug-2010 14:08 paul Quant Type: ISTD  
Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
Als bottle: 1 QC Sample: LCS  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: sim12dca.sub  
Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN ( ng/L)
1 Vinyl Chloride	62	1.551	1.552	(0.292)	84671	908.413	908.41
2 1,1-Dichloroethene	96	2.505	2.504	(0.471)	61976	947.323	947.32
175 Trans-1,2-Dichloroethene	96	3.284	3.283	(0.618)	70188	964.980	964.98
3 cis-1,2-dichloroethene	96	4.434	4.433	(0.834)	72363	958.777	958.78
6 Benzene	78	5.203	5.202	(0.906)	324303	1048.71	1048.7
* 4 Pentafluorobenzene	168	5.317	5.316	(1.000)	119311	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.326	5.325	(1.002)	67873	1102.74	1102.7
176 1,2-Dichloroethane	62	5.383	5.373	(1.012)	89611	997.724	997.72
8 Trichloroethene	130	5.709	5.708	(0.994)	68249	894.607	894.61
* 7 1,4-Difluorobenzene	114	5.743	5.743	(1.000)	199529	1000.00	
\$ 9 d8-Toluene	98	6.902	6.901	(1.202)	273687	1075.55	1075.6
10 Tetrachloroethene	166	7.258	7.258	(1.264)	57384	1005.64	1005.6
11 1,1,2,2-Tetrachloroethane	83	9.445	9.445	(1.645)	54224	936.981	936.98

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201003.d  
Lab Smp Id: LCS0820  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-

Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: LCS0820  
Level: LOW  
Sample Type: WATER

Test Mode:

Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	119311	30.16
7 1,4-Difluorobenze	147386	73693	294772	199529	35.38

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.01
7 1,4-Difluorobenze	5.74	5.24	6.24	5.74	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: Client SDG: 20AUG2010  
 Sample Matrix: LIQUID Fraction: VOA  
 Lab Smp Id: LCS0820 Client Smp ID: LCS0820  
 Level: LOW Operator: MH  
 Data Type: MS DATA SampleType: LCS  
 SpikeList File: special.spk Quant Type: ISTD  
 Sublist File: sim12dca.sub  
 Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Misc Info: 10-

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Vinyl Chloride	1000.0	908.41	90.84	74-120
176 1,2-Dichloroethane	1000.0	997.72	99.77	79-134
175 Trans-1,2-Dichloro	1000.0	964.98	96.50	80-120
2 1,1-Dichloroethene	1000.0	947.32	94.73	80-120
3 cis-1,2-dichloroet	1000.0	958.78	95.88	80-120
6 Benzene	1000.0	1048.7	104.87	80-120
8 Trichloroethene	1000.0	894.61	89.46	80-120
10 Tetrachloroethene	1000.0	1005.6	100.56	80-122
11 1,1,2,2-Tetrachlor	1000.0	936.98	93.70	80-125

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1102.7	110.27	80-120
\$ 9 d8-Toluene	1000.0	1075.6	107.56	80-120

Data File: /chem1/nt7.i/20AUG2010.b/08201003.d

Date: 20-AUG-2010 09:44

Client ID: LCS0820

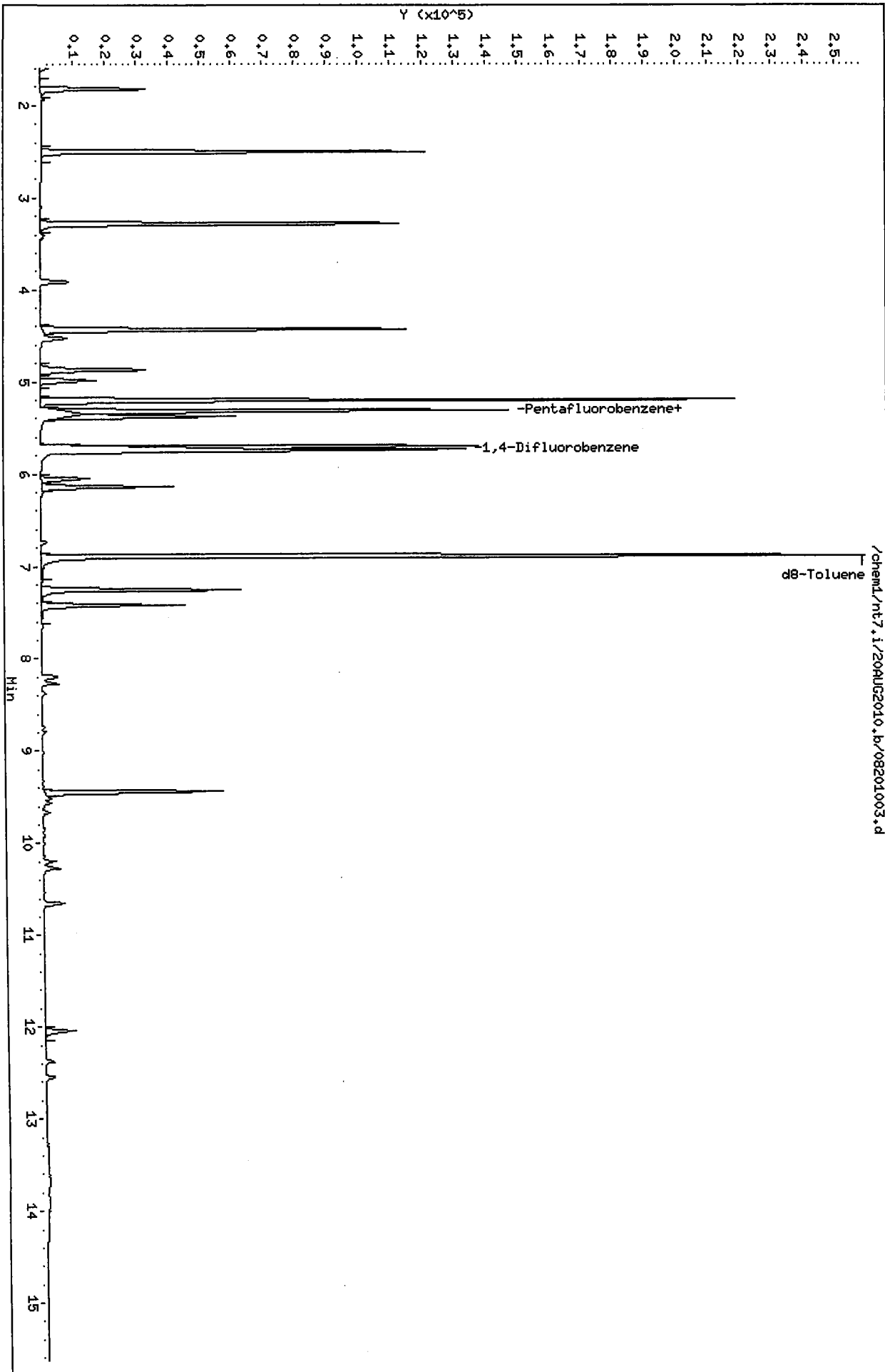
Sample Info: LCS0820,10,10,0,

Column phase: RTXVMS

Instrument: nt7.i

Operator: MH

Column diameter: 0.18



Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201004.d  
 Lab Smp Id: LCSD0820 Client Smp ID: LCSD0820  
 Inj Date : 20-AUG-2010 10:10  
 Operator : MH Inst ID: nt7.i  
 Smp Info : LCSD0820,10,10,0,  
 Misc Info : 10-  
 Comment :  
 Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Meth Date : 25-Aug-2010 14:08 paul Quant Type: ISTD  
 Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
 Als bottle: 1 QC Sample: LCS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62	1.552	1.552	(0.292)	83771	912.672	912.67
2 1,1-Dichloroethene	96	2.511	2.504	(0.472)	61416	953.297	953.30
175 Trans-1,2-Dichloroethene	96	3.285	3.283	(0.618)	69969	976.862	976.86
3 cis-1,2-dichloroethene	96	4.440	4.433	(0.835)	72093	969.988	969.99
6 Benzene	78	5.211	5.202	(0.905)	322084	1048.00	1048.0
* 4 Pentafluorobenzene	168	5.315	5.316	(1.000)	117492	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	66891	1103.62	1103.6
176 1,2-Dichloroethane	62	5.381	5.373	(1.012)	91389	1033.27	1033.3
8 Trichloroethene	130	5.709	5.708	(0.992)	67730	893.320	893.32
* 7 1,4-Difluorobenzene	114	5.755	5.743	(1.000)	198297	1000.00	
\$ 9 d8-Toluene	98	6.902	6.901	(1.199)	269991	1067.62	1067.6
10 Tetrachloroethene	166	7.259	7.258	(1.261)	56811	1001.79	1001.8
11 1,1,2,2-Tetrachloroethane	83	9.446	9.445	(1.641)	54685	950.818	950.82

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201004.d  
Lab Smp Id: LCSD0820  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-

Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: LCSD0820  
Level: LOW  
Sample Type: WATER

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	117492	28.17
7 1,4-Difluorobenze	147386	73693	294772	198297	34.54

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	-0.02
7 1,4-Difluorobenze	5.74	5.24	6.24	5.76	0.22

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20AUG2010  
 Sample Matrix: LIQUID Fraction: VOA  
 Lab Smp Id: LCSD0820 Client Smp ID: LCSD0820  
 Level: LOW Operator: MH  
 Data Type: MS DATA SampleType: LCS  
 SpikeList File: special.spk Quant Type: ISTD  
 Sublist File: sim12dca.sub  
 Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Misc Info: 10-

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Vinyl Chloride	1000.0	912.67	91.27	74-120
176 1,2-Dichloroethane	1000.0	1033.3	103.33	79-134
175 Trans-1,2-Dichloro	1000.0	976.86	97.69	80-120
2 1,1-Dichloroethene	1000.0	953.30	95.33	80-120
3 cis-1,2-dichloroet	1000.0	969.99	97.00	80-120
6 Benzene	1000.0	1048.0	104.80	80-120
8 Trichloroethene	1000.0	893.32	89.33	80-120
10 Tetrachloroethene	1000.0	1001.8	100.18	80-122
11 1,1,2,2-Tetrachlor	1000.0	950.82	95.08	80-125

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1103.6	110.36	80-120
\$ 9 d8-Toluene	1000.0	1067.6	106.76	80-120

Data File: /chem1/nt7.i/20AUG2010.b/08201004.d

Date: 20-AUG-2010 10:10

Client ID: LCSD0820

Sample Info: LCSD0820,10,10,0,

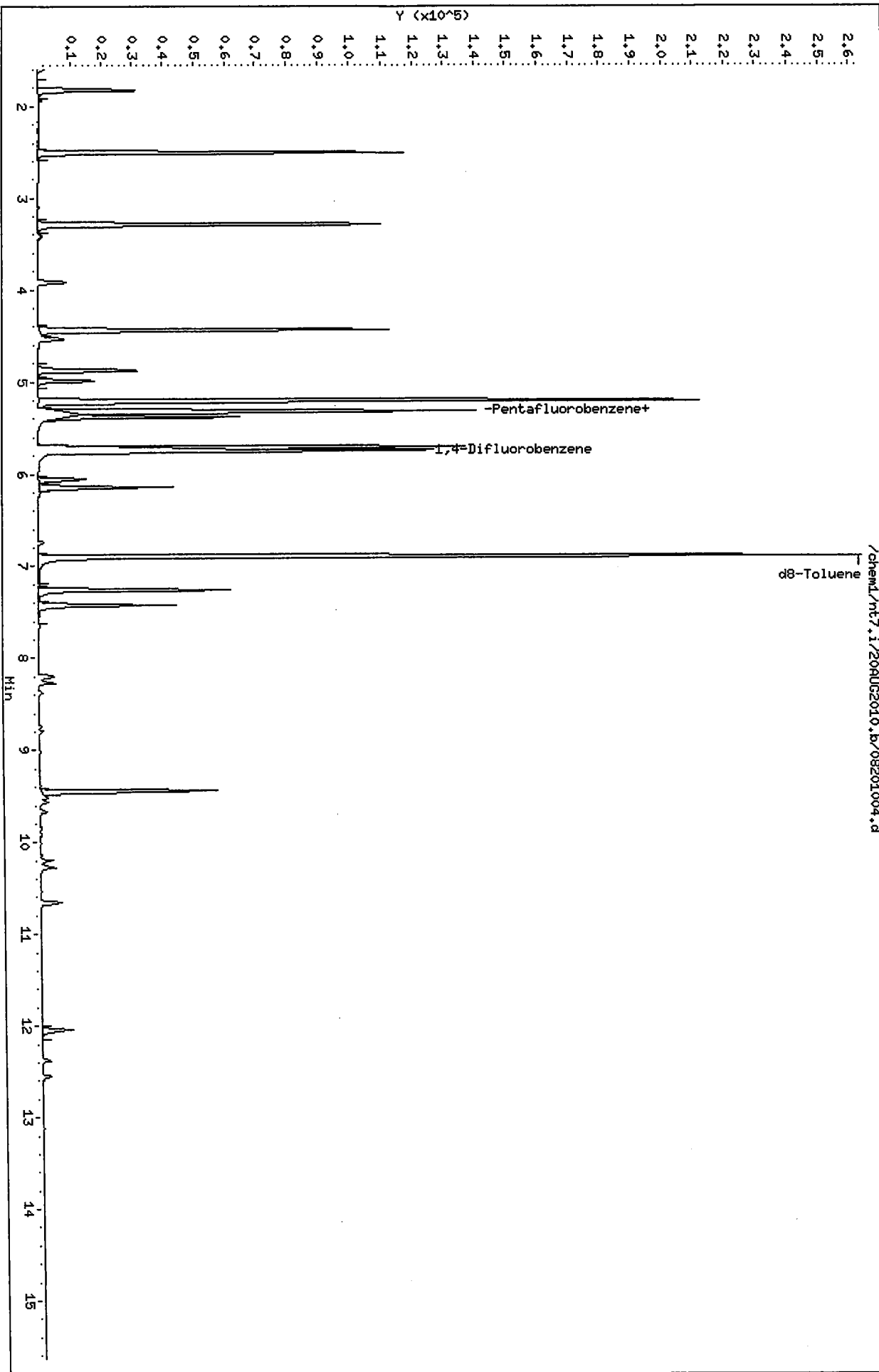
Column phase: RTXVMS

Instrument: nt7.i

Operator: NH

Column diameter: 0.18

/chem1/nt7.i/20AUG2010.b/08201004.d



Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201005.d  
 Lab Smp Id: MB0820 Client Smp ID: MB0820  
 Inj Date : 20-AUG-2010 10:35  
 Operator : MH Inst ID: nt7.i  
 Smp Info : MB0820,10,10,0,  
 Misc Info : 10-  
 Comment :  
 Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Meth Date : 25-Aug-2010 14:09 paul Quant Type: ISTD  
 Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
 Als bottle: 1 QC Sample: BLANK  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96						
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.316	5.316	(1.000)	117096	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	70373	1164.99	1165.0
176 1,2-Dichloroethane	62	5.382	5.373	(1.012)	28	0.31765	0.3176 (Q)
8 Trichloroethene	130						
* 7 1,4-Difluorobenzene	114	5.754	5.743	(1.000)	193817	1000.00	
\$ 9 d8-Toluene	98	6.903	6.901	(1.200)	260813	1055.16	1055.2
10 Tetrachloroethene	166						
11 1,1,2,2-Tetrachloroethane	83						

QC Flag Legend

Q - Qualifier signal failed the ratio test.



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201005.d  
Lab Smp Id: MB0820  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-

Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: MB0820  
Level: LOW  
Sample Type: WATER

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	117096	27.74
7 1,4-Difluorobenze	147386	73693	294772	193817	31.50

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	-0.01
7 1,4-Difluorobenze	5.74	5.24	6.24	5.75	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: Client SDG: 20AUG2010  
Sample Matrix: LIQUID Fraction: VOA  
Lab Smp Id: MB0820 Client Smp ID: MB0820  
Level: LOW Operator: MH  
Data Type: MS DATA SampleType: BLANK  
SpikeList File: special.spk Quant Type: ISTD  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1165.0	116.50	80-120
\$ 9 d8-Toluene	1000.0	1055.2	105.52	80-120

Data File: /chem1/n7,i/20AUG2010.b/08201005.d

Date : 20-AUG-2010 10:35

Client ID: HB0820

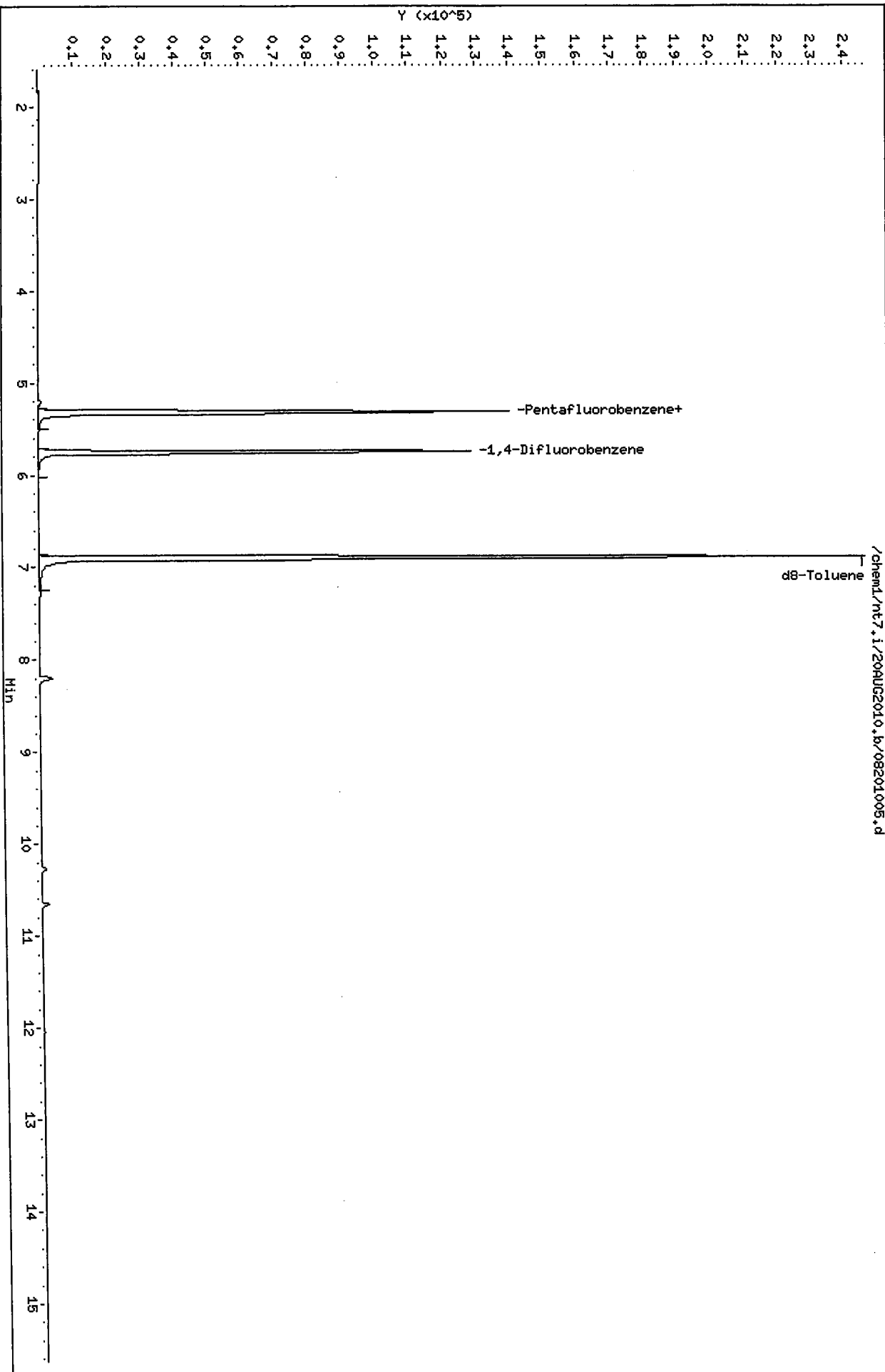
Sample Info: HB0820,10,10,0,

Column phase: RTXVHS

Instrument: n7,i

Operator: HH

Column diameter: 0.18



Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201008.d  
 Lab Smp Id: RI65F Client Smp ID: 081310-TB  
 Inj Date : 20-AUG-2010 11:58  
 Operator : MH Inst ID: nt7.i  
 Smp Info : RI65F,10,10,0,  
 Misc Info : 10-19852  
 Comment :  
 Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Meth Date : 25-Aug-2010 14:09 paul Quant Type: ISTD  
 Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
 Als bottle: 1  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96						
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.316	5.316	(1.000)	116375	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	69917	1164.61	1164.6
176 1,2-Dichloroethane	62	5.316	5.373	(1.000)	444	5.06819	5.068 (Q)
8 Trichloroethene	130						
* 7 1,4-Difluorobenzene	114	5.756	5.743	(1.000)	190955	1000.00	
\$ 9 d8-Toluene	98	6.902	6.901	(1.199)	256832	1054.63	1054.6
10 Tetrachloroethene	166						
11 1,1,2,2-Tetrachloroethane	83						

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201008.d  
Lab Smp Id: RI65F  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19852

Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: 081310-TB  
Level: LOW  
Sample Type: Water

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	116375	26.96
7 1,4-Difluorobenze	147386	73693	294772	190955	29.56

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	-0.01
7 1,4-Difluorobenze	5.74	5.24	6.24	5.76	0.23

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

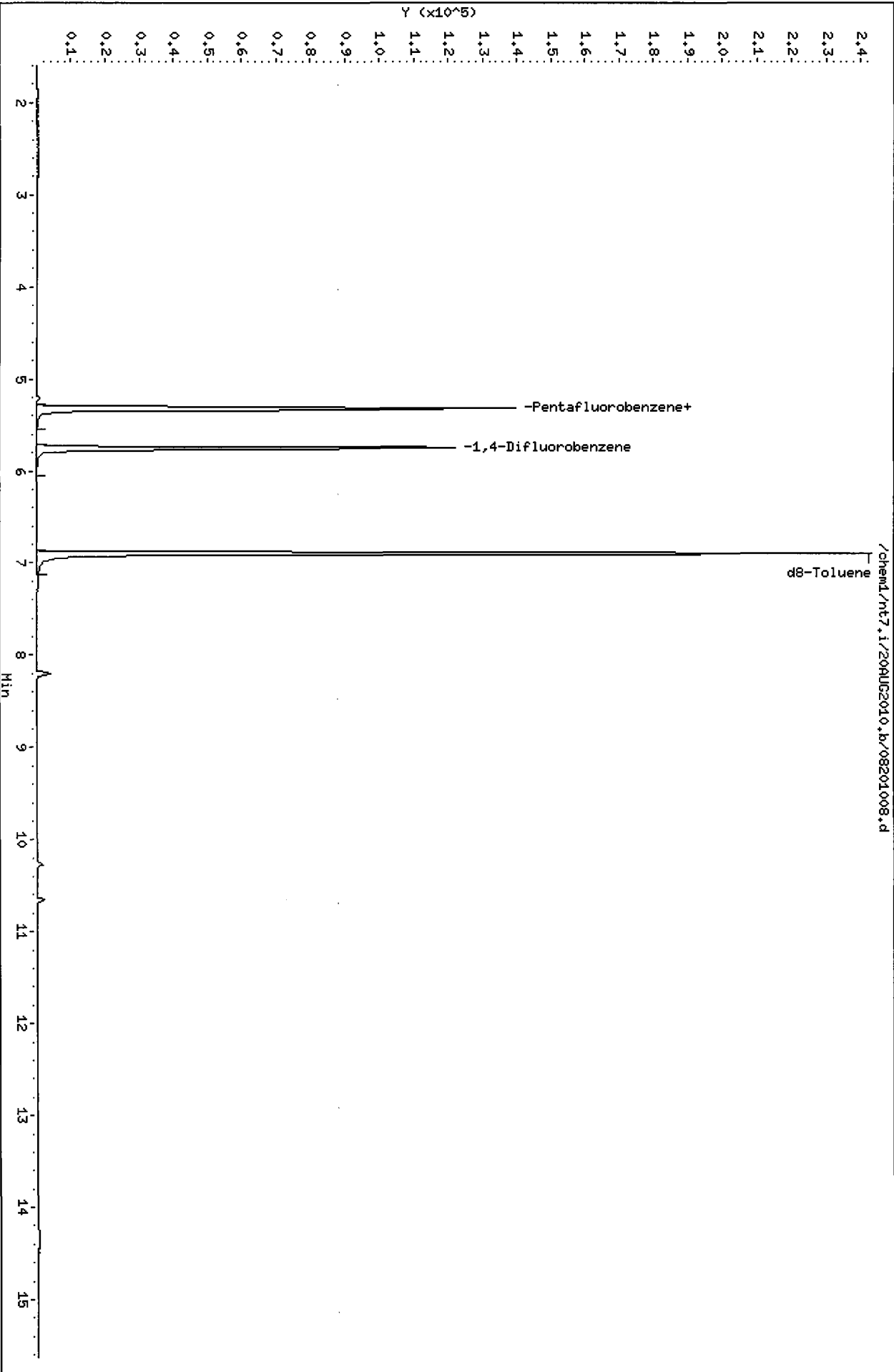
Client Name: Floyd-Snider  
Sample Matrix: LIQUID  
Lab Smp Id: RI65F  
Level: LOW  
Data Type: MS DATA  
SpikeList File: special.spk  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19852

Client SDG: RI46  
Fraction: VOA  
Client Smp ID: 081310-TB  
Operator: MH  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1164.6	116.46	80-120
\$ 9 d8-Toluene	1000.0	1054.6	105.46	80-120

Data File: /chem1/nt7.i/20AUG2010.b/08201008.d  
Date : 20-AUG-2010 11:58  
Client ID: 081310-TB  
Sample Info: RI65F,10,10,0,  
Column phase: RTXVMS

Instrument: nt7.i  
Operator: MH  
Column diameter: 0.18





Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201019.d  
Lab Smp Id: RI65B Client Smp ID: MW-08-081310  
Inj Date : 20-AUG-2010 16:40  
Operator : MH Inst ID: nt7.i  
Smp Info : RI65B,10,10,0,  
Misc Info : 10-19848  
Comment :  
Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
Meth Date : 25-Aug-2010 14:09 paul Quant Type: ISTD  
Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
Als bottle: 1  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: sim12dca.sub  
Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT	SIG	CONCENTRATIONS					
			ON-COLUMN	FINAL	RT	EXP RT	REL RT	
	MASS		( ng/L)	( ug/L)				
1 Vinyl Chloride	62							
2 1,1-Dichloroethene	96							
175 Trans-1,2-Dichloroethene	96							
3 cis-1,2-dichloroethene	96							
6 Benzene	78							
* 4 Pentafluorobenzene	168		5.316	5.316	(1.000)	99955	1000.00	
\$ 5 d4-1,2-Dichloroethane	65		5.326	5.325	(1.002)	67038	1300.09	1300.1 (R) 40 6.45
176 1,2-Dichloroethane	62		5.316	5.373	(1.000)	397	5.27613	5.276(2)
8 Trichloroethene	130							
* 7 1,4-Difluorobenzene	114		5.754	5.743	(1.000)	168882	1000.00	
\$ 9 d8-Toluene	98		6.903	6.901	(1.200)	228499	1060.92	1060.9
10 Tetrachloroethene	166							
11 1,1,2,2-Tetrachloroethane	83							

QC Flag Legend

- Q - Qualifier signal failed the ratio test.
- R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201019.d  
Lab Smp Id: RI65B  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19848

Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: MW-08-081310  
Level: LOW  
Sample Type: Water

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	99955	9.04
7 1,4-Difluorobenze	147386	73693	294772	168882	14.58

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.01
7 1,4-Difluorobenze	5.74	5.24	6.24	5.75	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

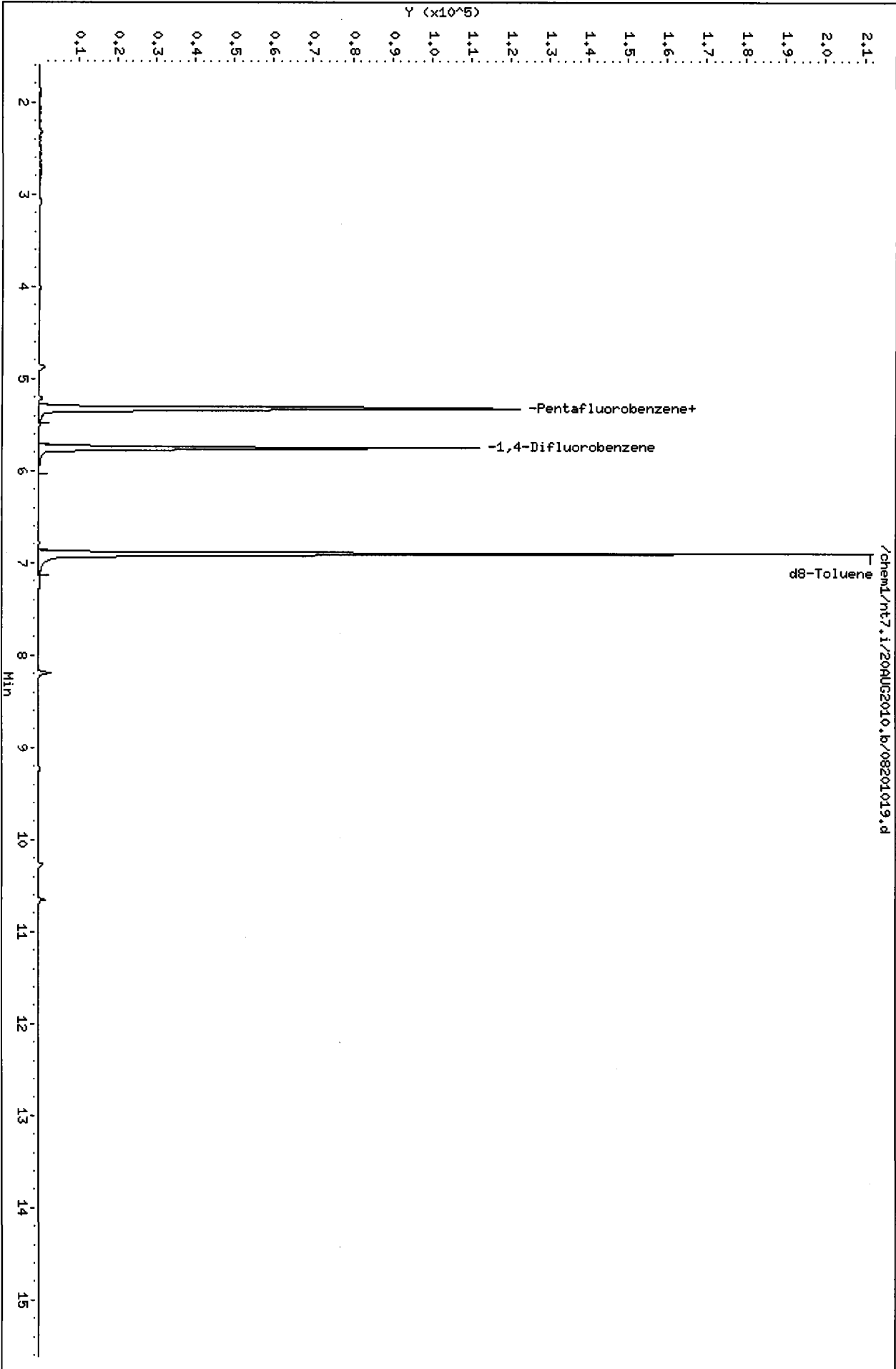
Client Name: Floyd-Snider  
Sample Matrix: LIQUID  
Lab Smp Id: RI65B  
Level: LOW  
Data Type: MS DATA  
SpikeList File: special.spk  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19848

Client SDG: RI46  
Fraction: VOA  
Client Smp ID: MW-08-081310  
Operator: MH  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1300.1	130.01*	80-120
\$ 9 d8-Toluene	1000.0	1060.9	106.09	80-120

Data File: /chem1/nt7.i/20AUG2010.b/08201019.d  
Date : 20-AUG-2010 16:40  
Client ID: MM-08-081310  
Sample Info: RI65B,10,10,0,  
Column phase: RTXVHS

Instrument: nt7.i  
Operator: HH  
Column diameter: 0.18



Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201020.d  
 Lab Smp Id: RI65C Client Smp ID: MW-07-081310  
 Inj Date : 20-AUG-2010 17:05  
 Operator : MH Inst ID: nt7.i  
 Smp Info : RI65C,10,10,0,  
 Misc Info : 10-19849  
 Comment :  
 Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Meth Date : 25-Aug-2010 14:09 paul Quant Type: ISTD  
 Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
 Als bottle: 1  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96						
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.324	5.316	(1.000)	97293	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.324	5.325	(1.000)	66913	1333.18	1333.2 (R) <i>no lts</i>
176 1,2-Dichloroethane	62	5.315	5.373	(0.998)	393	5.36587	5.366 (Q)
8 Trichloroethene	130						
* 7 1,4-Difluorobenzene	114	5.755	5.743	(1.000)	164303	1000.00	
\$ 9 d8-Toluene	98	6.902	6.901	(1.199)	220332	1051.51	1051.5
10 Tetrachloroethene	166						
11 1,1,2,2-Tetrachloroethane	83						

QC Flag Legend

- Q - Qualifier signal failed the ratio test.
- R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201020.d  
Lab Smp Id: RI65C  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19849

Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: MW-07-081310  
Level: LOW  
Sample Type: Water

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	97293	6.14
7 1,4-Difluorobenze	147386	73693	294772	164303	11.48

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.15
7 1,4-Difluorobenze	5.74	5.24	6.24	5.76	0.22

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: LIQUID  
Lab Smp Id: RI65C  
Level: LOW  
Data Type: MS DATA  
SpikeList File: special.spk  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19849

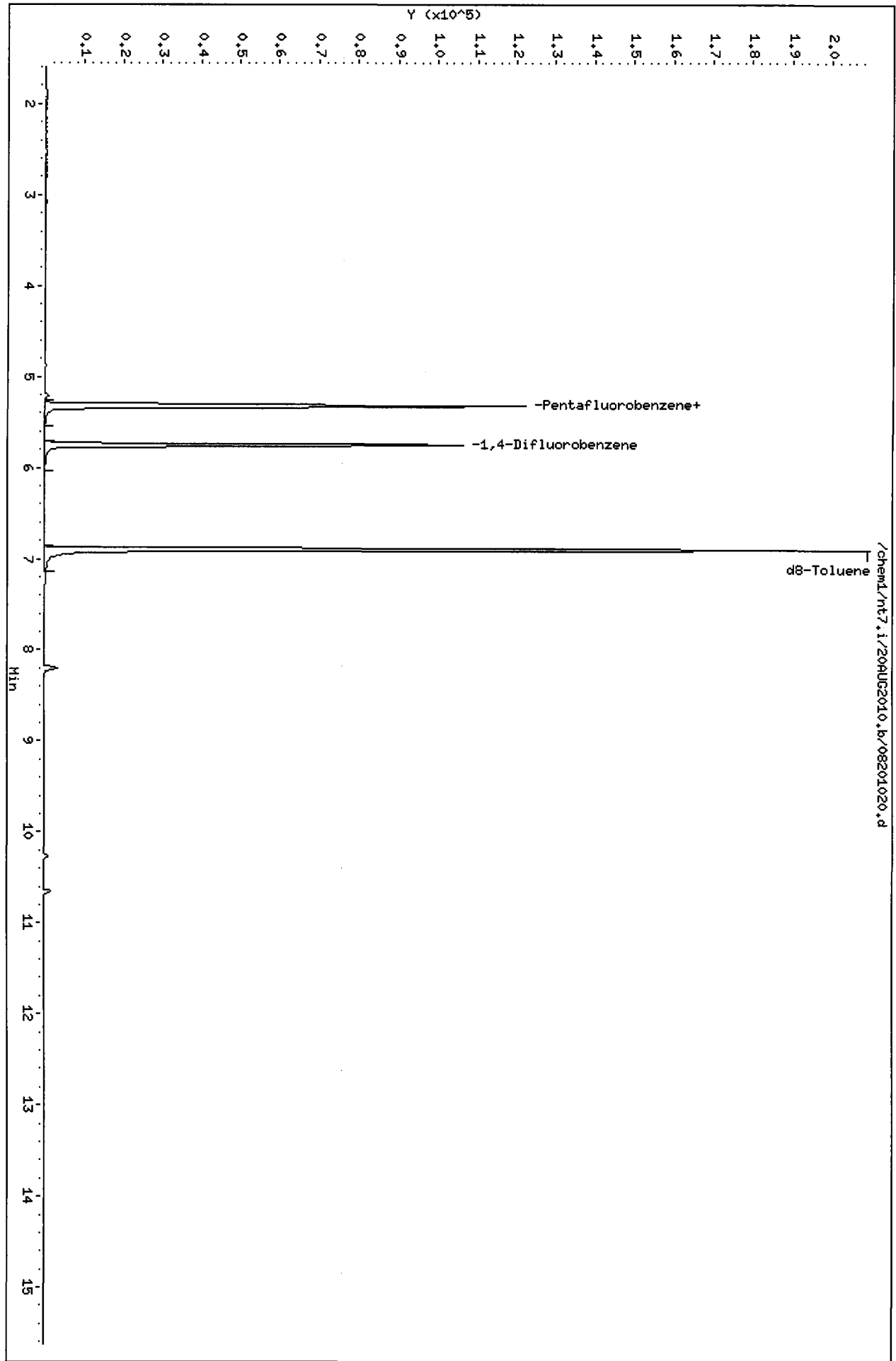
Client SDG: RI46  
Fraction: VOA  
Client Smp ID: MW-07-081310  
Operator: MH  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1333.2	133.32*	80-120
\$ 9 d8-Toluene	1000.0	1051.5	105.15	80-120

Data File: /chem1/nt7.i/20AUG2010.b/08201020.d  
Date : 20-AUG-2010 17:05  
Client ID: MM-07-081310  
Sample Info: RI65C,10,10,0,

Column phase: RTXVHS

Instrument: nt7.i  
Operator: MH  
Column diameter: 0.18



Date : 20-AUG-2010 17:05

Client ID: MW-07-081310

Instrument: nt7.i

Sample Info: RI65C,10,10,0,

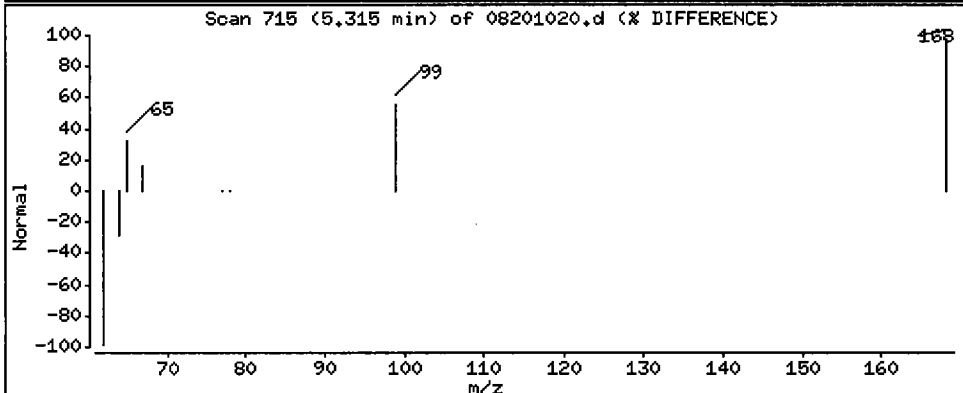
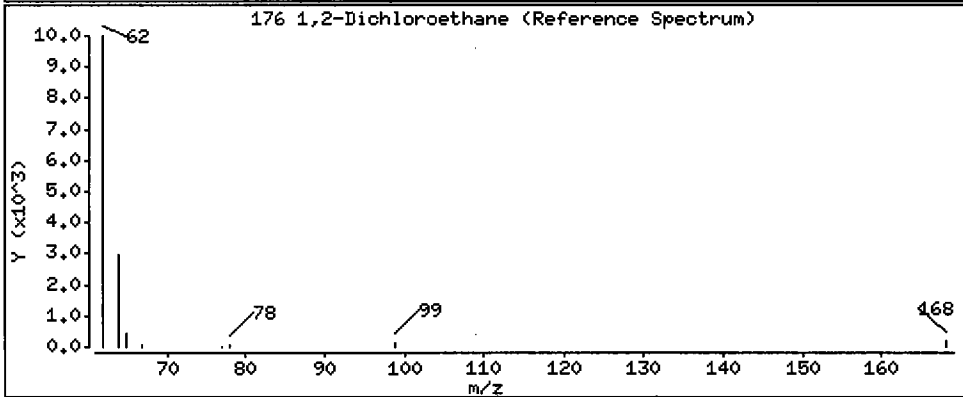
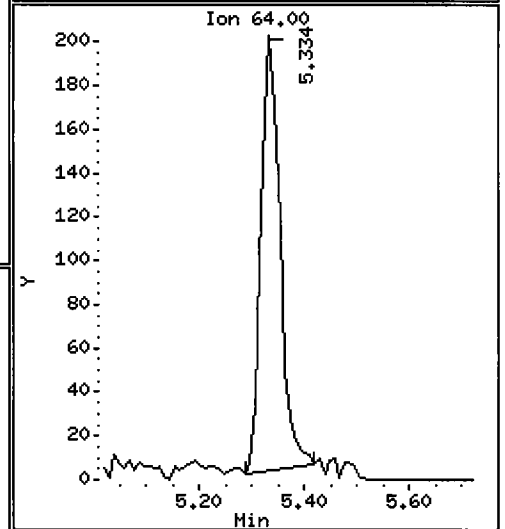
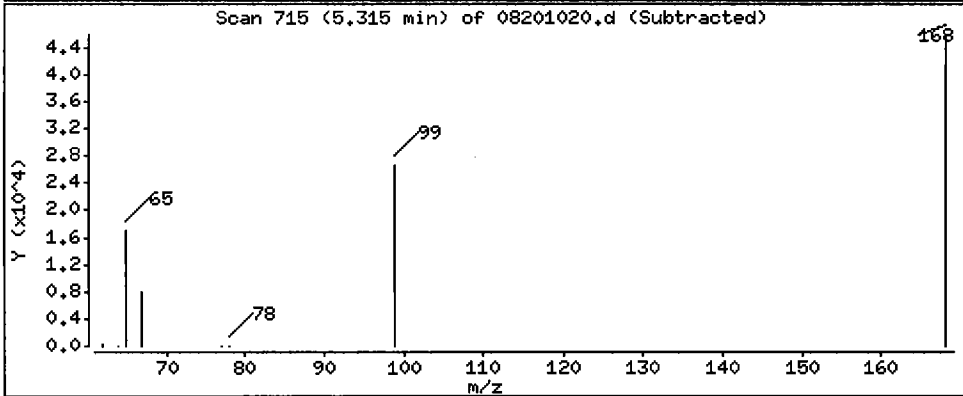
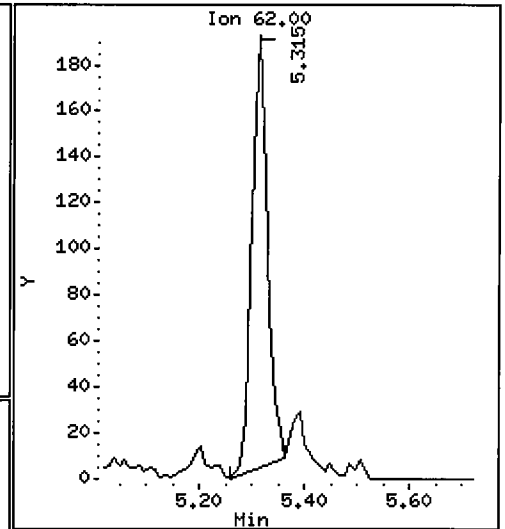
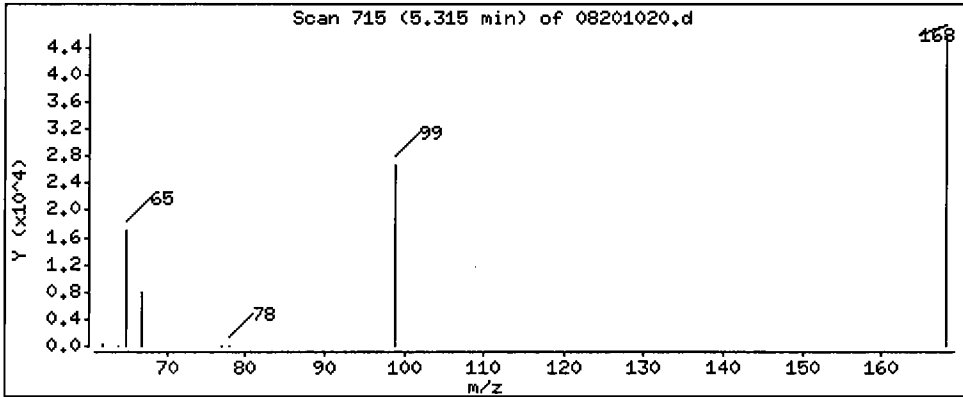
Operator: MH

Column phase: RTXVMS

Column diameter: 0.18

176 1,2-Dichloroethane

Concentration: 5.366 ug/L



*PC  
8/25/10*

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201023.d  
 Lab Smp Id: RI65BMS Client Smp ID: MW-08-081310 MS  
 Inj Date : 20-AUG-2010 18:22  
 Operator : MH Inst ID: nt7.i  
 Smp Info : RI65BMS,10,10,0,  
 Misc Info : 10-19848  
 Comment :  
 Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Meth Date : 25-Aug-2010 14:08 paul Quant Type: ISTD  
 Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
 Als bottle: 1 QC Sample: MS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
								ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62			1.552	1.552	(0.292)	77310	990.930	990.93
2 1,1-Dichloroethene	96			2.510	2.504	(0.471)	54074	987.464	987.46
175 Trans-1,2-Dichloroethene	96			3.290	3.283	(0.618)	61548	1010.95	1010.9
3 cis-1,2-dichloroethene	96			4.439	4.433	(0.834)	63488	1004.97	1005.0
6 Benzene	78			5.210	5.202	(0.905)	288721	1138.04	1138.0
* 4 Pentafluorobenzene	168			5.324	5.316	(1.000)	99867	1000.00	
\$ 5 d4-1,2-Dichloroethane	65			5.324	5.325	(1.000)	59052	1146.23	1146.2
176 1,2-Dichloroethane	62			5.381	5.373	(1.011)	85741	1140.50	1140.5
8 Trichloroethene	130			5.709	5.708	(0.992)	57681	921.605	921.60
* 7 1,4-Difluorobenzene	114			5.755	5.743	(1.000)	163693	1000.00	
\$ 9 d8-Toluene	98			6.902	6.901	(1.199)	223921	1072.62	1072.6
10 Tetrachloroethene	166			7.259	7.258	(1.261)	48163	1028.83	1028.8
11 1,1,2,2-Tetrachloroethane	83			9.446	9.445	(1.641)	50022	1053.60	1053.6

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i	Calibration Date: 20-AUG-2010
Lab File ID: 08201023.d	Calibration Time: 09:05
Lab Smp Id: RI65BMS	Client Smp ID: MW-08-081310 MS
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: MH	
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m	
Misc Info: 10-19848	

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	99867	8.95
7 1,4-Difluorobenze	147386	73693	294772	163693	11.06

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.15
7 1,4-Difluorobenze	5.74	5.24	6.24	5.76	0.22

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: LIQUID  
 Lab Smp Id: RI65BMS  
 Level: LOW  
 Data Type: MS DATA  
 SpikeList File: special.spk  
 Sublist File: sim12dca.sub  
 Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Misc Info: 10-19848

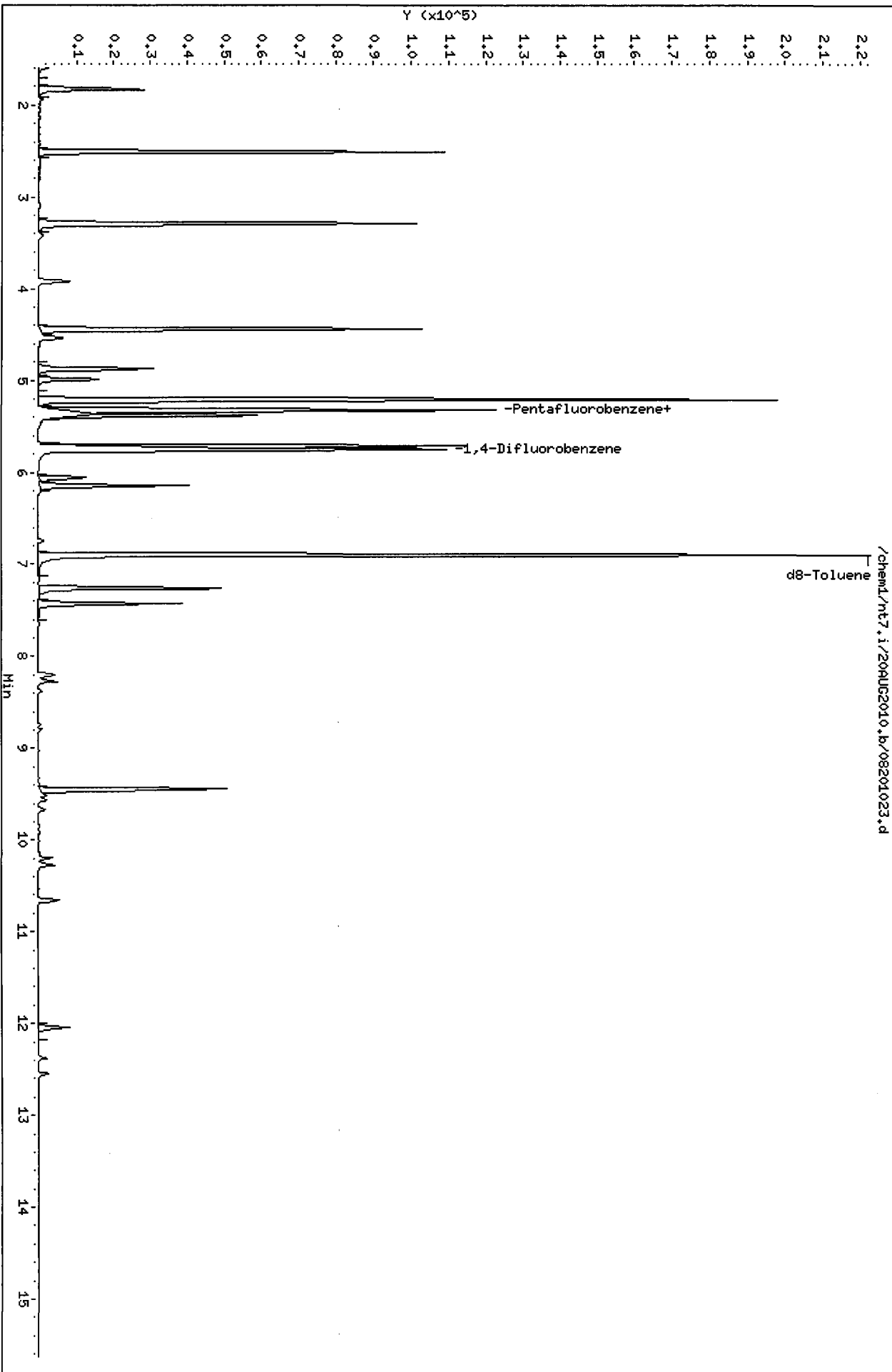
Client SDG: RI46  
 Fraction: VOA  
 Client Smp ID: MW-08-081310 MS  
 Operator: MH  
 SampleType: MS  
 Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Vinyl Chloride	1000.0	990.93	99.09	74-120
176 1,2-Dichloroethane	1000.0	1140.5	114.05	79-134
175 Trans-1,2-Dichloro	1000.0	1010.9	101.09	80-120
2 1,1-Dichloroethene	1000.0	987.46	98.75	80-120
3 cis-1,2-dichloroet	1000.0	1005.0	100.50	80-120
6 Benzene	1000.0	1138.0	113.80	80-120
8 Trichloroethene	1000.0	921.60	92.16	80-120
10 Tetrachloroethene	1000.0	1028.8	102.88	80-122
11 1,1,2,2-Tetrachlor	1000.0	1053.6	105.36	80-125

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1146.2	114.62	80-120
\$ 9 d8-Toluene	1000.0	1072.6	107.26	80-120

Data File: /chem1/nt7.i/20AUG2010.b/08201023.d  
Date : 20-AUG-2010 18:22  
Client ID: MM-08-081340 MS  
Sample Info: RI65BMS,10,10,0,  
Column phase: RTXVMS

Instrument: nt7.i  
Operator: MH  
Column diameter: 0.18



*VK*  
*8/25/10*

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201024.d  
 Lab Smp Id: RI65BMSD Client Smp ID: MW-08-081310 MSD  
 Inj Date : 20-AUG-2010 18:48  
 Operator : MH Inst ID: nt7.i  
 Smp Info : RI65BMSD,10,10,0,  
 Misc Info : 10-19848  
 Comment :  
 Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Meth Date : 25-Aug-2010 14:08 paul Quant Type: ISTD  
 Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
 Als bottle: 1 QC Sample: MSD  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62		1.551	1.552	(0.292)	73644	947.889	947.89
2 1,1-Dichloroethene	96		2.511	2.504	(0.472)	51760	949.161	949.16
175 Trans-1,2-Dichloroethene	96		3.290	3.283	(0.619)	58644	967.276	967.28
3 cis-1,2-dichloroethene	96		4.440	4.433	(0.835)	61182	972.515	972.51
6 Benzene	78		5.211	5.202	(0.905)	277458	1099.01	1099.0
* 4 Pentafluorobenzene	168		5.315	5.316	(1.000)	99451	1000.00	
\$ 5 d4-1,2-Dichloroethane	65		5.325	5.325	(1.002)	58897	1148.00	1148.0
176 1,2-Dichloroethane	62		5.382	5.373	(1.012)	82067	1096.20	1096.2
8 Trichloroethene	130		5.710	5.708	(0.992)	55204	886.355	886.35
* 7 1,4-Difluorobenzene	114		5.756	5.743	(1.000)	162894	1000.00	
\$ 9 d8-Toluene	98		6.902	6.901	(1.199)	223199	1074.41	1074.4
10 Tetrachloroethene	166		7.259	7.258	(1.261)	46565	999.570	999.57
11 1,1,2,2-Tetrachloroethane	83		9.446	9.445	(1.641)	47178	998.573	998.57



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i	Calibration Date: 20-AUG-2010
Lab File ID: 08201024.d	Calibration Time: 09:05
Lab Smp Id: RI65BMSD	Client Smp ID: MW-08-081310 MSD
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: MH	
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m	
Misc Info: 10-19848	

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	99451	8.49
7 1,4-Difluorobenze	147386	73693	294772	162894	10.52

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	-0.01
7 1,4-Difluorobenze	5.74	5.24	6.24	5.76	0.22

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

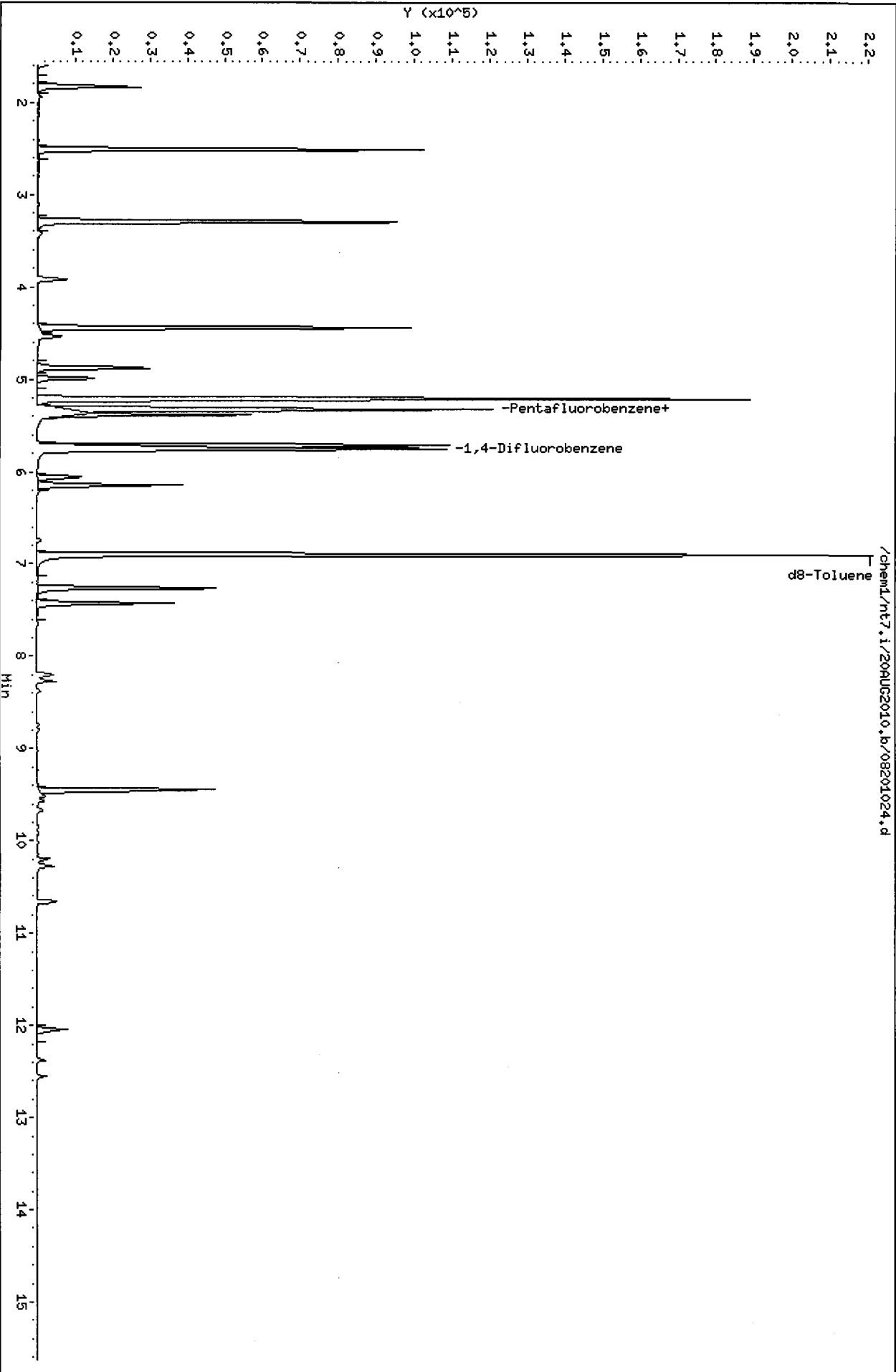
Client Name: Floyd-Snider Client SDG: RI46  
 Sample Matrix: LIQUID Fraction: VOA  
 Lab Smp Id: RI65BMSD Client Smp ID: MW-08-081310 MSD  
 Level: LOW Operator: MH  
 Data Type: MS DATA SampleType: MSD  
 SpikeList File: special.spk Quant Type: ISTD  
 Sublist File: sim12dca.sub  
 Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Misc Info: 10-19848

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Vinyl Chloride	1000.0	947.89	94.79	74-120
176 1,2-Dichloroethane	1000.0	1096.2	109.62	79-134
175 Trans-1,2-Dichloro	1000.0	967.28	96.73	80-120
2 1,1-Dichloroethene	1000.0	949.16	94.92	80-120
3 cis-1,2-dichloroet	1000.0	972.51	97.25	80-120
6 Benzene	1000.0	1099.0	109.90	80-120
8 Trichloroethene	1000.0	886.35	88.64	80-120
10 Tetrachloroethene	1000.0	999.57	99.96	80-122
11 1,1,2,2-Tetrachlor	1000.0	998.57	99.86	80-125

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1148.0	114.80	80-120
\$ 9 d8-Toluene	1000.0	1074.4	107.44	80-120

Data File: /chem1/nt7.i/20AUG2010.b/08201024.d  
Date : 20-AUG-2010 18:48  
Client ID: HM-08-081310 MSD  
Sample Info: R165BMSD,10,10,0,  
Column phase: RTXVHS

Instrument: nt7.i  
Operator: HH  
Column diameter: 0.18



# Analytical Resources Inc.: Volatile Organics Instrument Log

NT-7 Serial No.: GC=US00024417, MS=US72821196

Date: 8/23/10 Analysis: SMA chlor Analyst: PC KAH  
 GC Program: VC Column No: 850322 Column Type: RT-VMS  
 Instrument Tune (.U or .CT.): 08231001 EM Voltage: 2447  
 Calibration File: 08231008 Curve Date: 8/23/10

IS/SS	Ical/Ccal	LCS/ICV
<u>vw65v3</u>	<u>vw649-1</u>	<u>vw637-2</u>
		<u>vw649-1</u>

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt7.i/23AUG2010.b

Time	Filename	LabID	ClientID	WT
1	0711 08231001.d	BFB0823	BFB0823	0.00
2	0752 08231002.d	CC0823	CC0823	1
3	0818 08231003.d	LCS0823	LCS0823	1
4	0844 08231004.d	LCSD0823	LCSD0823	1
5	0909 08231005.d	MB0823	MB0823	1
6	1027 08231006.d	IC4000	IC4000	1   5.31 96493   5.74 169889
7	1052 08231007.d	IC2000	IC2000	1   5.32 95863   5.76 166703
8	1118 08231008.d	IC1000	IC1000	1   5.32 94653   5.75 166153
9	1144 08231009.d	ICS00	ICS00	1   5.32 94405   5.76 164423
10	1209 08231010.d	IC100	IC100	1   5.32 94066   5.76 163266
11	1235 08231011.d	ICS0	ICS0	1   5.32 92210   5.75 162236
12	1301 08231012.d	IC20	IC20	1   5.32 92413   5.75 161971
13	1326 08231013.d	ICV1000	ICV1000	1   5.31 92596   5.76 163650
14	1427 08231014.d	LCS0823	LCS0823	1   5.32 94718   5.74 168101
15	1450 08231015.d	LCSD0823	LCSD0823	1   5.32 84063   5.76 148835
16	1516 08231016.d	MB0823	MB0823	1   5.32 91100   5.76 159719
17	1551 08231017.d	RI46G	MW-13-081210	10 < 2   5.32 90849   5.76 160038
18	1617 08231018.d	RI65A	MW-09-081310	5   5.32 90517   5.75 157840
19	1643 08231019.d	RI65D	MW-01-081310	2   5.32 91429   5.75 157817
20	1708 08231020.d	RI65E	MW-05-081310	2   5.31 95002   5.76 162456
21	1734 08231021.d	RI46PMS		12   5.32 99293   5.76 166687

*PC 8/25/10*

**Maintenance / Comments**

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

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt7.i/23AUG2010.b

ARI Job No.: IC40 Method: sim082310.m Instrument: nt7.i Date: 23-AUG-2010

Time Filename LabID ClientId DF Manually Integrated Compounds

1027 08231006.d IC4000 IC4000 1 NO MANUAL INTEGRATION

1052 08231007.d IC2000 IC2000 1 NO MANUAL INTEGRATION

1118 08231008.d IC1000 IC1000 1 NO MANUAL INTEGRATION

1144 08231009.d IC500 IC500 1 NO MANUAL INTEGRATION

1209 08231010.d IC100 IC100 1 NO MANUAL INTEGRATION

1235 08231011.d IC50 IC50 1 NO MANUAL INTEGRATION

1301 08231012.d IC20 IC20 1 NO MANUAL INTEGRATION

1326 08231013.d ICV1000 ICV1000 1 NO MANUAL INTEGRATION

1427 08231014.d LCS0823 LCS0823 1 NO MANUAL INTEGRATION

1450 08231015.d LCSD0823 LCSD0823 1 NO MANUAL INTEGRATION

1516 08231016.d MB0823 MB0823 1 NO MANUAL INTEGRATION

1551 08231017.d RI46G MW-13-0812 1 NO MANUAL INTEGRATION

1617 08231018.d RI65A MW-09-0813 1 NO MANUAL INTEGRATION

1643 08231019.d RI65D MW-01-0813 1 NO MANUAL INTEGRATION

1708 08231020.d RI65E MW-05-0813 1 NO MANUAL INTEGRATION

1734 08231021.d RI46FMS MW-12-0812 1 NO MANUAL INTEGRATION

MC  
8/25/10

Data File: /chem1/nt7.i/23AUG2010,b/08231001.d

Page 2

Date : 23-AUG-2010 07:11

Client ID: BFB0823

Instrument: nt7.i

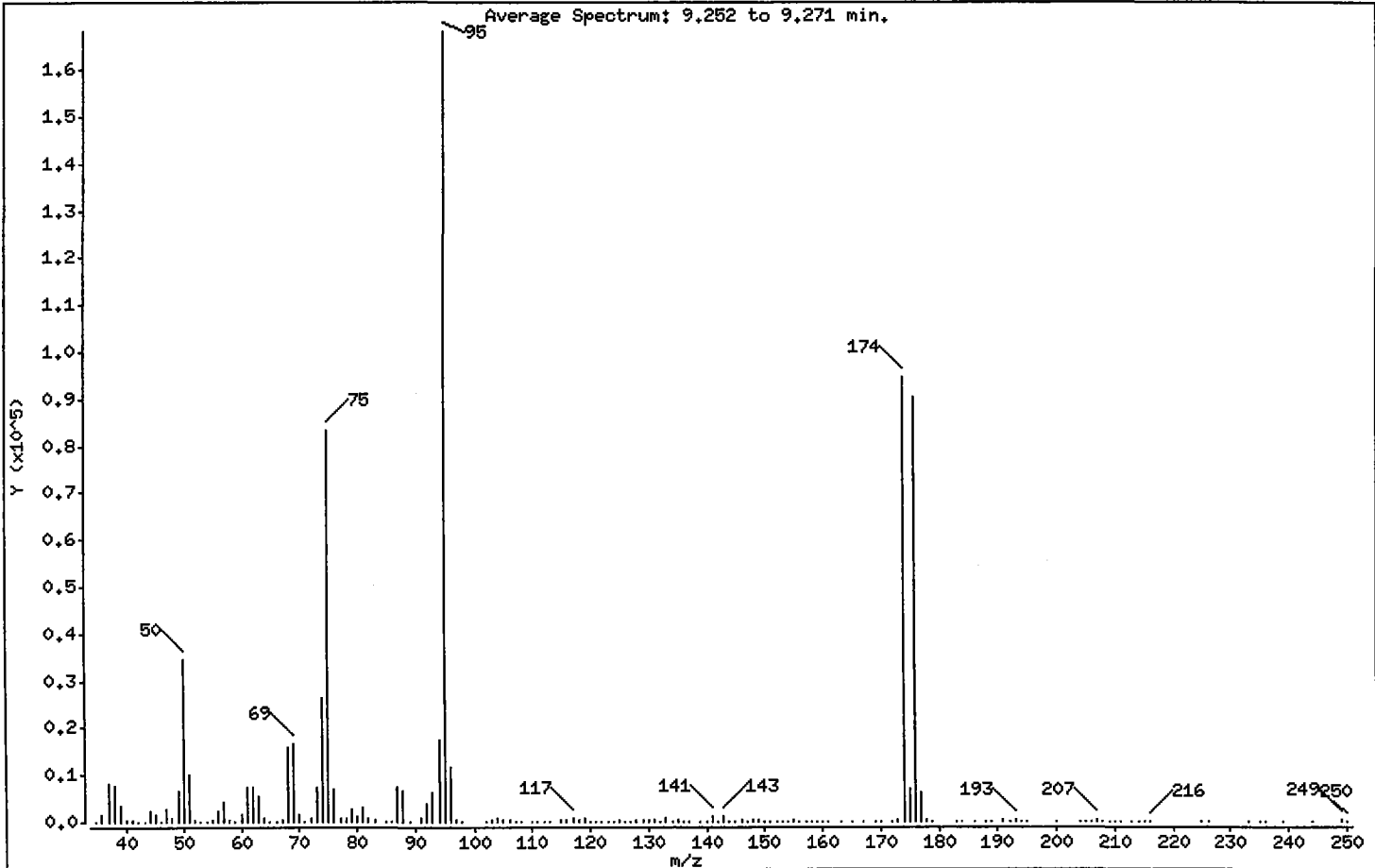
Sample Info: BFB0823,BFB0823,1,082310,

Operator: MH

Column phase: RTXVHS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	20.61
75	30.00 - 66.00% of mass 95	49.52
96	5.00 - 9.00% of mass 95	6.89
173	Less than 2.00% of mass 174	0.18 ( 0.32)
174	50.00 - 101.00% of mass 95	56.22
175	4.00 - 9.00% of mass 174	4.07 ( 7.24)
176	93.00 - 101.00% of mass 174	53.72 ( 95.55)
177	5.00 - 9.00% of mass 176	3.63 ( 6.76)

Date : 23-AUG-2010 07:11

Client ID: BFB0823

Instrument: nt7.i

Sample Info: BFB0823,BFB0823,1,082310,

Operator: MH

Column phase: RTXVMS

Column diameter: 0.18

Data File: 08231001.d

Spectrum: Average Spectrum: 9.252 to 9.271 min.

Location of Maximum: 95.00

Number of points: 164

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	25	77.00	907	126.00	66	174.00	94568
36.00	1673	78.00	736	127.00	95	175.00	6846
37.00	8024	79.00	2714	128.00	451	176.00	90360
38.00	7943	80.00	1093	129.00	216	177.00	6106
39.00	3330	81.00	3031	130.00	483	178.00	290
40.00	387	82.00	694	131.00	274	179.00	93
41.00	197	83.00	291	132.00	88	183.00	26
42.00	101	85.00	20	133.00	664	184.00	19
43.00	174	86.00	84	134.00	165	186.00	19
44.00	2499	87.00	7398	135.00	246	188.00	19
45.00	1538	88.00	6473	136.00	70	189.00	71
46.00	53	89.00	30	137.00	138	191.00	396
47.00	2612	91.00	594	139.00	22	192.00	73
48.00	954	92.00	3984	140.00	41	193.00	464
49.00	6743	93.00	6274	141.00	1245	194.00	143
50.00	34656	94.00	17504	142.00	139	195.00	46
51.00	10113	95.00	168192	143.00	1344	200.00	19
52.00	513	96.00	11596	144.00	34	204.00	73
53.00	19	97.00	416	145.00	168	205.00	83
54.00	69	98.00	51	146.00	200	206.00	36
55.00	522	102.00	56	147.00	129	207.00	514
56.00	2139	103.00	243	148.00	373	208.00	46
57.00	4372	104.00	679	149.00	232	209.00	60
58.00	212	105.00	297	150.00	32	210.00	24
59.00	177	106.00	484	151.00	30	211.00	105
60.00	1409	107.00	112	152.00	62	213.00	19
61.00	7426	108.00	29	153.00	93	214.00	20
62.00	7230	110.00	135	154.00	66	215.00	23
63.00	5344	111.00	148	155.00	286	216.00	37
64.00	732	112.00	121	156.00	35	225.00	24
65.00	59	113.00	43	157.00	181	226.00	19
66.00	19	115.00	251	158.00	26	233.00	30
67.00	467	116.00	494	159.00	186	235.00	73
68.00	16016	117.00	801	160.00	22	236.00	19
69.00	16696	118.00	550	161.00	145	239.00	24

Date : 23-AUG-2010 07:11

Client ID: BFB0823

Instrument: nt7.i

Sample Info: BFB0823,BFB0823,1,082310,

Operator: MH

Column phase: RTXVMS

Column diameter: 0.18

Data File: 08231001.d

Spectrum: Average Spectrum: 9.252 to 9.271 min.

Location of Maximum: 95.00

Number of points: 164

m/z	Y	m/z	Y	m/z	Y	m/z	Y
70.00	1584	119.00	628	163.00	52	244.00	20
71.00	28	120.00	42	165.00	149	249.00	279
72.00	966	121.00	45	167.00	30	250.00	24
73.00	7265	122.00	24	169.00	36		
74.00	26280	123.00	192	170.00	51		
75.00	83304	124.00	96	172.00	20		
76.00	7039	125.00	204	173.00	304		

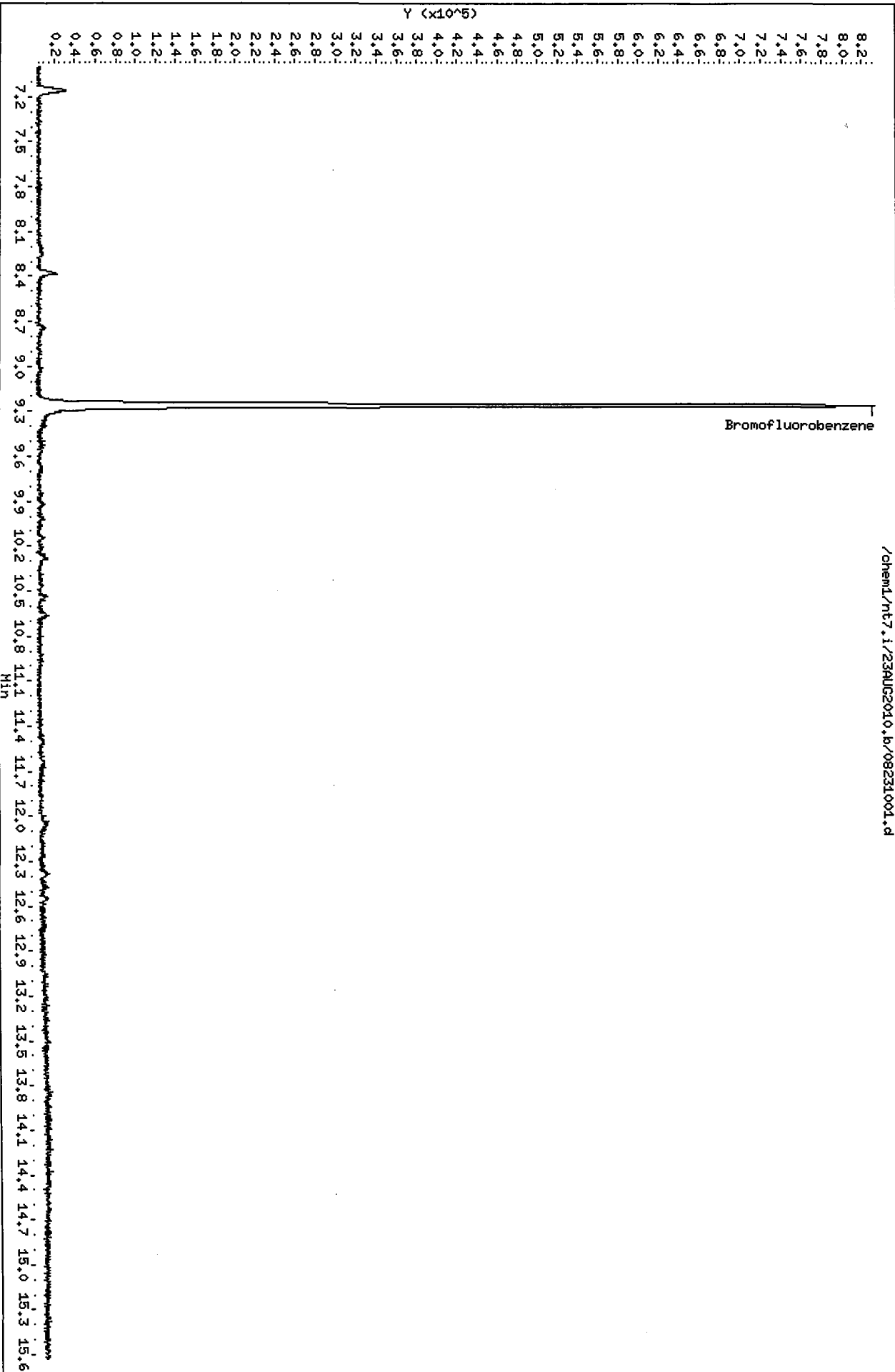


Data File: /chem1/nt7.1/23AUG2010.b/08231001.d  
Date : 23-AUG-2010 07:11  
Client ID: BFB0823  
Sample Info: BFB0823,BFB0823,1,082310,

Column phase: RTXVHS

Instrument: nt7.i  
Operator: NH  
Column diameter: 0.18

/chem1/nt7.1/23AUG2010.b/08231001.d



bc  
8/25/10

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/23AUG2010.b/08231014.d  
Lab Smp Id: LCS0823 Client Smp ID: LCS0823  
Inj Date : 23-AUG-2010 14:27  
Operator : PC Inst ID: nt7.i  
Smp Info : LCS0823,10,10,0,  
Misc Info : 10-  
Comment :  
Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
Meth Date : 23-Aug-2010 15:32 paul Quant Type: ISTD  
Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
Als bottle: 1 QC Sample: LCS  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: sim12dca.sub  
Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT	SIG	CONCENTRATIONS				
			ON-COLUMN	FINAL			
	MASS	RT	EXP RT	REL RT	RESPONSE	( ng/L)	( ug/L)
=====	====	==	=====	=====	=====	=====	=====
1 Vinyl Chloride	62	1.551	1.552	(0.292)	80948	952.910	952.91
2 1,1-Dichloroethene	96	2.503	2.510	(0.471)	46346	958.240	958.24
175 Trans-1,2-Dichloroethene	96	3.283	3.289	(0.618)	54359	962.871	962.87
3 cis-1,2-dichloroethene	96	4.432	4.439	(0.834)	55743	964.342	964.34
6 Benzene	78	5.202	5.212	(0.906)	257882	903.129	903.13
* 4 Pentafluorobenzene	168	5.316	5.316	(1.000)	94718	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	63005	968.483	968.48
176 1,2-Dichloroethane	62	5.382	5.382	(1.012)	77196	974.332	974.33
8 Trichloroethene	130	5.710	5.720	(0.994)	49724	914.257	914.26 (Q)
* 7 1,4-Difluorobenzene	114	5.744	5.754	(1.000)	168101	1000.00	
\$ 9 d8-Toluene	98	6.902	6.903	(1.202)	231161	997.351	997.35
10 Tetrachloroethene	166	7.259	7.260	(1.264)	42320	942.813	942.81
11 1,1,2,2-Tetrachloroethane	83	9.446	9.447	(1.644)	42110	973.721	973.72

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08231014.d  
Lab Smp Id: LCS0823  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: PC  
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
Misc Info: 10-

Calibration Date: 23-AUG-2010  
Calibration Time: 11:18  
Client Smp ID: LCS0823  
Level: LOW  
Sample Type: WATER

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	94718	0.07
7 1,4-Difluorobenze	166153	83076	332306	168101	1.17

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	-0.01
7 1,4-Difluorobenze	5.75	5.25	6.25	5.74	-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: Client SDG: 23AUG2010  
 Sample Matrix: LIQUID Fraction: VOA  
 Lab Smp Id: LCS0823 Client Smp ID: LCS0823  
 Level: LOW Operator: PC  
 Data Type: MS DATA SampleType: LCS  
 SpikeList File: special.spk Quant Type: ISTD  
 Sublist File: sim12dca.sub  
 Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Misc Info: 10-

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Vinyl Chloride	1000.0	952.91	95.29	74-120
176 1,2-Dichloroethane	1000.0	974.33	97.43	79-134
175 Trans-1,2-Dichloro	1000.0	962.87	96.29	80-120
2 1,1-Dichloroethene	1000.0	958.24	95.82	80-120
3 cis-1,2-dichloroet	1000.0	964.34	96.43	80-120
6 Benzene	1000.0	903.13	90.31	80-120
8 Trichloroethene	1000.0	914.26	91.43	80-120
10 Tetrachloroethene	1000.0	942.81	94.28	80-122
11 1,1,2,2-Tetrachlor	1000.0	973.72	97.37	80-125

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	968.48	96.85	80-120
\$ 9 d8-Toluene	1000.0	997.35	99.74	80-120

Data File: /chem1/nt7.i/23AUG2010.b/08231014.d

Date: 23-AUG-2010 14:27

Client ID: LCS0823

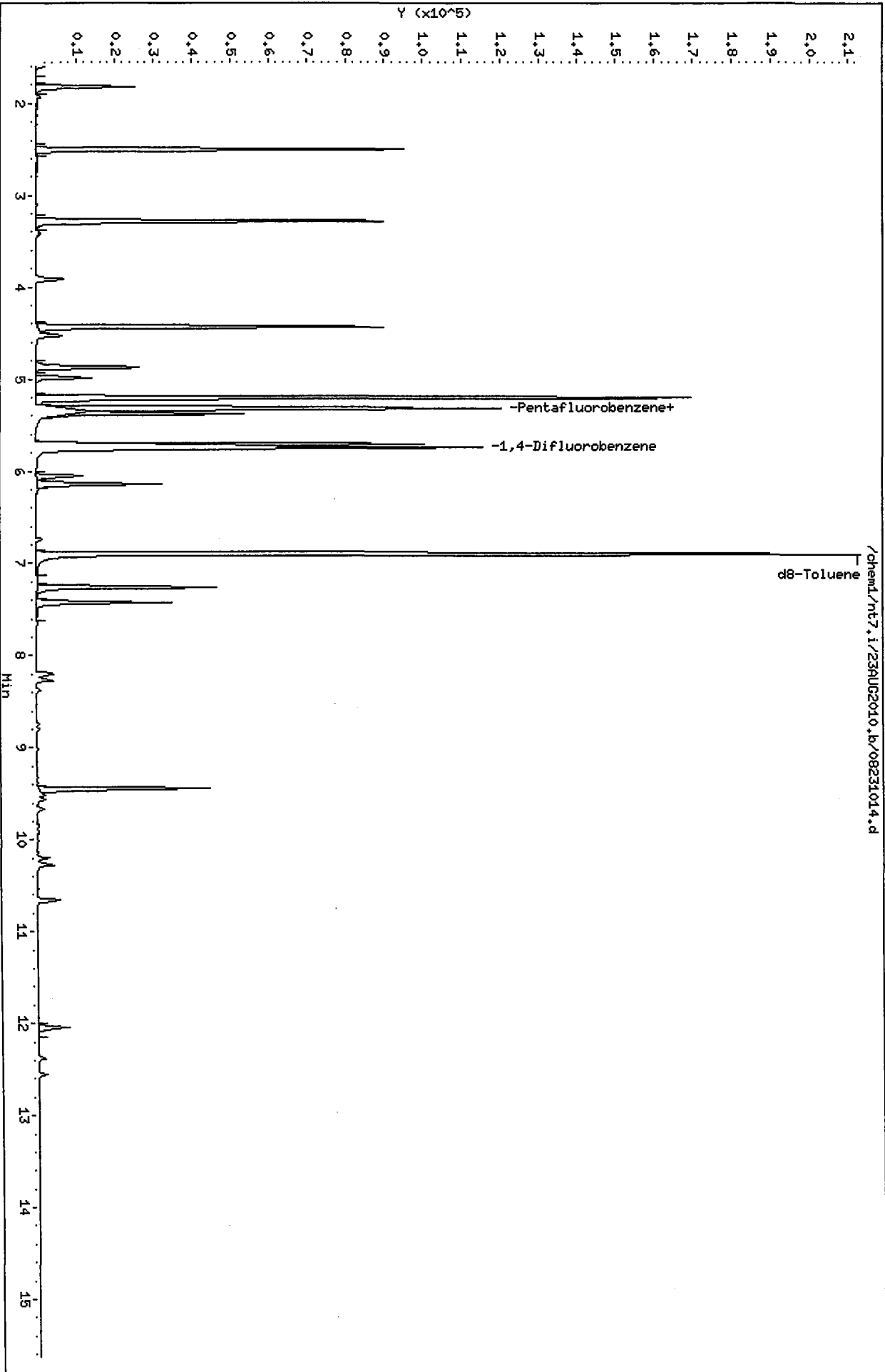
Sample Info: LCS0823,10,10,0,

Column phase: RTXVHS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18



/chem1/nt7.i/23AUG2010.b/08231014.d

*MC*  
*8/25/10*

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/23AUG2010.b/08231015.d  
 Lab Smp Id: LCSD0823 Client Smp ID: LCSD0823  
 Inj Date : 23-AUG-2010 14:50  
 Operator : PC Inst ID: nt7.i  
 Smp Info : LCSD0823,10,10,0,  
 Misc Info : 10-  
 Comment :  
 Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Meth Date : 23-Aug-2010 15:32 paul Quant Type: ISTD  
 Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
 Als bottle: 1 QC Sample: LCSD  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62	1.551	1.552	(0.292)	85664	1136.24	1136.2
2 1,1-Dichloroethene	96	2.509	2.510	(0.472)	49272	1147.86	1147.9
175 Trans-1,2-Dichloroethene	96	3.289	3.289	(0.619)	58367	1164.91	1164.9
3 cis-1,2-dichloroethene	96	4.438	4.439	(0.835)	59802	1165.69	1165.7
6 Benzene	78	5.211	5.212	(0.905)	276886	1095.20	1095.2
* 4 Pentafluorobenzene	168	5.315	5.316	(1.000)	84063	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	59653	1033.18	1033.2
176 1,2-Dichloroethane	62	5.382	5.382	(1.012)	83780	1191.46	1191.5
8 Trichloroethene	130	5.710	5.720	(0.992)	54162	1124.77	1124.8(Q)
* 7 1,4-Difluorobenzene	114	5.756	5.754	(1.000)	148835	1000.00	
\$ 9 d8-Toluene	98	6.902	6.903	(1.199)	185610	904.482	904.48
10 Tetrachloroethene	166	7.259	7.260	(1.261)	45238	1138.28	1138.3
11 1,1,2,2-Tetrachloroethane	83	9.446	9.447	(1.641)	44664	1166.47	1166.5

QC Flag Legend

Q - Qualifier signal failed the ratio test.



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08231015.d  
Lab Smp Id: LCSD0823  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: PC  
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
Misc Info: 10-

Calibration Date: 23-AUG-2010  
Calibration Time: 11:18  
Client Smp ID: LCSD0823  
Level: LOW  
Sample Type: WATER

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	84063	-11.19
7 1,4-Difluorobenze	166153	83076	332306	148835	-10.42

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	-0.01
7 1,4-Difluorobenze	5.75	5.25	6.25	5.76	0.02

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 23AUG2010  
 Sample Matrix: LIQUID Fraction: VOA  
 Lab Smp Id: LCSD0823 Client Smp ID: LCSD0823  
 Level: LOW Operator: PC  
 Data Type: MS DATA SampleType: LCSD  
 SpikeList File: special.spk Quant Type: ISTD  
 Sublist File: sim12dca.sub  
 Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Misc Info: 10-

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Vinyl Chloride	1000.0	1136.2	113.62	74-120
176 1,2-Dichloroethane	1000.0	1191.5	119.15	79-134
175 Trans-1,2-Dichloro	1000.0	1164.9	116.49	80-120
2 1,1-Dichloroethene	1000.0	1147.9	114.79	80-120
3 cis-1,2-dichloroet	1000.0	1165.7	116.57	80-120
6 Benzene	1000.0	1095.2	109.52	80-120
8 Trichloroethene	1000.0	1124.8	112.48	80-120
10 Tetrachloroethene	1000.0	1138.3	113.83	80-122
11 1,1,2,2-Tetrachlor	1000.0	1166.5	116.65	80-125

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1033.2	103.32	80-120
\$ 9 d8-Toluene	1000.0	904.48	90.45	80-120

Data File: /chem1/nt7.1/23AUG2010.b/08231015.d

Date : 23-AUG-2010 14:50

Client ID: LCSJ0823

Sample Info: LCSJ0823,10,10,0,

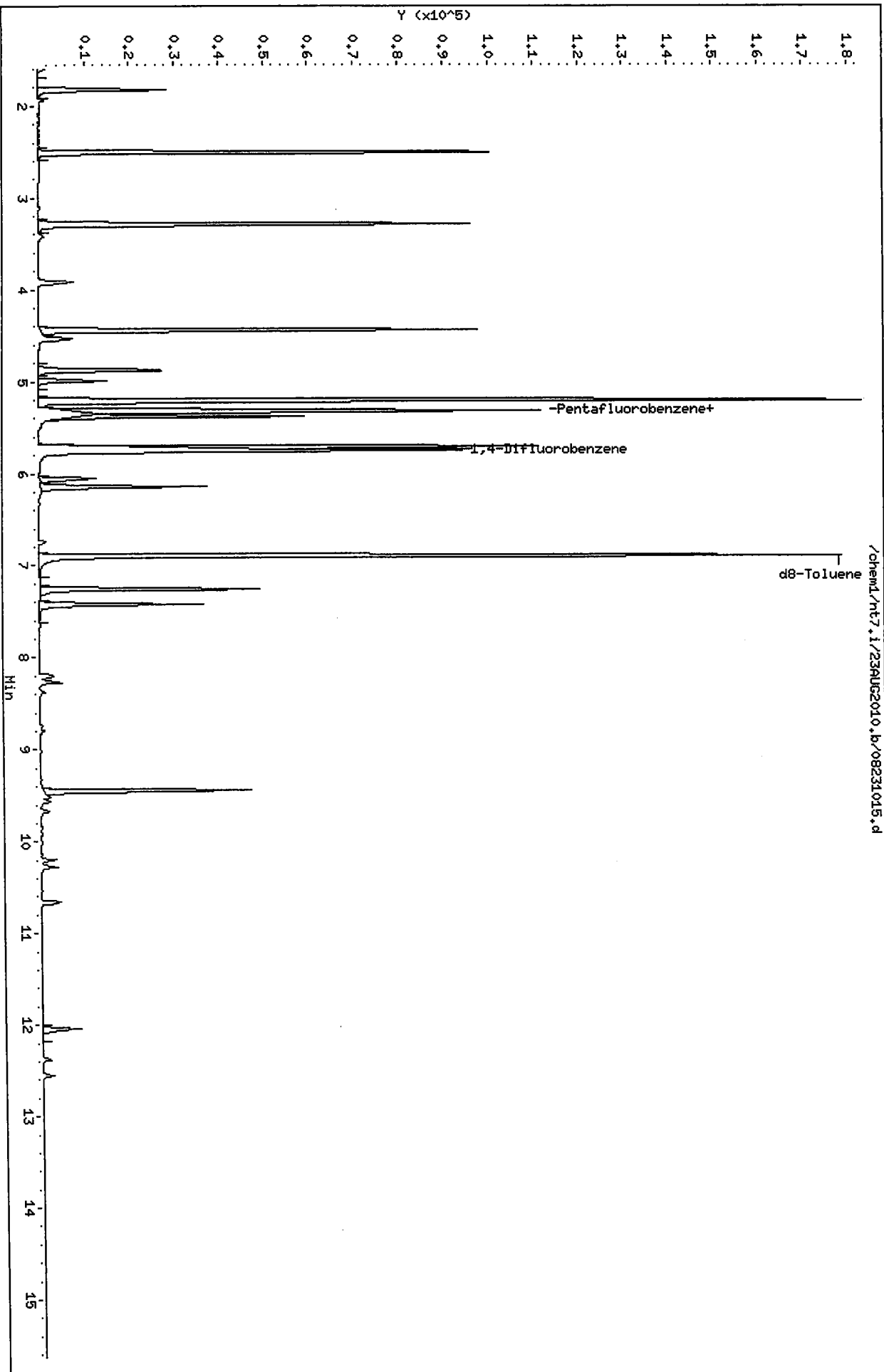
Column phase: RTXVHS

Instrument: nt7.1

Operator: PC

Column diameter: 0.18

/chem1/nt7.1/23AUG2010.b/08231015.d



*MS*  
*8/25/10*

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/23AUG2010.b/08231016.d  
 Lab Smp Id: MB0823 Client Smp ID: MB0823  
 Inj Date : 23-AUG-2010 15:16  
 Operator : PC Inst ID: nt7.i  
 Smp Info : MB0823,10,10,0,  
 Misc Info : 10-  
 Comment :  
 Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Meth Date : 25-Aug-2010 14:10 paul Quant Type: ISTD  
 Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
 Als bottle: 1 QC Sample: BLANK  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96						
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.316	5.316	(1.000)	91100	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	68633	1096.89	1096.9
176 1,2-Dichloroethane	62						
8 Trichloroethene	130						
* 7 1,4-Difluorobenzene	114	5.756	5.754	(1.000)	159719	1000.00	
\$ 9 d8-Toluene	98	6.902	6.903	(1.199)	219519	996.826	996.83
10 Tetrachloroethene	166						
11 1,1,2,2-Tetrachloroethane	83						

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08231016.d  
Lab Smp Id: MB0823  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: PC  
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
Misc Info: 10-

Calibration Date: 23-AUG-2010  
Calibration Time: 11:18  
Client Smp ID: MB0823  
Level: LOW  
Sample Type: WATER

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	91100	-3.75
7 1,4-Difluorobenze	166153	83076	332306	159719	-3.87

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.00
7 1,4-Difluorobenze	5.75	5.25	6.25	5.76	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: Client SDG: 23AUG2010  
Sample Matrix: LIQUID Fraction: VOA  
Lab Smp Id: MB0823 Client Smp ID: MB0823  
Level: LOW Operator: PC  
Data Type: MS DATA SampleType: BLANK  
SpikeList File: special.spk Quant Type: ISTD  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
Misc Info: 10-

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1096.9	109.69	80-120
\$ 9 d8-Toluene	1000.0	996.83	99.68	80-120

Data File: /chem1/nt7.i/23AUG2010.b/08231016.d

Date : 23-AUG-2010 15:16

Client ID: MB0823

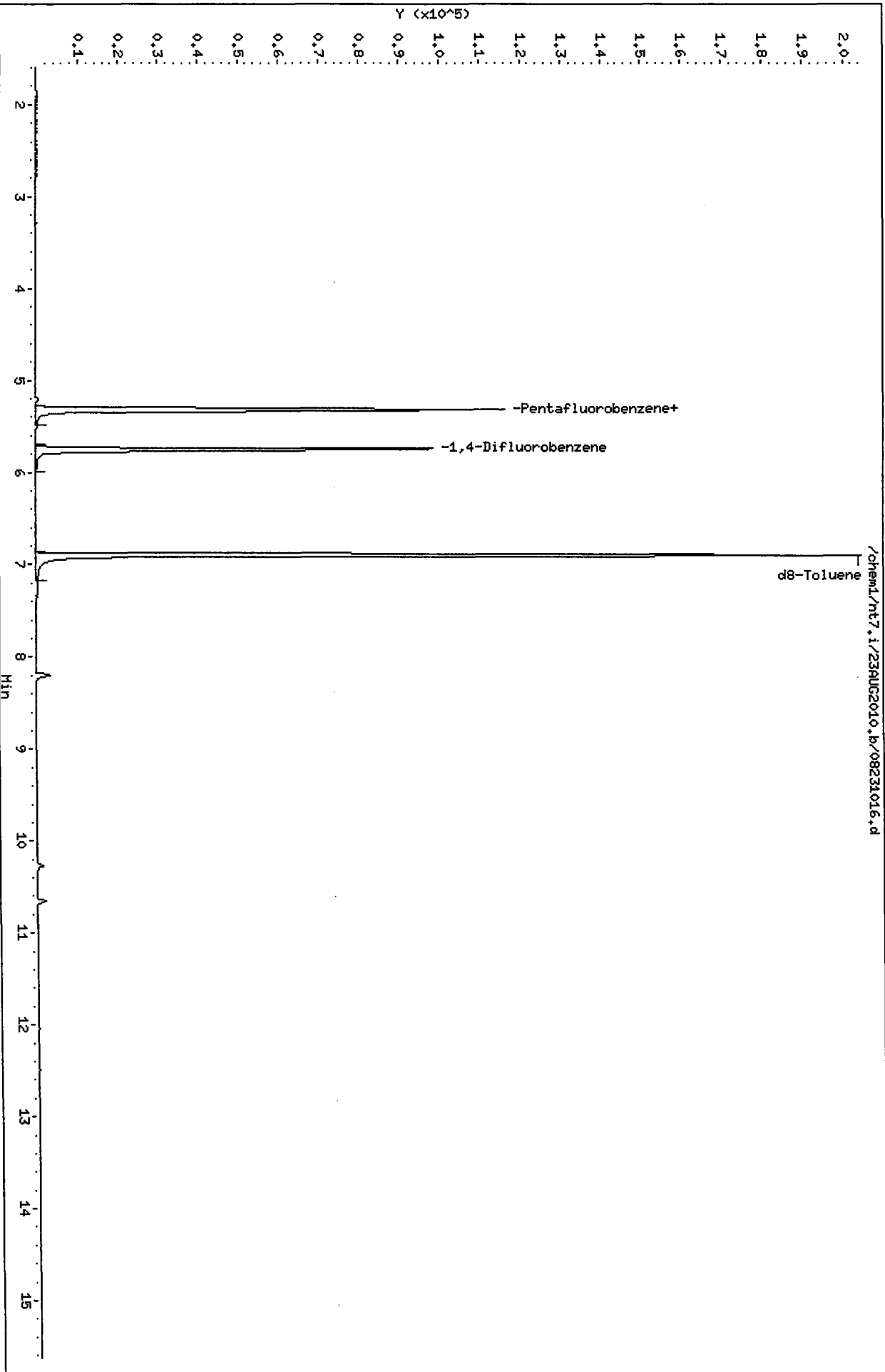
Sample Info: MB0823,10,10,0,

Column phaset: RTXVMS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18



/chem1/nt7.i/23AUG2010.b/08231016.d

MC  
8/25/10

Data File: /chem1/nt7.i/23AUG2010.b/08231018.d  
Report Date: 25-Aug-2010 14:11

Page 1

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/23AUG2010.b/08231018.d  
Lab Smp Id: RI65A Client Smp ID: MW-09-081310  
Inj Date : 23-AUG-2010 16:17  
Operator : PC Inst ID: nt7.i  
Smp Info : RI65A,10,10,0,  
Misc Info : 10-19847  
Comment :  
Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
Meth Date : 25-Aug-2010 14:10 paul Quant Type: ISTD  
Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
Als bottle: 1  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: sim12dca.sub  
Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96						
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.316	5.316	(1.000)	90517	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.326	5.325	(1.002)	64965	1044.96	1045.0
176 1,2-Dichloroethane	62	5.382	5.382	(1.012)	291	3.84333	3.843
8 Trichloroethene	130						
* 7 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	157840	1000.00	
\$ 9 d8-Toluene	98	6.903	6.903	(1.200)	213645	981.702	981.70
10 Tetrachloroethene	166						
11 1,1,2,2-Tetrachloroethane	83						



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08231018.d  
Lab Smp Id: RI65A  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: PC  
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
Misc Info: 10-19847

Calibration Date: 23-AUG-2010  
Calibration Time: 11:18  
Client Smp ID: MW-09-081310  
Level: LOW  
Sample Type: Water

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	90517	-4.37
7 1,4-Difluorobenze	166153	83076	332306	157840	-5.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.00
7 1,4-Difluorobenze	5.75	5.25	6.25	5.75	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  
Sample Matrix: LIQUID  
Lab Smp Id: RI65A  
Level: LOW  
Data Type: MS DATA  
SpikeList File: special.spk  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
Misc Info: 10-19847

Client SDG: RI46  
Fraction: VOA  
Client Smp ID: MW-09-081310  
Operator: PC  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1045.0	104.50	80-120
\$ 9 d8-Toluene	1000.0	981.70	98.17	80-120

Data File: /chem1/nt7.i/23AUG2010.b/08231018.d

Date: 23-AUG-2010 16:17

Client ID: MW-09-081310

Sample Info: R1658,10,10,0,

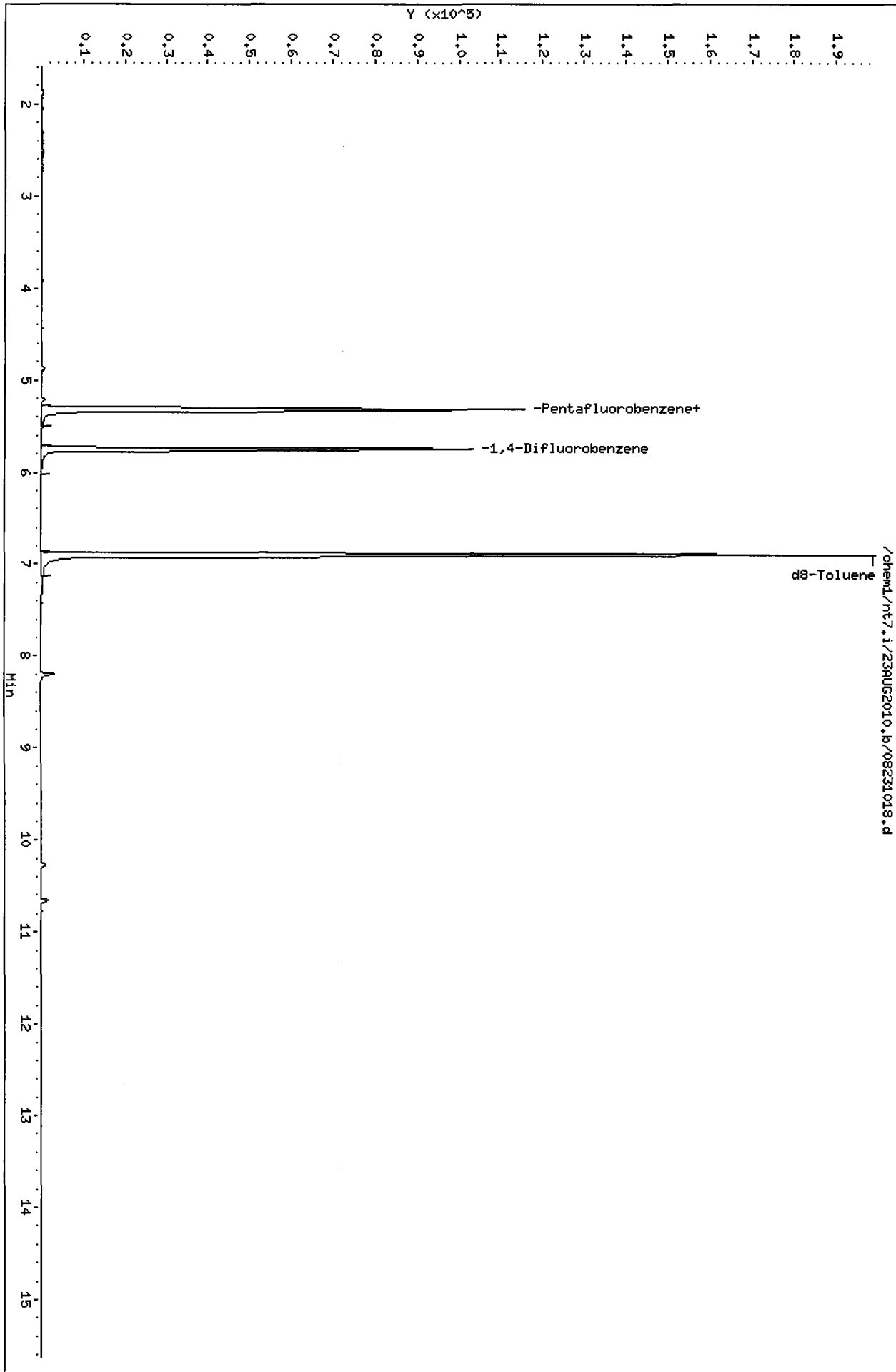
Page 4

Instrument: nt7.i

Operator: PC

Column diameter: 0.18

Column phase: RTXVHS



R165 : 00322

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/23AUG2010.b/08231019.d  
Lab Smp Id: RI65D Client Smp ID: MW-01-081310  
Inj Date : 23-AUG-2010 16:43  
Operator : PC Inst ID: nt7.i  
Smp Info : RI65D,10,10,0,  
Misc Info : 10-19850  
Comment :  
Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
Meth Date : 25-Aug-2010 14:10 paul Quant Type: ISTD  
Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
Als bottle: 1  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: sim12dca.sub  
Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN ( ng/L)
1 Vinyl Chloride	62	1.551	1.552	(0.292)	2225	27.1347	27.135
2 1,1-Dichloroethene	96	Compound Not Detected.					
175 Trans-1,2-Dichloroethene	96	3.290	3.289	(0.619)	5867	107.662	107.66
3 cis-1,2-dichloroethene	96	4.439	4.439	(0.835)	10928	195.853	195.85
6 Benzene	78	5.212	5.212	(0.906)	37146	138.566	138.57
* 4 Pentafluorobenzene	168	5.317	5.316	(1.000)	91429	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.326	5.325	(1.002)	65677	1045.87	1045.9
176 1,2-Dichloroethane	62	5.383	5.382	(1.012)	2942	38.4683	38.468
8 Trichloroethene	130	5.720	5.720	(0.994)	8722	170.819	170.82 (Q)
* 7 1,4-Difluorobenzene	114	5.755	5.754	(1.000)	157817	1000.00	
\$ 9 d8-Toluene	98	6.902	6.903	(1.199)	215843	991.946	991.95
10 Tetrachloroethene	166	Compound Not Detected.					
11 1,1,2,2-Tetrachloroethane	83	9.492	9.447	(1.649)	841	20.7139	20.714 (Q)

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i	Calibration Date: 23-AUG-2010
Lab File ID: 08231019.d	Calibration Time: 11:18
Lab Smp Id: RI65D	Client Smp ID: MW-01-081310
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: PC	
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m	
Misc Info: 10-19850	

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	91429	-3.41
7 1,4-Difluorobenze	166153	83076	332306	157817	-5.02

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.01
7 1,4-Difluorobenze	5.75	5.25	6.25	5.75	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  
Sample Matrix: LIQUID  
Lab Smp Id: RI65D  
Level: LOW  
Data Type: MS DATA  
SpikeList File: special.spk  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
Misc Info: 10-19850

Client SDG: RI46  
Fraction: VOA  
Client Smp ID: MW-01-081310  
Operator: PC  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1045.9	104.59	80-120
\$ 9 d8-Toluene	1000.0	991.95	99.19	80-120

Data File: /chem1/nt7.i/23AUG2010.b/08231019.d

Date: 23-AUG-2010 16:43

Client ID: MM-01-081310

Sample Info: R165D,10,10,0,

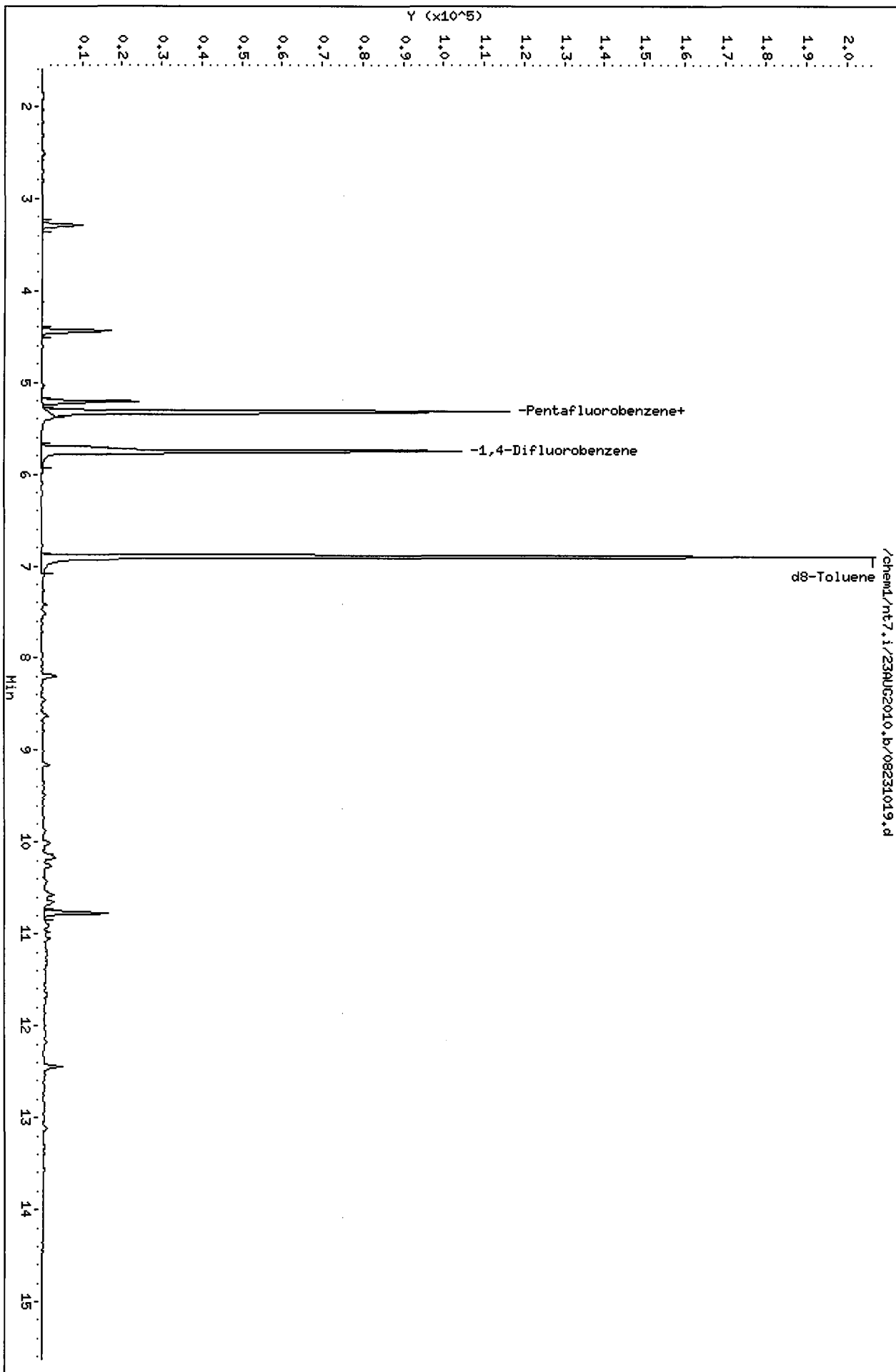
Column phase: RTXVHS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18

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R165 : 00327



Date : 23-AUG-2010 16:43

Client ID: MW-01-081310

Instrument: nt7.i

Sample Info: RI65D,10,10,0,

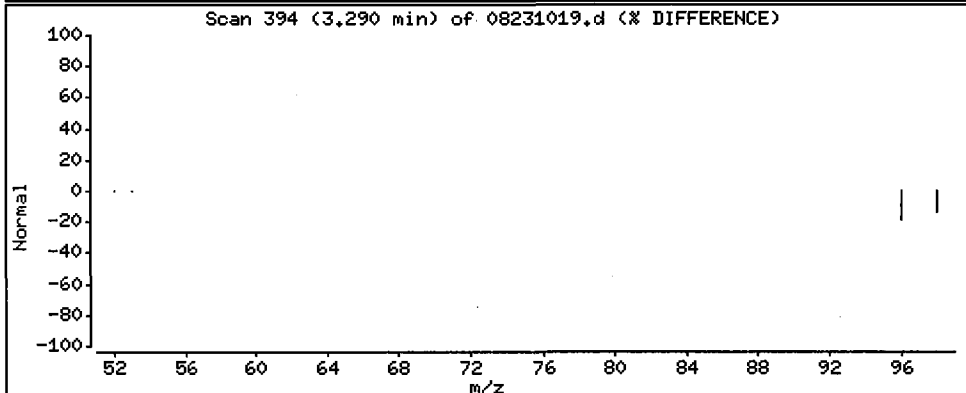
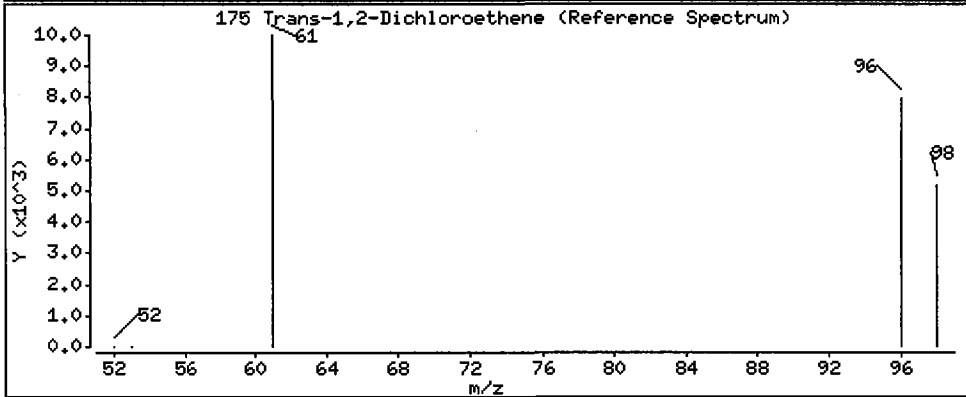
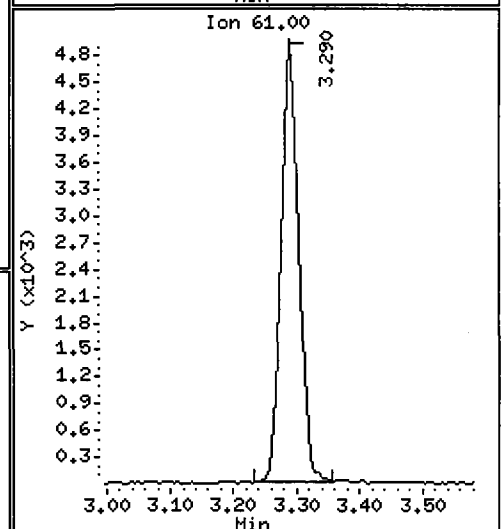
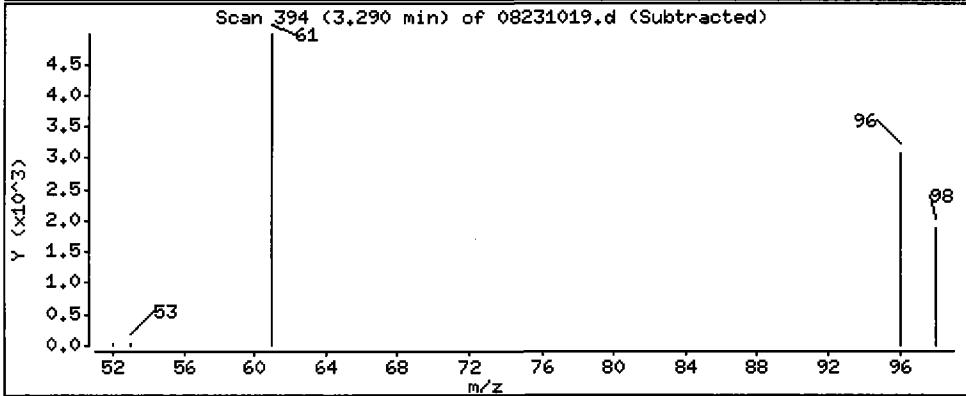
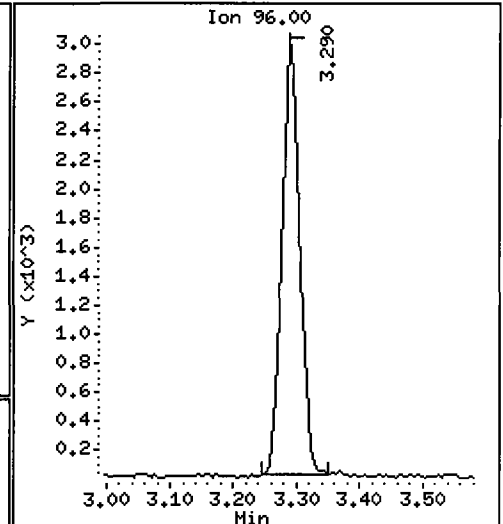
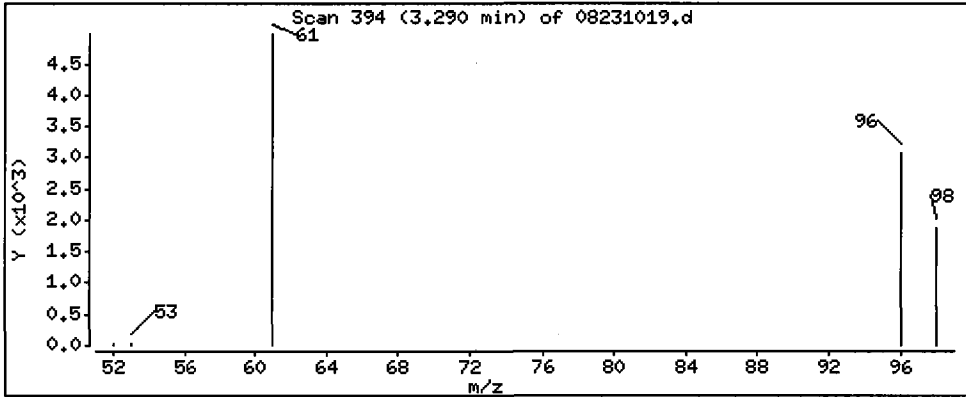
Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

175 Trans-1,2-Dichloroethene

Concentration: 107.66 ug/L



Date : 23-AUG-2010 16:43

Client ID: MW-01-081310

Instrument: nt7.i

Sample Info: RI65D,10,10,0,

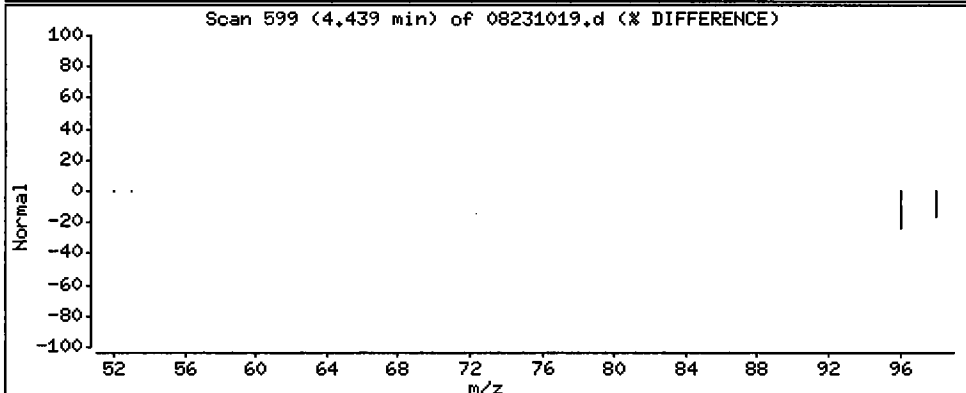
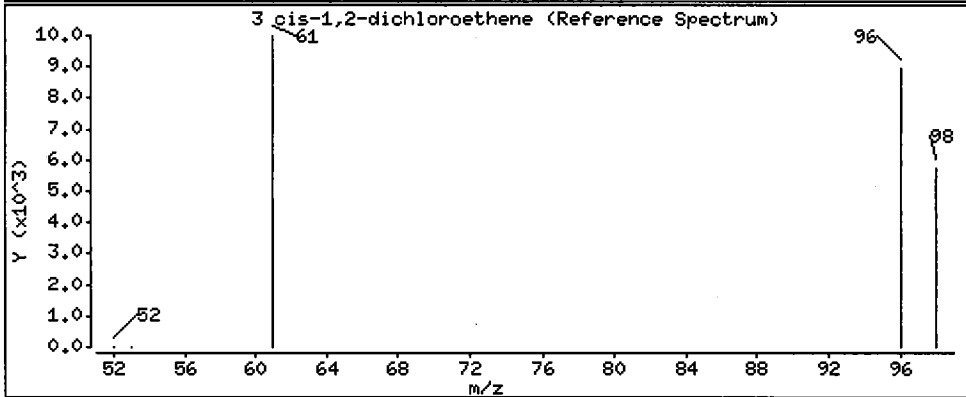
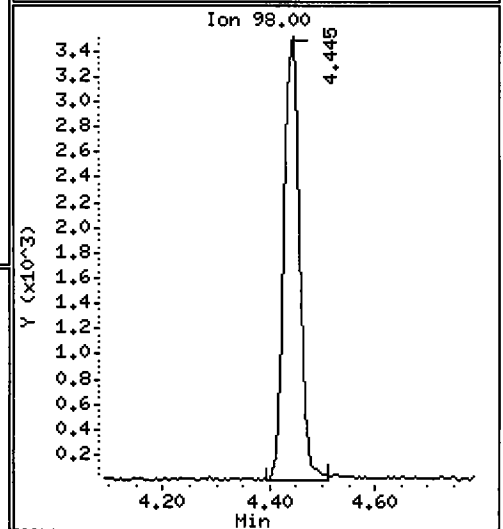
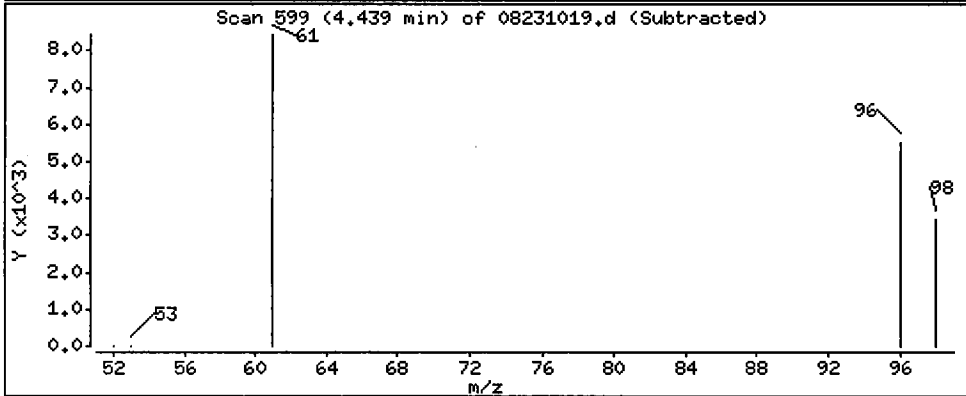
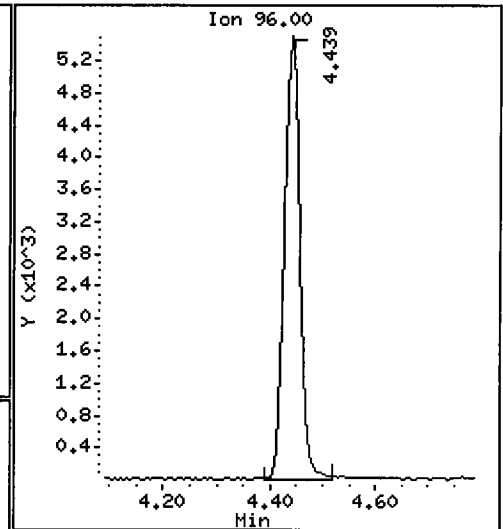
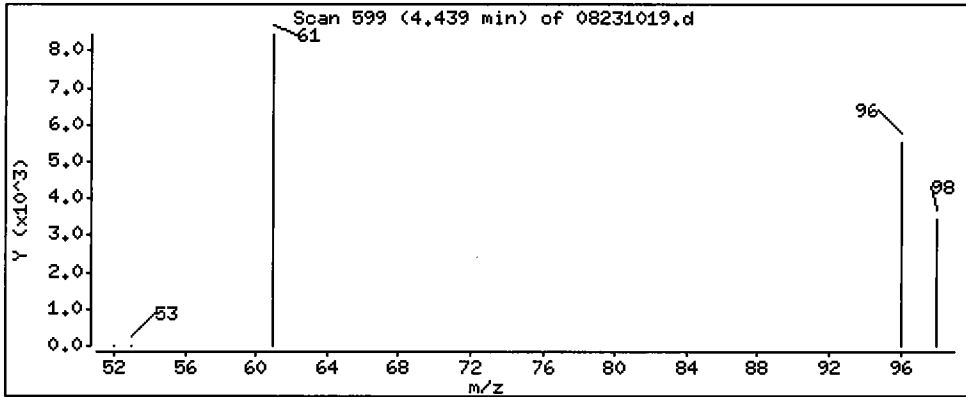
Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

3 cis-1,2-dichloroethene

Concentration: 195.85 ug/L



Date : 23-AUG-2010 16:43

Client ID: MW-01-081310

Instrument: nt7.i

Sample Info: RI65D,10,10,0,

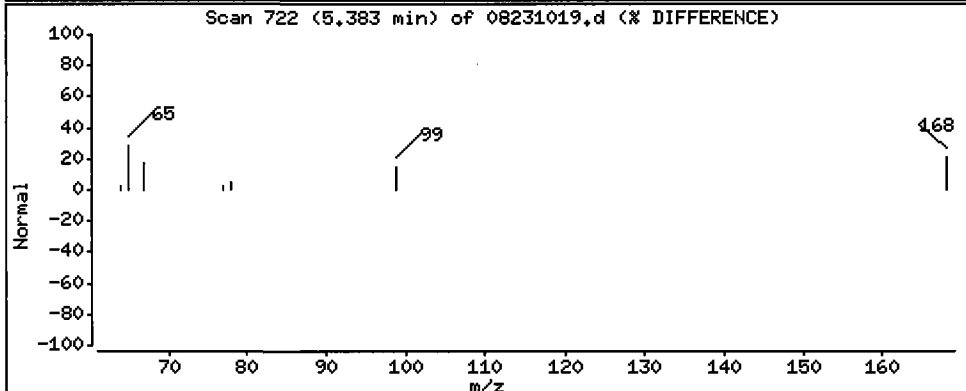
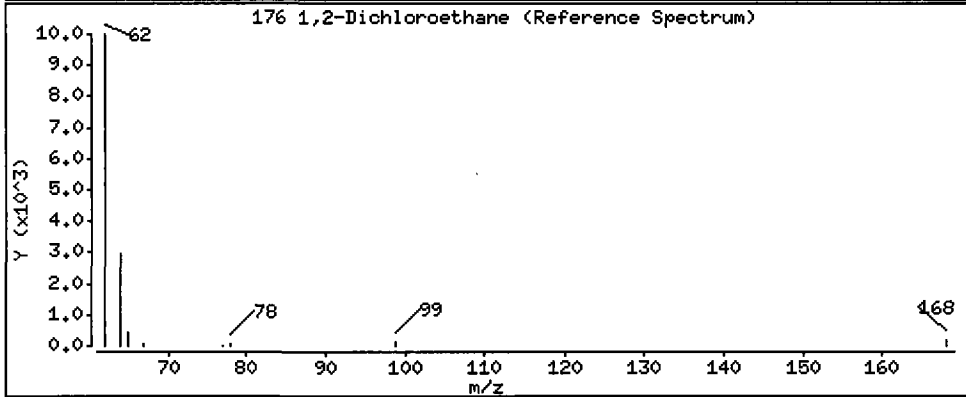
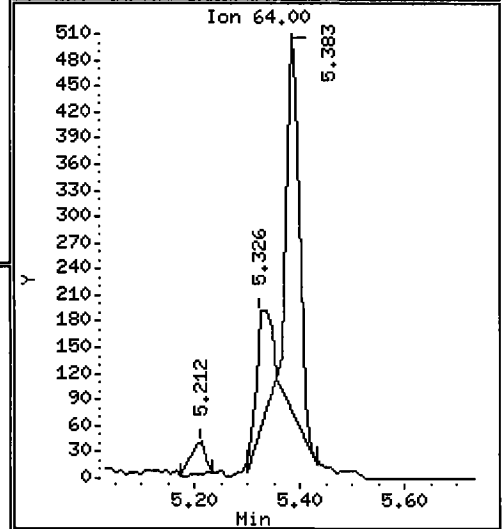
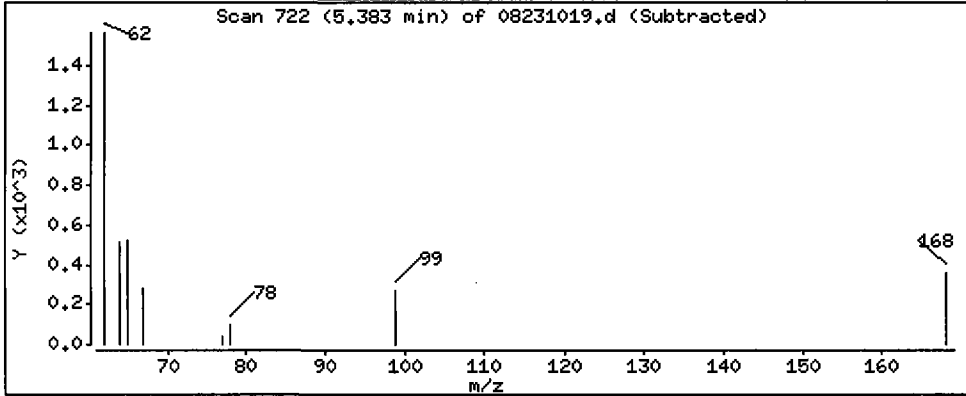
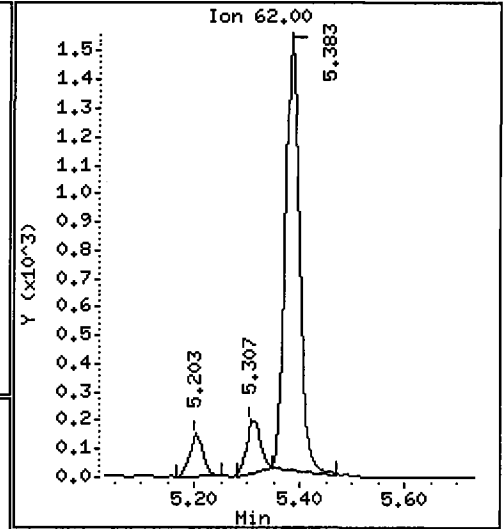
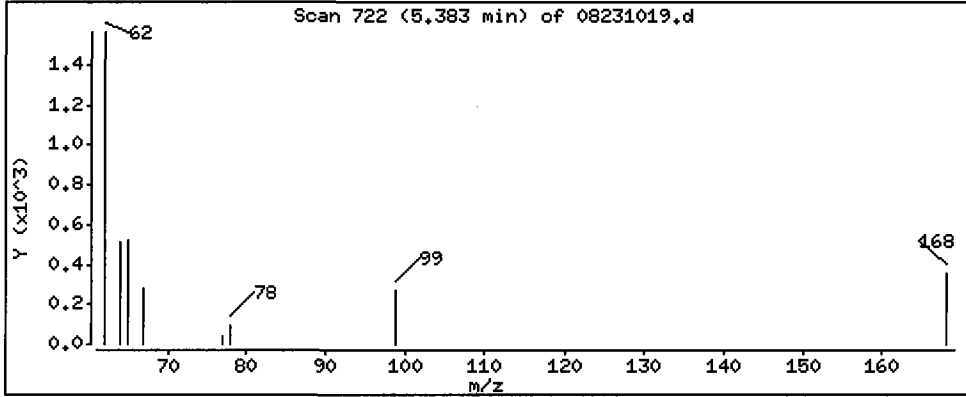
Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

176 1,2-Dichloroethane

Concentration: 38.468 ug/L



Date : 23-AUG-2010 16:43

Client ID: MW-01-081310

Instrument: nt7.i

Sample Info: RI65D,10,10,0,

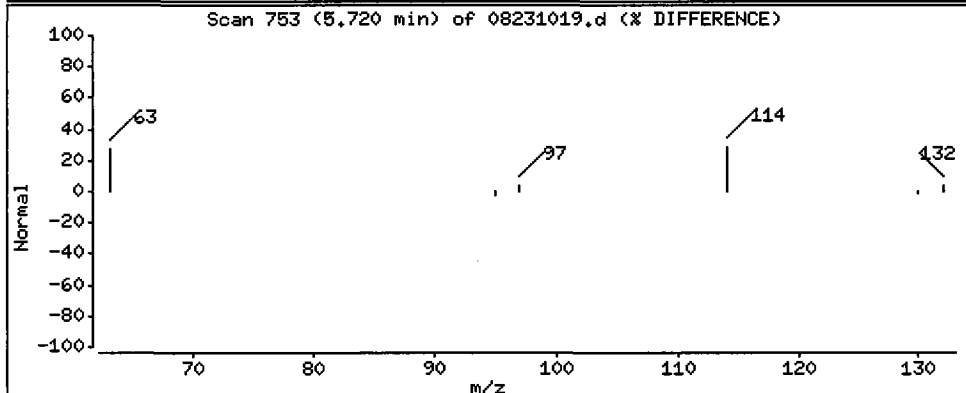
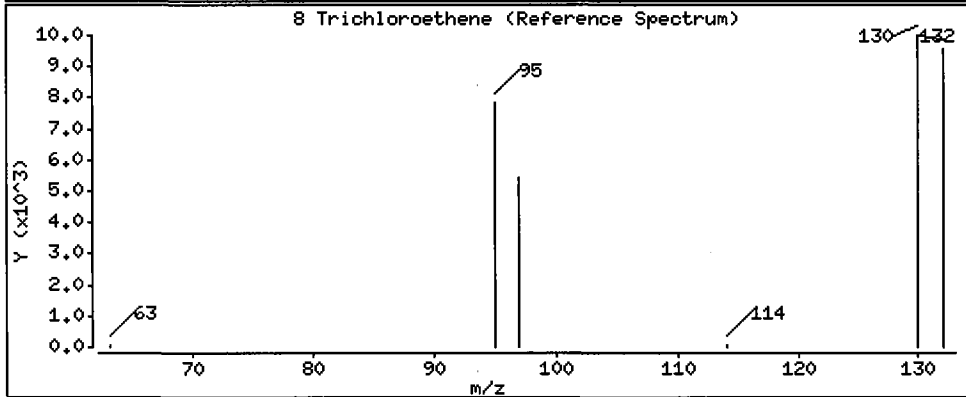
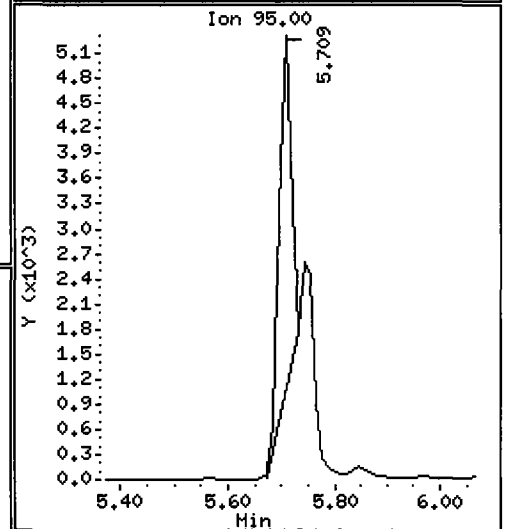
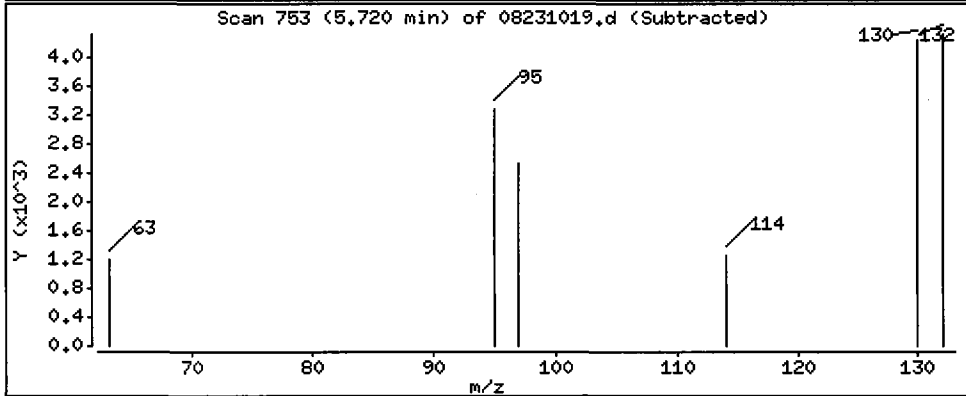
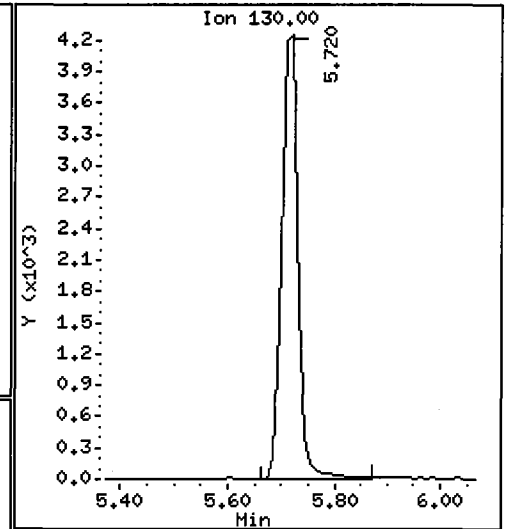
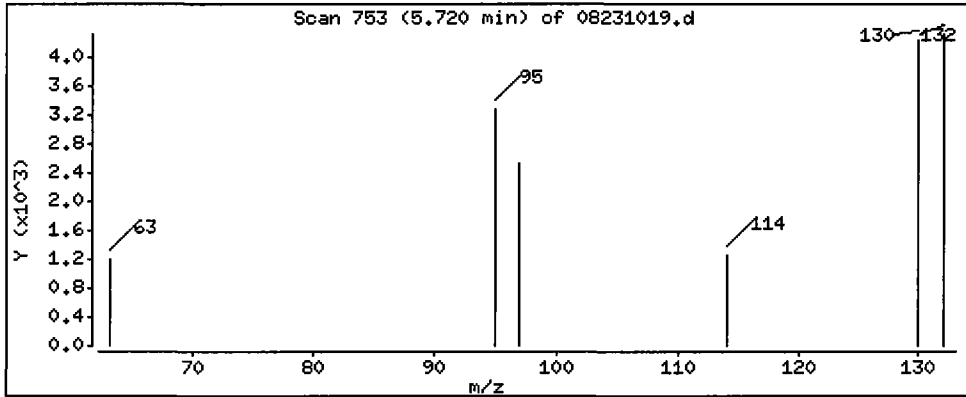
Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

8 Trichloroethene

Concentration: 170.82 ug/L



PC  
8/25/10

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/23AUG2010.b/08231020.d  
 Lab Smp Id: RI65E Client Smp ID: MW-05-081310  
 Inj Date : 23-AUG-2010 17:08  
 Operator : PC Inst ID: nt7.i  
 Smp Info : RI65E,10,10,0,  
 Misc Info : 10-19851  
 Comment :  
 Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Meth Date : 25-Aug-2010 14:10 paul Quant Type: ISTD  
 Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
 Als bottle: 1  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Pv / Sa \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96	4.440	4.439	(0.835)	1646	28.3903	28.390
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.315	5.316	(1.000)	95002	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.324	5.325	(1.002)	70976	1087.75	1087.7
176 1,2-Dichloroethane	62	5.381	5.382	(1.012)	5595	70.4064	70.406
8 Trichloroethene	130	5.721	5.720	(0.994)	792	15.0682	15.068 (Q)
* 7 1,4-Difluorobenzene	114	5.755	5.754	(1.000)	162456	1000.00	
\$ 9 d8-Toluene	98	6.902	6.903	(1.199)	221645	989.523	989.52
10 Tetrachloroethene	166						
11 1,1,2,2-Tetrachloroethane	83						

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i	Calibration Date: 23-AUG-2010
Lab File ID: 08231020.d	Calibration Time: 11:18
Lab Smp Id: RI65E	Client Smp ID: MW-05-081310
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: PC	
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m	
Misc Info: 10-19851	

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	95002	0.37
7 1,4-Difluorobenze	166153	83076	332306	162456	-2.23

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.31	-0.02
7 1,4-Difluorobenze	5.75	5.25	6.25	5.76	0.02

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd-Snider  
Sample Matrix: LIQUID  
Lab Smp Id: RI65E  
Level: LOW  
Data Type: MS DATA  
SpikeList File: special.spk  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
Misc Info: 10-19851

Client SDG: RI46  
Fraction: VOA  
Client Smp ID: MW-05-081310  
Operator: PC  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1087.7	108.77	80-120
\$ 9 d8-Toluene	1000.0	989.52	98.95	80-120



Data File: /chem1/nt7.i/23AUG2010.b/08231020.d

Date: 23-AUG-2010 17:08

Client ID: MM-05-081310

Sample Info: R165E,10,10,0,

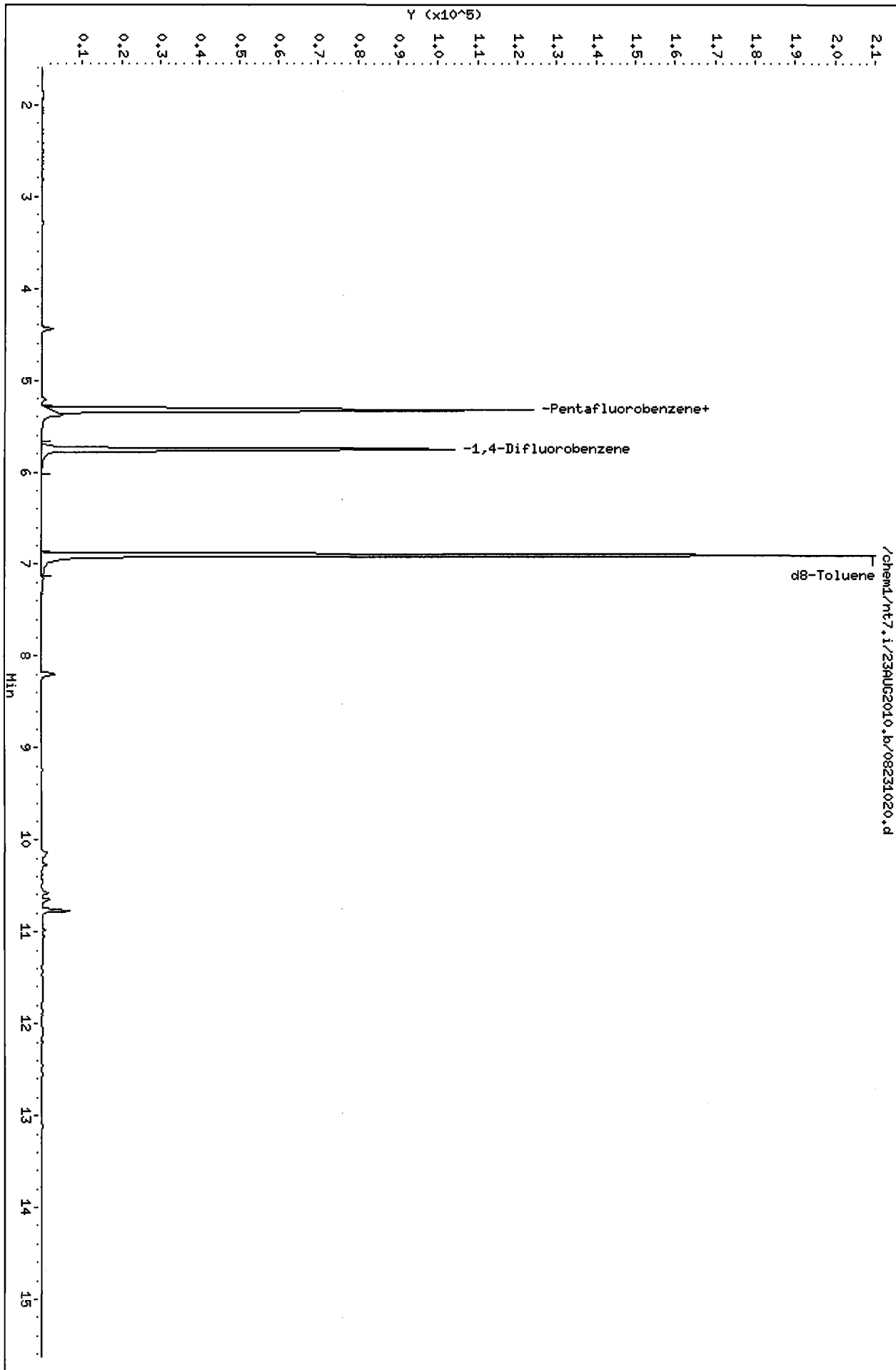
Column phase: RTXVHS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18

Page 5



R165: 00336

Date : 23-AUG-2010 17:08

Client ID: MW-05-081310

Instrument: nt7.i

Sample Info: RI65E,10,10,0,

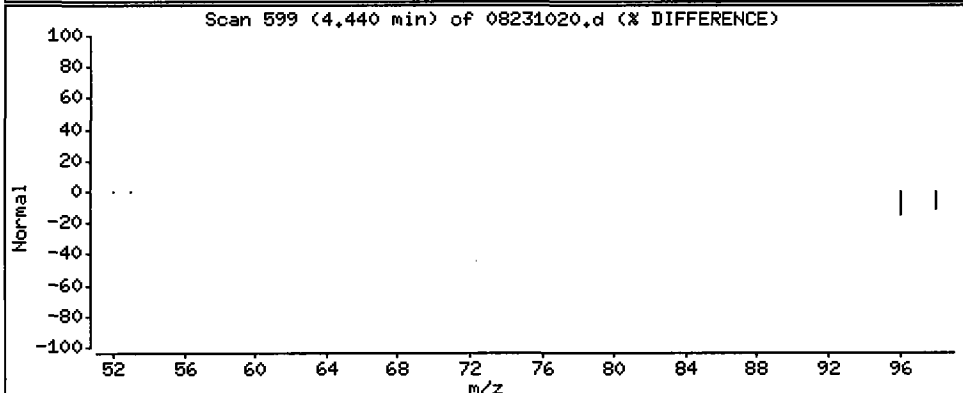
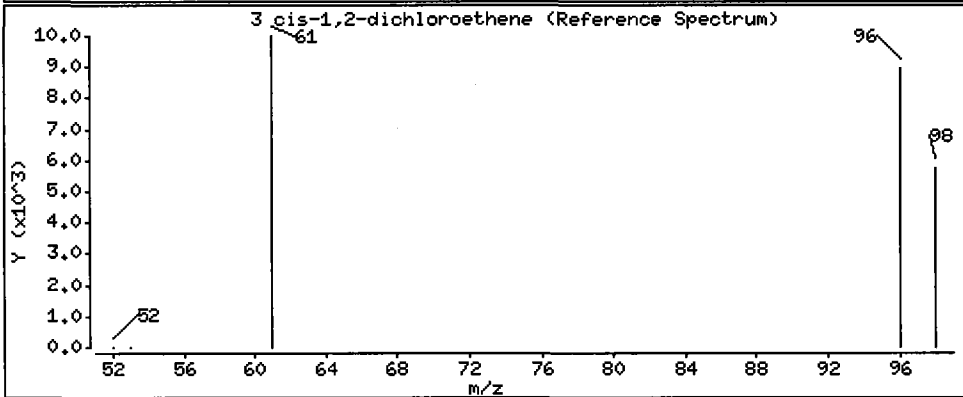
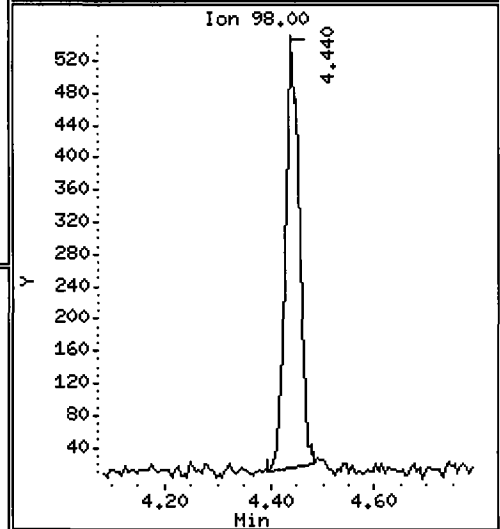
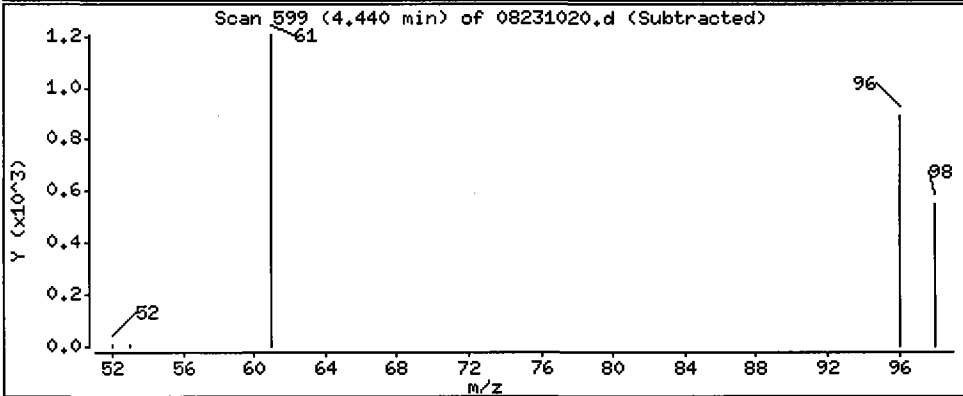
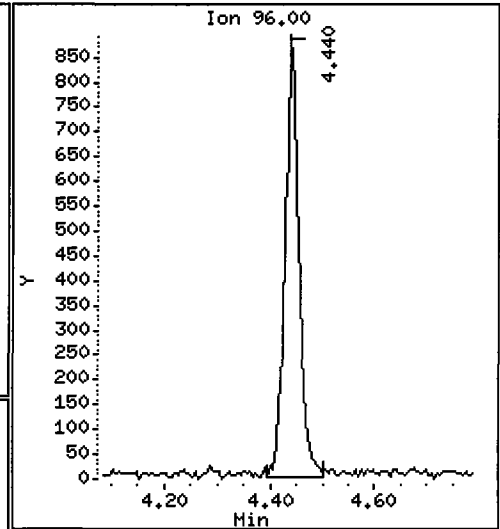
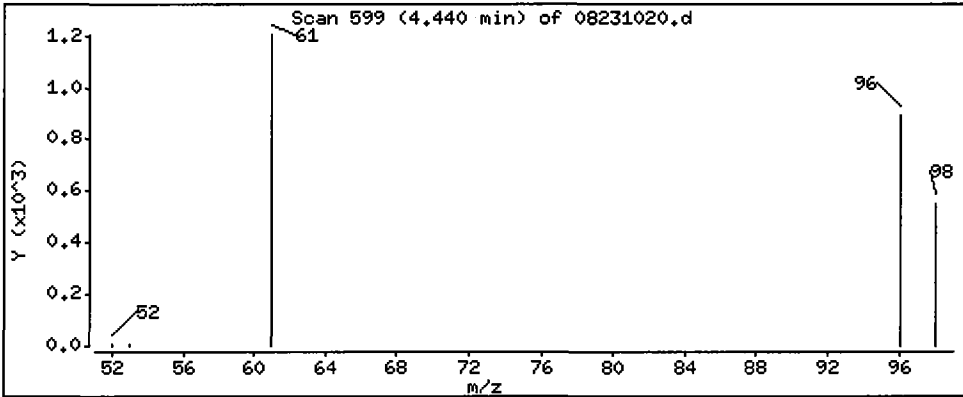
Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

3 cis-1,2-dichloroethene

Concentration: 28,390 ug/L



Date : 23-AUG-2010 17:08

Client ID: MW-05-081310

Instrument: nt7.i

Sample Info: RI65E,10,10,0,

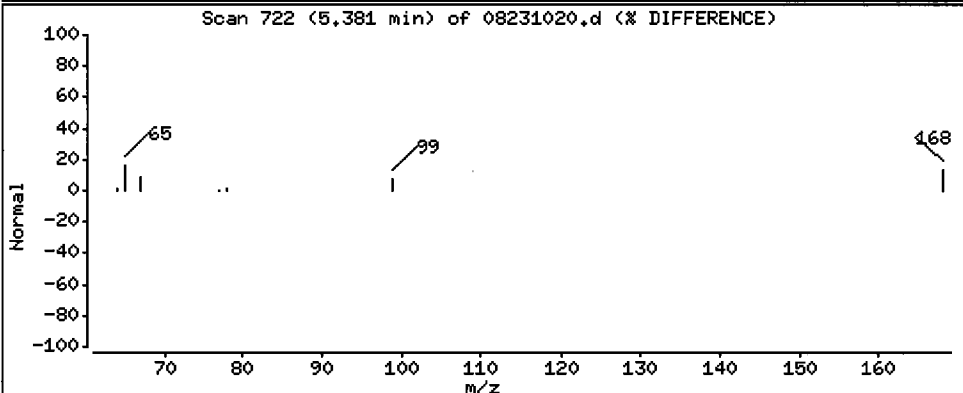
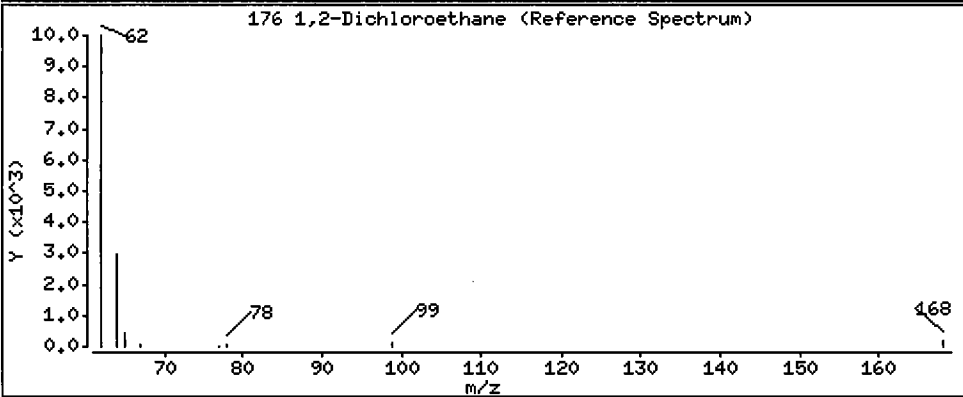
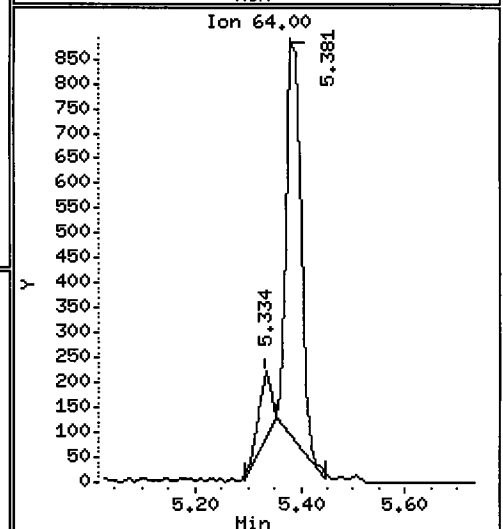
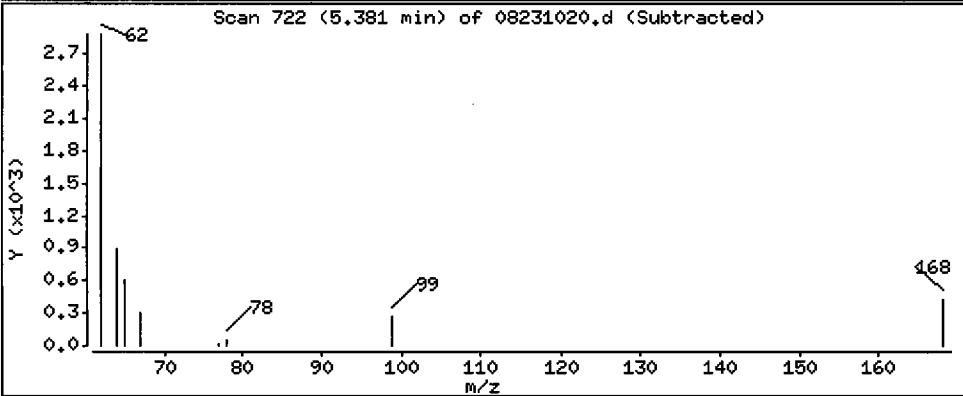
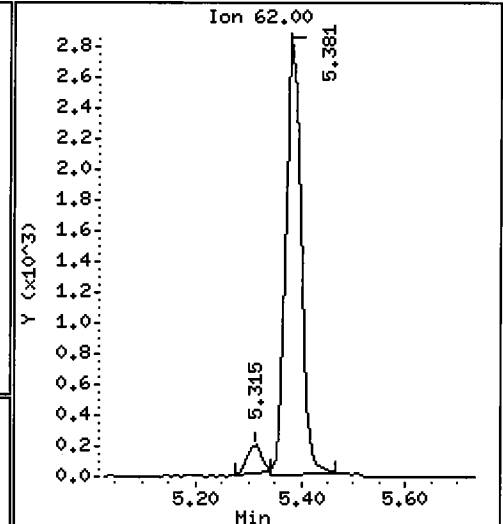
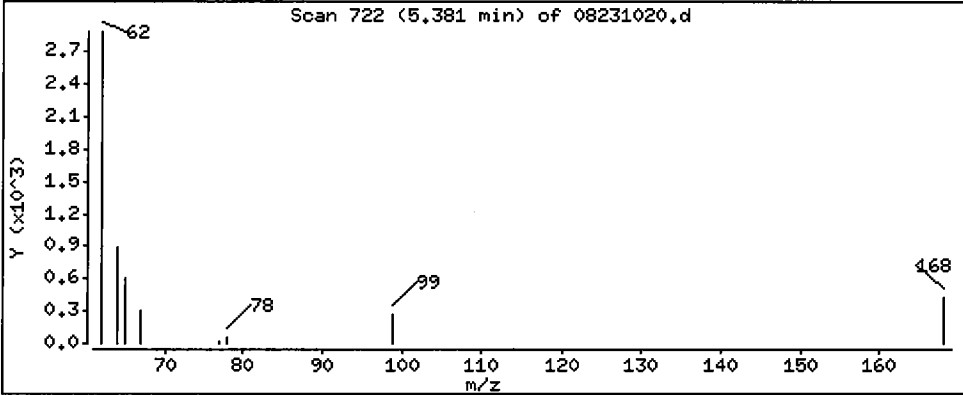
Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

176 1,2-Dichloroethane

Concentration: 70.406 ug/L



Date : 23-AUG-2010 17:08

Client ID: MW-05-081310

Instrument: nt7.i

Sample Info: RI65E,10,10,0,

Operator: PC

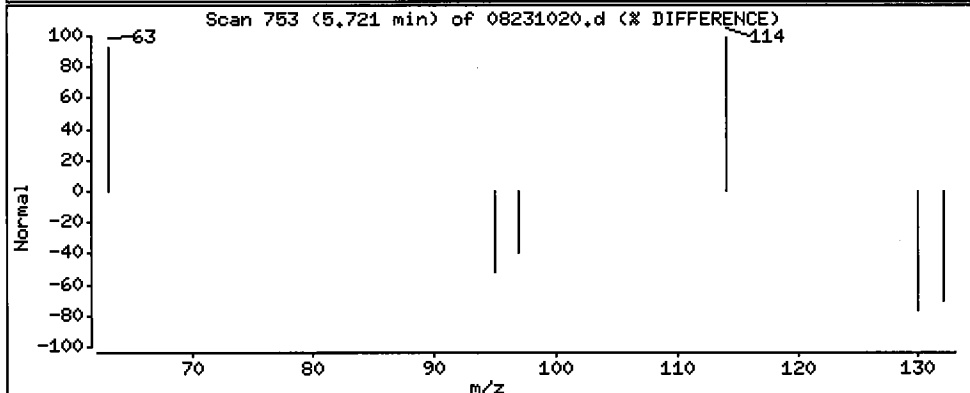
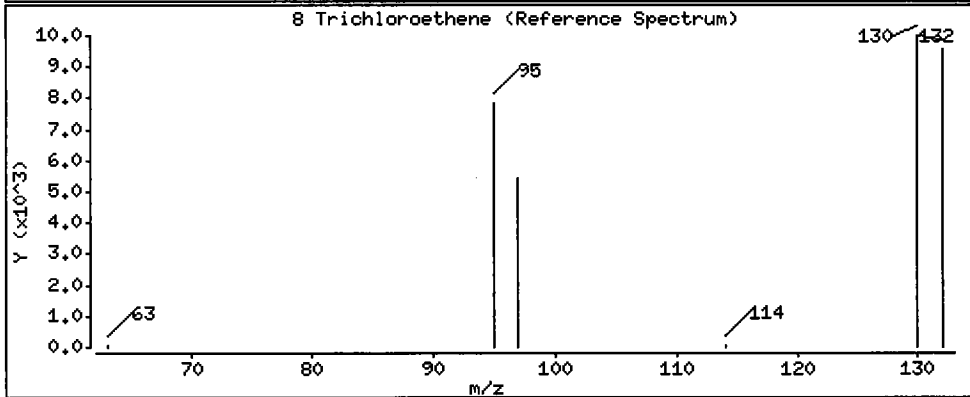
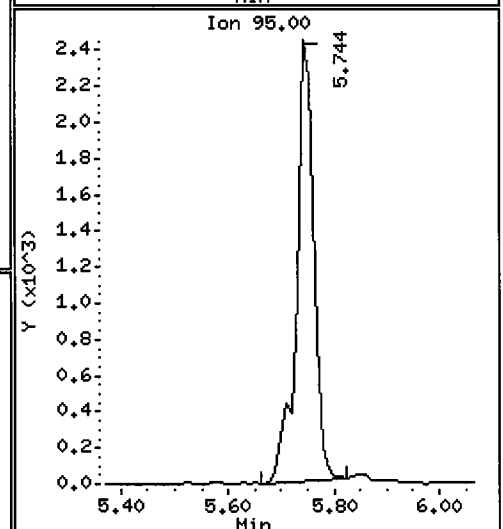
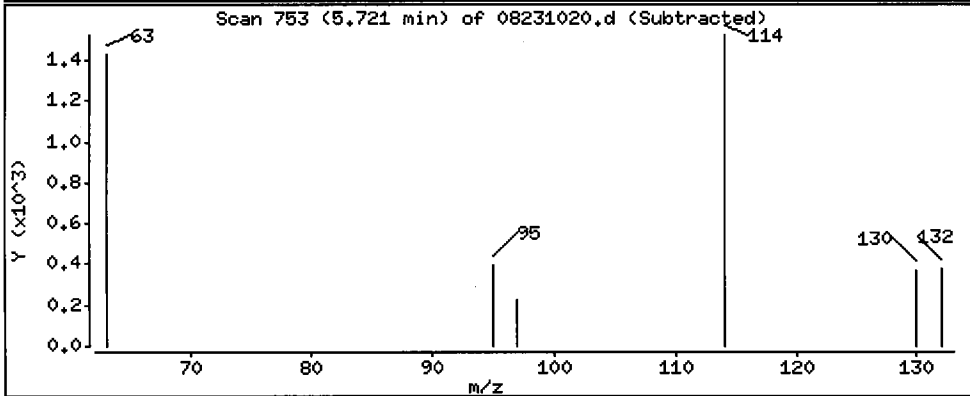
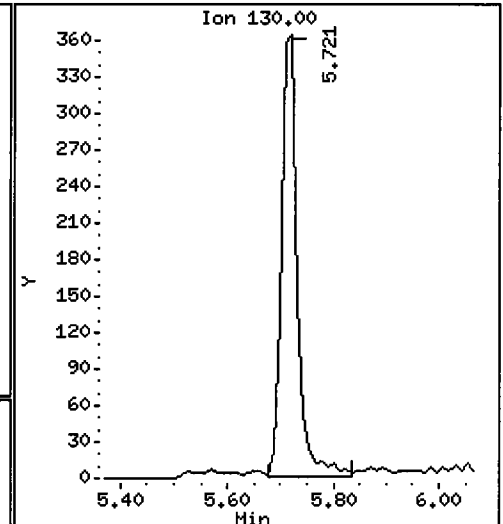
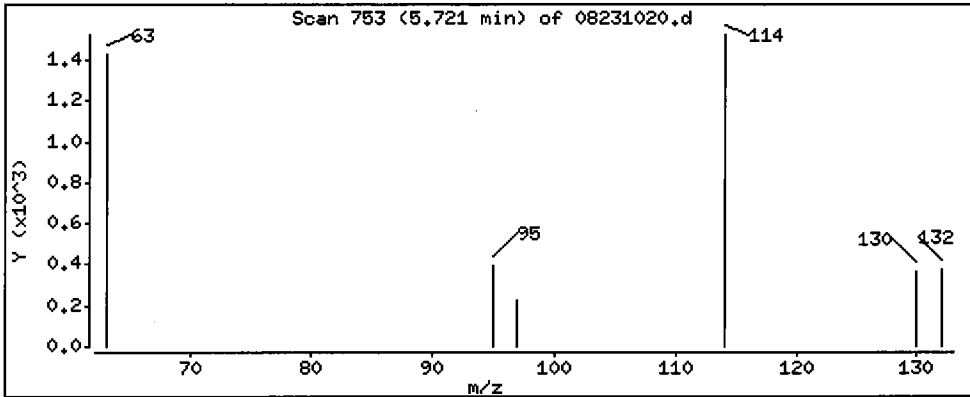
Column phase: RTXVMS

Column diameter: 0.18

8 Trichloroethene

Concentration: 15.068 ug/L

*PC*



**SIM PAH Raw Data  
Extraction Bench Sheets and Notes**

**ARI Job ID: RI65**



Preparation Test SIM PNA # 6

ARI Job No(s) RI65

Bottle #	Extraction Requirements	Verify Client ID	Volume Extracted	KD Exchange to Hexane (X2)	Turbo Vap 1 2 3	(REQ) Silica Gel Clean (1:1) Y N	Turbo Vap 1 2 3	Final Effective Volume	Volume to Lab	Comments
	RI65 MBW	Date 8/19/10	500mL		1 2 3	Y N	1 2 3	0.5mL	0.5mL	
	↓ SBW	↓	↓							
	SBW Dup.									
12	RI65 A	verified	500 mL							
24	B									
31	BMS									
23	BMSD									
13	C									
11	D									
12	E									
Analyst/Date: JW 8/19/10				TS/RR	8-20-10	8/24/10	TS	8-25-10		

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	I	100µL	10/7/10	JW	Gx3
Spike	18	100µL	10/7/10	JW	Gx3

Extraction Time: 12:05

- SPECIAL INSTRUCTIONS: 1. Rinse all glassware with Low Level DCM. 2. Extract 3X with 30mL Low Level DCM. 3. KD (no drying column) to ~8mL at 80°. 4. Exchange (2 X with 10mL) to Low Level Hexane at 100°. 5. TurboVap. 6. Silica Clean-up=REQUIRED. 6. TurboVap. 7. Vial in Low Level DCM. 8. Post screen extracts with any color. A. Archive Y N



**SIM PAH Raw Data  
Initial Calibration**

**ARI Job ID: RI65**





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

ARI Project ID: CURVIZ Client ID: \_\_\_\_\_

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

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

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

Curve Date: 8.18.10 Analysis Start Date: \_\_\_\_\_

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

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

*See report*

*- All targets <20% RSD.*

Additional Details on Reverse: Yes / No

Analyst: VIB Date: 8.19.10

Reviewer: [Signature] Date: 8/19/10

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20100818.b

ARI Job No. : IC08 Method: lowsim.m Instrument: nt11.i Date: 18-AUG-2010

Time	Filename	LabID	ClientID	DF	Manually Integrated Compounds
1525	ic0818a.d	IC0818A		1	NO MANUAL INTEGRATION
1549	ic0818b.d	IC0818B		1	NO MANUAL INTEGRATION
1627	ic0818c.d	IC0818C		1	NO MANUAL INTEGRATION
1651	ic0818d.d	IC0818D		1	NO MANUAL INTEGRATION
1714	ic0818e.d	IC0818E		1	NO MANUAL INTEGRATION
1739	ic0818f.d	IC0818F		1	Total Benzofluoranthenes,
1802	icv0818.d	ICV0818		1	NO MANUAL INTEGRATION

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20100818.b/lowsim.m  
Batch File: /chem3/nt11.i/20100818.b  
Inst ID: nt11.i

ID: RT01 RT02 RT03 RT04 RT05 RT06  
FILENAME: IC0818a IC0818b IC0818c IC0818d IC0818e IC0818f  
INJ.DATE: 18-AUG-2010 18-AUG-2010 18-AUG-2010 18-AUG-2010 18-AUG-2010 18-AUG-2010  
INJ.TIME: 15:25 15:49 16:27 16:51 17:14 17:39

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 D5-Phenol	+++++	+++++	+++++	+++++	+++++	+++++	3.150	2.900-3.400	+++++	+++++
2 Phenol	+++++	+++++	+++++	+++++	+++++	+++++	3.160	2.910-3.410	+++++	+++++
3 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	6.639	6.389-6.889	+++++	+++++
4 Naphthalene-d8	5.939	5.939	5.939	5.939	5.939	5.939	5.939	5.689-6.189	5.939	0.000
5 Naphthalene	5.962	5.962	5.962	5.962	5.962	5.962	5.962	5.712-6.212	5.962	0.000
6 2-Methylnaphthalene-d1	6.767	6.767	6.767	6.767	6.767	6.767	6.767	6.517-7.017	6.767	0.000
7 2-Methylnaphthalene	6.802	6.802	6.802	6.802	6.802	6.802	6.802	6.552-7.052	6.802	0.000
8 1-Methylnaphthalene	6.940	6.940	6.940	6.940	6.940	6.940	6.940	6.690-7.190	6.940	0.000
9 Dimethylphtalate	+++++	+++++	+++++	+++++	+++++	+++++	10.433	10.183-10.683	+++++	+++++
10 Acenaphthylene	7.916	7.916	7.915	7.916	7.915	7.916	7.916	7.666-8.166	7.916	0.000
* 11 Acenaphthene-d10	8.103	8.103	8.103	8.103	8.103	8.103	8.103	7.853-8.353	8.103	0.000
12 Acenaphthene	8.143	8.143	8.143	8.144	8.143	8.143	8.143	7.893-8.393	8.143	0.000
13 Diethylphtalate	+++++	+++++	+++++	+++++	+++++	+++++	11.543	11.293-11.793	+++++	+++++
14 Dibenzofuran	8.345	8.345	8.345	8.345	8.344	8.345	8.345	8.095-8.595	8.345	0.000
15 Fluorene	8.760	8.760	8.760	8.760	8.760	8.760	8.760	8.510-9.010	8.760	0.000
\$ 16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	12.499	12.249-12.749	+++++	+++++
17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	13.381	13.131-13.631	+++++	+++++

Reviewer 1  
Reviewer 2

*VBS*

*[Signature]*

Date: 8-19-10  
Date: 8/19/10

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20100818.b/lowsim.m  
Batch File: /chem3/nt11.i/20100818.b  
Inst ID: nt11.1

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 18 Phenanthrene-d10	9.940	9.940	9.926	9.927	9.926	9.927	9.927	9.677-10.177	9.931	0.007
19 Phenanthrene	9.953	9.953	9.953	9.953	9.953	9.953	9.953	9.703-10.203	9.953	0.000
20 Anthracene	10.020	10.020	10.020	10.007	10.007	10.007	10.007	9.757-10.257	10.014	0.007
21 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	14.153	13.903-14.403	+++++	+++++
22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	14.533	14.283-14.783	+++++	+++++
\$ 23 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	14.682	14.432-14.932	+++++	+++++
24 Fluoranthene	11.442	11.442	11.442	11.442	11.442	11.442	11.442	11.192-11.692	11.442	0.000
25 Pyrene	11.723	11.723	11.723	11.723	11.723	11.723	11.723	11.473-11.973	11.723	0.000
26 Butylbenzylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	16.528	16.278-16.778	+++++	+++++
27 Bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	17.320	17.070-17.570	+++++	+++++
28 Benzo(a)anthracene	13.212	13.212	13.212	13.212	13.212	13.212	13.212	12.962-13.462	13.212	0.000
* 29 Chrysene-d12	13.239	13.239	13.239	13.239	13.239	13.239	13.239	12.989-13.489	13.239	0.000
30 Chrysene	13.265	13.265	13.265	13.266	13.265	13.265	13.265	13.015-13.515	13.265	0.000
31 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	18.607	18.357-18.857	+++++	+++++
43 Total Benzofluoranthen	14.509	14.509	14.511	14.510	14.534	14.509	14.509	14.259-14.759	14.514	0.010
34 Benzo(a)pyrene	14.947	14.947	14.949	14.947	14.937	14.935	14.935	14.685-15.185	14.944	0.006
* 35 Perylene-d12	15.027	15.027	15.029	15.028	15.018	15.027	15.027	14.777-15.277	15.026	0.004
\$ 36 Dibenzo(a,h)anthracene	16.730	16.730	16.732	16.730	16.732	16.730	16.730	16.480-16.980	16.731	0.001
37 Indeno(1,2,3-cd)pyrene	16.784	16.784	16.785	16.770	16.772	16.770	16.770	16.520-17.020	16.777	0.007
38 Dibenzo(a,h)anthracene	16.797	16.797	16.799	16.784	16.785	16.784	16.784	16.534-17.034	16.791	0.007
39 Benzo(g,h,i)perylene	17.293	17.293	17.295	17.293	17.295	17.293	17.293	17.043-17.543	17.294	0.001

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

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 8.18.10 Analysis: LOW Sim PWA Analyst: VIS

GC Program: LOW Sim Column No: 180393 Column Type: ZB-Smsi

Instrument Tune (.U or .CT.): 100605.U EM Voltage: 2200

Calibration File: DF0818 Curve Date: 8.18.10

IS/SS	Ical/Ccal	LCS/ICV
<u>11665-3 VIS</u>	<u>11665-3</u>	<u>11663-4</u>
<u>1754-5</u>		

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20100818.b

Time	Filename	LabID	ClientId	DF
1 1511	df0818.d	DF0818		1  NO ISTDS FOUND
2 1525	ic0818a.d	IC0818A		1   5.94 422551   8.10 241002   9.94 409999  13.24 258429  15.03 200470
3 1549	ic0818b.d	IC0818B		1   5.94 458789   8.10 243638   9.94 426979  13.24 283343  15.03 215832
4 1627	ic0818c.d	IC0818C		1   5.94 410655   8.10 231284   9.93 389118  13.24 231066  15.03 174799
5 1651	ic0818d.d	IC0818D		1   5.94 420304   8.10 235063   9.93 397699  13.24 240566  15.03 183198
6 1714	ic0818e.d	IC0818E		1   5.94 440171   8.10 241408   9.93 412483  13.24 266735  15.02 192917
7 1739	ic0818f.d	IC0818F		1   5.94 426298   8.10 229121   9.93 389224  13.24 228389  15.03 170190
8 1802	icv0818.d	ICV0818		1   5.94 421880   8.10 237318   9.93 392583  13.24 242433  15.02 178531
9 1826	rd57mb.d	RD57MBW1	RD57MBW1	1   5.94 443388   8.10 237559   9.93 385925  13.24 241750  15.03 186419
10 1851	rd57sb.d	RD57LCSW1	RD57LCSW1	1   5.94 438816   8.10 239578   9.93 400949  13.24 258734  15.02 202723
11 1915	rd57at.d	RD57AT	PEO-259	1   5.94 443919   8.10 236916   9.93 398246  13.24 264372  15.02 206054

*8.19.10 VIS*

**Maintenance / Comments**

New line / New septum / clipped column / flushed injector

**Maintenance Verification** (Identify ICal or CCal that demonstrates the instrument is in control): IC0818A

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

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-AUG-2010 15:25  
 End Cal Date : 18-AUG-2010 17:39  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem3/nt11.i/20100818.b/lowsim.m  
 Cal Date : 19-Aug-2010 08:49 van  
 Curve Type : Average

Calibration File Names:

Level 1: /chem3/nt11.i/20100818.b/ic0818c.d  
 Level 2: /chem3/nt11.i/20100818.b/ic0818f.d  
 Level 3: /chem3/nt11.i/20100818.b/ic0818d.d  
 Level 4: /chem3/nt11.i/20100818.b/ic0818a.d  
 Level 5: /chem3/nt11.i/20100818.b/ic0818e.d  
 Level 6: /chem3/nt11.i/20100818.b/ic0818b.d

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
2 Phenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
5 Naphthalene	1.06401	1.02348	0.99416	0.99819	1.01882	0.97467	1.01222	3.056
7 2-Methylnaphthalene	0.62364	0.61395	0.61769	0.62896	0.65178	0.61672	0.62545	2.236
8 1-Methylnaphthalene	0.62169	0.61014	0.61603	0.61768	0.63942	0.61278	0.61962	1.692
9 Dimethylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
10 Acenaphthylene	1.84466	1.85375	1.80136	1.87293	1.95854	2.00586	1.88951	4.075
12 Acenaphthene	1.09398	1.10277	1.07562	1.10311	1.14694	1.16093	1.11389	2.952
13 Diethylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
14 Dibenzofuran	1.58169	1.60088	1.60143	1.61456	1.65745	1.69853	1.62576	2.692
15 Fluorene	1.24003	1.15384	1.15164	1.20557	1.23402	1.25653	1.20694	3.736
17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Phenanthrene	1.04518	1.03511	1.04017	0.99844	1.00400	1.02846	1.02523	1.900
20 Anthracene	0.97739	0.95646	0.97267	1.02735	1.03863	1.06690	1.00656	4.356
21 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Fluoranthene	1.05670	1.02466	1.05464	1.08708	1.11165	1.14876	1.08058	4.144
25 Pyrene	1.09417	1.06076	1.08681	1.13947	1.16755	1.17609	1.12081	4.196
26 Butylbenzylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
27 Bis(2-Ethylhexyl)phthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
28 Benzo(a)anthracene	1.46002	1.36542	1.36368	1.38759	1.35907	1.38799	1.38730	2.720

## Analytical Resources, Inc.

## INITIAL CALIBRATION DATA

Start Cal Date : 18-AUG-2010 15:25  
 End Cal Date : 18-AUG-2010 17:39  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem3/nt11.i/20100818.b/lowsim.m  
 Cal Date : 19-Aug-2010 08:49 van  
 Curve Type : Average

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
30 Chrysene	1.44937	1.40607	1.39768	1.36324	1.38372	1.37018	1.39504	2.230
31 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 Total Benzofluoranthenes	1.73456	1.65373	1.62937	1.70912	1.74292	1.65701	1.68779	2.804
34 Benzo(a)pyrene	1.40253	1.34927	1.33780	1.42642	1.42497	1.40300	1.39066	2.739
37 Indeno(1,2,3-cd)pyrene	1.93754	1.78410	1.85195	1.79689	1.90968	1.89095	1.86185	3.330
38 Dibenzo(a,h)anthracene	1.46557	1.35308	1.41324	1.37502	1.46277	1.44567	1.41922	3.321
39 Benzo(g,h,i)perylene	1.70905	1.60287	1.65827	1.57286	1.71527	1.59576	1.64235	3.712
\$ 1 D5-Phenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 6 2-Methylnaphthalene-d10	0.63888	0.62790	0.62941	0.63121	0.64997	0.63053	0.63465	1.326
\$ 16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 23 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 36 Dibenzo(a,h)anthracene-d14	1.12289	0.99026	1.04156	1.00984	1.07160	1.06466	1.05013	4.516

Date : 18-AUG-2010 15:11

Client ID:

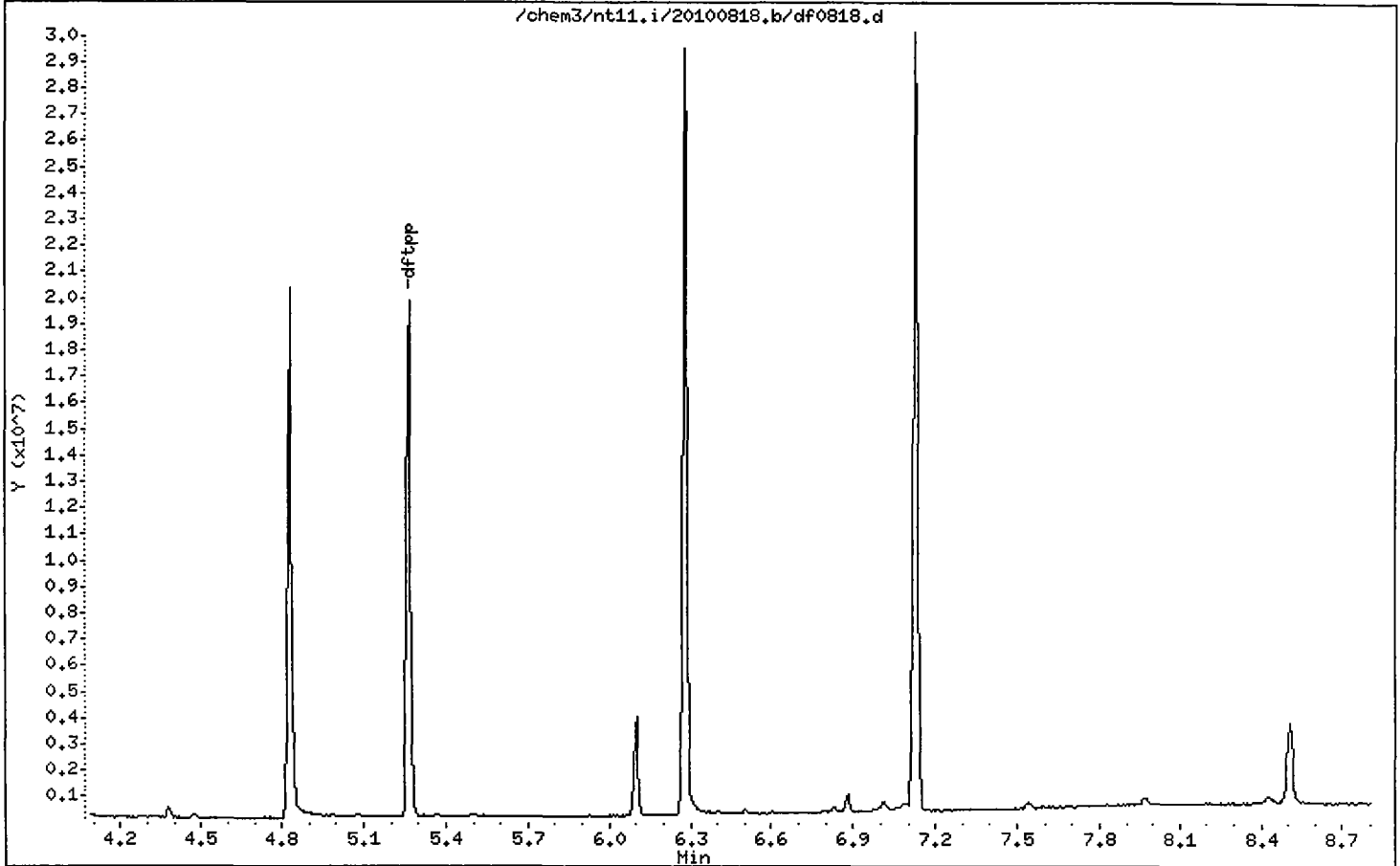
Instrument: nt11.i

Sample Info: DF0818

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25





Date : 18-AUG-2010 15:11

Client ID:

Instrument: nt11.i

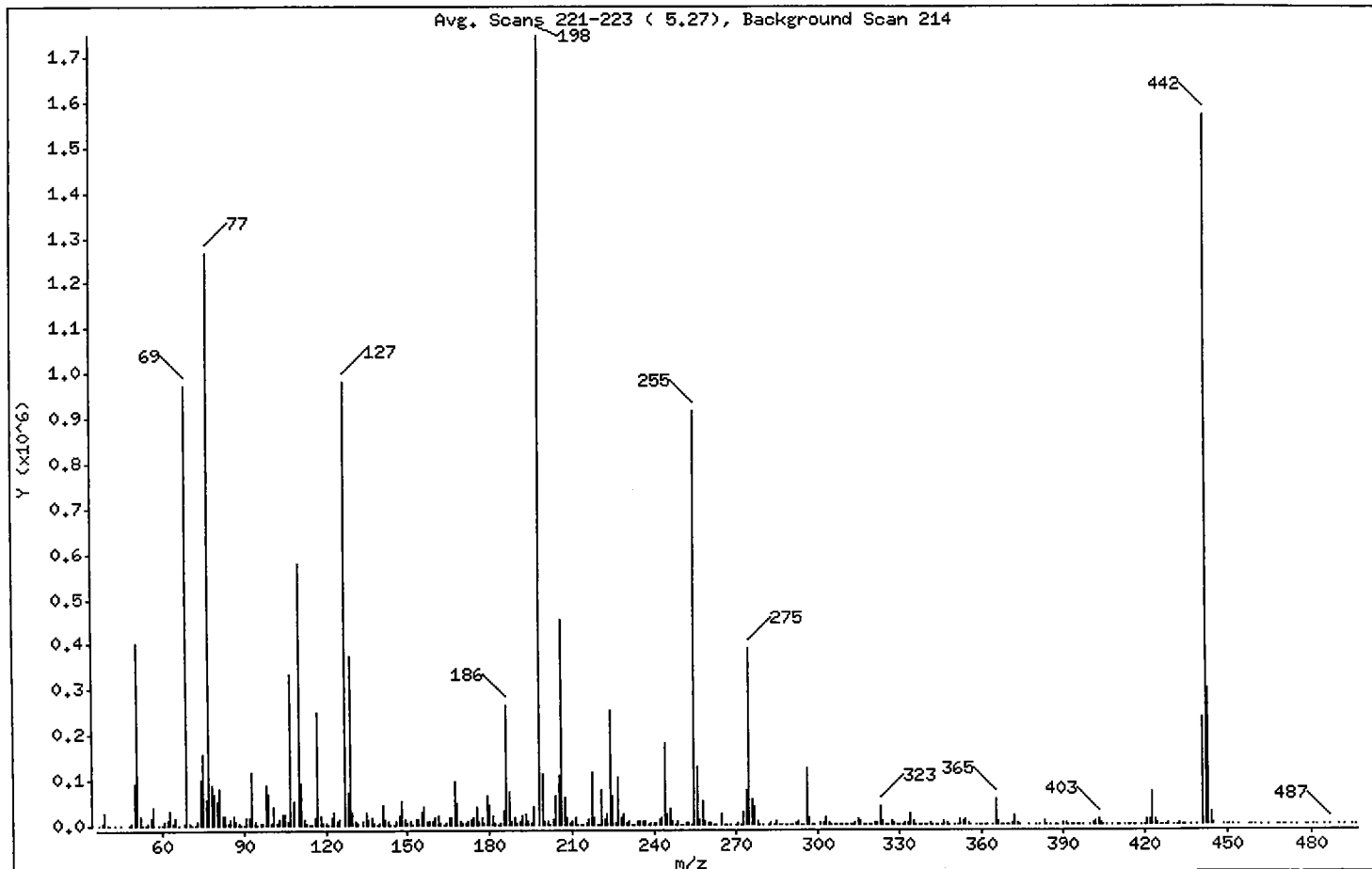
Sample Info: DF0818

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

1 df tpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	23.09
68	Less than 2.00% of mass 69	0.12 ( 0.21)
69	Mass 69 relative abundance	55.52
70	Less than 2.00% of mass 69	0.21 ( 0.38)
127	10.00 - 80.00% of mass 198	56.16
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.46
275	10.00 - 60.00% of mass 198	22.41
365	Greater than 1.00% of mass 198	3.16
441	0.01 - 24.00% of mass 442	13.50 ( 15.02)
442	50.00 - 200.00% of mass 198	89.90
443	15.00 - 24.00% of mass 442	17.15 ( 19.08)

Date : 18-AUG-2010 15:11

Client ID:

Instrument: nt11.i

Sample Info: DF0818

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0818.d  
 Spectrum: Avg. Scans 221-223 ( 5,27), Background Scan 214  
 Location of Maximum: 198.00  
 Number of points: 401

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1247	147.00	21648	249.00	6099	355.00	2726
38.00	3136	148.00	52040	250.00	1916	356.00	120
39.00	28944	149.00	10890	251.00	1927	358.00	580
40.00	1323	150.00	3938	252.00	2715	359.00	522
41.00	751	151.00	6459	253.00	5298	360.00	136
43.00	1794	152.00	987	254.00	250	361.00	497
45.00	1467	153.00	13768	255.00	917568	362.00	210
48.00	318	154.00	11229	256.00	129808	364.00	132
49.00	2444	155.00	28416	257.00	11709	365.00	55320
50.00	93992	156.00	39312	258.00	52776	366.00	9742
51.00	403712	157.00	7872	259.00	7457	367.00	788
52.00	19296	158.00	7772	260.00	2320	368.00	397
53.00	397	159.00	7178	261.00	2119	369.00	366
54.00	449	160.00	14489	262.00	336	370.00	625
55.00	4579	161.00	19912	263.00	222	371.00	4190
56.00	16584	162.00	4248	265.00	22256	372.00	19304
57.00	39408	163.00	1151	266.00	1695	373.00	4957
59.00	562	164.00	2686	267.00	316	374.00	1365
60.00	596	165.00	16584	268.00	464	377.00	268
61.00	8298	166.00	15420	270.00	1764	380.00	204
62.00	10587	167.00	95024	271.00	2827	381.00	137
63.00	30872	168.00	49704	272.00	1953	383.00	7450
64.00	3269	169.00	7141	273.00	28320	384.00	1606
65.00	18064	170.00	3861	274.00	76832	385.00	698
66.00	1203	171.00	3107	275.00	391872	387.00	146
68.00	2070	172.00	7599	276.00	55216	388.00	107
69.00	971008	173.00	11771	277.00	39696	390.00	3946
70.00	3706	174.00	16912	278.00	6783	391.00	2363
71.00	1848	175.00	40800	279.00	1015	392.00	590
72.00	951	176.00	8180	280.00	180	393.00	271
73.00	6747	177.00	16228	282.00	919	394.00	685
74.00	102488	178.00	4299	283.00	4447	395.00	22
75.00	156096	179.00	65552	284.00	1761	396.00	414
76.00	58264	180.00	45752	285.00	7292	397.00	715
77.00	1265152	181.00	21520	286.00	1708	400.00	75

Date : 18-AUG-2010 15:11

Client ID:

Instrument: nt11.i

Sample Info: DF0818

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0818.d

Spectrum: Avg. Scans 221-223 ( 5,27), Background Scan 214

Location of Maximum: 198.00

Number of points: 401

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	90224	182.00	3670	287.00	386	401.00	2159
79.00	66768	183.00	1666	288.00	833	402.00	9330
80.00	53928	184.00	5290	289.00	1255	403.00	11783
81.00	78784	185.00	31840	290.00	1179	404.00	3761
82.00	19936	186.00	267264	291.00	1793	405.00	765
83.00	19648	187.00	70480	292.00	2409	406.00	533
84.00	2320	188.00	7121	293.00	7160	408.00	388
85.00	10480	189.00	14414	294.00	1954	410.00	646
86.00	18528	190.00	2083	295.00	302	411.00	495
87.00	8852	191.00	7819	296.00	124296	413.00	415
88.00	4480	192.00	21136	297.00	17040	414.00	127
89.00	1632	193.00	22408	298.00	511	415.00	758
90.00	491	194.00	6105	299.00	308	416.00	742
91.00	16228	195.00	2593	301.00	2073	417.00	369
92.00	17176	196.00	42128	302.00	2618	419.00	28
93.00	116800	198.00	1748480	303.00	14088	420.00	88
94.00	7885	199.00	113008	304.00	5036	421.00	13261
95.00	711	200.00	7995	305.00	516	422.00	11222
96.00	4356	201.00	8110	306.00	450	423.00	73464
97.00	2022	202.00	1124	307.00	248	424.00	13926
98.00	87600	203.00	13913	308.00	1980	425.00	3069
99.00	67472	204.00	62776	309.00	1357	426.00	963
100.00	5897	205.00	109864	310.00	1448	427.00	1256
101.00	40768	206.00	454912	311.00	291	428.00	1127
102.00	3025	207.00	58912	312.00	413	429.00	2366
103.00	11191	208.00	14698	313.00	614	431.00	1365
104.00	25792	209.00	4944	314.00	5705	432.00	639
105.00	24216	210.00	8036	315.00	12080	433.00	2239
106.00	6814	211.00	15789	316.00	6373	434.00	804
107.00	335488	212.00	1893	317.00	1469	435.00	829
108.00	53592	213.00	710	318.00	202	437.00	399
110.00	577600	214.00	766	319.00	92	439.00	211
111.00	92040	215.00	4341	320.00	1271	441.00	236032
112.00	10411	216.00	10694	321.00	5359	442.00	1571840
113.00	3702	217.00	116768	322.00	2711	443.00	299904

Date : 18-AUG-2010 15:11

Client ID:

Instrument: nt11.i

Sample Info: DF0818

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0818.d

Spectrum: Avg. Scans 221-223 ( 5,27), Background Scan 214

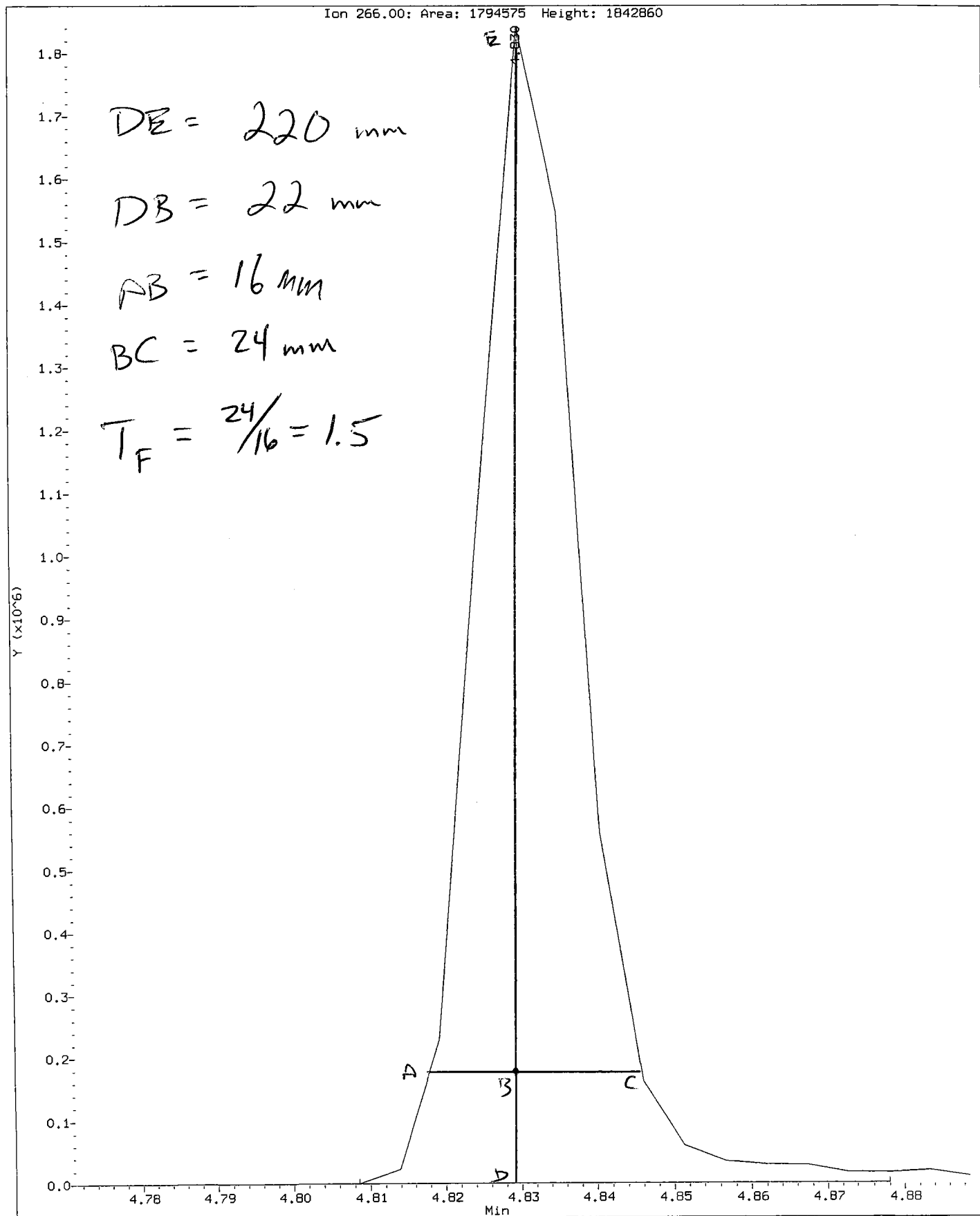
Location of Maximum: 198.00

Number of points: 401

m/z	Y	m/z	Y	m/z	Y	m/z	Y
114.00	1103	218.00	15208	323.00	39872	444.00	26936
115.00	692	219.00	1201	324.00	8659	445.00	2623
116.00	15598	220.00	306	325.00	560	449.00	63
117.00	250752	221.00	77480	326.00	597	450.00	192
118.00	18400	222.00	13515	327.00	7486	451.00	300
119.00	2540	223.00	25936	328.00	3579	452.00	115
120.00	2851	224.00	254784	329.00	249	454.00	168
121.00	1775	225.00	62416	330.00	92	458.00	107
122.00	17416	226.00	6000	331.00	39	459.00	78
123.00	28136	227.00	106360	332.00	2048	460.00	221
124.00	8424	228.00	16373	333.00	5863	462.00	91
125.00	12796	229.00	22576	334.00	25392	465.00	183
127.00	982208	230.00	3275	335.00	7617	468.00	165
128.00	74184	231.00	8738	336.00	716	469.00	196
129.00	374464	232.00	1588	337.00	454	470.00	117
130.00	29856	233.00	1752	338.00	358	471.00	57
131.00	6054	234.00	7763	339.00	1363	473.00	249
132.00	2641	235.00	7892	340.00	803	475.00	120
134.00	9300	236.00	6407	341.00	4002	478.00	246
135.00	29512	237.00	6453	342.00	325	479.00	178
136.00	10507	238.00	428	343.00	397	481.00	69
137.00	14889	239.00	3864	344.00	376	482.00	163
138.00	2465	240.00	2751	345.00	316	485.00	52
139.00	1857	241.00	5637	346.00	6894	487.00	364
140.00	4207	242.00	12655	347.00	2081	490.00	53
141.00	44392	243.00	14593	348.00	731	492.00	64
142.00	13829	244.00	181120	350.00	252	495.00	103
143.00	9684	245.00	22800	351.00	372	496.00	131
144.00	1285	246.00	35144	352.00	13572		
145.00	1925	247.00	7028	353.00	7213		
146.00	7080	248.00	1469	354.00	10810		

Data File: /chem3/nt11.1/20100818.b/ddt.b/df0818.d  
Injection Date: 18-AUG-2010 15:11  
Instrument: nt11.i  
Client Sample ID:

Compound: Pentachlorophenol  
CAS Number: 87-86-5

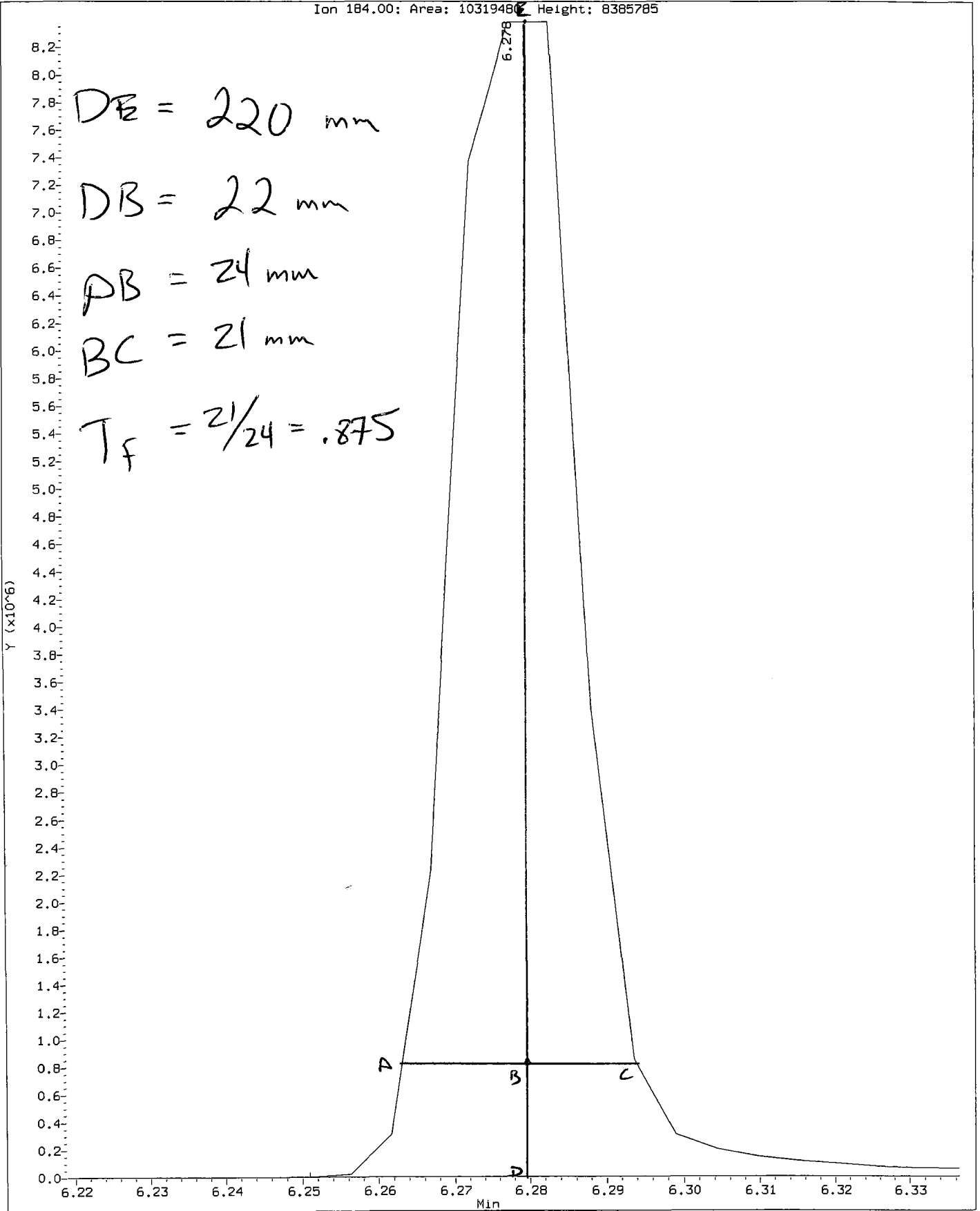


RI65:00356

Data File: /chem3/nt11.1/20100818.b/ddt.b/df0818.d  
Injection Date: 18-AUG-2010 15:11  
Instrument: nt11.1  
Client Sample ID:

Compound: Benzidine  
CAS Number:

Ion 184.00; Area: 10319480; Height: 8385785



RI65: 00357

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

Data file: /chem3/nt11.i/20100818.b/ddt.b/df0818.d      ARI ID: DF0818  
Method: /chem3/nt11.i/20100818.b/ddt.b/sw846ddt.m      Misc:  
Analysis Date: 18-AUG-2010 15:11      Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.830	1794575
Benzidine	6.278	10319480
4,4'-DDE	6.507	18434
4,4'-DDD	6.833	33615
4,4'-DDT	7.127	5459440

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

$$\text{DDT Percent Breakdown} = \frac{(18434 + 33615) * 100}{(18434 + 33615 + 5459440)}$$

$$\text{DDT Percent Breakdown} = 0.9 \%$$

Analytical Resources, Inc.

LOW LEVEL PNAS BY SW8270D-SIM

Data file : /chem3/nt11.i/20100818.b/ic0818a.d  
 Lab Smp Id: IC0818A  
 Inj Date : 18-AUG-2010 15:25  
 Operator : VTS  
 Smp Info : IC0818A  
 Misc Info :  
 Comment :  
 Method : /chem3/nt11.i/20100818.b/lowsim.m  
 Meth Date : 19-Aug-2010 08:51 van  
 Cal Date : 18-AUG-2010 17:39  
 Als bottle: 2  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50  
 Processing Host: cserv3

Inst ID: nt11.i  
 Quant Type: ISTD  
 Cal File: ic0818f.d  
 Calibration Sample, Level: 4  
 Compound Sublist: pnalnm.sub

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ng/mL)	ON-COL (ng/mL)
* 4 Naphthalene-d8	----	136	5.939	5.939	(1.000)	422551	200.000	
5 Naphthalene	----	128	5.962	5.962	(1.004)	527233	250.000	247
\$ 6 2-Methylnaphthalene-d10	----	152	6.767	6.767	(1.139)	333399	250.000	249
7 2-Methylnaphthalene	----	142	6.802	6.802	(1.145)	332207	250.000	251
8 1-Methylnaphthalene	----	142	6.940	6.940	(1.169)	326252	250.000	249
10 Acenaphthylene	----	152	7.916	7.916	(0.977)	564226	250.000	248
* 11 Acenaphthene-d10	----	164	8.103	8.103	(1.000)	241002	200.000	
12 Acenaphthene	----	153	8.143	8.143	(1.005)	332315	250.000	248
14 Dibenzofuran	----	168	8.345	8.345	(1.030)	486389	250.000	248
15 Fluorene	----	166	8.760	8.760	(1.081)	363180	250.000	250
* 18 Phenanthrene-d10	----	188	9.940	9.927	(1.000)	409999	200.000	
19 Phenanthrene	----	178	9.953	9.953	(1.001)	511700	250.000	243
20 Anthracene	----	178	10.020	10.007	(1.008)	526516	250.000	255
24 Fluoranthene	----	202	11.442	11.442	(1.151)	557129	250.000	252
25 Pyrene	----	202	11.723	11.723	(1.179)	583976	250.000	254
28 Benzo(a)anthracene	----	228	13.212	13.212	(0.998)	448241	250.000	250
* 29 Chrysene-d12	----	240	13.239	13.239	(1.000)	258429	200.000	
30 Chrysene	----	228	13.265	13.265	(1.002)	440375	250.000	244
43 Total Benzofluoranthenes	----	252	14.509	14.509	(0.966)	856567	500.000	506
34 Benzo(a)pyrene	----	252	14.947	14.935	(0.995)	357444	250.000	256
* 35 Perylene-d12	----	264	15.027	15.027	(1.000)	200470	200.000	
37 Indeno(1,2,3-cd)pyrene	----	276	16.784	16.770	(1.117)	450279	250.000	241
\$ 36 Dibenzo(a,h)anthracene-d14	----	292	16.730	16.730	(1.113)	253053	250.000	240
38 Dibenzo(a,h)anthracene	----	278	16.797	16.784	(1.118)	344564	250.000	242
39 Benzo(g,h,i)perylene	----	276	17.293	17.293	(1.151)	394138	250.000	239

8.19.10  
 VTS



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

Instrument ID: nt11.i  
Lab File ID: ic0818a.d  
Lab Smp Id: IC0818A  
Analysis Type: SV  
Quant Type: ISTD  
Operator: VTS  
Method File: /chem3/nt11.i/20100818.b/lowsim.m  
Misc Info:

Calibration Date: 18-AUG-2010  
Calibration Time: 15:25  
Level:  
Sample Type:

Test Mode:  
Use Initial Calibration Level 4.

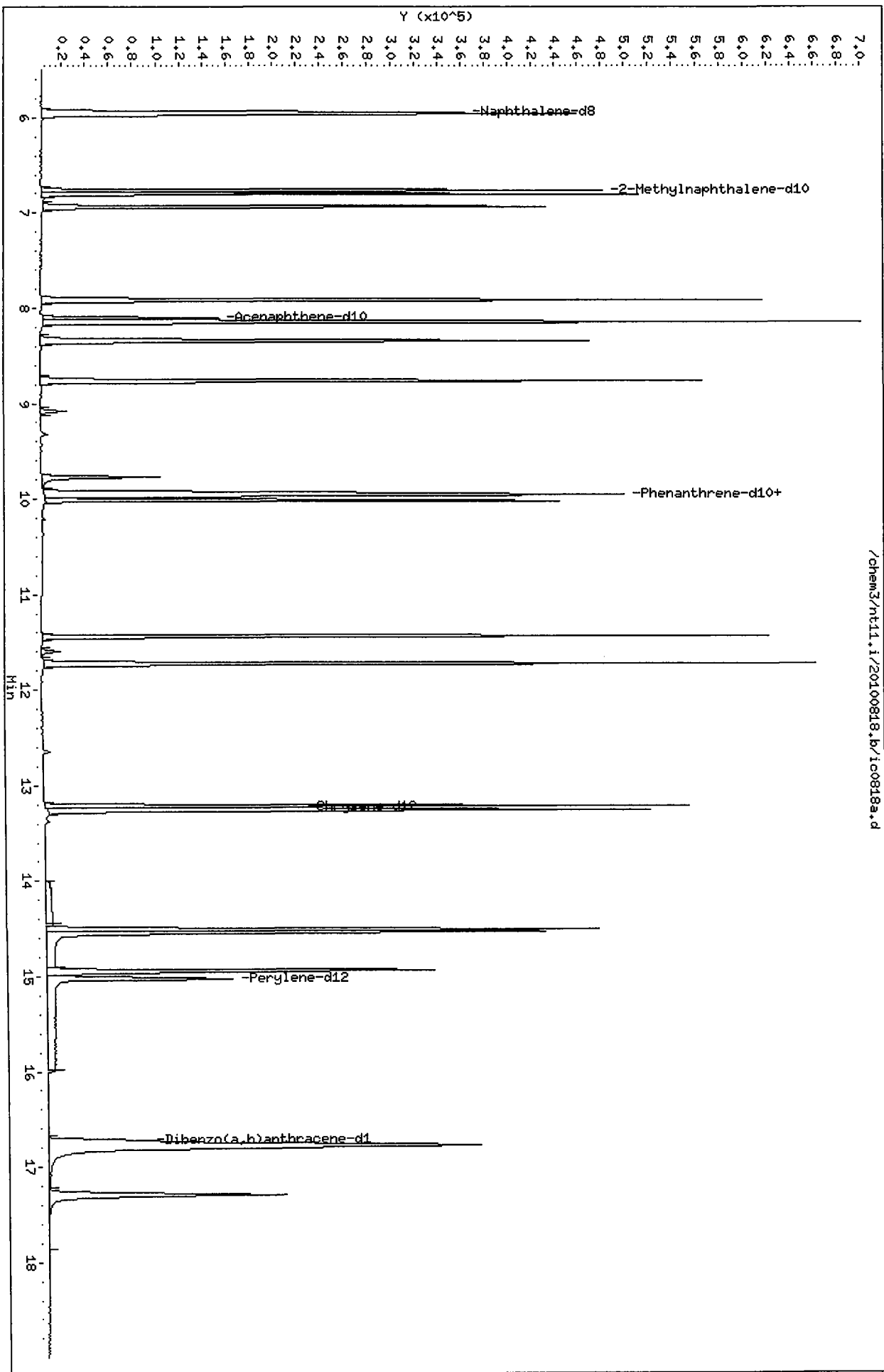
COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	422551	0.00
11 Acenaphthene-d10	241002	120501	482004	241002	0.00
18 Phenanthrene-d10	409999	205000	819998	409999	0.00
29 Chrysene-d12	258429	129214	516858	258429	0.00
35 Perylene-d12	200470	100235	400940	200470	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.94	9.44	10.44	9.94	0.00
29 Chrysene-d12	13.24	12.74	13.74	13.24	0.00
35 Perylene-d12	15.03	14.53	15.53	15.03	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/nt11.i/20100818.b/ic0818a.d  
Date: 18-AUG-2010 15:25  
Client ID:  
Sample Info: IC0818A  
Column phase: ZB-5msi

Instrument: nt11.i  
Operator: VTS  
Column diameter: 0.25



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100818.b/ic0818b.d  
Lab Smp Id: IC0818B  
Inj Date : 18-AUG-2010 15:49  
Operator : VTS  
Smp Info : IC0818B  
Misc Info :  
Comment :  
Method : /chem3/nt11.i/20100818.b/lowsim.m  
Meth Date : 19-Aug-2010 08:51 van  
Cal Date : 18-AUG-2010 17:39  
Als bottle: 3  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50  
Processing Host: cserv3  
Inst ID: nt11.i  
Quant Type: ISTD  
Cal File: ic0818f.d  
Calibration Sample, Level: 6  
Compound Sublist: pnalnm.sub

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	458789	200.000	
5 Naphthalene	128	5.962	5.962	(1.004)	2235837	1000.00	963
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	1446411	1000.00	994
7 2-Methylnaphthalene	142	6.802	6.802	(1.145)	1414725	1000.00	986
8 1-Methylnaphthalene	142	6.940	6.940	(1.169)	1405688	1000.00	989
10 Acenaphthylene	152	7.916	7.916	(0.977)	2443515	1000.00	1060
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	243638	200.000	
12 Acenaphthene	153	8.143	8.143	(1.005)	1414229	1000.00	1040
14 Dibenzofuran	168	8.345	8.345	(1.030)	2069133	1000.00	1040
15 Fluorene	166	8.760	8.760	(1.081)	1530698	1000.00	1040
* 18 Phenanthrene-d10	188	9.940	9.927	(1.000)	426979	200.000	
19 Phenanthrene	178	9.953	9.953	(1.001)	2195649	1000.00	1000
20 Anthracene	178	10.020	10.007	(1.008)	2277717	1000.00	1060
24 Fluoranthene	202	11.442	11.442	(1.151)	2452484	1000.00	1060
25 Pyrene	202	11.723	11.723	(1.179)	2510834	1000.00	1050
28 Benzo(a)anthracene	228	13.212	13.212	(0.998)	1966387	1000.00	1000
* 29 Chrysene-d12	240	13.239	13.239	(1.000)	283343	200.000	
30 Chrysene	228	13.265	13.265	(1.002)	1941159	1000.00	982
43 Total Benzofluoranthenes	252	14.509	14.509	(0.966)	3576364	2000.00	1960
34 Benzo(a)pyrene	252	14.947	14.935	(0.995)	1514064	1000.00	1010
* 35 Perylene-d12	264	15.027	15.027	(1.000)	215832	200.000	
37 Indeno(1,2,3-cd)pyrene	276	16.784	16.770	(1.117)	2040633	1000.00	1020
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.730	16.730	(1.113)	1148935	1000.00	1010
38 Dibenzo(a,h)anthracene	278	16.797	16.784	(1.118)	1560104	1000.00	1020
39 Benzo(g,h,i)perylene	276	17.293	17.293	(1.151)	1722082	1000.00	972

VTS  
8-19-10

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: ic0818b.d  
 Lab Smp Id: IC0818B  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem3/nt11.i/20100818.b/lowsim.m  
 Misc Info:

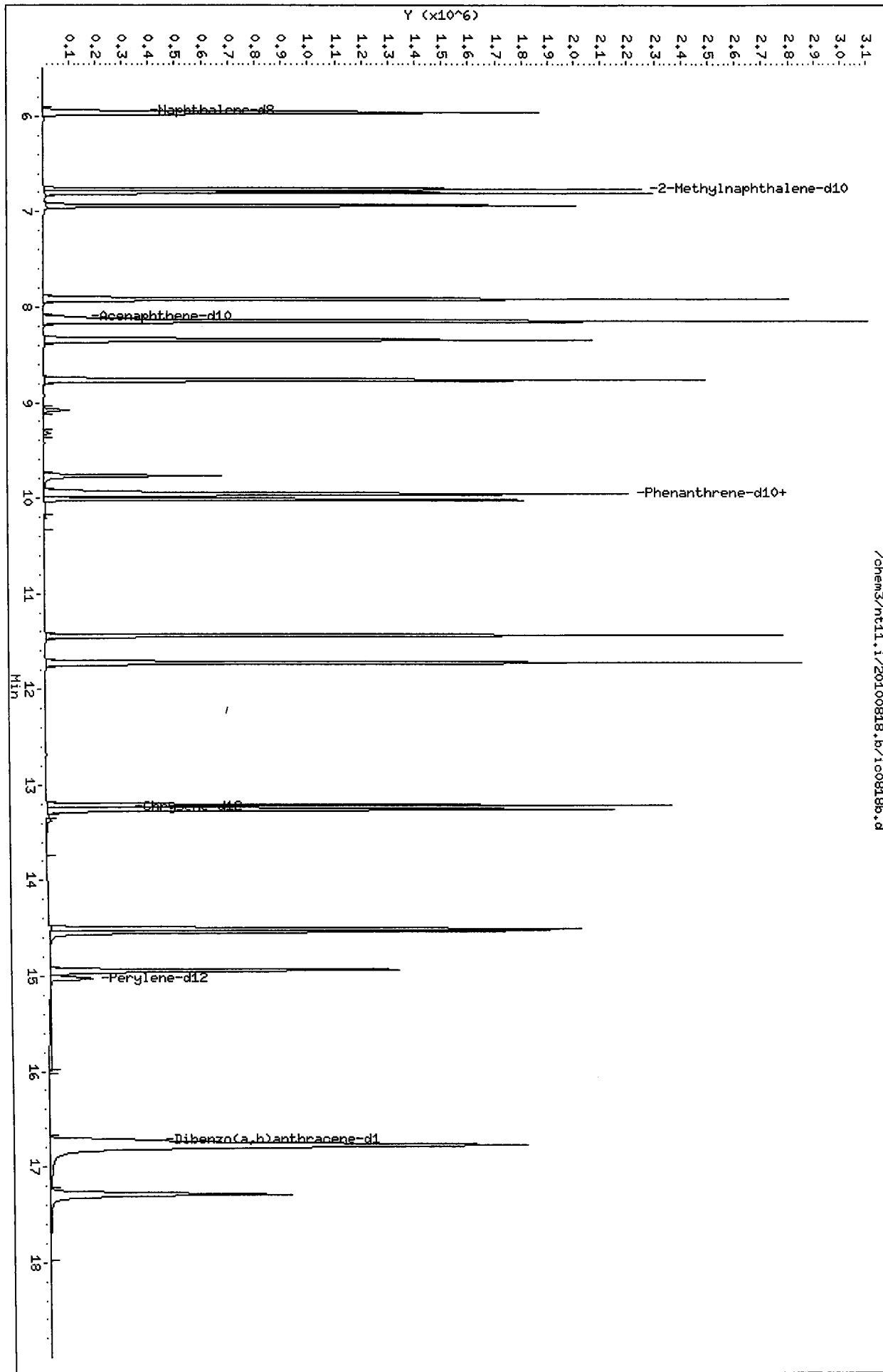
Calibration Date: 18-AUG-2010  
 Calibration Time: 15:25  
 Level:  
 Sample Type:

Test Mode: Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	458789	8.58
11 Acenaphthene-d10	241002	120501	482004	243638	1.09
18 Phenanthrene-d10	409999	205000	819998	426979	4.14
29 Chrysene-d12	258429	129214	516858	283343	9.64
35 Perylene-d12	200470	100235	400940	215832	7.66

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.94	9.44	10.44	9.94	0.00
29 Chrysene-d12	13.24	12.74	13.74	13.24	0.00
35 Perylene-d12	15.03	14.53	15.53	15.03	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.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100818.b/ic0818c.d  
 Lab Smp Id: IC0818C  
 Inj Date : 18-AUG-2010 16:27  
 Operator : VTS  
 Smp Info : IC0818C  
 Misc Info :  
 Comment :  
 Method : /chem3/nt11.i/20100818.b/lowsim.m  
 Meth Date : 19-Aug-2010 08:51 van  
 Cal Date : 18-AUG-2010 17:39  
 Als bottle: 4  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50  
 Processing Host: cserv3

Inst ID: nt11.i  
 Quant Type: ISTD  
 Cal File: ic0818f.d  
 Calibration Sample, Level: 1  
 Compound Sublist: pnalnm.sub

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
								CAL-AMT (ng/mL)	ON-COL (ng/mL)
* 4 Naphthalene-d8	136			5.939	5.939	(1.000)	410655	200.000	
5 Naphthalene	128			5.962	5.962	(1.004)	21847	10.0000	10.5
§ 6 2-Methylnaphthalene-d10	152			6.767	6.767	(1.139)	13118	10.0000	10.1
7 2-Methylnaphthalene	142			6.802	6.802	(1.145)	12805	10.0000	9.97
8 1-Methylnaphthalene	142			6.940	6.940	(1.169)	12765	10.0000	10.0
10 Acenaphthylene	152			7.915	7.916	(0.977)	21332	10.0000	9.76
* 11 Acenaphthene-d10	164			8.103	8.103	(1.000)	231284	200.000	
12 Acenaphthene	153			8.143	8.143	(1.005)	12651	10.0000	9.82
14 Dibenzofuran	168			8.345	8.345	(1.030)	18291	10.0000	9.73
15 Fluorene	166			8.760	8.760	(1.081)	14340	10.0000	10.3
* 18 Phenanthrene-d10	188			9.926	9.927	(1.000)	389118	200.000	
19 Phenanthrene	178			9.953	9.953	(1.003)	20335	10.0000	10.2
20 Anthracene	178			10.020	10.007	(1.009)	19016	10.0000	9.71
24 Fluoranthene	202			11.442	11.442	(1.153)	20559	10.0000	9.78
25 Pyrene	202			11.723	11.723	(1.181)	21288	10.0000	9.76
28 Benzo (a) anthracene	228			13.212	13.212	(0.998)	16868	10.0000	10.5
* 29 Chrysene-d12	240			13.239	13.239	(1.000)	231066	200.000	
30 Chrysene	228			13.265	13.265	(1.002)	16745	10.0000	10.4
43 Total Benzofluoranthenes	252			14.511	14.509	(0.966)	30320	20.0000	20.6
34 Benzo (a) pyrene	252			14.949	14.935	(0.995)	12258	10.0000	10.1
* 35 Perylene-d12	264			15.029	15.027	(1.000)	174799	200.000	
37 Indeno (1,2,3-cd) pyrene	276			16.785	16.770	(1.117)	16934	10.0000	10.4
§ 36 Dibenzo (a,h) anthracene-d14	292			16.732	16.730	(1.113)	9814	10.0000	10.7
38 Dibenzo (a,h) anthracene	278			16.799	16.784	(1.118)	12809	10.0000	10.3
39 Benzo (g,h,i) perylene	276			17.295	17.293	(1.151)	14937	10.0000	10.4

VTS  
8-19-10

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: ic0818c.d  
 Lab Smp Id: IC0818C  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem3/nt11.i/20100818.b/lowsim.m  
 Misc Info:

Calibration Date: 18-AUG-2010  
 Calibration Time: 15:25

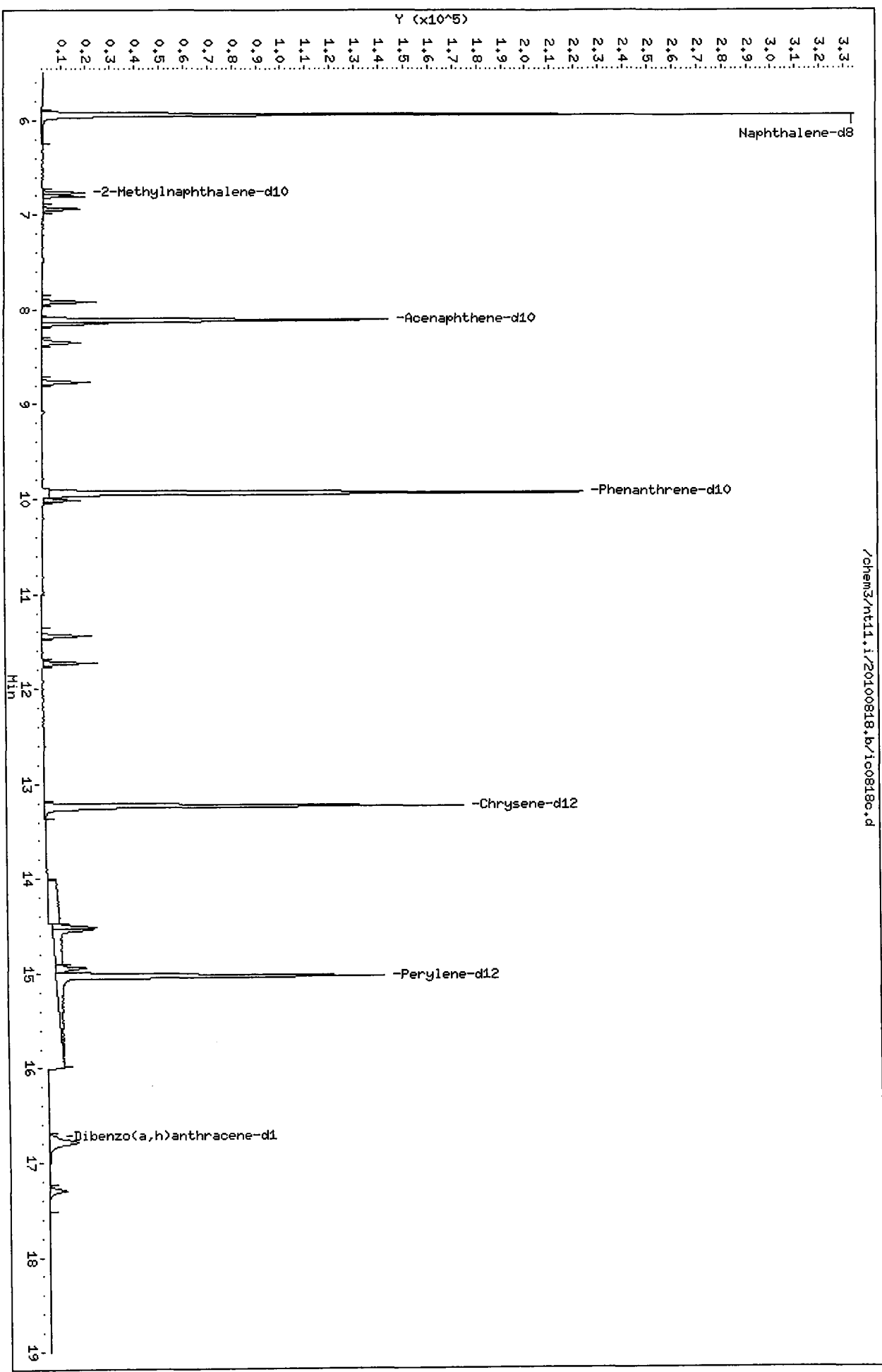
Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	410655	-2.82
11 Acenaphthene-d10	241002	120501	482004	231284	-4.03
18 Phenanthrene-d10	409999	205000	819998	389118	-5.09
29 Chrysene-d12	258429	129214	516858	231066	-10.59
35 Perylene-d12	200470	100235	400940	174799	-12.81

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.94	9.44	10.44	9.93	-0.14
29 Chrysene-d12	13.24	12.74	13.74	13.24	0.00
35 Perylene-d12	15.03	14.53	15.53	15.03	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.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100818.b/ic0818d.d  
 Lab Smp Id: IC0818D  
 Inj Date : 18-AUG-2010 16:51  
 Operator : VTS  
 Smp Info : IC0818D  
 Misc Info :  
 Comment :  
 Method : /chem3/nt11.i/20100818.b/lowsim.m  
 Meth Date : 19-Aug-2010 08:51 van  
 Cal Date : 18-AUG-2010 17:39  
 Als bottle: 5  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50  
 Processing Host: cserv3

Inst ID: nt11.i  
 Quant Type: ISTD  
 Cal File: ic0818f.d  
 Calibration Sample, Level: 3  
 Compound Sublist: pnalnm.sub

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	420304	200.000	
5 Naphthalene	128	5.962	5.962	(1.004)	208925	100.000	98.2
§ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	132272	100.000	99.2
7 2-Methylnaphthalene	142	6.802	6.802	(1.145)	129808	100.000	98.8
8 1-Methylnaphthalene	142	6.940	6.940	(1.169)	129459	100.000	99.4
10 Acenaphthylene	152	7.916	7.916	(0.977)	211716	100.000	95.3
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	235063	200.000	
12 Acenaphthene	153	8.144	8.143	(1.005)	126419	100.000	96.6
14 Dibenzofuran	168	8.345	8.345	(1.030)	188219	100.000	98.5
15 Fluorene	166	8.760	8.760	(1.081)	135354	100.000	95.4
* 18 Phenanthrene-d10	188	9.927	9.927	(1.000)	397699	200.000	
19 Phenanthrene	178	9.953	9.953	(1.003)	206837	100.000	101
20 Anthracene	178	10.007	10.007	(1.008)	193414	100.000	96.6
24 Fluoranthene	202	11.442	11.442	(1.153)	209714	100.000	97.6
25 Pyrene	202	11.723	11.723	(1.181)	216111	100.000	97.0
28 Benzo (a) anthracene	228	13.212	13.212	(0.998)	164028	100.000	98.3
* 29 Chrysene-d12	240	13.239	13.239	(1.000)	240566	200.000	
30 Chrysene	228	13.266	13.265	(1.002)	168117	100.000	100
43 Total Benzofluoranthenes	252	14.510	14.509	(0.966)	298497	200.000	193
34 Benzo (a) pyrene	252	14.947	14.935	(0.995)	122541	100.000	96.2
* 35 Perylene-d12	264	15.028	15.027	(1.000)	183198	200.000	
37 Indeno (1,2,3-cd) pyrene	276	16.770	16.770	(1.116)	169637	100.000	99.5
§ 36 Dibenzo (a,h) anthracene-d14	292	16.730	16.730	(1.113)	95406	100.000	99.2
38 Dibenzo (a,h) anthracene	278	16.784	16.784	(1.117)	129451	100.000	99.6
39 Benzo (g,h,i) perylene	276	17.293	17.293	(1.151)	151896	100.000	101

*Handwritten signature and date:*  
 VTS  
 8-19-10

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: ic0818d.d  
 Lab Smp Id: IC0818D  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem3/nt11.i/20100818.b/lowsim.m  
 Misc Info:

Calibration Date: 18-AUG-2010  
 Calibration Time: 15:25

Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	420304	-0.53
11 Acenaphthene-d10	241002	120501	482004	235063	-2.46
18 Phenanthrene-d10	409999	205000	819998	397699	-3.00
29 Chrysene-d12	258429	129214	516858	240566	-6.91
35 Perylene-d12	200470	100235	400940	183198	-8.62

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.94	9.44	10.44	9.93	-0.13
29 Chrysene-d12	13.24	12.74	13.74	13.24	0.00
35 Perylene-d12	15.03	14.53	15.53	15.03	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/nt11.i/20100818.b/1c0818d.d  
Date: 18-AUG-2010 16:51

Client ID:

Sample Info: 1C0818D

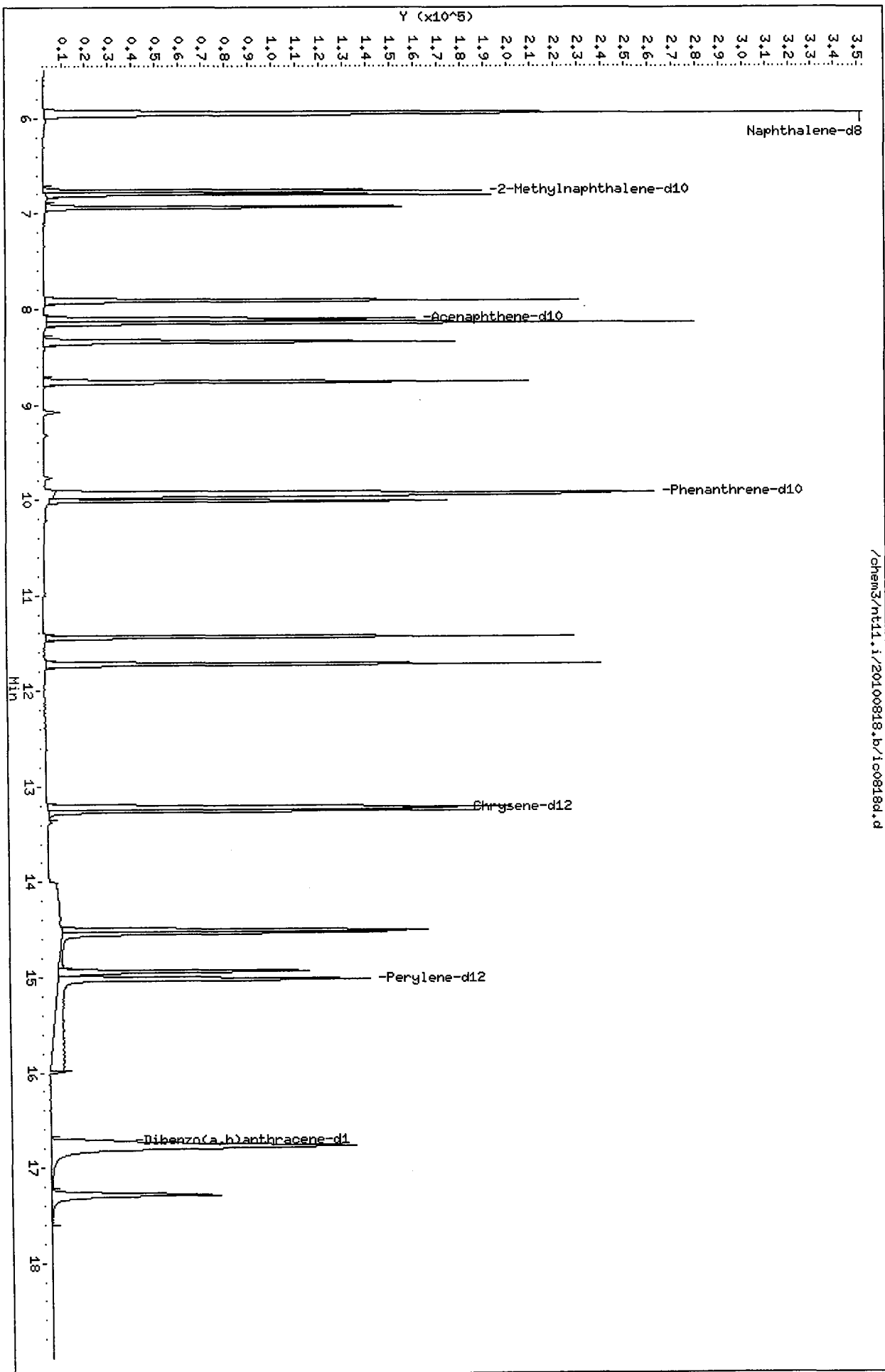
Column phase: ZB-5msi

Instrument: nt11.i

Operator: VTS

Column diameter: 0.25

/chem3/nt11.i/20100818.b/1c0818d.d



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100818.b/ic0818e.d  
 Lab Smp Id: IC0818E  
 Inj Date : 18-AUG-2010 17:14  
 Operator : VTS  
 Smp Info : IC0818E  
 Misc Info :  
 Comment :  
 Method : /chem3/nt11.i/20100818.b/lowsim.m  
 Meth Date : 19-Aug-2010 08:51 van  
 Cal Date : 18-AUG-2010 17:39  
 Als bottle: 6  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50  
 Processing Host: cserv3

Inst ID: nt11.i  
 Quant Type: ISTD  
 Cal File: ic0818f.d  
 Calibration Sample, Level: 5  
 Compound Sublist: pnalnm.sub

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	440171	200.000	
5 Naphthalene	128	5.962	5.962	(1.004)	1121139	500.000	503
§ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	715243	500.000	512
7 2-Methylnaphthalene	142	6.802	6.802	(1.145)	717236	500.000	521
8 1-Methylnaphthalene	142	6.940	6.940	(1.169)	703640	500.000	516
10 Acenaphthylene	152	7.915	7.916	(0.977)	1182016	500.000	518
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	241408	200.000	
12 Acenaphthene	153	8.143	8.143	(1.005)	692200	500.000	515
14 Dibenzofuran	168	8.344	8.345	(1.030)	1000305	500.000	510
15 Fluorene	166	8.760	8.760	(1.081)	744756	500.000	511
* 18 Phenanthrene-d10	188	9.926	9.927	(1.000)	412483	200.000	
19 Phenanthrene	178	9.953	9.953	(1.003)	1035330	500.000	490
20 Anthracene	178	10.007	10.007	(1.008)	1071038	500.000	516
24 Fluoranthene	202	11.442	11.442	(1.153)	1146346	500.000	514
25 Pyrene	202	11.723	11.723	(1.181)	1203984	500.000	521
28 Benzo (a) anthracene	228	13.212	13.212	(0.998)	906282	500.000	490
* 29 Chrysene-d12	240	13.239	13.239	(1.000)	266735	200.000	
30 Chrysene	228	13.265	13.265	(1.002)	922718	500.000	496
43 Total Benzofluoranthenes	252	14.534	14.509	(0.968)	1681194	1000.00	1030
34 Benzo (a) pyrene	252	14.937	14.935	(0.995)	687250	500.000	512
* 35 Perylene-d12	264	15.018	15.027	(1.000)	192917	200.000	
37 Indeno (1,2,3-cd) pyrene	276	16.772	16.770	(1.117)	921023	500.000	513
§ 36 Dibenzo (a,h) anthracene-d14	292	16.732	16.730	(1.114)	516827	500.000	510
38 Dibenzo (a,h) anthracene	278	16.785	16.784	(1.118)	705484	500.000	515
39 Benzo (g,h,i) perylene	276	17.295	17.293	(1.152)	827264	500.000	522

*Handwritten:*  
 8.19.10  
 V/S

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt11.i  
Lab File ID: ic0818e.d  
Lab Smp Id: IC0818E  
Analysis Type: SV  
Quant Type: ISTD  
Operator: VTS  
Method File: /chem3/nt11.i/20100818.b/lowsim.m  
Misc Info:

Calibration Date: 18-AUG-2010  
Calibration Time: 15:25  
Level:  
Sample Type:

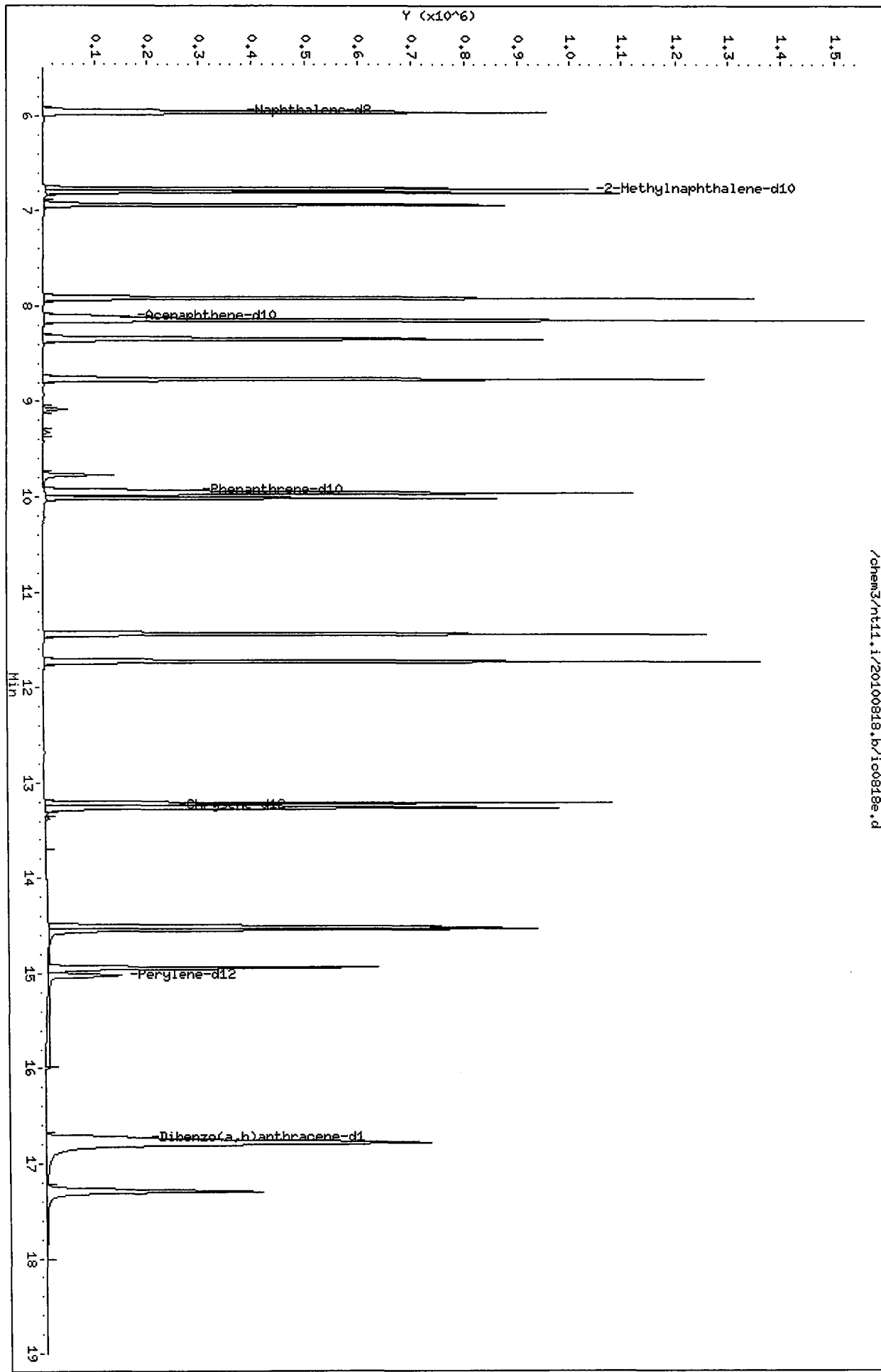
Test Mode:  
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	440171	4.17
11 Acenaphthene-d10	241002	120501	482004	241408	0.17
18 Phenanthrene-d10	409999	205000	819998	412483	0.61
29 Chrysene-d12	258429	129214	516858	266735	3.21
35 Perylene-d12	200470	100235	400940	192917	-3.77

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.94	9.44	10.44	9.93	-0.14
29 Chrysene-d12	13.24	12.74	13.74	13.24	0.00
35 Perylene-d12	15.03	14.53	15.53	15.02	-0.06

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.

/chem3/nt11.i/20100818.b/1c0818e.d



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100818.b/ic0818f.d  
Lab Smp Id: IC0818F  
Inj Date : 18-AUG-2010 17:39  
Operator : VTS  
Smp Info : IC0818F  
Misc Info :  
Comment :  
Method : /chem3/nt11.i/20100818.b/lowsim.m  
Meth Date : 19-Aug-2010 08:51 van  
Cal Date : 18-AUG-2010 17:39  
Als bottle: 7  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50  
Processing Host: cserv3

Inst ID: nt11.i  
Quant Type: ISTD  
Cal File: ic0818f.d  
Calibration Sample, Level: 2  
Compound Sublist: pnalmn.sub

Compounds	QUANT SIG			AMOUNTS		
	MASS	RT	EXP RT REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
*****	=====	==	=====	=====	=====	=====
* 4 Naphthalene-d8	136	5.939	5.939 (1.000)	426298	200.000	
5 Naphthalene	128	5.962	5.962 (1.004)	109077	50.0000	50.6
§ 6 2-Methylnaphthalene-d10	152	6.767	6.767 (1.139)	66918	50.0000	49.5
7 2-Methylnaphthalene	142	6.802	6.802 (1.145)	65431	50.0000	49.1
8 1-Methylnaphthalene	142	6.940	6.940 (1.169)	65025	50.0000	49.2
10 Acenaphthylene	152	7.916	7.916 (0.977)	106183	50.0000	49.1
* 11 Acenaphthene-d10	164	8.103	8.103 (1.000)	229121	200.000	
12 Acenaphthene	153	8.143	8.143 (1.005)	63167	50.0000	49.5
14 Dibenzofuran	168	8.345	8.345 (1.030)	91699	50.0000	49.2
15 Fluorene	166	8.760	8.760 (1.081)	66092	50.0000	47.8
* 18 Phenanthrene-d10	188	9.927	9.927 (1.000)	389224	200.000	
19 Phenanthrene	178	9.953	9.953 (1.003)	100722	50.0000	50.5
20 Anthracene	178	10.007	10.007 (1.008)	93069	50.0000	47.5
24 Fluoranthene	202	11.442	11.442 (1.153)	99706	50.0000	47.4
25 Pyrene	202	11.723	11.723 (1.181)	103218	50.0000	47.3
28 Benzo (a) anthracene	228	13.212	13.212 (0.998)	77962	50.0000	49.2
* 29 Chrysene-d12	240	13.239	13.239 (1.000)	228389	200.000	
30 Chrysene	228	13.265	13.265 (1.002)	80283	50.0000	50.4
43 Total Benzofluoranthenes	252	14.509	14.509 (0.966)	140724	100.000	98.0 (M)
34 Benzo (a) pyrene	252	14.935	14.935 (0.994)	57408	50.0000	48.5
* 35 Perylene-d12	264	15.027	15.027 (1.000)	170190	200.000	
37 Indeno (1,2,3-cd) pyrene	276	16.770	16.770 (1.116)	75909	50.0000	47.9
§ 36 Dibenzo (a,h) anthracene-d14	292	16.730	16.730 (1.113)	42133	50.0000	47.1
38 Dibenzo (a,h) anthracene	278	16.784	16.784 (1.117)	57570	50.0000	47.7
39 Benzo (g,h,i) perylene	276	17.293	17.293 (1.151)	68198	50.0000	48.8

VTS  
8/19/10

QC Flag Legend

M - Compound response manually integrated.



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: ic0818f.d  
 Lab Smp Id: IC0818F  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem3/nt11.i/20100818.b/lowsim.m  
 Misc Info:

Calibration Date: 18-AUG-2010  
 Calibration Time: 15:25

Level:  
 Sample Type:

Test Mode: Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	426298	0.89
11 Acenaphthene-d10	241002	120501	482004	229121	-4.93
18 Phenanthrene-d10	409999	205000	819998	389224	-5.07
29 Chrysene-d12	258429	129214	516858	228389	-11.62
35 Perylene-d12	200470	100235	400940	170190	-15.10

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.94	9.44	10.44	9.93	-0.13
29 Chrysene-d12	13.24	12.74	13.74	13.24	0.00
35 Perylene-d12	15.03	14.53	15.53	15.03	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/nt11.i/20100818.b/ic0818f.d  
Date: 18-AUG-2010 17:39  
Client ID:

Sample Info: IC0818F

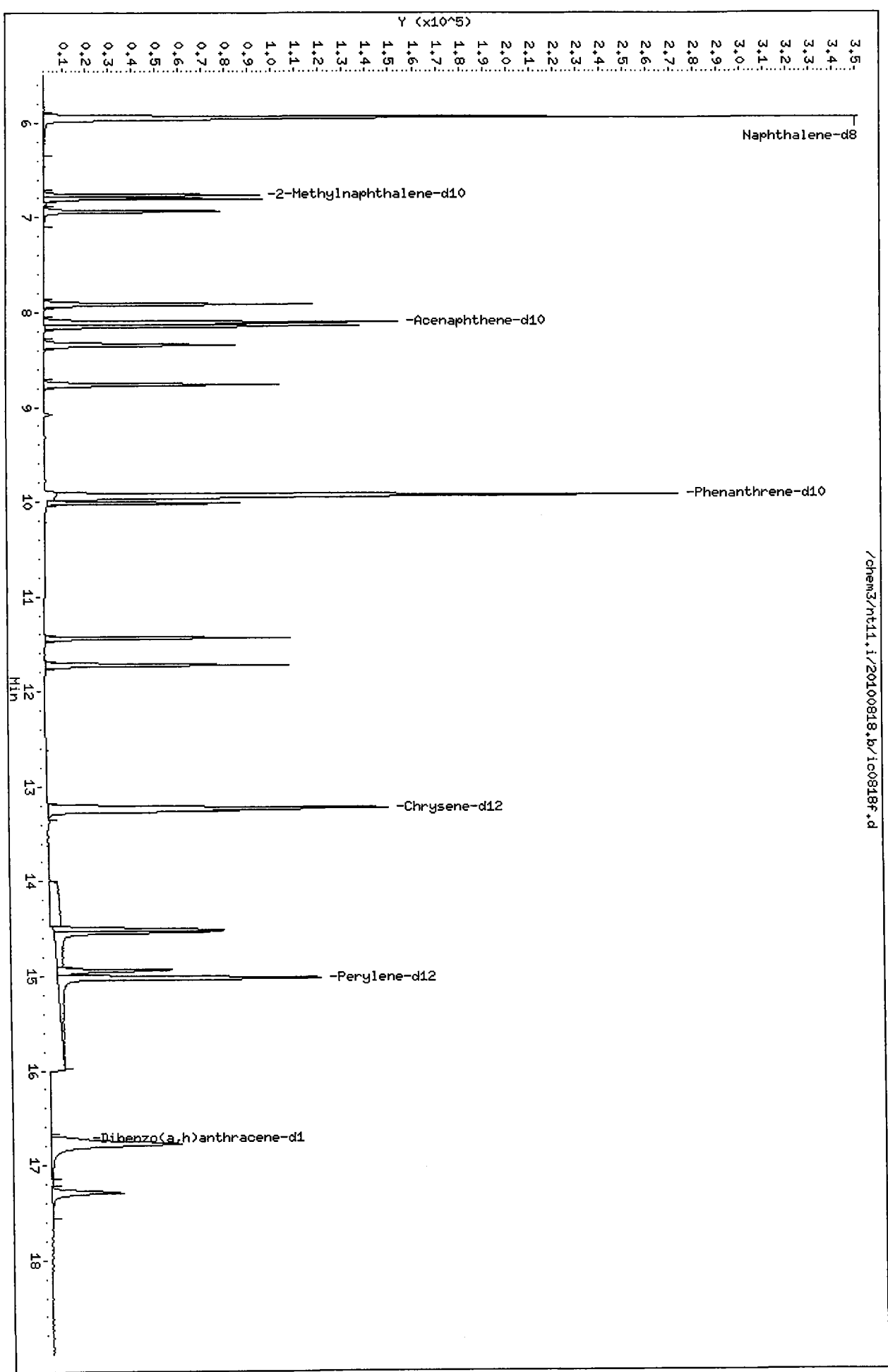
Column phase: ZB-5ms1

Instrument: nt11.i

Operator: VTS

Column diameter: 0.25

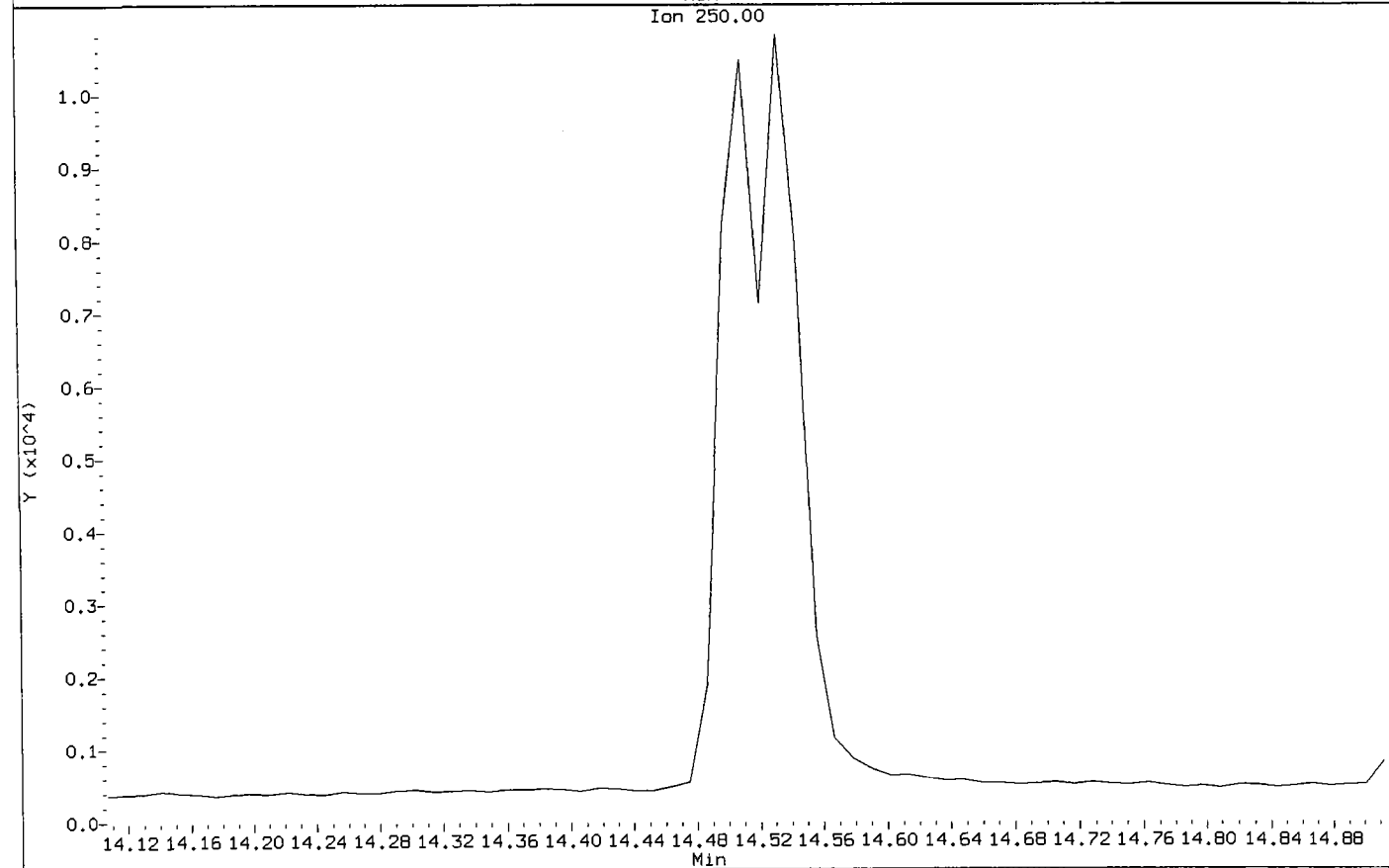
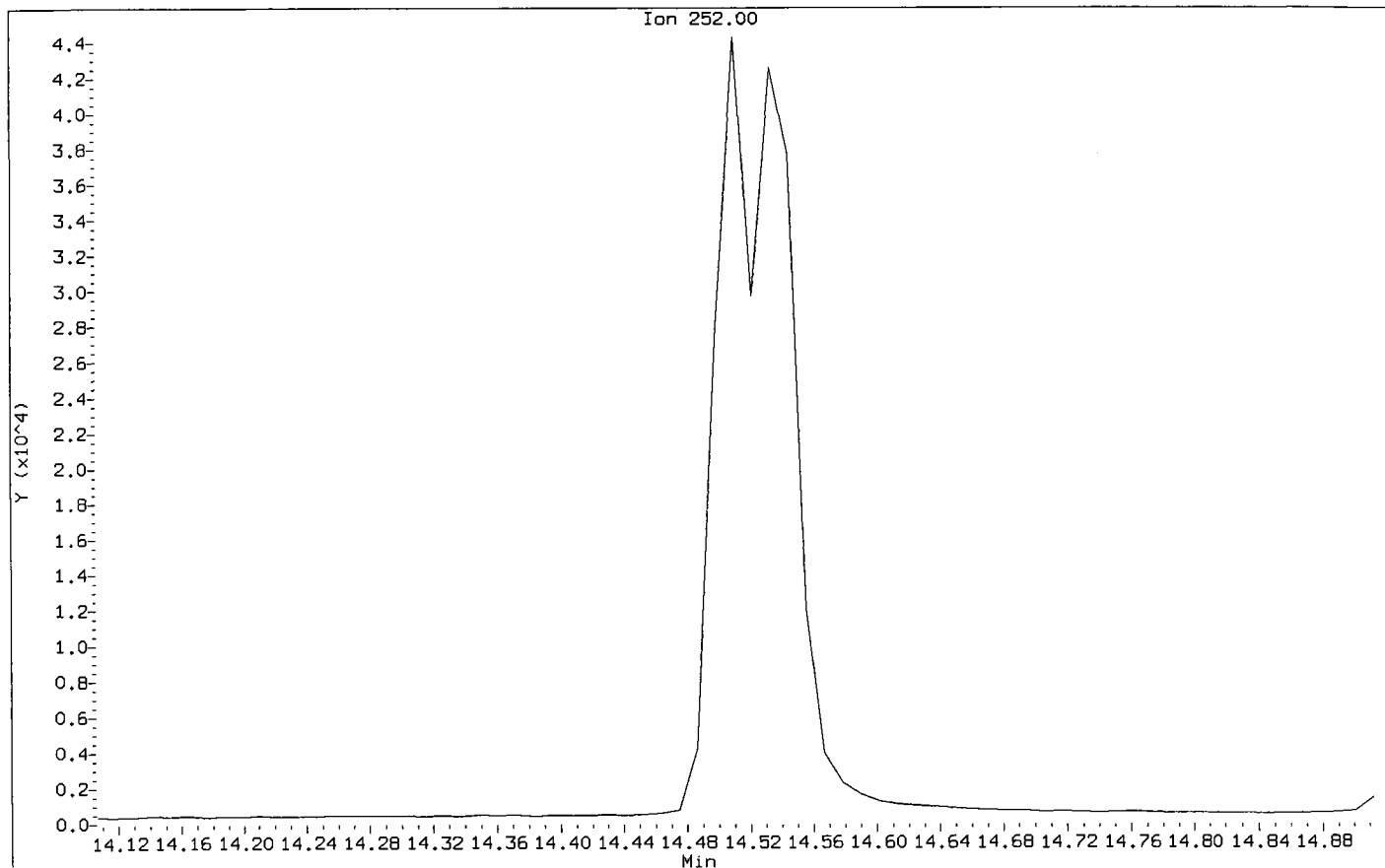
/chem3/nt11.i/20100818.b/ic0818f.d



Data File: /chem3/nt11.i/20100818.b/ic0818F.d  
Injection Date: 18-AUG-2010 17:39  
Instrument: nt11.i  
Client Sample ID:

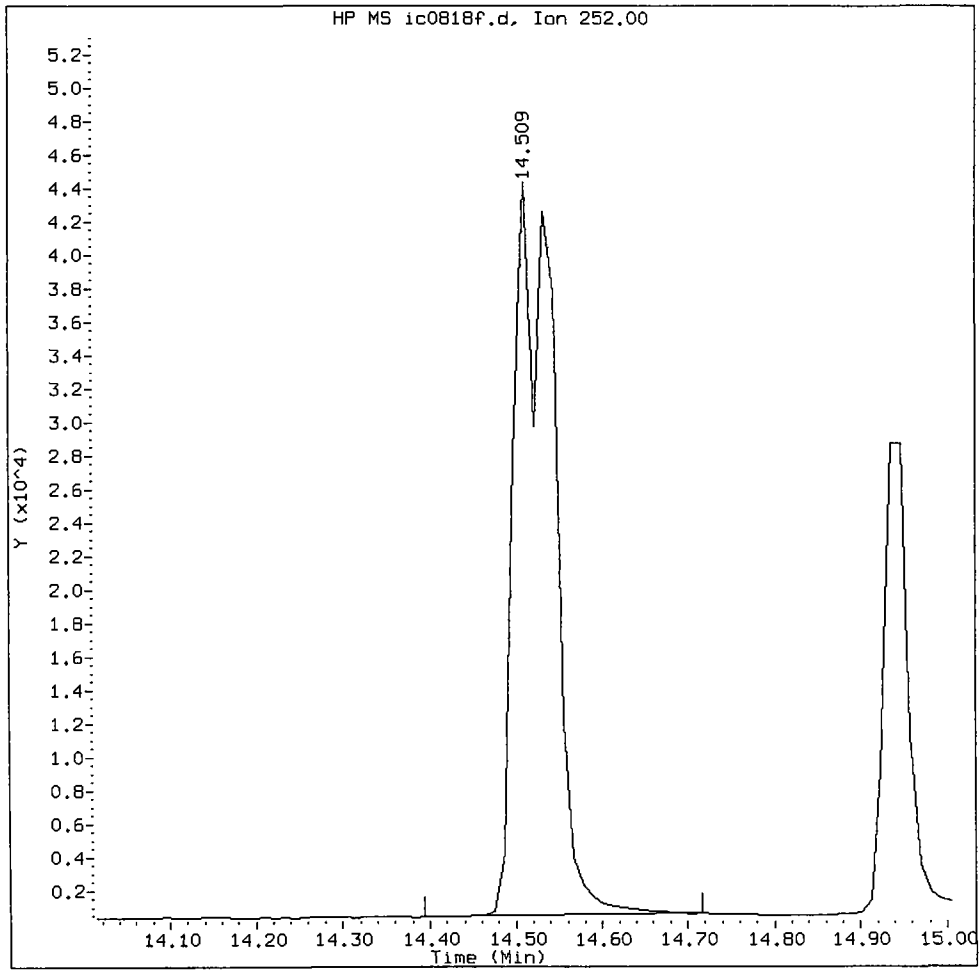
VTS  
8.19.10

Compound: Total Benzofluoranthenes  
CAS Number:



R165: 00378

Total Benzofluoranthenes Amount: 97.98 Area: 140724



MANUAL INTEGRATION for Total Benzofluoranthenes

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

Analyst: VR

Date: 8.19.10

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100818.b/icv0818.d  
Lab Smp Id: ICV0818  
Inj Date : 18-AUG-2010 18:02  
Operator : VTS  
Smp Info : ICV0818  
Misc Info :  
Comment :  
Method : /chem3/nt11.i/20100818.b/lowsim.m  
Meth Date : 19-Aug-2010 08:56 van  
Cal Date : 18-AUG-2010 17:39  
Als bottle: 8  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50  
Processing Host: cserv3

Inst ID: nt11.i  
Quant Type: ISTD  
Cal File: ic0818f.d  
Compound Sublist: pnalmn.sub

Compounds	QUANT SIG			CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL (ng/mL)	
*****	=====	==	=====	=====	=====	=====	=====	
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	421880	200.000		
5 Naphthalene	128	5.962	5.962	(1.004)	581695	272.434	272	
\$ 6 2-Methylnaphthalene-d10	152	Compound Not Detected.						
7 2-Methylnaphthalene	142	6.802	6.802	(1.145)	350960	266.013	266	
8 1-Methylnaphthalene	142	6.940	6.940	(1.169)	339137	259.471	259	
10 Acenaphthylene	152	7.915	7.916	(0.977)	604836	269.766	270	
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	237318	200.000		
12 Acenaphthene	153	8.143	8.143	(1.005)	353967	267.806	268	
14 Dibenzofuran	168	8.344	8.345	(1.030)	550049	285.131	285	
15 Fluorene	166	8.760	8.760	(1.081)	392888	274.336	274	
* 18 Phenanthrene-d10	188	9.926	9.927	(1.000)	392583	200.000		
19 Phenanthrene	178	9.953	9.953	(1.003)	556862	276.711	277	
20 Anthracene	178	10.007	10.007	(1.008)	538290	272.441	272	
24 Fluoranthene	202	11.442	11.442	(1.153)	579818	273.358	273	
25 Pyrene	202	11.723	11.723	(1.181)	613818	279.002	279	
28 Benzo(a)anthracene	228	13.212	13.212	(0.998)	473494	281.568	282	
* 29 Chrysene-d12	240	13.239	13.239	(1.000)	242433	200.000		
30 Chrysene	228	13.265	13.265	(1.002)	504824	298.532	299	
43 Total Benzofluoranthenes	252	14.534	14.509	(0.968)	852220	565.654	566	
34 Benzo(a)pyrene	252	14.937	14.935	(0.995)	363779	293.043	293	
* 35 Perylene-d12	264	15.018	15.027	(1.000)	178531	200.000		
37 Indeno(1,2,3-cd)pyrene	276	16.772	16.770	(1.117)	459347	276.384	276	
\$ 36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.						
38 Dibenzo(a,h)anthracene	278	16.785	16.784	(1.118)	350934	277.007	277	
39 Benzo(g,h,i)perylene	276	17.295	17.293	(1.152)	404786	276.107	276	

VTS  
8.19.10

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: icv0818.d  
 Lab Smp Id: ICV0818  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem3/nt11.i/20100818.b/lowsim.m  
 Misc Info:

Calibration Date: 18-AUG-2010  
 Calibration Time: 15:25  
 Level:  
 Sample Type:

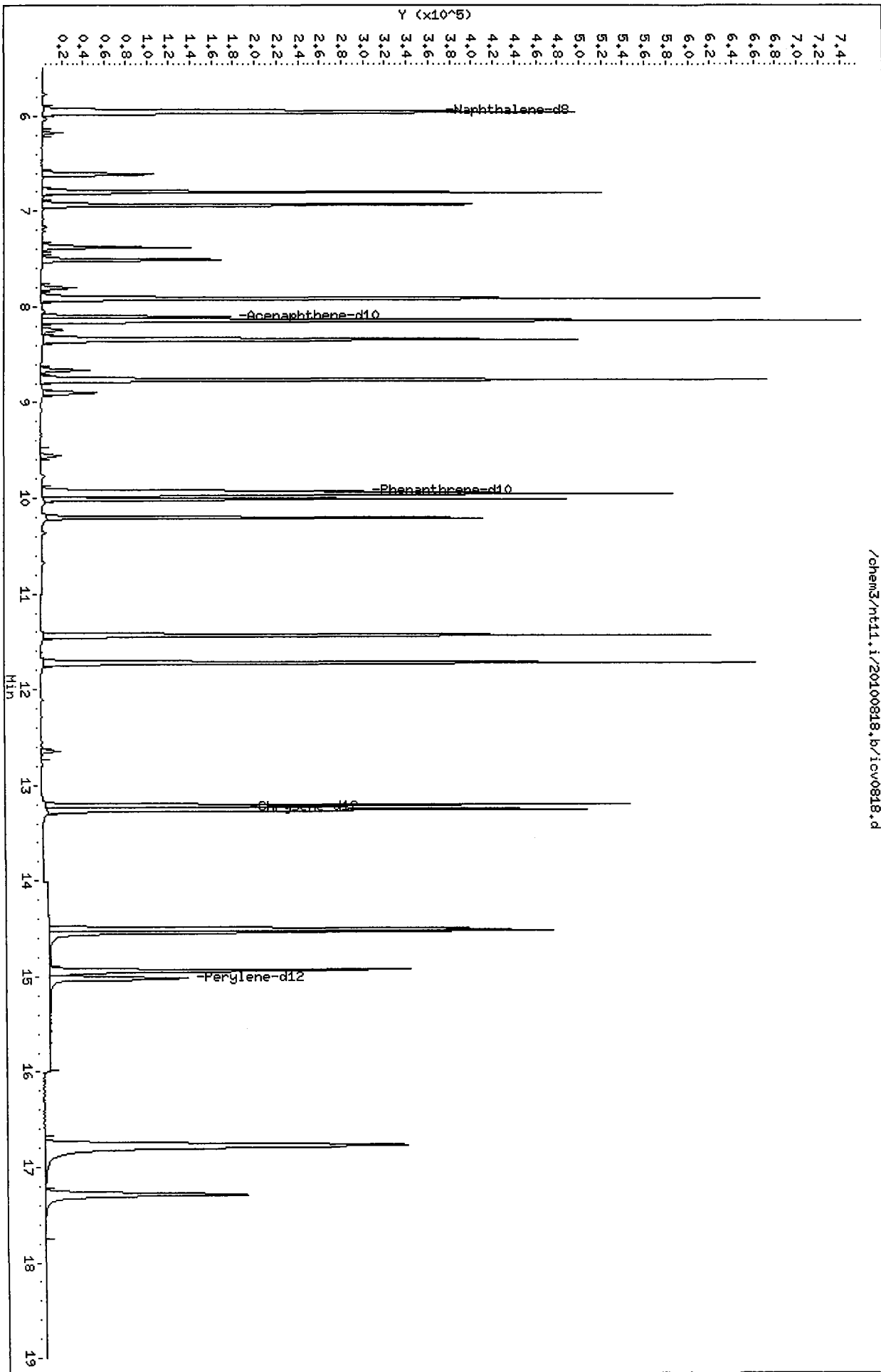
Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	421880	-0.16
11 Acenaphthene-d10	241002	120501	482004	237318	-1.53
18 Phenanthrene-d10	409999	205000	819998	392583	-4.25
29 Chrysene-d12	258429	129214	516858	242433	-6.19
35 Perylene-d12	200470	100235	400940	178531	-10.94

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.94	9.44	10.44	9.93	-0.14
29 Chrysene-d12	13.24	12.74	13.74	13.24	0.00
35 Perylene-d12	15.03	14.53	15.53	15.02	-0.06

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.

/chem3/nt11.i/20100818.b/icv0818.d



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

**ARI Job ID: RI65**



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

NT-11 Serial No.: GC=US10140004, MS=US10481502

Date: 8-28-10 Analysis: Low SIM Analyst: VTS/YZ  
 GC Program: Low SIM Column No: 180393 Column Type: Z05 MSI  
 Instrument Tune (.U or .CT.): 1006054 EM Voltage: 200  
 Calibration File: DF 0828 Curve Date: 8/18/10

IS/SS	Ical/Ccal	LCS/ICV
<u>1754-5</u>	<u>1665-3</u>	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20100828.b

Time	Filename	LabID	ClientId	DF										
1	1505 df0828.d	DF0828		1	NO ISTDs FOUND									
2	1519 cc0828.d	CC0828		1	5.94	403803	8.10	205562	9.93	340812	13.23	214043	15.02	157623
3	1601 ri65mb.d	RI65MBW1	RI65MBW1	1	5.94	397917	8.10	201819	9.93	330504	13.24	192134	15.03	154089
4	1625 ri65sb.d	RI65LCSW1	RI65LCSW1	1	5.94	382189	8.10	207871	9.93	334062	13.23	204148	15.02	154463
5	1649 ri65a.d	RI65A	MW-09-081310	1	5.94	393398	8.10	209034	9.93	320491	13.23	191005	15.02	143684
6	1713 ri65b.d	RI65B	MW-08-081310	1	5.94	386018	8.10	204381	9.93	318855	13.23	193619	15.02	152867
7	1737 ri65bms.d	RI65BMS	MW-08-081310	1	5.94	392345	8.10	212746	9.93	341007	13.23	209147	15.02	158443
8	1801 ri65bmsd.d	RI65BMSD	MW-08-081310	1	5.94	392485	8.10	213386	9.93	339911	13.23	206453	15.02	156217
9	1825 ri65c.d	RI65C	MW-07-081310	1	5.94	404256	8.10	212075	9.93	333901	13.23	197822	15.02	151439
10	1849 ri65d.d	RI65D	MW-01-081310	1	5.94	435251	8.10	216920	9.93	343597	13.23	200293	15.02	153726
11	1912 ri65e.d	RI65E	MW-05-081310	1	5.94	389265	8.10	213203	9.93	337527	13.23	199281	15.02	153172

Maintenance / Comments none

*YZ 8/30/10*

**Maintenance Verification** (Identify ICal or CCal that demonstrates the instrument is in control): cc0828  
 Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.



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

ARI Project ID: RI65 Client ID: Floyd-Snyder

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

Parameter(s): SIM PNA LL

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

Curve Date: 08/18/10 Analysis Start Date: 08/28/10

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?	<u>YES</u> / NO / NA
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):

Additional Details on Reverse: Yes / No

Analyst: YZ Date: 8/30/10

Reviewer: MW Date: 8/30/10

Date : 28-AUG-2010 15:05

Client ID:

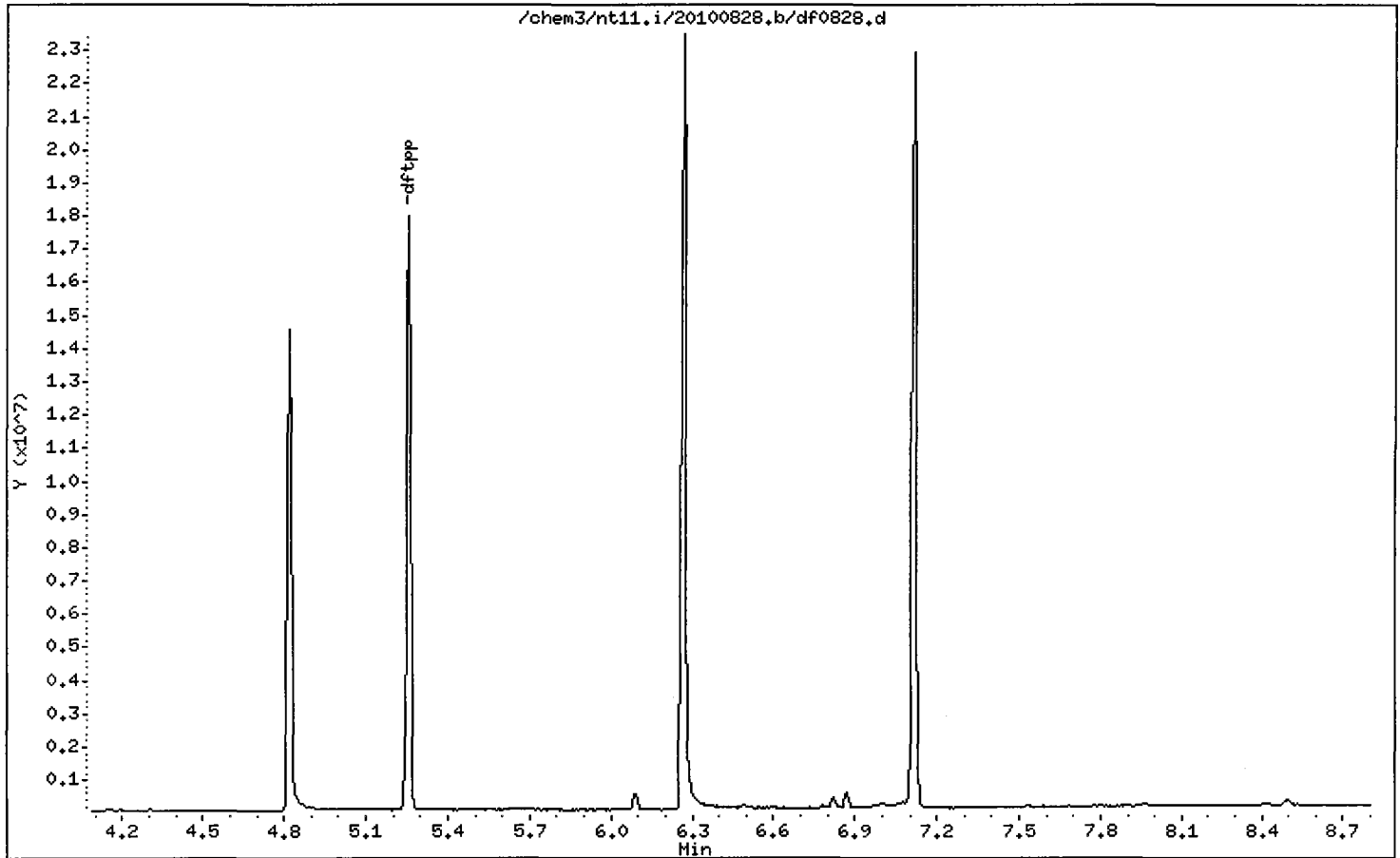
Instrument: nt11.i

Sample Info: DF0828

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25



Date : 28-AUG-2010 15:05

Client ID:

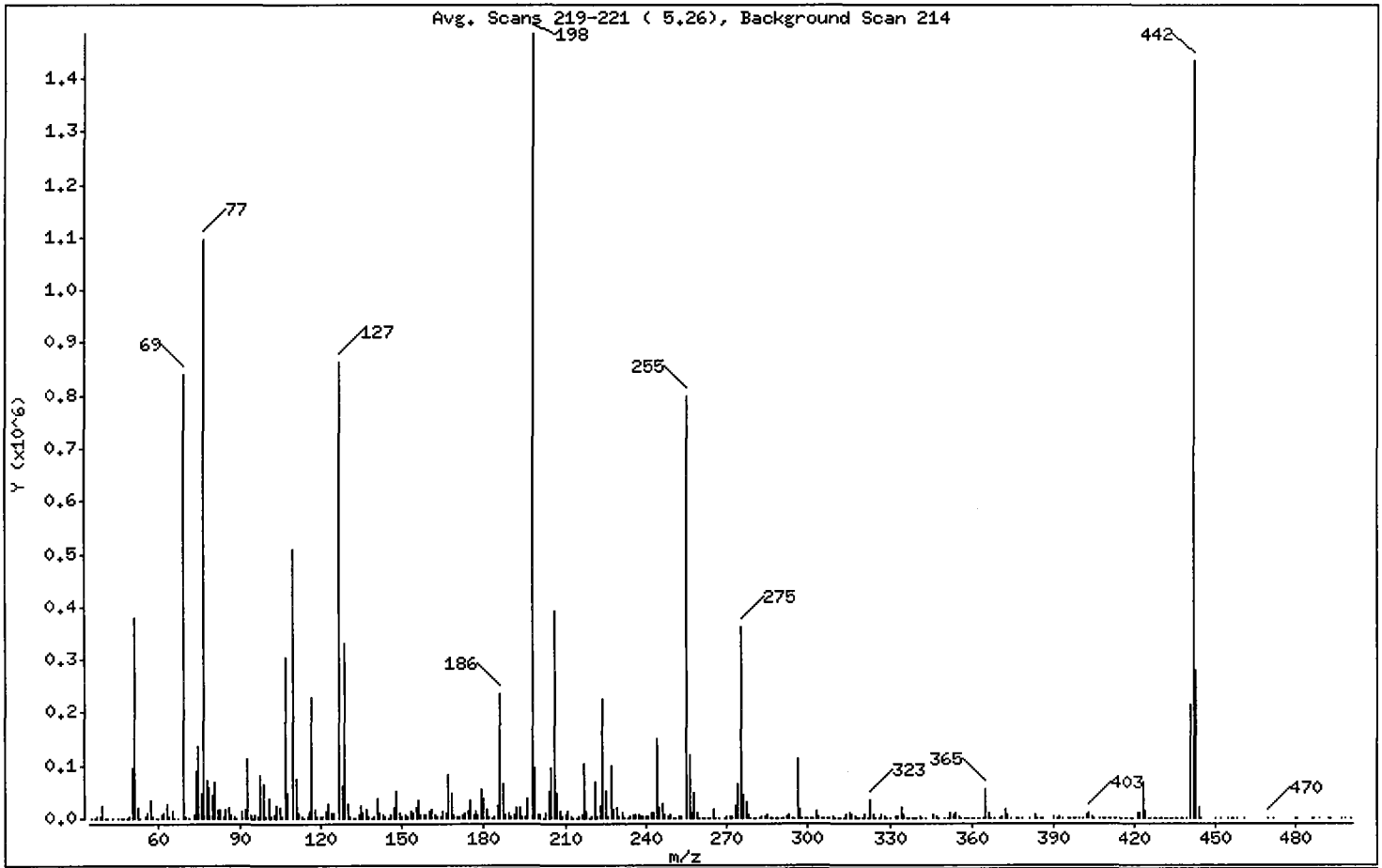
Instrument: nt11.i

Sample Info: DF0828

Operator: VTS

Column phase: ZB-5msi  
1 dftpp

Column diameter: 0.25



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	25.61
68	Less than 2.00% of mass 69	0.00 ( 0.00)
69	Mass 69 relative abundance	56.58
70	Less than 2.00% of mass 69	0.24 ( 0.43)
127	10.00 - 80.00% of mass 198	58.06
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.39
275	10.00 - 60.00% of mass 198	24.28
365	Greater than 1.00% of mass 198	3.67
441	0.01 - 24.00% of mass 442	14.47 ( 15.00)
442	50.00 - 200.00% of mass 198	96.46
443	15.00 - 24.00% of mass 442	18.81 ( 19.50)

Date : 28-AUG-2010 15:05

Client ID:

Instrument: nt11.i

Sample Info: DF0828

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0828.d

Spectrum: Avg. Scans 219-221 ( 5.26), Background Scan 214

Location of Maximum: 198.00

Number of points: 402

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	148	144.00	3157	246.00	28984	353.00	7163
36.00	86	145.00	1423	247.00	5646	354.00	11008
37.00	1727	146.00	6765	248.00	2780	355.00	2494
38.00	4694	147.00	19712	249.00	5566	356.00	246
39.00	25176	148.00	50232	250.00	1182	357.00	252
40.00	959	149.00	10598	251.00	944	358.00	119
41.00	173	150.00	3195	252.00	2673	359.00	823
43.00	488	151.00	5309	253.00	3509	360.00	689
45.00	985	152.00	3526	255.00	798592	361.00	654
46.00	352	153.00	12157	256.00	121056	362.00	186
47.00	273	154.00	10755	257.00	9780	363.00	250
48.00	454	155.00	22016	258.00	47712	364.00	180
49.00	2669	156.00	34968	259.00	8705	365.00	54600
50.00	94432	157.00	6653	260.00	1435	366.00	9467
51.00	380544	158.00	7824	261.00	1159	367.00	834
52.00	18992	159.00	5163	262.00	471	368.00	58
53.00	449	160.00	14952	263.00	235	370.00	1206
55.00	1973	161.00	16768	264.00	871	371.00	3800
56.00	11475	162.00	5882	265.00	17912	372.00	17216
57.00	32952	163.00	1788	266.00	584	373.00	6981
58.00	2094	164.00	2581	267.00	586	374.00	447
59.00	674	165.00	13825	269.00	899	376.00	354
60.00	331	166.00	11258	270.00	1930	377.00	926
61.00	7676	167.00	83288	271.00	2373	378.00	187
62.00	9974	168.00	46776	272.00	2928	381.00	92
63.00	26064	169.00	6652	273.00	24464	383.00	5298
64.00	4147	170.00	3827	274.00	66488	384.00	605
65.00	14655	171.00	4107	275.00	360704	385.00	520
66.00	1573	172.00	6660	276.00	45472	386.00	157
67.00	21	173.00	10093	277.00	31152	390.00	2854
69.00	840640	174.00	14355	278.00	6286	391.00	918
70.00	3601	175.00	34056	279.00	1167	392.00	1765
71.00	1661	176.00	8144	280.00	195	393.00	381
73.00	5559	177.00	12725	281.00	184	395.00	218
74.00	89224	178.00	5231	282.00	1184	396.00	107

Date : 28-AUG-2010 15:05

Client ID:

Instrument: nt11.i

Sample Info: DF0828

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0828.d

Spectrum: Avg. Scans 219-221 ( 5.26), Background Scan 214

Location of Maximum: 198.00

Number of points: 402

m/z	Y	m/z	Y	m/z	Y	m/z	Y
75.00	137984	179.00	55856	283.00	3271	397.00	189
76.00	48248	180.00	38024	284.00	2946	398.00	154
77.00	1095168	181.00	18048	285.00	6043	399.00	245
78.00	71480	182.00	2761	286.00	686	401.00	1594
79.00	58640	183.00	923	287.00	269	402.00	8387
80.00	45912	184.00	4458	288.00	544	403.00	9467
81.00	68144	185.00	25504	289.00	1208	404.00	3112
82.00	18616	186.00	234176	290.00	575	405.00	1011
83.00	17864	187.00	63856	291.00	587	407.00	59
84.00	1979	188.00	7634	292.00	1966	408.00	88
85.00	15469	189.00	11125	293.00	7457	409.00	326
86.00	19392	190.00	2172	294.00	1228	410.00	637
87.00	7009	191.00	6809	295.00	1542	411.00	172
88.00	3881	192.00	19480	296.00	111088	412.00	138
89.00	1224	193.00	20024	297.00	16362	413.00	291
91.00	14815	194.00	4520	298.00	813	414.00	214
92.00	16896	195.00	2466	299.00	309	415.00	1127
93.00	113360	196.00	37496	300.00	186	416.00	261
94.00	6194	198.00	1485312	301.00	995	417.00	358
95.00	772	199.00	94928	302.00	1518	418.00	341
96.00	5225	200.00	6294	303.00	13692	419.00	415
97.00	1775	201.00	6906	304.00	3482	421.00	9321
98.00	82520	202.00	133	305.00	227	422.00	8894
99.00	65424	203.00	10803	306.00	318	423.00	66832
100.00	4974	204.00	51928	307.00	124	424.00	14589
101.00	38664	205.00	94792	308.00	922	425.00	1297
102.00	2659	206.00	394368	309.00	1720	426.00	168
103.00	8336	207.00	49432	310.00	1371	427.00	717
104.00	23712	208.00	13636	311.00	291	428.00	79
105.00	21536	209.00	3744	312.00	373	429.00	660
106.00	2773	210.00	7767	313.00	719	430.00	349
107.00	303360	211.00	15165	314.00	5163	431.00	423
108.00	48048	212.00	2330	315.00	9051	432.00	506
110.00	508800	213.00	884	316.00	8003	433.00	875
111.00	75712	214.00	265	317.00	1947	434.00	701

Date : 28-AUG-2010 15:05

Client ID:

Instrument: nt11.i

Sample Info: DF0828

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

Data File: df0828.d

Spectrum: Avg. Scans 219-221 ( 5.26), Background Scan 214

Location of Maximum: 198.00

Number of points: 402

m/z	Y	m/z	Y	m/z	Y	m/z	Y
112.00	11817	215.00	2968	318.00	372	435.00	581
113.00	2698	216.00	8114	319.00	610	436.00	278
114.00	1299	217.00	101024	320.00	1218	437.00	412
115.00	1884	218.00	14059	321.00	5408	438.00	245
116.00	14682	219.00	1335	322.00	994	439.00	462
117.00	228672	220.00	1809	323.00	35456	441.00	214912
118.00	17272	221.00	66736	324.00	7183	442.00	1433088
119.00	2193	222.00	4346	325.00	766	443.00	279424
120.00	4260	223.00	23432	326.00	404	444.00	22128
121.00	1981	224.00	224320	327.00	6292	445.00	1501
122.00	14162	225.00	52768	328.00	3796	450.00	148
123.00	25800	226.00	4109	329.00	1188	452.00	94
124.00	11172	227.00	97656	330.00	93	455.00	139
125.00	11592	228.00	15621	332.00	2147	456.00	134
127.00	862656	229.00	20592	333.00	3300	457.00	86
128.00	63088	230.00	3358	334.00	21584	458.00	136
129.00	331776	231.00	8805	335.00	5398	461.00	50
130.00	27552	232.00	1636	336.00	1011	470.00	249
131.00	4562	233.00	1656	337.00	70	472.00	137
132.00	1245	234.00	4483	338.00	497	480.00	71
133.00	1169	235.00	5986	339.00	672	481.00	64
134.00	7937	236.00	5548	340.00	426	486.00	129
135.00	22544	237.00	7088	341.00	4659	487.00	180
136.00	9905	238.00	1869	342.00	1336	489.00	57
137.00	16162	239.00	4557	343.00	546	492.00	75
138.00	3118	240.00	2431	346.00	8281	493.00	147
139.00	1267	241.00	4300	347.00	2170	497.00	162
140.00	3669	242.00	11442	348.00	318	498.00	99
141.00	38536	243.00	11387	350.00	312	500.00	138
142.00	10493	244.00	149952	351.00	485		
143.00	8213	245.00	21384	352.00	10080		

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100828.b/cc0828.d  
 Lab Smp Id: CC0828  
 Inj Date : 28-AUG-2010 15:19  
 Operator : VTS  
 Smp Info : CC0828  
 Misc Info :  
 Comment :  
 Method : /chem3/nt11.i/20100828.b/lowsim.m  
 Meth Date : 28-Aug-2010 16:11 van  
 Cal Date : 18-AUG-2010 17:39  
 Als bottle: 3  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50  
 Processing Host: cserv3

Inst ID: nt11.i  
 Quant Type: ISTD  
 Cal File: ic0818f.d  
 Continuing Calibration Sample  
 Compound Sublist: pnalmn.sub

Compounds	QUANT SIG			AMOUNTS			
	MASS	RT	EXP RT REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)	
* 4 Naphthalene-d8	136	5.939	5.939 (1.000)	403803	200.000		
5 Naphthalene	128	5.962	5.962 (1.004)	537885	250.000	263	
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767 (1.139)	310601	250.000	242	
7 2-Methylnaphthalene	142	6.802	6.802 (1.145)	321016	250.000	254	
8 1-Methylnaphthalene	142	6.928	6.928 (1.167)	314164	250.000	251	
10 Acenaphthylene	152	7.915	7.915 (0.977)	475267	250.000	245	
* 11 Acenaphthene-d10	164	8.103	8.103 (1.000)	205562	200.000		
12 Acenaphthene	153	8.143	8.143 (1.005)	300778	250.000	263	
14 Dibenzofuran	168	8.344	8.344 (1.030)	445130	250.000	266	
15 Fluorene	166	8.760	8.760 (1.081)	314024	250.000	253	
* 18 Phenanthrene-d10	188	9.926	9.926 (1.000)	340812	200.000		
19 Phenanthrene	178	9.953	9.953 (1.003)	461124	250.000	264	
20 Anthracene	178	10.007	10.007 (1.008)	428655	250.000	250	
24 Fluoranthene	202	11.442	11.442 (1.153)	454485	250.000	247	
25 Pyrene	202	11.723	11.723 (1.181)	511913	250.000	268	
28 Benzo (a) anthracene	228	13.212	13.212 (0.999)	352468	250.000	237	
* 29 Chrysene-d12	240	13.225	13.225 (1.000)	214043	200.000		
30 Chrysene	228	13.265	13.265 (1.003)	393581	250.000	264	
43 Total Benzofluoranthenes	252	14.534	14.534 (0.968)	674029	500.000	507	
34 Benzo (a) pyrene	252	14.937	14.937 (0.995)	280333	250.000	256	
* 35 Perylene-d12	264	15.018	15.018 (1.000)	157623	200.000		
37 Indeno (1,2,3-cd) pyrene	276	16.772	16.772 (1.117)	358960	250.000	245	
\$ 36 Dibenzo (a, h) anthracene-d14	292	16.732	16.732 (1.114)	195847	250.000	237	
38 Dibenzo (a, h) anthracene	278	16.785	16.785 (1.118)	267829	250.000	239	
39 Benzo (g, h, i) perylene	276	17.282	17.282 (1.151)	318932	250.000	246	

*H. VTS  
28-10*



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i Calibration Date: 28-AUG-2010  
 Lab File ID: cc0828.d Calibration Time: 15:19  
 Lab Smp Id: CC0828  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: /chem3/nt11.i/20100828.b/lowsim.m  
 Misc Info:

Test Mode: Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	403803	-4.44
11 Acenaphthene-d10	241002	120501	482004	205562	-14.71
18 Phenanthrene-d10	409999	205000	819998	340812	-16.87
29 Chrysene-d12	258429	129214	516858	214043	-17.18
35 Perylene-d12	200470	100235	400940	157623	-21.37

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.93	9.43	10.43	9.93	0.00
29 Chrysene-d12	13.23	12.73	13.73	13.23	0.00
35 Perylene-d12	15.02	14.52	15.52	15.02	0.00

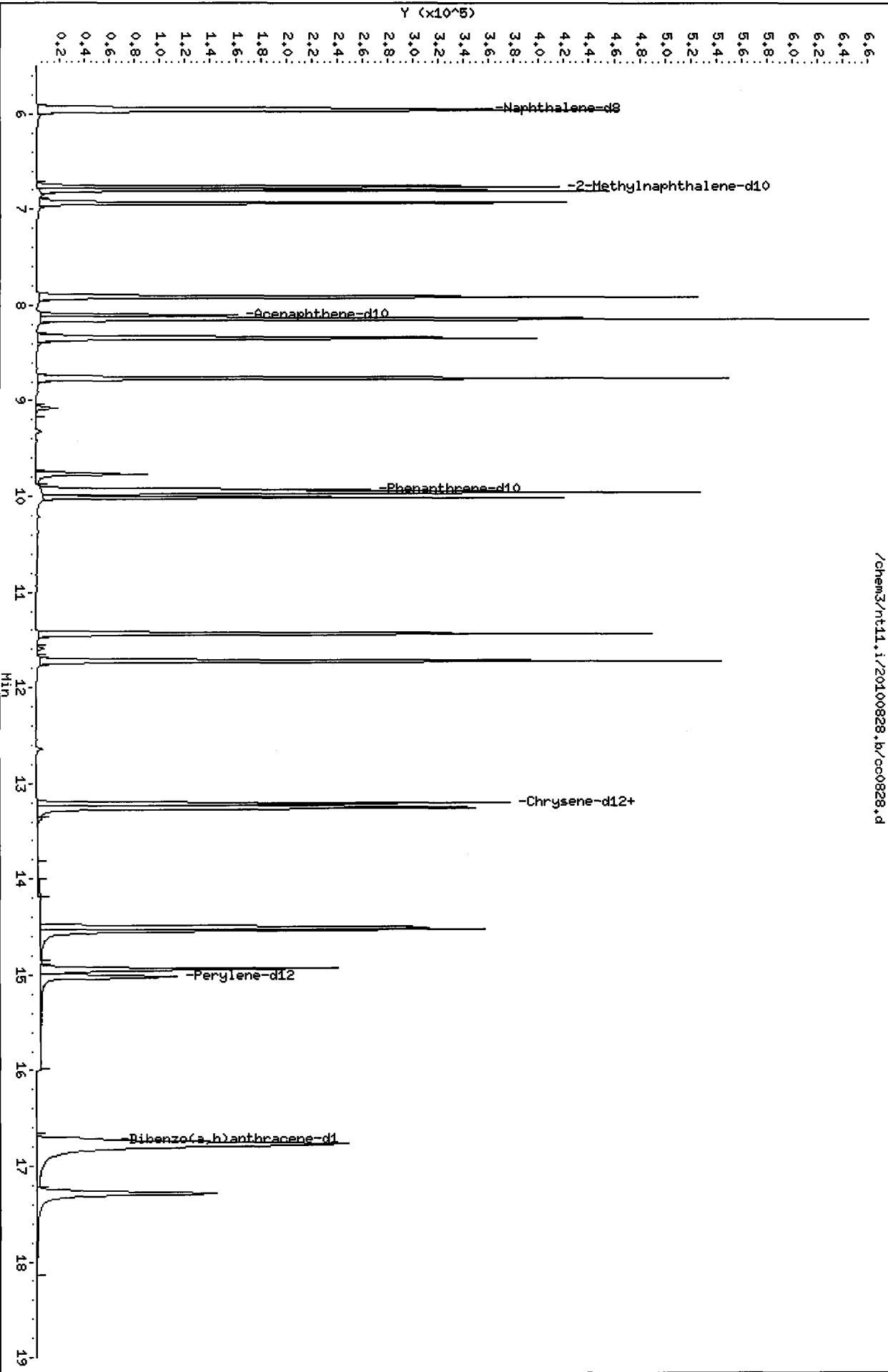
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

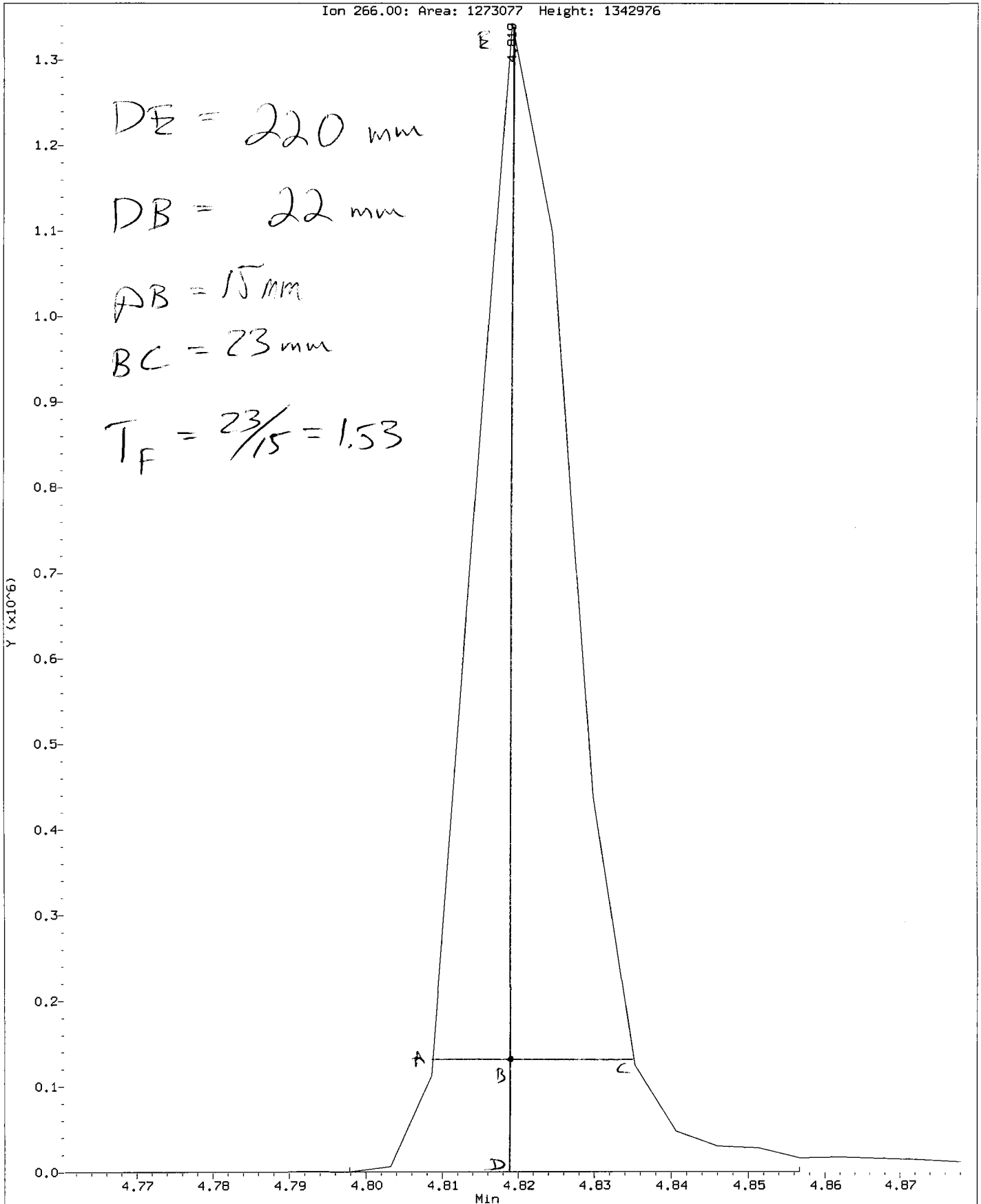
Instrument ID: nt11.i                      Injection Date: 28-AUG-2010 15:19  
 Lab File ID: cc0828.d                    Init. Cal. Date(s): 18-AUG-2010 18-AUG-2010  
 Analysis Type:                            Init. Cal. Times: 15:25 17:39  
 Lab Sample ID: CC0828                    Quant Type: ISTD  
 Method: /chem3/nt11.i/20100828.b/lowsim.m

COMPOUND	RRF / AMOUNT	RF250	MIN		MAX		CURVE TYPE
			RRF	%D / %DRIFT	%D / %DRIFT		
5 Naphthalene	1.01222	1.06564	0.010	5.27722	20.00000	Averaged	
\$ 6 2-Methylnaphthalene-d10	0.63465	0.61535	0.010	-3.04100	20.00000	Averaged	
7 2-Methylnaphthalene	0.62545	0.63599	0.010	1.68377	20.00000	Averaged	
8 1-Methylnaphthalene	0.61962	0.62241	0.010	0.44989	20.00000	Averaged	
10 Acenaphthylene	1.88951	1.84962	0.010	-2.11115	20.00000	Averaged	
12 Acenaphthene	1.11389	1.17056	0.010	5.08713	20.00000	Averaged	
14 Dibenzofuran	1.62576	1.73234	0.010	6.55564	20.00000	Averaged	
15 Fluorene	1.20694	1.22211	0.010	1.25683	20.00000	Averaged	
19 Phenanthrene	1.02523	1.08241	0.010	5.57810	20.00000	Averaged	
20 Anthracene	1.00656	1.00620	0.010	-0.03651	20.00000	Averaged	
24 Fluoranthene	1.08058	1.06683	0.010	-1.27276	20.00000	Averaged	
25 Pyrene	1.12081	1.20163	0.010	7.21148	20.00000	Averaged	
28 Benzo(a)anthracene	1.38730	1.31737	0.010	-5.04049	20.00000	Averaged	
30 Chrysene	1.39504	1.47103	0.010	5.44678	20.00000	Averaged	
43 Total Benzofluoranthenes	1.68779	1.71047	0.010	1.34429	20.00000	Averaged	
34 Benzo(a)pyrene	1.39066	1.42280	0.010	2.31055	20.00000	Averaged	
37 Indeno(1,2,3-cd)pyrene	1.86185	1.82186	0.010	-2.14812	20.00000	Averaged	
\$ 36 Dibenzo(a,h)anthracene-d14	1.05013	0.99400	0.010	-5.34586	20.00000	Averaged	
38 Dibenzo(a,h)anthracene	1.41922	1.35933	0.010	-4.22007	20.00000	Averaged	
39 Benzo(g,h,i)perylene	1.64235	1.61870	0.010	-1.43965	20.00000	Averaged	



Data File: /chem3/nt11.1/20100828.b/ddt.b/df0828.d  
Injection Date: 28-AUG-2010 15:05  
Instrument: nt11.1  
Client Sample ID:

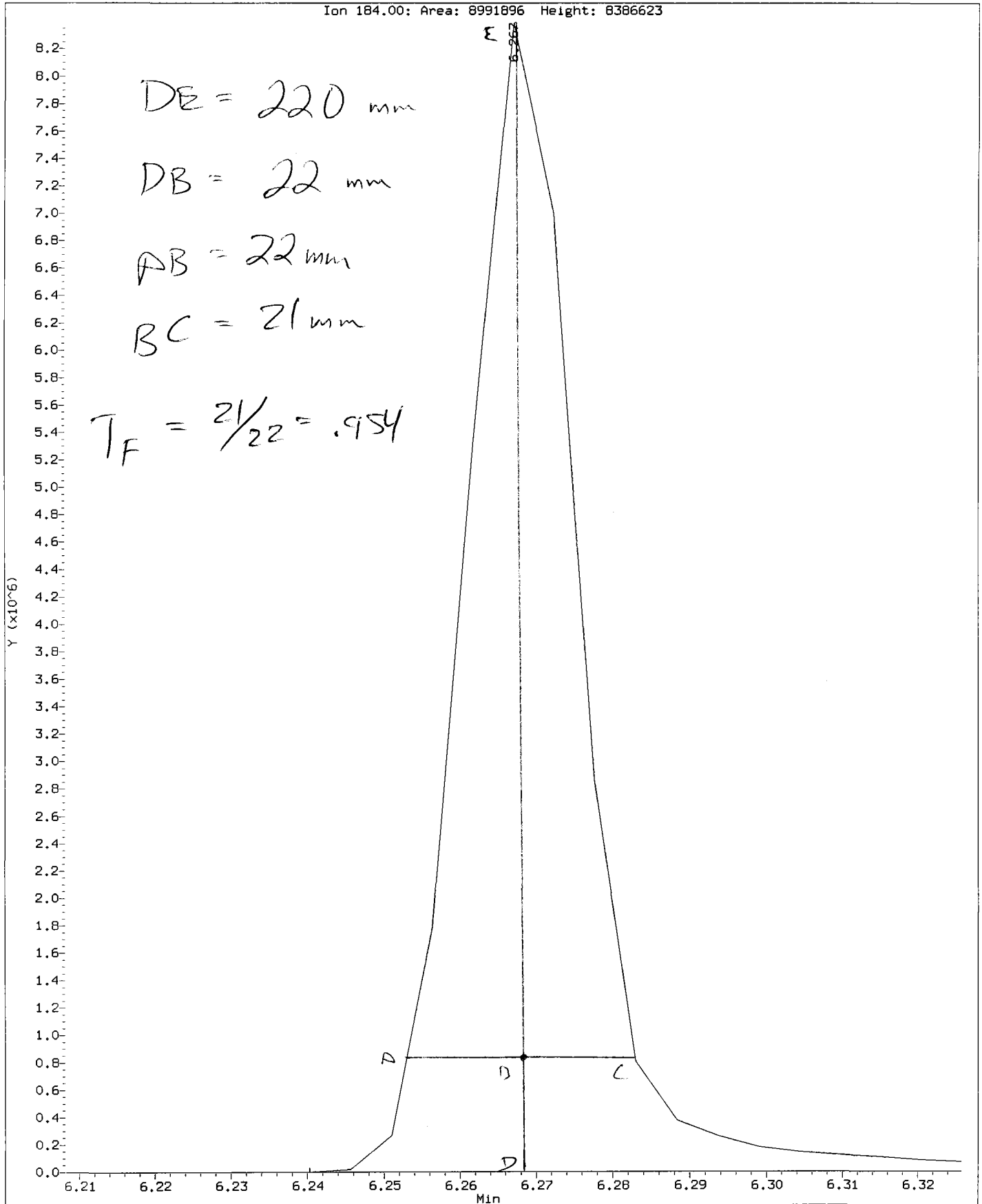
Compound: Pentachlorophenol  
CAS Number: 87-86-5



Data File: /chem3/nt11.1/20100828.b/ddt.b/df0828.d  
Injection Date: 28-AUG-2010 15:05  
Instrument: nt11.1  
Client Sample ID:

Compound: Benzidine  
CAS Number:

Ion 184.00: Area: 8991896 Height: 8386623



RI65:00396

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

Data file: /chem3/nt11.i/20100828.b/ddt.b/df0828.d      ARI ID: DF0828  
Method: /chem3/nt11.i/20100828.b/ddt.b/sw846ddt.m      Misc:  
Analysis Date: 28-AUG-2010 15:05      Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.819	1273077
Benzidine	6.267	8991896
4,4'-DDE	6.486	11616
4,4'-DDD	6.823	51914
4,4'-DDT	7.116	4109398

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

$$\text{DDT Percent Breakdown} = \frac{(11616 + 51914) * 100}{(11616 + 51914 + 4109398)}$$

$$\text{DDT Percent Breakdown} = 1.5 \%$$

Analytical Resources, Inc.

*Y2 8/30/10*

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100828.b/ri65mb.d  
 Lab Smp Id: RI65MBW1 Client Smp ID: RI65MBW1  
 Inj Date : 28-AUG-2010 16:01  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI65MBW1  
 Misc Info : 10-19848  
 Comment :  
 Method : /chem3/nt11.i/20100828.b/lowsim.m  
 Meth Date : 30-Aug-2010 10:33 yev Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 4 QC Sample: BLANK  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

Concentration Formula: Amt \* DF \* Vt / Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ng/mL)	FINAL (ug/L)	
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	397917	200.000		
5 Naphthalene	128	Compound Not Detected.						
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	219602	173.916	174	
7 2-Methylnaphthalene	142	Compound Not Detected.						
8 1-Methylnaphthalene	142	Compound Not Detected.						
10 Acenaphthylene	152	Compound Not Detected.						
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	201819	200.000		
12 Acenaphthene	153	Compound Not Detected.						
14 Dibenzofuran	168	Compound Not Detected.						
15 Fluorene	166	Compound Not Detected.						
* 18 Phenanthrene-d10	188	9.927	9.926	(1.000)	330504	200.000		
19 Phenanthrene	178	Compound Not Detected.						
20 Anthracene	178	Compound Not Detected.						
24 Fluoranthene	202	Compound Not Detected.						
25 Pyrene	202	Compound Not Detected.						

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL ( ug/L)
28 Benzo (a) anthracene	228				Compound Not Detected.		
* 29 Chrysene-d12	240	13.239	13.225	(1.000)	192134	200.000	
30 Chrysene	228				Compound Not Detected.		
43 Total Benzofluoranthenes	252				Compound Not Detected.		
34 Benzo (a) pyrene	252				Compound Not Detected.		
* 35 Perylene-d12	264	15.028	15.018	(1.000)	154089	200.000	
37 Indeno (1,2,3-cd) pyrene	276				Compound Not Detected.		
\$ 36 Dibenzo (a,h) anthracene-d14	292	16.730	16.732	(1.113)	129795	160.425	160
38 Dibenzo (a,h) anthracene	278				Compound Not Detected.		
39 Benzo (g,h,i) perylene	276				Compound Not Detected.		



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i	Calibration Date: 28-AUG-2010
Lab File ID: ri65mb.d	Calibration Time: 15:19
Lab Smp Id: RI65MBW1	Client Smp ID: RI65MBW1
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Liquid
Operator: VTS	
Method File: /chem3/nt11.i/20100828.b/lowsim.m	
Misc Info: 10-19848	

Test Mode: Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	397917	-5.83
11 Acenaphthene-d10	241002	120501	482004	201819	-16.26
18 Phenanthrene-d10	409999	205000	819998	330504	-19.39
29 Chrysene-d12	258429	129214	516858	192134	-25.65
35 Perylene-d12	200470	100235	400940	154089	-23.14

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.93	9.43	10.43	9.93	0.00
29 Chrysene-d12	13.23	12.73	13.73	13.24	0.10
35 Perylene-d12	15.02	14.52	15.52	15.03	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.

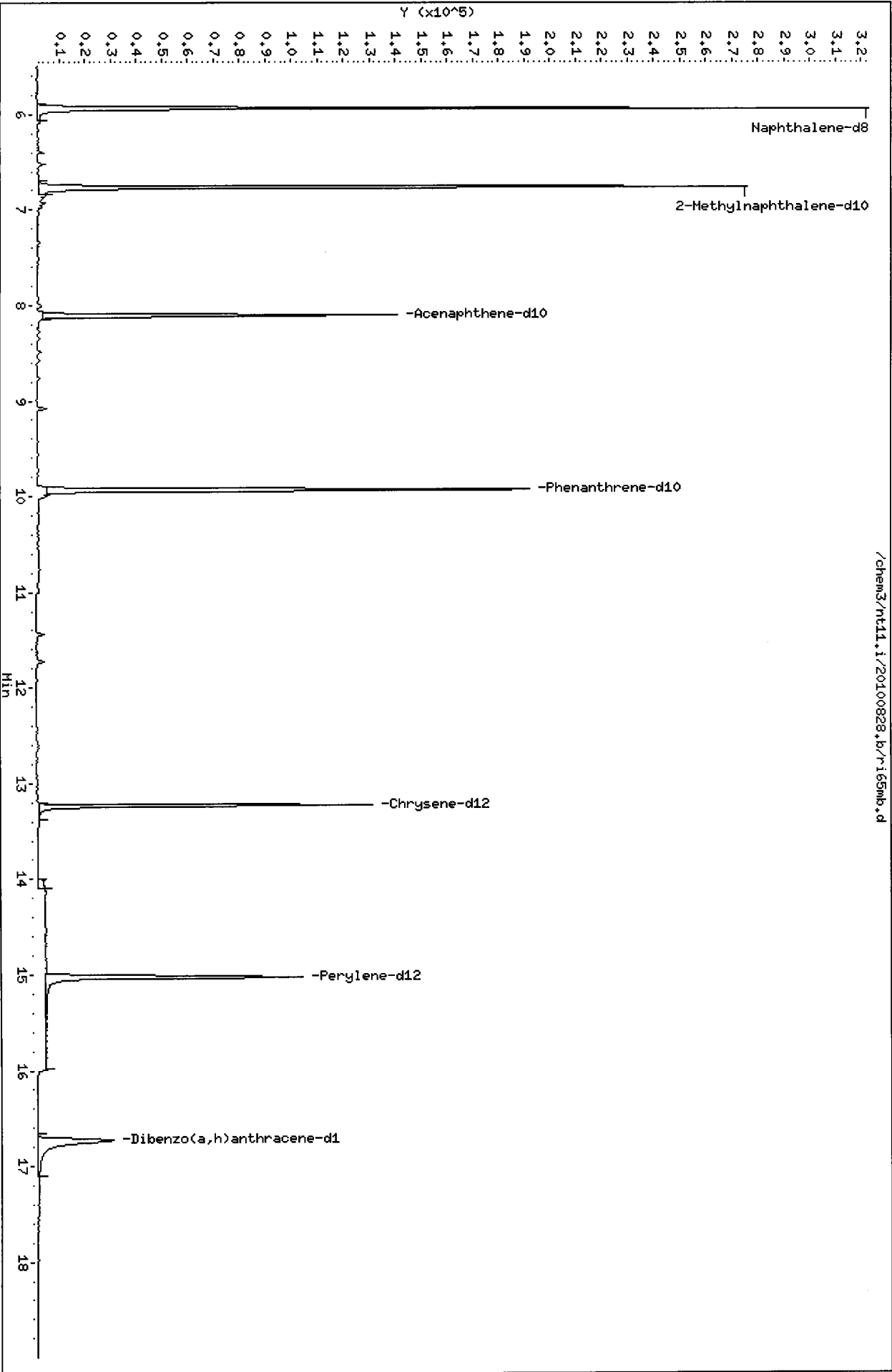
RECOVERY REPORT

Client Name: Floyd-Snider  
Sample Matrix: LIQUID  
Lab Smp Id: RI65MBW1  
Level: LOW  
Data Type: MS DATA  
SpikeList File: waterlcs.spk  
Sublist File: pnalnm.sub  
Method File: /chem3/nt11.i/20100828.b/lowsim.m  
Misc Info: 10-19848

Client SDG: RI65  
Fraction: SV  
Client Smp ID: RI65MBW1  
Operator: VTS  
SampleType: BLANK  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	174	57.97	31-109
\$ 36 Dibenzo(a,h)anthra	300	160	53.47	10-133

/chem3/nt11.i/20100828.b/r165mb.d



Analytical Resources, Inc.

*YZ 8/30/10*

LOW LEVEL PNAS BY SW8270D-SIM

Data file : /chem3/nt11.i/20100828.b/ri65sb.d  
 Lab Smp Id: RI65LCSW1 Client Smp ID: RI65LCSW1  
 Inj Date : 28-AUG-2010 16:25  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI65LCSW1  
 Misc Info : 10-19848  
 Comment :  
 Method : /chem3/nt11.i/20100828.b/lowsim.m  
 Meth Date : 30-Aug-2010 10:33 yev Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 5 QC Sample: LCS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

Concentration Formula: Amt \* DF \* Vt / Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL (ug/L)
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	382189	200.000	
5 Naphthalene	128	5.962	5.962	(1.004)	403449	208.576	209
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	244940	201.965	202
7 2-Methylnaphthalene	142	6.802	6.802	(1.145)	244142	204.267	204
8 1-Methylnaphthalene	142	6.928	6.928	(1.167)	242766	205.027	205
10 Acenaphthylene	152	7.916	7.915	(0.977)	393968	200.607	201
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	207871	200.000	
12 Acenaphthene	153	8.144	8.143	(1.005)	246834	213.206	213
14 Dibenzofuran	168	8.345	8.344	(1.030)	341614	202.170	202
15 Fluorene	166	8.760	8.760	(1.081)	273989	218.416	218
* 18 Phenanthrene-d10	188	9.927	9.926	(1.000)	334062	200.000	
19 Phenanthrene	178	9.953	9.953	(1.003)	417107	243.574	244
20 Anthracene	178	10.007	10.007	(1.008)	379334	225.623	226
24 Fluoranthene	202	11.442	11.442	(1.153)	476196	263.834	264
25 Pyrene	202	11.723	11.723	(1.181)	492672	263.166	263

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL ( ug/L)
=====	====	==	=====	=====	=====	=====	=====
28 Benzo(a)anthracene	228	13.212	13.212	(0.999)	357172	252.228	252
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	204148	200.000	
30 Chrysene	228	13.266	13.265	(1.003)	387031	271.796	272
43 Total Benzo(a)fluoranthenes	252	14.533	14.534	(0.968)	648361	497.399	497
34 Benzo(a)pyrene	252	14.935	14.937	(0.995)	249921	232.694	233
* 35 Perylene-d12	264	15.016	15.018	(1.000)	154463	200.000	
37 Indeno(1,2,3-cd)pyrene	276	16.770	16.772	(1.117)	304554	211.799	212
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.730	16.732	(1.114)	182561	225.096	225
38 Dibenzo(a,h)anthracene	278	16.784	16.785	(1.118)	241122	219.984	220
39 Benzo(g,h,i)perylene	276	17.280	17.282	(1.151)	258712	203.966	204

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt11.i	Calibration Date: 28-AUG-2010
Lab File ID: ri65sb.d	Calibration Time: 15:19
Lab Smp Id: RI65LCSW1	Client Smp ID: RI65LCSW1
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Liquid
Operator: VTS	
Method File: /chem3/nt11.i/20100828.b/lowsim.m	
Misc Info: 10-19848	

Test Mode:  
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	382189	-9.55
11 Acenaphthene-d10	241002	120501	482004	207871	-13.75
18 Phenanthrene-d10	409999	205000	819998	334062	-18.52
29 Chrysene-d12	258429	129214	516858	204148	-21.00
35 Perylene-d12	200470	100235	400940	154463	-22.95

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.93	9.43	10.43	9.93	0.00
29 Chrysene-d12	13.23	12.73	13.73	13.23	0.00
35 Perylene-d12	15.02	14.52	15.52	15.02	-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.

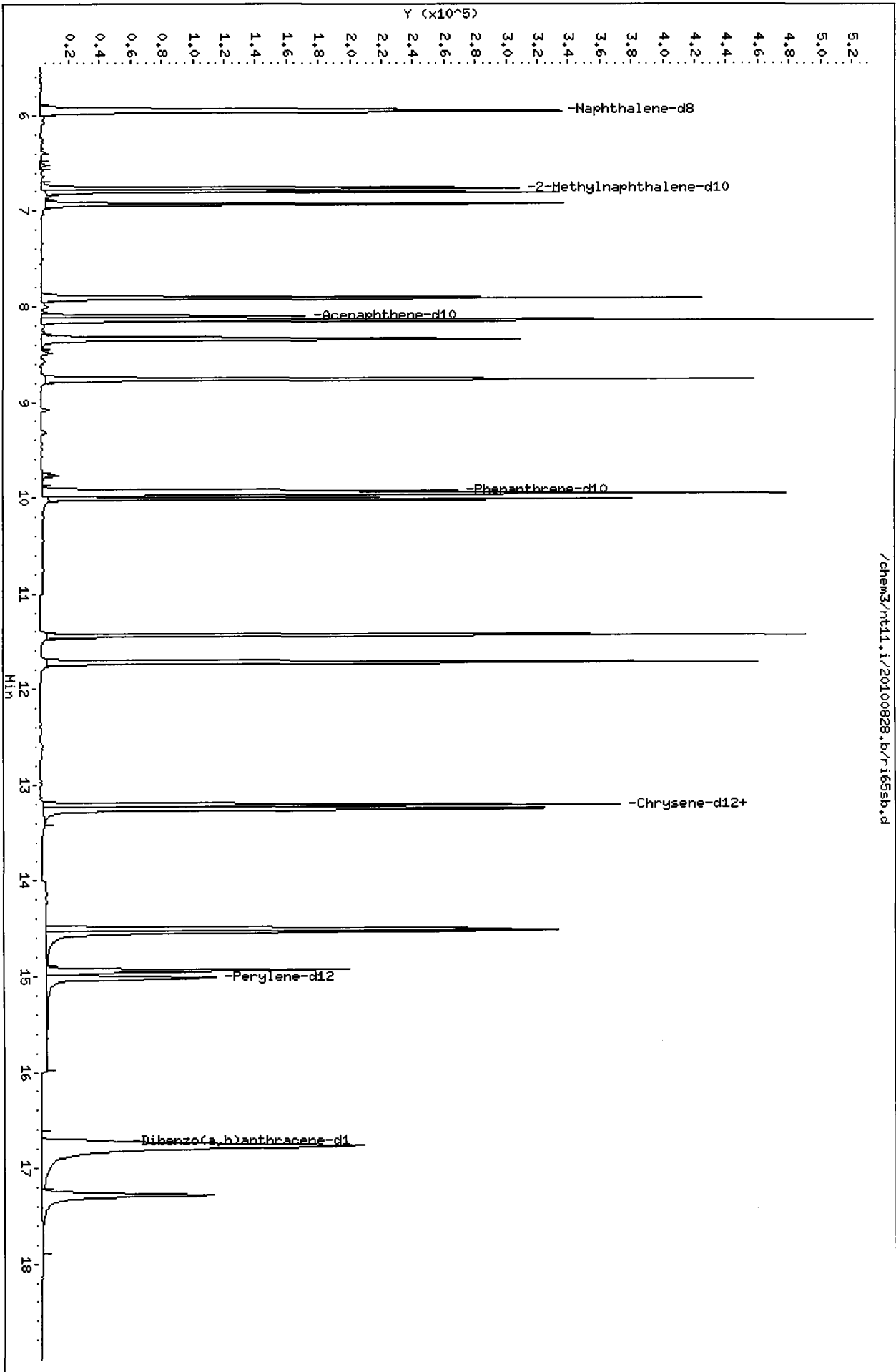
RECOVERY REPORT

Client Name: Floyd-Snider                      Client SDG: RI65  
 Sample Matrix: LIQUID                         Fraction: SV  
 Lab Smp Id: RI65LCSW1                       Client Smp ID: RI65LCSW1  
 Level: LOW                                         Operator: VTS  
 Data Type: MS DATA                         SampleType: LCS  
 SpikeList File: waterlcs.spk                Quant Type: ISTD  
 Sublist File: pnalnm.sub  
 Method File: /chem3/nt11.i/20100828.b/lowsim.m  
 Misc Info: 10-19848

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	209	69.53	41-101
7 2-Methylnaphthalen	300	204	68.09	47-100
8 1-Methylnaphthalen	300	205	68.34	30-160
10 Acenaphthylene	300	201	66.87	35-100
12 Acenaphthene	300	213	71.07	43-104
14 Dibenzofuran	300	202	67.39	37-100
15 Fluorene	300	218	72.81	51-103
19 Phenanthrene	300	244	81.19	55-109
20 Anthracene	300	226	75.21	30-101
24 Fluoranthene	300	264	87.94	49-123
25 Pyrene	300	263	87.72	48-120
28 Benzo(a)anthracene	300	252	84.08	43-113
30 Chrysene	300	272	90.60	59-112
43 Total Benzofluoran	600	497	82.90	30-160
34 Benzo(a)pyrene	300	233	77.56	10-100
37 Indeno(1,2,3-cd)py	300	212	70.60	43-112
38 Dibenzo(a,h)anthra	300	220	73.33	42-114
39 Benzo(g,h,i)peryle	300	204	67.99	31-118

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	202	67.32	31-109
\$ 36 Dibenzo(a,h)anthra	300	225	75.03	10-133

/chem3/nt11.i/20100828.b/r165sb.d





Analytical Resources, Inc.

*YZ 8/30/10*

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100828.b/ri65a.d  
 Lab Smp Id: RI65A Client Smp ID: MW-09-081310  
 Inj Date : 28-AUG-2010 16:49  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI65A  
 Misc Info : 10-19847  
 Comment :  
 Method : /chem3/nt11.i/20100828.b/lowsim.m  
 Meth Date : 30-Aug-2010 10:33 yev Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 6  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

Concentration Formula: Amt \* DF \* Vt / Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL (ug/L)
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	393398	200.000	
5 Naphthalene	128	5.962	5.962	(1.004)	12816	6.43687	6.44
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	232724	186.425	186
7 2-Methylnaphthalene	142	Compound Not Detected.					
8 1-Methylnaphthalene	142	Compound Not Detected.					
10 Acenaphthylene	152	Compound Not Detected.					
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	209034	200.000	
12 Acenaphthene	153	Compound Not Detected.					
14 Dibenzofuran	168	Compound Not Detected.					
15 Fluorene	166	Compound Not Detected.					
* 18 Phenanthrene-d10	188	9.927	9.926	(1.000)	320491	200.000	
19 Phenanthrene	178	Compound Not Detected.					
20 Anthracene	178	Compound Not Detected.					
24 Fluoranthene	202	Compound Not Detected.					
25 Pyrene	202	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL ( ug/L)
28 Benzo(a)anthracene	228				Compound Not Detected.		
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	191005	200.000	
30 Chrysene	228				Compound Not Detected.		
43 Total Benzofluoranthenes	252				Compound Not Detected.		
34 Benzo(a)pyrene	252				Compound Not Detected.		
* 35 Perylene-d12	264	15.016	15.018	(1.000)	143684	200.000	
37 Indeno(1,2,3-cd)pyrene	276				Compound Not Detected.		
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.730	16.732	(1.114)	165439	219.288	219
38 Dibenzo(a,h)anthracene	278				Compound Not Detected.		
39 Benzo(g,h,i)perylene	276				Compound Not Detected.		

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i	Calibration Date: 28-AUG-2010
Lab File ID: ri65a.d	Calibration Time: 15:19
Lab Smp Id: RI65A	Client Smp ID: MW-09-081310
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: VTS	
Method File: /chem3/nt11.i/20100828.b/lowsim.m	
Misc Info: 10-19847	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	393398	-6.90
11 Acenaphthene-d10	241002	120501	482004	209034	-13.26
18 Phenanthrene-d10	409999	205000	819998	320491	-21.83
29 Chrysene-d12	258429	129214	516858	191005	-26.09
35 Perylene-d12	200470	100235	400940	143684	-28.33

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.93	9.43	10.43	9.93	0.00
29 Chrysene-d12	13.23	12.73	13.73	13.23	0.00
35 Perylene-d12	15.02	14.52	15.52	15.02	-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.

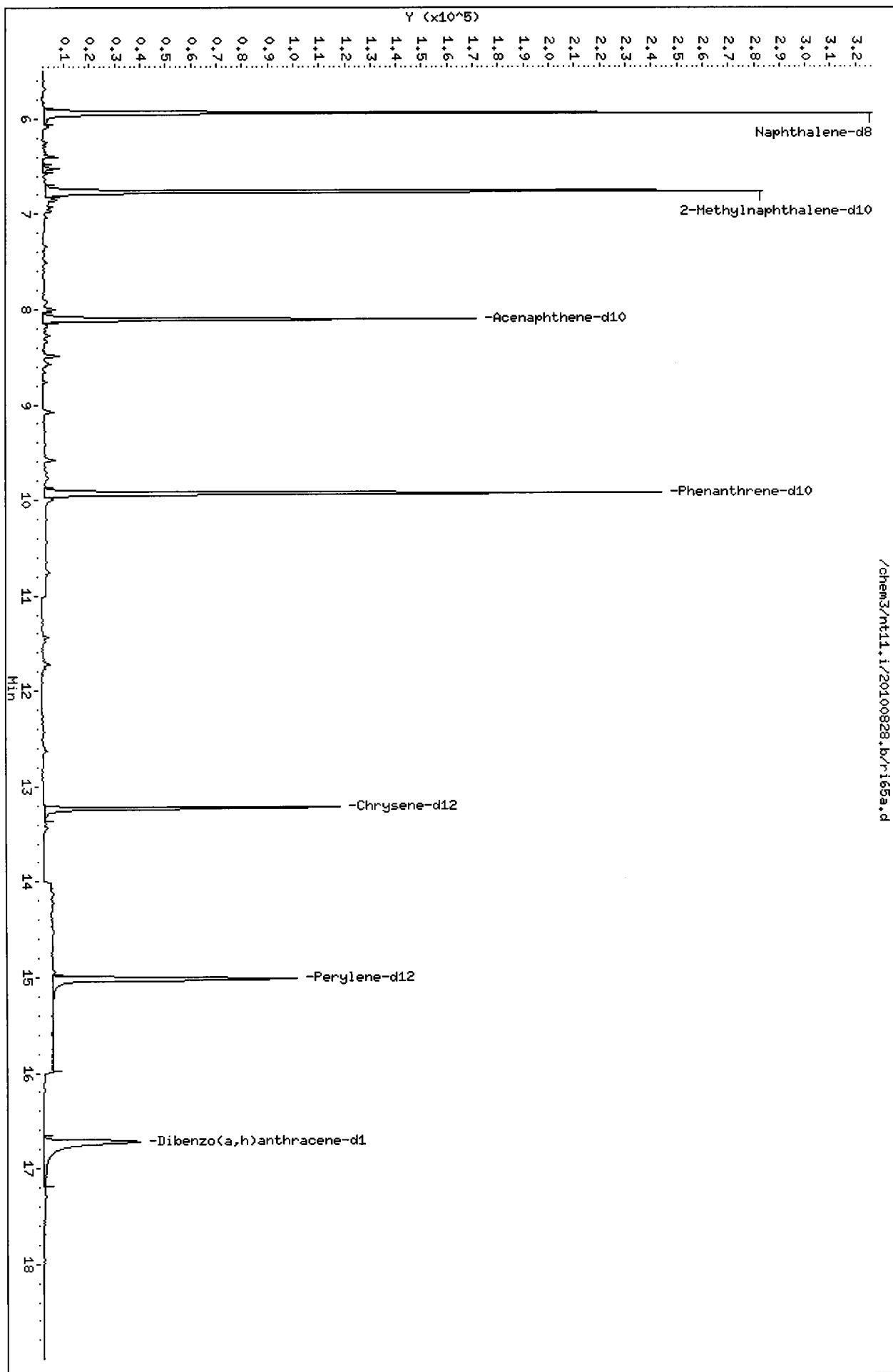
RECOVERY REPORT

Client Name: Floyd-Snider                      Client SDG: RI65  
Sample Matrix: LIQUID                            Fraction: SV  
Lab Smp Id: RI65A                                Client Smp ID: MW-09-081310  
Level: LOW                                        Operator: VTS  
Data Type: MS DATA                             SampleType: SAMPLE  
SpikeList File: waterlcs.spk                    Quant Type: ISTD  
Sublist File: pnalmn.sub  
Method File: /chem3/nt11.i/20100828.b/lowsim.m  
Misc Info: 10-19847

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	186	62.14	31-109
\$ 36 Dibenzo(a,h) anthra	300	219	73.10	10-133

Data File: /chem3/nt11.i/20100828.b/r165a.d  
Date : 28-AUG-2010 16:49  
Client ID: MW-09-081310  
Sample Info: R165a  
Volume Injected (uL): 2.0  
Column phase: ZB-5ms1

Instrument: nt11.i  
Operator: VTS  
Column diameter: 0.25



/chem3/nt11.i/20100828.b/r165a.d

Analytical Resources, Inc.

*YE 8/30/10*

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100828.b/ri65b.d  
 Lab Smp Id: RI65B Client Smp ID: MW-08-081310  
 Inj Date : 28-AUG-2010 17:13  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI65B  
 Misc Info : 10-19848  
 Comment :  
 Method : /chem3/nt11.i/20100828.b/lowsim.m  
 Meth Date : 30-Aug-2010 10:33 yev Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 7  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

Concentration Formula: Amt \* DF \* Vt / Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL (ug/L)
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	386018	200.000	
5 Naphthalene	128	5.962	5.962	(1.004)	15480	7.92351	7.92
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	237126	193.583	194
7 2-Methylnaphthalene	142	Compound Not Detected.					
8 1-Methylnaphthalene	142	Compound Not Detected.					
10 Acenaphthylene	152	Compound Not Detected.					
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	204381	200.000	
12 Acenaphthene	153	Compound Not Detected.					
14 Dibenzofuran	168	Compound Not Detected.					
15 Fluorene	166	Compound Not Detected.					
* 18 Phenanthrene-d10	188	9.927	9.926	(1.000)	318855	200.000	
19 Phenanthrene	178	Compound Not Detected.					
20 Anthracene	178	Compound Not Detected.					
24 Fluoranthene	202	Compound Not Detected.					
25 Pyrene	202	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL ( ug/L)
=====	====	==	=====	=====	=====	=====	=====
28 Benzo(a)anthracene	228				Compound Not Detected.		
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	193619	200.000	
30 Chrysene	228				Compound Not Detected.		
43 Total Benzofluoranthenes	252				Compound Not Detected.		
34 Benzo(a)pyrene	252				Compound Not Detected.		
* 35 Perylene-d12	264	15.016	15.018	(1.000)	152867	200.000	
37 Indeno(1,2,3-cd)pyrene	276				Compound Not Detected.		
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.730	16.732	(1.114)	154493	192.477	192
38 Dibenzo(a,h)anthracene	278				Compound Not Detected.		
39 Benzo(g,h,i)perylene	276				Compound Not Detected.		

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i	Calibration Date: 28-AUG-2010
Lab File ID: ri65b.d	Calibration Time: 15:19
Lab Smp Id: RI65B	Client Smp ID: MW-08-081310
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: VTS	
Method File: /chem3/nt11.i/20100828.b/lowsim.m	
Misc Info: 10-19848	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	386018	-8.65
11 Acenaphthene-d10	241002	120501	482004	204381	-15.20
18 Phenanthrene-d10	409999	205000	819998	318855	-22.23
29 Chrysene-d12	258429	129214	516858	193619	-25.08
35 Perylene-d12	200470	100235	400940	152867	-23.75

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.93	9.43	10.43	9.93	0.00
29 Chrysene-d12	13.23	12.73	13.73	13.23	0.00
35 Perylene-d12	15.02	14.52	15.52	15.02	-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.

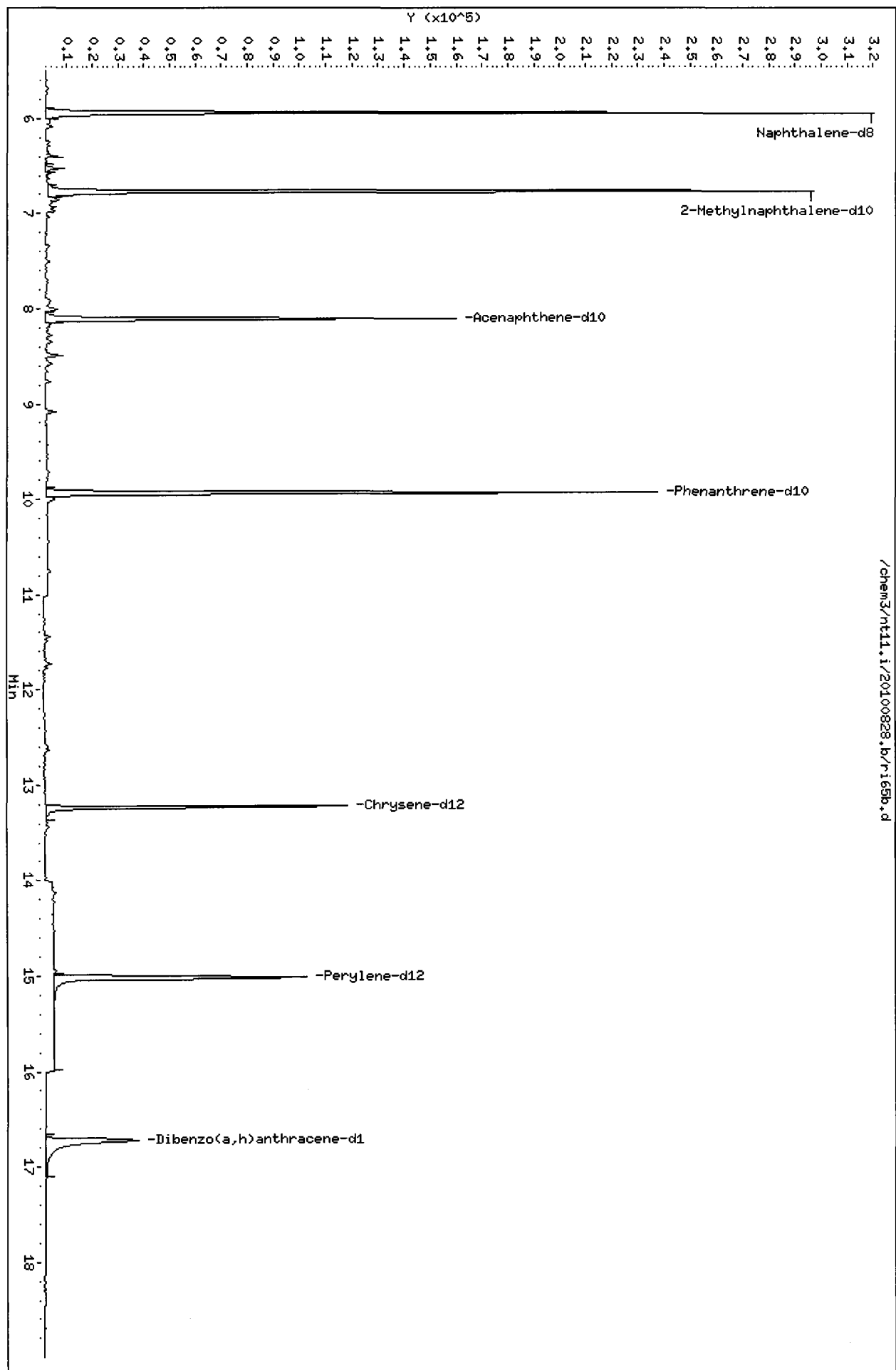
RECOVERY REPORT

Client Name: Floyd-Snyder                      Client SDG: RI65  
 Sample Matrix: LIQUID                        Fraction: SV  
 Lab Smp Id: RI65B                              Client Smp ID: MW-08-081310  
 Level: LOW                                      Operator: VTS  
 Data Type: MS DATA                         SampleType: SAMPLE  
 SpikeList File: waterlcs.spk                Quant Type: ISTD  
 Sublist File: pnalnm.sub  
 Method File: /chem3/nt11.i/20100828.b/lowsim.m  
 Misc Info: 10-19848

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	%RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	194	64.53	31-109
\$ 36 Dibenzo(a,h) anthra	300	192	64.16	10-133

Data File: /chem3/nt11.i/20100828.b/r165b.d  
Date: 28-AUG-2010 17:13  
Client ID: MW-08-081310  
Sample Info: R165B  
Volume Injected (uL): 2.0  
Column phase: ZB-5ms1

Instrument: nt11.i  
Operator: VTS  
Column diameter: 0.25



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

*YZ 8/30/10*

Data file : /chem3/nt11.i/20100828.b/ri65bms.d  
 Lab Smp Id: RI65BMS Client Smp ID: MW-08-081310 MS  
 Inj Date : 28-AUG-2010 17:37  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI65BMS  
 Misc Info : 10-19848  
 Comment :  
 Method : /chem3/nt11.i/20100828.b/lowsim.m  
 Meth Date : 30-Aug-2010 10:33 yev Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 8 QC Sample: MS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

Concentration Formula: Amt \* DF \* Vt / Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ug/L)
* 4 Naphthalene-d8	====	136	5.939	5.939	(1.000)	392345	200.000	
5 Naphthalene	==	128	5.962	5.962	(1.004)	373861	188.277	188
\$ 6 2-Methylnaphthalene-d10	=====	152	6.767	6.767	(1.139)	236984	190.347	190
7 2-Methylnaphthalene		142	6.802	6.802	(1.145)	225084	183.447	183
8 1-Methylnaphthalene		142	6.928	6.928	(1.167)	223270	183.681	184
10 Acenaphthylene		152	7.916	7.915	(0.977)	371412	184.788	185
* 11 Acenaphthene-d10		164	8.103	8.103	(1.000)	212746	200.000	
12 Acenaphthene		153	8.143	8.143	(1.005)	215311	181.716	182
14 Dibenzofuran		168	8.345	8.344	(1.030)	303846	175.698	176
15 Fluorene		166	8.760	8.760	(1.081)	248738	193.743	194
* 18 Phenanthrene-d10		188	9.927	9.926	(1.000)	341007	200.000	
19 Phenanthrene		178	9.953	9.953	(1.003)	380485	217.663	218
20 Anthracene		178	10.007	10.007	(1.008)	352148	205.187	205
24 Fluoranthene		202	11.442	11.442	(1.153)	440278	238.966	239
25 Pyrene		202	11.723	11.723	(1.181)	446933	233.872	234

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL ( ug/L)
=====	====	==	=====	=====	=====	=====	=====
28 Benzo(a)anthracene	228	13.212	13.212	(0.999)	328040	226.118	226
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	209147	200.000	
30 Chrysene	228	13.252	13.265	(1.002)	354084	242.715	243
43 Total Benzofluoranthenes	252	14.533	14.534	(0.968)	587429	439.334	439
34 Benzo(a)pyrene	252	14.935	14.937	(0.995)	227517	206.514	207
* 35 Perylene-d12	264	15.016	15.018	(1.000)	158443	200.000	
37 Indeno(1,2,3-cd)pyrene	276	16.770	16.772	(1.117)	268172	181.813	182
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.730	16.732	(1.114)	166007	199.544	200
38 Dibenzo(a,h)anthracene	278	16.784	16.785	(1.118)	218257	194.122	194
39 Benzo(g,h,i)perylene	276	17.280	17.282	(1.151)	224565	172.597	173

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i	Calibration Date: 28-AUG-2010
Lab File ID: ri65bms.d	Calibration Time: 15:19
Lab Smp Id: RI65BMS	Client Smp ID: MW-08-081310 MS
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: VTS	
Method File: /chem3/nt11.i/20100828.b/lowsim.m	
Misc Info: 10-19848	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	392345	-7.15
11 Acenaphthene-d10	241002	120501	482004	212746	-11.72
18 Phenanthrene-d10	409999	205000	819998	341007	-16.83
29 Chrysene-d12	258429	129214	516858	209147	-19.07
35 Perylene-d12	200470	100235	400940	158443	-20.96

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.93	9.43	10.43	9.93	0.00
29 Chrysene-d12	13.23	12.73	13.73	13.23	0.00
35 Perylene-d12	15.02	14.52	15.52	15.02	-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: FSI Client SDG: RI65  
 Sample Matrix: LIQUID Fraction: SV  
 Lab Smp Id: RI65BMS Client Smp ID: MW-08-081310 MS  
 Level: LOW Operator: VTS  
 Data Type: MS DATA SampleType: MS  
 SpikeList File: waterlcs.spk Quant Type: ISTD  
 Sublist File: pnalmn.sub  
 Method File: /chem3/nt11.i/20100828.b/lowsim.m  
 Misc Info: 10-19848

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	188	62.76	41-101
7 2-Methylnaphthalen	300	183	61.15	47-100
8 1-Methylnaphthalen	300	184	61.23	30-160
10 Acenaphthylene	300	185	61.60	35-100
12 Acenaphthene	300	182	60.57	43-104
14 Dibenzofuran	300	176	58.57	37-100
15 Fluorene	300	194	64.58	51-103
19 Phenanthrene	300	218	72.55	55-109
20 Anthracene	300	205	68.40	30-101
24 Fluoranthene	300	239	79.66	49-123
25 Pyrene	300	234	77.96	48-120
28 Benzo(a)anthracene	300	226	75.37	43-113
30 Chrysene	300	243	80.91	59-112
43 Total Benzofluoran	600	439	73.22	30-160
34 Benzo(a)pyrene	300	207	68.84	10-100
37 Indeno(1,2,3-cd)py	300	182	60.60	43-112
38 Dibenzo(a,h)anthra	300	194	64.71	42-114
39 Benzo(g,h,i)peryle	300	173	57.53	31-118

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	190	63.45	31-109
\$ 36 Dibenzo(a,h)anthra	300	200	66.51	10-133

Date: 28-AUG-2010 17:37

Client ID: MW-08-081310 MS

Sample Info: R165BMS

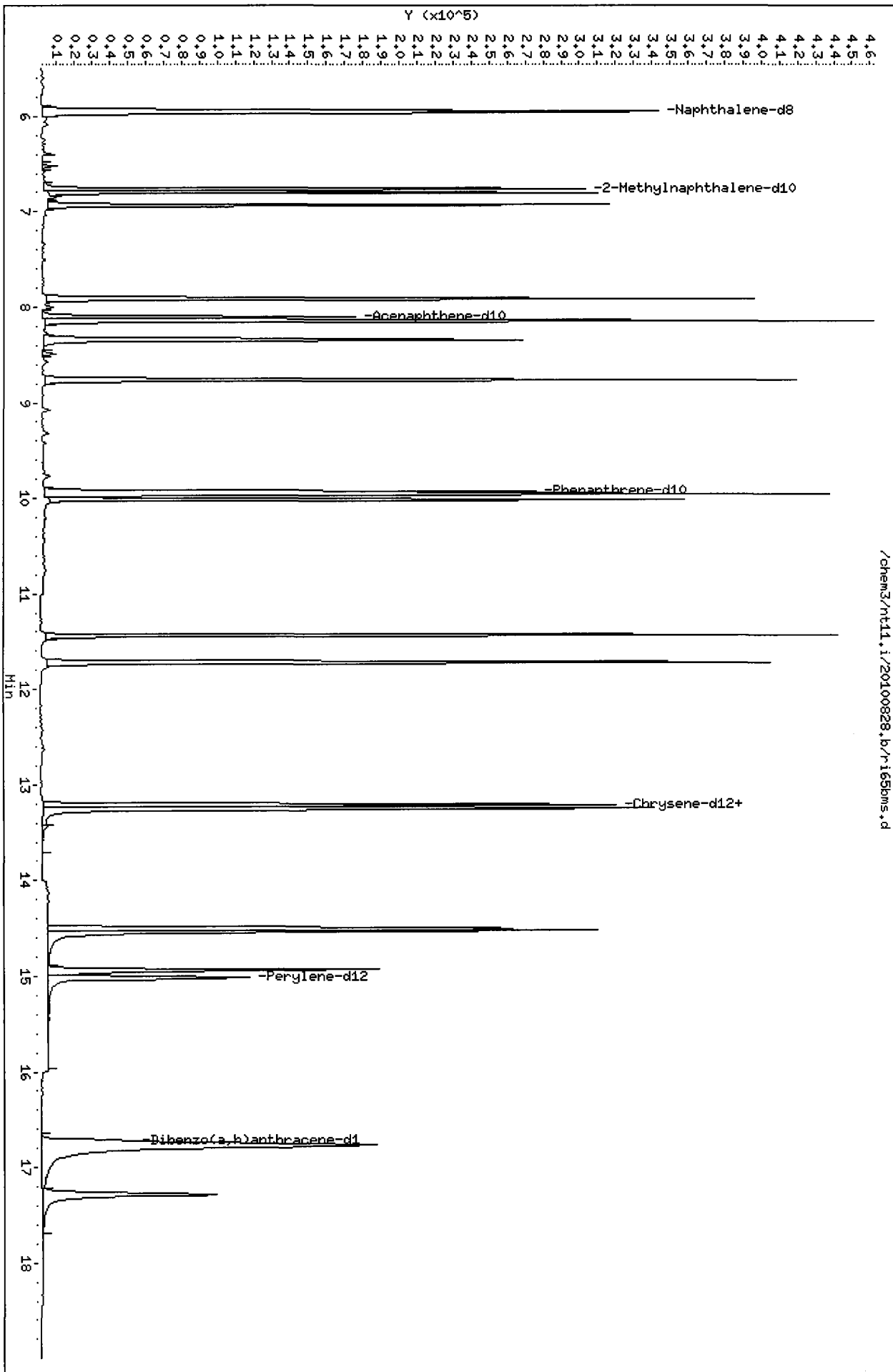
Volume Injected (uL): 2.0

Column Phase: ZB-5ms1

Instrument: nt11.i

Operator: VTS

Column diameter: 0.25



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

*YZ 8/30/10*

Data file : /chem3/nt11.i/20100828.b/ri65bmsd.d  
 Lab Smp Id: RI65BMSD Client Smp ID: MW-08-081310 MSD  
 Inj Date : 28-AUG-2010 18:01  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI65BMSD  
 Misc Info : 10-19848  
 Comment :  
 Method : /chem3/nt11.i/20100828.b/lowsim.m  
 Meth Date : 30-Aug-2010 10:33 yev Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 9 QC Sample: MS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

Concentration Formula: Amt \* DF \* Vt / Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	392485	200.000	
5 Naphthalene	128	5.962	5.962	(1.004)	460615	231.883	232
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	238675	191.637	192
7 2-Methylnaphthalene	142	6.802	6.802	(1.145)	261078	212.707	213
8 1-Methylnaphthalene	142	6.929	6.928	(1.167)	245989	202.300	202
10 Acenaphthylene	152	7.916	7.915	(0.977)	395897	196.379	196
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	213386	200.000	
12 Acenaphthene	153	8.144	8.143	(1.005)	244702	205.901	206
14 Dibenzofuran	168	8.345	8.344	(1.030)	346224	199.602	200
15 Fluorene	166	8.760	8.760	(1.081)	283807	220.395	220
* 18 Phenanthrene-d10	188	9.927	9.926	(1.000)	339911	200.000	
19 Phenanthrene	178	9.954	9.953	(1.003)	466859	267.936	268
20 Anthracene	178	10.007	10.007	(1.008)	411669	240.642	241
24 Fluoranthene	202	11.442	11.442	(1.153)	514212	279.994	280
25 Pyrene	202	11.723	11.723	(1.181)	527144	276.735	277



Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL ( ug/L)
=====	====	==	=====	=====	=====	=====	=====
28 Benzo(a)anthracene	228	13.212	13.212	(0.999)	398411	278.209	278
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	206453	200.000	
30 Chrysene	228	13.266	13.265	(1.003)	425036	295.153	295
43 Total Benzofluoranthenes	252	14.533	14.534	(0.968)	729065	553.033	553
34 Benzo(a)pyrene	252	14.935	14.937	(0.995)	288057	265.190	265
* 35 Perylene-d12	264	15.016	15.018	(1.000)	156217	200.000	
37 Indeno(1,2,3-cd)pyrene	276	16.770	16.772	(1.117)	366638	252.112	252
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.717	16.732	(1.113)	202197	246.508	247
38 Dibenzo(a,h)anthracene	278	16.784	16.785	(1.118)	283425	255.675	256
39 Benzo(g,h,i)perylene	276	17.280	17.282	(1.151)	315365	245.839	246

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: ri65bmsd.d  
 Lab Smp Id: RI65BMSD  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem3/nt11.i/20100828.b/lowsim.m  
 Misc Info: 10-19848

Calibration Date: 28-AUG-2010  
 Calibration Time: 15:19  
 Client Smp ID: MW-08-081310 MSD  
 Level: LOW  
 Sample Type: Water

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	392485	-7.12
11 Acenaphthene-d10	241002	120501	482004	213386	-11.46
18 Phenanthrene-d10	409999	205000	819998	339911	-17.09
29 Chrysene-d12	258429	129214	516858	206453	-20.11
35 Perylene-d12	200470	100235	400940	156217	-22.07

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.93	9.43	10.43	9.93	0.00
29 Chrysene-d12	13.23	12.73	13.73	13.23	0.00
35 Perylene-d12	15.02	14.52	15.52	15.02	-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: FSI Client SDG: RI65  
 Sample Matrix: LIQUID Fraction: SV  
 Lab Smp Id: RI65BMSD Client Smp ID: MW-08-081310 MSD  
 Level: LOW Operator: VTS  
 Data Type: MS DATA SampleType: MS  
 SpikeList File: waterlcs.spk Quant Type: ISTD  
 Sublist File: pnalmn.sub  
 Method File: /chem3/nt11.i/20100828.b/lowsim.m  
 Misc Info: 10-19848

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	232	77.29	41-101
7 2-Methylnaphthalen	300	213	70.90	47-100
8 1-Methylnaphthalen	300	202	67.43	30-160
10 Acenaphthylene	300	196	65.46	35-100
12 Acenaphthene	300	206	68.63	43-104
14 Dibenzofuran	300	200	66.53	37-100
15 Fluorene	300	220	73.47	51-103
19 Phenanthrene	300	268	89.31	55-109
20 Anthracene	300	241	80.21	30-101
24 Fluoranthene	300	280	93.33	49-123
25 Pyrene	300	277	92.24	48-120
28 Benzo(a)anthracene	300	278	92.74	43-113
30 Chrysene	300	295	98.38	59-112
43 Total Benzofluoran	600	553	92.17	30-160
34 Benzo(a)pyrene	300	265	88.40	10-100
37 Indeno(1,2,3-cd)py	300	252	84.04	43-112
38 Dibenzo(a,h)anthra	300	256	85.23	42-114
39 Benzo(g,h,i)peryle	300	246	81.95	31-118

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	192	63.88	31-109
\$ 36 Dibenzo(a,h)anthra	300	247	82.17	10-133

Data File: /chem3/rt11.i/20100828.b/r/i65bmsd.d  
Date : 28-AUG-2010 18:01

Client ID: MW-08-081310 MSD

Sample Inlet: RI65BMSD

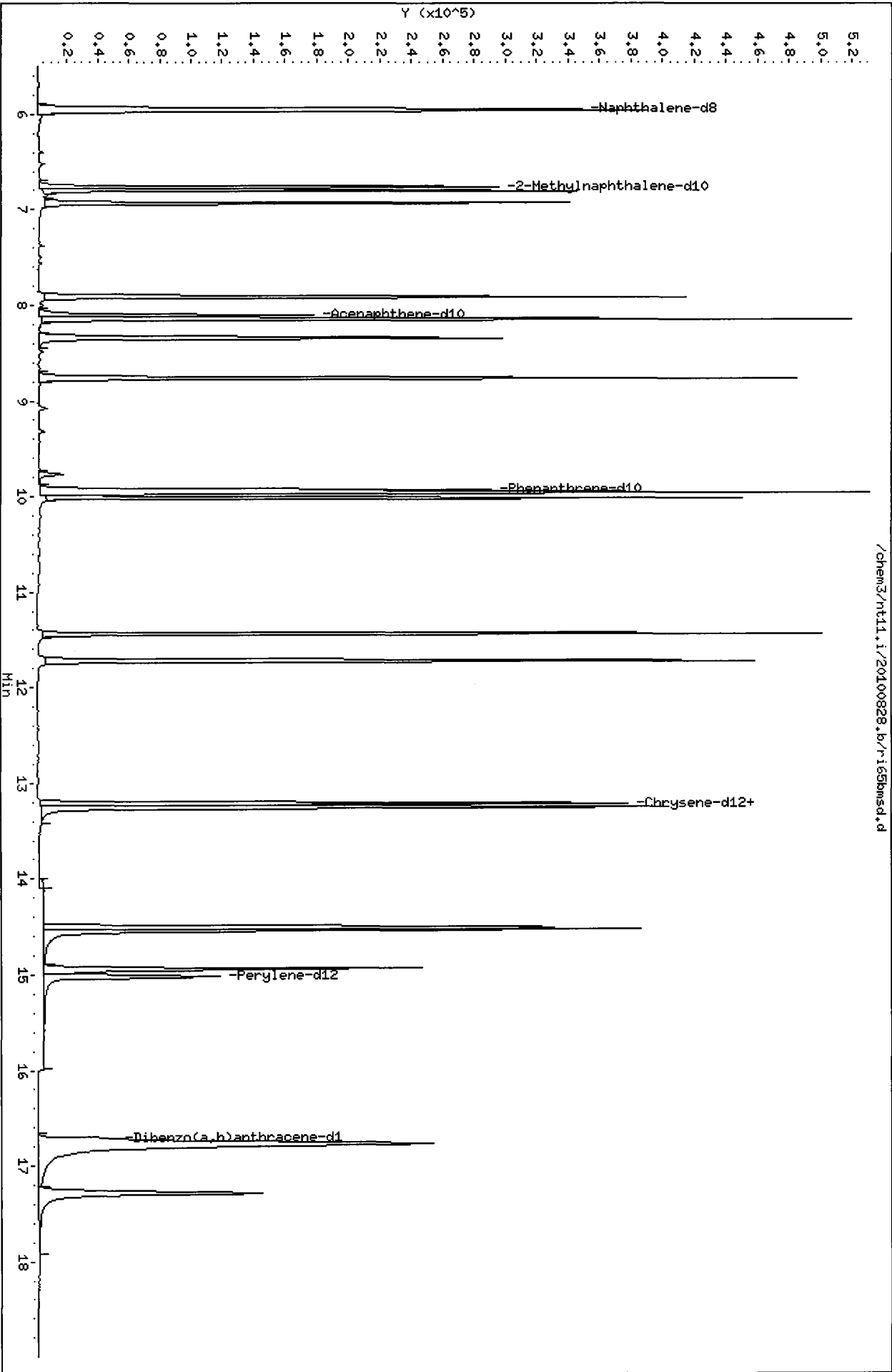
Volume Injected (uL): 2.0

Column phase: ZB-5ms1

Instrument: rt11.i

Operator: VTS

Column diameter: 0.25



Analytical Resources, Inc.

*YZ 8/30/10*

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100828.b/ri65c.d  
 Lab Smp Id: RI65C Client Smp ID: MW-07-081310  
 Inj Date : 28-AUG-2010 18:25  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI65C  
 Misc Info : 10-19849  
 Comment :  
 Method : /chem3/nt11.i/20100828.b/lowsim.m  
 Meth Date : 30-Aug-2010 10:33 yev Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 10  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

Concentration Formula: Amt \* DF \* Vt / Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ug/L)
* 4 Naphthalene-d8	====	136	5.939	5.939	(1.000)	404256	200.000	
5 Naphthalene	==	128	5.962	5.962	(1.004)	52119	25.4738	<i>NFA</i> 25.5
\$ 6 2-Methylnaphthalene-d10	=====	152	6.767	6.767	(1.139)	248110	193.412	193
7 2-Methylnaphthalene		142	6.802	6.802	(1.145)	12738	10.0758	<i>NFA</i> 10.1
8 1-Methylnaphthalene		142	Compound Not Detected.					
10 Acenaphthylene		152	Compound Not Detected.					
* 11 Acenaphthene-d10		164	8.103	8.103	(1.000)	212075	200.000	
12 Acenaphthene		153	Compound Not Detected.					
14 Dibenzofuran		168	Compound Not Detected.					
15 Fluorene		166	Compound Not Detected.					
* 18 Phenanthrene-d10		188	9.927	9.926	(1.000)	333901	200.000	
19 Phenanthrene		178	9.954	9.953	(1.003)	18809	10.9890	<i>NFA</i> 11.0
20 Anthracene		178	Compound Not Detected.					
24 Fluoranthene		202	Compound Not Detected.					
25 Pyrene		202	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL ( ug/L)
28 Benzo(a)anthracene	228				Compound Not Detected.		
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	197822	200.000	
30 Chrysene	228				Compound Not Detected.		
43 Total Benzofluoranthenes	252				Compound Not Detected.		
34 Benzo(a)pyrene	252				Compound Not Detected.		
* 35 Perylene-d12	264	15.016	15.018	(1.000)	151439	200.000	
37 Indeno(1,2,3-cd)pyrene	276				Compound Not Detected.		
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.730	16.732	(1.114)	186875	235.016	235
38 Dibenzo(a,h)anthracene	278				Compound Not Detected.		
39 Benzo(g,h,i)perylene	276				Compound Not Detected.		

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i	Calibration Date: 28-AUG-2010
Lab File ID: ri65c.d	Calibration Time: 15:19
Lab Smp Id: RI65C	Client Smp ID: MW-07-081310
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: VTS	
Method File: /chem3/nt11.i/20100828.b/lowsim.m	
Misc Info: 10-19849	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	404256	-4.33
11 Acenaphthene-d10	241002	120501	482004	212075	-12.00
18 Phenanthrene-d10	409999	205000	819998	333901	-18.56
29 Chrysene-d12	258429	129214	516858	197822	-23.45
35 Perylene-d12	200470	100235	400940	151439	-24.46

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.93	9.43	10.43	9.93	0.00
29 Chrysene-d12	13.23	12.73	13.73	13.23	0.00
35 Perylene-d12	15.02	14.52	15.52	15.02	-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.

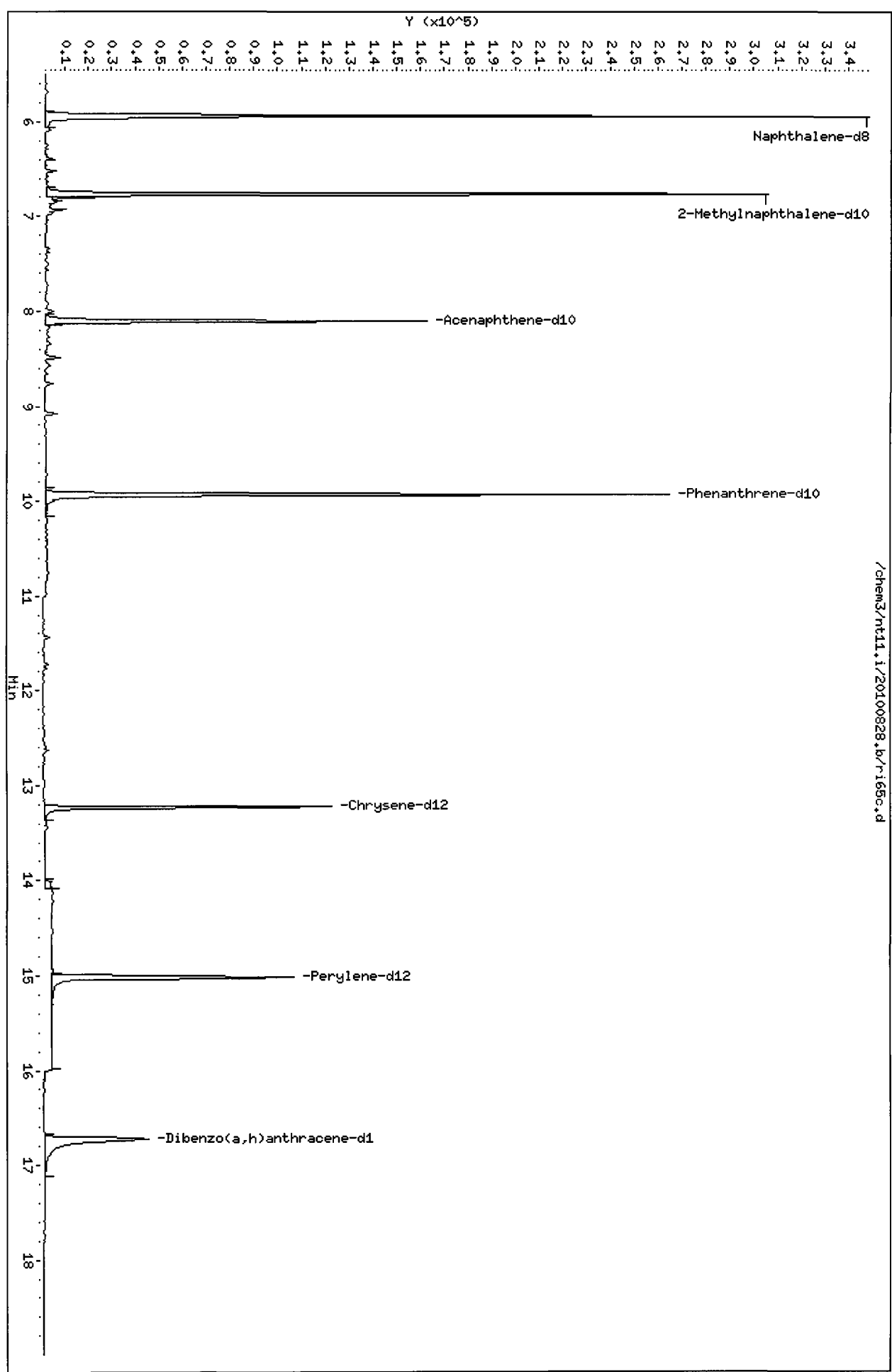
RECOVERY REPORT

Client Name: Floyd-Snider	Client SDG: RI65
Sample Matrix: LIQUID	Fraction: SV
Lab Smp Id: RI65C	Client Smp ID: MW-07-081310
Level: LOW	Operator: VTS
Data Type: MS DATA	SampleType: SAMPLE
SpikeList File: waterlcs.spk	Quant Type: ISTD
Sublist File: pnalmm.sub	
Method File: /chem3/nt11.i/20100828.b/lowsim.m	
Misc Info: 10-19849	

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	193	64.47	31-109
\$ 36 Dibenzo(a,h) anthra	300	235	78.34	10-133



/chem3/nt11.i/20100828.b/r165c.d



Analytical Resources, Inc.

*YZ 8/30/10*

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100828.b/ri65d.d  
 Lab Smp Id: RI65D Client Smp ID: MW-01-081310  
 Inj Date : 28-AUG-2010 18:49  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI65D  
 Misc Info : 10-19850  
 Comment :  
 Method : /chem3/nt11.i/20100828.b/lowsim.m  
 Meth Date : 30-Aug-2010 10:42 yev Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

Concentration Formula: Amt \* DF \* Vt / Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL (ug/L)
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	435251	200.000	
5 Naphthalene	128	5.962	5.962	(1.004)	44296	20.1085	20.1
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	221171	160.134	160
7 2-Methylnaphthalene	142	6.802	6.802	(1.145)	9756	7.16748	7.17 (M)
8 1-Methylnaphthalene	142	6.928	6.928	(1.167)	28094	20.8342	20.8
10 Acenaphthylene	152	Compound Not Detected.					
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	216920	200.000	
12 Acenaphthene	153	8.143	8.143	(1.005)	31720	26.2555	26.3
14 Dibenzofuran	168	8.345	8.344	(1.030)	22158	12.5662	12.6
15 Fluorene	166	8.760	8.760	(1.081)	22564	17.2370	17.2
* 18 Phenanthrene-d10	188	9.927	9.926	(1.000)	343597	200.000	
19 Phenanthrene	178	9.953	9.953	(1.003)	15266	8.66735	8.67
20 Anthracene	178	Compound Not Detected.					
24 Fluoranthene	202	11.442	11.442	(1.153)	17678	9.52260	9.52
25 Pyrene	202	11.723	11.723	(1.181)	34972	18.1623	18.2
28 Benzo(a)anthracene	228	Compound Not Detected.					

Compounds	QUANT SIG		CONCENTRATIONS					
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL ( ug/L)	
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	200293	200.000		
30 Chrysene	228	13.252	13.265	(1.002)	11250	8.05246	J 8.05	
43 Total Benzofluoranthenes	252	Compound Not Detected.						
34 Benzo(a)pyrene	252	Compound Not Detected.						
* 35 Perylene-d12	264	15.018	15.018	(1.000)	153736	200.000		
37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.						
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.732	16.732	(1.114)	163732	202.835	203	
38 Dibenzo(a,h)anthracene	278	Compound Not Detected.						
39 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: nt11.i	Calibration Date: 28-AUG-2010
Lab File ID: ri65d.d	Calibration Time: 15:19
Lab Smp Id: RI65D	Client Smp ID: MW-01-081310
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: VTS	
Method File: /chem3/nt11.i/20100828.b/lowsim.m	
Misc Info: 10-19850	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	435251	3.01
11 Acenaphthene-d10	241002	120501	482004	216920	-9.99
18 Phenanthrene-d10	409999	205000	819998	343597	-16.20
29 Chrysene-d12	258429	129214	516858	200293	-22.50
35 Perylene-d12	200470	100235	400940	153736	-23.31

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.93	9.43	10.43	9.93	0.00
29 Chrysene-d12	13.23	12.73	13.73	13.23	0.00
35 Perylene-d12	15.02	14.52	15.52	15.02	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.

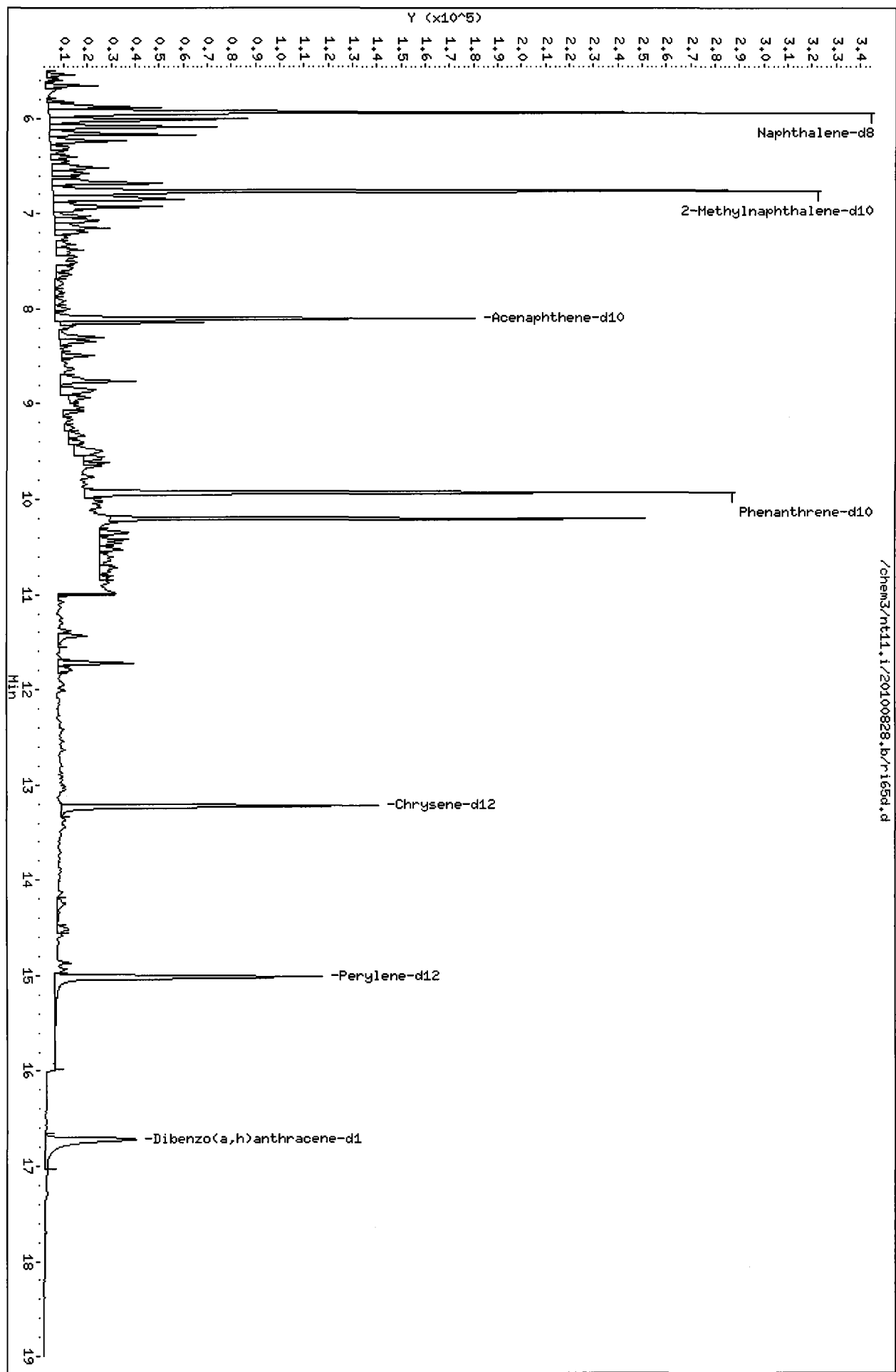
RECOVERY REPORT

Client Name: Floyd-Snider Client SDG: RI65  
Sample Matrix: LIQUID Fraction: SV  
Lab Smp Id: RI65D Client Smp ID: MW-01-081310  
Level: LOW Operator: VTS  
Data Type: MS DATA SampleType: SAMPLE  
SpikeList File: waterlcs.spk Quant Type: ISTD  
Sublist File: pnalmn.sub  
Method File: /chem3/nt11.i/20100828.b/lowsim.m  
Misc Info: 10-19850

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	160	53.38	31-109
\$ 36 Dibenzo(a,h) anthra	300	203	67.61	10-133

Data File: /chem3/nt11.i/20100828.br/r165d.d  
Date : 28-AUG-2010 18:49  
Client ID: MW-01-081310  
Sample Info: R165D  
Volume Injected (uL): 2.0  
Column phase: ZB-5msi

Instrument: nt11.i  
Operator: VTS  
Column diameter: 0.25



Date : 28-AUG-2010 18:49

Client ID: MW-01-081310

Instrument: nt11.i

Sample Info: RI65D

Volume Injected (uL): 2.0

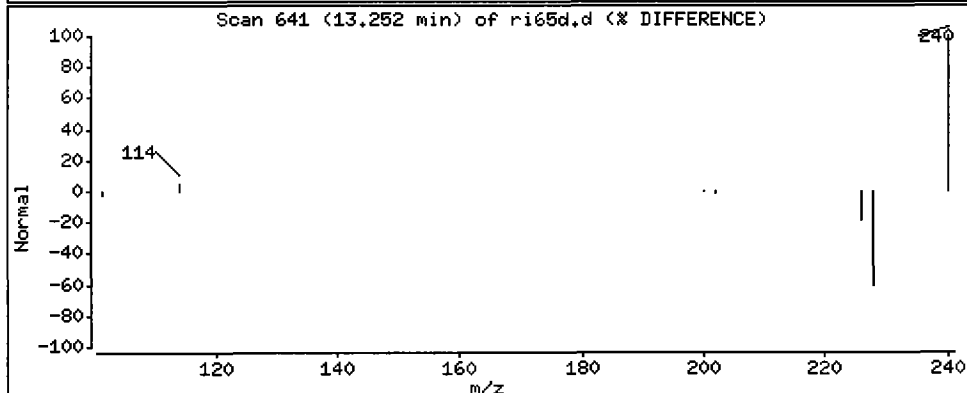
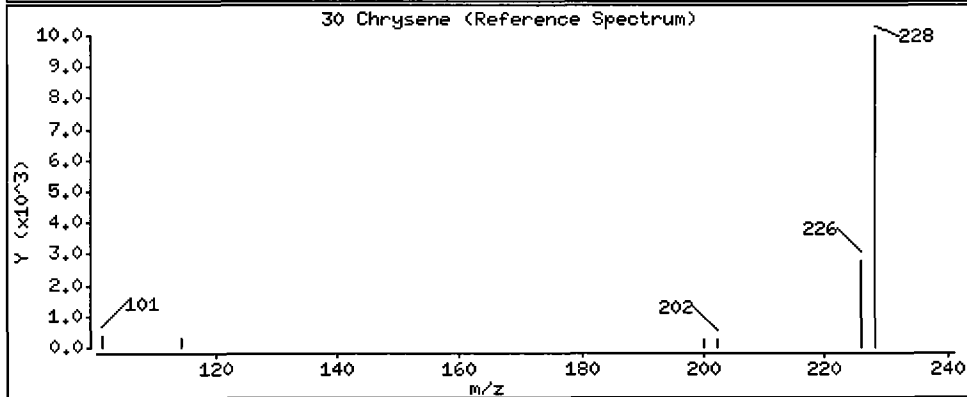
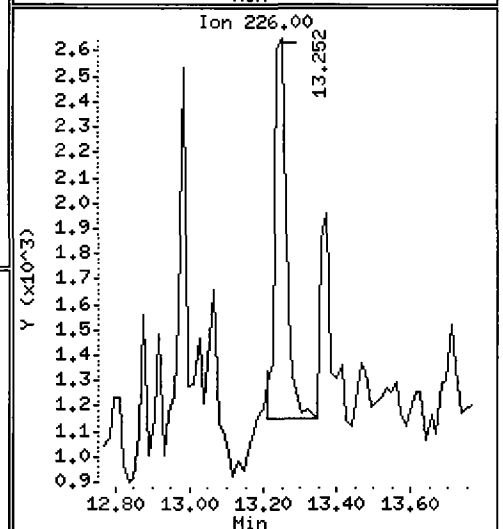
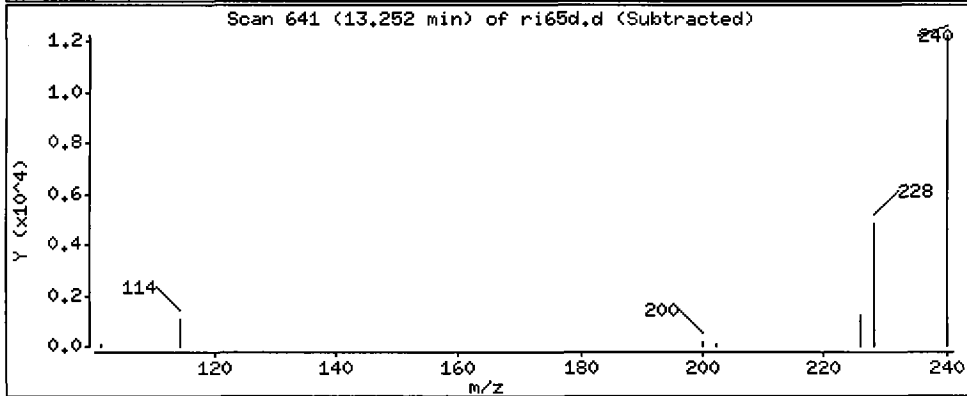
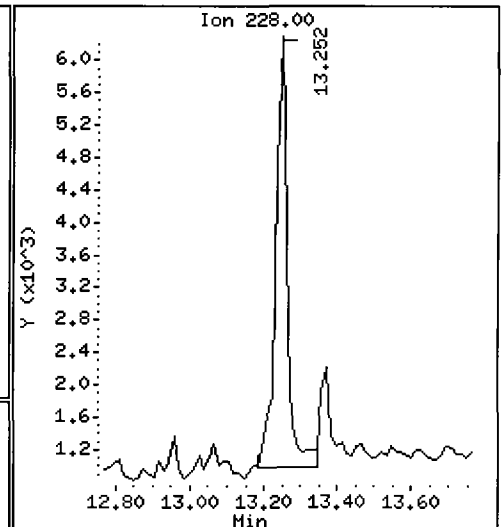
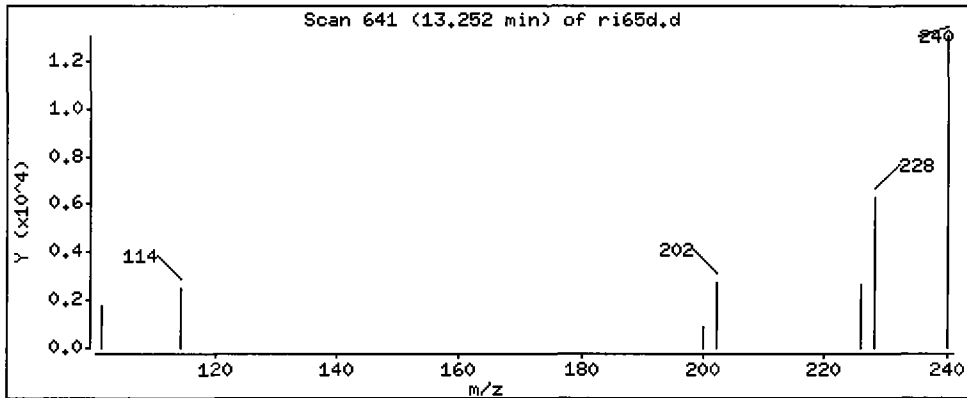
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

30 Chrysene

Concentration: 8.05 ug/L



Analytical Resources, Inc.

*YE 8/30/10*

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100828.b/ri65e.d  
 Lab Smp Id: RI65E Client Smp ID: MW-05-081310  
 Inj Date : 28-AUG-2010 19:12  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI65E  
 Misc Info : 10-19851  
 Comment :  
 Method : /chem3/nt11.i/20100828.b/lowsim.m  
 Meth Date : 30-Aug-2010 10:33 yev Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 12  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

Concentration Formula: Amt \* DF \* Vt / Vo \* CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL (ug/L)
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	389265	200.000	
5 Naphthalene	128	5.962	5.962	(1.004)	34834	17.6812	17.7
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	219329	177.560	178
7 2-Methylnaphthalene	142	6.802	6.802	(1.145)	8782	7.21410	7.21
8 1-Methylnaphthalene	142	Compound Not Detected.					
10 Acenaphthylene	152	Compound Not Detected.					
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	213203	200.000	
12 Acenaphthene	153	Compound Not Detected.					
14 Dibenzofuran	168	Compound Not Detected.					
15 Fluorene	166	Compound Not Detected.					
* 18 Phenanthrene-d10	188	9.927	9.926	(1.000)	337527	200.000	
19 Phenanthrene	178	9.953	9.953	(1.003)	10807	6.24607	6.25
20 Anthracene	178	Compound Not Detected.					
24 Fluoranthene	202	Compound Not Detected.					
25 Pyrene	202	Compound Not Detected.					



Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL ( ug/L)
28 Benzo(a)anthracene	228				Compound Not Detected.		
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	199281	200.000	
30 Chrysene	228				Compound Not Detected.		
43 Total Benzofluoranthenes	252				Compound Not Detected.		
34 Benzo(a)pyrene	252				Compound Not Detected.		
* 35 Perylene-d12	264	15.016	15.018	(1.000)	153173	200.000	
37 Indeno(1,2,3-cd)pyrene	276				Compound Not Detected.		
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.730	16.732	(1.114)	180162	224.009	224
38 Dibenzo(a,h)anthracene	278				Compound Not Detected.		
39 Benzo(g,h,i)perylene	276				Compound Not Detected.		

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i	Calibration Date: 28-AUG-2010
Lab File ID: ri65e.d	Calibration Time: 15:19
Lab Smp Id: RI65E	Client Smp ID: MW-05-081310
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: VTS	
Method File: /chem3/nt11.i/20100828.b/lowsim.m	
Misc Info: 10-19851	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	389265	-7.88
11 Acenaphthene-d10	241002	120501	482004	213203	-11.53
18 Phenanthrene-d10	409999	205000	819998	337527	-17.68
29 Chrysene-d12	258429	129214	516858	199281	-22.89
35 Perylene-d12	200470	100235	400940	153173	-23.59

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.93	9.43	10.43	9.93	0.00
29 Chrysene-d12	13.23	12.73	13.73	13.23	0.00
35 Perylene-d12	15.02	14.52	15.52	15.02	-0.01

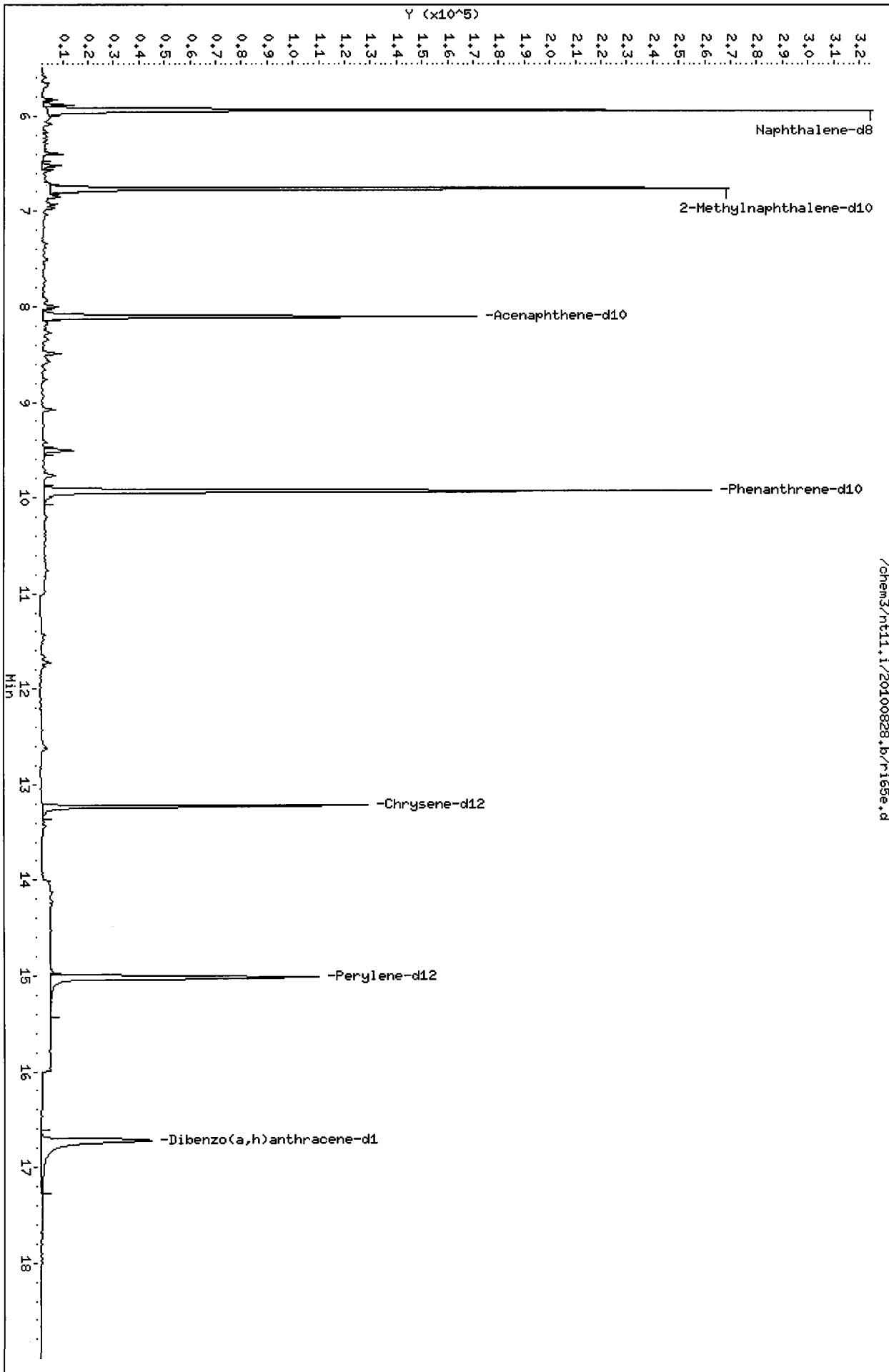
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd-Snider	Client SDG: RI65
Sample Matrix: LIQUID	Fraction: SV
Lab Smp Id: RI65E	Client Smp ID: MW-05-081310
Level: LOW	Operator: VTS
Data Type: MS DATA	SampleType: SAMPLE
SpikeList File: waterlcs.spk	Quant Type: ISTD
Sublist File: pnalmn.sub	
Method File: /chem3/nt11.i/20100828.b/lowsim.m	
Misc Info: 10-19851	

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	178	59.19	31-109
\$ 36 Dibenzo(a,h) anthra	300	224	74.67	10-133



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

**ARI Job ID: RI65**

**RI65:00444**



Preparation Test PCP # 1

ARI Job No(s) RI65

In-House (0.25ppb)  
Batch set up by: SP

Bottle #	Extraction Requirements	Verify Client ID	Volume Extracted	KD Exchange To Hexane (X 2)	Turbo Vap	Final Effective Volume	Volume to Lab	Derivitize	Comments
	RI65 MB	Date 08/18/10	500mL	↓	↓	50mL	1-2mL		
	↓ SB	↓	↓	↓	↓	↓	↓		
	SB Dup								
11	RI65 A	checked	500 mL	↓	↓				
27	B	↓	↓	↓	↓				
32	BMS	↓	↓	↓	↓				
25	BMSD	↓	↓	↓	↓				
10	C	↓	↓	↓	↓				
14	D	↓	↓	↓	↓				
13	E	↓	↓	↓	↓				
Analyst/Date: <u>AR 08/18/10</u>				<u>RR/TS</u>		<u>TS</u>		<u>8/19/10 B-23-10</u>	

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	F 1683-3	100µL 12.5	12/9/10	<u>AR</u>	<u>SP</u>
Spike	6 1702-8	100µL 12.5	12/5/11	<u>AR</u>	<u>SP</u>
Extraction Time:	<u>1520</u>		Derivitized by:	Diazald ID:	

- SPECIAL INSTRUCTIONS: 1. Add surr/spike. 2. Acidify all with 1:1 Sulfuric Acid 3. Extract 3X with 30mL DCM.  
4. KD (NO Drying Column) at 80° to 5mL. 5. Exchange (2 X with 20mL) Hexane at 100°. 6. Turbo Vap to 1-2mL  
7. Pipet using Hexane into Herb Tubes. 8. GC Analyst to Derivitize. A. Archive Y/(N)



ARI Job No.: RI 65

Client ID: Floyd Snider

Parameter: PCP

Client Project: Lora Lakes Apts R.I.

Note problems, concerns, corrective actions	Analyst/Date
<b>Screens: Soil/Sediment/Solid/Other:</b>	
<input type="checkbox"/> No Anomalies (standard soil/sediment)	
<input type="checkbox"/> Wet sediment/sludge=	
<input type="checkbox"/> Standing Water Decanted=	
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=	
<input type="checkbox"/> Clay (Difficult to homogenize/Mixed with Kitchen Aid)=	
<input type="checkbox"/> Rocks/Organics=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input type="checkbox"/> Other (Details)=	
<b>Aqueous:</b>	
<input checked="" type="checkbox"/> No Anomalies	RR 08/18/10
<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: RI65**





### 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 / NA Method Blank In Control? YES / NO / NA  
ICal Meets RF & %RSD Criteria? YES / NO LCS/LCSD Recovery In Control? YES / NO / NA  
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):**

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

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 8/10/2010</sub> Analyst: AR

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

Instrument Tune (.U or .CT.): AR ~~PCFAST.M~~ EM Voltage: NA

Calibration File: ~~HERB20100802~~ FPCP20100809.b Curve Date: ~~8/2/2010~~ 8/9/2010

IS/SS	AR	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	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
FILENAME:	0809A005	0809A006	0809A007	0809A008	0809A009	0809A010	0809A011	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	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 AR Date: 8/12/2010  
Reviewer 2 [Signature] 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: 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	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 DATABATCH - /chem2/ecd1.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/ecdl.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

PR 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:

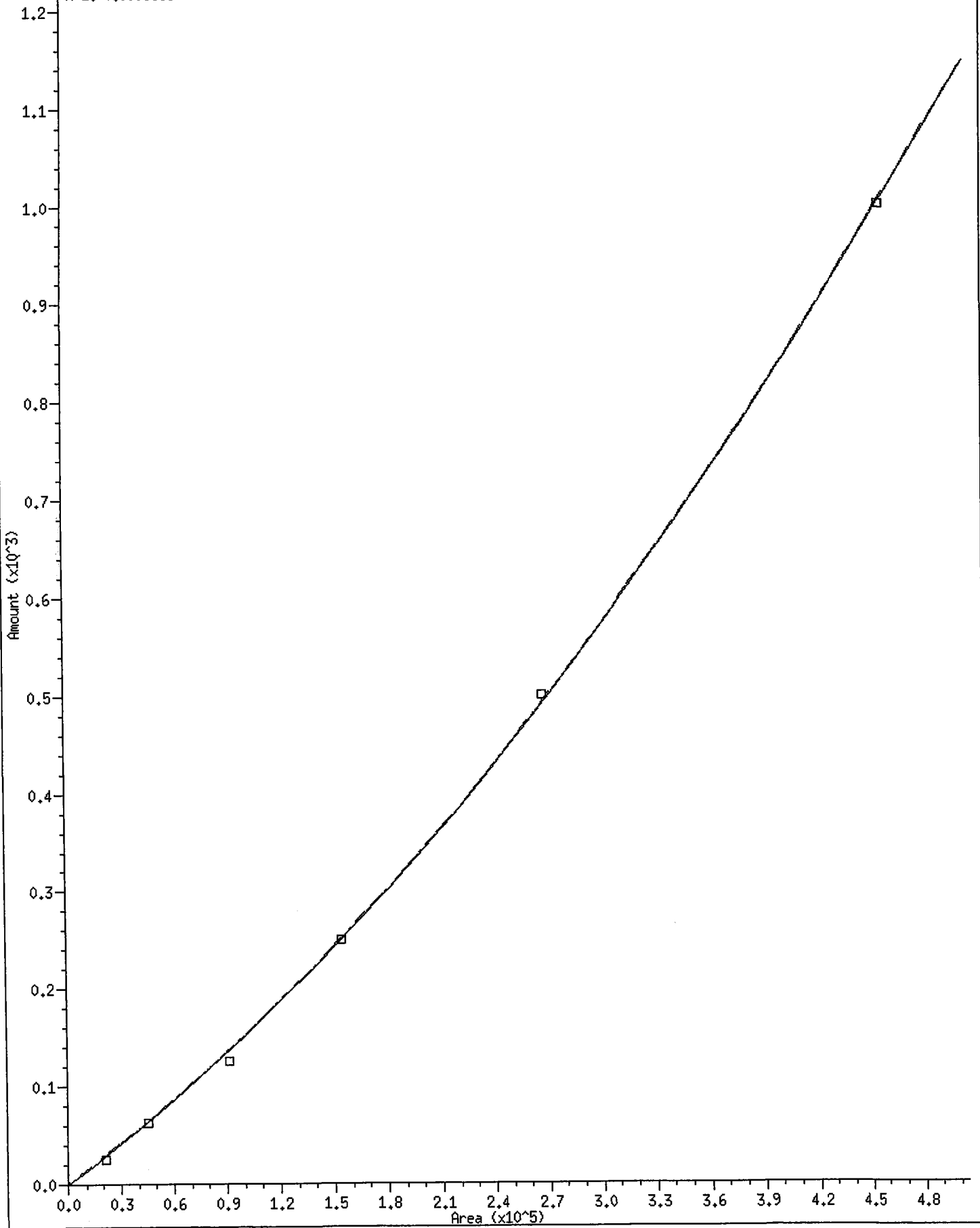
Level 1: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A006.d/0809A006.cdf  
 Level 2: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A007.d/0809A007.cdf  
 Level 3: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A008.d  
 Level 4: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A005.d  
 Level 5: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A009.d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



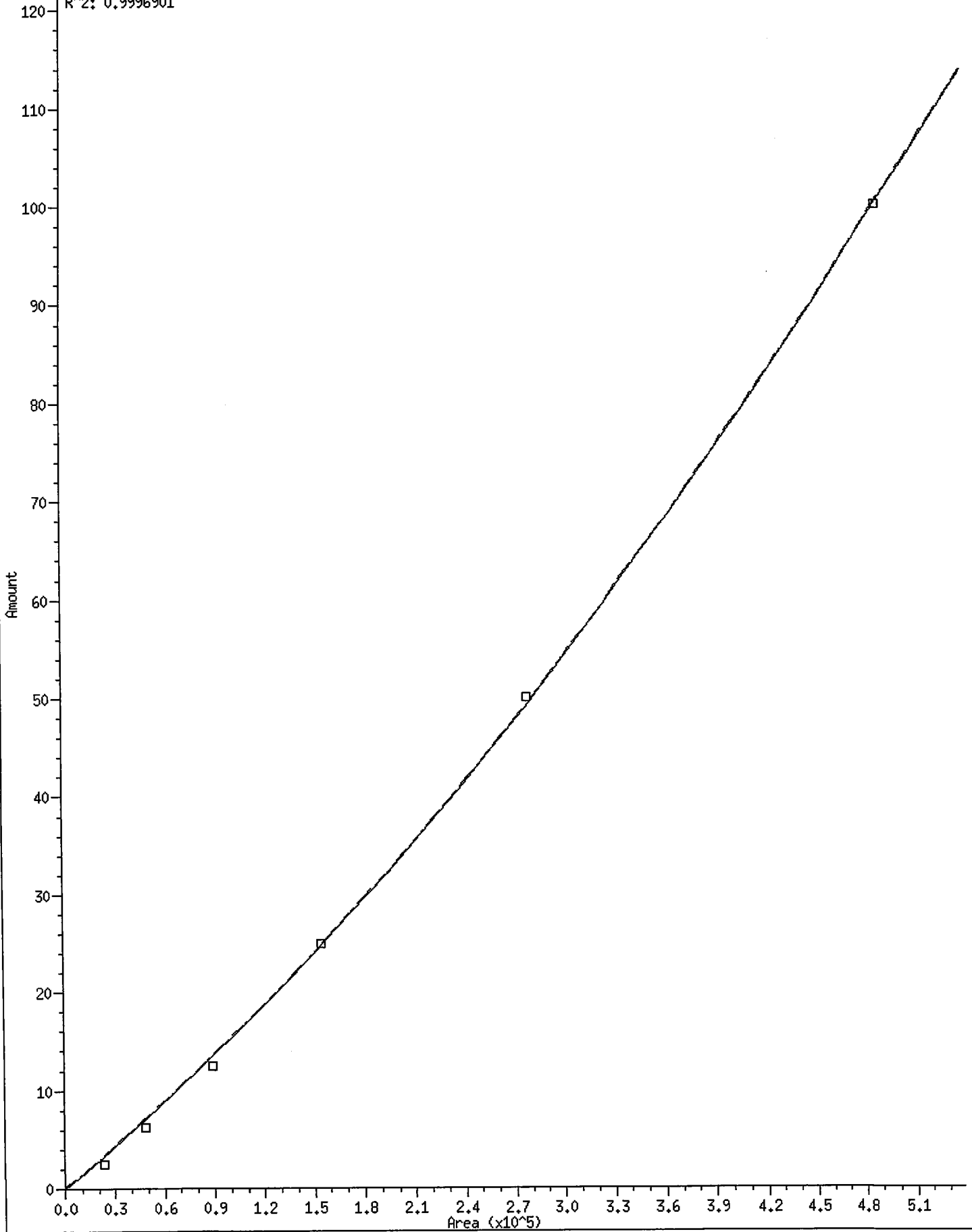
1 2,4-Dichlorophenol

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

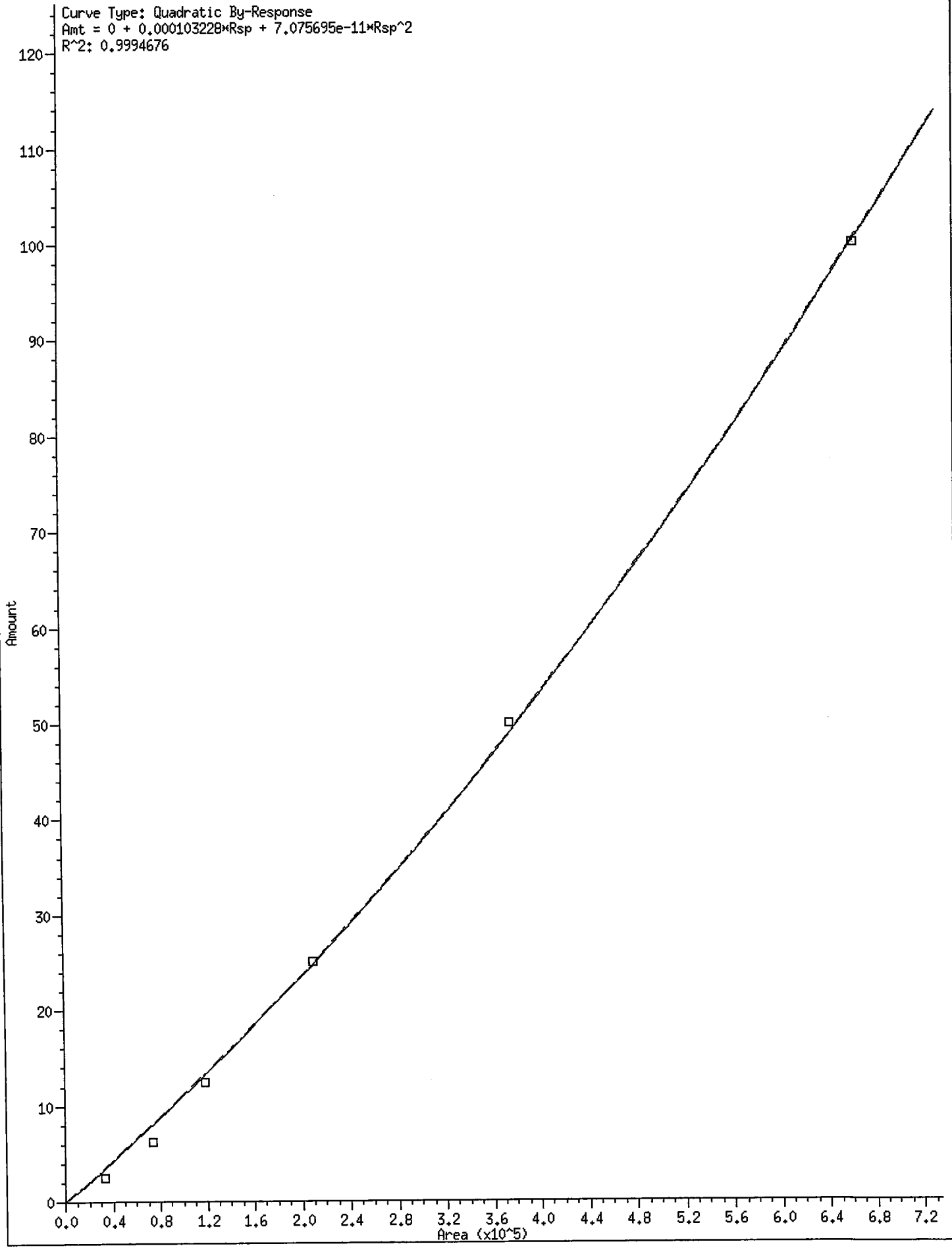


4 2,4,5-Trichlorophenol

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



6 2,3,4-Trichlorophenol



Report Date : 12-Aug-2010 19:02

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Calibration File Names:

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

Compound	2		6		12		25		50		100		Coefficients		%RSD or R <sup>2</sup>	
	Level 1	Level 2	Level 2	Level 2	Level 3	Level 3	Level 4	Level 4	Level 5	Level 5	Level 6	Level 6	b	ml		m2
1 2,4-Dichlorophenol	21466	45023	91643	154741	267768	457854	QUAD	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	0.00014	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	0.00010	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						

00459

Report Date : 12-Aug-2010 19:02

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

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

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

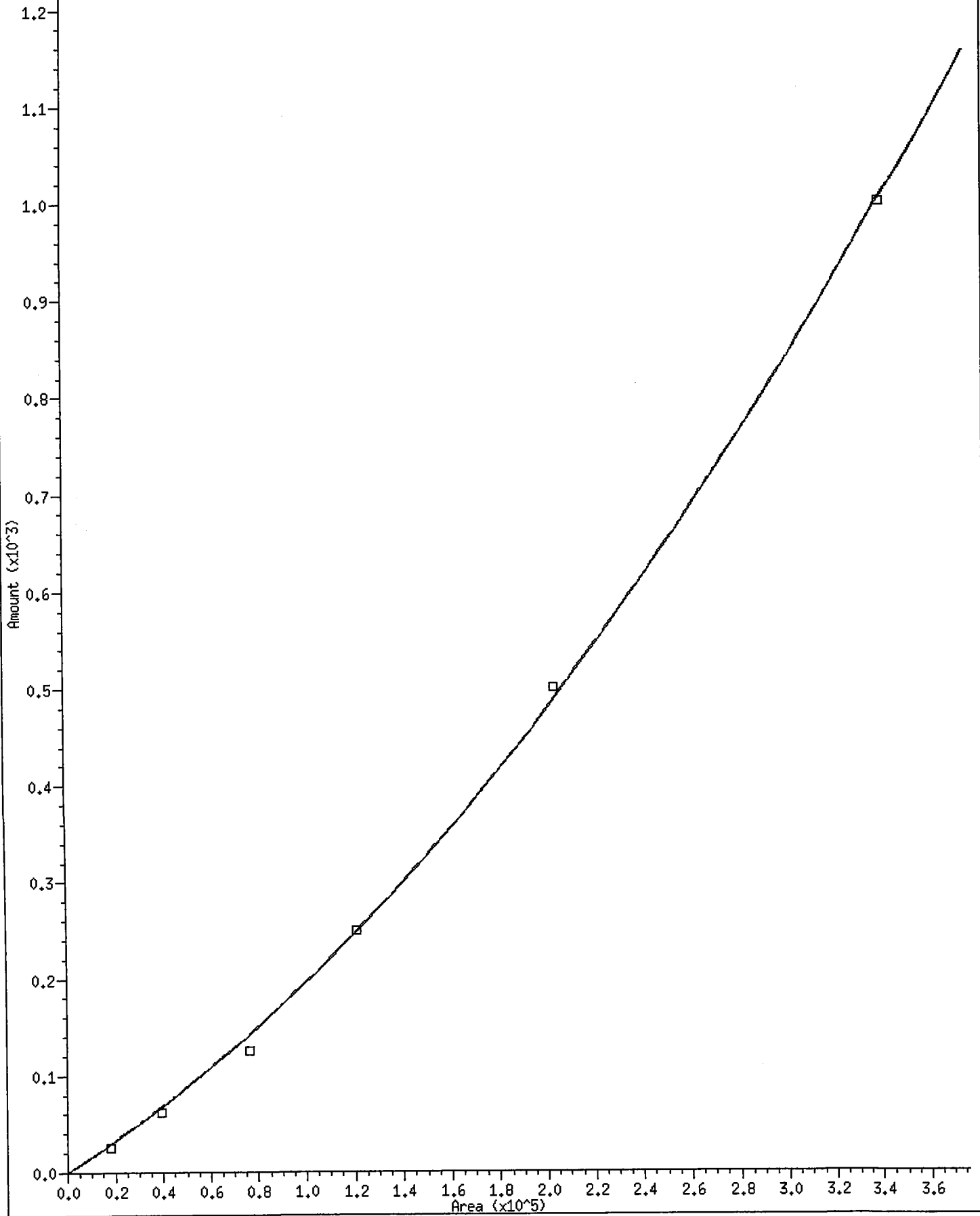
Calibration File Names:

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

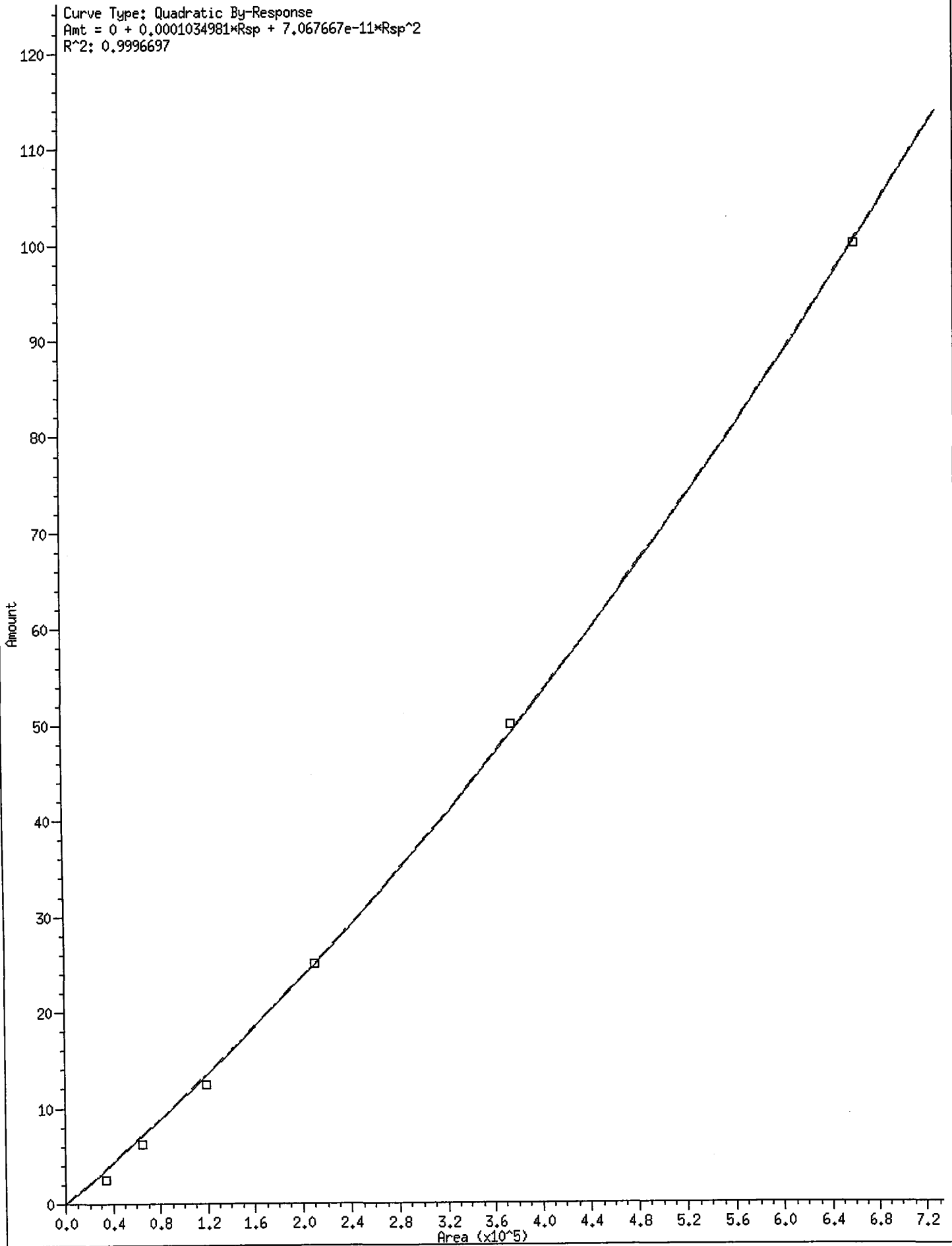
Compound	2.500 Level 1	6.250 Level 2	12.500 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
1 2,4-Dichlorophenol	721	627	611	486	409	342	533	27.140 <-
2 2,4,6-Trichlorophenol	13540	10473	9560	8413	7539	6660	9364	26.271 <-
3 2,3,6-Trichlorophenol	12902	10500	9607	8801	8025	7161	9499	21.431 <-
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



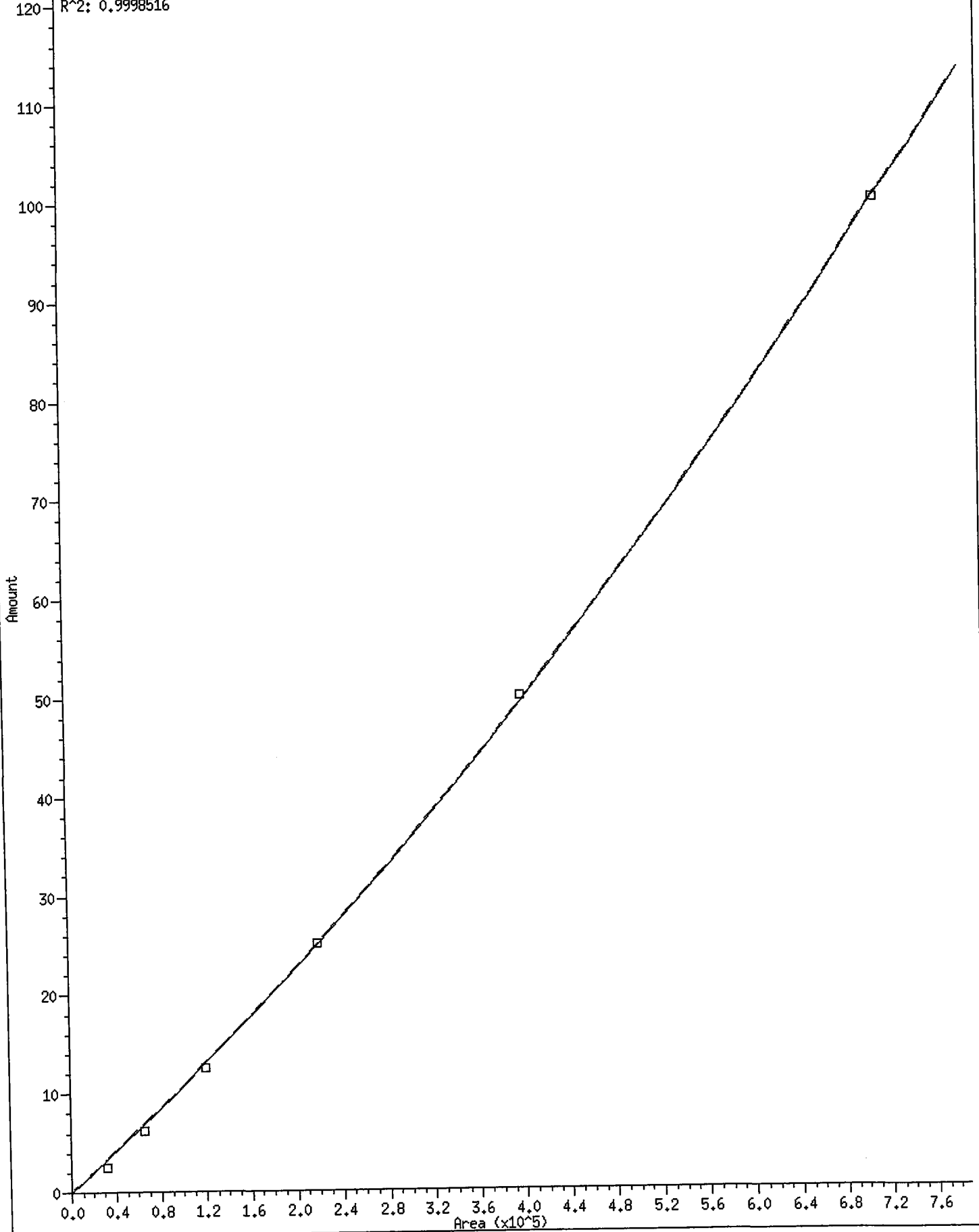
2,2,4,6-Trichlorophenol





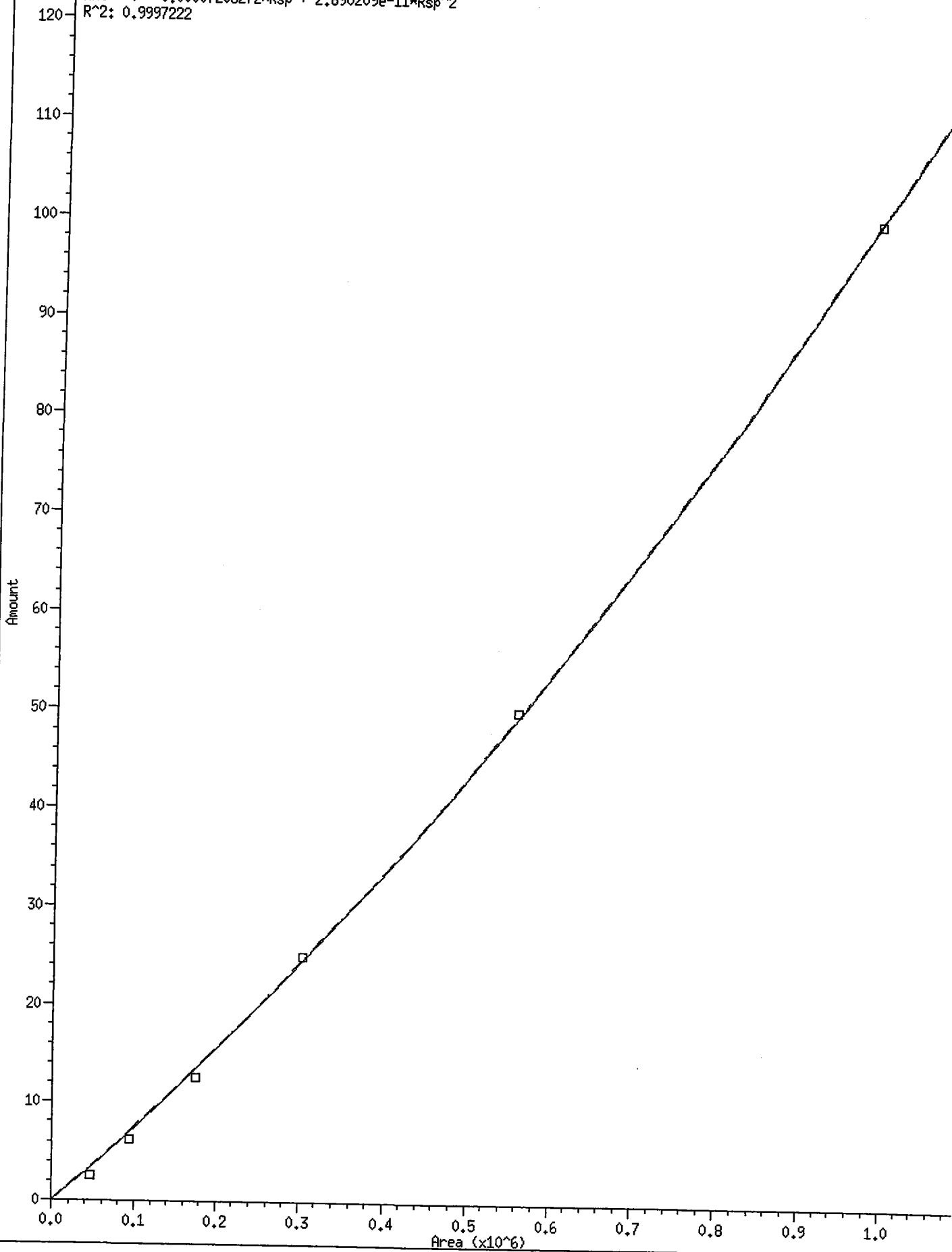
3 2,3,6-Trichlorophenol

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)

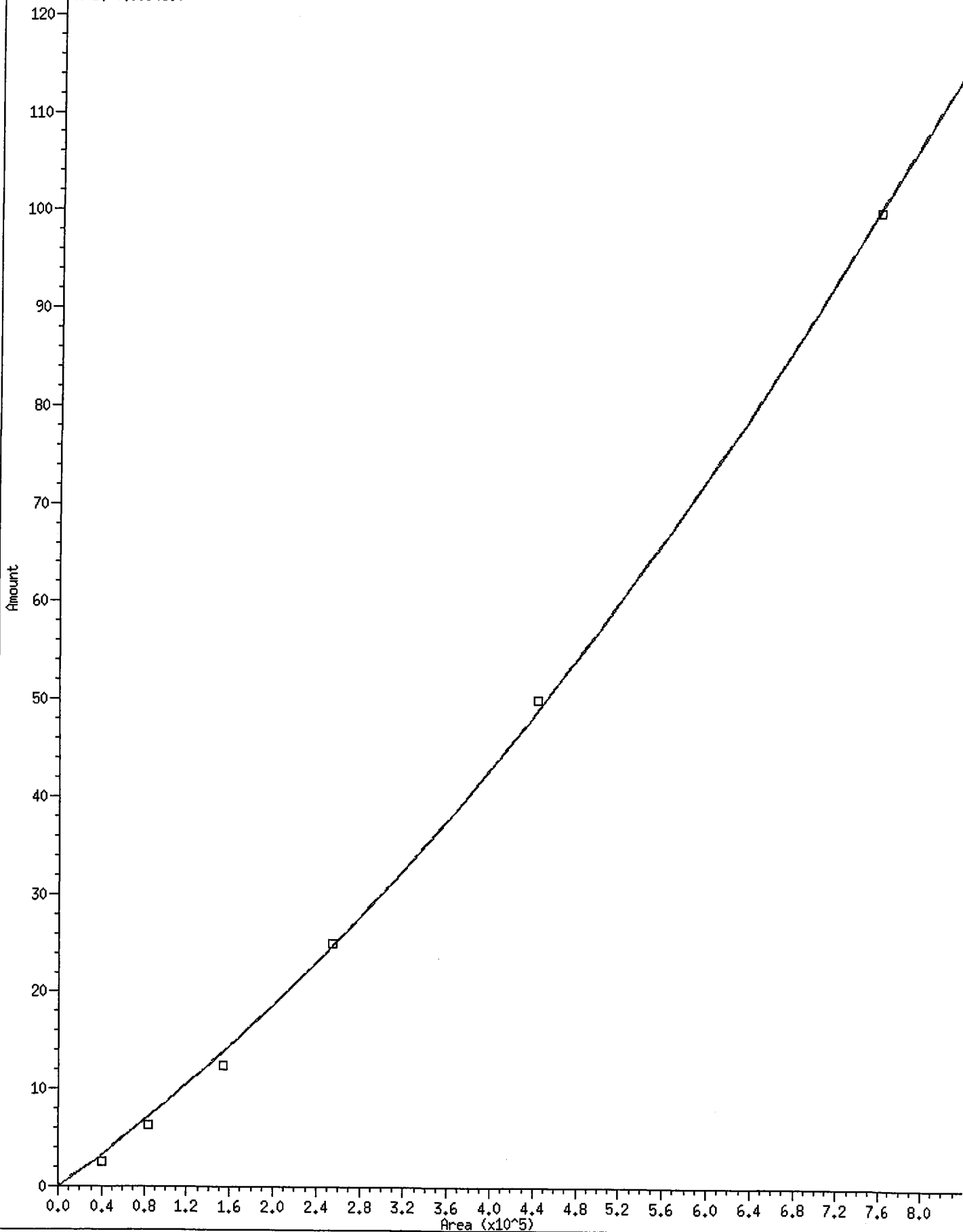
Curve Type: Quadratic By-Response  
Amt = 0 + 0.00007206272\*Rsp + 2.890209e-11\*Rsp^2  
R^2: 0.9997222



RI65:00465

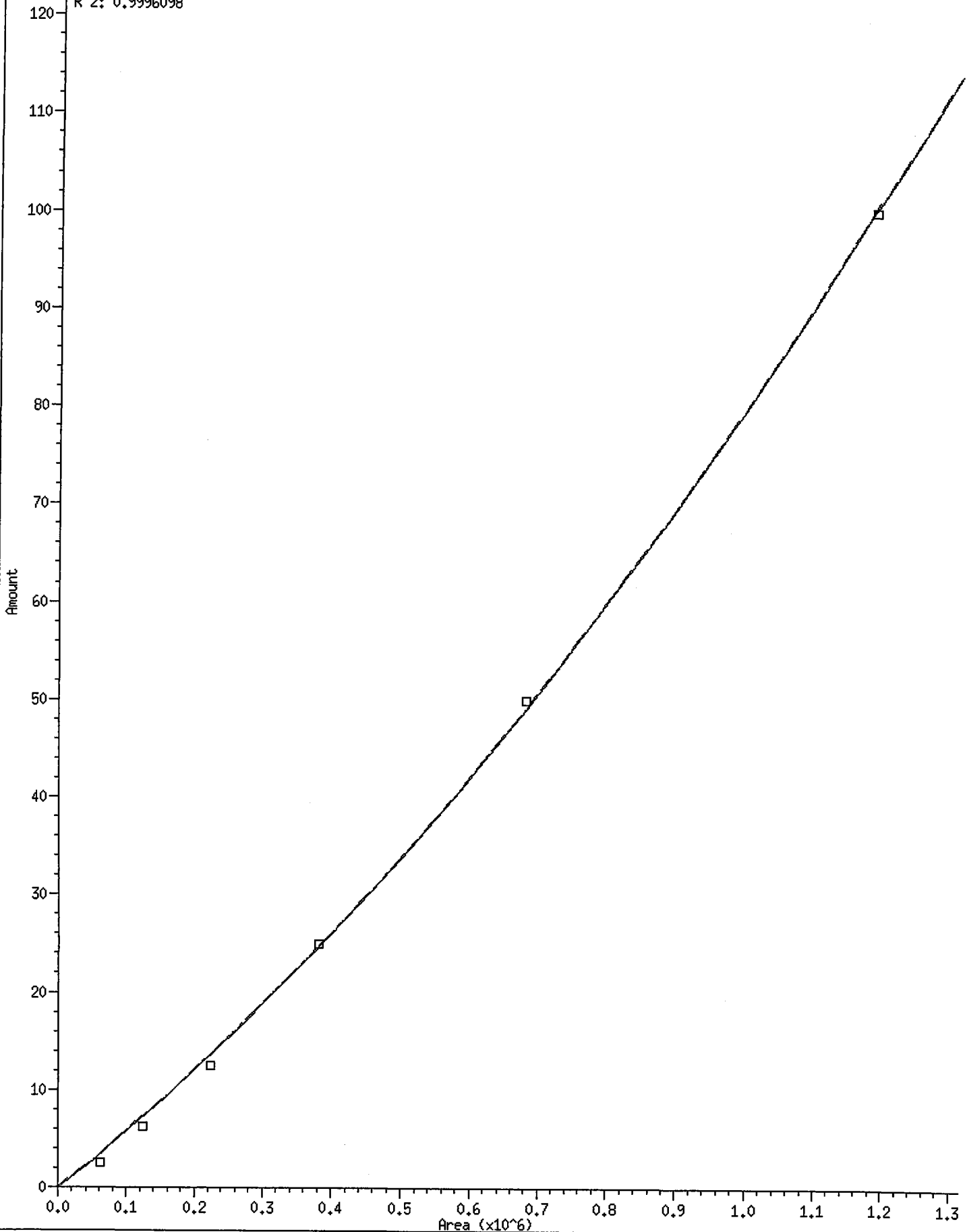
8 2,3,4,5-Tetrachlorophenol

Curve Type: Quadratic By-Response  
Amt = 0 + 0.0000793554\*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



Report Date : 12-Aug-2010 19:15

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Calibration File Names:

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

Compound	Level						Coefficients						%RSD or R^2
	2	6	12	25	50	100	b	ml	m2	ml	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	0.00008	6.846e-11	0.99949		
9 Pentachlorophenol	61320	123902	222874	383426	684285	1196534	QUAD	0.000e+00	0.00006	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		

Report Date : 12-Aug-2010 19:15

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

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

Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

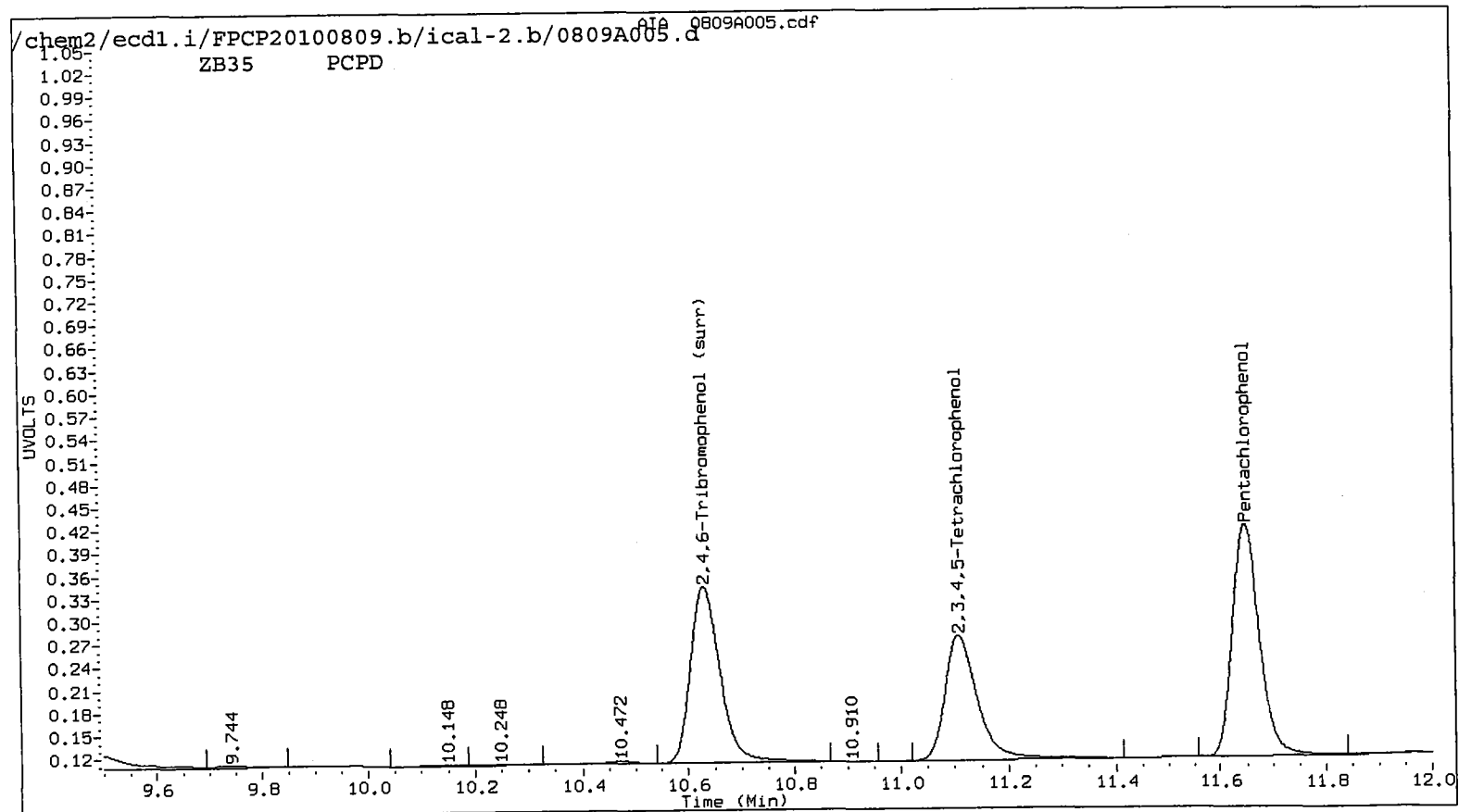
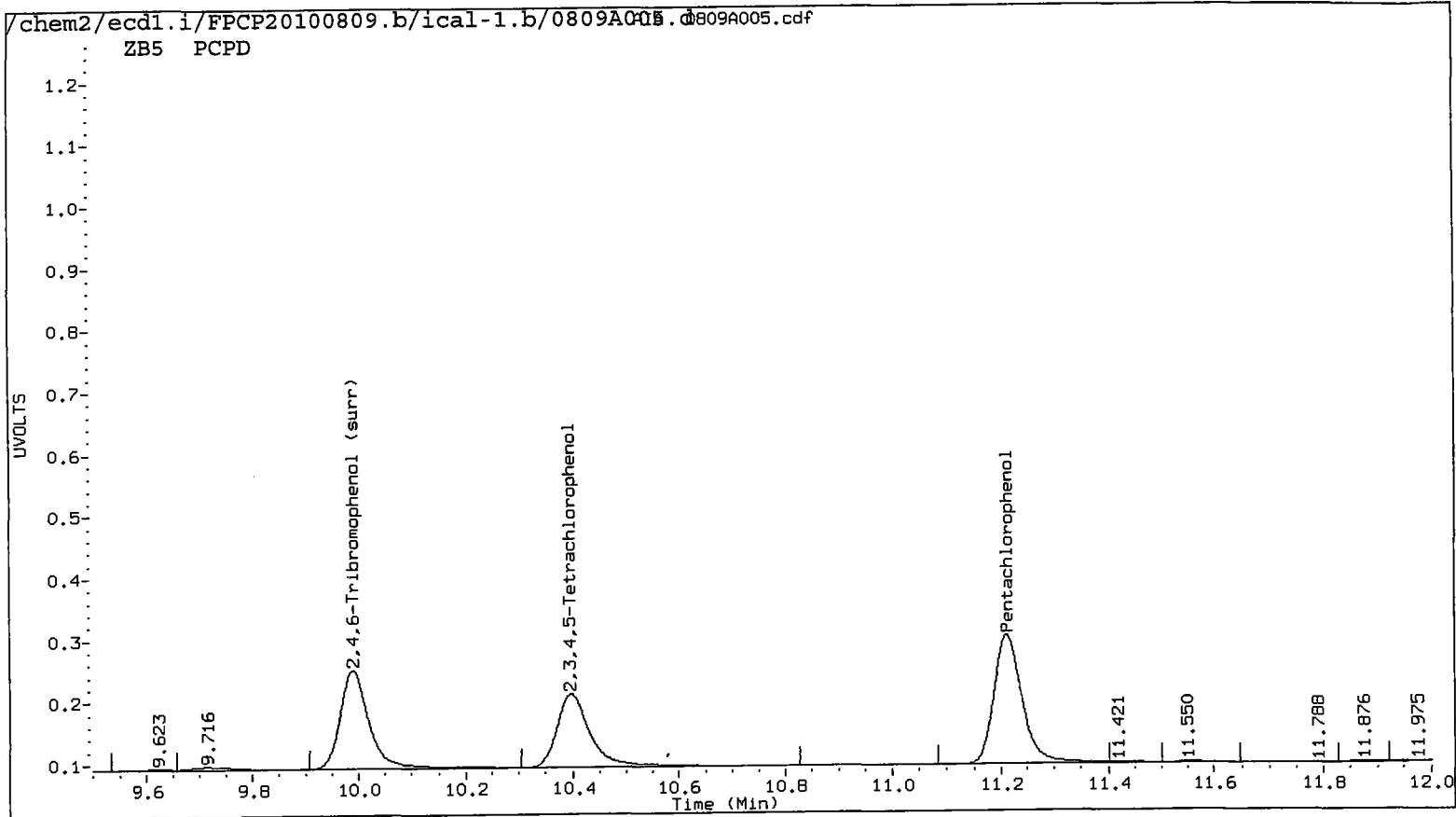
AR 8/12/2010

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

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

PERCENT RECOVERY

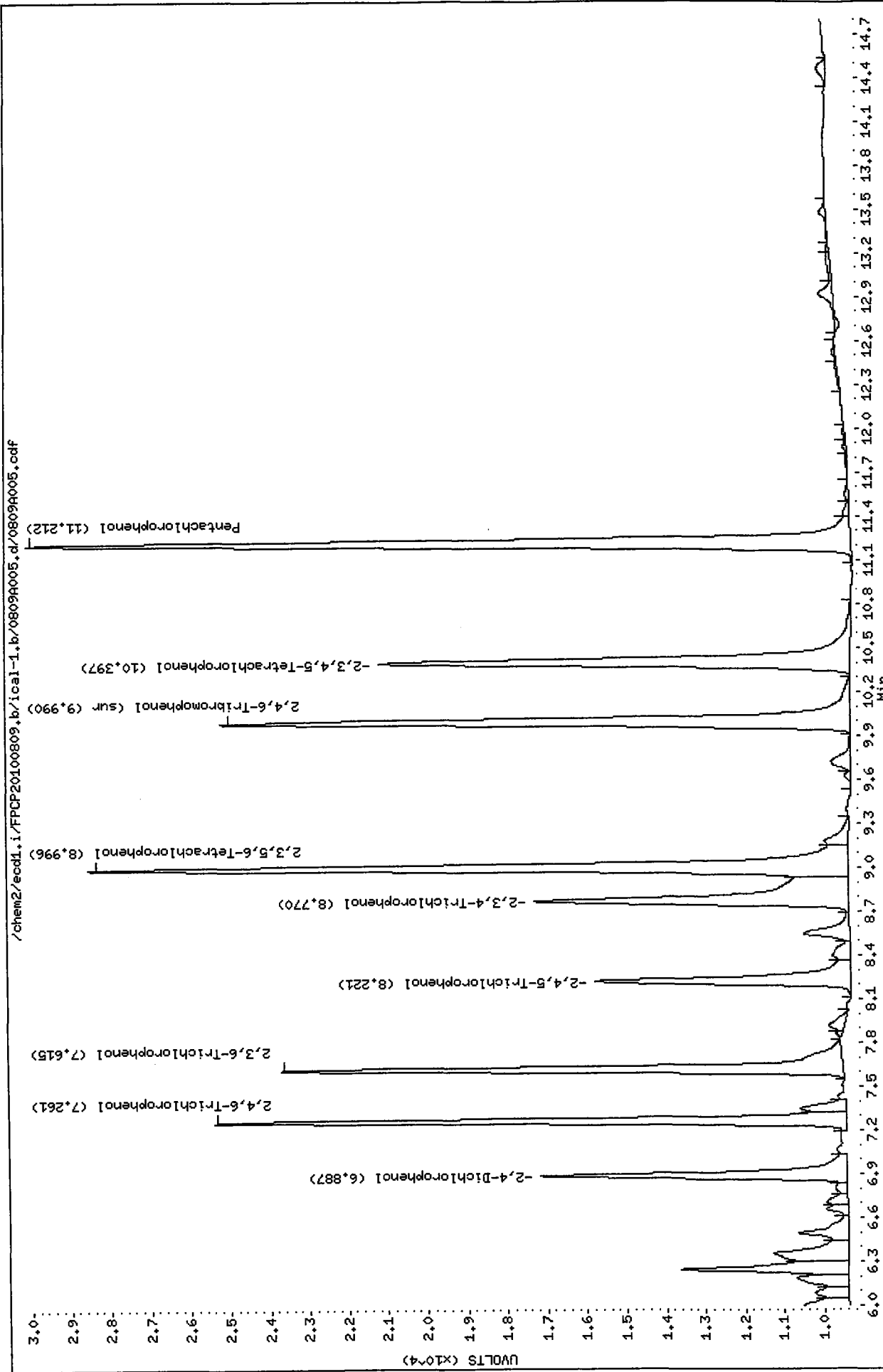
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	98.1	95.3





Data File: /chem2/eod1.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

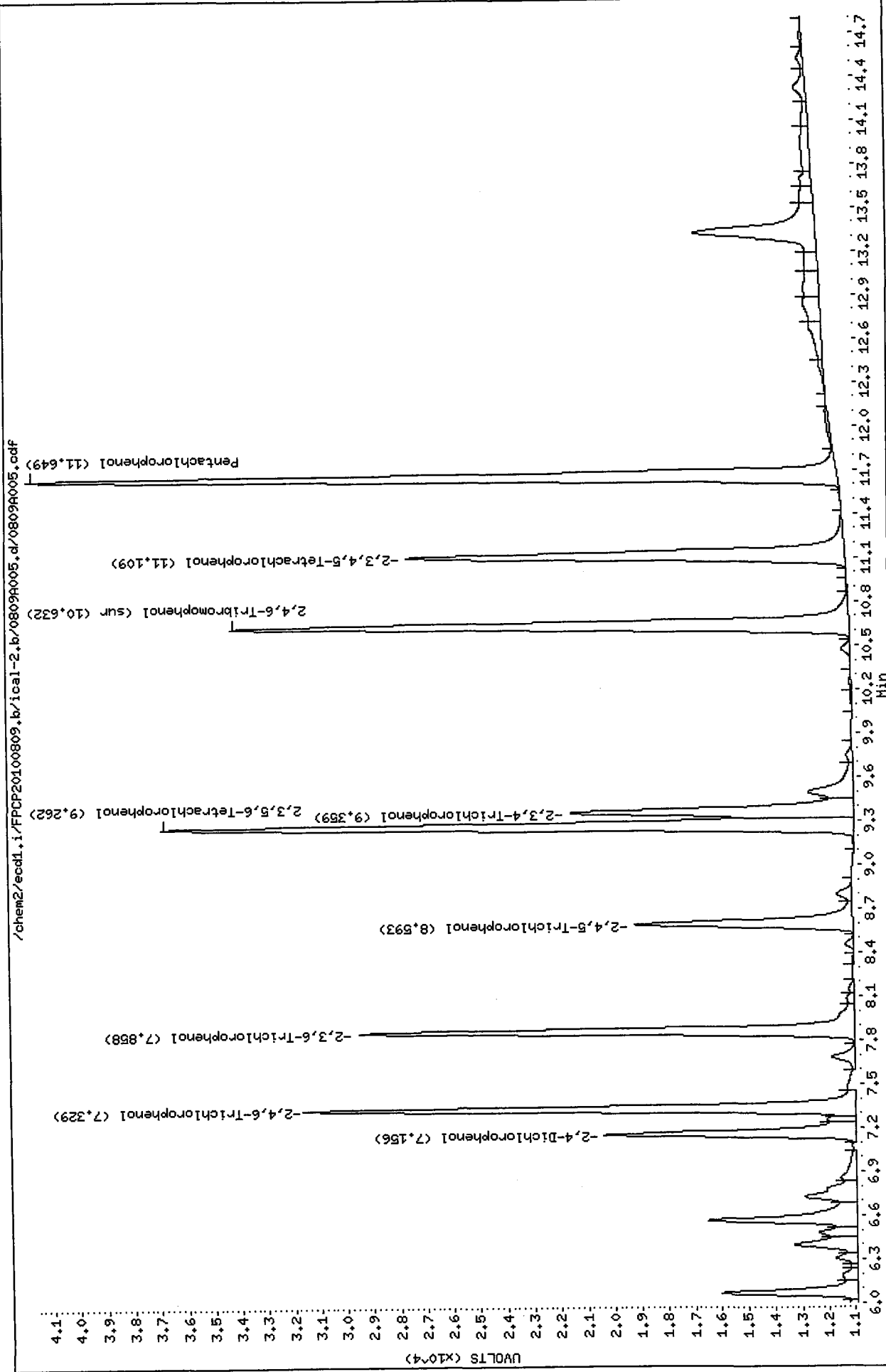
Instrument: eod1.i  
Operator: ar  
Column diameter: 0.53



Data File: /chem2/ecdl1.i/FFPCP20100809.b/ical-2.b/0809A005.d  
Date : 09-AUG-2010 12:23  
Client ID:  
Sample Info: PCPD  
Purge Volume: 2.0  
Column phase: ZB35

Instrument: ecdl1.i

Operator: ar  
Column diameter: 0.53



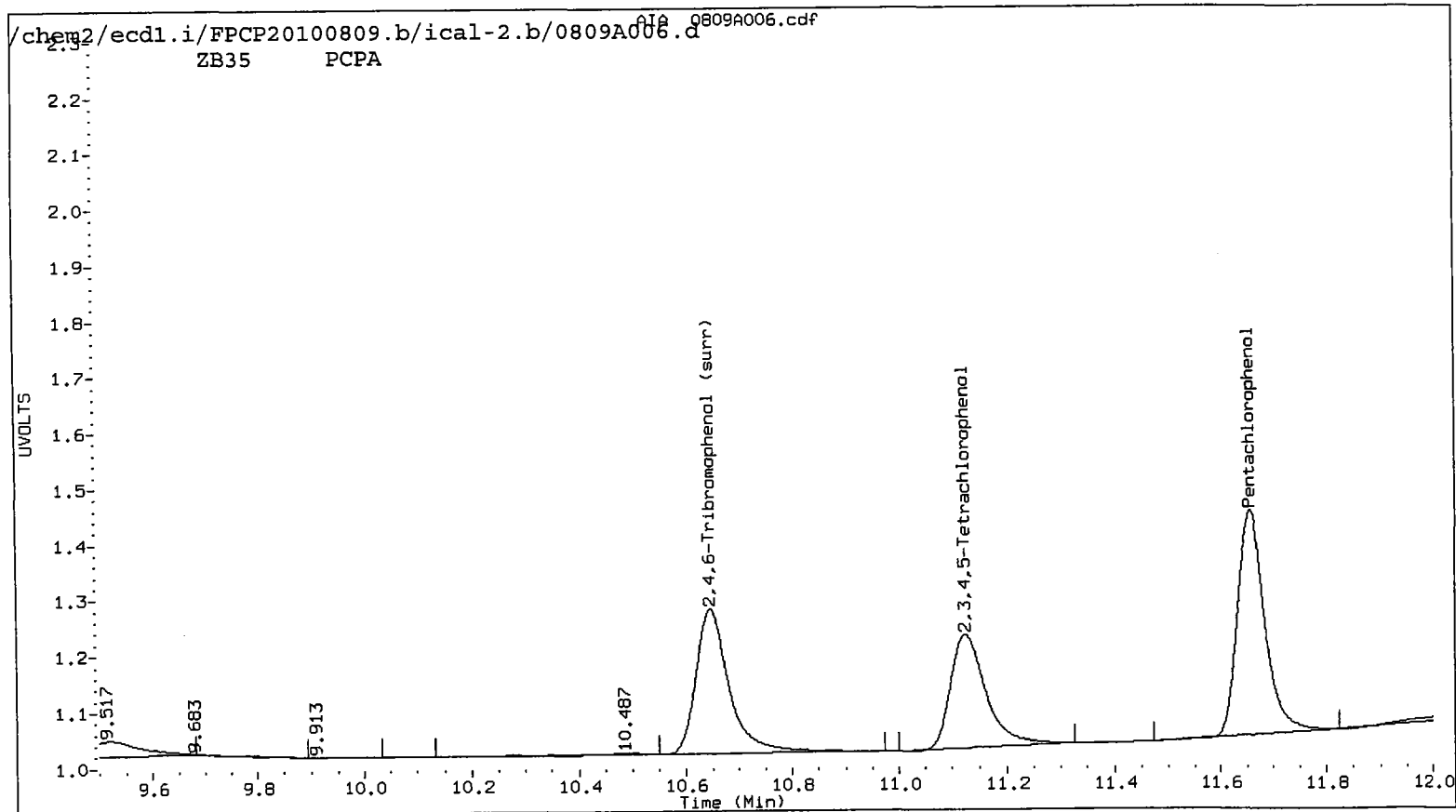
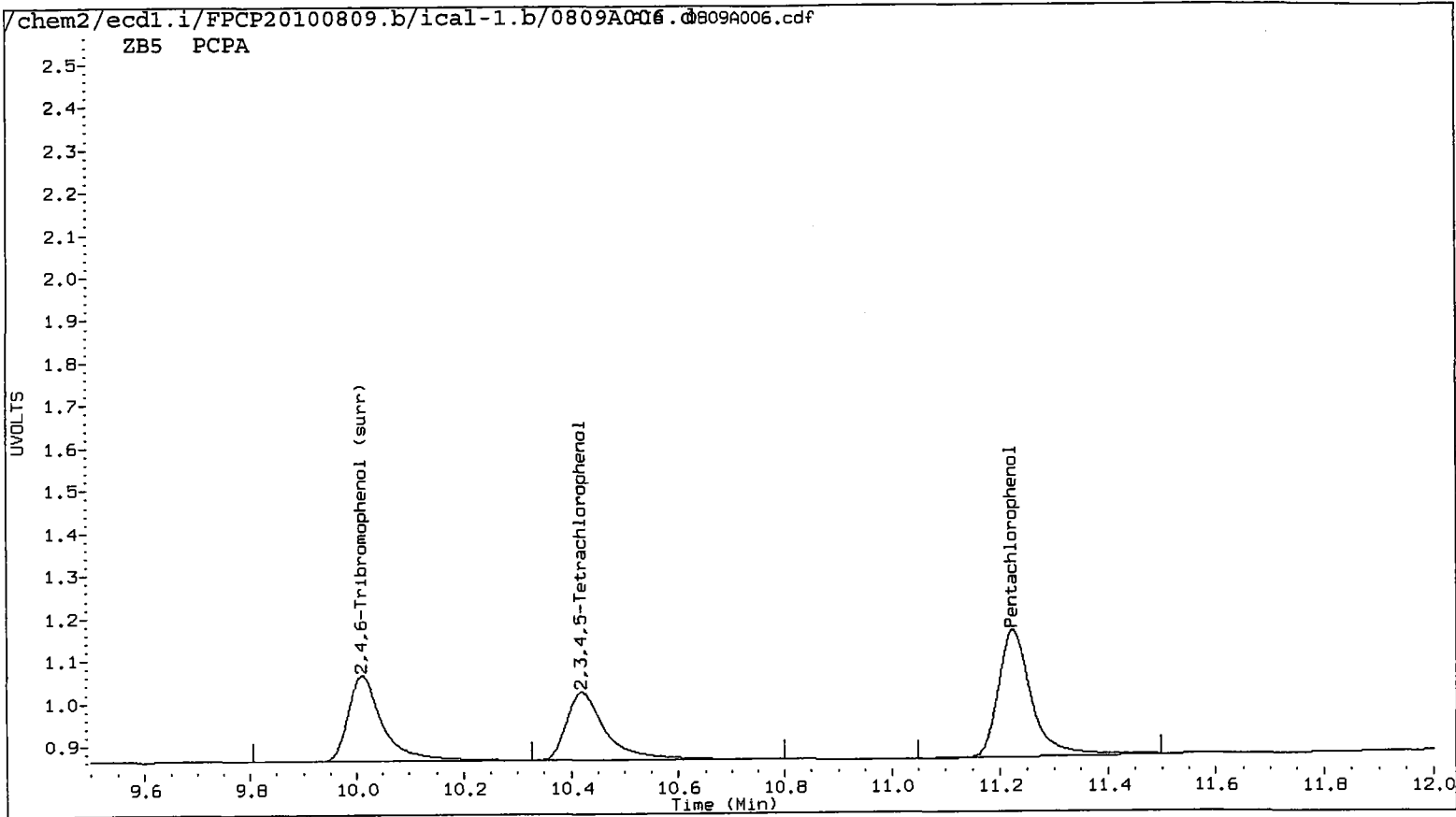
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

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

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

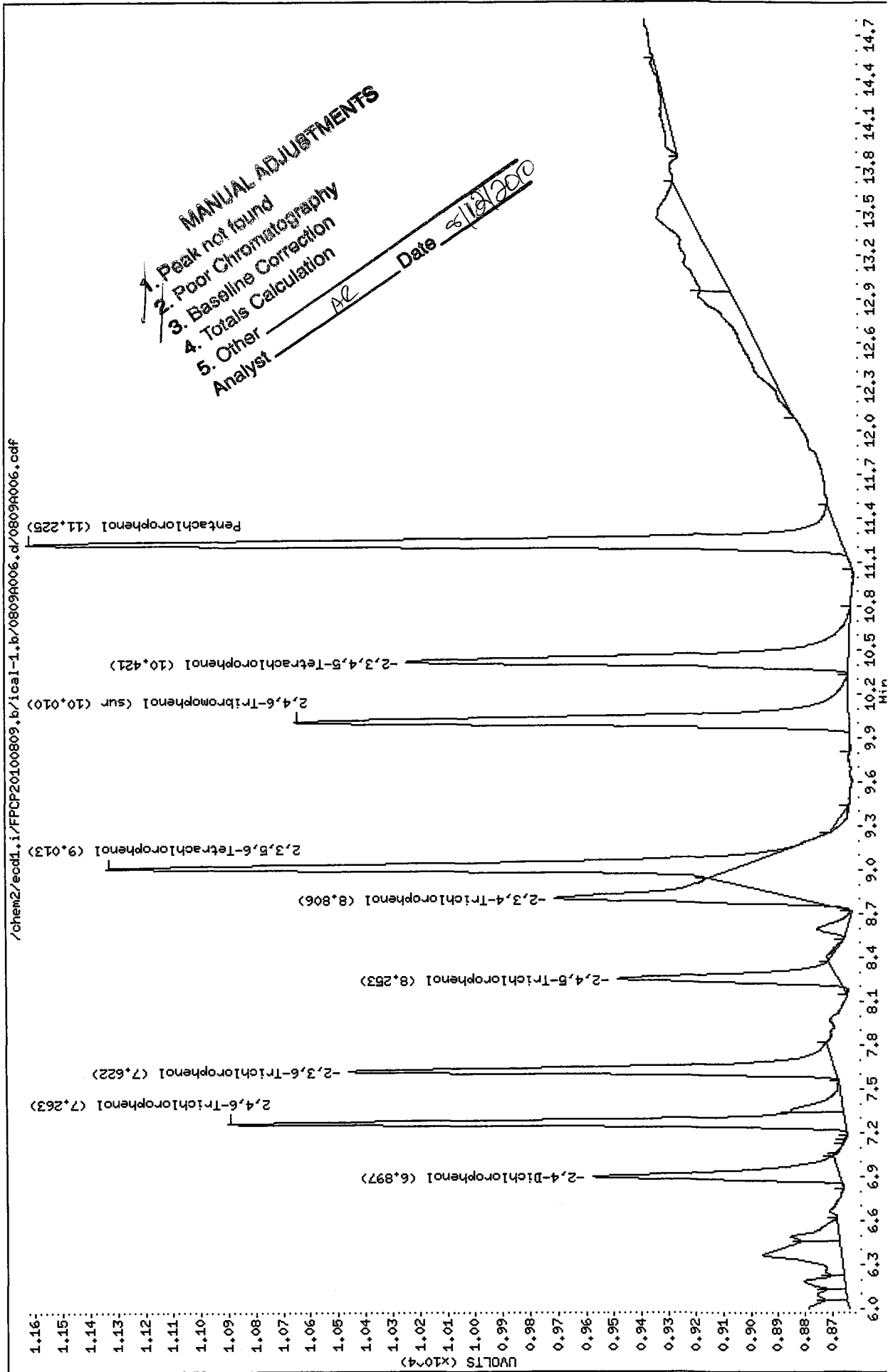
PERCENT RECOVERY

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

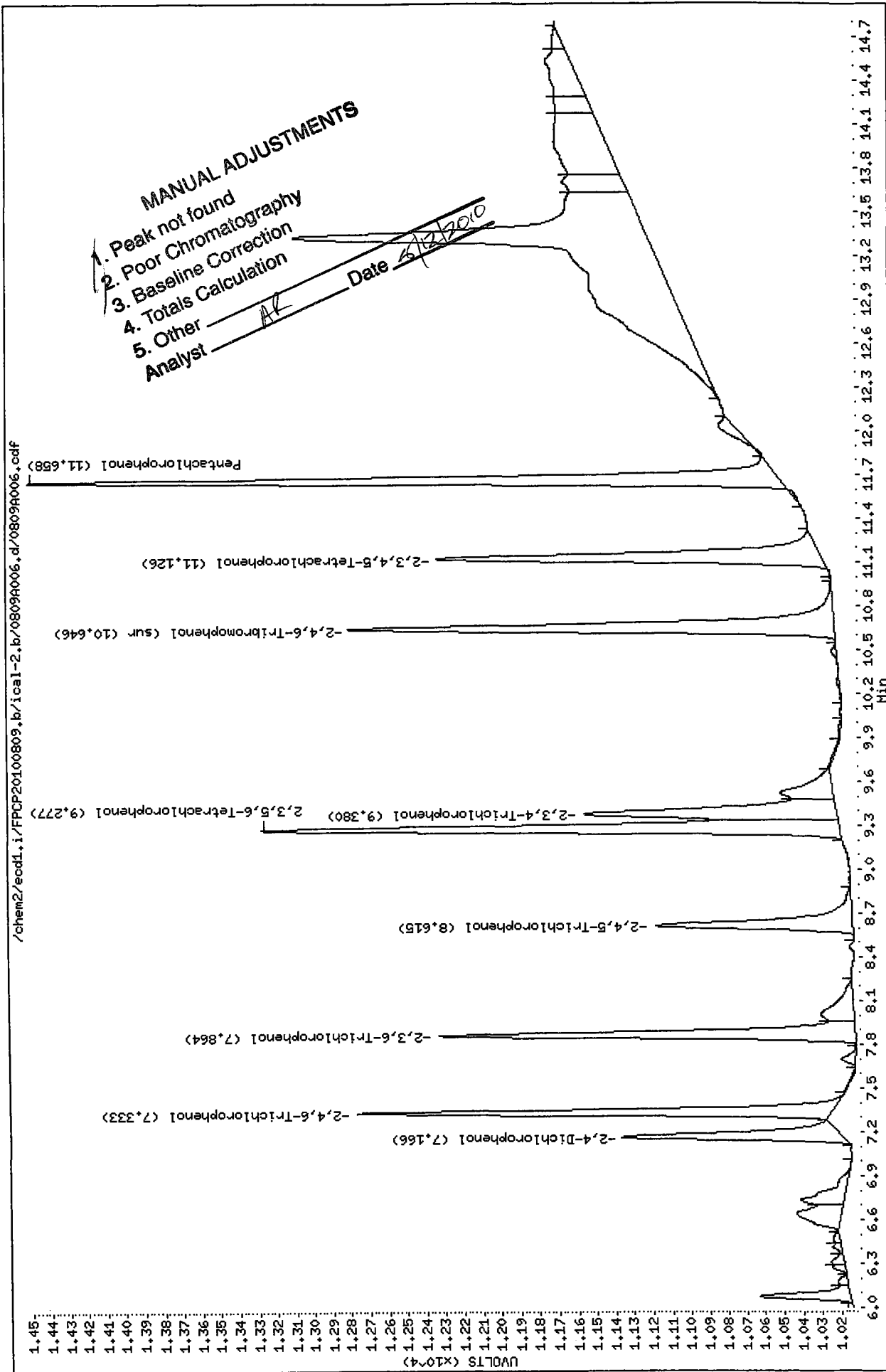


Data File: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/0809A006.d  
Date : 09-AUG-2010 12:43  
Client ID:  
Sample Info: PCPA  
Purge Volume: 2.0  
Column phase: ZB5

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

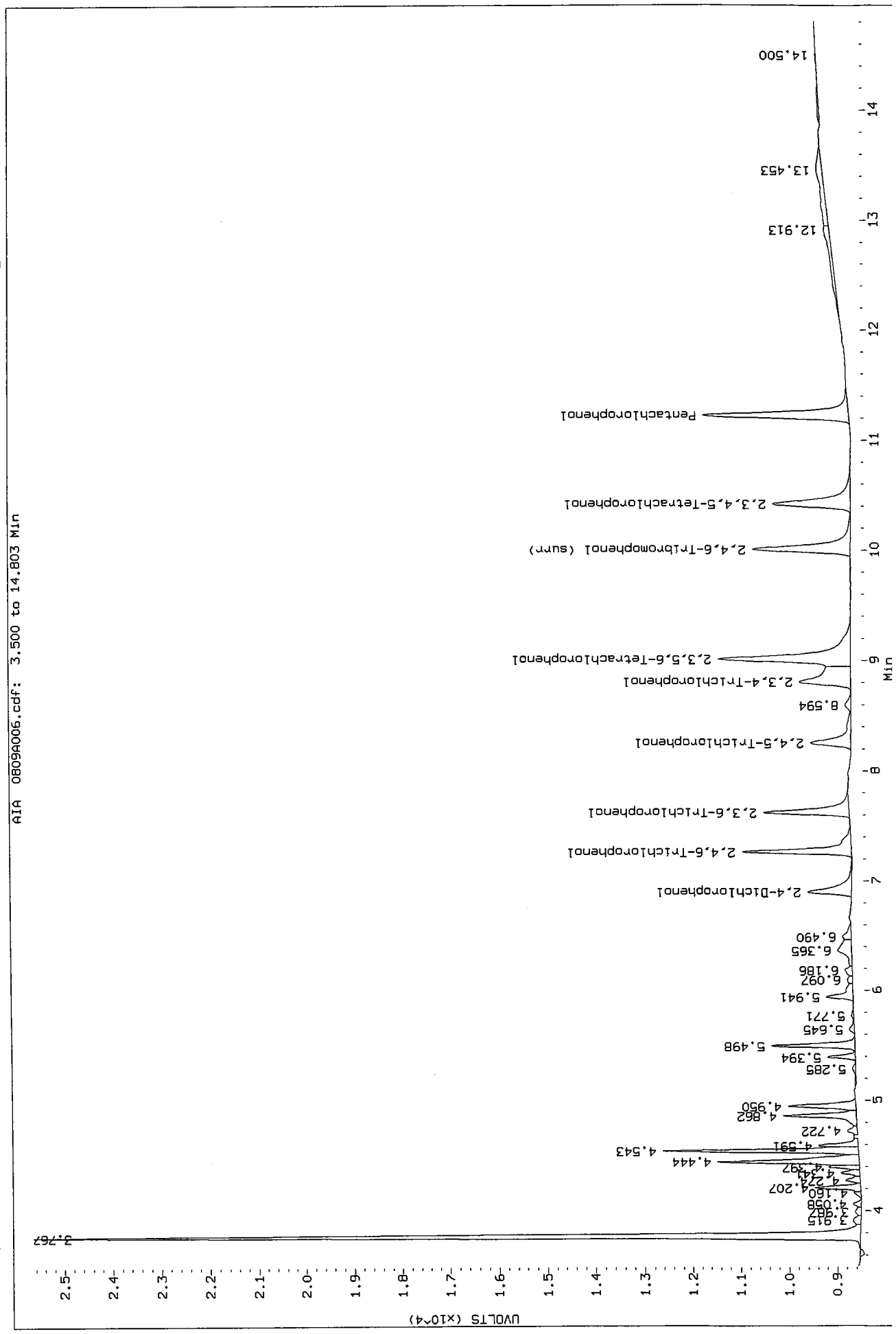


Data File: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809A006.d  
Date: 09-AUG-2010 12:43  
Client ID:  
Sample Info: PCPA  
Purge Volume: 2.0  
Column phase: ZB35  
Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53



Data File: /chem2/ecdl1.1/FP/20100809.b/ical-1.b/0809A006.d/0809A006.cdf  
 Injection Date: 09-AUG-2010 12:43  
 Instrument: ecdl1.1  
 Client Sample ID:

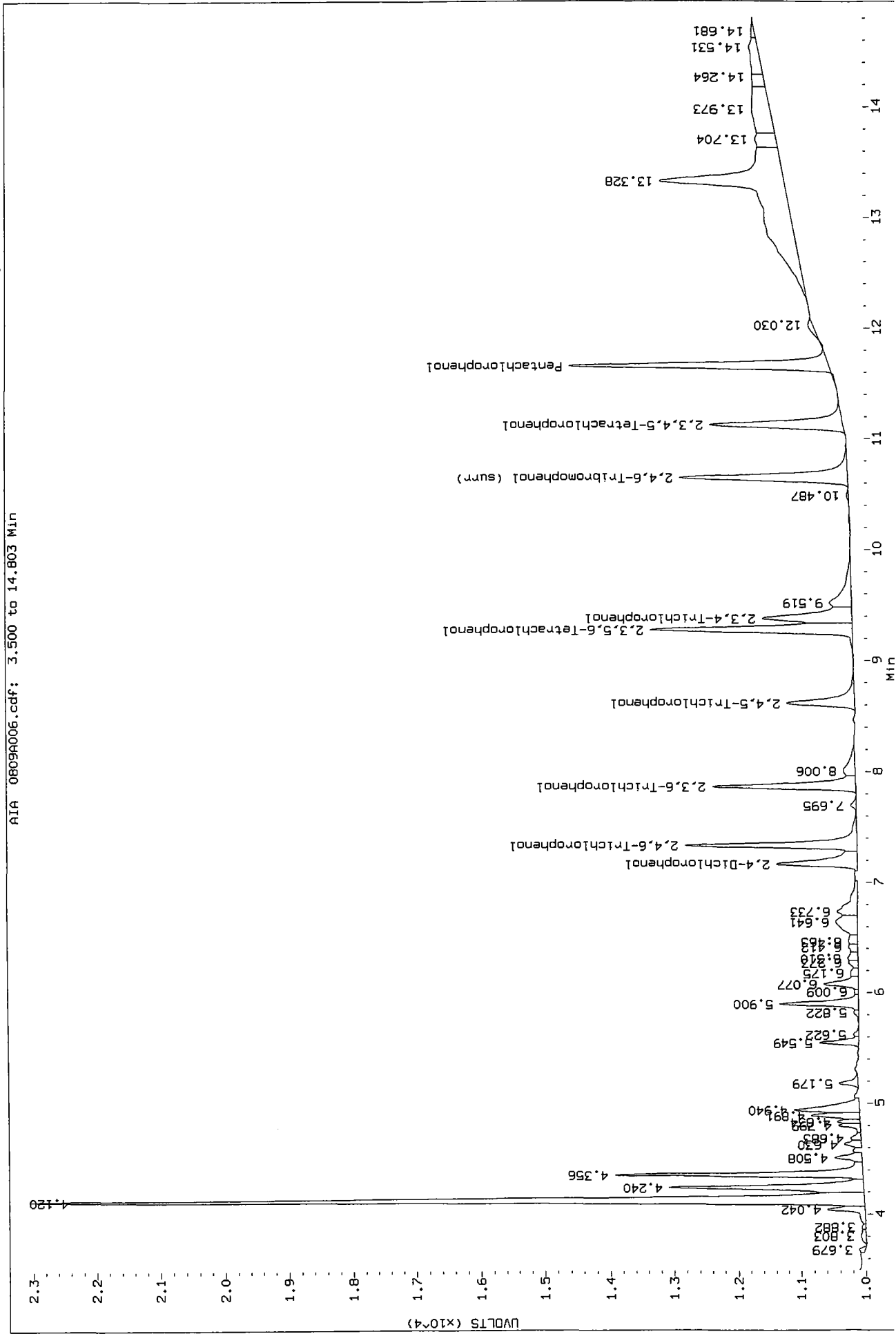
Before 08/12/200



R165:00478

Data File: /chem2/ecdl1.1/FPLCP20100809.b/1cal-2.b/0809A006.d/0809A006.cdf  
Injection Date: 09-AUG-2010 12:43  
Instrument: ecdl1.1  
Client Sample ID:

Before AR 8/19/2010



RI65: 00479



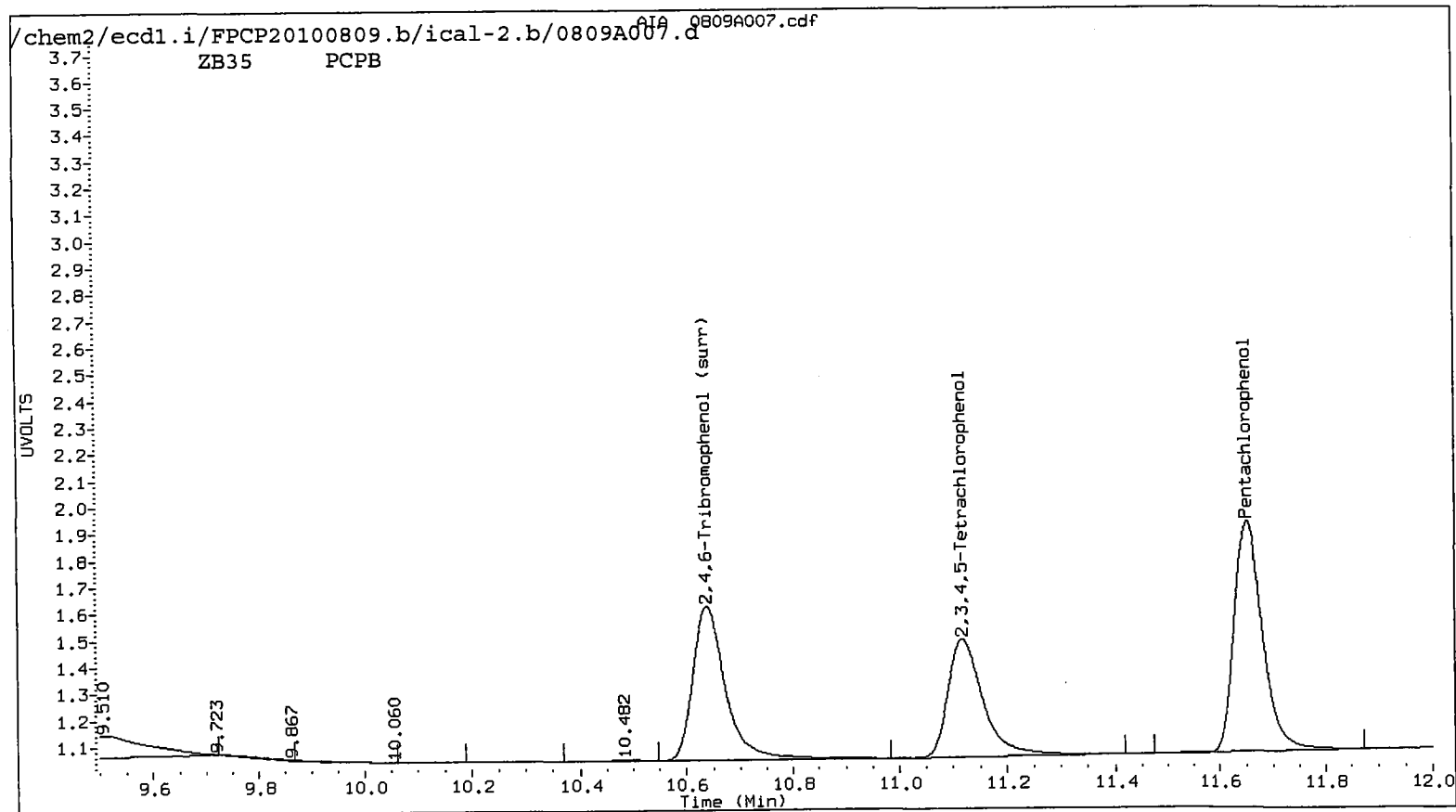
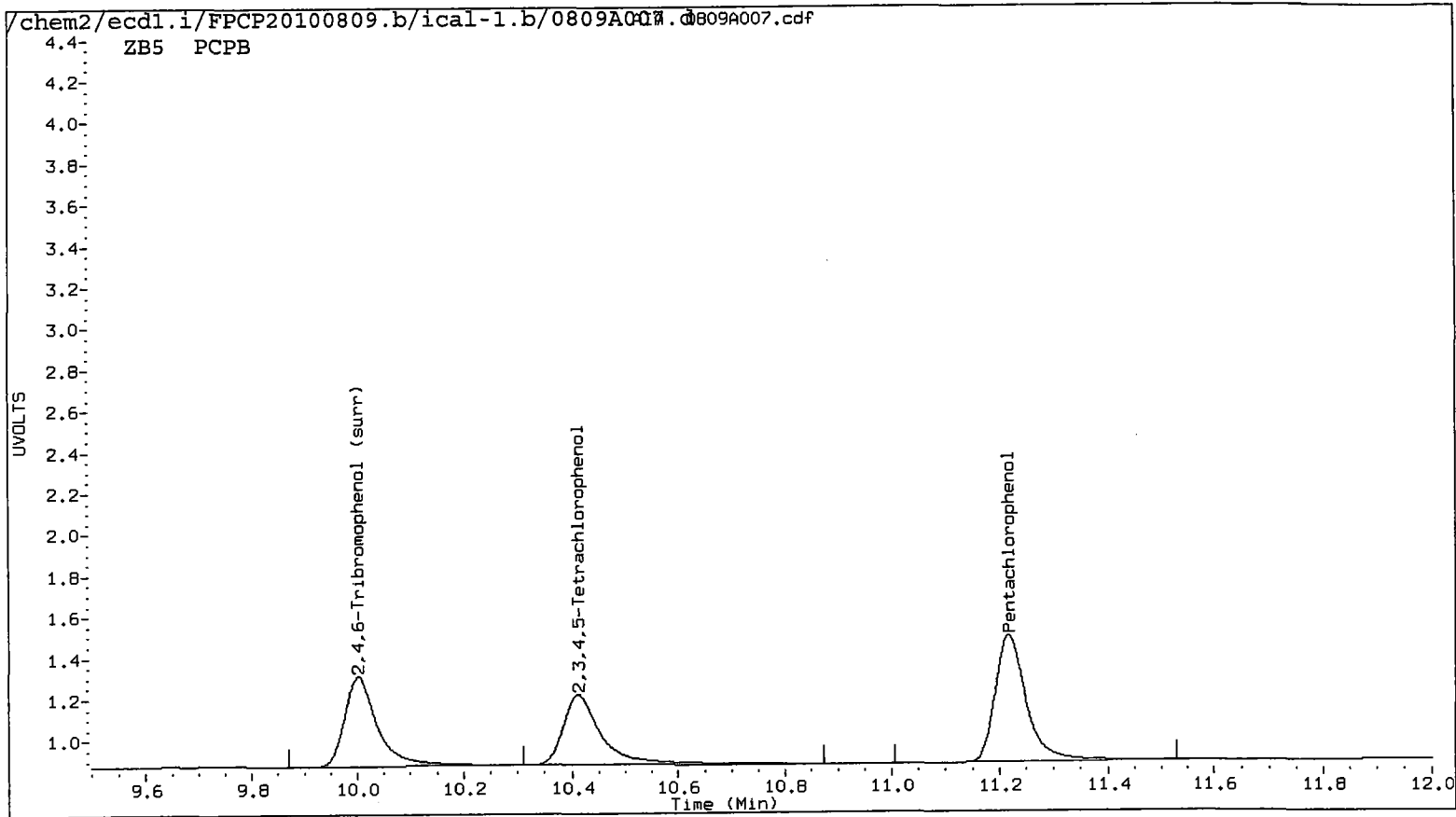
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

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)

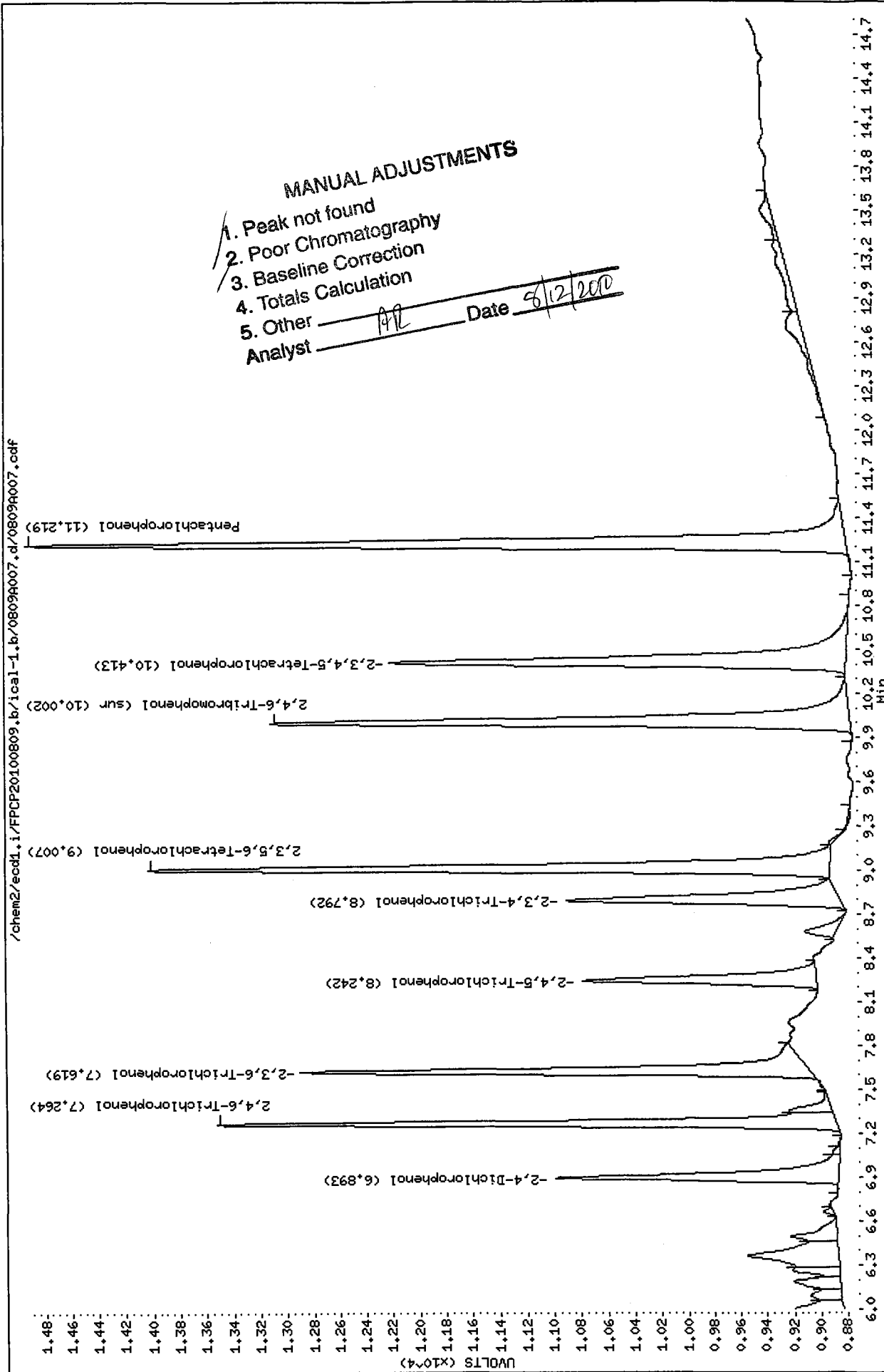
PERCENT RECOVERY

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: PCPB  
Purge Volume: 2.0  
Column phase: ZB5

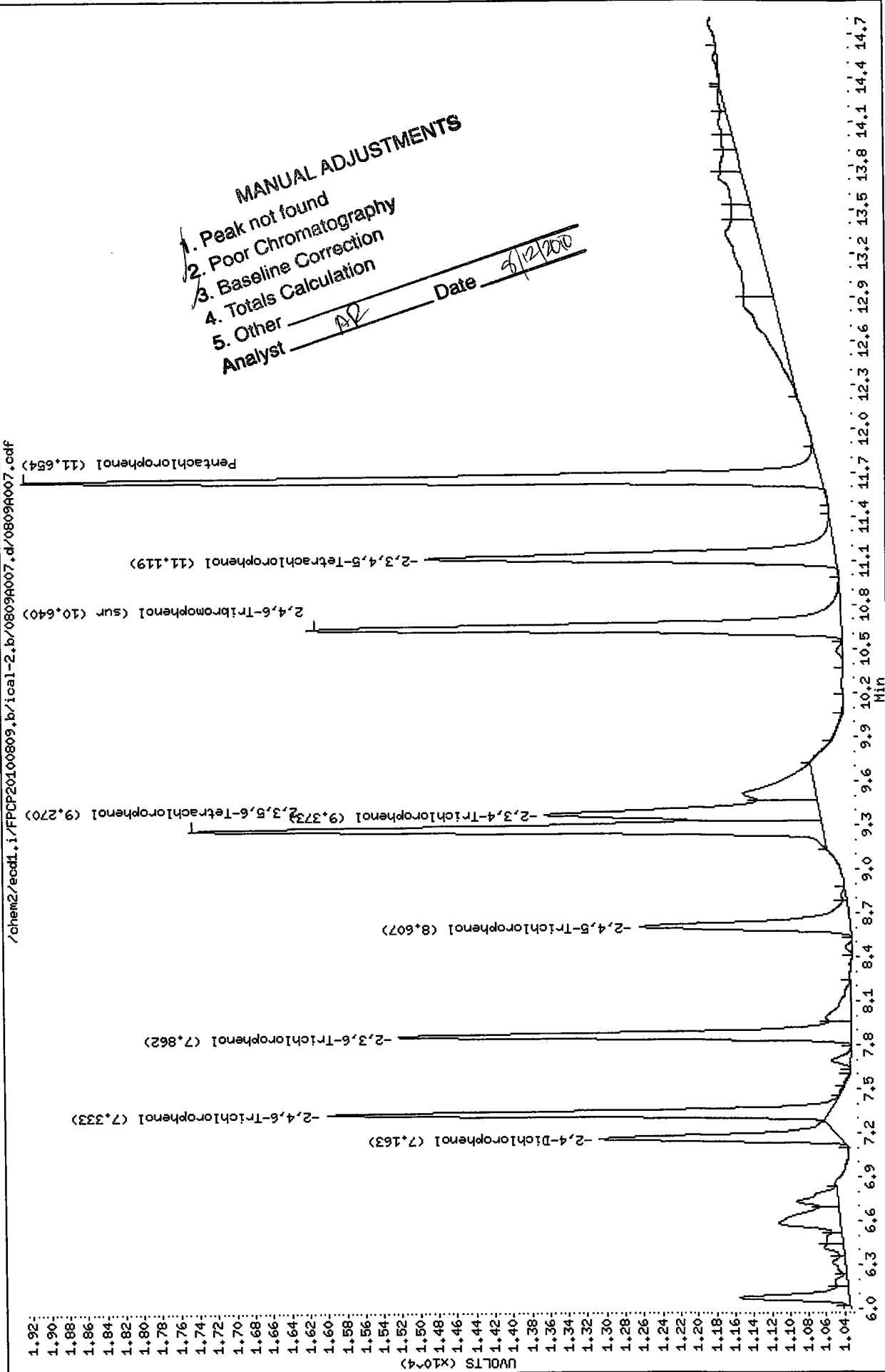
Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53



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

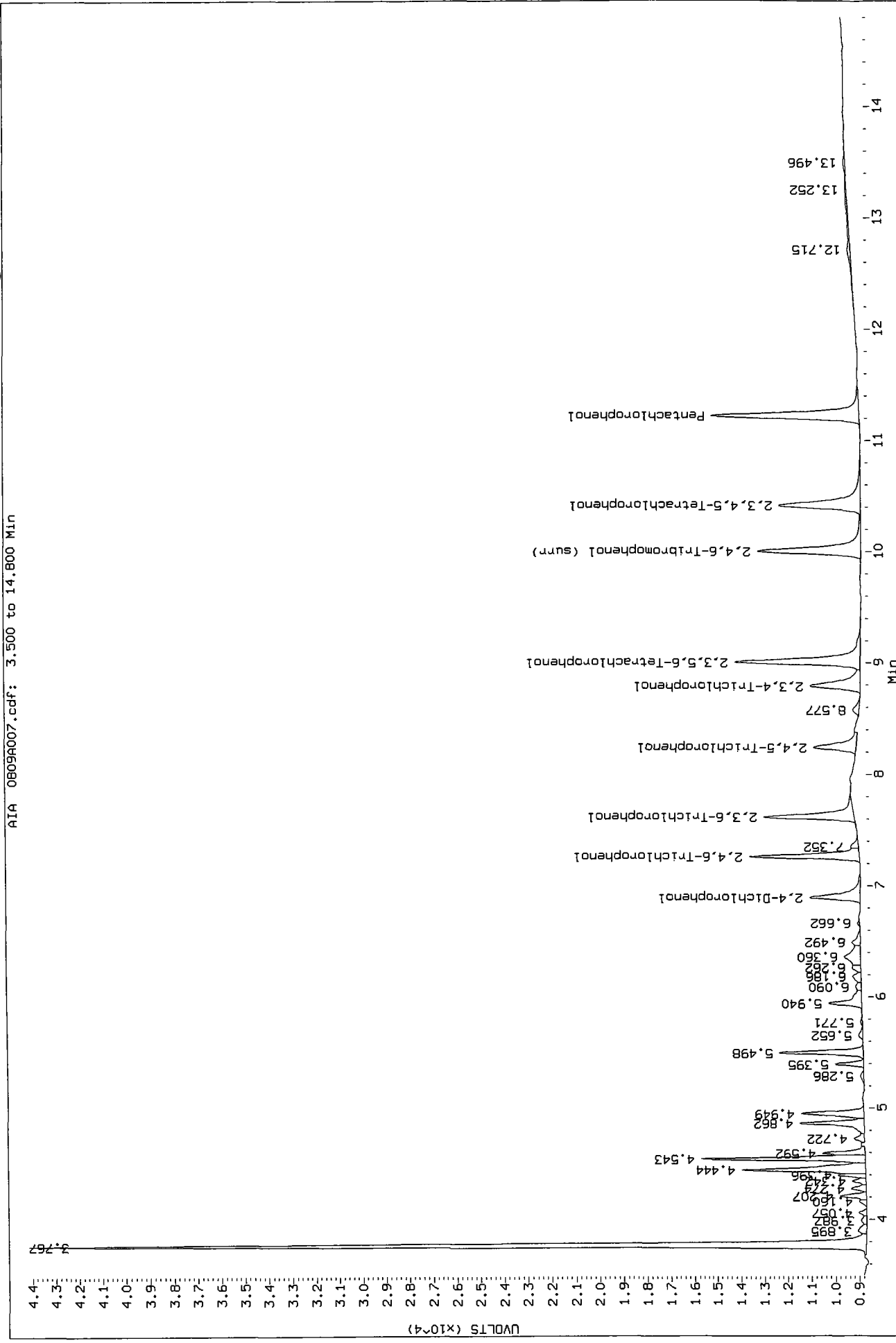
Data File: /chem2/eod1.i/FPCP20100809.b/ical-2.b/0809A007.d  
 Date : 09-AUG-2010 13:03  
 Client ID:  
 Sample Info: PCPB  
 Purge Volume: 2.0  
 Column phase: ZB35

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



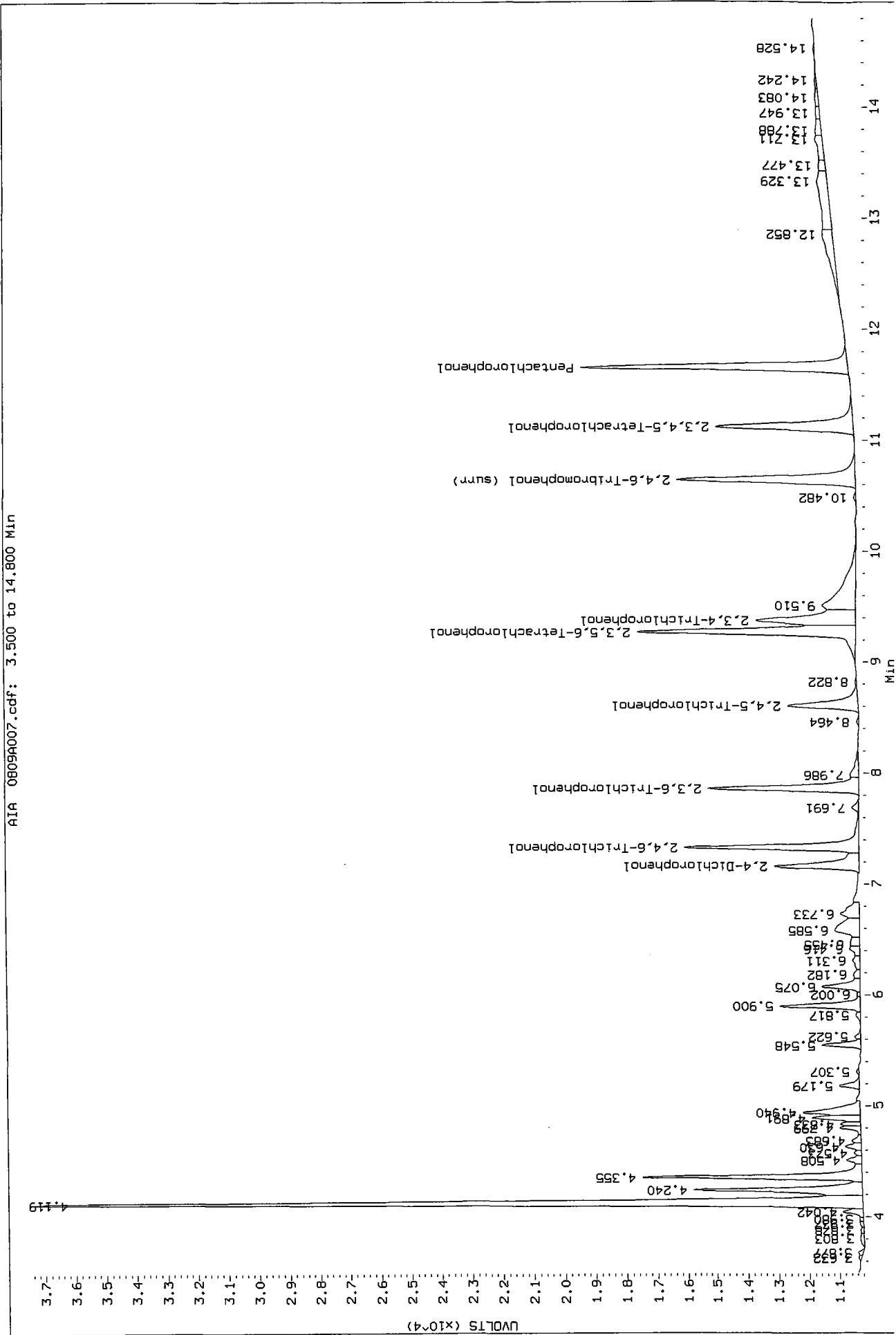
Data File: /chem2/eecd1.1/FPCP20100809.b/1cal-1.b/0809A007.d/0809A007.cdf  
Injection Date: 09-AUG-2010 13:03  
Instrument: ecd1.1  
Client Sample ID:

Before AR 8/10/2010



Data File: /chem2/ecdl1.1/FPCP20100809.b/1cal-2.b/0809A007.d/0809A007.cdf  
 Injection Date: 09-AUG-2010 13:03  
 Instrument: ecdl1.1  
 Client Sample ID:

Before AR 8/12/2010



RI65: 00485

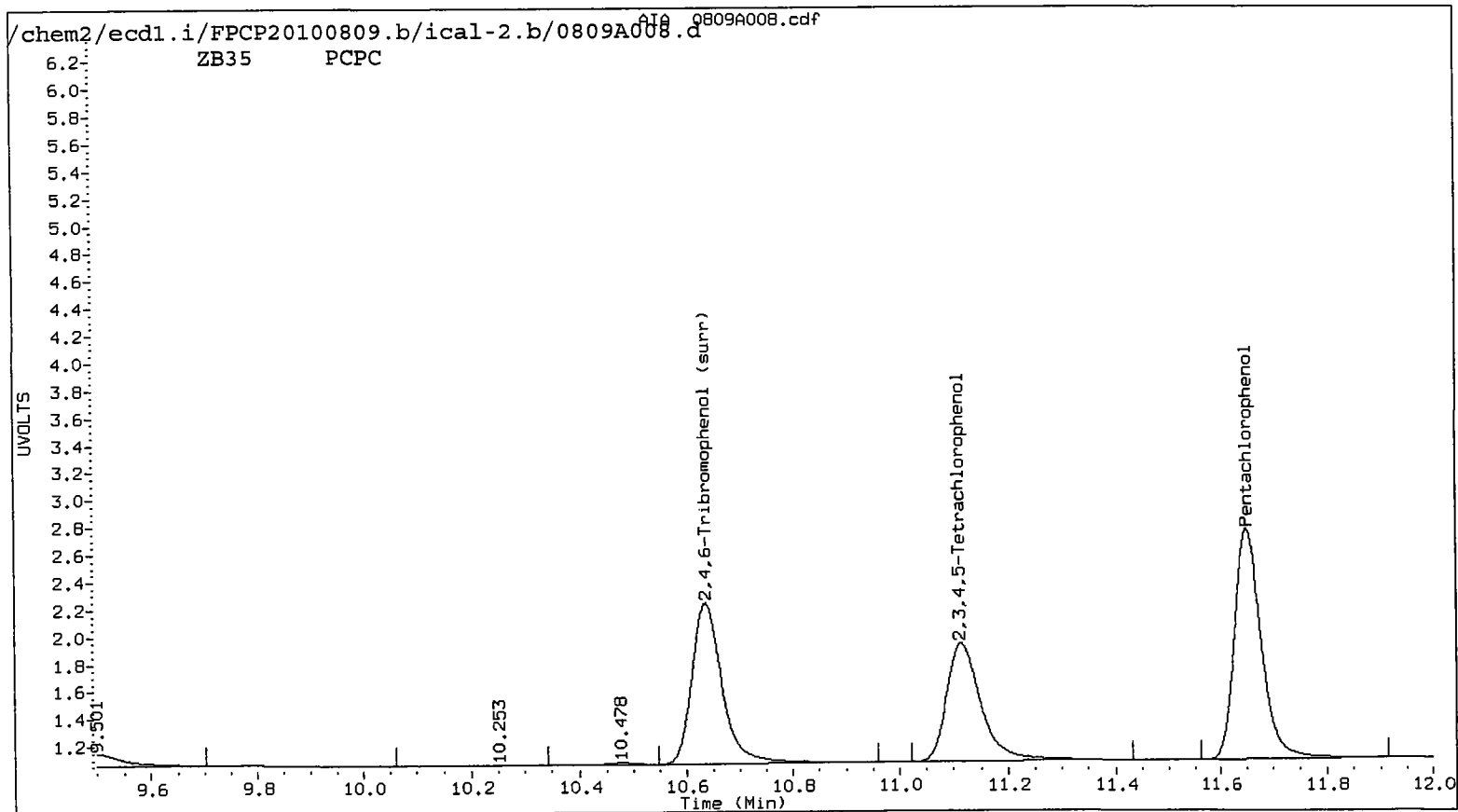
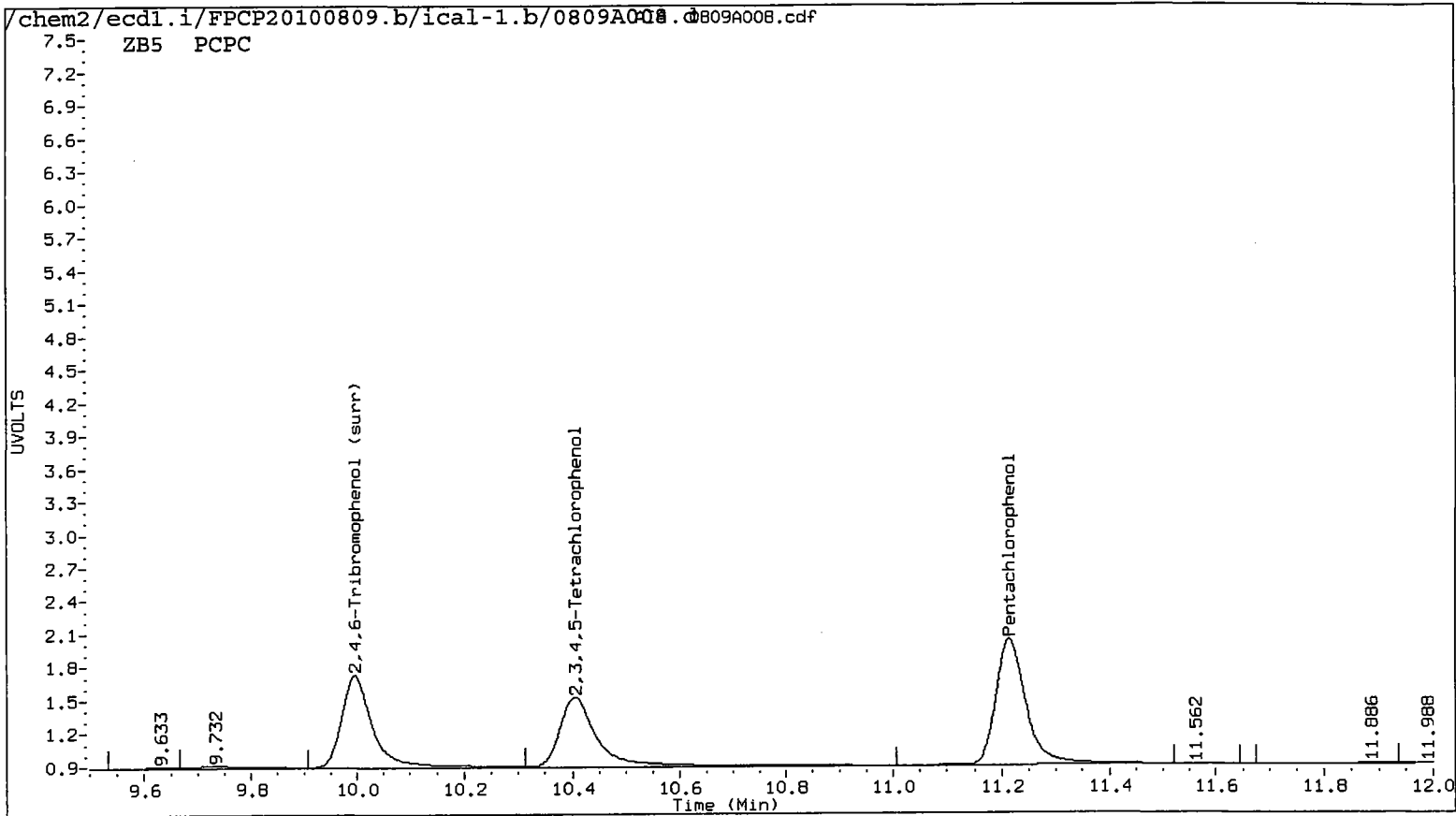
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

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

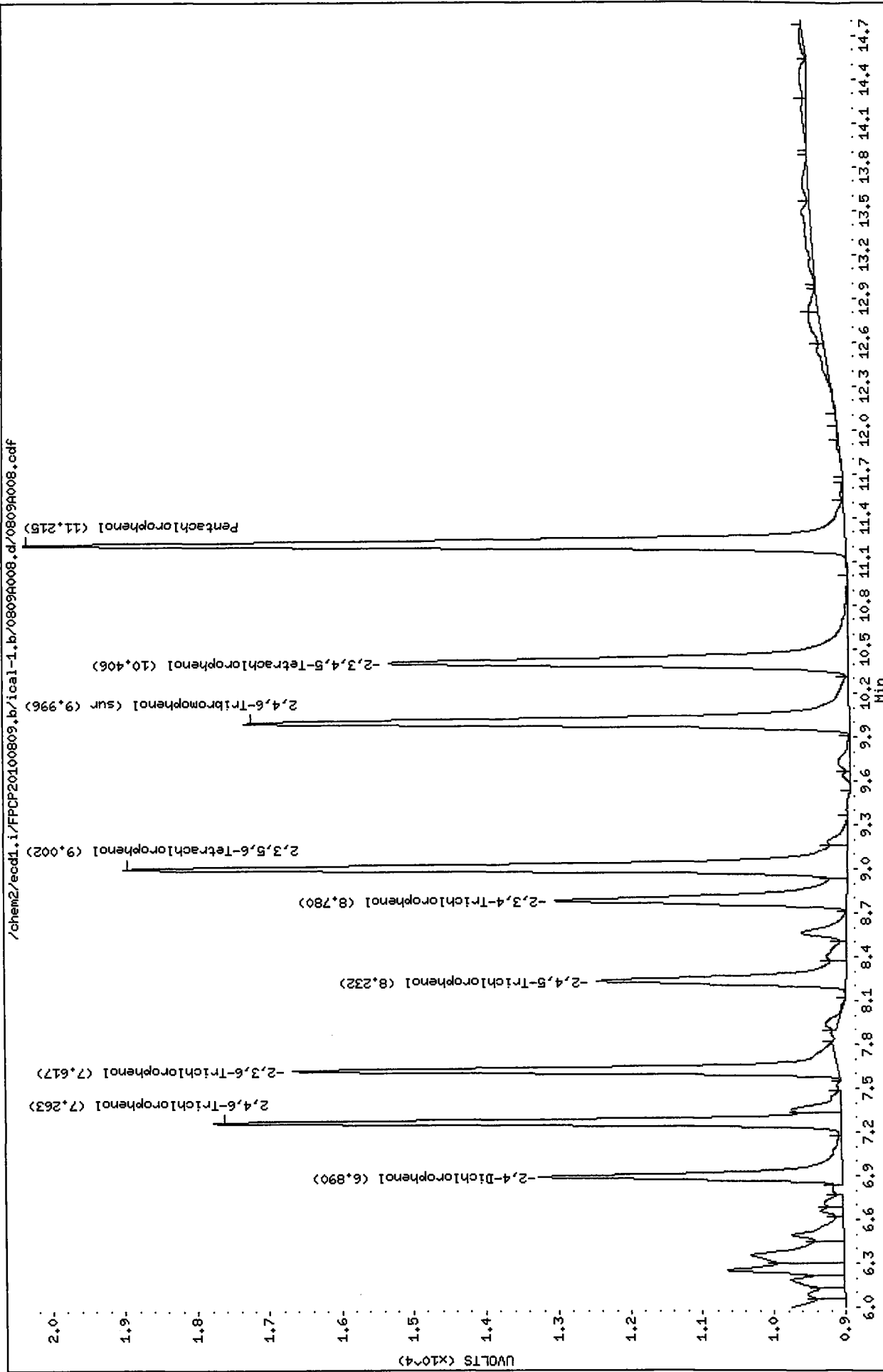




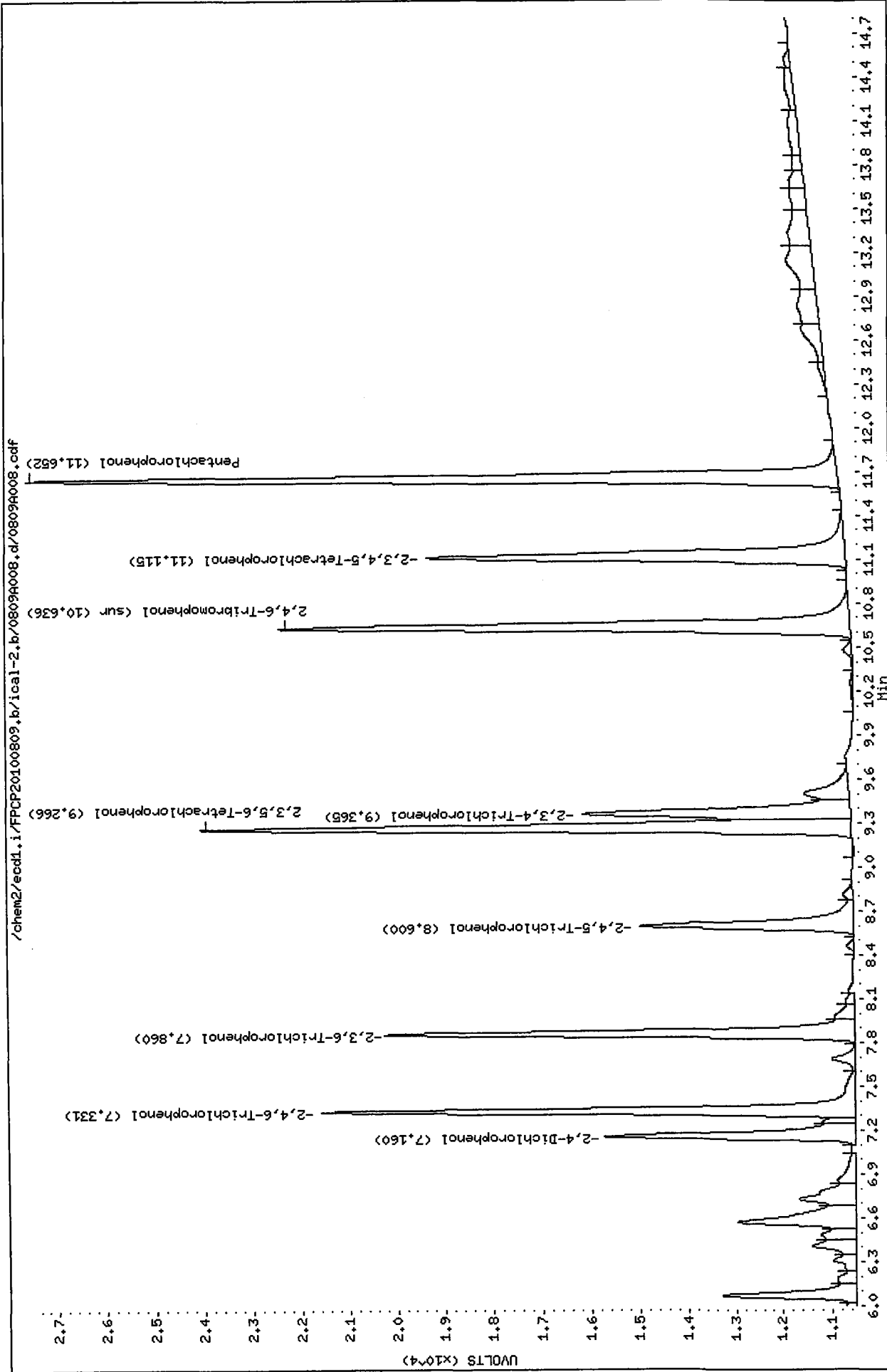
Data File: /chem2/ecdl.i/FPCP20100809.b/ical-1.b/08099008.d  
Date : 09-AUG-2010 13:23  
Client ID:  
Sample Info: PCPC  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: ecld1.i

Operator: ar  
Column diameter: 0.53



Data File: /chem2/ecdl.i/FPCP20100809,b/ical-2.b/0809R008.d  
Date : 09-AUG-2010 13:23  
Client ID:  
Sample Info: PPCP  
Purge Volume: 2.0  
Column phase: ZB35  
Instrument: ecdl.i  
Operator: ar  
Column diameter: 0.53



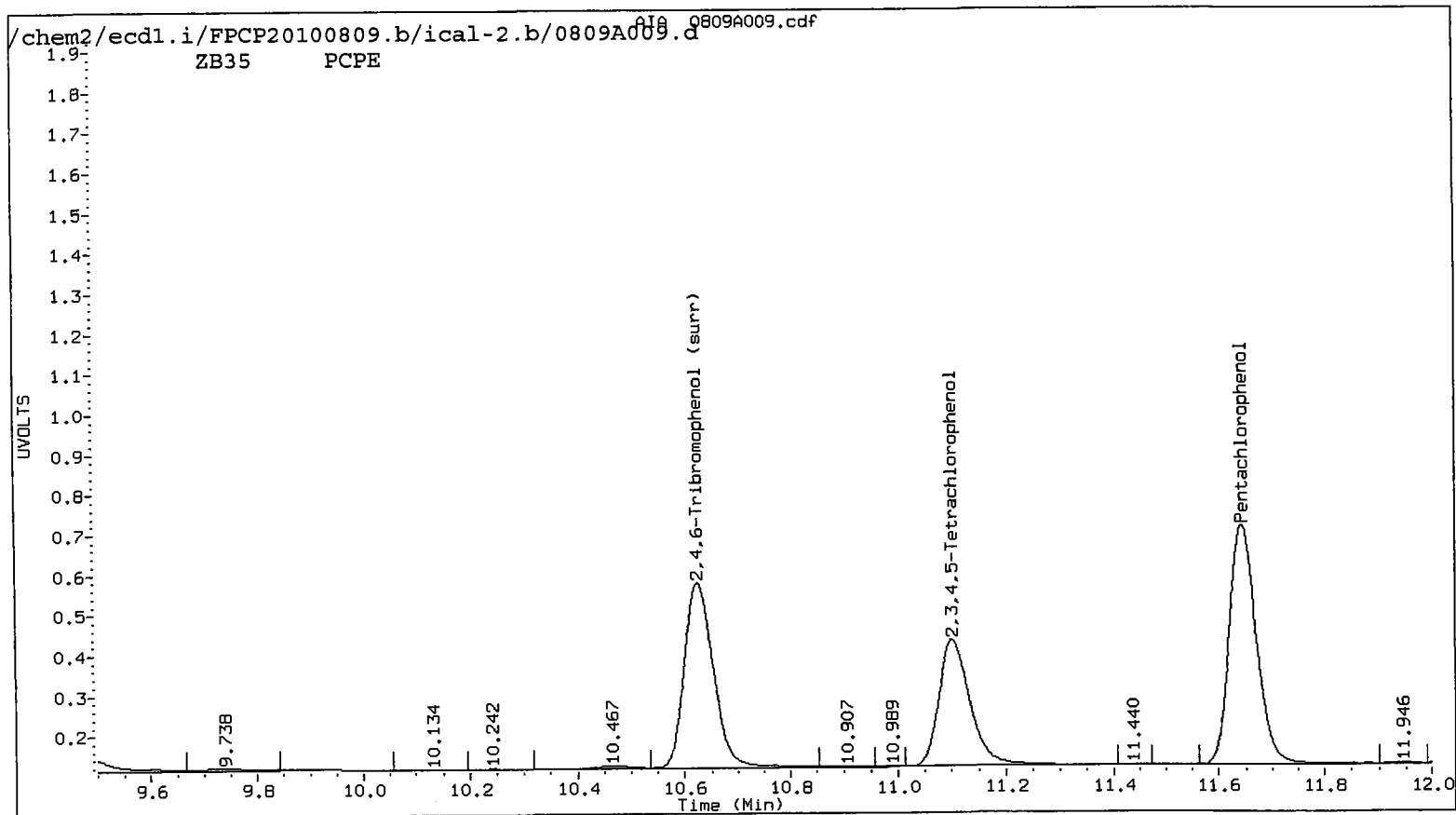
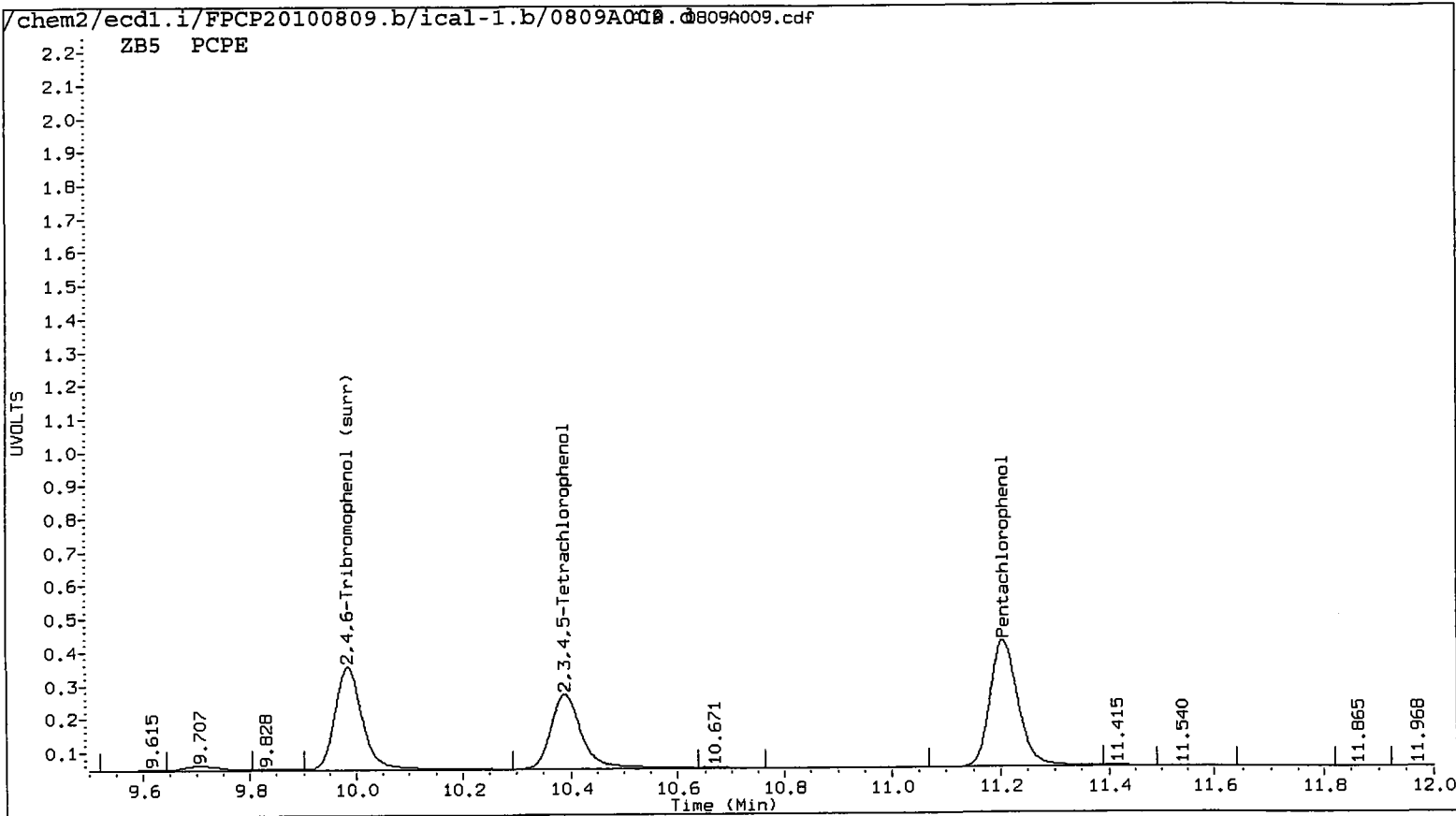
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/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

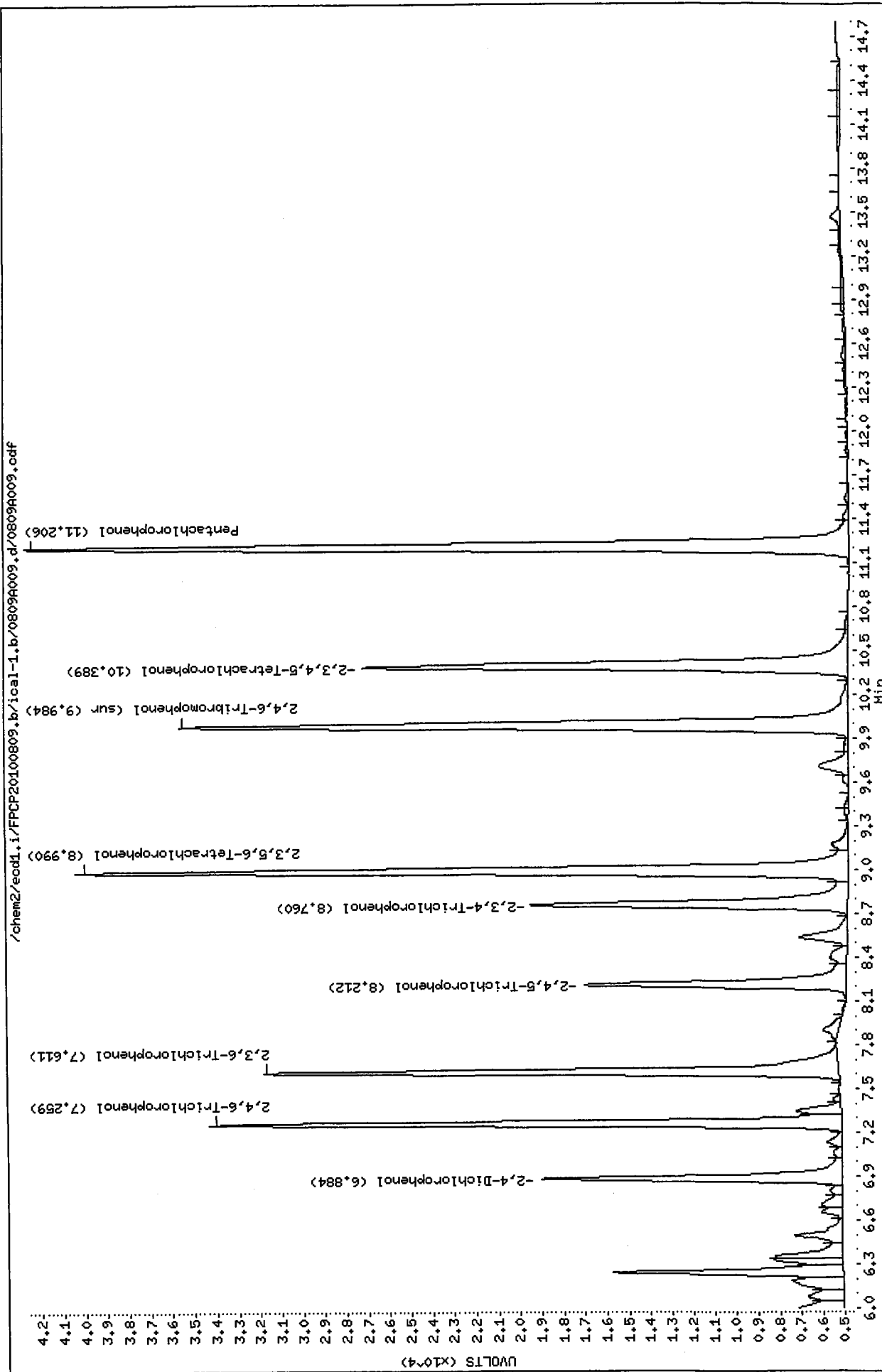
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	197.7	184.6



Data File: /chem2/eod1.1/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: eod1.i

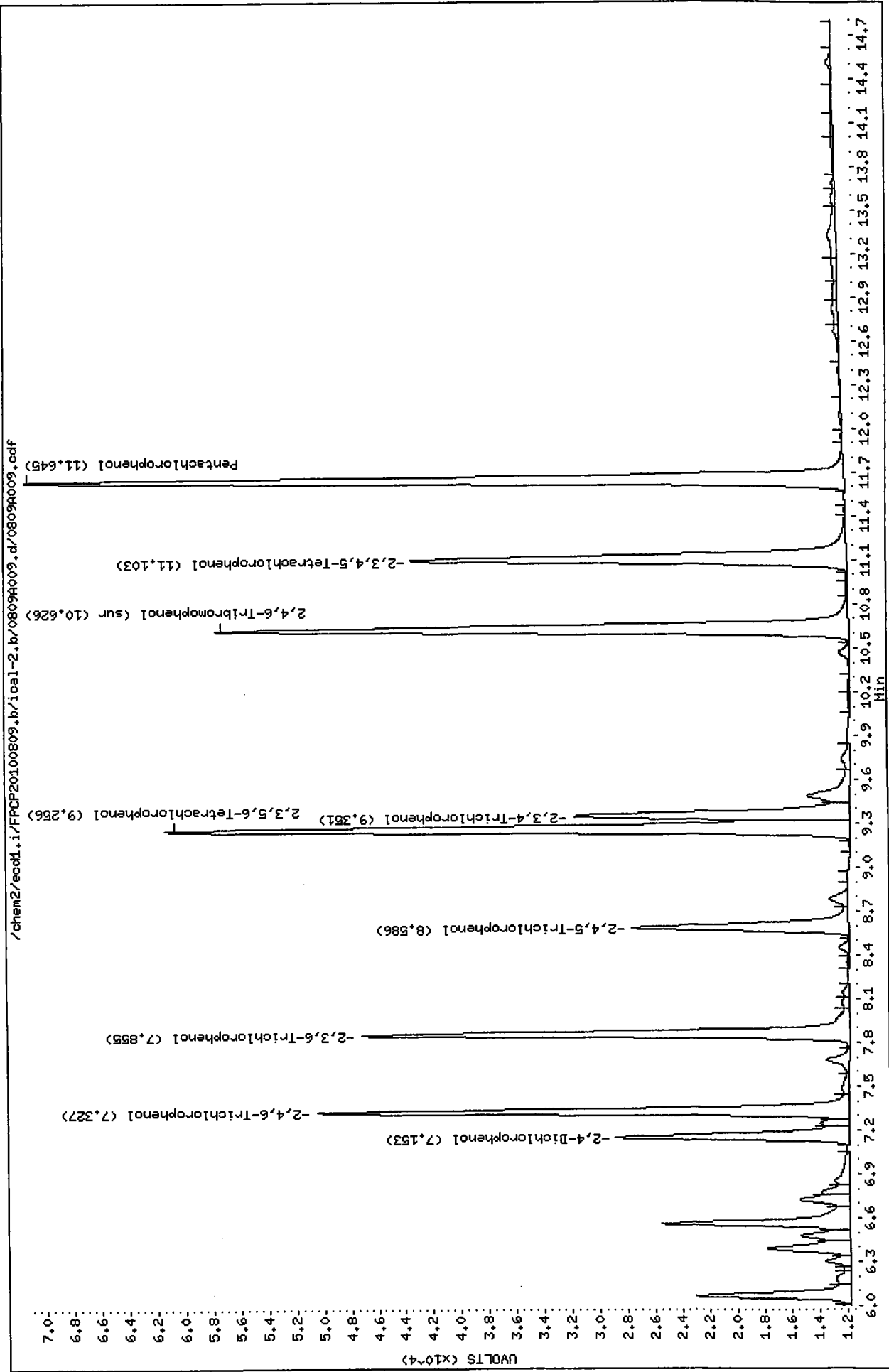
Operator: ar  
Column diameter: 0.53



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

Instrument: ecd1.i

Operator: ar  
Column diameter: 0.53



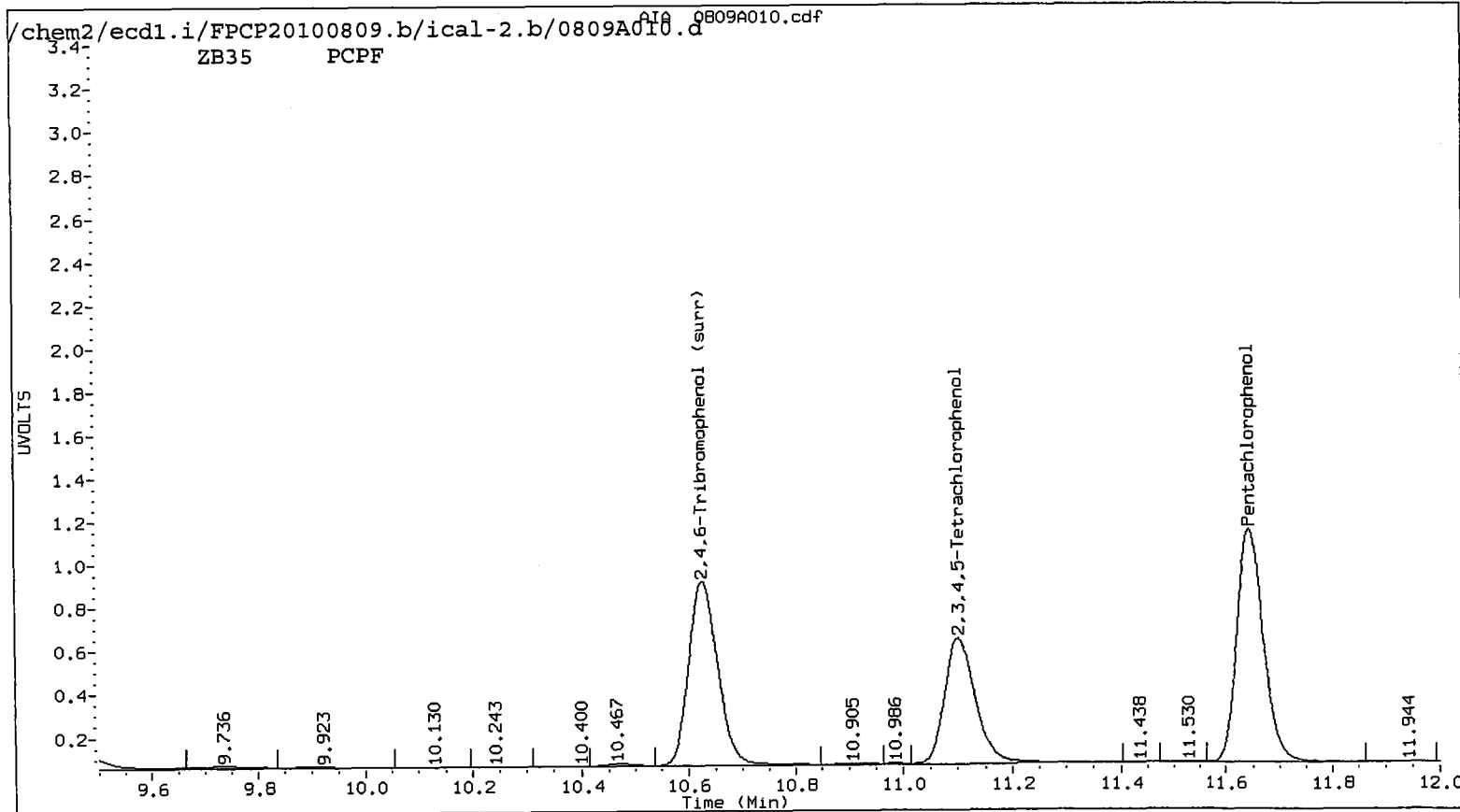
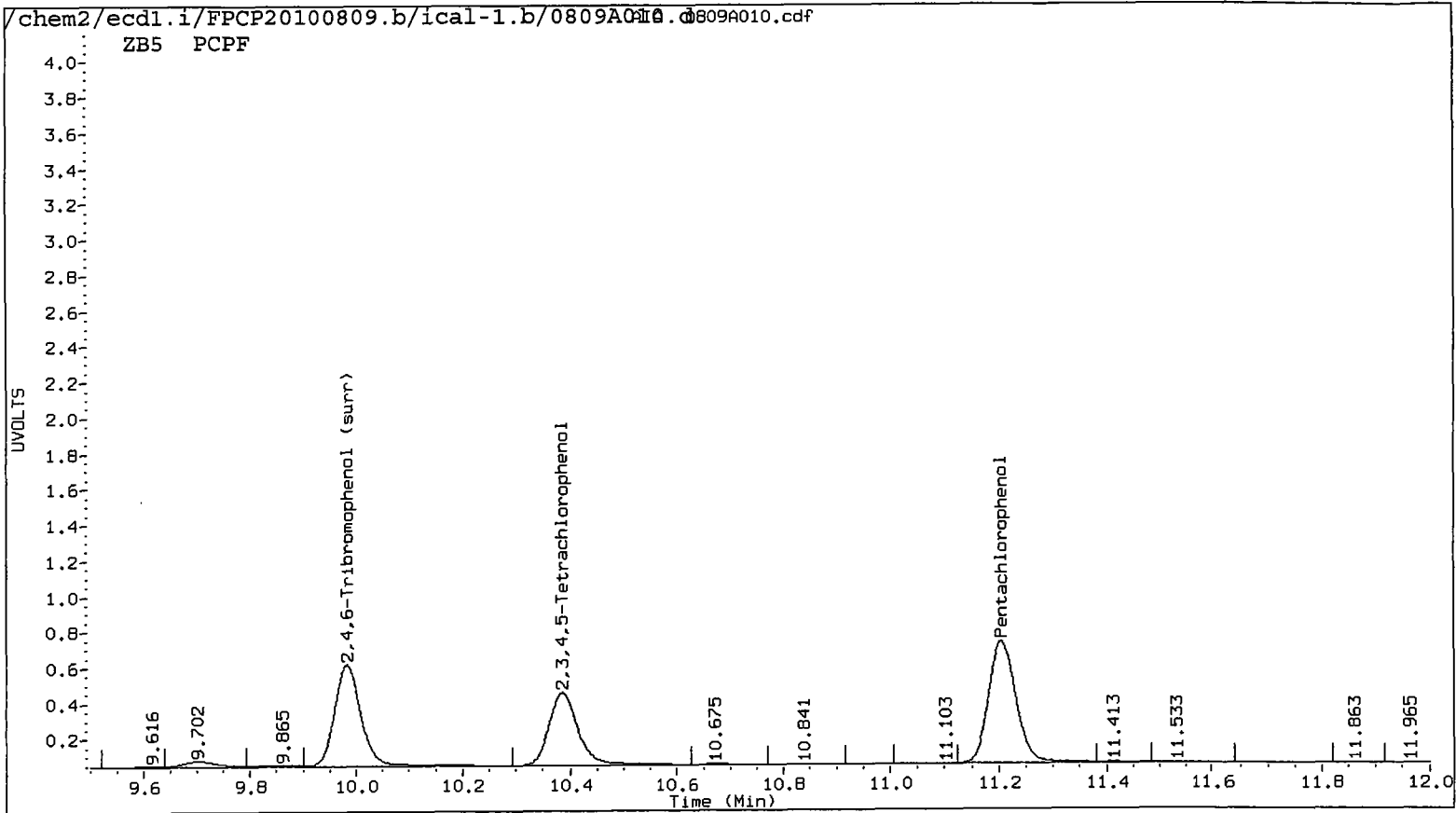
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

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

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

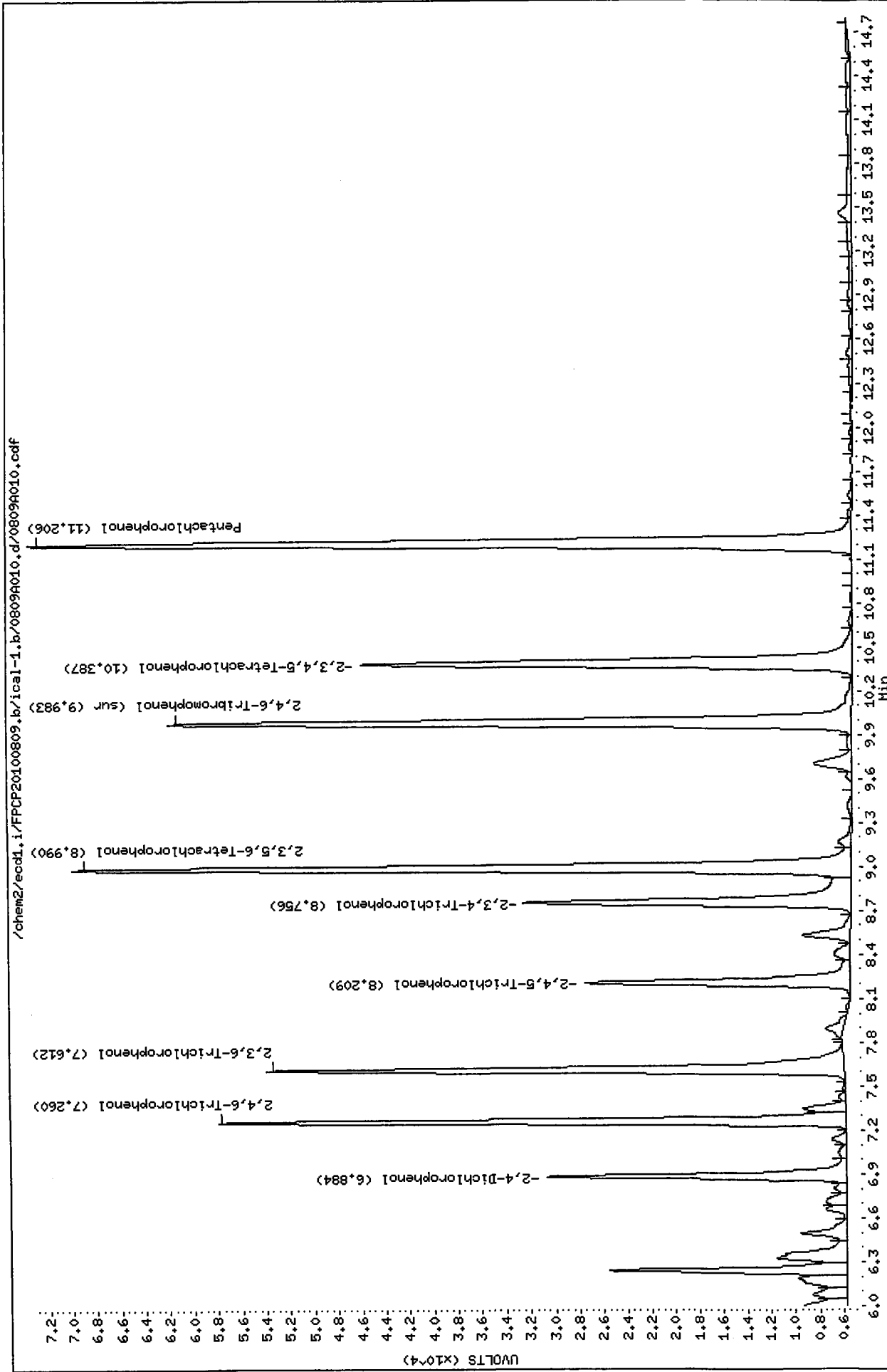
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	400.8	344.6





Data File: /chem2/ecd1.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

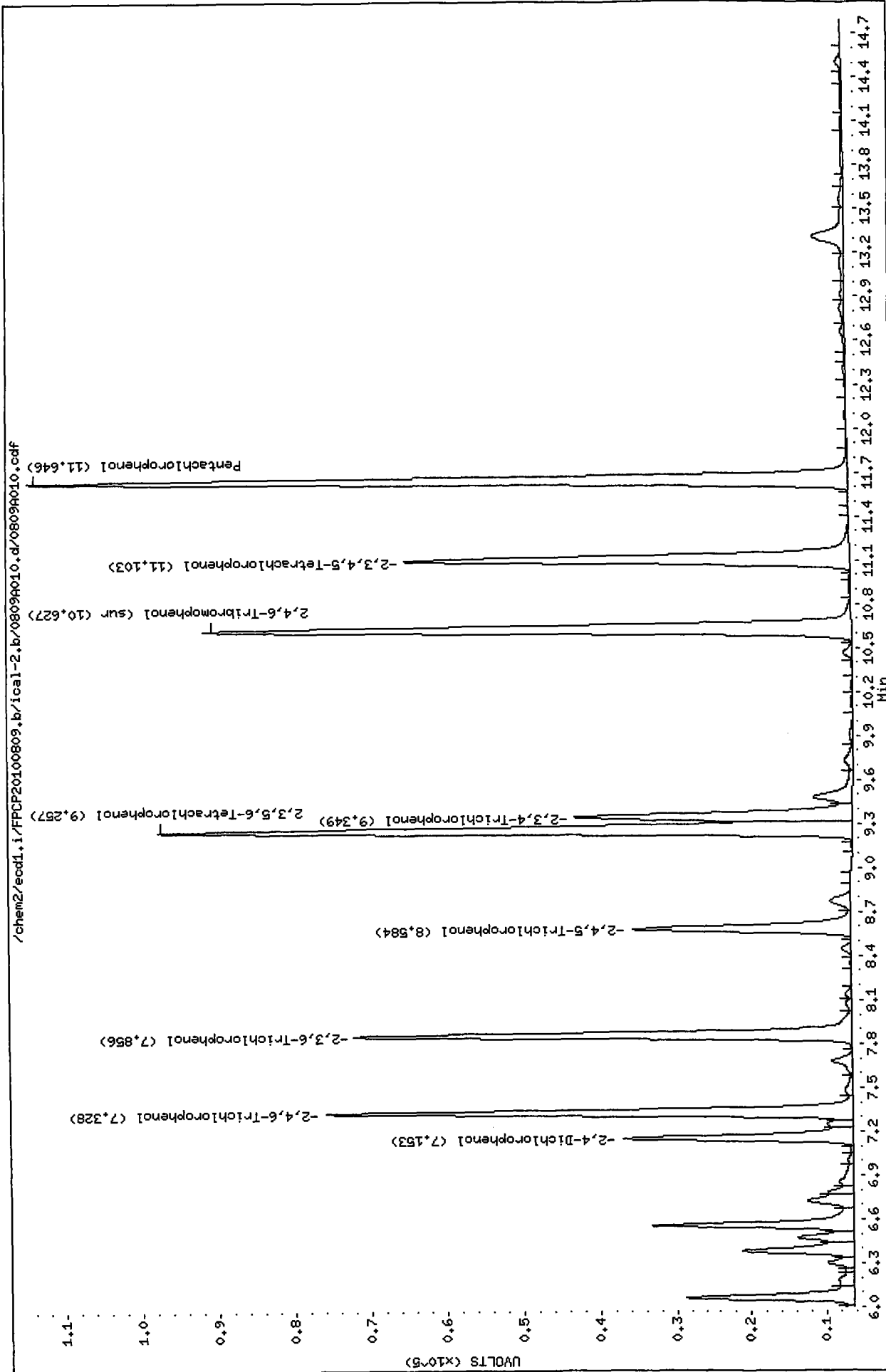
Instrument: ecd1.i  
Operator: ar  
Column diameter: 0.53



Data File: /chem2/ecdl.i/FPCP20100809.b/ical-2.b/0809R010.d  
Date : 09-AUG-2010 14:03  
Client ID:  
Sample Info: PCPF  
Purge Volume: 2.0  
Column phase: ZB35

Instrument: ecld1.i

Operator: ar  
Column diameter: 0.53



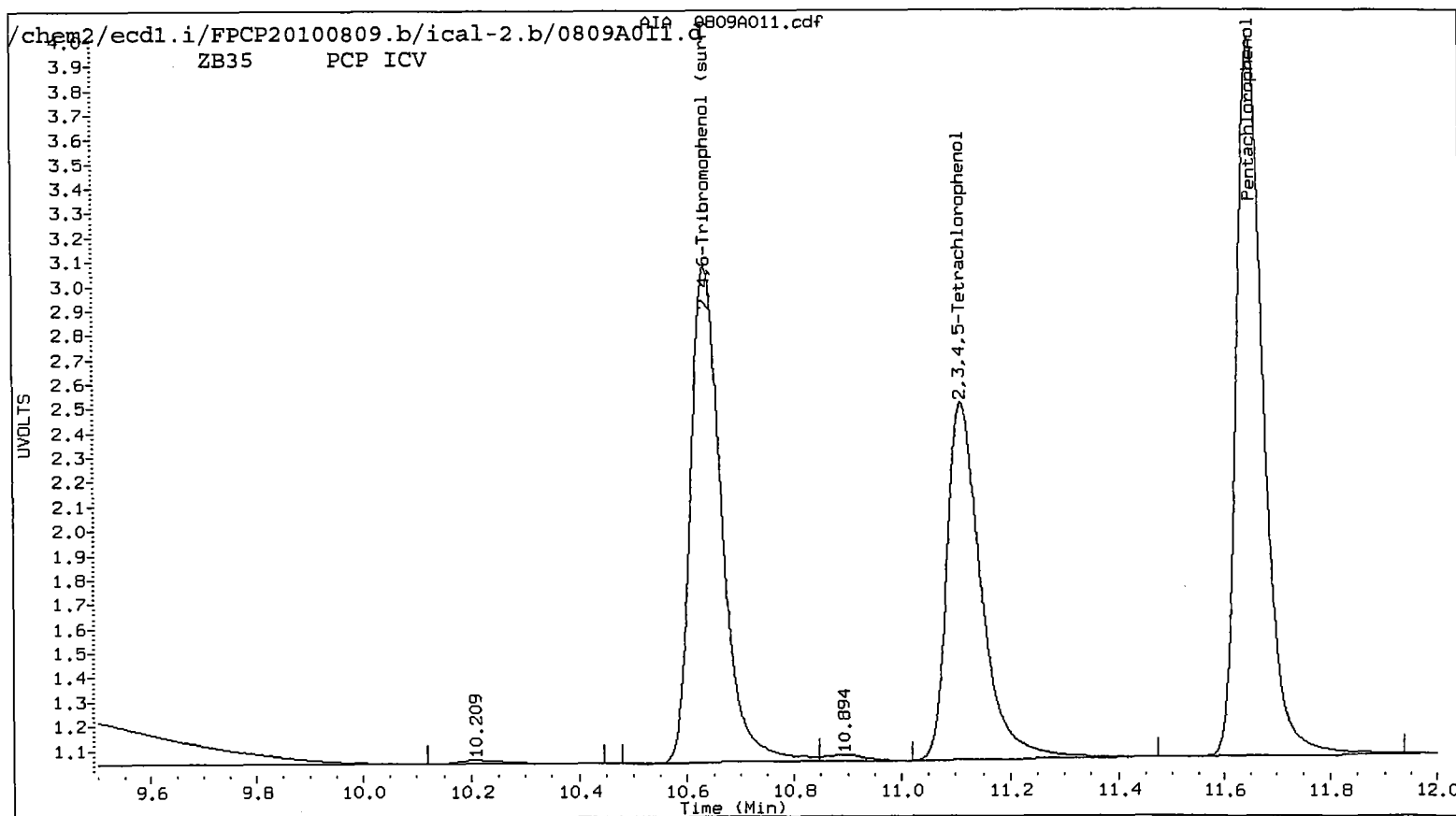
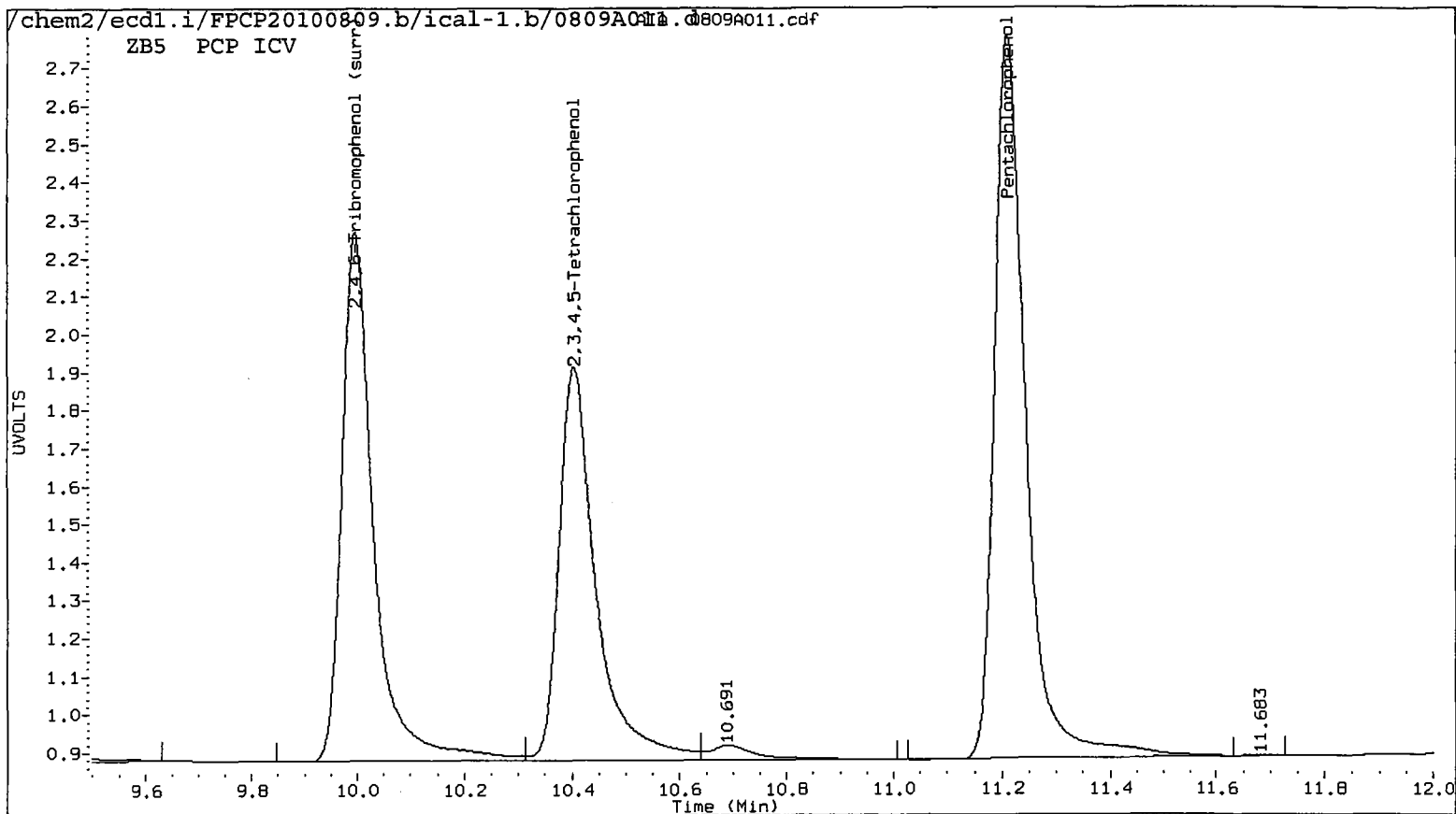
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

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

Date: 09-AUG-2010 14:23

Client ID:

Sample Info: PCP ICV

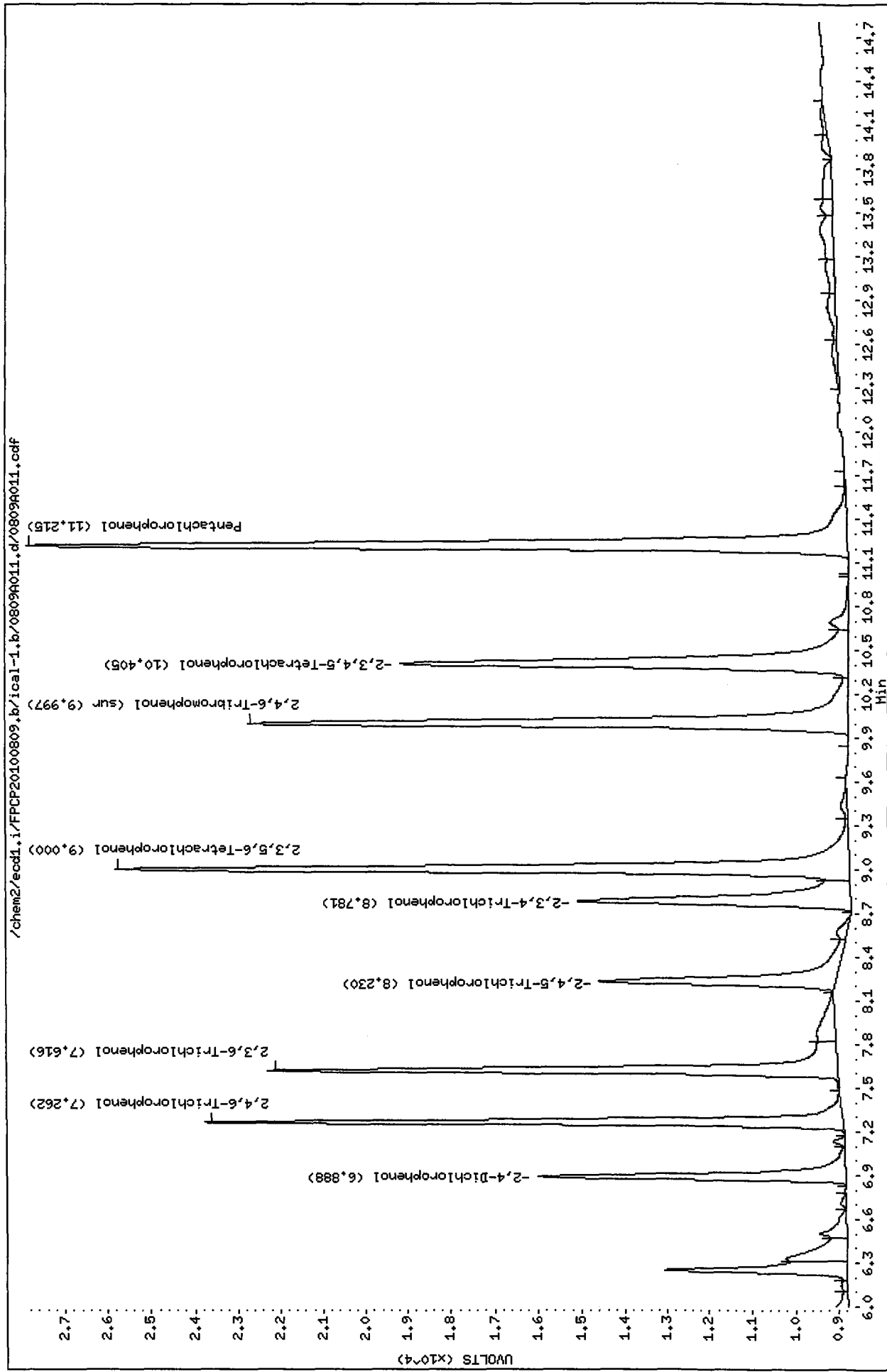
Purge Volume: 2.0

Column phase: ZB5

Instrument: eccl1.i

Operator: ar

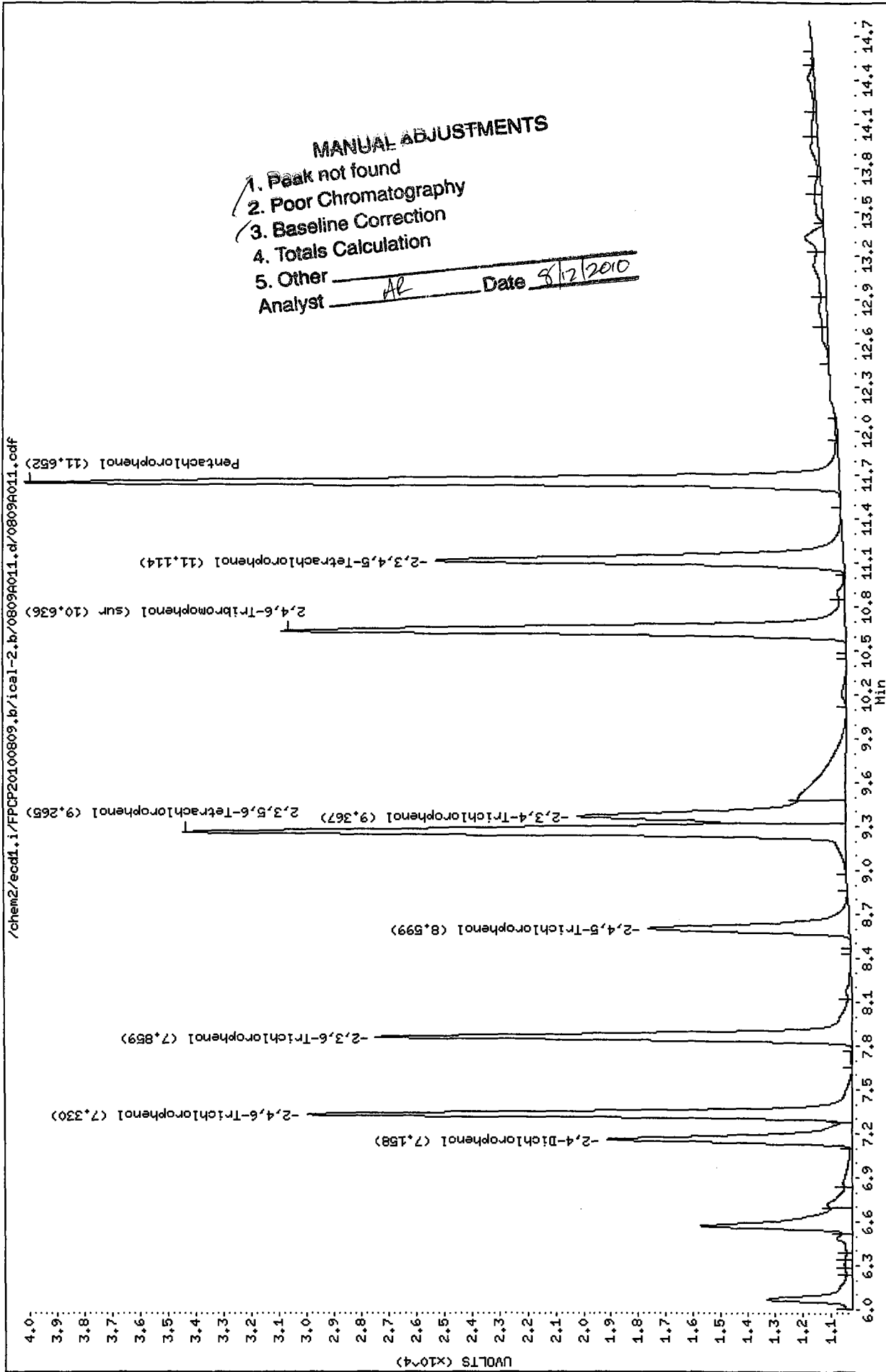
Column diameter: 0.53



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

Operator: ar  
Column diameter: 0.53



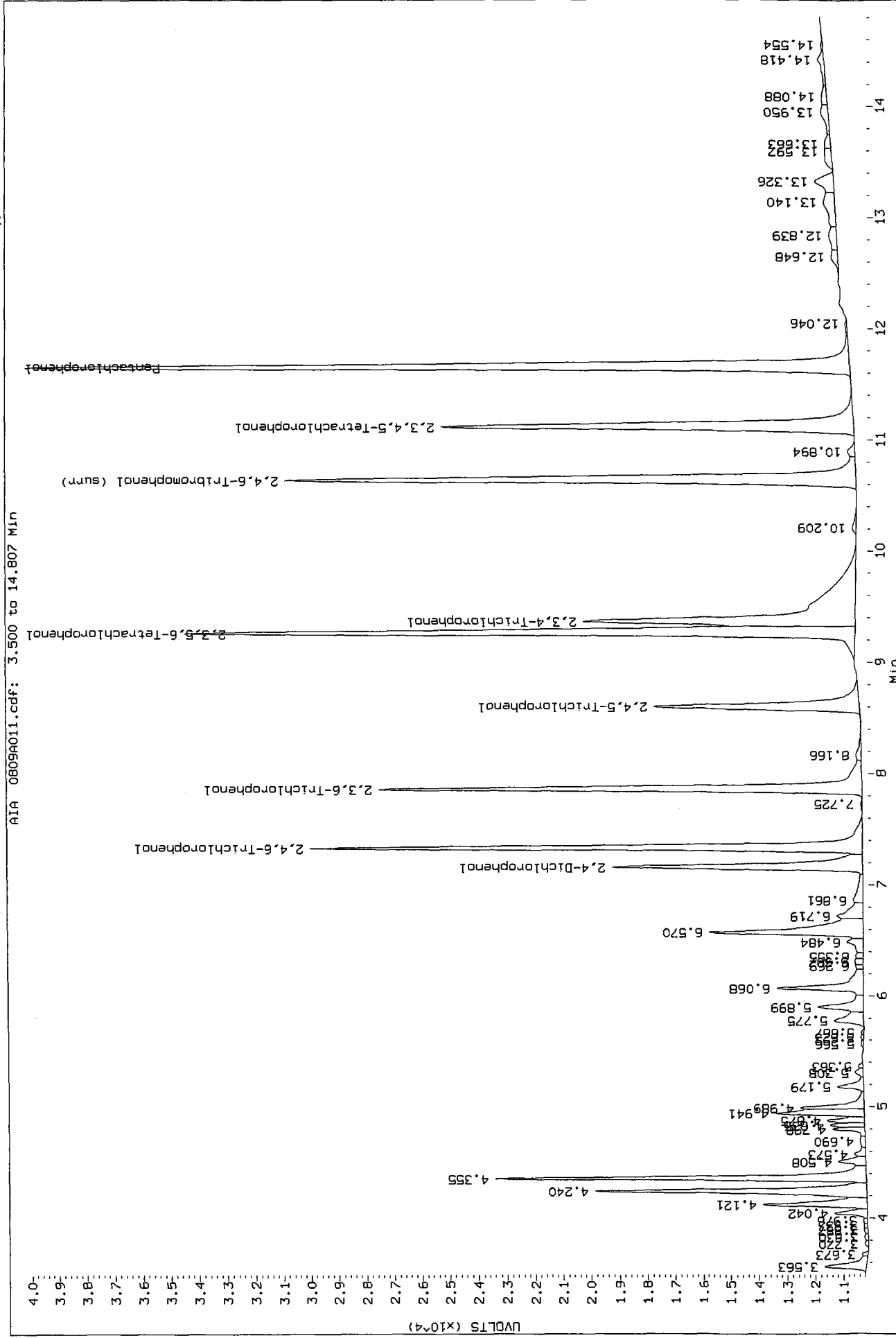
MANUAL ADJUSTMENTS

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

Analyst AR Date 8/12/2010

Data File: /chem2/ecdl1.1/FPCP20100809\_b/ical-2.b/0809A011.d/0809A011.cdf  
Injection Date: 09-AUG-2010 14:23  
Instrument: ecdl1.1  
Client Sample ID:

Before AR-8/12/2010



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

**ARI Job ID: RI65**


**RI65:00503**



# Analytical Resources Inc.: Organics Instrument Log

ECD1 Serial No.: 3410A39690

Date: 8/24/10 Analysis: Cl. Phends Analyst: AR  
 GC Program: PCPFAST.M Column No: 150608/148246 Column Type: 2B5/35  
 Instrument Tune (.U or .CT.): NA EM Voltage: NA  
 Calibration File: FPCP20100809.b Curve Date: 8/9/2010

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

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd1.i/FPCP20100809.b/0824-1.b

Inject	Date/Time	Filename	DF	LabID	ClientID
1	24-AUG-2010 14:27	0824A001.d	1	RINSE	
2	24-AUG-2010 14:47	0824A002.d	1	RINSE	
3	24-AUG-2010 15:07	0824A003.d	1	RINSE	
4	24-AUG-2010 15:27	0824A004.d	1	PCPCCAL	
5	24-AUG-2010 15:47	0824A005.d	1	PCPCCAL	
6	24-AUG-2010 16:08	0824A006.d	1	RI46MBW1	
7	24-AUG-2010 16:28	0824A007.d	1	RI46LCSW1	
8	24-AUG-2010 16:48	0824A008.d	1	RI46OLCSDW1	
9	24-AUG-2010 17:08	0824A009.d	1	RI46A	
10	24-AUG-2010 17:28	0824A010.d	1	RI46B	
11	24-AUG-2010 17:48	0824A011.d	1	RI46C	
12	24-AUG-2010 18:08	0824A012.d	1	RI46D	
13	24-AUG-2010 18:28	0824A013.d	1	RI46E	
14	24-AUG-2010 18:48	0824A014.d	1	RI46F	
15	24-AUG-2010 19:08	0824A015.d	1	RI46G	
16	24-AUG-2010 19:28	0824A016.d	1	RINSE	
17	24-AUG-2010 19:48	0824A017.d	1	PCPCCAL	
18	24-AUG-2010 20:08	0824A018.d	1	PCPCCAL	
19	24-AUG-2010 20:28	0824A019.d	1	RI46H	
20	24-AUG-2010 20:48	0824A020.d	1	RI46I	
21	25-AUG-2010 09:36	0824A021.d	1	pcp	
22	25-AUG-2010 09:56	0824A022.d	1	PCPCCAL	
23	25-AUG-2010 10:16	0824A023.d	1	PCPCCAL	
24	25-AUG-2010 10:36	0824A024.d	1	RI46MBW1	
25	25-AUG-2010 10:56	0824A025.d	1	RI46H	
26	25-AUG-2010 11:16	0824A026.d	1	RI46I	
27	25-AUG-2010 12:02	0824A027.d	1	RI46MBW1	
28	25-AUG-2010 12:21	0824A028.d	1	pcp	
29	25-AUG-2010 12:41	0824A029.d	1	PCPCCAL	

AR 8/25/2010

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.

# Analytical Resources Inc.: Organics Instrument Log

ECD1 Serial No.: 3410A39690

Date: 8/24/10 cont Analysis: Cl. Phenols Analyst: AR

GC Program: PCPFAST.M Column No: 150608/148146 Column Type: ZB5/35

Instrument Tune (.U or .CT.): NA EM Voltage: NA

Calibration File: PCP20100809.6 Curve Date: 8/9/2010

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

30	25-AUG-2010	13:01	0824A030.d	1	RJ40MBW1	RJ40MBW1
31	25-AUG-2010	13:22	0824A031.d	1	RJ40LCSW1	RJ40LCSW1
32	25-AUG-2010	13:42	0824A032.d	1	RJ40LCSDW1	RJ40LCSDW1
33	25-AUG-2010	14:02	0824A033.d	1	RJ40A	MW-18
34	25-AUG-2010	14:22	0824A034.d	1	RJ40B	MW-42
35	25-AUG-2010	14:42	0824A035.d	1	RJ40C	HCMW-7
36	25-AUG-2010	15:02	0824A036.d	1	RJ40D	MW-17
37	25-AUG-2010	15:22	0824A037.d	1	RJ40E	MW-31
38	25-AUG-2010	15:42	0824A038.d	1	RJ40F	MW-39
39	25-AUG-2010	16:02	0824A039.d	1	RJ40G	MW-16
40	25-AUG-2010	16:22	0824A040.d	1	PCP	
41	25-AUG-2010	16:42	0824A041.d	1	PCPCCAL	
42	25-AUG-2010	17:02	0824A042.d	1	RJ40H	MW-37
43	25-AUG-2010	17:23	0824A043.d	1	RJ40I	MW-41
44	25-AUG-2010	17:43	0824A044.d	1	RJ40J	MW-15
45	25-AUG-2010	18:03	0824A045.d	1	RI65MBW1	RI65MBW1
46	25-AUG-2010	18:23	0824A046.d	1	RI65LCSW1	RI65LCSW1
47	25-AUG-2010	18:43	0824A047.d	1	RI65A	MW-09-081310
48	25-AUG-2010	19:03	0824A048.d	1	RI65B	MW-08-081310
49	25-AUG-2010	19:23	0824A049.d	1	RI65BMS	MW-08-081310 MS
50	25-AUG-2010	19:43	0824A050.d	1	RI65BMSD	MW-08-081310 MSD
51	25-AUG-2010	20:03	0824A051.d	1	RI65C	MW-07-081310
52	25-AUG-2010	20:23	0824A052.d	1	PCP	
53	25-AUG-2010	20:43	0824A053.d	1	PCPCCAL	
54	25-AUG-2010	21:03	0824A054.d	1	RI65D	MW-01-081310
55	25-AUG-2010	21:23	0824A055.d	1	RI65E	MW-05-081310
56	25-AUG-2010	21:44	0824A056.d	1	RJ40J	MW-15
57	25-AUG-2010	22:04	0824A057.d	100	RJ40F	MW-39
58	25-AUG-2010	22:24	0824A058.d	100	RJ40H	MW-37
59	25-AUG-2010	22:43	0824A059.d	1000	RJ40I	MW-41
60	25-AUG-2010	23:03	0824A060.d	10	RJ40F	MW-39
61	25-AUG-2010	23:23	0824A061.d	10	RJ40H	MW-37
62	25-AUG-2010	23:43	0824A062.d	100	RJ40I	MW-41
63	26-AUG-2010	00:03	0824A063.d	1	PCP	
64	26-AUG-2010	00:23	0824A064.d	1	PCPCCAL	

AR 8/26/2010

**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.



### GC Analyst Notes / Corrective Action Log

ARI Project ID: RI65 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: 8/4/2010 Analysis Start: 8/24/2010

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 <sup>AR</sup>  
Internal Standard Meets Criteria? YES / NO / NA Special Analysis Criteria Met? YES / NO / NA <sub>VDP</sub>

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

Additional Details on Reverse: Yes / No

Analyst: [Signature] Date: 8/26/2010

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

Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

AR 8/25/2010

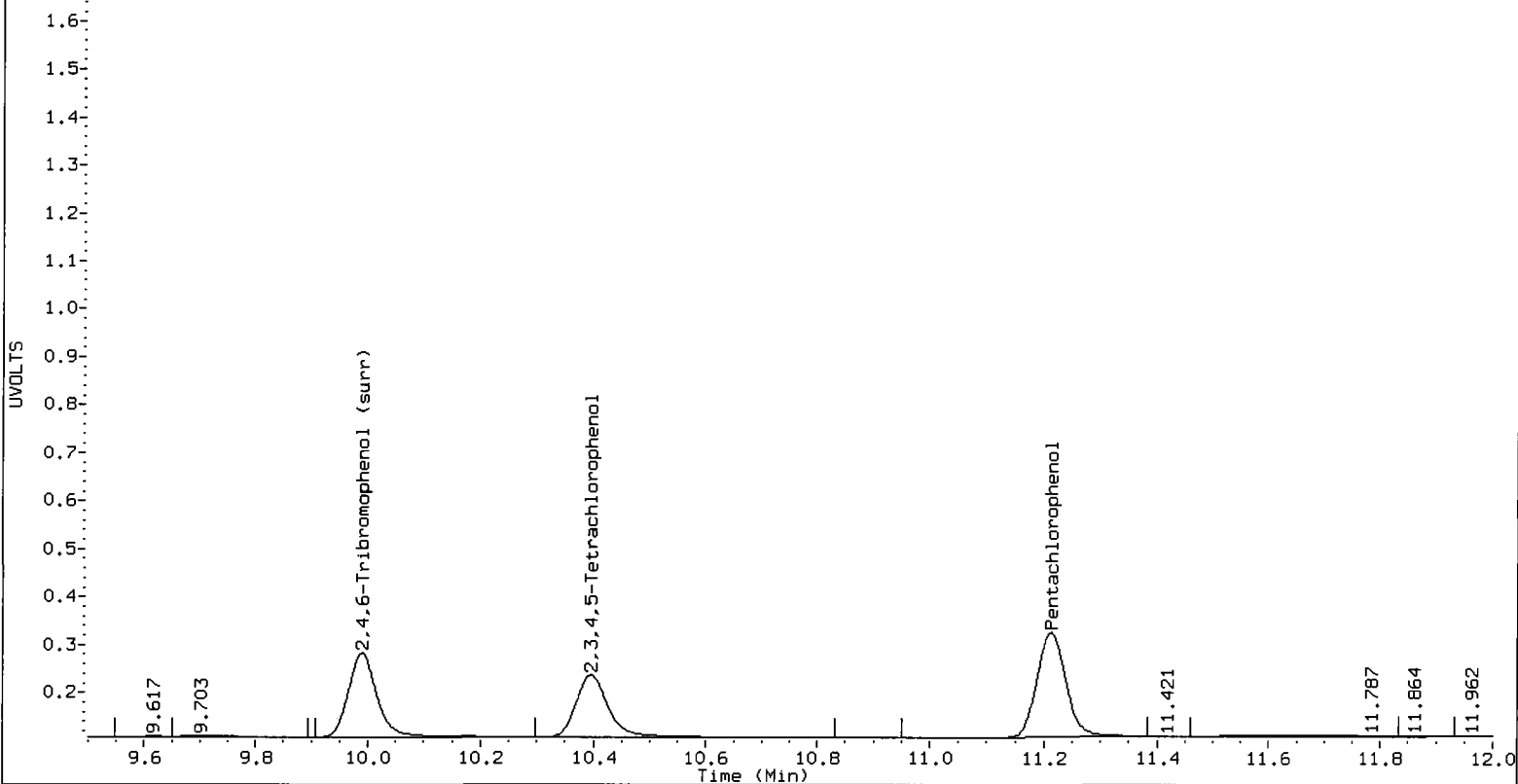
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 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0824-2.b/0824A041.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 25-AUG-2010 16:42  
 Compound Sublist: all Report Date: 08/25/2010 20:36  
 Instrument: ecd1.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.213	-0.006	388701	11.649	-0.009	580600	25.1237	25.2859	0.6	Pentachlorophenol
7.262	-0.002	221491	7.330	-0.003	334904	26.3912	26.8254	1.6	2,4,6-Trichlorophenol
7.616	-0.003	229349	7.857	-0.007	306983	26.1313	24.7397	5.5	2,3,6-Trichlorophenol
8.218	-0.024	128817	8.590	-0.025	165389	25.5209	26.6729	4.4	2,4,5-Trichlorophenol
8.767	-0.025	169227	9.355	-0.025	214742	24.7370	25.4304	2.8	2,3,4-Trichlorophenol
8.996	-0.011	346570	9.260	-0.017	472939	24.5697	25.5438	3.9	2,3,5,6-Tetrachlorophenol
10.395	-0.018	258781	11.107	-0.019	348530	25.1202	23.8872	5.0	2,3,4,5-Tetrachlorophenol
6.888	-0.005	116578	7.156	-0.010	156264	235.9129	253.2722	7.1	2,4-Dichlorophenol
9.990	-0.012	315145	10.631	-0.015	471811	25.6	25.3	1.2	2,4,6-Tribromophenol (surr)

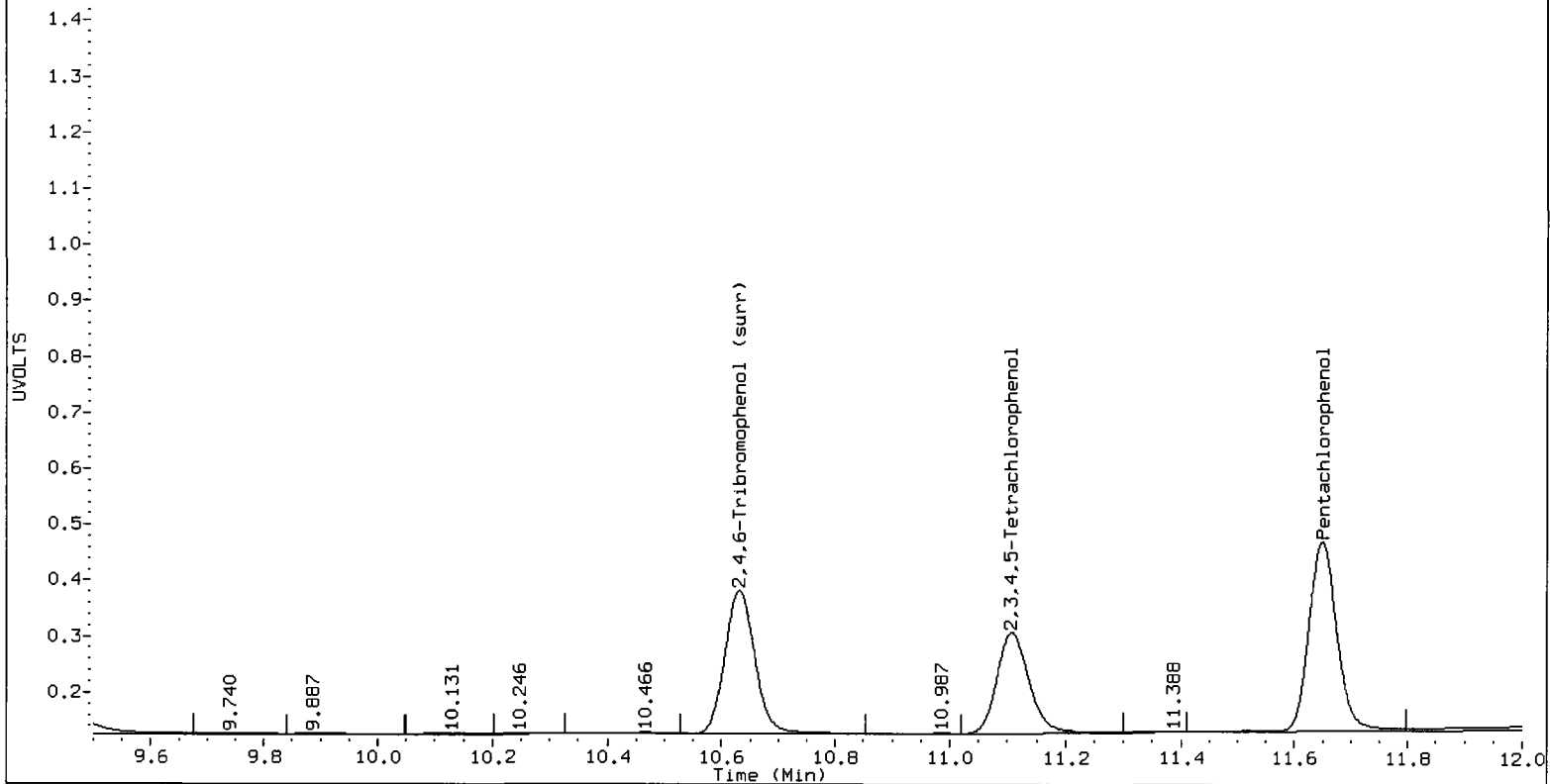
PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	100.5	101.1
2,4,6-Trichlorophenol	105.6	107.3
2,3,6-Trichlorophenol	104.5	99.0
2,4,5-Trichlorophenol	102.1	106.7
2,3,4-Trichlorophenol	98.9	101.7
2,3,5,6-Tetrachlorophenol	98.3	102.2
2,3,4,5-Tetrachlorophenol	100.5	95.5
2,4-Dichlorophenol	94.4	101.3
2,4,6-TBP (surr)	102.3	101.1

chem2/ecdl.i/FPCP20100809.b/0824-1.b/0824A041.d 0824A041.cdf  
ZB5 PCPCCAL

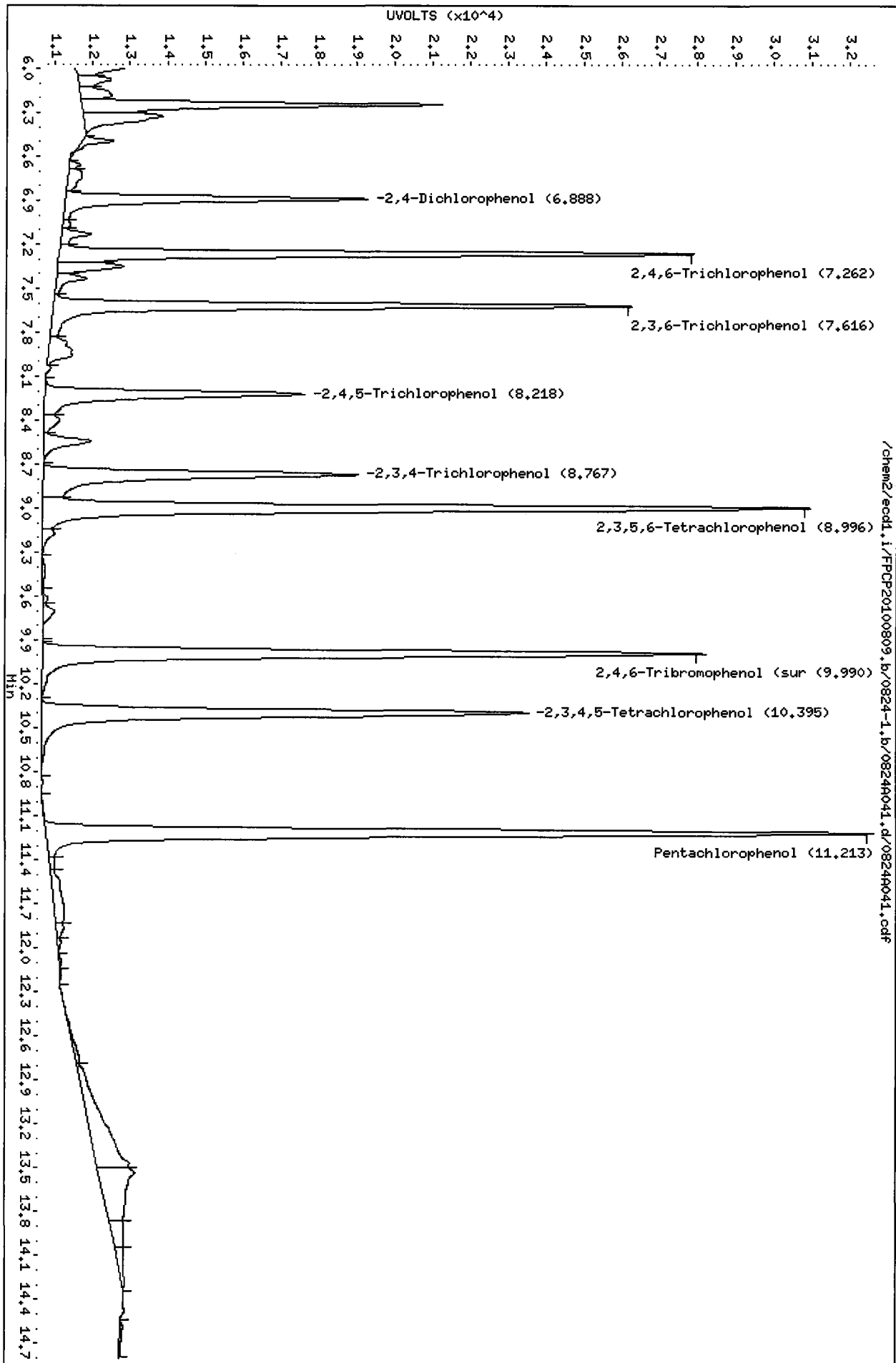


chem2/ecdl.i/FPCP20100809.b/0824-2.b/0824A041.d 0824A041.cdf  
ZB35 PCPCCAL



Data File: /chem2/ecdl.i/FP0P20100809.b/0824-1.b/0824R041.d  
Date : 25-JUL-2010 16:42  
Client ID:  
Sample Info: PCPCAL  
Purge Volume: 2.0  
Column phase: ZB5

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



AR 8/26/2010

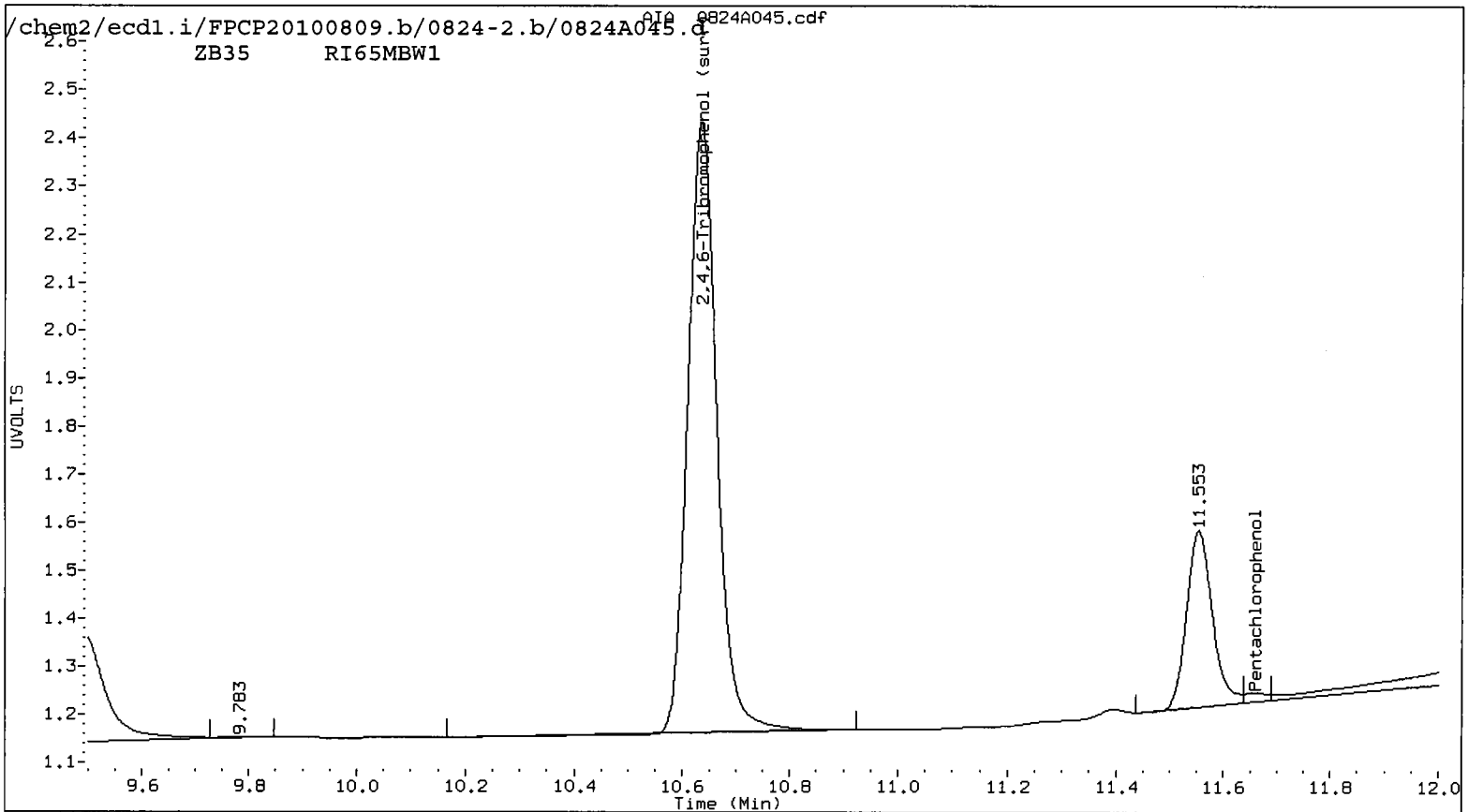
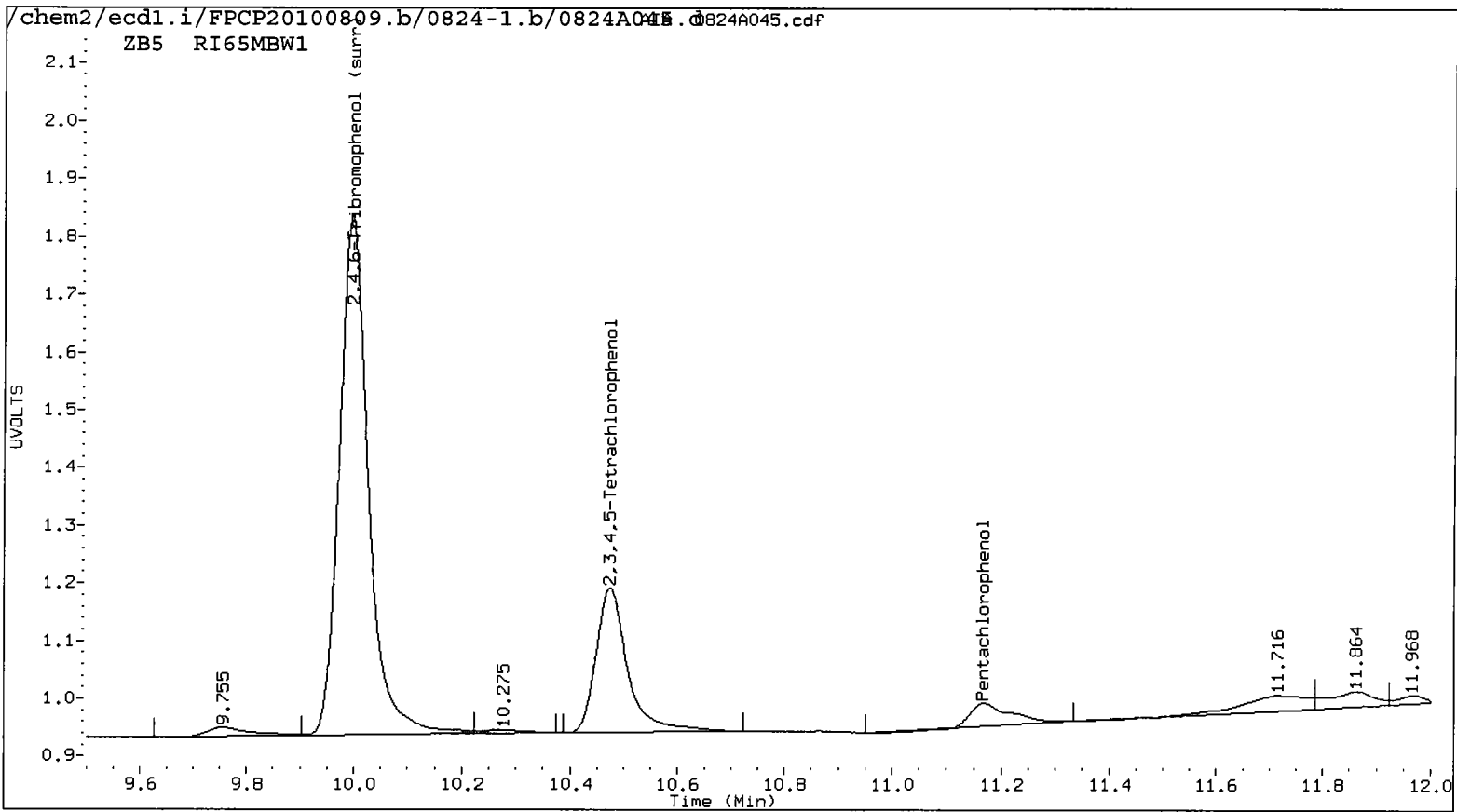
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0824-1.b/0824A045.d    ARI ID: RI65MBW1  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0824-2.b/0824A045.d    Client ID: RI65MBW1  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m                      Injection Date: 25-AUG-2010 18:03  
 Compound Sublist: all    Report Date: 08/25/2010 20:36  
 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		
11.168	-0.051	9403	11.659	0.001	2757	0.5231	0.1201 <i>✓</i>	125.3*	Pentachlorophenol
7.221	-0.043	12705	----			1.3264	0.0000	---	2,4,6-Trichlorophenol
----			7.845	-0.019	1536	0.0000	0.1238	---	2,3,6-Trichlorophenol
----			8.575	-0.040	753	0.0000	0.1048	---	2,4,5-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,4-Trichlorophenol
8.983	-0.024	34036	9.271	-0.006	612	2.4130	0.0331	194.6*	2,3,5,6-Tetrachlorophenol
10.473	0.060	50964	----			4.2221	0.0000	---	2,3,4,5-Tetrachlorophenol
----			----			0.0000	0.0000	---	2,4-Dichlorophenol
9.996	-0.006	169645	10.635	-0.011	237800	13.1	12.7 <i>✓</i>	2.5	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	52.2	51.0 <i>✓</i>

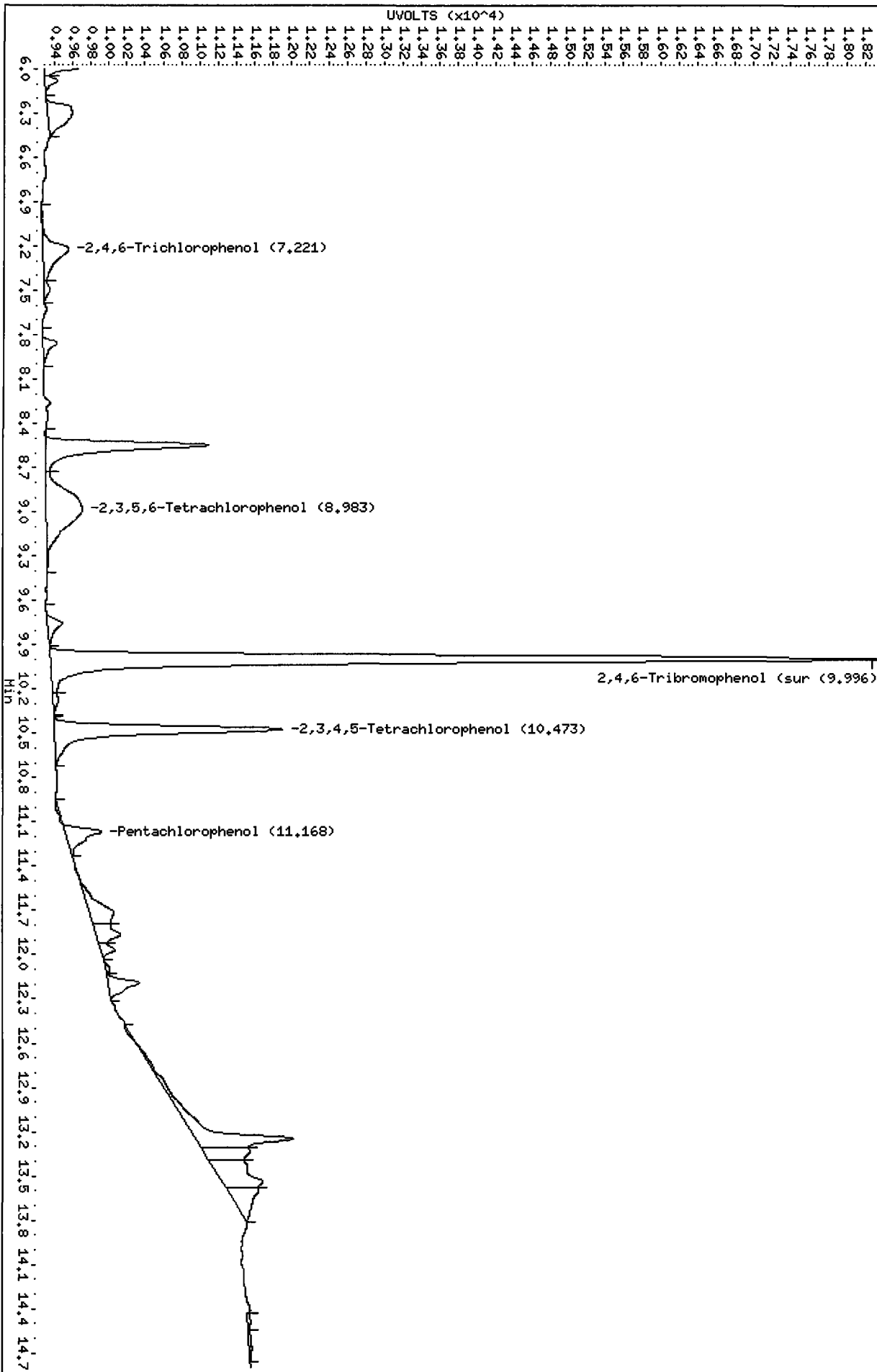




Data File: /chem2/eod1.i/FP20100809.b/0824-1.b/0824R045.d  
Date: 25-AUG-2010 18:03  
Client ID: R165MBM1  
Sample Info: R165MBM1  
Purge Volume: 2.0  
Column phase: ZB5

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

/chem2/eod1.i/FP20100809.b/0824-1.b/0824R045.d/0824R045.cdf



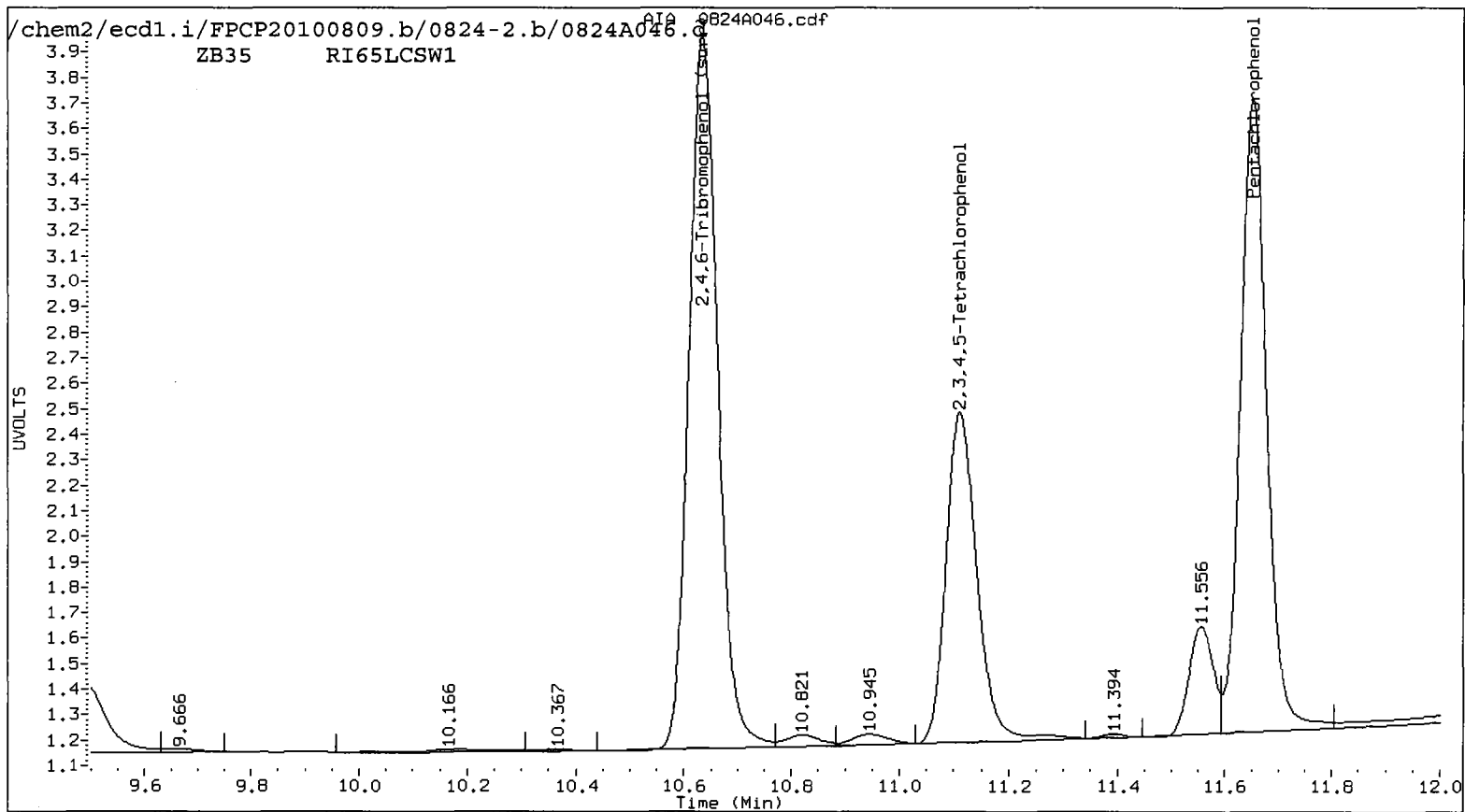
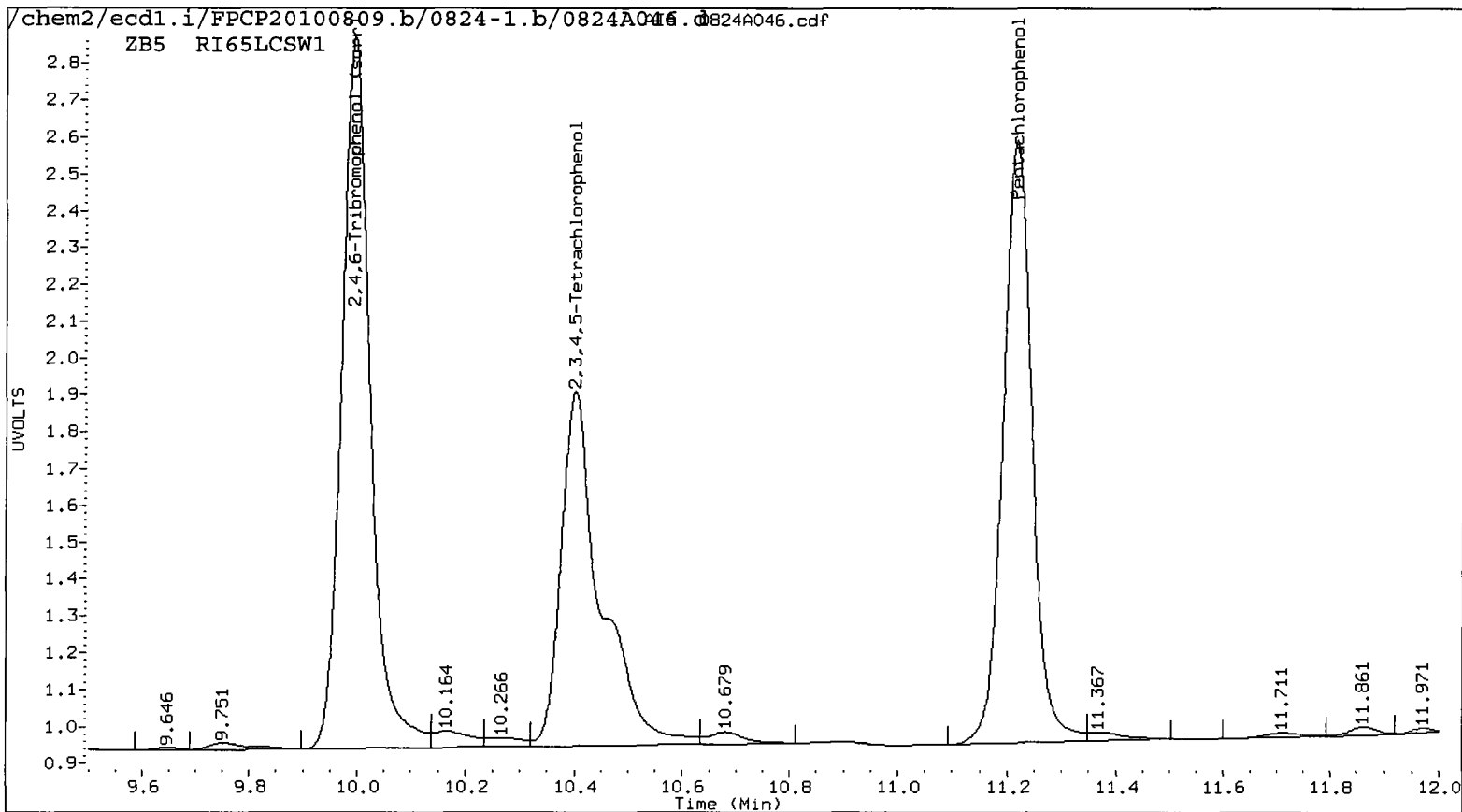
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0824-1.b/0824A046.d ARI ID: RI65LCSW1  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0824-2.b/0824A046.d Client ID: RI65LCSW1  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 25-AUG-2010 18:23  
 Compound Sublist: all Report Date: 08/25/2010 20:36  
 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		
11.216	-0.003	299436	11.652	-0.006	428320	18.7193	18.6539	0.3	Pentachlorophenol
7.265	0.001	151351	7.333	0.000	194618	17.2836	15.5887	10.3	2,4,6-Trichlorophenol
7.620	0.001	193074	7.861	-0.003	218522	21.6248	17.6106	20.5	2,3,6-Trichlorophenol
8.224	-0.018	75997	8.595	-0.020	100510	15.0564	15.3342	1.8	2,4,5-Trichlorophenol
8.772	-0.020	81050	9.360	-0.020	99200	11.8476	10.9366	8.0	2,3,4-Trichlorophenol
8.999	-0.008	251020	9.265	-0.012	319288	17.7958	17.2450	3.1	2,3,5,6-Tetrachlorophenol
10.401	-0.012	244120	11.111	-0.015	255103	23.4521	17.4839	29.2	2,3,4,5-Tetrachlorophenol
6.894	0.001	21470	7.162	-0.004	29123	35.1524	40.2136	13.4	2,4-Dichlorophenol
9.994	-0.008	356934	10.634	-0.012	519000	29.4	27.8	5.6	2,4,6-Tribromophenol (surr)

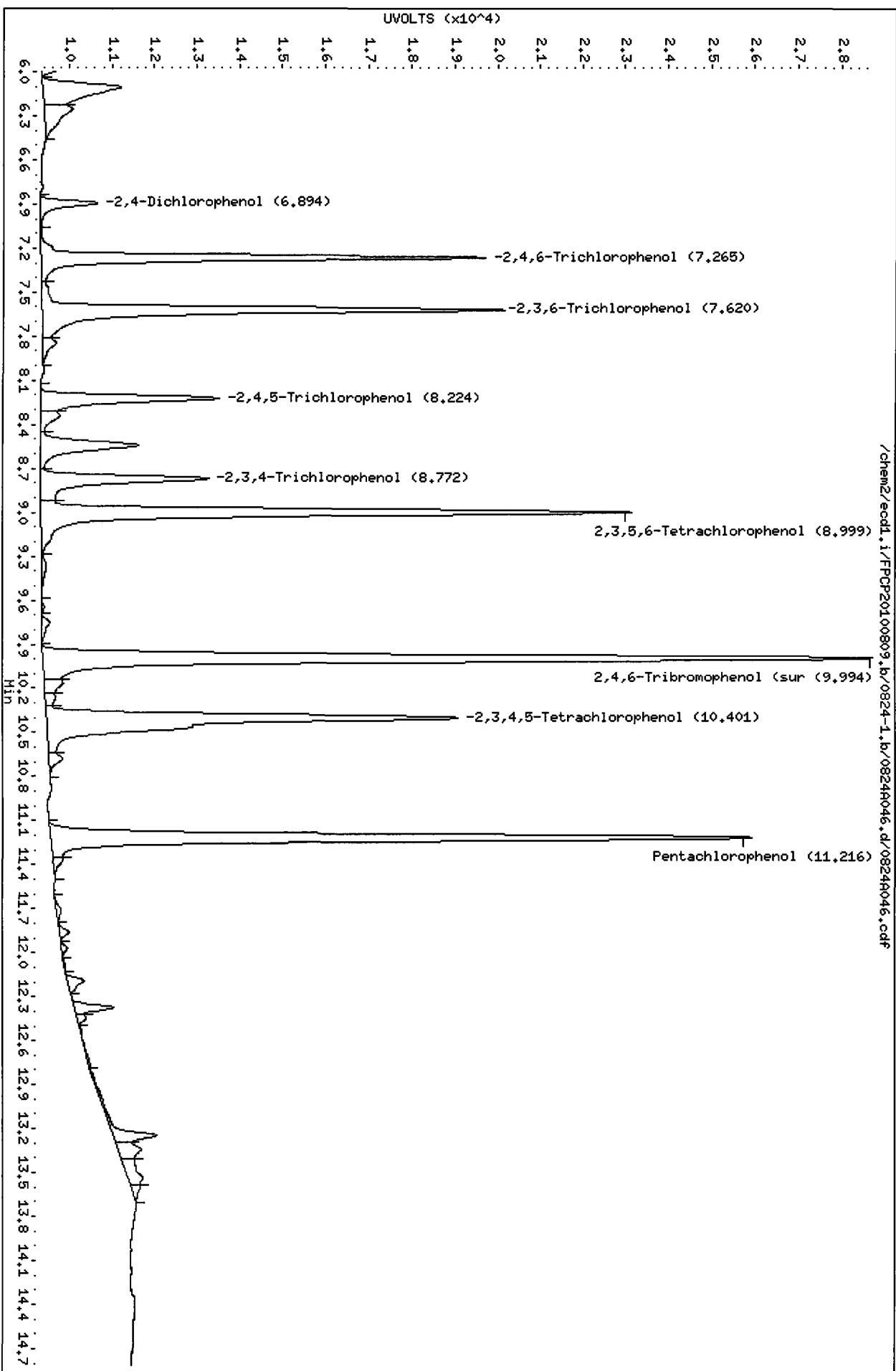
PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	74.9	74.6
2,4,6-Trichlorophenol	69.1	62.4
2,3,6-Trichlorophenol	86.5	70.4
2,4,5-Trichlorophenol	60.2	61.3
2,3,4-Trichlorophenol	47.4	43.7
2,3,5,6-Tetrachlorophenol	71.2	69.0
2,3,4,5-Tetrachlorophenol	93.8	69.9
2,4-Dichlorophenol	14.1	16.1
2,4,6-TBP (surr)	58.8	55.6



Data File: /chem2/ecdl.i/FP0P20100809.b/0824-1.b/0824R046.d  
Date: 25-AUG-2010 18:23  
Client ID: R165LCSM4  
Sample Info: R165LCSM4  
Purge Volume: 2.0  
Column phase: Z85

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



/chem2/ecdl.i/FP0P20100809.b/0824-1.b/0824R046.d/0824R046.cdf

Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

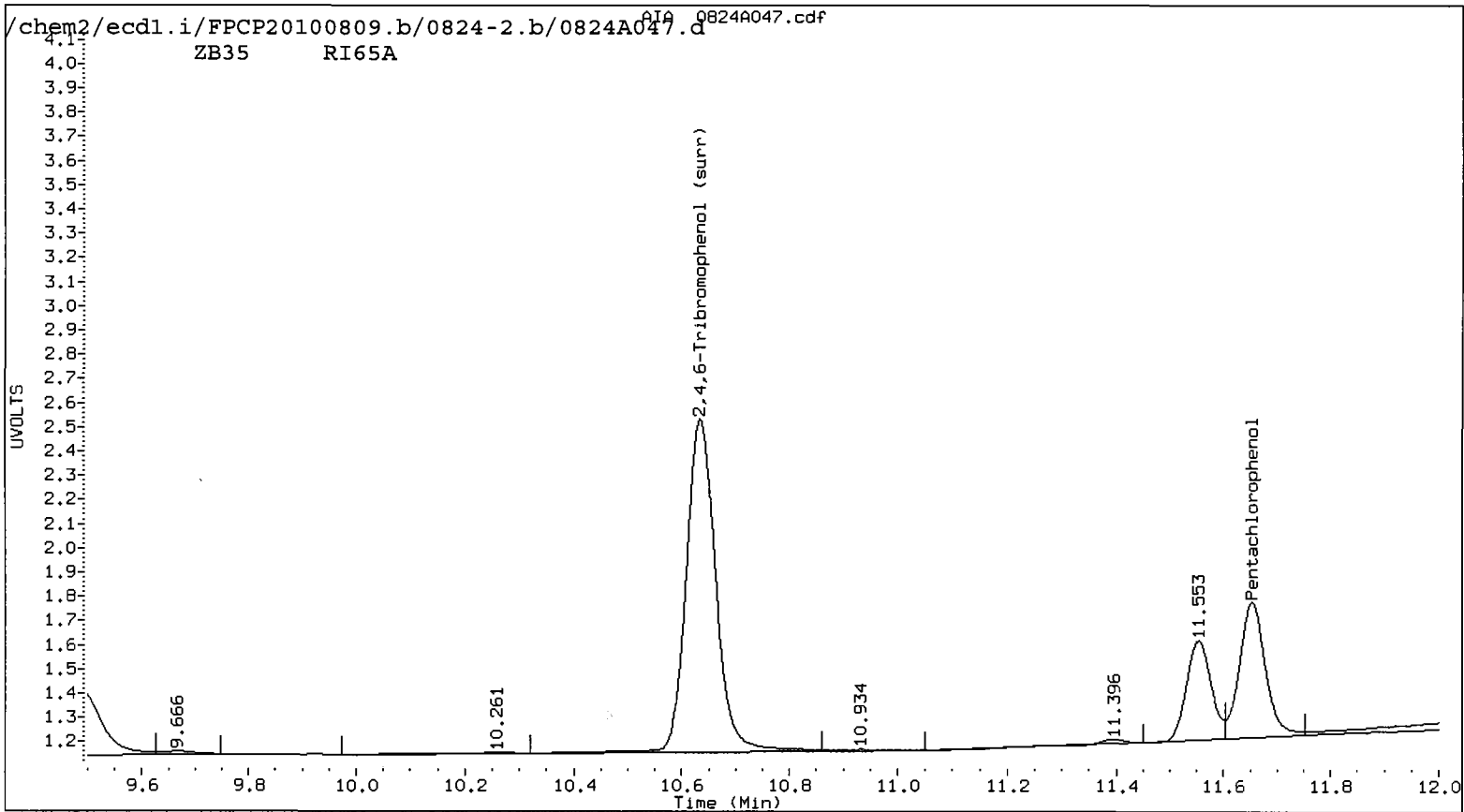
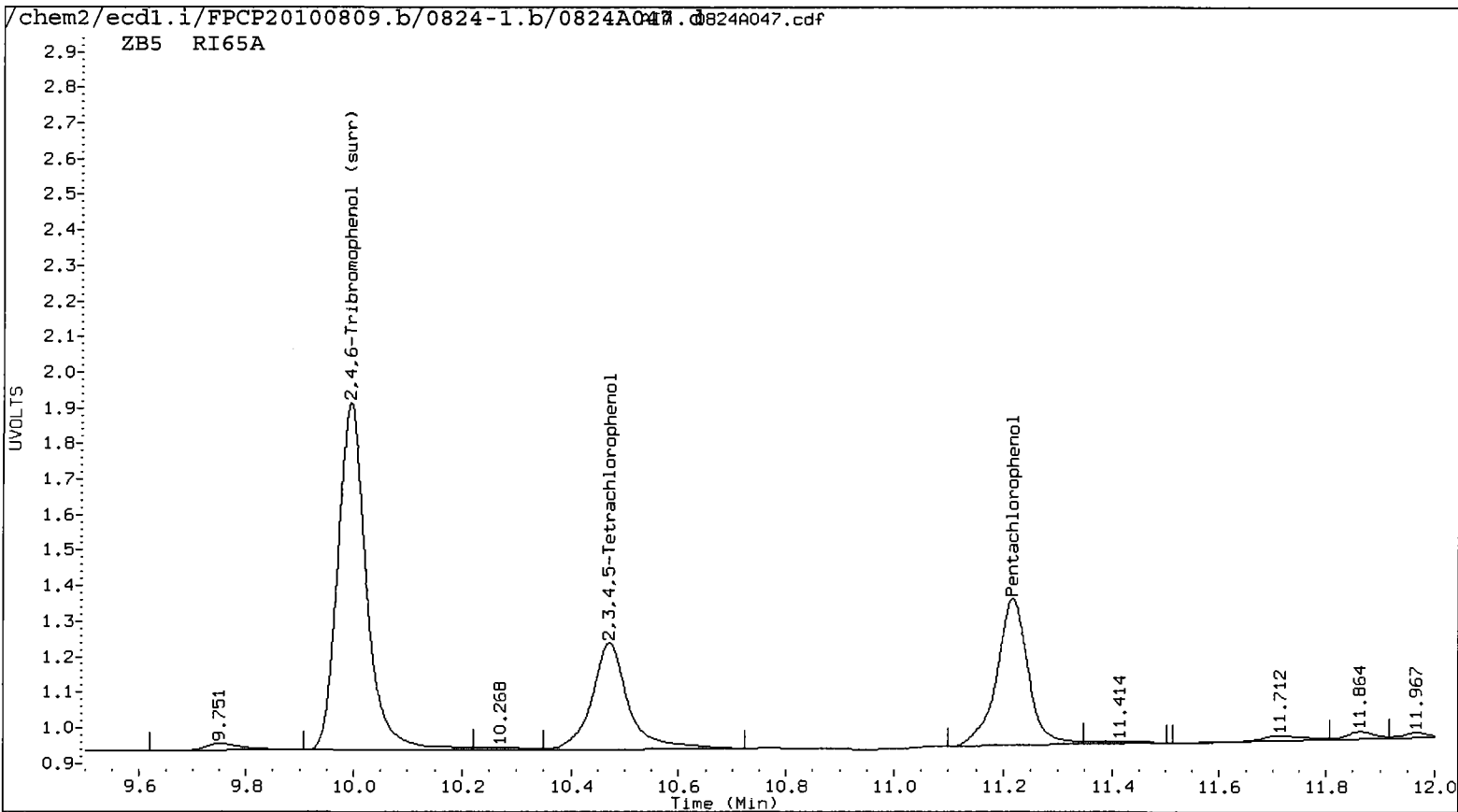
AR 8/26/2010

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0824-1.b/0824A047.d ARI ID: RI65A  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0824-2.b/0824A047.d Client ID: MW-09-081310  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 25-AUG-2010 18:43  
 Compound Sublist: all Report Date: 08/25/2010 20:36  
 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		
11.217	-0.002	82295	11.653	-0.005	95459	4.7203	4.1574	12.7	Pentachlorophenol
7.209	-0.055	11782	----	----	----	1.2293	0.0000	---	2,4,6-Trichlorophenol
7.632	0.013	2261	7.847	-0.017	1324	0.2303	0.1067	73.4*	2,3,6-Trichlorophenol
8.258	0.016	12993	8.682	0.067	2693	2.5742	0.3755	149.1*	2,4,5-Trichlorophenol
----	----	----	----	----	----	0.0000	0.0000	---	2,3,4-Trichlorophenol
9.019	0.012	27449	9.280	0.003	6969	1.9460	0.3764	135.2*	2,3,5,6-Tetrachlorophenol
10.471	0.058	69454	----	----	----	5.8418	0.0000	---	2,3,4,5-Tetrachlorophenol
----	----	----	----	----	----	0.0000	0.0000	---	2,4-Dichlorophenol
9.994	-0.008	181052	10.634	-0.012	260651	14.0	14.0	0.2	2,4,6-Tribromophenol (surr)

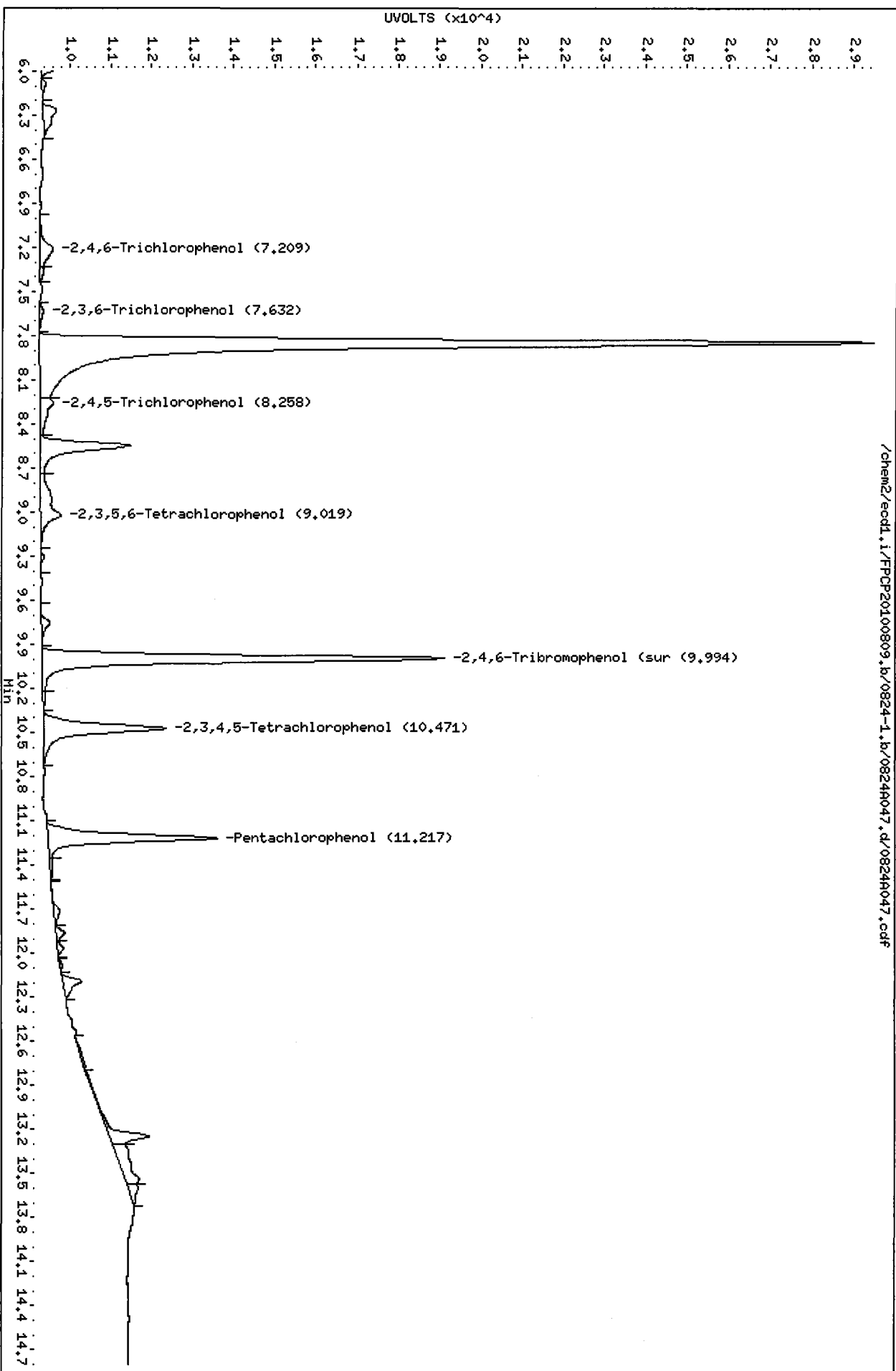
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	56.0	55.9



Data File: /chem2/ecdl.i/FPQP20100809.br/0824-1.br/0824R047.d  
Date : 25-AUG-2010 18:43  
Client ID: MW-09-081310  
Sample Info: RIGSA  
Purge Volume: 2.0  
Column phase: ZB5

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



/chem2/ecdl.i/FPQP20100809.br/0824-1.br/0824R047.d/0824R047.cdf

Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

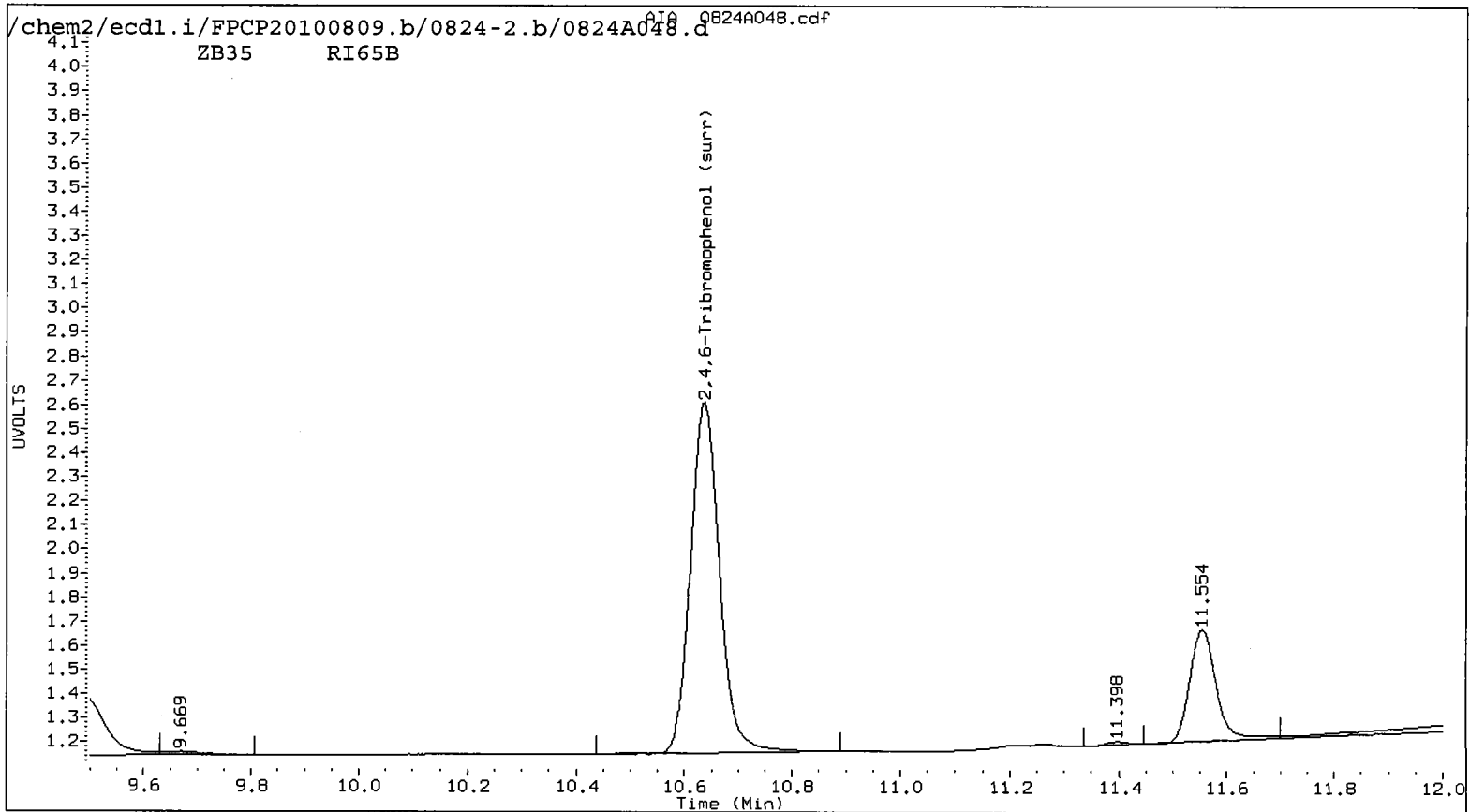
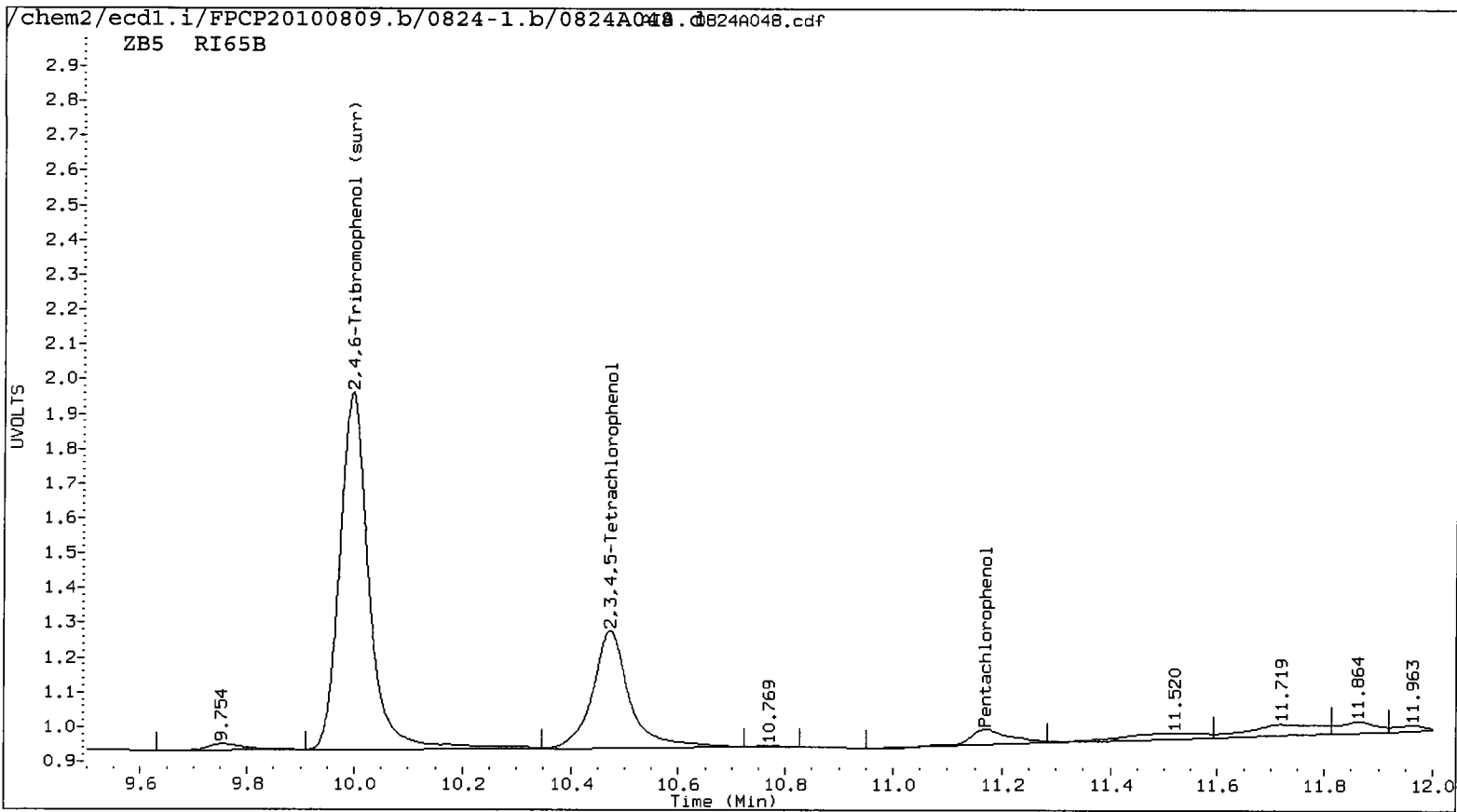
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 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0824-2.b/0824A048.d    Client ID: MW-08-081310  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m                      Injection Date: 25-AUG-2010 19:03  
 Compound Sublist: all    Report Date: 08/25/2010 20:36  
 Instrument: ecdl.i    Matrix: WATER  
 Operator: ar    Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.169	-0.050	10210	----			0.5681	0.0000	---	Pentachlorophenol
7.214	-0.050	8227	----			0.8564	0.0000	---	2,4,6-Trichlorophenol
7.630	0.011	1541	7.848	-0.016	1685	0.1569	0.1358	14.4	2,3,6-Trichlorophenol
8.257	0.015	13889	----			2.7517	0.0000	---	2,4,5-Trichlorophenol
8.949	-0.058	37413	----			0.0000	0.0000	---	2,3,4-Trichlorophenol
10.472	0.059	80230	----			2.6524	0.0000	---	2,3,5,6-Tetrachlorophenol
9.996	-0.006	195414	10.636	-0.010	271245	6.8074	0.0000	---	2,3,4,5-Tetrachlorophenol
			----			0.0000	0.0000	---	2,4-Dichlorophenol
						15.2	14.5	4.4	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

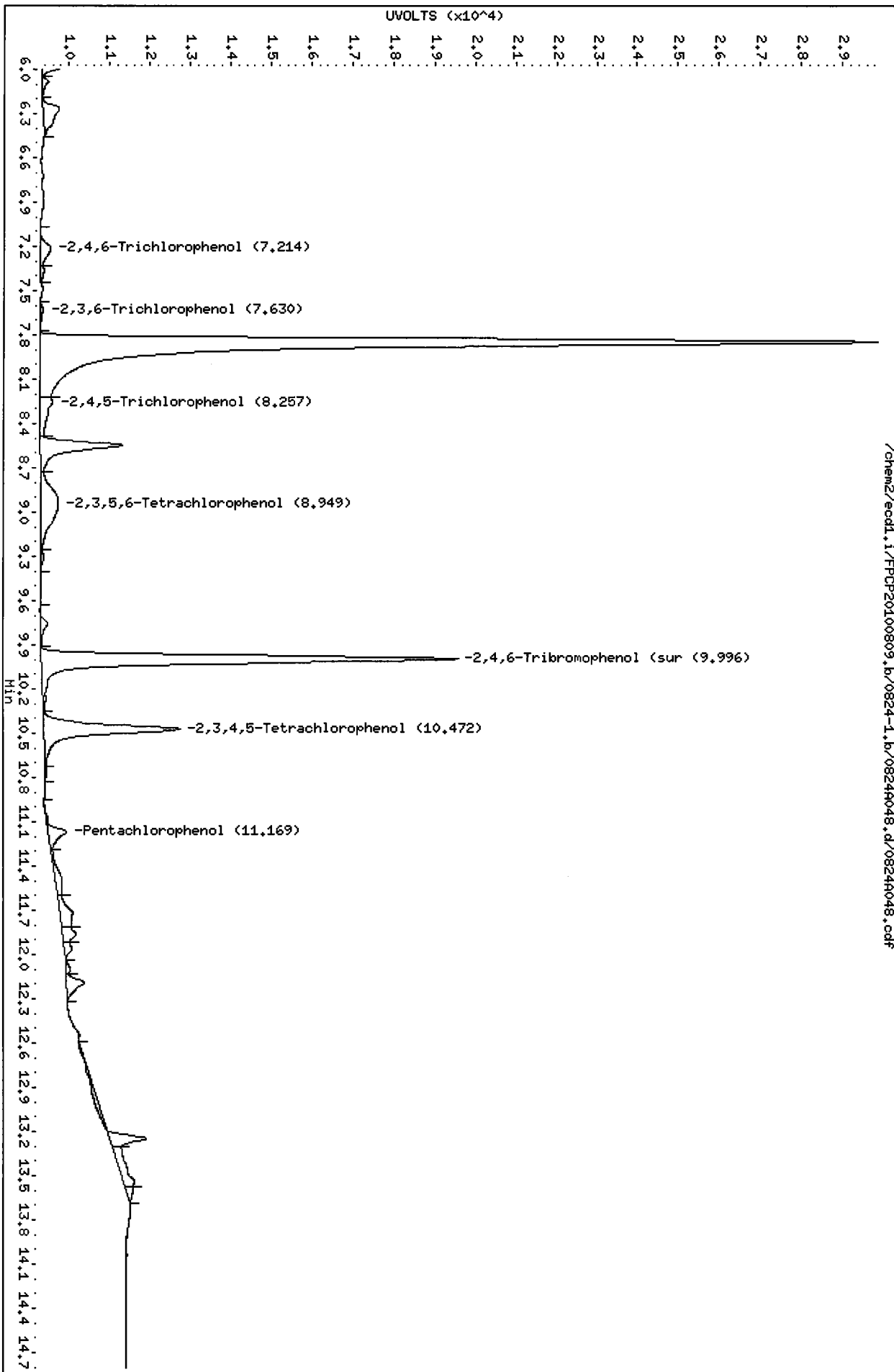
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	60.7	58.1





Data File: /chem2/eod1.i/FP20100809.b/0824-1.b/08240048.d  
Date: 25-AUG-2010 19:03  
Client ID: MW-08-081310  
Sample Info: RI65B  
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

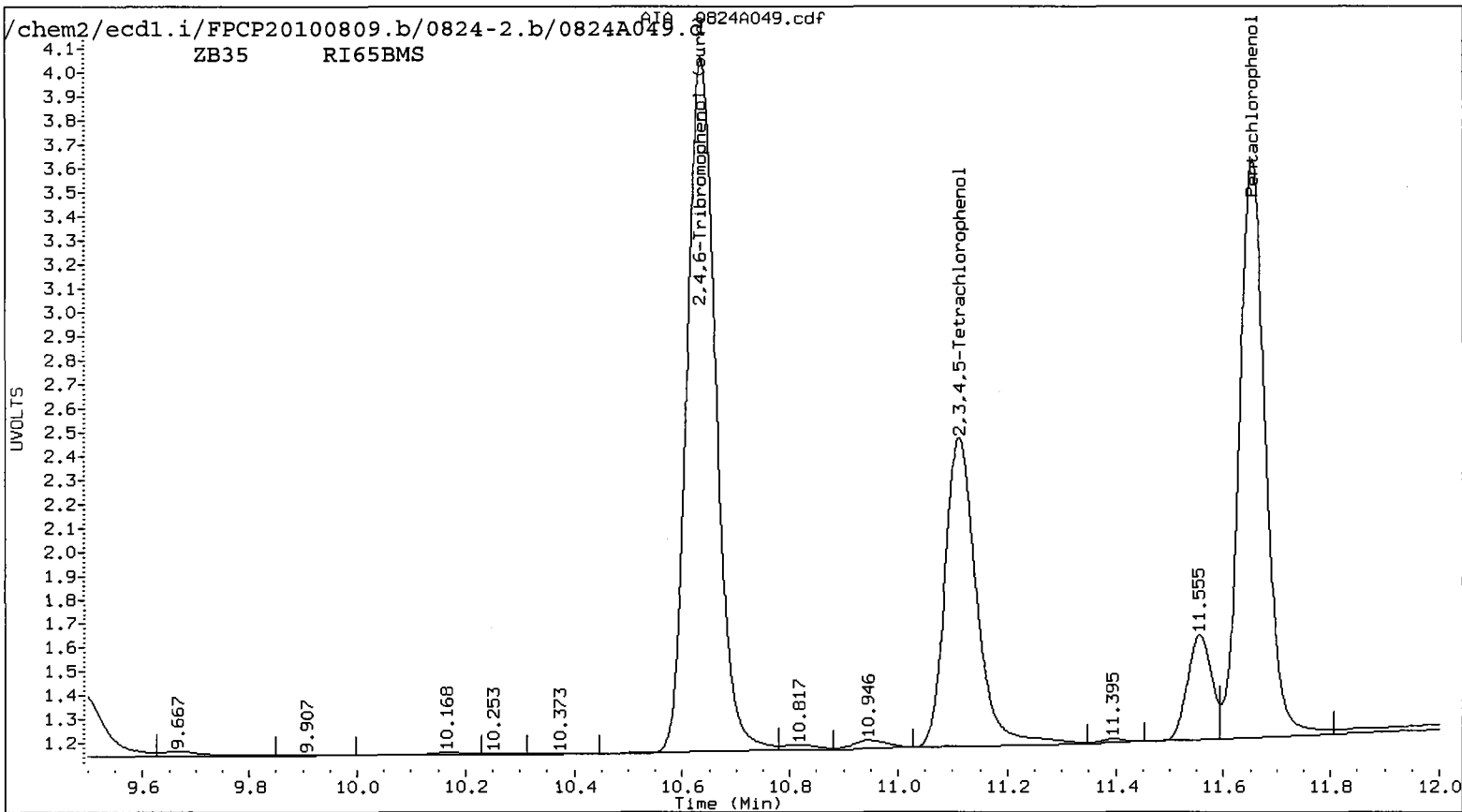
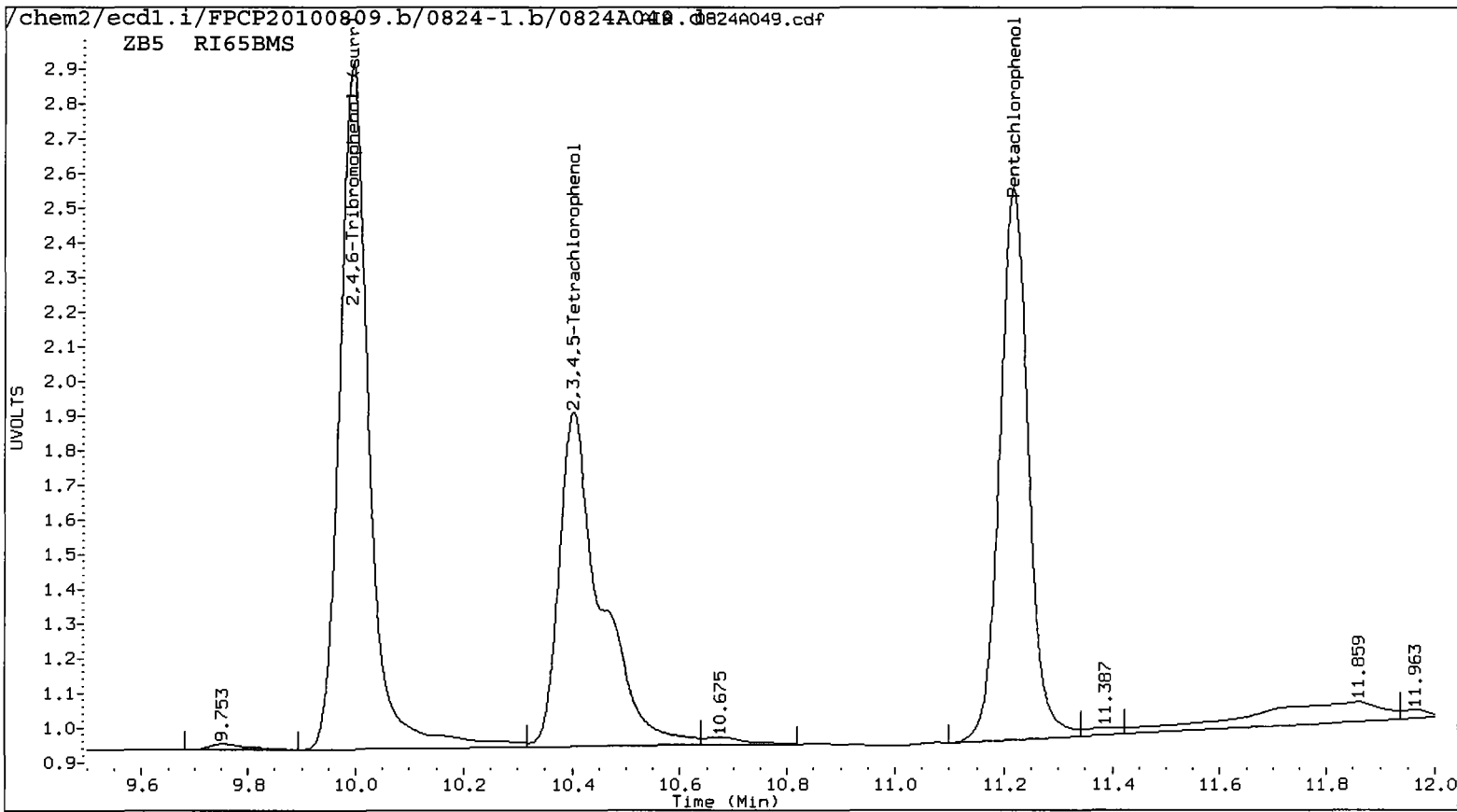
AR 8/26/2010

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0824-1.b/0824A049.d ARI ID: RI65BMS  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0824-2.b/0824A049.d Client ID: MW-08-081310 MS  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 25-AUG-2010 19:23  
 Compound Sublist: all Report Date: 08/26/2010 12:39  
 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		
11.216	-0.003	289573	11.652	-0.006	414858	18.0348	18.0676	0.2	Pentachlorophenol
7.265	0.001	154449	7.333	0.000	200905	17.6712	16.0923	9.4	2,4,6-Trichlorophenol
7.619	0.000	165171	7.861	-0.003	208308	18.2538	16.7875	8.4	2,3,6-Trichlorophenol
8.222	-0.020	91512	8.594	-0.021	121592	18.1302	18.8946	4.1	2,4,5-Trichlorophenol
8.772	-0.020	110774	9.360	-0.020	129109	16.1926	14.5072	11.0	2,3,4-Trichlorophenol
8.999	-0.008	240657	9.265	-0.012	310604	17.0611	16.7760	1.7	2,3,5,6-Tetrachlorophenol
10.401	-0.012	259232	11.112	-0.014	259023	25.1721	17.7526	34.6	2,3,4,5-Tetrachlorophenol
6.893	0.000	39781	7.162	-0.004	49729	68.0923	70.5994	3.6	2,4-Dichlorophenol
9.994	-0.008	376574	10.634	-0.012	536818	31.2	28.8	8.3	2,4,6-Tribromophenol (surr)

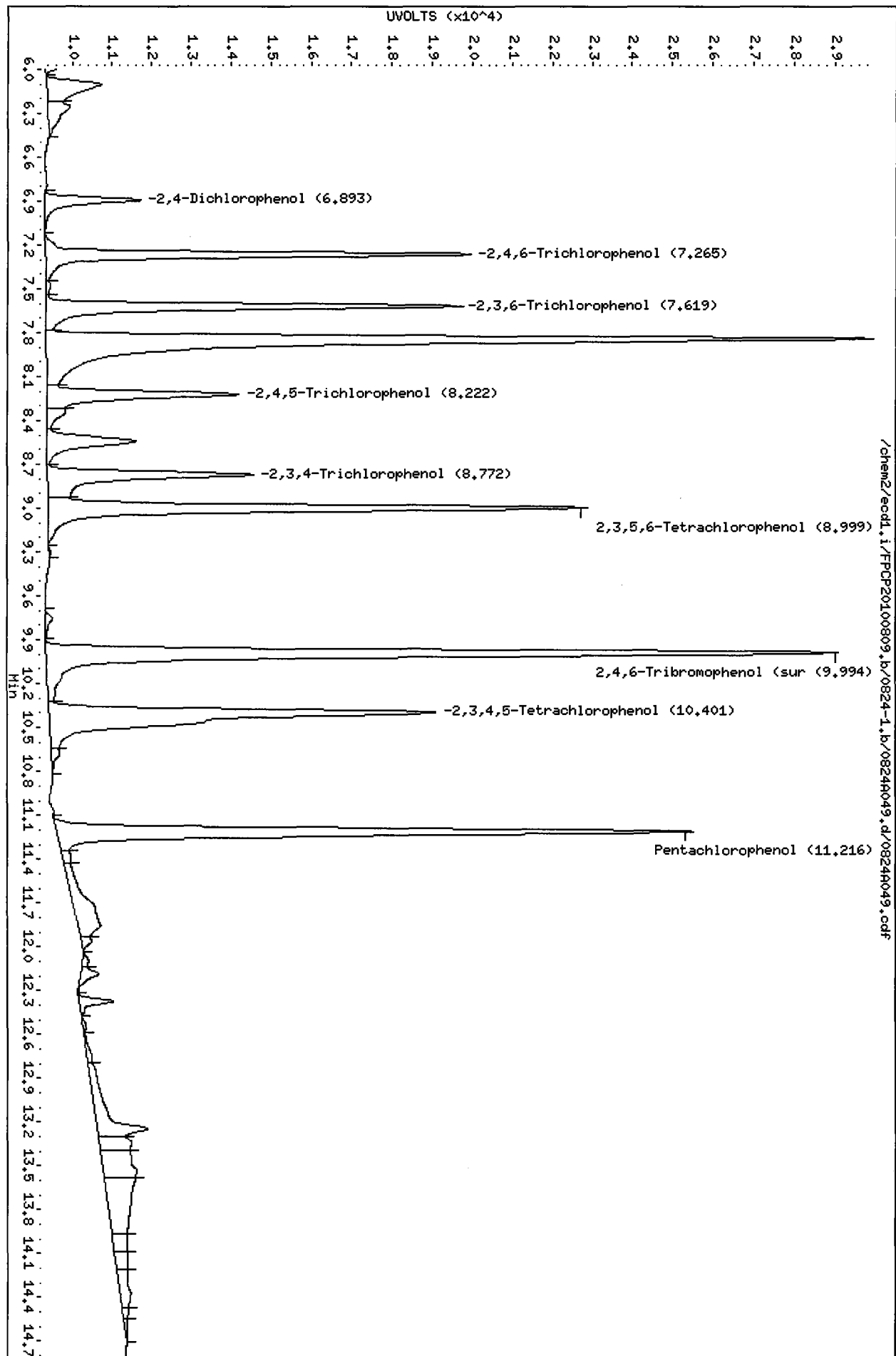
PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	72.1	72.3
2,4,6-Trichlorophenol	70.7	64.4
2,3,6-Trichlorophenol	73.0	67.2
2,4,5-Trichlorophenol	72.5	75.6
2,3,4-Trichlorophenol	64.8	58.0
2,3,5,6-Tetrachlorophenol	68.2	67.1
2,3,4,5-Tetrachlorophenol	100.7	71.0
2,4-Dichlorophenol	27.2	28.2
2,4,6-TBP (surr)	62.5	57.5



Data File: /chem2/ecdl.i/FPCP20100809.b/0824-1.b/08244049.d  
Date: 25-AUG-2010 19:23  
Client ID: HM-08-081310 HS  
Sample Info: R165BHS  
Purge Volume: 2.0  
Column phase: ZB5

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



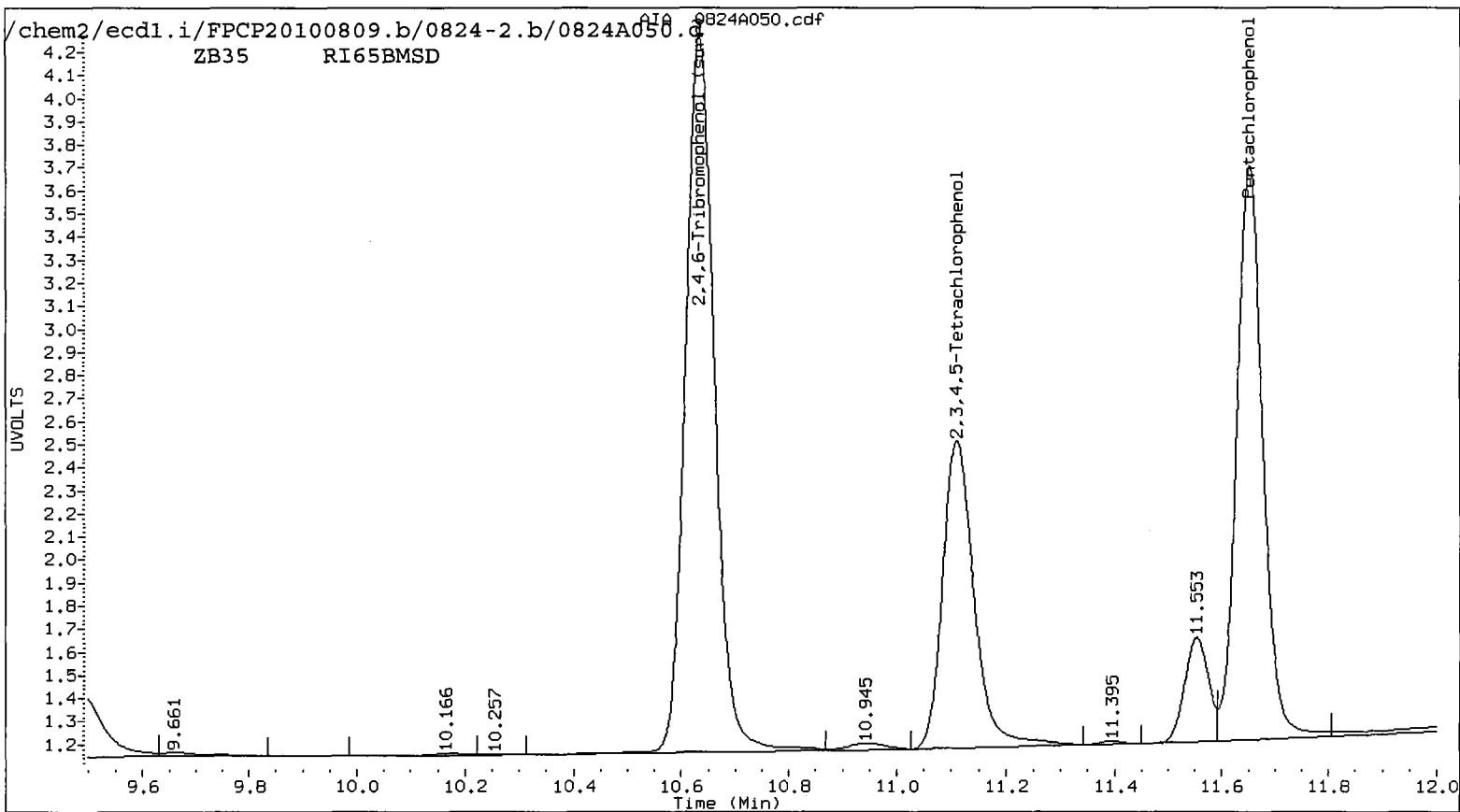
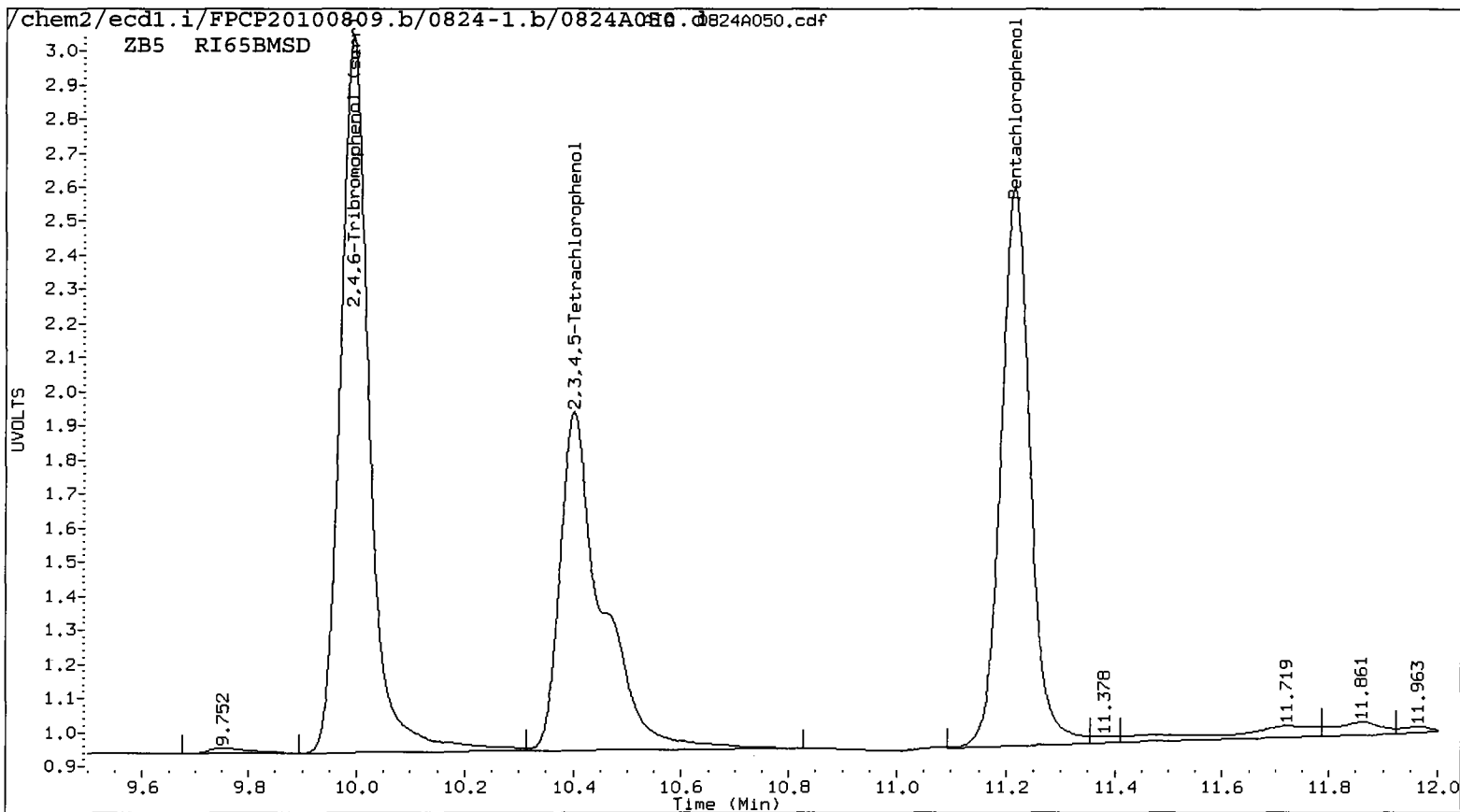
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0824-1.b/0824A050.d ARI ID: RI65BMSD  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0824-2.b/0824A050.d Client ID: MW-08-081310 MSD  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 25-AUG-2010 19:43  
 Compound Sublist: all Report Date: 08/26/2010 12:39  
 Instrument: ecd1.i Matrix: WATER  
 Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.215	-0.004	301742	11.651	-0.007	426941	18.8800	18.5939	1.5	Pentachlorophenol
7.264	0.000	165085	7.332	-0.001	218046	19.0122	17.4652	8.5	2,4,6-Trichlorophenol
7.618	-0.001	161732	7.860	-0.004	215859	17.8441	17.3960	2.5	2,3,6-Trichlorophenol
8.222	-0.020	96801	8.593	-0.022	127751	19.1780	19.9574	4.0	2,4,5-Trichlorophenol
8.770	-0.022	120955	9.358	-0.022	150787	17.6807	17.1743	2.9	2,3,4-Trichlorophenol
8.999	-0.008	243662	9.263	-0.014	321154	17.2741	17.3458	0.4	2,3,5,6-Tetrachlorophenol
10.400	-0.013	268303	11.110	-0.016	266183	26.2195	18.2433	35.9	2,3,4,5-Tetrachlorophenol
6.892	-0.001	54050	7.160	-0.006	68953	95.6474	100.3947	4.8	2,4-Dichlorophenol
9.993	-0.009	396601	10.634	-0.012	579050	33.1	31.0	6.6	2,4,6-Tribromophenol (surr)

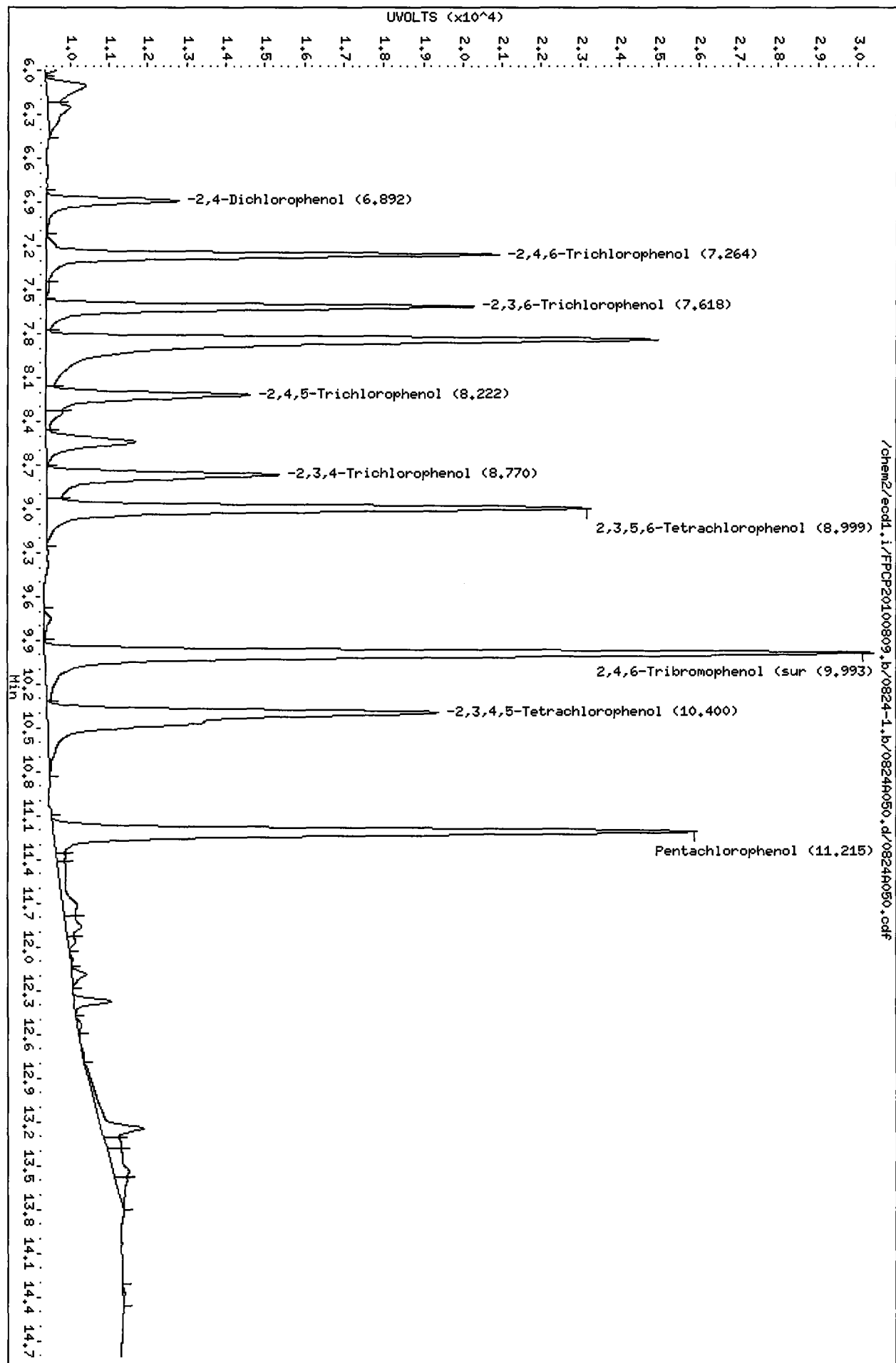
PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	75.5	74.4
2,4,6-Trichlorophenol	76.0	69.9
2,3,6-Trichlorophenol	71.4	69.6
2,4,5-Trichlorophenol	76.7	79.8
2,3,4-Trichlorophenol	70.7	68.7
2,3,5,6-Tetrachlorophenol	69.1	69.4
2,3,4,5-Tetrachlorophenol	104.9	73.0
2,4-Dichlorophenol	38.3	40.2
2,4,6-TBP (surr)	66.3	62.0



Data File: /chem2/eod1.i/FPCP20100809.b/0824-1.b/08244050.d  
Date: 25-AUG-2010 19:43  
Client ID: MM-08-081310 MSD  
Sample Info: R165BMSD  
Purge Volume: 2.0  
Column phase: ZRS

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





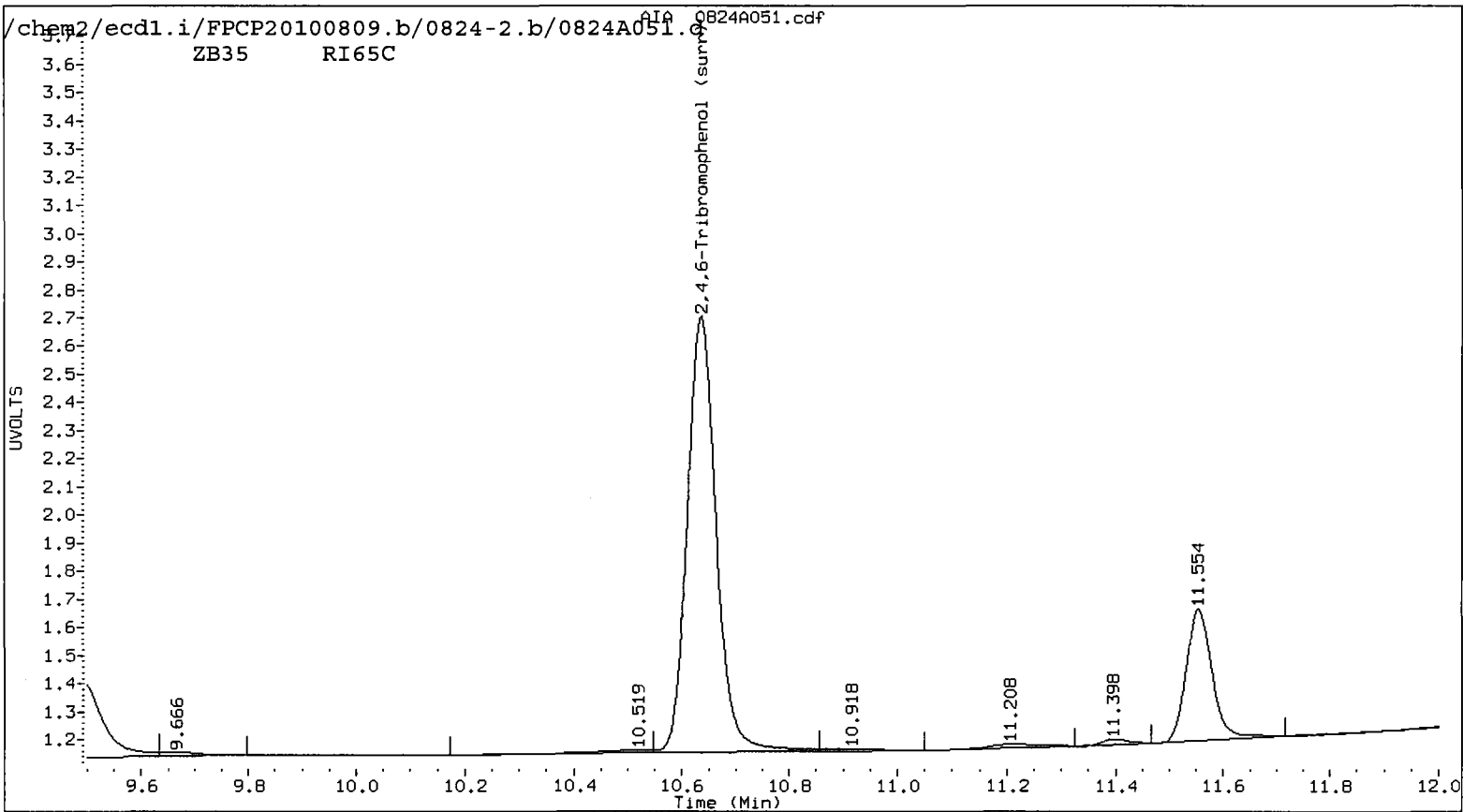
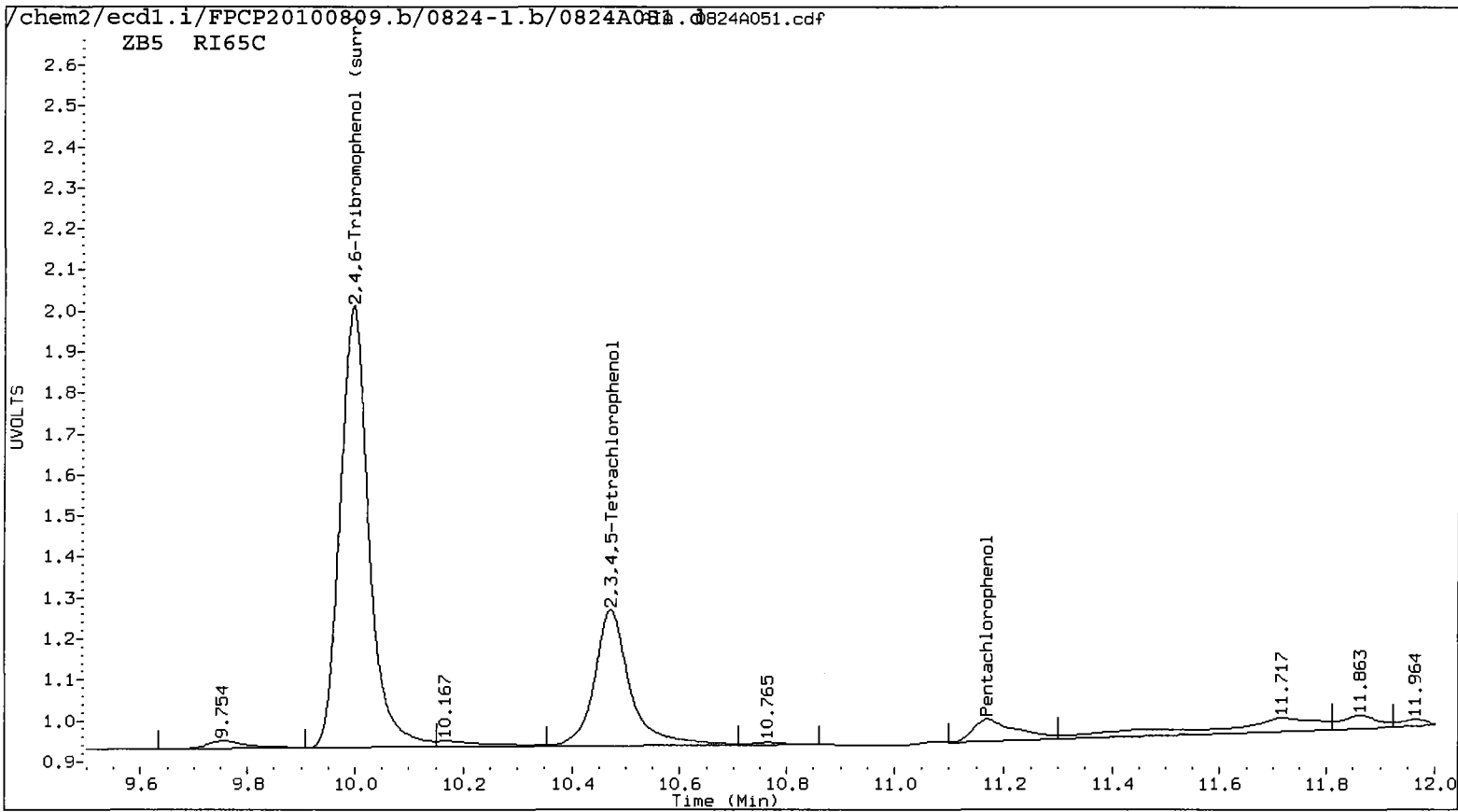
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0824-1.b/0824A051.d ARI ID: RI65C  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0824-2.b/0824A051.d Client ID: MW-07-081310  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 25-AUG-2010 20:03  
 Compound Sublist: all Report Date: 08/26/2010 12:39  
 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		
11.169	-0.050	14526	----			0.8098	0.0000	---	Pentachlorophenol
7.211	-0.053	9476	----			0.9871	0.0000	---	2,4,6-Trichlorophenol
7.643	0.024	2350	----			0.2393	0.0000	---	2,3,6-Trichlorophenol
8.258	0.016	5707	----			1.1308	0.0000	---	2,4,5-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,4-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,5,6-Tetrachlorophenol
10.472	0.059	75039	----			6.3403	0.0000	---	2,3,4,5-Tetrachlorophenol
----			----			0.0000	0.0000	---	2,4-Dichlorophenol
9.996	-0.006	200010	10.636	-0.010	290738	15.6	15.6	0.0	2,4,6-Tribromophenol (surr)

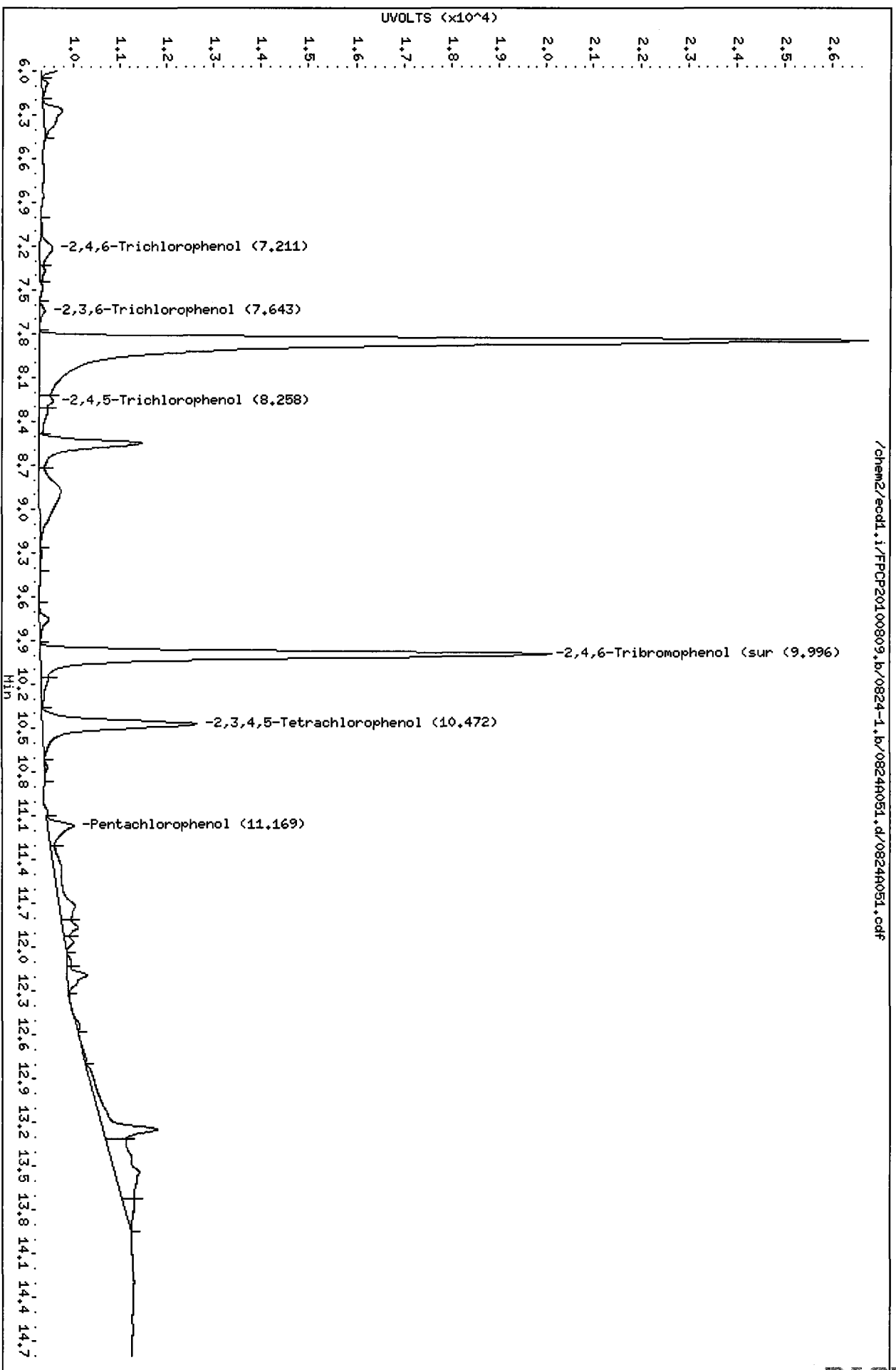
PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	62.3	62.3



Data File: /chem2/ecdl.i/FPCP20100809,b/0824-1,b/0824A051.d  
Date : 25-AUG-2010 20:03  
Client ID: HM-07-081310  
Sample Info: R165C  
Purge Volume: 2.0  
Column phase: ZB5

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



/chem2/ecdl.i/FPCP20100809,b/0824-1,b/0824A051.d/0824A051.cdf

Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

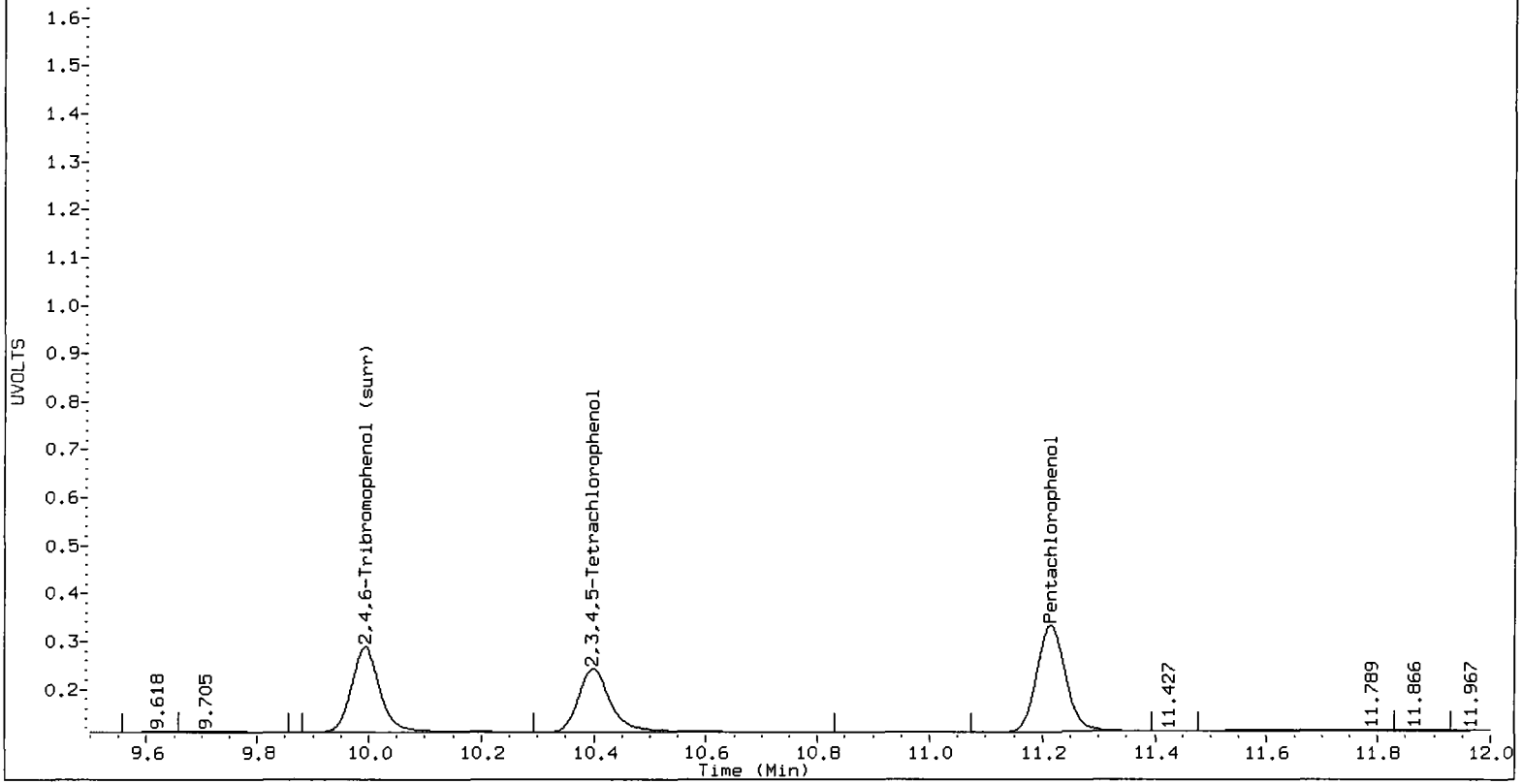
Data file 1: /chem2/ecdl.i/FPCP20100809.b/0824-1.b/0824A053.d ARI ID: PCPCCAL  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0824-2.b/0824A053.d Client ID:  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 25-AUG-2010 20:43  
 Compound Sublist: all Report Date: 08/26/2010 12:39  
 Instrument: 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		
11.214	-0.005	398378	11.650	-0.008	595772	25.8408	25.9467	0.4	Pentachlorophenol
7.264	0.000	224729	7.331	-0.002	341298	26.8285	27.3376	1.9	2,4,6-Trichlorophenol
7.617	-0.002	230609	7.859	-0.005	315435	26.2905	25.4209	3.4	2,3,6-Trichlorophenol
8.220	-0.022	130338	8.592	-0.023	170743	25.8223	27.6590	6.9	2,4,5-Trichlorophenol
8.769	-0.023	166319	9.357	-0.023	220897	24.3119	26.2555	7.7	2,3,4-Trichlorophenol
8.998	-0.009	348789	9.262	-0.015	487696	24.7270	26.3408	6.3	2,3,5,6-Tetrachlorophenol
10.398	-0.015	268967	11.109	-0.017	358777	26.2966	24.5894	6.7	2,3,4,5-Tetrachlorophenol
6.889	-0.004	117926	7.158	-0.008	159526	239.2879	259.5413	8.1	2,4-Dichlorophenol
9.993	-0.009	318680	10.632	-0.014	486129	25.9	26.0	0.5	2,4,6-Tribromophenol (surr)

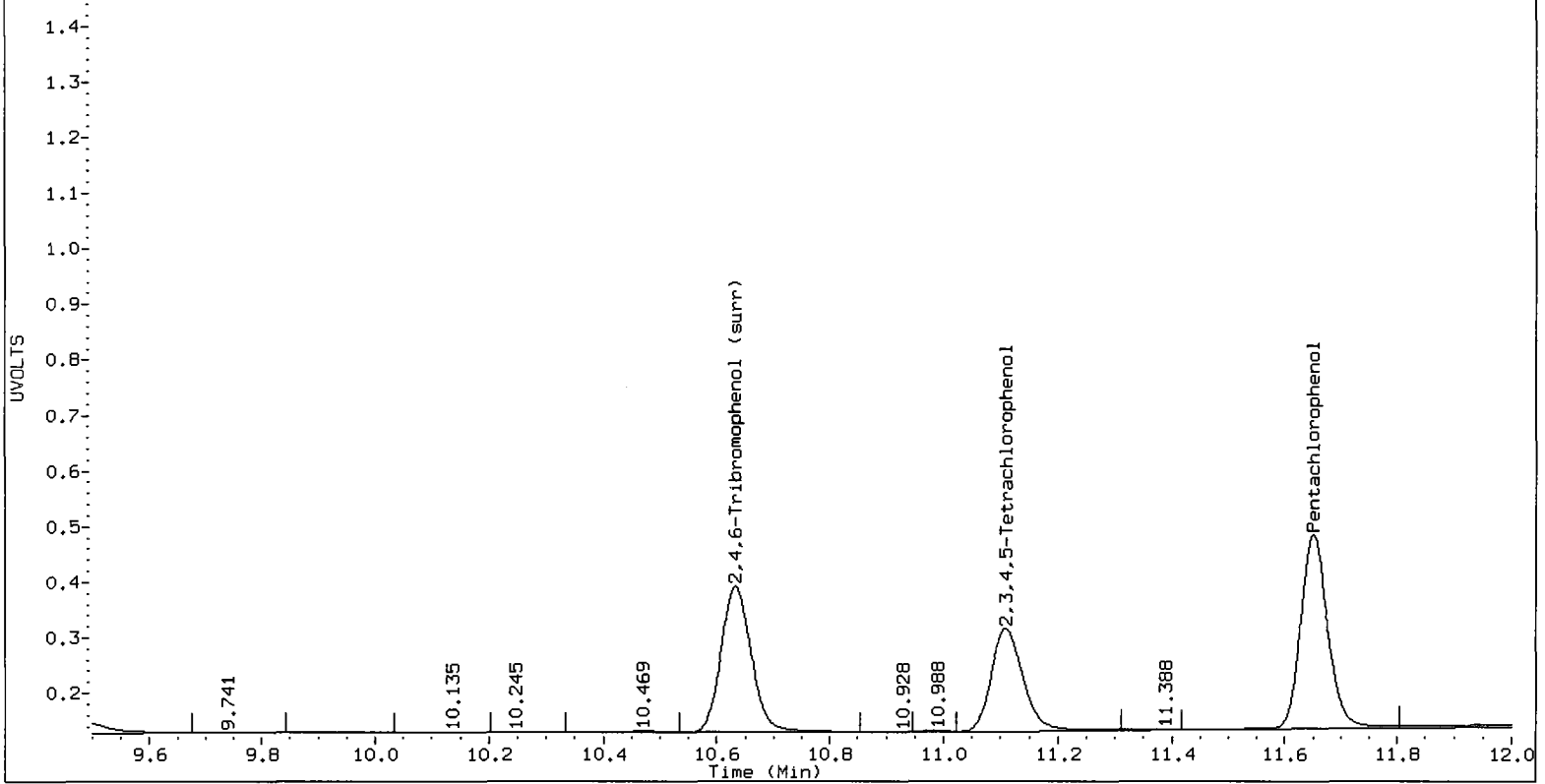
PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	103.4	103.8
2,4,6-Trichlorophenol	107.3	109.4
2,3,6-Trichlorophenol	105.2	101.7
2,4,5-Trichlorophenol	103.3	110.6
2,3,4-Trichlorophenol	97.2	105.0
2,3,5,6-Tetrachlorophenol	98.9	105.4
2,3,4,5-Tetrachlorophenol	105.2	98.4
2,4-Dichlorophenol	95.7	103.8
2,4,6-TBP (surr)	103.6	104.2

ZB5 PCPCCAL

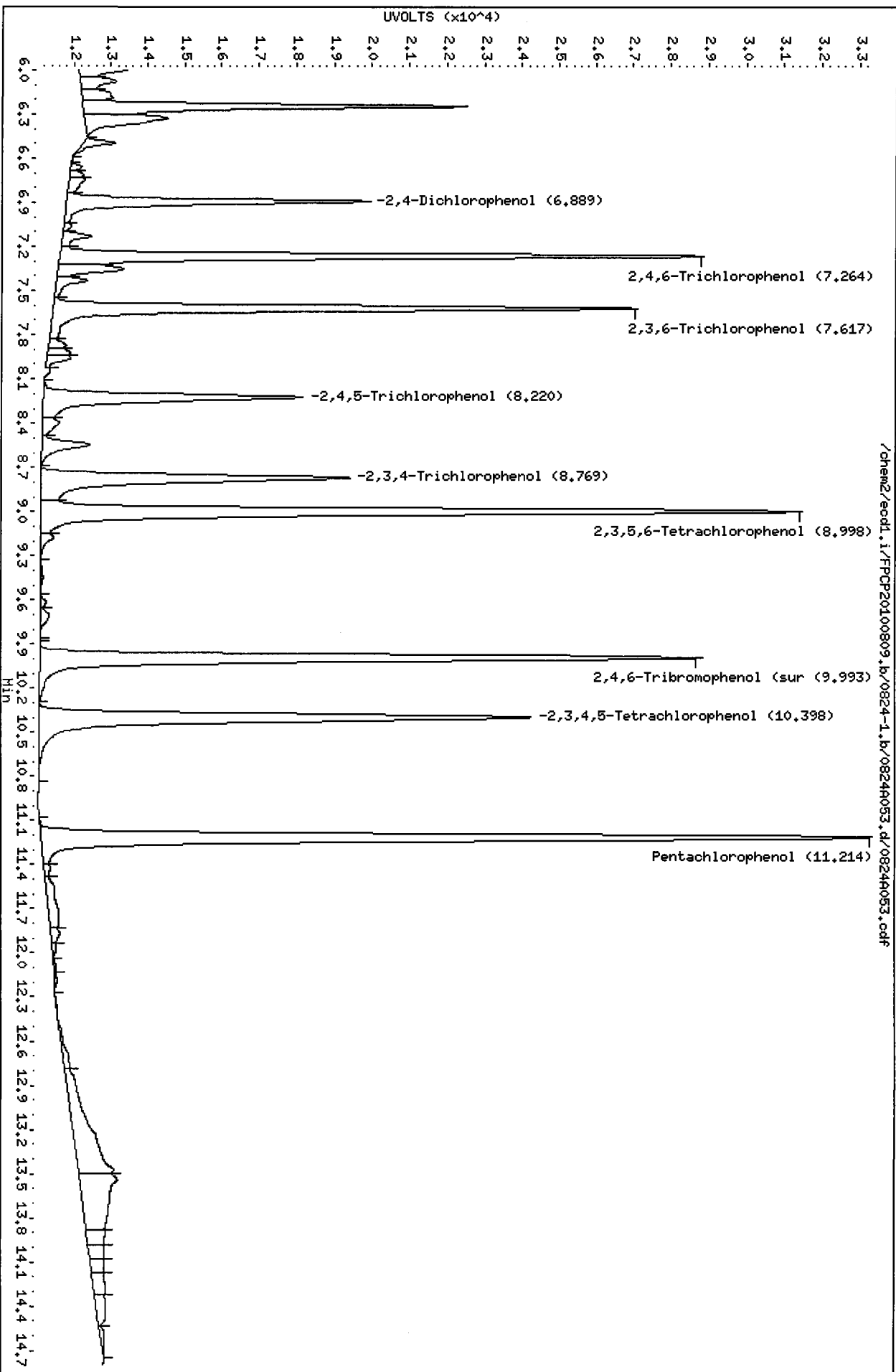


ZB35 PCPCCAL



Data File: /chem2/eodl.i/FP20100809.b/0824-1.b/08240053.d  
Date: 25-AUG-2010 20:43  
Client ID:  
Sample Info: PCPCCL  
Purge Volume: 2.0  
Column phase: ZBS

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



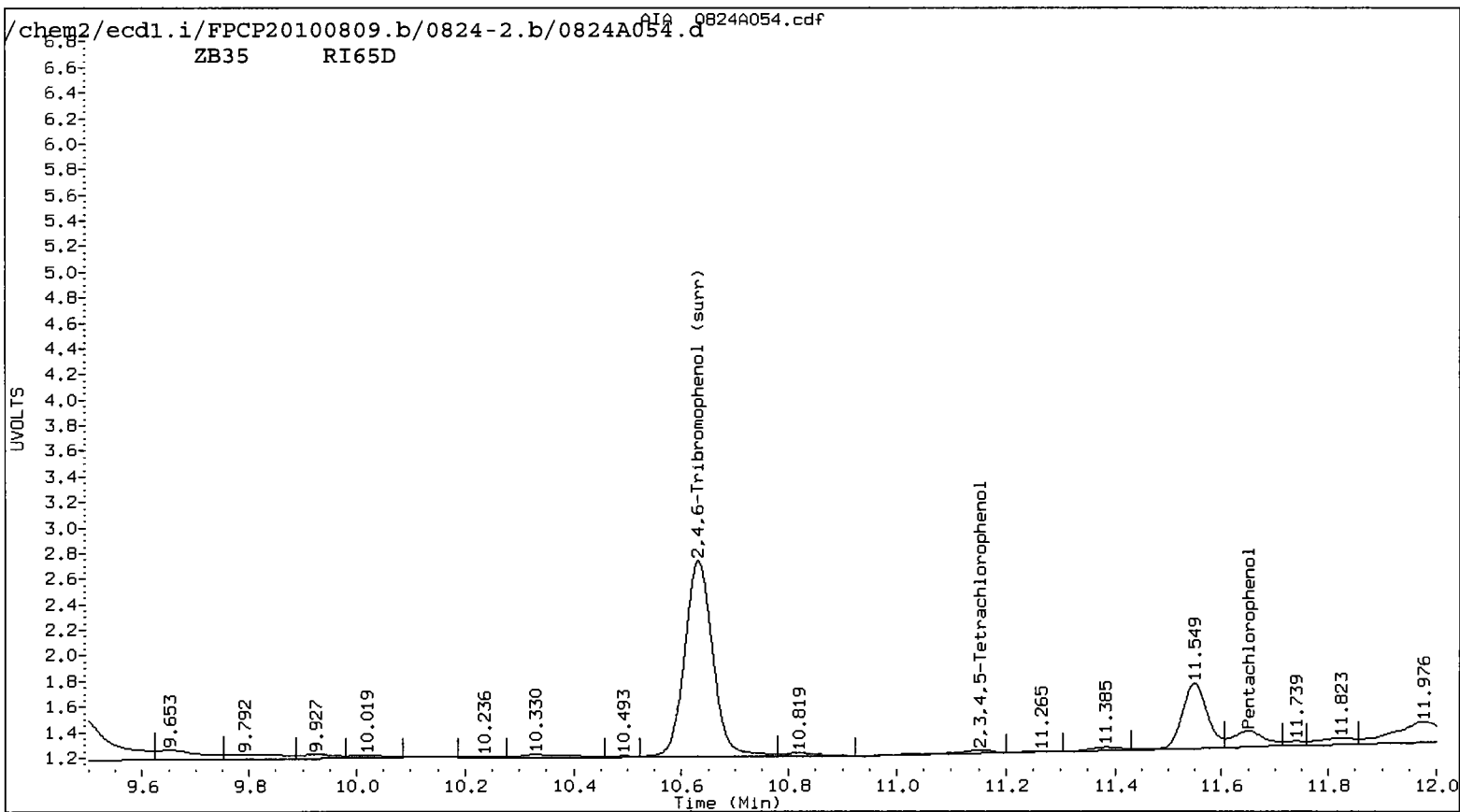
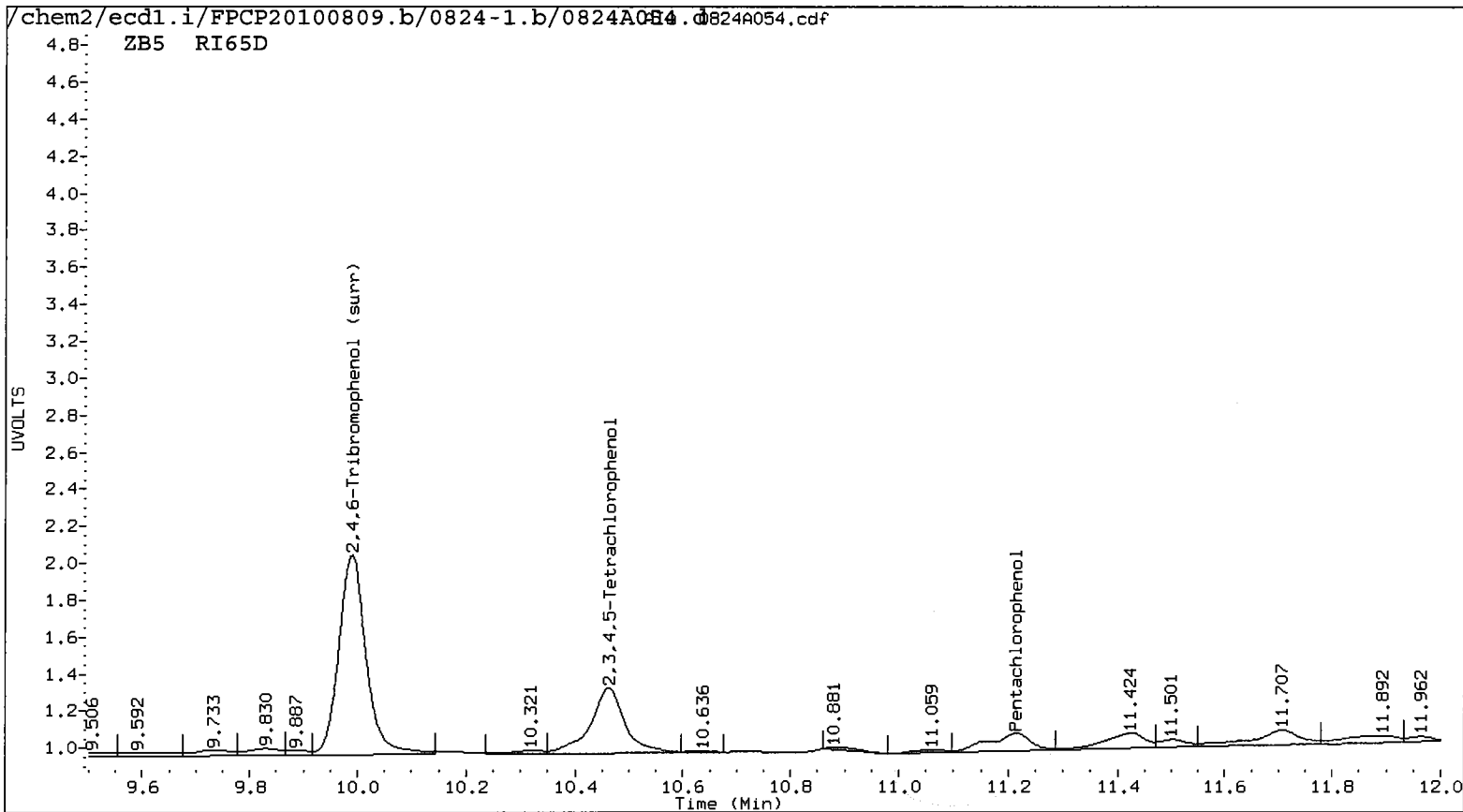
Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0824-1.b/0824A054.d    ARI ID: RI65D  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0824-2.b/0824A054.d    Client ID: MW-01-081310  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m    Injection Date: 25-AUG-2010 21:03  
 Compound Sublist: all    Report Date: 08/26/2010 12:39  
 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		
11.214	-0.005	26002	11.649	-0.009	25386	1.4567	1.1056 <sup>TR</sup>	27.4	Pentachlorophenol
7.266	0.002	19064	7.330	-0.003	15582	1.9989	1.2481	46.2*	2,4,6-Trichlorophenol
7.659	0.040	37824	7.847	-0.017	9219	3.9233	0.7430	136.3*	2,3,6-Trichlorophenol
8.210	-0.032	34910	8.579	-0.036	5795	6.9164	0.8105	158.0*	2,4,5-Trichlorophenol
----	----	----	----	----	----	0.0000	0.0000	---	2,3,4-Trichlorophenol
9.000	-0.007	36107	9.268	-0.009	62809	2.5598	3.3924	28.0	2,3,5,6-Tetrachlorophenol
10.462	0.049	77132	11.153	0.027	5160	6.5282	0.3537	179.4*	2,3,4,5-Tetrachlorophenol
6.893	0.000	2921	7.210	0.044	9052	4.5635	12.1567	90.8*	2,4-Dichlorophenol
9.989	-0.013	191421	10.631	-0.015	280072	14.9	15.0	1.0	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	59.4	60.0

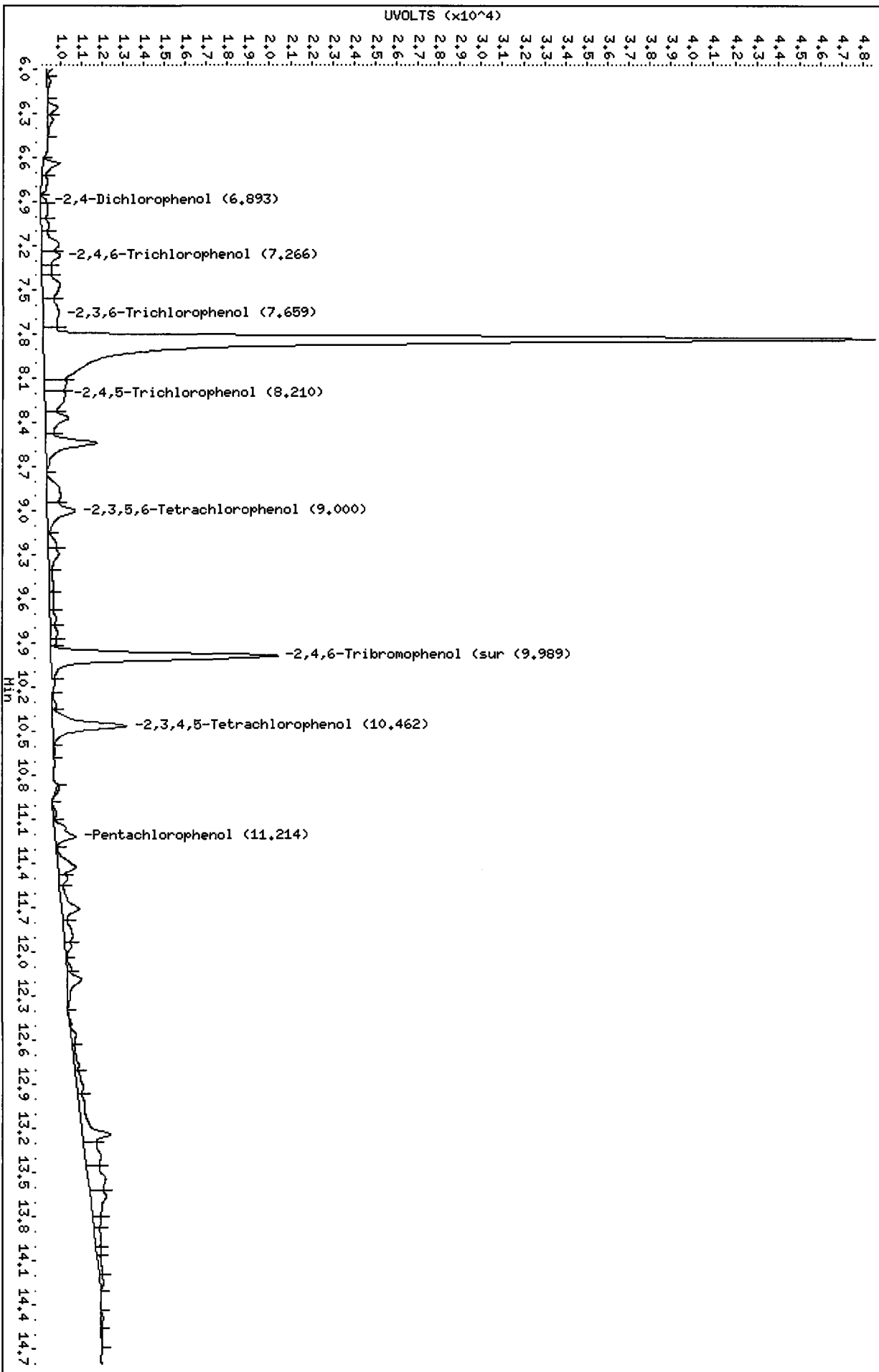




Data File: /chem2/eodl.i/FPCP20100809.b/0824-1.b/08240054.d  
Date : 25-AUG-2010 21:03  
Client ID: MM-01-081310  
Sample Info: RI65D  
Purge Volume: 2.0  
Column phase: ZB5

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

/chem2/eodl.i/FPCP20100809.b/0824-1.b/08240054.d/08240054.cdf



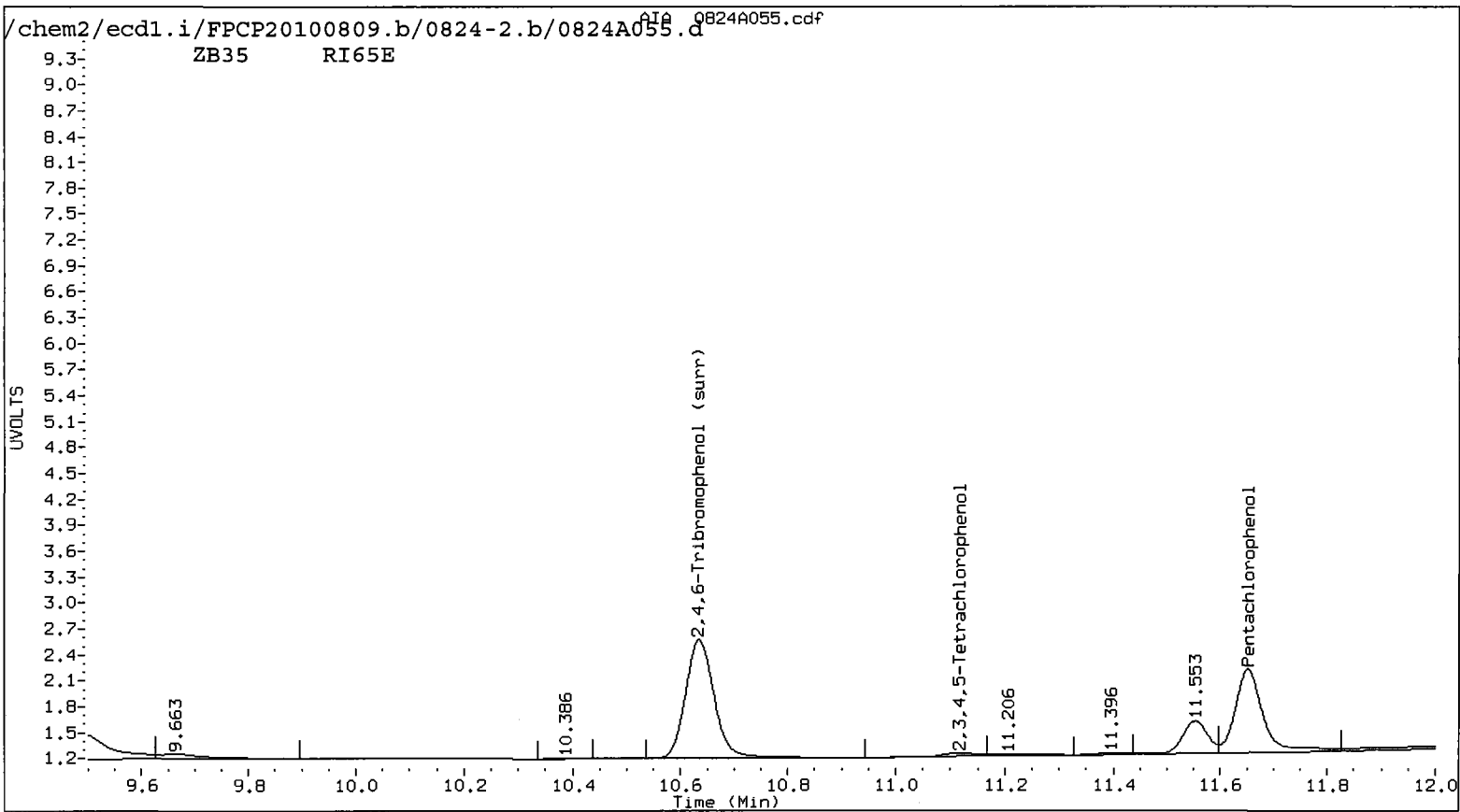
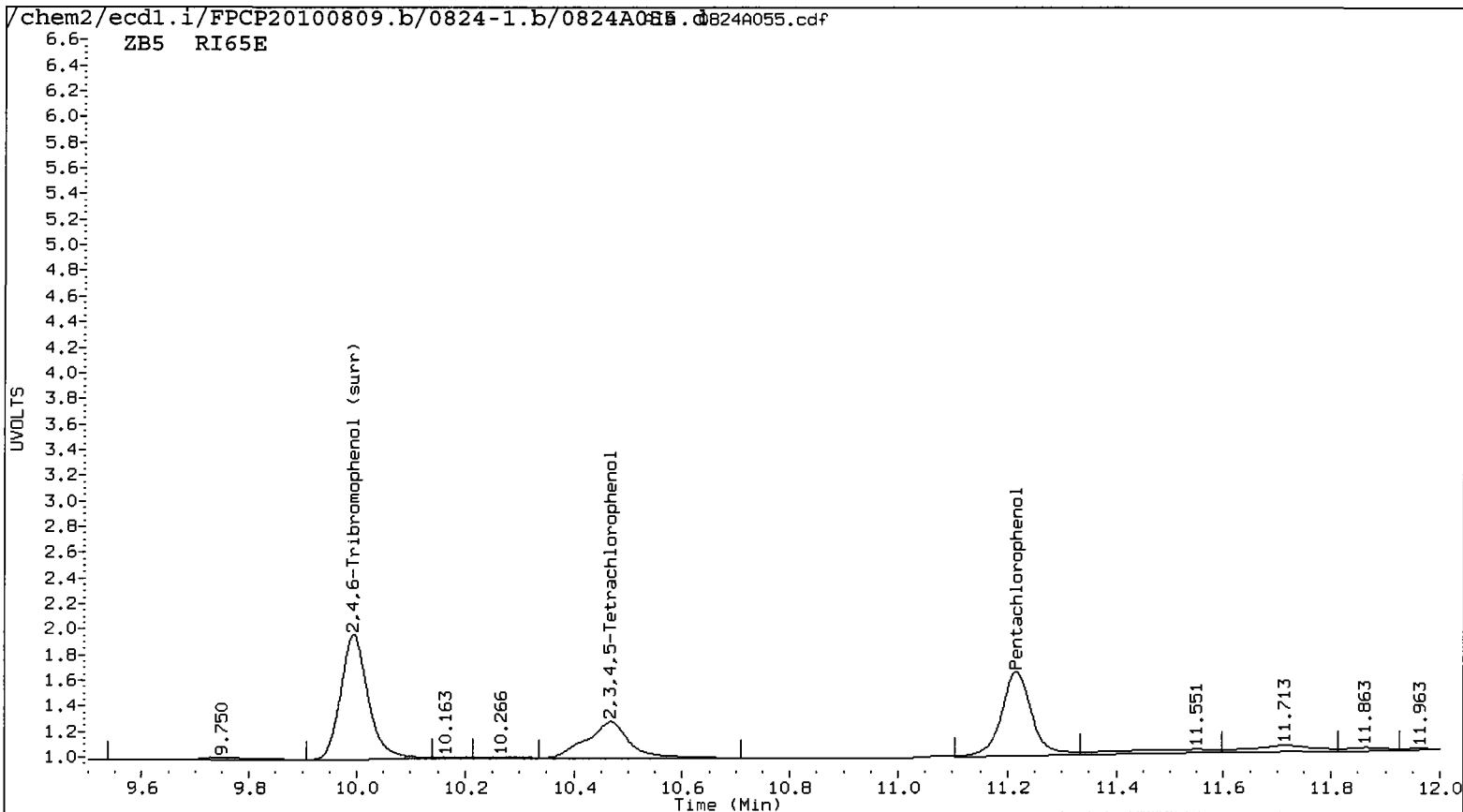
Analytical Resources Inc.  
 Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecdl.i/FPCP20100809.b/0824-1.b/0824A055.d ARI ID: RI65E  
 Data file 2: /chem2/ecdl.i/FPCP20100809.b/0824-2.b/0824A055.d Client ID: MW-05-081310  
 Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m Injection Date: 25-AUG-2010 21:23  
 Compound Sublist: all Report Date: 08/26/2010 12:39  
 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		
11.216	-0.003	125769	11.652	-0.006	174090	7.3437	7.5819	3.2	Pentachlorophenol
7.208	-0.056	9783	7.337	0.004	653	1.0193	0.0524	180.5*	2,4,6-Trichlorophenol
----			7.849	-0.015	859	0.0000	0.0692	---	2,3,6-Trichlorophenol
8.254	0.012	21189	8.674	0.059	12127	4.1980	1.7064	84.4*	2,4,5-Trichlorophenol
8.858	0.066	18067	----			2.6410	0.0000	---	2,3,4-Trichlorophenol
9.007	0.000	30992	9.271	-0.006	53697	2.1972	2.9002	27.6	2,3,5,6-Tetrachlorophenol
10.467	0.054	81214	11.116	-0.010	6767	6.8963	0.4638	174.8*	2,3,4,5-Tetrachlorophenol
----			----			0.0000	0.0000	---	2,4-Dichlorophenol
9.994	-0.008	174346	10.635	-0.011	253280	13.4	13.6	0.9	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

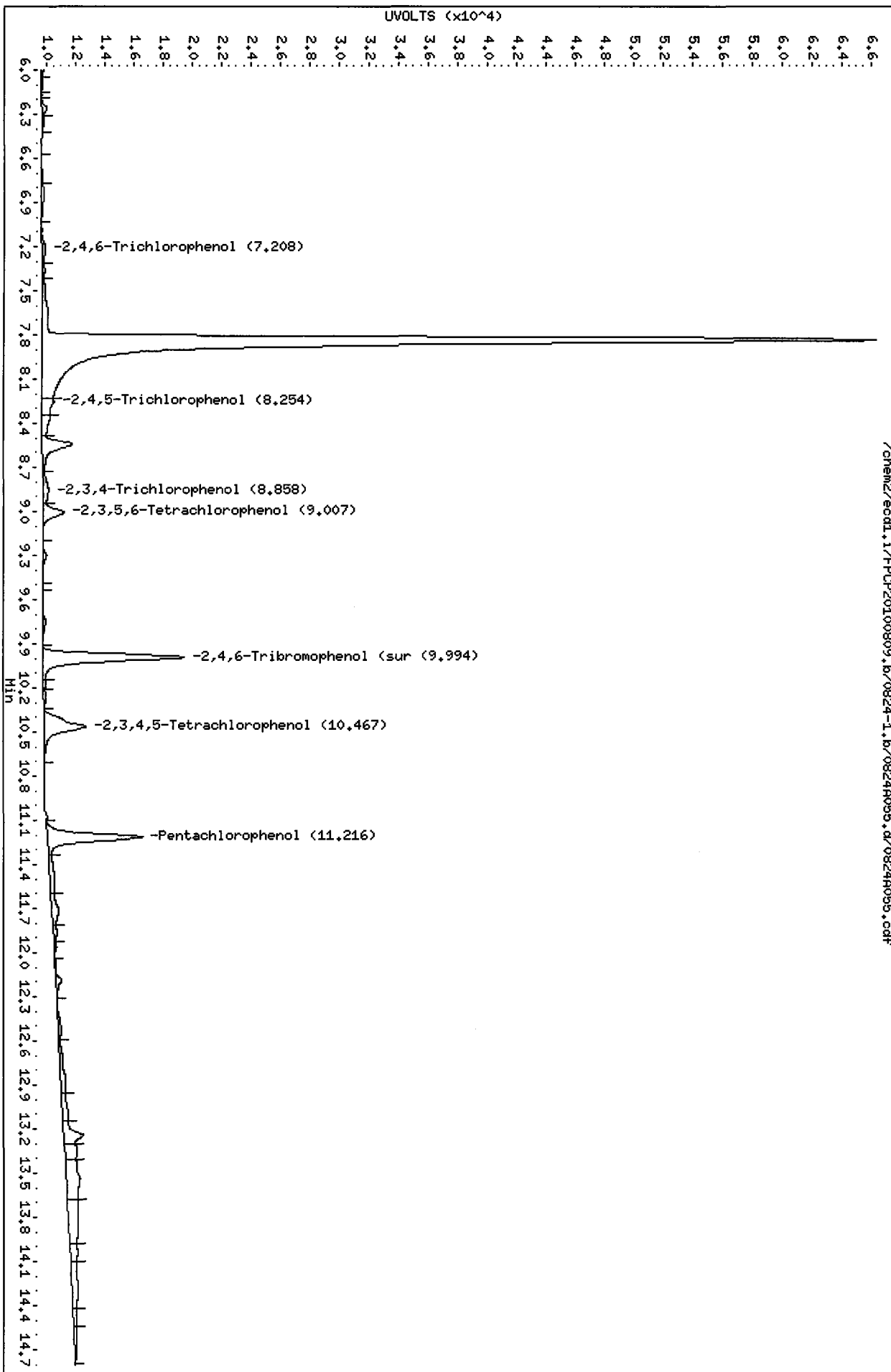
COMPOUND	Col1	Col2
2,4,6-TBP (surr)	53.8	54.3



Data File: /chem2/eodl,i/PPCP20100809,b/0824-1,b/0824A055.d  
Date: 25-AUG-2010 21:23  
Client ID: MW-05-081310  
Sample Info: R165E  
Purge Volume: 2.0  
Column phase: ZB5

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

/chem2/eodl,i/PPCP20100809,b/0824-1,b/0824A055,d/0824A055.cdf



Analytical Resources Inc.  
Dual Column 8041 Chlorinated Phenols Quantitation Report

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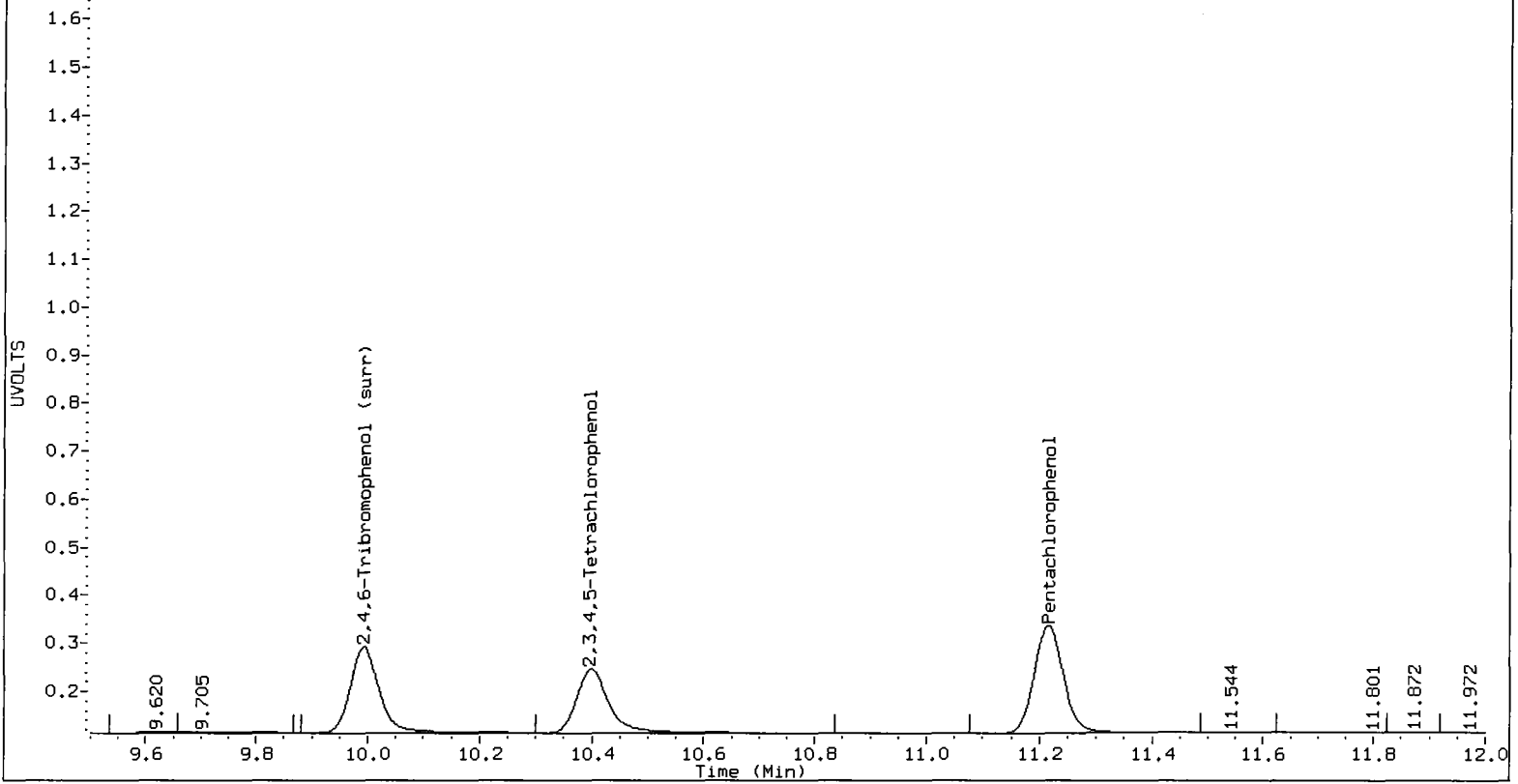
Data file 1: /chem2/ecdl.i/FPCP20100809.b/0824-1.b/0824A064.d  ARI ID: PCPCCAL
Data file 2: /chem2/ecdl.i/FPCP20100809.b/0824-2.b/0824A064.d  Client ID:
Method: /chem2/ecdl.i/FPCP20100809.b/FPCP.m                    Injection Date: 26-AUG-2010 00:23
Compound Sublist: all                                          Report Date: 08/26/2010 12:39
Instrument: ecd1.i                                           Matrix: WATER
Operator: ar                                                Dilution Factor: 1.000
  
```

ZB-5 Col			ZB35 Col			ZB-5	ZB35	RPD	Compound
RT	Shift	Response	RT	Shift	Response	on col	on col		
11.215	-0.004	407110	11.651	-0.007	603112	26.4916	26.2663	0.9	Pentachlorophenol
7.264	0.000	227681	7.331	-0.002	351944	27.2285	28.1903	3.5	2,4,6-Trichlorophenol
7.617	-0.002	227108	7.860	-0.004	319791	25.8488	25.7719	0.3	2,3,6-Trichlorophenol
8.220	-0.022	132018	8.593	-0.022	174186	26.1550	28.2974	7.9	2,4,5-Trichlorophenol
8.769	-0.023	163872	9.358	-0.022	225921	23.9542	26.9330	11.7	2,3,4-Trichlorophenol
8.997	-0.010	360388	9.263	-0.014	496951	25.5493	26.8407	4.9	2,3,5,6-Tetrachlorophenol
10.398	-0.015	272177	11.110	-0.016	367702	26.6703	25.2011	5.7	2,3,4,5-Tetrachlorophenol
6.889	-0.004	119493	7.158	-0.008	163365	243.2271	266.9697	9.3	2,4-Dichlorophenol
9.993	-0.009	324273	10.634	-0.012	496799	26.4	26.6	0.8	2,4,6-Tribromophenol (surr)

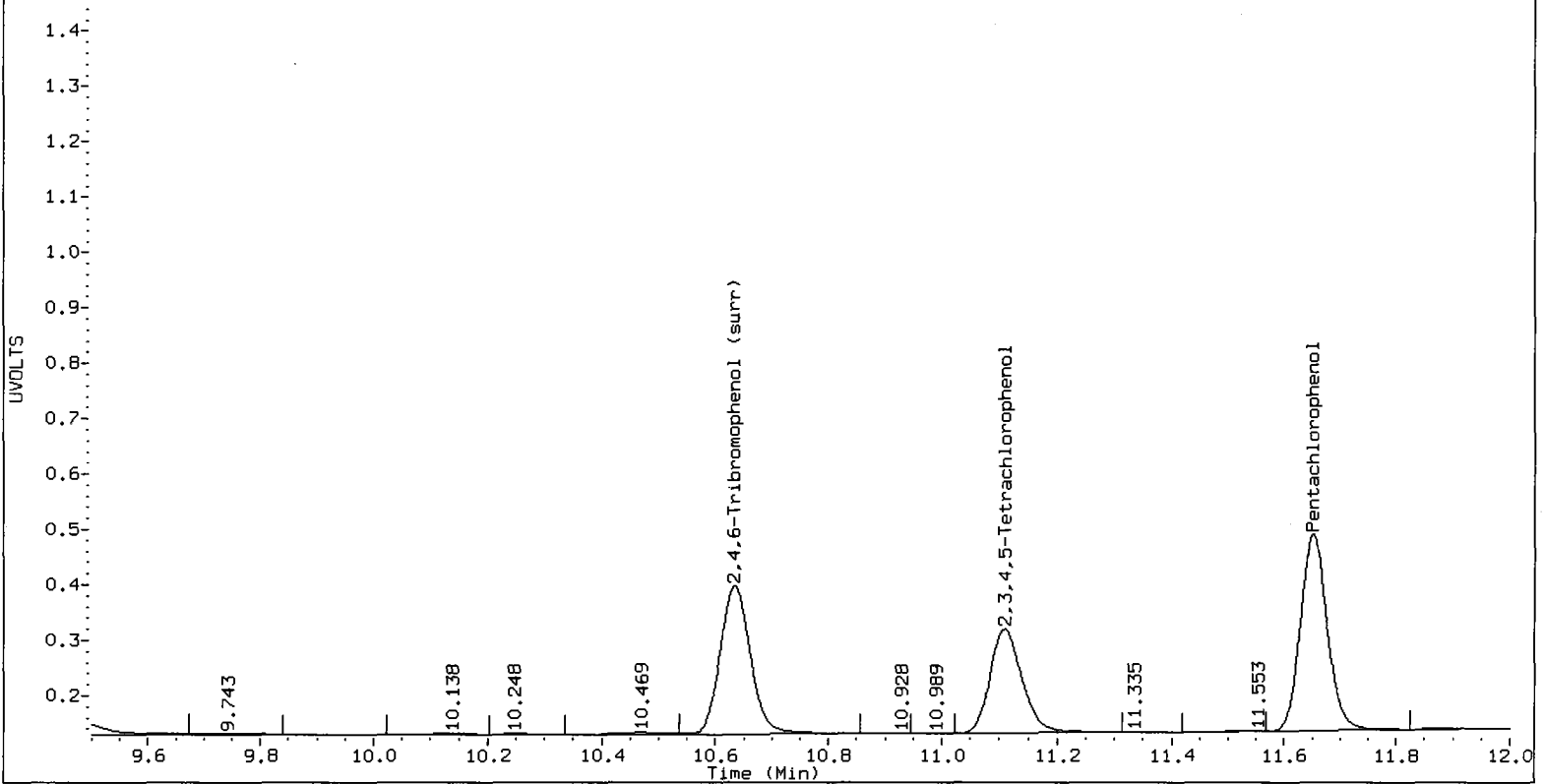
PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	106.0	105.1
2,4,6-Trichlorophenol	108.9	112.8
2,3,6-Trichlorophenol	103.4	103.1
2,4,5-Trichlorophenol	104.6	113.2
2,3,4-Trichlorophenol	95.8	107.7
2,3,5,6-Tetrachlorophenol	102.2	107.4
2,3,4,5-Tetrachlorophenol	106.7	100.8
2,4-Dichlorophenol	97.3	106.8
2,4,6-TBP (surr)	105.6	106.5

ZB5 PCPCAL



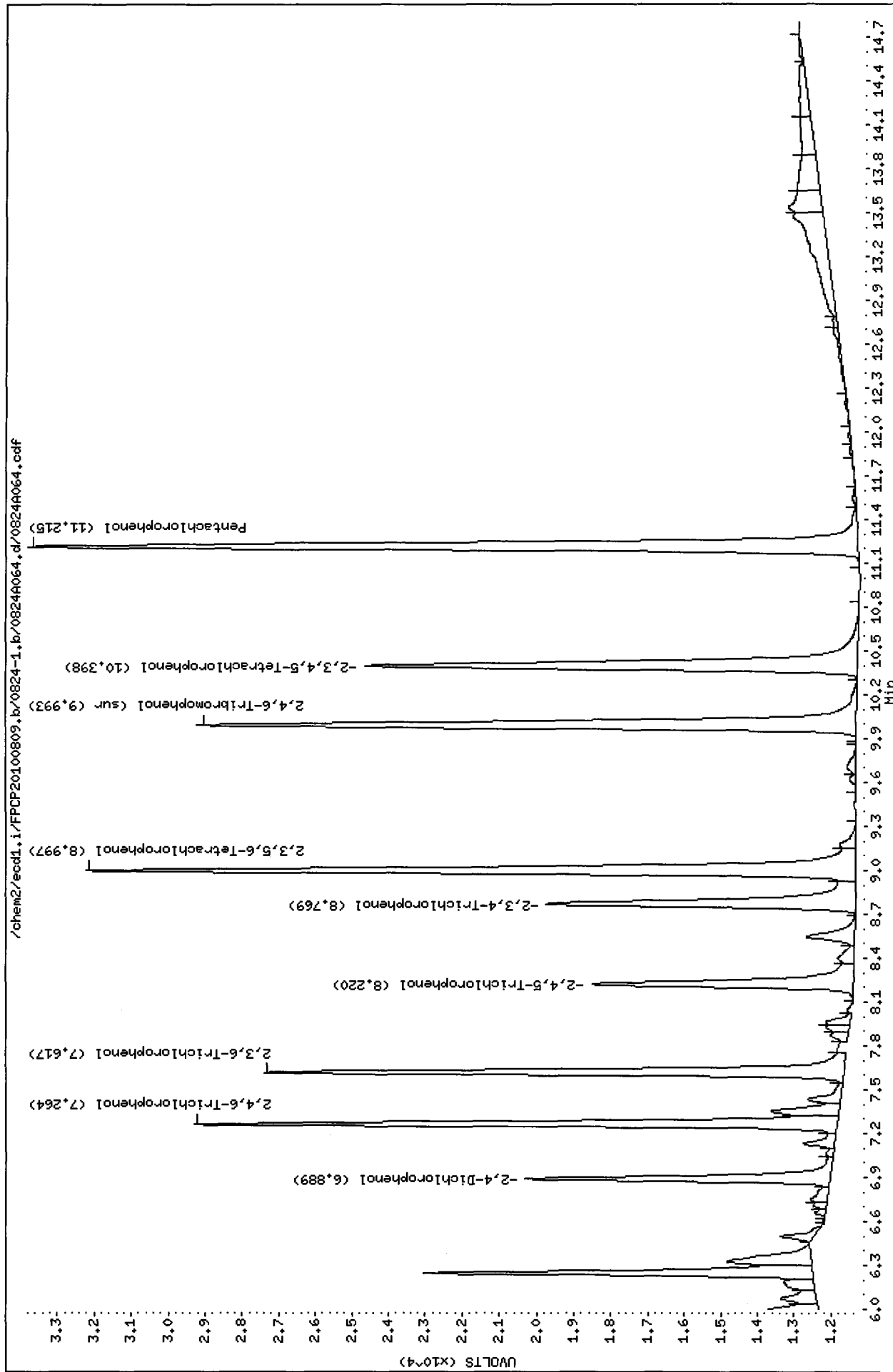
ZB35 PCPCAL



Data File: /chem2/ecdl.i/FPCP20100809.b/0824-1.b/0824A064.d  
Date : 26-AUG-2010 00:23  
Client ID:  
Sample Info: PDCPCAL  
Purge Volume: 2.0  
Column phase: ZB5

Instrument: ecd1.i

Operator: ar  
Column diameter: 0.53



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

**ARI Job ID: RI65**





Preparation Test TPHD/HCID # 1

ARI Job No(s) RI 98, RI 65

In-House (0.25-0.50ppm)  
Batch set up by: SP

Bottle #	Extraction Requirements	Verify Client ID	Volume Extracted	DryVap Or KD	Turbo Vap	Acid/Silica Clean (1:1)	Final Effective Volume	Volume to Lab	Comments
	RI 98 MBW	Date 08/18/10	500mL		123	Y/N 1mL	1mL	1mL	
	SBW		↓			↓	↓	↓	
	SBW Dup.		↓			↓	↓	↓	
7	A	checked	500mL	460mL					See note
7	B		↓	400mL					
10	RI 65 A		500mL						
29	B								
30	BMS								
28	BMSD								
11	C								
13	D								
10	E								
7	RI 98 C		400mL						
Analyst/Date: <u>AR 08/18/10</u> → <u>RRTS 8/19/10</u> <u>CSZ 8/19/10</u>									

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	0	100µL	6/2/11	AR	WW
Spike	11	100µL	4/26/11	AR	WW

Extraction Time: 13:25

- SPECIAL INSTRUCTIONS: 1. Add Surr/Spk. 2. Acidify with 1 pipet of 1:1 Sulfuric Acid. 3. Check pH.
4. Extract 2X with 30mL DCM. 5. DryVap or KD at 80°. 6. TurboVap if KD. 7. Acid/Silica Clean-ups? Y/N.
8. Vial in DCM. A. Archive Y/N
- 3014F
- RI 98 only
- RI 65 : 00544



ARI Job No.: RI 65

Client ID: Floyd + Snider

Parameter: TPHD A/S

Client Project: Lara Lake Apts RI

Note problems, concerns, corrective actions	Analyst/Date
<b>Screens: Soil/Sediment/Solid/Other:</b>	
<input type="checkbox"/> No Anomalies (standard soil/sediment)	
<input type="checkbox"/> Wet sediment/sludge=	
<input type="checkbox"/> Standing Water Decanted=	
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=	
<input type="checkbox"/> Clay (Difficult to homogenize/Mixed with Kitchen Aid)=	
<input type="checkbox"/> Rocks/Organics=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input type="checkbox"/> Other (Details)=	
<b>Aqueous:</b>	
<input checked="" type="checkbox"/> No Anomalies	<u>AS 02/12/10</u>
<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: RI65**



**GC Analyst Notes / Corrective Action Log**

ARI Project ID: Diesel, MOil Client ID: ARI

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

Parameter(s): Diesel, 30wt MOil, AK702, 07-phenyl-n-triacontane

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

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

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

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

Additional Details on Reverse: Yes / No

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

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

# Analytical Resources Inc.: Organics Instrument Log

FID-9 Agilent 6850 - Serial No.: US10404004

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

GC Program: TPH Column No.: SD2031 Column Type: HT-1

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

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

IS/SS	Ical/Ccal	LCS/ICV
	1700-1	
	1680-2	
	1730-3	
	1737-3	

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

**Maintenance / Comments**

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

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

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

ANNUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/fid9.i/20100728.B

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

Time Filename LabID ClientId DF Manually Integrated Compounds

024	0728A012.D DIESEL 50		1	1	o-terph,
045	0728A013.D DIESEL 100		1	1	o-terph,
107	0728A014.D DIESEL 250		1	1	o-terph,
128	0728A015.D DIESEL 500		1	1	o-terph,
149	0728A016.D DIESEL 1000		1	1	o-terph,
211	0728A017.D DIESEL 2500		1	1	o-terph,
232	0728A018.D DIESEL ICV		1	1	o-terph,
253	0728A019.D MOIL 100		1	1	Triacon Surr,
315	0728A020.D MOIL 250		1	1	Triacon Surr,
336	0728A021.D MOIL 500		1	1	Triacon Surr,
357	0728A022.D MOIL 1000		1	1	Triacon Surr,
018	0728A023.D MOIL 2500		1	1	Triacon Surr,
040	0728A024.D MOIL 5000		1	1	Triacon Surr,
101	0728A025.D MOIL ICV		1	1	Triacon Surr,

RI65: 00549

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

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

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

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

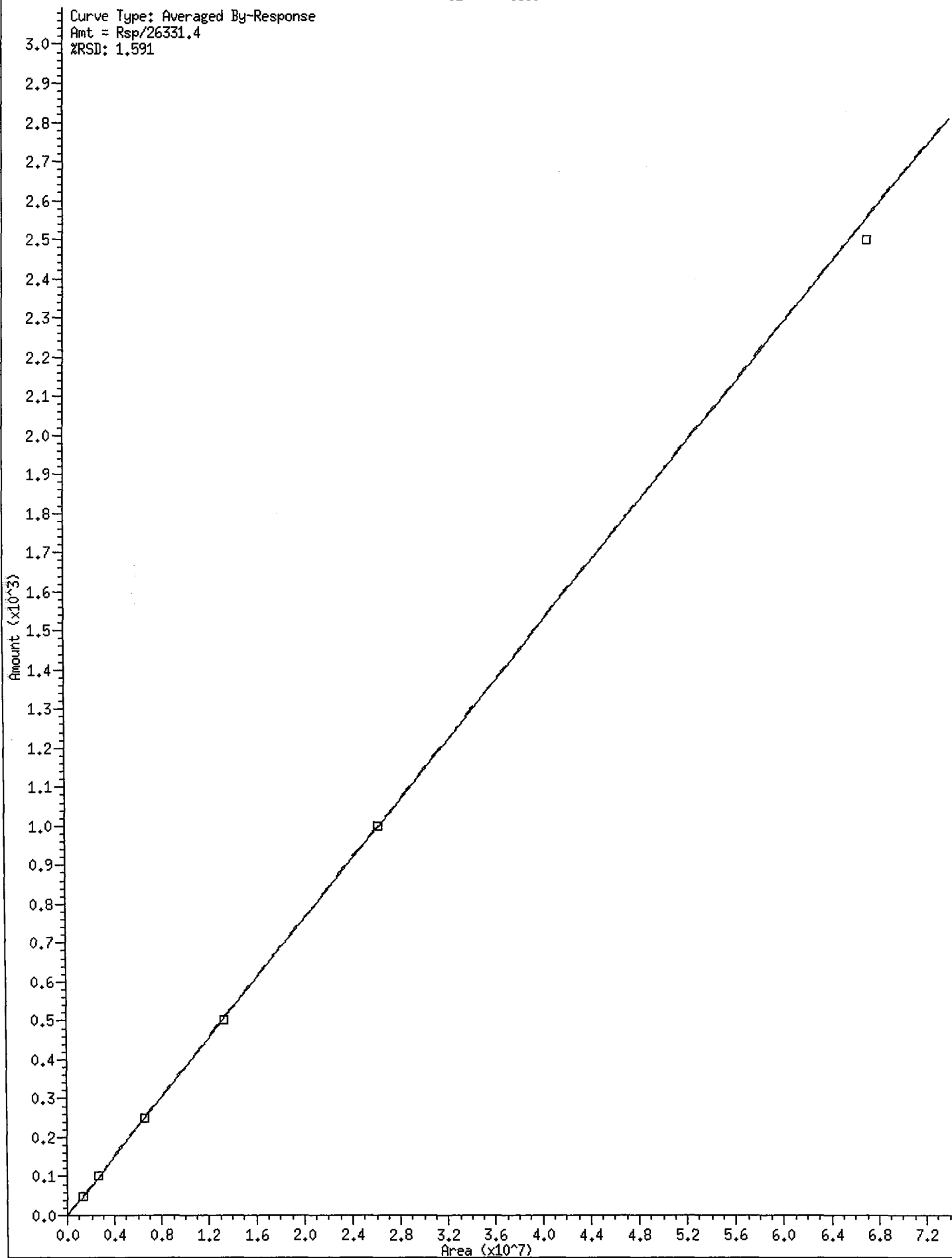
Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

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

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



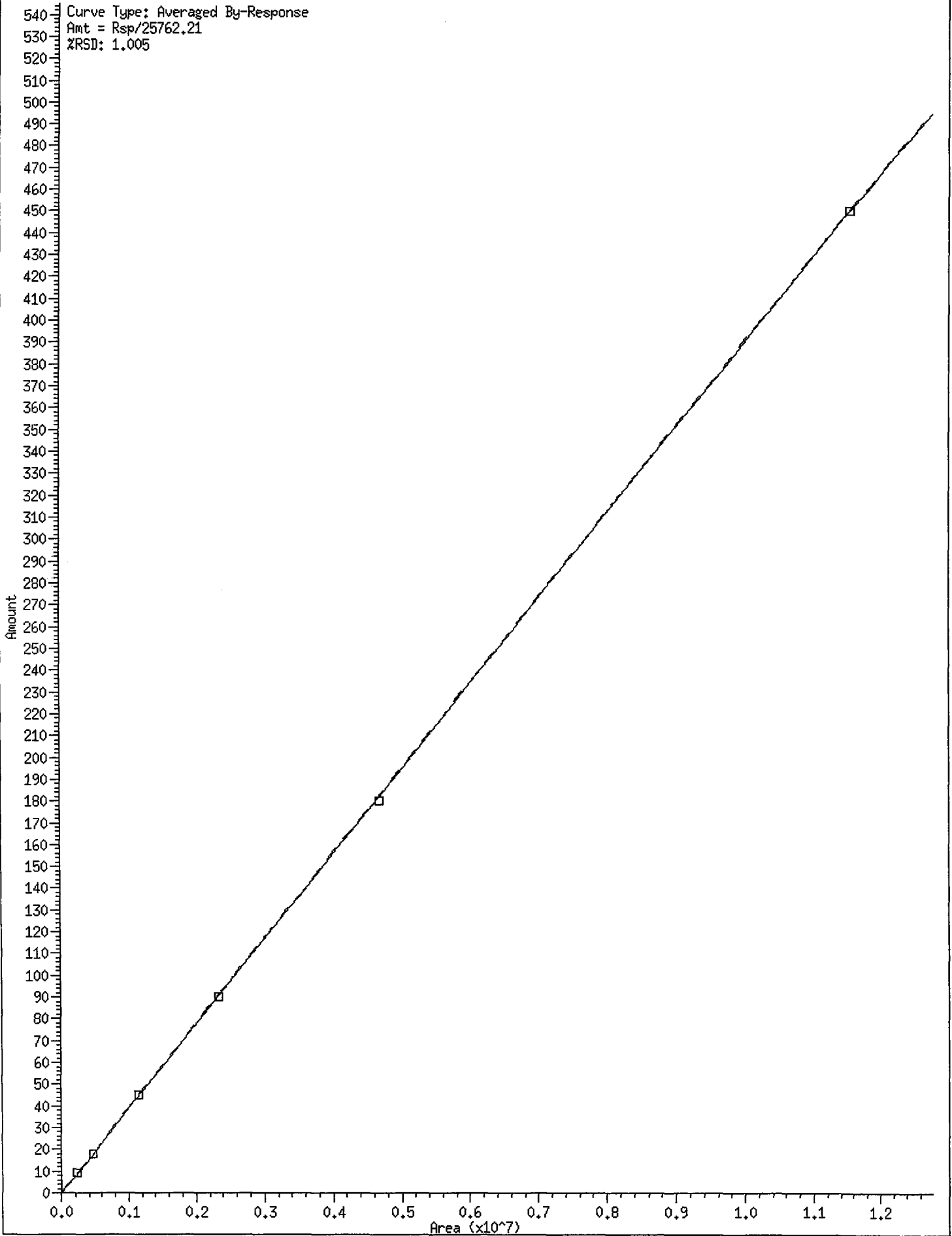
31 NW Diesel



R165: 00552

\* 8 o-terph

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



RI65: 00553

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

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

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

\* Not in Mol range

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

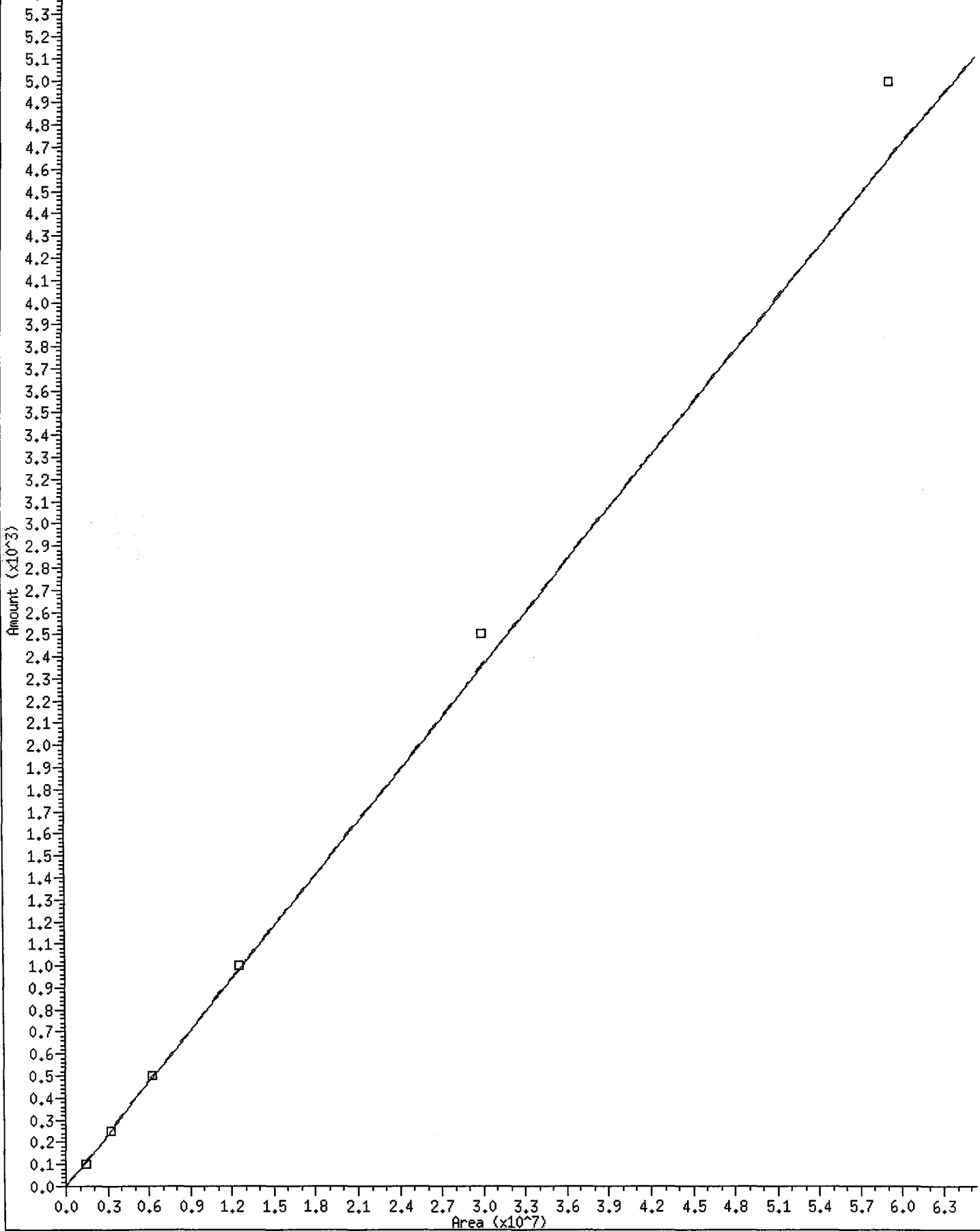
Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

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

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

30 NW MO11

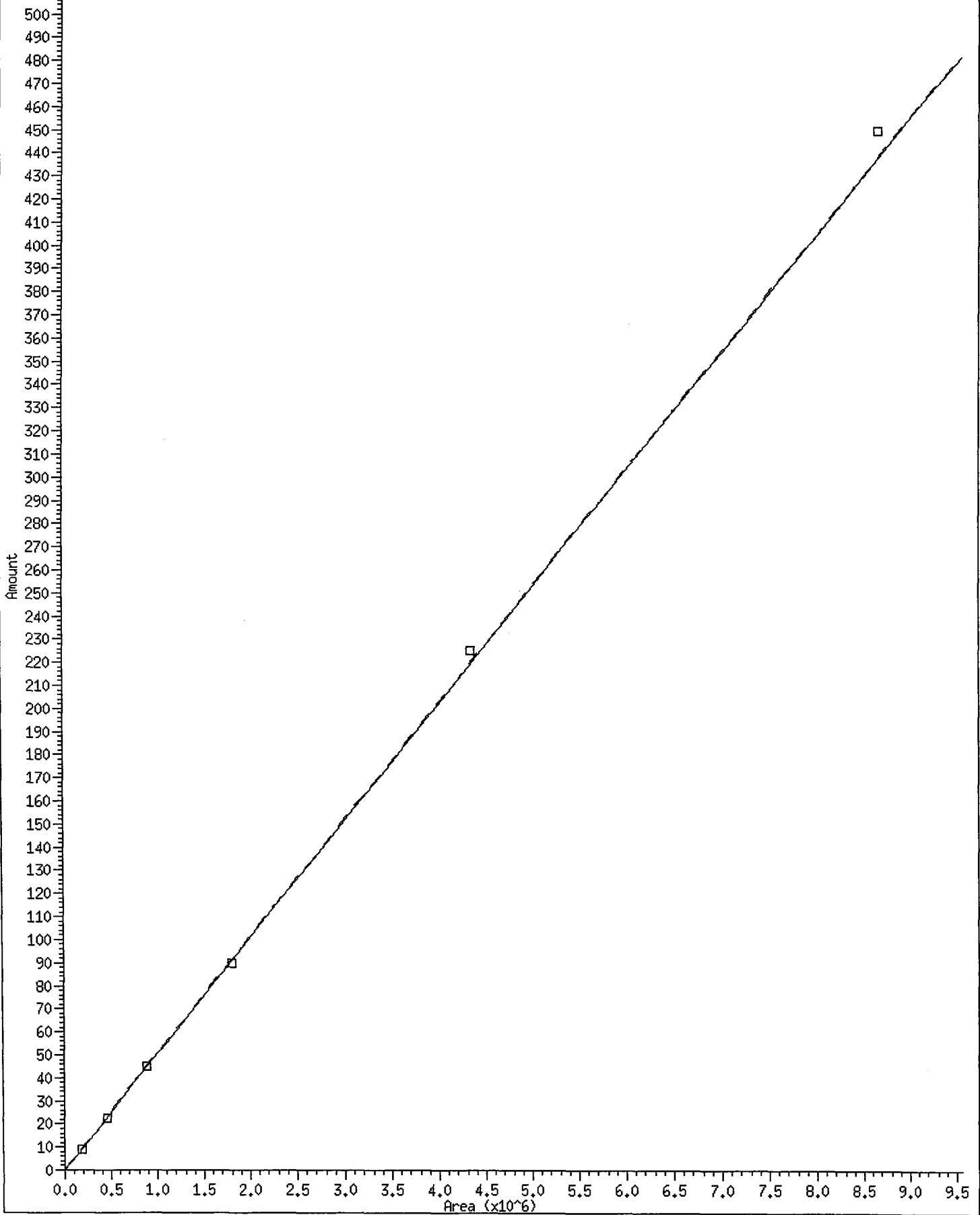
Curve Type: Averaged By-Response  
Amt = Rsp/12787.21  
%RSD: 7.943



RI65:00556

◆ 15 Triacon Surr

530 Curve Type: Averaged By-Response  
520 Amt = Rsp/19832.14  
510 %RSD: 2.295



R165: 00557

Analytical Resources Inc.  
 NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

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

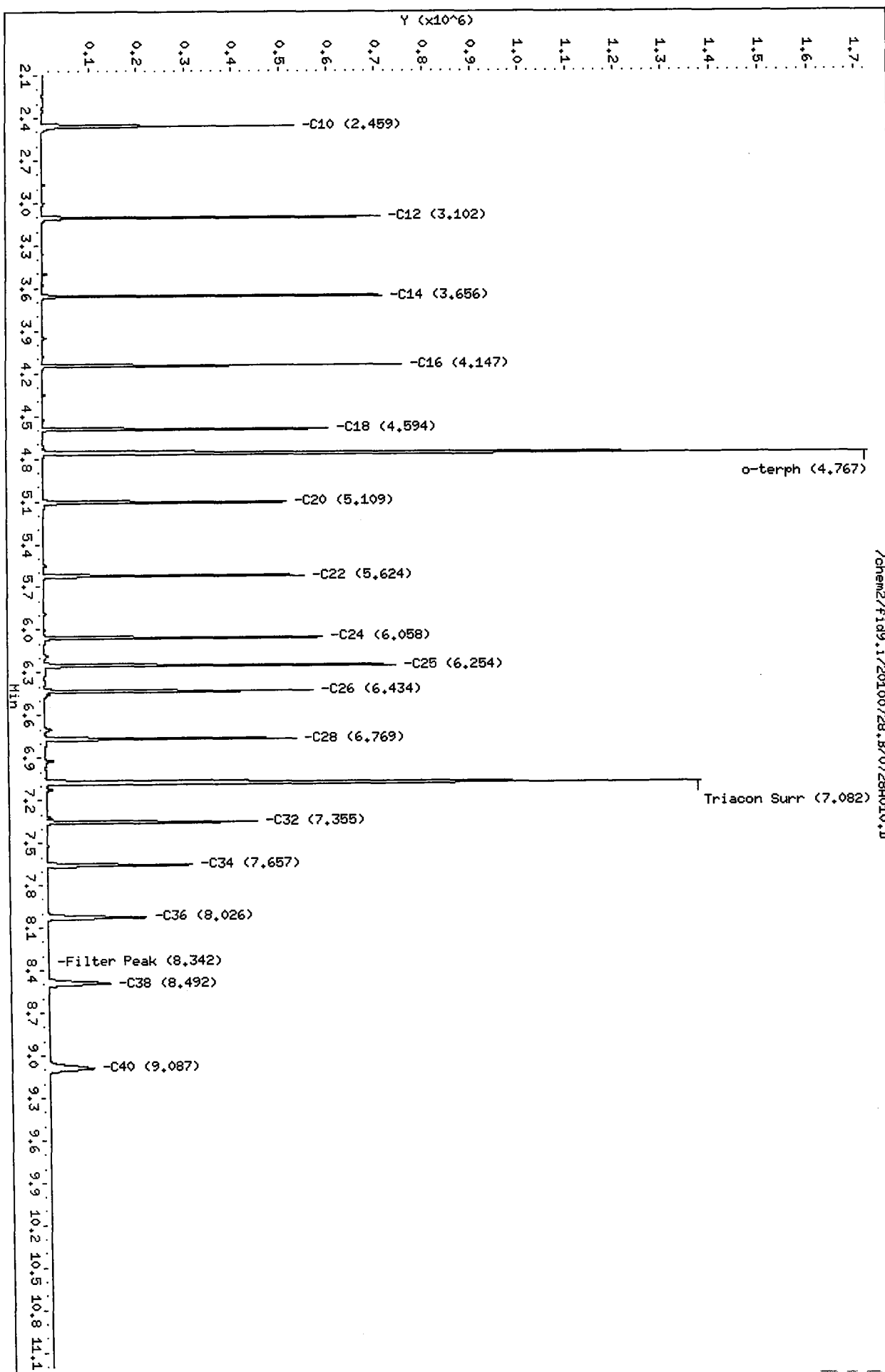
Surrogate	Area	Amount	%Rec
o-Terphenyl	1429326	55.5	123.3
Triacantane	1311650	66.1	147.0

*MS 7/30/10*

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

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

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





Analytical Resources Inc.  
 NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

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

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

*MO 7/20/10*

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

Data File: /chem2/fid9.i/20100728.B/07289011.D

Date: 28-JUL-2010 20:02

Client ID:

Sample Info: IB

Column phase: RTX-1

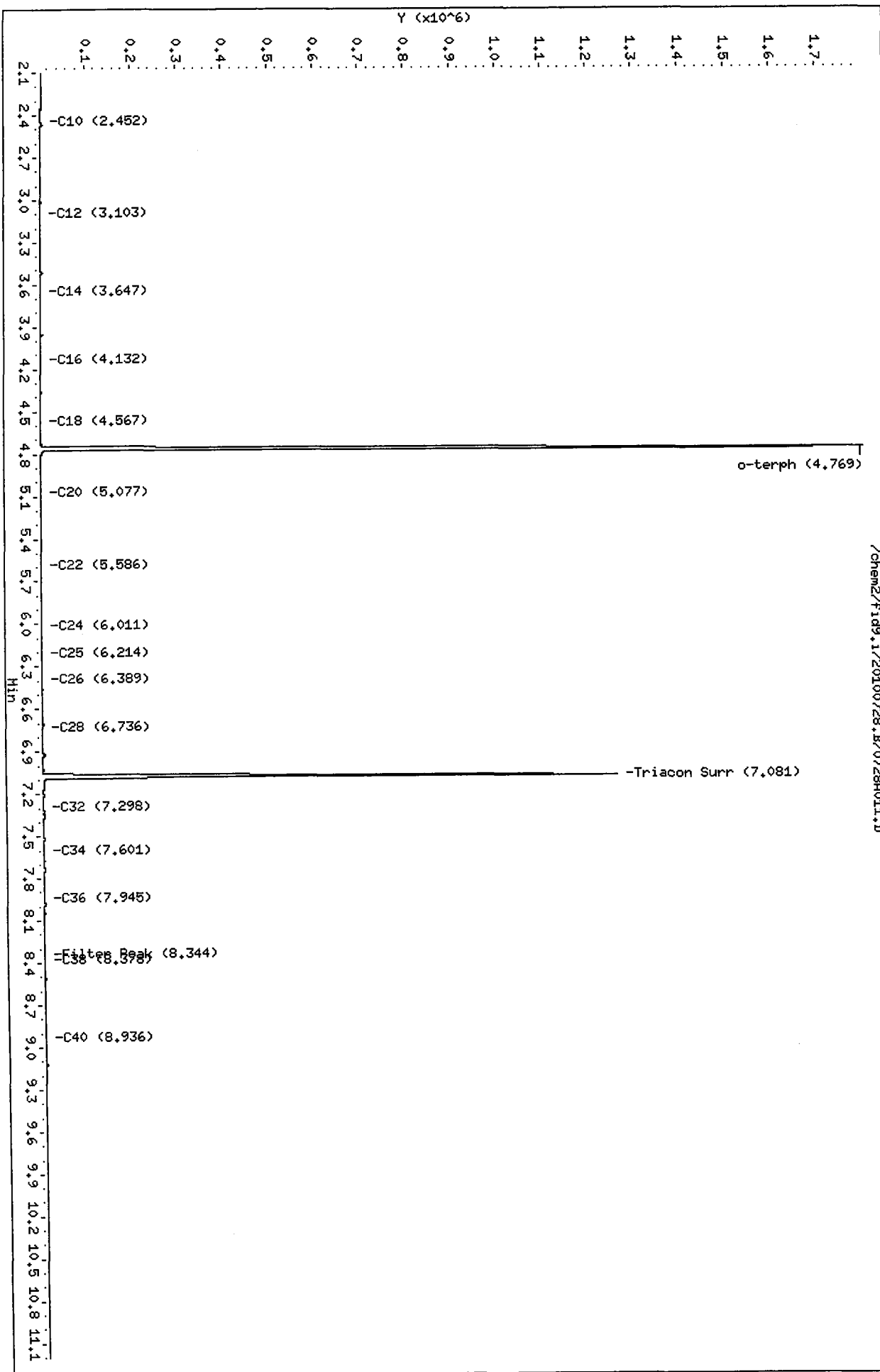
Instrument: fid9.i

Operator: HS

Column diameter: 0.25

/chem2/fid9.i/20100728.B/07289011.D

Page 1



RI65: 00561

Analytical Resources Inc.  
 NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

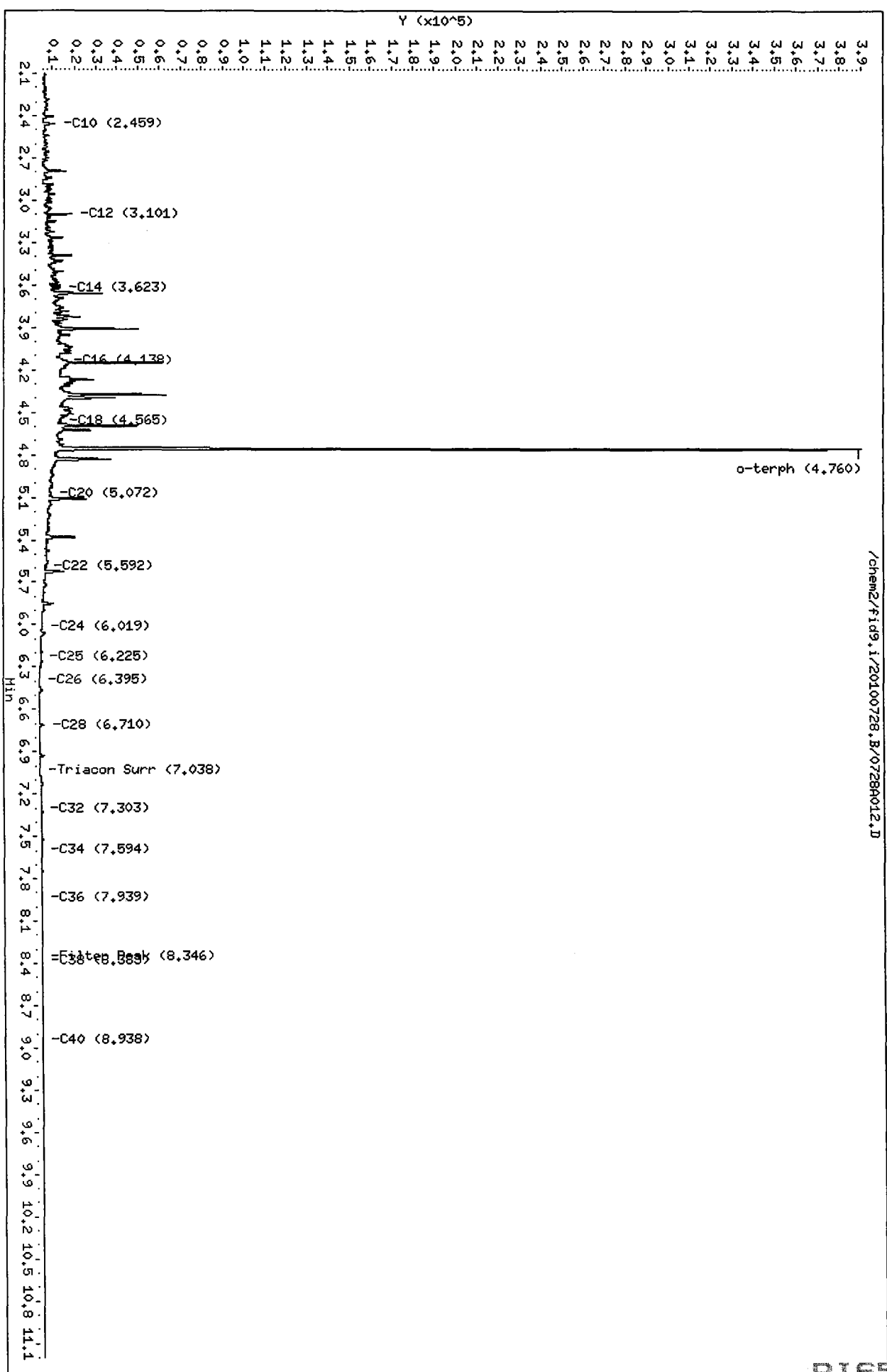
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

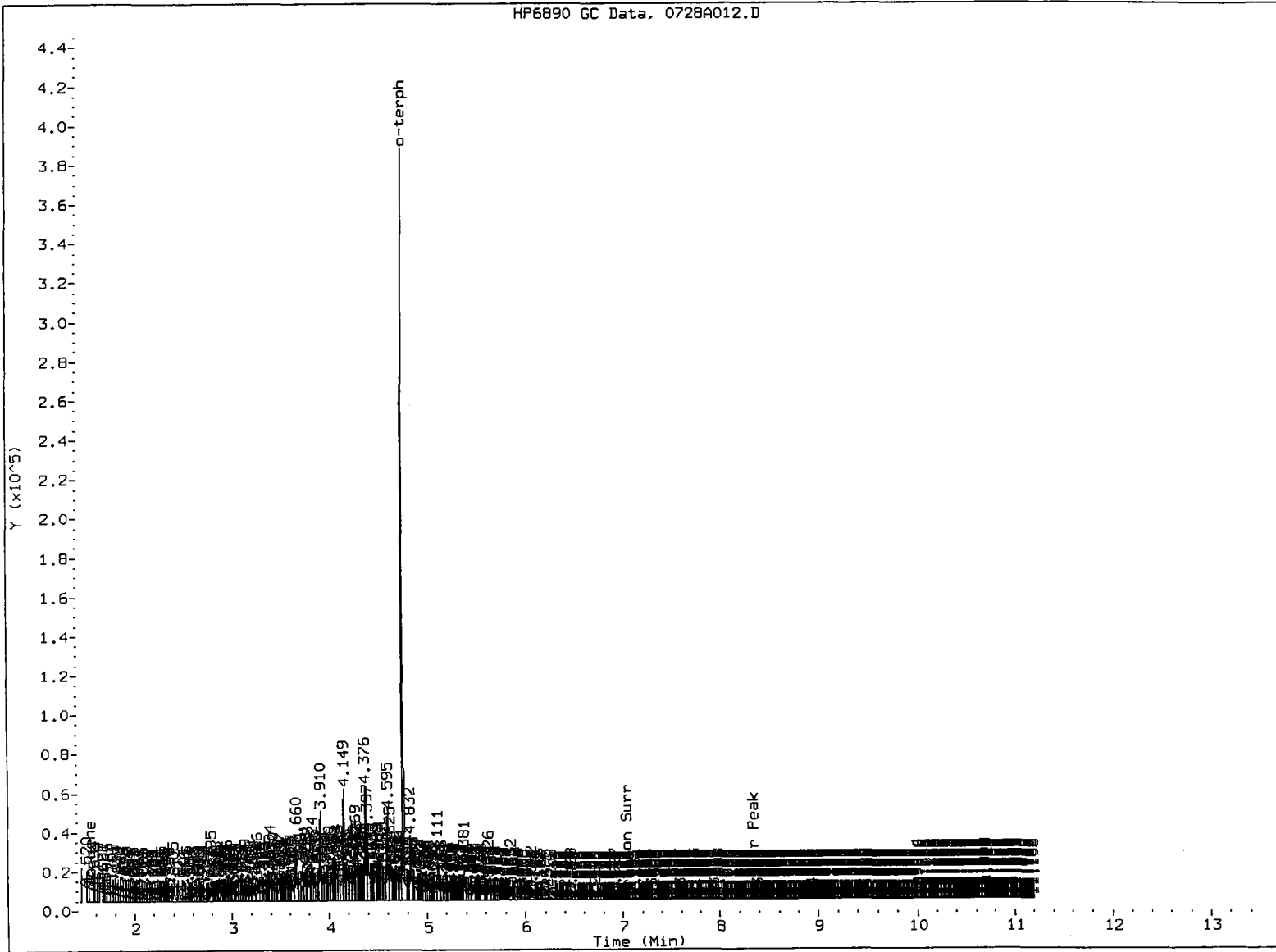
Surrogate	Area	Amount	%Rec
o-Terphenyl	229869	8.9	19.8
Triacotane	80	0.0	0.0

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

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

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





MANUAL INTEGRATION

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

Analyst: MM

Date: 7/30/10

Analytical Resources Inc.  
 NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

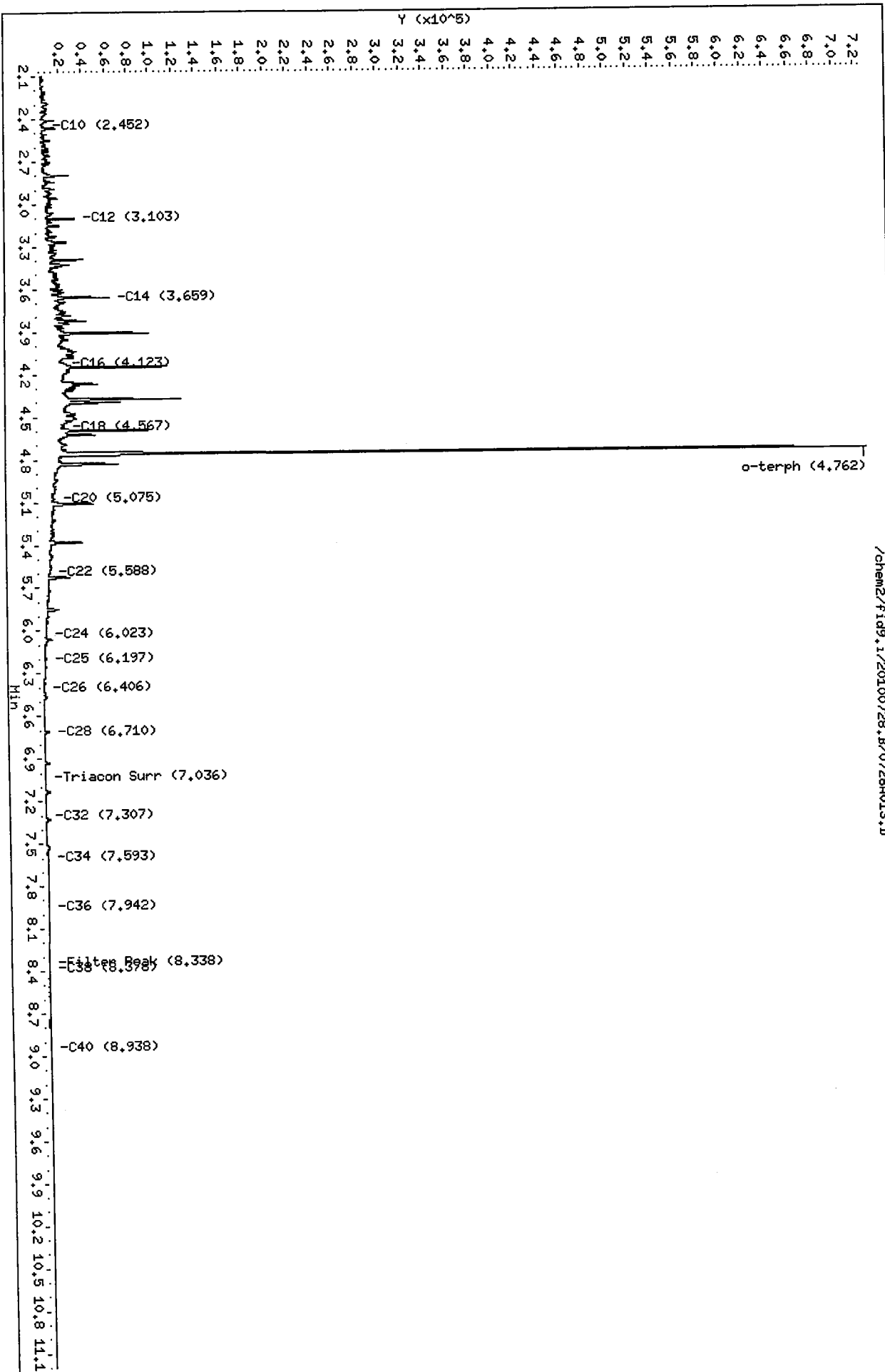
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

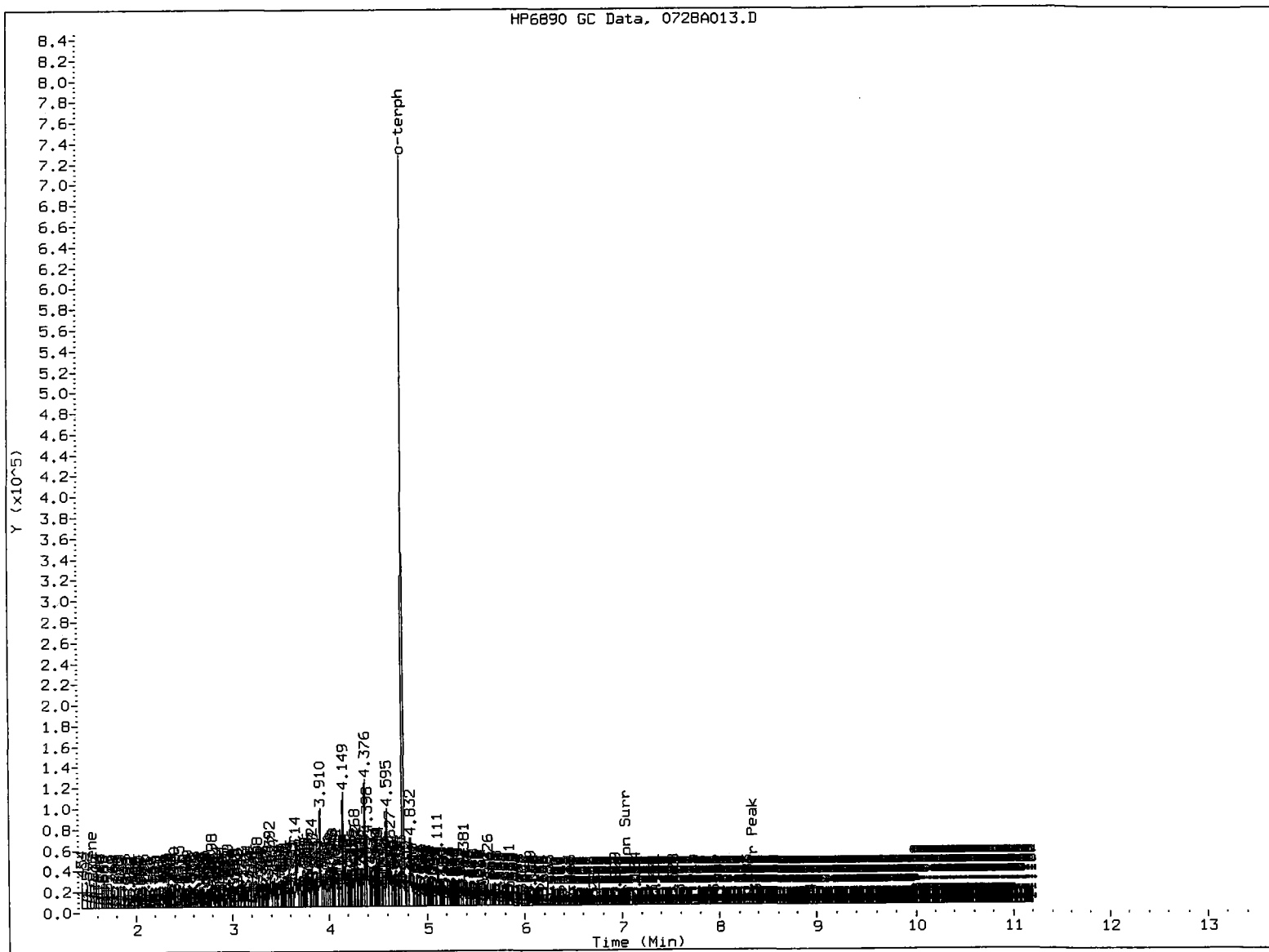
Surrogate	Area	Amount	%Rec
o-Terphenyl	457301	17.8	39.4
Triacantane	42	0.0	0.0

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

Data File: /chem2/fid9.i/20100728.B/0728R013.D  
Date: 28-JUL-2010 20:45  
Client ID:  
Sample Info: DIESEL 100  
Column phase: RTX-1

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





MANUAL INTEGRATION

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

Analyst: Ma

Date: 4/30/00



Analytical Resources Inc.  
NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

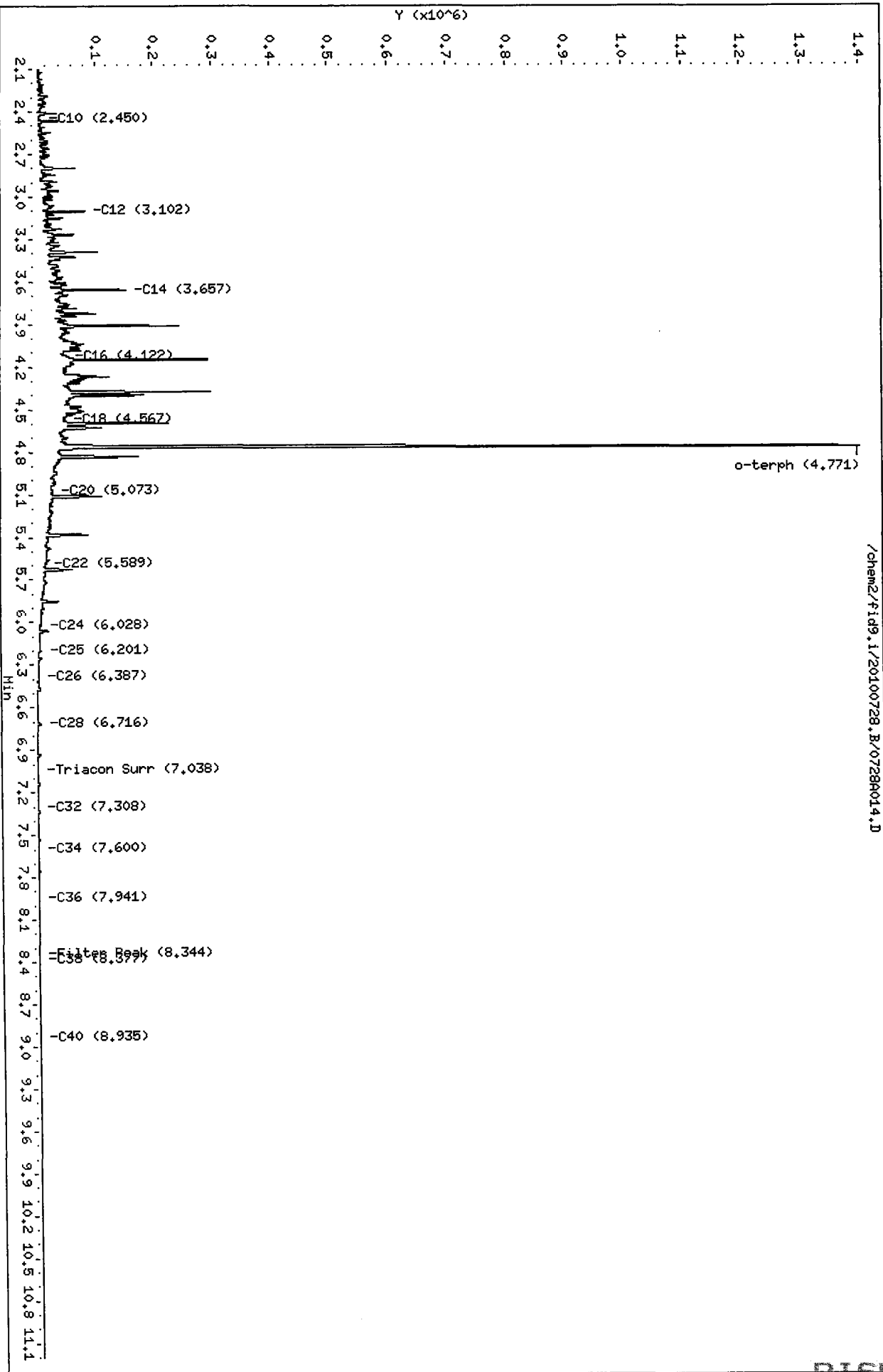
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

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

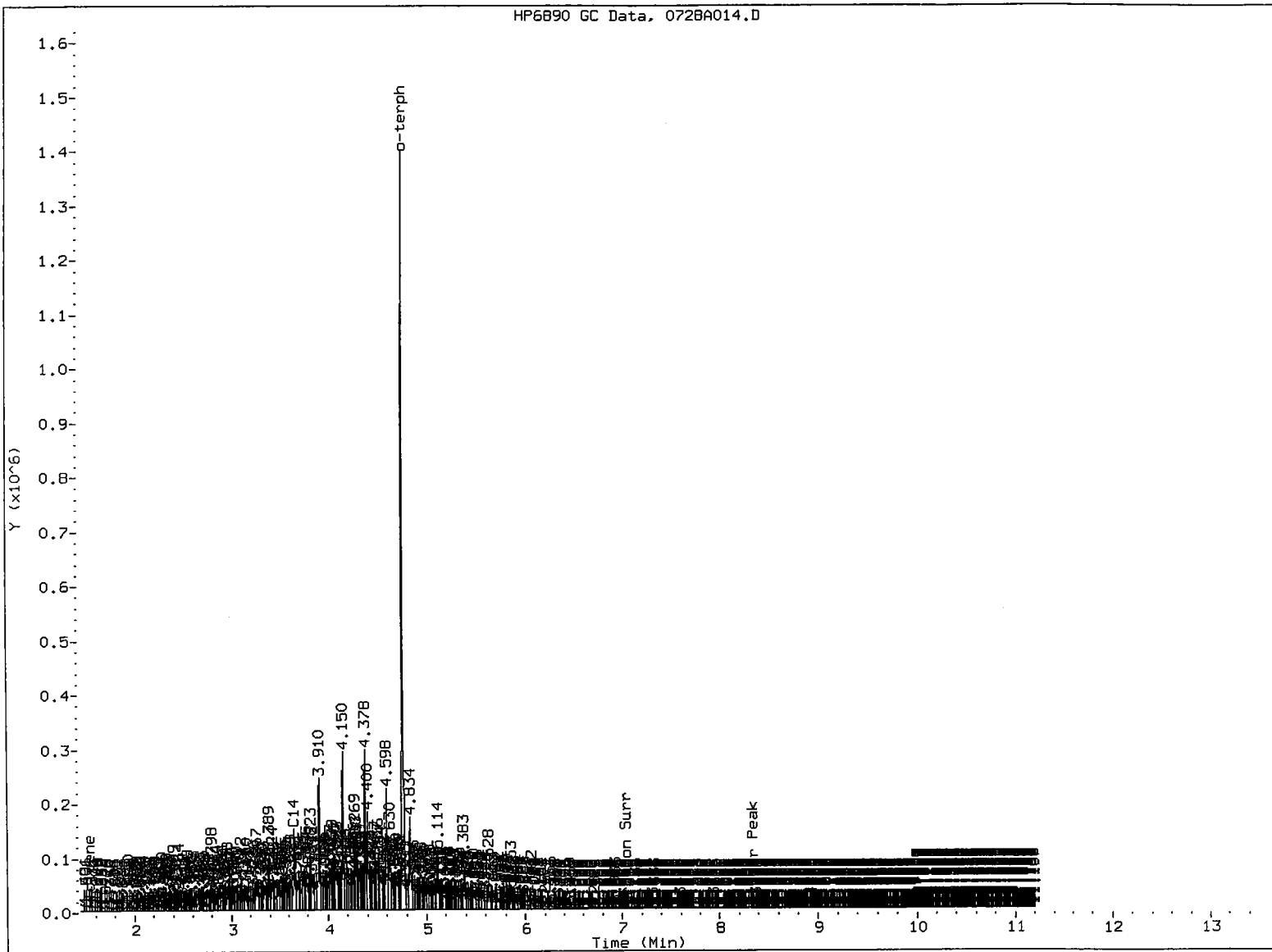
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8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

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

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



/chem2/fid9.i/20100728.B/0728A014.D



MANUAL INTEGRATION

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

Analyst:                      Date:

Analytical Resources Inc.  
NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

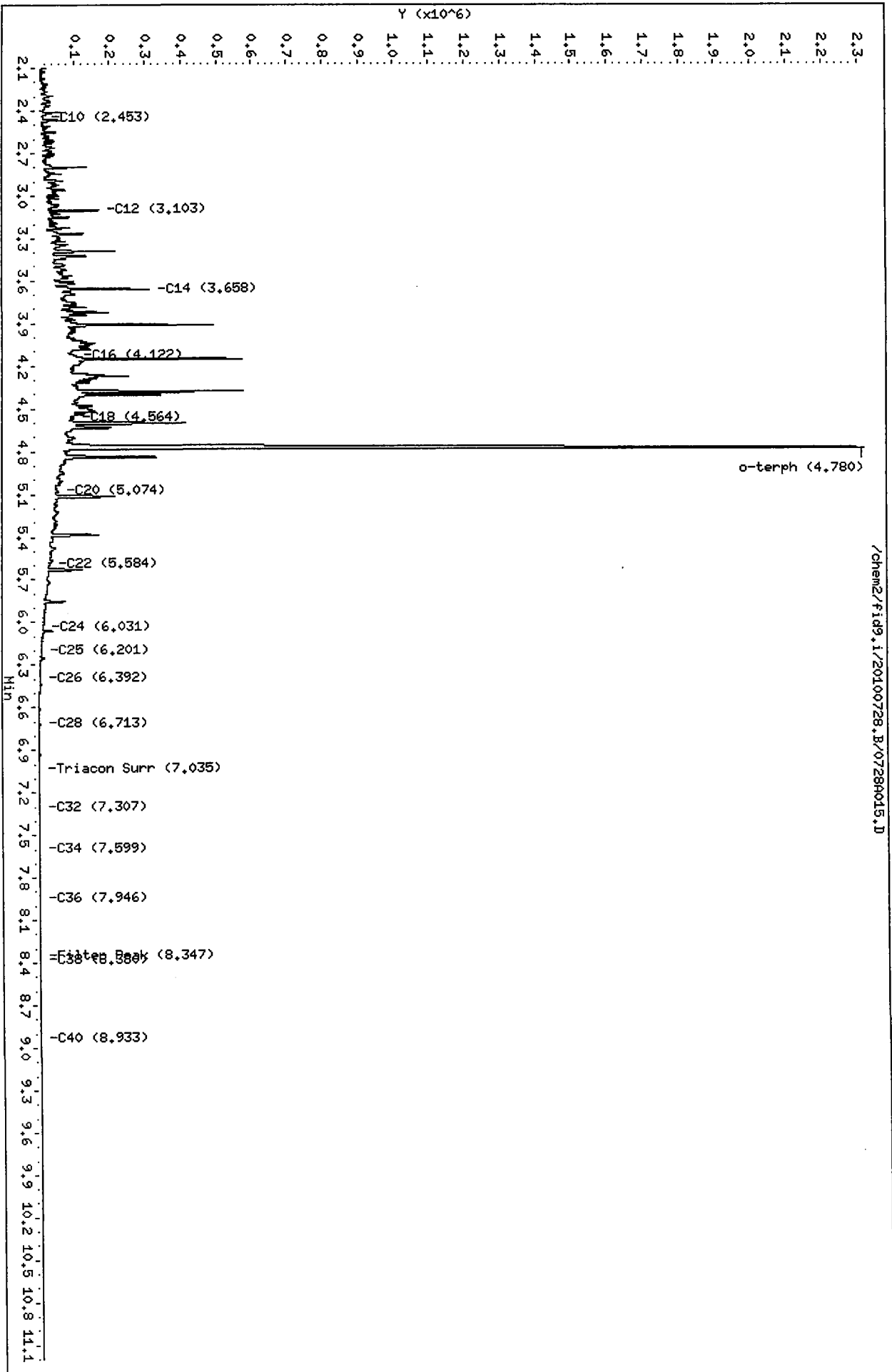
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

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

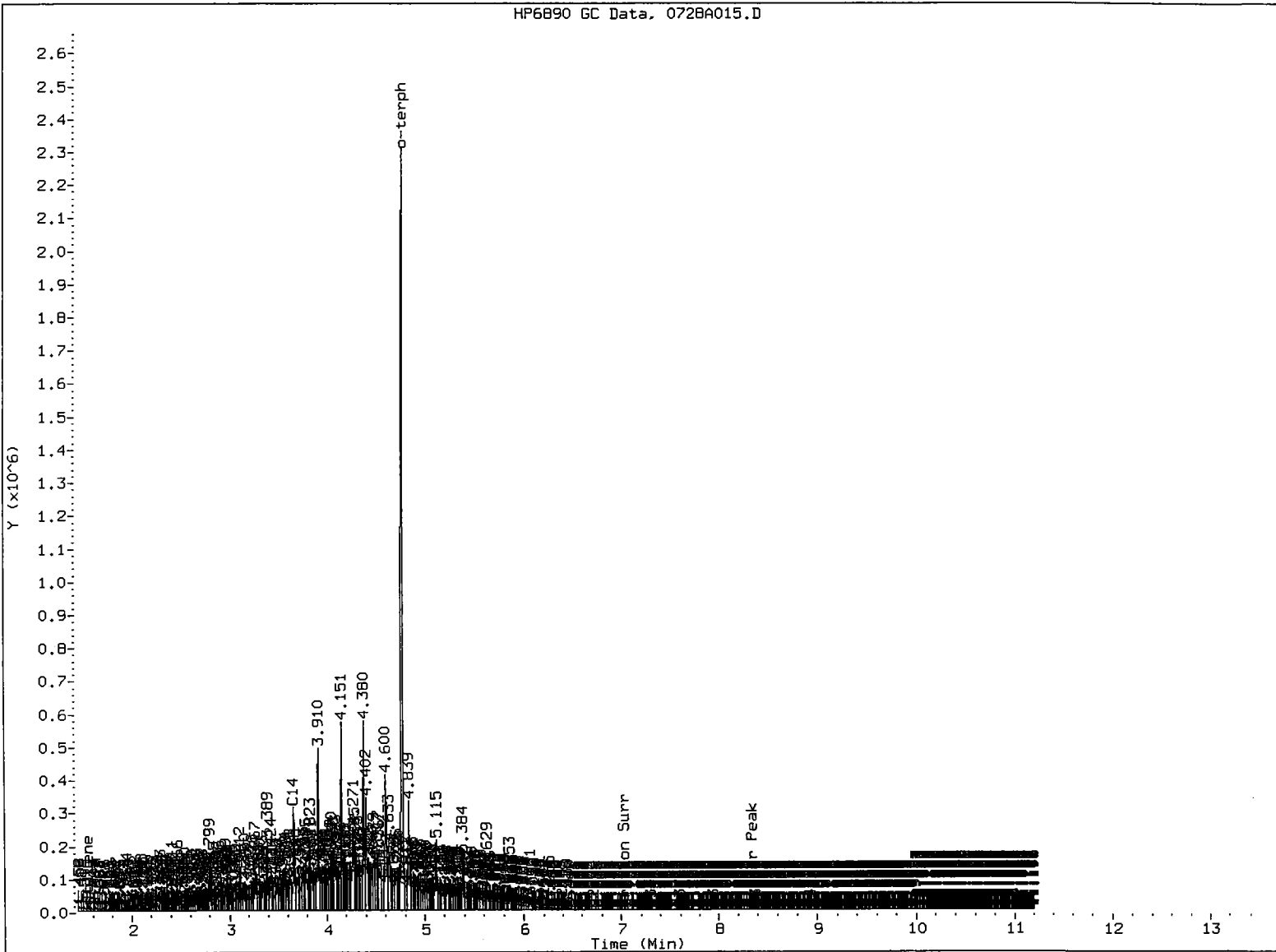
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8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

Data File: /chem2/fid9.i/20100728.B/0728A015.D  
Date: 28-JUL-2010 21:28  
Client ID:  
Sample Info: DIESEL 500  
Column Phase: RTX-1

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



HP6890 GC Data, 0728A015.D



MANUAL INTEGRATION

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

Analyst: me

Date: 7/30/10

Analytical Resources Inc.  
 NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

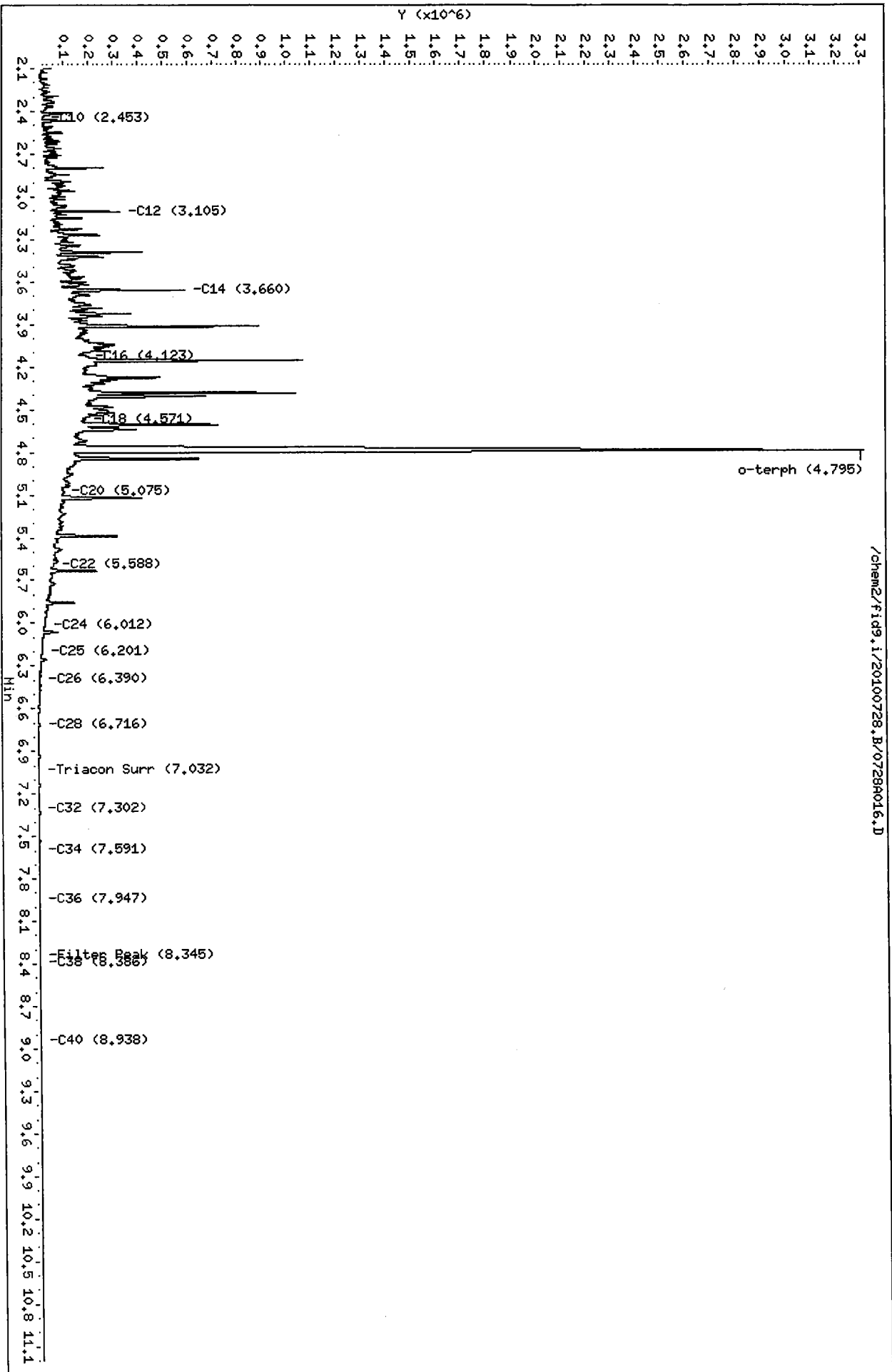
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

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

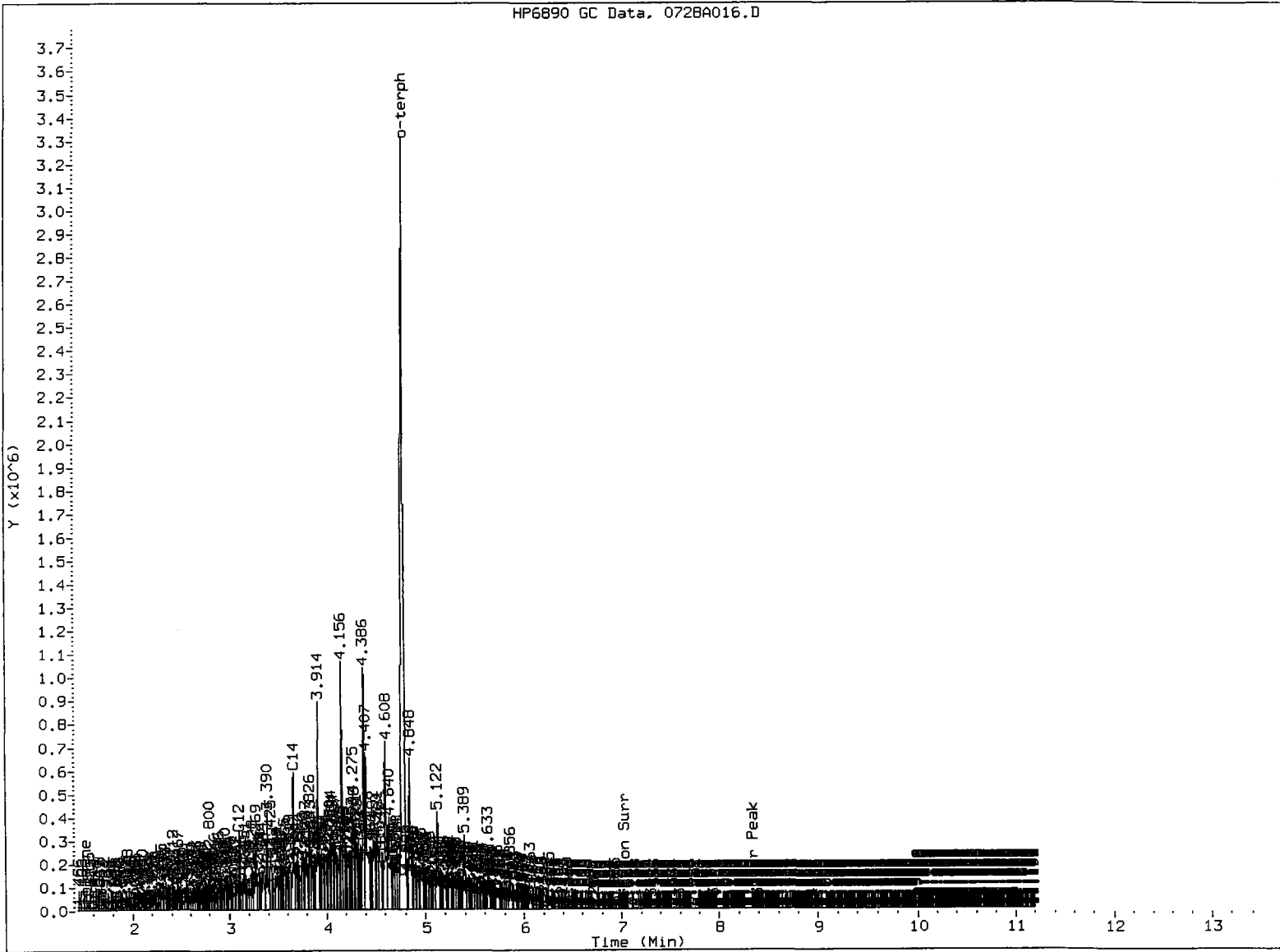
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8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

Data File: /chem2/fid9.i/20100728.B/07289016.D  
Date : 28-JUL-2010 21:49  
Client ID:  
Sample Info: DIESEL 1000  
Column phase: RTX-1

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







MANUAL INTEGRATION

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

Analyst: MM

Date: 2/30/10

Analytical Resources Inc.  
 NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

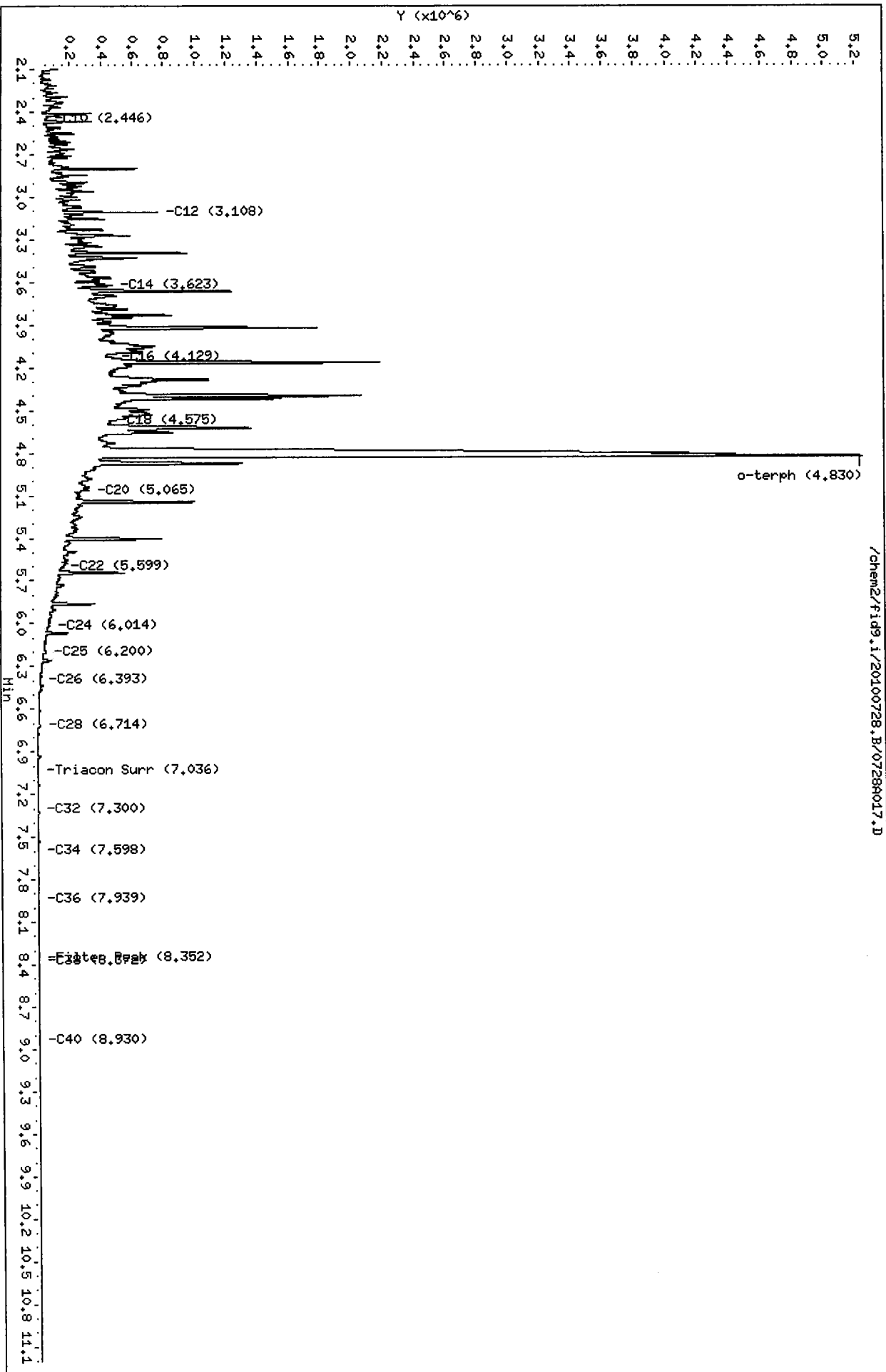
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

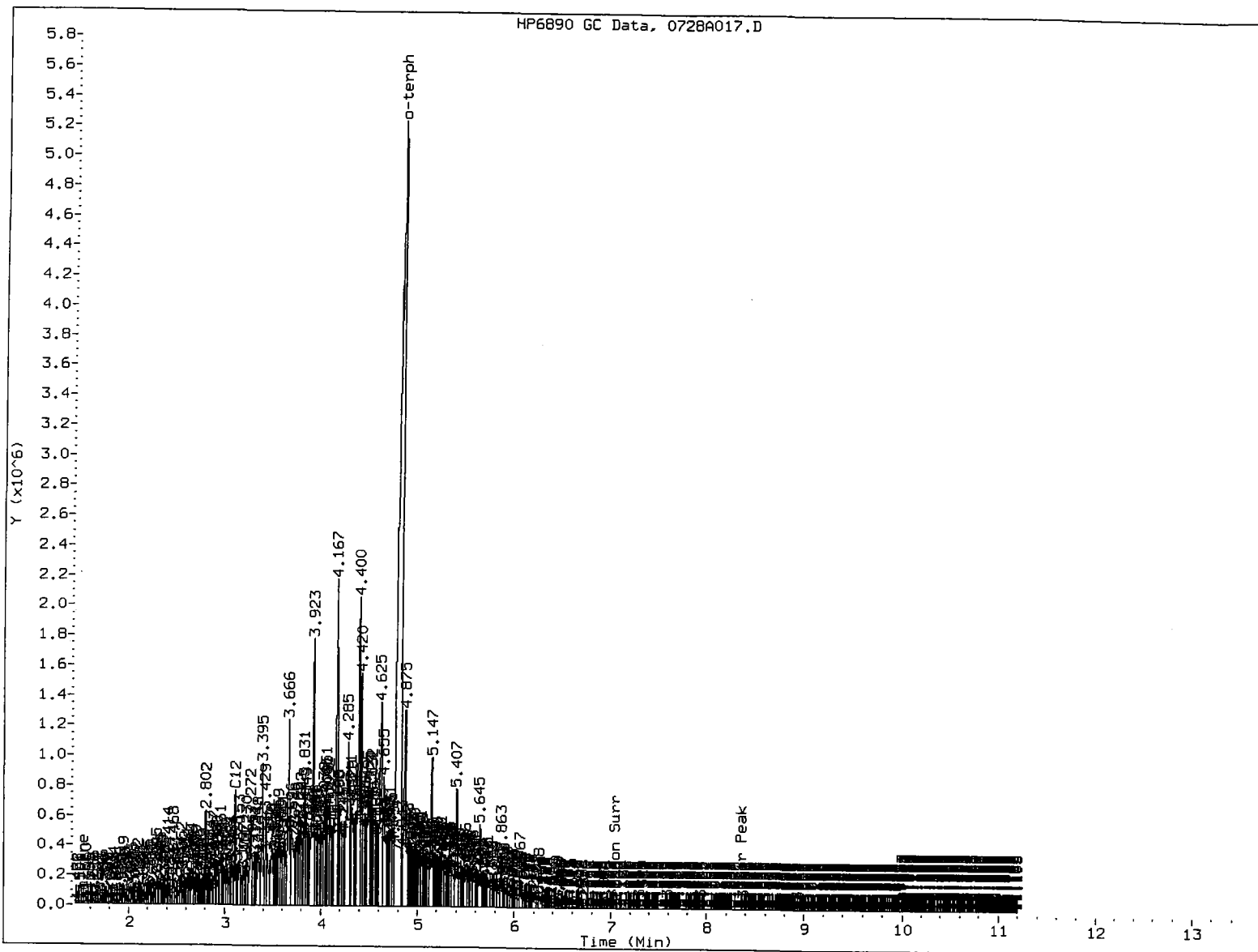
Surrogate	Area	Amount	%Rec
o-Terphenyl	11602111	450.4	1000.8
Triacotane	1487	0.1	0.2

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

Data File: /chem2/fid9.i/20100728.B/0728R017.D  
Date : 28-JUL-2010 22:11  
Client ID:  
Sample Info: DIESEL 2500  
Column phase: RTX-1

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





MANUAL INTEGRATION

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

Analyst:                      Date: 7/3/11

Analytical Resources Inc.  
 NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

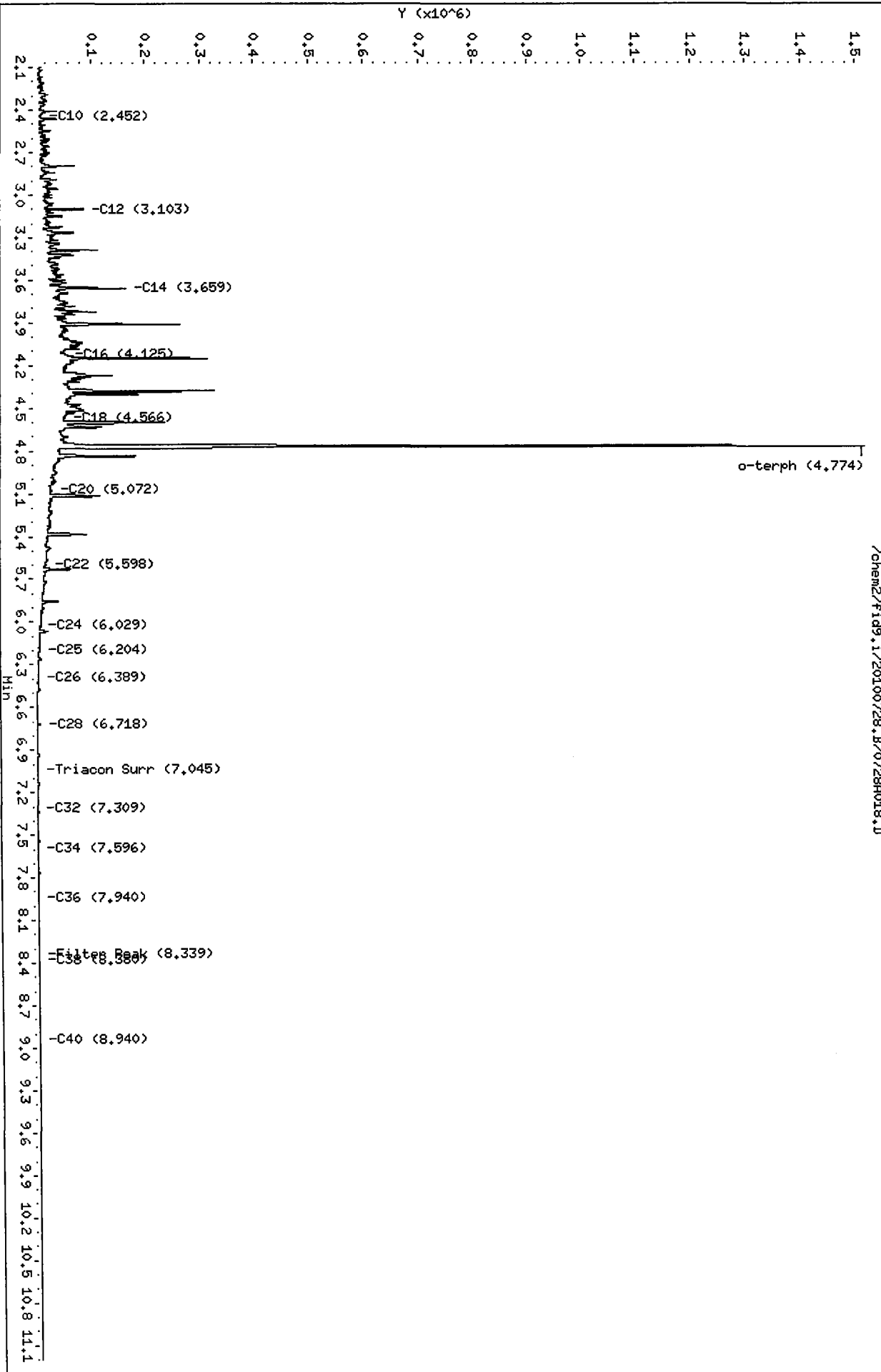
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

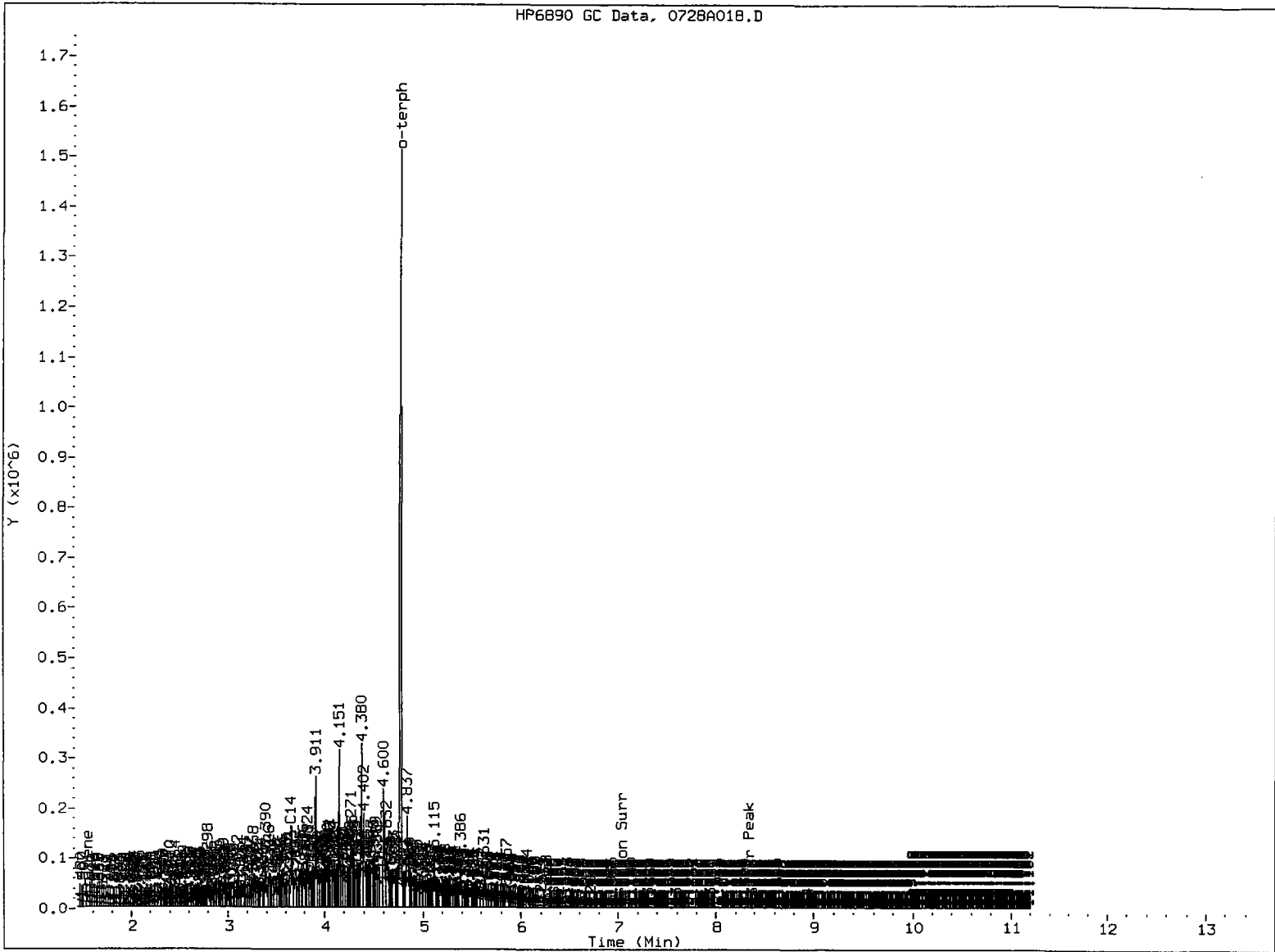
Surrogate	Area	Amount	%Rec
o-Terphenyl	1244864	48.3	107.4
Triacontane	10	0.0	0.0

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

Data File: /chem2/fid9.i/20100728.B/0728R018.D  
Date: 28-JUL-2010 22:32  
Client ID:  
Sample Info: DIESEL ICV  
Column phase: RTX-1

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





MANUAL INTEGRATION

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

Analyst:                      Date: 7/30/10

Analytical Resources Inc.  
 NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

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

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

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



Data File: /chem2/fid9.i/20100728.B/0728R019.D

Date: 28-JUL-2010 22:53

Client ID:

Sample Info: MOIL 100

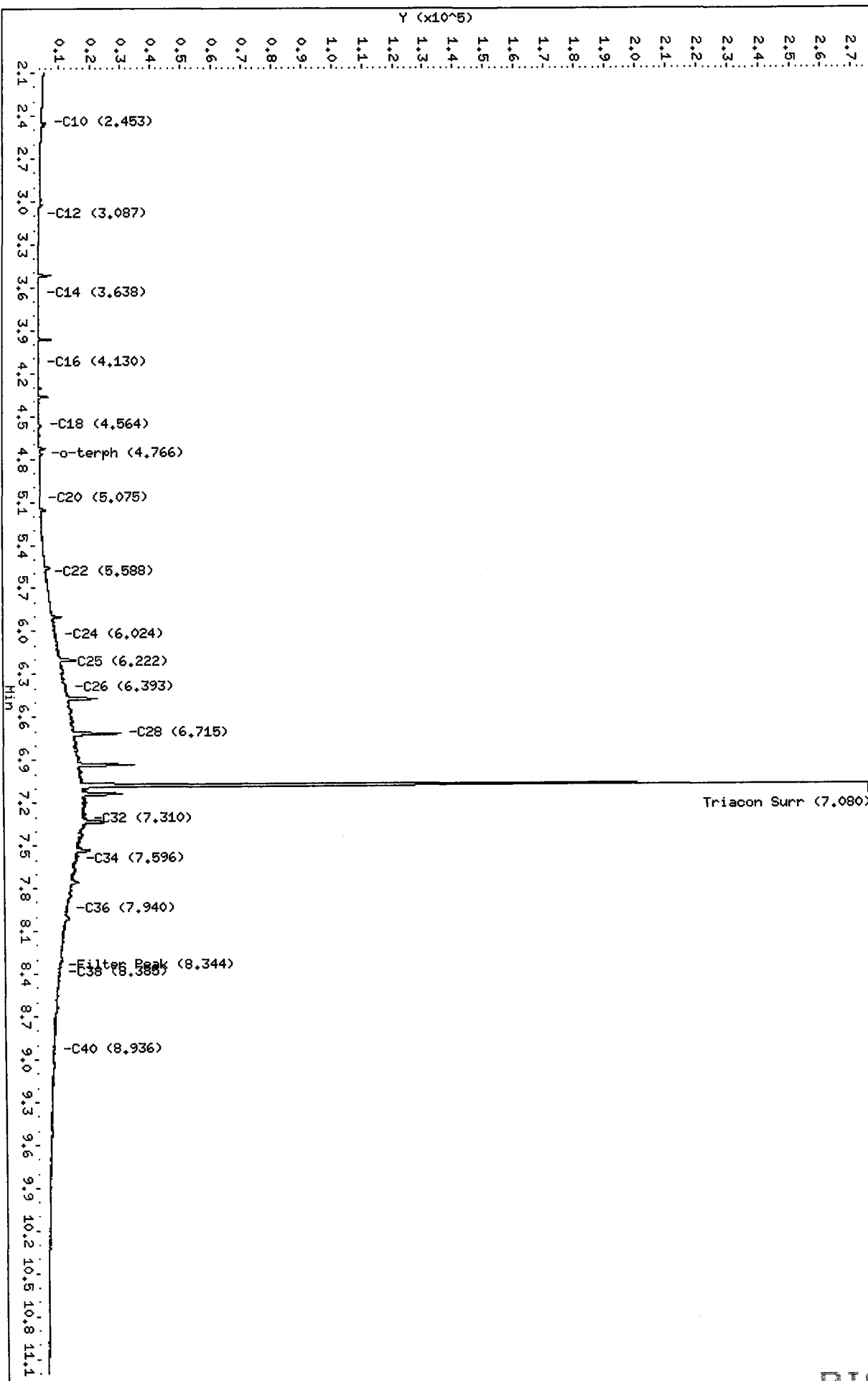
Column phase: RTX-1

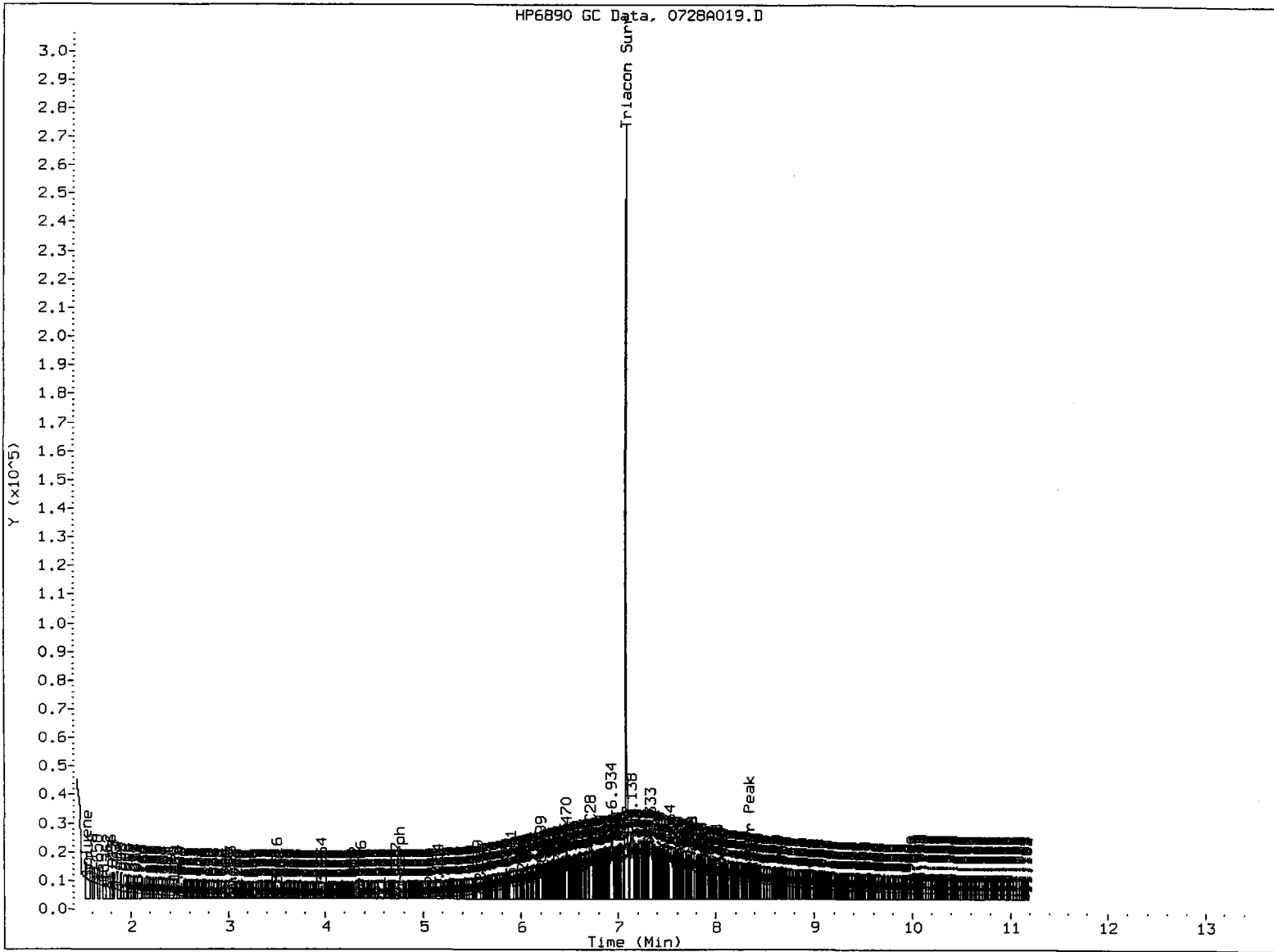
Instrument: fid9.i

Operator: HS

Column diameter: 0.25

/chem2/fid9.i/20100728.B/0728R019.D





MANUAL INTEGRATION

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

Analyst: Mc

Date: 7/30/10

Analytical Resources Inc.  
NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

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

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

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

Data File: /chem2/fid9.1/20100728.B/0728A020.D

Date: 28-JUL-2010 23:15

Client ID:

Sample Info: M01L 250

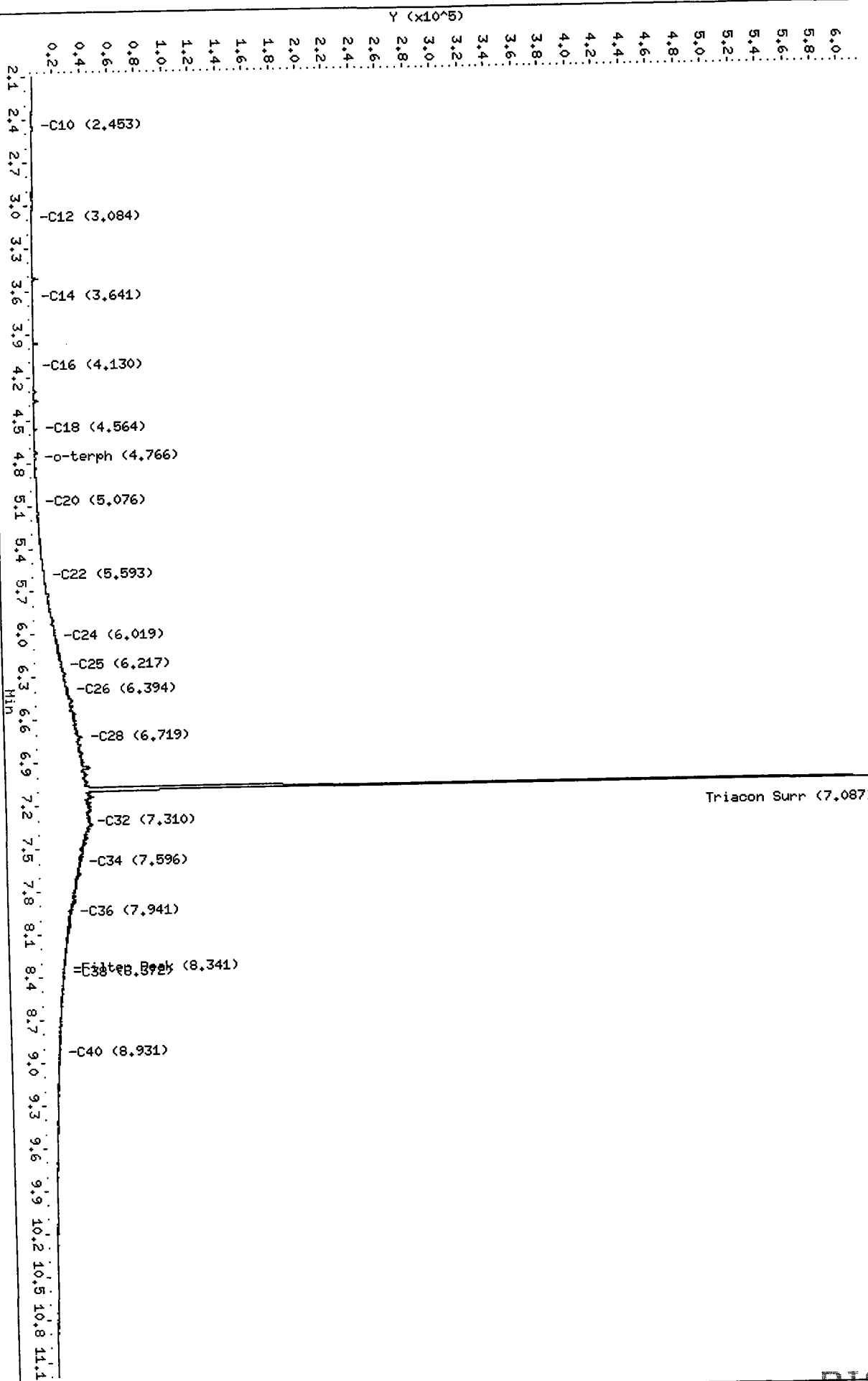
Column phase: RTX-1

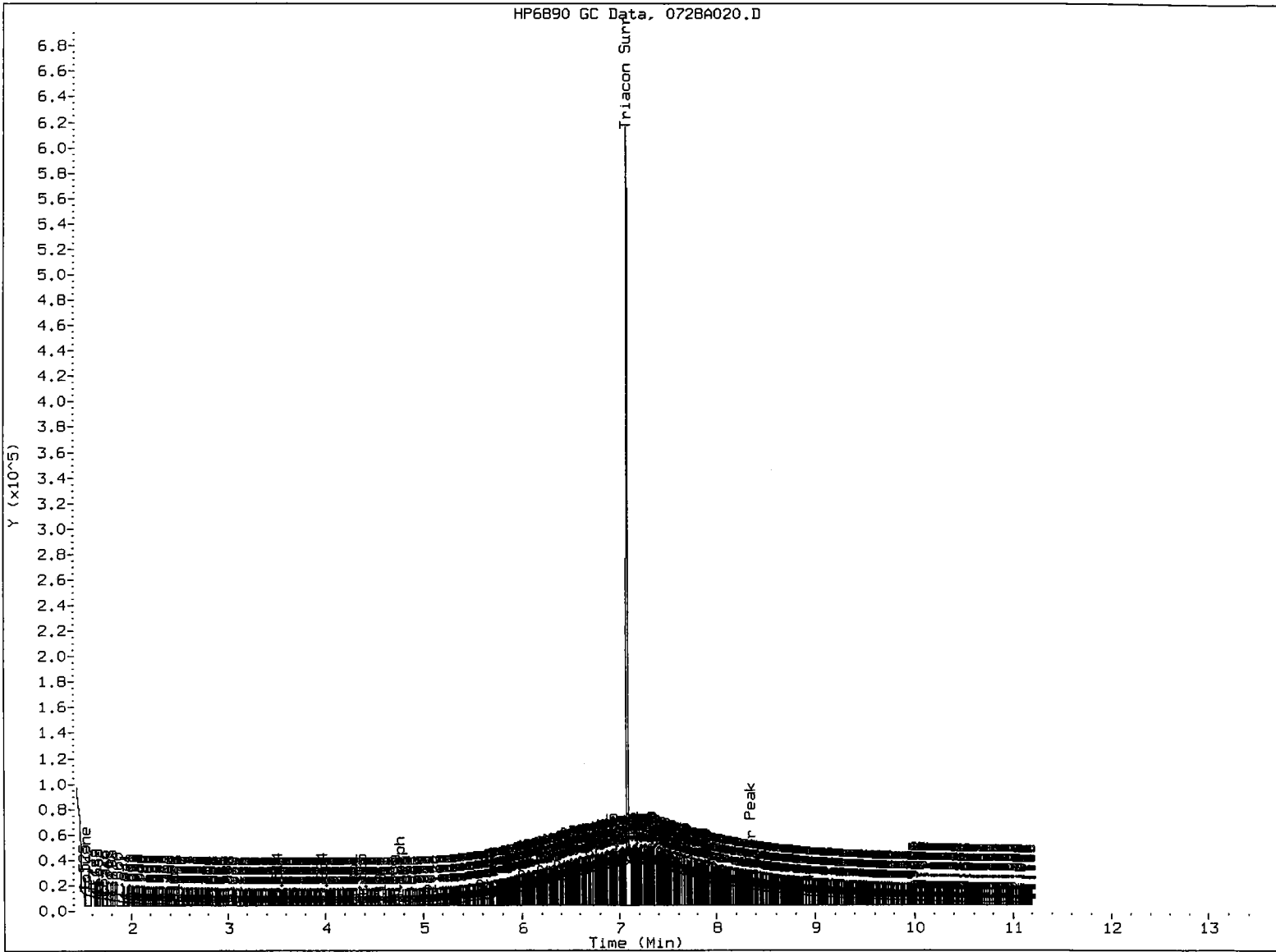
Instrument: fid9.1

Operator: HS

Column diameter: 0.25

/chem2/fid9.1/20100728.B/0728A020.D





MANUAL INTEGRATION

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

Analyst: MM

Date: 7/27/10

Analytical Resources Inc.  
NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

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

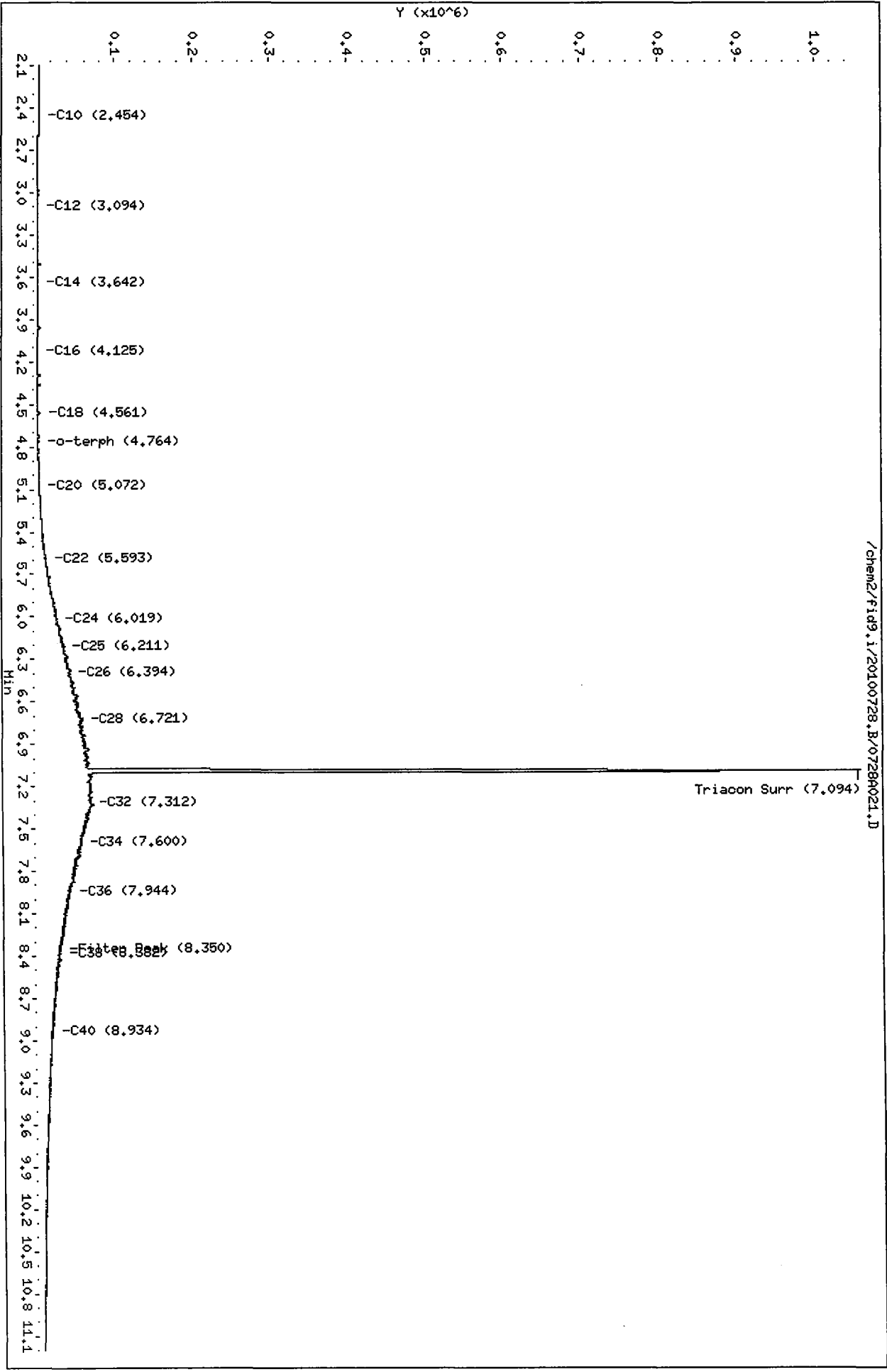
Surrogate	Area	Amount	%Rec
o-Terphenyl	1159	0.0	0.1
Triacontane	889470	44.8	99.7

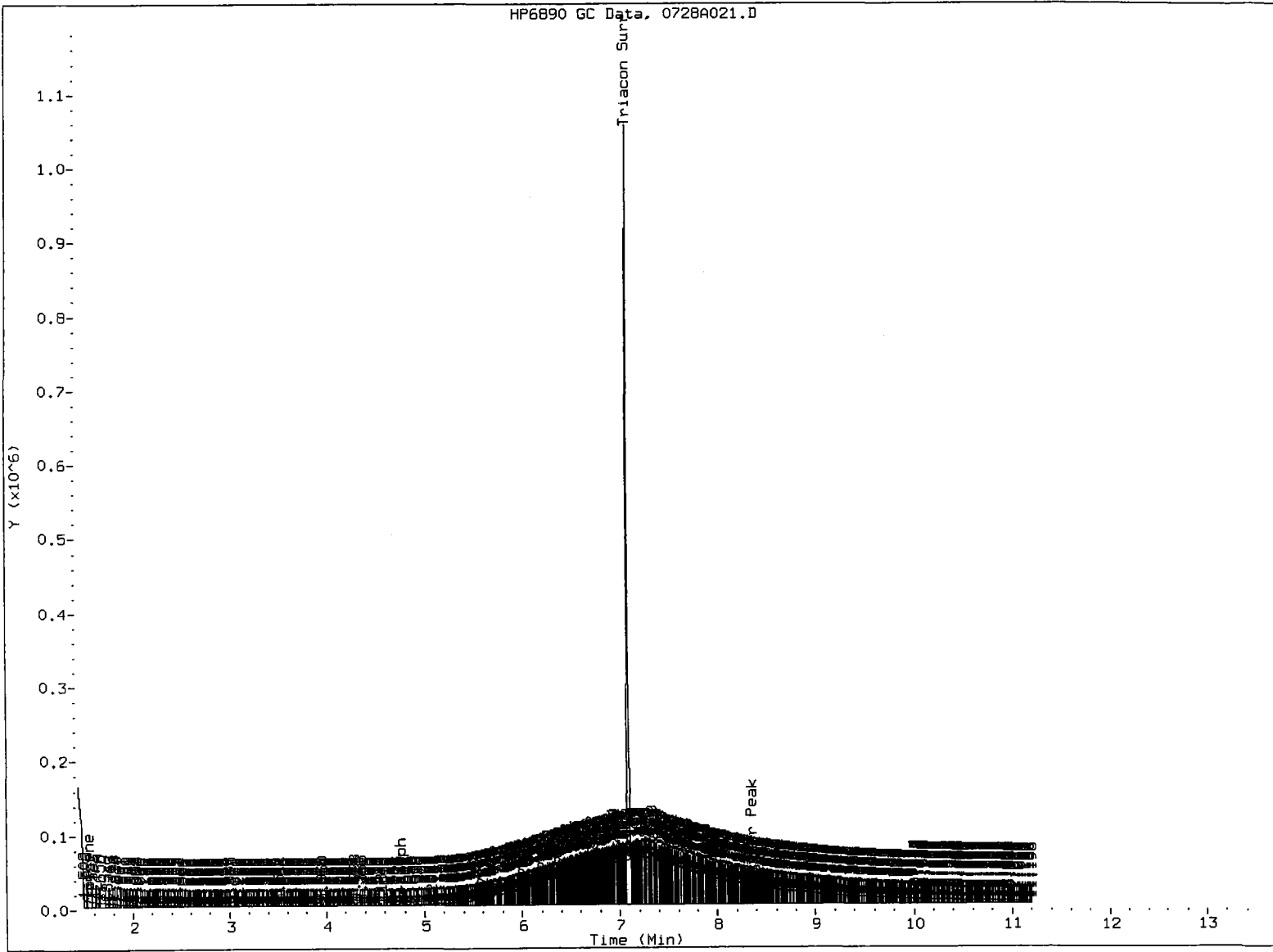
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8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

Data File: /chem2/fid9.1/20100728.B/0728021.D  
Date: 28-JUL-2010 23:36  
Client ID:  
Sample Info: MDL 500  
Column phase: RTX-1

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

/chem2/fid9.1/20100728.B/0728021.D





MANUAL INTEGRATION

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

Analyst: MA

Date: 2/20/10



Analytical Resources Inc.  
 NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

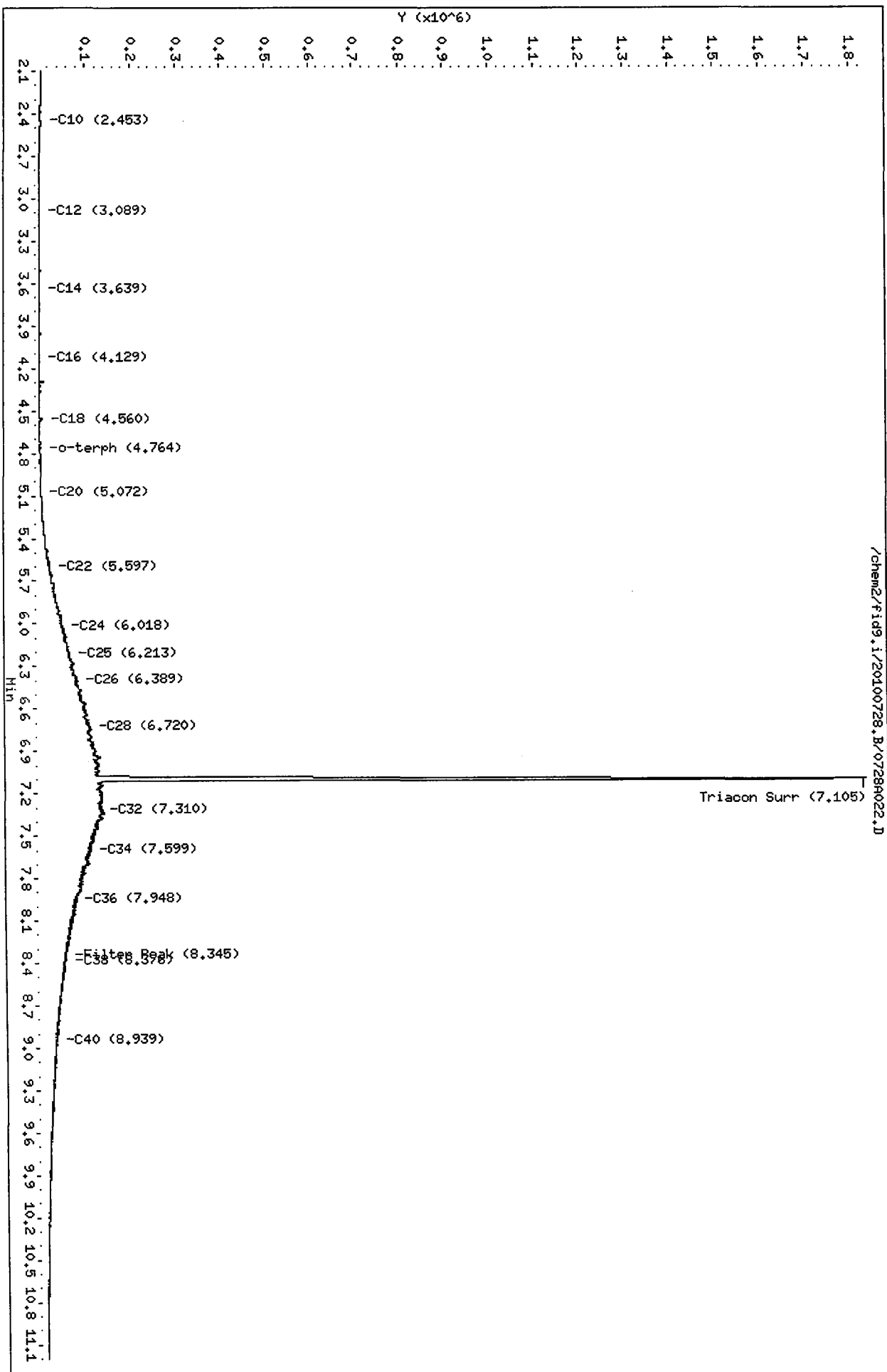
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
 NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

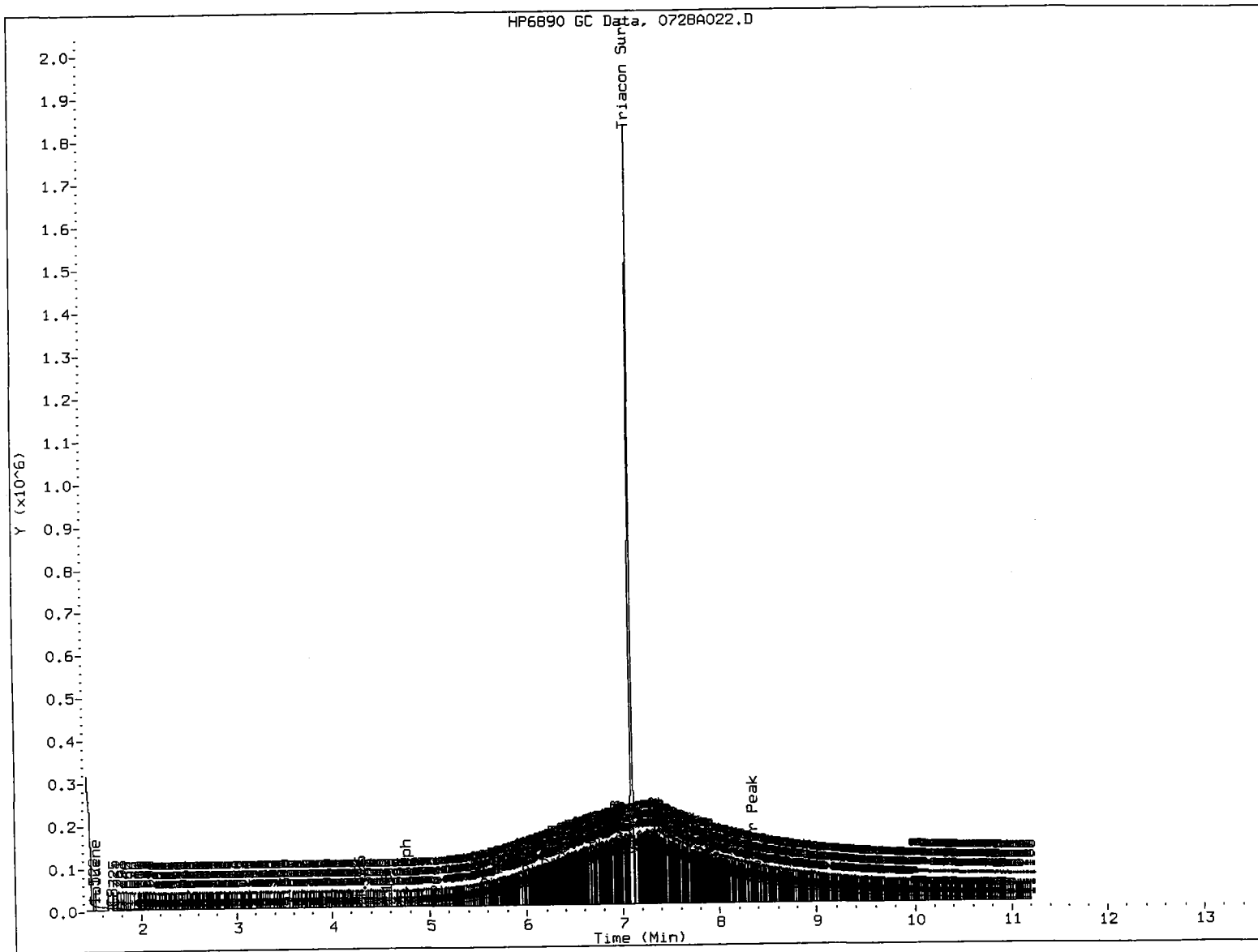
Surrogate	Area	Amount	%Rec
o-Terphenyl	1847	0.1	0.2
Triacontane	1806179	91.1	202.4

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

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

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





MANUAL INTEGRATION

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

Analyst: My

Date: 9/20/10

Analytical Resources Inc.  
 NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

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

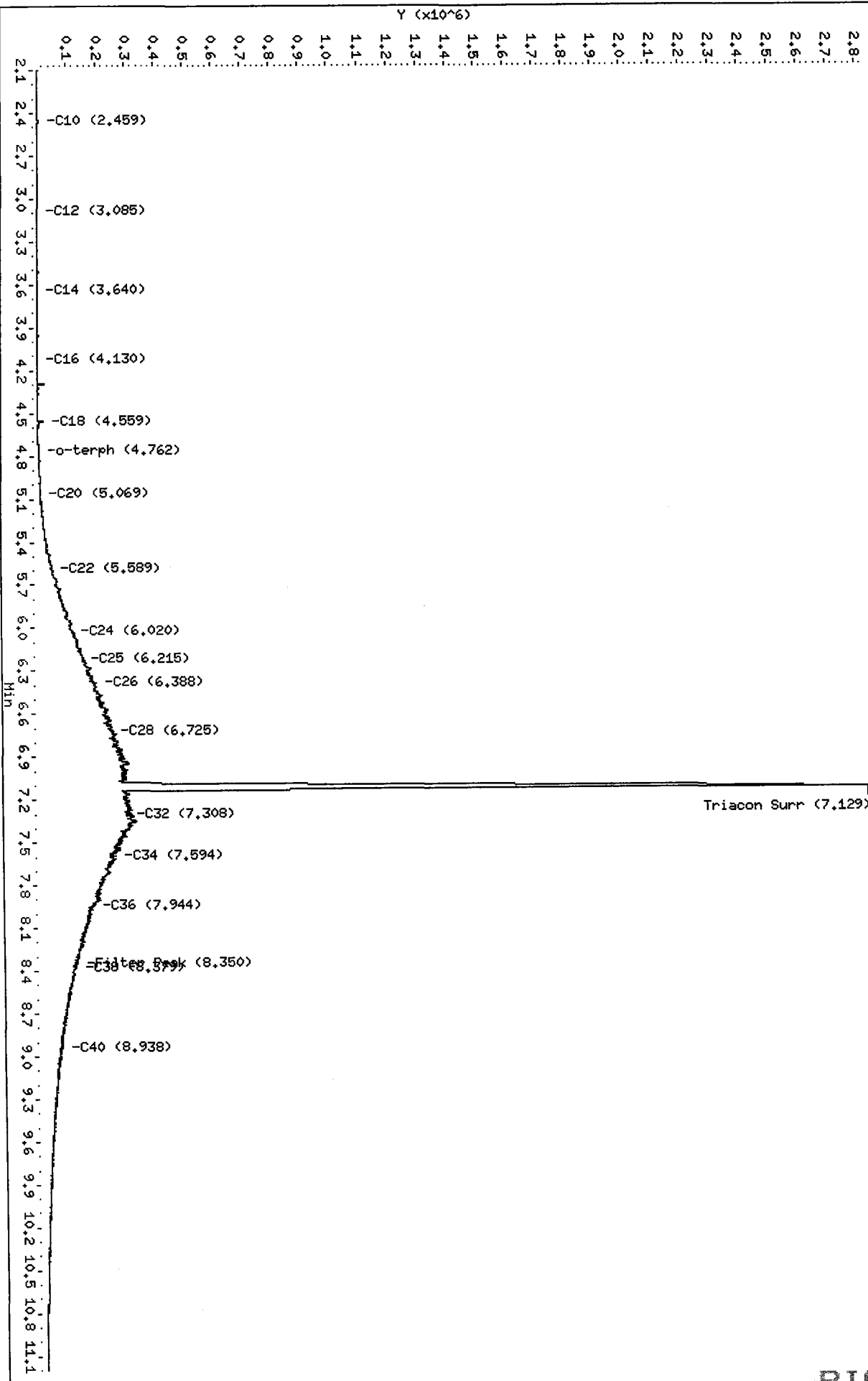
Surrogate	Area	Amount	%Rec
o-Terphenyl	4178	0.2	0.4
Triacontane	4343398	219.0	486.7

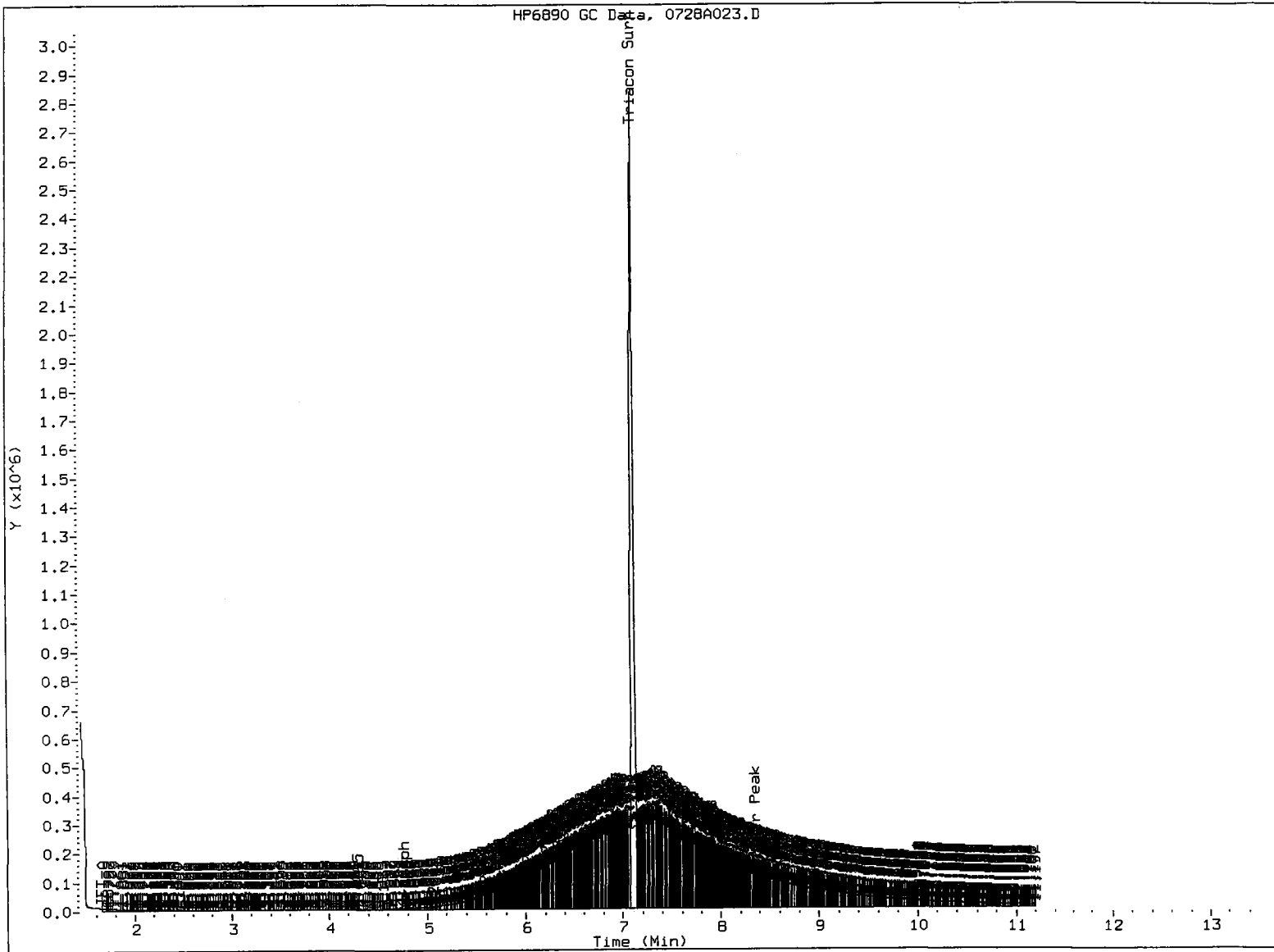
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8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

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

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

/chem2/fid9.i/20100728.B/0728A023.D





MANUAL INTEGRATION

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

Analyst: M

Date: 9/20/10

Analytical Resources Inc.  
 NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

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

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

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

Data File: /chem2/fid9.i/20100728.B/0728024.D

Date: 29-JUL-2010 00:40

Client ID:

Sample Info: H01L 5000

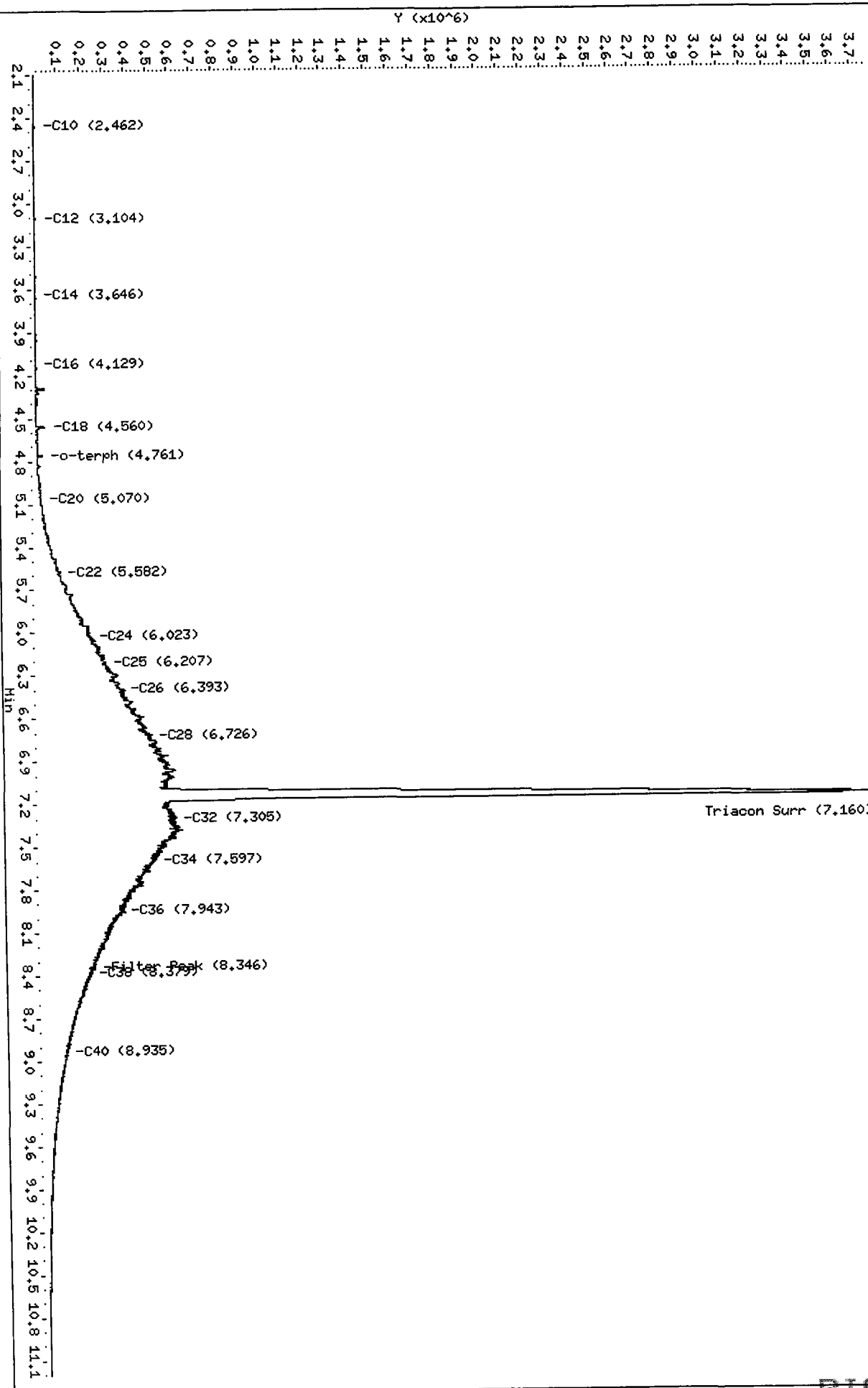
Column phase: RTX-1

Instrument: fid9.i

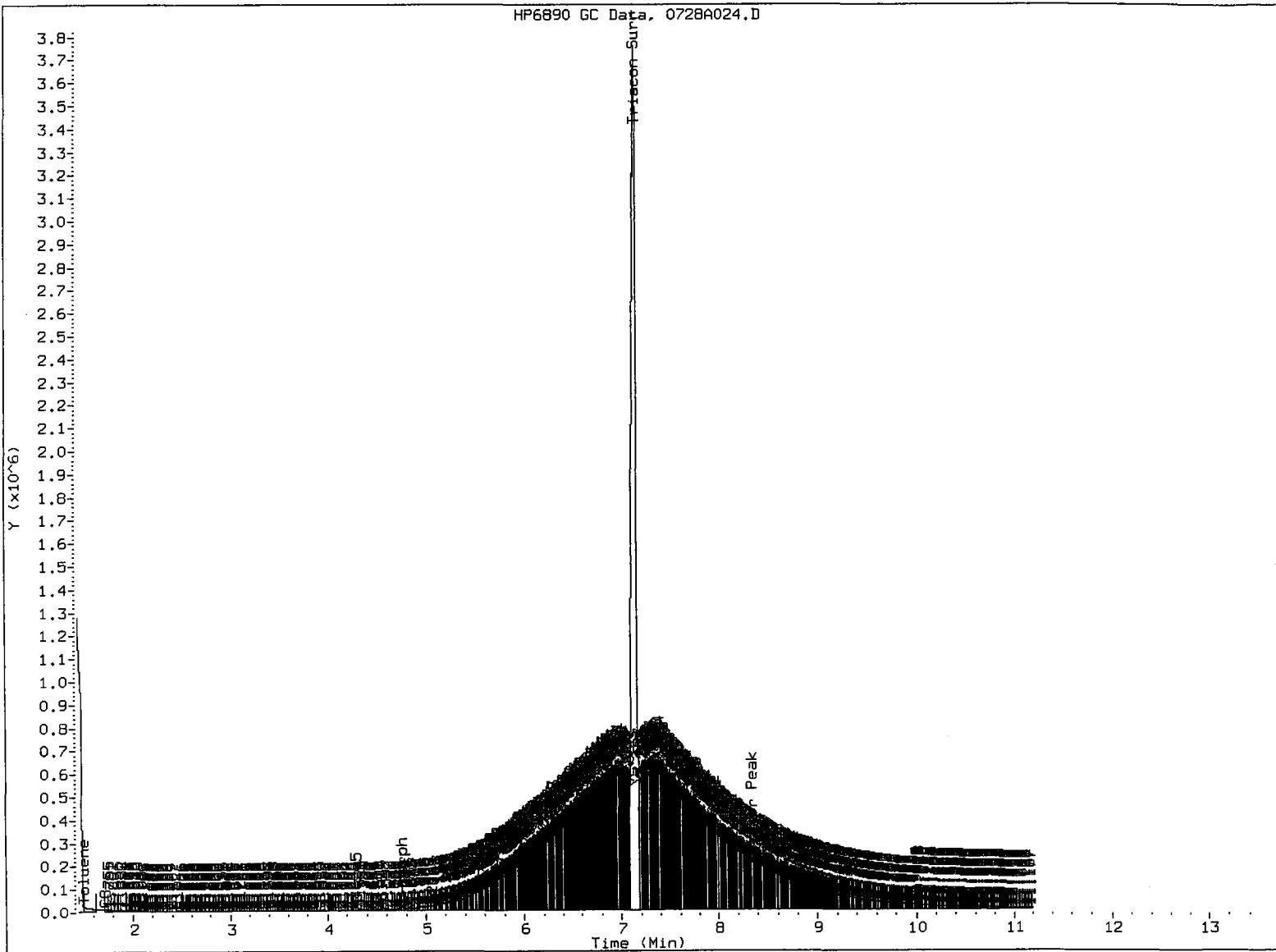
Operator: MS

Column diameter: 0.25

/chem2/fid9.i/20100728.B/0728024.D







MANUAL INTEGRATION

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

Analyst: MA

Date: 7/30/12

Analytical Resources Inc.  
NWTPH Quantitation Report

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

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

FID:9 RESULTS

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

M Indicates manual integration within range.

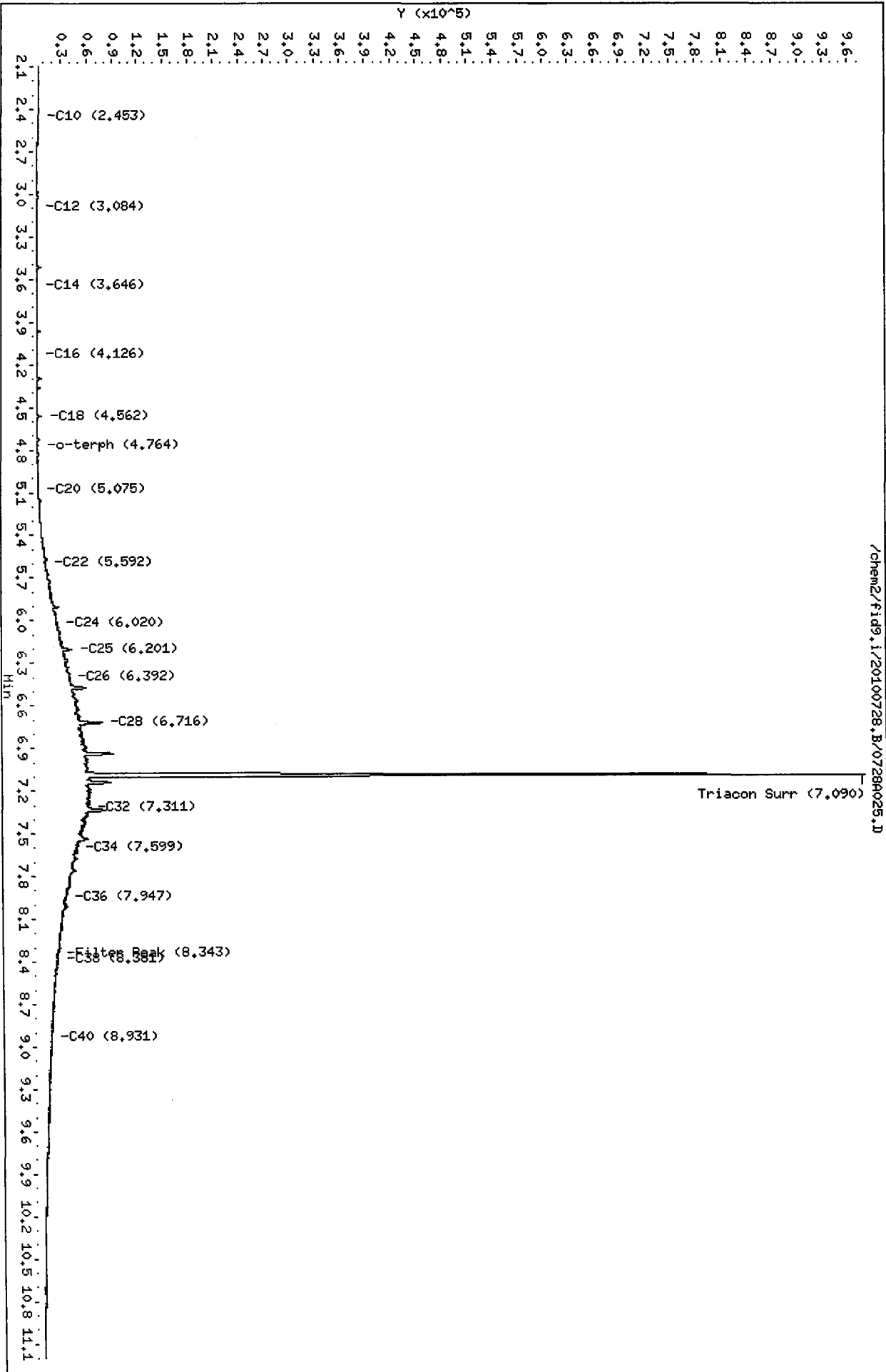
Range Times: NW Diesel(3.091 - 6.020) AK102(2.46 - 6.21) Jet A(2.46 - 4.57)  
NW M.Oil(6.02 - 8.38) AK103(6.21 - 7.94) OR Diesel(2.46 - 6.72)

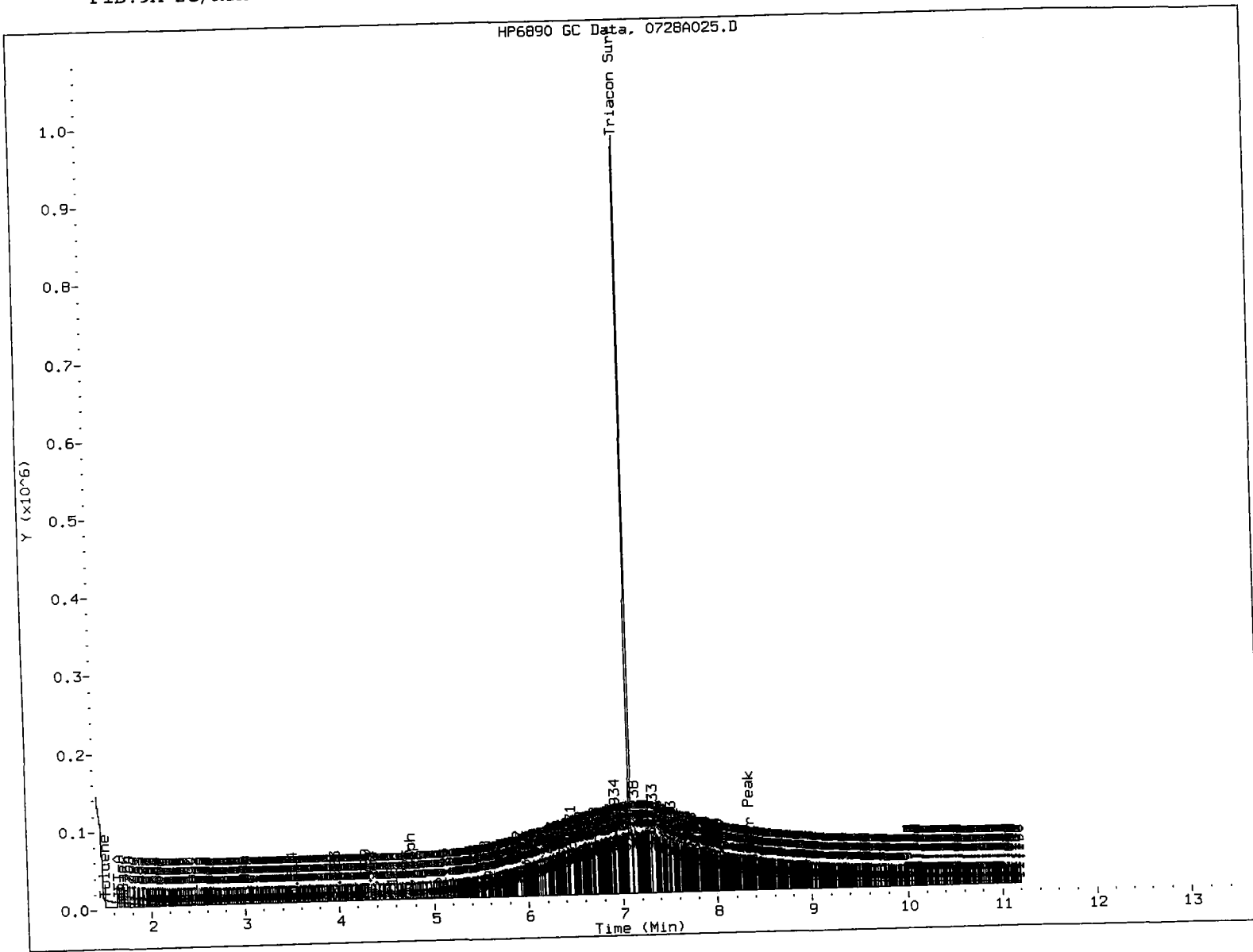
Surrogate	Area	Amount	%Rec
o-Terphenyl	933	0.0	0.1
Triacontane	806969	40.7	90.4

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

Data File: /chem2/fid9.i/20100728.B/07280025.D  
Date: 29-JUL-2010 01:01  
Client ID:  
Sample Info: MOLL ICV  
Column phase: RTX-1

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





MANUAL INTEGRATION

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

Analyst: MM

Date: 9/30/02

Analytical Resources Inc.  
NWTPH Quantitation Report

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

FID:9 RESULTS

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

M Indicates manual integration within range.

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

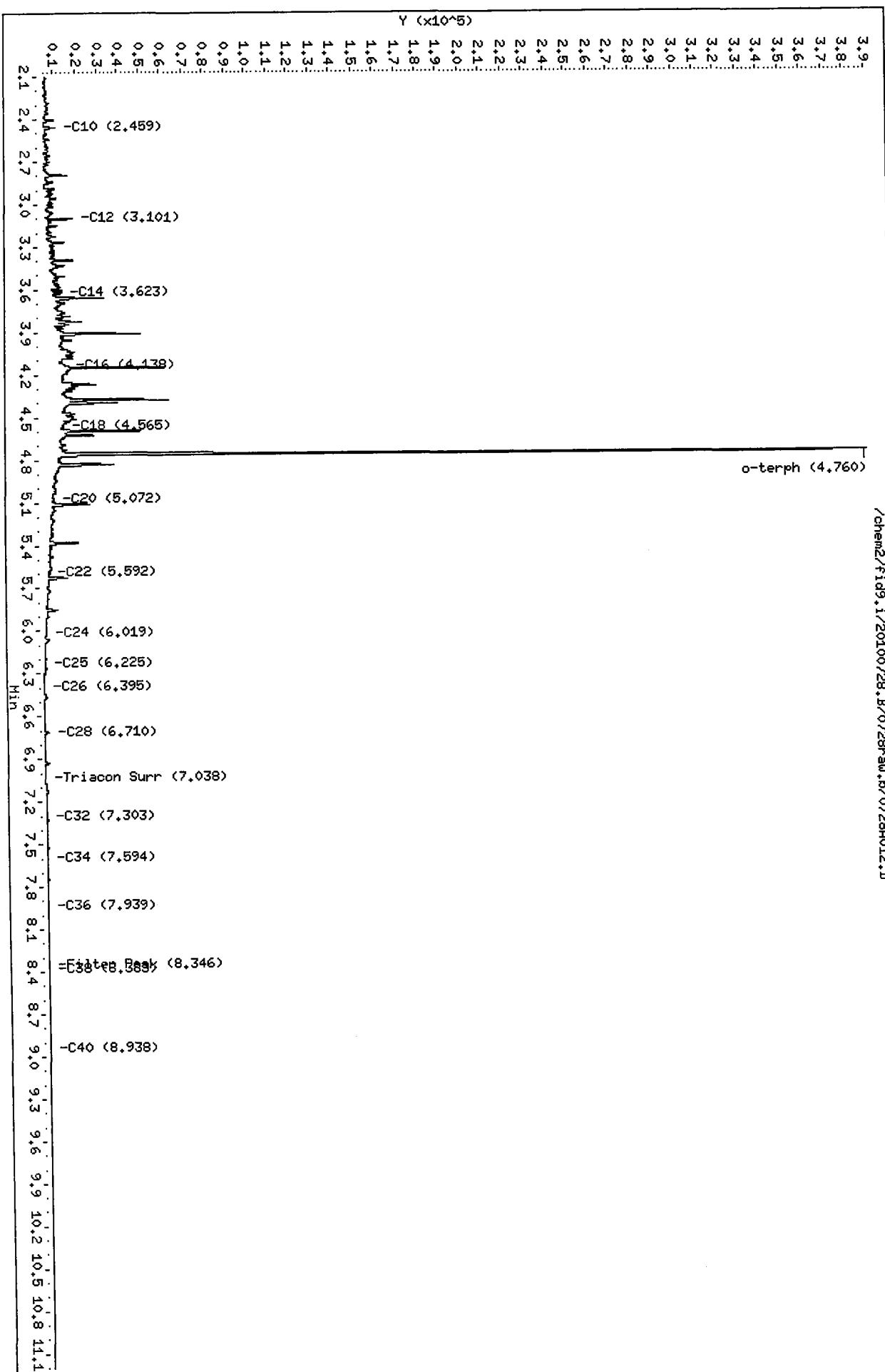
Surrogate	Area	Amount	%Rec
o-Terphenyl	262259	10.2	22.6
Triacontane	80	0.0	0.0

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

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

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



/chem2/fid9.i/20100728.B/0728raw.b/0728A012.D

Analytical Resources Inc.  
NWTPH Quantitation Report

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

FID:9 RESULTS

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

M Indicates manual integration within range.

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

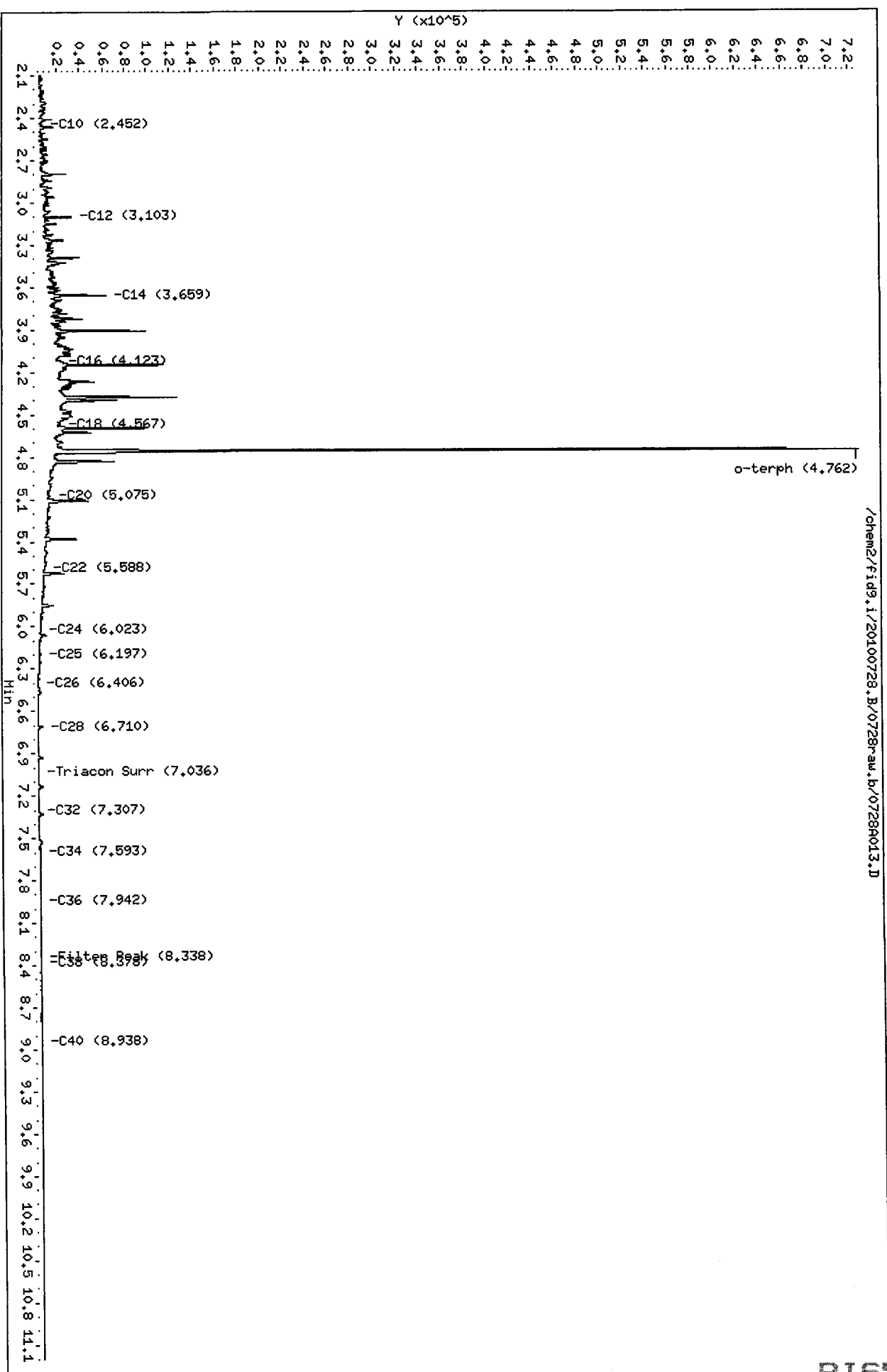
Surrogate	Area	Amount	%Rec
o-Terphenyl	506270	19.7	43.7
Triacontane	42	0.0	0.0

*MAD 01/11*

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

Data File: /chem2/fid9.i/20100728.B/0728r.aw,b/0728R013.D  
Date: 28-JUL-2010 20:45  
Client ID:  
Sample Info: DIESEL 100  
Column phase: RTX-1

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





Analytical Resources Inc.  
 NWTPH Quantitation Report

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

FID:9 RESULTS

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

M Indicates manual integration within range.

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

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

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

*M 7/30/10*

Data File: /chem2/fid9.i/20100728.B/0728raw.b/0728A014.D

Date: 28-JUL-2010 21:07

Client ID:

Sample Info: DIESEL 250

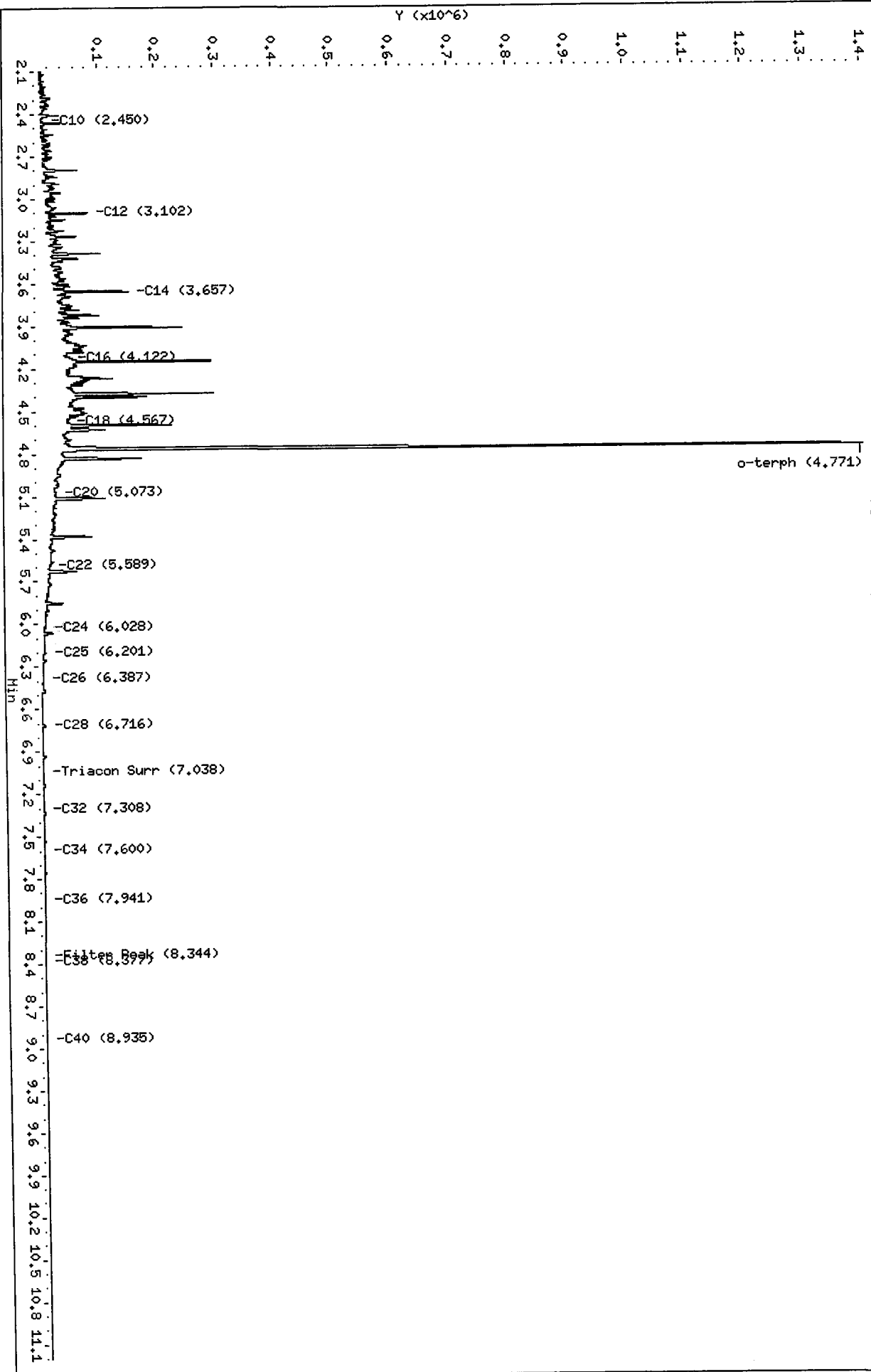
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

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Analytical Resources Inc.  
 NWTPH Quantitation Report

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

FID:9 RESULTS

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

M Indicates manual integration within range.

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

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

*M 7/29/10*

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

Data File: /chem2/fid9.i/20100728.B/0728r-aw,b/0728A015.D

Date: 28-JUL-2010 21:28

Client ID:

Sample Info: DIESEL 500

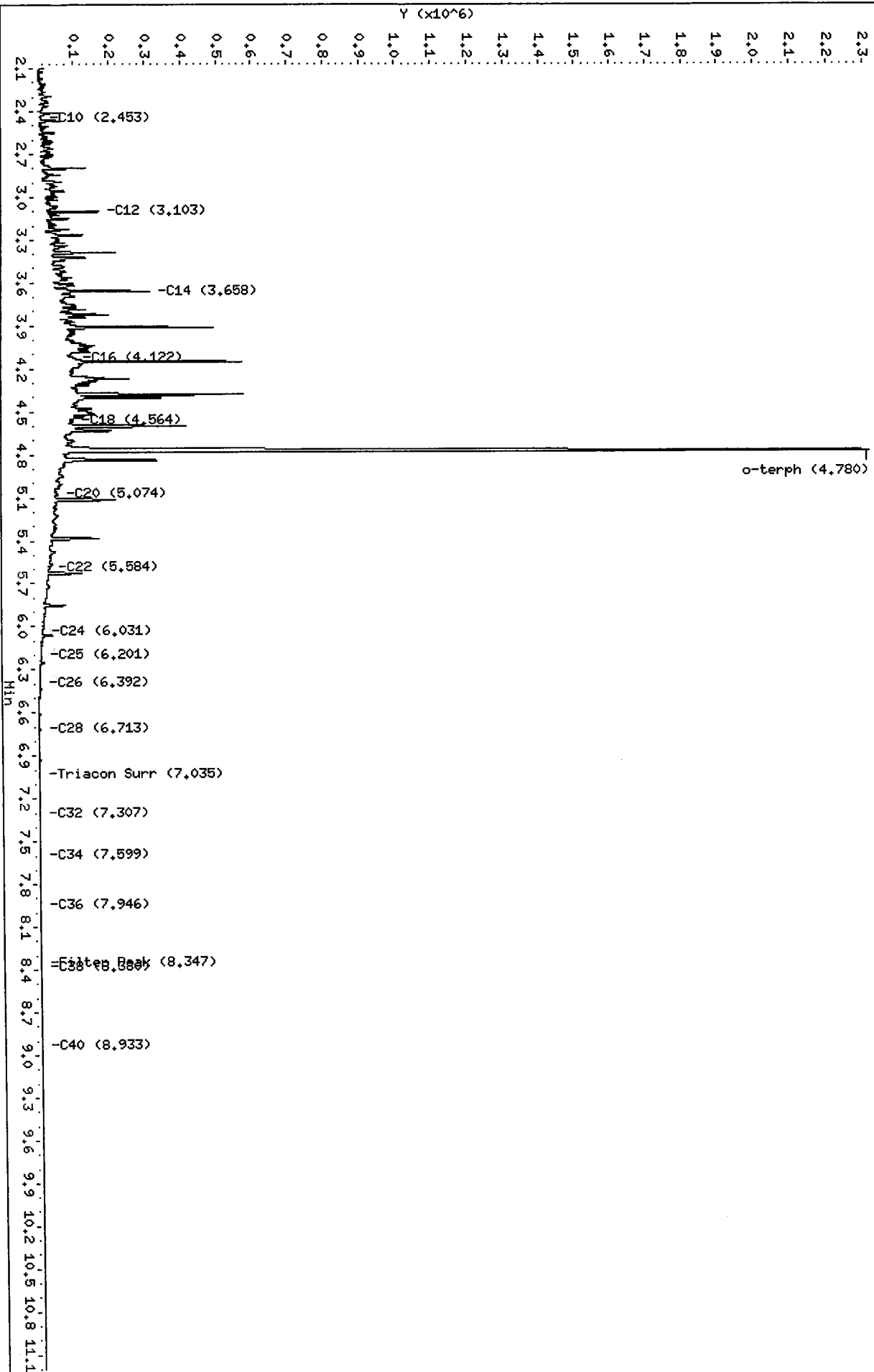
Column phase: RTX-1

Instrument: fid9.i

Operator: HS

Column diameter: 0.25

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Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A016.D ARI ID: DIESEL 1000  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 28-JUL-2010 21:49  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.522	-0.014	10876	15528	GAS (Tol-C12)	3531545	168
C8	1.681	-0.013	9803	11090	DIESEL (C12-C24)	25634454	974
C10	2.453	-0.002	18978	7692	M.OIL (C24-C38)	394336	31
C12	3.105	0.014	327593	189038	AK-102 (C10-C25)	28360210	976
C14	3.660	0.019	587586	585940	AK-103 (C25-C36)	290957	58
C16	4.123	-0.005	194975	156606			
C18	4.571	0.002	188327	195568			
C20	5.075	0.003	102065	48020			
C22	5.588	-0.001	60397	13108			
C24	6.012	-0.008	28768	31861			
C25	6.201	-0.011	17610	33377			
C26	6.390	-0.002	7211	10254			
C28	6.716	-0.006	7614	9107			
C32	7.302	-0.007	202	83	JP-4 (Tol-C14)	7631157	465
C34	7.591	-0.005	294	192	BUNKERC (C10-C38)	28658250	3268
Filter Peak	8.345	0.002	161	90			
C36	7.947	0.002	235	162			
C38	8.386	0.006	146	81			
C40	8.938	0.002	67	15			
o-terph	4.795	0.028	3307229	5312362	JET-A (C10-C18)	20311515	1470
Triacon Surr	7.032	-0.006	267	242	JP8 (Tol-C16)	14220053	808

M Indicates manual integration within range.

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

Surrogate	Area	Amount	%Rec
o-Terphenyl	5312362	206.2	458.2
Triacontane	242	0.0	0.0

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

Data File: /chem2/fid9.i/20100728.B/0728r-aw.b/0728A016.D

Date: 28-JUL-2010 21:49

Client ID:

Sample Info: DIESEL 1000

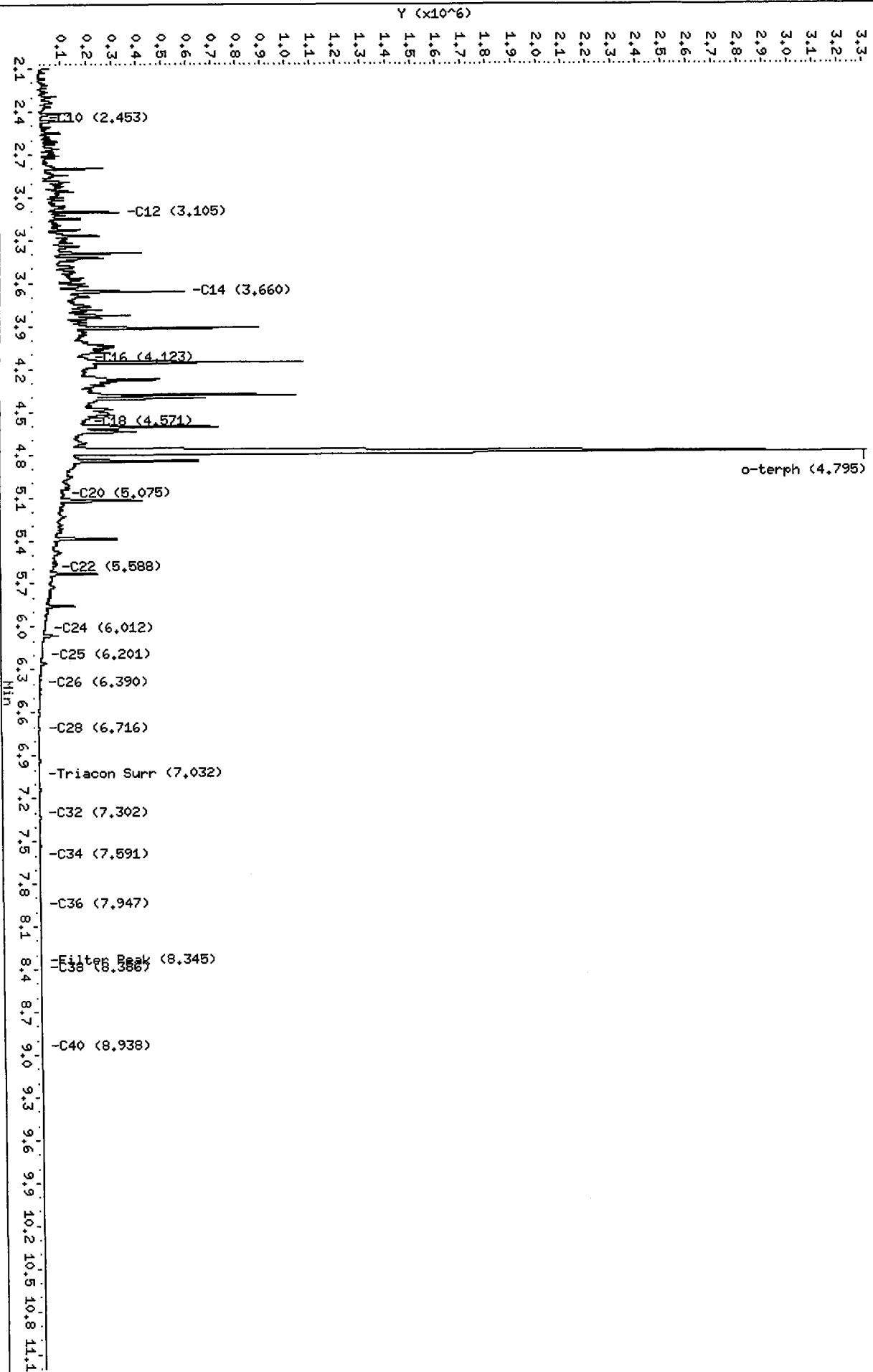
Column phase: RTX-1

Instrument: fid9.i

Operator: HS

Column diameter: 0.25

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Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/ftd9.i/20100728.B/0728raw.b/0728A017.D ARI ID: DIESEL 2500  
 Method: /chem2/ftd9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 28-JUL-2010 22:11  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.527	-0.009	13560	11562	GAS (Tol-C12)	8824002	420
C8	1.696	0.002	11080	4589	DIESEL (C12-C24)	78583836	2984
C10	2.446	-0.009	54486	45945	M.OIL (C24-C38)	1069546	84
C12	3.108	0.017	766741	530976	AK-102 (C10-C25)	85583799	2946
C14	3.623	-0.018	472383	536342	AK-103 (C25-C36)	814815	163
C16	4.129	0.001	485188	391044			
C18	4.575	0.006	464619	138288			
C20	5.065	-0.008	324441	293811			
C22	5.599	0.011	159352	44294			
C24	6.014	-0.006	74943	92274			
C25	6.200	-0.013	55517	125809			
C26	6.393	0.001	18866	27921			
C28	6.714	-0.009	18491	25629			
C32	7.300	-0.009	811	206	JP-4 (Tol-C14)	19257288	1174
C34	7.598	0.002	667	236	BUNKERC (C10-C38)	86411627	9852
Filter Peak	8.352	0.008	294	163			
C36	7.939	-0.006	456	454			
C38	8.372	-0.008	289	303			
C40	8.930	-0.005	144	37			
o-terph	4.745	-0.022	442051	349242	JET-A (C10-C18)	49526362	3584
Triacon Surr	7.036	-0.002	1327	1487	JP8 (Tol-C16)	35611639	2024

M Indicates manual integration within range.

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

Surrogate	Area	Amount	%Rec
o-Terphenyl	349242	13.6	30.1
Triacontane	1487	0.1	0.2

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

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Data File: /chem2/fid9.i/20100728.B/0728rsw.b/0728A017.D

Date: 28-JUL-2010 22:11

Client ID:

Sample Info: DIESEL 2500

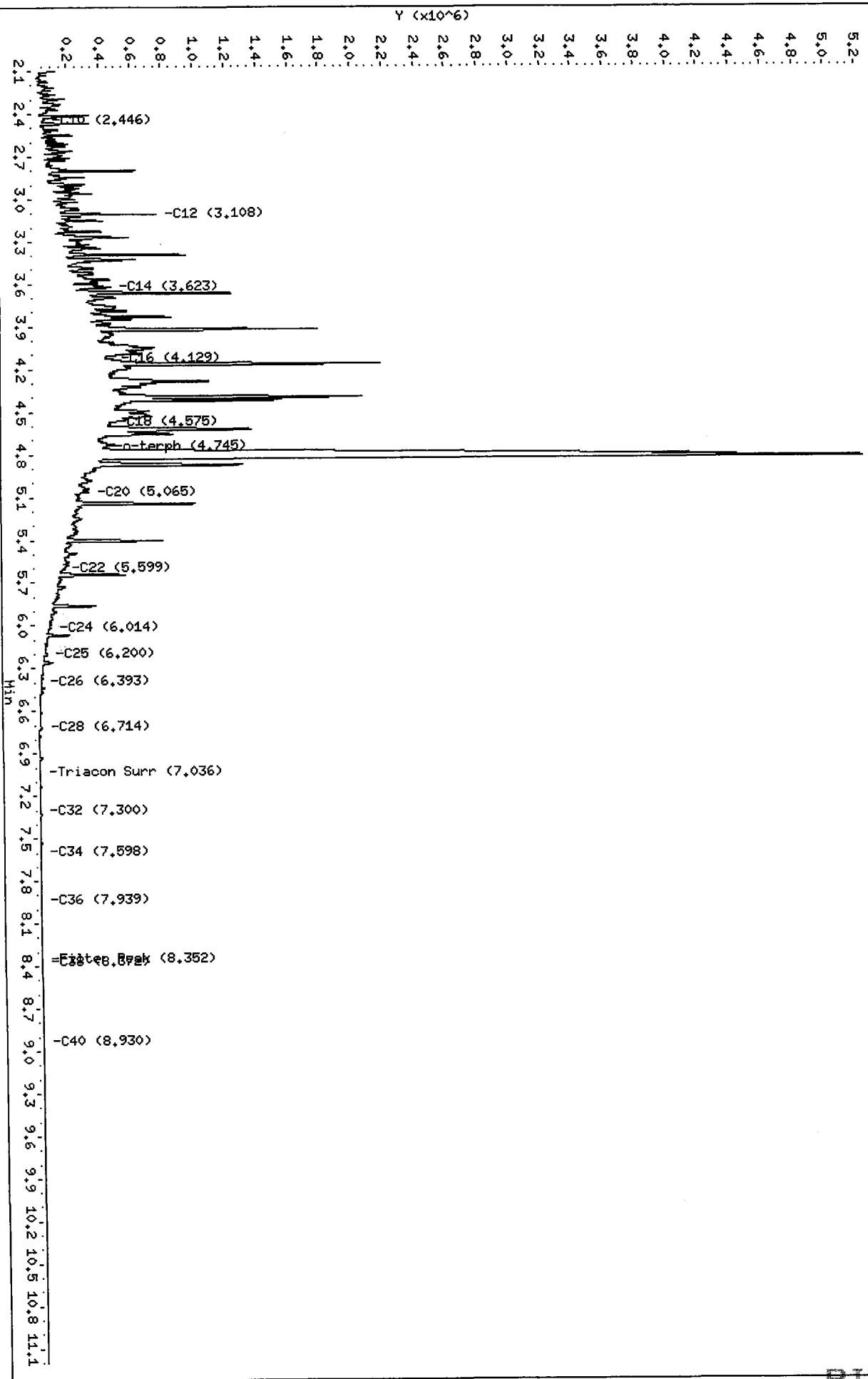
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

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Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A019.D ARI ID: MOIL 100  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 28-JUL-2010 22:53  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS							
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.544	0.008	7458	18695	GAS (Tol-C12)	141901	7
C8	1.726	0.033	5158	6296	DIESEL (C12-C24)	170722	6
C10	2.453	-0.002	2104	2277	M.OIL (C24-C38)	1637902	128
C12	3.087	-0.004	132	32	AK-102 (C10-C25)	227313	8
C14	3.638	-0.003	73	40	AK-103 (C25-C36)	1430764	286
C16	4.130	0.002	69	41			
C18	4.564	-0.005	811	866			
C20	5.075	0.003	500	282			
C22	5.588	-0.001	2108	500			
C24	6.024	0.004	5281	1867			
C25	6.222	0.010	6965	4086			
C26	6.393	0.001	8433	4859			
C28	6.715	-0.008	26196	37657			
C32	7.310	0.001	14515	3993	JP-4 (Tol-C14)	147735	9
C34	7.596	0.000	11767	4821	BUNKERC (C10-C38)	1833277	209
Filter Peak	8.344	0.001	6091	3946			
C36	7.940	-0.005	8533	7979			
C38	8.385	0.005	5855	2782			
C40	8.936	0.000	3917	1842			
o-terph	4.766	-0.001	1479	1425	JET-A (C10-C18)	40423	3
Triacon Surr	7.036	-0.002	13527	12287	JP8 (Tol-C16)	151586	9

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

Surrogate	Area	Amount	%Rec
o-Terphenyl	1425	0.1	0.1
Triacontane	12287	0.6	1.4

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

Data File: /chem2/fid9.i/20100728.B/0728r-au.b/0728A019.D

Date: 28-JUL-2010 22:53

Client ID:

Sample Info: MOIL 100

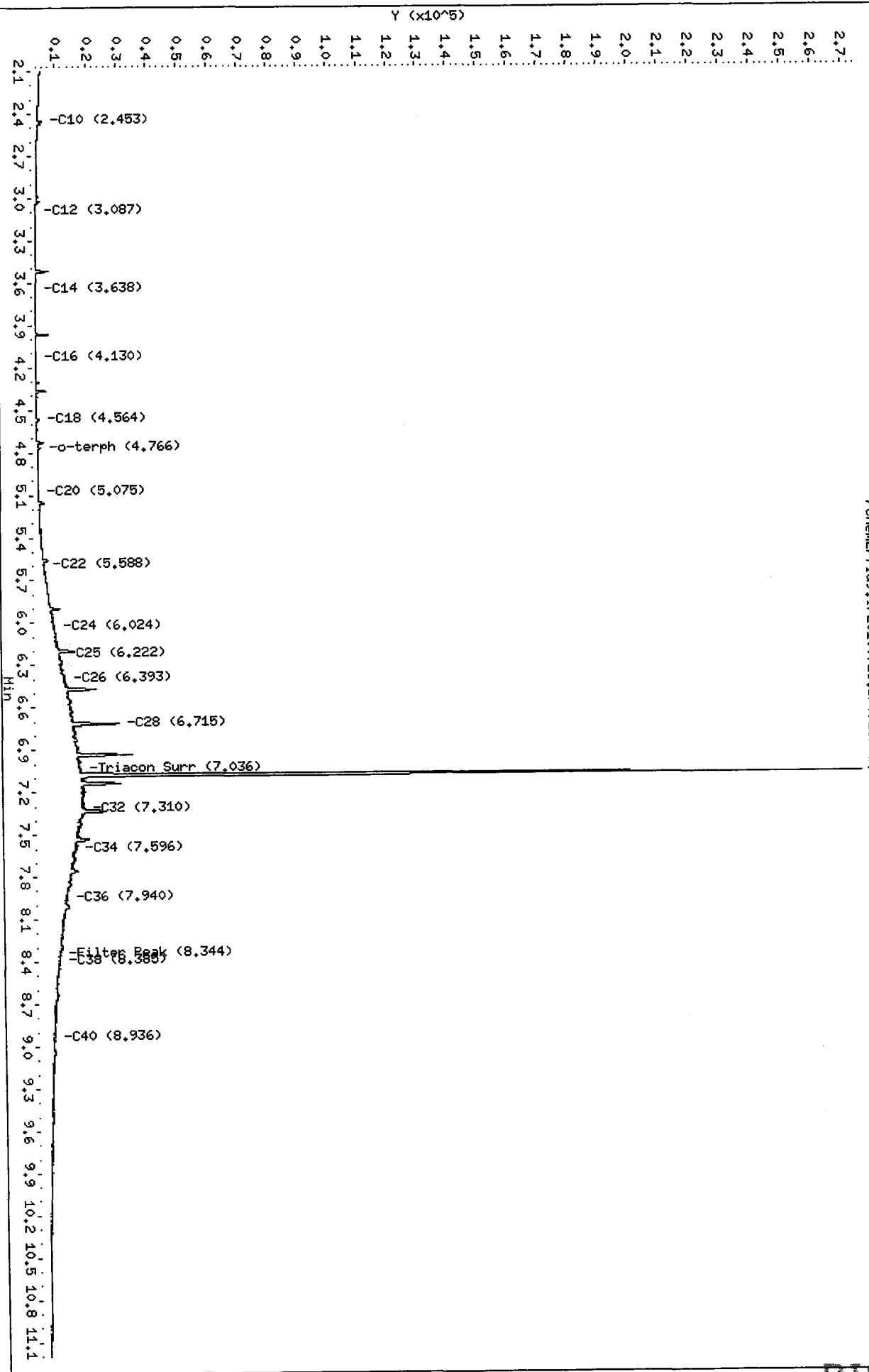
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

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Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A020.D ARI ID: MOIL 250  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 28-JUL-2010 23:15  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.542	0.006	9497	26573	GAS (Tol-C12)	196853	9
C8	1.701	0.007	5948	3882	DIESEL (C12-C24)	365810	14
C10	2.453	-0.002	2442	3279	M.OIL (C24-C38)	3704698	290
C12	3.084	-0.007	295	172	AK-102 (C10-C25)	480434	17
C14	3.641	0.000	143	28	AK-103 (C25-C36)	3234984	646
C16	4.130	0.002	41	6			
C18	4.564	-0.005	1875	1532			
C20	5.076	0.003	1034	1260			
C22	5.593	0.005	5116	2268			
C24	6.019	-0.001	12501	3919			
C25	6.217	0.004	16132	5120			
C26	6.394	0.003	20541	11264			
C28	6.719	-0.004	29297	45978			
C32	7.310	0.001	33294	13189	JP-4 (Tol-C14)	205495	13
C34	7.596	0.000	26975	12175	BUNKERC (C10-C38)	4105098	468
Filter Peak	8.341	-0.002	13586	4242			
C36	7.941	-0.004	19049	9333			
C38	8.372	-0.008	13101	10702			
C40	8.931	-0.004	8356	5723			
o-terph	4.766	-0.001	970	1169	JET-A (C10-C18)	53412	4
Triacon Surr	7.041	0.003	32829	14153	JP8 (Tol-C16)	208886	12

M Indicates manual integration within range.

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

Surrogate	Area	Amount	%Rec
o-Terphenyl	1169	0.0	0.1
Triacontane	14153	0.7	1.6

*Not 13070*

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

Data File: /chem2/fid9.i/20100728.B/0728raw.b/0728A020.D

Date : 28-JUL-2010 23:15

Client ID:

Sample Info: MOIL 250

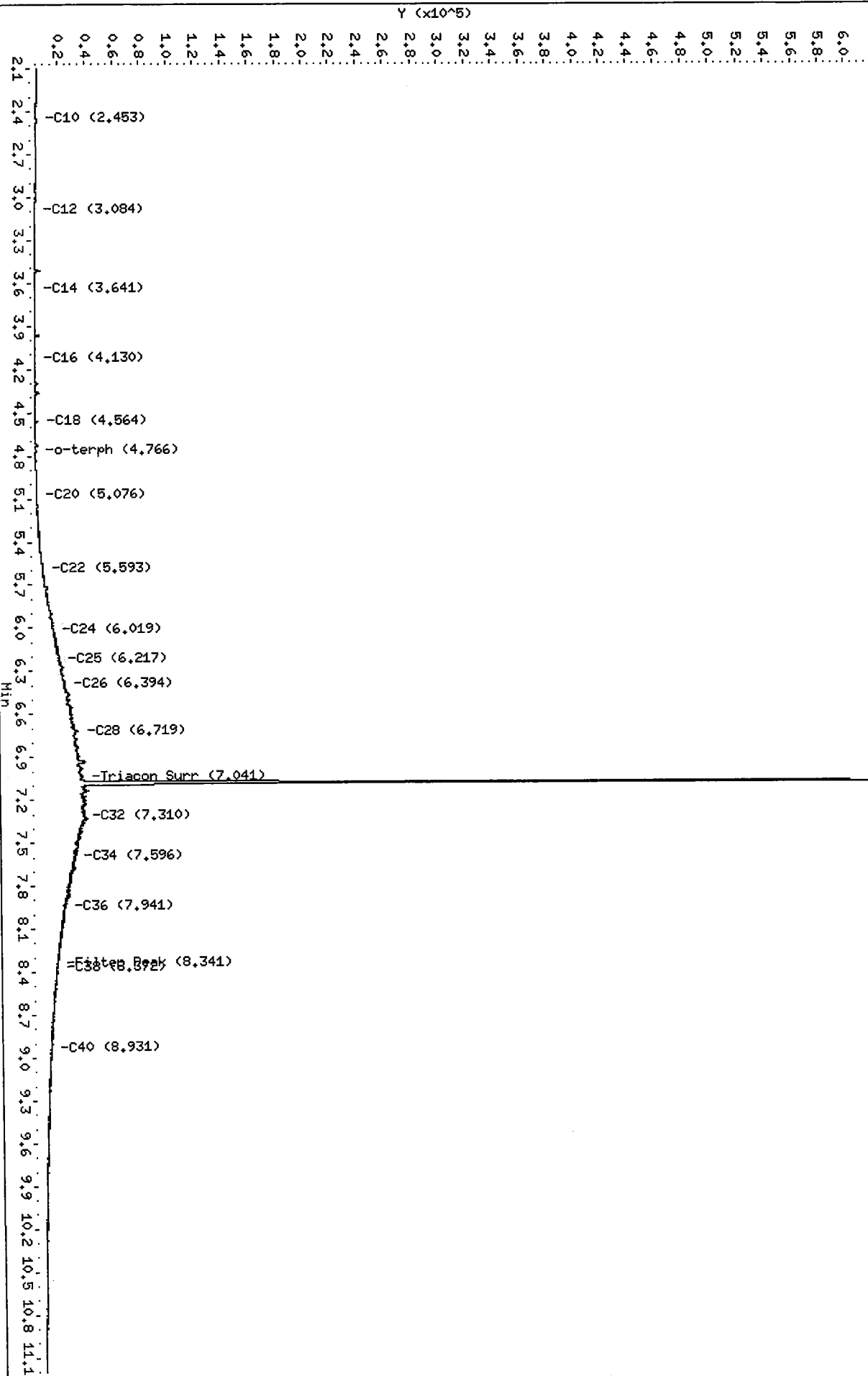
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

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Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A021.D ARI ID: MOIL 500  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 28-JUL-2010 23:36  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.544	0.008	9179	20369	GAS (Tol-C12)	216239	10
C8	1.728	0.034	6026	8955	DIESEL (C12-C24)	681352	26
C10	2.454	-0.002	2354	2271	M.OIL (C24-C38)	7090303	554
C12	3.094	0.003	289	44	AK-102 (C10-C25)	866175	30
C14	3.642	0.001	195	126	AK-103 (C25-C36)	6178857	1234
C16	4.125	-0.003	40	9			
C18	4.561	-0.008	3657	2936			
C20	5.072	-0.001	2047	2188			
C22	5.593	0.004	10080	6940			
C24	6.019	-0.001	23765	7965			
C25	6.211	-0.002	31744	9374			
C26	6.394	0.003	39169	13151			
C28	6.721	-0.002	55036	30221			
C32	7.312	0.003	65826	24703	JP-4 (Tol-C14)	225770	14
C34	7.600	0.003	52438	20690	BUNKERC (C10-C38)	7803945	890
Filter Peak	8.350	0.007	26035	6689			
C36	7.944	-0.001	38444	12762			
C38	8.382	0.002	26485	18398			
C40	8.934	-0.002	15558	5694			
o-terph	4.764	-0.003	1139	1159	JET-A (C10-C18)	56856	4
Triacon Surr	7.035	-0.003	64313	60373	JP8 (Tol-C16)	229628	13

M Indicates manual integration within range.

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

Surrogate	Area	Amount	%Rec
o-Terphenyl	1159	0.0	0.1
Triacontane	60373	3.0	6.8

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

*M 7/30/10*

Data File: /chem2/fid9.i/20100728.B/0728raw.b/0728A021.D

Date : 28-JUL-2010 23:36

Client ID:

Sample Info: M01L 500

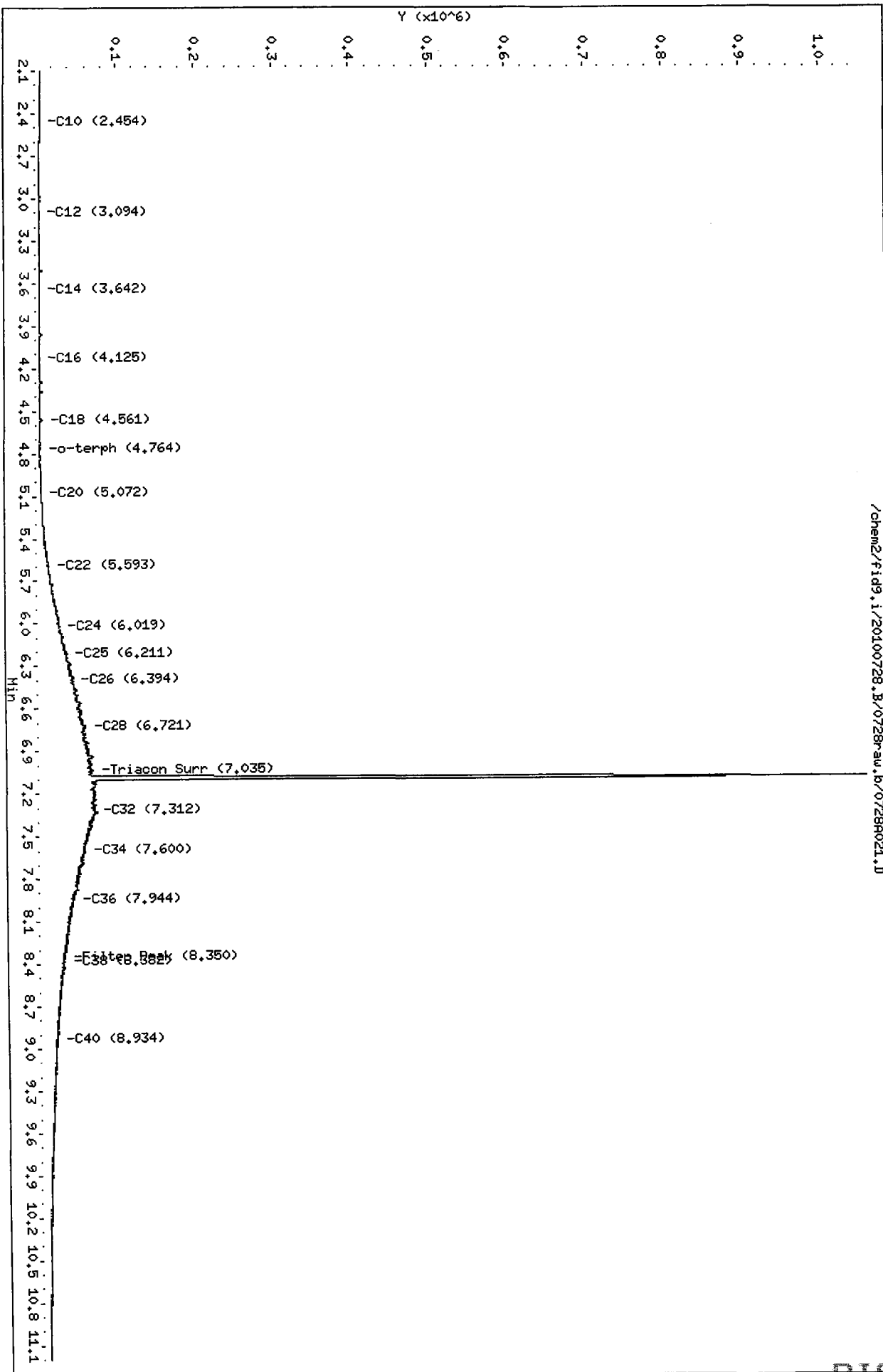
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

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Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A022.D ARI ID: MOIL 1000  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 28-JUL-2010 23:57  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.538	0.002	10649	63178	GAS (Tol-C12)	218627	10
C8	1.703	0.010	6083	4895	DIESEL (C12-C24)	1375330	52
C10	2.453	-0.003	2350	1902	M.OIL (C24-C38)	14305504	1119
C12	3.089	-0.002	381	214	AK-102 (C10-C25)	1720432	59
C14	3.639	-0.002	299	246	AK-103 (C25-C36)	12524196	2500
C16	4.129	0.000	79	16			
C18	4.560	-0.009	7645	6024			
C20	5.072	0.000	4064	7040			
C22	5.597	0.008	20853	24416			
C24	6.018	-0.002	49376	52041			
C25	6.213	0.001	63610	16233			
C26	6.389	-0.002	79064	34283			
C28	6.720	-0.003	107910	42122			
C32	7.310	0.001	130942	41405	JP-4 (Tol-C14)	231895	14
C34	7.599	0.002	108281	136091	BUNKERC (C10-C38)	15714808	1792
Filter Peak	8.345	0.002	52029	25346			
C36	7.948	0.003	74855	16070			
C38	8.376	-0.004	51433	44591			
C40	8.939	0.003	30398	16046			
o-terph	4.764	-0.003	1794	1847	JET-A (C10-C18)	72341	5
Triacon Surr	7.037	-0.001	127050	74010	JP8 (Tol-C16)	236928	13

M Indicates manual integration within range.

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

Surrogate	Area	Amount	%Rec
o-Terphenyl	1847	0.1	0.2
Triacontane	74010	3.7	8.3

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

Data File: /chem2/fid9.i/20100728.B/0728raw.b/0728A022.D

Date: 28-JUL-2010 23:57

Client ID:

Sample Info: MOIL 4000

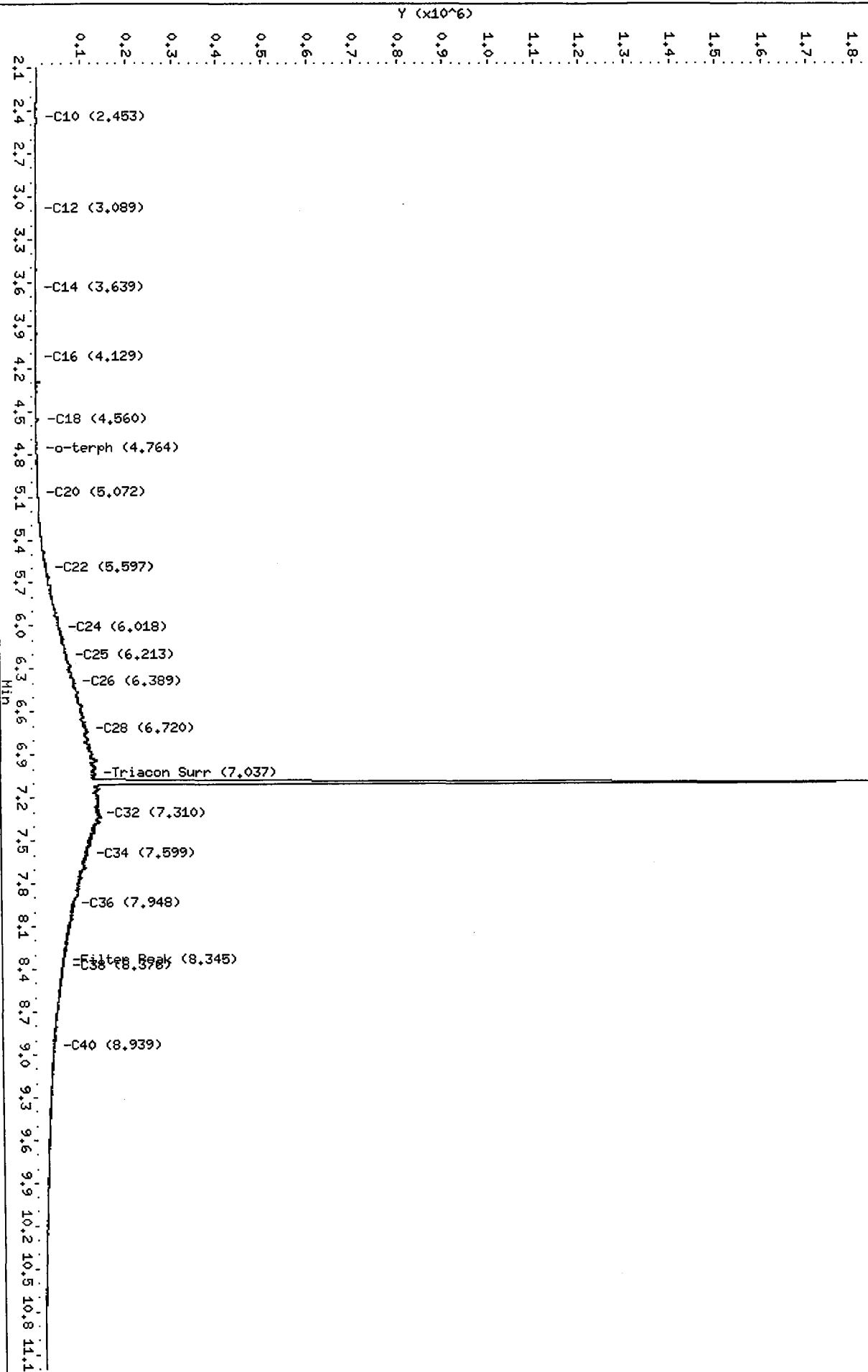
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

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





Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A023.D ARI ID: MOIL 2500  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 29-JUL-2010 00:18  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	----				GAS (Tol-C12)	185483	9
C8	1.718	0.025	7199	4779	DIESEL (C12-C24)	3353157	127
C10	2.459	0.004	3767	6961	M.OIL (C24-C38)	34124562	2669
C12	3.085	-0.006	494	385	AK-102 (C10-C25)	4193453	144
C14	3.640	-0.001	498	323	AK-103 (C25-C36)	29834397	5956
C16	4.130	0.001	204	91			
C18	4.559	-0.010	20942	16266			
C20	5.069	-0.004	9741	14269			
C22	5.589	0.001	46953	16444			
C24	6.020	0.000	116155	30105			
C25	6.215	0.003	149541	35623			
C26	6.388	-0.003	192672	83538			
C28	6.725	0.002	249614	49500			
C32	7.308	-0.001	301815	83744	JP-4 (Tol-C14)	202516	12
C34	7.594	-0.002	255953	217957	BUNKERC (C10-C38)	37513451	4277
Filter Peak	8.350	0.006	124584	111418			
C36	7.944	-0.001	179229	56451			
C38	8.379	-0.001	117276	59781			
C40	8.938	0.003	70596	37072			
o-terph	4.762	-0.005	3843	4178	JET-A (C10-C18)	110588	8
Triacon Surr	7.043	0.005	291768	230191	JP8 (Tol-C16)	210004	12

M Indicates manual integration within range.

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

Surrogate	Area	Amount	%Rec
o-Terphenyl	4178	0.2	0.4
Triacontane	230191	11.6	25.8

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

*MW/591*

Data File: /chem2/Fid9,1/20100728,B/0728raw,b/0728A023.D

Date: 29-JUL-2010 00:18

Client ID:

Sample Info: MDIL 2500

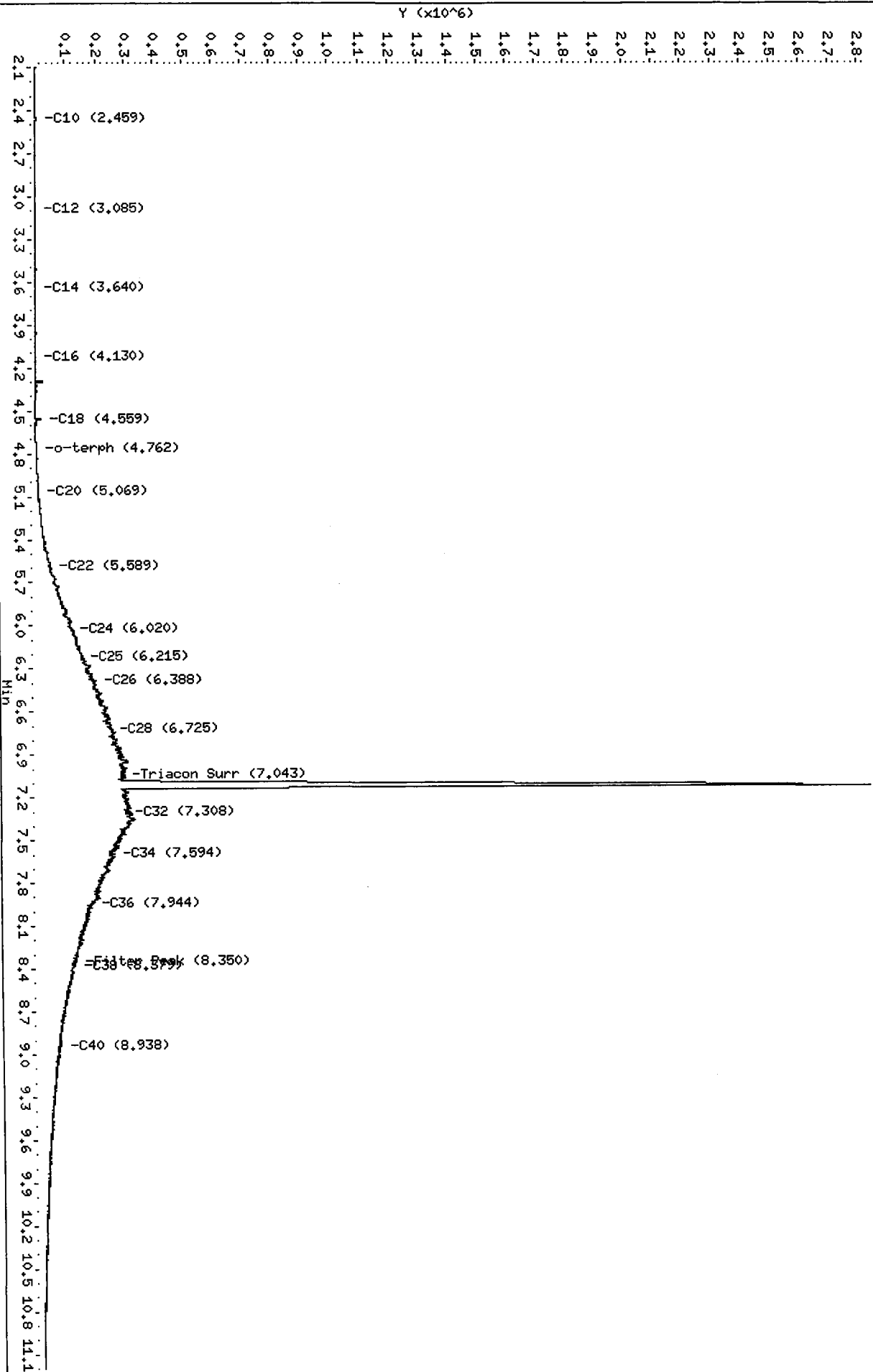
Column phase: RTX-1

Instrument: fid9,1

Operator: MS

Column diameter: 0.25

/chem2/Fid9,1/20100728,B/0728raw,b/0728A023.D



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100728.B/0728raw.b/0728A024.D ARI ID: MOIL 5000  
 Method: /chem2/fid9.i/20100728.B/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 29-JUL-2010 00:40  
 Operator: MS Dilution Factor: 1  
 Report Date: 07/30/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.505	-0.031	22596	103344	GAS (Tol-C12)	263209	13
C8	1.724	0.030	8164	11347	DIESEL (C12-C24)	6666776	253
C10	2.462	0.006	6166	7110	M.OIL (C24-C38)	67258151	5260
C12	3.104	0.013	3368	1784	AK-102 (C10-C25)	8147281	280
C14	3.646	0.005	615	350	AK-103 (C25-C36)	59351121	11849
C16	4.129	0.001	608	343			
C18	4.560	-0.009	37045	30543			
C20	5.070	-0.002	19428	26259			
C22	5.582	-0.007	96098	68803			
C24	6.023	0.003	234560	106000			
C25	6.207	-0.006	297700	255615			
C26	6.393	0.001	373459	230456			
C28	6.726	0.003	495735	196084			
C32	7.305	-0.004	602415	260738	JP-4 (Tol-C14)	285229	17
C34	7.597	0.000	510745	472002	BUNKERC (C10-C38)	73961804	8433
Filter Peak	8.346	0.002	226260	178664			
C36	7.943	-0.001	358012	278298			
C38	8.379	-0.001	210178	74132			
C40	8.935	0.000	96401	47669			
o-terph	4.761	-0.006	24528	21927	JET-A (C10-C18)	180059	13
Triacon Surr	7.043	0.005	564895	111509	JP8 (Tol-C16)	304722	17

M Indicates manual integration within range.

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

Surrogate	Area	Amount	%Rec
o-Terphenyl	21927	0.9	1.9
Triacontane	111509	5.6	12.5

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

*Handwritten signature*

Data File: /chem2/fid9.i/20100728.B/0728r.aw,b/0728h024.D  
Date : 29-JUL-2010 00:40

Client ID:

Sample Info: MOIL 5000

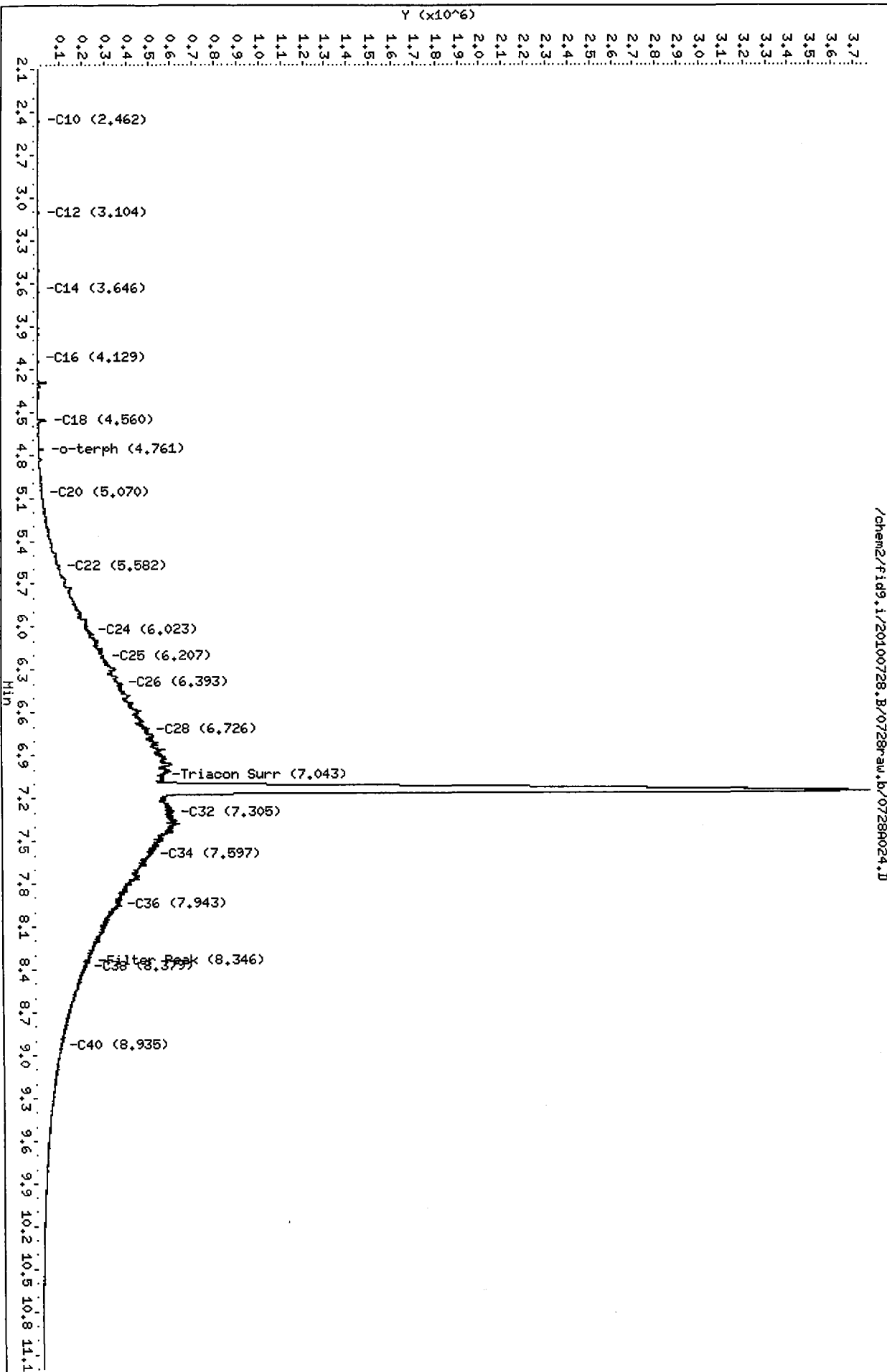
Column phase: RTX-1

Instrument: fid9.i

Operator: HS

Column diameter: 0.25

/chem2/fid9.i/20100728.B/0728r.aw,b/0728h024.D



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

**ARI Job ID: RI65**

### GC Analyst Notes / Corrective Action Log

ARI Project ID: RI65 Client ID: FLOYD/SNIDER - LLAPTS.

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, MOIL, Steph

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

Dates: Curve: 7/28/10 Analysis Start: 8/17/10

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?	YES / NO	Surrogate Recovery In Control?	<u>YES</u> / NO
Manual Integrations for ICal?	<u>YES</u> / NO	Manual Integrations for Samples?	<u>YES</u> / NO
Internal Standard Meets Criteria?	YES / NO / <u>NA</u>	Special Analysis Criteria Met?	YES / NO / <u>NA</u>

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

Additional Details on Reverse: Yes / No

Analyst: [Signature] Date: 8/23/10

Reviewer: [Signature] Date: 8/23/10

# Analytical Resources Inc.: Organics Instrument Log

FID-9 Agilent 6850 - Serial No.: US10404004

Date: 8/19/10

Analysis: Asphalt

Analyst: MD

GC Program: TPH

Column No: 802031

Column Type: RTX-1

Instrument Tune (.U or .CT.):           

EM Voltage:           

Calibration File:           

Curve Date: 7/28/10

IS/SS

Ical/Ccal

LCS/ICV

1200-1  
1211-2  
1230-3  
1255-2

Time	Filename	LabID	ClientID	DF
1106	0819A001.D	RINSE		1
1127	0819A002.D	RT		1
1148	0819A003.D	IB		1
1210	0819A004.D	DIESEL#1		1
1231	0819A005.D	MOIL#1		1
1253	0819A006.D	BUNKERC#1		1
1314	0819A007.D	RI42A	EV 2-Way TPH	1
1336	0819A008.D	RI88A	P2IM-DB-025-	1
1358	0819A009.D	RI88AMS	P2IM-DB-025-	1
1419	0819A010.D	RI88AMSD	P2IM-DB-025-	1
1441	0819A011.D	RI88B	P2IM-DB-026-	1
1503	0819A012.D	RI98D	B1-8	1
1525	0819A013.D	RI98E	B2-8	1
1546	0819A014.D	RI42LCSS1	RI42LCSS1	1
1608	0819A015.D	RI42LCSDS1	RI42LCSDS1	1
1630	0819A016.D	RI42MBS1	RI42MBS1	1
1651	0819A017.D	DIESEL#2		1
1713	0819A018.D	MOIL#2		1
1734	0819A019.D	BUNKERC#2		1
1756	0819A020.D	RI98A		1
1817	0819A021.D	RI98B		1
1839	0819A022.D	RI65A		1

Time	Filename	LabID	ClientID	DF
1901	0819A023.D	RI65B		1
1922	0819A024.D	RI65BMS		1
1944	0819A025.D	RI65BMSD		1
2005	0819A026.D	RI65C		1
2027	0819A027.D	RI65D		1
2048	0819A028.D	RI65E		1
2109	0819A029.D	RI98C		1
2131	0819A030.D	RI98LCSW1		1
2153	0819A031.D	RI98LCSW1		1
2214	0819A032.D	RI98MBW1		1
2236	0819A033.D	DIESEL#3		1
2257	0819A034.D	MOIL#3		1
2319	0819A035.D	BUNKERC#3		1

*[Large handwritten scribbles and signatures]*

8/20/10

**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 - /chem2/fid9.i/20100819.b

ARI Job No.: DIES Method: ftphfid9a.m Instrument: fid9.i Date: 19-AUG-2010

Time Filename LabID ClientId DF Manually Integrated Compounds

1651	0819A017.D DIESEL#2	DIESEL#2	1	1	o-terph,
1713	0819A018.D MOIL#2	MOIL#2	1	1	Triacon Surr,
1734	0819A019.D BUNKERC#2	DUCT BANK	1	1	Triacon Surr,
1756	0819A020.D RI98A	B1-15W	1	1	NO MANUAL INTEGRATION
1817	0819A021.D RI98B	B2-15W	1	1	NO MANUAL INTEGRATION
1839	0819A022.D RI65A	MW-09-0813	1	1	NO MANUAL INTEGRATION
1901	0819A023.D RI65B	MW-08-0813	1	1	NO MANUAL INTEGRATION
1922	0819A024.D RI65BMS	MW-08-0813	1	1	o-terph,
1944	0819A025.D RI65BMSD	MW-08-0813	1	1	o-terph,
2005	0819A026.D RI65C	MW-07-0813	1	1	NO MANUAL INTEGRATION
2027	0819A027.D RI65D	MW-01-0813	1	1	NO MANUAL INTEGRATION
2048	0819A028.D RI65E	MW-05-0813	1	1	NO MANUAL INTEGRATION
2109	0819A029.D RI98C	B3-15W	1	1	NO MANUAL INTEGRATION
2131	0819A030.D RI98LCSW1	RI98LCSW1	1	1	o-terph,
2153	0819A031.D RI98LCSDW1	RI98LCSDW1	1	1	o-terph,
2214	0819A032.D RI98MW1	RI98MW1	1	1	NO MANUAL INTEGRATION
2236	0819A033.D DIESEL#3		1	1	o-terph,
2257	0819A034.D MOIL#3		1	1	Triacon Surr,
2319	0819A035.D BUNKERC#3		1	1	Triacon Surr,

000031



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A002.D  
 Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: JR  
 Report Date: 08/20/2010

ARI ID: RT  
 Client ID: RT  
 Injection: 19-AUG-2010 11:27  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.572	0.008	892120	418737	GAS (Tol-C12)	1305797	62
C8	1.734	0.017	551933	279582	DIESEL (C12-C24)	1769412	67
C10	2.495	0.014	654363	294948	M.OIL (C24-C38)	1992202	156
C12	3.129	0.010	548447	269668	AK-102 (C10-C25)	2348699	81
C14	3.684	0.008	496607	284450	AK-103 (C25-C36)	1792672	358
C16	4.175	0.005	516440	289482			
C18	4.624	0.003	386963	291806			
C20	5.151	0.005	328266	293552			
C22	5.663	0.002	363409	290168			
C24	6.099	0.004	330435	288470			
C25	6.299	0.004	438779	394460			
C26	6.483	0.007	307112	287343			
C28	6.820	-0.013	355675	283760			
C32	7.424	0.014	259978	275006	JP-4 (Tol-C14)	1596095	97
C34	7.752	-0.028	164486	252714	BUNKERC (C10-C38)	4335532	494
Filter Peak	8.346	0.003	949	487			
C36	8.160	-0.029	117834	230080			
C38	8.661	0.000	63470	40859			
C40	9.326	-0.027	36458	60044			
o-terph	4.798	0.005	1263467	1041631	JET-A (C10-C18)	1453488	105
Triacon Surr	7.139	-0.007	937992	971512	JP8 (Tol-C16)	1889413	107

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
 NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

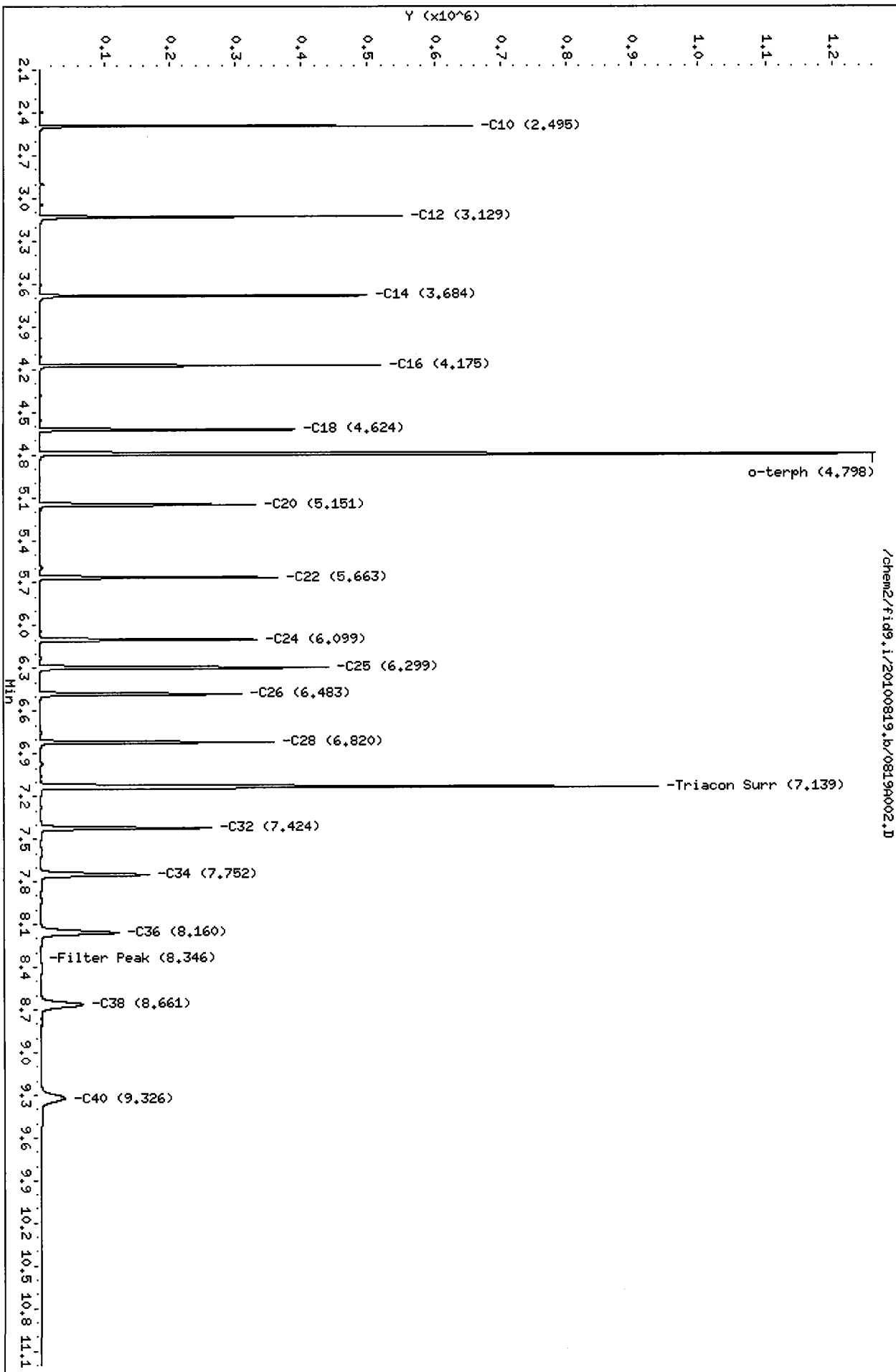
Surrogate	Area	Amount	%Rec
o-Terphenyl	1041631	40.4	89.9
Triacontane	971512	49.0	108.9

*MAS/2074*

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

Data File: /chem2/fid9.i/20100819.b/0819A002.D  
Date: 19-AUG-2010 11:27  
Client ID: RT  
Sample Info: RT  
Column phase: RTX-1

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



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A003.D  
 Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: JR  
 Report Date: 08/20/2010

ARI ID: IB  
 Client ID: IB  
 Injection: 19-AUG-2010 11:48  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.575	0.010	1986	2094	GAS (Tol-C12)	24060	1
C8	1.722	0.006	453	89	DIESEL (C12-C24)	18817	1
C10	2.481	0.000	252	82	M.OIL (C24-C38)	107663	8
C12	3.124	0.005	56	26	AK-102 (C10-C25)	26601	1
C14	3.677	0.001	25	3	AK-103 (C25-C36)	83778	17
C16	4.166	-0.004	35	11			
C18	4.622	0.002	843	722			
C20	5.139	-0.006	94	28			
C22	5.667	0.006	865	1022			
C24	6.100	0.006	1017	1225			
C25	6.295	0.000	1487	1872			
C26	6.479	0.003	1137	1183			
C28	6.837	0.005	446	594			
C32	7.414	0.004	2363	5919	JP-4 (Tol-C14)	26218	2
C34	7.800	0.020	858	373	BUNKERC (C10-C38)	132580	15
Filter Peak	8.341	-0.002	814	627			
C36	8.197	0.007	819	503			
C38	8.662	0.001	1105	950			
C40	9.361	0.008	912	1041			
o-terph	4.798	0.005	1247947	1114460	JET-A (C10-C18)	11908	1
Triacon Surr	7.131	-0.014	872204	883093	JP8 (Tol-C16)	27950	2

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
 NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

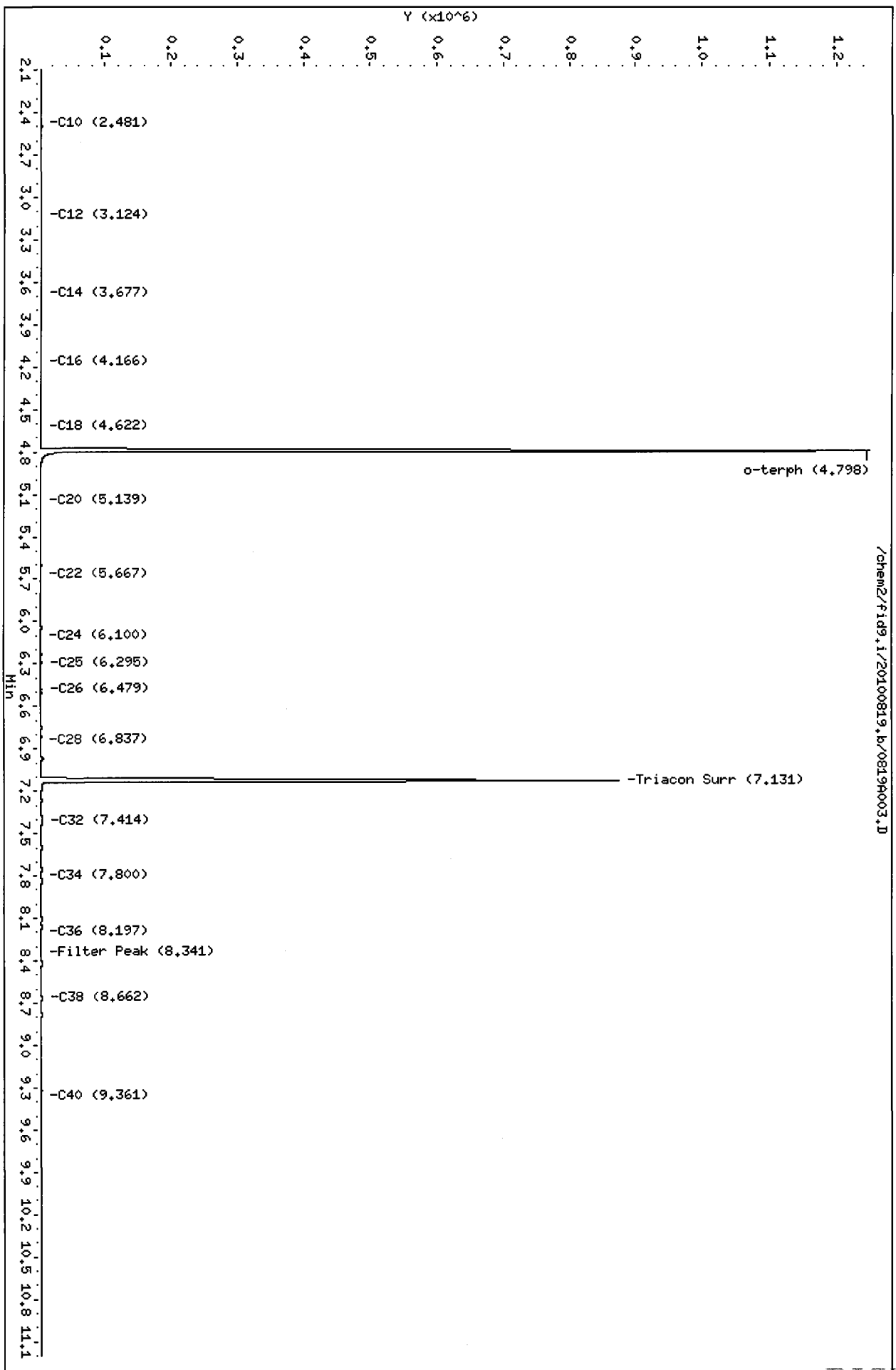
Surrogate	Area	Amount	%Rec
o-Terphenyl	1114460	43.3	96.1
Triacontane	883093	44.5	99.0



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

Data File: /chem2/fid9.i/20100819.b/0819R003.D  
Date: 19-AUG-2010 11:48  
Client ID: IB  
Sample Info: IB  
Column phase: RTX-1

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



/chem2/fid9.i/20100819.b/0819R003.D

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819raw.b/0819A017.D ARI ID: DIESEL#2  
 Method: /chem2/fid9.i/20100819.b/ftphfid9a.m Client ID: DIESEL#2  
 Instrument: fid9.i Injection: 19-AUG-2010 16:51  
 Operator: JR Dilution Factor: 1  
 Report Date: 08/20/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.551	-0.014	1433	1677	GAS (Tol-C12)	874484	42
C8	1.710	-0.006	1683	1497	DIESEL (C12-C24)	6119712	232
C10	2.485	0.004	3999	2481	M.OIL (C24-C38)	185207	14
C12	3.118	-0.001	15222	5219	AK-102 (C10-C25)	6825155	235
C14	3.682	0.007	139440	140991	AK-103 (C25-C36)	136641	27
C16	4.173	0.003	273637	193716			
C18	4.622	0.002	191668	196142			
C20	5.150	0.004	98497	109879			
C22	5.662	0.000	51643	56299			
C24	6.099	0.004	15600	18277			
C25	6.294	0.000	6646	11294			
C26	6.483	0.007	2658	3045			
C28	6.844	0.012	466	731			
C32	7.433	0.023	458	265	JP-4 (Tol-C14)	1908034	116
C34	7.785	0.005	489	277	BUNKERC (C10-C38)	6978478	796
Filter Peak	8.343	0.000	422	217			
C36	8.186	-0.003	440	383			
C38	8.664	0.003	448	254			
C40	9.360	0.007	446	376			
o-terph	4.798	0.004	1317380	1185927	JET-A (C10-C18)	5015969	363
Triacon Surr	7.122	-0.023	3867	4245	JP8 (Tol-C16)	3468150	197

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
 NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

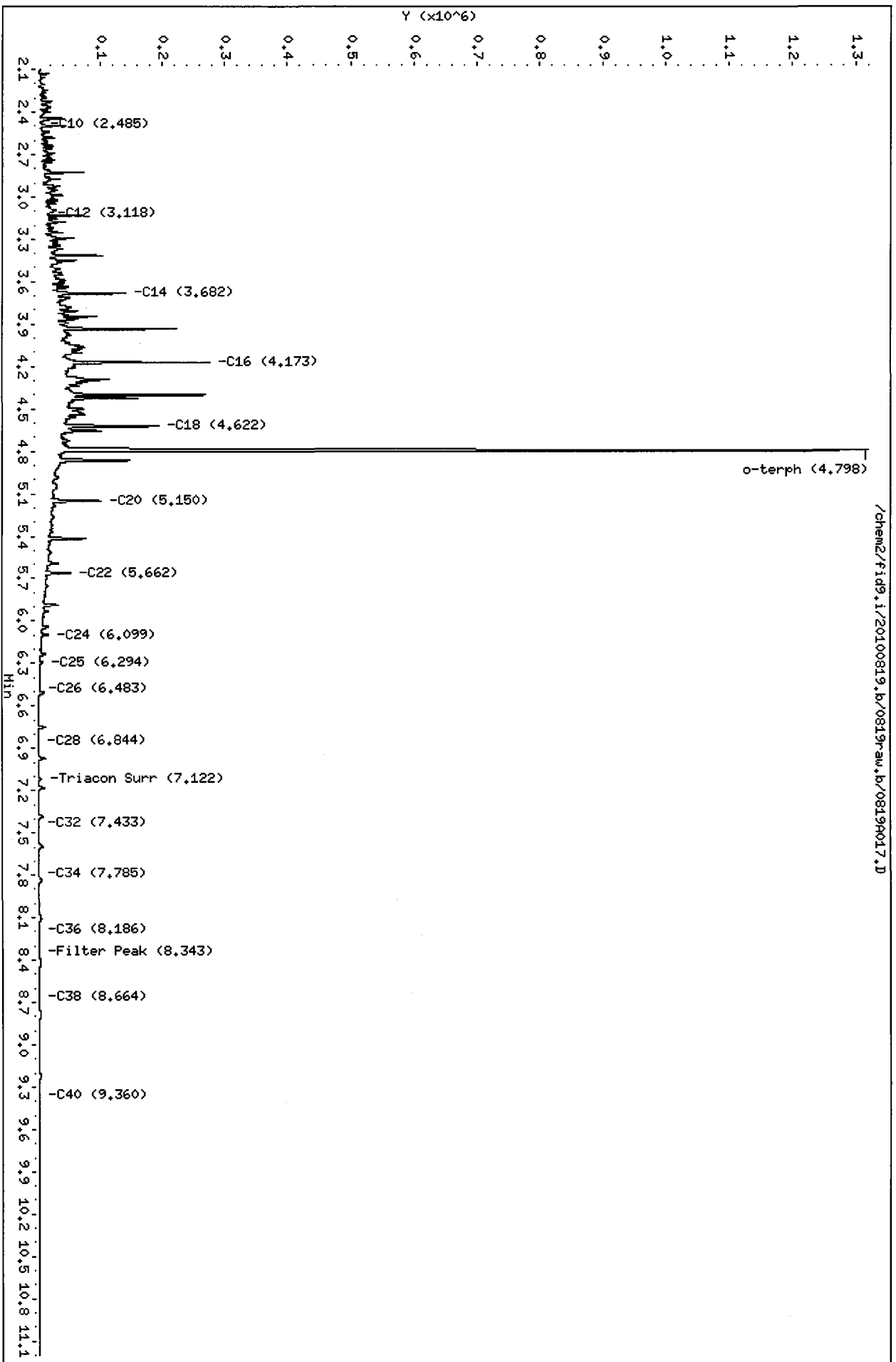
Surrogate	Area	Amount	%Rec
o-Terphenyl	1185927	46.0	102.3
Triacontane	4245	0.2	0.5

*ms 8/2010*

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

Data File: /chem2/fid9,1/20100819,b/0819raw,b/0819A017.D  
Date : 19-AUG-2010 16:51  
Client ID: DIESEL#2  
Sample Info: DIESEL#2  
Column phase: RTX-1

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



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A017.D  
 Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: JR  
 Report Date: 08/20/2010

ARI ID: DIESEL#2  
 Client ID: DIESEL#2  
 Injection: 19-AUG-2010 16:51  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.551	-0.014	1433	1677	GAS (Tol-C12)	874484	42
C8	1.710	-0.006	1683	1497	DIESEL (C12-C24)	6227303	237
C10	2.485	0.004	3999	2481	M.OIL (C24-C38)	185207	14
C12	3.118	-0.001	15222	5219	AK-102 (C10-C25)	6932746	239 M
C14	3.682	0.007	139440	140991	AK-103 (C25-C36)	136641	27
C16	4.173	0.003	273637	193716			
C18	4.622	0.002	191668	196142			
C20	5.150	0.004	98497	109879			
C22	5.662	0.000	51643	56299			
C24	6.099	0.004	15600	18277			
C25	6.294	0.000	6646	11294			
C26	6.483	0.007	2658	3045			
C28	6.844	0.012	466	731			
C32	7.433	0.023	458	265	JP-4 (Tol-C14)	1908034	116
C34	7.785	0.005	489	277	BUNKERC (C10-C38)	7086069	808 M
Filter Peak	8.343	0.000	422	217			
C36	8.186	-0.003	440	383			
C38	8.664	0.003	448	254			
C40	9.360	0.007	446	376			
o-terph	4.798	0.004	1279594	1079106	JET-A (C10-C18)	5015969	363
Triacon Surr	7.122	-0.023	3867	4245	JP8 (Tol-C16)	3468150	197

M Indicates manual integration within range.

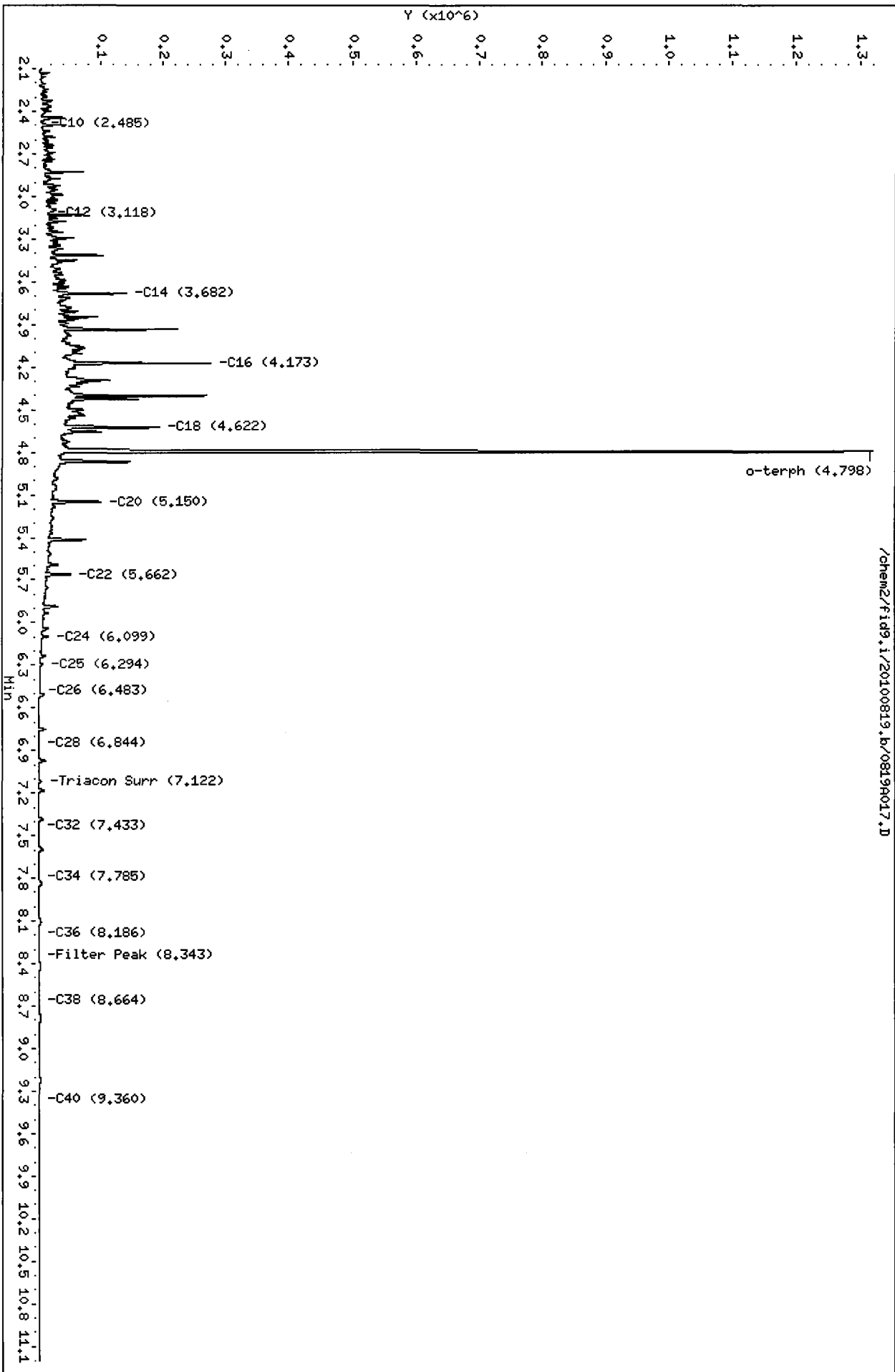
Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
 NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1079106	41.9	93.1
Triacontane	4245	0.2	0.5

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

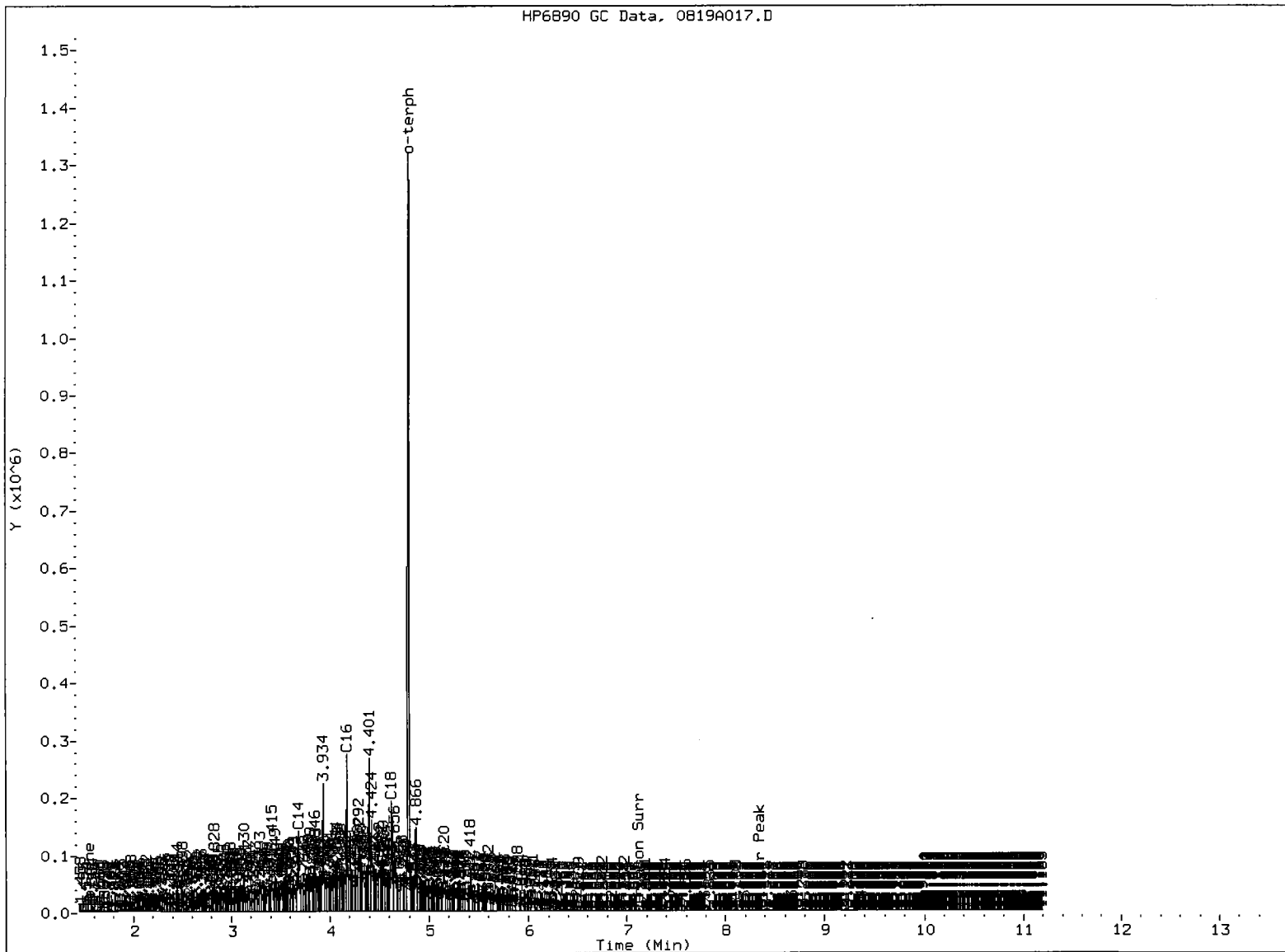
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Date: 19-AUG-2010 16:51  
Client ID: DIESEL#2  
Sample Info: DIESEL#2  
Column phase: RTX-1

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





HP6890 GC Data, 0819A017.D



MANUAL INTEGRATION

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

Analyst:     *M*     Date:     *8/29/00*

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819raw.b/0819A018.D ARI ID: MOIL#2  
 Method: /chem2/fid9.i/20100819.b/ftphfid9a.m Client ID: MOIL#2  
 Instrument: fid9.i Injection: 19-AUG-2010 17:13  
 Operator: JR Dilution Factor: 1  
 Report Date: 08/20/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.577	0.013	1282	2024	GAS (Tol-C12)	24785	1
C8	1.715	-0.001	539	608	DIESEL (C12-C24)	752614	29
C10	2.474	-0.008	64	14	M.OIL (C24-C38)	7215995	564
C12	3.110	-0.009	30	20	AK-102 (C10-C25)	928914	32
C14	3.681	0.005	131	138	AK-103 (C25-C36)	6426059	1283
C16	4.165	-0.005	222	139			
C18	4.625	0.004	1033	1304			
C20	5.149	0.003	2832	4766			
C22	5.662	0.000	11078	4714			
C24	6.097	0.003	24345	7622			
C25	6.293	-0.002	30931	9159			
C26	6.476	0.000	37987	14960			
C28	6.827	-0.005	52581	16444			
C32	7.406	-0.004	62077	34363	JP-4 (Tol-C14)	28615	2
C34	7.777	-0.003	45909	27608	BUNKERC (C10-C38)	7975623	909
Filter Peak	8.344	0.001	26054	10746			
C36	8.190	0.001	31528	17513			
C38	8.658	-0.003	18339	5053			
C40	9.354	0.001	9109	5371			
o-terph	4.790	-0.004	6367	6459	JET-A (C10-C18)	36597	3
Triacon Surr	7.154	0.009	59730	26061	JP8 (Tol-C16)	33974	2

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
 NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

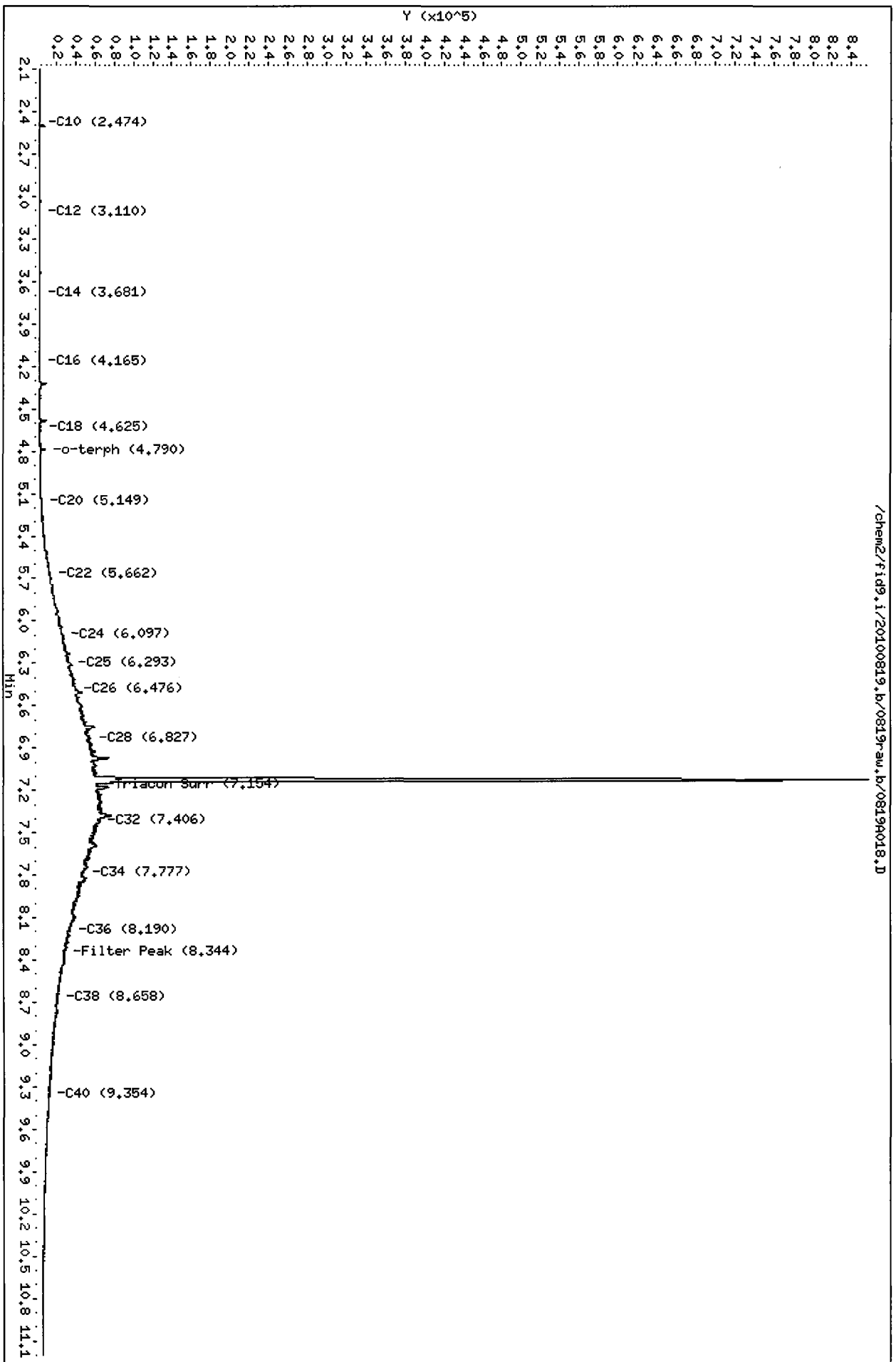
Surrogate	Area	Amount	%Rec
o-Terphenyl	6459	0.3	0.6
Triacontane	26061	1.3	2.9

*MW8/20/10*

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

Data File: /chem2/fid9.i/20100819.b/0819raw.b/0819A018.D  
Date : 19-AUG-2010 17:13  
Client ID: M01L#2  
Sample Info: M01L#2  
Column phase: RTX-1

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



/chem2/fid9.i/20100819.b/0819raw.b/0819A018.D

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A018.D  
Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
Instrument: fid9.i  
Operator: JR  
Report Date: 08/20/2010

ARI ID: MOIL#2  
Client ID: MOIL#2  
Injection: 19-AUG-2010 17:13  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.577	0.013	1282	2024	GAS (Tol-C12)	24785	1
C8	1.715	-0.001	539	608	DIESEL (C12-C24)	752614	29
C10	2.474	-0.008	64	14	M.OIL (C24-C38)	6363616	498
C12	3.110	-0.009	30	20	AK-102 (C10-C25)	928914	32
C14	3.681	0.005	131	138	AK-103 (C25-C36)	5573680	1113 M
C16	4.165	-0.005	222	139			
C18	4.625	0.004	1033	1304			
C20	5.149	0.003	2832	4766			
C22	5.662	0.000	11078	4714			
C24	6.097	0.003	24345	7622			
C25	6.293	-0.002	30931	9159			
C26	6.476	0.000	37987	14960			
C28	6.827	-0.005	52581	16444			
C32	7.406	-0.004	62077	34363	JP-4 (Tol-C14)	28615	2
C34	7.777	-0.003	45909	27608	BUNKERC (C10-C38)	7123244	812 M
Filter Peak	8.344	0.001	26054	10746			
C36	8.190	0.001	31528	17513			
C38	8.658	-0.003	18339	5053			
C40	9.354	0.001	9109	5371			
o-terph	4.790	-0.004	6367	6459	JET-A (C10-C18)	36597	3
Triacon Surr	7.131	-0.014	796012	879598	JP8 (Tol-C16)	33974	2

M Indicates manual integration within range.

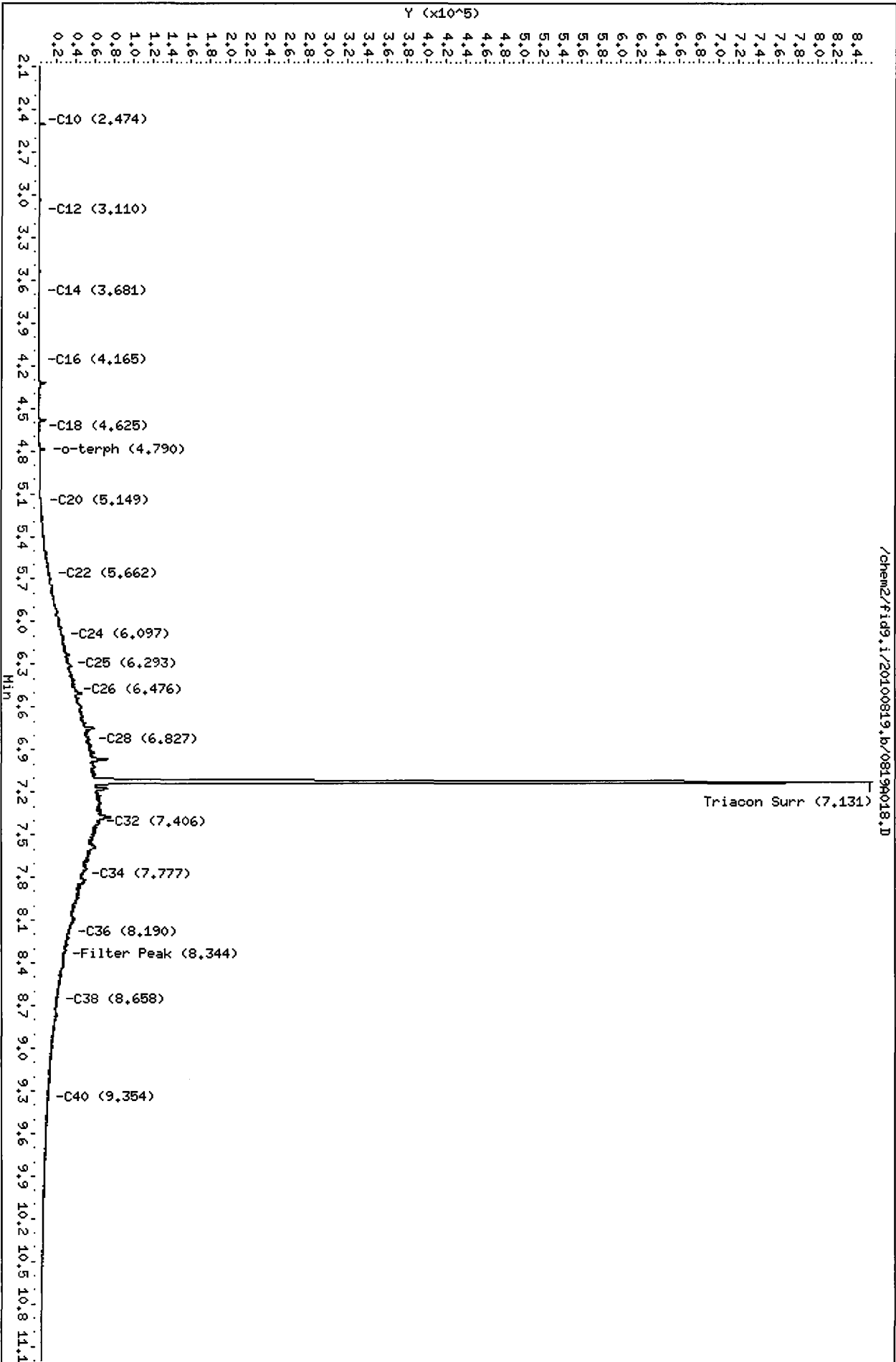
Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

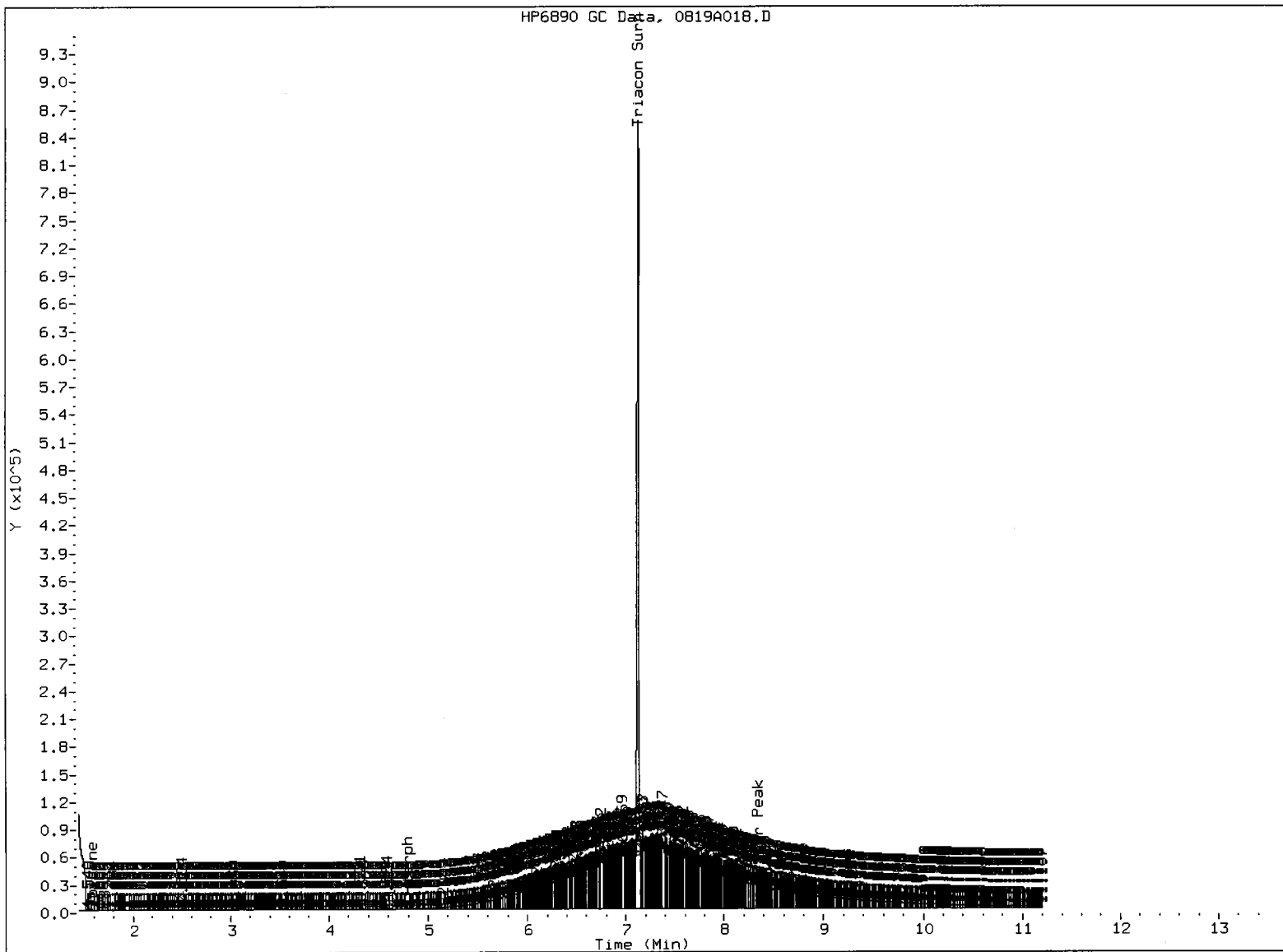
Surrogate	Area	Amount	%Rec
o-Terphenyl	6459	0.3	0.6
Triacontane	879598	44.4	98.6

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

Data File: /chem2/fid9.i/20100819.b/0819018.D  
Date : 19-AUG-2010 17:13  
Client ID: M01L#2  
Sample Info: M01L#2  
Column phase: RTX-1

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





MANUAL INTEGRATION

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

Analyst:       

Date: 8/20/10

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A022.D  
Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
Instrument: fid9.i  
Operator: JR  
Report Date: 08/20/2010

ARI ID: RI65A  
Client ID: MW-09-081310  
Injection: 19-AUG-2010 18:39  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.577	0.013	13302	7986	GAS (Tol-C12)	42953	2
C8	1.720	0.004	436	144	DIESEL (C12-C24)	84075	3
C10	2.482	0.001	750	435	M.OIL (C24-C38)	179511	14
C12	3.114	-0.005	32	18	AK-102 (C10-C25)	98147	3
C14	3.676	0.001	126	38	AK-103 (C25-C36)	155905	31
C16	4.167	-0.003	657	283			
C18	4.618	-0.003	760	1086			
C20	5.137	-0.008	837	1663			
C22	5.658	-0.004	342	106			
C24	6.091	-0.003	253	83			
C25	6.291	-0.004	1093	1544			
C26	6.471	-0.004	317	109			
C28	6.841	0.008	2951	3213			
C32	7.410	0.000	1992	3594	JP-4 (Tol-C14)	54451	3
C34	7.785	0.005	940	297	BUNKERC (C10-C38)	275018	31
Filter Peak	8.339	-0.004	848	666			
C36	8.183	-0.006	1050	999			
C38	8.654	-0.007	836	830			
C40	9.354	0.002	827	277			
o-terph	4.796	0.003	1001677	832887	JET-A (C10-C18)	67872	5
Triacon Surr	7.131	-0.014	685436	677274	JP8 (Tol-C16)	78750	4

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

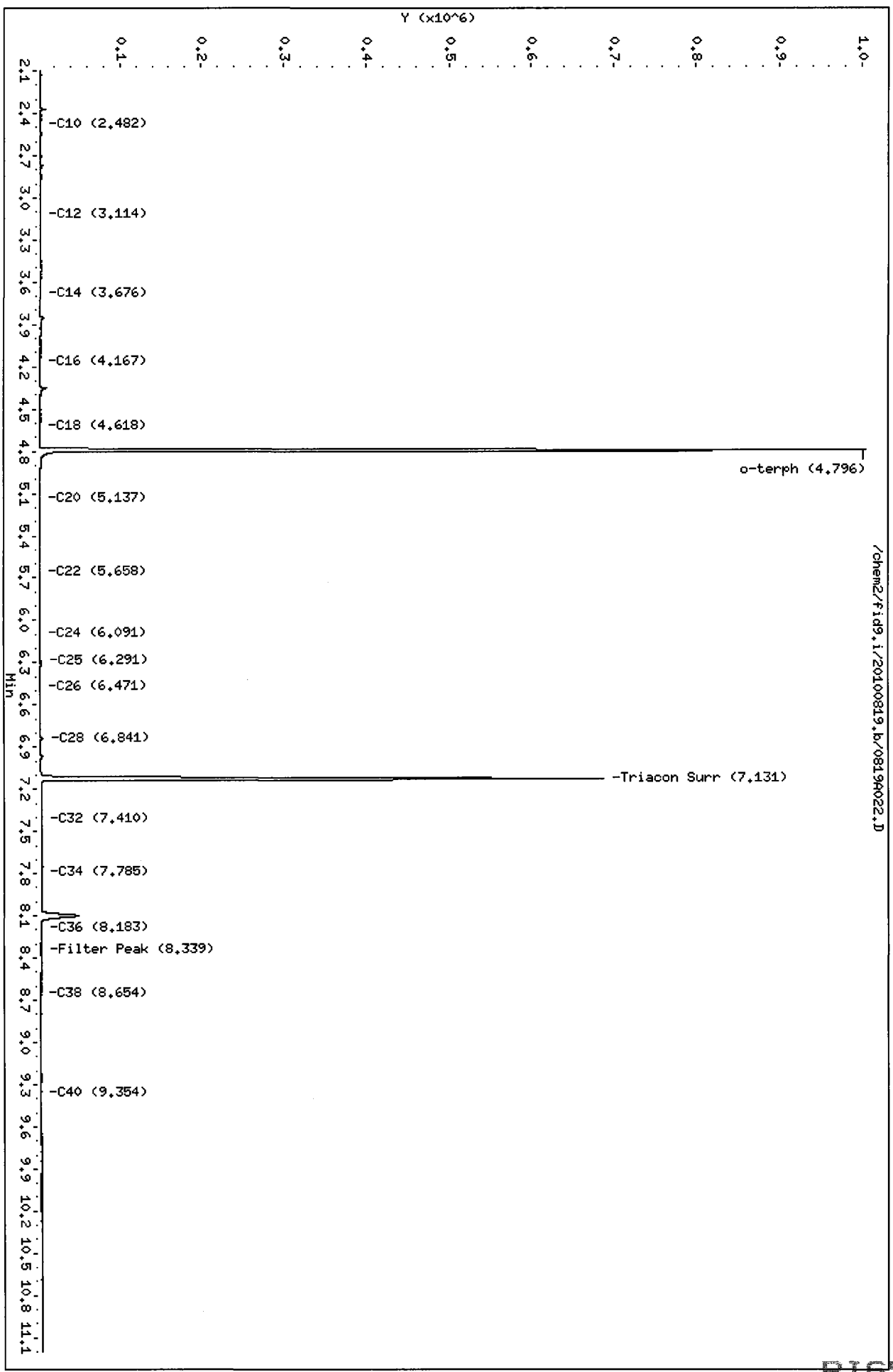
Surrogate	Area	Amount	%Rec
o-Terphenyl	832887	32.3	71.8
Triacontane	677274	34.2	75.9

*MW 8/20/10*

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

Data File: /chem2/fid9.i/20100819.b/08194022.D  
Date: 19-AUG-2010 18:39  
Client ID: MM-09-081310  
Sample Info: R165A  
Column phase: RTX-1

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



/chem2/fid9.i/20100819.b/08194022.D



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A023.D  
 Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: JR  
 Report Date: 08/20/2010

ARI ID: RI65B  
 Client ID: MW-08-081310  
 Injection: 19-AUG-2010 19:01  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.576	0.011	30921	16917	GAS (Tol-C12)	51798	2
C8	1.719	0.003	466	63	DIESEL (C12-C24)	74007	3
C10	2.482	0.000	831	467	M.OIL (C24-C38)	180201	14
C12	3.111	-0.009	40	25	AK-102 (C10-C25)	87108	3
C14	3.676	0.000	105	39	AK-103 (C25-C36)	156517	31
C16	4.179	0.009	680	916			
C18	4.620	-0.001	788	1079			
C20	5.150	0.005	742	783			
C22	5.668	0.006	525	723			
C24	6.088	-0.006	245	108			
C25	6.292	-0.002	1017	1398			
C26	6.483	0.007	493	650			
C28	6.845	0.012	3034	3113			
C32	7.398	-0.012	1259	1417	JP-4 (Tol-C14)	61387	4
C34	7.768	-0.012	1720	4105	BUNKERC (C10-C38)	264809	30
Filter Peak	8.344	0.000	835	361			
C36	8.231	0.042	932	732			
C38	8.668	0.007	823	517			
C40	9.350	-0.003	809	240			
o-terph	4.796	0.002	1073799	882753	JET-A (C10-C18)	58621	4
Triacon Surr	7.142	-0.004	698965	715174	JP8 (Tol-C16)	81852	5

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
 NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

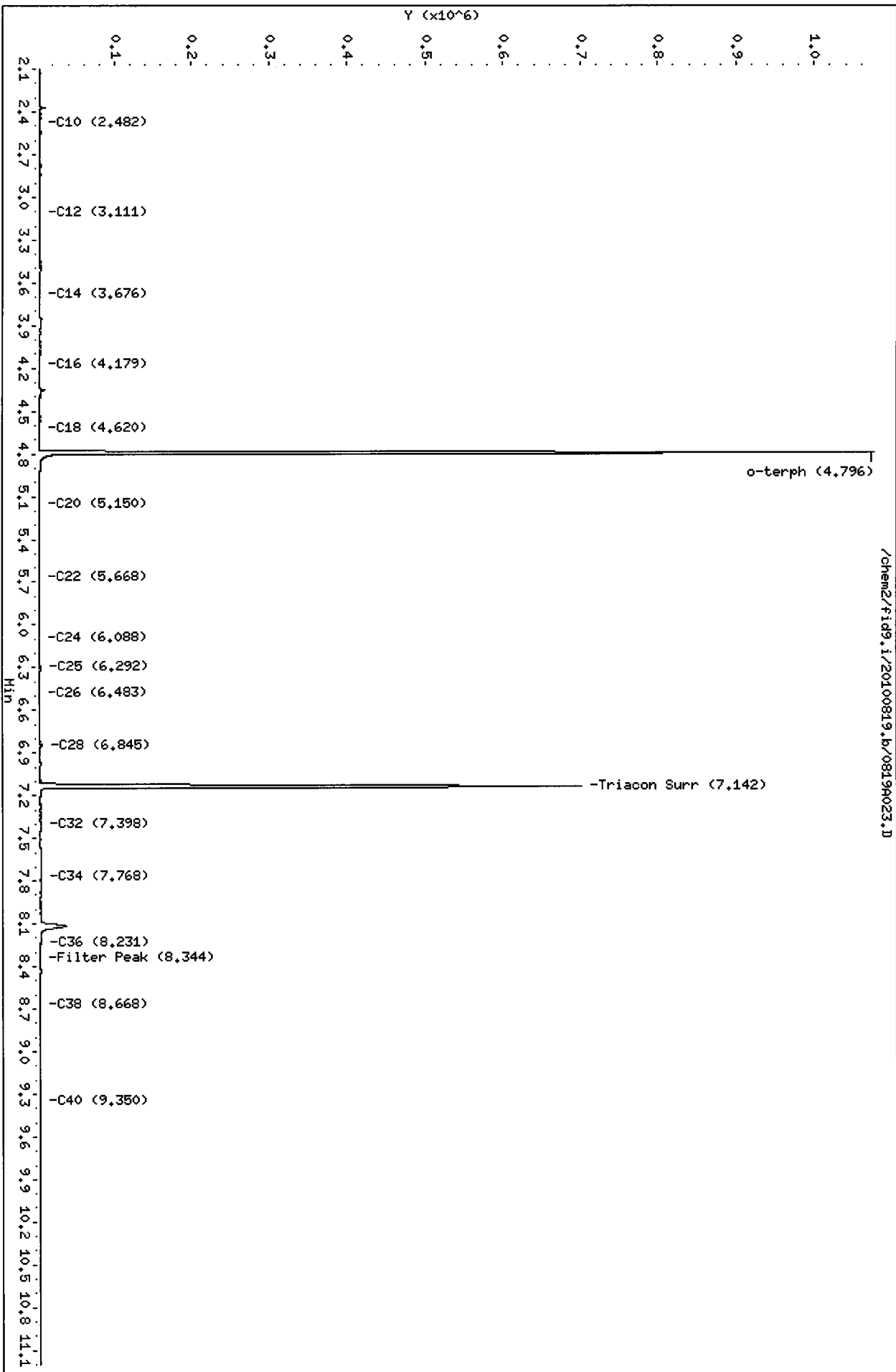
Surrogate	Area	Amount	%Rec
o-Terphenyl	882753	34.3	76.1
Triacontane	715174	36.1	80.1

*MW 8/20/10*

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

Data File: /chem2/fid9.i/20100819.b/0819A023.D  
Date: 19-AUG-2010 19:01  
Client ID: HM-08-081310  
Sample Info: R165B  
Column phase: RTX-1

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



Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A024.D  
Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
Instrument: fid9.i  
Operator: JR  
Report Date: 08/20/2010

ARI ID: RI65BMS  
Client ID: MW-08-081310 MS  
Injection: 19-AUG-2010 19:22  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.576	0.012	37018	18713	GAS (Tol-C12)	3342161	159
C8	1.704	-0.012	3131	2454	DIESEL (C12-C24)	28326892	1076
C10	2.484	0.003	15082	9919	M.OIL (C24-C38)	494907	39
C12	3.111	-0.008	77979	67428	AK-102 (C10-C25)	31121874	1071
C14	3.686	0.010	641239	583488	AK-103 (C25-C36)	376599	75
C16	4.182	0.012	1165489	1129186			
C18	4.615	-0.005	193835	61365			
C20	5.137	-0.009	103581	28665			
C22	5.668	0.007	245884	277751			
C24	6.098	0.004	79779	92118			
C25	6.292	-0.003	38248	68120			
C26	6.475	-0.001	14351	24486			
C28	6.837	0.005	5991	7061			
C32	7.404	-0.006	2153	3570	JP-4 (Tol-C14)	7829813	478
C34	7.758	-0.022	2033	4355	BUNKERC (C10-C38)	31510963	3593
Filter Peak	8.346	0.003	490	209			
C36	8.194	0.004	607	737			
C38	8.662	0.001	437	243			
C40	9.356	0.003	440	221			
o-terph	4.804	0.011	1182246	1497280	JET-A (C10-C18)	22650824	1639
Triacon Surr	7.126	-0.019	792839	731488	JP8 (Tol-C16)	15218244	865

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

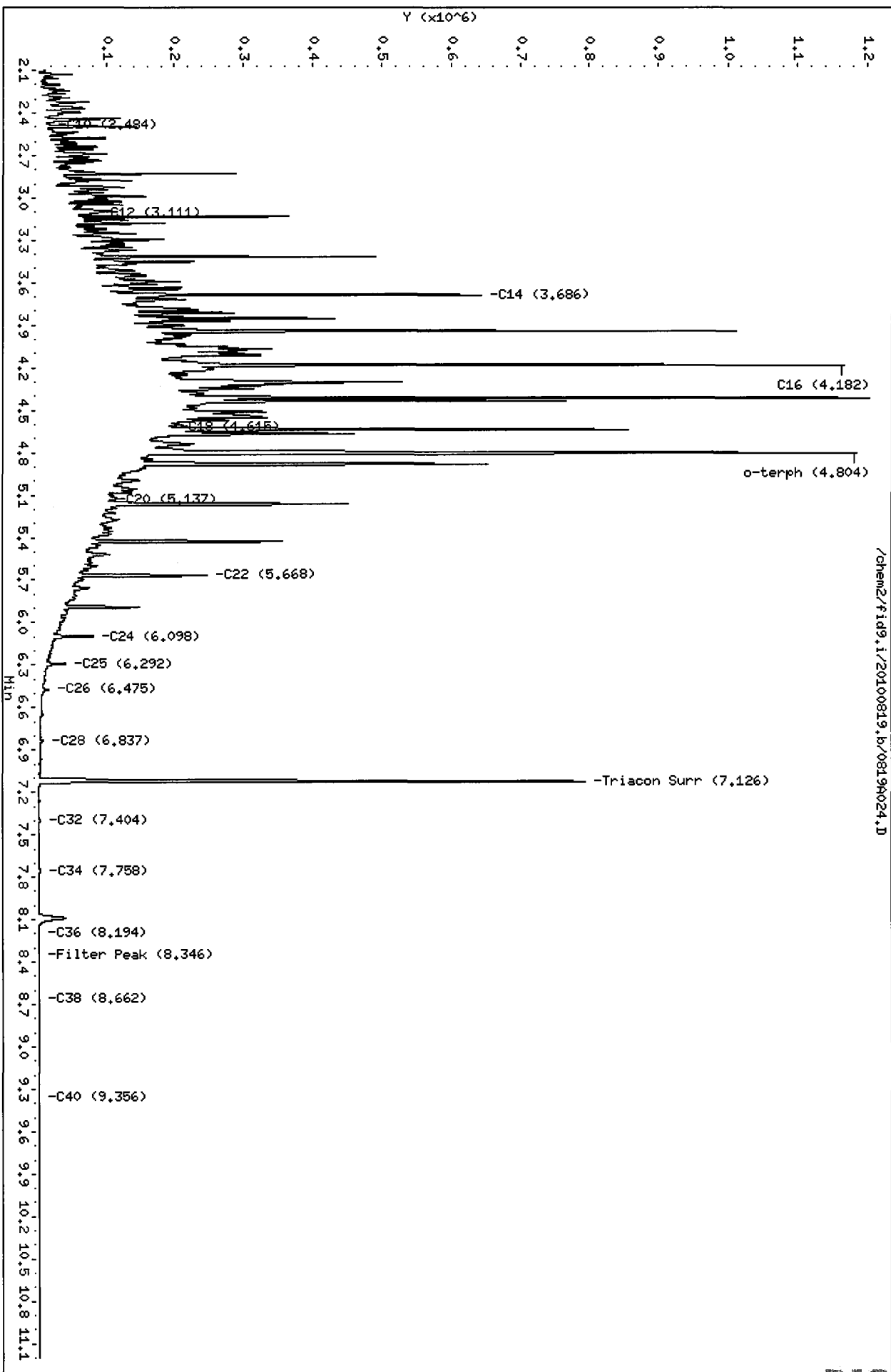
Surrogate	Area	Amount	%Rec
o-Terphenyl	1497280	58.1	129.2
Triacontane	731488	36.9	82.0

*M 8/20/10*

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

Data File: /chem2/fid9.i/20100819.b/0819A024.D  
Date: 19-AUG-2010 19:22  
Client ID: MW-08-081310 MS  
Sample Info: R165BMS  
Column phase: RTX-1

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



/chem2/fid9.i/20100819.b/0819A024.D

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A024.D  
Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
Instrument: fid9.i  
Operator: JR  
Report Date: 08/20/2010

ARI ID: RI65BMS  
Client ID: MW-08-081310 MS  
Injection: 19-AUG-2010 19:22  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.576	0.012	37018	18713	GAS (Tol-C12)	3342161	159
C8	1.704	-0.012	3131	2454	DIESEL (C12-C24)	28864068	1096
C10	2.484	0.003	15082	9919	M.OIL (C24-C38)	494907	39
C12	3.111	-0.008	77979	67428	AK-102 (C10-C25)	31659050	1090 M
C14	3.686	0.010	641239	583488	AK-103 (C25-C36)	376599	75
C16	4.182	0.012	1165489	1129186			
C18	4.615	-0.005	193835	61365			
C20	5.137	-0.009	103581	28665			
C22	5.668	0.007	245884	277751			
C24	6.098	0.004	79779	92118			
C25	6.292	-0.003	38248	68120			
C26	6.475	-0.001	14351	24486			
C28	6.837	0.005	5991	7061			
C32	7.404	-0.006	2153	3570	JP-4 (Tol-C14)	7829813	478
C34	7.758	-0.022	2033	4355	BUNKERC (C10-C38)	32048139	3654 M
Filter Peak	8.346	0.003	490	209			
C36	8.194	0.004	607	737			
C38	8.662	0.001	437	243			
C40	9.356	0.003	440	221			
o-terph	4.804	0.011	1011237	963621	JET-A (C10-C18)	22650824	1639
Triacon Surr	7.126	-0.019	792839	731488	JP8 (Tol-C16)	15218244	865

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

Surrogate	Area	Amount	%Rec
o-Terphenyl	963621	37.4	83.1
Triacantane	731488	36.9	82.0

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

Data File: /chem2/fid9.i/20100819.b/0819A024.D

Date: 19-AUG-2010 19:22

Client ID: MM-08-081310 MS

Sample Info: R165BMS

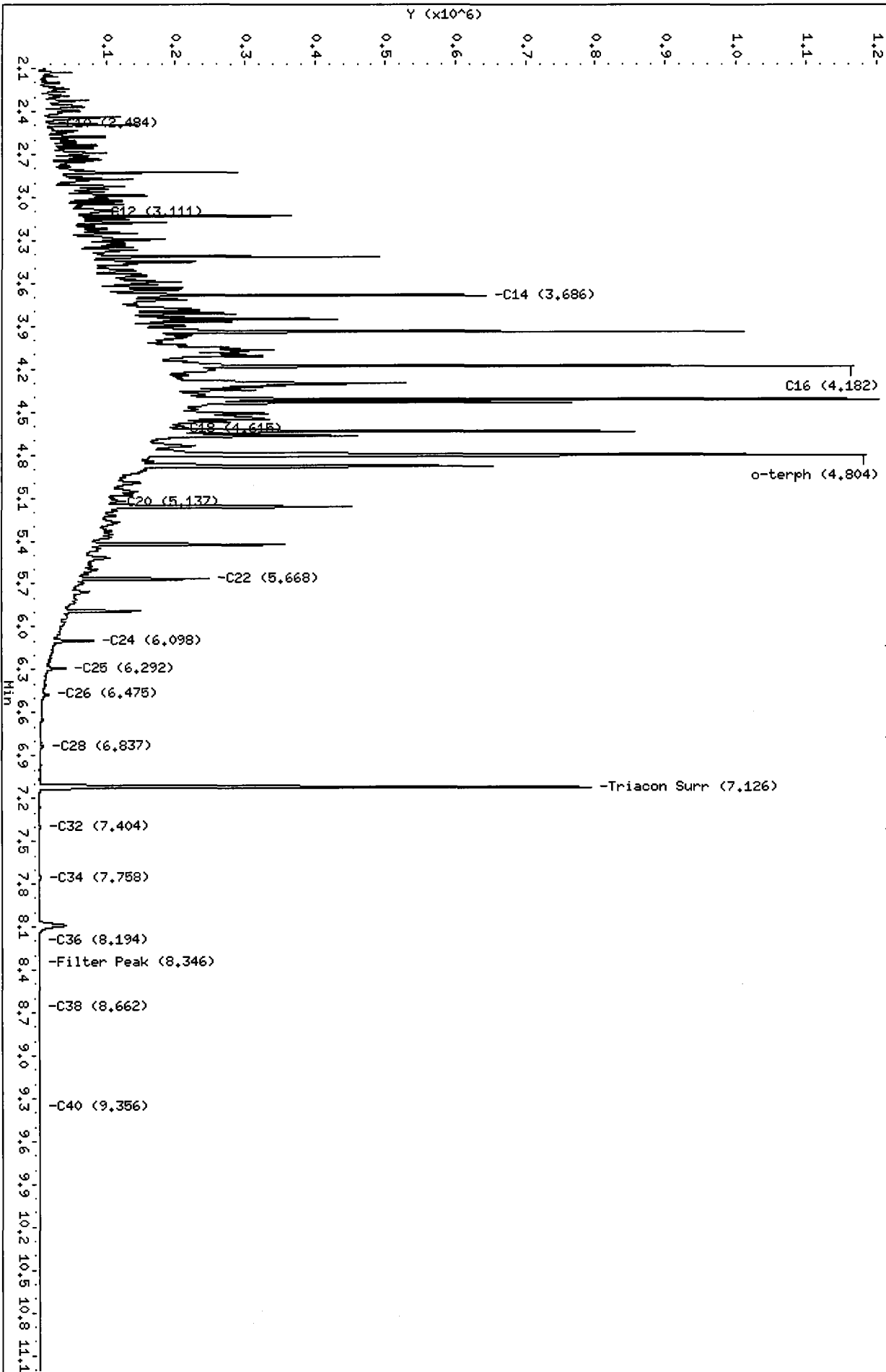
Column phase: RTX-1

Instrument: fid9.1

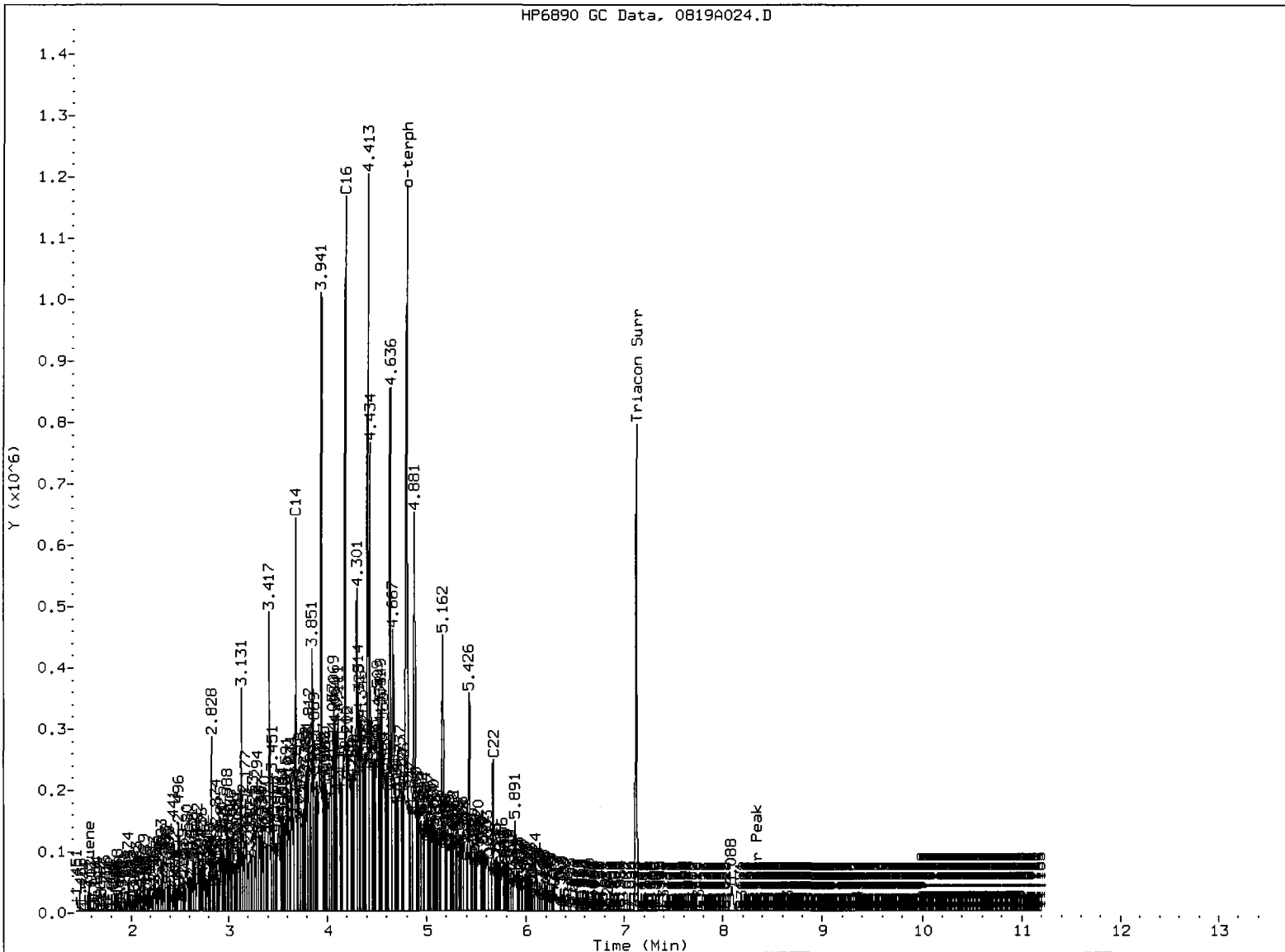
Operator: JR

Column diameter: 0.25

/chem2/fid9.i/20100819.b/0819A024.D



HP6890 GC Data, 0819A024.D



MANUAL INTEGRATION

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

Analyst: MM Date: 5/20/60

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A025.D  
 Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: JR  
 Report Date: 08/20/2010

ARI ID: RI65BMSD  
 Client ID: MW-08-081310 MSD  
 Injection: 19-AUG-2010 19:44  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.577	0.012	42265	21905	GAS (Tol-C12)	3560168	169
C8	1.705	-0.011	3262	2598	DIESEL (C12-C24)	28897148	1097
C10	2.466	-0.015	22533	13226	M.OIL (C24-C38)	519024	41
C12	3.111	-0.008	82489	71479	AK-102 (C10-C25)	31859221	1097
C14	3.686	0.010	654832	657670	AK-103 (C25-C36)	392935	78
C16	4.166	-0.004	265089	201187			
C18	4.638	0.017	829366	987296			
C20	5.164	0.018	462816	617199			
C22	5.668	0.007	248034	302279			
C24	6.099	0.005	84452	114654			
C25	6.292	-0.002	37635	44386			
C26	6.478	0.002	14364	22479			
C28	6.840	0.008	3650	5282			
C32	7.407	-0.003	2111	3360	JP-4 (Tol-C14)	8177914	499
C34	7.785	0.005	695	605	BUNKERC (C10-C38)	32262297	3678
Filter Peak	8.342	-0.001	394	98			
C36	8.193	0.004	556	363			
C38	8.664	0.003	320	198			
C40	9.346	-0.007	297	128			
o-terph	4.805	0.011	1212306	1395965	JET-A (C10-C18)	23082685	1670
Triacon Surr	7.129	-0.016	773777	742182	JP8 (Tol-C16)	15580578	886

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
 NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1395965	54.2	120.4
Triacontane	742182	37.4	83.2

*Mos 8/20/10*

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



Data File: /chem2/fid9.i/20100819.b/0819A025.D

Date: 19-AUG-2010 19:44

Client ID: MW-08-081310 MSD

Sample Info: R165BMSD

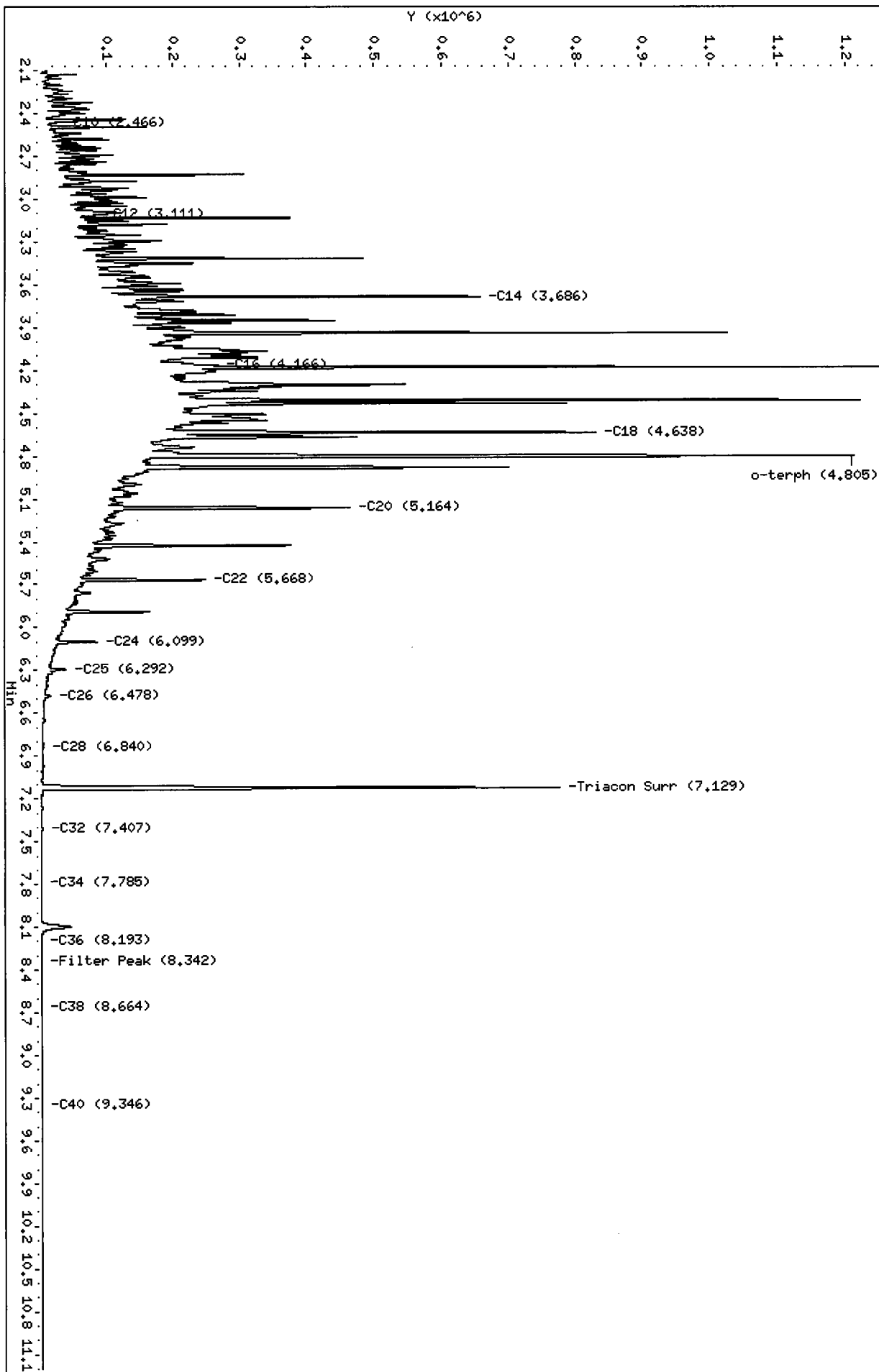
Column phase: RTX-1

Instrument: fid9.i

Operator: JR

Column diameter: 0.25

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Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A025.D  
 Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: JR  
 Report Date: 08/20/2010

ARI ID: RI65BMSD  
 Client ID: MW-08-081310 MSD  
 Injection: 19-AUG-2010 19:44  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.577	0.012	42265	21905	GAS (Tol-C12)	3560168	169
C8	1.705	-0.011	3262	2598	DIESEL (C12-C24)	29360130	1115
C10	2.466	-0.015	22533	13226	M.OIL (C24-C38)	519024	41
C12	3.111	-0.008	82489	71479	AK-102 (C10-C25)	32322203	1113 M
C14	3.686	0.010	654832	657670	AK-103 (C25-C36)	392935	78
C16	4.166	-0.004	265089	201187			
C18	4.638	0.017	829366	987296			
C20	5.164	0.018	462816	617199			
C22	5.668	0.007	248034	302279			
C24	6.099	0.005	84452	114654			
C25	6.292	-0.002	37635	44386			
C26	6.478	0.002	14364	22479			
C28	6.840	0.008	3650	5282			
C32	7.407	-0.003	2111	3360	JP-4 (Tol-C14)	8177914	499
C34	7.785	0.005	695	605	BUNKERC (C10-C38)	32725280	3731 M
Filter Peak	8.342	-0.001	394	98			
C36	8.193	0.004	556	363			
C38	8.664	0.003	320	198			
C40	9.346	-0.007	297	128			
o-terph	4.805	0.011	1035486	936561	JET-A (C10-C18)	23082685	1670
Triacon Surr	7.129	-0.016	773777	742182	JP8 (Tol-C16)	15580578	886

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
 NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

Surrogate	Area	Amount	%Rec
o-Terphenyl	936561	36.4	80.8
Triacontane	742182	37.4	83.2

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

Data File: /chem2/fid9.i/20100819.b/0819A025.D

Date: 19-AUG-2010 19:44

Client ID: MM-08-081310 MSD

Sample Info: R165BMSD

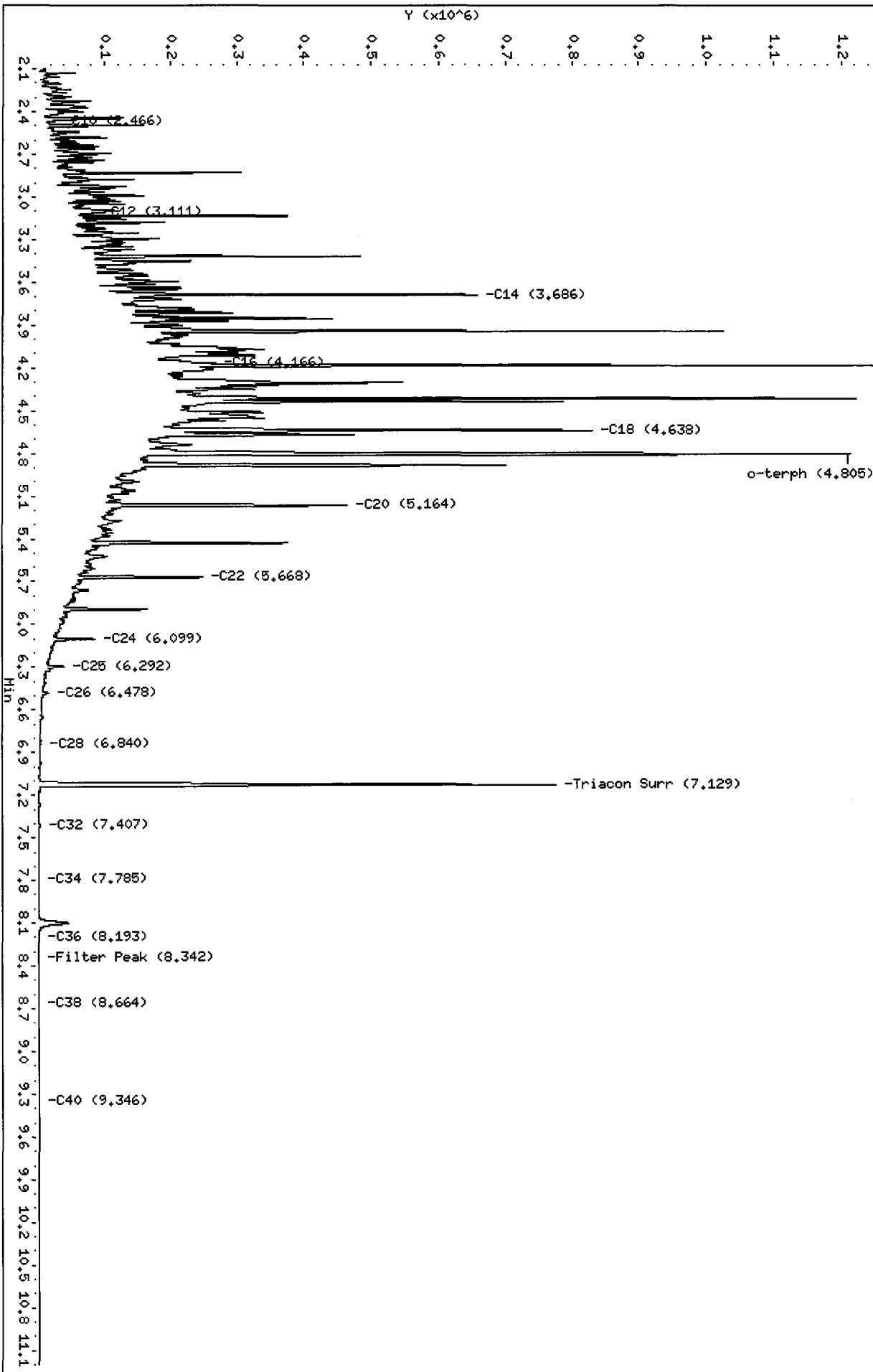
Column phase: RTX-1

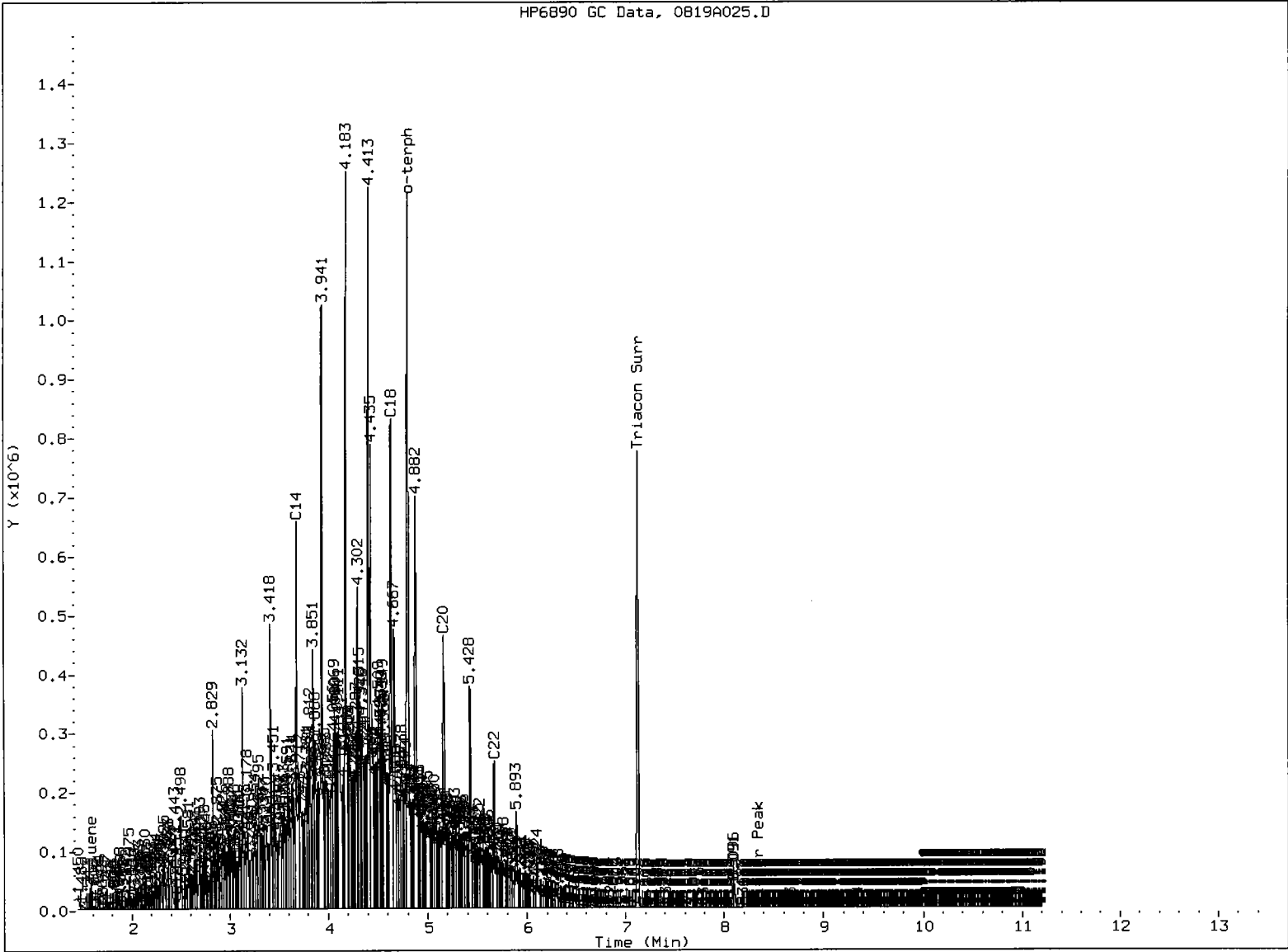
Instrument: fid9.1

Operator: JR

Column diameter: 0.25

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MANUAL INTEGRATION

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

Analyst:                      Date: 8/20/10

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A026.D  
Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
Instrument: fid9.i  
Operator: JR  
Report Date: 08/20/2010

ARI ID: RI65C  
Client ID: MW-07-081310  
Injection: 19-AUG-2010 20:05  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.579	0.014	12209	7208	GAS (Tol-C12)	34927	2
C8	1.732	0.015	329	199	DIESEL (C12-C24)	70601	3
C10	2.483	0.001	756	426	M.OIL (C24-C38)	176331	14
C12	3.111	-0.008	37	35	AK-102 (C10-C25)	82095	3
C14	3.673	-0.003	128	32	AK-103 (C25-C36)	153910	31
C16	4.181	0.011	870	1202			
C18	4.623	0.002	953	1186			
C20	5.156	0.010	685	1818			
C22	5.674	0.012	433	585			
C24	6.084	-0.010	150	90			
C25	6.293	-0.001	762	1054			
C26	6.482	0.006	326	452			
C28	6.840	0.008	1312	1728			
C32	7.410	0.000	1957	3527	JP-4 (Tol-C14)	44126	3
C34	7.789	0.009	861	739	BUNKERC (C10-C38)	256505	29
Filter Peak	8.348	0.005	785	465			
C36	8.193	0.003	927	883			
C38	8.666	0.005	775	242			
C40	9.347	-0.006	784	620			
o-terph	4.797	0.003	1044221	831468	JET-A (C10-C18)	59351	4
Triacon Surr	7.130	-0.015	697650	685310	JP8 (Tol-C16)	64942	4

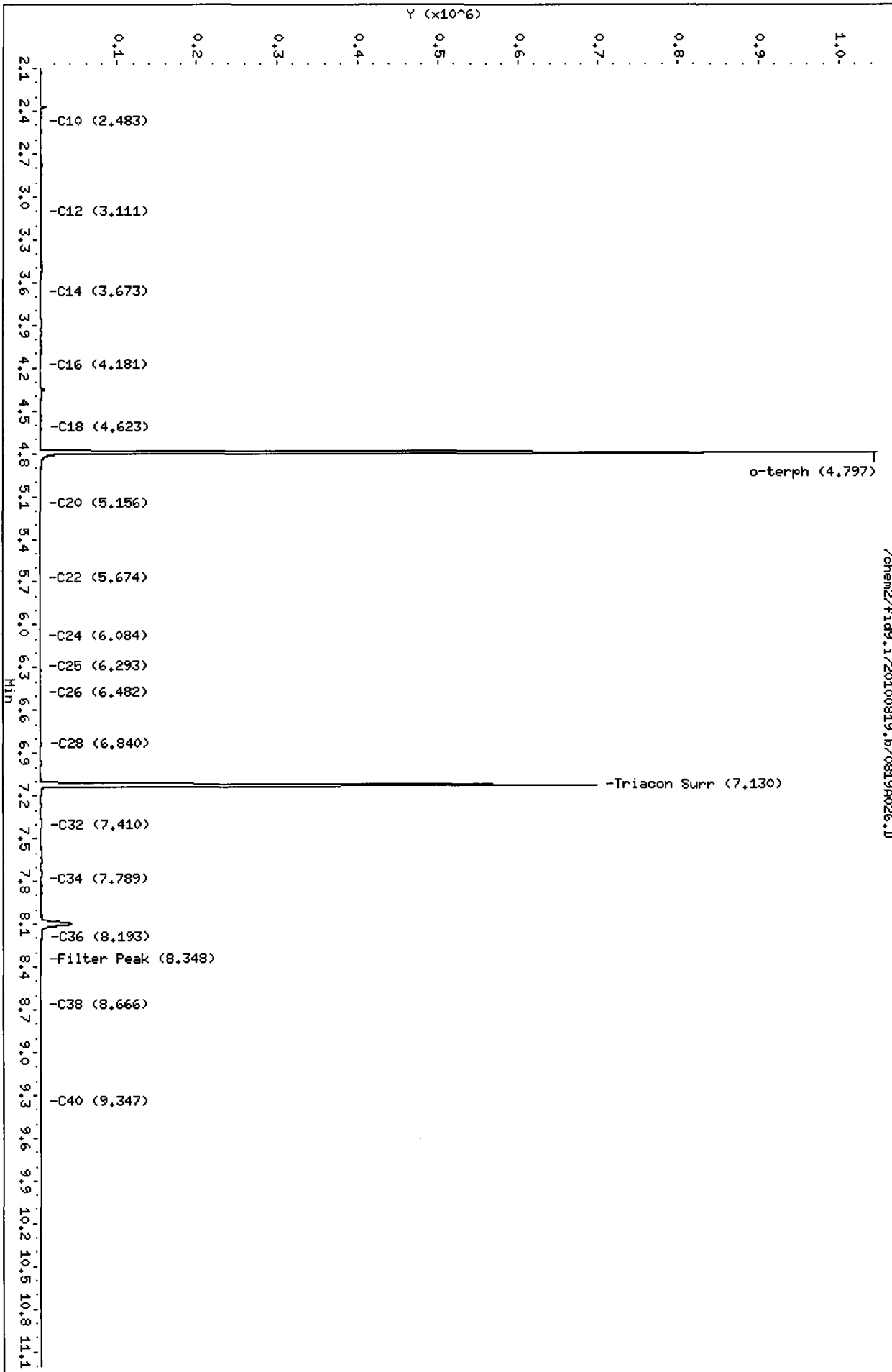
M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

Surrogate	Area	Amount	%Rec
o-Terphenyl	831468	32.3	71.7
Triacontane	685310	34.6	76.8

*Mus 8/20/10*

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



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A027.D  
 Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: JR  
 Report Date: 08/20/2010

ARI ID: RI65D  
 Client ID: MW-01-081310  
 Injection: 19-AUG-2010 20:27  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.579	0.015	11369	6853	GAS (Tol-C12)	72842	3
C8	1.722	0.006	336	78	DIESEL (C12-C24)	217672	8
C10	2.483	0.001	806	476	M.OIL (C24-C38)	374482	29
C12	3.105	-0.014	581	607	AK-102 (C10-C25)	263025	9
C14	3.684	0.008	821	758	AK-103 (C25-C36)	338203	68
C16	4.168	-0.002	1535	1075			
C18	4.628	0.008	2172	4098			
C20	5.146	0.001	1657	360			
C22	5.670	0.009	1425	1444			
C24	6.098	0.003	1426	894			
C25	6.293	-0.002	1997	1391			
C26	6.480	0.004	1746	2078			
C28	6.840	0.008	3664	4383			
C32	7.412	0.002	3248	7104	JP-4 (Tol-C14)	93337	6
C34	7.783	0.003	1547	822	BUNKERC (C10-C38)	627769	72
Filter Peak	8.349	0.006	1089	1052			
C36	8.189	-0.001	1303	1152			
C38	8.656	-0.005	913	723			
C40	9.351	-0.002	805	526			
o-terph	4.797	0.003	1018015	835553	JET-A (C10-C18)	144449	10
Triacon Surr	7.131	-0.014	715921	686818	JP8 (Tol-C16)	132796	8

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
 NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

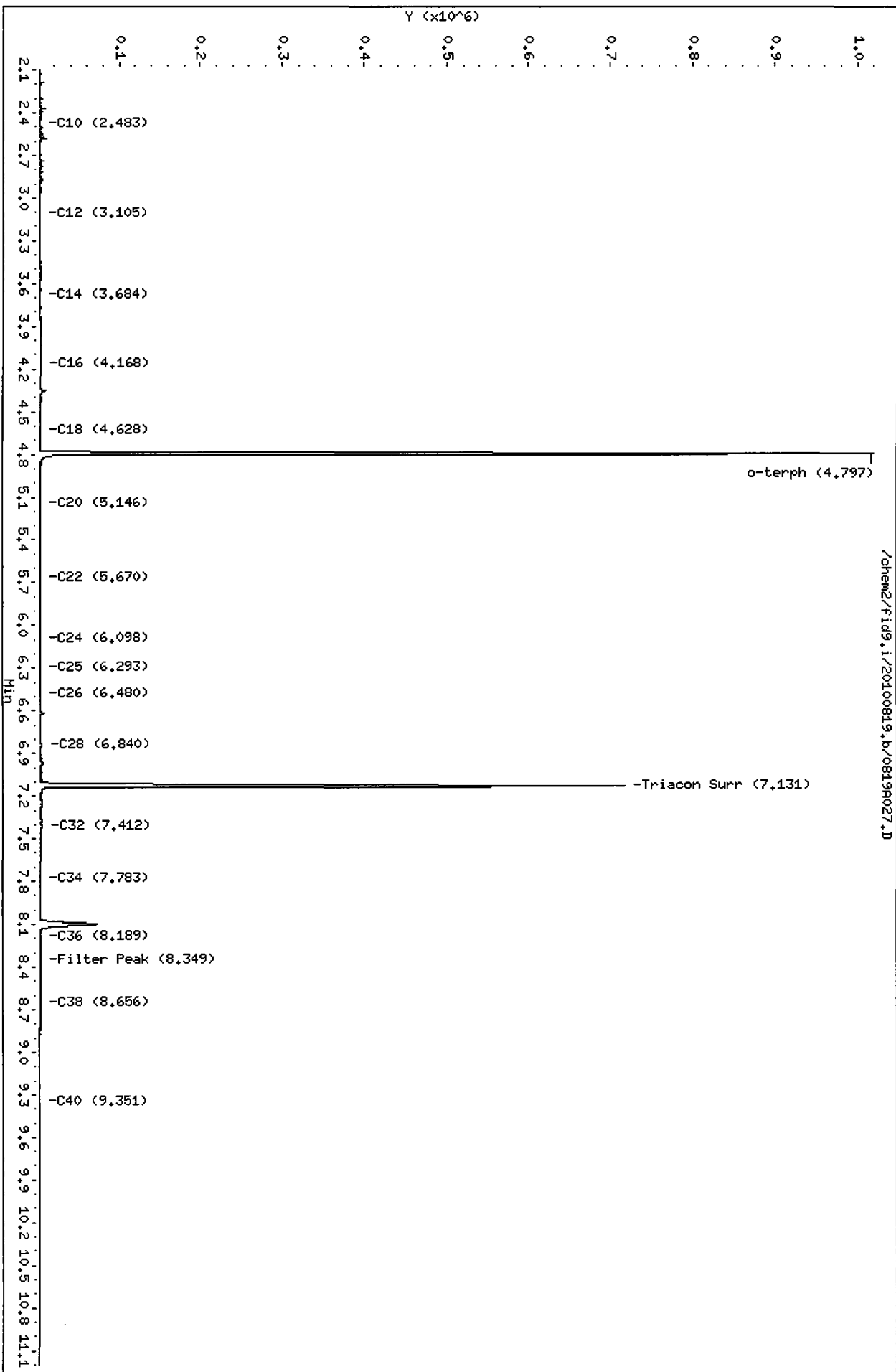
Surrogate	Area	Amount	%Rec
o-Terphenyl	835553	32.4	72.1
Triacontane	686818	34.6	77.0

*MW 8/20/10*

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

Data File: /chem2/fid9.i/20100819.b/0819A027.D  
Date: 19-AUG-2010 20:27  
Client ID: MM-01-081310  
Sample Info: RI65D  
Column phase: RTX-1

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



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Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A028.D  
Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
Instrument: fid9.i  
Operator: JR  
Report Date: 08/20/2010

ARI ID: RI65E  
Client ID: MW-05-081310  
Injection: 19-AUG-2010 20:48  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.578	0.013	10190	6693	GAS (Tol-C12)	42247	2
C8	1.727	0.011	528	103	DIESEL (C12-C24)	65054	2
C10	2.481	0.000	793	495	M.OIL (C24-C38)	148215	12
C12	3.117	-0.002	27	17	AK-102 (C10-C25)	77475	3
C14	3.678	0.002	64	19	AK-103 (C25-C36)	127110	25
C16	4.165	-0.005	424	233			
C18	4.622	0.001	592	911			
C20	5.143	-0.003	696	336			
C22	5.670	0.008	375	444			
C24	6.087	-0.008	185	69			
C25	6.292	-0.002	725	896			
C26	6.480	0.004	374	456			
C28	6.843	0.011	2994	3221			
C32	7.422	0.012	2052	3400	JP-4 (Tol-C14)	49075	3
C34	7.761	-0.019	1727	4050	BUNKERC (C10-C38)	223573	25
Filter Peak	8.349	0.006	769	514			
C36	8.199	0.009	965	1054			
C38	8.667	0.006	757	448			
C40	9.345	-0.008	761	648			
o-terph	4.796	0.002	1061042	868112	JET-A (C10-C18)	50091	4
Triacon Surr	7.138	-0.007	693096	705913	JP8 (Tol-C16)	63007	4

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

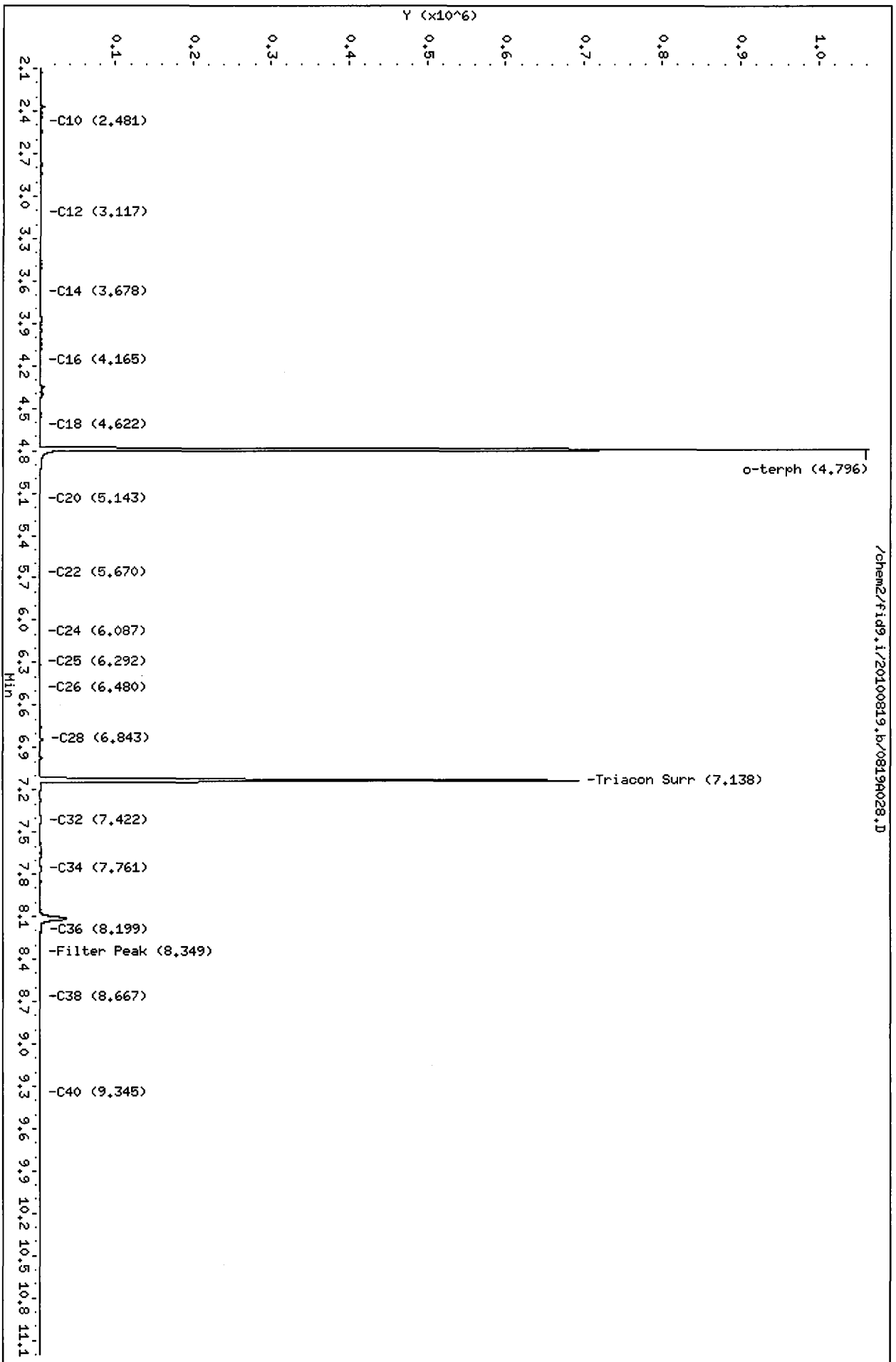
Surrogate	Area	Amount	%Rec
o-Terphenyl	868112	33.7	74.9
Triacontane	705913	35.6	79.1

*M 8/20/10*

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

Data File: /chem2/fid9.i/20100819.b/08194028.D  
Date: 19-AUG-2010 20:48  
Client ID: MM-05-081310  
Sample Info: RI65E  
Column phase: RTX-1

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



/chem2/fid9.i/20100819.b/08194028.D

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A030.D  
Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
Instrument: fid9.i  
Operator: JR  
Report Date: 08/20/2010

ARI ID: RI98LCSW1  
Client ID: RI98LCSW1  
Injection: 19-AUG-2010 21:31  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.580	0.016	41779	22004	GAS (Tol-C12)	2926691	139
C8	1.708	-0.008	2749	2309	DIESEL (C12-C24)	25500618	968
C10	2.467	-0.014	18172	10646	M.OIL (C24-C38)	396272	31
C12	3.112	-0.007	69305	58900	AK-102 (C10-C25)	27923760	961
C14	3.686	0.011	595013	577892	AK-103 (C25-C36)	298640	60
C16	4.182	0.013	1083711	1016311			
C18	4.635	0.015	781628	864068			
C20	5.161	0.016	425298	516787			
C22	5.669	0.008	222787	251544			
C24	6.100	0.006	70891	97526			
C25	6.295	0.001	32467	46378			
C26	6.478	0.002	12609	22748			
C28	6.844	0.012	2855	3900			
C32	7.422	0.012	1535	2239	JP-4 (Tol-C14)	6807271	415
C34	7.763	-0.017	1343	2418	BUNKERC (C10-C38)	28225447	3218
Filter Peak	8.343	0.000	128	41			
C36	8.201	0.012	304	144			
C38	8.660	-0.001	105	100			
C40	9.348	-0.004	97	27			
o-terph	4.804	0.011	1130577	1283648	JET-A (C10-C18)	20112878	1455
Triacon Surr	7.137	-0.008	675745	666009	JP8 (Tol-C16)	13364063	760

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

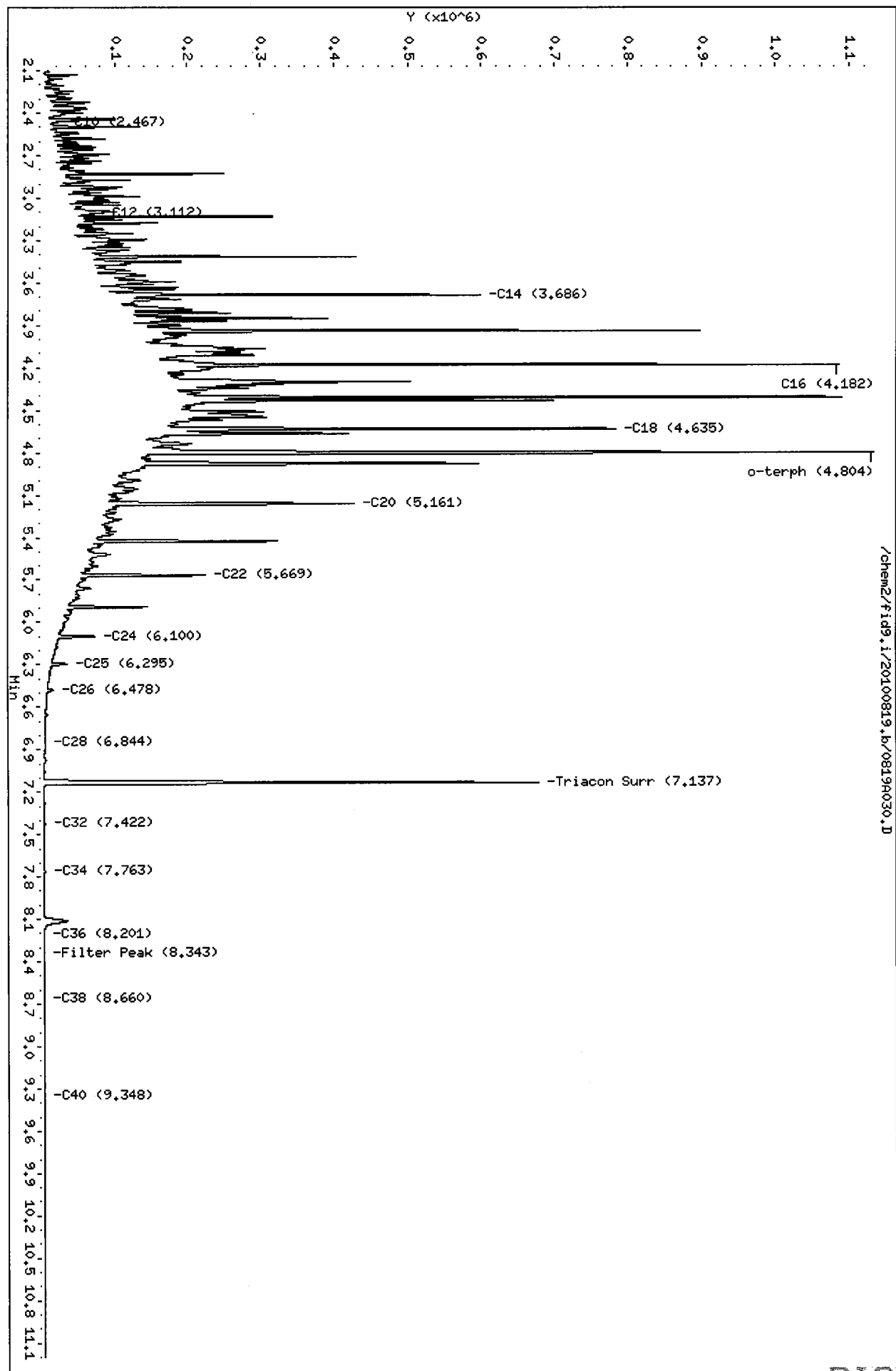
Surrogate	Area	Amount	%Rec
o-Terphenyl	1283648	49.8	110.7
Triacontane	666009	33.6	74.6

*M = 8/20/10*

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

Data File: /chem2/fid9.i/20100819.b/0819030.D  
Date: 19-AUG-2010 21:31  
Client ID: R198LCSM1  
Sample Info: R198LCSM1  
Column phase: RTX-1

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



/chem2/fid9.i/20100819.b/0819030.D

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A030.D  
 Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: JR  
 Report Date: 08/20/2010

ARI ID: RI98LCSW1  
 Client ID: RI98LCSW1  
 Injection: 19-AUG-2010 21:31  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.580	0.016	41779	22004	GAS (Tol-C12)	2926691	139
C8	1.708	-0.008	2749	2309	DIESEL (C12-C24)	25931483	985
C10	2.467	-0.014	18172	10646	M.OIL (C24-C38)	396272	31
C12	3.112	-0.007	69305	58900	AK-102 (C10-C25)	28354624	976 M
C14	3.686	0.011	595013	577892	AK-103 (C25-C36)	298640	60
C16	4.182	0.013	1083711	1016311			
C18	4.635	0.015	781628	864068			
C20	5.161	0.016	425298	516787			
C22	5.669	0.008	222787	251544			
C24	6.100	0.006	70891	97526			
C25	6.295	0.001	32467	46378			
C26	6.478	0.002	12609	22748			
C28	6.844	0.012	2855	3900			
C32	7.422	0.012	1535	2239	JP-4 (Tol-C14)	6807271	415
C34	7.763	-0.017	1343	2418	BUNKERC (C10-C38)	28656311	3267 M
Filter Peak	8.343	0.000	128	41			
C36	8.201	0.012	304	144			
C38	8.660	-0.001	105	100			
C40	9.348	-0.004	97	27			
o-terph	4.804	0.011	977064	855957	JET-A (C10-C18)	20112878	1455
Triacon Surr	7.137	-0.008	675745	666009	JP8 (Tol-C16)	13364063	760

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
 NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

Surrogate	Area	Amount	%Rec
o-Terphenyl	855957	33.2	73.8
Triacontane	666009	33.6	74.6

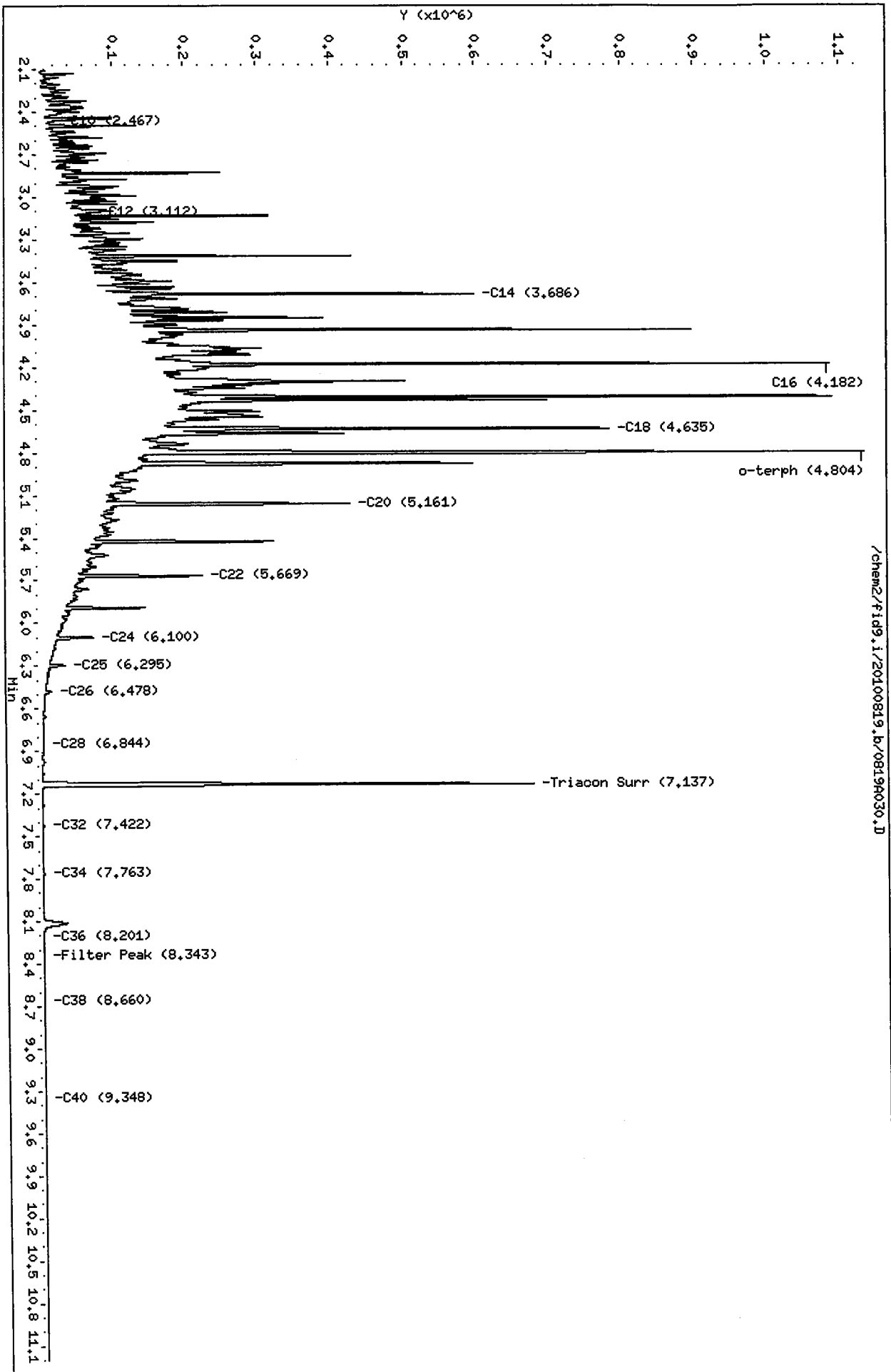
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8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

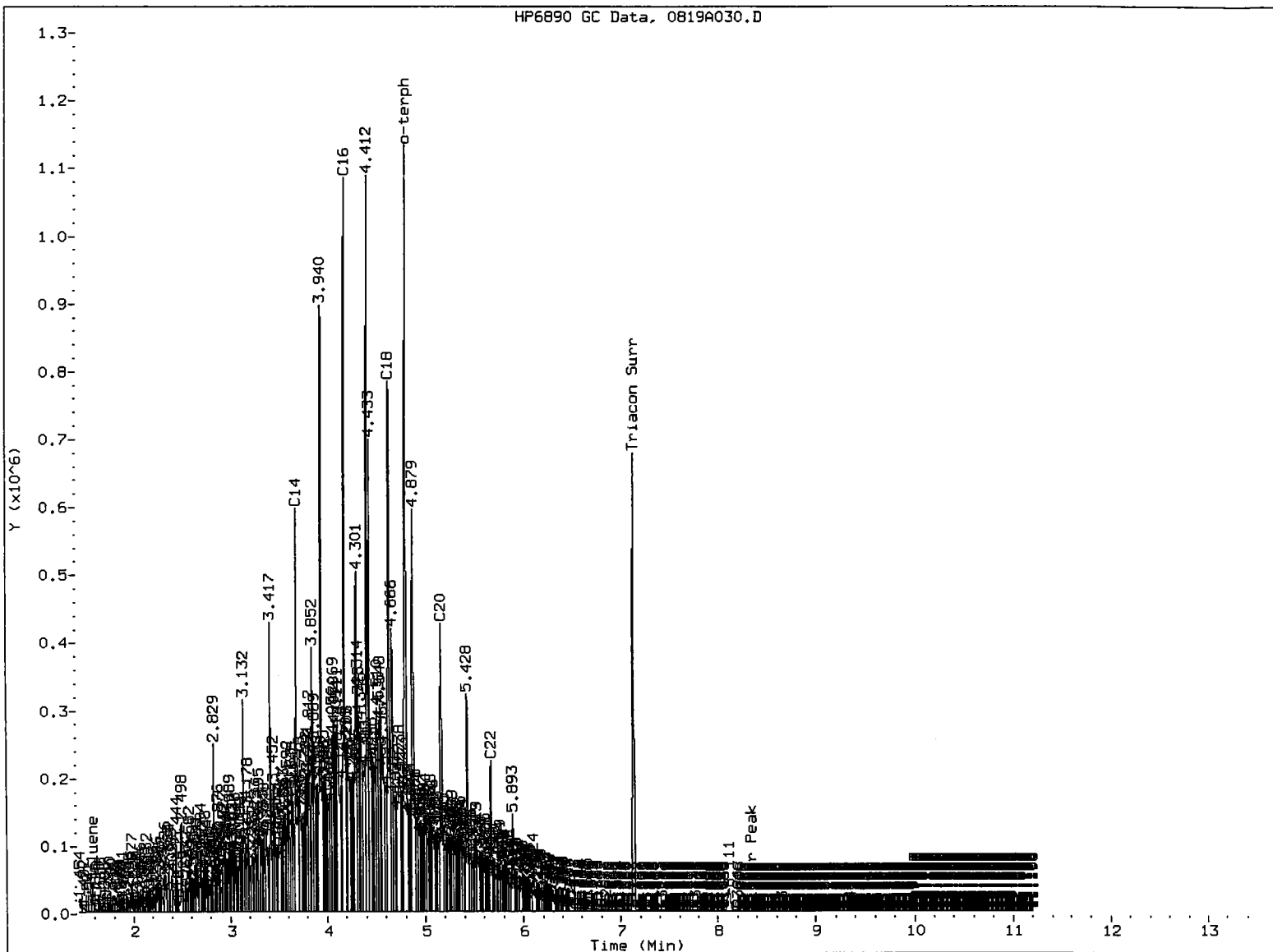
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Date: 19-AUG-2010 21:31  
Client ID: R198LCSM1  
Sample Info: R198LCSM1

Column phase: RTX-1

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

/chem2/fid9.i/20100819.b/08190030.D





MANUAL INTEGRATION

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

Analyst: *M* Date: *8/20/74*

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A031.D  
Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
Instrument: fid9.i  
Operator: JR  
Report Date: 08/20/2010

ARI ID: RI98LCSDW1  
Client ID: RI98LCSDW1  
Injection: 19-AUG-2010 21:53  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.578	0.013	39383	20179	GAS (Tol-C12)	3104776	148
C8	1.705	-0.011	2951	2427	DIESEL (C12-C24)	27485626	1044
C10	2.466	-0.015	19817	11644	M.OIL (C24-C38)	441514	35
C12	3.111	-0.008	73520	60089	AK-102 (C10-C25)	30068059	1035
C14	3.687	0.011	632081	611700	AK-103 (C25-C36)	330292	66
C16	4.166	-0.004	253226	189437			
C18	4.636	0.015	828394	948624			
C20	5.141	-0.005	99549	25576			
C22	5.668	0.007	249729	275322			
C24	6.098	0.003	78181	95662			
C25	6.292	-0.003	34859	60095			
C26	6.476	0.000	14043	20144			
C28	6.838	0.006	5173	6342			
C32	7.404	-0.006	2081	3082	JP-4 (Tol-C14)	7291502	445
C34	7.783	0.003	673	724	BUNKERC (C10-C38)	30410616	3467
Filter Peak	8.345	0.001	471	137			
C36	8.185	-0.005	609	558			
C38	8.659	-0.002	423	173			
C40	9.351	-0.002	406	167			
o-terph	4.806	0.012	1239365	1375996	JET-A (C10-C18)	21615026	1564
Triacon Surr	7.126	-0.020	682444	702997	JP8 (Tol-C16)	14337527	815

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1375996	53.4	118.7
Triacontane	702997	35.4	78.8

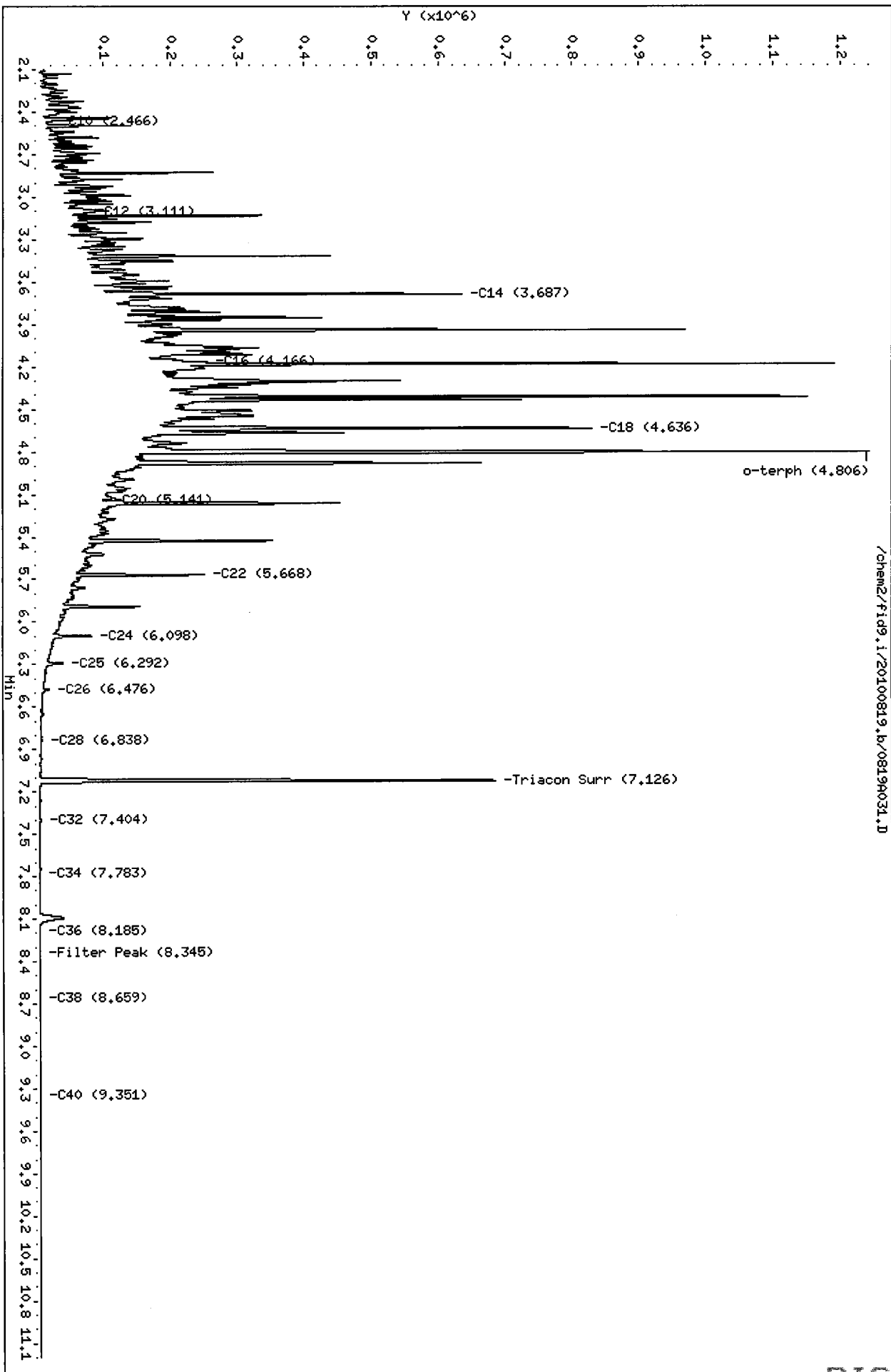
*MS 8/20/10*

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



Data File: /chem2/fid9.i/20100819.b/0819A031.D  
Date : 19-AUG-2010 21:53  
Client ID: R198LCSDM1  
Sample Info: R198LCSDM1  
Column phase: RTX-1

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



Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A031.D  
 Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
 Instrument: fid9.i  
 Operator: JR  
 Report Date: 08/20/2010

ARI ID: RI98LCSDW1  
 Client ID: RI98LCSDW1  
 Injection: 19-AUG-2010 21:53  
 Dilution Factor: 1  
 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.578	0.013	39383	20179	GAS (Tol-C12)	3104776	148
C8	1.705	-0.011	2951	2427	DIESEL (C12-C24)	27950475	1062
C10	2.466	-0.015	19817	11644	M.OIL (C24-C38)	441514	35
C12	3.111	-0.008	73520	60089	AK-102 (C10-C25)	30532909	1051 M
C14	3.687	0.011	632081	611700	AK-103 (C25-C36)	330292	66
C16	4.166	-0.004	253226	189437			
C18	4.636	0.015	828394	948624			
C20	5.141	-0.005	99549	25576			
C22	5.668	0.007	249729	275322			
C24	6.098	0.003	78181	95662			
C25	6.292	-0.003	34859	60095			
C26	6.476	0.000	14043	20144			
C28	6.838	0.006	5173	6342			
C32	7.404	-0.006	2081	3082	JP-4 (Tol-C14)	7291502	445
C34	7.783	0.003	673	724	BUNKERC (C10-C38)	30875465	3520 M
Filter Peak	8.345	0.001	471	137			
C36	8.185	-0.005	609	558			
C38	8.659	-0.002	423	173			
C40	9.351	-0.002	406	167			
o-terph	4.806	0.012	1073612	914575	JET-A (C10-C18)	21615026	1564
Triacon Surr	7.126	-0.020	682444	702997	JP8 (Tol-C16)	14337527	815

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
 NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

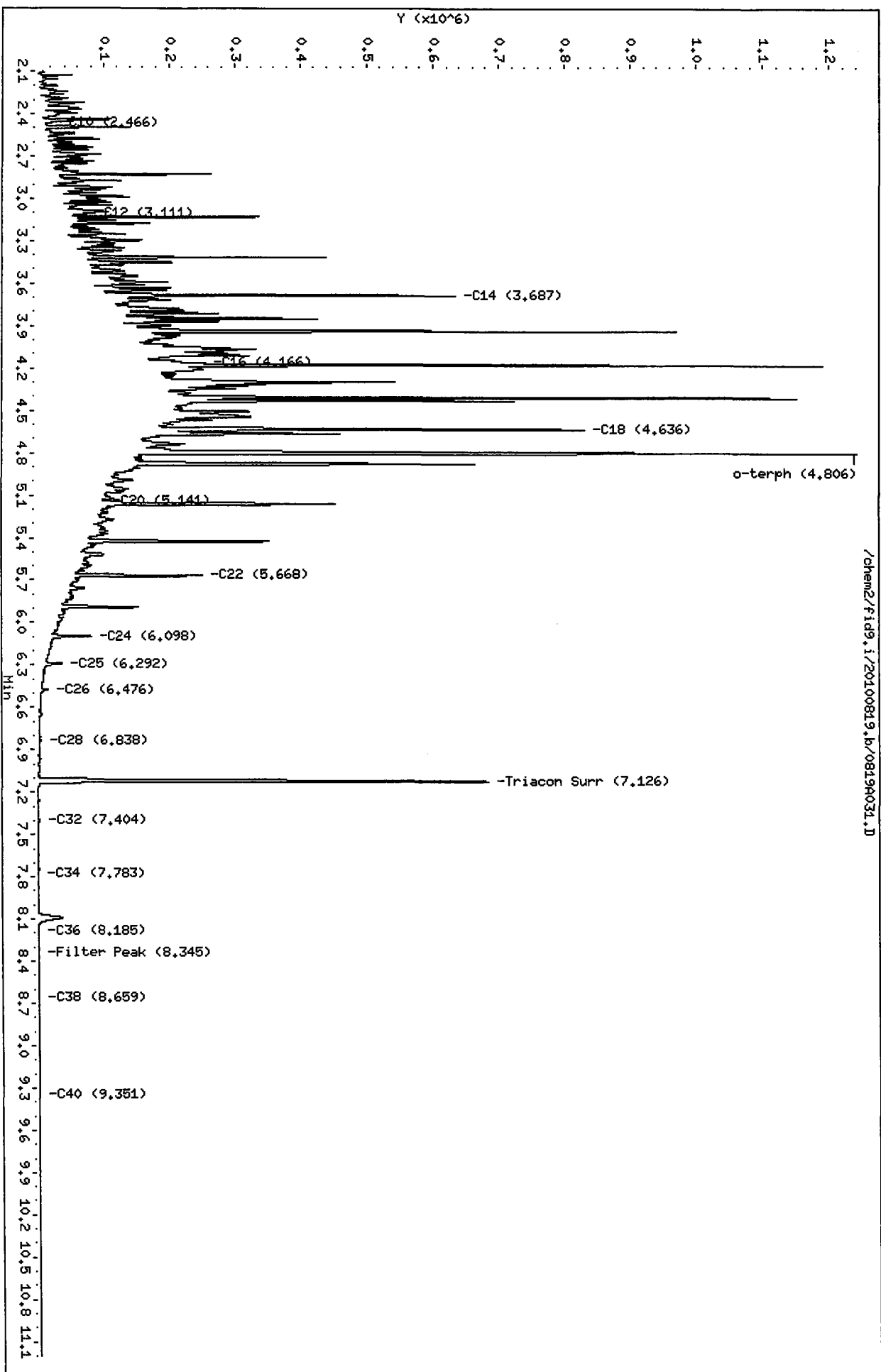
Surrogate	Area	Amount	%Rec
o-Terphenyl	914575	35.5	78.9
Triacontane	702997	35.4	78.8

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

Data File: /chem2/fid9.i/20100819.b/0819A031.D  
Date: 19-AUG-2010 21:53  
Client ID: RI98LCSDM4  
Sample Info: RI98LCSDM4

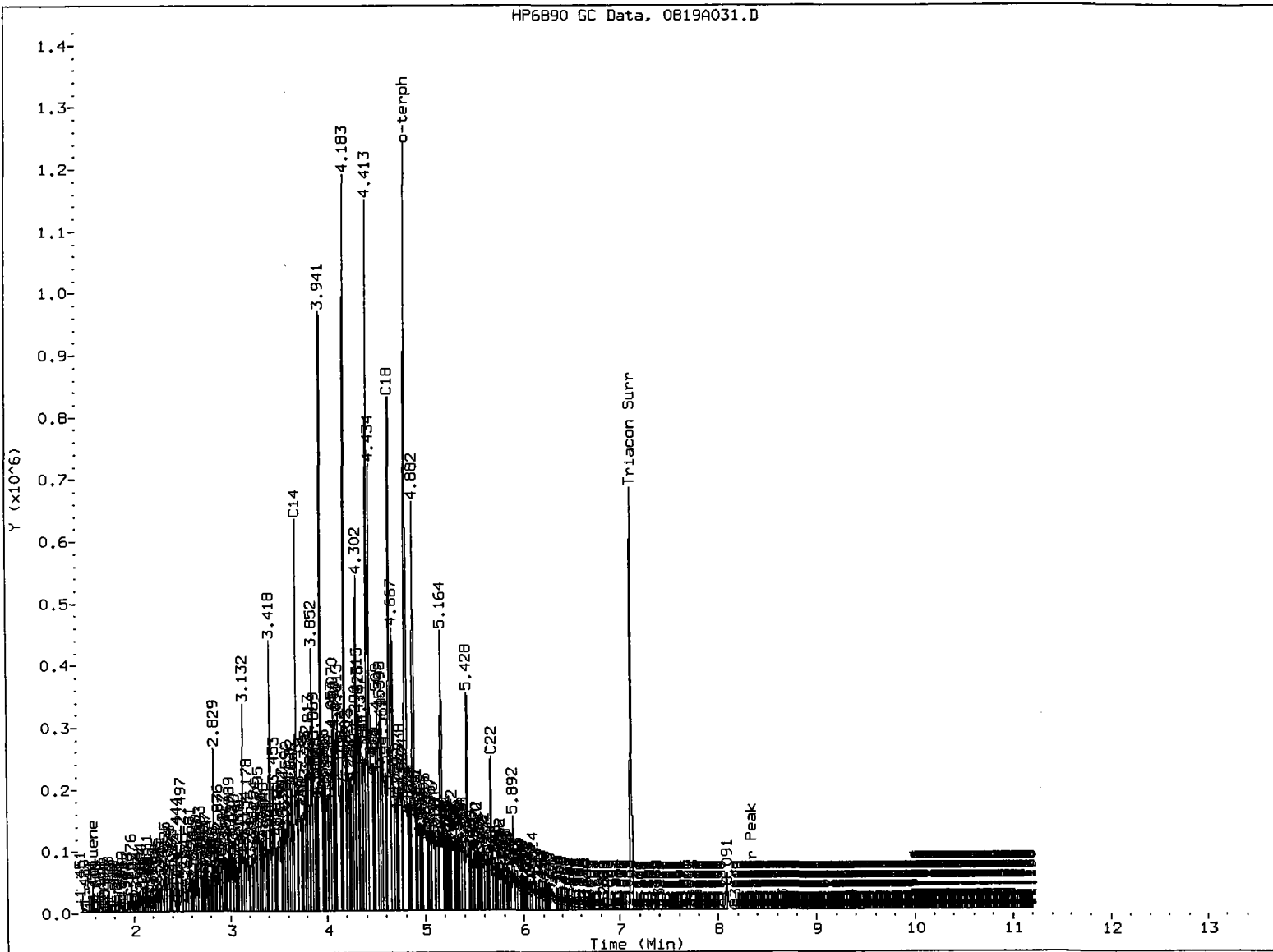
Column phase: RTX-1

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



/chem2/fid9.i/20100819.b/0819A031.D

HP6890 GC Data, 0B19A031.D



MANUAL INTEGRATION

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

Analyst: M

Date: 8/20/74

Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A032.D  
Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
Instrument: fid9.i  
Operator: JR  
Report Date: 08/20/2010

ARI ID: RI98MBW1  
Client ID: RI98MBW1  
Injection: 19-AUG-2010 22:14  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.559	-0.006	658	341	GAS (Tol-C12)	37018	2
C8	1.723	0.007	336	65	DIESEL (C12-C24)	62063	2
C10	2.483	0.002	755	372	M.OIL (C24-C38)	145937	11
C12	3.122	0.003	33	14	AK-102 (C10-C25)	74349	3
C14	3.674	-0.001	138	79	AK-103 (C25-C36)	124187	25
C16	4.168	-0.002	495	225			
C18	4.625	0.004	720	948			
C20	5.141	-0.005	417	543			
C22	5.671	0.010	413	563			
C24	6.096	0.001	264	64			
C25	6.297	0.003	690	1554			
C26	6.484	0.008	390	338			
C28	6.836	0.004	442	76			
C32	7.409	-0.001	1949	3290	JP-4 (Tol-C14)	45297	3
C34	7.784	0.004	802	142	BUNKERC (C10-C38)	218479	25
Filter Peak	8.344	0.001	763	770			
C36	8.196	0.006	868	927			
C38	8.656	-0.005	747	487			
C40	9.355	0.002	773	792			
o-terph	4.797	0.004	998725	860798	JET-A (C10-C18)	49919	4
Triacon Surr	7.130	-0.016	735326	715846	JP8 (Tol-C16)	59753	3

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

Surrogate	Area	Amount	%Rec
o-Terphenyl	860798	33.4	74.3
Triacontane	715846	36.1	80.2

*ms 8/20/10*

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

Data File: /chem2/fid9.i/20100819.b/0819A032.D

Date: 19-AUG-2010 22:14

Client ID: R198MBM1

Sample Info: R198MBM1

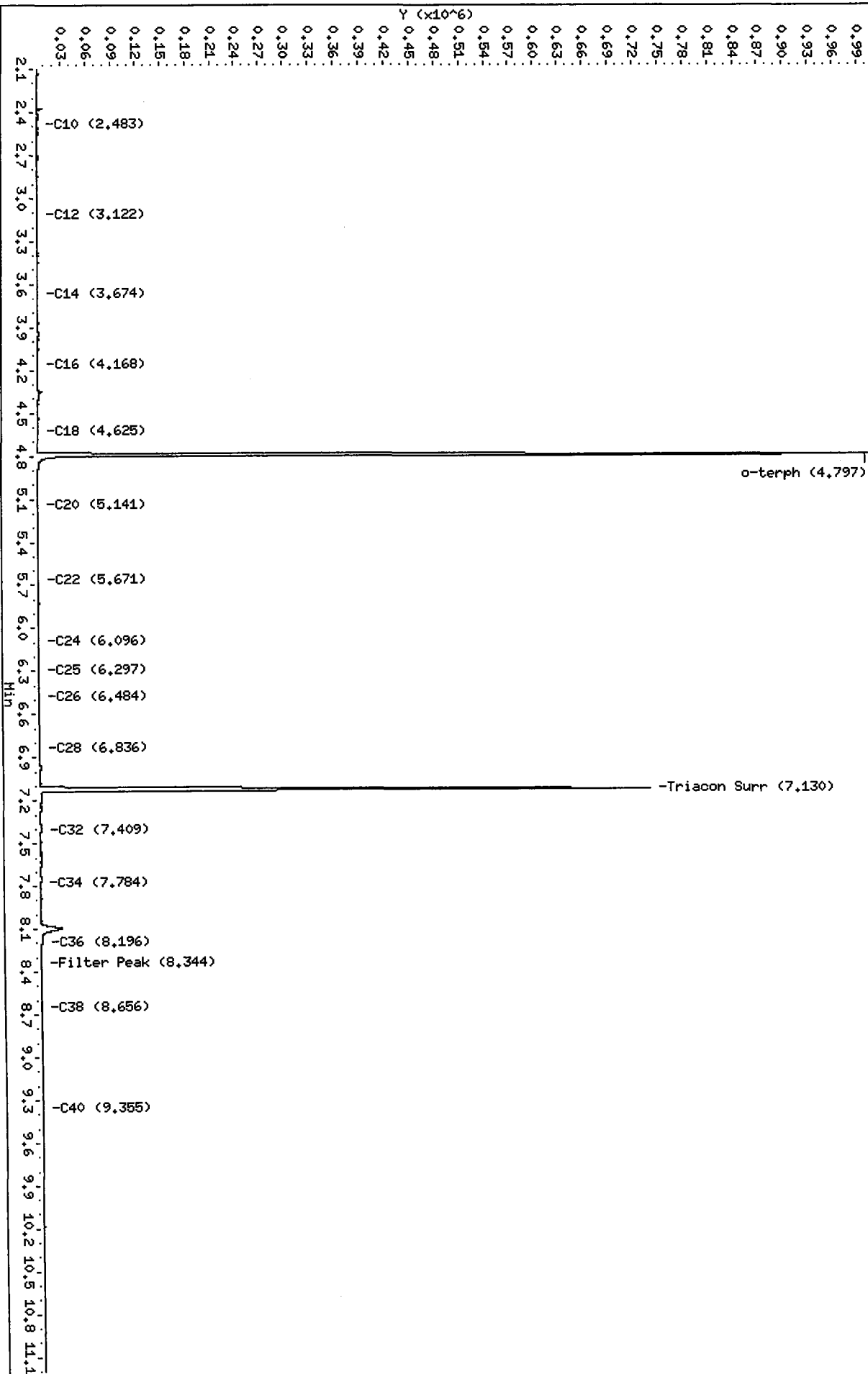
Column phase: RTX-1

Instrument: fid9.i

Operator: JR

Column diameter: 0.25

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Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819raw.b/0819A033.D ARI ID: DIESEL#3  
 Method: /chem2/fid9.i/20100819.b/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 19-AUG-2010 22:36  
 Operator: JR Dilution Factor: 1  
 Report Date: 08/20/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.550	-0.015	1369	1585	GAS (Tol-C12)	876215	42
C8	1.711	-0.006	1669	1461	DIESEL (C12-C24)	6133737	233
C10	2.487	0.006	3927	2417	M.OIL (C24-C38)	167496	13
C12	3.111	-0.008	18314	14844	AK-102 (C10-C25)	6840214	235
C14	3.684	0.008	143559	139920	AK-103 (C25-C36)	126788	25
C16	4.175	0.005	268725	198169			
C18	4.625	0.004	196397	207517			
C20	5.153	0.007	96859	112116			
C22	5.663	0.002	50776	53691			
C24	6.098	0.004	16283	20448			
C25	6.295	0.000	6518	12074			
C26	6.481	0.005	2582	3350			
C28	6.842	0.010	384	451			
C32	7.435	0.025	315	143	JP-4 (Tol-C14)	1915284	117
C34	7.780	0.000	323	209	BUNKERC (C10-C38)	6976941	795
Filter Peak	8.346	0.003	266	160			
C36	8.193	0.004	267	141			
C38	8.664	0.003	279	269			
C40	9.347	-0.006	303	218			
o-terph	4.802	0.008	1292225	1215173	JET-A (C10-C18)	5010191	363
Triacon Surr	7.153	0.008	255	44	JP8 (Tol-C16)	3505393	199

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
 NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

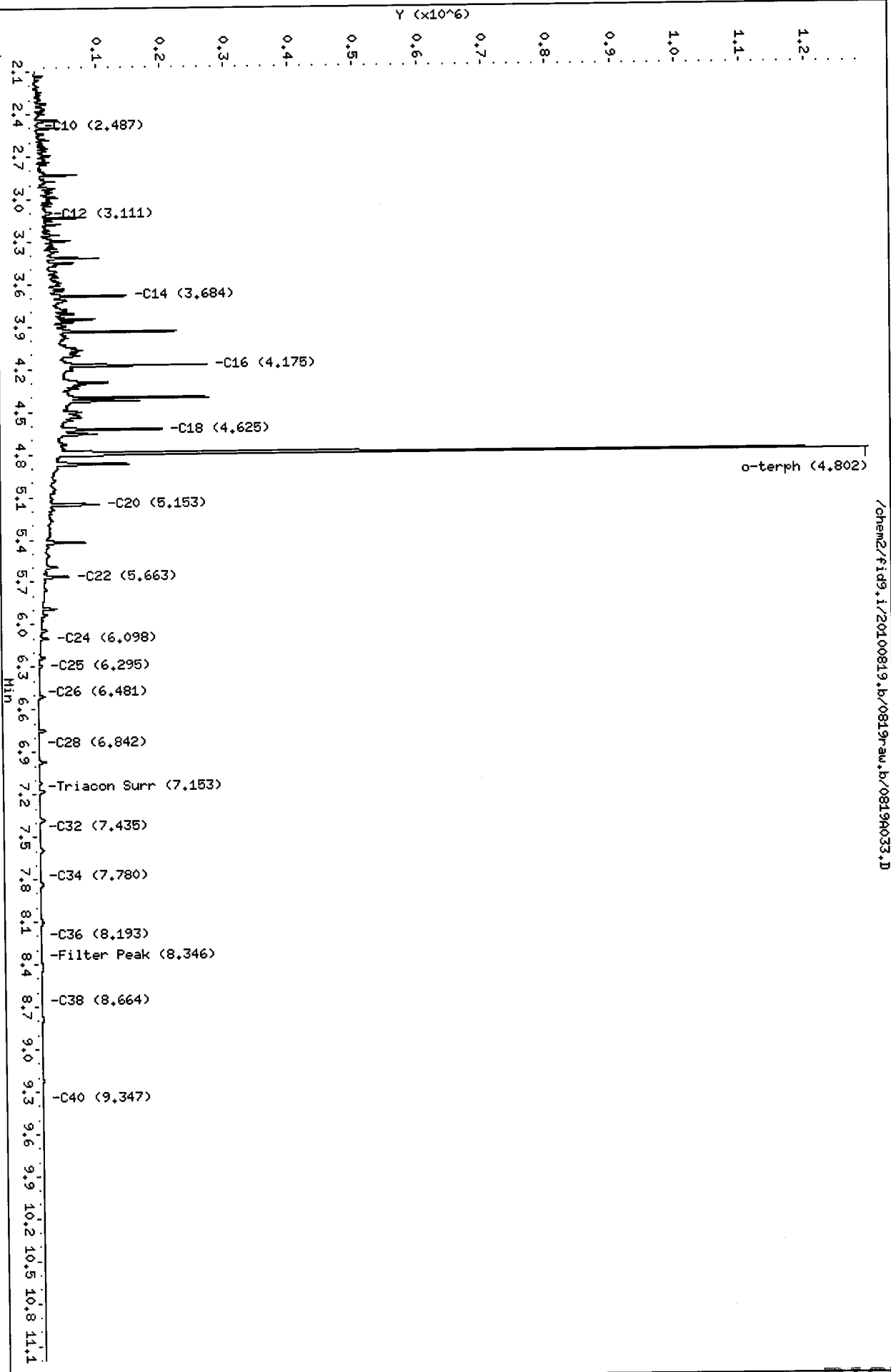
Surrogate	Area	Amount	%Rec
o-Terphenyl	1215173	47.2	104.8
Triacontane	44	0.0	0.0

*Mus/rojc*

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

Data File: /chem2/fid9.i/20100819.b/0819r.aw.b/0819A033.D  
Date: 19-AUG-2010 22:36  
Client ID:  
Sample Info: DIESEL#3  
Column phase: RTX-1

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





Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A033.D  
Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
Instrument: fid9.i  
Operator: JR  
Report Date: 08/20/2010

ARI ID: DIESEL#3  
Client ID:  
Injection: 19-AUG-2010 22:36  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.550	-0.015	1369	1585	GAS (Tol-C12)	876215	42
C8	1.711	-0.006	1669	1461	DIESEL (C12-C24)	6272899	238
C10	2.487	0.006	3927	2417	M.OIL (C24-C38)	167496	13
C12	3.111	-0.008	18314	14844	AK-102 (C10-C25)	6979376	240 M
C14	3.684	0.008	143559	139920	AK-103 (C25-C36)	126788	25
C16	4.175	0.005	268725	198169			
C18	4.625	0.004	196397	207517			
C20	5.153	0.007	96859	112116			
C22	5.663	0.002	50776	53691			
C24	6.098	0.004	16283	20448			
C25	6.295	0.000	6518	12074			
C26	6.481	0.005	2582	3350			
C28	6.842	0.010	384	451			
C32	7.435	0.025	315	143	JP-4 (Tol-C14)	1915284	117
C34	7.780	0.000	323	209	BUNKERC (C10-C38)	7116103	811 M
Filter Peak	8.346	0.003	266	160			
C36	8.193	0.004	267	141			
C38	8.664	0.003	279	269			
C40	9.347	-0.006	303	218			
o-terph	4.802	0.008	1253192	1076751	JET-A (C10-C18)	5010191	363
Triacon Surr	7.153	0.008	255	44	JP8 (Tol-C16)	3505393	199

M Indicates manual integration within range.

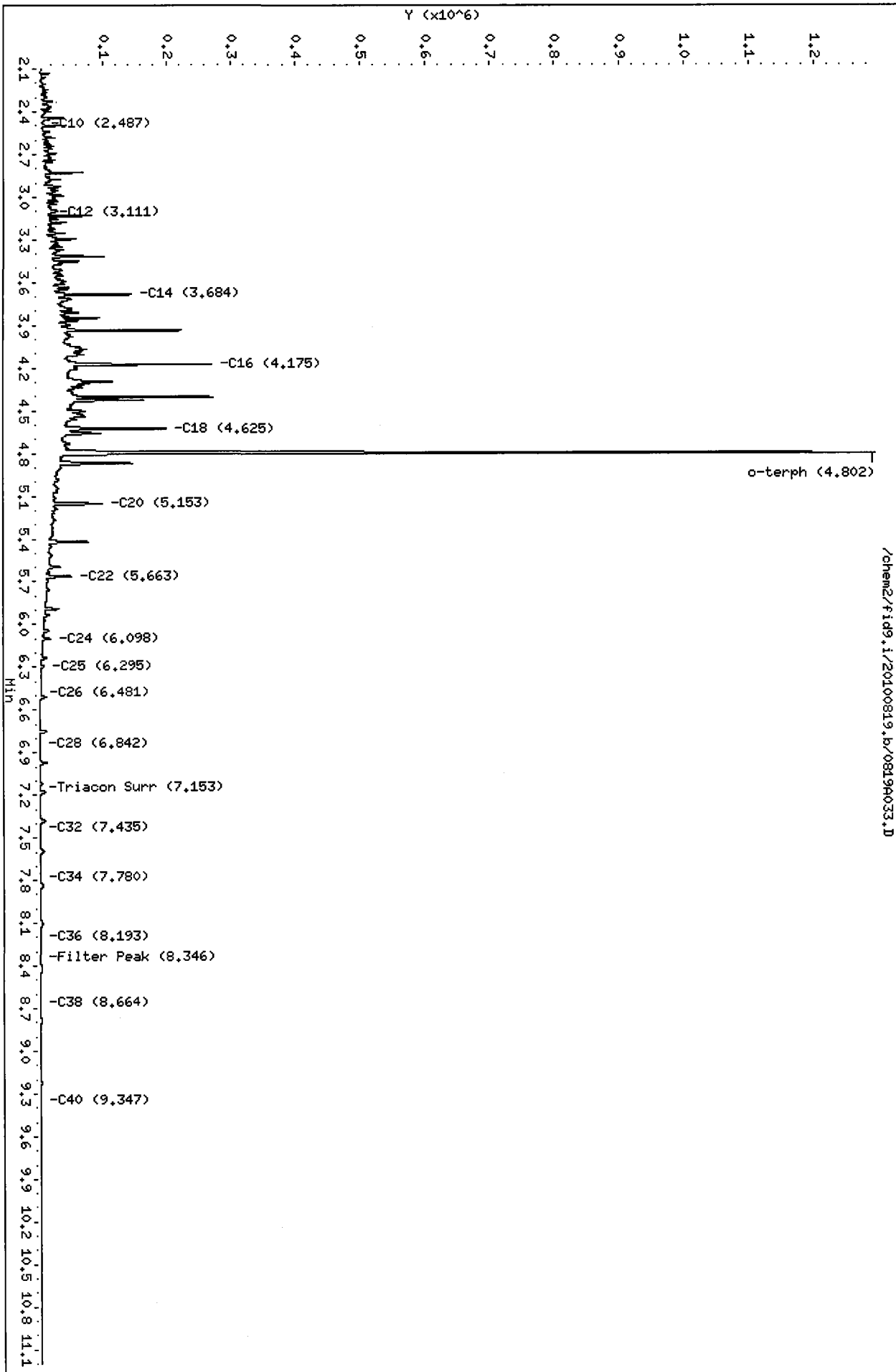
Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1076751	41.8	92.9
Triacontane	44	0.0	0.0

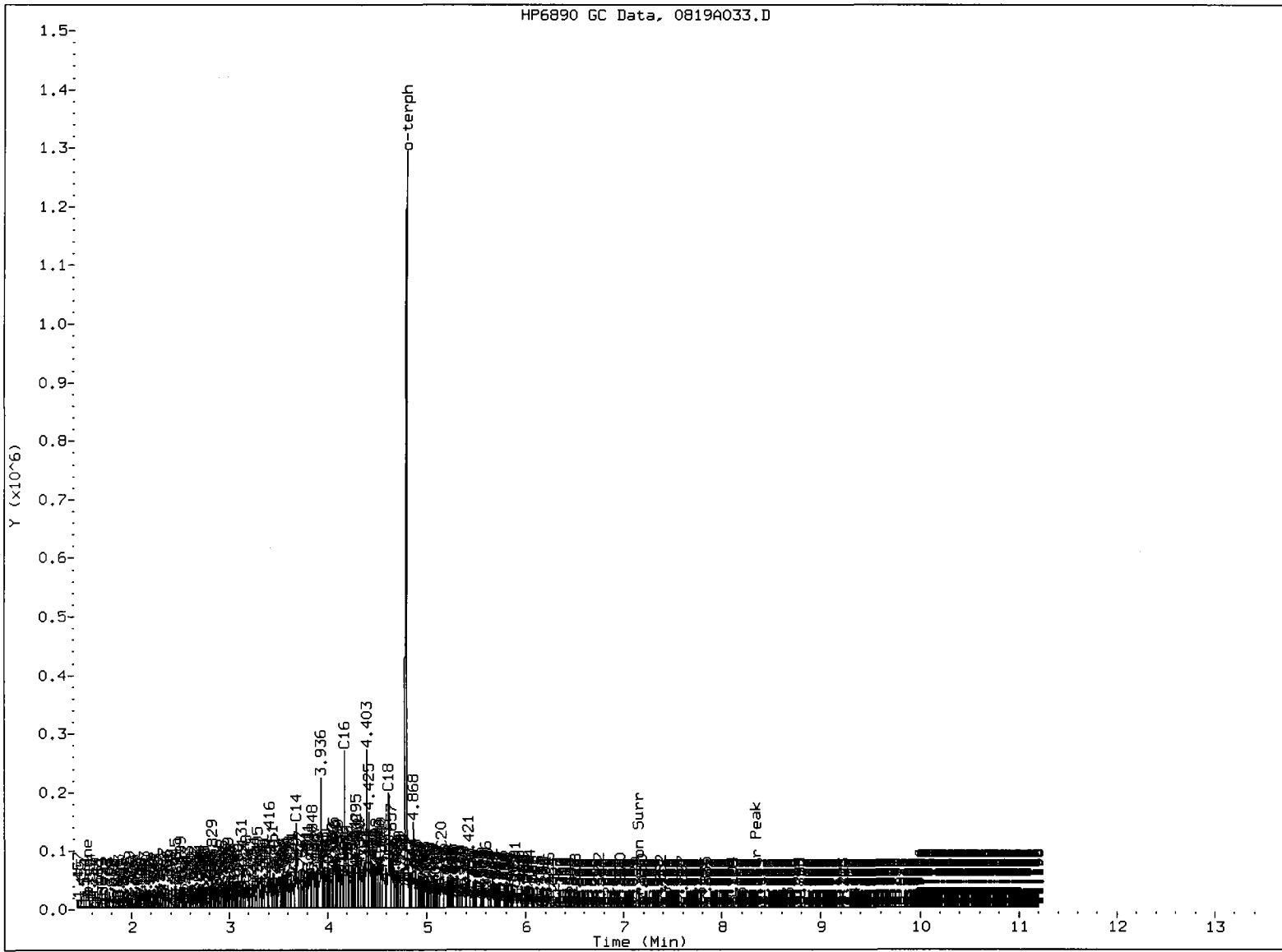
Analyte	RF	Curve Date
o-Terph Surr	25762.2	28-JUL-2010
Triacon Surr	19832.1	28-JUL-2010
Gas	21009.8	15-JUN-2010
Diesel	26331.0	28-JUL-2010
Motor Oil	12787.0	28-JUL-2010
AK102	29053.0	28-JUL-2010
AK103	5009.0	26-JUL-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8770.6	05-JAN-2010
JP-8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

Data File: /chem2/fid9.i/20100819.b/0819A033.D  
Date : 19-AUG-2010 22:36  
Client ID:  
Sample Info: DIESEL#3  
Column phase: RTX-1

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



/chem2/fid9.i/20100819.b/0819A033.D



MANUAL INTEGRATION

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

Analyst: MS

Date: 8/20/10

Analytical Resources Inc.  
 NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819raw.b/0819A034.D ARI ID: MOIL#3  
 Method: /chem2/fid9.i/20100819.b/ftphfid9a.m Client ID:  
 Instrument: fid9.i Injection: 19-AUG-2010 22:57  
 Operator: JR Dilution Factor: 1  
 Report Date: 08/20/2010 Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.578	0.013	1271	1864	GAS (Tol-C12)	24884	1
C8	1.716	0.000	518	545	DIESEL (C12-C24)	741080	28
C10	2.474	-0.007	65	11	M.OIL (C24-C38)	6148878	481
C12	3.127	0.008	15	2	AK-102 (C10-C25)	910301	31
C14	3.680	0.004	105	45	AK-103 (C25-C36)	5344408	1067
C16	4.167	-0.003	230	212			
C18	4.627	0.006	1043	1226			
C20	5.153	0.008	2846	4269			
C22	5.665	0.004	11232	7330			
C24	6.094	-0.001	23624	11459			
C25	6.296	0.001	31662	6849			
C26	6.474	-0.002	37689	24506			
C28	6.833	0.001	50788	20180			
C32	7.413	0.003	63380	30838	JP-4 (Tol-C14)	28485	2
C34	7.781	0.001	46761	44536	BUNKERC (C10-C38)	6897331	786
Filter Peak	8.336	-0.007	26545	29352			
C36	8.188	-0.002	31478	14770			
C38	8.656	-0.005	18704	11654			
C40	9.355	0.002	8931	2296			
o-terph	4.792	-0.002	7097	6684	JET-A (C10-C18)	35837	3
Triacon Surr	7.142	-0.004	826119	1082941	JP8 (Tol-C16)	33657	2

M Indicates manual integration within range.

Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
 NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

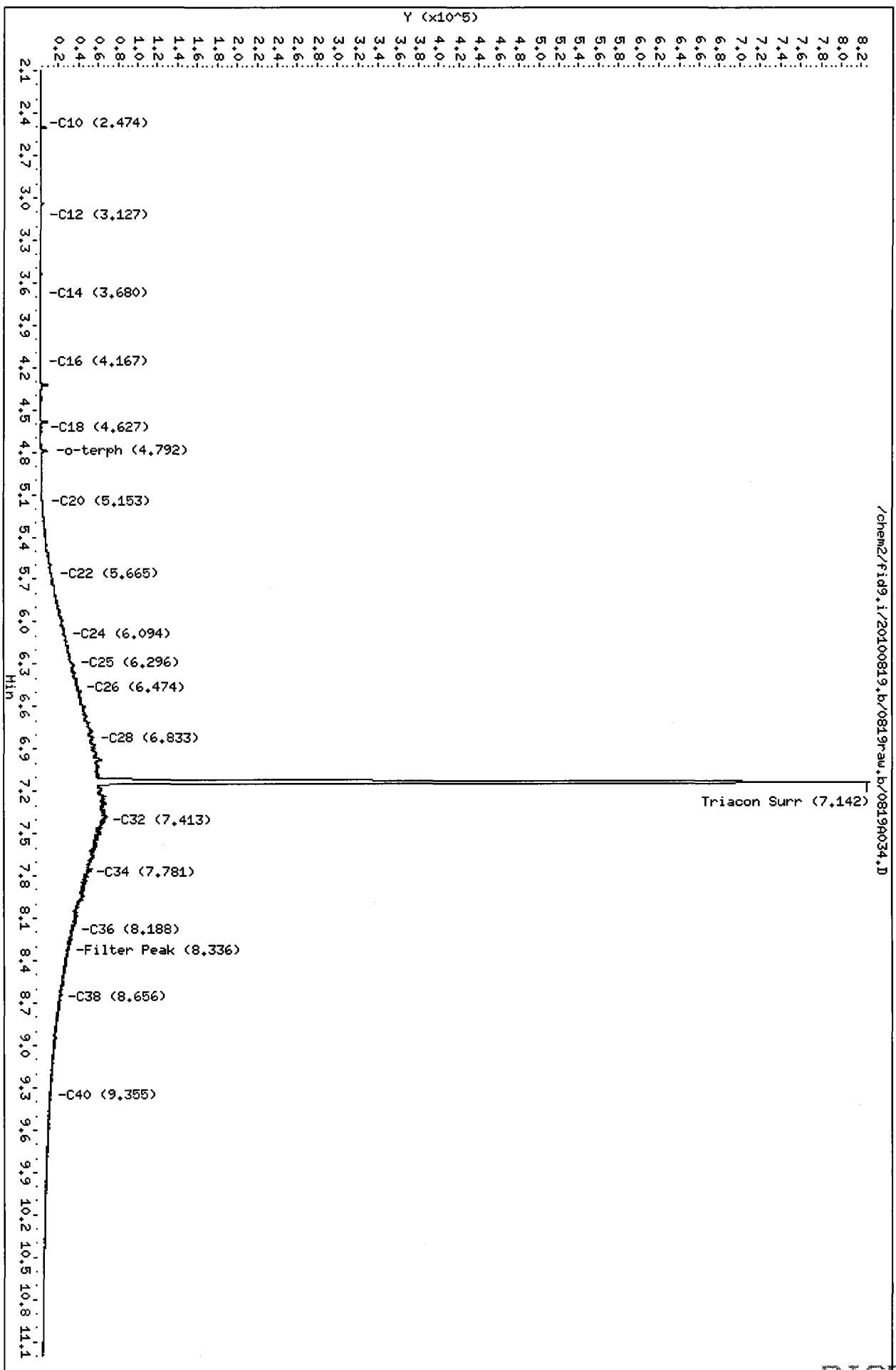
Surrogate	Area	Amount	%Rec
o-Terphenyl	6684	0.3	0.6
Triacontane	1082941	54.6	121.3

*M 8/20/10*

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

Data File: /chem2/fid9.i/20100819.b/0819r-aw.b/0819A034.D  
Date: 19-AUG-2010 22:57  
Client ID:  
Sample Info: M01L#3  
Column phase: RTX-1

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



Analytical Resources Inc.  
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20100819.b/0819A034.D  
Method: /chem2/fid9.i/20100819.b/ftphfid9a.m  
Instrument: fid9.i  
Operator: JR  
Report Date: 08/20/2010

ARI ID: MOIL#3  
Client ID:  
Injection: 19-AUG-2010 22:57  
Dilution Factor: 1  
Macro: 28-JUN-2010

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.578	0.013	1271	1864	GAS (Tol-C12)	24884	1
C8	1.716	0.000	518	545	DIESEL (C12-C24)	741080	28
C10	2.474	-0.007	65	11	M.OIL (C24-C38)	6346221	496
C12	3.127	0.008	15	2	AK-102 (C10-C25)	910301	31
C14	3.680	0.004	105	45	AK-103 (C25-C36)	5541751	1106 M
C16	4.167	-0.003	230	212			
C18	4.627	0.006	1043	1226			
C20	5.153	0.008	2846	4269			
C22	5.665	0.004	11232	7330			
C24	6.094	-0.001	23624	11459			
C25	6.296	0.001	31662	6849			
C26	6.474	-0.002	37689	24506			
C28	6.833	0.001	50788	20180			
C32	7.413	0.003	63380	30838	JP-4 (Tol-C14)	28485	2
C34	7.781	0.001	46761	44536	BUNKERC (C10-C38)	7094674	809 M
Filter Peak	8.336	-0.007	26545	29352			
C36	8.188	-0.002	31478	14770			
C38	8.656	-0.005	18704	11654			
C40	9.355	0.002	8931	2296			
o-terph	4.792	-0.002	7097	6684	JET-A (C10-C18)	35837	3
Triacon Surr	7.142	-0.004	767118	886729	JP8 (Tol-C16)	33657	2

M Indicates manual integration within range.

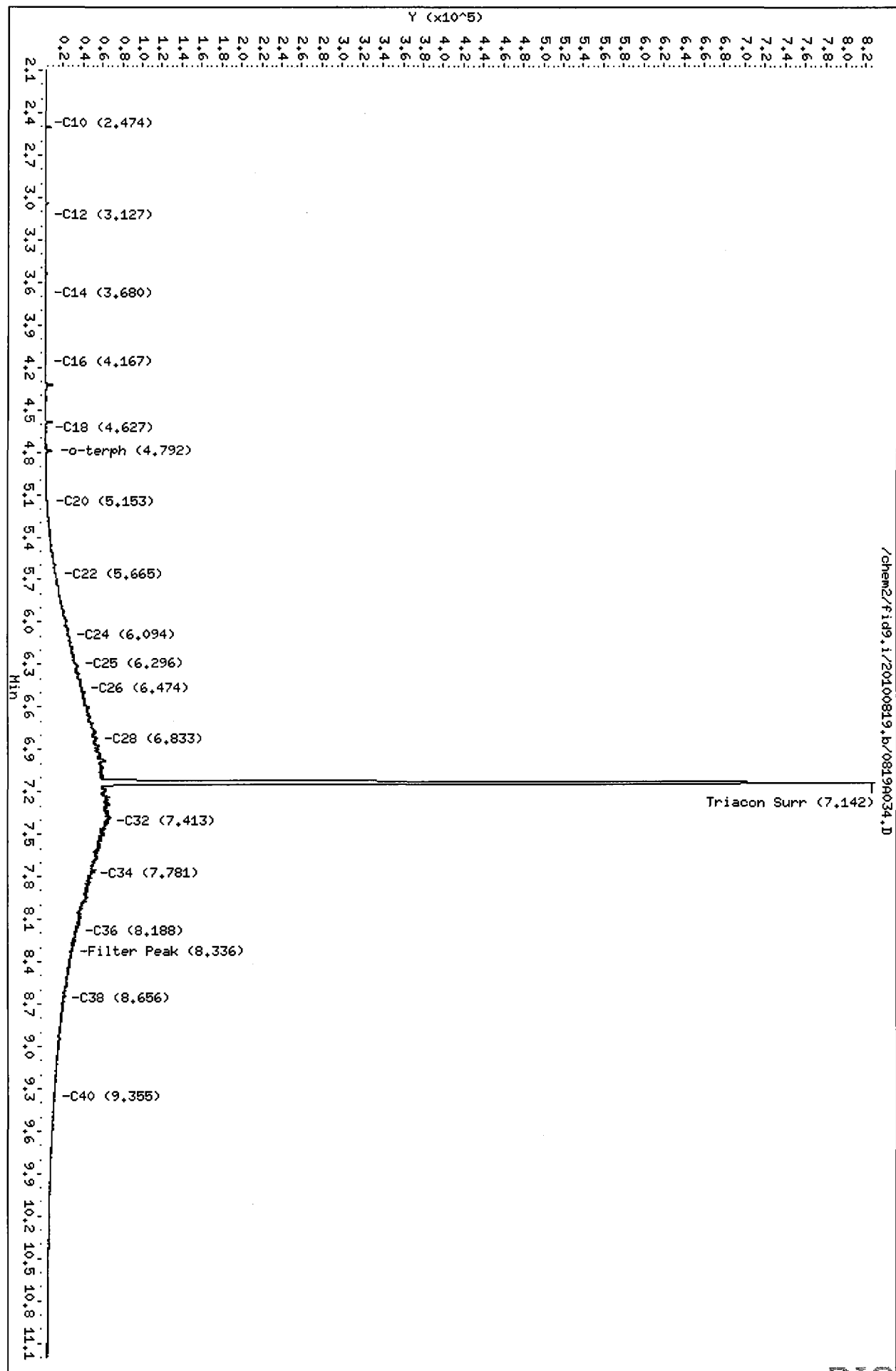
Range Times: NW Diesel(3.119 - 6.095) AK102(2.48 - 6.29) Jet A(2.48 - 4.62)  
NW M.Oil(6.09 - 8.66) AK103(6.29 - 8.19) OR Diesel(2.48 - 6.83)

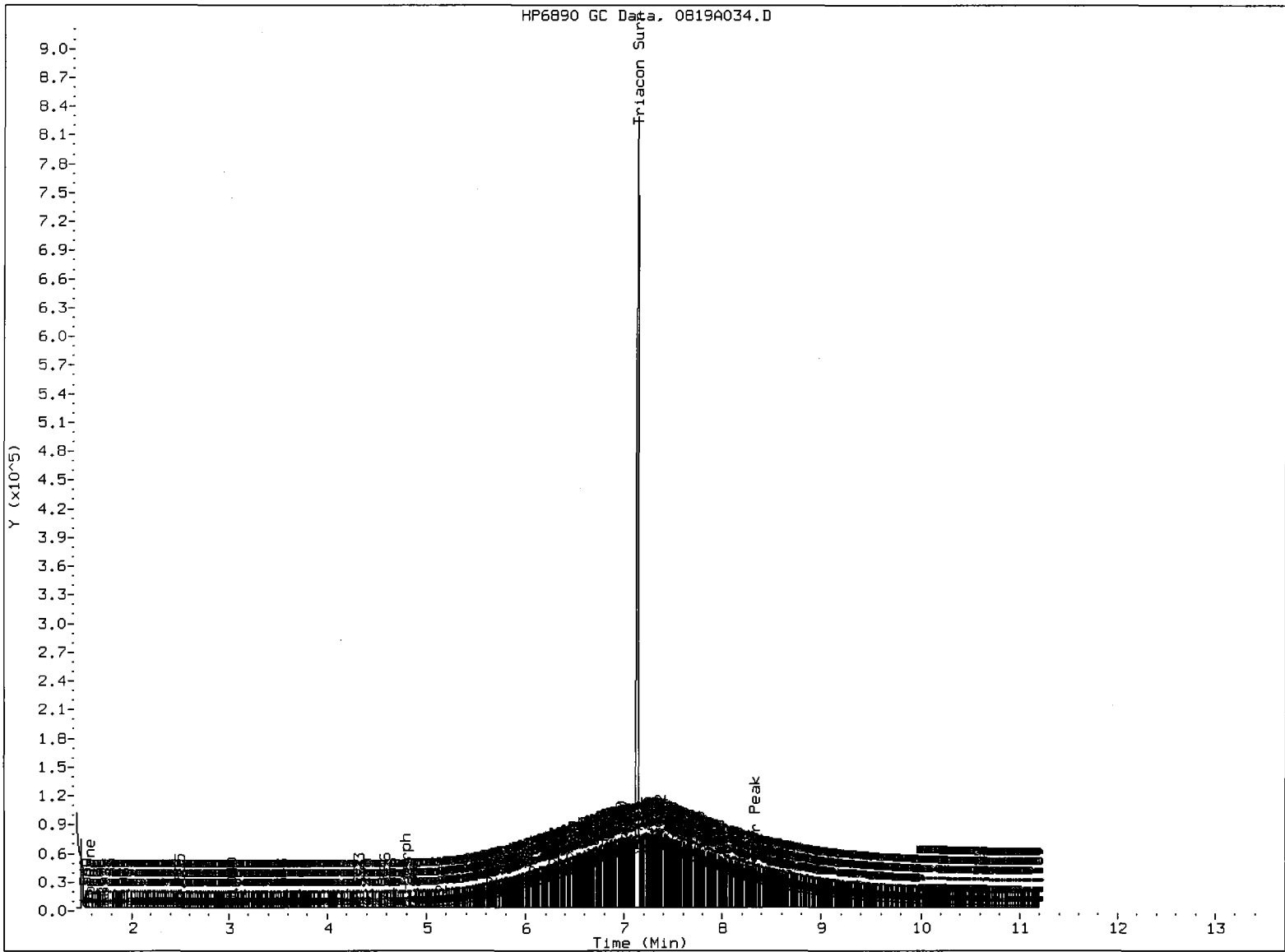
Surrogate	Area	Amount	%Rec
o-Terphenyl	6684	0.3	0.6
Triacontane	886729	44.7	99.4

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

Data File: /chem2/fid9.i/20100819.b/0819A034.D  
 Date : 19-AUG-2010 22:57  
 Client ID:  
 Sample Info: M01L#3  
 Column phase: RTX-1

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





MANUAL INTEGRATION

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

Analyst: *[Signature]* Date: *8/20/00*



**TPHG/BETX Raw Data  
Initial Calibration Notes and Raw Data**

**ARI Job ID: RI65**



### VOA Analyst Notes / Corrective Action Log

ARI Project ID: Gas Curve Client ID: \_\_\_\_\_

ARI SOP: 404S(Gas) 410S(BTEX) 430S(VPH) 700S(8260C) 703S(SIM) 706S(524.2) 710S(RSK-175)

Parameter(s): Gas

Instrument: NT-3 NT-5 NT-7 NT-9 NT-10 PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 5 Curve Date: 7/28/10 Analysis Start Date: 7/28/10

pH ≤ 2.0	YES / NO <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

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

Analyst: [Signature] Date: 7/29/10

Reviewer: [Signature] Date: 7/29/10

# Analytical Resources Inc.: Organics Instrument Log

PID-3 HP 5890 Series II - Serial No.: 2728A-13336

Date: 7/28/10 Analysis: NWTPHG Analyst: MH

GC Program: BETA Column No: 832213 Column Type: RTX502-2

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

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

IS/SS	Ical/Ccal	LCS/ICV
<u>VW632-3</u>	<u>VW635-1</u>	<u>VW618-1</u>
	<u>VW644-3</u>	<u>VW647-2</u>
	<u>VW647-2</u>	

Time	Filename	LabID	ClientID	Vial#	pH	DF						
1	0653	0728a001.d	RINSE			1	23	1702	0728a023.d	GCAL 2	1	
2	0718	0728a002.d	RT+BCAL 1			1	24	1726	0728a024.d	RF82Q	LLASB06-5	0.00
3	0742	0728a003.d	GAS .1			1	25	1751	0728a025.d	RF82S	LLASB06-8	0.00
4	0807	0728a004.d	GAS .25			1	26	1816	0728a026.d	RF83A	LLASB06-8S	0.00
5	0831	0728a005.d	GAS 1			1	27	1840	0728a027.d	RF83B	LLASB11-8	0.00
6	0856	0728a006.d	GAS 2.5			1	28	1904	0728a028.d	RF83C	LLASB11-5	0.00
7	0920	0728a007.d	GAS 5			1	29	1929	0728a029.d	RF83D	LLASB11-2	0.00
8	0945	0728a008.d	GAS 20			1	30	1953	0728a030.d	RG01D	LLASB01-5	0.00
9	1009	0728a009.d	RINSE			1	31	2018	0728a031.d	RG01E	LLASB01-5S	0.00
10	1034	0728a010.d	GAS ICV			1	32	2042	0728a032.d	RG01EMS		1
11	1117	0728a011.d	RINSE			1	33	2107	0728a033.d	RG01EMSD		1
12	1142	0728a012.d	GAS .1			1	34	2132	0728a034.d	RINSE		1
13	1238	0728a013.d	LCS0728			1	35	2156	0728a035.d	GCAL3		1
14	1303	0728a014.d	LCS0728			1	36	2221	0728a036.d	RG01F	LLASB01-6.5	0.00
15	1328	0728a015.d	MB0728			1	37	2246	0728a037.d	RG01G	LLASB01-8	0.00
16	1410	0728a016.d	RF80K	GTSP-TE-03		1	38	2311	0728a038.d	RF74A	SYASB01-5	0.00
17	1435	0728a017.d	RF82E	LLASB10-2		0.00	39	2335	0728a039.d	RF80A	SYASB05-5	0.00
18	1459	0728a018.d	RF82G	LLASB10-5		0.00	40	0000	0728a040.d	RF80B	SYASB05-5S	0.00
19	1523	0728a019.d	RF82H	LLASB10-5S		0.00	41	0025	0728a041.d	RF80C	SYASB05-8	0.00
20	1548	0728a020.d	RF82J	LLASB10-8		0.00	42	0049	0728a042.d	RINSE		1
21	1613	0728a021.d	RF82O	LLASB06-2		0.00	43	0114	0728a043.d	GCAL 4		1
22	1637	0728a022.d	RINSE			1						

MH 7/29/10

## Maintenance / Comments

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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.

7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a012.d      ARI ID: GAS .1  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a012.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 11:42  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.425	0.017	7873	93810	109.4	TFT(Surr)
14.901	0.013	4596	37219	106.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	100925	0.122 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	195939	0.118 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	134256	0.119 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	110221	0.125 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.424	0.017	23728	107.9	TFT(Surr)
14.900	0.013	47912	105.1	BB(Surr)

SW8021 (PID)

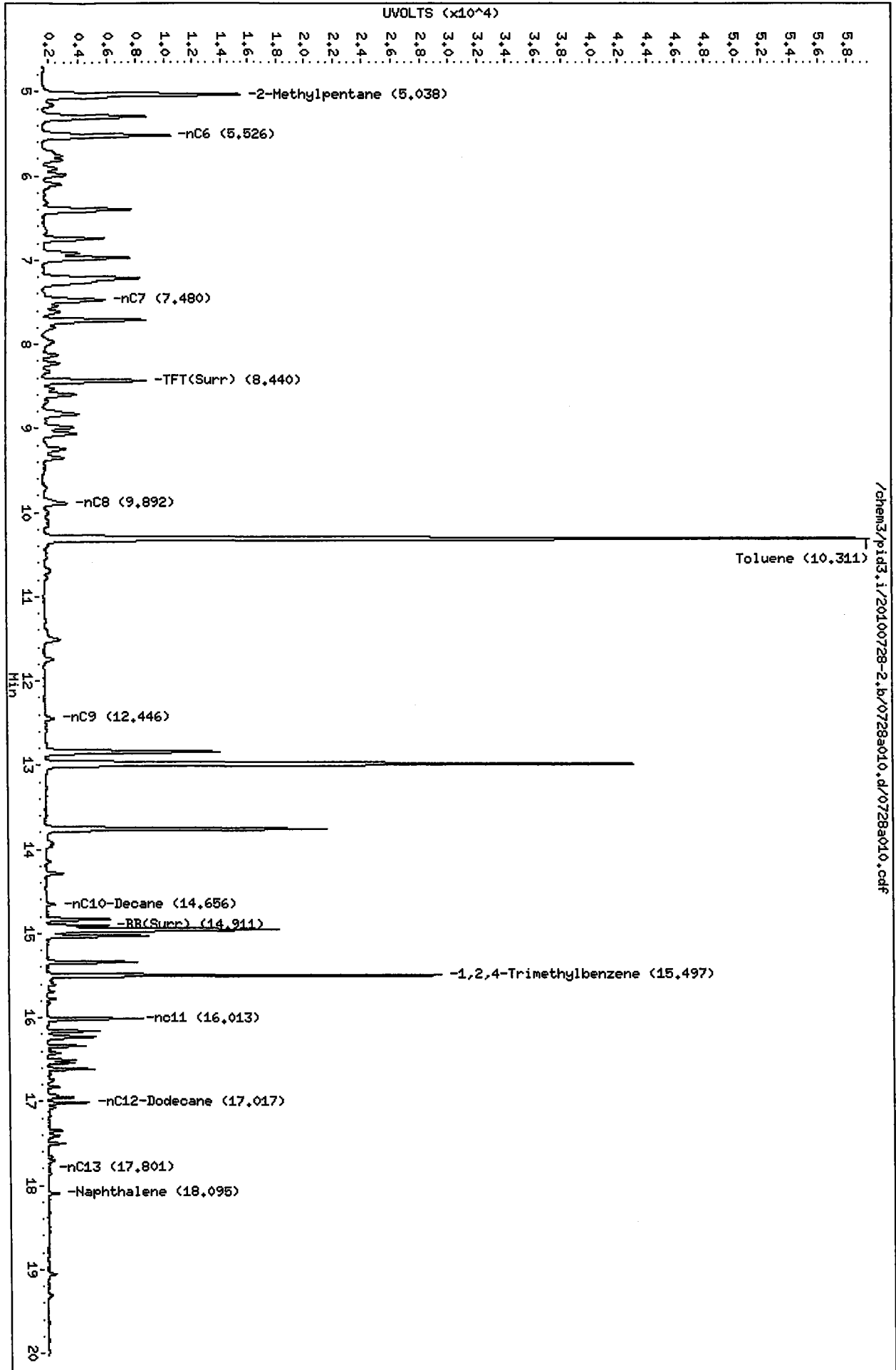
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
10.290	0.018	4229	3.20	Toluene
12.825	0.020	1325	1.07	Ethylbenzene
12.964	0.022	4623	3.43	M/P-Xylene
13.742	0.018	1960	1.53	O-Xylene
5.294	0.007	3815	10.72	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak peak was manually integrated

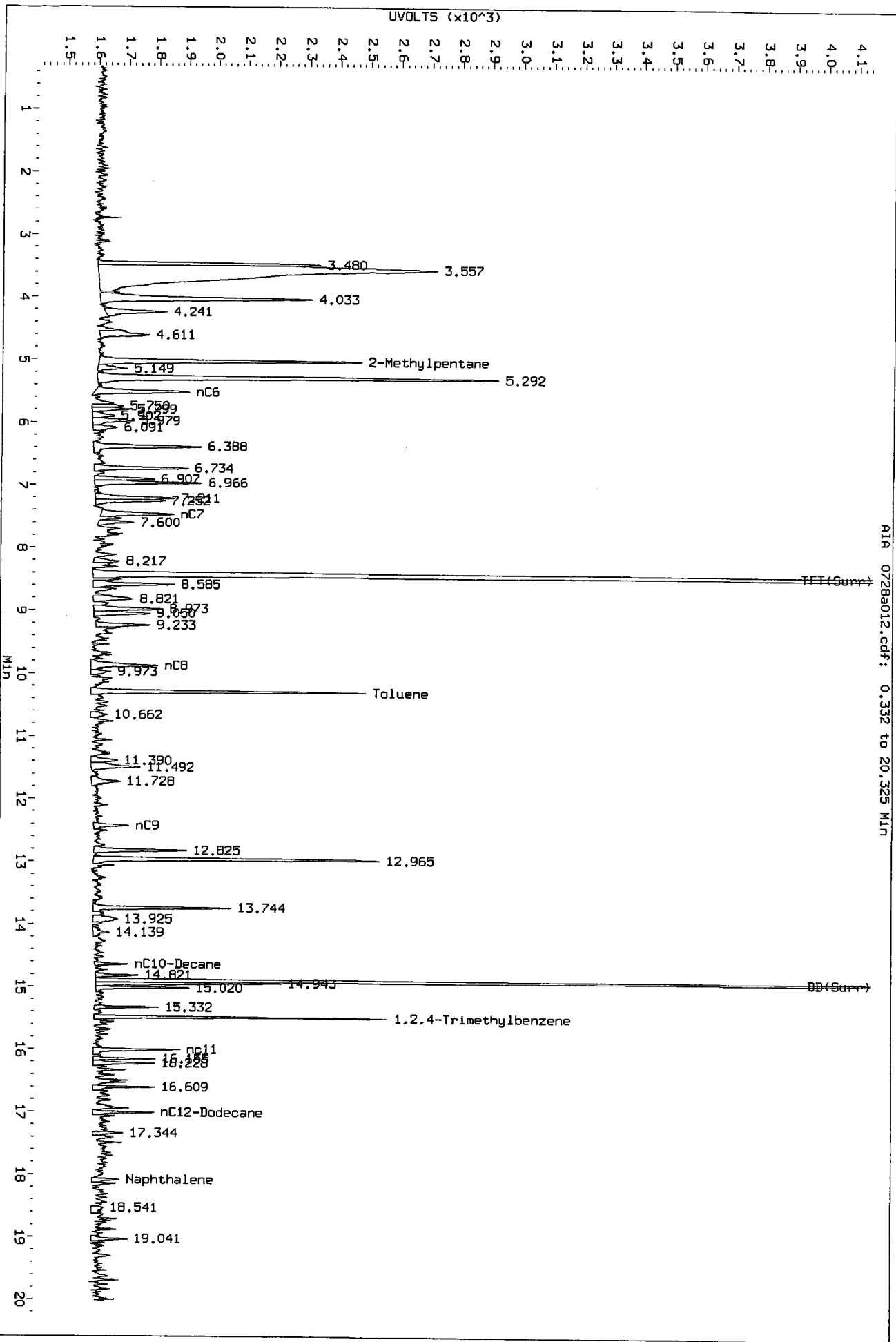
Data File: /chem3/pid3.i/20100728-2.b/0728a010.d  
Date: 28-JUL-2010 10:34  
Client ID:  
Sample Info: GAS ICV  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

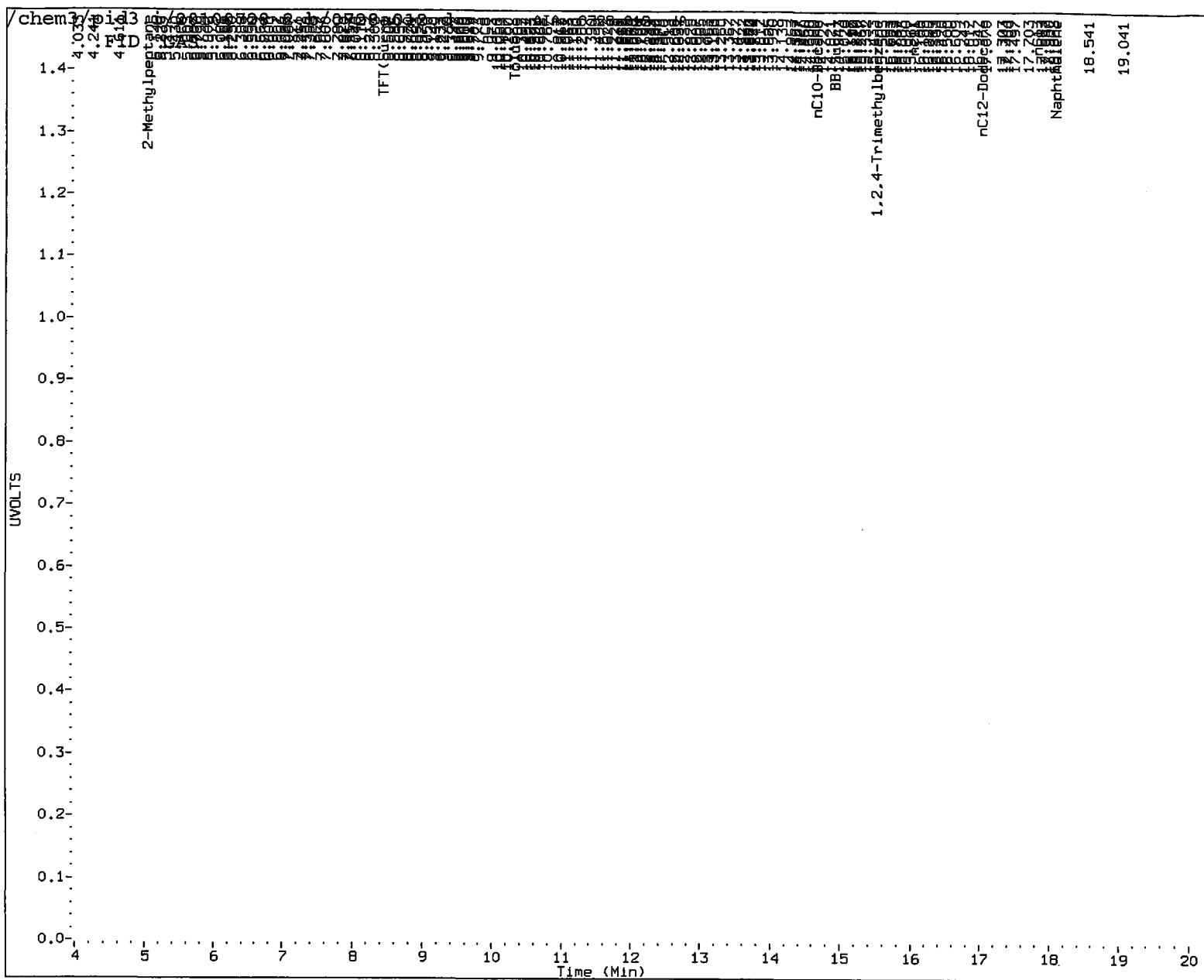


01/6/2010  
MH

Data File: /chem3/pid3.1/20100728-2.b/0728a012.d/0728a012.cdf  
Injection Date: 28-JUL-2010 11:42  
Instrument: pid3.1  
Client Sample ID:



RI# 0728a012.cdf: 0.332 to 20.325 MIN



MANUAL INTEGRATION

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

Analyst: MH

Date: 7/29/10

M.  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a004.d      ARI ID: GAS .25  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a004.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m            Injection Date: 28-JUL-2010 08:07  
Instrument: pid3.i                                        Matrix: WATER  
Gas Ical Date: 28-JUL-2010                            Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.435	0.027	7186	84666	99.8	TFT (Surr)
14.907	0.019	4308	34905	100.0	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	193174	0.233 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	400040	0.240 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	266719	0.236 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	207460	0.235 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.434	0.027	21029	95.7	TFT (Surr)
14.906	0.020	44130	96.8	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.711	0.024	617	0.47	Benzene
10.300	0.029	9631	7.30	Toluene
12.835	0.030	2739	2.20	Ethylbenzene
12.974	0.032	10740	7.98	M/P-Xylene
13.751	0.027	4547	3.54	O-Xylene
5.301	0.013	9271	26.06	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20100728-2.b/0728a004.d

Date: 28-JUL-2010 08:07

Client ID:

Sample Info: GAS .25

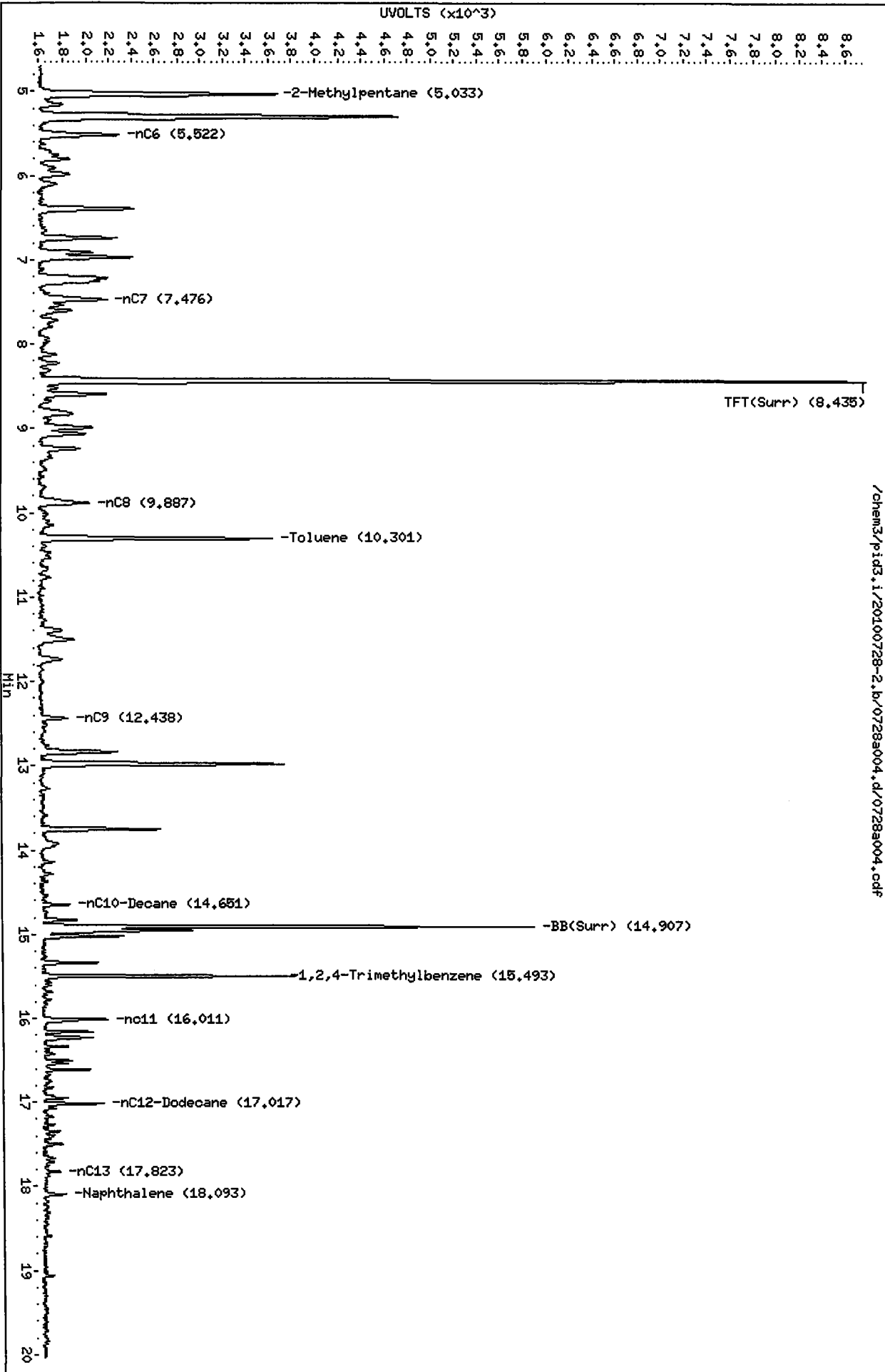
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: HH

Column diameter: 0.18

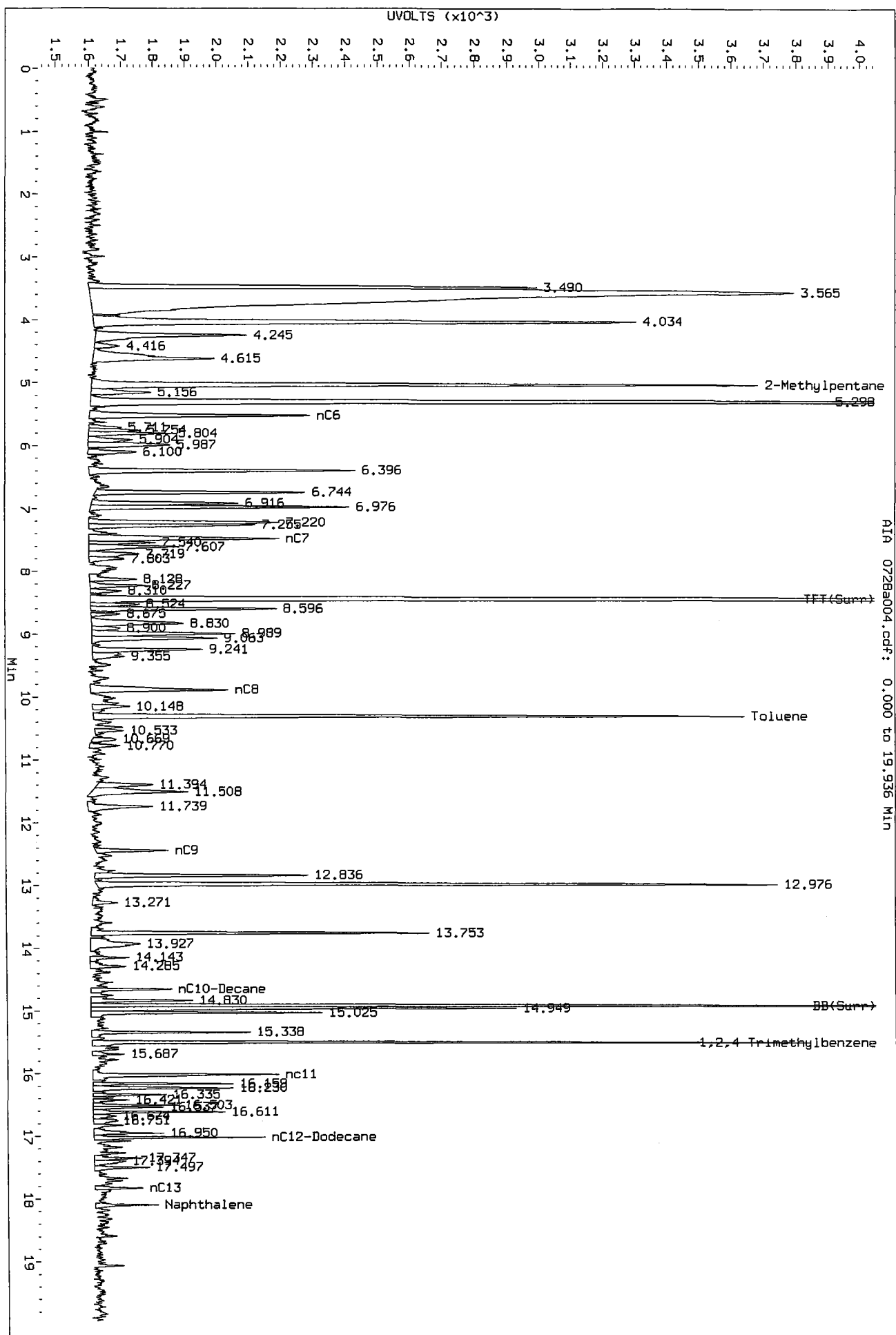
Page 1



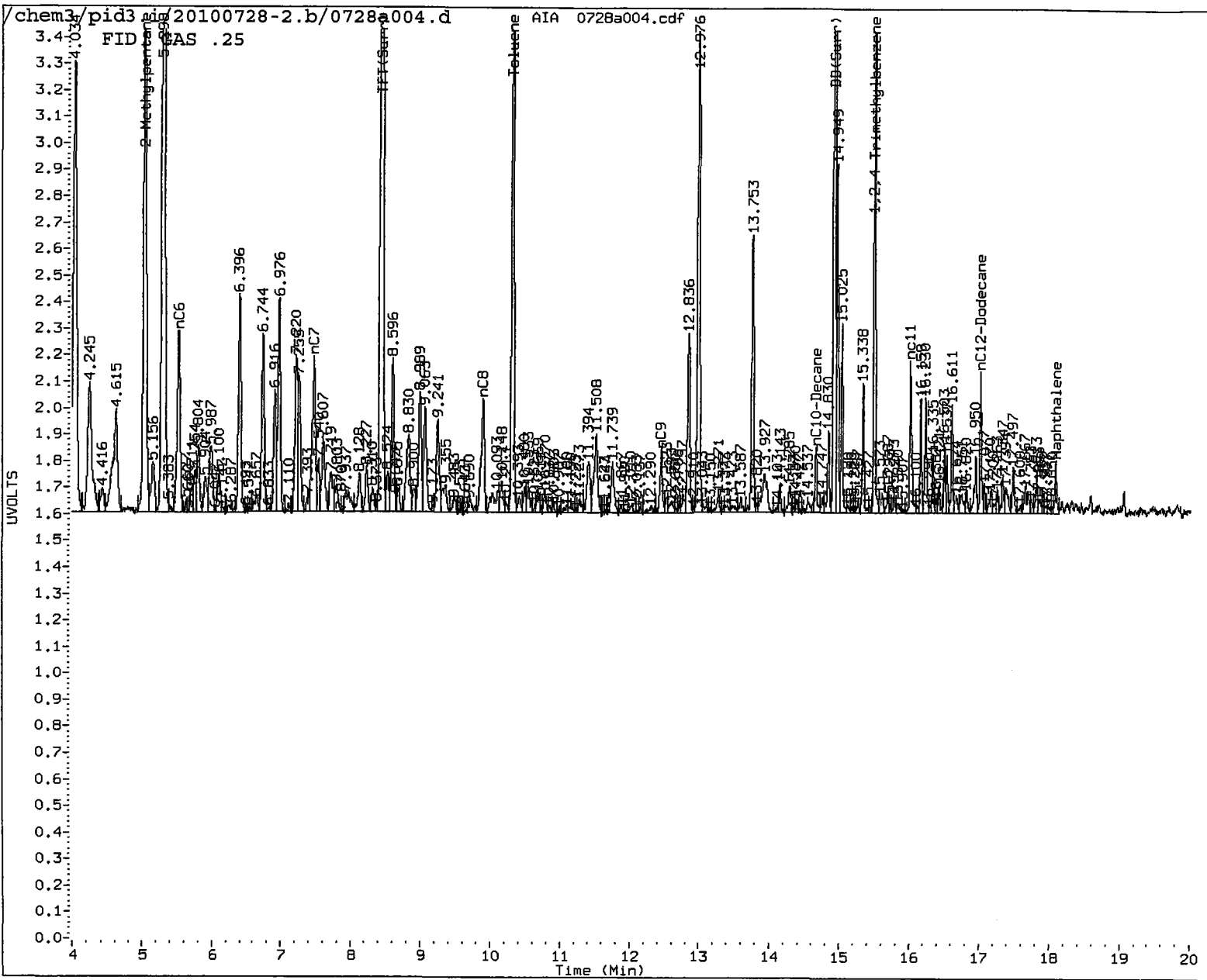
RT165 : 00696

MH  
1/16/2010

Data File: /chem3/pid3.1/20100728-2.h/0728a004.d/0728a004.cdf  
Injection Date: 28-JUL-2010 08:07  
Instrument: pid3.1  
Client Sample ID:



R1A 0728a004.cdf: 0.000 to 19.936 MIN



MANUAL INTEGRATION

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

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

Analyst: MH

Date: 7/29/10

7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a005.d  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a005.d  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m  
Instrument: pid3.i  
Gas Ical Date: 28-JUL-2010  
BETX Ical Date: 29-JUN-2010

ARI ID: GAS 1  
Client ID:  
Injection Date: 28-JUL-2010 08:31  
Matrix: WATER  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.437	0.029	7240	85071	100.6	TFT (Surr)
14.910	0.022	4266	35061	99.1	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	761867	0.920 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	1564234	0.940 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1050254	0.928 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	811111	0.920 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.436	0.029	21131	96.1	TFT(Surr)
14.908	0.022	43950	96.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.713	0.026	2868	2.17	Benzene
10.303	0.032	37994	28.79	Toluene
12.838	0.033	10898	8.77	Ethylbenzene
12.978	0.036	42543	31.59	M/P-Xylene
13.754	0.029	17526	13.64	O-Xylene
5.302	0.015	35267	99.12	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100728-2.b/0728a005.d  
Date : 28-JUL-2010 08:31  
Client ID:  
Sample Info: GAS 1

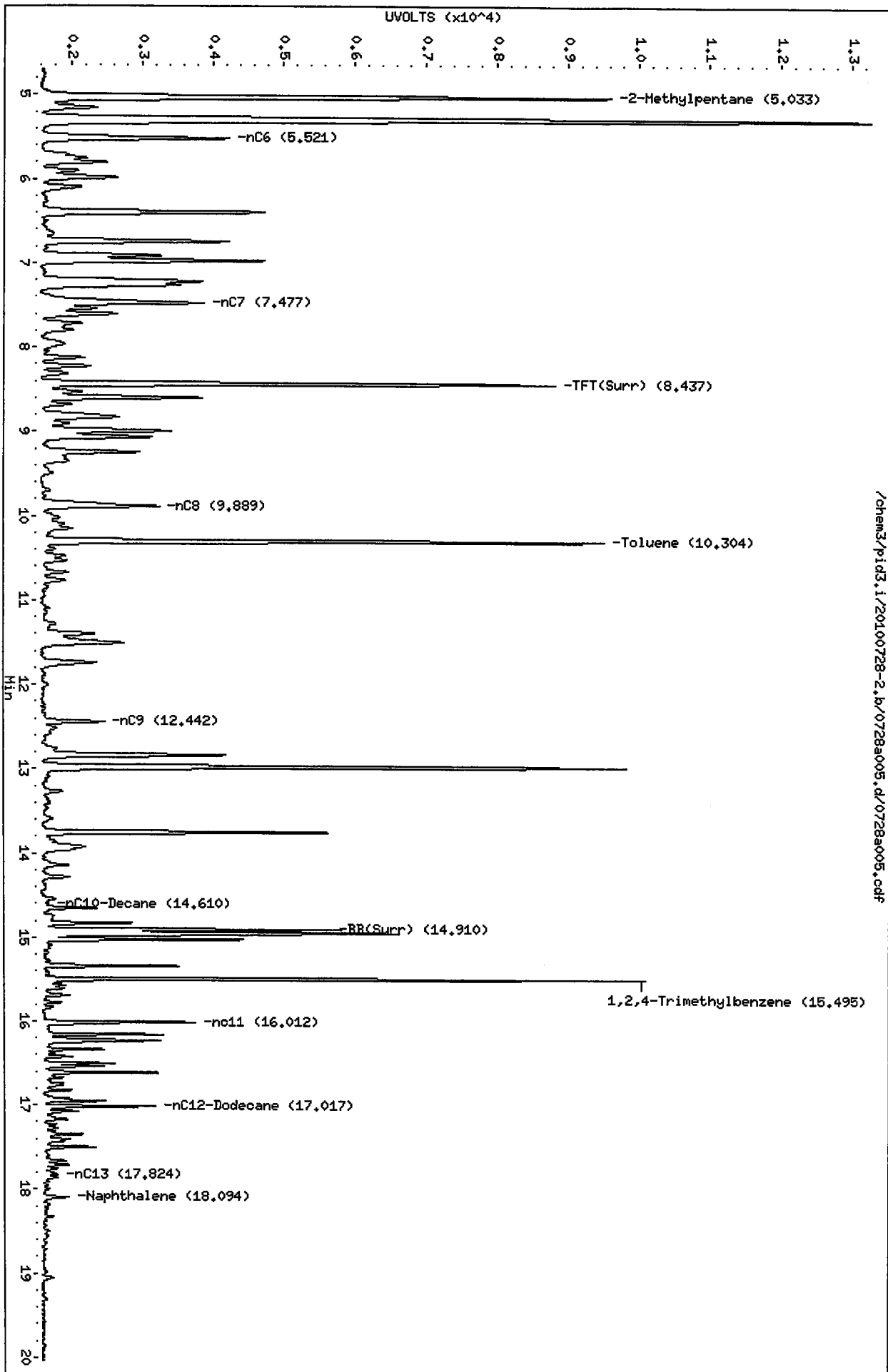
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: NH

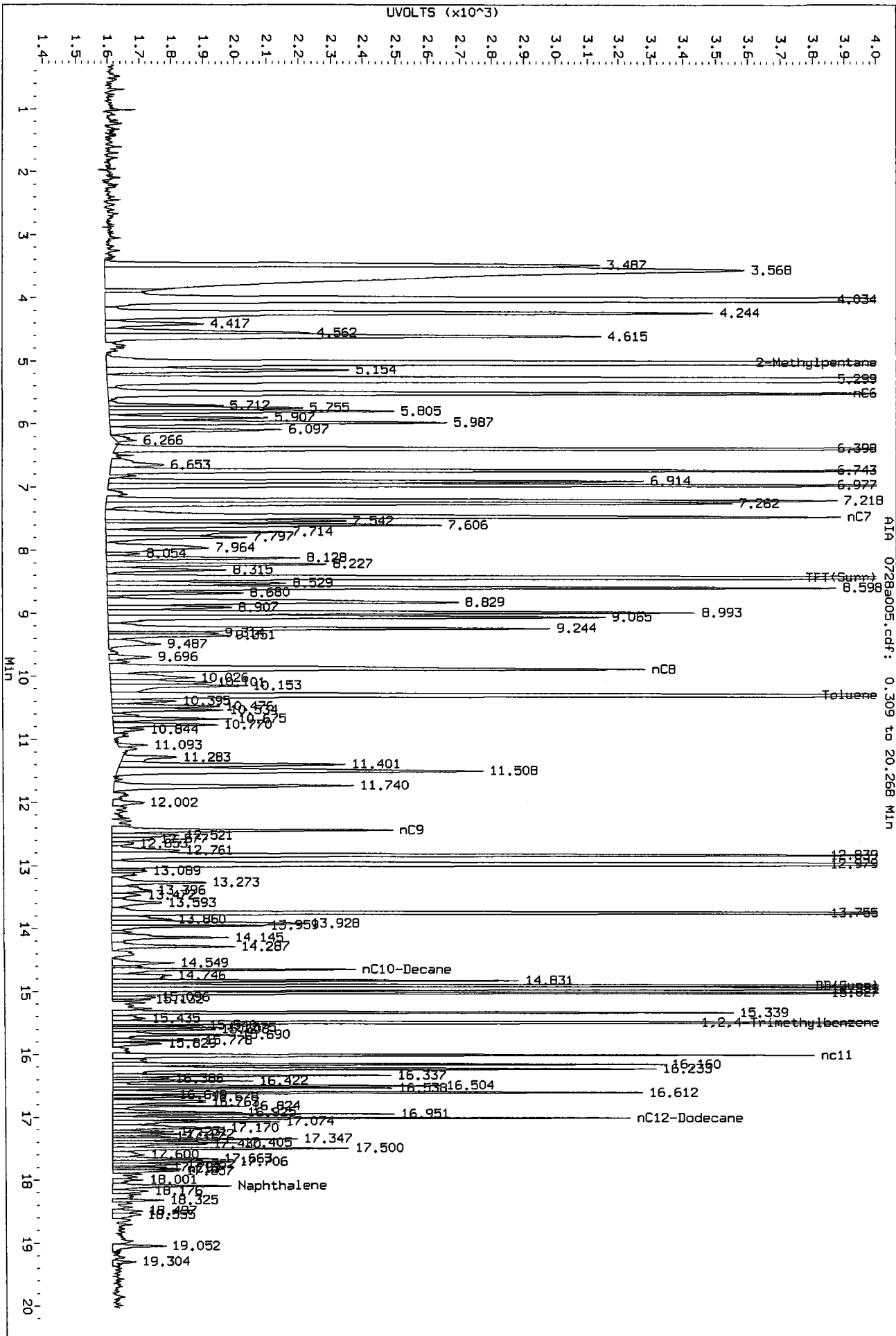
Column diameter: 0.18

/chem3/pid3.i/20100728-2.b/0728a005.d/0728a005.cdf



MH  
7/16/10  
2116216

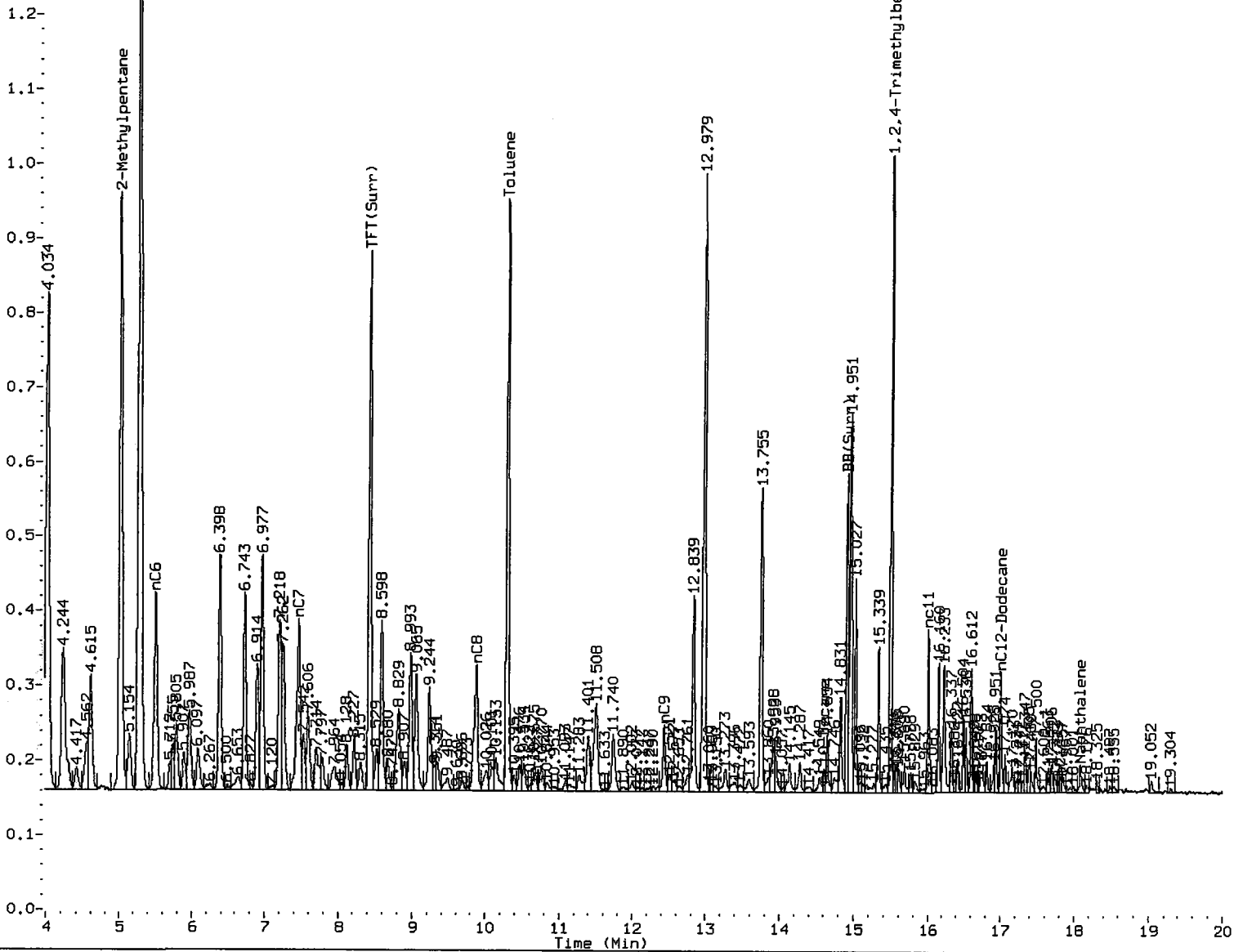
Data File: /chem3/pid3.1/20100728-2.b/0728a005.d/0728a005.cdf  
Injection Date: 28-JUL-2010 08:31  
Instrument: pid3.1  
Client Sample ID:



AIR 0728a005.cdf: 0.309 to 20.268 MIN

FID GAS 1

UVOLTS



MANUAL INTEGRATION

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

Analyst: MH

Date: 7/29/10

7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a006.d    ARI ID: GAS 2.5  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a006.d    Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m            Injection Date: 28-JUL-2010 08:56  
Instrument: pid3.i                                        Matrix: WATER  
Gas Ical Date: 28-JUL-2010                             Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.031	7507	89299	104.3	TFT(Surr)
14.911	0.023	4475	36770	103.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	1957108	2.364 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	3879004	2.331 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2606200	2.303 M
NWTFPHG Tol-Nap (10.17 to 18.18)	882029	2072468	2.350 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.438	0.031	21902	99.6	TFT(Surr)
14.909	0.023	45851	100.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.715	0.028	7095	5.37	Benzene
10.306	0.034	94086	71.29	Toluene
12.840	0.036	27296	21.97	Ethylbenzene
12.981	0.039	105425	78.29	M/P-Xylene
13.756	0.032	43640	33.97	O-Xylene
5.306	0.019	82935	233.09	MTBE

A Indicates Peak Area was used for quantitation instead of Height

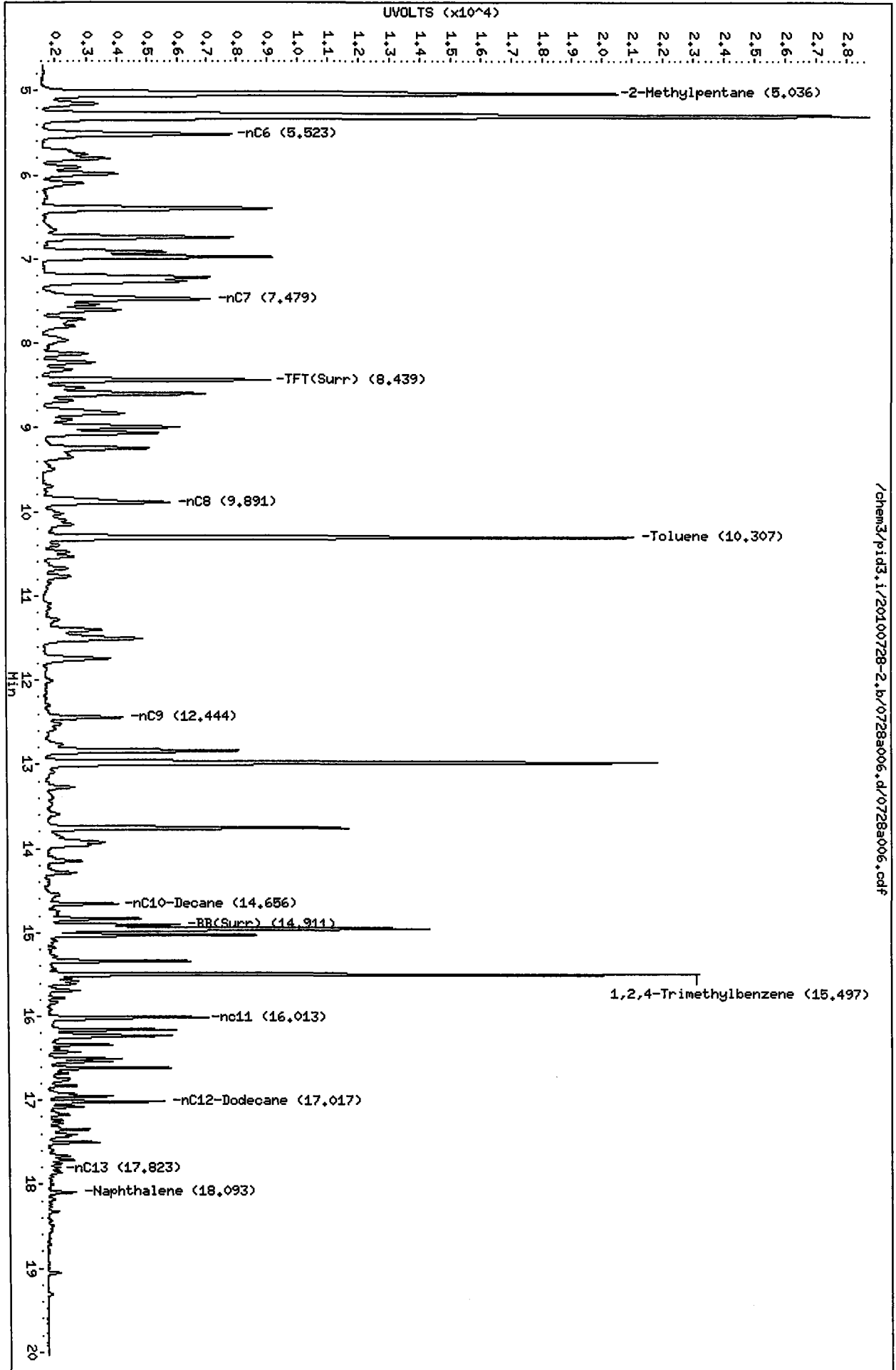
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20100728-2.b/0728a006.d  
Date: 28-JUL-2010 08:56  
Client ID:  
Sample Info: GAS 2.5  
Column phase: RTX 502-2 FID

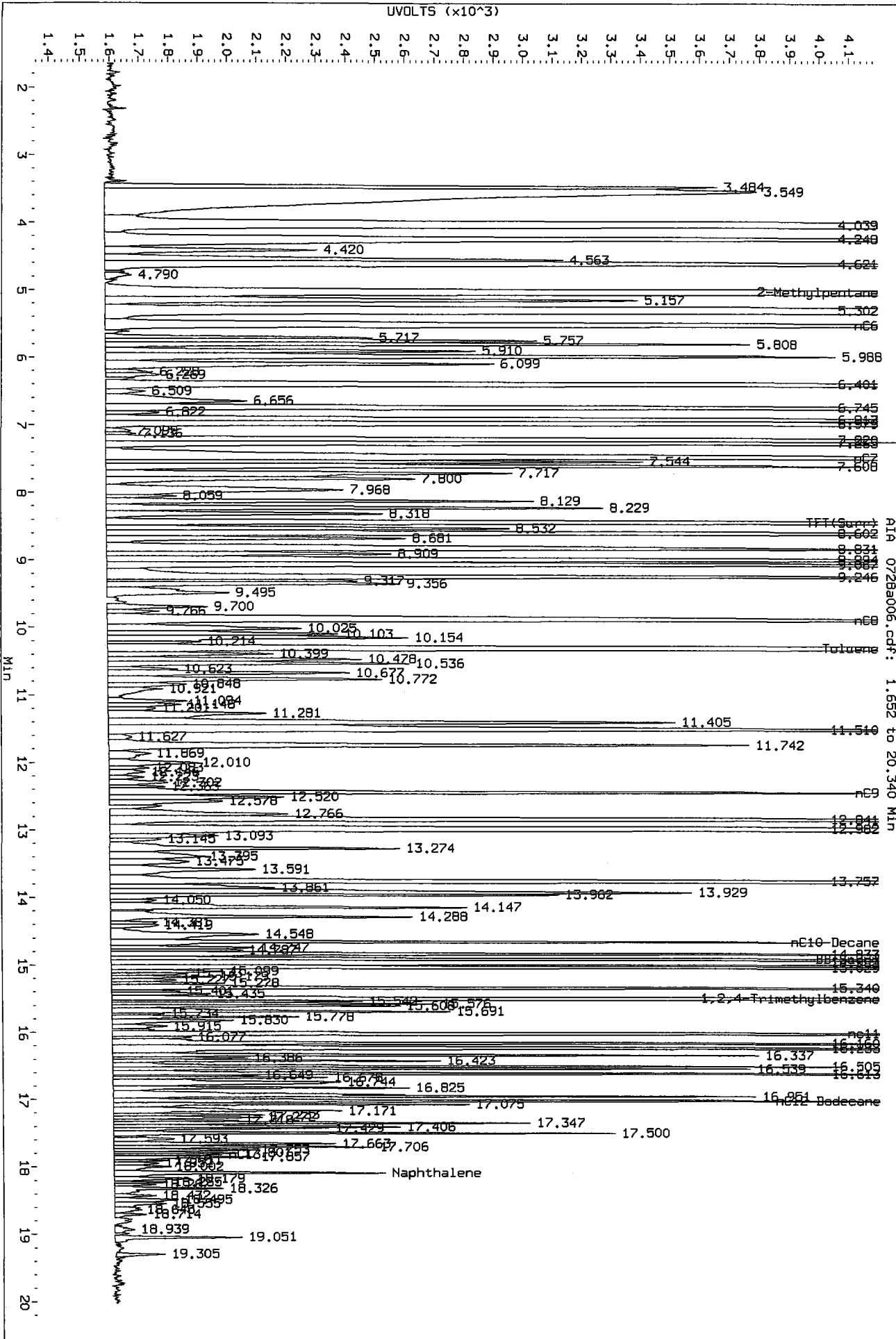
Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100728-2.b/0728a006.d/0728a006.cdf

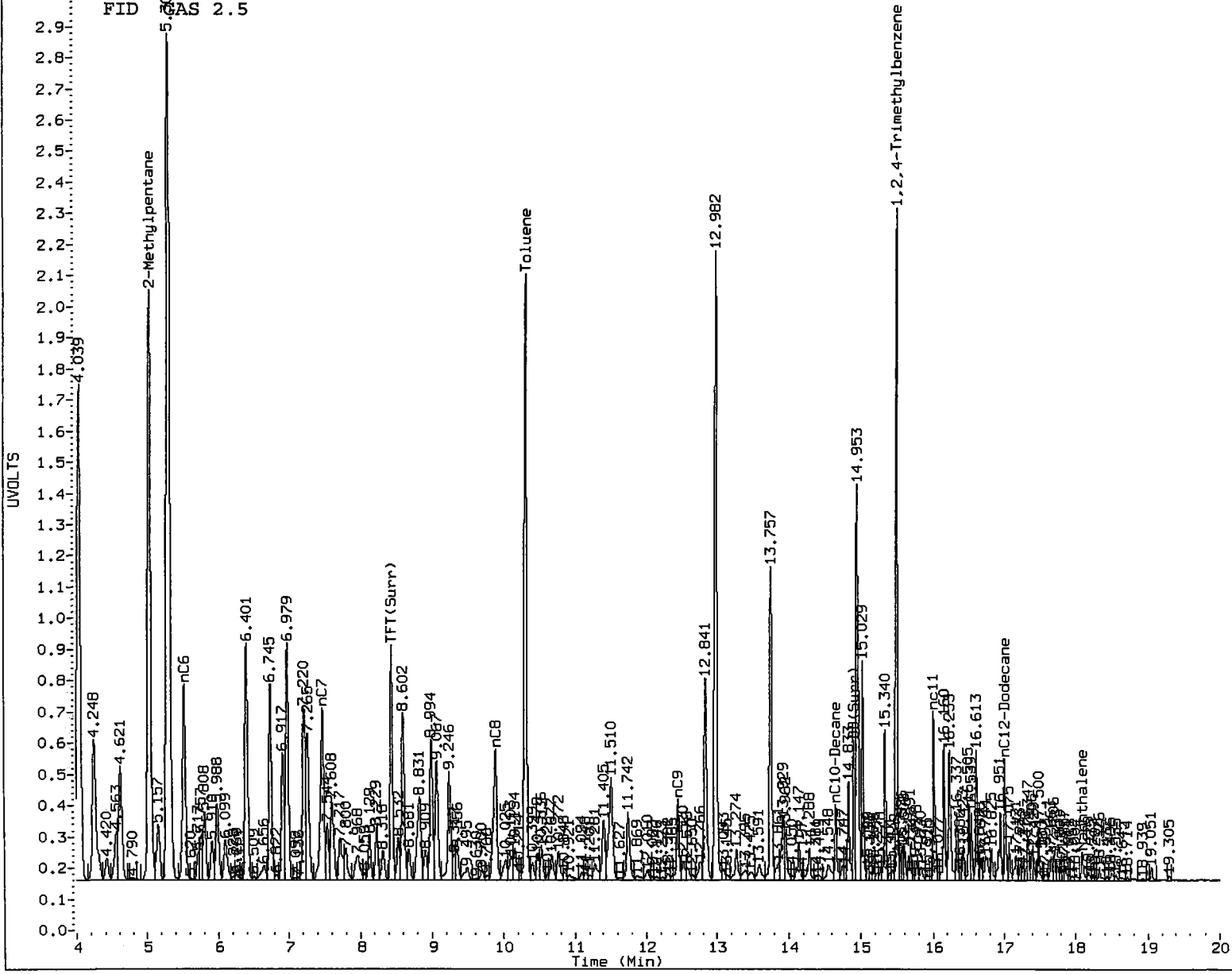


M4  
7/19/10

Data File: /chem3/p1d3.1/20100728-2.b/0728a006.d/0728a006.cdf  
Injection Date: 28-JUL-2010 08:56  
Instrument: p1d3.1  
Client Sample ID:



FID GAS 2.5



MANUAL INTEGRATION

- Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 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/pid3.i/20100728-2.b/0728a007.d      ARI ID: GAS 5  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a007.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 09:20  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.031	7878	94697	109.5	TFT (Surr)
14.912	0.024	4741	41421	110.1	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	4003725	4.837
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	7856270	4.721 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	5316980	4.698 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	4221581	4.786

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.438	0.031	23349	106.2	TFT (Surr)
14.910	0.023	47815	104.9	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.716	0.029	14610	11.05	Benzene
10.308	0.037	191522	145.11	Toluene
12.842	0.038	56084	45.13	Ethylbenzene
12.985	0.043	209817	155.81	M/P-Xylene
13.758	0.033	88195	68.64	O-Xylene
5.308	0.021	162558	456.88	MTBE

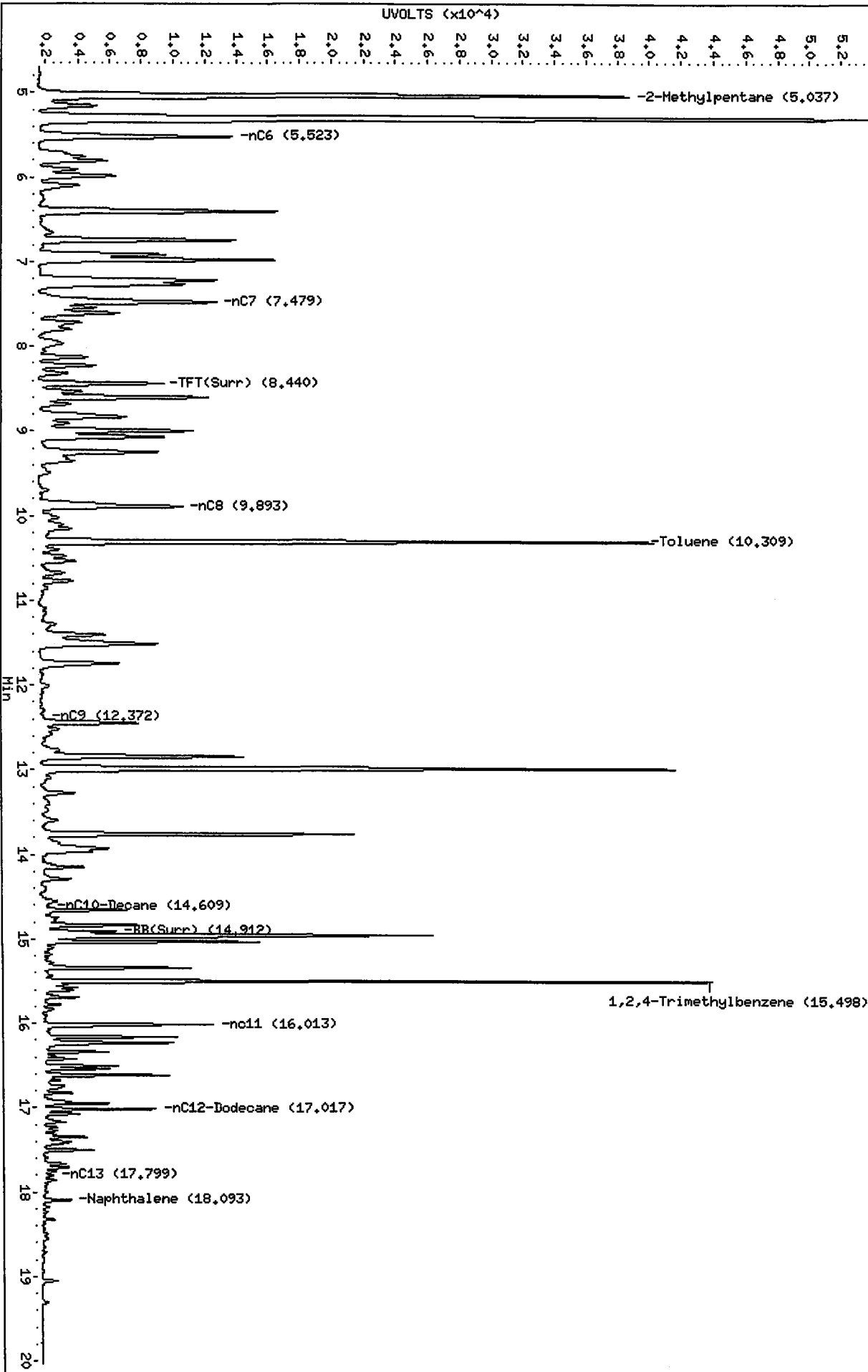
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100728-2.b/0728a007.d  
Date : 28-JUL-2010 09:20  
Client ID:  
Sample Info: GAS 5  
Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

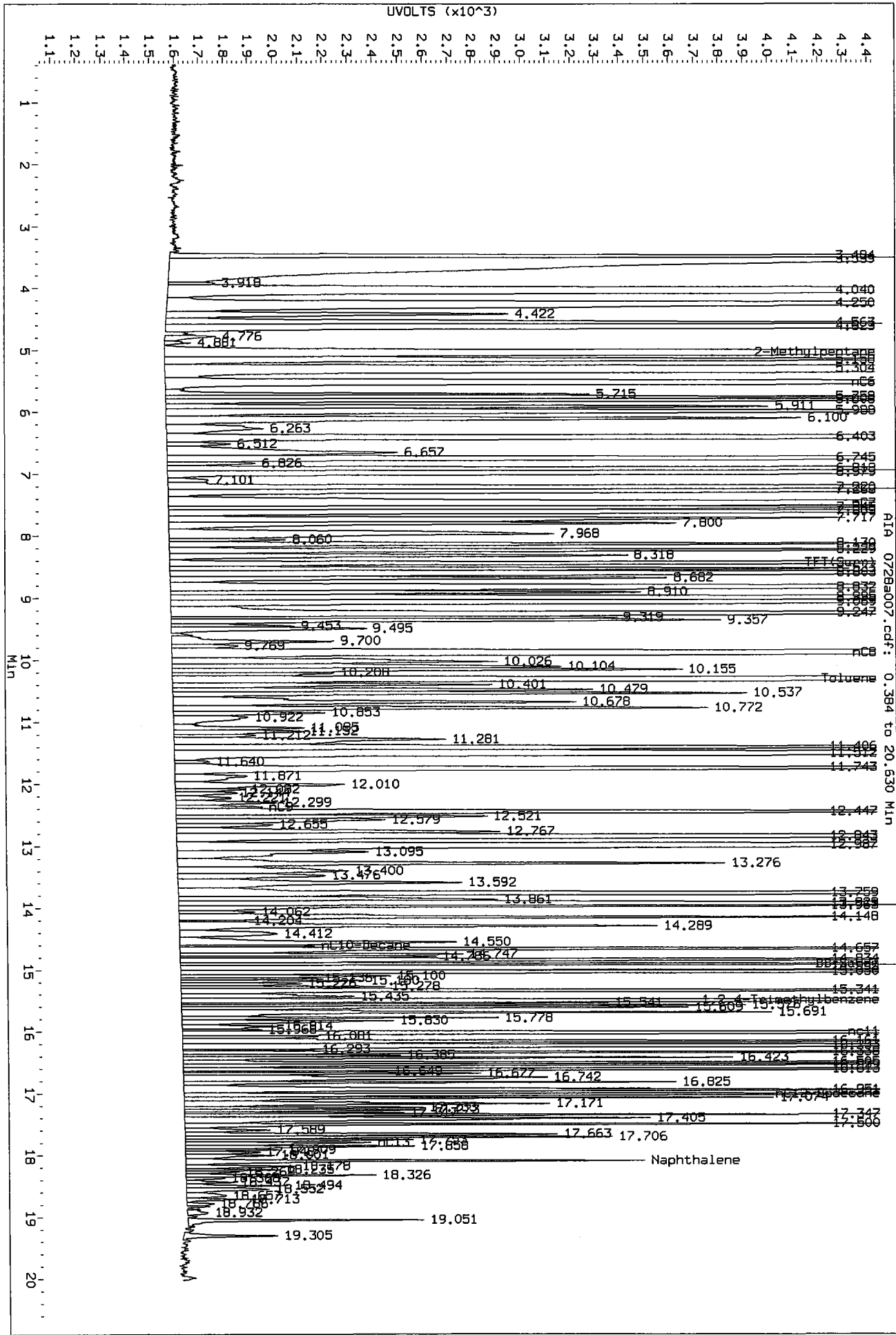
/chem3/pid3.i/20100728-2.b/0728a007.d/0728a007.cdf



7/19/11  
MH

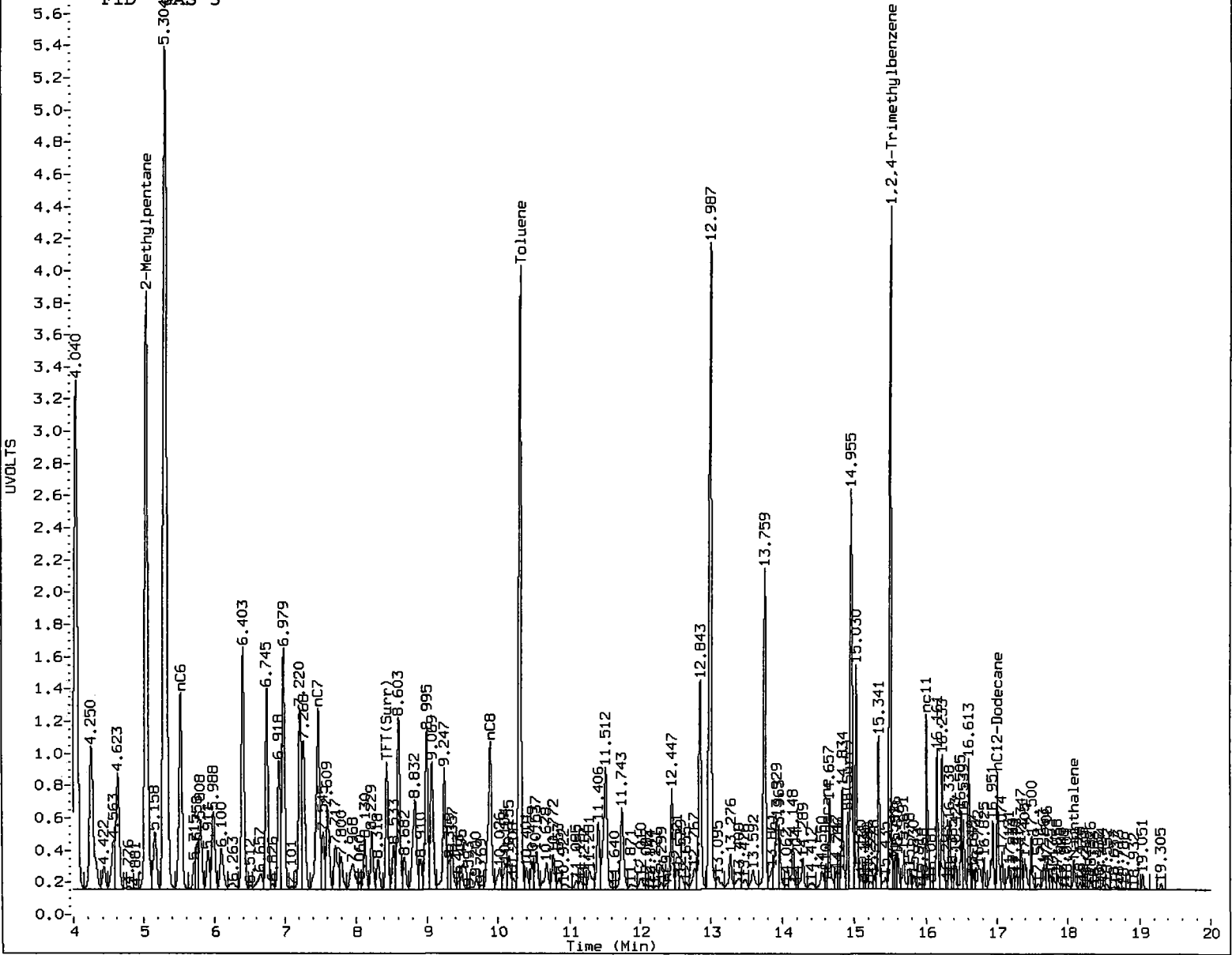
Data File: /chem3/p1d3\_1/20100728-2.b/0728a007.d/0728a007.cdf  
Injection Date: 28-JUL-2010 09:20  
Instrument: p1d3.1  
Client Sample ID:

UVOLTS (x10<sup>3</sup>)



0728a007.cdf: 0.384 to 20.630 MIN

FID GAS 5



MANUAL INTEGRATION

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

Analyst: MTT Date: 7/29/10

7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a008.d      ARI ID: GAS 20  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a008.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 09:45  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                   Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.032	10794	142846	150.0	TFT (Surr)
14.914	0.026	6397	57315	148.5	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	16788832	20.281
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	34760005	20.888
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	24502732	21.650
NWTPHG Tol-Nap (10.17 to 18.18)	882029	17514258	19.857

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.439	0.032	28146	128.0	TFT (Surr)
14.834	-0.052	109465	240.1	BB (Surr)

SW8021 (PID)

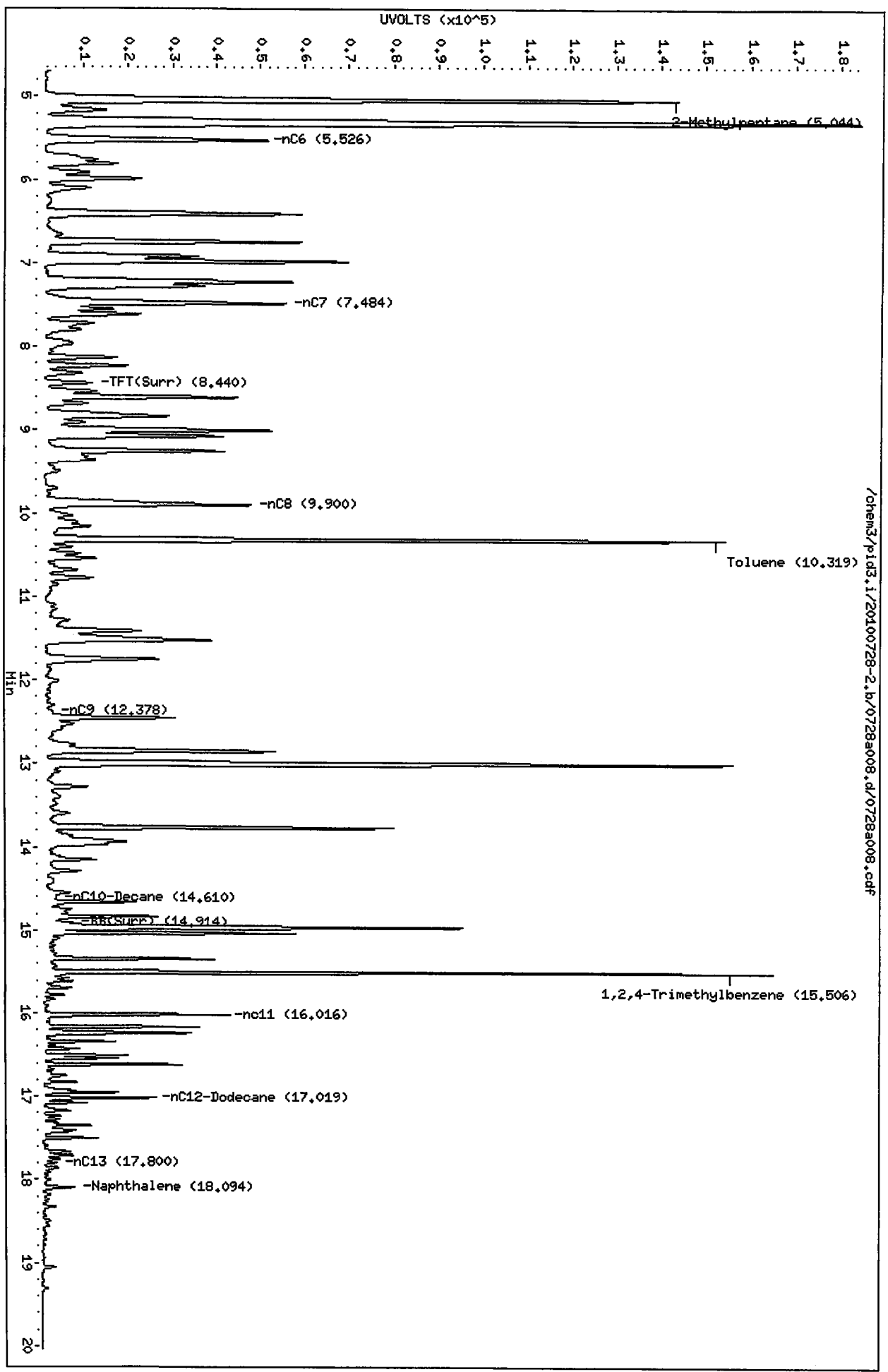
RT	Shift	Response	Amount	Compound
7.719	0.032	57953	43.83	Benzene
10.317	0.046	742279	562.41	Toluene
12.772	-0.032	18288	14.72	Ethylbenzene
13.001	0.059	811732	602.78	M/P-Xylene
13.765	0.041	355553	276.74	O-Xylene
5.321	0.033	530538	1491.10	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3,1/20100728-2.b/0728a008.d  
Date: 28-JUL-2010 09:45  
Client ID:  
Sample Info: GAS 20  
Column phase: RTX 502-2 FID

Instrument: pid3,1  
Operator: MH  
Column diameter: 0.18



/chem3/pid3,1/20100728-2.b/0728a008.d/0728a008.pdf

Mr.  
7/29/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100728-2.b/0728a010.d      ARI ID: GAS ICV  
Data file 2: /chem3/pid3.i/20100728-1.b/0728a010.d      Client ID:  
Method: /chem3/pid3.i/20100728-1.b/PIDB.m              Injection Date: 28-JUL-2010 10:34  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.032	7179	85915	99.7	TFT(Surr)
14.911	0.023	4354	33856	101.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	2492293	3.011 M
8015B 2MP-TMB ( 4.92 to 15.58)	1664107	3736060	2.245 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2858584	2.526 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	2556570	2.899 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.439	0.032	21749	98.9	TFT(Surr)
14.909	0.023	46674	102.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.715	0.029	38928	29.44	Benzene
10.309	0.037	288200	218.36	Toluene
12.842	0.037	55963	45.04	Ethylbenzene
12.983	0.041	219824	163.24	M/P-Xylene
13.757	0.033	89384	69.57	O-Xylene
5.294	0.007	2620	7.36	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak peak was manually integrated

Data File: /chem3/pid3.1/20100728-2.b/0728a010.d

Date: 28-JUL-2010 10:34

Client ID:

Sample Info: GAS ICV

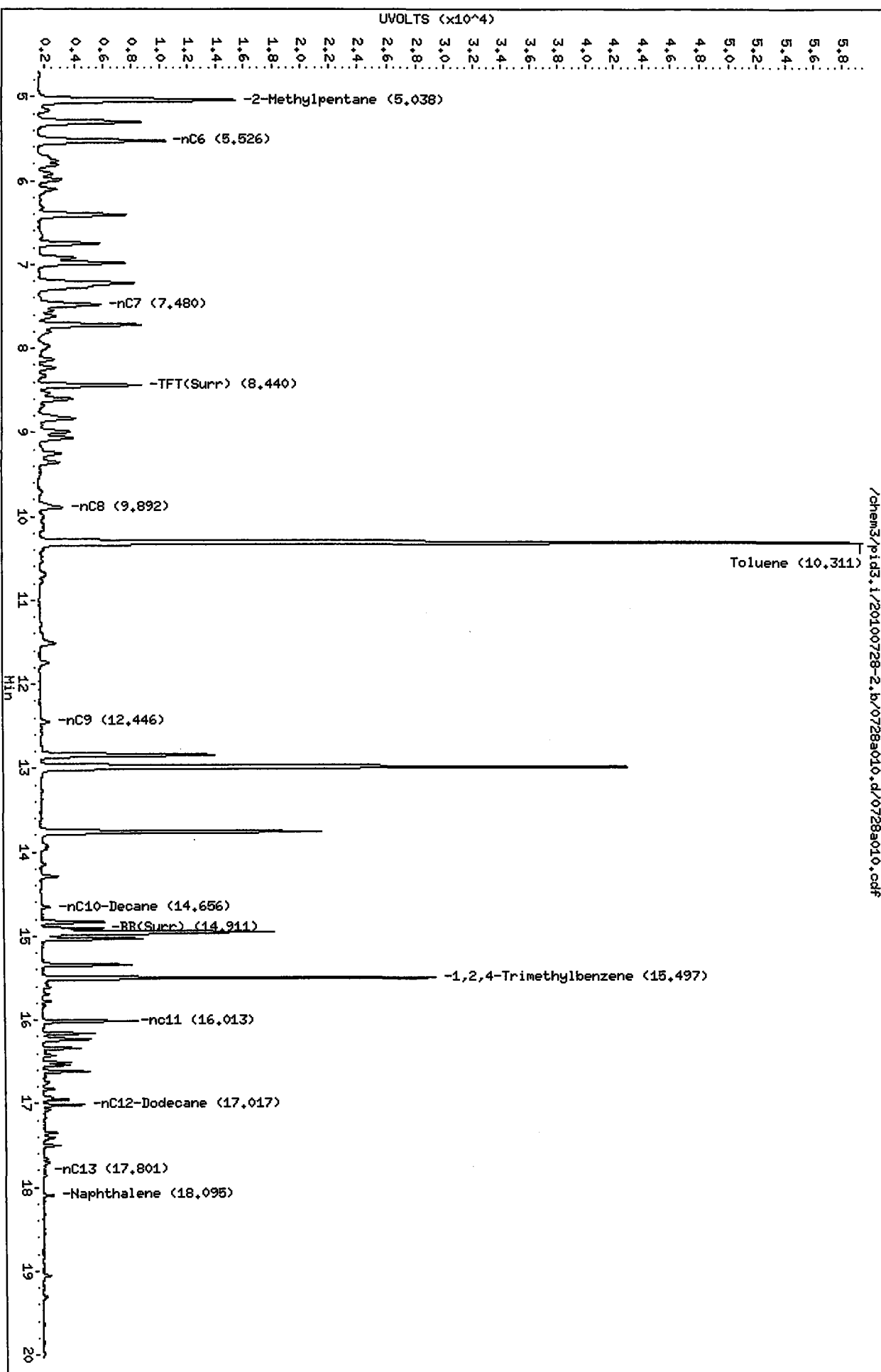
Column phase: RTX 502-2 FID

Instrument: pid3.1

Operator: MH

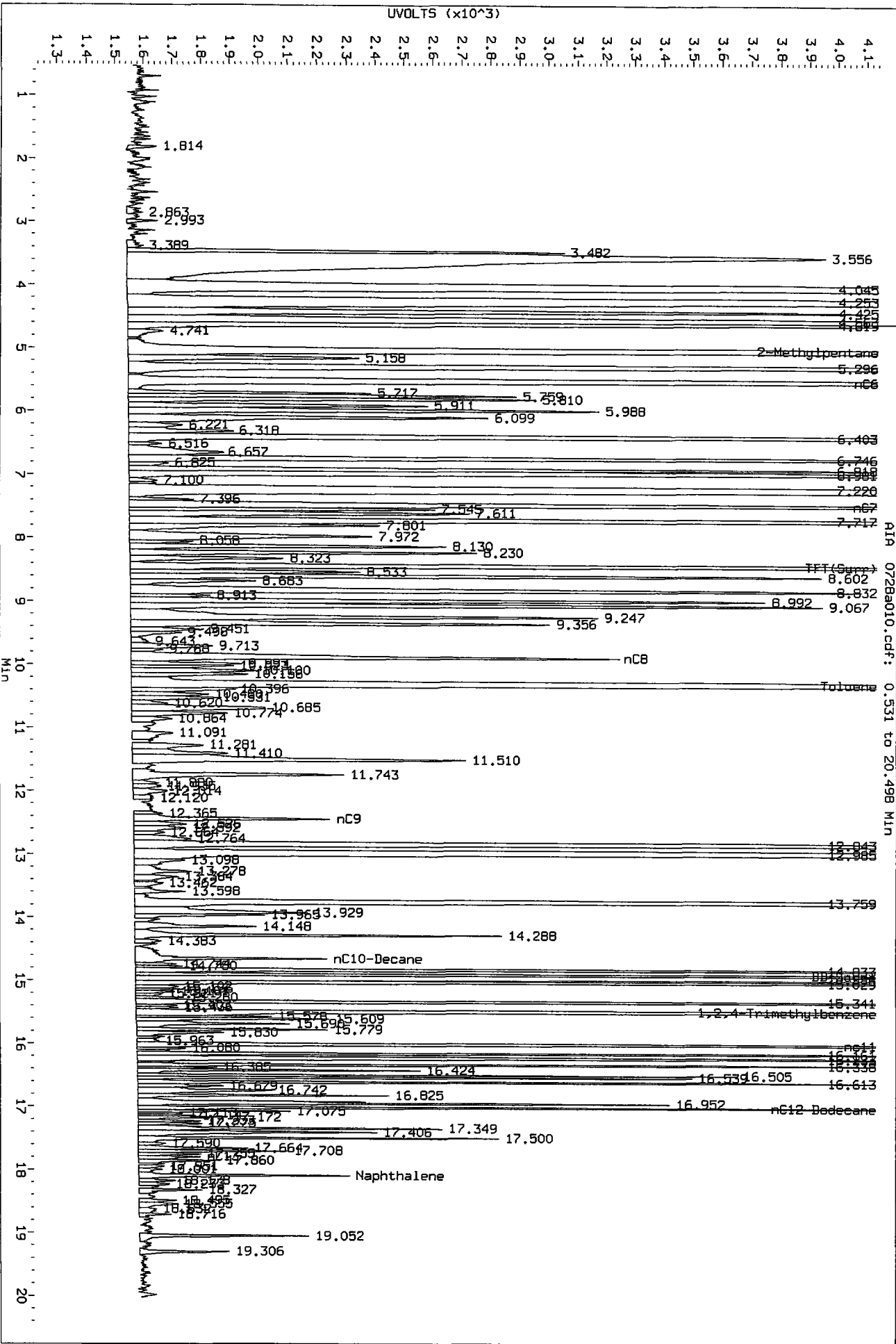
Column diameter: 0.18

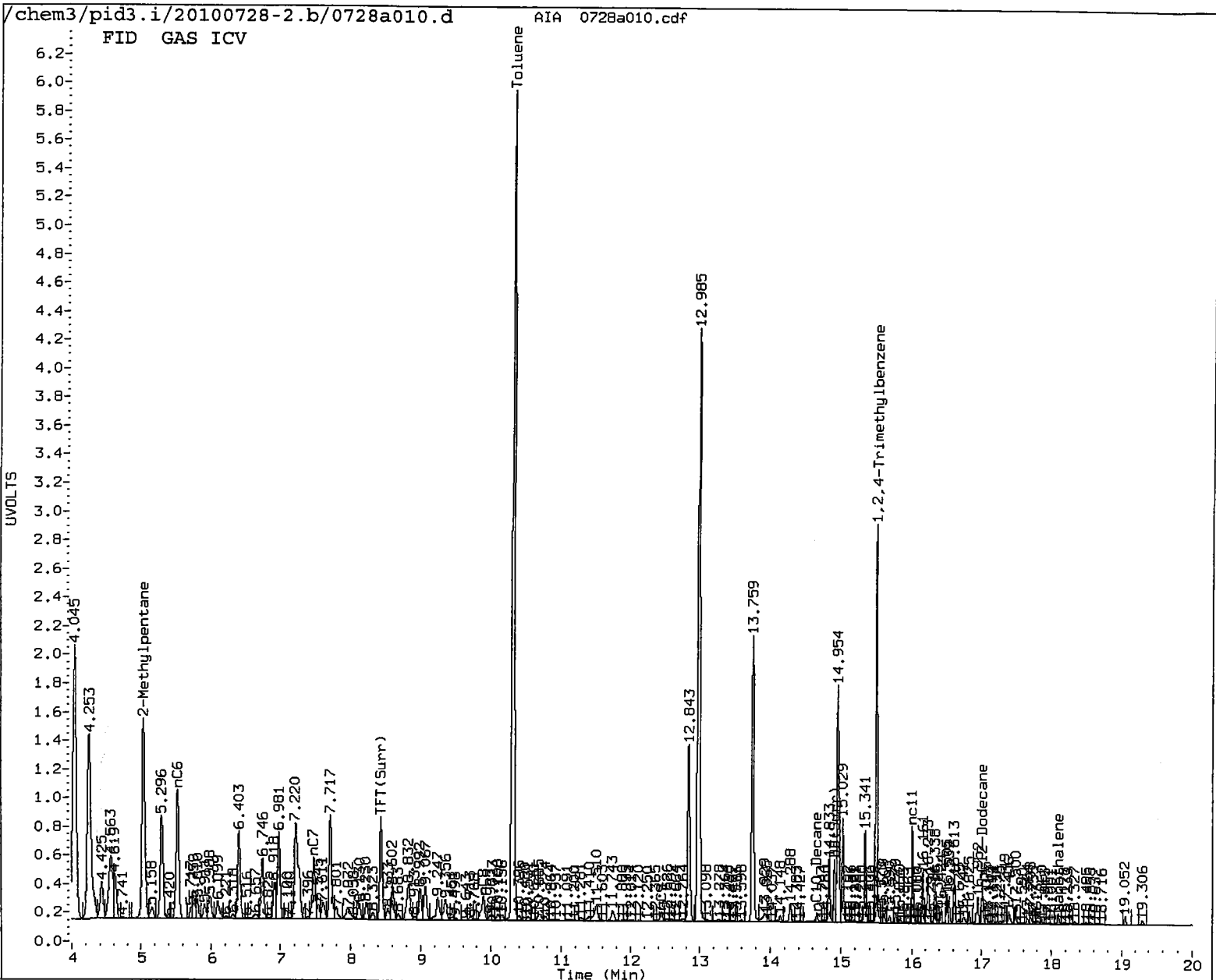
/chem3/pid3.1/20100728-2.b/0728a010.d/0728a010.cdf



11/12/10  
MH

Data File: /chem3/pid3.1/20100728-2.b/0728a010.d/0728a010.cdf  
Injection Date: 28-JUL-2010 10:34  
Instrument: pid3.1  
Client Sample ID:





MANUAL INTEGRATION

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

Analyst:   MH   Date:   7/29/10

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid3.i/20100728-2.b/FID.m  
Batch File: /chem3/pid3.i/20100728-2.b  
Inst ID: pid3.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 2-Methylpentane	5.033	5.033	5.036	5.037	5.044	5.028	5.022	4.952-5.092	5.035	0.005
18 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	1.097	1.027-1.167	+++++	+++++
19 8015B	+++++	+++++	+++++	+++++	+++++	+++++	0.833	0.763-0.903	+++++	+++++
20 AK101	+++++	+++++	+++++	+++++	+++++	+++++	0.989	0.919-1.059	+++++	+++++
21 NWGAS	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.930-1.070	+++++	+++++
2 nC6	5.522	5.521	5.523	5.523	5.526	5.520	5.507	5.437-5.577	5.523	0.002
3 nC7	7.476	7.477	7.479	7.479	7.484	7.469	7.454	7.384-7.524	7.477	0.005
4 TFF(Surr)	8.435	8.437	8.439	8.440	8.440	8.425	8.408	8.338-8.478	8.436	0.006
5 nC8	9.887	9.889	9.891	9.893	9.900	9.874	9.858	9.788-9.928	9.889	0.009
6 Toluene	10.301	10.304	10.307	10.309	10.319	10.292	10.273	10.203-10.343	10.306	0.009
7 nC9	12.438	12.442	12.444	12.447	12.456	12.430	12.409	12.339-12.479	12.443	0.009
8 nC10-Decane	14.651	14.610	14.656	14.609	14.663	14.644	14.632	14.562-14.702	14.639	0.024
9 BB(Surr)	14.907	14.910	14.911	14.912	14.914	14.901	14.888	14.818-14.958	14.909	0.005
10 1,2,4-Trimethylbenzene	15.493	15.495	15.497	15.498	15.506	15.488	15.477	15.407-15.547	15.496	0.006
11 nC11	16.011	16.012	16.013	16.013	16.016	16.007	16.020	15.950-16.090	16.012	0.003
12 nC12-Dodecane	17.017	17.017	17.017	17.017	17.019	17.014	17.008	16.938-17.078	17.017	0.002
13 nC13	17.823	17.824	17.823	17.799	17.860	17.823	17.814	17.744-17.884	17.825	0.019

Reviewer 1 MH Date: 7/29/10  
Reviewer 2 [Signature] Date: 7/29/10

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid3.i/20100728-2.b/FID.m  
Batch File: /chem3/pid3.i/20100728-2.b  
Inst ID: pid3.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
14 Naphthalene	18.093	18.094	18.093	18.093	18.094	18.089	18.082	18.012-18.152	18.093	0.002



### VOA Analyst Notes / Corrective Action Log

ARI Project ID: BETX Curve Client ID: \_\_\_\_\_

ARI SOP: ~~404S~~(Gas) ~~410S(BTEX)~~ ~~430S~~(VPH) ~~700S~~(8260C) ~~703S~~(SIM) ~~706S~~(524.2) ~~710S~~(RSK-175)

Parameter(s): BETX

Instrument: NT-3 NT-5 NT-7 NT-9 NT-10 PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 5 Curve Date: 6/29/10 Analysis Start Date: 6/29/10

pH ≤ 2.0 YES / NO NA Method Blank In Control? YES / NO

BFB Tune Meets Criteria? YES / NO / NA LCS / LCSD Recovery In Control? YES / NO

Internal Standard Meets Criteria? YES / NO / NA Surrogate Recovery In Control? YES / NO

ICal acceptable? YES / NO CCal acceptable? YES / NO

Q flag applied? YES / NO / NA Q flag applied? YES / NO / NA

Manual Integrations for ICal? YES / NO Manual Integrations for Samples? Yes / NO

Special Analysis Criteria Met? YES / NO / NA

Bubbles/Headspace: None SM (≤ 2mm ●) PB (2-4mm) LG (> 4mm ●) Head Space

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

BETX ICW Targeted 25

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

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

Reviewer: [Signature] Date: 7-10-10



# Analytical Resources Inc.: Organics Instrument Log

PID-3 HP 5890 Series II - Serial No.: 2728A-13336

Date: 6/29/10 <sup>MH 7/1/10</sup> Analysis: NWTPH6/BETX Analyst: MH

GC Program: BETX Column No: 832213 Column Type: RTX502-2

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

Calibration File: \_\_\_\_\_ Curve Date: 2/2/10 63  
6/29/10 BETX

IS/SS	Ical/Ccal	LCS/ICV
<u>VW632-2</u>	<u>VW607-1</u>	<u>VW629-4</u>
_____	<u>VW630-4</u>	_____
_____	<u>VW629-4</u>	_____
_____	_____	_____
_____	_____	_____

Time	Filename	LabID	ClientID	Vial#	pH	DF			
1	0548	0629a001.d	RINSE			1			
2	0613	0629a002.d	RT+BCAL 1			1			
3	0637	0629a003.d	GCAL 1			1			
4	0735	0629a004.d	RINSE			1			
5	0759	0629a005.d	BETX .25			1			
6	0824	0629a006.d	BETX .5			1			
7	0848	0629a007.d	BETX 5			1			
8	0912	0629a008.d	BETX 25			1			
9	0937	0629a009.d	BETX 50			1			
10	1001	0629a010.d	BETX 100			1			
11	1026	0629a011.d	BETX 200			1			
12	1050	0629a012.d	BETX ICV			1			
13	1145	0629a013.d	GCAL 2			1			
14	1210	0629a014.d	LCS0629			1			
15	1234	0629a015.d	LCS0629			1			
16	1259	0629a016.d	MB0629			1			
17	1344	0629a017.d	RC18B	Trip Blank		2	1		
18	1408	0629a018.d	RC18A	Sample 1		2	1		
19	1433	0629a019.d	RB54D	92-8S		8	1		
20	1458	0629a020.d	RB54E	92-9S		4	1		
21	1522	0629a021.d	RB54F	92-10S		4	1		
22	1547	0629a022.d	RB54G	51-2		3	1		

4 1 1

MH  
7/1/10

**Maintenance / Comments**

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

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid3.i/20100629-1.b

ARI Job No.: BETX Method: PIDB.m Instrument: pid3.i Date: 29-JUN-2010

Time Filename LabID ClientId DF Manually Integrated Compounds

0759 0629a005.d BETX .25 1 Toluene, Ethylbenzene, O-Xylene, MTBE, TBT(Surr), BB(Surr),

0824 0629a006.d BETX .5 1 Toluene, O-Xylene, MTBE,

0848 0629a007.d BETX 5 1 NO MANUAL INTEGRATION

0912 0629a008.d BETX 25 1 NO MANUAL INTEGRATION

0937 0629a009.d BETX 50 1 NO MANUAL INTEGRATION

1001 0629a010.d BETX 100 1 NO MANUAL INTEGRATION

1026 0629a011.d BETX 200 1 NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid3.i/20100629-2.b  
ARI Job No.: BETX Method: FID.m Instrument: pid3.i Date: 29-JUN-2010

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0759	0629a005.d	BETX .25		1	NO MANUAL INTEGRATION
0824	0629a006.d	BETX .5		1	NO MANUAL INTEGRATION
0848	0629a007.d	BETX 5		1	NO MANUAL INTEGRATION
0912	0629a008.d	BETX 25		1	NO MANUAL INTEGRATION
0937	0629a009.d	BETX 50		1	NO MANUAL INTEGRATION
1001	0629a010.d	BETX 100		1	NO MANUAL INTEGRATION
1026	0629a011.d	BETX 200		1	NO MANUAL INTEGRATION

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-JUN-2010 07:59  
 End Cal Date : 29-JUN-2010 10:26  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid3.i/20100629-1.b/PIDB.m  
 Cal Date : 29-Jun-2010 11:12 monicah  
 Curve Type : Average

Calibration File Names:

Level 1: /chem3/pid3.i/20100629-1.b/0629a005.d/0629a005.cdf  
 Level 2: /chem3/pid3.i/20100629-1.b/0629a006.d/0629a006.cdf  
 Level 3: /chem3/pid3.i/20100629-1.b/0629a007.d  
 Level 4: /chem3/pid3.i/20100629-1.b/0629a008.d  
 Level 5: /chem3/pid3.i/20100629-1.b/0629a009.d  
 Level 6: /chem3/pid3.i/20100629-1.b/0629a010.d  
 Level 7: /chem3/pid3.i/20100629-1.b/0629a011.d

Compound	0.25000	0.50000	5.000	25.000	50.000	100.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	200.000							
	Level 7							
1 MTBE	464 343	288	367	346	348	334	356	15.046
2 Benzene	1564 1254	1462	1257	1240	1256	1221	1322	10.156
4 Toluene	1608 1294	1252	1288	1275	1275	1247	1320	9.717
15 Chlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
5 Ethylbenzene	1404 1183	1420	1164	1185	1190	1152	1243	9.380
6 M/P-Xylene	1614 1268	1381	1314	1300	1302	1247	1347	9.293

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-JUN-2010 07:59  
 End Cal Date : 29-JUN-2010 10:26  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid3.i/20100629-1.b/PIDB.m  
 Cal Date : 29-Jun-2010 11:12 monicah  
 Curve Type : Average

Compound	0.25000	0.50000	5.000	25.000	50.000	100.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	200.000							
	Level 7							
7 O-Xylene	1352 1307	1232	1295	1269	1282	1256	1285	3.016
13 1,3,5 Trimethylbenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
14 1,2,4 Trimethyl benzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
16 1,3 Dichlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
17 1,4 Dichlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
18 1,2 Dichlorobenzene	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
\$ 3 TFT(Surr)	243 219	220	213	214	217	212	220	4.943
\$ 8 BB(Surr)	496 463	451	434	440	456	450	456	4.411

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-JUN-2010 07:59  
 End Cal Date : 29-JUN-2010 10:26  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid3.i/20100629-2.b/FID.m  
 Cal Date : 29-Jun-2010 11:13 monicah  
 Curve Type : Average

Compound	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			
	0.000e+00								
	Level 7								
14 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	+++++							+++++	+++++
\$ 4 TPT(Surr)	78.13636	73.54545	71.97015	70.36000	70.48120	69.03933			
	70.30000						71.97607		4.271
\$ 9 BB(Surr)	48.72727	43.22727	42.49254	41.18000	42.06767	41.53933			
	42.23000						43.06630		5.994

1/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a005.d      ARI ID: BETX .25  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a005.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 07:59  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.418	-0.021	1719	20323	23.9	TFT(Surr)
14.897	-0.015	1072	10075	24.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.13)	23668	0.034
8015B 2MP-TMB ( 4.93 to 15.54)	22061	0.016
AK101 nC6-nC10 ( 5.50 to 14.63)	15306	0.014
NWTPHG Tol-Nap (10.21 to 18.23)	24708	0.033

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.417	-0.021	5356	24.4	TFT(Surr)
14.893	-0.016	10910	23.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.694	-0.019	391	0.30	Benzene
10.287	-0.021	402	0.30N	Toluene
12.817	-0.030	351	0.28N	Ethylbenzene
12.955	-0.034	807	0.60	M/P-Xylene
13.737	-0.025	338	0.26N	O-Xylene
5.283	-0.017	116	0.33N	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100629-2.b/0629a005.d

Date: 29-JUN-2010 07:59

Client ID:

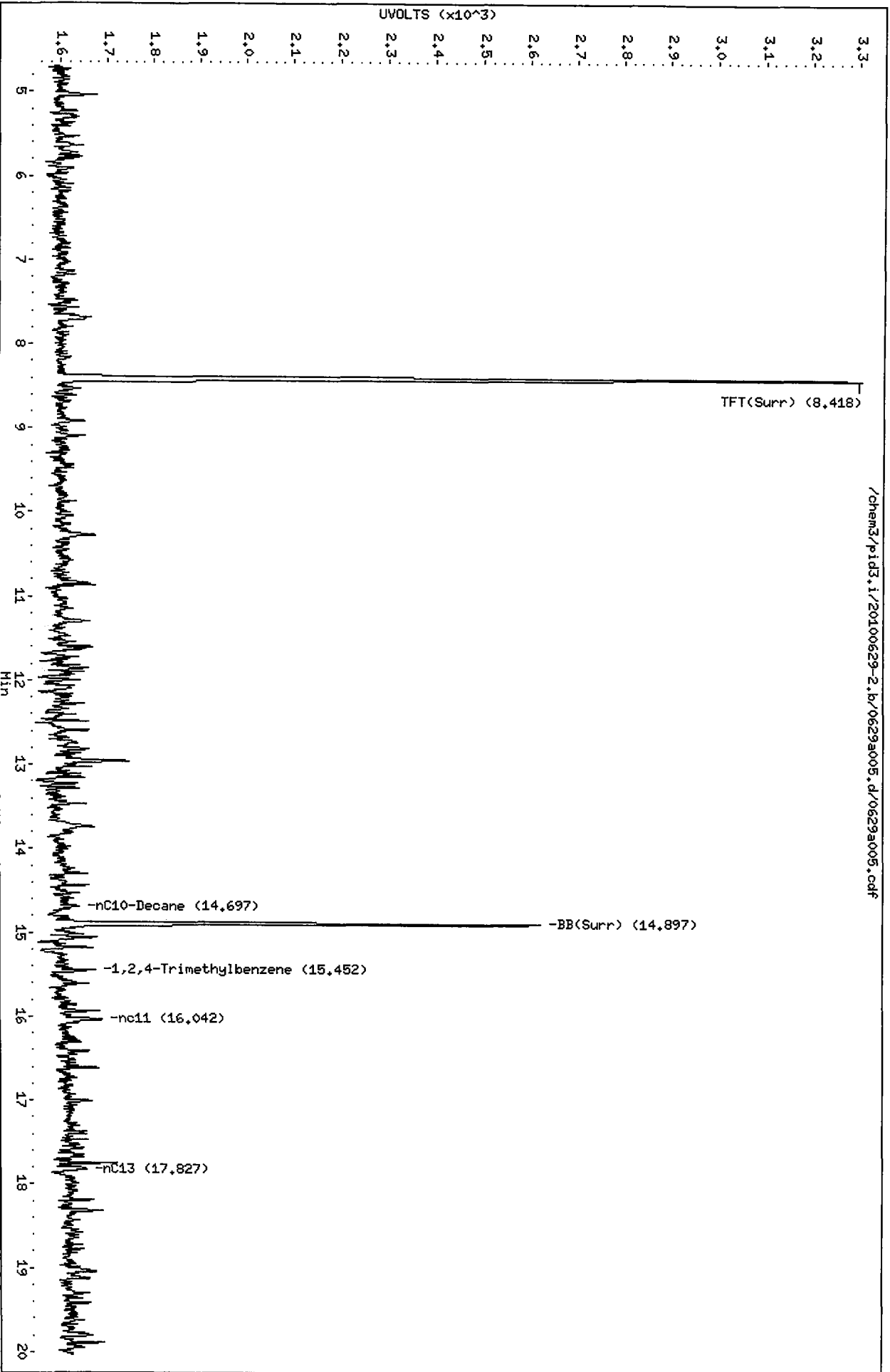
Sample Info: BETX .25

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

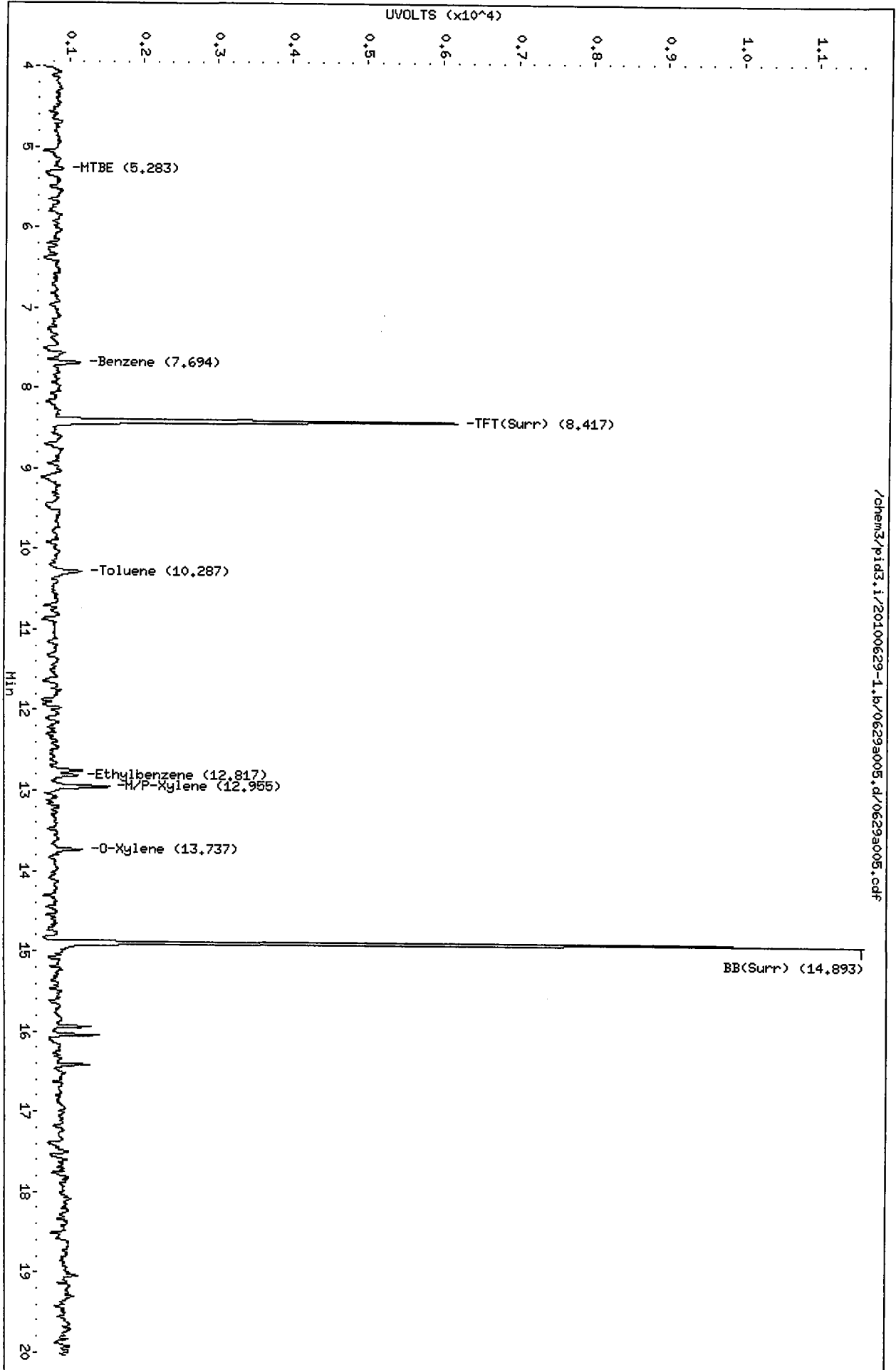




Data File: /chem3/pid3.i/20100629-1.b/0629a005.d  
Date : 29-JUN-2010 07:59  
Client ID:  
Sample Info: BETX .25  
Column phase: RTX 502-2 PID

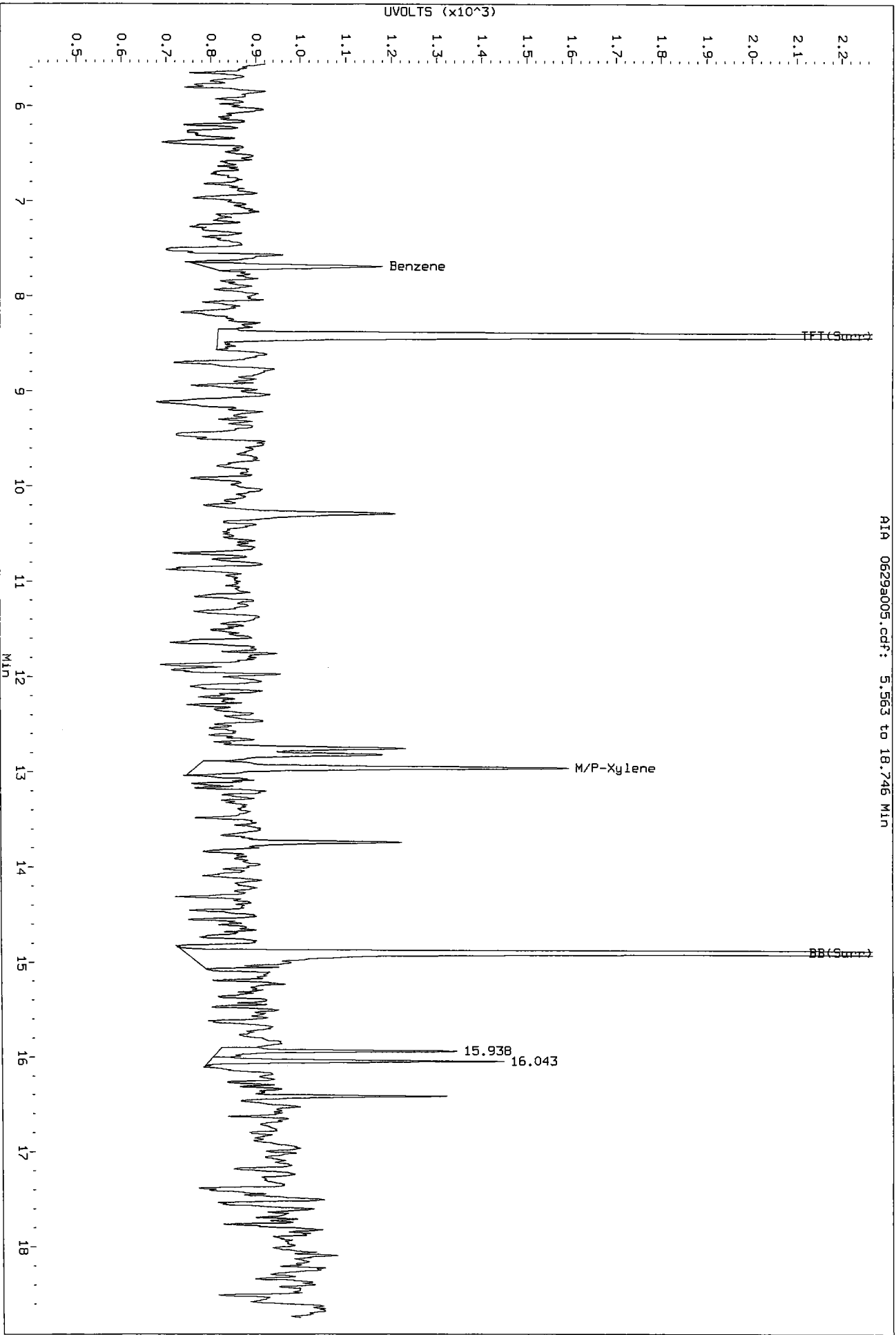
Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid3.i/20100629-1.b/0629a005.d/0629a005.cdf

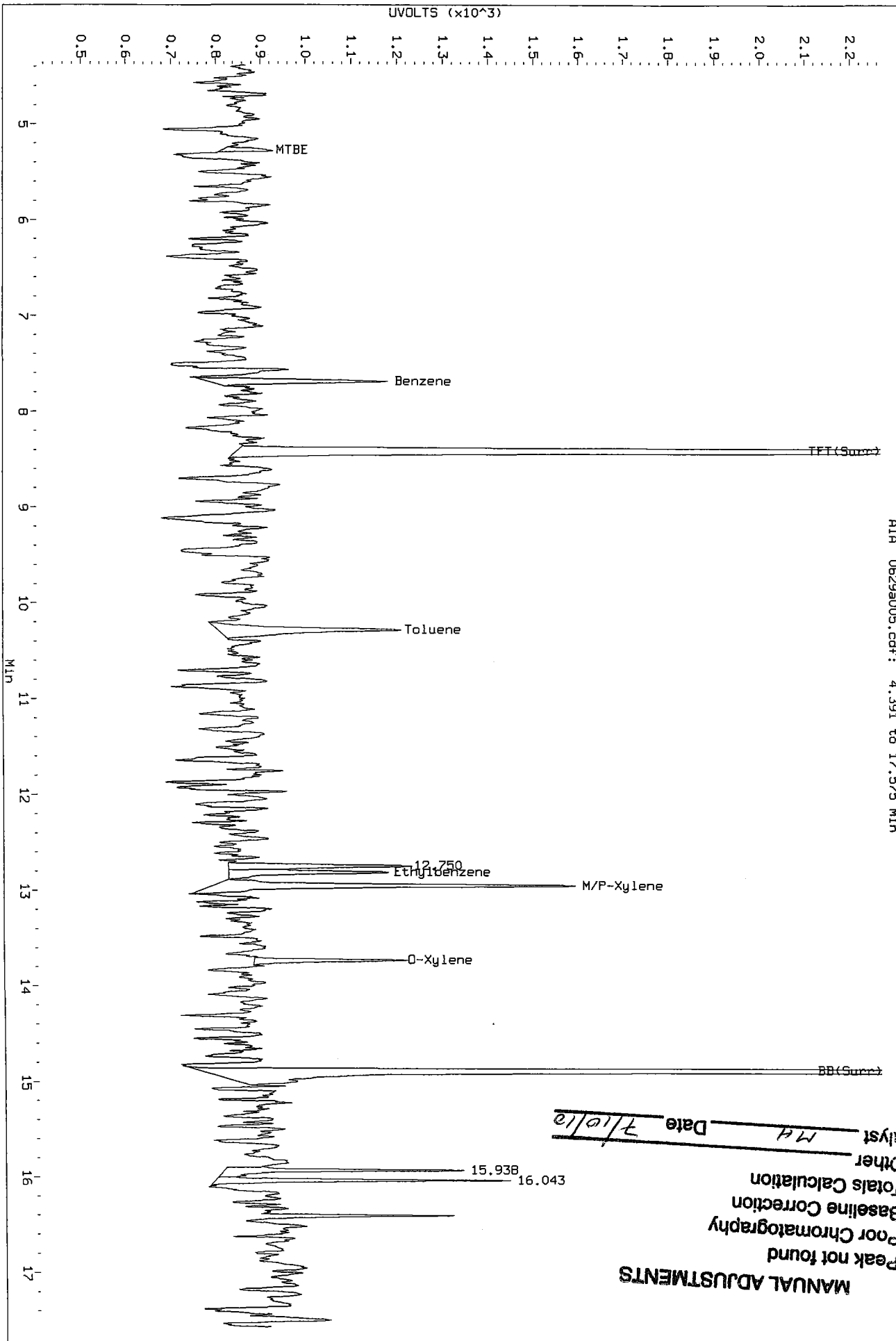


MM  
7/10/10

Data File: /chem3/pid3.1/20100629-1.b/0629a005.d/0629a005.cdf  
Injection Date: 29-JUN-2010 07:59  
Instrument: pid3.1  
Client Sample ID:



Data File: /chem3/pid3.1/20100629-1.b/0629a005.d/0629a005.cdf  
Injection Date: 29-JUN-2010 07:59  
Instrument: pid3.1  
Client Sample ID:



AIA 0629a005.cdf: 4.391 to 17.575 Min

**MANUAL ADJUSTMENTS**  
Peak not found  
Poor Chromatography  
Baseline Correction  
Totals Calculation  
Other  
Analyst: MA  
Date: 7/10/10

Analytical Resources Inc.  
 BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a006.d      ARI ID: BETX .5  
 Data file 2: /chem3/pid3.i/20100629-1.b/0629a006.d      Client ID:  
 Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 08:24  
 Instrument: pid3.i    Matrix: WATER  
 Gas Ical Date: 02-FEB-2010                                  Dilution Factor: 1.000  
 BETX Ical Date: 29-JUN-2010

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
---	-----	-----	-----	-----	-----
8.430	-0.008	3236	38151	45.0	TFT(Surr)
14.906	-0.006	1902	15702	44.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	Total Area*	Amount
-----	-----	-----
WAGas Tol-C12 (10.21 to 17.13)	29425	0.042
8015B 2MP-TMB ( 4.93 to 15.54)	33980	0.025
AK101 nC6-nC10 ( 5.50 to 14.63)	33979	0.031
NWTPHG Tol-Nap (10.21 to 18.23)	34396	0.046

\* Surrogate areas are subtracted from Total Area  
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
---	-----	-----	-----	-----
8.429	-0.008	9683	44.0	TFT(Surr)
14.904	-0.006	19865	43.6	BB(Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
---	-----	-----	-----	-----
7.706	-0.007	731	0.55	Benzene
10.297	-0.011	626	0.47N	Toluene
12.832	-0.015	710	0.57	Ethylbenzene
12.969	-0.020	1381	1.03	M/P-Xylene
13.750	-0.012	616	0.48N	O-Xylene
5.300	-0.001	144	0.40N	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

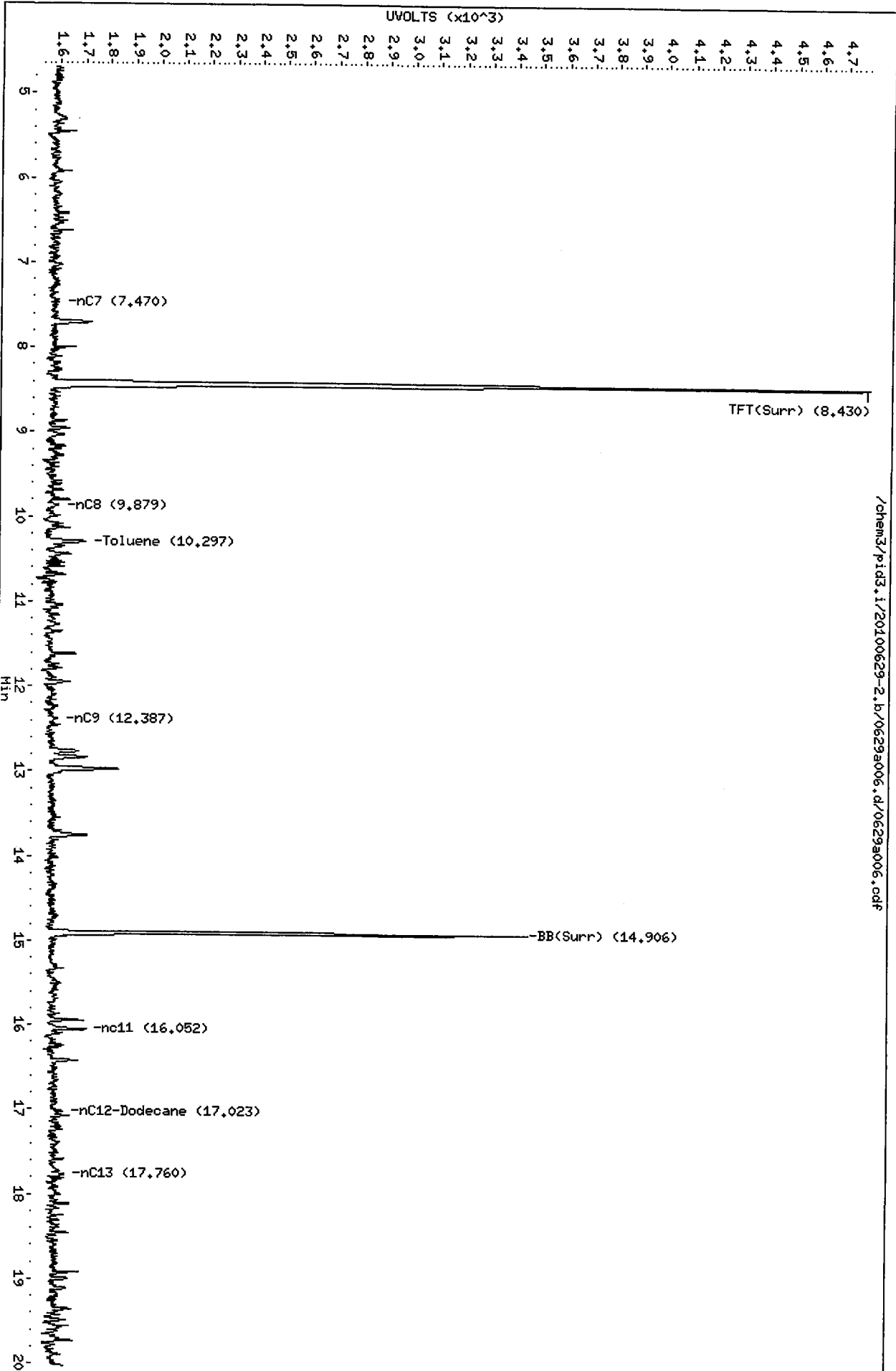
Data File: /chem3/pid3.i/20100629-2.b/0629a006.d  
Date: 29-JUN-2010 08:24

Client ID:  
Sample Info: BETX .5

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid3.i/20100629-2.b/0629a006.d/0629a006.pdf



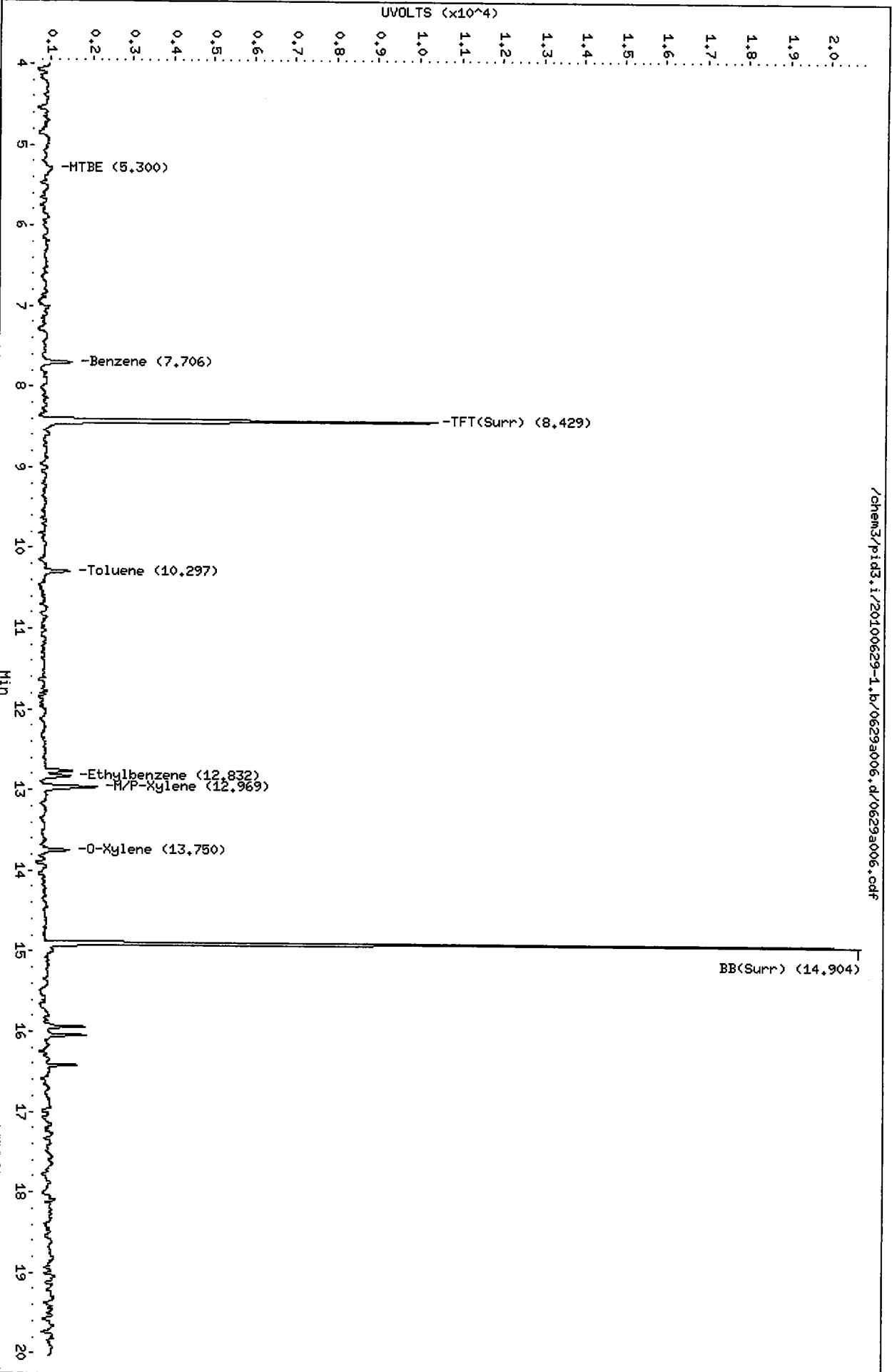
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Date: 29-JUN-2010 08:24

Client ID:  
Sample Info: BETX .5

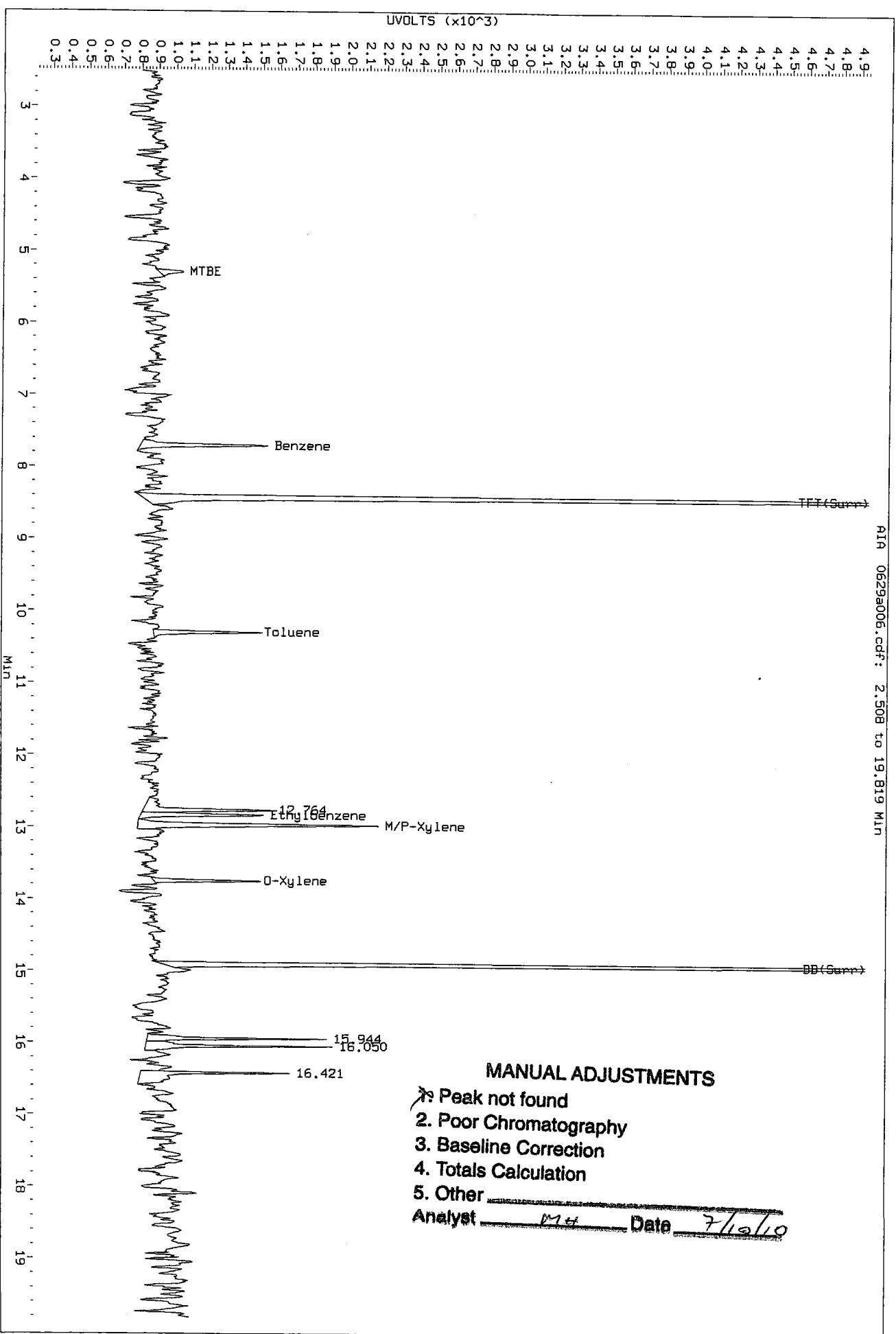
Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid3.i/20100629-1.b/0629a006.d/0629a006.cdf



Data File: /chem3/pid3.1/20100629-1.b/0629a006.d/0629a006.cdf  
 Injection Date: 29-JUN-2010 09:24  
 Instrument: pid3.1  
 Client Sample ID:



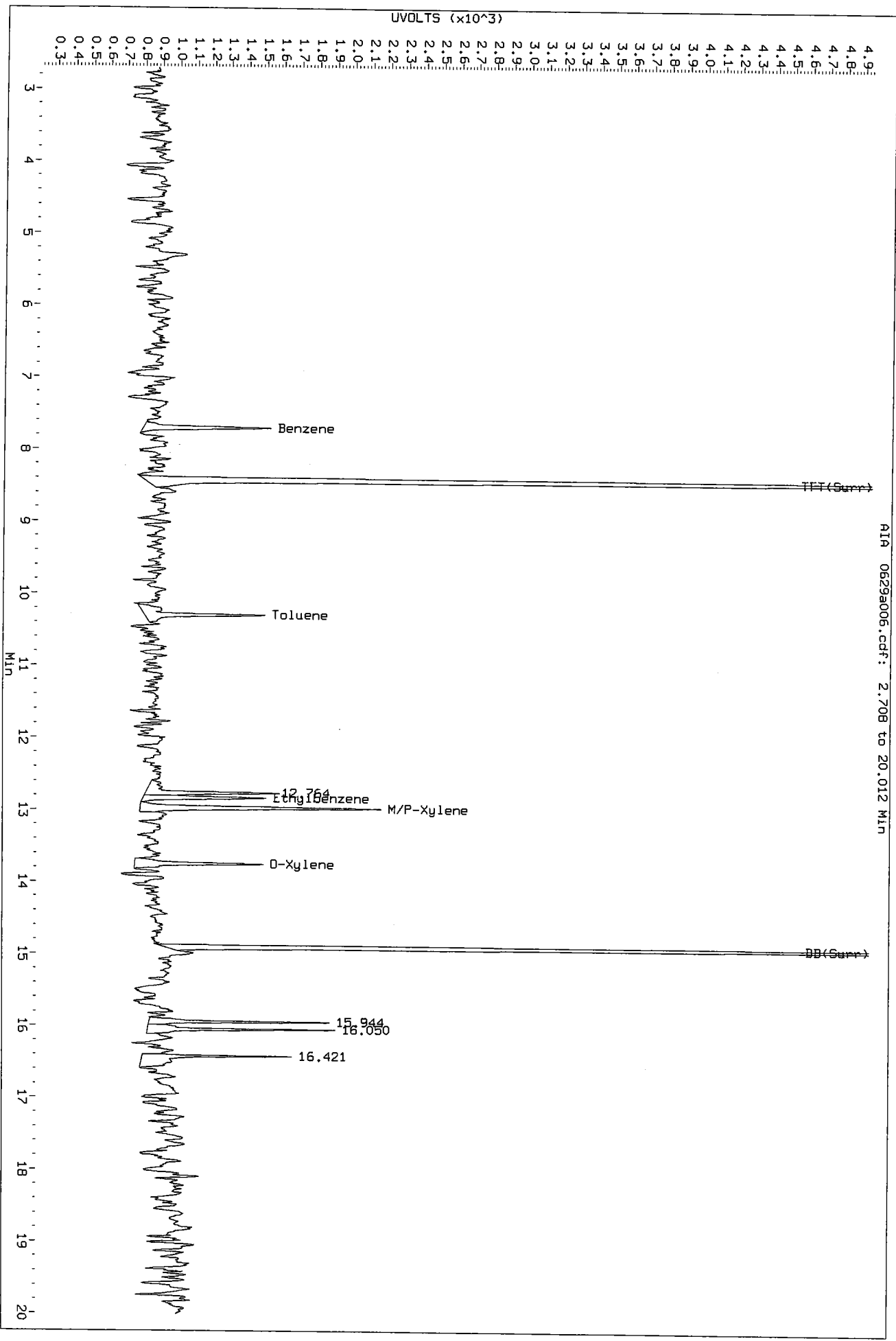
**MANUAL ADJUSTMENTS**

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

Analyst MT Date 7/12/10

MLT  
4/10/10

Data File: /chem3/pid3.1/20100629-1.b/0629a006.d/0629a006.cdf  
Injection Date: 29-JUN-2010 08:24  
Instrument: pid3.1  
Client Sample ID:





7/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a007.d      ARI ID: BETX 5  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a007.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 08:48  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.435	-0.003	4822	56817	67.0	TFT (Surr)
14.908	-0.003	2847	24157	66.1	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.13)	137046	0.197
8015B 2MP-TMB ( 4.93 to 15.54)	118984	0.088
AK101 nC6-nC10 ( 5.50 to 14.63)	107982	0.100
NWTPHG Tol-Nap (10.21 to 18.23)	152307	0.206

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.434	-0.003	14296	65.0	TFT (Surr)
14.907	-0.003	29105	63.8	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.709	-0.004	6287	4.76	Benzene
10.302	-0.006	6442	4.88	Toluene
12.837	-0.010	5819	4.68	Ethylbenzene
12.974	-0.015	13142	9.76	M/P-Xylene
13.753	-0.009	6477	5.04	O-Xylene
5.297	-0.003	1833	5.15	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

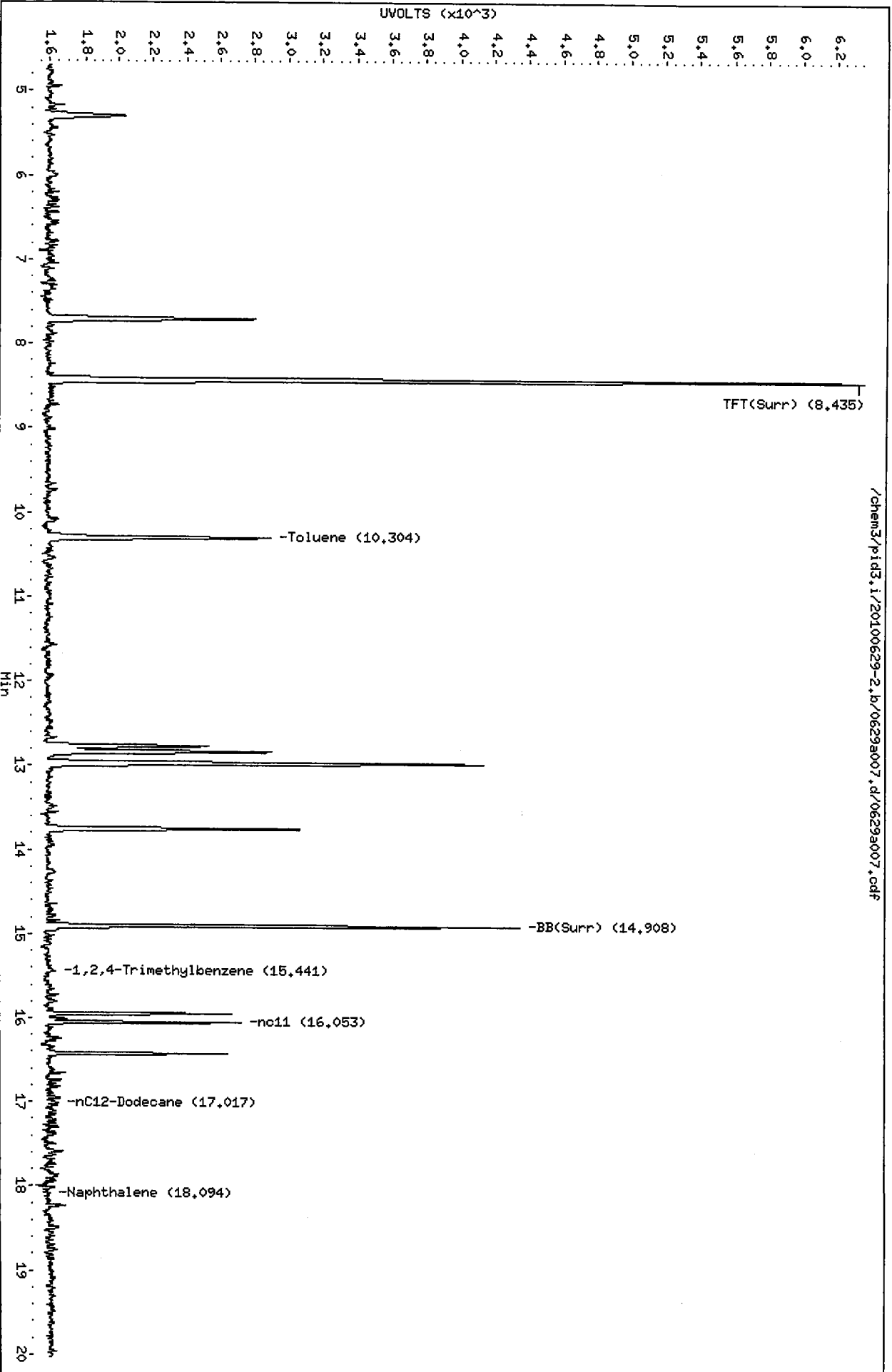
Data File: /chem3/pid3.i/20100629-2.b/0629a007.d  
Date: 29-JUN-2010 08:48

Client ID:  
Sample Info: BETX 5

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100629-2.b/0629a007.d/0629a007.cdf

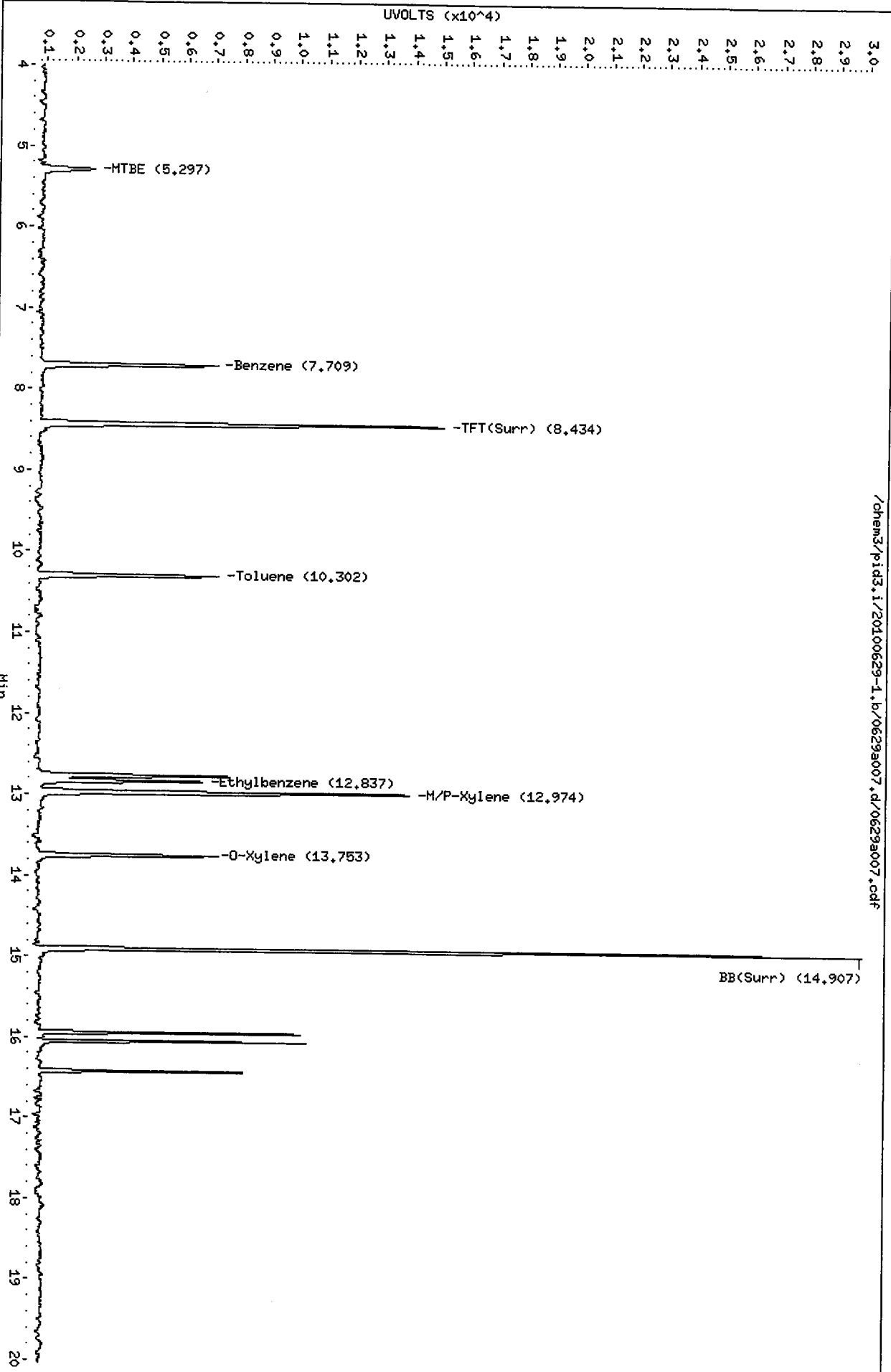


Data File: /chem3/pid3.i/20100629-1.b/0629a007.d  
Date: 29-JUN-2010 08:48

Client ID:  
Sample Info: BETX 5

Column Phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



/chem3/pid3.i/20100629-1.b/0629a007.d/0629a007.cdf

Ms  
7/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a008.d      ARI ID: BETX 25  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a008.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 09:12  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.000	7036	82252	97.8	TFT (Surr)
14.911	-0.001	4118	35649	95.6	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.13)	554289	0.797
8015B 2MP-TMB ( 4.93 to 15.54)	539482	0.398
AK101 nC6-nC10 ( 5.50 to 14.63)	505710	0.468
NWTPHG Tol-Nap (10.21 to 18.23)	562868	0.760

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.436	-0.001	21401	97.4	TFT (Surr)
14.908	-0.002	44020	96.6	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.712	-0.001	31003	23.45	Benzene
10.304	-0.004	31867	24.14	Toluene
12.840	-0.007	29632	23.85	Ethylbenzene
12.977	-0.012	65022	48.28	M/P-Xylene
13.755	-0.007	31715	24.68	O-Xylene
5.300	-0.001	8658	24.33	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

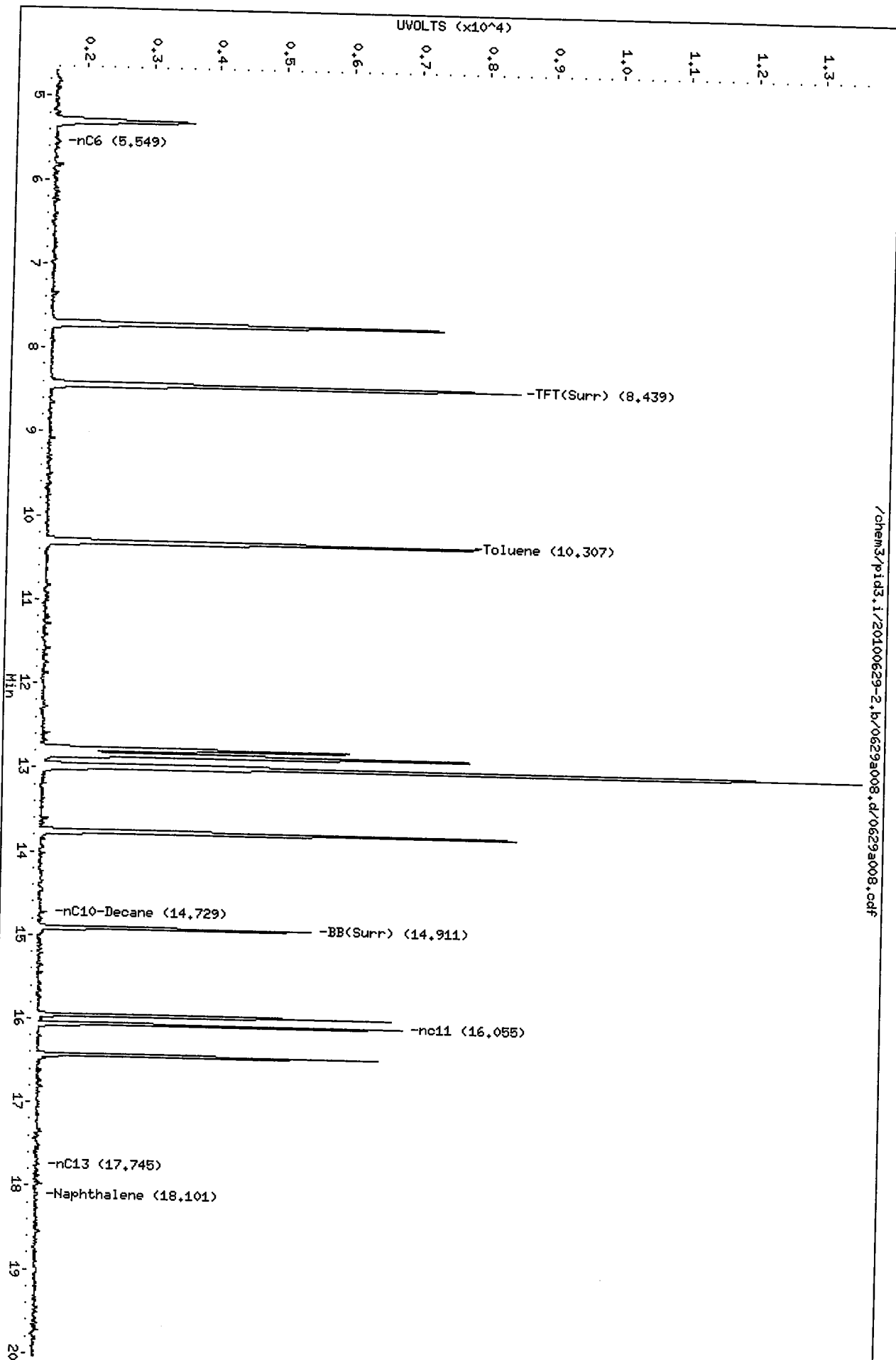
Data File: /chem3/pid3.i/20100629-2.b/0629a008.d  
Date : 29-JUN-2010 09:12  
Client ID:  
Sample Info: BETX 25

Instrument: pid3.i

Page 1

Column phase: RTX 502-2 FID

Operator: HH  
Column diameter: 0.18



RI65:00740

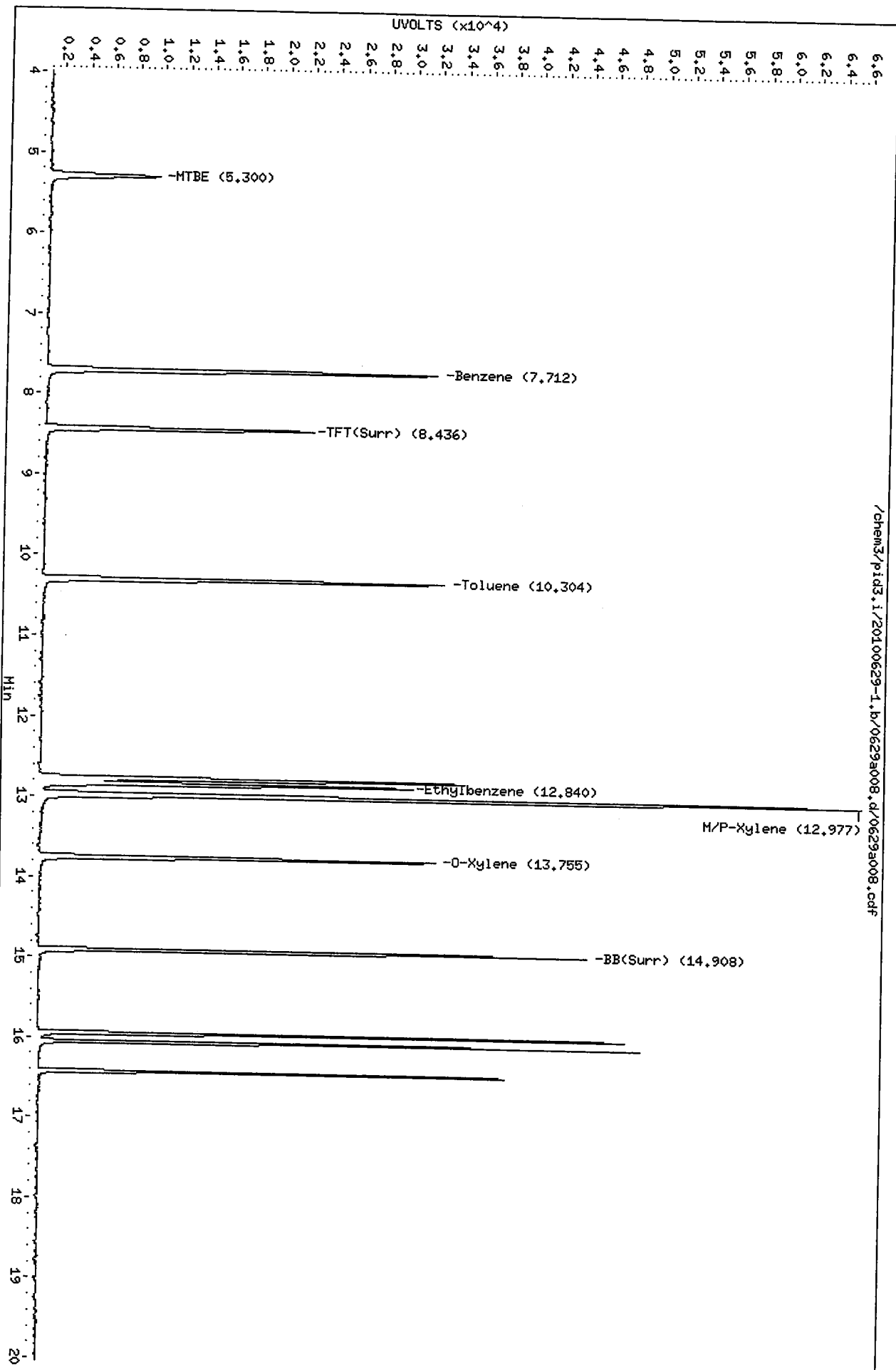
Data File: /chem3/pid3.i/20100629-1.b/0629a008.d  
Date : 29-JUN-2010 09:12  
Client ID:  
Sample Info: BETX 25

Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100629-1.b/0629a008.d/0629a008.cdf



M.  
7/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a009.d      ARI ID: BETX 50  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a009.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 09:37  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====  
FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.438	-0.001	9374	110805	130.2	TFT (Surr)
14.911	-0.001	5595	46087	129.9	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.13)	1045595	1.504
8015B 2MP-TMB ( 4.93 to 15.54)	1041320	0.768
AK101 nC6-nC10 ( 5.50 to 14.63)	978534	0.906
NWTPHG Tol-Nap (10.21 to 18.23)	1053990	1.423

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.436	-0.001	28902	131.5	TFT (Surr)
14.909	-0.001	60660	133.1	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.711	-0.002	62822	47.52	Benzene
10.305	-0.003	63750	48.30	Toluene
12.841	-0.006	59507	47.89	Ethylbenzene
12.979	-0.010	130181	96.67	M/P-Xylene
13.757	-0.005	64099	49.89	O-Xylene
5.298	-0.003	17422	48.97	MTBE

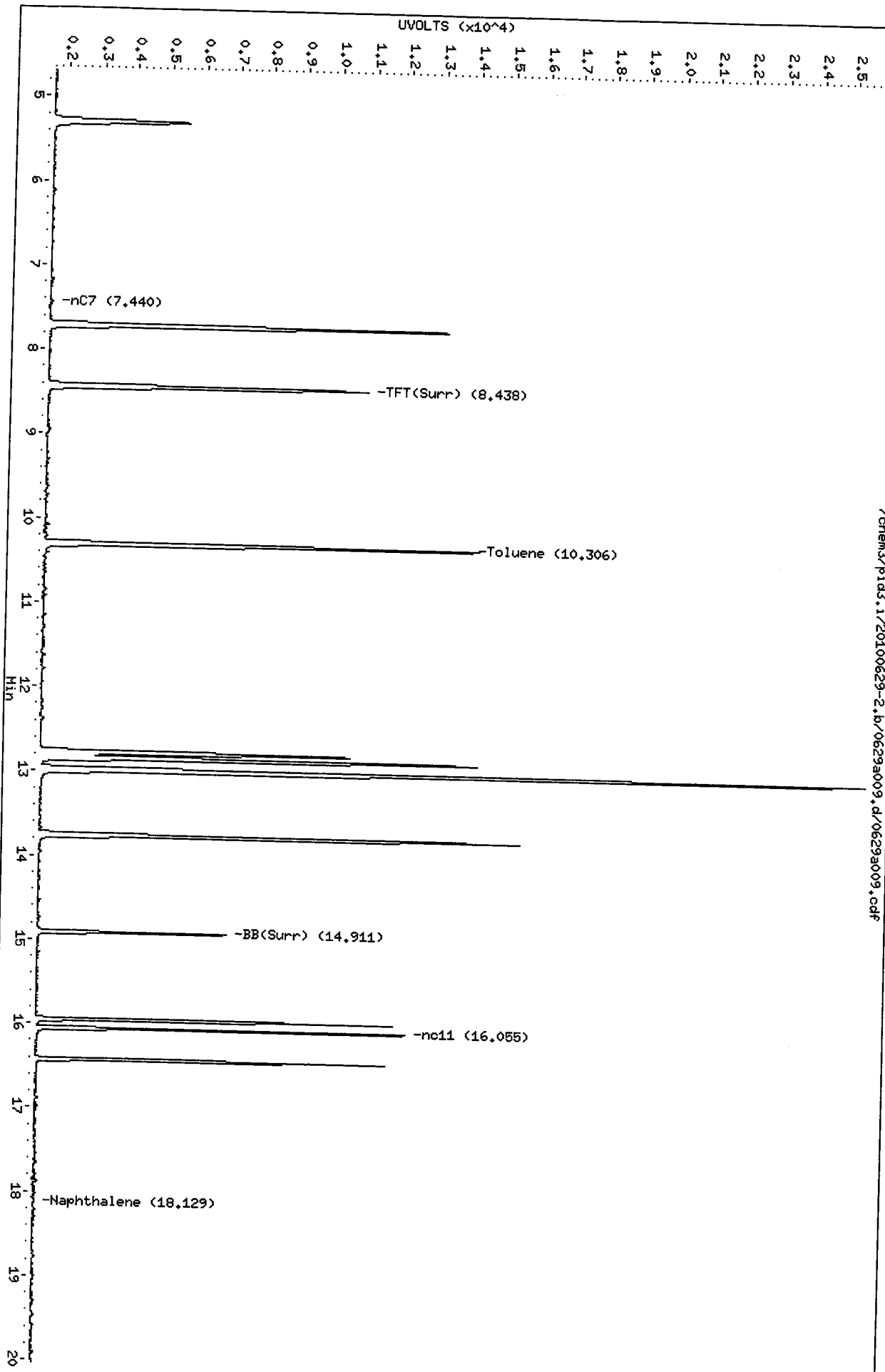
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100629-2.b/0629a009.d  
Date: 29-JUN-2010 09:37  
Client ID:  
Sample Info: BETX 50

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: NH  
Column diameter: 0.18

/chem3/pid3.i/20100629-2.b/0629a009.d/0629a009.cdf





Data File: /chem3/pid3.i/20100629-1.b/0629a009.d  
Date: 29-JUN-2010 09:37

Client ID:  
Sample Info: BETX 50

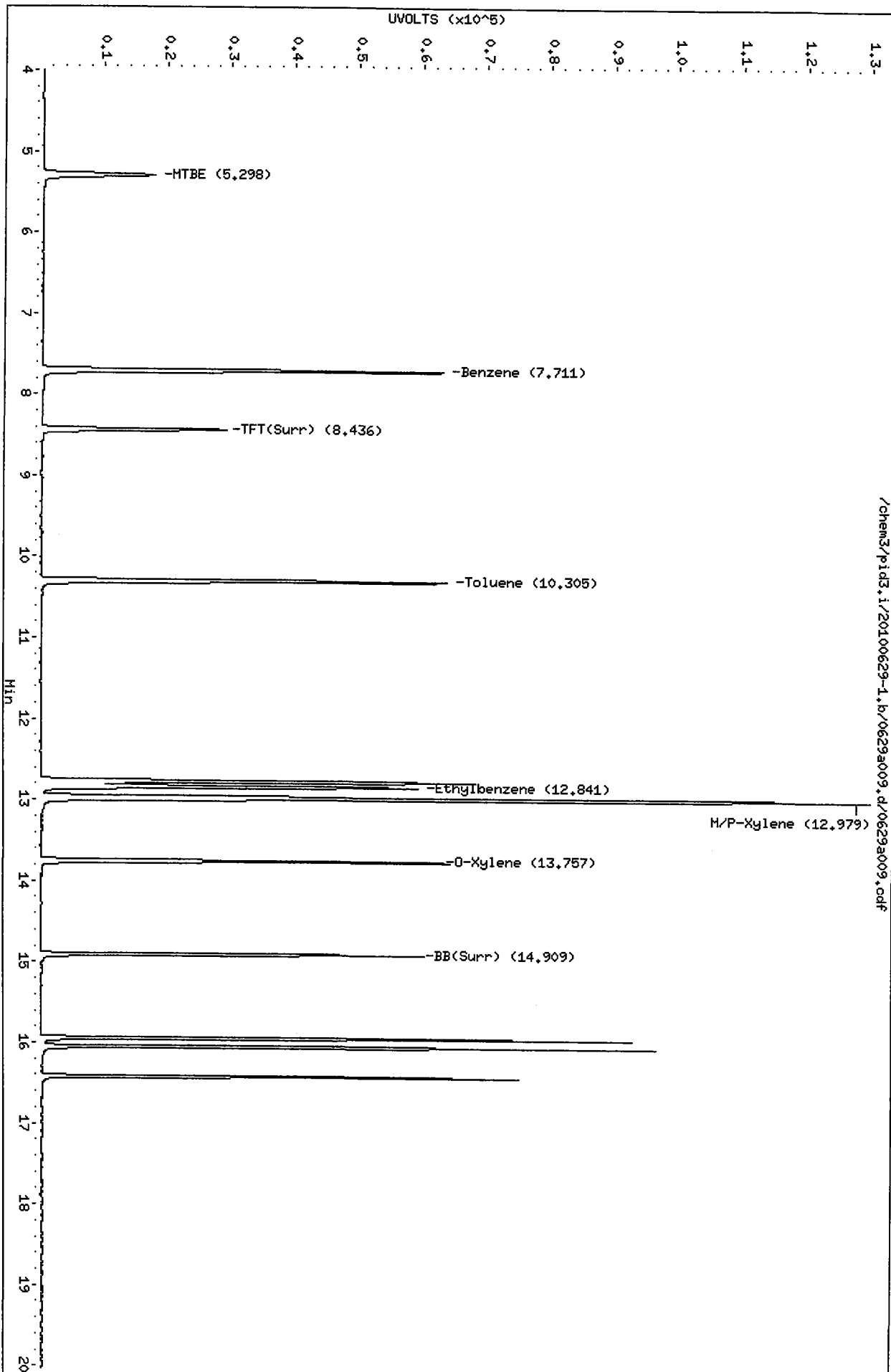
Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: HH

Column diameter: 0.18

/chem3/pid3.i/20100629-1.b/0629a009.d/0629a009.cdf



7/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a010.d  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a010.d  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m  
Instrument: pid3.i  
Gas Ical Date: 02-FEB-2010  
BETX Ical Date: 29-JUN-2010

ARI ID: BETX 100  
Client ID:  
Injection Date: 29-JUN-2010 10:01  
Matrix: WATER  
Dilution Factor: 1.000

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.001	12289	144775	170.7	TFT(Surr)
14.912	0.001	7394	58577	171.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.13)	2011481	2.893
8015B 2MP-TMB ( 4.93 to 15.54)	1982095	1.462
AK101 nC6-nC10 ( 5.50 to 14.63)	1860428	1.722
NWTPHG Tol-Nap (10.21 to 18.23)	2014004	2.719

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.438	0.001	37664	171.3	TFT(Surr)
14.910	0.001	80033	175.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.714	0.001	122057	92.32	Benzene
10.307	-0.001	124686	94.47	Toluene
12.844	-0.003	115194	92.70	Ethylbenzene
12.984	-0.006	249433	185.23	M/P-Xylene
13.759	-0.003	125630	97.78	O-Xylene
5.302	0.001	33414	93.91	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100629-2.b/0629a010.d

Date : 29-JUN-2010 10:01

Client ID:

Sample Info: BETX 100

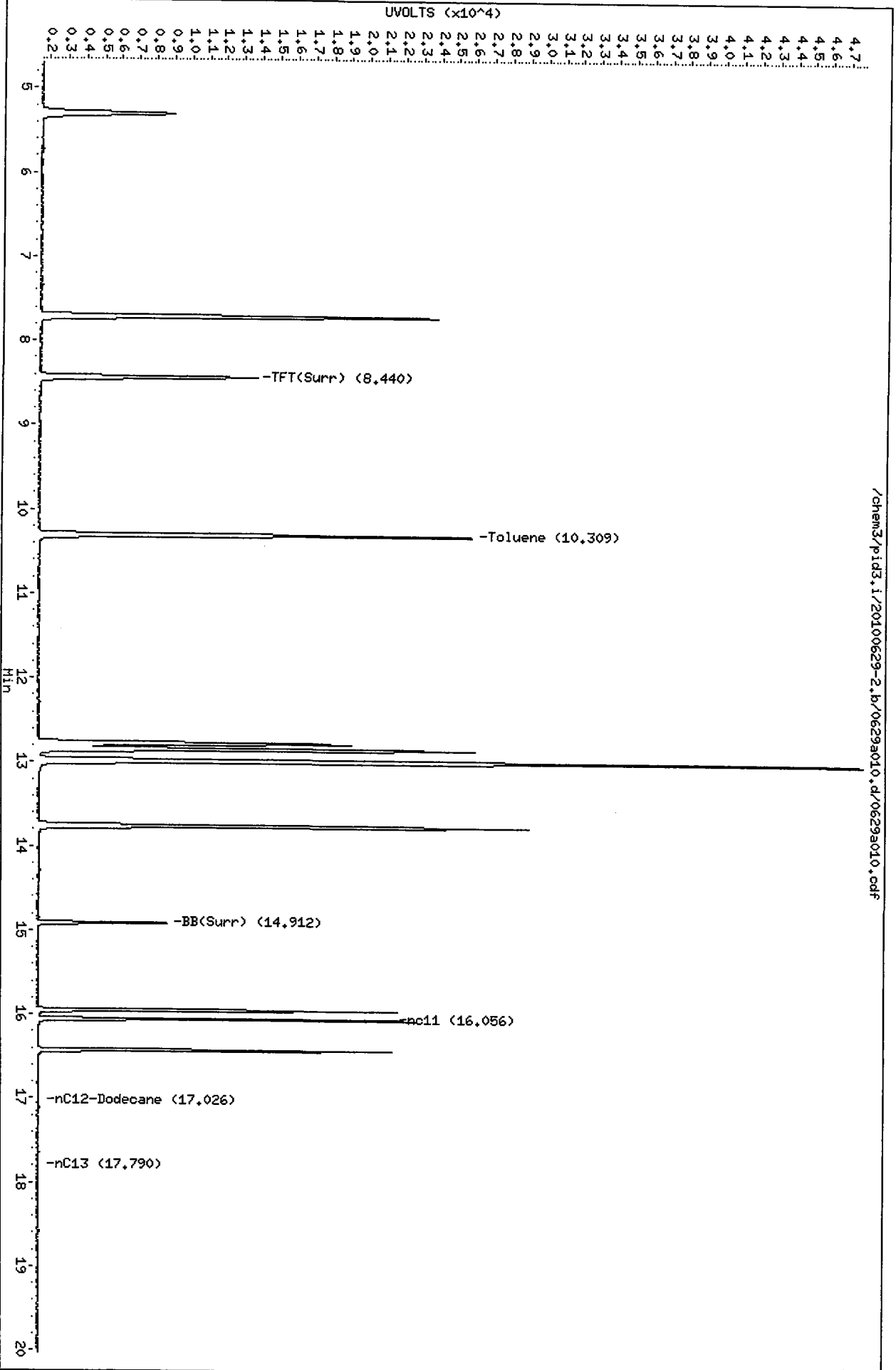
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

/chem3/pid3.i/20100629-2.b/0629a010.d/0629a010.cdf



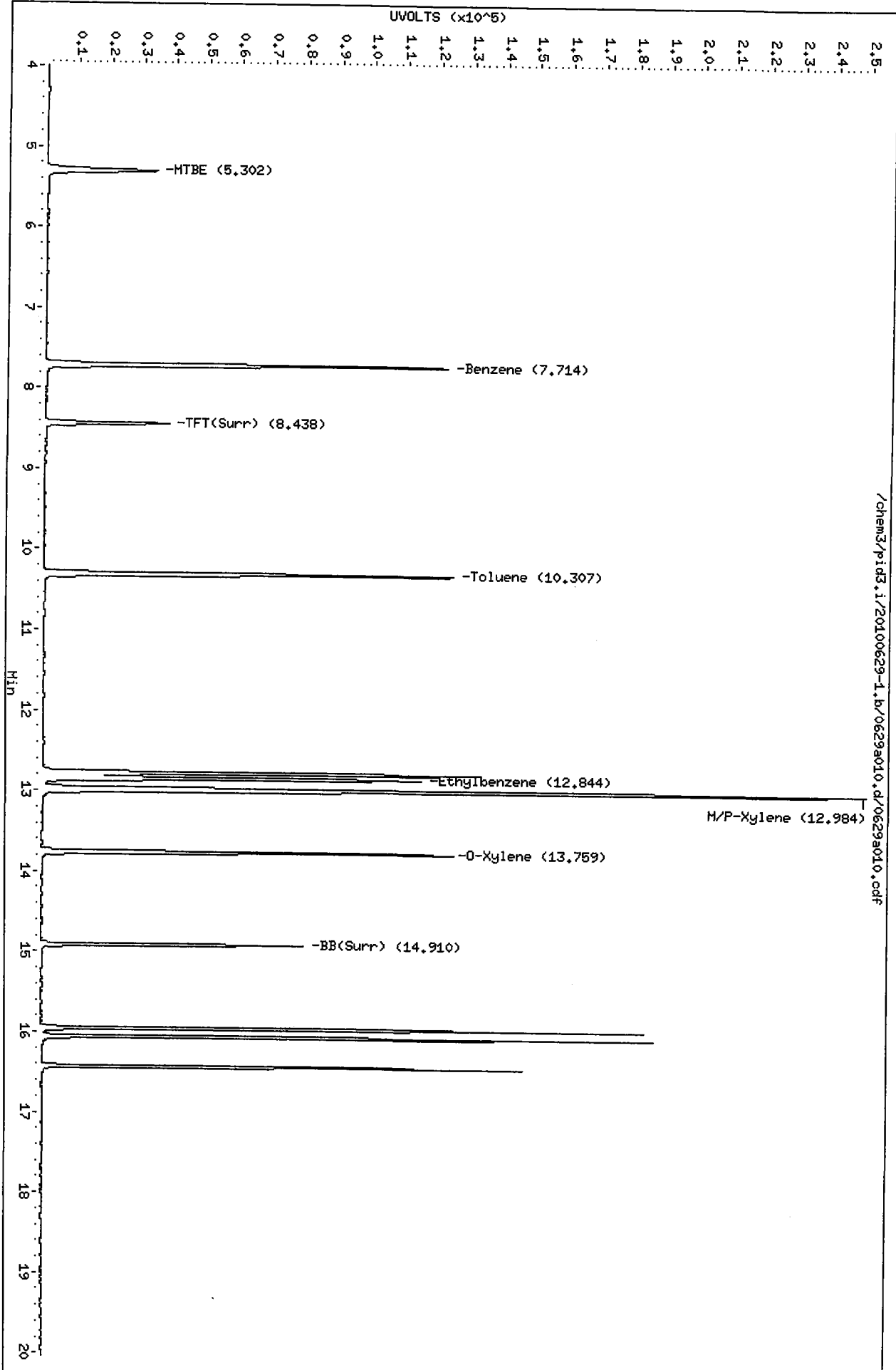
Data File: /chem3/pid3.i/20100629-1.b/0629a010.d  
Date: 29-JUN-2010 10:01

Client ID:  
Sample Info: BETX 100

Column Phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid3.i/20100629-1.b/0629a010.d/0629a010.cdf



7/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a011.d      ARI ID: BETX 200  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a011.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 10:26  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.000	14060	165027	195.3	TFT(Surr)
14.911	0.000	8446	67516	196.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.13)	4138650	5.951
8015B 2MP-TMB ( 4.93 to 15.54)	4088735	3.015
AK101 nC6-nC10 ( 5.50 to 14.63)	3833098	3.547
NWTPHG Tol-Nap (10.21 to 18.23)	4139793	5.588

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.437	0.000	43804	199.3	TFT(Surr)
14.910	0.000	92698	203.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.713	0.000	250899	189.77	Benzene
10.308	0.000	258768	196.06	Toluene
12.847	0.000	236635	190.43	Ethylbenzene
12.989	0.000	507143	376.60	M/P-Xylene
13.762	0.000	261479	203.52	O-Xylene
5.301	0.000	68624	192.87	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100629-2.b/0629a011.d  
Date: 29-JUN-2010 10:26  
Client ID:

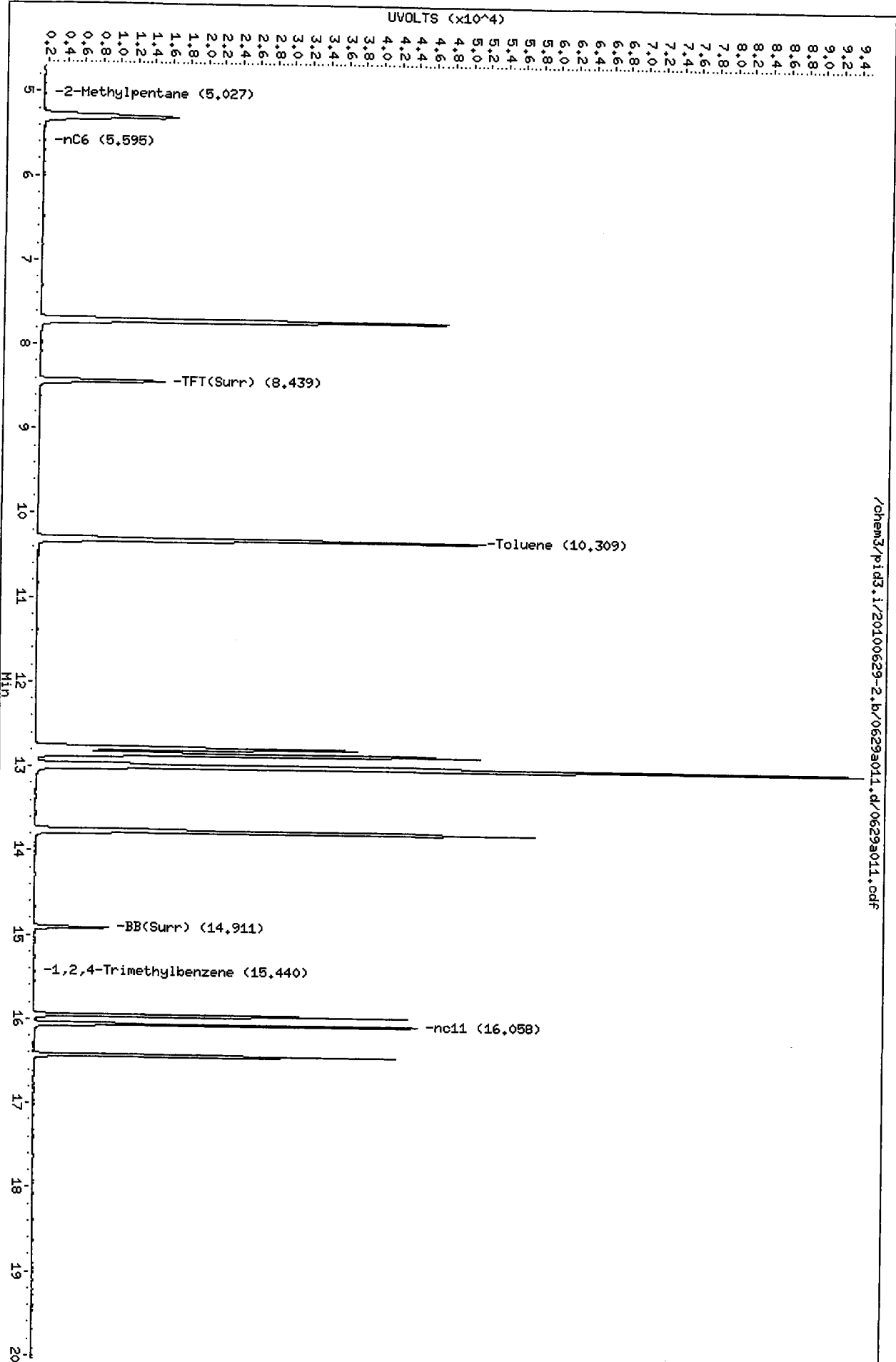
Sample Info: BETX 200

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18



/chem3/pid3.i/20100629-2.b/0629a011.d/0629a011.cdf

Data File: /chem3/pid3.i/20100629-1.b/0629a011.d  
Date: 29-JUN-2010 10:26

Client ID:

Sample Info: BETX 200

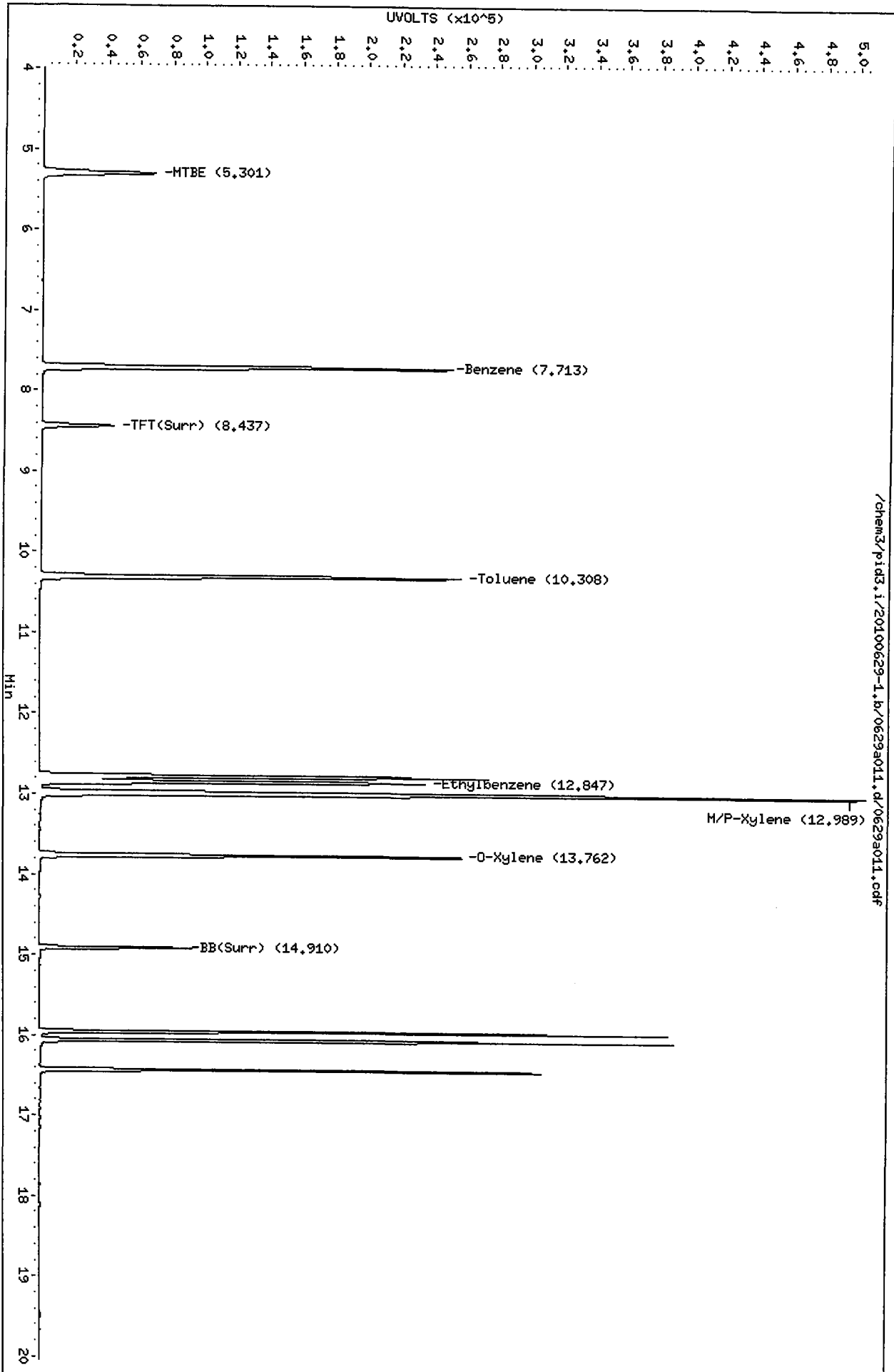
Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

/chem3/pid3.i/20100629-1.b/0629a011.d/0629a011.cdf



7/10/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100629-2.b/0629a012.d      ARI ID: BETX ICV  
Data file 2: /chem3/pid3.i/20100629-1.b/0629a012.d      Client ID:  
Method: /chem3/pid3.i/20100629-1.b/PIDB.m              Injection Date: 29-JUN-2010 10:50  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 02-FEB-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.439	0.000	6906	81786	95.9	TFT(Surr)
14.911	0.000	4128	34996	95.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	Total Area*	Amount
WAGas Tol-C12 (10.21 to 17.13)	577743	0.831
8015B 2MP-TMB ( 4.93 to 15.54)	579812	0.428
AK101 nC6-nC10 ( 5.50 to 14.63)	541769	0.501
NWTPHG Tol-Nap (10.21 to 18.23)	580332	0.783

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
8.437	0.000	21036	95.7	TFT(Surr)
14.909	0.000	44825	98.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	----	-----
7.712	-0.001	34297	25.94	Benzene
10.305	-0.002	33530	25.40	Toluene
12.841	-0.005	30482	24.53	Ethylbenzene
12.979	-0.010	67184	49.89	M/P-Xylene
13.757	-0.005	32583	25.36	O-Xylene
5.300	-0.001	9537	26.80	MTBE

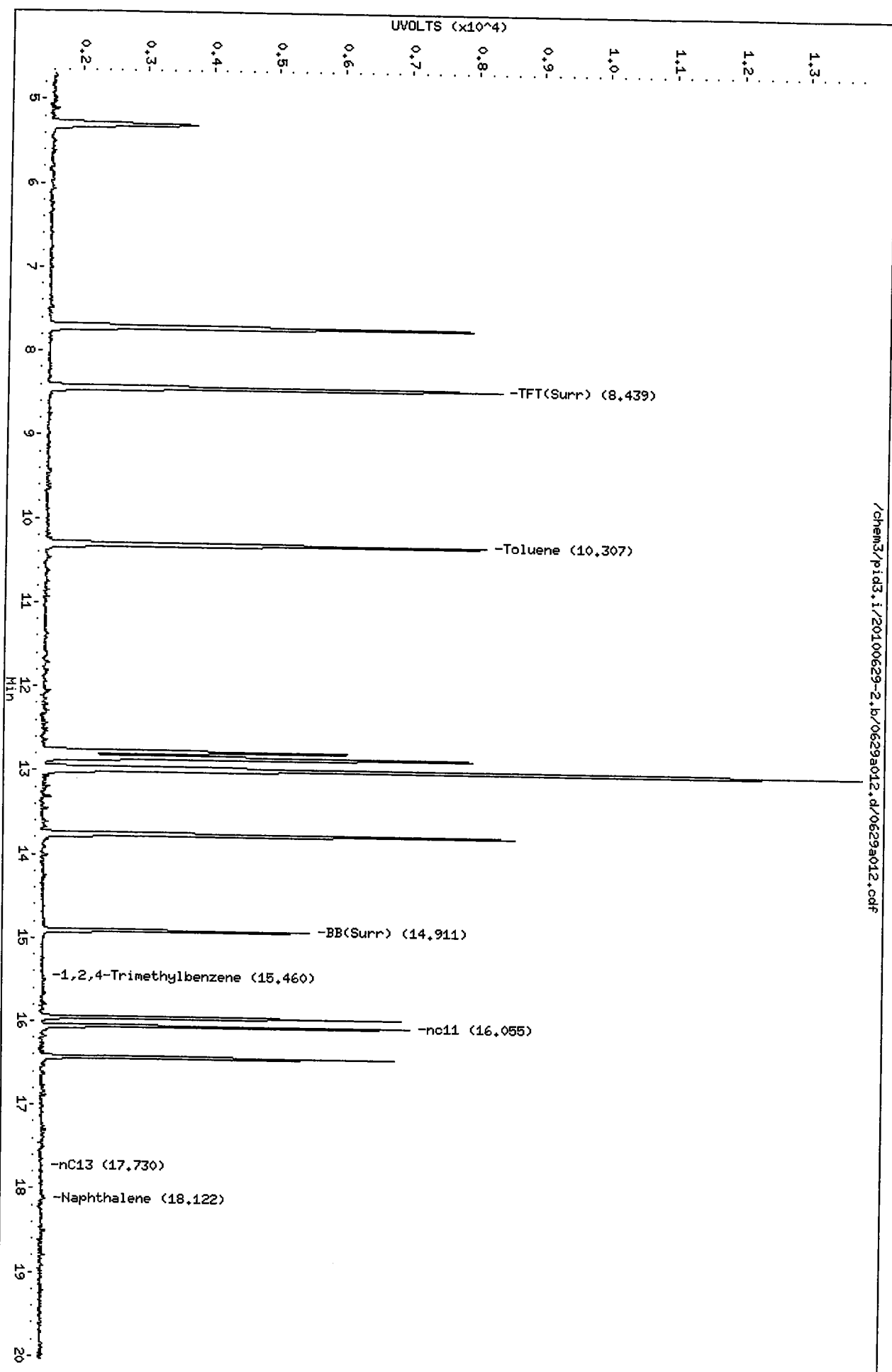
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20100629-2.b/0629s012.d  
Date : 29-JUN-2010 10:50  
Client ID:  
Sample Info: BETX ICV

Column phase: RTX 502-2 FID

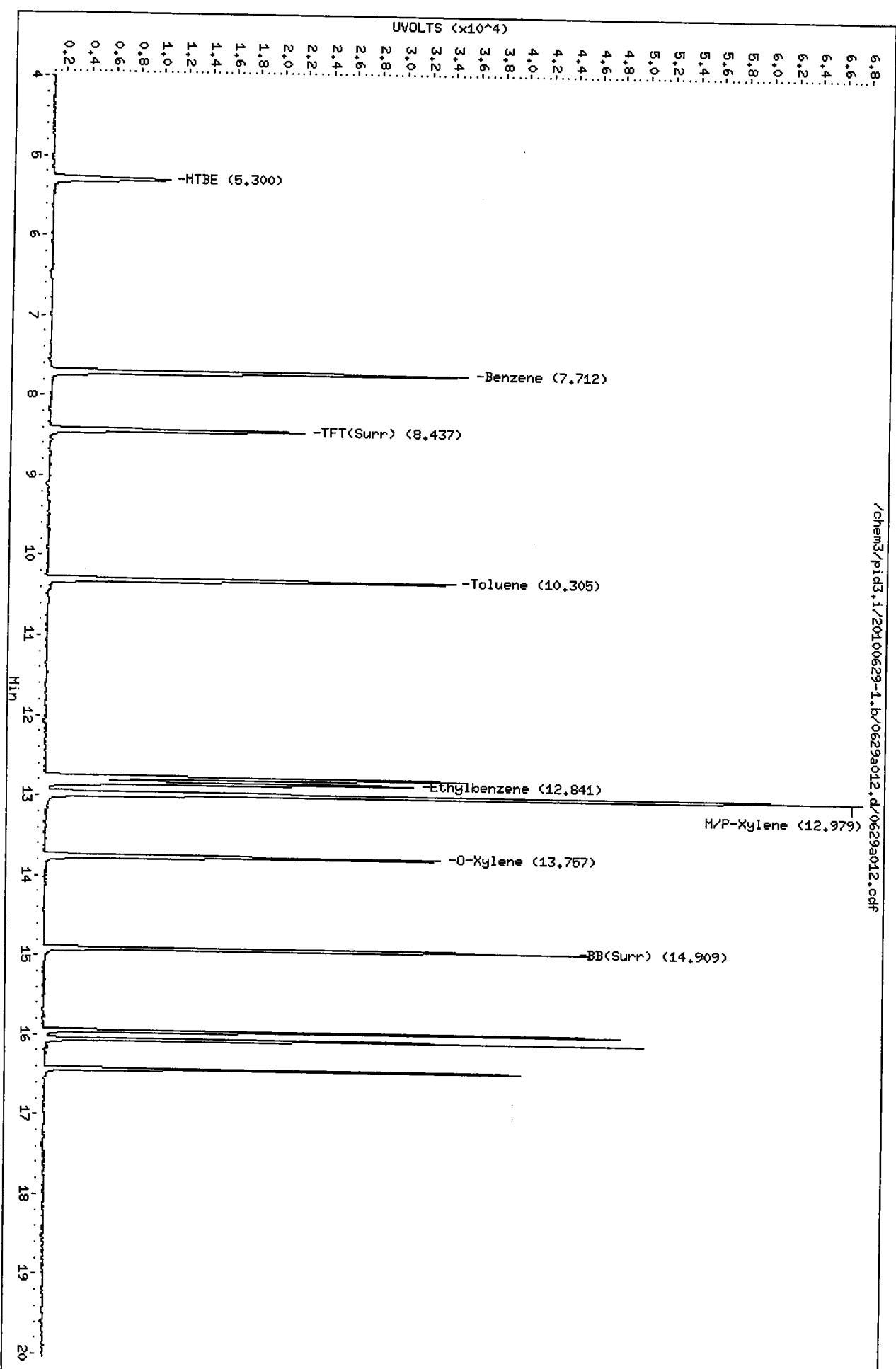
Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid3.i/20100629-2.b/0629s012.d/0629s012.cdf

Data File: /chem3/pid3.i/20100629-1.b/0629a012.d  
Date: 29-JUN-2010 10:50  
Client ID:  
Sample Info: BETX ICV  
Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



/chem3/pid3.i/20100629-1.b/0629a012.d/0629a012.cdf

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid3.i/20100629-2.b/FID.m  
Batch File: /chem3/pid3.i/20100629-2.b  
Inst ID: pid3.i

ID	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT06	RT07	RT07	RT07
FILENAME:	0629a005	0629a006	0629a007	0629a008	0629a009	0629a010	0629a011				
INJ. DATE:	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010	29-JUN-2010
INJ. TIME:	07:59	08:24	08:48	09:12	09:37	10:01	10:26				
Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV	
1 2-Methylpentane	++++	++++	++++	++++	++++	++++	5.027	4.957-5.097	5.027	0.000	
18 WAGAS	++++	++++	++++	++++	++++	++++	1.097	1.027-1.167	++++	++++	
19 8015B	++++	++++	++++	++++	++++	++++	0.891	0.821-0.961	++++	++++	
20 AK101	++++	++++	++++	++++	++++	++++	1.000	0.930-1.070	++++	++++	
21 NMGAS	++++	++++	++++	++++	++++	++++	1.000	0.930-1.070	++++	++++	
2 nC6	++++	++++	++++	5.549	++++	++++	5.595	5.525-5.665	5.572	0.032	
3 nC7	++++	7.470	++++	++++	7.440	++++	7.440	7.370-7.510	7.455	0.021	
\$ 4 TFT (Surr)	8.418	8.430	8.435	8.439	8.438	8.440	8.439	8.348-8.488	8.434	0.008	
5 nC8	++++	9.879	++++	++++	++++	++++	9.879	9.809-9.949	9.879	0.000	
6 Toluene	++++	10.297	10.304	10.307	10.306	10.309	10.309	10.239-10.379	10.305	0.005	
7 nC9	++++	12.387	++++	++++	++++	++++	12.387	12.317-12.457	12.387	0.000	
8 nC10-Decane	14.697	++++	++++	14.729	++++	++++	14.697	14.627-14.767	14.713	0.023	
\$ 9 BB (Surr)	14.897	14.906	14.908	14.911	14.911	14.912	14.911	14.827-14.967	14.908	0.005	
10 1,2,4-Trimethylbenzene	15.452	++++	15.441	++++	++++	++++	15.440	15.382-15.522	15.444	0.007	
11 nC11	16.042	16.052	16.053	16.055	16.055	16.056	16.058	15.972-16.112	16.053	0.005	
12 nC12-Dodecane	17.023	17.023	17.017	++++	++++	17.026	17.026	16.956-17.096	17.022	0.005	
13 nC13	17.827	17.760	++++	17.745	++++	17.790	17.827	17.757-17.897	17.781	0.036	

Reviewer 1 [Signature] Date: 7/10/10  
Reviewer 2 [Signature] Date: 7/10/10

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid3.i/20100629-1.b/PIDB.m  
Batch File: /chem3/pid3.i/20100629-1.b  
Inst ID: pid3.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 MTBE	5.283	5.300	5.297	5.300	5.298	5.302	5.301	5.283	5.213-5.353	5.297	0.006
2 Benzene	7.694	7.706	7.709	7.712	7.711	7.714	7.713	7.694	7.624-7.764	7.708	0.007
3 TFT (Surr)	8.417	8.429	8.434	8.436	8.436	8.438	8.437	8.417	8.347-8.487	8.433	0.008
4 Toluene	10.287	10.297	10.302	10.304	10.305	10.307	10.308	10.287	10.217-10.357	10.301	0.007
15 Chlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.835	12.765-12.905	+++++	+++++
5 Ethylbenzene	12.817	12.832	12.837	12.840	12.841	12.844	12.847	12.817	12.747-12.887	12.837	0.010
6 M/P-Xylene	12.955	12.969	12.974	12.977	12.979	12.984	12.989	12.955	12.885-13.025	12.975	0.011
7 O-Xylene	13.737	13.750	13.753	13.755	13.757	13.759	13.762	13.737	13.687-13.787	13.753	0.008
8 BB (Surr)	14.893	14.904	14.907	14.908	14.909	14.910	14.910	14.893	14.823-14.963	14.906	0.006
13 1,3,5 Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.421	12.351-12.491	+++++	+++++
14 1,2,4 Trimethyl benzen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.059	12.989-13.129	+++++	+++++
16 1,3 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.034	15.964-16.104	+++++	+++++
17 1,4 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.140	16.070-16.210	+++++	+++++
18 1,2 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.513	16.443-16.583	+++++	+++++

Reviewer 1 MH Date: 7/10/10  
 Reviewer 2 [Signature] Date: 7-10-10

**TPHG/BETX Raw Data**  
**Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: RI65**



**VOA Analyst Notes / Corrective Action Log**

ARI Project ID: RI65 Client ID: Floyd/Snyder

ARI SOP: ~~404S(Gas)~~ ~~410S(BTEX)~~ ~~430S(VPH)~~ ~~700S(8260C)~~ ~~703S(SIM)~~ ~~706S(524.2)~~ ~~710S(RSK-175)~~

Parameter(s): NWTPH8/BETX

Instrument: NT-3 NT-5 NT-7 NT-9 NT-10 PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 5 Curve Date: 6/29/10 BETX / 7/28/10 GCS Analysis Start Date: 8/17/10

pH ≤ 2.0 YES / NO / NA Method Blank In Control? YES / NO

BFB Tune Meets Criteria? YES / NO NA LCS / LCSD Recovery In Control? YES / NO

Internal Standard Meets Criteria? YES / NO NA Surrogate Recovery In Control? YES / NO

ICal acceptable? YES / NO CCal acceptable? YES / NO  
Q flag applied? YES / NO NA Q flag applied? YES / NO NA

Manual Integrations for ICal? YES / NO Manual Integrations for Samples? Yes NO

Special Analysis Criteria Met? YES / NO NA

Bubbles/Headspace: None SM (≤ 2mm ●) PB (2-4mm) LG (> 4mm ●) Head Space

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

*BMS → MISSED Ethyl Benzene in Target. Changed report  
AND ADDED IT. (MR)*

Additional Details on Reverse: Yes / No

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

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

# Analytical Resources Inc.: Organics Instrument Log

PID-3 HP 5890 Series II - Serial No.: 2728A-13336

Date: 8/17/10 Analysis: NWTP#6/BETA Analyst: MH  
 GC Program: BETA Column No: 832213 Column Type: RTX502-Z  
 Instrument Tune (.U or .CT.): \_\_\_\_\_ EM Voltage: \_\_\_\_\_  
 Calibration File: \_\_\_\_\_ Curve Date: 7/28/10 GOS  
6/29/10 BETA

IS/SS	Ical/Ccal	LCS/ICV
<u>VW 648-3</u>	<u>VW 635-1</u>	<u>VW 647-2</u>
	<u>VW 644-3</u>	
	<u>VW 647-2</u>	

Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0554	0817a001.d	RINSE			1
2	0618	0817a002.d	RT+BCAL 1			1
3	0643	0817a003.d	GCAL 1			1
4	0707	0817a004.d	LCS0817			1
5	0732	0817a005.d	LCS0817			1
6	0756	0817a006.d	MB0817			1
7	0842	0817a007.d	RI45A	STOCKPILE(1) 2010081		0.00
8	0907	0817a008.d	RINSE			1
9	0931	0817a009.d	BCAL 2			1
10	0956	0817a010.d	GCAL 2			1
11	1020	0817a011.d	RI65F	081310-TB	1	1
12	1045	0817a012.d	RI65A	MW-09-081310	2	1
13	1109	0817a013.d	RI65B	MW-08-081310	15	1
14	1133	0817a014.d	RI65BMS	MW-08-081310 MS	12	1
15	1158	0817a015.d	RI65BMSD	MW-08-081310 MSD	1	1
16	1222	0817a016.d	RI65C	MW-07-081310	4	1
17	1247	0817a017.d	RI65D	MW-01-081310	6	1
18	1312	0817a018.d	RI65E	MW-05-081310	6	1
19	1337	0817a019.d	RINSE			1
20	1401	0817a020.d	BCAL 3			1
21	1426	0817a021.d	GCAL 3			1

MH 8/20/10

## 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

8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a002.d      ARI ID: RT+BCAL 1  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a002.d      Client ID:  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 06:18  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.410	0.000	7198	84360	100.0	TFT(Surr)
14.888	0.000	4324	35169	100.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	1017924	1.230
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	1227249	0.737
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	863680	0.763
NWTPHG Tol-Nap (10.17 to 18.18)	882029	1081651	1.226

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
8.408	0.000	20131	91.6	TFT(Surr)
14.887	0.000	42377	93.0	BB(Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
7.689	0.000	31620	23.92	Benzene
10.273	0.000	30820	23.35	Toluene
12.806	0.000	27902	22.45	Ethylbenzene
12.943	0.000	60902	45.23	M/P-Xylene
13.725	0.000	29270	22.78	O-Xylene
5.292	0.000	9089	25.55	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20100817-2.b/0817a002.d

Date: 17-AUG-2010 06:18

Client ID:

Sample Info: RT+BCAL 1

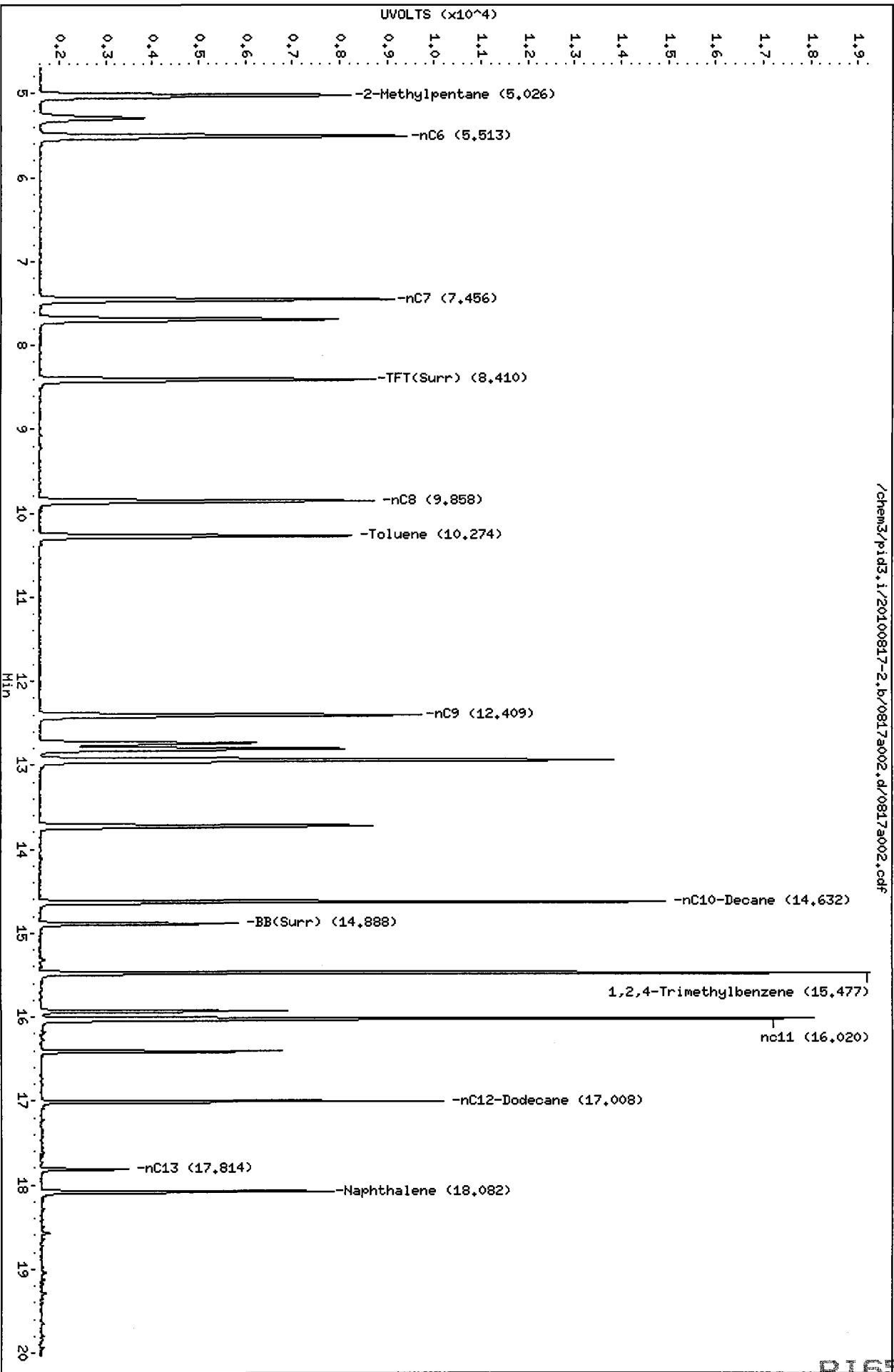
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: HH

Column diameter: 0.18

/chem3/pid3.i/20100817-2.b/0817a002.d/0817a002.cdf



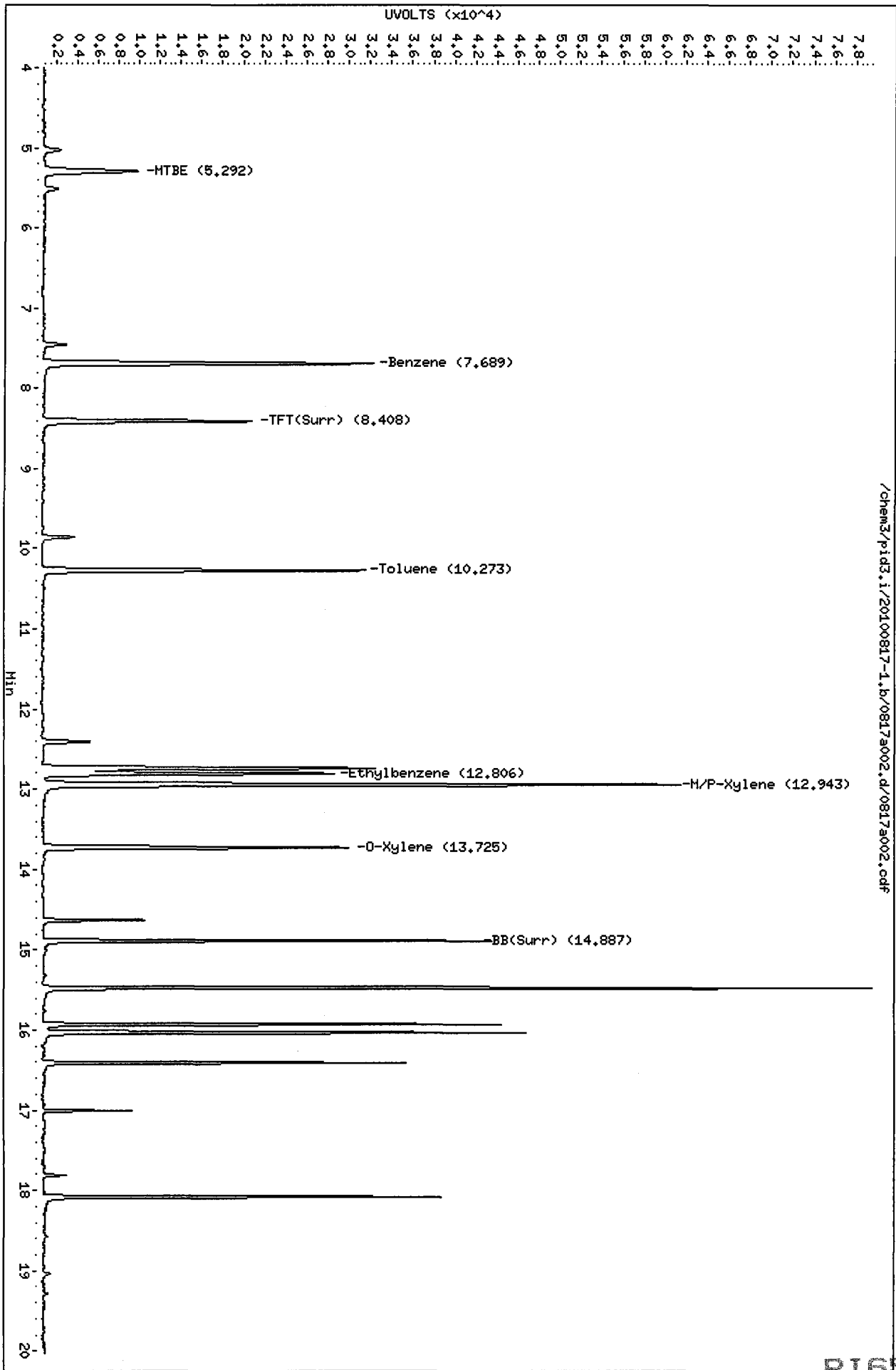
Data File: /chem3/pid3.i/20100817-1.b/0817a002.d  
Date: 17-AUG-2010 06:18

Client ID:  
Sample Info: RT+BCAL 1

Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100817-1.b/0817a002.d/0817a002.cdf



MH  
8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a003.d      ARI ID: GCAL 1  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a003.d      Client ID:  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 06:43  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
8.429	0.019	7443	89253	103.4	TFT(Surr)
14.902	0.014	4495	38174	104.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)  
-----

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (10.17 to 17.11)	827807	1893461	2.287 M
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	3711638	2.230 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2498772	2.208 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	2023073	2.294 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
--	-----	-----	-----	-----
8.427	0.019	20939	95.2	TFT(Surr)
14.901	0.014	44014	96.5	BB(Surr)

SW8021 (PID)  
-----

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.707	0.018	6561	4.96	Benzene
10.293	0.021	86091	65.23	Toluene
12.826	0.021	25109	20.21	Ethylbenzene
12.967	0.025	95826	71.16	M/P-Xylene
13.744	0.019	39903	31.06	O-Xylene
5.306	0.014	77888	218.91	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100817-2.b/0817a003.d

Date: 17-AUG-2010 06:43

Client ID:

Sample Info: CCL 1

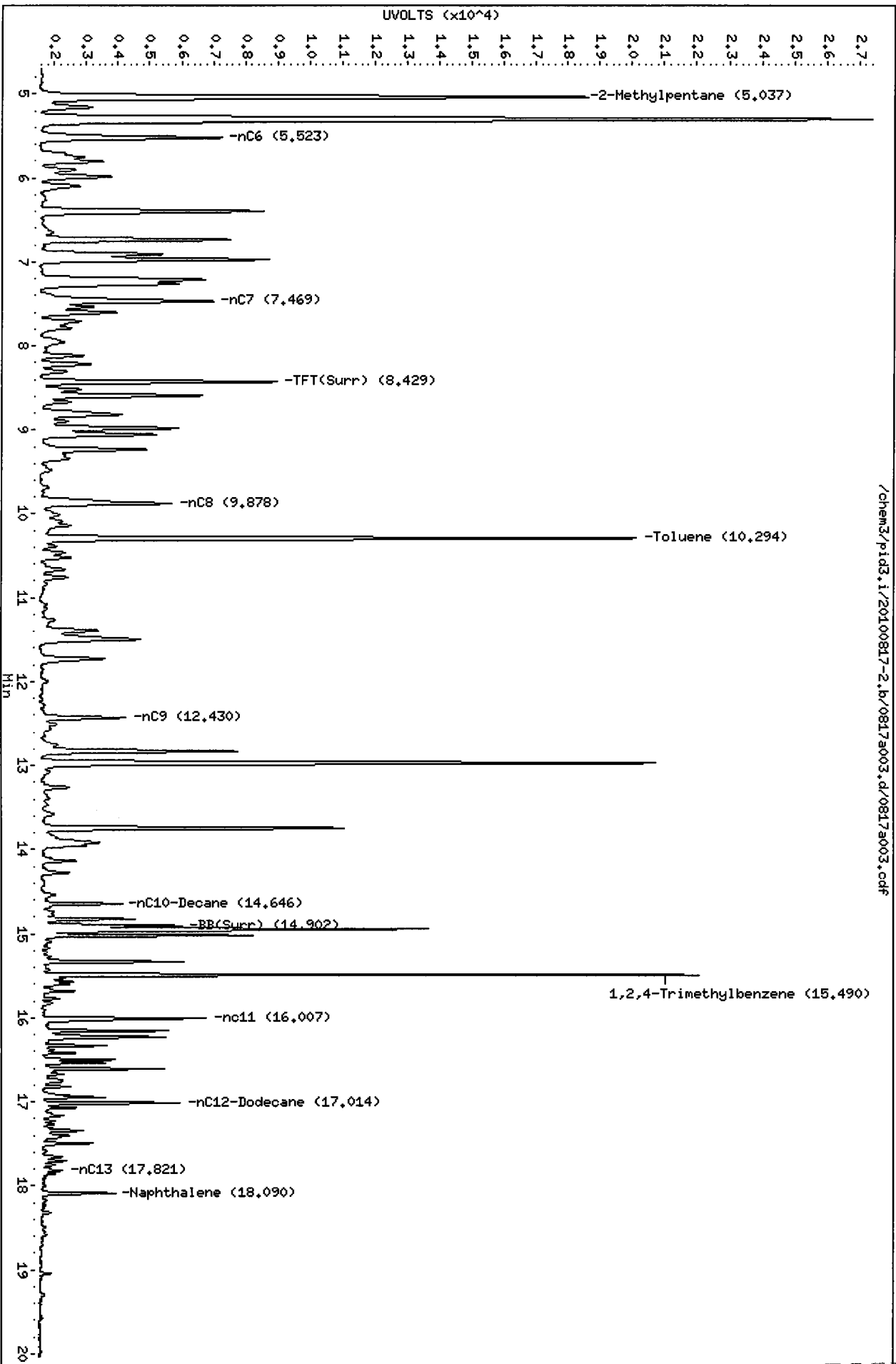
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: HH

Column diameter: 0.18

/chem3/pid3.i/20100817-2.b/0817a003.d/0817a003.cdf



Data File: /chem3/pid3.i/20100817-1.b/0817a003.d  
Date: 17-AUG-2010 06:43

Client ID:

Sample Info: GCAL 1

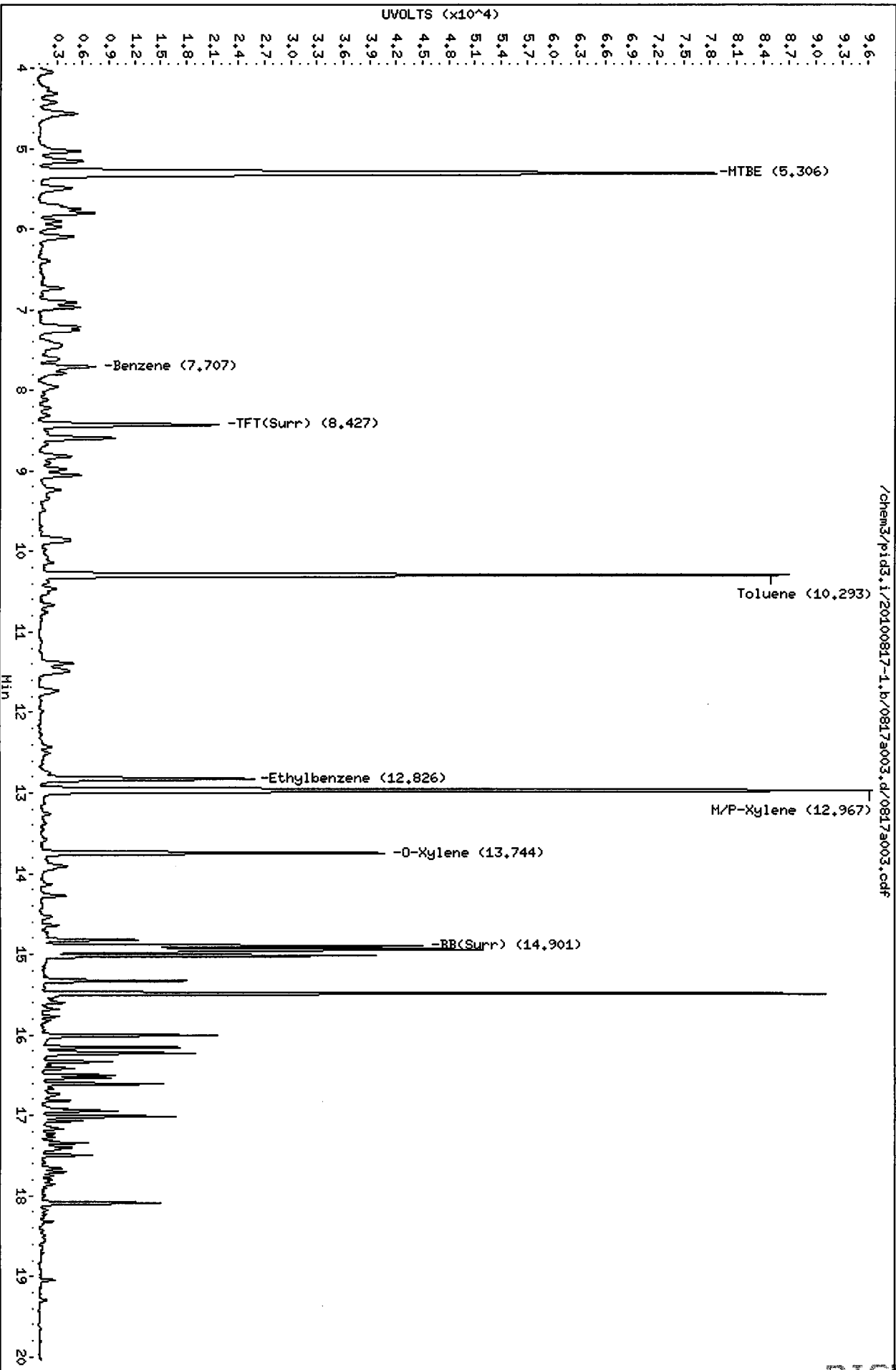
Column phase: RTX 502-2 PID

Instrument: pid3.i

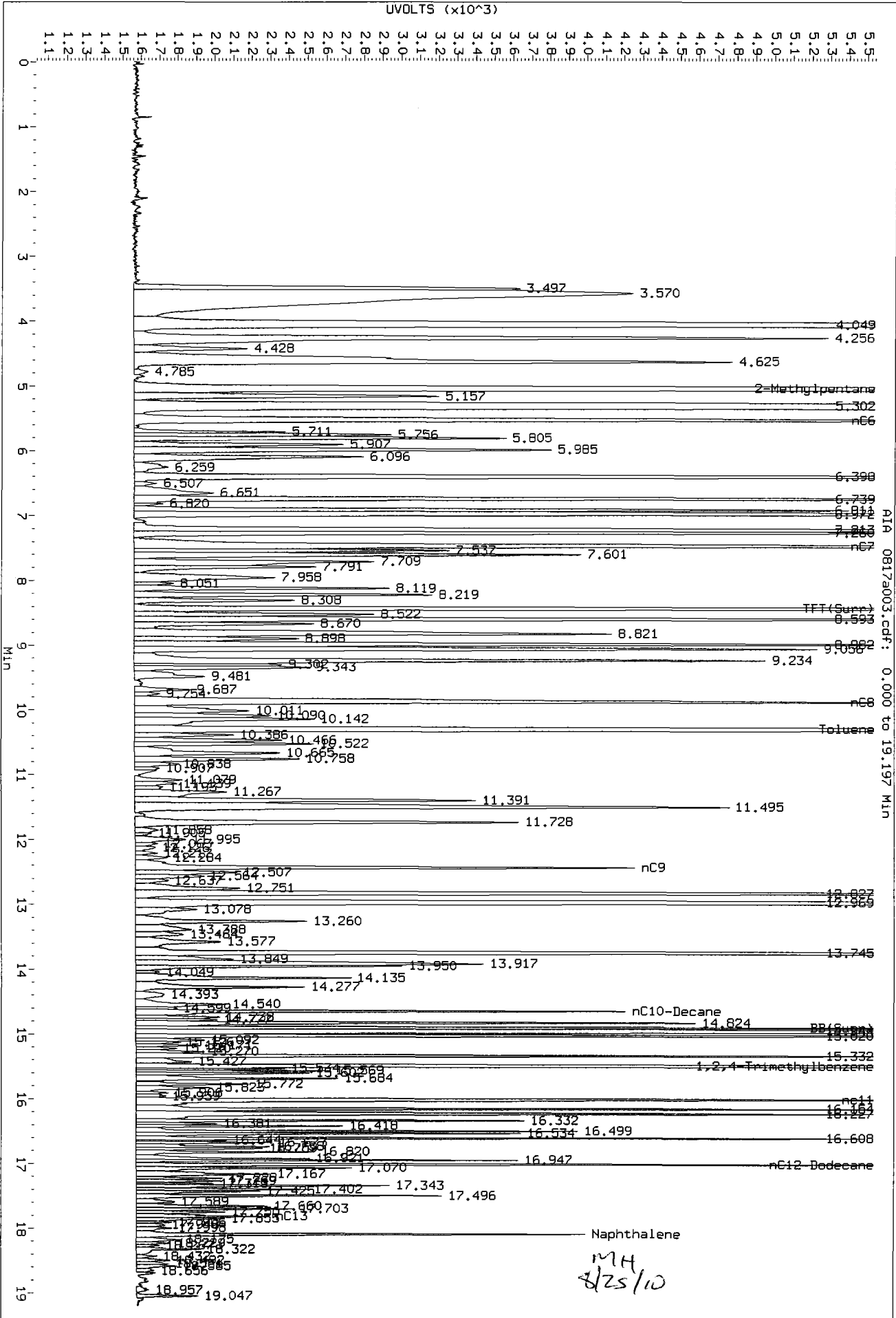
Operator: HH

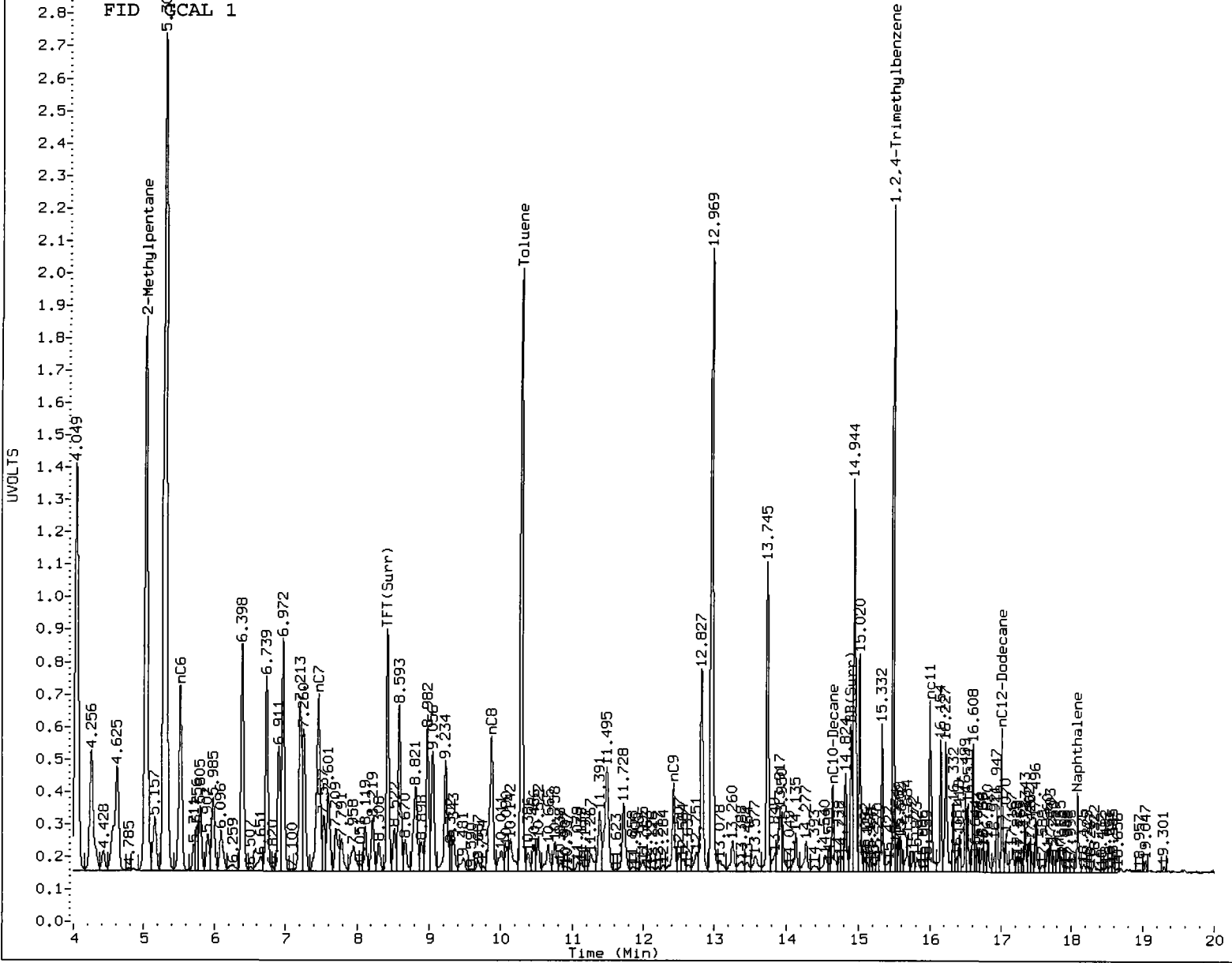
Column diameter: 0.18

Page 1



Data File: /chem3/pid3.1/20100817-2.b/0817a003.d/0817a003.cdf  
 Injection Date: 17-AUG-2010 06:43  
 Instrument: pid3.1  
 Client Sample ID:





MANUAL INTEGRATION

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

Analyst: MTI Date: 8/25/10

MH  
8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a004.d      ARI ID: LCS0817  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a004.d      Client ID:  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 07:07  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.437	0.027	7055	83418	98.0	TFT(Surr)
14.908	0.020	4229	34398	98.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	765924	0.925 M
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	1509648	0.907 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1015218	0.897 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	823466	0.934 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
8.435	0.026	19780	90.0	TFT(Surr)
14.906	0.019	41460	90.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.714	0.025	2708	2.05	Benzene
10.301	0.028	35354	26.79	Toluene
12.835	0.029	9981	8.03	Ethylbenzene
12.974	0.032	39083	29.02	M/P-Xylene
13.751	0.026	16151	12.57	O-Xylene
5.307	0.015	32641	91.74	MTBE

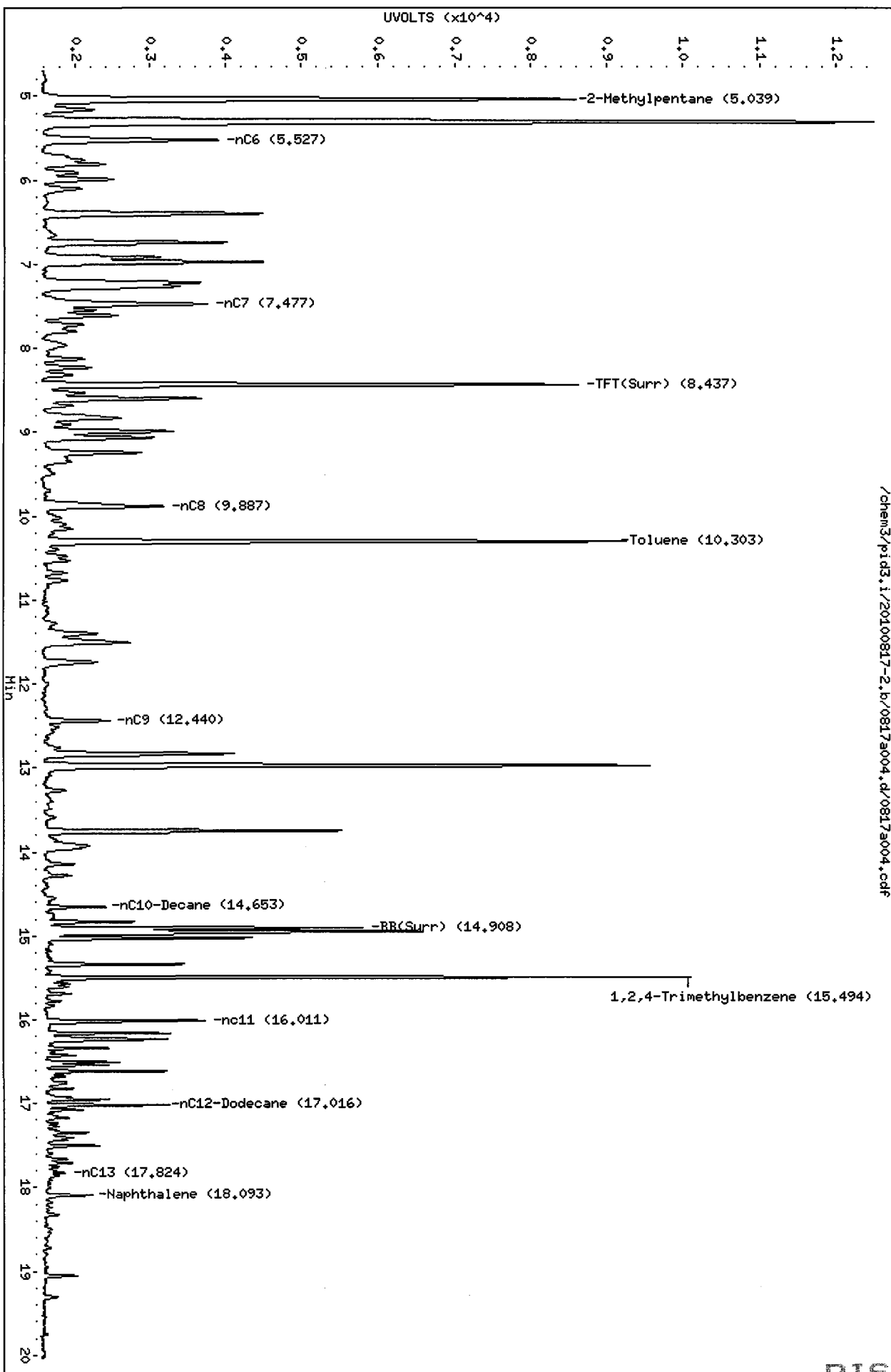
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20100817-2.b/0817a004.d  
Date: 17-AUG-2010 07:07  
Client ID:  
Sample Info: LCS0817

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



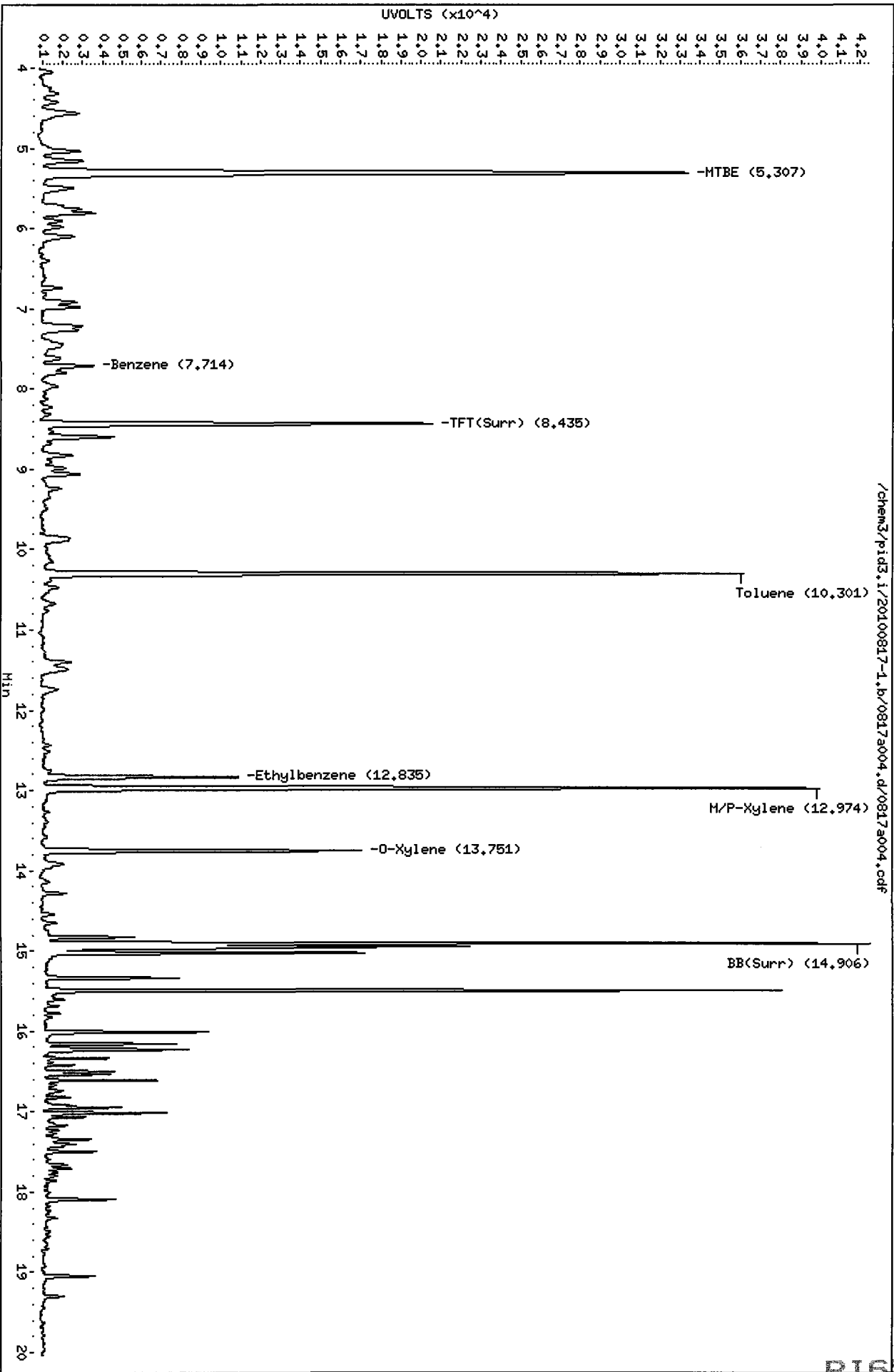
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Data File: /chem3/pid3.i/20100817-1.b/0817a004.d  
Date: 17-AUG-2010 07:07

Client ID:  
Sample Info: LCS0817

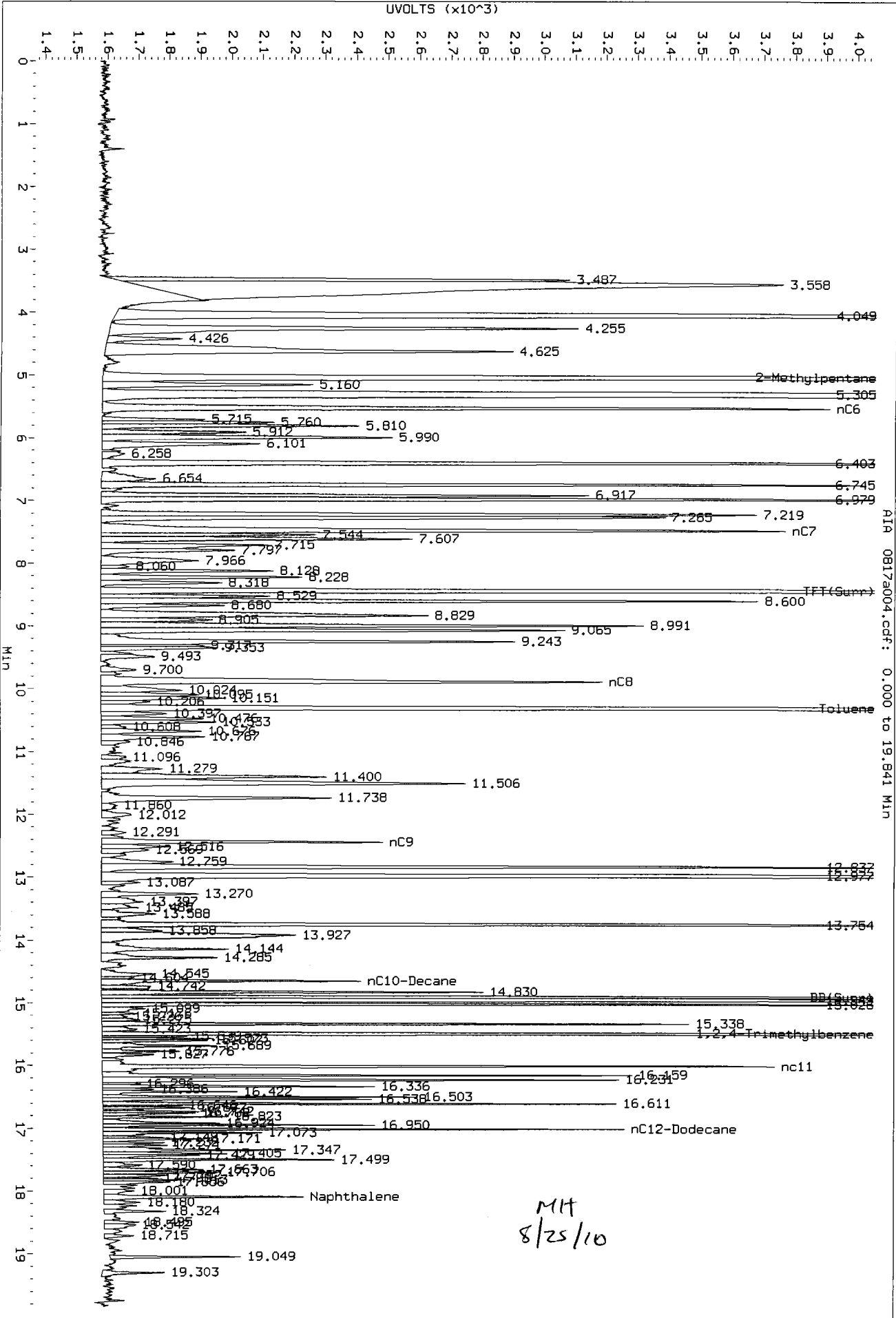
Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

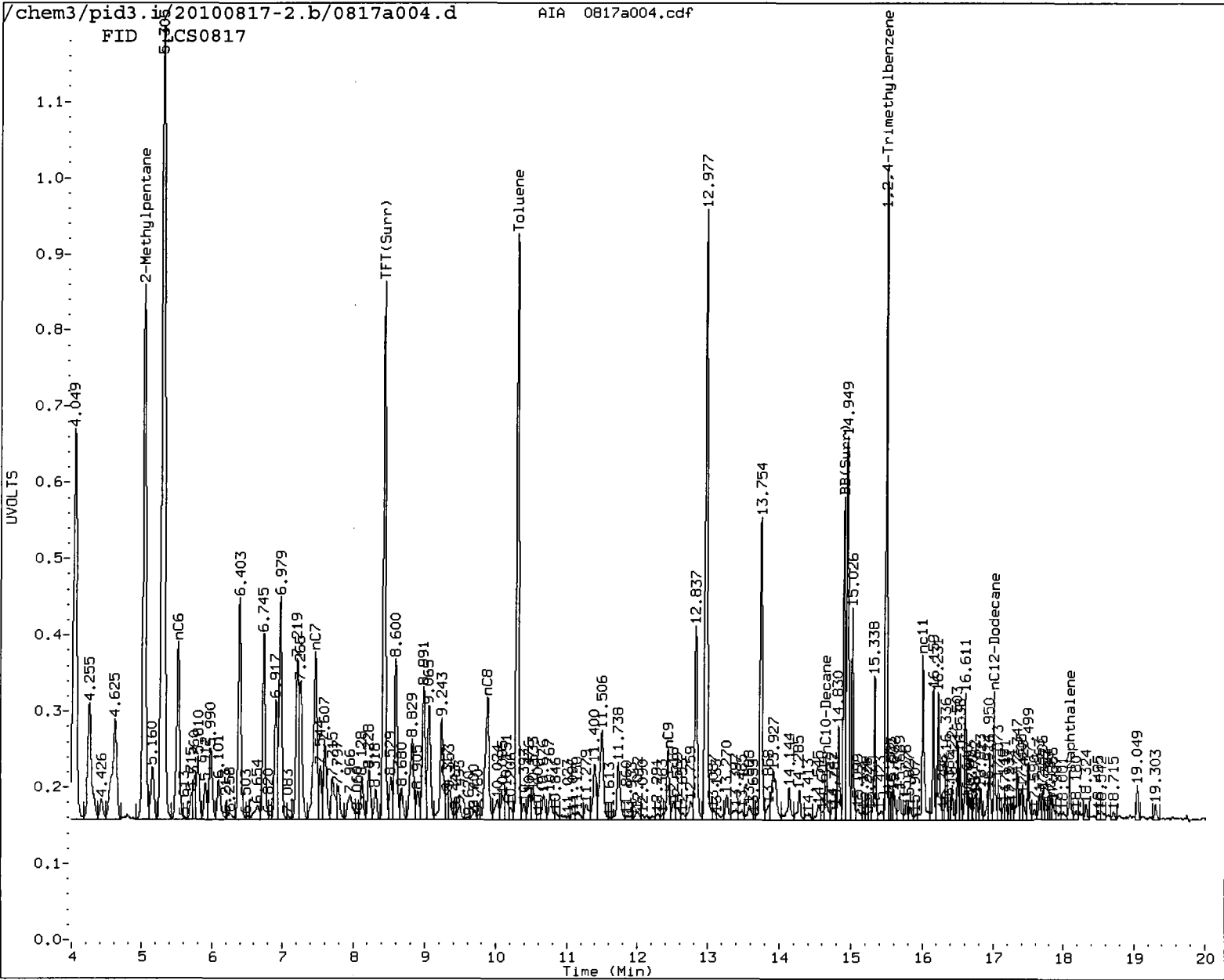


/chem3/pid3.i/20100817-1.b/0817a004.d/0817a004.cdf

Data File: /chem3/p103.1/20100817-2.b/0817a004.d/0817a004.cdf  
Injection Date: 17-AUG-2010 07:07  
Instrument: pid3.1  
Client Sample ID:



FID  
LCS0817



MANUAL INTEGRATION

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

Analyst: MH Date: 8/25/10

MH  
8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a005.d      ARI ID: LCSD0817  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a005.d      Client ID:  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 07:32  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.030	7132	84300	99.1	TFT(Surr)
14.910	0.022	4348	35456	101.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	745692	0.901 M
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	1469924	0.883 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	992365	0.877 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	796473	0.903 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.439	0.030	20015	91.0	TFT(Surr)
14.909	0.022	42694	93.7	BB(Surr)

SW8021 (PID)

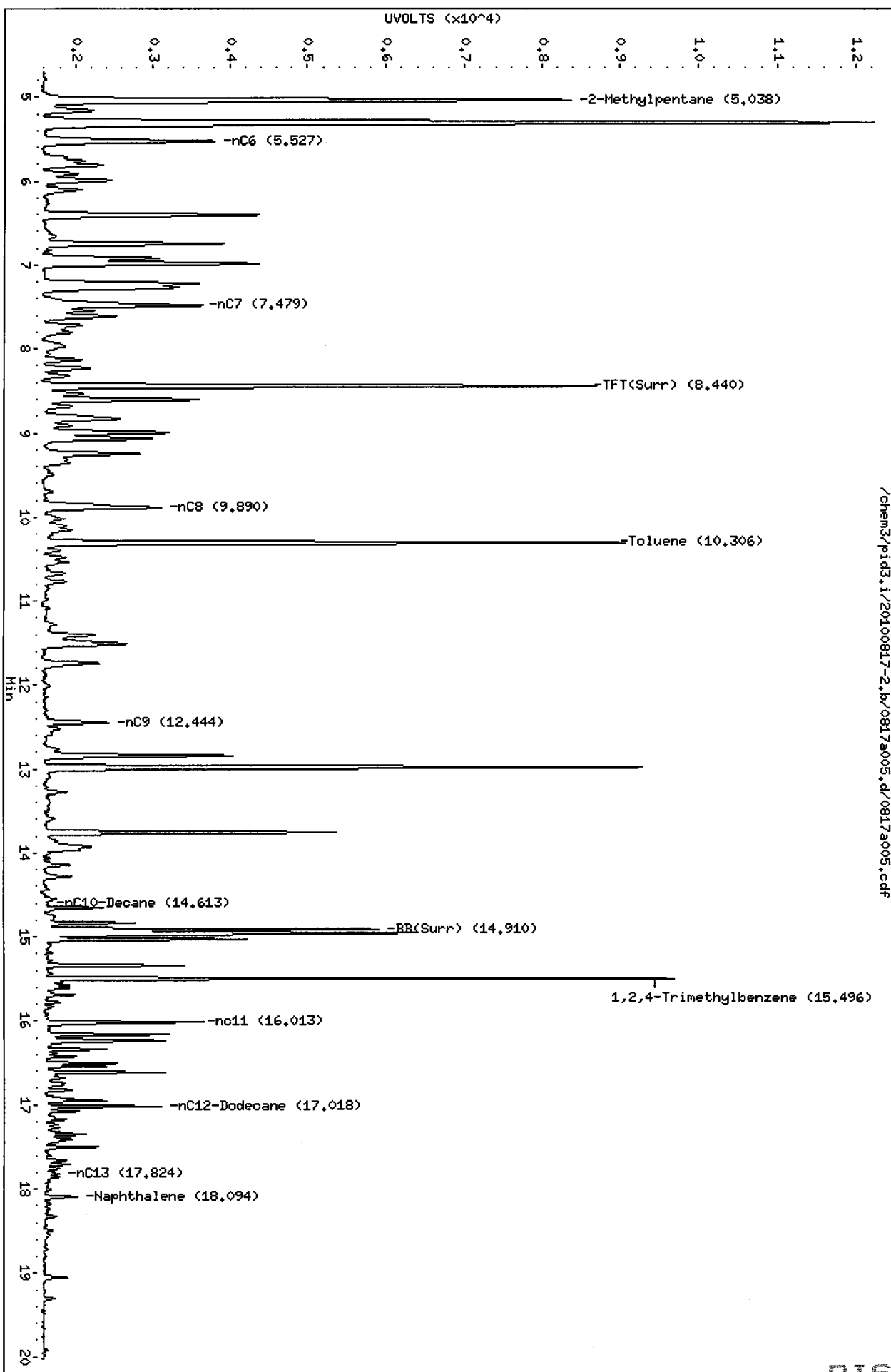
RT	Shift	Response	Amount	Compound
7.716	0.027	2673	2.02	Benzene
10.305	0.033	34175	25.89	Toluene
12.839	0.034	9895	7.96	Ethylbenzene
12.979	0.037	37978	28.20	M/P-Xylene
13.755	0.030	15590	12.13	O-Xylene
5.308	0.016	31877	89.59	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100817-2.b/0817a005.d  
Date: 17-AUG-2010 07:32  
Client ID:  
Sample Info: LCS00817

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



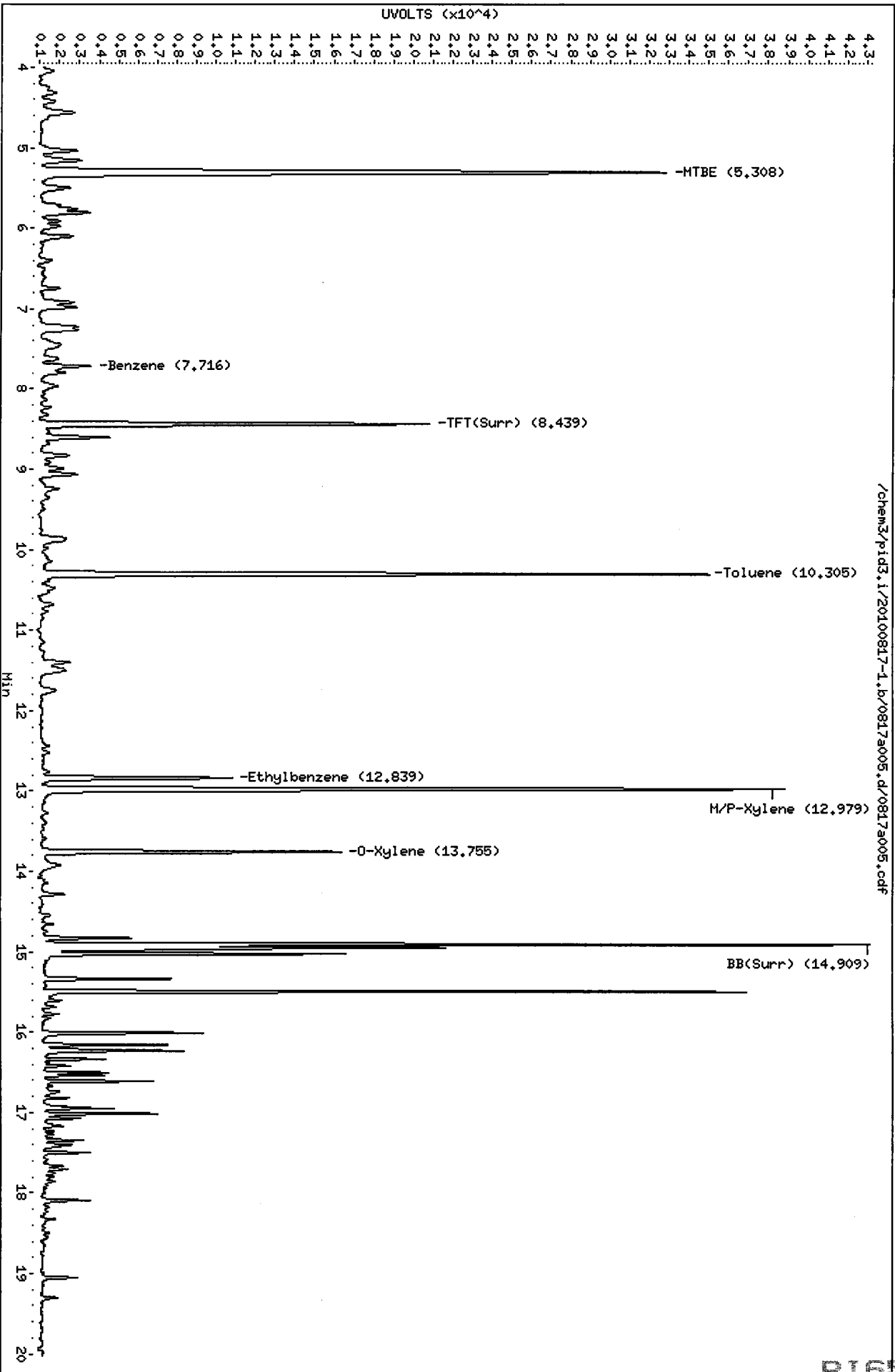
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Data File: /chem3/pid3.i/20100817-1.b/0817a005.d  
Date: 17-AUG-2010 07:32

Client ID:  
Sample Info: LCSD0817

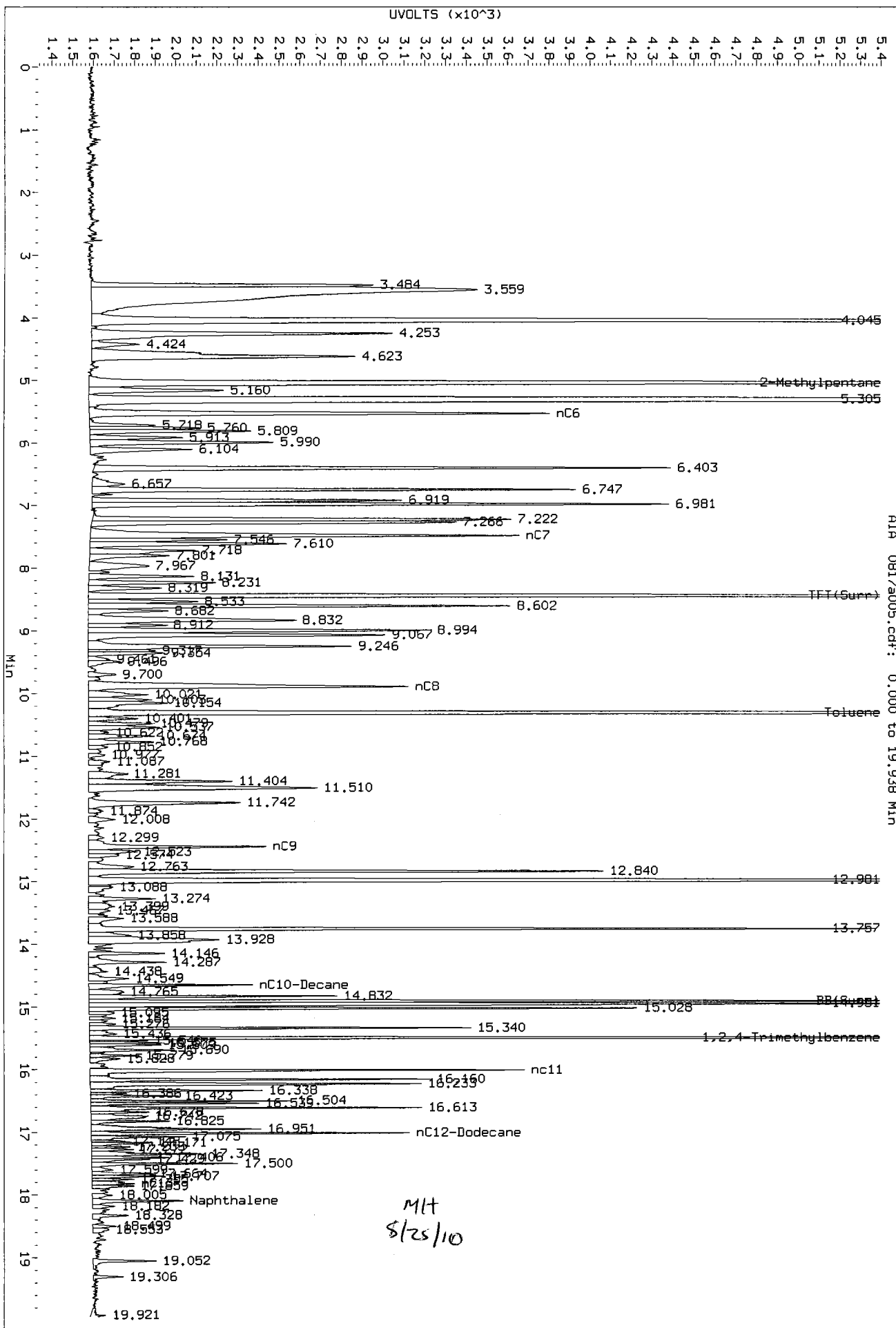
Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



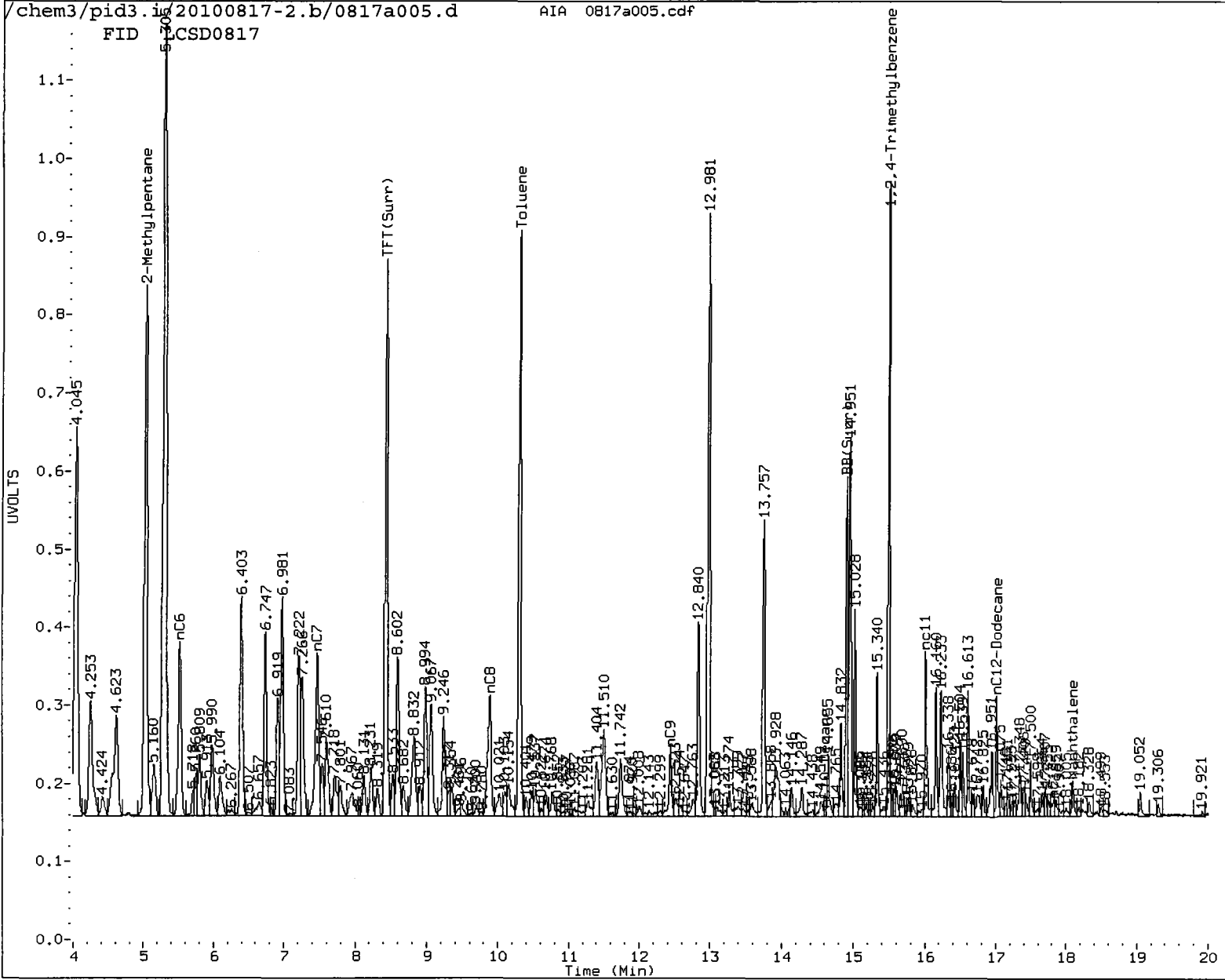
/chem3/pid3.i/20100817-1.b/0817a005.d/0817a005.cdf

Data File: /chem3/pid3.1/20100817-2.b/0817a005.d/0817a005.cdf  
Injection Date: 17-AUG-2010 07:32  
Instrument: pid3.1  
Client Sample ID:



A1A 0817a005.cdf: 0.000 to 19.938 Min





MANUAL INTEGRATION

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

Analyst: MM Date: 8/25/10

MH  
8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a006.d      ARI ID: MB0817  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a006.d      Client ID:  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 07:56  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.446	0.036	7078	83559	98.3	TFT(Surr)
14.913	0.025	4304	35056	99.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	1056	0.001
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	3200	0.002
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	3199	0.003
NWTPHG Tol-Nap (10.17 to 18.18)	882029	1056	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
8.445	0.037	19641	89.3	TFT(Surr)
14.911	0.025	42320	92.8	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/20100817-2.b/0817a006.d  
Date: 17-AUG-2010 07:56

Client ID:

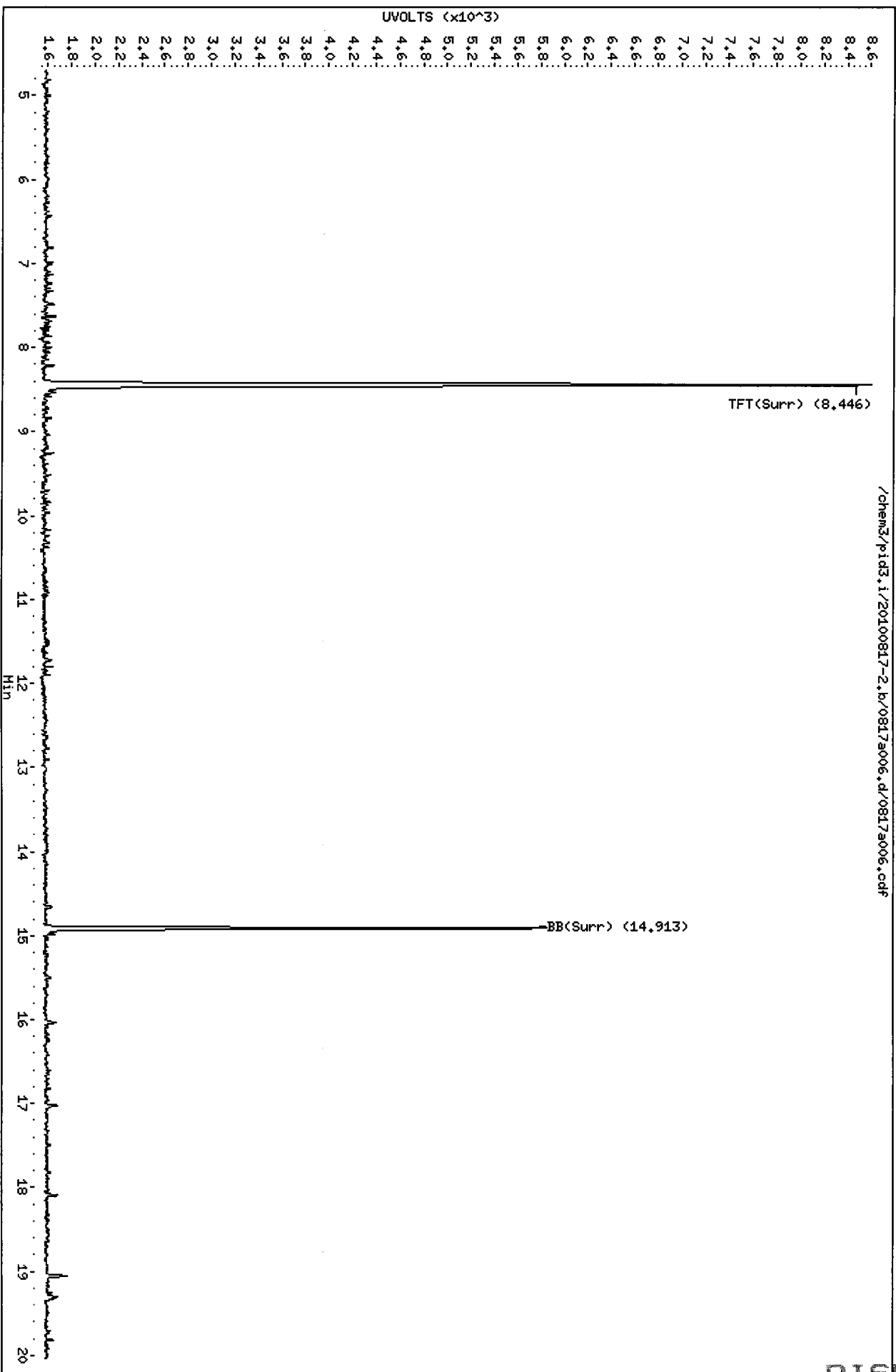
Sample Info: MB0817

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18



Data File: /chem3/pid3.i/20100817-1.b/0817a006.d  
Date: 17-AUG-2010 07:56

Client ID:

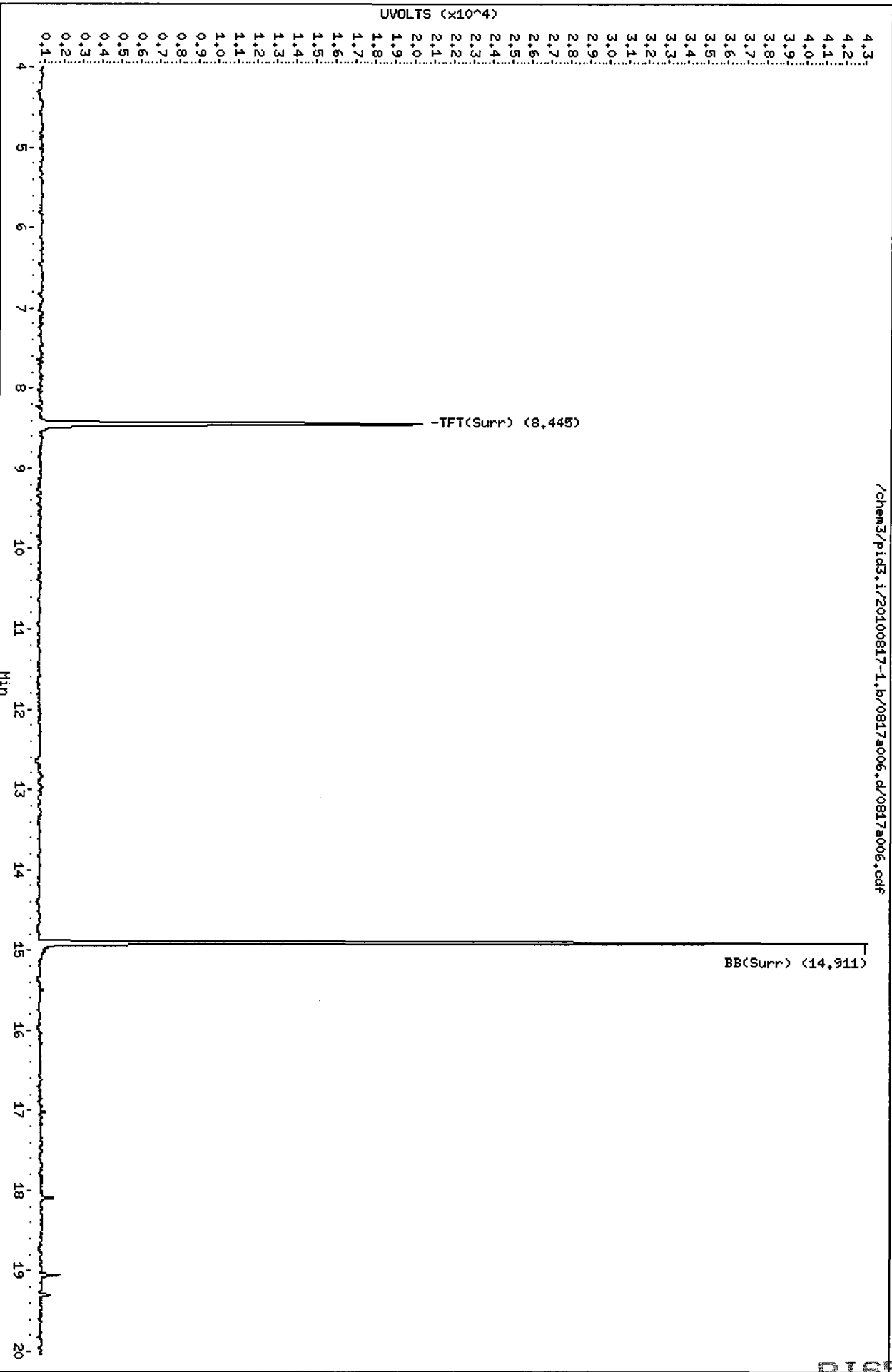
Sample Info: MB0817

Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: HH

Column diameter: 0.18



Mr. 8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a009.d      ARI ID: BCAL 2  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a009.d      Client ID:  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 09:31  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.440	0.030	7214	85314	100.2	TFT(Surr)
14.908	0.020	4311	34829	100.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	547660	0.662
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	542534	0.326
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	500060	0.442
NWTPHG Tol-Nap (10.17 to 18.18)	882029	555949	0.630

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	0.030	20695	94.1	TFT(Surr)
14.907	0.020	43492	95.4	BB(Surr)

SW8021 (PID)

-----

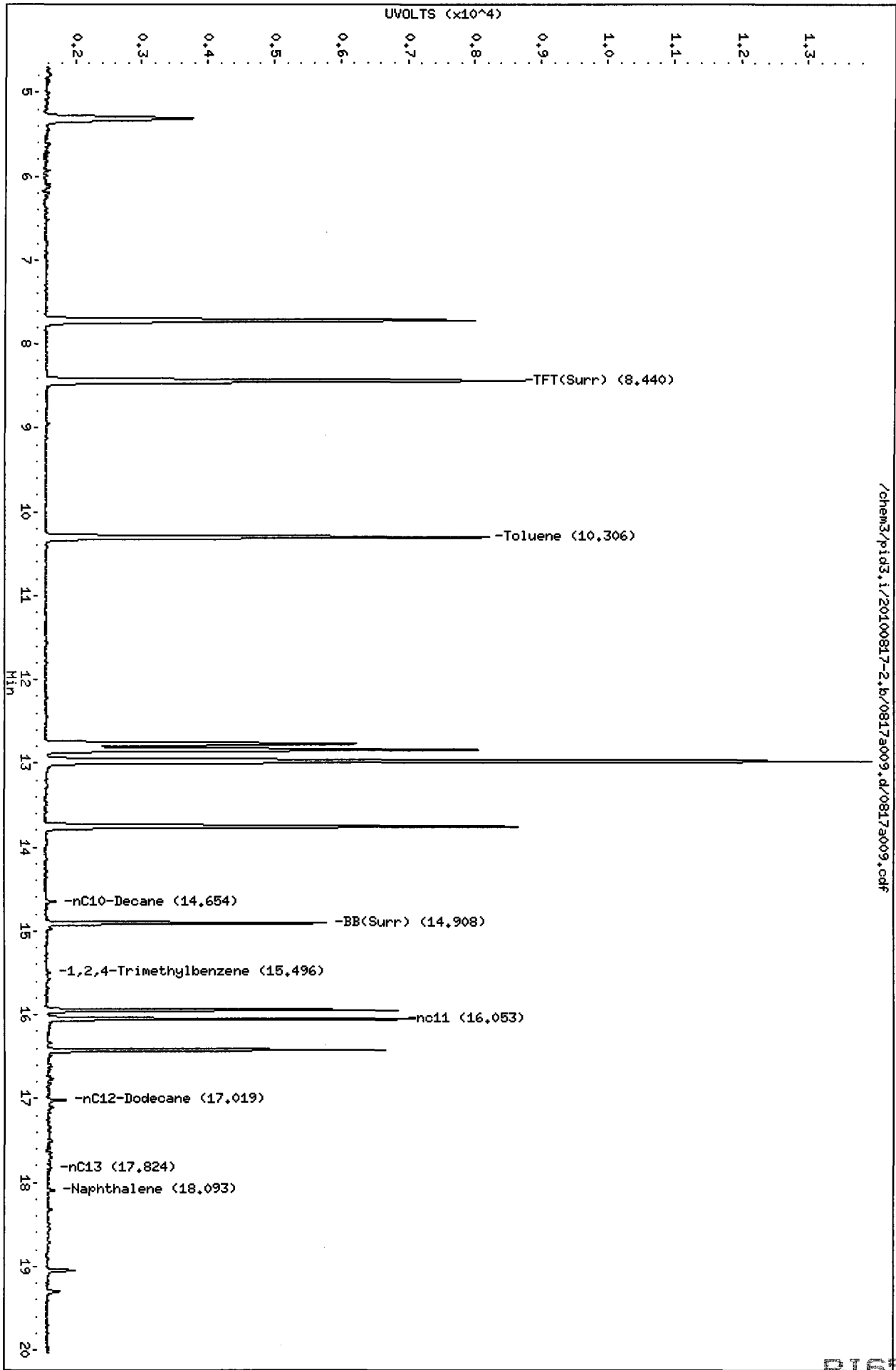
RT	Shift	Response	Amount	Compound
7.716	0.027	32408	24.51	Benzene
10.304	0.032	31446	23.83	Toluene
12.837	0.032	28546	22.97	Ethylbenzene
12.975	0.032	62747	46.60	M/P-Xylene
13.754	0.029	30243	23.54	O-Xylene
5.310	0.018	9015	25.34	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100817-2.b/0817a009.d  
Date: 17-AUG-2010 09:34  
Client ID:  
Sample Info: BCAL 2

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

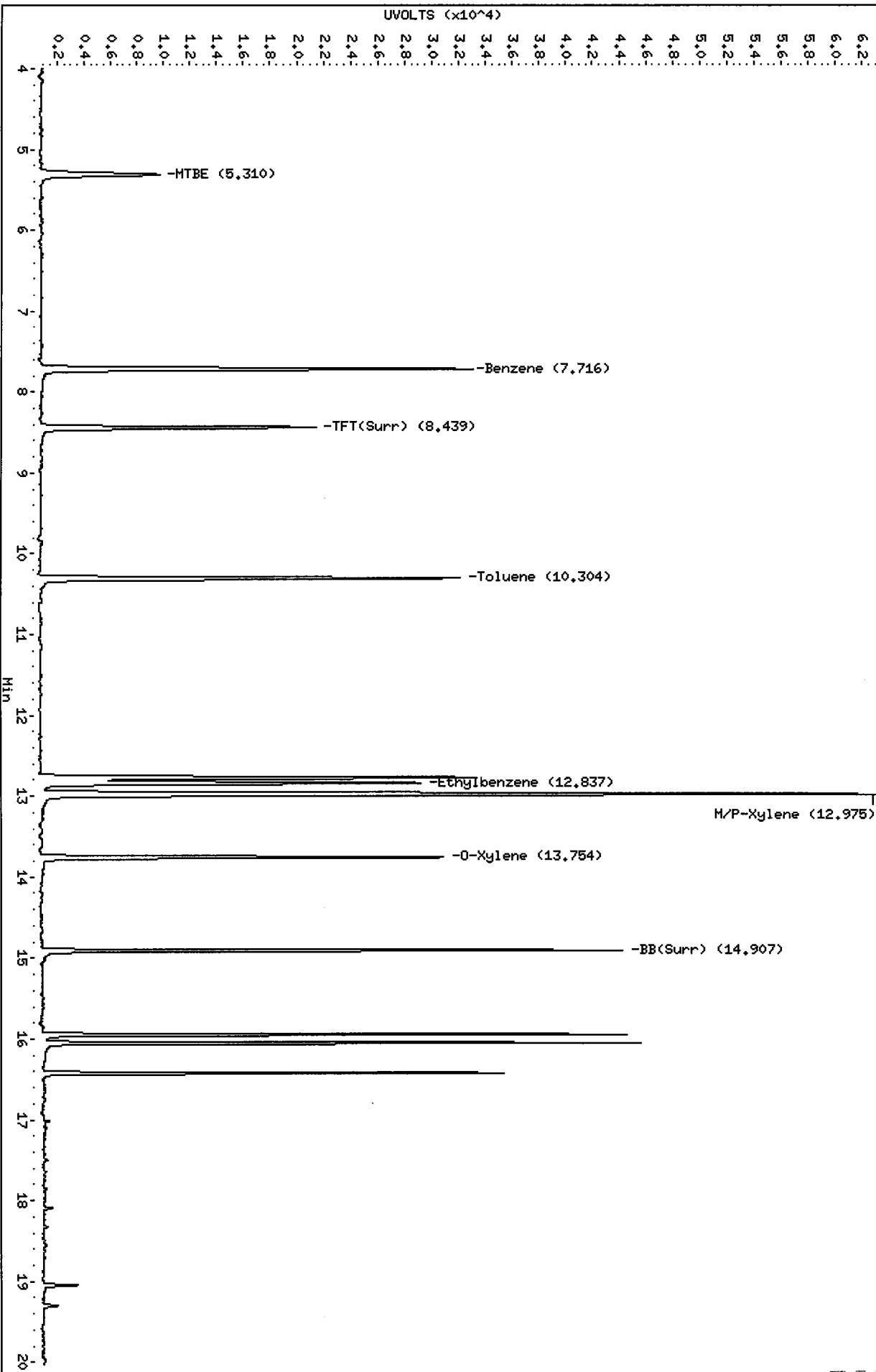


Data File: /chem3/pid3.i/20100817-1.b/0817a009.d  
Date: 17-AUG-2010 09:31  
Client ID:  
Sample Info: BCL 2

Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid3.i/20100817-1.b/0817a009.d/0817a009.cdf



M.  
8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a010.d      ARI ID: GCAL 2  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a010.d      Client ID:  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 09:56  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.439	0.029	7429	88750	103.2	TFT(Surr)
14.910	0.023	4479	36698	104.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	1837748	2.220 M
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	3608572	2.168 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2419964	2.138 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	1956475	2.218 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.437	0.029	20879	95.0	TFT(Surr)
14.909	0.022	43846	96.2	BB(Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
7.715	0.026	6437	4.87	Benzene
10.305	0.032	86046	65.19	Toluene
12.839	0.034	24794	19.95	Ethylbenzene
12.980	0.037	97034	72.06	M/P-Xylene
13.755	0.030	39928	31.08	O-Xylene
5.309	0.017	77379	217.48	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



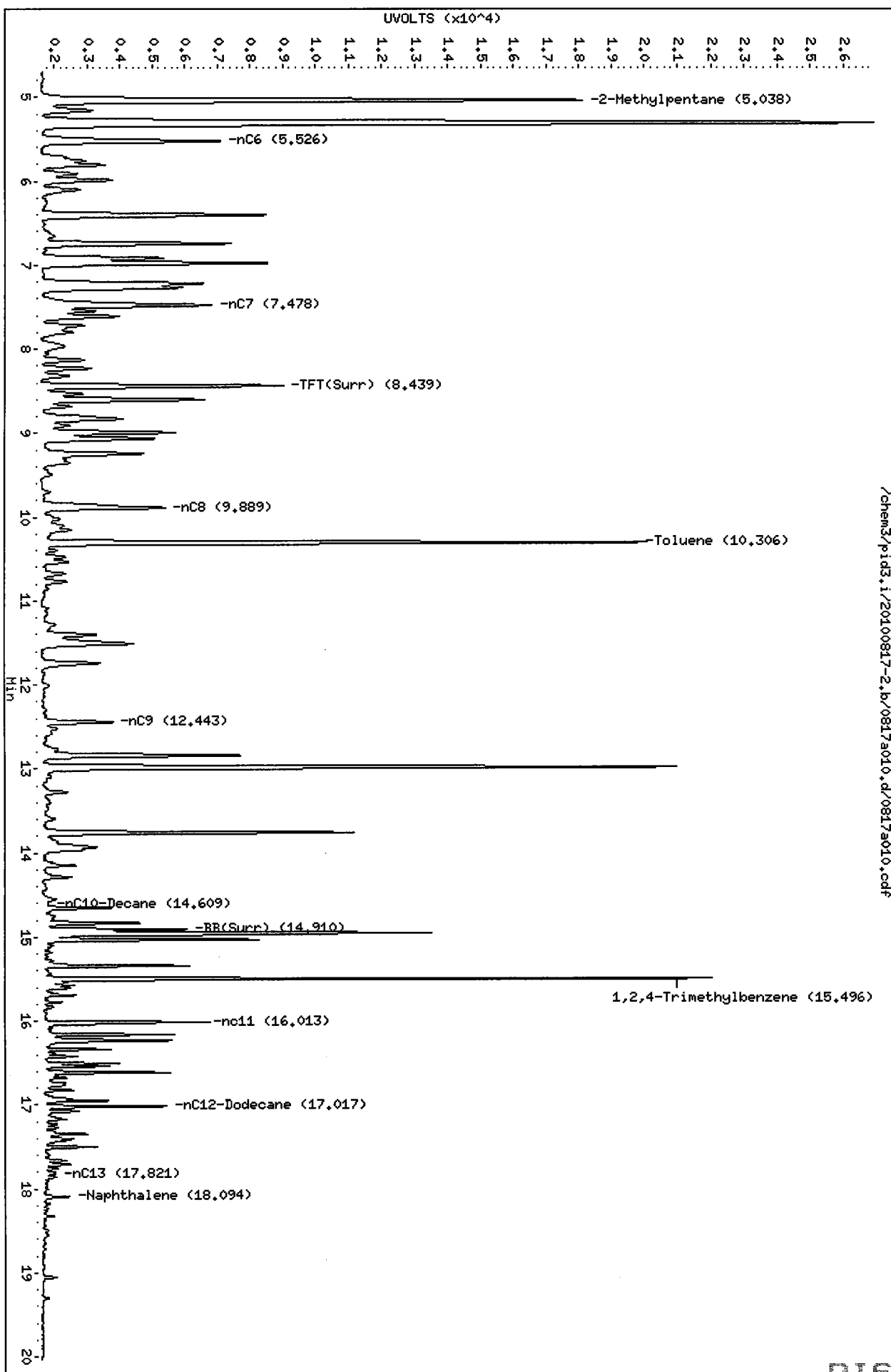
Data File: /chem3/pid3.i/20100817-2.b/0817a010.d  
Date: 17-AUG-2010 09:56

Client ID:  
Sample Info: GCAL 2

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100817-2.b/0817a010.d/0817a010.cdf

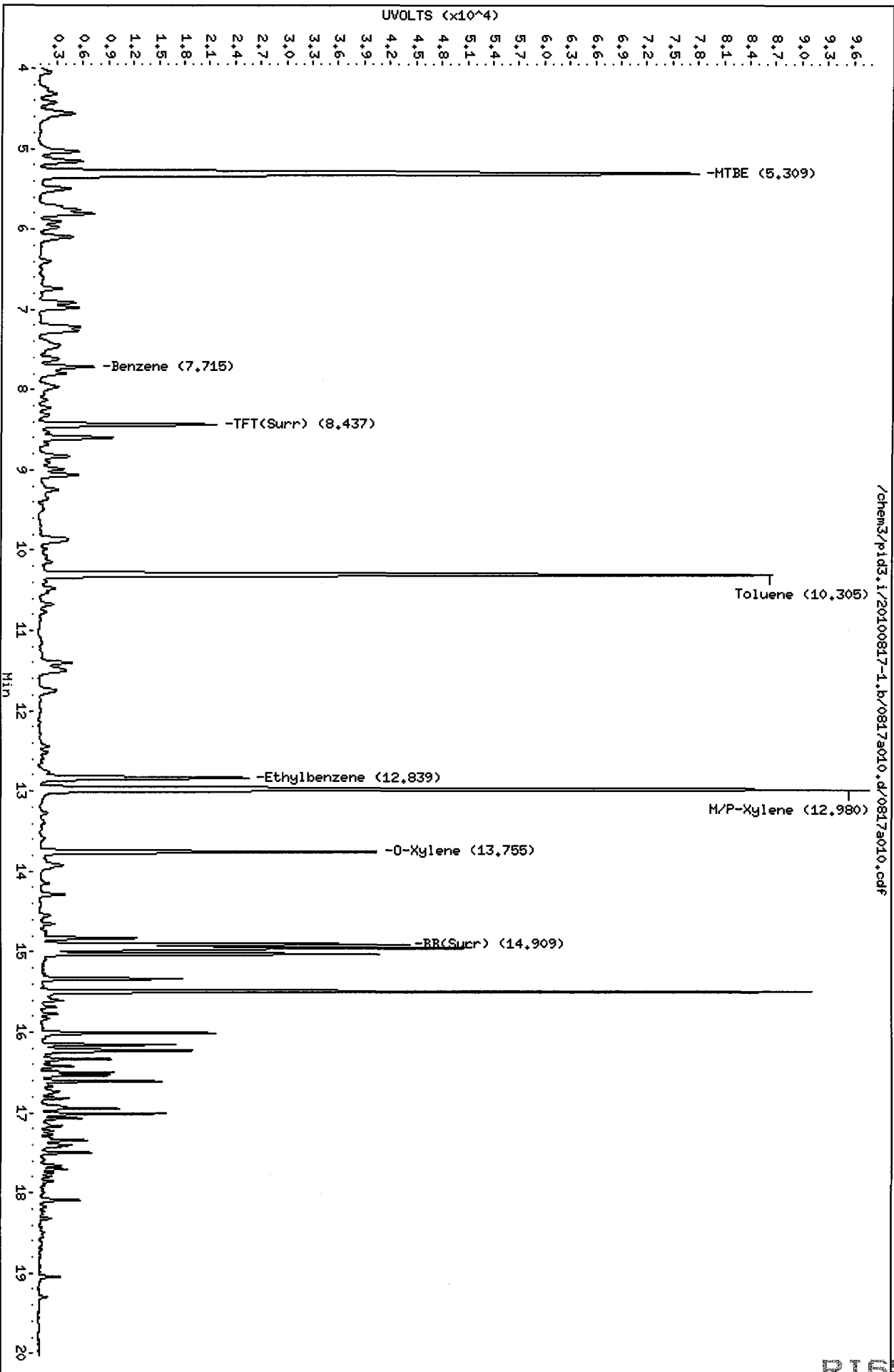


Data File: /chem3/pid3.i/20100817-1.b/0817a010.d  
Date: 17-AUG-2010 09:56

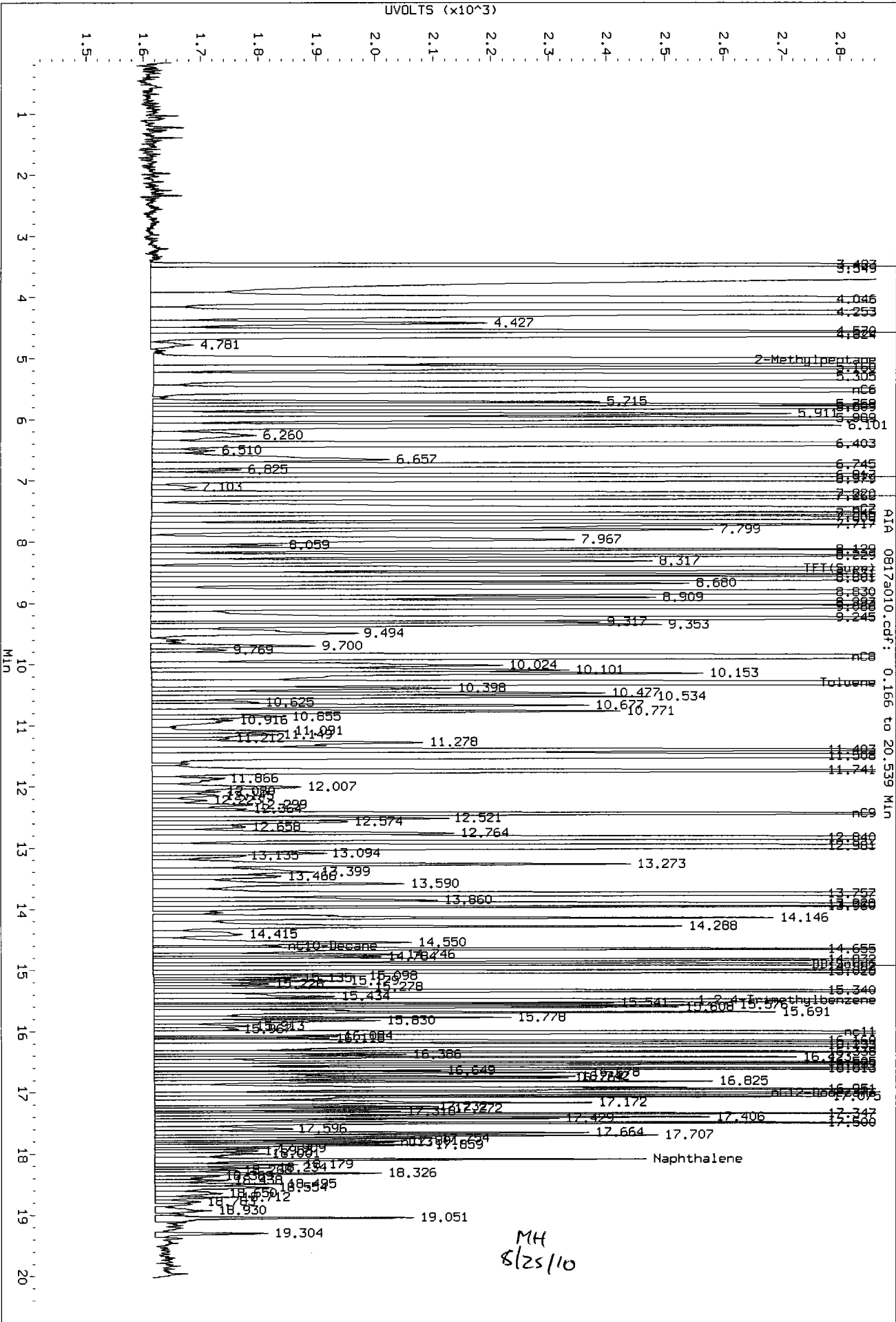
Client ID:  
Sample Info: GCAL 2

Column phase: RTX 502-2 PID

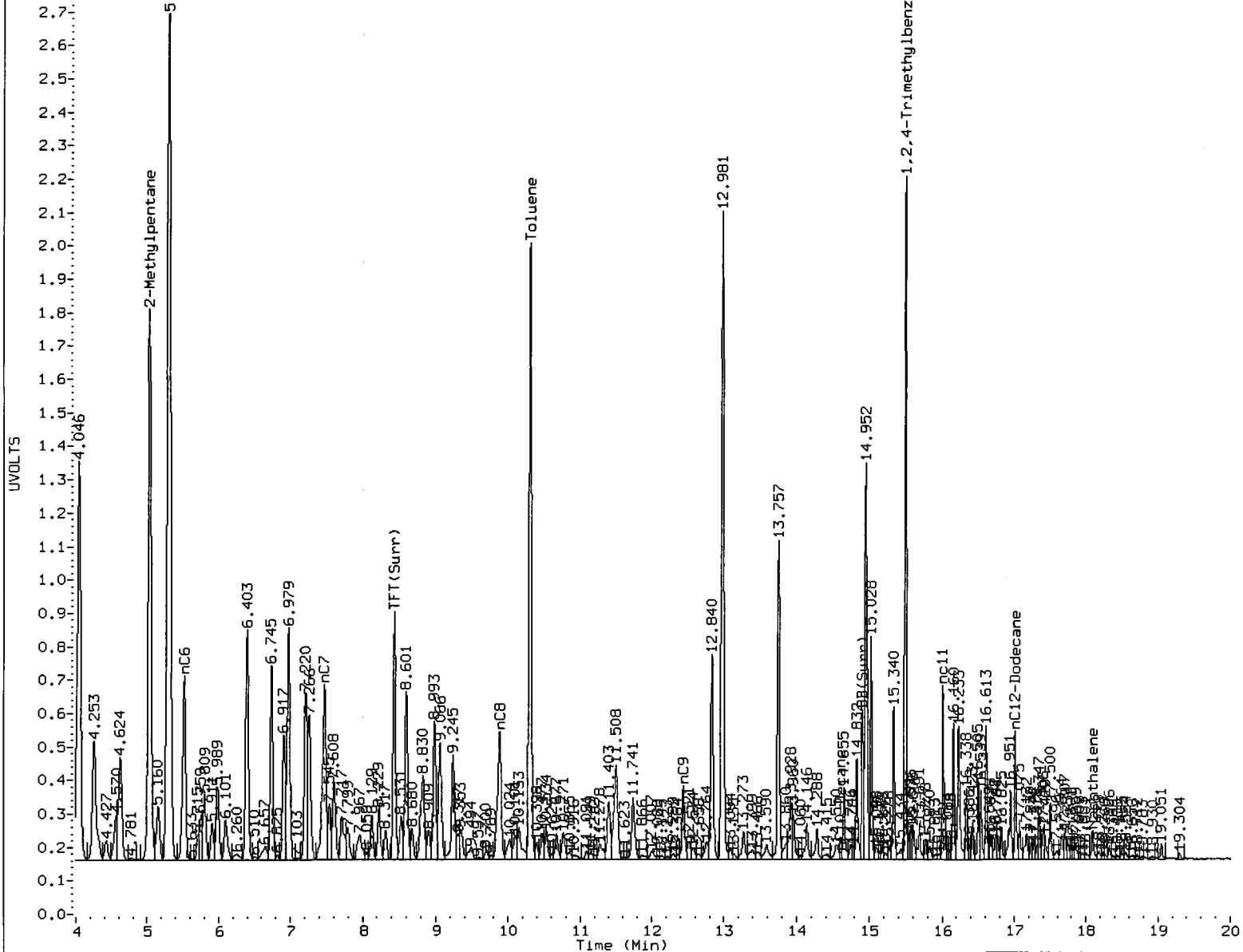
Instrument: pid3.i  
Operator: NH  
Column diameter: 0.18



Data File: /chem3/p1d3.1/20100817-2.b/0817a010.d/0817a010.cdf  
 Injection Date: 17-AUG-2010 09:56  
 Instrument: p1d3.1  
 Client Sample ID:



FID GCAL 2



MANUAL INTEGRATION

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

Analyst: MH

Date: 8/25/10

Ms.  
8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a011.d      ARI ID: RI65F  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a011.d      Client ID: 081310-TB  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 10:20  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	-----	-----	-----
8.445	0.036	7147	84265	99.3	TFT(Surr)
14.912	0.024	4282	34563	99.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)  
-----

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 (10.17 to 17.11)	827807	7411	0.009
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	2904	0.002
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	0	0.000
NWTPHG Tol-Nap (10.17 to 18.18)	882029	9385	0.011

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	-----	-----
8.444	0.036	20017	91.1	TFT(Surr)
14.911	0.024	42105	92.4	BB(Surr)

SW8021 (PID)  
-----

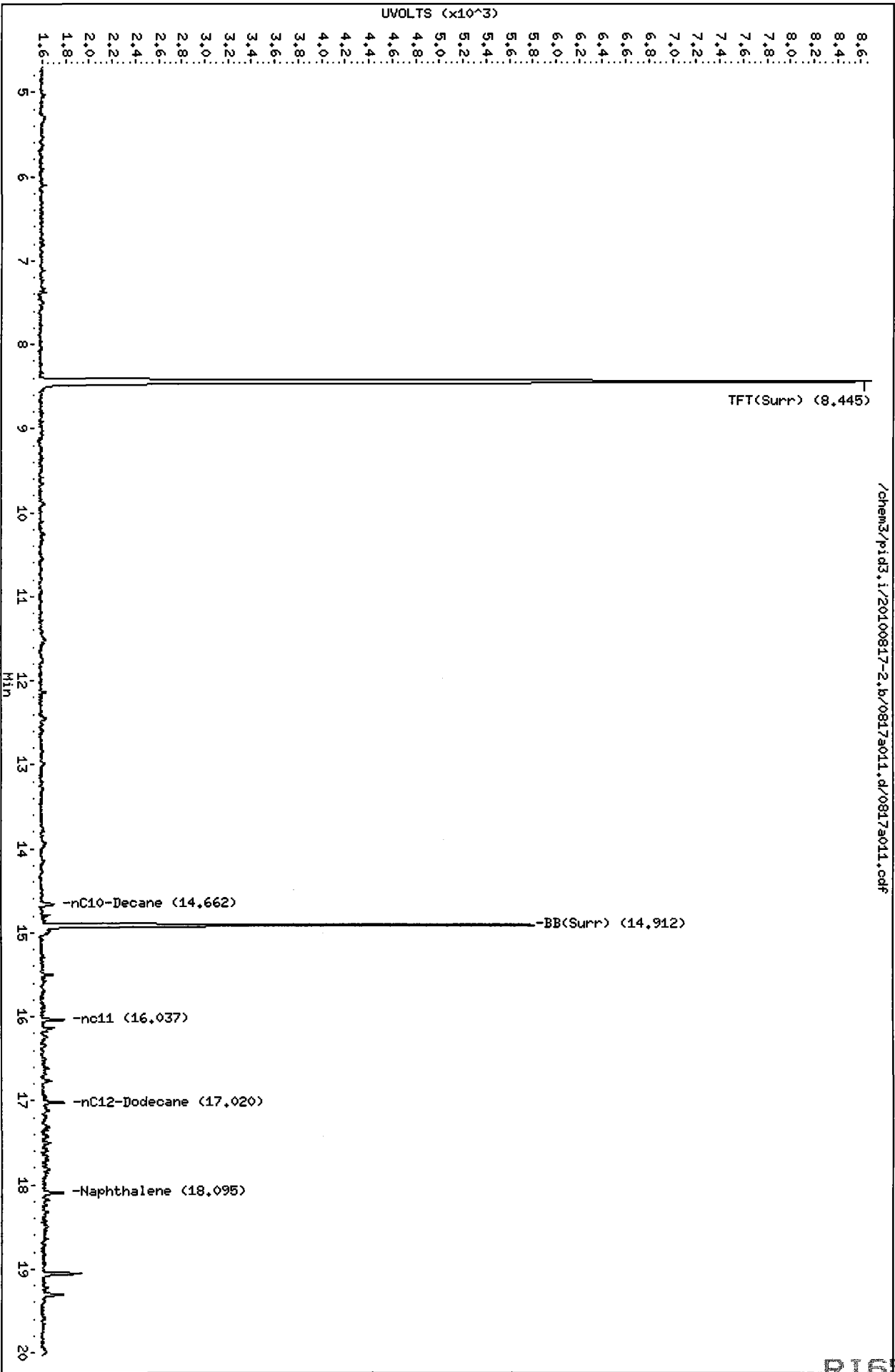
RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100817-2.b/0817a011.d  
Date: 17-AUG-2010 10:20  
Client ID: 081310-TB  
Sample Info: R165F

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid3.i/20100817-2.b/0817a011.d/0817a011.cdf

Data File: /chem3/pid3.i/20100817-1.b/0817a011.d

Date: 17-AUG-2010 10:20

Client ID: 081310-TB

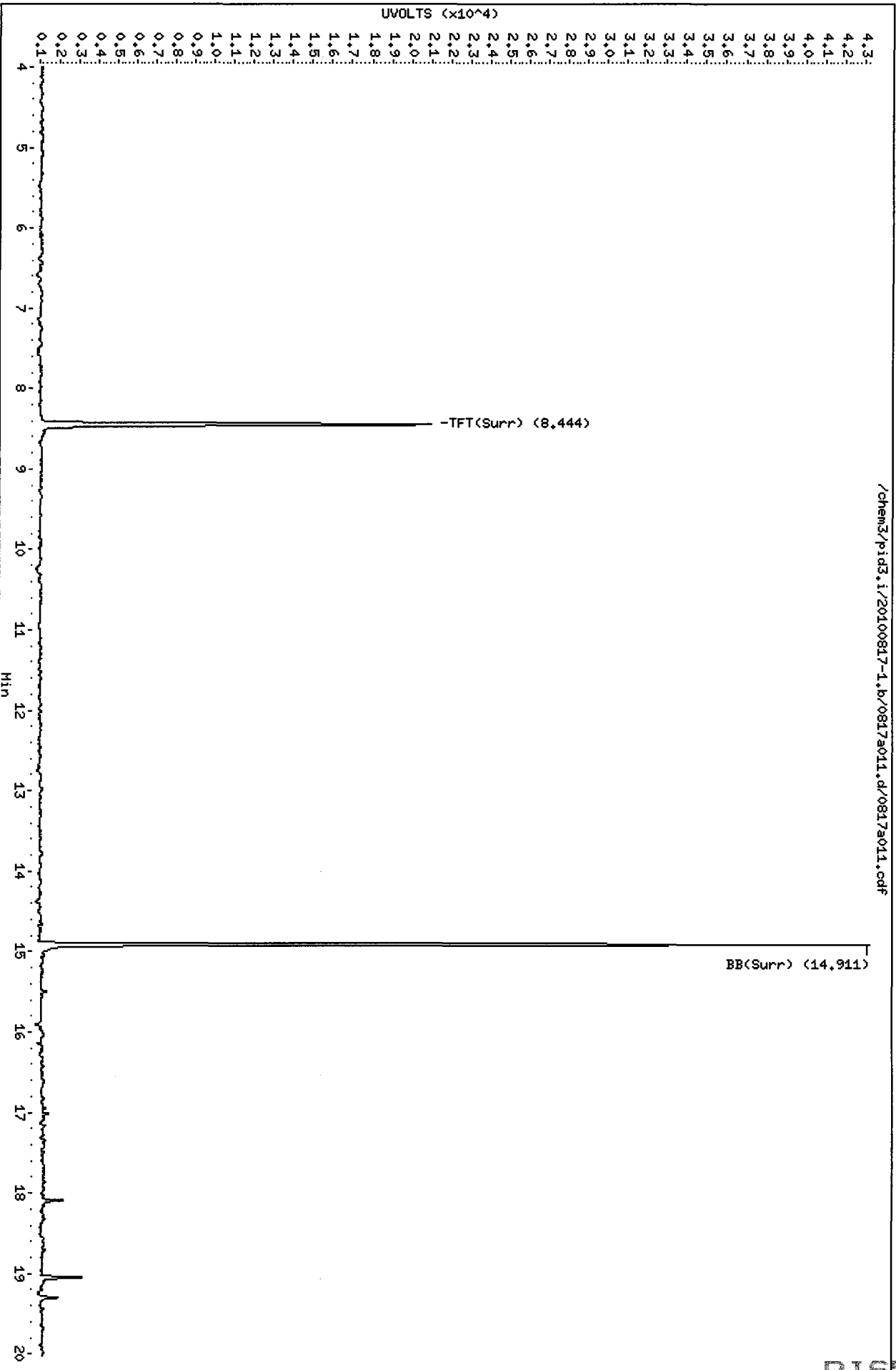
Sample Info: R165F

Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18



8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a012.d      ARI ID: RI65A  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a012.d      Client ID: MW-09-081310  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 10:45  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.442	0.032	7050	84458	97.9	TFT (Surr)
14.912	0.024	4228	35287	98.2	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	3618	0.004
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	1138	0.001
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1	0.000
NWTPHG Tol-Nap (10.17 to 18.18)	882029	3618	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
8.441	0.032	19710	89.7	TFT (Surr)
14.910	0.024	41532	91.1	BB (Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

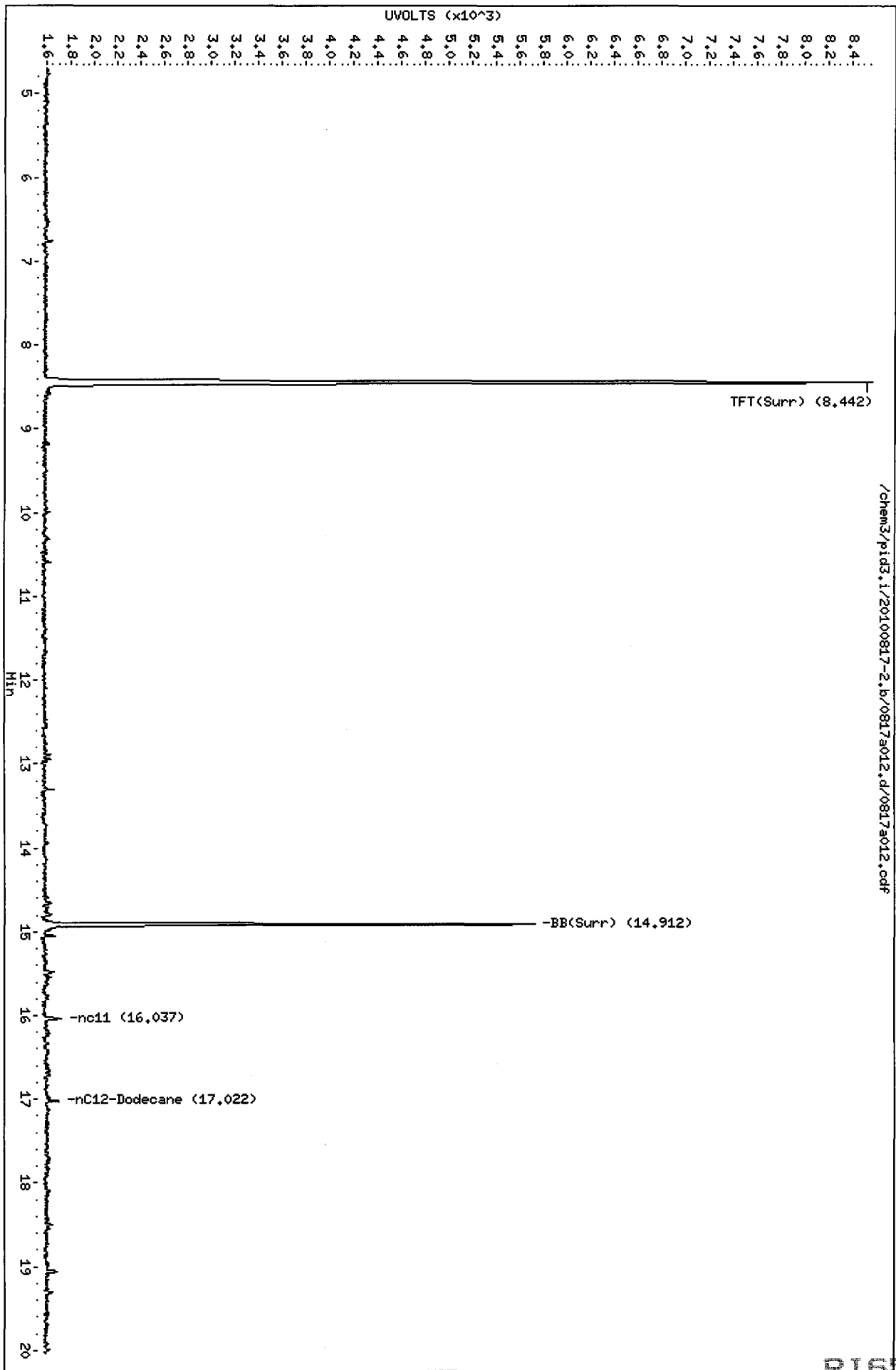


Data File: /chem3/pid3.i/20100817-2.b/0817a012.d  
Date: 17-AUG-2010 10:45  
Client ID: MM-09-081310  
Sample Info: R165a

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: NH  
Column diameter: 0.18

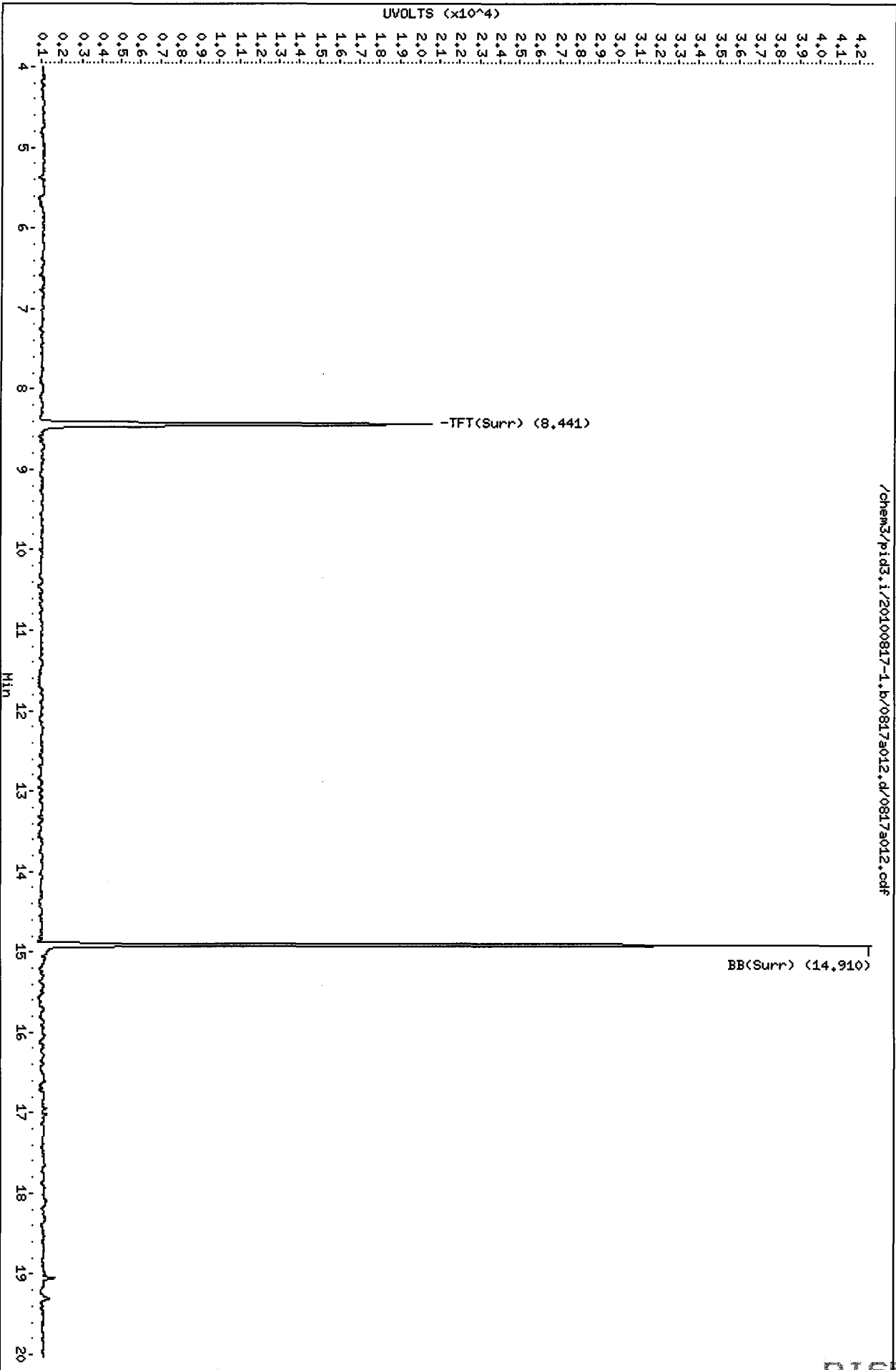
/chem3/pid3.i/20100817-2.b/0817a012.d/0817a012.cdf



Data File: /chem3/pid3.i/20100817-1.b/0817a012.d  
Date: 17-AUG-2010 10:45  
Client ID: MW-09-081310  
Sample Info: R165a

Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid3.i/20100817-1.b/0817a012.d/0817a012.cdf

M  
8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a013.d      ARI ID: RI65B  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a013.d      Client ID: MW-08-081310  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 11:09  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.446	0.036	7166	85528	99.6	TFT(Surr)
14.914	0.026	4305	35850	100.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	5658	0.007
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	9269	0.006
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	7967	0.007
NWTPHG Tol-Nap (10.17 to 18.18)	882029	5658	0.006

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
8.445	0.037	19908	90.6	TFT(Surr)
14.912	0.026	42102	92.4	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/20100817-2.b/0817a013.d

Date: 17-AUG-2010 11:09

Client ID: NH-08-081310

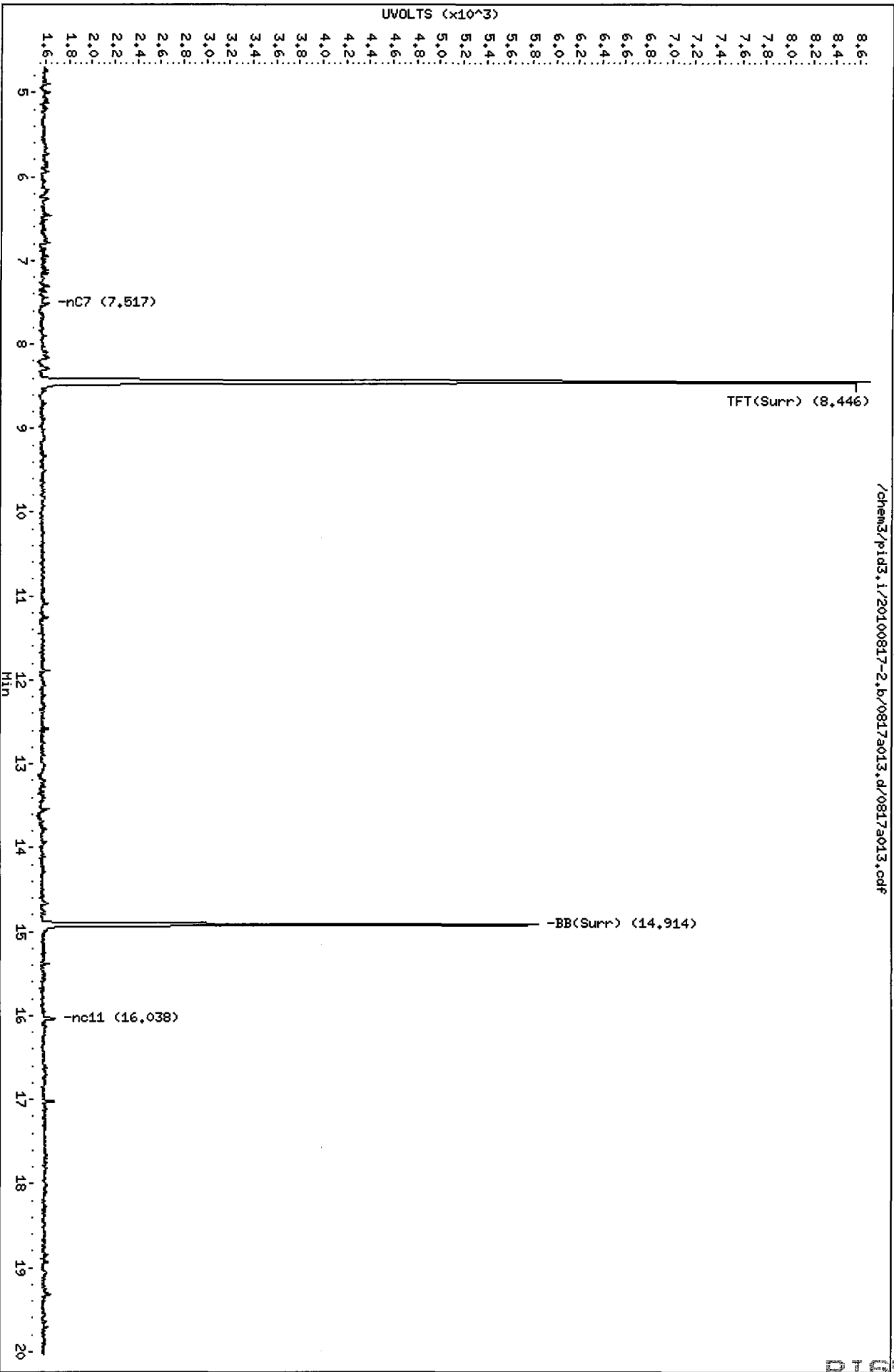
Sample Info: R165B

Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: NH

Column diameter: 0.18



Data File: /chem3/pid3.i/20100817-1.b/0817a013.d

Date: 17-AUG-2010 11:09

Client ID: MH-08-081310

Sample Info: R165B

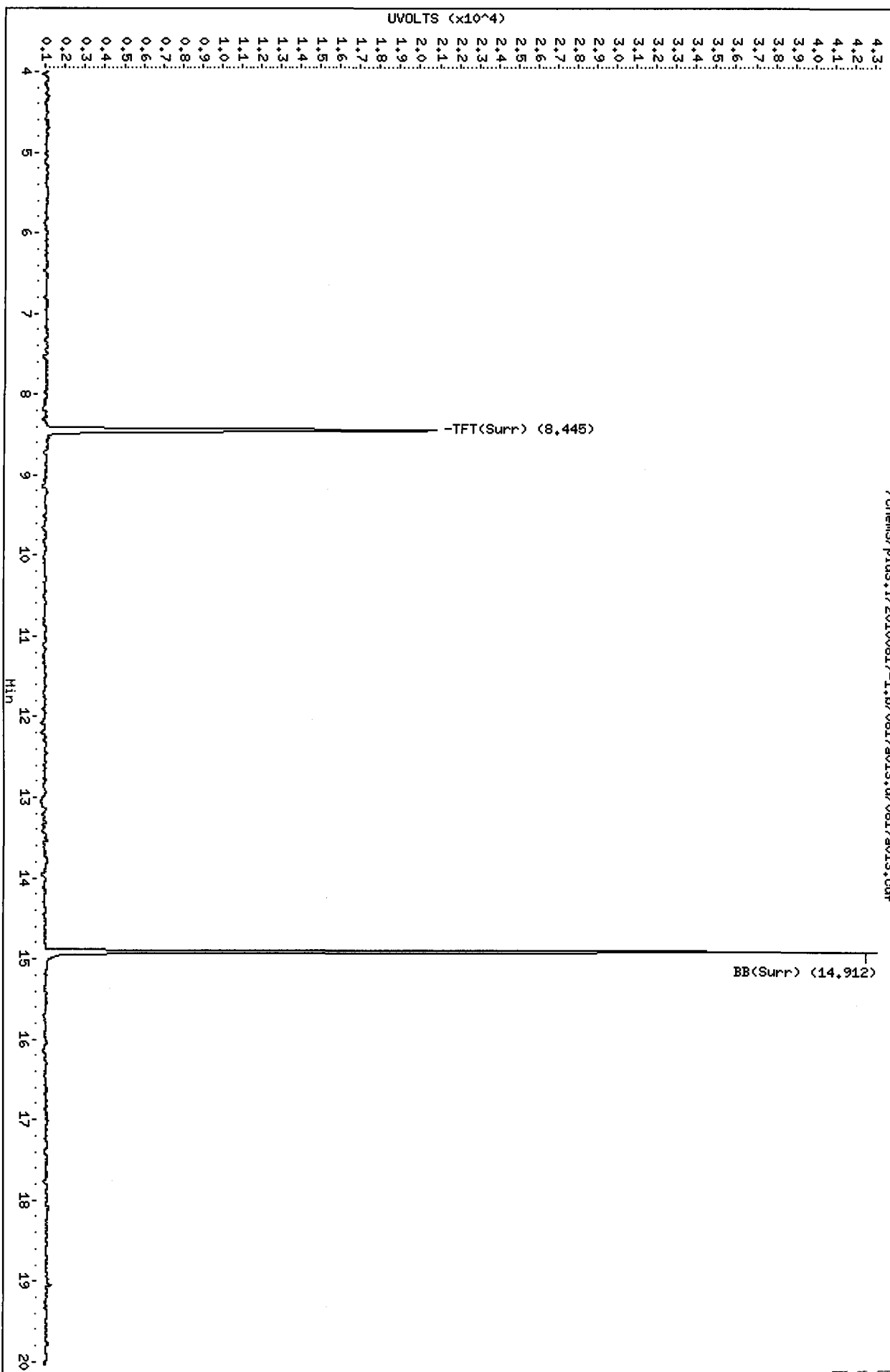
Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

/chem3/pid3.i/20100817-1.b/0817a013.d/0817a013.cdf



Analytical Resources, Inc.

Data file : /chem3/pid3.i/20100817-1.b/0817a014.d  
Lab Smp Id: RI65BMS Client Smp ID: MW-08-081310 MS  
Inj Date : 17-AUG-2010 11:33  
Operator : MH Inst ID: pid3.i  
Smp Info : RI65BMS  
Misc Info : 10-19848  
Comment :  
Method : /chem3/pid3.i/20100817-1.b/PIDB.m  
Meth Date : 25-Aug-2010 06:33 monicah Quant Type: ESTD  
Cal Date : 29-JUN-2010 10:26 Cal File: 0629a011.d  
Als bottle: 1 QC Sample: MS  
Dil Factor: 1.00000  
Integrator: HP Genie Compound Sublist: btex.sub  
Target Version: 3.50  
Processing Host: cserv3

Concentration Formula: Amt \* DF \* CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS	
					ON-COLUMN (ng/mL)	FINAL ( ug/L)
1 MTBE	5.313	5.292	0.021	32595	91.6097	91.6
2 Benzene	7.722	7.689	0.033	2755	2.08373	2.1
\$ 3 TFT(Surr)	8.445	8.408	0.037	20250	92.1155	92.1
4 Toluene	10.312	10.273	0.039	35369	26.7982	26.8
5 Ethylbenzene	12.845	12.806	0.039	10249	8.24790	8.2 (M) ✓
6 M/P-Xylene	12.985	12.943	0.042	39561	29.3776	29.4
7 O-Xylene	13.760	13.725	0.035	16112	12.5404	12.5
\$ 8 BB(Surr)	14.912	14.887	0.025	41856	91.8127	91.8

QC Flag Legend

M - Compound response manually integrated.

MW  
8/25/10

Data File: /chem3/pid3.i/20100817-1.b/0817a014.d

Date : 17-AUG-2010 11:33

Client ID: MM-08-081310 MS

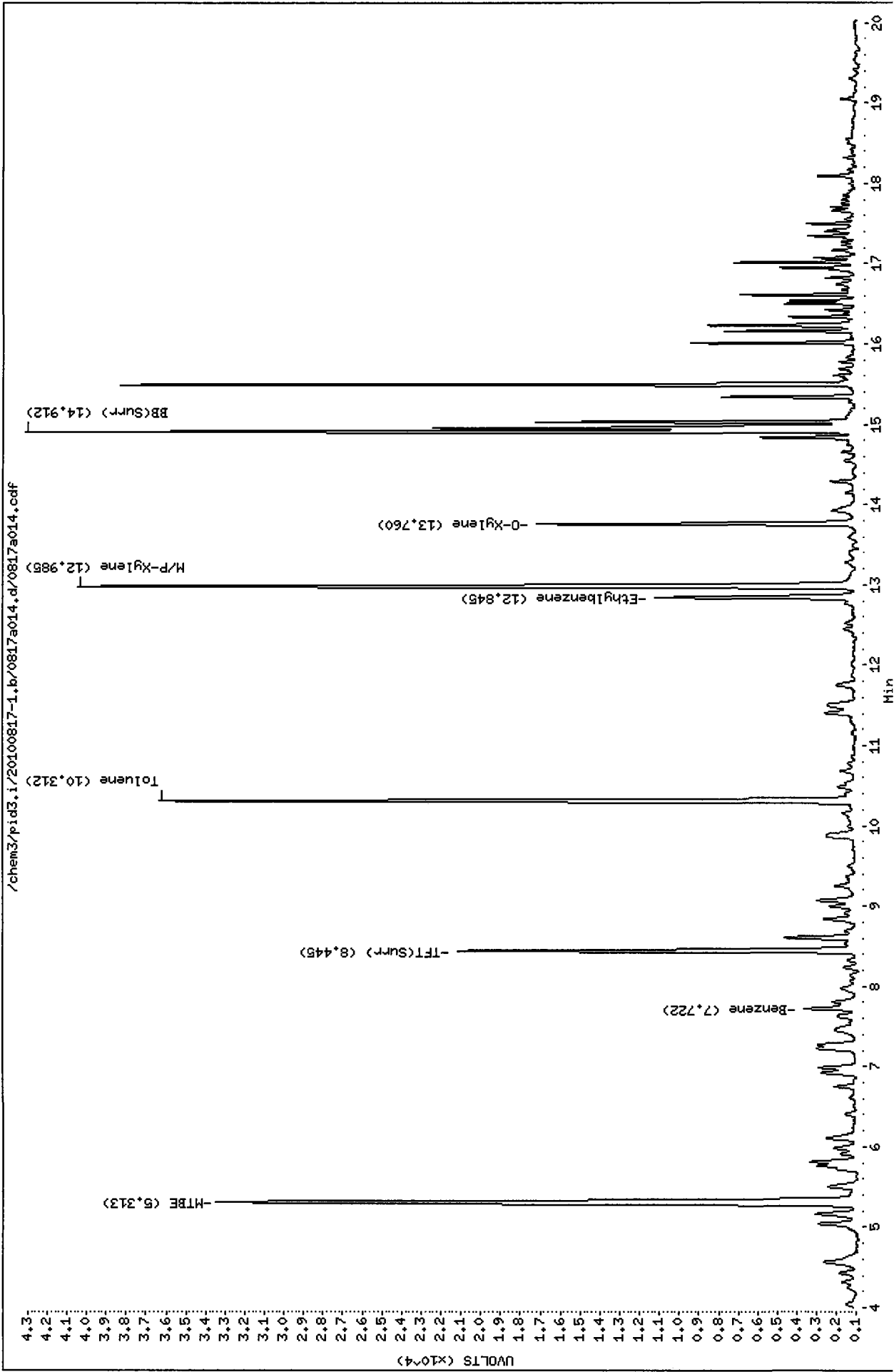
Sample Info: RI65BMS

Instrument: pid3.i

Operator: MH

Column diameter: 0.18

Column phase: RTX 502-2 PID



M  
8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a014.d      ARI ID: RI65BMS  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a014.d      Client ID: MW-08-081310 MS  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 11:33  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.446	0.037	7195	85457	100.0	TFT(Surr)
14.913	0.026	4332	35309	100.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	783839	0.947 M
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	1534658	0.922 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1041914	0.921 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	839902	0.952 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
8.445	0.037	20250	92.1	TFT(Surr)
14.912	0.025	41856	91.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.722	0.033	2755	2.08	Benzene
10.312	0.039	35369	26.80	Toluene
12.769	-0.037	611	0.49	Ethylbenzene
12.985	0.042	39561	29.38	M/P-Xylene
13.760	0.035	16112	12.54	O-Xylene
5.313	0.021	32595	91.61	MTBE

Change Wrong RT (M)

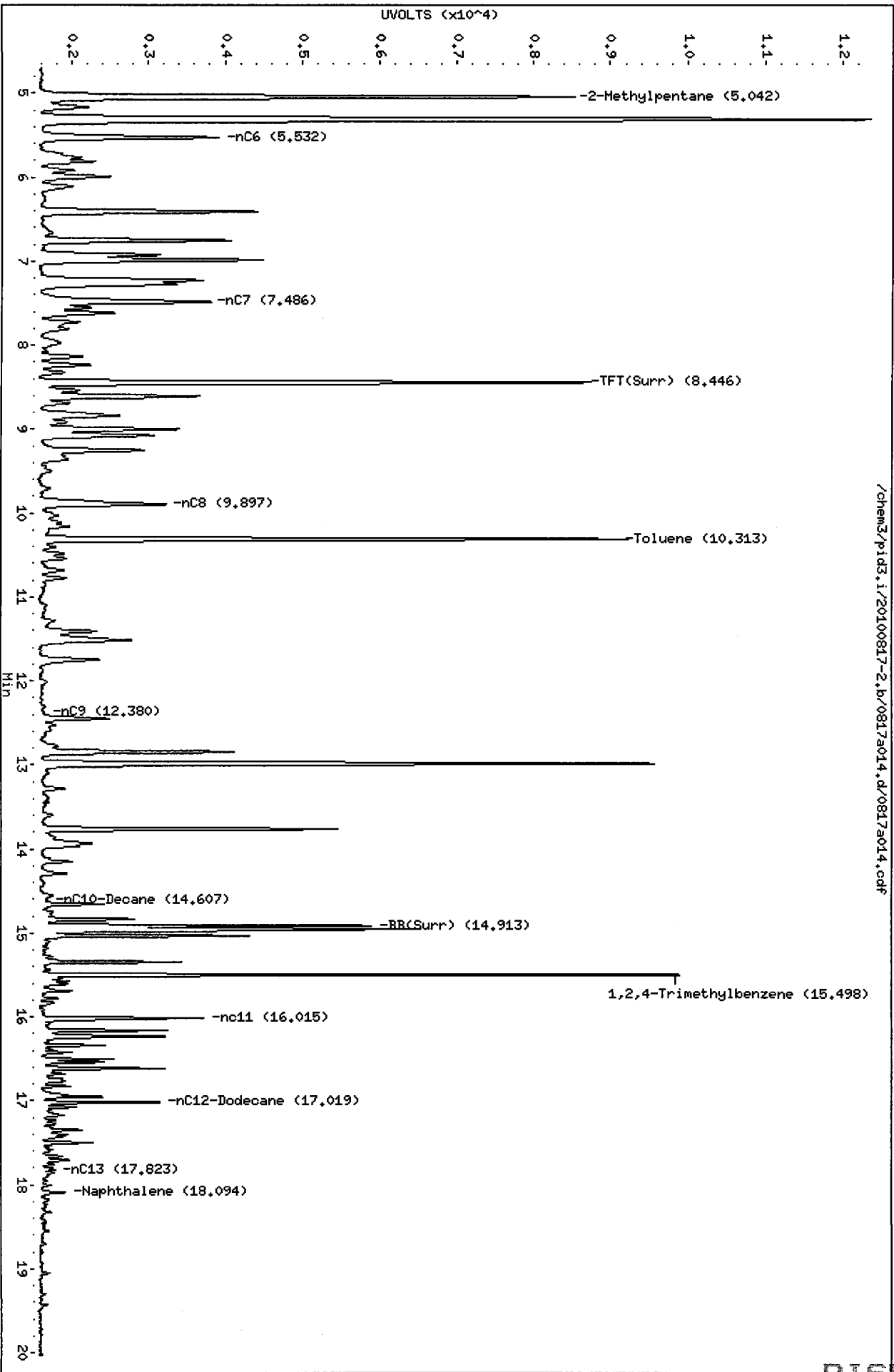
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20100817-2.b/0817a014.d  
Date: 17-AUG-2010 11:33  
Client ID: MW-08-081310 MS  
Sample Info: R165BHS

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid3.i/20100817-2.b/0817a014.d/0817a014.cdf

Data File: /chem3/pid3.i/20100817-1.b/0817a014.d

Date: 17-AUG-2010 11:33

Client ID: MW-08-081310 MS

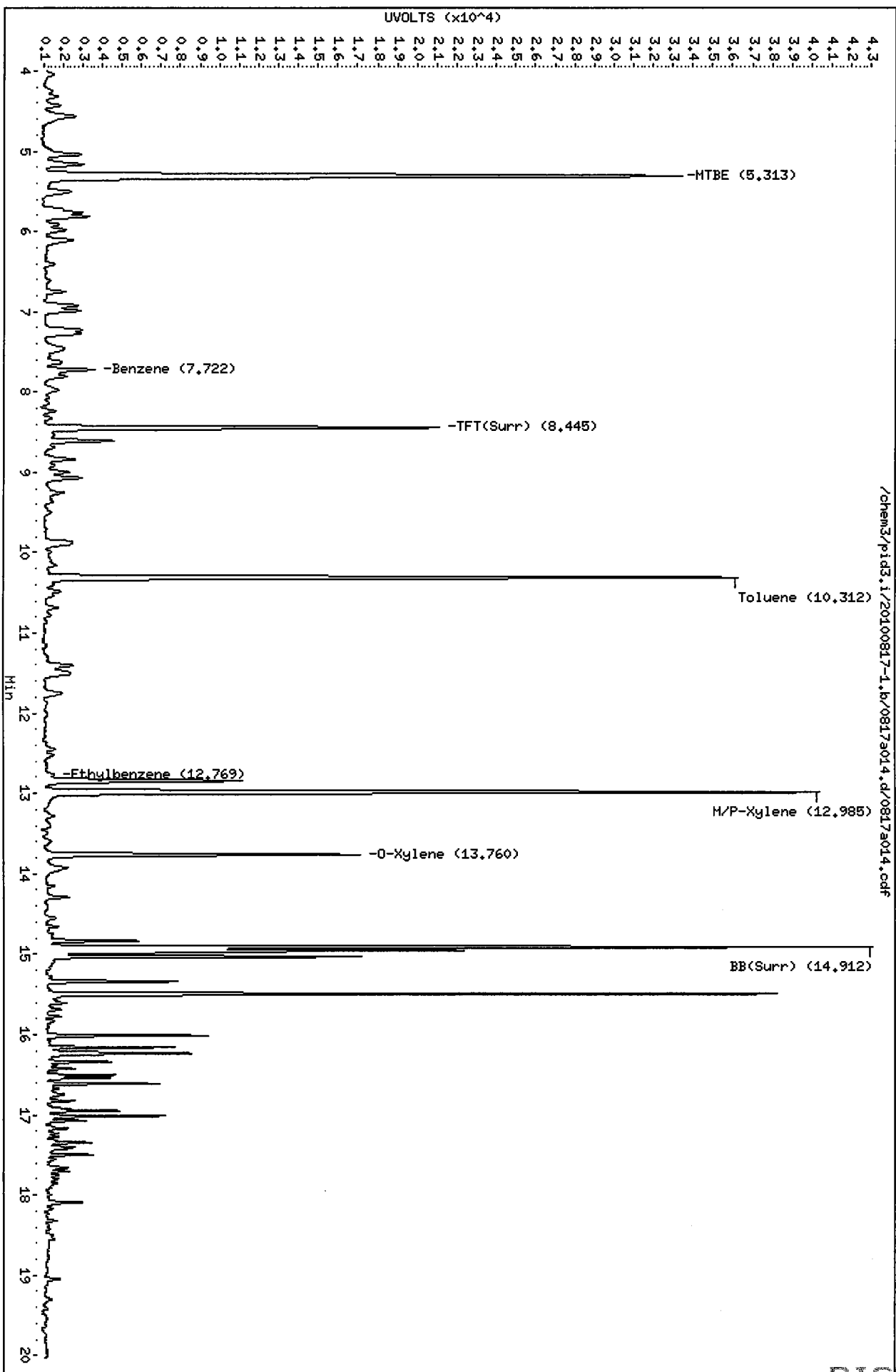
Sample Info: R165BMS

Column phase: RTX 502-2 PID

Instrument: pid3.i

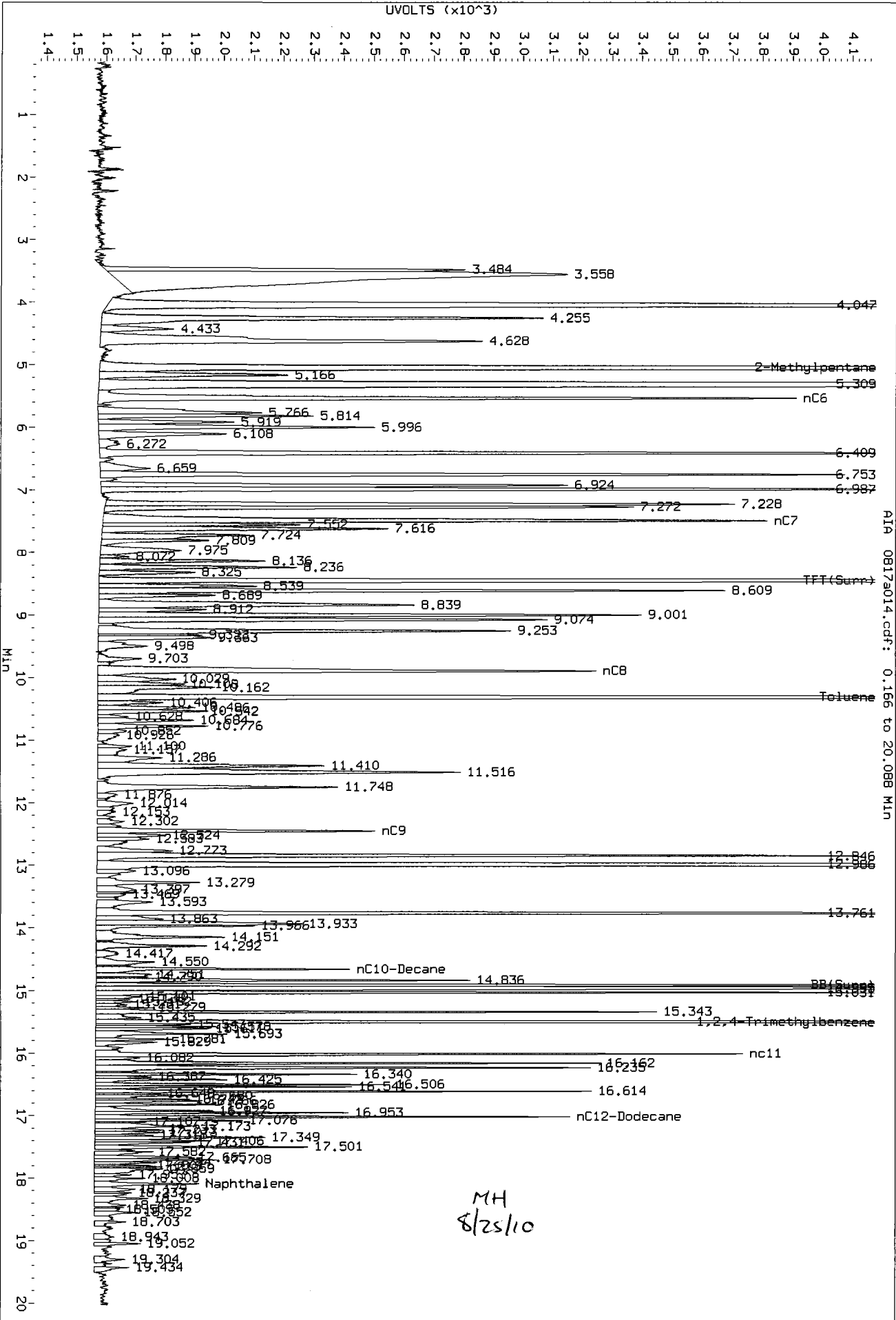
Operator: MH

Column diameter: 0.18



/chem3/pid3.i/20100817-1.b/0817a014.d/0817a014.cdf

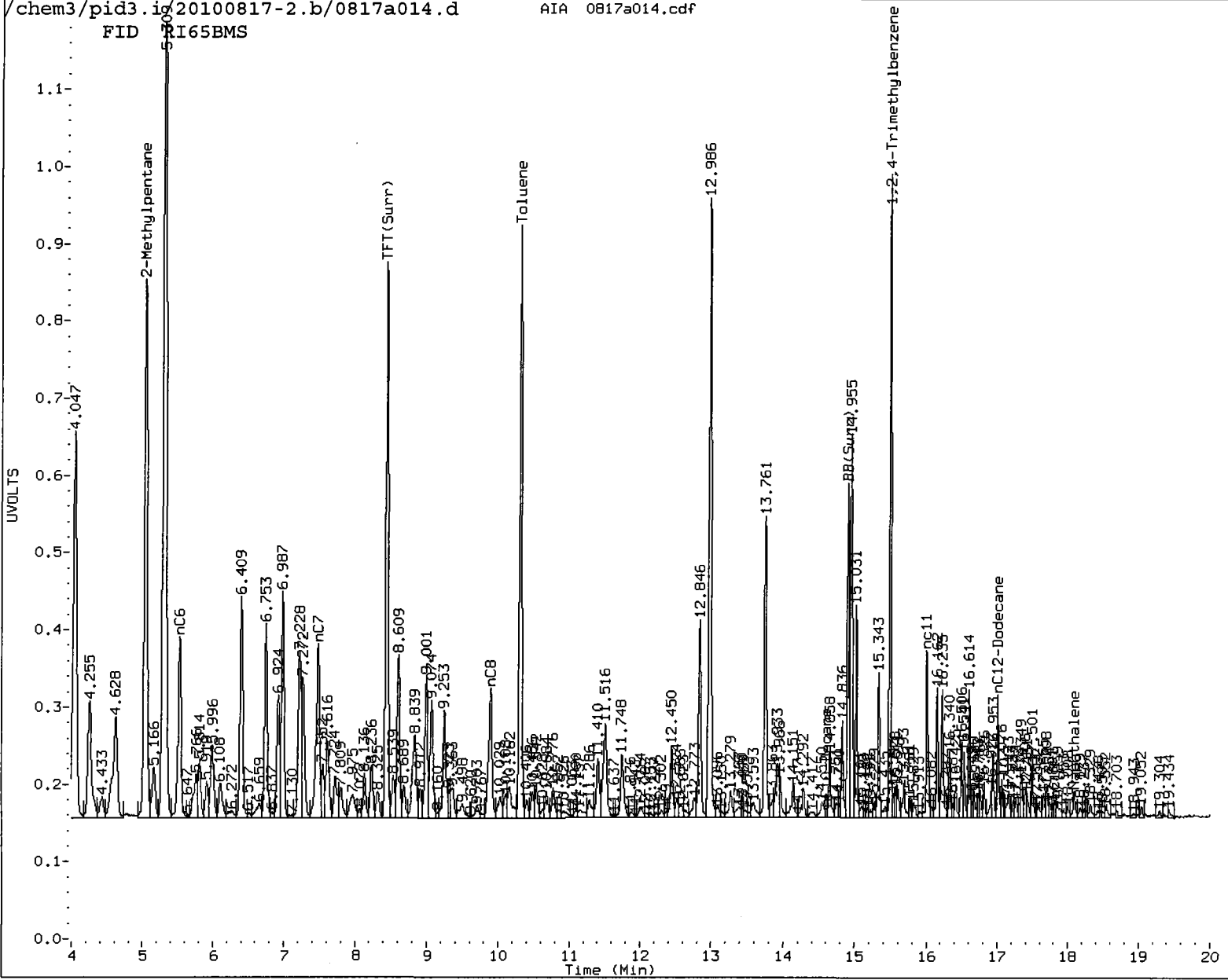
Data File: /chem3/pid3.1/20100817-2.b/0817a014.d/0817a014.cdf  
Injection Date: 17-AUG-2010 11:33  
Instrument: pid3.1  
Client Sample ID: MW-08-081310 MS



A19 0817a014.cdf: 0.166 to 20.088 MIN

MH  
8/25/10

FID RI65BMS



MANUAL INTEGRATION

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

Analyst: MH Date: 8/25/10

M.  
8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a015.d      ARI ID: RI65BMSD  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a015.d      Client ID: MW-08-081310 MSD  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 11:58  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
8.442	0.032	7201	85684	100.0	TFT(Surr)
14.913	0.025	4394	35905	102.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 (10.17 to 17.11)	827807	774942	0.936 M
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	1512380	0.909 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1022732	0.904 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	830552	0.942 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
--	----	-----	----	-----
8.441	0.032	20348	92.6	TFT(Surr)
14.911	0.024	43388	95.2	BB(Surr)

SW8021 (PID)

-----

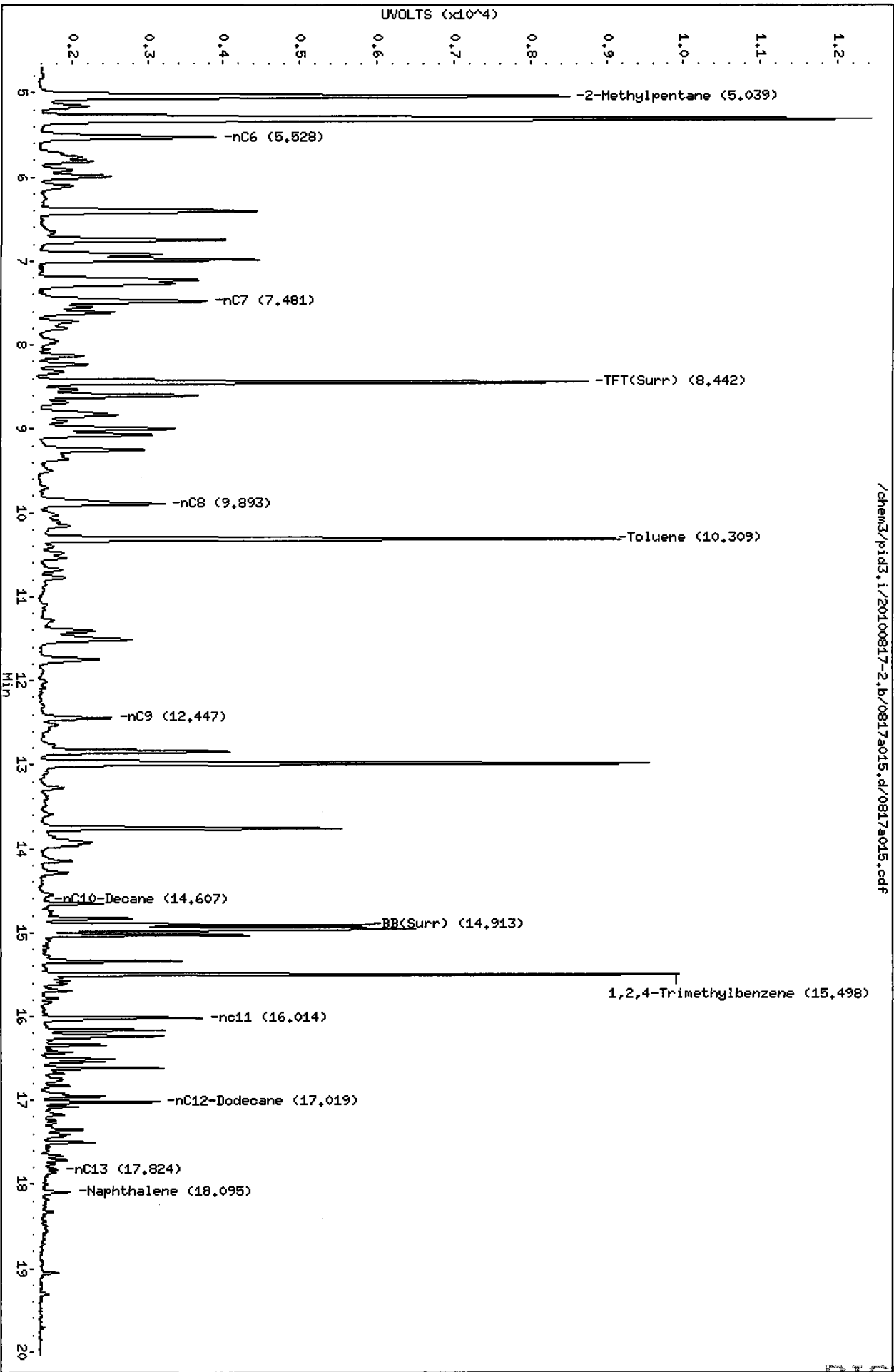
RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.717	0.028	2704	2.05	Benzene
10.308	0.036	35541	26.93	Toluene
12.843	0.037	10007	8.05	Ethylbenzene
12.982	0.040	39375	29.24	M/P-Xylene
13.758	0.033	16291	12.68	O-Xylene
5.308	0.016	32742	92.02	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100817-2.b/0817a015.d  
Date: 17-AUG-2010 11:58  
Client ID: MW-08-081310 MSD  
Sample Info: R165BMSD

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

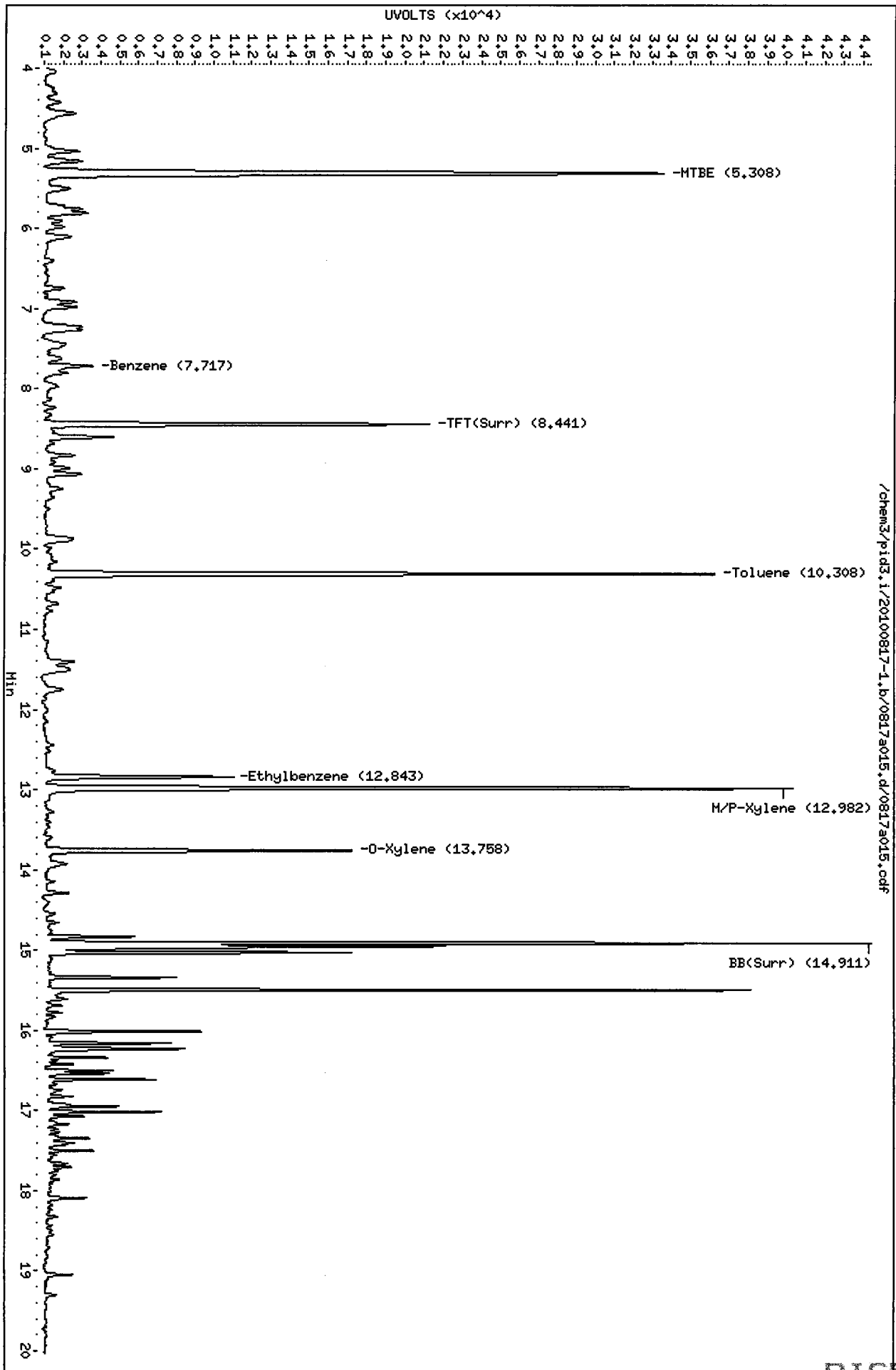


/chem3/pid3.i/20100817-2.b/0817a015.d/0817a015.cdf

Data File: /chem3/pid3.i/20100817-1.b/0817a015.d  
Date: 17-AUG-2010 11:58  
Client ID: MW-08-081310 MSD  
Sample Info: R165BMSD

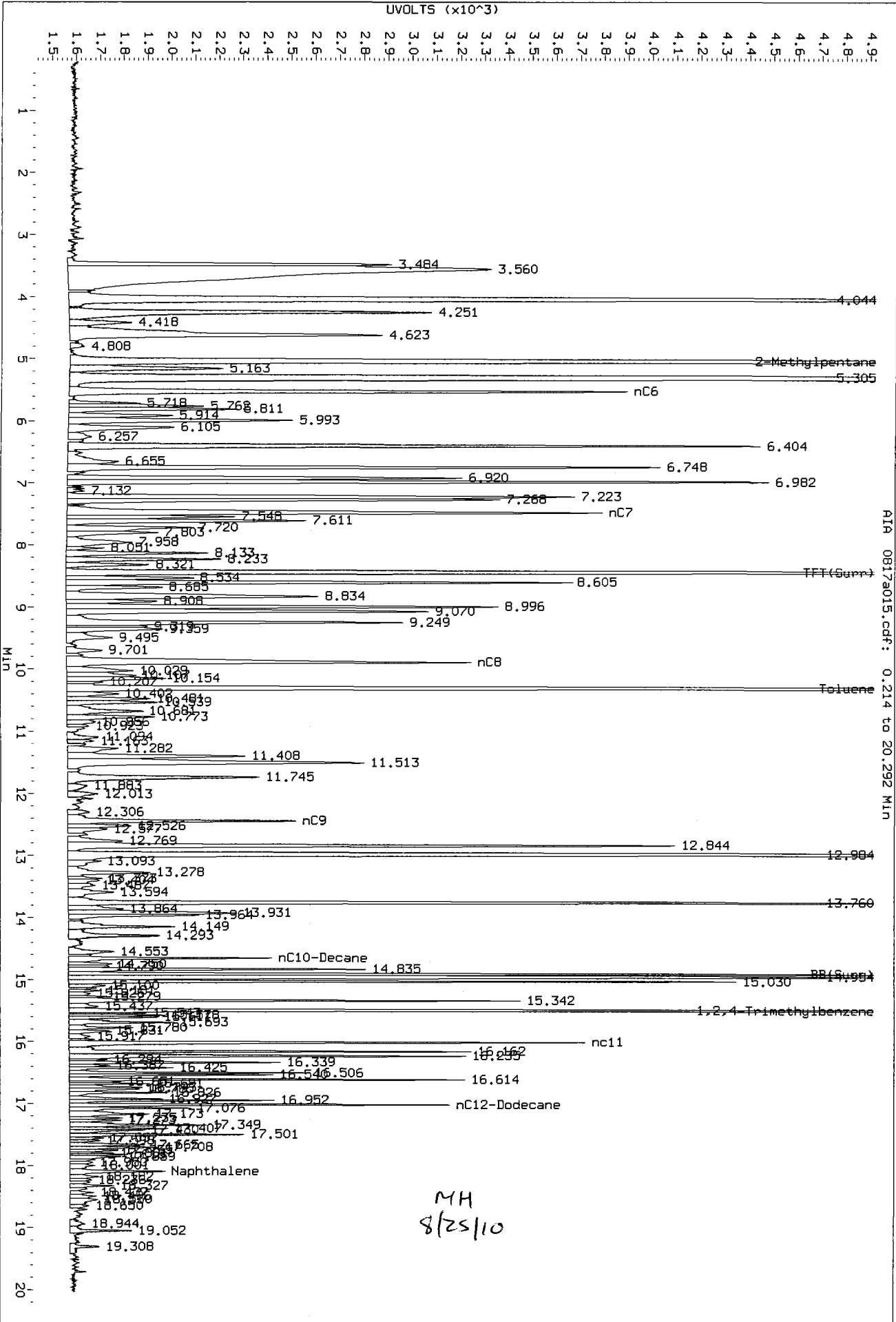
Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18



/chem3/pid3.i/20100817-1.b/0817a015.d/0817a015.cdf

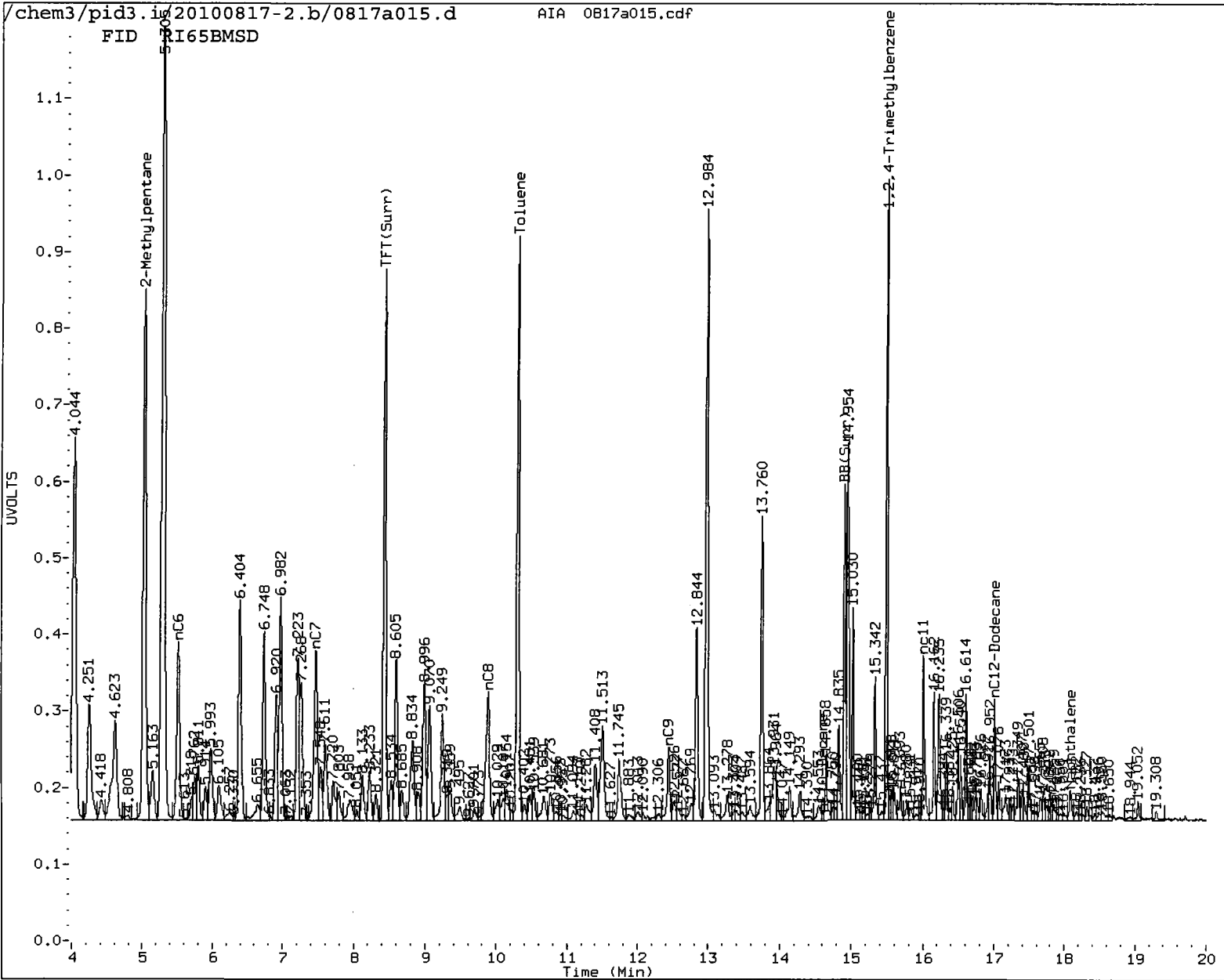
Data File: /chem3/pid3.1/20100817-2.b/0817a015.d/0817a015.cdf  
Injection Date: 17-AUG-2010 11:58  
Instrument: pid3.1  
Client Sample ID: MW-08-081310 MSD



AIR 0817a015.cdf: 0.214 to 20.292 Min



FID RI65BMSD



MANUAL INTEGRATION

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

Analyst: MH Date: 8/25/10

M  
8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a016.d      ARI ID: RI65C  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a016.d      Client ID: MW-07-081310  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 12:22  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.446	0.036	7103	83725	98.7	TFT (Surr)
14.913	0.025	4377	36359	101.6	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	21936	0.026
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	13458	0.008
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	11448	0.010
NWTPHG Tol-Nap (10.17 to 18.18)	882029	26713	0.030

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
8.445	0.036	20008	91.0	TFT (Surr)
14.912	0.025	42306	92.8	BB (Surr)

SW8021 (PID)

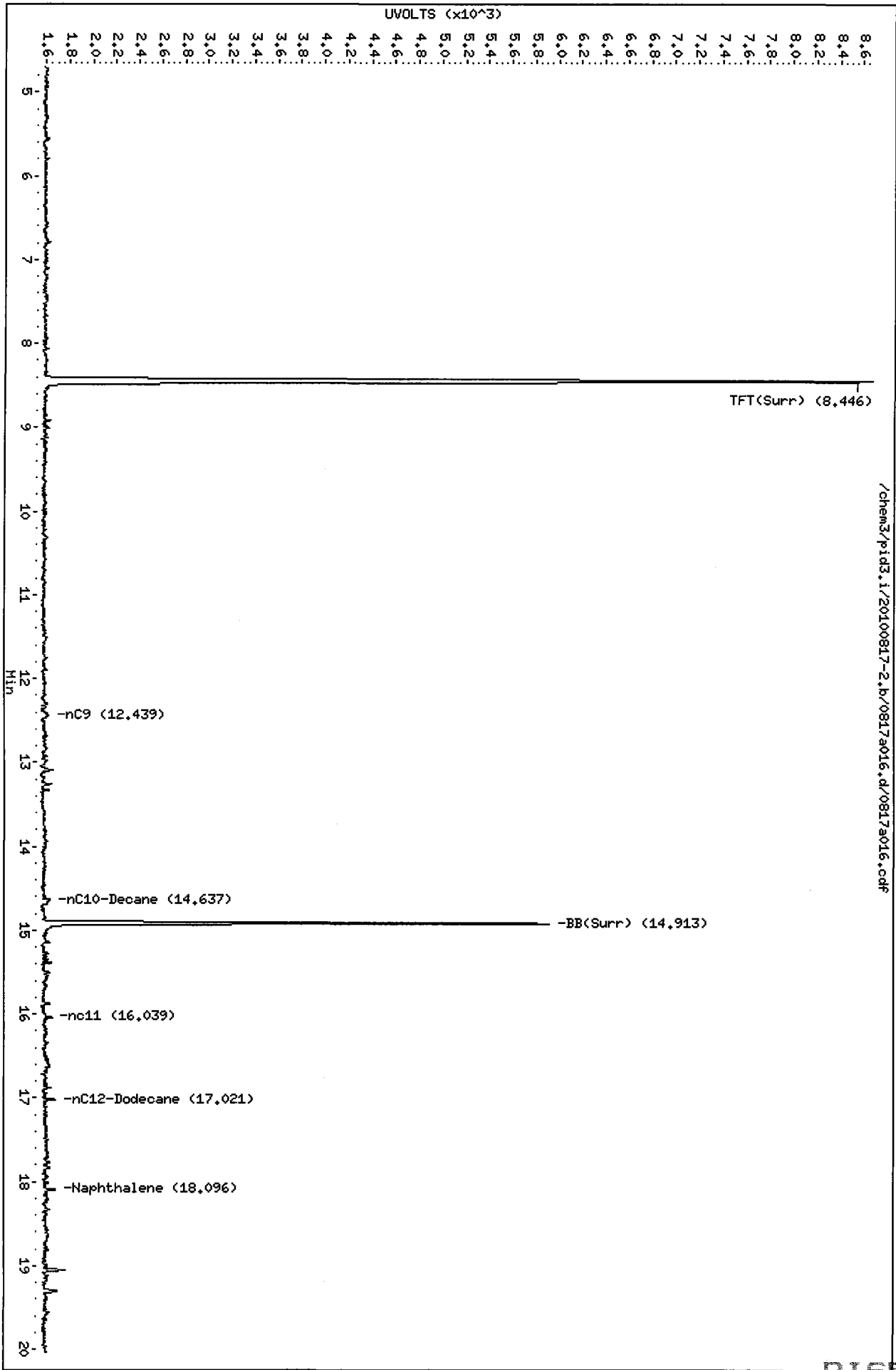
RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100817-2.b/0817a016.d  
Date: 17-AUG-2010 12:22  
Client ID: MW-07-081310  
Sample Info: R165C

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

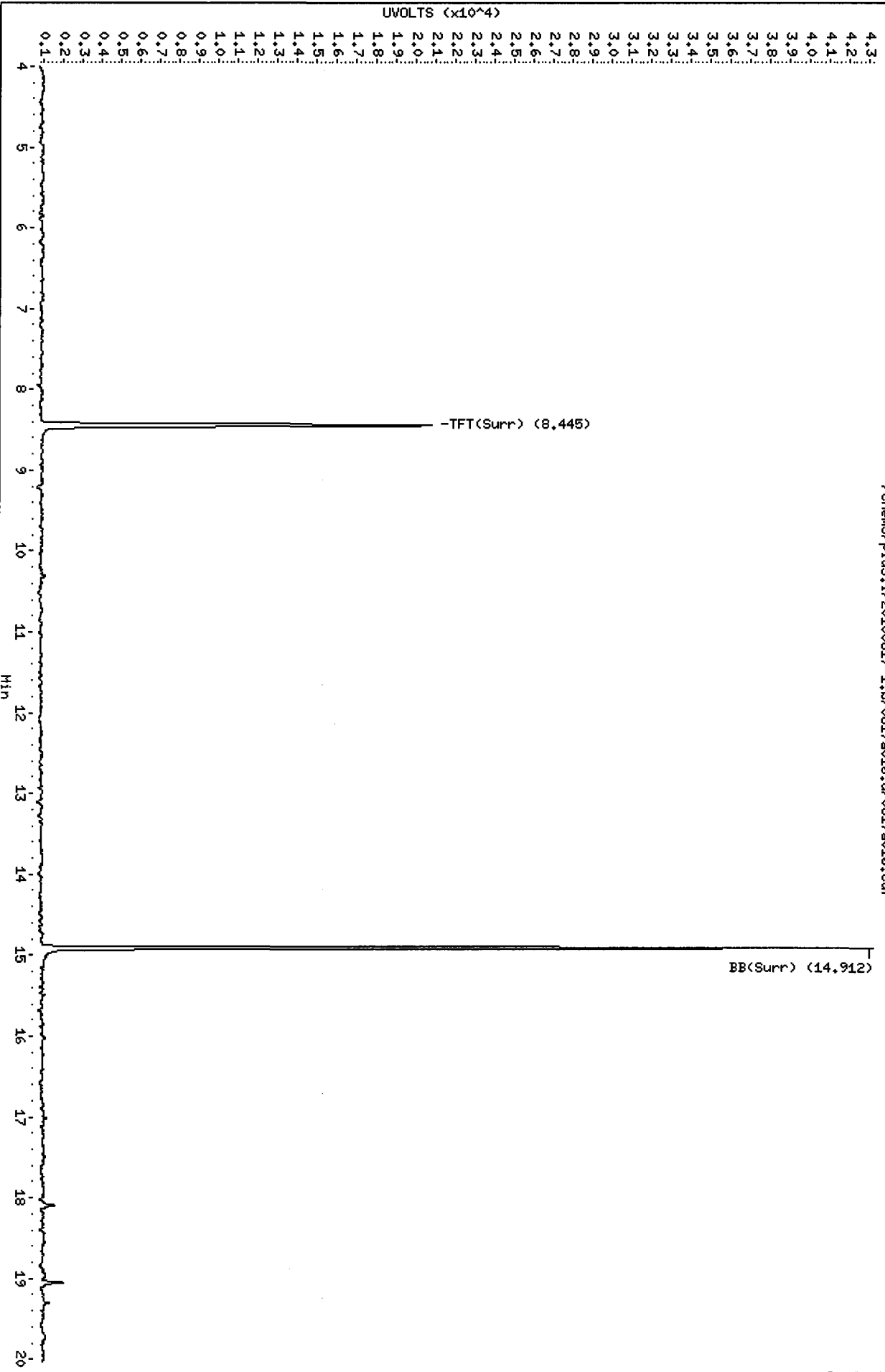


/chem3/pid3.i/20100817-2.b/0817a016.d/0817a016.cdf

Data File: /chem3/pid3.i/20100817-1.b/0817a016.d  
Date: 17-AUG-2010 12:22  
Client ID: MW-07-081310  
Sample Info: R165C  
Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid3.i/20100817-1.b/0817a016.d/0817a016.cdf



M  
8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a017.d      ARI ID: RI65D  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a017.d      Client ID: MW-01-081310  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 12:47  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.444	0.034	7184	84243	99.8	TFT(Surr)
14.913	0.025	4395	35252	102.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	30899	0.037
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	5920	0.004
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	3286	0.003
NWTPHG Tol-Nap (10.17 to 18.18)	882029	34172	0.039

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.442	0.033	20143	91.6	TFT(Surr)
14.910	0.024	43270	94.9	BB(Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
12.845	0.039	493	0.40	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

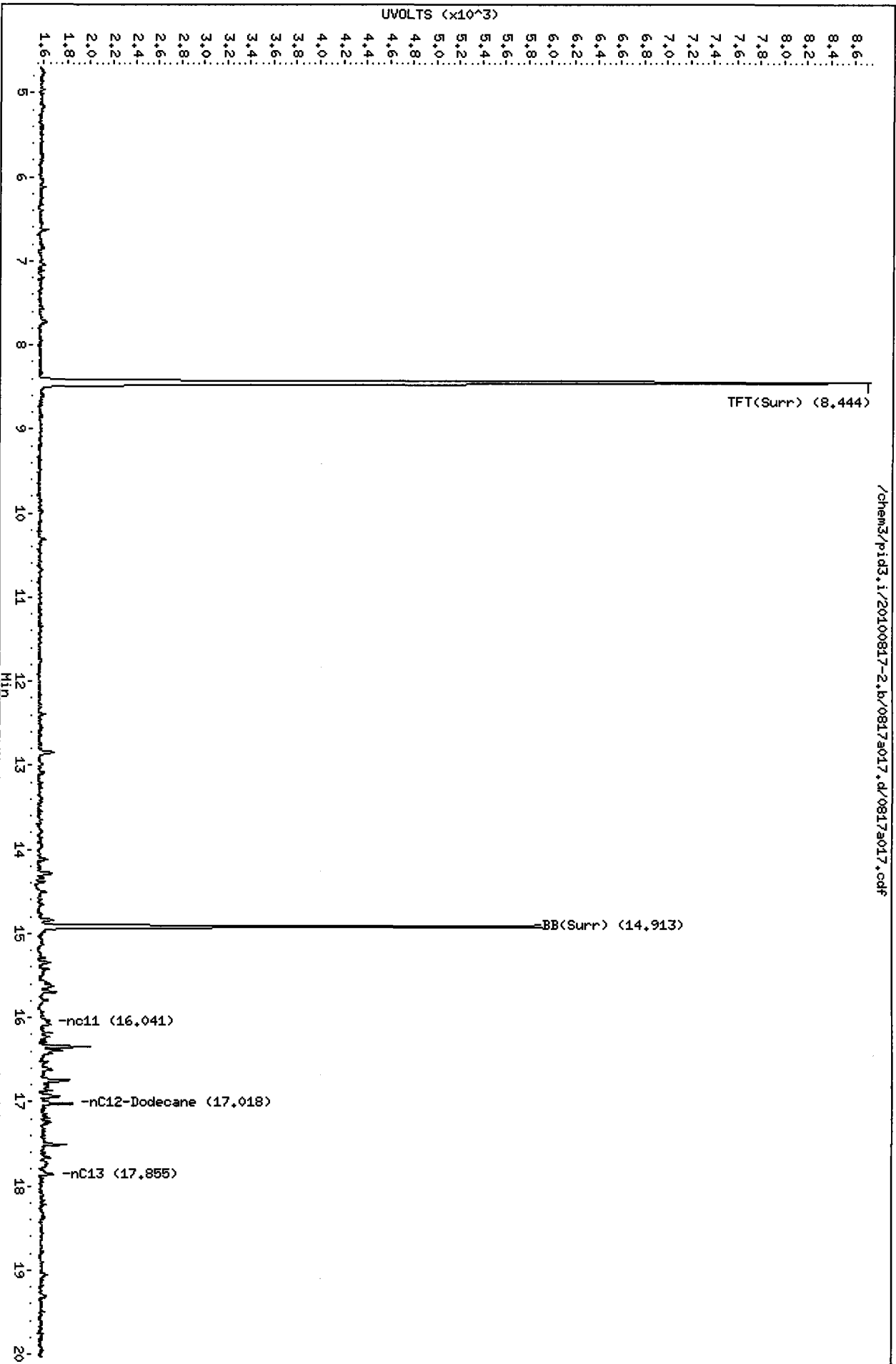
Data File: /chem3/pid3.i/20100817-2.b/0817a017.d  
Date: 17-AUG-2010 12:47

Client ID: MW-01-081310  
Sample Info: R165D

Column Phase: RTX 502-2 FID

Instrument: pid3.i

Operator: MH  
Column diameter: 0.18



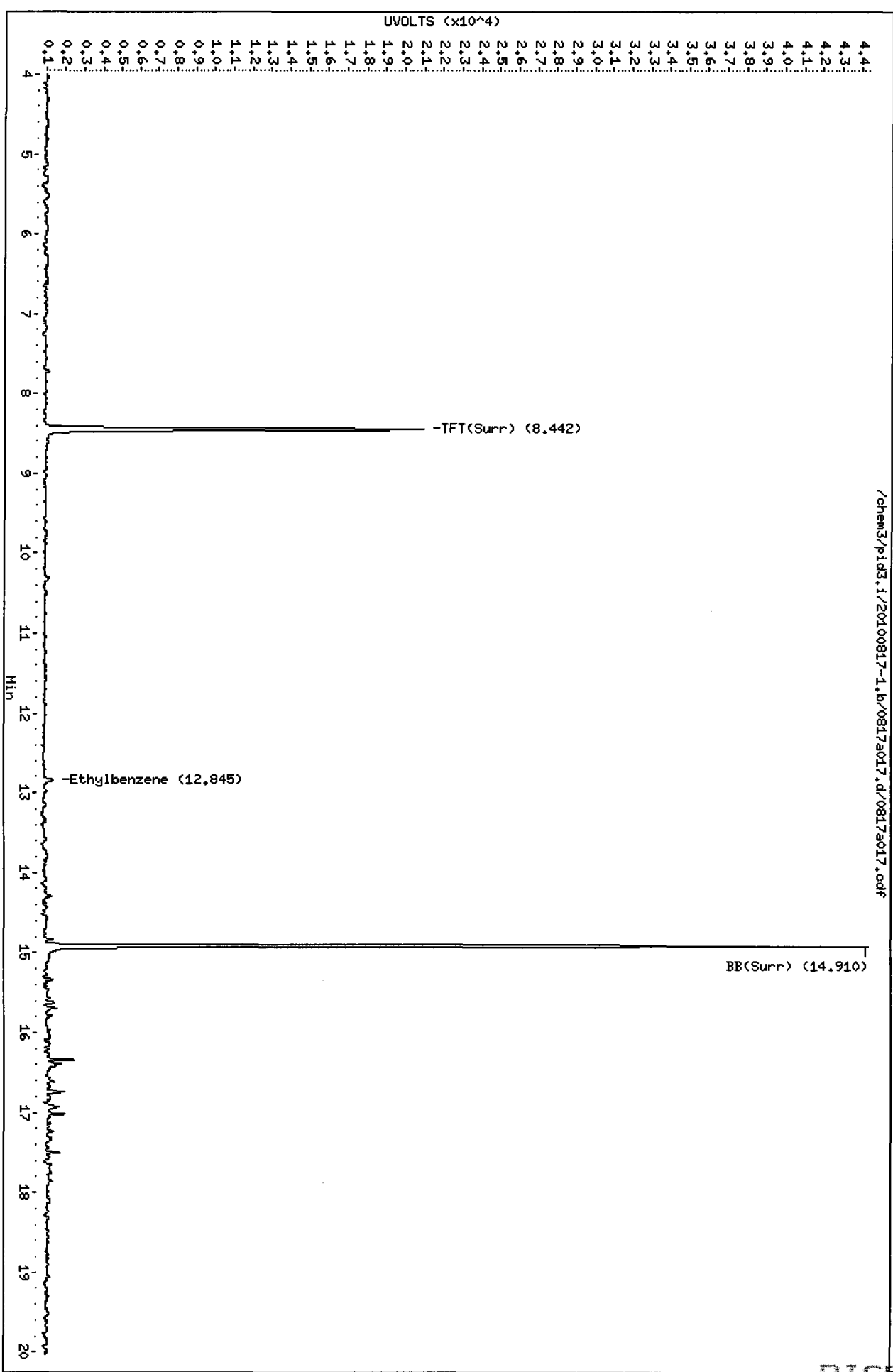
/chem3/pid3.i/20100817-2.b/0817a017.d/0817a017.cdf

000100

Data File: /chem3/pid3.i/20100817-1.b/0817a017.d  
Date: 17-AUG-2010 12:47  
Client ID: MW-01-081310  
Sample Info: R165D

Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



8/25/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a018.d      ARI ID: RI65E  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a018.d      Client ID: MW-05-081310  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 13:12  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.442	0.032	7116	84650	98.9	TFT(Surr)
14.913	0.025	4388	35376	101.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	2164	0.003
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	1	0.000
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	1	0.000
NWTPHG Tol-Nap (10.17 to 18.18)	882029	2164	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
8.441	0.033	19819	90.2	TFT(Surr)
14.911	0.025	42893	94.1	BB(Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



Data File: /chem3/pid3.i/20100817-2.b/0817a018.d

Date: 17-AUG-2010 13:12

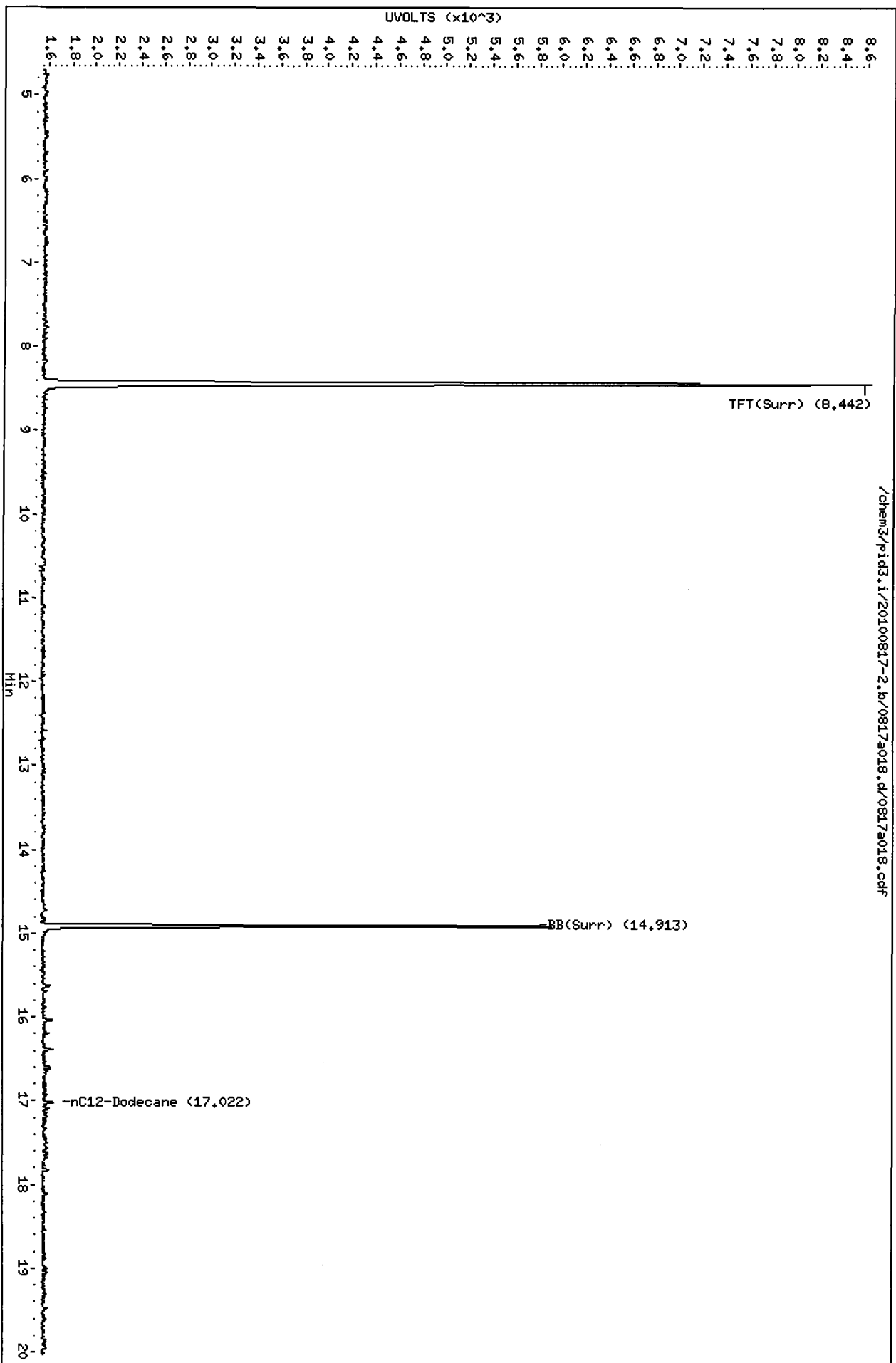
Client ID: MW-05-081310

Sample Info: R165E

Page 1

Column phase: RTX 502-2 FID

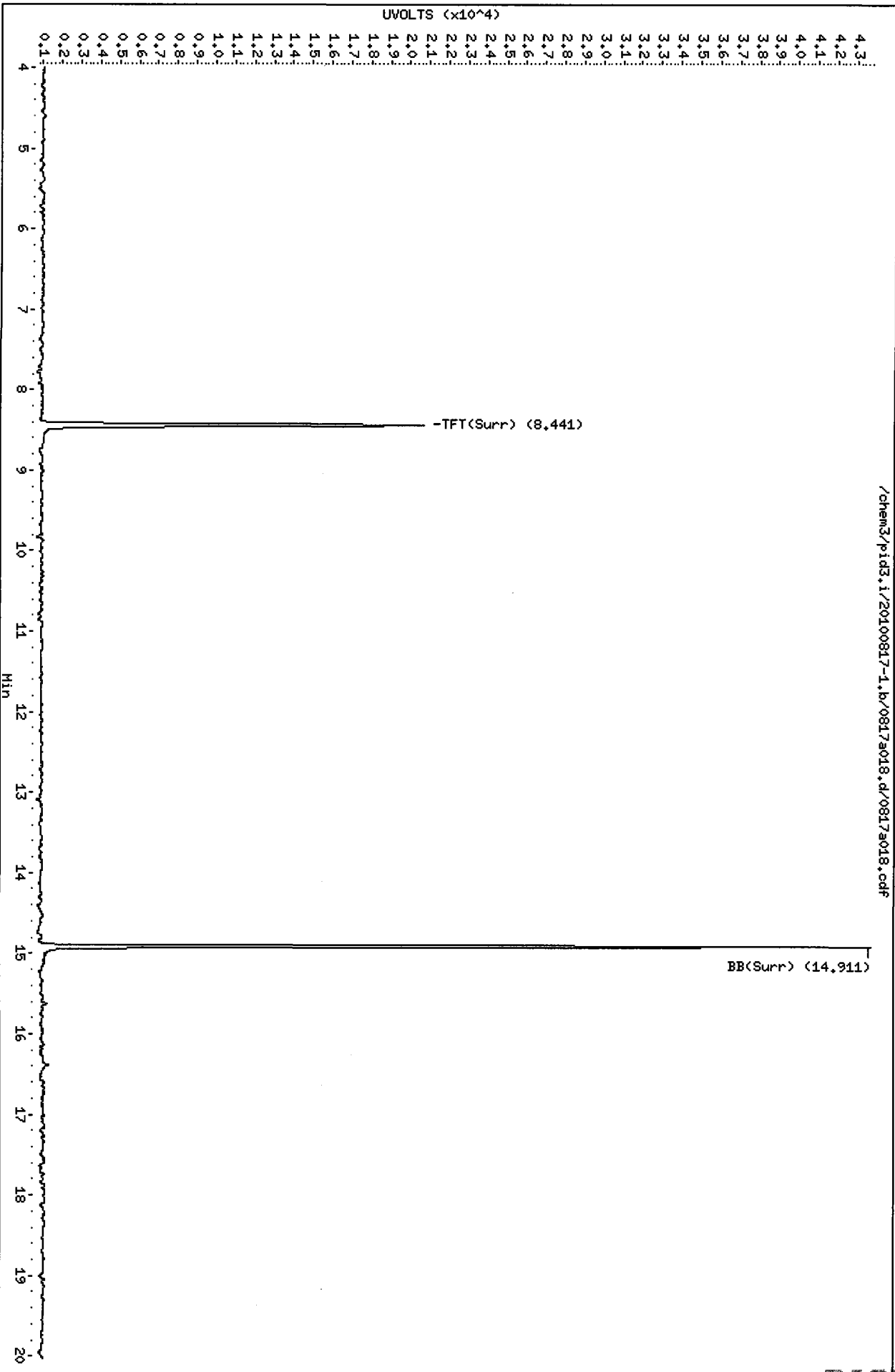
Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



R165: 00016

Data File: /chem3/pid3.i/20100817-1.b/0817a018.d  
Date: 17-AUG-2010 13:12  
Client ID: MW-05-081310  
Sample Info: R165E  
Column phase: RTX 502-2 PID

Instrument: pid3.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid3.i/20100817-1.b/0817a018.d/0817a018.cdf

M.  
8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a020.d      ARI ID: BCAL 3  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a020.d      Client ID:  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 14:01  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                  Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.443	0.033	6814	80567	94.7	TFT(Surr)
14.912	0.024	4325	34522	100.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	531560	0.642
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	540040	0.325
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	502647	0.444
NWTPHG Tol-Nap (10.17 to 18.18)	882029	531560	0.603

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
8.441	0.033	19242	87.5	TFT(Surr)
14.911	0.024	42459	93.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.718	0.029	31920	24.14	Benzene
10.308	0.036	31076	23.55	Toluene
12.843	0.037	28024	22.55	Ethylbenzene
12.980	0.038	61347	45.56	M/P-Xylene
13.758	0.033	29827	23.22	O-Xylene
5.308	0.016	9090	25.55	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid3.i/20100817-2.b/0817a020.d  
Date: 17-AUG-2010 14:01

Client ID:

Sample Info: BCL 3

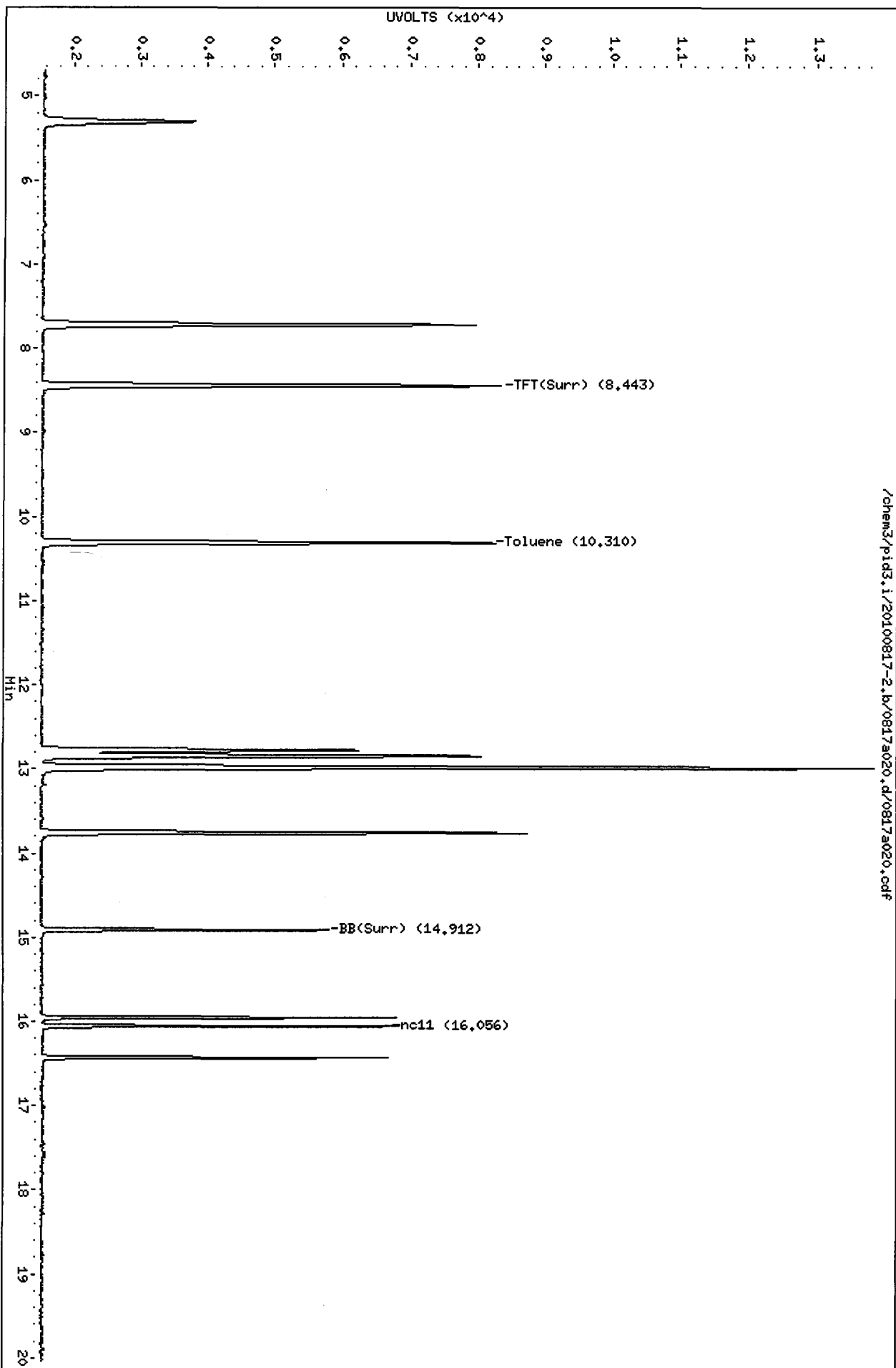
Column phase: RTX 502-2 FID

Instrument: pid3.i

Operator: HH

Column diameter: 0.18

/chem3/pid3.i/20100817-2.b/0817a020.d/0817a020.cdf



Data File: /chem3/pid3.i/20100817-1.k/0817a020.d  
Date : 17-AUG-2010 14:01

Client ID:

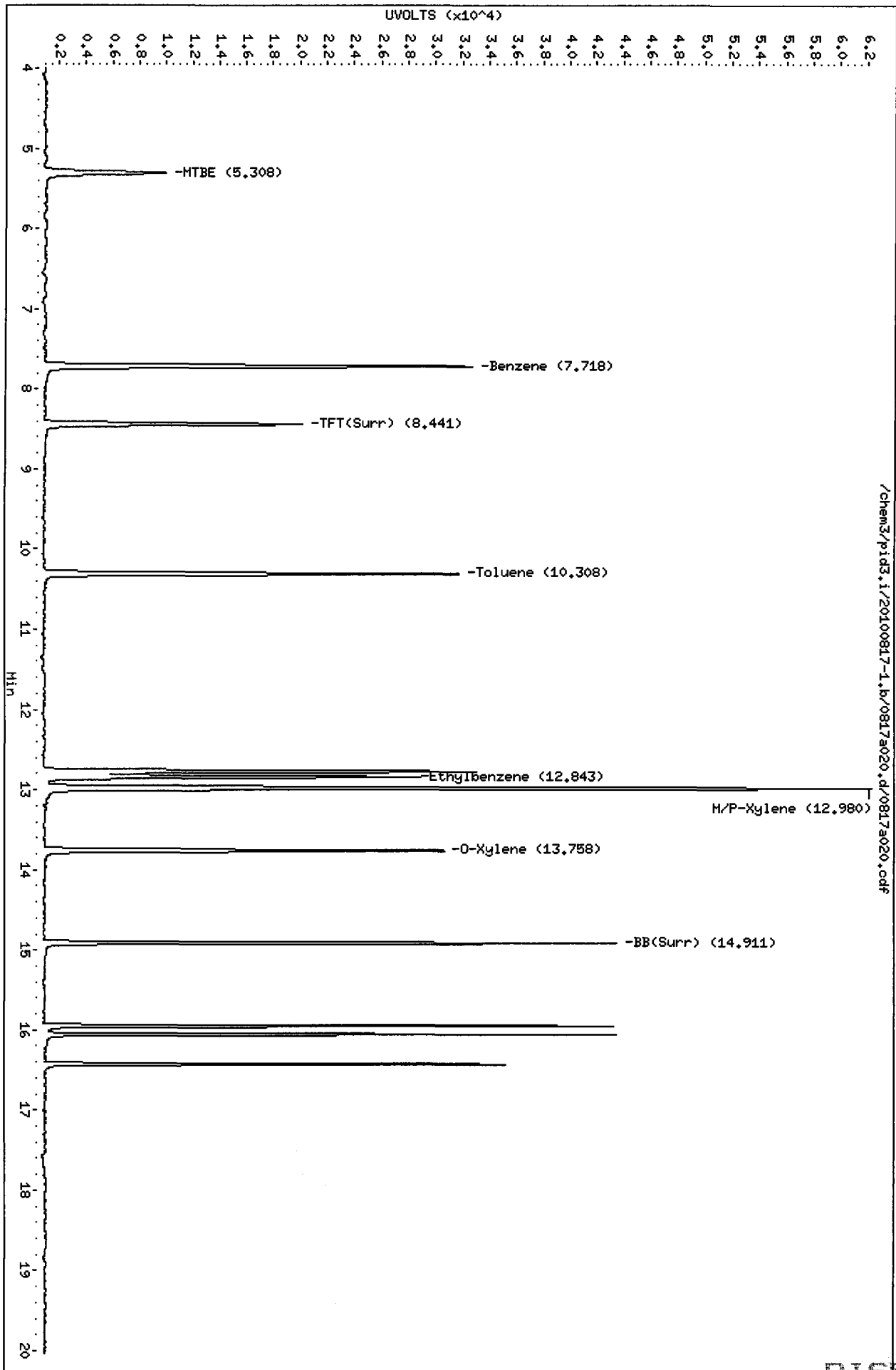
Sample Info: BQAL 3

Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: HH

Column diameter: 0.18



/chem3/pid3.i/20100817-1.k/0817a020.d/0817a020.cdf

Me  
8/25/10

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid3.i/20100817-2.b/0817a021.d      ARI ID: GCAL 3  
Data file 2: /chem3/pid3.i/20100817-1.b/0817a021.d      Client ID:  
Method: /chem3/pid3.i/20100817-1.b/PIDB.m              Injection Date: 17-AUG-2010 14:26  
Instrument: pid3.i    Matrix: WATER  
Gas Ical Date: 28-JUL-2010                                   Dilution Factor: 1.000  
BETX Ical Date: 29-JUN-2010

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
8.446	0.037	6981	83557	97.0	TFT (Surr)
14.914	0.026	4391	35541	102.0	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 (10.17 to 17.11)	827807	1771430	2.140 M
8015B 2MP-TMB ( 4.93 to 15.58)	1664107	3404261	2.046 M
AK101 nC6-nC10 ( 5.41 to 14.53)	1131784	2267248	2.003 M
NWTPHG Tol-Nap (10.17 to 18.18)	882029	1874480	2.125 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
8.445	0.037	19376	88.1	TFT (Surr)
14.912	0.026	42706	93.7	BB (Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
7.722	0.033	6593	4.99	Benzene
10.313	0.040	88150	66.79	Toluene
12.769	-0.037	1231	0.99	Ethylbenzene
12.987	0.044	97004	72.03	M/P-Xylene
13.761	0.036	40765	31.73	O-Xylene
5.315	0.023	77451	217.68	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

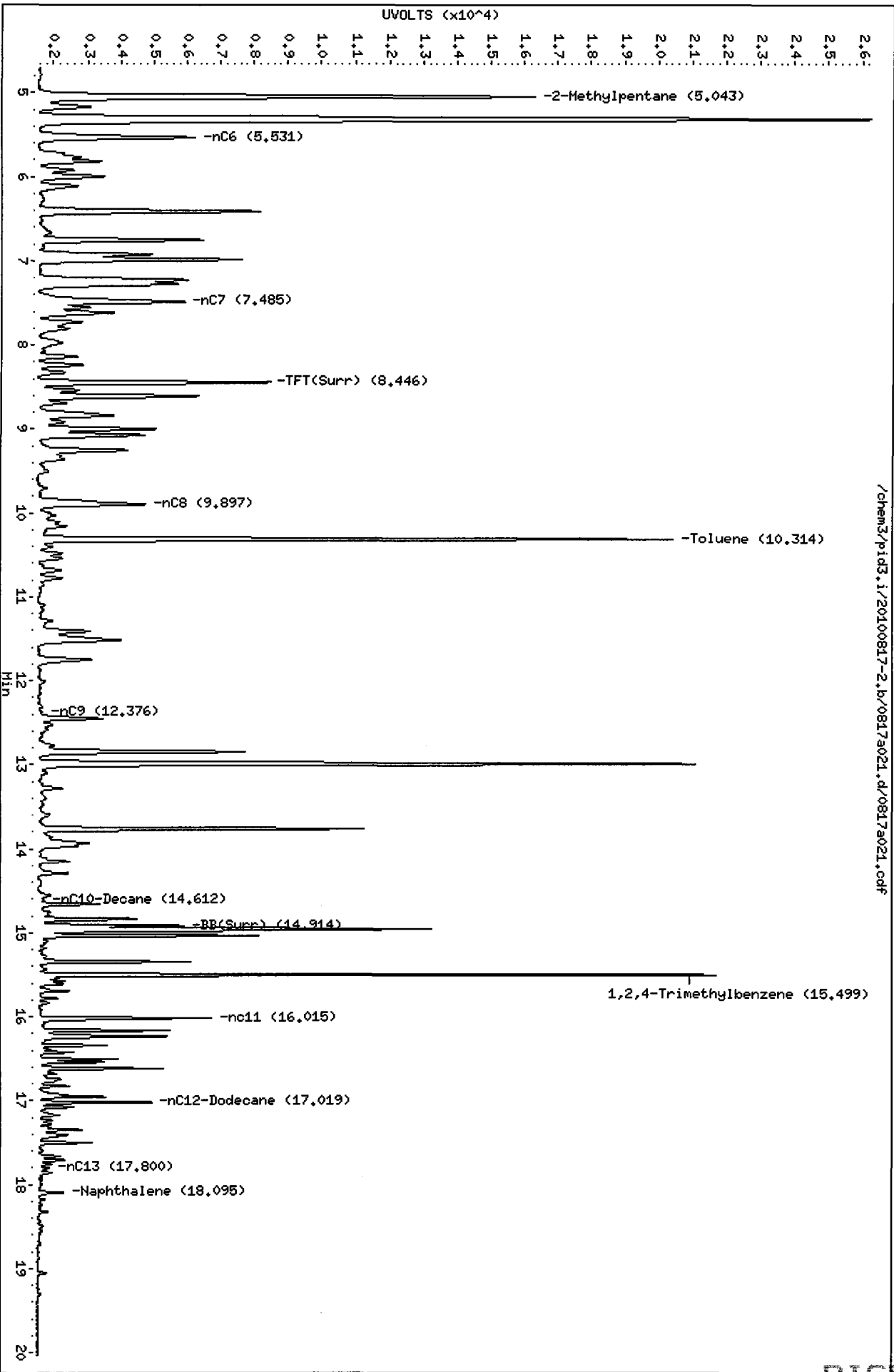
Data File: /chem3/pid3.i/20100817-2.b/0817a021.d  
Date: 17-AUG-2010 14:26

Client ID:  
Sample Info: GCAL 3

Column phase: RTX 502-2 FID

Instrument: pid3.i  
Operator: HH  
Column diameter: 0.18

/chem3/pid3.i/20100817-2.b/0817a021.d/0817a021.cdf



Data File: /chem3/pid3.i/20100817-1.b/0817a021.d  
Date: 17-AUG-2010 14:26

Client ID:

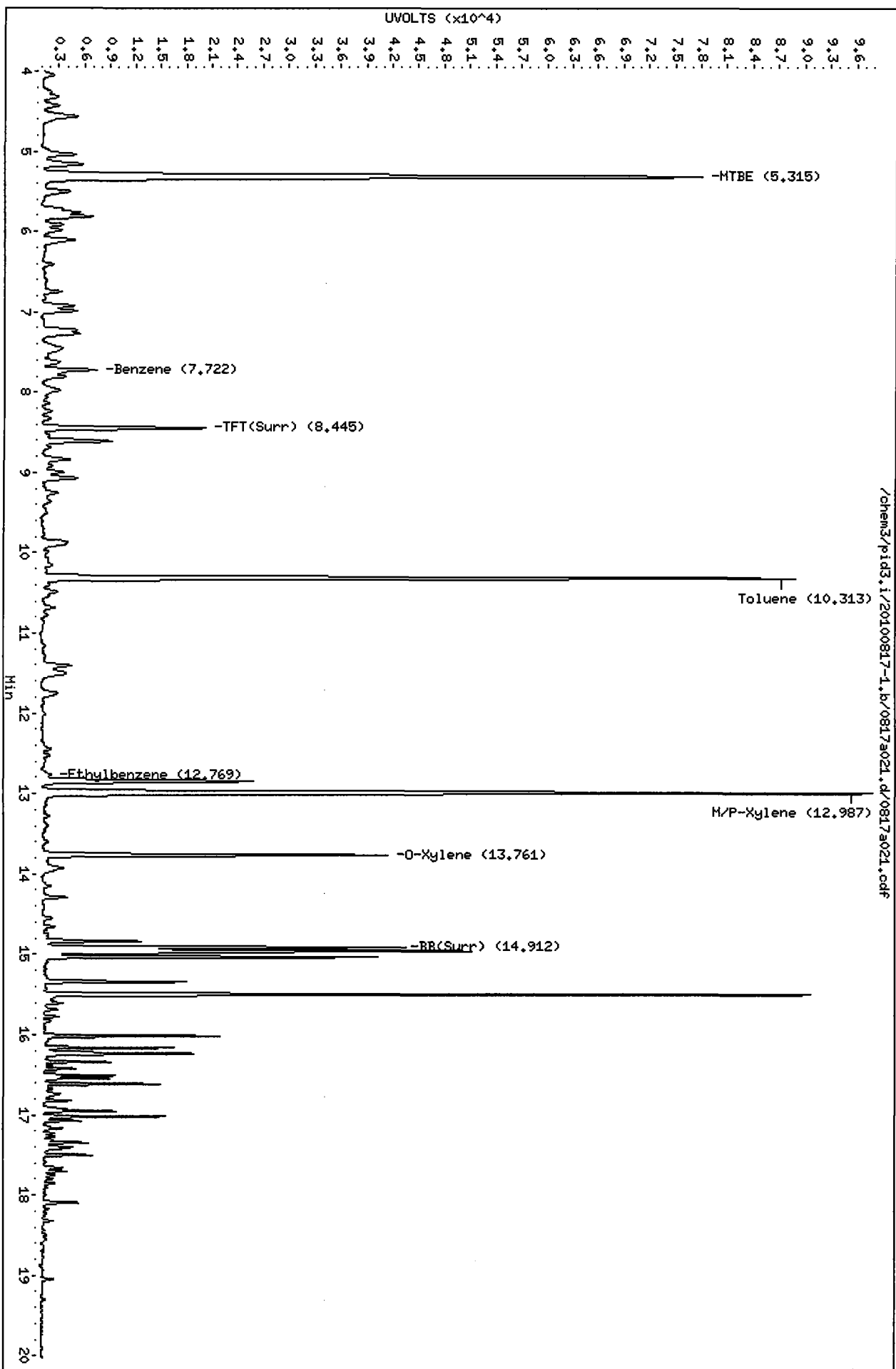
Sample Info: GCAL 3

Column phase: RTX 502-2 PID

Instrument: pid3.i

Operator: HH

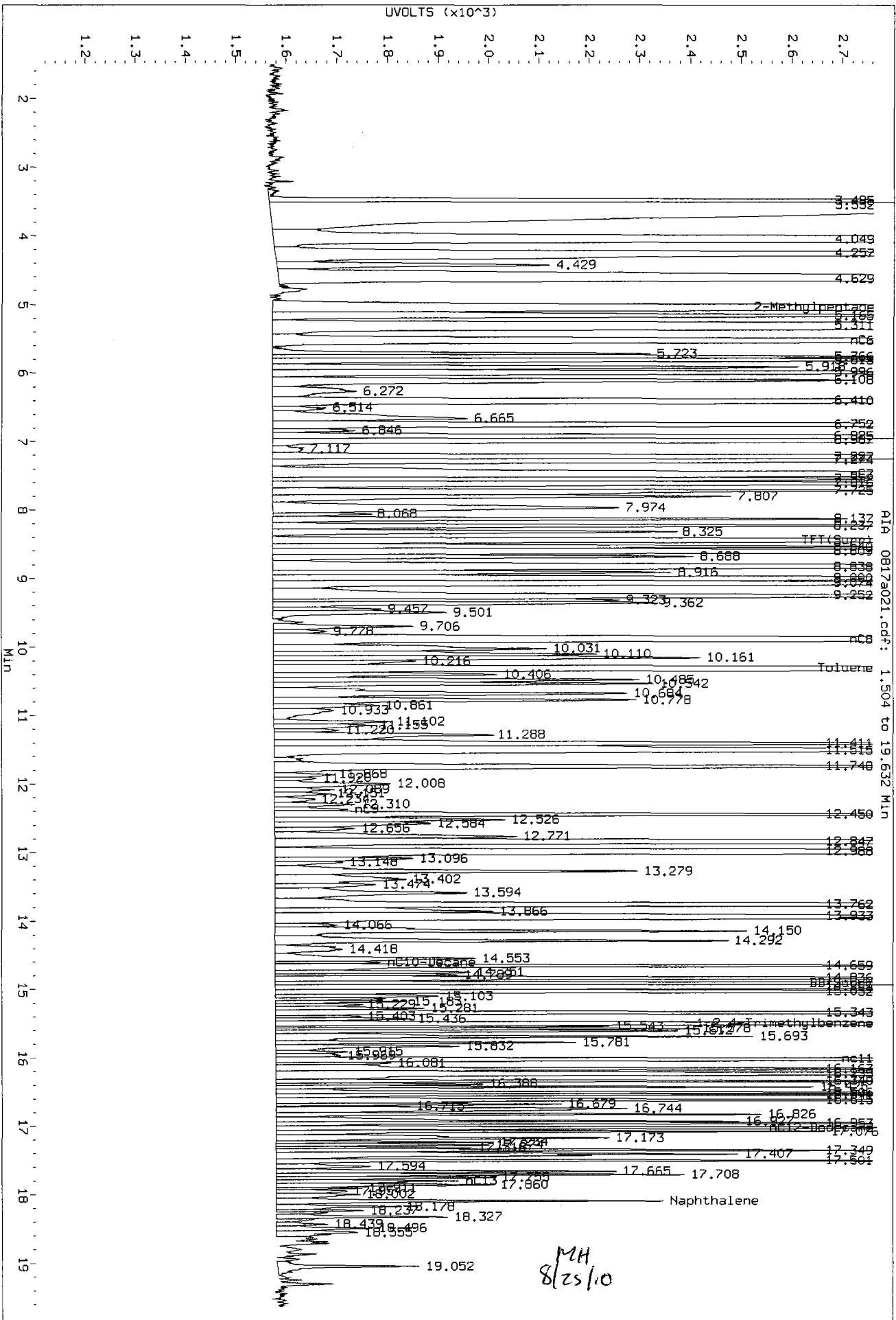
Column diameter: 0.18



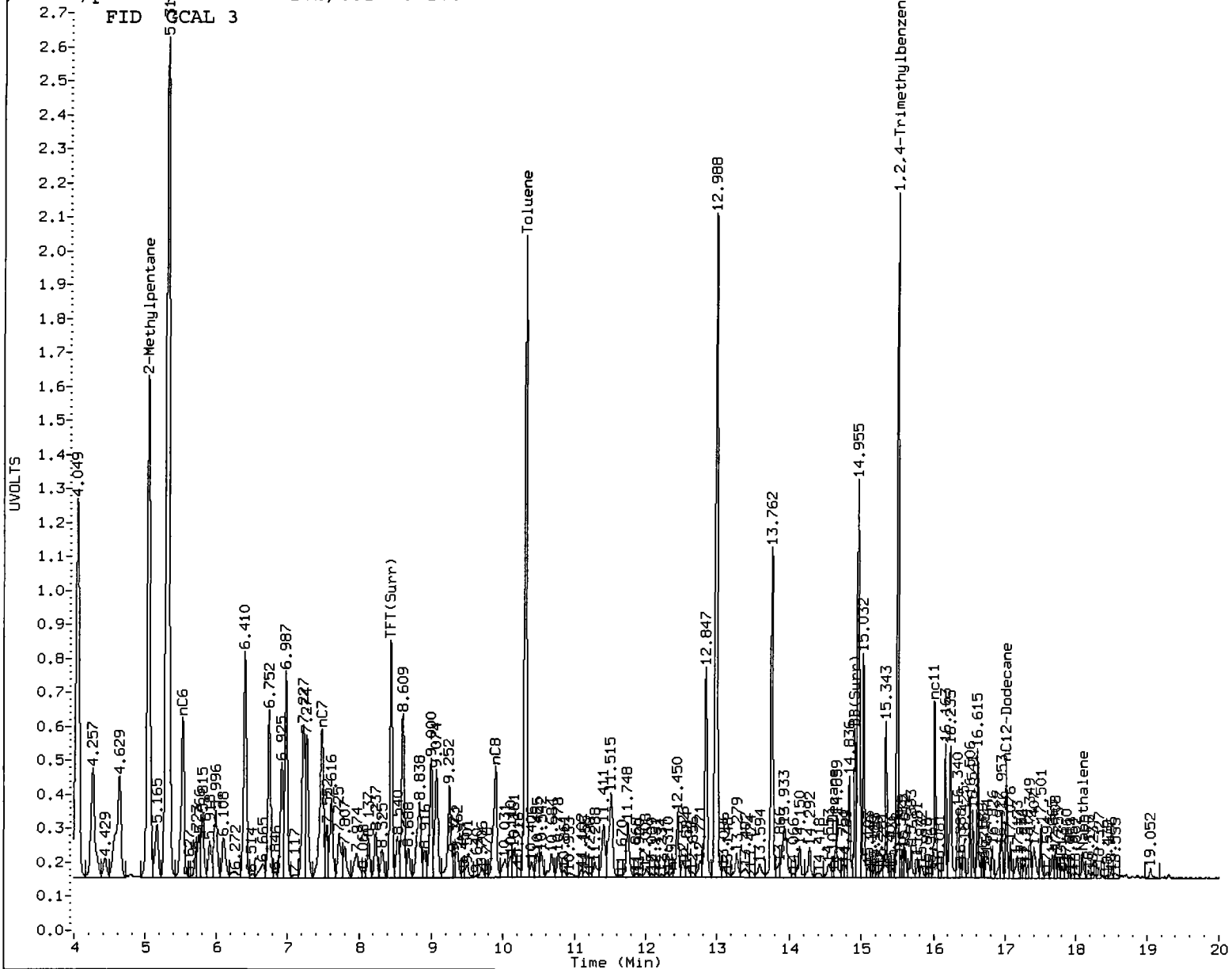
/chem3/pid3.i/20100817-1.b/0817a021.d/0817a021.cdf



Data File: /chem3/pid3.1/20100817-2.b/0817a021.d/0817a021.cdf  
 Injection Date: 17-AUG-2010 14:26  
 Instrument: pid3.1  
 Client Sample ID:



MH  
8/25/10



MANUAL INTEGRATION

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

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

Analyst:   MH  

Date:   8/25/10

**Metals Raw Data  
Preparation Bench Sheets and Notes**

**ARI Job ID: RI65**





# Digestion Log

Analyst: MH

Date: 8/17/10

Matrix: Water Block ID: #14

Block Temp: 950C

Thermometer: MP18

ARI Sample ID	Btl #	pH<2	Prep Code: <u>REN</u>		Prep Code:		Comments
			Initial Wt (g) Vol (mL)	Final Vol (mL)	Initial Wt (g) Vol (mL)	Final Vol (mL)	
RI46 A	15	—	50.0	25.0			Filtered in Lab
" ADUP	15	—					
" ASPK	15	—					
" B	15	—					
" C	15	—					
" D	15	—					
" E	15	—					
" F	15	—					
" G	15	—					
" H	15	—					
" I	15	—					
" MBI	—	—					
" MBISPK	—	—					
RI65 A	9	—					
" B	21	—					
" BDUP	21	—					
" BSPK	21	—					
" C	9	—					
" D	9	—					
" E	9	—					
" MBI	—	—	↓	↓			
" MBISPK	—	—	50.0	25.0			
<del> <div style="display: flex; justify-content: space-between; align-items: center;"> <span>5061F</span> <span>Page 21575</span> <span>Version 004 6/8/10</span> </div> </del>							

Chemical/Reagent ID:

HNO<sub>3</sub>: MP1937  
I5547

HCl: —

H<sub>2</sub>O<sub>2</sub>: I5512

Tube Lot #: 1005282

**Metals Raw Data  
Run Logs, Calibrations, and Raw Data**

**ARI Job ID: RI65**



# ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 8.19.10

Analyst: REW

Page: 1 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		std 0			2750-3
		1			2748-5
		2			↓ -6
		3			2751-1
		↓ 4			2748-8
		rinse sample			
		ICV			2732-4
		ICB			
		CCV1			
		(CB)			
		low check			
		ICSA			
		ICSA B			
		CCV2			
		CCB2			
		RH25 A-L	REW	10 ✓	As
		A		2	
		Adp		↓ ✓	
		Asph		↓ ✓	
		B		5	
		↓ Q	↓	↓	↓
		RH66 E		2	
		F			scan Zn
		↓ G	↓	↓	



# ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 8.19.10

Analyst: REW

Page: 2 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		RH66 H	REW	2	
		CCV3			
		CCB3			
		RI46 MBI	REW	2	
		RH66 MB	↓	↓	✓
		↓ MBsph	↓	↓	✓
		RI46 MBI sph	↓	↓	✓
		↓ Acph	↓	↓	✓
		A	↓	↓	✓
		Asph	↓	↓	✓
		B	↓	↓	
		C	↓	↓	
		↓ D	↓	↓	
		CCV4			
		CCB4			
		RI65 MBI	REW	2	
		↓ MBISph	↓	↓	✓
		RI46 E	↓	↓	
		F	↓	↓	
		G	↓	↓	
		H	↓	↓	
		↓ I	↓	↓	
		RI66 F	↓	10	Zn
		LR200			





# ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 8/19/10

Analyst: BW

Page: 3 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		LR300			
		CCV5			
		CCB5			
		RI57 MB	SUN	20	
		↓ MBspk	↓	↓	✓
		RI65 Bdep	REF	2	✓
		↓ B	↓	↓	✓
		↓ Bdep	↓	↓	✓
		↓ AV	↓	↓	
		↓ C	↓	↓	
		↓ D	↓	↓	
		↓ E	↓	↓	
		RI57 A	SUN	20	
		CCV6			
		CCB6			
		RI28 MB1	SUN	20	
		↓ MB1spk	↓	↓	✓
		↓ Adep	↓	↓	✓
		↓ A	↓	↓	
		↓ A spk	↓	↓	✓
		↓ A post	↓	↓	✓
		↓ B	↓	↓	
		↓ C	↓	↓	
		RI57 B			

✓ Sb 2%  
0.06 spk #1, spk #2 ~~Sb~~

*[Signature]*  
Version 002  
7/21/06

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA

Analysis Date: 8/19/10

	Analyst RJC 8-20	Peer HJZ	Comment
<b>Logbook:</b>			
Analyst, Date, Method info	/	✓	
Sample ID's	/	✓	
Standard/QC solution ID's recorded	/	✓	
Prep codes	/	✓	
Dilution factors	/	✓	
Crossouts/Corrections/Deletions	/	✓	
<b>Calibration:</b>			
Blank & Standard intensities	/	✓	
Standard deviations	/	✓	
Curve fit	/	✓	
<b>Calibration Verification:</b>			
ICV/CCV	/	✓	
ICB/CCB	/	✓	
<b>Samples:</b>			
RSD's & SD's	/	✓	
Internal Standards	/	✓	
Carry-over	/	✓	
<b>Method QC:</b>			
CRI/CRA	/	✓	
ICSA/ICSAB	/	✓	
Post Spikes/Serial Dilutions	/	/	
Analytic Spikes	—	—	
<b>Matrix QC:</b>			
SRM/LCS	/	✓	
Matrix Spikes	/	✓	RI28
Matrix Duplicates	/	✓	
Method Blanks	/	✓	
<b>Data Distribution:</b>			
Requested elements/isotope identified	/	✓	
Correct samples identified for distribution	/	✓	
Raw data match distributed data	/	✓	
Data filename correct	/	✓	
Necessary Analysts Notes and CAF's	/	/	RI28

# Instrument Tuning Report

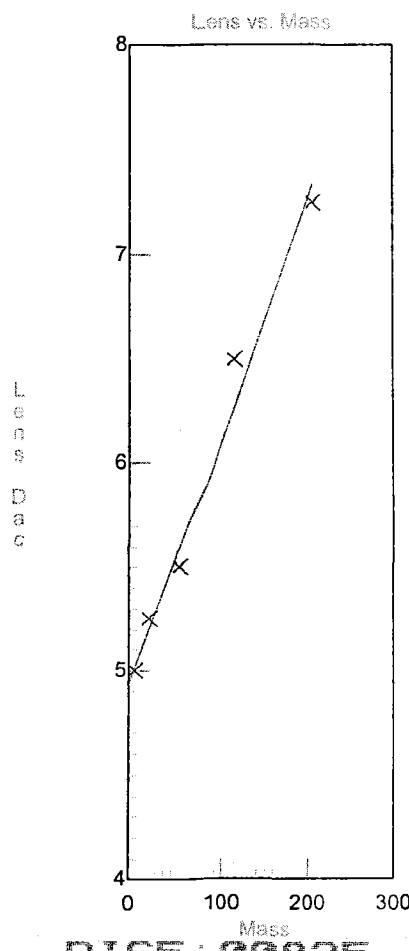
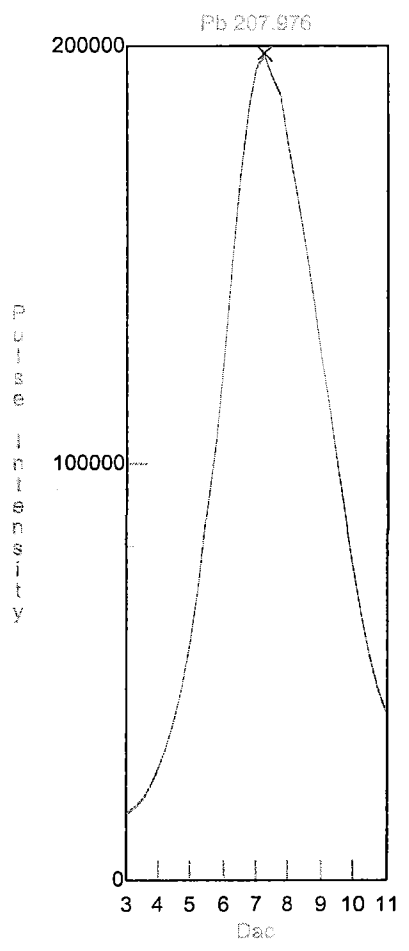
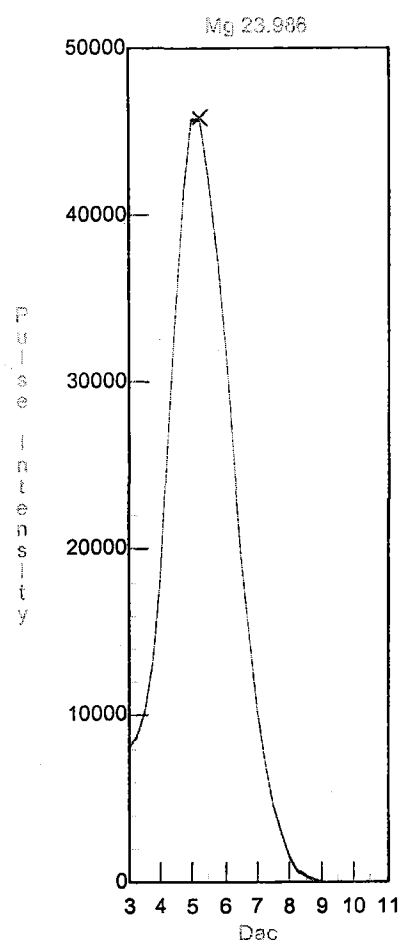
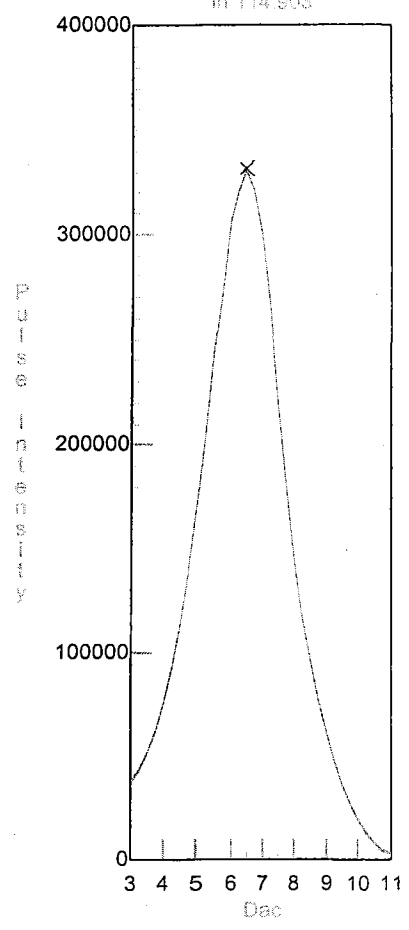
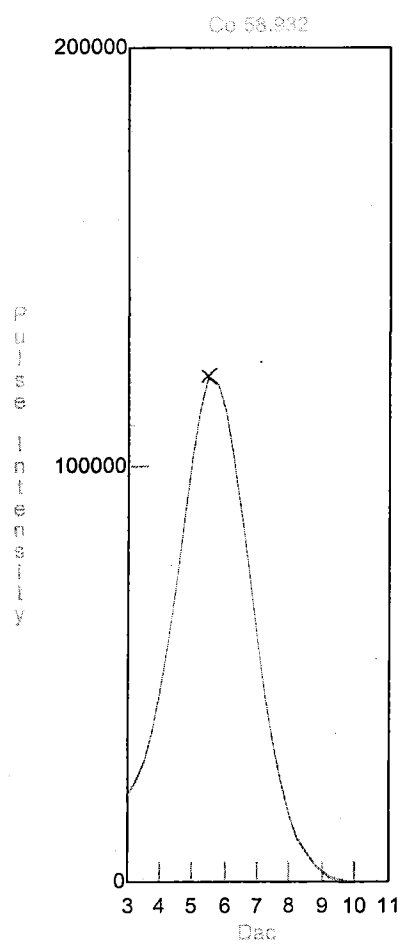
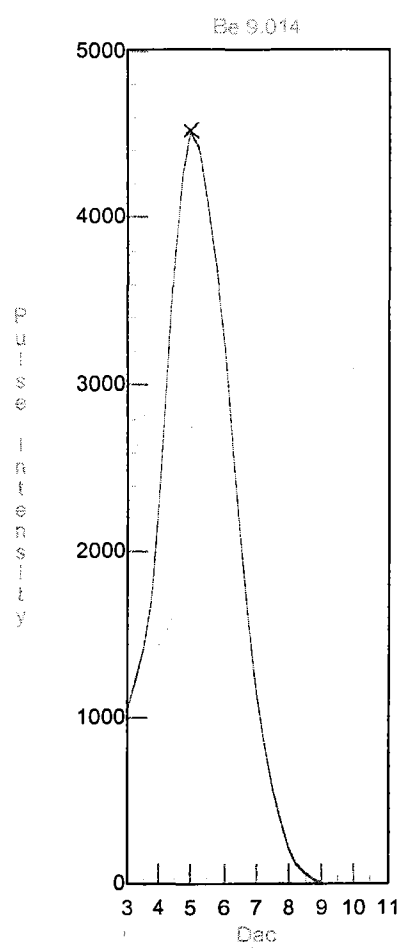
1st

File Name: 2008.tun  
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Be	9.012	8.976 ✓	2027	2170	0.717	
Mg	23.985	23.979 ✓	5663	2282	0.704	✓
Co	58.933	58.979 ✓	14150	2546	0.694	
In	114.904	114.878 ✓	27758	2997	0.678	
Pb	207.977	207.976 ✓	50419	3763	0.678	

8.19.10

In 114.908



# Daily Performance Report

Sample ID: Sample  
Sample Date/Time: Thursday, August 19, 2010 11:17:52  
Sample Description:  
Sample File: 1120.sam  
Method File: c:\elandata\Method\aridailyperf.mth  
Dataset File: c:\elandata\Dataset\daily performance\Sample.7030  
Tuning File: c:\elandata\Tuning\2008.tun  
Optimization File: c:\elandata\Optimize\arioptimize.dac  
Number of Replicates: 5  
Dual Detector Mode: Pulse

ne b  
1.05

## Summary

Analyte	Mass	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
Mg	24	47668.976	677.074	1.420
In	115	330907.629	1764.708	0.533
Pb	208	198398.305	630.784	0.318
[> Ba	138	209354.780	960.884	0.459
[ Ba++	69	0.009	0.000	2.407
[> Ce	140	246582.104	1304.880	0.529
[ CeO	156	0.028	0.001	1.985
Bkgd	220	2.500	0.884	35.355

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 11:24:45

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L				4707	1
Cl	37		mg/L				1264649	0
> Ge	72		ug/L				241496	0
Ni	60		ug/L				28	18
Ni	62		ug/L				168	3
Cu	63		ug/L				260	3
Cu	65		ug/L				62	12
Zn	66		ug/L				253	13
Zn	67		ug/L				110	8
Zn	68		ug/L				2272	2
As-1	75		ug/L				35	126
As	75		ug/L				4780	0
Se	82		ug/L				-5	117
Se	78		ug/L				4907	0
Y	89		ug/L				230220	0
Kr	83		ug/L				76	9
> In	115		ug/L				331526	0
Ag	107		ug/L				19	35
Cd	111		ug/L				203	7
Cd	114		ug/L				45	22
Sb	121		ug/L				22	33
Sb	123		ug/L				14	17
Ba	135		ug/L				14	5
Ba	137		ug/L				20	49
> Tb	159		ug/L				301360	0
Tl	205		ug/L				426	11
Pb	208		ug/L				331	8
Bi	209		ug/L				307927	0
Th	232		ug/L				40	15
U	238		ug/L				10	12

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 11:32:00

Number of Replicates: 3

Method File: C:\elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4103	1
Cl	37		mg/L			1264649	1256454	0
> Ge	72		ug/L			241496	244320	0
Ni	60	10.000	ug/L	0.048	0	28	24256	0
Ni	62	10.000	ug/L	0.248	2	168	3751	2
Cu	63	10.000	ug/L	0.027	0	260	52180	0
Cu	65	10.000	ug/L	0.038	0	62	24304	0
Zn	66	10.000	ug/L	0.104	1	253	17476	1
Zn	67	10.000	ug/L	0.169	1	110	3015	1
Zn	68	10.000	ug/L	0.100	1	2272	14007	0
As-1	75	10.000	ug/L	0.116	1	35	13235	1
As	75	10.000	ug/L	0.168	1	4780	17810	1
Se	82	10.000	ug/L	0.029	0	-5	1704	0
Se	78	10.000	ug/L	0.140	1	4907	9065	0
Y	89		ug/L			230220	231909	0
Kr	83		ug/L			76	69	5
> In	115		ug/L			331526	334130	0
Ag	107	10.000	ug/L	0.018	0	19	104679	0
Cd	111	10.000	ug/L	0.077	0	203	28055	0
Cd	114	10.000	ug/L	0.023	0	45	65790	0
Sb	121	10.000	ug/L	0.056	0	22	85572	0
Sb	123	10.000	ug/L	0.041	0	14	64446	0
Ba	135	10.000	ug/L	0.134	1	14	19297	1
Ba	137	10.000	ug/L	0.026	0	20	32875	0
> Tb	159		ug/L			301360	304808	0
Tl	205	10.000	ug/L	0.034	0	426	273827	0
Pb	208	10.000	ug/L	0.024	0	331	378577	0
Bi	209		ug/L			307927	307734	0
Th	232	10.000	ug/L	0.049	0	40	394808	0
U	238	10.000	ug/L	0.038	0	10	450526	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 11:39:16

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4194	1
Cl	37		mg/L			1264649	1254605	0
> Ge	72		ug/L			241496	244412	0
Ni	60	19.942	ug/L	0.088	0	28	47811	0
Ni	62	19.904	ug/L	0.410	2	168	7167	1
Cu	63	19.966	ug/L	0.139	0	260	103258	0
Cu	65	19.953	ug/L	0.140	0	62	47997	1
Zn	66	20.048	ug/L	0.160	0	253	35129	0
Zn	67	19.922	ug/L	0.263	1	110	5810	0
Zn	68	20.023	ug/L	0.027	0	2272	25863	0
As-1	75	20.075	ug/L	0.153	0	35	26943	0
As	75	20.050	ug/L	0.082	0	4780	31124	0
Se	82	20.050	ug/L	0.147	0	-5	3458	0
Se	78	19.979	ug/L	0.178	0	4907	13128	0
Y	89		ug/L			230220	232030	0
Kr	83		ug/L			76	70	5
> In	115		ug/L			331526	330040	0
Ag	107	20.006	ug/L	0.144	0	19	207094	0
Cd	111	20.027	ug/L	0.046	0	203	55591	0
Cd	114	20.047	ug/L	0.014	0	45	131469	0
Sb	121	20.052	ug/L	0.088	0	22	171268	0
Sb	123	20.045	ug/L	0.012	0	14	128757	0
Ba	135	20.071	ug/L	0.060	0	14	38792	0
Ba	137	20.040	ug/L	0.080	0	20	65577	0
> Tb	159		ug/L			301360	303040	0
Tl	205	19.999	ug/L	0.033	0	426	543866	0
Pb	208	20.019	ug/L	0.096	0	331	755962	0
Bi	209		ug/L			307927	306514	0
Th	232	20.056	ug/L	0.056	0	40	796208	0
U	238	20.030	ug/L	0.090	0	10	902603	0



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 11:46:34

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3903	1
Cl	37		mg/L			1264649	1265617	0
> Ge	72		ug/L			241496	237510	0
Ni	60	49.913	ug/L	0.437	0	28	115244	0
Ni	62	50.011	ug/L	0.618	1	168	17267	1
Cu	63	49.826	ug/L	0.426	0	260	245745	0
Cu	65	49.832	ug/L	0.393	0	62	114465	0
Zn	66	49.803	ug/L	0.435	0	253	82799	0
Zn	67	49.811	ug/L	0.436	0	110	13698	0
Zn	68	49.848	ug/L	0.503	1	2272	58386	0
As-1	75	49.981	ug/L	0.279	0	35	65012	0
As	75	50.009	ug/L	0.168	0	4780	68470	0
Se	82	49.924	ug/L	0.482	0	-5	8314	0
Se	78	50.042	ug/L	0.211	0	4907	24775	0
Y	89		ug/L			230220	225508	0
Kr	83		ug/L			76	84	5
> In	115		ug/L			331526	320190	0
Ag	107	49.916	ug/L	0.473	0	19	497069	0
Cd	111	49.959	ug/L	0.090	0	203	133694	0
Cd	114	49.952	ug/L	0.229	0	45	316229	0
Sb	121	49.955	ug/L	0.143	0	22	412042	0
Sb	123	49.936	ug/L	0.147	0	14	309177	0
Ba	135	49.989	ug/L	0.336	0	14	93604	0
Ba	137	49.940	ug/L	0.172	0	20	157560	0
> Tb	159		ug/L			301360	296416	0
Tl	205	49.956	ug/L	0.284	0	426	1322416	0
Pb	208	49.933	ug/L	0.071	0	331	1831571	0
Bi	209		ug/L			307927	294440	0
Th	232	50.014	ug/L	0.146	0	40	1944779	0
U	238	50.043	ug/L	0.175	0	10	2215406	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 11:53:55

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4087	1
Cl	37		mg/L			1264649	1246565	0
> Ge	72		ug/L			241496	233247	0
Ni	60	99.689	ug/L	0.399	0	28	223698	0
Ni	62	99.638	ug/L	0.099	0	168	33225	0
Cu	63	99.586	ug/L	0.435	0	260	475545	0
Cu	65	99.509	ug/L	0.542	0	62	220796	0
Zn	66	99.316	ug/L	0.412	0	253	158306	0
Zn	67	99.410	ug/L	0.673	0	110	26229	1
Zn	68	99.484	ug/L	0.624	0	2272	110384	0
As-1	75	99.823	ug/L	0.779	0	35	126731	0
As	75	99.846	ug/L	0.685	0	4780	129009	0
Se	82	99.536	ug/L	0.938	0	-5	16035	0
Se	78	99.599	ug/L	0.785	0	4907	43216	0
Y	89		ug/L			230220	221127	0
Kr	83		ug/L			76	87	3
> In	115		ug/L			331526	314518	0
Ag	107	99.719	ug/L	0.310	0	19	966395	0
Cd	111	99.616	ug/L	0.176	0	203	258364	0
Cd	114	99.692	ug/L	0.293	0	45	613599	0
Sb	121	99.893	ug/L	0.269	0	22	806455	0
Sb	123	99.861	ug/L	0.408	0	14	604515	0
Ba	135	99.816	ug/L	0.239	0	14	182470	0
Ba	137	99.715	ug/L	0.532	0	20	306104	0
> Tb	159		ug/L			301360	290826	0
Tl	205	100.060	ug/L	0.359	0	426	2603521	0
Pb	208	99.931	ug/L	0.721	0	331	3587693	0
Bi	209		ug/L			307927	286224	0
Th	232	100.190	ug/L	0.443	0	40	3846706	0
U	238	100.000	ug/L	0.372	0	10	4343416	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse Sample

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 12:00:57

Number of Replicates: 3

Method File: C:\elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4656	0
Cl	37		mg/L			1264649	1304040	0
> Ge	72		ug/L			241496	244394	0
Ni	60	0.002	ug/L	0.004	190	28	34	27
Ni	62	-0.074	ug/L	0.043	57	168	145	10
Cu	63	0.001	ug/L	0.003	224	260	268	4
Cu	65	0.001	ug/L	0.001	120	62	65	4
Zn	66	-0.070	ug/L	0.011	16	253	140	13
Zn	67	-0.105	ug/L	0.031	29	110	82	10
Zn	68	-0.265	ug/L	0.055	20	2272	1998	3
As-1	75	0.015	ug/L	0.010	68	35	55	23
As	75	-0.040	ug/L	0.019	46	4780	4785	0
Se	82	0.058	ug/L	0.019	32	-5	4	71
Se	78	-0.134	ug/L	0.061	45	4907	4912	0
Y	89		ug/L			230220	234557	0
Kr	83		ug/L			76	73	11
> In	115		ug/L			331526	333702	0
Ag	107	0.017	ug/L	0.002	10	19	192	9
Cd	111	0.001	ug/L	0.004	338	203	207	4
Cd	114	0.003	ug/L	0.001	29	45	63	8
Sb	121	0.059	ug/L	0.008	13	22	524	12
Sb	123	0.060	ug/L	0.004	6	14	402	5
Ba	135	0.003	ug/L	0.003	124	14	19	32
Ba	137	0.004	ug/L	0.001	27	20	33	10
> Tb	159		ug/L			301360	305015	0
Tl	205	0.002	ug/L	0.001	29	426	495	3
Pb	208	0.006	ug/L	0.001	19	331	545	7
Bi	209		ug/L			307927	310110	0
Th	232	0.036	ug/L	0.003	9	40	1471	8
U	238	0.007	ug/L	0.001	9	10	349	9

## Quantitative Analysis - Calibration Report

Sample Date/Time: Thursday, August 19, 2010 11:53:55

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	r Corr Coeff	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Cl	37							
Ge	72							
Ni	60	1.0000	0.0096	10	20	50	100	
Ni	62	1.0000	0.0014	10	20	50	100	
Cu	63	1.0000	0.0205	10	20	50	100	
Cu	65	1.0000	0.0095	10	20	50	100	
Zn	66	0.9999	0.0068	10	20	50	100	
Zn	67	0.9999	0.0011	10	20	50	100	
Zn	68	0.9999	0.0047	10	20	50	100	
As-1	75	1.0000	0.0054	10	20	50	100	
As	75	1.0000	0.0053	10	20	50	100	
Se	82	1.0000	0.0007	10	20	50	100	
Se	78	1.0000	0.0017	10	20	50	100	
Y	89							
Kr	83							
In	115							
Ag	107	1.0000	0.0308	10	20	50	100	
Cd	111	1.0000	0.0082	10	20	50	100	
Cd	114	1.0000	0.0196	10	20	50	100	
Sb	121	1.0000	0.0257	10	20	50	100	
Sb	123	1.0000	0.0192	10	20	50	100	
Ba	135	1.0000	0.0058	10	20	50	100	
Ba	137	1.0000	0.0098	10	20	50	100	
Tb	159							
Tl	205	1.0000	0.0895	10	20	50	100	
Pb	208	1.0000	0.1234	10	20	50	100	
Bi	209							
Th	232	1.0000	0.1320	10	20	50	100	
U	238	1.0000	0.1493	10	20	50	100	

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 12:07:47

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4946	2
Cl	37		mg/L			1264649	1261420	1
> Ge	72		ug/L			241496	240612	0
Ni	60	49.509	ug/L	0.106	0	28	114618	0
Ni	62	49.339	ug/L	0.695	1	168	17056	1
Cu	63	49.899	ug/L	0.141	0	260	245939	0
Cu	65	50.035	ug/L	0.191	0	62	114559	0
Zn	66	51.862	ug/L	0.040	0	253	85398	0
Zn	67	51.706	ug/L	0.892	1	110	14125	1
Zn	68	51.472	ug/L	0.344	0	2272	60008	0
As-1	75	49.732	ug/L	0.109	0	35	65150	0
As	75	49.040	ug/L	0.140	0	4780	67789	0
Se	82	79.573	ug/L	0.479	0	-5	13223	0
Se	78	79.104	ug/L	0.441	0	4907	36413	0
Y	89		ug/L			230220	231478	0
Kr	83		ug/L			76	79	5
> In	115		ug/L			331526	327333	0
Ag	107	48.511	ug/L	0.518	1	19	489263	0
Cd	111	49.080	ug/L	0.322	0	203	132578	0
Cd	114	48.974	ug/L	0.303	0	45	313729	0
Sb	121	48.952	ug/L	0.369	0	22	411294	0
Sb	123	48.986	ug/L	0.343	0	14	308615	0
Ba	135	50.560	ug/L	0.185	0	14	96197	0
Ba	137	50.644	ug/L	0.069	0	20	161809	0
> Tb	159		ug/L			301360	301152	0
Tl	205	49.536	ug/L	0.095	0	426	1334891	0
Pb	208	48.759	ug/L	0.267	0	331	1812878	0
Bi	209		ug/L			307927	300708	0
Th	232	49.296	ug/L	0.180	0	40	1959903	0
U	238	49.277	ug/L	0.196	0	10	2216305	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 12:14:30

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4730	2
Cl	37		mg/L			1264649	1281721	0
> Ge	72		ug/L			241496	245946	0
Ni	60	0.005	ug/L	0.001	23	28	40	6
Ni	62	-0.191	ug/L	0.067	35	168	105	22
Cu	63	-0.004	ug/L	0.004	111	260	245	8
Cu	65	-0.003	ug/L	0.003	103	62	57	10
Zn	66	-0.070	ug/L	0.006	9	253	140	8
Zn	67	-0.125	ug/L	0.034	26	110	77	12
Zn	68	-0.338	ug/L	0.004	1	2272	1927	0
As-1	75	0.009	ug/L	0.010	117	35	47	28
As	75	-0.103	ug/L	0.031	29	4780	4733	1
Se	82	0.023	ug/L	0.035	155	-5	-1	374
Se	78	-0.342	ug/L	0.119	34	4907	4859	1
Y	89		ug/L			230220	233701	0
Kr	83		ug/L			76	76	6
> In	115		ug/L			331526	331329	0
Ag	107	0.011	ug/L	0.000	3	19	127	3
Cd	111	-0.004	ug/L	0.005	107	203	190	6
Cd	114	0.001	ug/L	0.002	230	45	51	29
Sb	121	0.029	ug/L	0.002	5	22	268	5
Sb	123	0.027	ug/L	0.004	15	14	183	14
Ba	135	0.003	ug/L	0.003	117	14	19	30
Ba	137	0.002	ug/L	0.001	44	20	28	12
> Tb	159		ug/L			301360	304490	0
Tl	205	-0.002	ug/L	0.002	97	426	388	11
Pb	208	0.004	ug/L	0.001	26	331	470	7
Bi	209		ug/L			307927	307955	0
Th	232	0.024	ug/L	0.000	1	40	986	2
U	238	0.005	ug/L	0.000	3	10	247	4

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 12:21:12

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3872	0
Cl	37		mg/L			1264649	1264402	0
> Ge	72		ug/L			241496	238322	0
Ni	60	50.205	ug/L	0.370	0	28	115121	0
Ni	62	50.042	ug/L	0.849	1	168	17132	1
Cu	63	50.234	ug/L	0.194	0	260	245229	0
Cu	65	50.402	ug/L	0.294	0	62	114301	0
Zn	66	51.244	ug/L	0.364	0	253	83579	0
Zn	67	51.504	ug/L	0.708	1	110	13936	1
Zn	68	51.028	ug/L	0.311	0	2272	58944	0
As-1	75	50.613	ug/L	0.066	0	35	65673	0
As	75	50.415	ug/L	0.060	0	4780	68894	0
Se	82	51.548	ug/L	0.362	0	-5	8482	0
Se	78	50.961	ug/L	0.455	0	4907	24959	0
Y	89		ug/L			230220	228582	0
Kr	83		ug/L			76	81	6
>   In	115		ug/L			331526	323328	0
Ag	107	49.964	ug/L	0.028	0	19	497777	0
Cd	111	50.207	ug/L	0.080	0	203	133963	0
Cd	114	50.381	ug/L	0.118	0	45	318799	0
Sb	121	49.723	ug/L	0.137	0	22	412680	0
Sb	123	49.807	ug/L	0.457	0	14	309956	0
Ba	135	49.644	ug/L	0.158	0	14	93300	0
Ba	137	49.948	ug/L	0.056	0	20	157634	0
>   Tb	159		ug/L			301360	297946	0
Tl	205	49.764	ug/L	0.032	0	426	1326778	0
Pb	208	49.950	ug/L	0.142	0	331	1837420	0
Bi	209		ug/L			307927	295619	0
Th	232	49.587	ug/L	0.080	0	40	1950501	0
U	238	50.146	ug/L	0.137	0	10	2231378	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 12:27:53

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4574	3
Cl	37		mg/L			1264649	1289731	0
> Ge	72		ug/L			241496	243214	0
Ni	60	0.006	ug/L	0.004	64	28	42	20
Ni	62	-0.176	ug/L	0.033	18	168	109	10
Cu	63	-0.006	ug/L	0.003	47	260	231	5
Cu	65	-0.001	ug/L	0.004	472	62	60	16
Zn	66	-0.066	ug/L	0.014	21	253	146	16
Zn	67	-0.164	ug/L	0.059	36	110	66	24
Zn	68	-0.367	ug/L	0.053	14	2272	1872	2
As-1	75	-0.007	ug/L	0.017	266	35	27	84
As	75	-0.127	ug/L	0.031	24	4780	4649	0
Se	82	0.012	ug/L	0.019	158	-5	-3	97
Se	78	-0.409	ug/L	0.072	17	4907	4777	0
Y	89		ug/L			230220	235122	0
Kr	83		ug/L			76	70	2
> In	115		ug/L			331526	332877	0
Ag	107	0.012	ug/L	0.002	18	19	140	16
Cd	111	-0.000	ug/L	0.007	3620	203	203	10
Cd	114	0.003	ug/L	0.002	74	45	64	21
Sb	121	0.063	ug/L	0.009	13	22	557	13
Sb	123	0.059	ug/L	0.005	8	14	394	8
Ba	135	0.003	ug/L	0.001	46	14	19	13
Ba	137	0.001	ug/L	0.002	194	20	24	32
> Tb	159		ug/L			301360	304592	0
Tl	205	-0.003	ug/L	0.001	24	426	361	4
Pb	208	0.004	ug/L	0.000	12	331	474	3
Bi	209		ug/L			307927	305967	0
Th	232	0.036	ug/L	0.003	8	40	1504	7
U	238	0.006	ug/L	0.001	20	10	290	19



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 12:34:32

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3874	0
Cl	37		mg/L			1264649	1291054	0
> Ge	72		ug/L			241496	244916	0
Ni	60	0.527	ug/L	0.010	1	28	1269	1
Ni	62	0.324	ug/L	0.021	6	168	284	2
Cu	63	0.526	ug/L	0.012	2	260	2898	2
Cu	65	0.529	ug/L	0.017	3	62	1296	2
Zn	66	4.173	ug/L	0.014	0	253	7231	0
Zn	67	3.821	ug/L	0.146	3	110	1166	3
Zn	68	3.804	ug/L	0.103	2	2272	6648	1
As-1	75	0.214	ug/L	0.017	7	35	321	7
As	75	0.081	ug/L	0.050	61	4780	4955	1
Se	82	0.548	ug/L	0.017	3	-5	87	3
Se	78	0.117	ug/L	0.136	115	4907	5025	1
Y	89		ug/L			230220	237148	0
Kr	83		ug/L			76	73	2
> In	115		ug/L			331526	334736	0
Ag	107	0.210	ug/L	0.007	3	19	2189	3
Cd	111	0.200	ug/L	0.015	7	203	757	5
Cd	114	0.219	ug/L	0.003	1	45	1480	1
Sb	121	0.230	ug/L	0.006	2	22	2000	2
Sb	123	0.232	ug/L	0.004	1	14	1508	1
Ba	135	0.511	ug/L	0.018	3	14	1008	3
Ba	137	0.502	ug/L	0.006	1	20	1661	0
> Tb	159		ug/L			301360	308032	0
Tl	205	0.193	ug/L	0.006	2	426	5764	2
Pb	208	1.006	ug/L	0.007	0	331	38608	0
Bi	209		ug/L			307927	308552	0
Th	232	0.210	ug/L	0.003	1	40	8577	1
U	238	0.214	ug/L	0.004	1	10	9854	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 12:41:12

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	14528	1
Cl	37		mg/L			1264649	2055036	3
> Ge	72		ug/L			241496	212634	1
Ni	60	0.643	ug/L	0.017	2	28	1341	1
Ni	62	3.724	ug/L	0.055	1	168	1275	1
Cu	63	0.473	ug/L	0.010	2	260	2288	2
Cu	65	0.678	ug/L	0.034	4	62	1426	5
Zn	66	1.319	ug/L	0.073	5	253	2137	5
Zn	67	1.332	ug/L	0.066	4	110	416	2
Zn	68	0.236	ug/L	0.071	30	2272	2235	3
As-1	75	0.011	ug/L	0.031	295	35	43	84
As	75	-0.214	ug/L	0.045	20	4780	3966	2
Se	82	-0.049	ug/L	0.052	104	-5	-11	63
Se	78	-0.641	ug/L	0.081	12	4907	4095	1
Y	89		ug/L			230220	213438	0
Kr	83		ug/L			76	85	5
> In	115		ug/L			331526	302317	0
Ag	107	0.035	ug/L	0.001	2	19	347	3
Cd	111	0.012	ug/L	0.058	470	203	215	66
Cd	114	0.593	ug/L	0.016	2	45	3551	3
Sb	121	0.057	ug/L	0.001	2	22	466	2
Sb	123	0.061	ug/L	0.001	1	14	366	2
Ba	135	0.040	ug/L	0.007	17	14	82	15
Ba	137	0.040	ug/L	0.002	4	20	135	2
> Tb	159		ug/L			301360	290427	0
Tl	205	-0.007	ug/L	0.000	6	426	225	5
Pb	208	0.044	ug/L	0.002	5	331	1909	4
Bi	209		ug/L			307927	265441	0
Th	232	0.060	ug/L	0.004	6	40	2358	6
U	238	0.001	ug/L	0.000	22	10	69	19

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 12:48:12

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	13863	0
Cl	37		mg/L			1264649	1830452	1
> Ge	72		ug/L			241496	201846	0
Ni	60	19.492	ug/L	0.233	1	28	37873	2
Ni	62	22.460	ug/L	0.553	2	168	6591	3
Cu	63	18.747	ug/L	0.089	0	260	77649	1
Cu	65	18.958	ug/L	0.282	1	62	36447	2
Zn	66	20.377	ug/L	0.169	0	253	28278	1
Zn	67	18.212	ug/L	0.415	2	110	4233	2
Zn	68	18.660	ug/L	0.157	0	2272	19461	1
As-1	75	18.868	ug/L	0.098	0	35	20754	1
As	75	18.968	ug/L	0.143	0	4780	24446	1
Se	82	-0.020	ug/L	0.023	117	-5	-7	45
Se	78	-0.719	ug/L	0.116	16	4907	3861	1
Y	89		ug/L			230220	205713	0
Kr	83		ug/L			76	79	5
>   In	115		ug/L			331526	290585	0
Ag	107	17.743	ug/L	0.079	0	19	158882	1
Cd	111	19.170	ug/L	0.084	0	203	46079	1
Cd	114	19.615	ug/L	0.133	0	45	111580	1
Sb	121	0.052	ug/L	0.001	2	22	406	2
Sb	123	0.054	ug/L	0.002	3	14	311	3
Ba	135	0.026	ug/L	0.003	12	14	56	9
Ba	137	0.031	ug/L	0.003	8	20	107	7
>   Tb	159		ug/L			301360	287610	0
Tl	205	-0.008	ug/L	0.000	2	426	192	3
Pb	208	0.039	ug/L	0.001	3	331	1708	3
Bi	209		ug/L			307927	258389	0
Th	232	0.034	ug/L	0.002	4	40	1326	3
U	238	0.001	ug/L	0.000	38	10	37	28

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 12:55:13

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3588	1
Cl	37		mg/L			1264649	1032442	0
> Ge	72		ug/L			241496	212264	0
Ni	60	48.682	ug/L	0.221	0	28	99426	0
Ni	62	48.095	ug/L	0.245	0	168	14671	1
Cu	63	48.024	ug/L	0.207	0	260	208815	0
Cu	65	48.036	ug/L	0.376	0	62	97024	0
Zn	66	51.623	ug/L	0.114	0	253	74991	0
Zn	67	50.930	ug/L	0.116	0	110	12276	0
Zn	68	50.749	ug/L	0.096	0	2272	52223	0
As-1	75	50.449	ug/L	0.177	0	35	58302	0
As	75	50.015	ug/L	0.152	0	4780	60907	0
Se	82	53.536	ug/L	0.764	1	-5	7846	0
Se	78	52.301	ug/L	0.759	1	4907	22700	0
Y	89		ug/L			230220	215326	0
Kr	83		ug/L			76	69	5
> In	115		ug/L			331526	307796	0
Ag	107	47.442	ug/L	0.127	0	19	449951	0
Cd	111	50.557	ug/L	0.277	0	203	128415	0
Cd	114	50.685	ug/L	0.094	0	45	305320	0
Sb	121	50.562	ug/L	0.505	0	22	399476	0
Sb	123	50.829	ug/L	0.290	0	14	301127	0
Ba	135	50.072	ug/L	0.180	0	14	89584	0
Ba	137	50.702	ug/L	0.224	0	20	152326	0
> Tb	159		ug/L			301360	302926	0
Tl	205	45.791	ug/L	0.404	0	426	1241263	0
Pb	208	46.178	ug/L	0.209	0	331	1727079	0
Bi	209		ug/L			307927	277120	0
Th	232	46.926	ug/L	0.227	0	40	1876688	0
U	238	48.194	ug/L	0.363	0	10	2180387	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 13:01:55

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4102	2
Cl	37		mg/L			1264649	1033602	0
> Ge	72		ug/L			241496	212650	0
Ni	60	0.003	ug/L	0.003	91	28	31	17
Ni	62	-0.330	ug/L	0.037	11	168	48	22
Cu	63	-0.016	ug/L	0.001	8	260	158	3
Cu	65	0.001	ug/L	0.005	518	62	57	18
Zn	66	-0.075	ug/L	0.010	12	253	114	12
Zn	67	-0.126	ug/L	0.025	19	110	67	8
Zn	68	-0.427	ug/L	0.008	1	2272	1577	0
As-1	75	-0.005	ug/L	0.014	266	35	25	61
As	75	-0.222	ug/L	0.025	11	4780	3957	0
Se	82	0.043	ug/L	0.009	21	-5	1	84
Se	78	-0.679	ug/L	0.084	12	4907	4082	0
Y	89		ug/L			230220	218507	0
Kr	83		ug/L			76	63	8
> In	115		ug/L			331526	311733	0
Ag	107	0.011	ug/L	0.001	12	19	125	10
Cd	111	-0.020	ug/L	0.008	40	203	138	15
Cd	114	0.003	ug/L	0.000	13	45	61	4
Sb	121	0.086	ug/L	0.052	60	22	708	58
Sb	123	0.061	ug/L	0.009	13	14	380	13
Ba	135	-0.000	ug/L	0.006	2543	14	12	81
Ba	137	0.002	ug/L	0.001	57	20	25	14
> Tb	159		ug/L			301360	307002	0
Tl	205	0.001	ug/L	0.001	68	426	457	3
Pb	208	0.002	ug/L	0.001	60	331	395	9
Bi	209		ug/L			307927	287326	0
Th	232	0.032	ug/L	0.002	7	40	1324	7
U	238	0.005	ug/L	0.001	15	10	250	14

# ICP-MS Quantitative Analysis - Summary Report

Sample ID: RH25 A-L REN

Sample Dil Factor: 10

Comments:

Sample Date/Time: Thursday, August 19, 2010 13:08:35

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

AS

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3521	3
Cl	37		mg/L			1264649	1271134	0
> Ge	72		ug/L			241496	204831	0
Ni	60	0.212	ug/L	0.004	1	28	442	1
Ni	62	-0.104	ug/L	0.026	25	168	112	6
Cu	63	0.611	ug/L	0.011	1	260	2782	1
Cu	65	0.135	ug/L	0.015	10	62	315	9
Zn	66	0.861	ug/L	0.039	4	253	1418	3
Zn	67	0.775	ug/L	0.016	2	110	272	1
Zn	68	0.735	ug/L	0.067	9	2272	2629	2
As-1	75	0.123	ug/L	0.044	35	35	167	29
As	75	-0.206	ug/L	0.026	12	4780	3829	0
Se	82	0.400	ug/L	0.070	17	-5	52	19
Se	78	-0.670	ug/L	0.040	6	4907	3935	0
Y	89		ug/L			230220	216353	0
Kr	83		ug/L			76	60	3
> In	115		ug/L			331526	297919	0
Ag	107	0.008	ug/L	0.001	16	19	91	13
Cd	111	-0.033	ug/L	0.020	59	203	101	48
Cd	114	0.002	ug/L	0.002	76	45	53	18
Sb	121	0.024	ug/L	0.001	4	22	201	3
Sb	123	0.024	ug/L	0.002	8	14	148	7
Ba	135	0.875	ug/L	0.016	1	14	1527	1
Ba	137	0.887	ug/L	0.007	0	20	2597	0
> Tb	159		ug/L			301360	300867	0
Tl	205	-0.003	ug/L	0.001	25	426	350	5
Pb	208	0.028	ug/L	0.001	3	331	1374	2
Bi	209		ug/L			307927	266354	0
Th	232	0.017	ug/L	0.001	4	40	703	3
U	238	0.002	ug/L	0.000	1	10	118	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RH25 A REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 13:14:36

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

AS

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	5472	1
Cl	37		mg/L			1264649	2454902	1
> Ge	72		ug/L			241496	191052	0
Ni	60	0.904	ug/L	0.042	4	28	1683	4
Ni	62	0.962	ug/L	0.029	3	168	395	2
Cu	63	2.917	ug/L	0.055	1	260	11607	1
Cu	65	0.581	ug/L	0.012	2	62	1105	2
Zn	66	3.415	ug/L	0.129	3	253	4652	3
Zn	67	3.540	ug/L	0.018	0	110	849	0
Zn	68	3.775	ug/L	0.013	0	2272	5160	0
As-1	75	0.698	ug/L	0.038	5	35	753	5
As	75	-0.006	ug/L	0.035	549	4780	3775	0
Se	82	1.922	ug/L	0.038	1	-5	249	1
Se	78	-0.215	ug/L	0.091	42	4907	3814	0
Y	89		ug/L			230220	216889	0
Kr	83		ug/L			76	66	1
> In	115		ug/L			331526	274142	0
Ag	107	0.015	ug/L	0.000	3	19	144	2
Cd	111	-0.115	ug/L	0.013	10	203	-92	30
Cd	114	0.011	ug/L	0.002	19	45	98	11
Sb	121	0.030	ug/L	0.002	6	22	230	5
Sb	123	0.031	ug/L	0.002	5	14	173	4
Ba	135	4.171	ug/L	0.010	0	14	6657	0
Ba	137	4.213	ug/L	0.035	0	20	11290	1
> Tb	159		ug/L			301360	270401	0
Tl	205	-0.010	ug/L	0.000	1	426	147	2
Pb	208	0.065	ug/L	0.000	0	331	2458	0
Bi	209		ug/L			307927	233709	0
Th	232	0.045	ug/L	0.002	5	40	1639	4
U	238	0.007	ug/L	0.000	4	10	291	3

# ICP-MS Quantitative Analysis - Summary Report

Sample ID: RH25 ADUP REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 13:20:37

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

AS

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	5464	2
Cl	37		mg/L			1264649	2509235	0
> Ge	72		ug/L			241496	194441	0
Ni	60	1.143	ug/L	0.042	3	28	2160	3
Ni	62	1.348	ug/L	0.100	7	168	508	5
Cu	63	3.192	ug/L	0.015	0	260	12909	0
Cu	65	0.969	ug/L	0.058	6	62	1841	6
Zn	66	1.978	ug/L	0.036	1	253	2827	1
Zn	67	2.225	ug/L	0.027	1	110	576	1
Zn	68	2.380	ug/L	0.123	5	2272	3987	2
As-1	75	0.706	ug/L	0.072	10	35	775	9
As	75	-0.053	ug/L	0.087	163	4780	3793	1
Se	82	1.906	ug/L	0.129	6	-5	251	6
Se	78	-0.357	ug/L	0.204	57	4907	3836	1
Y	89		ug/L			230220	216872	0
Kr	83		ug/L			76	74	6
> In	115		ug/L			331526	276135	0
Ag	107	0.013	ug/L	0.002	14	19	130	13
Cd	111	-0.152	ug/L	0.042	27	203	-176	55
Cd	114	0.009	ug/L	0.002	17	45	86	9
Sb	121	0.029	ug/L	0.004	13	22	221	12
Sb	123	0.031	ug/L	0.003	9	14	174	9
Ba	135	4.020	ug/L	0.069	1	14	6463	0
Ba	137	3.980	ug/L	0.010	0	20	10742	0
> Tb	159		ug/L			301360	269164	0
Tl	205	-0.010	ug/L	0.001	7	426	138	13
Pb	208	0.069	ug/L	0.001	1	331	2590	1
Bi	209		ug/L			307927	235218	0
Th	232	0.035	ug/L	0.001	3	40	1279	2
U	238	0.005	ug/L	0.001	14	10	190	13



# ICP-MS Quantitative Analysis - Summary Report

Sample ID: RH25 ASPK REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 13:26:39

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

AS

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	5784	2
Cl	37		mg/L			1264649	2484426	0
> Ge	72		ug/L			241496	192223	0
Ni	60	25.998	ug/L	0.015	0	28	48095	0
Ni	62	26.836	ug/L	0.229	0	168	7472	0
Cu	63	27.450	ug/L	0.166	0	260	108175	0
Cu	65	25.211	ug/L	0.041	0	62	46139	0
Zn	66	74.798	ug/L	0.298	0	253	98306	0
Zn	67	69.021	ug/L	1.067	1	110	15034	1
Zn	68	73.773	ug/L	0.315	0	2272	67927	0
As-1	75	27.061	ug/L	0.114	0	35	28333	0
As	75	25.354	ug/L	0.162	0	4780	29836	0
Se	82	78.772	ug/L	0.274	0	-5	10457	0
Se	78	76.416	ug/L	0.283	0	4907	28235	0
Y	89		ug/L			230220	212647	0
Kr	83		ug/L			76	70	8
> In	115		ug/L			331526	271709	0
Ag	107	22.898	ug/L	0.065	0	19	191714	0
Cd	111	24.157	ug/L	0.070	0	203	54250	0
Cd	114	24.126	ug/L	0.177	0	45	128310	0
Sb	121	25.250	ug/L	0.037	0	22	176114	0
Sb	123	25.293	ug/L	0.229	0	14	132280	0
Ba	135	29.919	ug/L	0.137	0	14	47257	0
Ba	137	30.175	ug/L	0.092	0	20	80033	0
> Tb	159		ug/L			301360	263269	0
Tl	205	23.453	ug/L	0.010	0	426	552717	0
Pb	208	23.903	ug/L	0.007	0	331	777096	0
Bi	209		ug/L			307927	231958	0
Th	232	25.376	ug/L	0.060	0	40	882023	0
U	238	25.604	ug/L	0.018	0	10	1006746	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RH25 B REN

Sample Dil Factor: 5

Comments:

Sample Date/Time: Thursday, August 19, 2010 13:32:42

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

AS

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4619	1
Cl	37		mg/L			1264649	3678137	0
> Ge	72		ug/L			241496	181145	0
Ni	60	1.072	ug/L	0.021	1	28	1889	1
Ni	62	2.248	ug/L	0.257	11	168	705	9
Cu	63	4.189	ug/L	0.029	0	260	15723	0
Cu	65	0.931	ug/L	0.011	1	62	1650	1
Zn	66	4.117	ug/L	0.014	0	253	5279	0
Zn	67	4.075	ug/L	0.158	3	110	914	3
Zn	68	4.175	ug/L	0.070	1	2272	5231	1
As-1	75	2.381	ug/L	0.025	1	35	2373	1
As	75	0.797	ug/L	0.036	4	4780	4357	0
Se	82	4.847	ug/L	0.162	3	-5	602	3
Se	78	0.027	ug/L	0.086	324	4907	3689	0
Y	89		ug/L			230220	192693	0
Kr	83		ug/L			76	71	10
> In	115		ug/L			331526	257192	0
Ag	107	0.019	ug/L	0.002	9	19	162	8
Cd	111	-0.206	ug/L	0.011	5	203	-279	8
Cd	114	0.006	ug/L	0.000	2	45	62	1
Sb	121	0.044	ug/L	0.003	6	22	308	6
Sb	123	0.044	ug/L	0.006	13	14	226	13
Ba	135	4.252	ug/L	0.094	2	14	6365	1
Ba	137	4.239	ug/L	0.060	1	20	10655	0
> Tb	159		ug/L			301360	251046	0
Tl	205	0.011	ug/L	0.004	34	426	606	14
Pb	208	0.105	ug/L	0.003	2	331	3542	2
Bi	209		ug/L			307927	218194	0
Th	232	0.043	ug/L	0.001	2	40	1457	2
U	238	0.019	ug/L	0.001	7	10	720	8

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RH25 Q REN

Sample Dil Factor: 5

Comments:

Sample Date/Time: Thursday, August 19, 2010 13:38:45

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

AS

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3361	1
Cl	37		mg/L			1264649	7363748	1
> Ge	72		ug/L			241496	152468	0
Ni	60	4.413	ug/L	0.175	3	28	6491	4
Ni	62	10.908	ug/L	0.566	5	168	2472	5
Cu	63	9.110	ug/L	0.037	0	260	28584	0
Cu	65	2.828	ug/L	0.088	3	62	4139	3
Zn	66	45.578	ug/L	0.144	0	253	47577	0
Zn	67	40.821	ug/L	0.635	1	110	7081	1
Zn	68	43.874	ug/L	0.625	1	2272	32624	1
As-1	75	1.675	ug/L	0.026	1	35	1412	1
As	75	0.862	ug/L	0.078	9	4780	3720	1
Se	82	2.804	ug/L	0.096	3	-5	292	3
Se	78	0.670	ug/L	0.069	10	4907	3267	0
Y	89		ug/L			230220	171076	0
Kr	83		ug/L			76	89	5
> In	115		ug/L			331526	221426	0
Ag	107	0.155	ug/L	0.001	0	19	1070	0
Cd	111	1.026	ug/L	0.055	5	203	2007	4
Cd	114	1.335	ug/L	0.023	1	45	5816	1
Sb	121	1.604	ug/L	0.017	1	22	9133	1
Sb	123	1.579	ug/L	0.013	0	14	6740	1
Ba	135	15.694	ug/L	0.150	0	14	20204	0
Ba	137	15.833	ug/L	0.119	0	20	34228	0
> Tb	159		ug/L			301360	215519	0
Tl	205	-0.005	ug/L	0.001	10	426	202	5
Pb	208	0.041	ug/L	0.002	5	331	1331	3
Bi	209		ug/L			307927	177286	0
Th	232	0.014	ug/L	0.001	7	40	434	6
U	238	0.246	ug/L	0.005	2	10	7929	2

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RH66 E REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 13:44:48

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	5520	2
Cl	37		mg/L			1264649	1242172	1
> Ge	72		ug/L			241496	249664	0
Ni	60	2.425	ug/L	0.062	2	28	5853	2
Ni	62	2.623	ug/L	0.056	2	168	1106	1
Cu	63	26.531	ug/L	0.188	0	260	135804	0
Cu	65	26.773	ug/L	0.166	0	62	63634	0
Zn	66	56.382	ug/L	0.499	0	253	96307	0
Zn	67	50.793	ug/L	0.915	1	110	14400	1
Zn	68	55.609	ug/L	0.112	0	2272	67083	0
As-1	75	10.471	ug/L	0.120	1	35	14262	0
As	75	9.995	ug/L	0.111	1	4780	18271	0
Se	82	0.313	ug/L	0.059	18	-5	48	20
Se	78	-1.933	ug/L	0.079	4	4907	4274	0
Y	89		ug/L			230220	240469	0
Kr	83		ug/L			76	61	4
> In	115		ug/L			331526	342193	0
Ag	107	0.012	ug/L	0.001	11	19	149	10
Cd	111	0.334	ug/L	0.003	0	203	1151	0
Cd	114	0.327	ug/L	0.014	4	45	2234	3
Sb	121	24.073	ug/L	0.041	0	22	211462	0
Sb	123	24.081	ug/L	0.052	0	14	158616	0
Ba	135	19.205	ug/L	0.025	0	14	38208	0
Ba	137	19.295	ug/L	0.022	0	20	64458	0
> Tb	159		ug/L			301360	315808	0
Tl	205	0.004	ug/L	0.001	21	426	573	5
Pb	208	2.612	ug/L	0.010	0	331	102156	0
Bi	209		ug/L			307927	315534	0
Th	232	0.021	ug/L	0.001	4	40	929	5
U	238	0.054	ug/L	0.001	1	10	2550	1

# ICP-MS Quantitative Analysis - Summary Report

Sample ID: RH66 F REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 13:50:55

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

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Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	5552	1
Cl	37		mg/L			1264649	1210618	0
> Ge	72		ug/L			241496	243575	0
Ni	60	7.899	ug/L	0.112	1	28	18535	0
Ni	62	8.203	ug/L	0.278	3	168	3012	3
Cu	63	55.335	ug/L	0.156	0	260	276056	0
Cu	65	55.734	ug/L	0.085	0	62	129172	0
Zn	66	477.613	ug/L	0.690	0	253	794041	0
Zn	67	427.003	ug/L	2.325	0	110	117282	0
Zn	68	473.575	ug/L	1.539	0	2272	540119	0
As-1	75	10.712	ug/L	0.035	0	35	14234	0
As	75	10.319	ug/L	0.058	0	4780	18247	0
Se	82	0.529	ug/L	0.049	9	-5	83	10
Se	78	-1.392	ug/L	0.153	11	4907	4388	1
Y	89		ug/L			230220	282457	0
Kr	83		ug/L			76	69	5
> In	115		ug/L			331526	331969	0
Ag	107	0.033	ug/L	0.001	2	19	359	1
Cd	111	0.516	ug/L	0.004	0	203	1614	0
Cd	114	0.456	ug/L	0.009	2	45	3005	1
Sb	121	2.702	ug/L	0.010	0	22	23049	0
Sb	123	2.696	ug/L	0.017	0	14	17238	0
Ba	135	49.697	ug/L	0.329	0	14	95895	0
Ba	137	49.755	ug/L	0.190	0	20	161219	0
> Tb	159		ug/L			301360	307405	0
Tl	205	0.014	ug/L	0.002	12	426	811	5
Pb	208	1.873	ug/L	0.002	0	331	71403	0
Bi	209		ug/L			307927	306348	0
Th	232	0.111	ug/L	0.002	1	40	4548	1
U	238	0.239	ug/L	0.002	0	10	10973	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RH66 G REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 13:57:00

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	5481	1
Cl	37		mg/L			1264649	1214229	0
> Ge	72		ug/L			241496	242287	0
Ni	60	3.214	ug/L	0.039	1	28	7520	1
Ni	62	2.567	ug/L	0.159	6	168	1054	5
Cu	63	36.432	ug/L	0.191	0	260	180881	0
Cu	65	36.643	ug/L	0.179	0	62	84498	0
Zn	66	39.629	ug/L	0.058	0	253	65770	0
Zn	67	36.099	ug/L	0.364	1	110	9964	1
Zn	68	39.371	ug/L	0.266	0	2272	46757	0
As-1	75	1.196	ug/L	0.040	3	35	1611	3
As	75	0.681	ug/L	0.031	4	4780	5677	0
Se	82	0.362	ug/L	0.032	8	-5	55	9
Se	78	-1.412	ug/L	0.079	5	4907	4357	0
Y	89		ug/L			230220	241551	0
Kr	83		ug/L			76	65	6
>   In	115		ug/L			331526	333178	0
Ag	107	0.011	ug/L	0.001	13	19	133	11
Cd	111	0.180	ug/L	0.006	3	203	699	2
Cd	114	0.156	ug/L	0.008	4	45	1060	4
Sb	121	0.684	ug/L	0.008	1	22	5876	1
Sb	123	0.684	ug/L	0.007	0	14	4402	1
Ba	135	14.765	ug/L	0.020	0	14	28604	0
Ba	137	14.881	ug/L	0.111	0	20	48410	1
>   Tb	159		ug/L			301360	307722	0
Tl	205	-0.002	ug/L	0.001	51	426	387	6
Pb	208	1.886	ug/L	0.001	0	331	71991	0
Bi	209		ug/L			307927	306010	0
Th	232	0.034	ug/L	0.002	6	40	1412	5
U	238	0.103	ug/L	0.002	1	10	4729	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RH66 H REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 14:03:05

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	5456	0
Cl	37		mg/L			1264649	1183600	1
> Ge	72		ug/L			241496	239168	0
Ni	60	2.236	ug/L	0.049	2	28	5173	2
Ni	62	1.163	ug/L	0.046	3	168	562	2
Cu	63	10.597	ug/L	0.066	0	260	52120	0
Cu	65	10.807	ug/L	0.040	0	62	24644	0
Zn	66	2.726	ug/L	0.069	2	253	4700	2
Zn	67	2.847	ug/L	0.071	2	110	876	2
Zn	68	2.577	ug/L	0.052	2	2272	5125	1
As-1	75	1.313	ug/L	0.020	1	35	1743	1
As	75	0.768	ug/L	0.029	3	4780	5715	0
Se	82	0.307	ug/L	0.022	7	-5	45	8
Se	78	-1.559	ug/L	0.032	2	4907	4243	0
Y	89		ug/L			230220	236719	0
Kr	83		ug/L			76	66	5
> In	115		ug/L			331526	329516	0
Ag	107	0.009	ug/L	0.000	5	19	107	4
Cd	111	0.031	ug/L	0.011	36	203	286	10
Cd	114	0.019	ug/L	0.002	7	45	170	5
Sb	121	3.712	ug/L	0.044	1	22	31417	1
Sb	123	3.731	ug/L	0.025	0	14	23675	0
Ba	135	20.456	ug/L	0.081	0	14	39188	0
Ba	137	20.643	ug/L	0.034	0	20	66408	0
> Tb	159		ug/L			301360	307301	0
Tl	205	-0.004	ug/L	0.001	24	426	336	7
Pb	208	0.625	ug/L	0.003	0	331	24042	0
Bi	209		ug/L			307927	301717	0
Th	232	0.013	ug/L	0.000	3	40	588	2
U	238	0.283	ug/L	0.003	0	10	12983	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 14:09:08

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3932	3
Cl	37		mg/L			1264649	1315311	0
> Ge	72		ug/L			241496	220041	0
Ni	60	49.321	ug/L	0.124	0	28	104421	0
Ni	62	49.594	ug/L	0.077	0	168	15678	0
Cu	63	49.642	ug/L	0.125	0	260	223752	0
Cu	65	49.890	ug/L	0.268	0	62	104462	0
Zn	66	51.721	ug/L	0.265	0	253	77885	0
Zn	67	51.415	ug/L	0.590	1	110	12845	0
Zn	68	51.243	ug/L	0.350	0	2272	54643	0
As-1	75	50.263	ug/L	0.214	0	35	60216	0
As	75	50.363	ug/L	0.269	0	4780	63548	0
Se	82	50.698	ug/L	0.151	0	-5	7702	0
Se	78	51.081	ug/L	0.376	0	4907	23088	0
Y	89		ug/L			230220	205977	0
Kr	83		ug/L			76	80	2
> In	115		ug/L			331526	293104	0
Ag	107	49.102	ug/L	0.210	0	19	443456	0
Cd	111	50.453	ug/L	0.333	0	203	122031	0
Cd	114	50.807	ug/L	0.295	0	45	291434	0
Sb	121	50.989	ug/L	0.077	0	22	383627	0
Sb	123	51.131	ug/L	0.226	0	14	288455	0
Ba	135	50.751	ug/L	0.273	0	14	86463	0
Ba	137	50.685	ug/L	0.237	0	20	145005	0
> Tb	159		ug/L			301360	271054	0
Tl	205	50.407	ug/L	0.301	0	426	1222573	0
Pb	208	50.442	ug/L	0.408	0	331	1687977	0
Bi	209		ug/L			307927	273097	0
Th	232	50.689	ug/L	0.275	0	40	1813854	0
U	238	51.305	ug/L	0.053	0	10	2076929	0



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 14:15:49

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4414	1
Cl	37		mg/L			1264649	1356354	0
> Ge	72		ug/L			241496	223427	0
Ni	60	0.001	ug/L	0.005	596	28	28	36
Ni	62	-0.042	ug/L	0.007	16	168	142	1
Cu	63	-0.009	ug/L	0.001	15	260	200	3
Cu	65	0.003	ug/L	0.004	166	62	63	13
Zn	66	-0.064	ug/L	0.006	8	253	137	5
Zn	67	-0.118	ug/L	0.042	36	110	72	14
Zn	68	-0.319	ug/L	0.003	0	2272	1770	0
As-1	75	-0.003	ug/L	0.019	648	35	29	79
As	75	0.068	ug/L	0.010	14	4780	4504	0
Se	82	0.032	ug/L	0.018	55	-5	0	77116
Se	78	0.271	ug/L	0.043	15	4907	4641	0
Y	89		ug/L			230220	209858	0
Kr	83		ug/L			76	71	7
> In	115		ug/L			331526	299089	0
Ag	107	0.003	ug/L	0.002	47	19	46	29
Cd	111	0.003	ug/L	0.002	67	203	190	1
Cd	114	-0.001	ug/L	0.002	158	45	32	41
Sb	121	0.047	ug/L	0.003	5	22	382	5
Sb	123	0.045	ug/L	0.001	2	14	274	2
Ba	135	-0.002	ug/L	0.001	80	14	10	21
Ba	137	-0.002	ug/L	0.002	116	20	13	43
> Tb	159		ug/L			301360	273727	0
Tl	205	0.001	ug/L	0.001	165	426	402	6
Pb	208	-0.001	ug/L	0.001	79	331	264	10
Bi	209		ug/L			307927	284036	0
Th	232	0.022	ug/L	0.004	18	40	847	17
U	238	0.003	ug/L	0.000	5	10	122	4

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI46 MB1 REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 14:22:32

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4966	0
Cl	37		mg/L			1264649	1316966	0
> Ge	72		ug/L			241496	230156	0
Ni	60	0.054	ug/L	0.002	3	28	146	3
Ni	62	-0.042	ug/L	0.039	91	168	147	8
Cu	63	0.078	ug/L	0.006	7	260	616	4
Cu	65	0.087	ug/L	0.007	8	62	250	6
Zn	66	1.916	ug/L	0.283	14	253	3250	13
Zn	67	1.624	ug/L	0.250	15	110	526	12
Zn	68	1.581	ug/L	0.289	18	2272	3861	7
As-1	75	0.019	ug/L	0.015	78	35	57	32
As	75	-0.099	ug/L	0.023	22	4780	4434	0
Se	82	0.068	ug/L	0.054	79	-5	5	149
Se	78	-0.323	ug/L	0.066	20	4907	4554	0
Y	89		ug/L			230220	219271	0
Kr	83		ug/L			76	70	6
> In	115		ug/L			331526	310590	0
Ag	107	0.001	ug/L	0.001	62	19	30	26
Cd	111	0.009	ug/L	0.008	88	203	213	9
Cd	114	-0.003	ug/L	0.001	19	45	21	19
Sb	121	0.018	ug/L	0.001	6	22	161	6
Sb	123	0.015	ug/L	0.003	20	14	104	18
Ba	135	0.033	ug/L	0.005	14	14	73	11
Ba	137	0.031	ug/L	0.003	9	20	114	7
> Tb	159		ug/L			301360	286311	0
Tl	205	-0.012	ug/L	0.001	5	426	107	16
Pb	208	0.034	ug/L	0.002	6	331	1514	4
Bi	209		ug/L			307927	294917	0
Th	232	0.008	ug/L	0.001	7	40	341	6
U	238	0.001	ug/L	0.000	24	10	40	18

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RH66 MB REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 14:28:38

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	5107	0
Cl	37		mg/L			1264649	1341115	0
> Ge	72		ug/L			241496	230409	0
Ni	60	0.027	ug/L	0.003	9	28	87	6
Ni	62	-0.077	ug/L	0.019	24	168	135	4
✓ Cu	63	0.014	ug/L	0.005	39	260	313	7
Cu	65	0.024	ug/L	0.006	23	62	111	10
Zn	66	0.116	ug/L	0.014	12	253	423	4
✓ Zn	67	0.065	ug/L	0.056	87	110	122	11
Zn	68	-0.146	ug/L	0.075	50	2272	2010	3
As-1	75	0.023	ug/L	0.024	105	35	62	48
As	75	-0.070	ug/L	0.030	42	4780	4475	0
Se	82	0.092	ug/L	0.086	93	-5	9	144
Se	78	-0.233	ug/L	0.140	59	4907	4593	0
Y	89		ug/L			230220	217623	0
Kr	83		ug/L			76	67	13
> In	115		ug/L			331526	309455	0
Ag	107	-0.000	ug/L	0.000	116	19	16	8
Cd	111	-0.001	ug/L	0.003	193	203	186	3
Cd	114	-0.004	ug/L	0.000	12	45	19	13
Sb	121	0.008	ug/L	0.001	9	22	82	7
Sb	123	0.008	ug/L	0.001	9	14	61	7
Ba	135	0.008	ug/L	0.002	20	14	28	11
Ba	137	0.006	ug/L	0.000	7	20	37	3
> Tb	159		ug/L			301360	282713	0
Tl	205	-0.012	ug/L	0.001	5	426	103	15
✓ Pb	208	0.005	ug/L	0.001	27	331	498	10
Bi	209		ug/L			307927	294262	0
Th	232	0.002	ug/L	0.001	34	40	114	23
U	238	0.000	ug/L	0.000	22	10	17	10

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RH66 MBSPK REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 14:34:40

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	5404	1
Cl	37		mg/L			1264649	1337939	0
> Ge	72		ug/L			241496	232455	0
Ni	60	23.893	ug/L	0.193	0	28	53454	0
Ni	62	23.571	ug/L	0.288	1	168	7957	1
Cu	63	24.802	ug/L	0.164	0	260	118222	0
Cu	65	25.067	ug/L	0.093	0	62	55478	0
Zn	66	75.282	ug/L	0.330	0	253	119650	0
Zn	67	69.783	ug/L	0.236	0	110	18381	0
Zn	68	74.108	ug/L	0.892	1	2272	82509	1
As-1	75	24.600	ug/L	0.132	0	35	31151	0
As	75	23.613	ug/L	0.071	0	4780	33920	0
Se	82	72.838	ug/L	0.454	0	-5	11693	0
Se	78	72.550	ug/L	0.160	0	4907	32656	0
Y	89		ug/L			230220	219502	0
Kr	83		ug/L			76	78	2
> In	115		ug/L			331526	310988	0
Ag	107	23.856	ug/L	0.115	0	19	228610	0
Cd	111	23.571	ug/L	0.192	0	203	60593	0
Cd	114	23.578	ug/L	0.079	0	45	143527	0
Sb	121	0.006	ug/L	0.002	35	22	68	24
Sb	123	0.006	ug/L	0.001	14	14	51	10
Ba	135	23.979	ug/L	0.066	0	14	43352	0
Ba	137	24.127	ug/L	0.075	0	20	73248	0
> Tb	159		ug/L			301360	284768	0
Tl	205	24.183	ug/L	0.057	0	426	616451	0
Pb	208	24.425	ug/L	0.060	0	331	858892	0
Bi	209		ug/L			307927	298912	0
Th	232	24.058	ug/L	0.076	0	40	904475	0
U	238	24.093	ug/L	0.110	0	10	1024694	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI46 MB1SPK REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 14:40:39

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	5050	1
Cl	37		mg/L			1264649	1320215	0
> Ge	72		ug/L			241496	228971	0
Ni	60	25.726	ug/L	0.102	0	28	56691	0
Ni	62	25.610	ug/L	0.146	0	168	8502	0
Cu	63	26.381	ug/L	0.132	0	260	123847	0
Cu	65	26.453	ug/L	0.164	0	62	57663	0
Zn	66	76.705	ug/L	0.572	0	253	120078	0
Zn	67	70.414	ug/L	0.156	0	110	18268	0
Zn	68	75.602	ug/L	0.433	0	2272	82866	0
As-1	75	25.435	ug/L	0.146	0	35	31724	0
As	75	24.649	ug/L	0.149	0	4780	34679	0
Se	82	73.060	ug/L	0.507	0	-5	11552	0
Se	78	73.424	ug/L	0.577	0	4907	32498	0
Y	89		ug/L			230220	218842	0
Kr	83		ug/L			76	84	2
> In	115		ug/L			331526	308537	0
Ag	107	25.425	ug/L	0.161	0	19	241718	0
Cd	111	24.592	ug/L	0.188	0	203	62709	0
Cd	114	24.465	ug/L	0.089	0	45	147745	0
Sb	121	0.006	ug/L	0.001	18	22	65	12
Sb	123	0.006	ug/L	0.002	30	14	51	22
Ba	135	25.673	ug/L	0.013	0	14	46049	0
Ba	137	25.665	ug/L	0.092	0	20	77300	0
> Tb	159		ug/L			301360	285134	0
Tl	205	25.727	ug/L	0.071	0	426	656618	0
Pb	208	25.929	ug/L	0.201	0	331	912888	0
Bi	209		ug/L			307927	294654	0
Th	232	25.572	ug/L	0.096	0	40	962634	0
U	238	25.622	ug/L	0.243	0	10	1091074	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI46 ADUP REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 14:46:38

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldat\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	5015	1
Cl	37		mg/L			1264649	1506862	0
> Ge	72		ug/L			241496	222187	0
Ni	60	2.810	ug/L	0.055	1	28	6032	2
Ni	62	1.907	ug/L	0.028	1	168	758	1
Cu	63	0.177	ug/L	0.017	9	260	1046	7
Cu	65	0.189	ug/L	0.006	3	62	455	2
Zn	66	0.663	ug/L	0.032	4	253	1238	4
Zn	67	0.861	ug/L	0.037	4	110	317	3
Zn	68	0.777	ug/L	0.047	6	2272	2896	2
As-1	75	0.127	ug/L	0.035	27	35	185	22
As	75	-0.045	ug/L	0.031	67	4780	4344	0
Se	82	0.077	ug/L	0.005	5	-5	6	9
Se	78	-0.462	ug/L	0.026	5	4907	4345	0
Y	89		ug/L			230220	217717	0
Kr	83		ug/L			76	72	1
> In	115		ug/L			331526	303288	0
Ag	107	0.001	ug/L	0.001	97	19	27	34
Cd	111	0.005	ug/L	0.007	144	203	197	8
Cd	114	0.009	ug/L	0.002	20	45	97	11
Sb	121	0.014	ug/L	0.001	4	22	130	4
Sb	123	0.018	ug/L	0.003	16	14	118	13
Ba	135	15.297	ug/L	0.055	0	14	26975	0
Ba	137	15.384	ug/L	0.105	0	20	45553	0
> Tb	159		ug/L			301360	280516	0
Tl	205	-0.009	ug/L	0.001	6	426	165	9
Pb	208	0.012	ug/L	0.001	9	331	708	5
Bi	209		ug/L			307927	276364	0
Th	232	0.013	ug/L	0.001	10	40	509	9
U	238	0.003	ug/L	0.000	3	10	135	3

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI46 A REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 14:52:38

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4774	1
Cl	37		mg/L			1264649	1458262	0
> Ge	72		ug/L			241496	217967	0
Ni	60	2.872	ug/L	0.058	2	28	6047	2
Ni	62	2.065	ug/L	0.055	2	168	792	2
Cu	63	0.183	ug/L	0.017	9	260	1051	6
Cu	65	0.191	ug/L	0.007	3	62	452	4
Zn	66	0.670	ug/L	0.011	1	253	1225	2
Zn	67	0.754	ug/L	0.096	12	110	285	8
Zn	68	0.699	ug/L	0.124	17	2272	2761	5
As-1	75	✓ 0.115	ug/L	0.008	6	35	168	5
As	75	-0.084	ug/L	0.010	11	4780	4216	0
Se	82	0.105	ug/L	0.029	27	-5	10	40
Se	78	-0.540	ug/L	0.065	12	4907	4234	1
Y	89		ug/L			230220	215472	0
Kr	83		ug/L			76	68	2
> In	115		ug/L			331526	302073	0
Ag	107	0.001	ug/L	0.000	16	19	26	5
Cd	111	0.011	ug/L	0.009	86	203	212	10
Cd	114	0.012	ug/L	0.001	10	45	111	6
Sb	121	0.018	ug/L	0.001	7	22	162	6
Sb	123	0.020	ug/L	0.003	12	14	130	12
Ba	135	15.667	ug/L	0.126	0	14	27517	0
Ba	137	15.908	ug/L	0.038	0	20	46916	0
> Tb	159		ug/L			301360	281615	0
Tl	205	✓ -0.009	ug/L	0.000	2	426	172	3
Pb	208	0.012	ug/L	0.001	6	331	743	3
Bi	209		ug/L			307927	273617	0
Th	232	0.003	ug/L	0.000	5	40	161	3
U	238	0.002	ug/L	0.000	1	10	87	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI46 ASPK REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 14:58:39

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	5091	2
Cl	37		mg/L			1264649	1417934	0
> Ge	72		ug/L			241496	213546	0
Ni	60	27.458	ug/L	0.225	0	28	56431	1
Ni	62	26.348	ug/L	0.187	0	168	8153	0
Cu	63	24.703	ug/L	0.052	0	260	108173	0
Cu	65	24.670	ug/L	0.229	0	62	50161	1
Zn	66	75.291	ug/L	0.469	0	253	109927	0
Zn	67	70.662	ug/L	0.370	0	110	17097	0
Zn	68	74.341	ug/L	0.245	0	2272	76029	0
As-1	75	26.125	ug/L	0.193	0	35	30390	1
As	75	24.822	ug/L	0.138	0	4780	32541	1
Se	82	75.402	ug/L	0.257	0	-5	11120	0
Se	78	74.186	ug/L	0.181	0	4907	30578	0
Y	89		ug/L			230220	212352	1
Kr	83		ug/L			76	76	2
> In	115		ug/L			331526	299504	0
Ag	107	15.051	ug/L	0.033	0	19	138916	0
Cd	111	24.415	ug/L	0.218	0	203	60438	0
Cd	114	24.443	ug/L	0.248	1	45	143290	1
Sb	121	0.016	ug/L	0.003	20	22	145	17
Sb	123	0.016	ug/L	0.001	5	14	107	5
Ba	135	40.984	ug/L	0.253	0	14	71352	1
Ba	137	41.421	ug/L	0.173	0	20	121092	0
> Tb	159		ug/L			301360	281581	0
Tl	205	23.924	ug/L	0.131	0	426	603009	0
Pb	208	24.204	ug/L	0.047	0	331	841595	0
Bi	209		ug/L			307927	269623	0
Th	232	24.592	ug/L	0.014	0	40	914215	0
U	238	24.908	ug/L	0.045	0	10	1047505	0



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI46 B REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 15:04:39

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	5335	3
Cl	37		mg/L			1264649	1170550	1
> Ge	72		ug/L			241496	209694	0
Ni	60	5.112	ug/L	0.032	0	28	10335	0
Ni	62	4.864	ug/L	0.245	5	168	1597	4
Cu	63	0.269	ug/L	0.011	4	260	1379	3
Cu	65	0.425	ug/L	0.024	5	62	902	5
Zn	66	0.816	ug/L	0.006	0	253	1388	1
Zn	67	0.701	ug/L	0.150	21	110	261	14
Zn	68	0.677	ug/L	0.037	5	2272	2635	0
As-1	75	0.389	ug/L	0.026	6	35	475	6
As	75	0.111	ug/L	0.061	54	4780	4275	1
Se	82	0.185	ug/L	0.026	14	-5	22	16
Se	78	-0.704	ug/L	0.140	19	4907	4017	1
Y	89		ug/L			230220	212641	0
Kr	83		ug/L			76	68	4
> In	115		ug/L			331526	298601	0
Ag	107	0.003	ug/L	0.000	7	19	44	4
Cd	111	0.011	ug/L	0.007	65	203	209	8
Cd	114	0.013	ug/L	0.003	20	45	114	13
Sb	121	0.056	ug/L	0.004	6	22	450	5
Sb	123	0.057	ug/L	0.008	13	14	338	12
Ba	135	6.261	ug/L	0.034	0	14	10878	0
Ba	137	6.295	ug/L	0.035	0	20	18362	0
> Tb	159		ug/L			301360	284553	0
Tl	205	-0.006	ug/L	0.001	12	426	252	8
Pb	208	0.009	ug/L	0.001	14	331	617	7
Bi	209		ug/L			307927	267879	0
Th	232	0.015	ug/L	0.003	16	40	609	16
U	238	0.006	ug/L	0.001	10	10	284	10

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI46 C REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 15:10:41

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4817	3
Cl	37		mg/L			1264649	1104155	1
> Ge	72		ug/L			241496	203218	1
Ni	60	5.118	ug/L	0.026	0	28	10029	0
Ni	62	4.745	ug/L	0.114	2	168	1513	1
Cu	63	0.260	ug/L	0.003	0	260	1301	1
Cu	65	0.395	ug/L	0.003	0	62	815	1
Zn	66	0.593	ug/L	0.005	0	253	1036	1
Zn	67	0.564	ug/L	0.051	9	110	222	6
Zn	68	0.361	ug/L	0.050	13	2272	2253	1
As-1	75	0.380	ug/L	0.015	3	35	449	3
As	75	0.031	ug/L	0.016	51	4780	4056	1
Se	82	0.220	ug/L	0.043	19	-5	26	22
Se	78	-0.932	ug/L	0.040	4	4907	3816	1
Y	89		ug/L			230220	207947	0
Kr	83		ug/L			76	61	2
> In	115		ug/L			331526	293759	0
Ag	107	0.000	ug/L	0.000	184	19	18	14
Cd	111	0.004	ug/L	0.005	140	203	188	6
Cd	114	0.009	ug/L	0.002	18	45	92	11
Sb	121	0.060	ug/L	0.004	7	22	469	6
Sb	123	0.056	ug/L	0.001	2	14	330	1
Ba	135	6.153	ug/L	0.040	0	14	10516	0
Ba	137	6.236	ug/L	0.031	0	20	17895	0
> Tb	159		ug/L			301360	284493	0
Tl	205	-0.009	ug/L	0.000	3	426	175	4
Pb	208	0.021	ug/L	0.001	5	331	1048	3
Bi	209		ug/L			307927	264476	0
Th	232	0.003	ug/L	0.001	19	40	155	13
U	238	0.002	ug/L	0.000	15	10	104	13

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI46 D REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 15:16:43

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4906	1
Cl	37		mg/L			1264649	1083453	0
> Ge	72		ug/L			241496	192325	1
Ni	60	8.057	ug/L	0.045	0	28	14928	1
Ni	62	7.443	ug/L	0.215	2	168	2170	3
Cu	63	0.237	ug/L	0.018	7	260	1141	7
Cu	65	0.293	ug/L	0.022	7	62	586	7
Zn	66	0.530	ug/L	0.006	1	253	897	1
Zn	67	0.570	ug/L	0.106	18	110	211	10
Zn	68	0.424	ug/L	0.066	15	2272	2190	3
As-1	75	0.430	ug/L	0.048	11	35	477	9
As	75	0.195	ug/L	0.035	17	4780	4007	0
Se	82	0.326	ug/L	0.114	35	-5	38	37
Se	78	-0.473	ug/L	0.063	13	4907	3757	0
Y	89		ug/L			230220	196336	0
Kr	83		ug/L			76	56	13
> In	115		ug/L			331526	278801	0
Ag	107	-0.000	ug/L	0.000	225	19	15	16
Cd	111	-0.008	ug/L	0.006	79	203	153	9
Cd	114	0.005	ug/L	0.003	62	45	67	26
Sb	121	0.076	ug/L	0.003	3	22	565	3
Sb	123	0.076	ug/L	0.001	1	14	419	2
Ba	135	7.398	ug/L	0.037	0	14	11999	1
Ba	137	7.434	ug/L	0.079	1	20	20245	1
> Tb	159		ug/L			301360	273719	0
Tl	205	-0.010	ug/L	0.000	1	426	137	2
Pb	208	0.005	ug/L	0.001	15	331	460	5
Bi	209		ug/L			307927	254884	1
Th	232	0.002	ug/L	0.000	17	40	98	10
U	238	0.005	ug/L	0.000	6	10	205	6

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 15:22:45

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3646	2
Cl	37		mg/L			1264649	1135705	0
> Ge	72		ug/L			241496	189249	0
Ni	60	47.529	ug/L	0.510	1	28	86544	0
Ni	62	47.467	ug/L	0.713	1	168	12911	1
Cu	63	47.467	ug/L	0.075	0	260	184018	0
Cu	65	47.345	ug/L	0.186	0	62	85263	0
Zn	66	51.638	ug/L	0.464	0	253	66878	0
Zn	67	50.808	ug/L	0.793	1	110	10918	1
Zn	68	50.746	ug/L	0.372	0	2272	46557	0
As-1	75	50.244	ug/L	0.409	0	35	51769	0
As	75	50.035	ug/L	0.432	0	4780	54323	0
Se	82	52.655	ug/L	0.364	0	-5	6880	0
Se	78	52.151	ug/L	0.417	0	4907	20192	0
Y	89		ug/L			230220	187970	0
Kr	83		ug/L			76	67	2
> In	115		ug/L			331526	269397	0
Ag	107	46.581	ug/L	0.577	1	19	386664	1
Cd	111	50.714	ug/L	0.278	0	203	112742	0
Cd	114	50.659	ug/L	0.293	0	45	267087	0
Sb	121	51.549	ug/L	0.273	0	22	356475	0
Sb	123	51.699	ug/L	0.361	0	14	268069	0
Ba	135	50.584	ug/L	0.281	0	14	79208	0
Ba	137	51.001	ug/L	0.160	0	20	134107	0
> Tb	159		ug/L			301360	265331	0
Tl	205	46.025	ug/L	0.263	0	426	1092776	0
Pb	208	46.784	ug/L	0.243	0	331	1532580	0
Bi	209		ug/L			307927	247691	0
Th	232	48.179	ug/L	0.174	0	40	1687657	0
U	238	49.121	ug/L	0.087	0	10	1946499	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 15:29:26

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4015	0
Cl	37		mg/L			1264649	1156405	0
> Ge	72		ug/L			241496	191220	0
Ni	60	0.003	ug/L	0.002	70	28	27	12
Ni	62	-0.197	ug/L	0.033	16	168	80	10
Cu	63	-0.017	ug/L	0.001	5	260	139	3
Cu	65	-0.001	ug/L	0.004	341	62	47	14
Zn	66	-0.070	ug/L	0.009	13	253	110	10
Zn	67	-0.135	ug/L	0.046	33	110	58	17
Zn	68	-0.325	ug/L	0.024	7	2272	1509	1
As-1	75	0.021	ug/L	0.003	16	35	49	7
As	75	0.042	ug/L	0.046	109	4780	3828	1
Se	82	0.025	ug/L	0.030	117	-5	0	440
Se	78	0.147	ug/L	0.140	95	4907	3932	1
Y	89		ug/L			230220	190605	0
Kr	83		ug/L			76	66	6
> In	115		ug/L			331526	273406	0
Ag	107	0.004	ug/L	0.002	51	19	46	33
Cd	111	-0.012	ug/L	0.012	97	203	140	18
Cd	114	-0.000	ug/L	0.002	3384	45	36	31
Sb	121	0.046	ug/L	0.003	6	22	339	6
Sb	123	0.051	ug/L	0.003	6	14	280	5
Ba	135	-0.001	ug/L	0.000	35	14	9	7
Ba	137	0.000	ug/L	0.002	681	20	17	25
> Tb	159		ug/L			301360	268843	0
Tl	205	-0.006	ug/L	0.001	17	426	236	10
Pb	208	-0.001	ug/L	0.001	106	331	268	10
Bi	209		ug/L			307927	257105	1
Th	232	0.026	ug/L	0.002	8	40	967	7
U	238	0.003	ug/L	0.001	15	10	147	14

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI65 MB1 REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 15:39:23

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4074	0
Cl	37		mg/L			1264649	1110780	0
> Ge	72		ug/L			241496	198653	0
Ni	60	0.022	ug/L	0.005	21	28	65	13
Ni	62	-0.223	ug/L	0.016	7	168	75	6
Cu	63	0.163	ug/L	0.003	1	260	878	1
Cu	65	0.188	ug/L	0.022	11	62	406	10
Zn	66	0.116	ug/L	0.023	19	253	366	8
Zn	67	-0.052	ug/L	0.073	140	110	79	20
Zn	68	-0.246	ug/L	0.019	7	2272	1641	1
As-1	75	0.003	ug/L	0.015	536	35	32	51
As	75	-0.193	ug/L	0.049	25	4780	3728	1
Se	82	0.029	ug/L	0.037	128	-5	0	1090
Se	78	-0.578	ug/L	0.108	18	4907	3846	0
Y	89		ug/L			230220	202707	0
Kr	83		ug/L			76	65	6
> In	115		ug/L			331526	289672	0
Ag	107	0.001	ug/L	0.000	34	19	22	8
Cd	111	-0.014	ug/L	0.003	19	203	143	4
Cd	114	-0.004	ug/L	0.001	22	45	14	39
Sb	121	0.010	ug/L	0.000	2	22	90	2
Sb	123	0.009	ug/L	0.002	21	14	63	17
Ba	135	0.015	ug/L	0.005	29	14	37	19
Ba	137	0.011	ug/L	0.002	17	20	48	11
> Tb	159		ug/L			301360	282448	0
Tl	205	-0.012	ug/L	0.000	3	426	96	11
Pb	208	0.013	ug/L	0.001	6	331	758	3
Bi	209		ug/L			307927	268487	0
Th	232	0.008	ug/L	0.005	63	40	354	56
U	238	0.000	ug/L	0.000	46	10	24	28

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI65 MB1SPK REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 15:45:26

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4489	2
Cl	37		mg/L			1264649	1109105	0
> Ge	72		ug/L			241496	196025	0
Ni	60	24.158	ug/L	0.342	1	28	45575	1
Ni	62	23.775	ug/L	0.139	0	168	6767	0
Cu	63	24.639	ug/L	0.152	0	260	99039	0
Cu	65	24.440	ug/L	0.313	1	62	45612	0
Zn	66	75.340	ug/L	0.700	0	253	100973	0
Zn	67	69.956	ug/L	0.397	0	110	15538	0
Zn	68	74.362	ug/L	0.188	0	2272	69810	0
As-1	75	25.446	ug/L	0.131	0	35	27172	0
As	75	24.042	ug/L	0.128	0	4780	29053	0
Se	82	76.195	ug/L	0.322	0	-5	10315	0
Se	78	74.718	ug/L	0.059	0	4907	28242	0
Y	89		ug/L			230220	200437	0
Kr	83		ug/L			76	66	6
> In	115		ug/L			331526	286537	0
Ag	107	23.360	ug/L	0.142	0	19	206252	0
Cd	111	24.221	ug/L	0.164	0	203	57363	0
Cd	114	24.036	ug/L	0.133	0	45	134806	0
Sb	121	0.009	ug/L	0.001	9	22	83	7
Sb	123	0.009	ug/L	0.002	18	14	60	14
Ba	135	25.053	ug/L	0.083	0	14	41732	0
Ba	137	25.322	ug/L	0.171	0	20	70829	0
> Tb	159		ug/L			301360	281657	0
Tl	205	22.914	ug/L	0.136	0	426	577723	0
Pb	208	23.459	ug/L	0.138	0	331	815908	0
Bi	209		ug/L			307927	268074	0
Th	232	23.734	ug/L	0.083	0	40	882551	0
U	238	24.087	ug/L	0.073	0	10	1013206	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI46 E REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 15:51:32

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4053	0
Cl	37		mg/L			1264649	1047747	1
> Ge	72		ug/L			241496	181285	1
Ni	60	3.061	ug/L	0.039	1	28	5358	1
Ni	62	2.413	ug/L	0.167	6	168	749	6
Cu	63	0.216	ug/L	0.001	0	260	996	1
Cu	65	0.208	ug/L	0.011	5	62	405	5
Zn	66	1.063	ug/L	0.065	6	253	1506	6
Zn	67	0.937	ug/L	0.199	21	110	274	15
Zn	68	1.171	ug/L	0.064	5	2272	2696	3
As-1	75	0.370	ug/L	0.028	7	35	391	6
As	75	0.264	ug/L	0.065	24	4780	3843	0
Se	82	0.068	ug/L	0.039	57	-5	4	108
Se	78	-0.274	ug/L	0.146	53	4907	3601	0
Y	89		ug/L			230220	187370	0
Kr	83		ug/L			76	58	6
> In	115		ug/L			331526	266873	1
Ag	107	0.001	ug/L	0.000	17	19	27	7
Cd	111	-0.015	ug/L	0.007	49	203	131	13
Cd	114	0.005	ug/L	0.004	80	45	63	35
Sb	121	0.031	ug/L	0.002	4	22	231	3
Sb	123	0.029	ug/L	0.003	11	14	158	10
Ba	135	3.966	ug/L	0.037	0	14	6162	0
Ba	137	4.053	ug/L	0.038	0	20	10572	1
> Tb	159		ug/L			301360	266903	0
Tl	205	-0.010	ug/L	0.001	6	426	137	12
Pb	208	0.007	ug/L	0.001	17	331	509	6
Bi	209		ug/L			307927	247383	0
Th	232	0.016	ug/L	0.003	16	40	597	15
U	238	0.005	ug/L	0.000	4	10	204	4



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI46 F REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 15:57:36

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4055	0
Cl	37		mg/L			1264649	992989	1
> Ge	72		ug/L			241496	167873	1
Ni	60	5.594	ug/L	0.052	0	28	9052	0
Ni	62	4.926	ug/L	0.378	7	168	1293	6
Cu	63	0.355	ug/L	0.007	1	260	1401	3
Cu	65	0.564	ug/L	0.032	5	62	943	6
Zn	66	0.669	ug/L	0.020	3	253	943	3
Zn	67	0.441	ug/L	0.072	16	110	160	7
Zn	68	0.592	ug/L	0.047	7	2272	2042	1
As-1	75	0.499	ug/L	0.010	2	35	480	1
As	75	0.456	ug/L	0.017	3	4780	3732	1
Se	82	0.173	ug/L	0.074	42	-5	16	52
Se	78	0.082	ug/L	0.042	51	4907	3434	1
Y	89		ug/L			230220	176323	1
Kr	83		ug/L			76	60	1
> In	115		ug/L			331526	249162	1
Ag	107	0.000	ug/L	0.001	149	19	17	29
Cd	111	0.007	ug/L	0.005	73	203	166	6
Cd	114	0.020	ug/L	0.005	26	45	133	20
Sb	121	0.033	ug/L	0.002	6	22	227	5
Sb	123	0.031	ug/L	0.002	7	14	157	5
Ba	135	6.344	ug/L	0.042	0	14	9197	1
Ba	137	6.489	ug/L	0.037	0	20	15795	1
> Tb	159		ug/L			301360	256559	1
Tl	205	-0.009	ug/L	0.000	3	426	145	5
Pb	208	0.003	ug/L	0.001	19	331	371	5
Bi	209		ug/L			307927	234595	1
Th	232	0.005	ug/L	0.001	13	40	220	10
U	238	0.006	ug/L	0.001	14	10	252	15

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI46 G REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 16:03:40

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3895	1
Cl	37		mg/L			1264649	980300	0
> Ge	72		ug/L			241496	163314	1
Ni	60	4.242	ug/L	0.018	0	28	6684	1
Ni	62	3.663	ug/L	0.312	8	168	964	5
Cu	63	0.204	ug/L	0.024	11	260	855	7
Cu	65	0.213	ug/L	0.013	6	62	372	6
Zn	66	0.560	ug/L	0.035	6	253	795	6
Zn	67	0.459	ug/L	0.135	29	110	159	15
Zn	68	0.717	ug/L	0.119	16	2272	2083	5
As-1	75	0.287	ug/L	0.042	14	35	279	14
As	75	0.244	ug/L	0.061	24	4780	3445	0
Se	82	0.131	ug/L	0.018	13	-5	11	19
Se	78	0.064	ug/L	0.293	455	4907	3335	0
Y	89		ug/L			230220	169688	1
Kr	83		ug/L			76	60	8
> In	115		ug/L			331526	243076	1
Ag	107	-0.001	ug/L	0.001	107	19	10	45
Cd	111	-0.017	ug/L	0.001	8	203	115	3
Cd	114	0.008	ug/L	0.001	18	45	71	9
Sb	121	0.050	ug/L	0.003	5	22	329	5
Sb	123	0.057	ug/L	0.004	6	14	276	4
Ba	135	5.442	ug/L	0.084	1	14	7698	1
Ba	137	5.506	ug/L	0.094	1	20	13079	2
> Tb	159		ug/L			301360	252364	1
Tl	205	-0.010	ug/L	0.001	5	426	128	8
Pb	208	✓ 0.006	ug/L	0.001	21	331	460	9
Bi	209		ug/L			307927	233817	1
Th	232	0.002	ug/L	0.000	8	40	97	4
U	238	0.005	ug/L	0.000	7	10	189	6

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI46 H REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 16:09:45

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3891	0
Cl	37		mg/L			1264649	939743	0
> Ge	72		ug/L			241496	160905	0
Ni	60	2.315	ug/L	0.027	1	28	3602	1
Ni	62	1.830	ug/L	0.086	4	168	531	3
Cu	63	0.212	ug/L	0.011	5	260	870	4
Cu	65	0.228	ug/L	0.006	2	62	391	2
Zn	66	0.272	ug/L	0.005	1	253	467	0
Zn	67	0.240	ug/L	0.108	44	110	117	17
Zn	68	0.386	ug/L	0.074	19	2272	1803	2
As-1	75	0.549	ug/L	0.016	2	35	504	2
As	75	0.480	ug/L	0.026	5	4780	3597	0
Se	82	0.161	ug/L	0.019	11	-5	14	14
Se	78	0.021	ug/L	0.083	387	4907	3275	0
Y	89		ug/L			230220	166339	0
Kr	83		ug/L			76	61	5
> In	115		ug/L			331526	238163	0
Ag	107	-0.000	ug/L	0.000	166	19	12	11
Cd	111	-0.017	ug/L	0.003	17	203	112	4
Cd	114	-0.001	ug/L	0.001	166	45	29	19
Sb	121	0.047	ug/L	0.002	5	22	301	5
Sb	123	0.053	ug/L	0.007	13	14	255	13
Ba	135	7.044	ug/L	0.046	0	14	9759	0
Ba	137	7.066	ug/L	0.030	0	20	16439	0
> Tb	159		ug/L			301360	249998	0
Tl	205	-0.012	ug/L	0.000	0	426	92	2
Pb	208	0.003	ug/L	0.000	11	331	374	2
Bi	209		ug/L			307927	231380	0
Th	232	0.001	ug/L	0.000	29	40	74	15
U	238	0.010	ug/L	0.000	2	10	397	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI46 I REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 16:15:50

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3874	1
Cl	37		mg/L			1264649	912047	0
> Ge	72		ug/L			241496	162018	0
Ni	60	3.488	ug/L	0.029	0	28	5455	0
Ni	62	2.951	ug/L	0.185	6	168	793	5
Cu	63	0.186	ug/L	0.018	9	260	792	6
Cu	65	0.201	ug/L	0.016	7	62	352	6
Zn	66	0.467	ug/L	0.021	4	253	685	3
Zn	67	0.347	ug/L	0.044	12	110	137	5
Zn	68	0.488	ug/L	0.071	14	2272	1893	3
As-1	75	0.189	ug/L	0.018	9	35	190	7
As	75	0.030	ug/L	0.081	273	4780	3232	1
Se	82	0.139	ug/L	0.006	4	-5	11	5
Se	78	-0.370	ug/L	0.211	56	4907	3193	0
Y	89		ug/L			230220	168520	0
Kr	83		ug/L			76	51	5
> In	115		ug/L			331526	242636	0
Ag	107	-0.001	ug/L	0.001	148	19	9	79
Cd	111	-0.012	ug/L	0.000	2	203	124	0
Cd	114	0.006	ug/L	0.001	22	45	60	9
Sb	121	0.021	ug/L	0.002	11	22	145	9
Sb	123	0.021	ug/L	0.003	12	14	107	11
Ba	135	5.214	ug/L	0.017	0	14	7362	1
Ba	137	5.358	ug/L	0.094	1	20	12702	1
> Tb	159		ug/L			301360	253503	0
Tl	205	-0.012	ug/L	0.000	2	426	89	8
Pb	208	0.006	ug/L	0.000	7	331	472	2
Bi	209		ug/L			307927	237166	0
Th	232	0.001	ug/L	0.000	44	40	59	17
U	238	0.003	ug/L	0.000	1	10	139	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RH66 F REN

Sample Dil Factor: 10

Comments:

Sample Date/Time: Thursday, August 19, 2010 16:21:56

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Zn

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	2945	1
Cl	37		mg/L			1264649	937837	0
> Ge	72		ug/L			241496	168268	0
Ni	60	1.478	ug/L	0.015	0	28	2413	0
Ni	62	1.157	ug/L	0.072	6	168	394	4
Cu	63	10.606	ug/L	0.056	0	260	36700	0
Cu	65	10.557	ug/L	0.089	0	62	16938	0
Zn	66	102.409	ug/L	0.053	0	253	117758	0
Zn	67	92.099	ug/L	1.073	1	110	17535	0
Zn	68	102.243	ug/L	0.432	0	2272	81801	0
As-1	75	2.154	ug/L	0.004	0	35	1996	0
As	75	1.995	ug/L	0.040	1	4780	5124	0
Se	82	0.091	ug/L	0.047	51	-5	6	79
Se	78	-0.504	ug/L	0.143	28	4907	3279	0
Y	89		ug/L			230220	177725	0
Kr	83		ug/L			76	57	9
> In	115		ug/L			331526	250534	0
Ag	107	0.007	ug/L	0.001	10	19	68	7
Cd	111	0.085	ug/L	0.027	31	203	329	16
Cd	114	0.086	ug/L	0.001	1	45	455	1
Sb	121	0.570	ug/L	0.008	1	22	3679	1
Sb	123	0.569	ug/L	0.006	1	14	2754	1
Ba	135	10.127	ug/L	0.079	0	14	14755	0
Ba	137	10.322	ug/L	0.063	0	20	25252	0
> Tb	159		ug/L			301360	259377	0
Tl	205	-0.007	ug/L	0.000	6	426	198	5
Pb	208	0.359	ug/L	0.005	1	331	11776	1
Bi	209		ug/L			307927	247034	0
Th	232	0.020	ug/L	0.000	0	40	713	0
U	238	0.046	ug/L	0.001	2	10	1807	2

# ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 16:27:58

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3554	3
Cl	37		mg/L			1264649	969239	0
> Ge	72		ug/L			241496	166027	0
Ni	60	181.747	ug/L	1.149	0	28	290279	0
Ni	62	180.550	ug/L	1.208	0	168	42760	0
Cu	63	178.937	ug/L	0.736	0	260	608078	0
Cu	65	178.403	ug/L	0.773	0	62	281744	0
Zn	66	193.469	ug/L	0.681	0	253	219348	0
Zn	67	189.568	ug/L	1.877	0	110	35532	0
Zn	68	192.613	ug/L	1.007	0	2272	150666	0
As-1	75	197.050	ug/L	0.586	0	35	178051	0
As	75	196.217	ug/L	0.714	0	4780	177296	0
Se	82	204.015	ug/L	1.141	0	-5	23399	0
Se	78	201.925	ug/L	1.222	0	4907	58900	0
Y	89		ug/L			230220	167995	0
Kr	83		ug/L			76	89	3
> In	115		ug/L			331526	241318	0
Ag	107	180.107	ug/L	0.399	0	19	1339206	0
Cd	111	197.900	ug/L	0.062	0	203	393672	0
Cd	114	197.903	ug/L	0.519	0	45	934561	0
Sb	121	208.736	ug/L	0.527	0	22	1292957	0
Sb	123	209.701	ug/L	0.187	0	14	973992	0
Ba	135	201.442	ug/L	1.068	0	14	282529	0
Ba	137	203.982	ug/L	0.804	0	20	480428	0
> Tb	159		ug/L			301360	247088	0
Tl	205	181.143	ug/L	1.265	0	426	4004082	0
Pb	208	184.421	ug/L	1.570	0	331	5625054	0
Bi	209		ug/L			307927	218767	0
Th	232	194.390	ug/L	1.001	0	40	6340900	0
U	238	197.111	ug/L	0.794	0	10	7273785	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 16:33:57

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	5343	2
Cl	37		mg/L			1264649	960312	0
> Ge	72		ug/L			241496	166358	0
Ni	60	272.985	ug/L	0.171	0	28	436867	0
Ni	62	270.738	ug/L	0.987	0	168	64190	0
Cu	63	266.570	ug/L	1.215	0	260	907582	0
Cu	65	266.060	ug/L	0.704	0	62	420987	0
Zn	66	284.362	ug/L	1.102	0	253	322953	0
Zn	67	282.230	ug/L	1.632	0	110	52969	0
Zn	68	282.759	ug/L	2.294	0	2272	220882	0
As-1	75	292.098	ug/L	1.703	0	35	264442	0
As	75	291.484	ug/L	1.452	0	4780	262295	0
Se	82	299.165	ug/L	1.450	0	-5	34381	0
Se	78	297.833	ug/L	0.973	0	4907	85443	0
Y	89		ug/L			230220	167766	0
Kr	83		ug/L			76	103	1
> In	115		ug/L			331526	240274	0
Ag	107	268.423	ug/L	1.245	0	19	1987255	0
Cd	111	294.199	ug/L	1.752	0	203	582631	0
Cd	114	294.700	ug/L	0.599	0	45	1385631	0
Sb	121	309.901	ug/L	1.009	0	22	1911289	0
Sb	123	309.940	ug/L	0.992	0	14	1433330	0
Ba	135	298.622	ug/L	1.716	0	14	417013	0
Ba	137	302.765	ug/L	0.550	0	20	709995	0
> Tb	159		ug/L			301360	243134	0
Tl	205	273.955	ug/L	1.136	0	426	5958708	0
Pb	208	278.120	ug/L	1.222	0	331	8347191	0
Bi	209		ug/L			307927	187702	0
Th	232	295.605	ug/L	0.896	0	40	9488263	0
U	238	299.272	ug/L	1.521	0	10	10866904	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 16:39:58

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3166	1
Cl	37		mg/L			1264649	991372	0
> Ge	72		ug/L			241496	173118	0
Ni	60	46.915	ug/L	0.377	0	28	78146	0
Ni	62	46.683	ug/L	0.264	0	168	11618	1
Cu	63	46.558	ug/L	0.398	0	260	165110	0
Cu	65	46.448	ug/L	0.189	0	62	76519	0
Zn	66	51.136	ug/L	0.365	0	253	60585	0
Zn	67	49.128	ug/L	0.412	0	110	9660	0
Zn	68	50.802	ug/L	0.305	0	2272	42634	0
As-1	75	50.346	ug/L	0.128	0	35	47453	0
As	75	50.090	ug/L	0.077	0	4780	49745	0
Se	82	53.808	ug/L	0.307	0	-5	6432	0
Se	78	53.264	ug/L	0.243	0	4907	18790	0
Y	89		ug/L			230220	176513	0
Kr	83		ug/L			76	67	11
> In	115		ug/L			331526	250391	0
Ag	107	46.671	ug/L	0.152	0	19	360089	0
Cd	111	51.181	ug/L	0.165	0	203	105753	0
Cd	114	50.902	ug/L	0.109	0	45	249436	0
Sb	121	52.699	ug/L	0.294	0	22	338715	0
Sb	123	52.852	ug/L	0.223	0	14	254716	0
Ba	135	51.009	ug/L	0.784	1	14	74241	1
Ba	137	51.874	ug/L	0.242	0	20	126782	0
> Tb	159		ug/L			301360	256718	0
Tl	205	46.029	ug/L	0.202	0	426	1057399	0
Pb	208	46.860	ug/L	0.118	0	331	1485235	0
Bi	209		ug/L			307927	237858	0
Th	232	48.831	ug/L	0.236	0	40	1654946	0
U	238	49.849	ug/L	0.135	0	10	1911224	0



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 16:46:39

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3388	0
Cl	37		mg/L			1264649	1006254	0
> Ge	72		ug/L			241496	173242	0
Ni	60	0.006	ug/L	0.004	74	28	30	23
Ni	62	-0.320	ug/L	0.021	6	168	42	12
Cu	63	-0.021	ug/L	0.002	11	260	113	7
Cu	65	-0.001	ug/L	0.004	453	62	43	15
Zn	66	-0.052	ug/L	0.015	28	253	120	14
Zn	67	-0.169	ug/L	0.056	32	110	46	23
Zn	68	-0.313	ug/L	0.031	9	2272	1377	1
As-1	75	0.040	ug/L	0.002	4	35	62	2
As	75	0.031	ug/L	0.017	55	4780	3458	0
Se	82	0.039	ug/L	0.049	125	-5	0	734
Se	78	0.097	ug/L	0.079	81	4907	3548	0
Y	89		ug/L			230220	177407	0
Kr	83		ug/L			76	64	8
> In	115		ug/L			331526	254158	0
Ag	107	0.007	ug/L	0.002	29	19	68	22
Cd	111	-0.011	ug/L	0.010	87	203	132	15
Cd	114	0.001	ug/L	0.001	73	45	41	12
Sb	121	0.085	ug/L	0.004	4	22	574	4
Sb	123	0.085	ug/L	0.015	17	14	427	17
Ba	135	-0.001	ug/L	0.003	341	14	9	45
Ba	137	0.001	ug/L	0.001	113	20	17	14
> Tb	159		ug/L			301360	258936	0
Tl	205	0.000	ug/L	0.002	812	426	373	14
Pb	208	0.001	ug/L	0.001	43	331	332	6
Bi	209		ug/L			307927	246733	0
Th	232	0.038	ug/L	0.008	20	40	1336	19
U	238	0.006	ug/L	0.000	6	10	230	6

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI57 MB SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Thursday, August 19, 2010 16:54:00

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3210	2
Cl	37		mg/L			1264649	1003783	0
> Ge	72		ug/L			241496	180376	0
Ni	60	0.027	ug/L	0.005	17	28	69	12
Ni	62	-0.332	ug/L	0.034	10	168	40	21
Cu	63	-0.005	ug/L	0.004	79	260	175	8
Cu	65	0.015	ug/L	0.005	36	62	72	13
Zn	66	0.098	ug/L	0.014	14	253	309	5
Zn	67	-0.041	ug/L	0.069	169	110	74	18
Zn	68	-0.220	ug/L	0.034	15	2272	1512	1
As-1	75	0.045	ug/L	0.012	25	35	70	15
As	75	-0.067	ug/L	0.026	39	4780	3506	0
Se	82	0.040	ug/L	0.061	152	-5	1	762
Se	78	-0.259	ug/L	0.080	30	4907	3588	0
Y	89		ug/L			230220	185829	0
Kr	83		ug/L			76	64	5
> In	115		ug/L			331526	265155	0
Ag	107	0.001	ug/L	0.002	108	19	26	46
Cd	111	-0.012	ug/L	0.003	27	203	135	5
Cd	114	-0.001	ug/L	0.001	84	45	30	15
Sb	121	0.033	ug/L	0.003	7	22	241	7
Sb	123	0.031	ug/L	0.002	7	14	168	6
Ba	135	0.684	ug/L	0.028	4	14	1065	3
Ba	137	0.692	ug/L	0.011	1	20	1807	1
> Tb	159		ug/L			301360	269530	0
Tl	205	-0.002	ug/L	0.002	68	426	322	12
Pb	208	U 0.008	ug/L	0.001	10	331	555	4
Bi	209		ug/L			307927	255914	0
Th	232	0.012	ug/L	0.002	14	40	454	12
U	238	0.001	ug/L	0.000	10	10	68	9

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI57 MBSPK SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Thursday, August 19, 2010 17:00:00

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3071	0
Cl	37		mg/L			1264649	1007288	0
> Ge	72		ug/L			241496	180370	0
Ni	60	23.266	ug/L	0.329	1	28	40388	1
Ni	62	22.324	ug/L	0.167	0	168	5854	0
Cu	63	23.657	ug/L	0.198	0	260	87506	0
Cu	65	23.798	ug/L	0.115	0	62	40869	0
Zn	66	77.892	ug/L	0.240	0	253	96052	0
Zn	67	71.921	ug/L	0.795	1	110	14696	0
Zn	68	77.135	ug/L	0.344	0	2272	66568	0
As-1	75	25.985	ug/L	0.365	1	35	25530	1
As	75	24.364	ug/L	0.322	1	4780	27043	0
Se	82	81.239	ug/L	0.689	0	-5	10119	0
Se	78	79.419	ug/L	0.907	1	4907	27390	0
Y	89		ug/L			230220	184747	0
Kr	83		ug/L			76	71	7
> In	115		ug/L			331526	265136	0
Ag	107	22.807	ug/L	0.136	0	19	186330	0
Cd	111	24.326	ug/L	0.128	0	203	53308	0
Cd	114	24.258	ug/L	0.253	1	45	125890	0
Sb	121	0.021	ug/L	0.001	4	22	163	3
Sb	123	0.021	ug/L	0.003	13	14	116	12
Ba	135	25.758	ug/L	0.391	1	14	39702	1
Ba	137	26.213	ug/L	0.248	0	20	67844	0
> Tb	159		ug/L			301360	270588	0
Tl	205	22.295	ug/L	0.078	0	426	540031	0
Pb	208	22.822	ug/L	0.071	0	331	762576	0
Bi	209		ug/L			307927	259140	0
Th	232	23.289	ug/L	0.097	0	40	831965	0
U	238	23.810	ug/L	0.059	0	10	962227	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI65 BDUP REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 17:06:00

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4548	2
Cl	37		mg/L			1264649	977715	0
> Ge	72		ug/L			241496	170706	0
Ni	60	3.172	ug/L	0.025	0	28	5229	1
Ni	62	2.301	ug/L	0.037	1	168	678	1
Cu	63	0.451	ug/L	0.010	2	260	1760	1
Cu	65	0.476	ug/L	0.037	7	62	817	7
Zn	66	0.354	ug/L	0.035	9	253	592	7
Zn	67	0.129	ug/L	0.013	9	110	102	1
Zn	68	0.321	ug/L	0.010	3	2272	1862	0
As-1	75	0.543	ug/L	0.013	2	35	529	2
As	75	0.426	ug/L	0.009	2	4780	3767	0
Se	82	0.089	ug/L	0.036	40	-5	6	63
Se	78	-0.203	ug/L	0.063	31	4907	3411	0
Y	89		ug/L			230220	177573	0
Kr	83		ug/L			76	66	5
> In	115		ug/L			331526	253212	0
Ag	107	0.003	ug/L	0.001	25	19	36	15
Cd	111	-0.015	ug/L	0.005	37	203	124	9
Cd	114	0.005	ug/L	0.002	37	45	61	16
Sb	121	0.062	ug/L	0.000	0	22	422	0
Sb	123	0.061	ug/L	0.002	3	14	310	3
Ba	135	3.027	ug/L	0.040	1	14	4464	1
Ba	137	3.034	ug/L	0.024	0	20	7512	0
> Tb	159		ug/L			301360	257811	0
Tl	205	-0.008	ug/L	0.001	16	426	183	16
Pb	208	0.003	ug/L	0.001	18	331	382	4
Bi	209		ug/L			307927	238026	1
Th	232	0.022	ug/L	0.001	3	40	781	3
U	238	0.008	ug/L	0.001	8	10	309	7

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI65 B REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 17:12:01

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4076	1
Cl	37		mg/L			1264649	962492	0
> Ge	72		ug/L			241496	168962	0
Ni	60	3.078	ug/L	0.063	2	28	5024	2
Ni	62	2.214	ug/L	0.130	5	168	650	5
Cu	63	0.443	ug/L	0.009	2	260	1713	1
Cu	65	0.465	ug/L	0.007	1	62	790	1
Zn	66	0.348	ug/L	0.028	8	253	578	5
Zn	67	0.209	ug/L	0.051	24	110	117	8
Zn	68	0.363	ug/L	0.039	10	2272	1875	1
As-1	75	0.555	ug/L	0.006	1	35	534	0
As	75	0.435	ug/L	0.040	9	4780	3737	0
Se	82	0.174	ug/L	0.059	34	-5	16	42
Se	78	-0.190	ug/L	0.081	42	4907	3380	0
Y	89		ug/L			230220	176331	0
Kr	83		ug/L			76	58	5
> In	115		ug/L			331526	251840	0
Ag	107	0.000	ug/L	0.001	361	19	16	45
Cd	111	-0.007	ug/L	0.004	52	203	140	5
Cd	114	0.003	ug/L	0.001	34	45	48	10
Sb	121	0.055	ug/L	0.003	4	22	372	4
Sb	123	0.058	ug/L	0.004	7	14	290	7
Ba	135	2.923	ug/L	0.104	3	14	4289	3
Ba	137	2.987	ug/L	0.019	0	20	7356	0
> Tb	159		ug/L			301360	257629	0
Tl	205	-0.011	ug/L	0.001	5	426	107	13
Pb	208	0.005	ug/L	0.000	6	331	427	2
Bi	209		ug/L			307927	238651	0
Th	232	0.007	ug/L	0.001	10	40	265	8
U	238	0.006	ug/L	0.000	6	10	249	5

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI65 BSPK REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 17:18:02

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	4281	4
Cl	37		mg/L			1264649	961496	0
> Ge	72		ug/L			241496	167927	0
Ni	60	25.519	ug/L	0.131	0	28	41241	0
Ni	62	24.875	ug/L	0.209	0	168	6059	1
Cu	63	23.036	ug/L	0.035	0	260	79336	0
Cu	65	23.114	ug/L	0.145	0	62	36960	1
Zn	66	72.484	ug/L	0.477	0	253	83230	1
Zn	67	66.032	ug/L	0.740	1	110	12569	2
Zn	68	71.791	ug/L	0.342	0	2272	57790	0
As-1	75	25.821	ug/L	0.271	1	35	23619	0
As	75	24.417	ug/L	0.097	0	4780	25224	0
Se	82	75.911	ug/L	0.648	0	-5	8803	0
Se	78	74.417	ug/L	0.277	0	4907	24110	0
Y	89		ug/L			230220	174527	0
Kr	83		ug/L			76	59	7
> In	115		ug/L			331526	249453	0
Ag	107	21.965	ug/L	0.130	0	19	168841	1
Cd	111	23.705	ug/L	0.063	0	203	48879	0
Cd	114	23.714	ug/L	0.088	0	45	115787	0
Sb	121	0.057	ug/L	0.003	6	22	381	5
Sb	123	0.061	ug/L	0.002	3	14	305	2
Ba	135	28.219	ug/L	0.141	0	14	40920	0
Ba	137	28.652	ug/L	0.196	0	20	69768	0
> Tb	159		ug/L			301360	257806	0
Tl	205	22.207	ug/L	0.071	0	426	512492	0
Pb	208	22.594	ug/L	0.174	0	331	719287	0
Bi	209		ug/L			307927	237141	0
Th	232	23.879	ug/L	0.213	0	40	812711	0
U	238	24.393	ug/L	0.022	0	10	939221	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI65 A REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 17:24:03

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3814	1
Cl	37		mg/L			1264649	938138	1
> Ge	72		ug/L			241496	165090	0
Ni	60	5.941	ug/L	0.018	0	28	9453	0
Ni	62	5.165	ug/L	0.171	3	168	1328	3
Cu	63	0.477	ug/L	0.016	3	260	1788	2
Cu	65	0.499	ug/L	0.017	3	62	826	2
Zn	66	0.507	ug/L	0.041	8	253	744	6
Zn	67	0.470	ug/L	0.060	12	110	162	6
Zn	68	0.525	ug/L	0.091	17	2272	1957	3
As-1	75	0.261	ug/L	0.032	12	35	259	11
As	75	0.115	ug/L	0.057	49	4780	3369	1
Se	82	0.219	ug/L	0.097	44	-5	21	51
Se	78	-0.207	ug/L	0.223	107	4907	3298	1
Y	89		ug/L			230220	174881	1
Kr	83		ug/L			76	56	7
> In	115		ug/L			331526	245800	0
Ag	107	0.005	ug/L	0.001	21	19	52	15
Cd	111	0.001	ug/L	0.009	1565	203	151	12
Cd	114	0.016	ug/L	0.001	8	45	110	4
Sb	121	0.039	ug/L	0.002	4	22	262	4
Sb	123	0.037	ug/L	0.001	1	14	184	2
Ba	135	11.577	ug/L	0.067	0	14	16548	0
Ba	137	11.706	ug/L	0.115	0	20	28096	1
> Tb	159		ug/L			301360	253932	0
Tl	205	-0.007	ug/L	0.001	10	426	200	8
Pb	208	0.013	ug/L	0.001	5	331	674	2
Bi	209		ug/L			307927	233669	0
Th	232	0.020	ug/L	0.005	25	40	707	24
U	238	0.015	ug/L	0.001	5	10	583	5

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI65 C REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 17:30:29

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3970	2
Cl	37		mg/L			1264649	952524	0
> Ge	72		ug/L			241496	165250	0
Ni	60	1.832	ug/L	0.016	0	28	2931	0
Ni	62	1.141	ug/L	0.125	10	168	383	7
Cu	63	0.101	ug/L	0.012	11	260	518	7
Cu	65	0.141	ug/L	0.011	7	62	264	5
Zn	66	0.302	ug/L	0.009	3	253	513	1
Zn	67	0.230	ug/L	0.036	15	110	118	6
Zn	68	0.346	ug/L	0.010	2	2272	1822	0
As-1	75	0.342	ug/L	0.035	10	35	331	9
As	75	0.161	ug/L	0.043	26	4780	3413	1
Se	82	0.162	ug/L	0.057	35	-5	14	44
Se	78	-0.431	ug/L	0.118	27	4907	3240	1
Y	89		ug/L			230220	171288	0
Kr	83		ug/L			76	52	6
> In	115		ug/L			331526	245477	0
Ag	107	0.003	ug/L	0.001	44	19	37	28
Cd	111	-0.001	ug/L	0.009	1364	203	149	12
Cd	114	0.014	ug/L	0.002	15	45	100	9
Sb	121	0.020	ug/L	0.002	9	22	141	8
Sb	123	0.025	ug/L	0.001	3	14	126	3
Ba	135	17.611	ug/L	0.054	0	14	25134	0
Ba	137	17.984	ug/L	0.145	0	20	43101	1
> Tb	159		ug/L			301360	254831	0
Tl	205	-0.012	ug/L	0.000	1	426	91	3
Pb	208	0.002	ug/L	0.001	42	331	357	8
Bi	209		ug/L			307927	234819	0
Th	232	0.006	ug/L	0.001	15	40	222	12
U	238	0.004	ug/L	0.000	7	10	167	7



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI65 D REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 17:36:32

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	5720	3
Cl	37		mg/L			1264649	924971	0
> Ge	72		ug/L			241496	157233	1
Ni	60	1.185	ug/L	0.012	1	28	1810	2
Ni	62	1.343	ug/L	0.093	6	168	410	3
Cu	63	2.108	ug/L	0.039	1	260	6951	2
Cu	65	0.265	ug/L	0.017	6	62	437	6
Zn	66	0.358	ug/L	0.013	3	253	549	1
Zn	67	0.291	ug/L	0.091	31	110	123	12
Zn	68	0.492	ug/L	0.031	6	2272	1839	1
As-1	75	5.618	ug/L	0.098	1	35	4829	1
As	75	5.771	ug/L	0.176	3	4780	7958	1
Se	82	0.115	ug/L	0.021	18	-5	9	25
Se	78	0.404	ug/L	0.327	80	4907	3299	0
Y	89		ug/L			230220	169177	1
Kr	83		ug/L			76	62	4
> In	115		ug/L			331526	232220	1
Ag	107	0.000	ug/L	0.000	84	19	16	17
Cd	111	-0.153	ug/L	0.024	15	203	-151	31
Cd	114	-0.002	ug/L	0.002	84	45	23	31
Sb	121	0.243	ug/L	0.006	2	22	1465	1
Sb	123	0.256	ug/L	0.015	5	14	1155	7
Ba	135	2.126	ug/L	0.042	1	14	2878	1
Ba	137	2.185	ug/L	0.036	1	20	4964	1
> Tb	159		ug/L			301360	242474	1
Tl	205	0.012	ug/L	0.000	2	426	92	6
Pb	208	0.005	ug/L	0.000	6	331	422	2
Bi	209		ug/L			307927	208221	0
Th	232	0.003	ug/L	0.001	29	40	132	22
U	238	0.121	ug/L	0.002	1	10	4372	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI65 E REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Thursday, August 19, 2010 17:42:35

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3929	1
Cl	37		mg/L			1264649	960293	0
> Ge	72		ug/L			241496	164213	1
Ni	60	2.940	ug/L	0.067	2	28	4663	1
Ni	62	2.358	ug/L	0.041	1	168	665	1
Cu	63	0.524	ug/L	0.002	0	260	1939	1
Cu	65	0.454	ug/L	0.016	3	62	750	2
Zn	66	10.742	ug/L	0.069	0	253	12208	0
Zn	67	9.822	ug/L	0.225	2	110	1892	2
Zn	68	10.651	ug/L	0.330	3	2272	9699	1
As-1	75	3.025	ug/L	0.040	1	35	2727	2
As	75	2.880	ug/L	0.041	1	4780	5776	0
Se	82	0.387	ug/L	0.044	11	-5	40	11
Se	78	-0.185	ug/L	0.249	134	4907	3286	0
Y	89		ug/L			230220	176363	1
Kr	83		ug/L			76	57	6
> In	115		ug/L			331526	244017	0
Ag	107	0.000	ug/L	0.000	121	19	16	18
Cd	111	-0.010	ug/L	0.017	175	203	130	27
Cd	114	0.007	ug/L	0.002	28	45	66	14
Sb	121	0.044	ug/L	0.003	7	22	294	6
Sb	123	0.046	ug/L	0.002	3	14	226	4
Ba	135	21.691	ug/L	0.314	1	14	30773	2
Ba	137	21.927	ug/L	0.158	0	20	52233	0
> Tb	159		ug/L			301360	253163	0
Tl	205	-0.010	ug/L	0.001	5	426	135	8
Pb	208	0.004	ug/L	0.001	20	331	418	7
Bi	209		ug/L			307927	228166	1
Th	232	0.003	ug/L	0.001	19	40	129	13
U	238	0.186	ug/L	0.002	1	10	7027	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RI57 A SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Thursday, August 19, 2010 17:48:38

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	8196	2
Cl	37		mg/L			1264649	960100	0
> Ge	72		ug/L			241496	179620	0
Ni	60	19.720	ug/L	0.032	0	28	34094	0
Ni	62	22.762	ug/L	0.233	1	168	5941	1
Cu	63	58.558	ug/L	0.312	0	260	215412	0
Cu	65	59.020	ug/L	0.409	0	62	100865	0
Zn	66	688.589	ug/L	2.469	0	253	844125	0
Zn	67	614.086	ug/L	4.520	0	110	124343	0
Zn	68	684.735	ug/L	5.039	0	2272	575132	0
As-1	75	4.771	ug/L	0.035	0	35	4690	0
As	75	4.574	ug/L	0.051	1	4780	7944	0
Se	82	0.206	ug/L	0.044	21	-5	21	25
Se	78	-0.552	ug/L	0.104	18	4907	3486	0
Y	89		ug/L			230220	235065	0
Kr	83		ug/L			76	74	7
> In	115		ug/L			331526	264708	0
Ag	107	0.348	ug/L	0.012	3	19	2851	4
Cd	111	3.399	ug/L	0.073	2	203	7575	2
Cd	114	3.299	ug/L	0.034	1	45	17125	1
Sb	121	0.202	ug/L	0.009	4	22	1390	4
Sb	123	0.206	ug/L	0.013	6	14	1062	5
Ba	135	54.360	ug/L	0.361	0	14	83638	0
Ba	137	54.891	ug/L	0.125	0	20	141821	0
> Tb	159		ug/L			301360	272978	0
Tl	205	0.031	ug/L	0.002	7	426	1155	4
Pb	208	38.184	ug/L	0.283	0	331	1286962	1
Bi	209		ug/L			307927	268895	0
Th	232	0.484	ug/L	0.008	1	40	17467	1
U	238	0.298	ug/L	0.000	0	10	12173	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, August 19, 2010 17:54:41

Number of Replicates: 3

Method File: C:\Elandata\Method\2008GFA7+.mth

Tuning File: c:\elandata\Tuning\2008.tun

Optimization File: c:\elandata\Optimize\arioptimize.dac

Calibration File: C:\Elandata\Caldata\081910.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
C	13		mg/L			4707	3002	1
Cl	37		mg/L			1264649	960025	0
> Ge	72		ug/L			241496	173859	0
Ni	60	46.512	ug/L	0.261	0	28	77806	0
Ni	62	45.888	ug/L	0.723	1	168	11470	0
Cu	63	46.325	ug/L	0.358	0	260	164992	1
Cu	65	46.411	ug/L	0.275	0	62	76783	0
Zn	66	51.067	ug/L	0.378	0	253	60765	1
Zn	67	50.125	ug/L	0.355	0	110	9897	1
Zn	68	50.864	ug/L	0.303	0	2272	42867	0
As-1	75	50.344	ug/L	0.358	0	35	47656	1
As	75	49.984	ug/L	0.522	1	4780	49861	1
Se	82	53.816	ug/L	0.163	0	-5	6460	0
Se	78	52.902	ug/L	0.427	0	4907	18767	1
Y	89		ug/L			230220	177968	1
Kr	83		ug/L			76	63	12
> In	115		ug/L			331526	255584	1
Ag	107	45.946	ug/L	0.272	0	19	361839	1
Cd	111	50.804	ug/L	0.534	1	203	107142	0
Cd	114	51.001	ug/L	0.320	0	45	255097	1
Sb	121	52.060	ug/L	0.212	0	22	341534	1
Sb	123	52.379	ug/L	0.631	1	14	257662	1
Ba	135	50.849	ug/L	0.591	1	14	75534	0
Ba	137	51.465	ug/L	0.248	0	20	128384	0
> Tb	159		ug/L			301360	261977	0
Tl	205	45.932	ug/L	0.453	0	426	1076819	1
Pb	208	46.743	ug/L	0.336	0	331	1511924	1
Bi	209		ug/L			307927	242691	1
Th	232	48.408	ug/L	0.264	0	40	1674285	0
U	238	49.704	ug/L	0.194	0	10	1944764	0