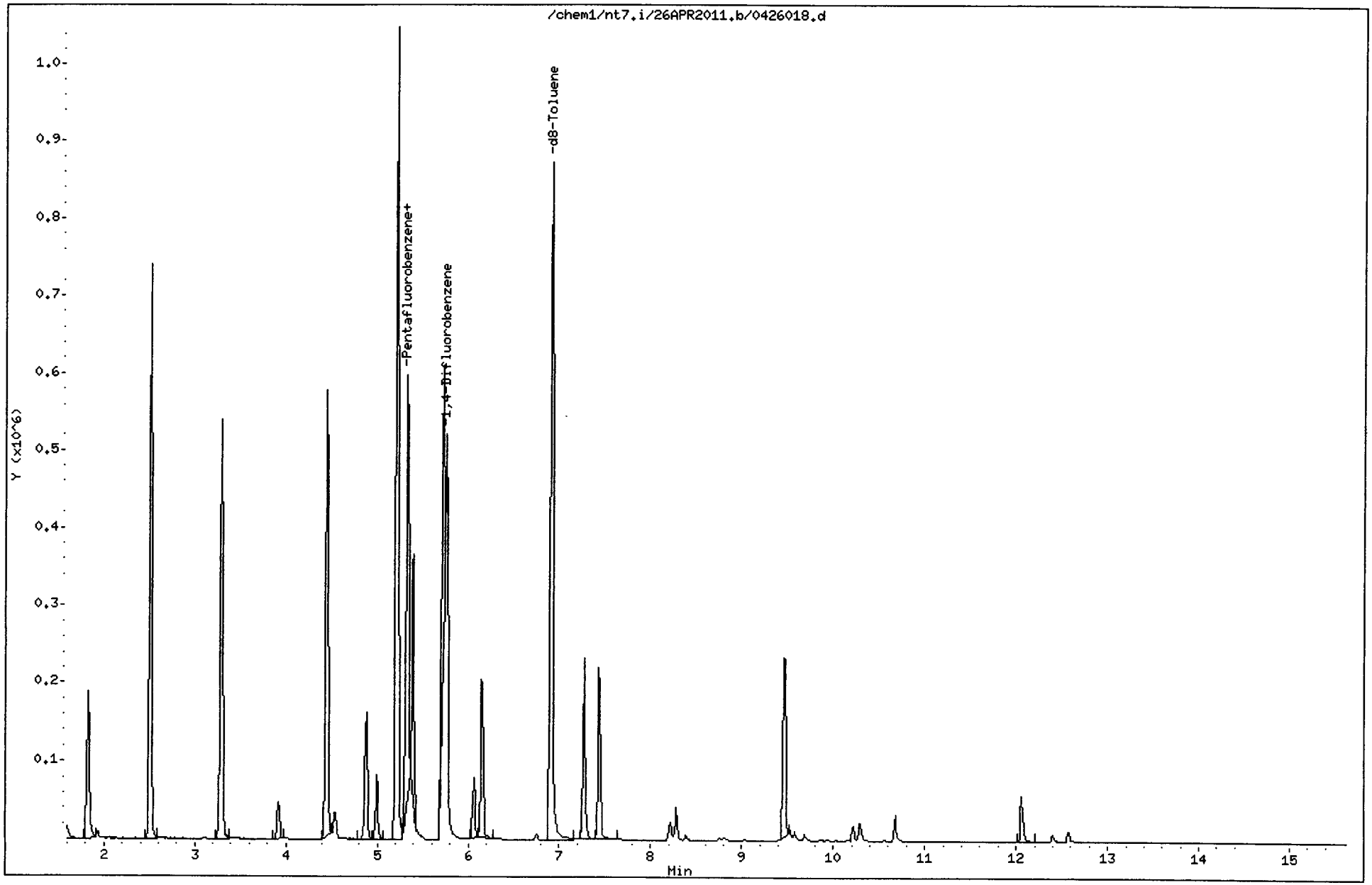
Data File: /chem1/nt7.i/26APR2011.b/0426018.d
Date : 26-APR-2011 14:29
Client ID: ICV
Sample Info: ICV0426,10,10,0,

Column phase: RTXVMS

Instrument: nt7.i

Operator: MH
Column diameter: 0.18

SUS:00388



CO-ELUTION SUMMARY FOR FILE - 0426018.d

Lab ID: ICV0426, Method: sim042611.m, Instrument: nt7.i, Date: 26-APR-2011

RT	CO-ELUTION COMPOUNDS

Report Date : 04-May-2011 09:22

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt7.i/26APR2011.b/sim042611.m
Batch File: /chem1/nt7.i/26APR2011.b
Inst ID: nt7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0426011	0426012	0426013	0426014	0426016	0426017	0426019
INJ.DATE:	26-APR-2011	26-APR-2011	26-APR-2011	26-APR-2011	26-APR-2011	26-APR-2011	26-APR-2011
INJ.TIME:	11:30	11:55	12:21	12:47	13:37	14:03	15:00

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Vinyl Chloride	1.552	1.552	1.551	1.554	1.552	1.553	1.551	1.551	1.338-1.764	1.552	0.001
	2 1,1-Dichloroethene	2.510	2.505	2.505	2.510	2.510	2.511	2.509	2.505	2.292-2.718	2.508	0.002
	175 Trans-1,2-Dichloroethe	3.289	3.290	3.290	3.289	3.289	3.290	3.289	3.285	3.071-3.498	3.289	0.001
	177 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.980	3.767-4.193	+++++	+++++
	3 cis-1,2-dichloroethene	4.444	4.439	4.440	4.444	4.444	4.440	4.444	4.440	4.227-4.653	4.442	0.002
	6 Benzene	5.221	5.220	5.211	5.212	5.212	5.210	5.220	5.210	4.980-5.441	5.215	0.005
*	4 Pentafluorobenzene	5.325	5.324	5.324	5.326	5.326	5.324	5.325	5.324	5.111-5.537	5.325	0.001
$	5 d4-1,2-Dichloroethane	5.335	5.333	5.334	5.335	5.335	5.334	5.334	5.324	5.111-5.537	5.334	0.001
	176 1,2-Dichloroethane	5.392	5.390	5.391	5.392	5.392	5.390	5.391	5.381	5.168-5.594	5.391	0.001
	8 Trichloroethene	5.720	5.721	5.721	5.720	5.720	5.721	5.721	5.721	5.491-5.951	5.720	0.001
*	7 1,4-Difluorobenzene	5.766	5.755	5.756	5.754	5.754	5.755	5.756	5.756	5.526-5.986	5.757	0.004
$	9 d8-Toluene	6.915	6.913	6.914	6.914	6.915	6.913	6.914	6.914	6.683-7.144	6.914	0.001
	10 Tetrachloroethene	7.283	7.281	7.270	7.271	7.271	7.270	7.282	7.270	7.040-7.501	7.276	0.006
	11 1,1,2,2-Tetrachloroeth	9.481	9.468	9.469	9.458	9.458	9.457	9.480	9.457	9.227-9.687	9.467	0.010

Reviewer 1 MH Date: 5/4/11
Reviewer 2 [signature] Date: 5/4/11

SU53:00385

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

ARI Job ID: SU53, SU73, SU74

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Analyst Notes / Corrective Action Log

ARI Project ID: 5453 Client ID: Floyd Snider

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

Parameter(s): SIM VOA

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

Purge Volume (mL) 10 Curve Date: 4/26/11 Analysis Start Date: 5/3/11

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):

c is 1,2 DCE 79.399% in 5/3/11 LCSD

Additional Details on Reverse: Yes / No

Analyst: PC **Date:** 5/5/11

Reviewer: [signature] **Date:** 5/6/11

Analytical Resources Inc.: Volatile Organics Instrument Log

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

Date: 5/3/11 Analysis: 5/M VOA Analyst: PC

GC Program: VC Column No: 850322 Column Type: RTXVMS

Instrument Tune (.U or .CT.): bfb0503 EM Voltage: 1647

Calibration File: cc0503a Curve Date: 4/26/11

IS/SS	Ical/Ccal	LCS/ICV
VW685-1	VW682-2	VW682-2

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt7.i/03MAY2011.b

	Time	Filename	LabID	ClientID	WT		
1	1025	bfb0503 d	BFB0503	BFB0503	0 00		
2	1103	cc0503.d	CC0503	CC0503	1 | 5 32	343960|| 5 75	648916|
3	1129	cc0503a d	CC0503	CC0503	1 | 5 33	367586|| 5 75	677458|
4	1206	lcs0503a d	LCS0503	LCS0503	1 | 5 32	371235|| 5 75	691618|
5	1232	lcs0503b d	LCS0503	LCS0503	1 | 5.32	368545|| 5.76	688280|
6	1258	mb0503 d	MB0503	mbsinject	1 | 5 33	374029|| 5 75	694748|
7	1323	mb0503a d	MB0503	MB0503	1 | 5 33	374268|| 5.75	671582|
8	1348	st98e d	ST98E	TB-042611	1	1 | 5 33	360193|| 5 75	635546|
9	1414	su21g d	SU21G	TB-042711	1	1 | 5 32	342984|| 5 76	622310|
10	1440	su53g d	SU53G	TB-042811	2	1 | 5 33	334355|| 5 75	617379|
11	1505	st98a d	ST98A	MW02-042611	4	1 | 5.33	337272|| 5 75	605168|
12	1531	st98b d	ST98B	MW03-042611	2	1 | 5 32	345206|| 5 76	603420|
13	1557	st98c d	ST98C	MW13-042611	2	1 | 5.33	332326|| 5.77	598780|
14	1622	st98d d	ST98D	MW06-042611	3	1 | 5 33	329307|| 5 75	596467|
15	1648	st98dms d	ST98DMS	MW06-042611 MS	4	1 | 5 32	381200|| 5 76	696898|
16	1714	st98dmsd d	ST98DMSD	MW06-042611 MSD	5	1 | 5 33	412190|| 5 75	751697|
17	1739	su21a d	SU21A	MW07-042711	3	1 | 5 32	396604|| 5 76	753683|
18	1805	su21b d	SU21B	MW11-042711	3	1 | 5 33	53850|	5 77	91485|
19	1831	su21c.d	SU21C	MW10-042711	3	1 | 5 33	354061|| 5 77	661517|
20	1856	su21d d	SU21D	MW09-042711	3	1 | 5 32	378093|| 5 77	644456|
21	1922	su21e d	SU21E	MW08-042711	4	1 | 5.33	121207|	5.77	211336|
22	1947	su21f.d	SU21F	MW12-042711	3	1 | 5 33	266113|| 5 77	458881|
23	2013	su53a d	SU53A	MW5042811	9	1 | 5 32	58907|	5 77	106273|
24	2039	su53b.d	SU53B	MW15042811	8	1 | 5 33	320598|| 5 77	566633|
25	2104	su53c d	SU53C	MW4042811	4	1 | 5 33	324280|| 5 77	565886|
26	2130	su53d.d	SU53D	MW17042811	4	1 | 5 33	291433|| 5 77	551688|
27	2156	su53e d	SU53E	MW14042811	4	1 | 5 33	307760|| 5 77	551825|
28	2221	su53f d	SU53F	MW16042811	3	1 | 5 33	52546|	5.77	97211|

PC 5/4/11

Maintenance / Comments

IS delivery problems SU21B, SU21E, SU53A, SU53F

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/03MAY2011.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt7.i Date: 03-MAY-2011

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1025	bfb0503.d	BFB0503	BFB0503	3	NO MANUAL INTEGRATION
1129	cc0503a.d	CC0503	CC0503	1	NO MANUAL INTEGRATION
1206	lcs0503a.d	LCS0503	LCS0503	1	NO MANUAL INTEGRATION
1232	lcs0503b.d	LCS0503	LCS0503	1	NO MANUAL INTEGRATION
1323	mb0503a.d	MB0503	MB0503	1	NO MANUAL INTEGRATION
1505	st98a.d	ST98A	MW02-04261	1	NO MANUAL INTEGRATION
1531	st98b.d	ST98B	MW03-04261	1	NO MANUAL INTEGRATION
1557	st98c.d	ST98C	MW13-04261	1	NO MANUAL INTEGRATION
1622	st98d.d	ST98D	MW06-04261	1	NO MANUAL INTEGRATION
1648	st98dms.d	ST98DMS	MW06-04261	1	NO MANUAL INTEGRATION
1714	st98dmsd.d	ST98DMSD	MW06-04261	1	NO MANUAL INTEGRATION
1348	st98e.d	ST98E	TB-042611	1	NO MANUAL INTEGRATION
1739	su21a.d	SU21A	MW07-04271	1	NO MANUAL INTEGRATION
1831	su21c.d	SU21C	MW10-04271	1	NO MANUAL INTEGRATION
1856	su21d.d	SU21D	MW09-04271	1	NO MANUAL INTEGRATION
1947	su21f.d	SU21F	MW12-04271	1	NO MANUAL INTEGRATION
1414	su21g.d	SU21G	TB-042711	1	NO MANUAL INTEGRATION
2039	su53b.d	SU53B	MW15042811	1	NO MANUAL INTEGRATION
2104	su53c.d	SU53C	MW4042811	1	NO MANUAL INTEGRATION
2130	su53d.d	SU53D	MW17042811	1	NO MANUAL INTEGRATION

2156 su53e.d SU53E MW14042811 1 NO MANUAL INTEGRATION

SU53 .0030

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt7.i/03MAY2011.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1440	su53g.d	SU53G	TB-042811	1	NO MANUAL INTEGRATION

SU53G : 00351

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt7.i/03MAY2011.b

Instrument: nt7.i Date: 03-MAY-2011 Method: sim042611.m

INITIAL CAL: 26-APR-2011

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 03-MAY-2011

Compound	%D
NO Q-FLAGS	

Data File: /chem1/nt7.i/03MAY2011.b/bfb0503.d

Date : 03-MAY-2011 10:25

Client ID: BFB0503

Instrument: nt7.i

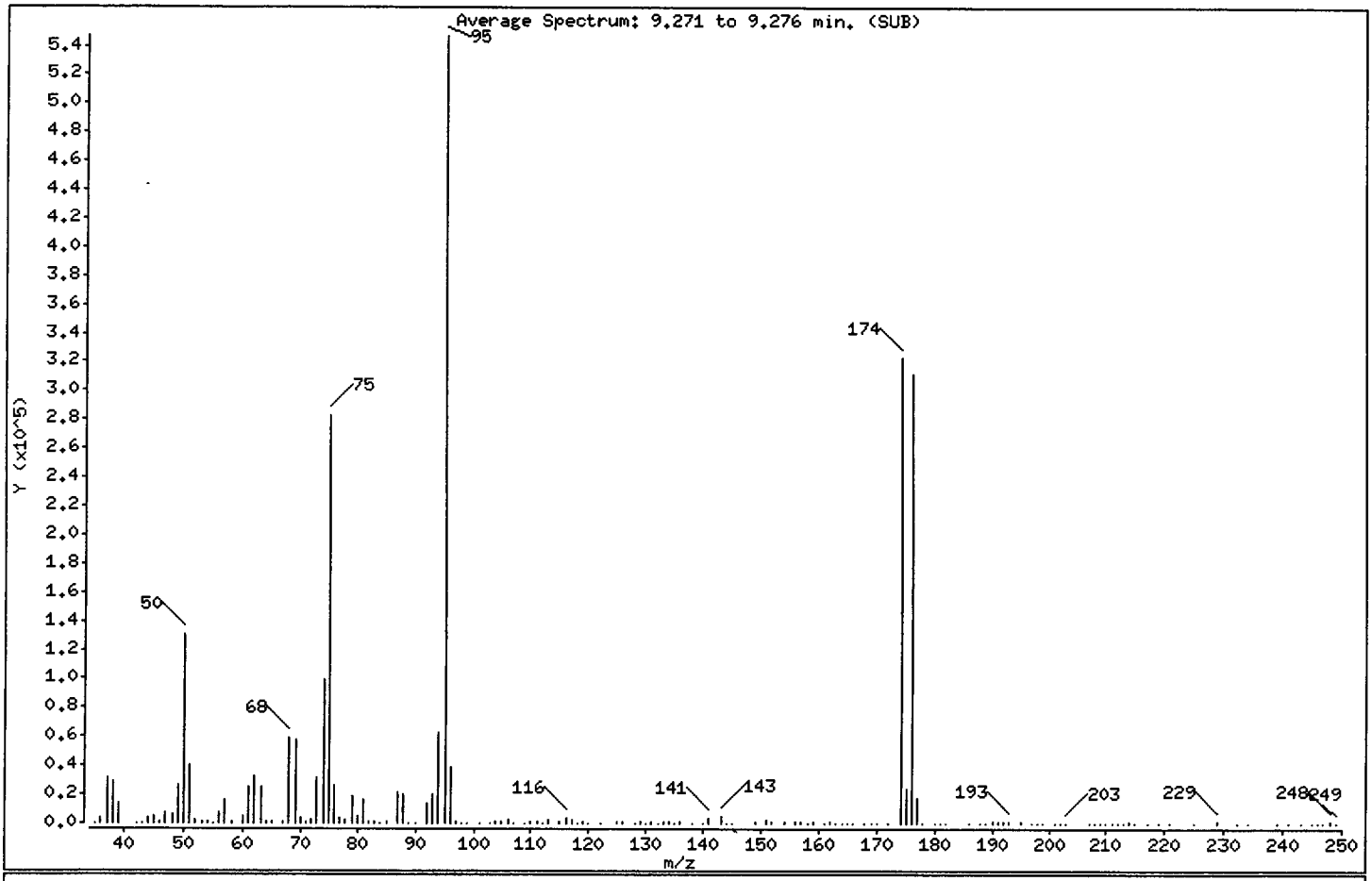
Sample Info: BFB0503,BFB0503,1,03MAY2011,,

Operator: PC

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	23.90
75	30.00 - 66.00% of mass 95	51.67
96	5.00 - 9.00% of mass 95	7.04
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 101.00% of mass 95	59.18
175	4.00 - 9.00% of mass 174	4.37 (7.39)
176	93.00 - 101.00% of mass 174	57.12 (96.52)
177	5.00 - 9.00% of mass 176	3.19 (5.59)

Data File: /chem1/nt7.i/03MAY2011.b/bfb0503.d

Date : 03-MAY-2011 10:25

Client ID: BFB0503 Instrument: nt7.i

Sample Info: BFB0503,BFB0503,1,03MAY2011,,

Operator: PC

Column phase: RTXVMS Column diameter: 0.18

Data File: bfb0503.d
Spectrum: Average Spectrum: 9.271 to 9.276 min. (SUB)
Location of Maximum: 95.00
Number of points: 167

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	127	81.00	16408	133.00	1042	188.00	74
36.00	3776	82.00	700	134.00	926	189.00	158
37.00	31544	83.00	1159	135.00	223	190.00	1475
38.00	28792	84.00	320	136.00	1275	191.00	963
39.00	13809	85.00	908	137.00	162	192.00	1170
42.00	312	87.00	21512	138.00	106	193.00	1567
43.00	351	88.00	20576	139.00	558	195.00	674
44.00	3419	89.00	254	140.00	498	197.00	76
45.00	4909	90.00	506	141.00	4081	198.00	284
46.00	1393	92.00	14318	142.00	39	199.00	97
47.00	7414	93.00	19928	143.00	5501	200.00	347
48.00	5714	94.00	62256	144.00	37	201.00	552
49.00	27032	95.00	546944	145.00	623	202.00	407
50.00	130720	96.00	38528	148.00	61	203.00	567
51.00	39840	97.00	969	149.00	639	207.00	526
52.00	2410	98.00	374	151.00	1966	208.00	331
53.00	838	99.00	600	152.00	691	209.00	302
54.00	640	101.00	462	154.00	1312	210.00	53
55.00	190	103.00	565	156.00	758	211.00	66
56.00	8057	104.00	1354	157.00	668	212.00	99
57.00	15772	105.00	656	158.00	187	213.00	339
58.00	1046	106.00	2282	159.00	928	214.00	801
60.00	5629	107.00	344	161.00	291	215.00	218
61.00	24544	109.00	237	162.00	1018	217.00	467
62.00	32208	110.00	769	163.00	200	219.00	404
63.00	25136	111.00	1378	164.00	509	221.00	130
64.00	1750	112.00	484	165.00	147	225.00	103
65.00	1004	113.00	2350	166.00	106	228.00	295
67.00	1535	115.00	1083	168.00	115	229.00	879
68.00	59600	116.00	3197	169.00	326	232.00	623
69.00	57792	117.00	2632	170.00	200	234.00	168
70.00	3408	118.00	463	172.00	481	236.00	139
71.00	1057	119.00	901	174.00	323648	238.00	341
72.00	2440	120.00	419	175.00	23920	239.00	146
73.00	31024	122.00	64	176.00	312384	241.00	354

Date : 03-MAY-2011 10:25

Client ID: BFB0503 Instrument: nt7.i

Sample Info: BFB0503,BFB0503,1,03MAY2011,,

Operator: PC

Column phase: RTXVMS Column diameter: 0.18

Data File: bfb0503.d

Spectrum: Average Spectrum: 9.271 to 9.276 min. (SUB)

Location of Maximum: 95.00

Number of points: 167

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	99080	125.00	1721	177.00	17464	243.00	593
75.00	282560	126.00	739	178.00	214	245.00	284
76.00	25824	128.00	597	180.00	382	246.00	240
77.00	3374	129.00	1091	181.00	209	247.00	194
78.00	2963	130.00	383	182.00	339	248.00	1650
79.00	19368	131.00	1080	183.00	436	249.00	436
80.00	5449	132.00	179	186.00	234		

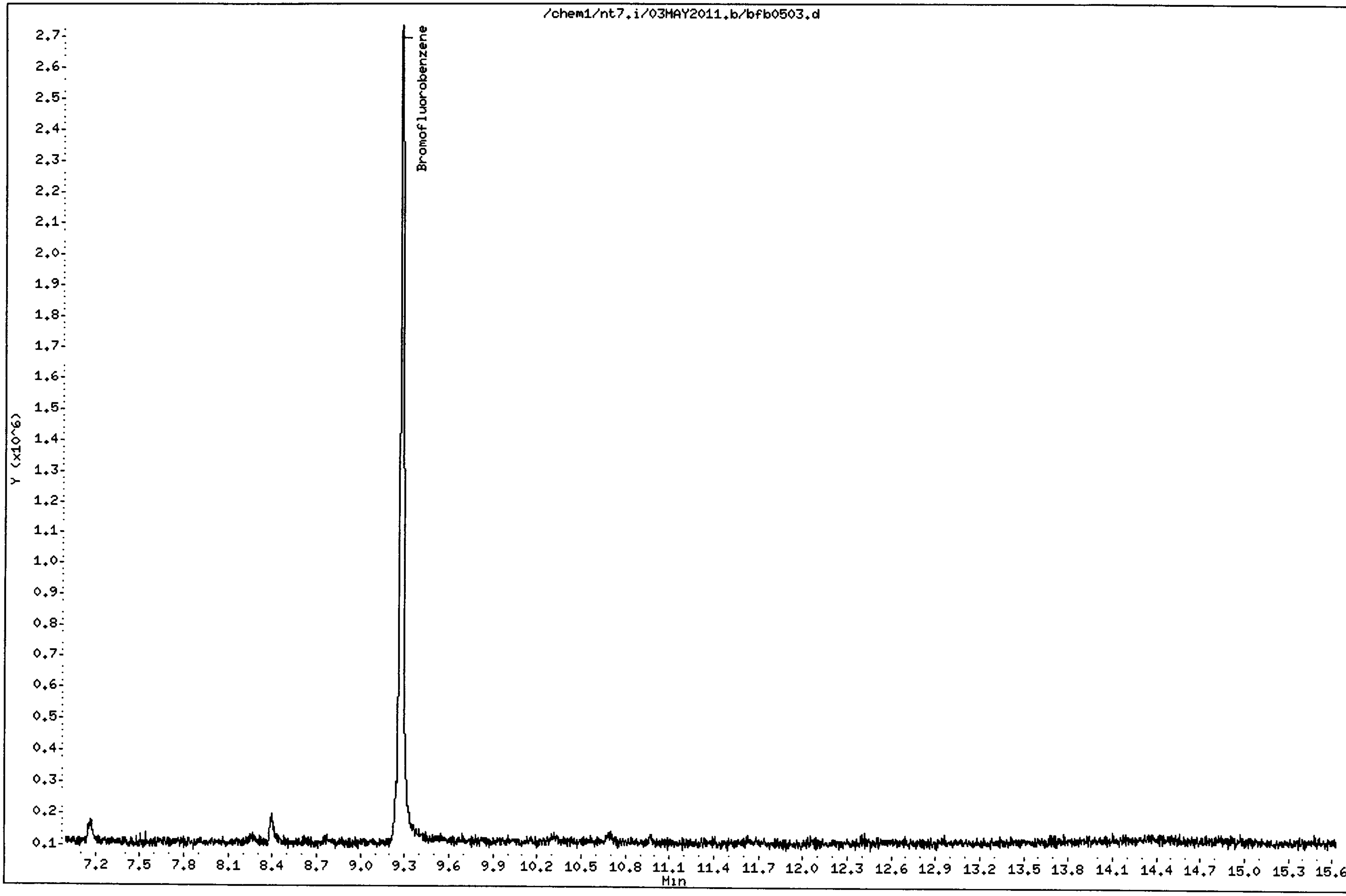
Data File: /chem1/nt7.i/03MAY2011.b/bfb0503.d
Date : 03-MAY-2011 10:25
Client ID: BFB0503
Sample Info: BFB0503,BFB0503,1,03MAY2011,,

Column phase: RTXVMS

Page 1

Instrument: nt7.i

Operator: PC
Column diameter: 0.18



SU53 : 00396

PG 5/4/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/03MAY2011.b/cc0503a.d
Lab Smp Id: CC0503 Client Smp ID: CC0503
Inj Date : 03-MAY-2011 11:29
Operator : PC Inst ID: nt7.i
Smp Info : CC0503,10,10,0,
Misc Info : 11-
Comment :
Method : /chem1/nt7.i/03MAY2011.b/sim042611.m
Meth Date : 03-May-2011 12:16 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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 MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	AMOUNTS ON-COL (ng/L)
	1 Vinyl Chloride	62	1.552	1.552	(0.291)	364320	1000.00	900.58
	2 1,1-Dichloroethene	96	2.505	2.505	(0.470)	275396	1000.00	855.61
	175 Trans-1,2-Dichloroethene	96	3.284	3.284	(0.617)	283504	1000.00	866.97
	3 cis-1,2-dichloroethene	96	4.439	4.439	(0.834)	284161	1000.00	813.96
	6 Benzene	78	5.212	5.212	(0.906)	1338657	1000.00	863.11
*	4 Pentafluorobenzene	168	5.326	5.326	(1.000)	367586	1000.00	
$	5 d4-1,2-Dichloroethane	65	5.326	5.326	(1.000)	288044	1000.00	869.56
	176 1,2-Dichloroethane	62	5.383	5.383	(1.011)	462721	1000.00	883.80
	8 Trichloroethene	130	5.720	5.720	(0.994)	243121	1000.00	915.31(Q)
*	7 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	677458	1000.00	
$	9 d8-Toluene	98	6.913	6.913	(1.201)	882319	1000.00	1022.4
	10 Tetrachloroethene	166	7.270	7.270	(1.263)	172672	1000.00	842.45
	11 1,1,2,2-Tetrachloroethane	83	9.457	9.457	(1.643)	230281	1000.00	938.49

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: cc0503a.d
Lab Smp Id: CC0503
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/03MAY2011.b/sim042611.m
Misc Info: 11-

Calibration Date: 03-MAY-2011
Calibration Time: 11:03
Client Smp ID: CC0503
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	367586	1.15
7 1,4-Difluorobenze	667797	333898	1335594	677458	1.45

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.33	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/03MAY2011.b/cc0503a.d

Date : 03-MAY-2011 11:29

Client ID: CC0503

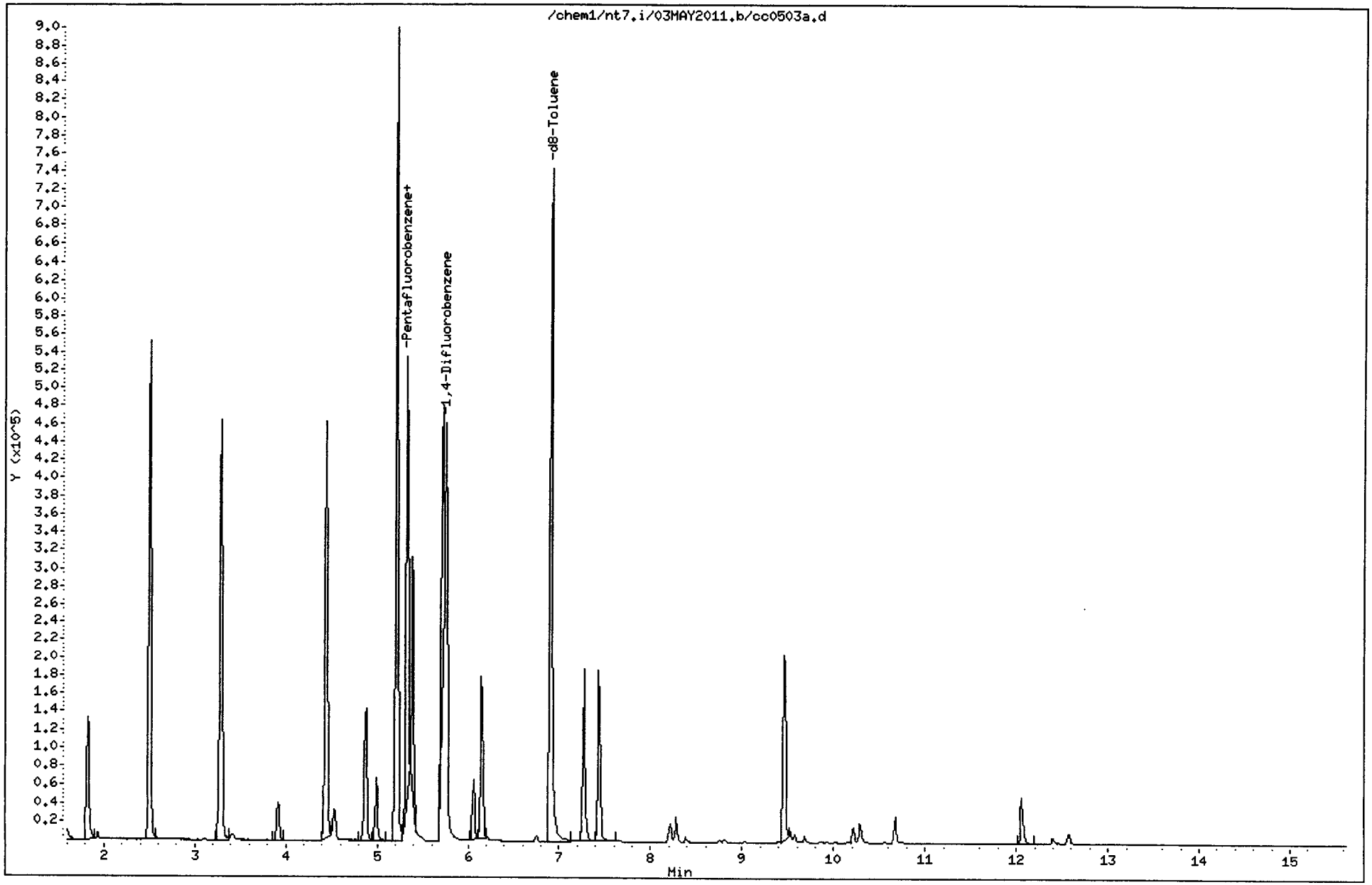
Sample Info: CC0503,10,10,0,

Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18



SUS3 00400

CO-ELUTION SUMMARY FOR FILE - cc0503a.d

Lab ID: CC0503, Method: sim042611.m, Instrument: nt7.i, Date: 03-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC 5/4/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/03MAY2011.b/lcs0503a.d
Lab Smp Id: LCS0503 Client Smp ID: LCS0503
Inj Date : 03-MAY-2011 12:06
Operator : PC Inst ID: nt7.i
Smp Info : LCS0503,10,10,0,
Misc Info : 11-
Comment :
Method : /chem1/nt7.i/03MAY2011.b/sim042611.m
Meth Date : 03-May-2011 12:16 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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	1.540	1.552	(0.289)	390148	954.950	954.95
	2 1,1-Dichloroethene	96	2.505	2.505	(0.470)	292701	900.434	900.43
	175 Trans-1,2-Dichloroethene	96	3.284	3.284	(0.617)	299692	907.461	907.46
	3 cis-1,2-dichloroethene	96	4.439	4.439	(0.834)	295609	838.427	838.43
	6 Benzene	78	5.210	5.212	(0.905)	1420246	896.962	896.96
*	4 Pentafluorobenzene	168	5.323	5.326	(1.000)	371235	1000.00	
$	5 d4-1,2-Dichloroethane	65	5.333	5.326	(1.002)	287830	860.376	860.38
	176 1,2-Dichloroethane	62	5.380	5.383	(1.011)	501520	948.495	948.49
	8 Trichloroethene	130	5.720	5.720	(0.994)	267396	986.085	986.08(Q)
*	7 1,4-Difluorobenzene	114	5.755	5.754	(1.000)	691618	1000.00	
$	9 d8-Toluene	98	6.913	6.913	(1.201)	869579	986.964	986.96
	10 Tetrachloroethene	166	7.270	7.270	(1.263)	177815	849.783	849.78
	11 1,1,2,2-Tetrachloroethane	83	9.457	9.457	(1.643)	254097	1014.35	1014.4

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: lcs0503a.d
Lab Smp Id: LCS0503
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/03MAY2011.b/sim042611.m
Misc Info: 11-

Calibration Date: 03-MAY-2011
Calibration Time: 11:29
Client Smp ID: LCS0503
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	371235	2.15
7 1,4-Difluorobenze	667797	333898	1335594	691618	3.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.32	-0.05
7 1,4-Difluorobenze	5.75	5.25	6.25	5.75	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: 03MAY2011
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS0503 Client Smp ID: LCS0503
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/03MAY2011.b/sim042611.m
Misc Info: 11-

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1	Vinyl Chloride	1000.0	954.95	95.50	76-120
176	1,2-Dichloroethane	1000.0	948.49	94.85	80-128
175	Trans-1,2-Dichloro	1000.0	907.46	90.75	80-120
2	1,1-Dichloroethene	1000.0	900.43	90.04	80-120
3	cis-1,2-dichloroet	1000.0	838.43	83.84	80-120
6	Benzene	1000.0	896.96	89.70	80-120
8	Trichloroethene	1000.0	986.08	98.61	80-120
10	Tetrachloroethene	1000.0	849.78	84.98	80-122
11	1,1,2,2-Tetrachlor	1000.0	1014.4	101.44	80-128

	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5	d4-1,2-Dichloroeth	1000.0	860.38	86.04	80-126
$ 9	d8-Toluene	1000.0	986.96	98.70	80-120

Data File: /chem1/nt7.i/03MAY2011.b/lcs0503a.d

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Date : 03-MAY-2011 12:06

Client ID: LCS0503

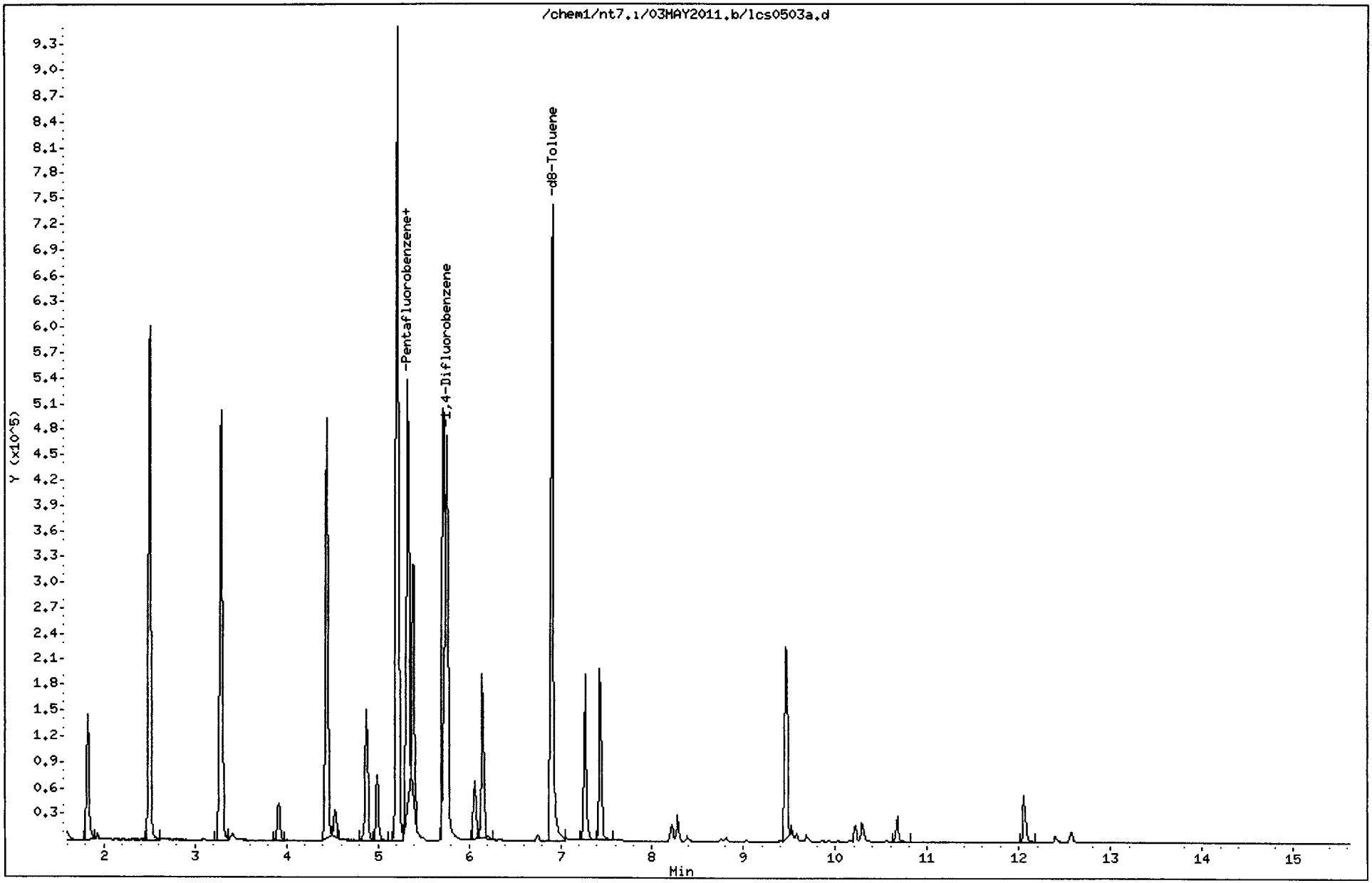
Instrument: nt7.i

Sample Info: LCS0503,10,10,0,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18



SUS3 : 004406

CO-ELUTION SUMMARY FOR FILE - lcs0503a.d

Lab ID: LCS0503, Method: sim042611.m, Instrument: nt7.i, Date: 03-MAY-2011

RT	CO-ELUTION COMPOUNDS

PL 5/4/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/03MAY2011.b/lcs0503b.d
Lab Smp Id: LCS0503 Client Smp ID: LCS0503
Inj Date : 03-MAY-2011 12:32
Operator : PC Inst ID: nt7.i
Smp Info : LCS0503,10,10,0,
Misc Info : 11-
Comment :
Method : /chem1/nt7.i/03MAY2011.b/sim042611.m
Meth Date : 03-May-2011 12:16 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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	1.553	1.552	(0.292)	348750	859.855	859.86
	2 1,1-Dichloroethene	96	2.505	2.505	(0.470)	265077	821.408	821.41
	175 Trans-1,2-Dichloroethene	96	3.290	3.284	(0.618)	272938	832.485	832.49
	3 cis-1,2-dichloroethene	96	4.439	4.439	(0.834)	277872	793.874	793.87(R)
	6 Benzene	78	5.210	5.212	(0.905)	1279163	811.779	811.78
*	4 Pentafluorobenzene	168	5.324	5.326	(1.000)	368545	1000.00	
$	5 d4-1,2-Dichloroethane	65	5.333	5.326	(1.002)	287668	866.170	866.17
	176 1,2-Dichloroethane	62	5.390	5.383	(1.012)	457454	871.470	871.47
	8 Trichloroethene	130	5.721	5.720	(0.994)	241864	896.256	896.26(Q)
*	7 1,4-Difluorobenzene	114	5.756	5.754	(1.000)	688280	1000.00	
$	9 d8-Toluene	98	6.914	6.913	(1.201)	874134	996.946	996.95
	10 Tetrachloroethene	166	7.270	7.270	(1.263)	180541	866.995	867.00
	11 1,1,2,2-Tetrachloroethane	83	9.457	9.457	(1.643)	233944	938.432	938.43

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: lcs0503b.d
Lab Smp Id: LCS0503
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/03MAY2011.b/sim042611.m
Misc Info: 11-

Calibration Date: 03-MAY-2011
Calibration Time: 11:29
Client Smp ID: LCS0503
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	368545	1.41
7 1,4-Difluorobenze	667797	333898	1335594	688280	3.07

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.32	-0.03
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: 03MAY2011
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS0503 Client Smp ID: LCS0503
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/03MAY2011.b/sim042611.m
Misc Info: 11-

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1	Vinyl Chloride	1000.0	859.86	85.99	76-120
176	1,2-Dichloroethane	1000.0	871.47	87.15	80-128
175	Trans-1,2-Dichloro	1000.0	832.49	83.25	80-120
2	1,1-Dichloroethene	1000.0	821.41	82.14	80-120
3	cis-1,2-dichloroet	1000.0	793.87	79.39*	80-120
6	Benzene	1000.0	811.78	81.18	80-120
8	Trichloroethene	1000.0	896.26	89.63	80-120
10	Tetrachloroethene	1000.0	867.00	86.70	80-122
11	1,1,2,2-Tetrachlor	1000.0	938.43	93.84	80-128

	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5	d4-1,2-Dichloroeth	1000.0	866.17	86.62	80-126
$ 9	d8-Toluene	1000.0	996.95	99.69	80-120

Data File: /chem1/nt7.i/03MAY2011.b/lcs0503b.d

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Date : 03-MAY-2011 12:32

Client ID: LCS0503

Instrument: nt7.i

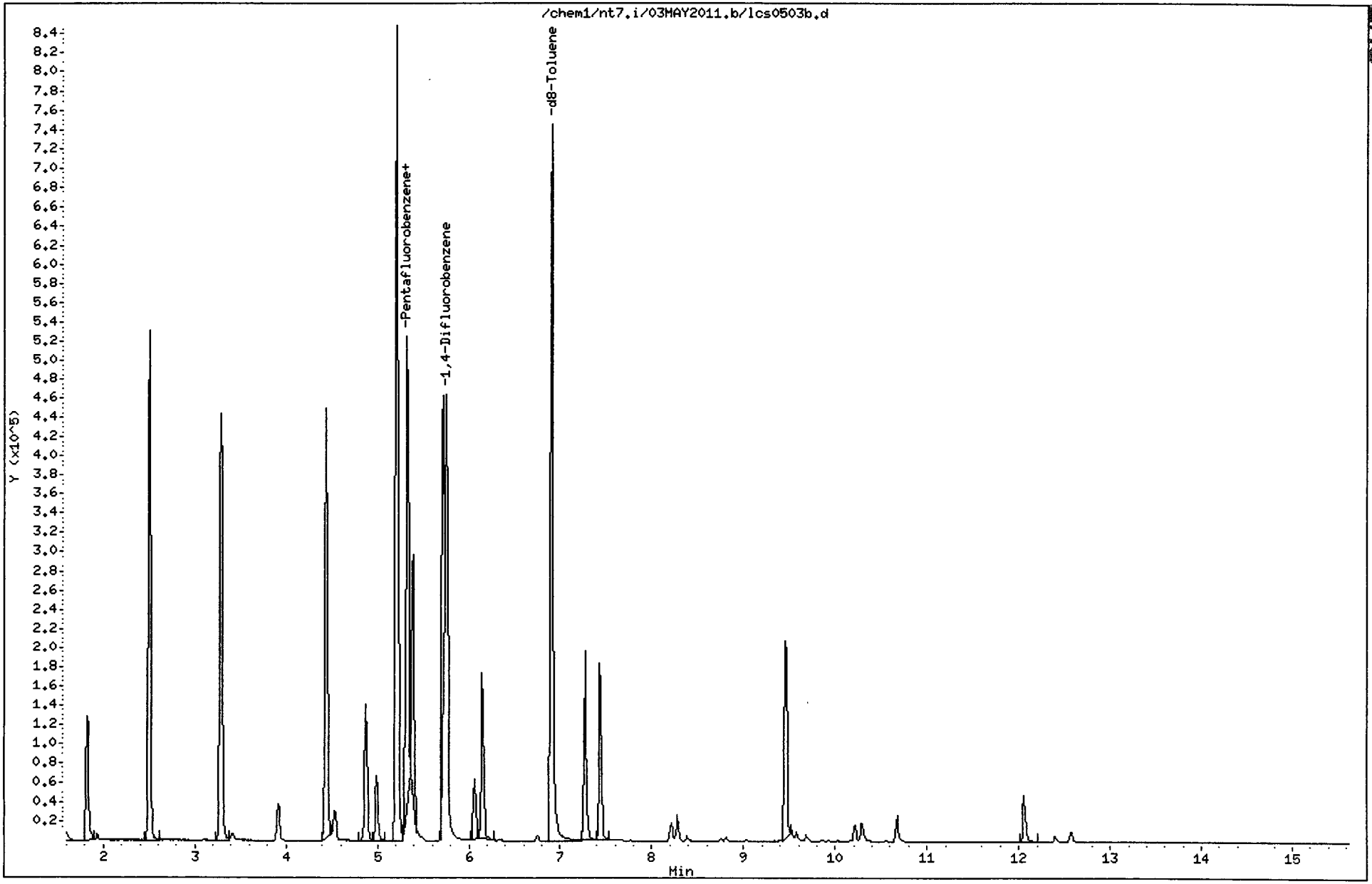
Sample Info: LCS0503,10,10,0,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

SUSS:90412



CO-ELUTION SUMMARY FOR FILE - lcs0503b.d

Lab ID: LCS0503, Method: sim042611.m, Instrument: nt7.i, Date: 03-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC 5/4/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/03MAY2011.b/mb0503a.d
Lab Smp Id: MB0503 Client Smp ID: MB0503
Inj Date : 03-MAY-2011 13:23
Operator : PC Inst ID: nt7.i
Smp Info : MB0503,10,10,0,
Misc Info : 11-
Comment :
Method : /chem1/nt7.i/03MAY2011.b/sim042611.m
Meth Date : 03-May-2011 12:16 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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 MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	1 Vinyl Chloride	62	Compound Not Detected.					
	2 1,1-Dichloroethene	96	Compound Not Detected.					
	175 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	3 cis-1,2-dichloroethene	96	Compound Not Detected.					
	6 Benzene	78	Compound Not Detected.					
*	4 Pentafluorobenzene	168	5.325	5.326	(1.000)	374268	1000.00	
$	5 d4-1,2-Dichloroethane	65	5.335	5.326	(1.002)	306108	907.597	907.60
	176 1,2-Dichloroethane	62	Compound Not Detected.					
	8 Trichloroethene	130	Compound Not Detected.					
*	7 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	671582	1000.00	
$	9 d8-Toluene	98	6.914	6.913	(1.202)	814023	951.472	951.47
	10 Tetrachloroethene	166	Compound Not Detected.					
	11 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: mb0503a.d
Lab Smp Id: MB0503
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/03MAY2011.b/sim042611.m
Misc Info: 11-

Calibration Date: 03-MAY-2011
Calibration Time: 11:29
Client Smp ID: MB0503
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	374268	2.99
7 1,4-Difluorobenze	667797	333898	1335594	671582	0.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.33	-0.01
7 1,4-Difluorobenze	5.75	5.25	6.25	5.75	-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:
Sample Matrix: LIQUID
Lab Smp Id: MB0503
Level: LOW
Data Type: MS DATA
SpikeList File: special.spk
Sublist File: sim12dca.sub
Method File: /chem1/nt7.i/03MAY2011.b/sim042611.m
Misc Info: 11-

Client SDG: 03MAY2011
Fraction: VOA
Client Smp ID: MB0503
Operator: PC
SampleType: BLANK
Quant Type: ISTD

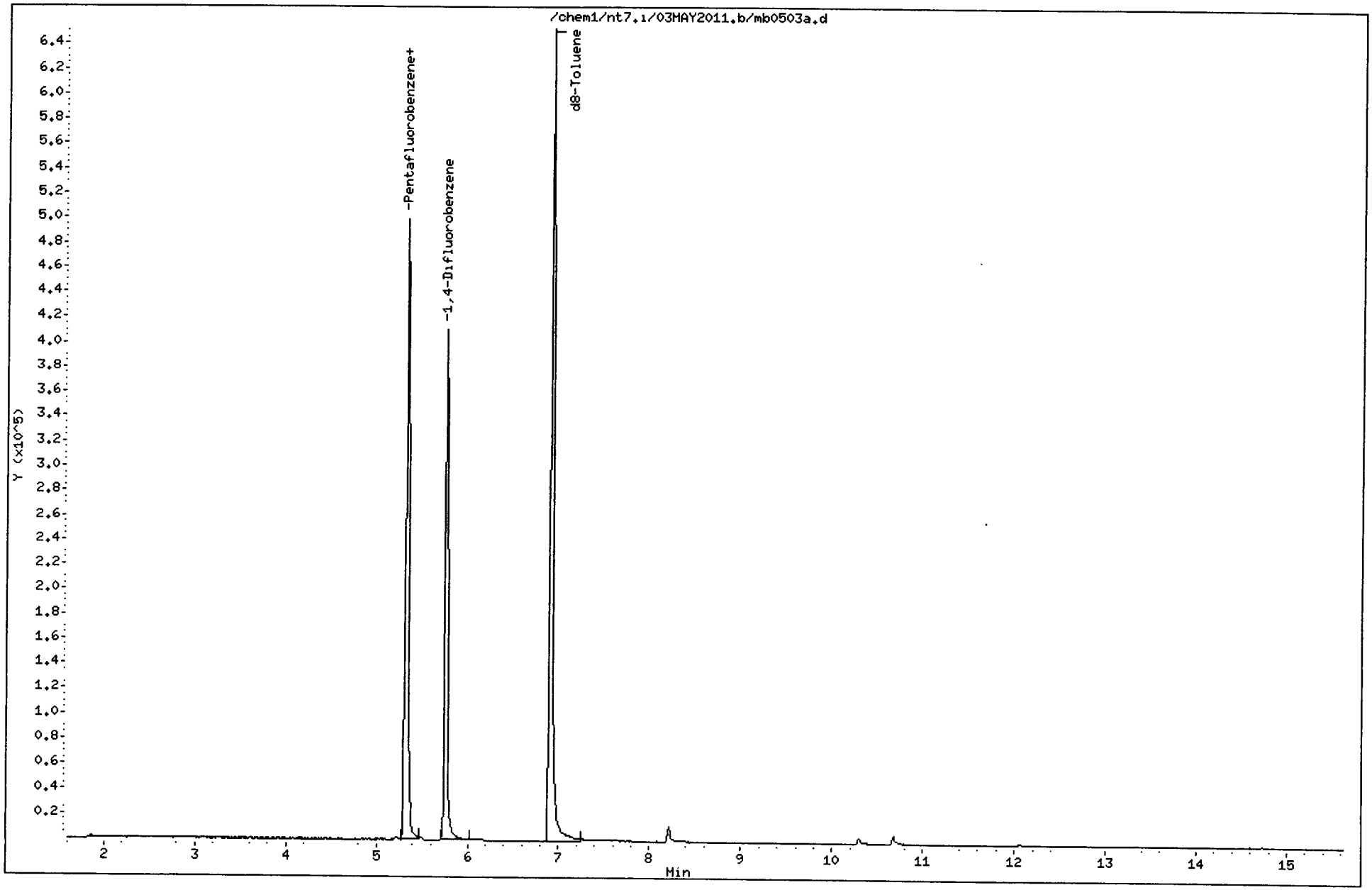
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	907.60	90.76	80-126
$ 9 d8-Toluene	1000.0	951.47	95.15	80-120

Data File: /chem1/nt7.i/03MAY2011.b/mb0503a.d
Date : 03-MAY-2011 13:23
Client ID: MB0503
Sample Info: MB0503,10,10,0,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



SL53:00417

CO-ELUTION SUMMARY FOR FILE - mb0503a.d

Lab ID: MB0503, Method: sim042611.m, Instrument: nt7.i, Date: 03-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC
5/4/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/03MAY2011.b/su53g.d
Lab Smp Id: SU53G Client Smp ID: TB-042811
Inj Date : 03-MAY-2011 14:40
Operator : PC Inst ID: nt7.i
Smp Info : SU53G,10,10,0,
Misc Info : 11-9627
Comment :
Method : /chem1/nt7.i/03MAY2011.b/sim042611.m
Meth Date : 03-May-2011 12:16 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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 MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	1 Vinyl Chloride	62	Compound Not Detected.					
	2 1,1-Dichloroethene	96	Compound Not Detected.					
	175 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	3 cis-1,2-dichloroethene	96	Compound Not Detected.					
	6 Benzene	78	Compound Not Detected.					
*	4 Pentafluorobenzene	168	5.325	5.326	(1.000)	334355	1000.00	
$	5 d4-1,2-Dichloroethane	65	5.335	5.326	(1.002)	298259	989.890	989.89
	176 1,2-Dichloroethane	62	Compound Not Detected.					
	8 Trichloroethene	130	Compound Not Detected.					
*	7 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	617379	1000.00	
$	9 d8-Toluene	98	6.914	6.913	(1.202)	783013	995.578	995.58
	10 Tetrachloroethene	166	Compound Not Detected.					
	11 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: su53g.d
Lab Smp Id: SU53G
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/03MAY2011.b/sim042611.m
Misc Info: 11-9627

Calibration Date: 03-MAY-2011
Calibration Time: 11:29
Client Smp ID: TB-042811
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	334355	-7.99
7 1,4-Difluorobenze	667797	333898	1335594	617379	-7.55

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.33	-0.01
7 1,4-Difluorobenze	5.75	5.25	6.25	5.75	-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: SU53
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: SU53G
Client Smp ID: TB-042811
Level: LOW
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: sim12dca.sub
Method File: /chem1/nt7.i/03MAY2011.b/sim042611.m
Misc Info: 11-9627

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	989.89	98.99	80-126
$ 9 d8-Toluene	1000.0	995.58	99.56	80-120

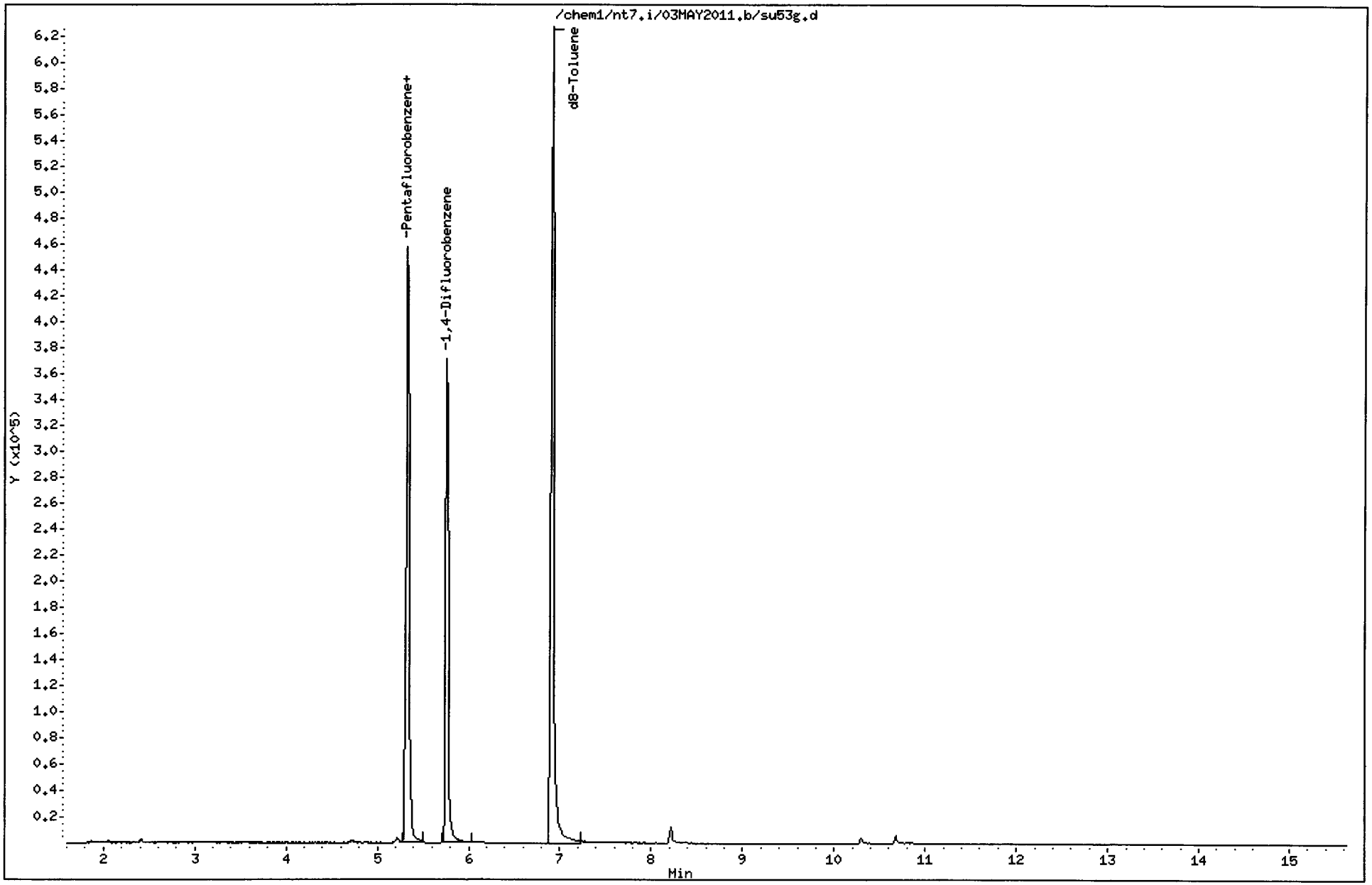
Data File: /chem1/nt7.i/03MAY2011.b/su53g.d
Date : 03-MAY-2011 14:40
Client ID: TB-042811
Sample Info: SU53G,10,10,0,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS

SU53:00422



CO-ELUTION SUMMARY FOR FILE - su53g.d

Lab ID: SU53G, Method: sim042611.m, Instrument: nt7.i, Date: 03-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC 5/13/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/03MAY2011.b/su53b.d
Lab Smp Id: SU53B Client Smp ID: MW15042811
Inj Date : 03-MAY-2011 20:39
Operator : PC Inst ID: nt7.i
Smp Info : SU53B,10,10,0,
Misc Info : 11-9622
Comment :
Method : /chem1/nt7.i/03MAY2011.b/sim042611.m
Meth Date : 03-May-2011 12:16 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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 MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/L)
	1	Vinyl Chloride	62	Compound Not Detected.					
	2	1,1-Dichloroethene	96	Compound Not Detected.					
	175	Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	3	cis-1,2-dichloroethene	96	Compound Not Detected.					
	6	Benzene	78	Compound Not Detected.					
*	4	Pentafluorobenzene	168	5.325	5.326	(1.000)	320598	1000.00	
$	5	d4-1,2-Dichloroethane	65	5.335	5.326	(1.002)	286153	990.465	990.46
	176	1,2-Dichloroethane	62	Compound Not Detected.					
	8	Trichloroethene	130	Compound Not Detected.					
*	7	1,4-Difluorobenzene	114	5.768	5.754	(1.000)	566633	1000.00	
$	9	d8-Toluene	98	6.914	6.913	(1.199)	696126	964.372	964.37
	10	Tetrachloroethene	166	Compound Not Detected.					
	11	1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: su53b.d
Lab Smp Id: SU53B
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/03MAY2011.b/sim042611.m
Misc Info: 11-9622

Calibration Date: 03-MAY-2011
Calibration Time: 11:29
Client Smp ID: MW15042811
Level: LOW
Sample Type: Groundwater

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	320598	-11.78
7 1,4-Difluorobenze	667797	333898	1335594	566633	-15.15

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.33	-0.01
7 1,4-Difluorobenze	5.75	5.25	6.25	5.77	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
Client SDG: SU53
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: SU53B
Client Smp ID: MW15042811
Level: LOW
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: sim12dca.sub
Method File: /chem1/nt7.i/03MAY2011.b/sim042611.m
Misc Info: 11-9622

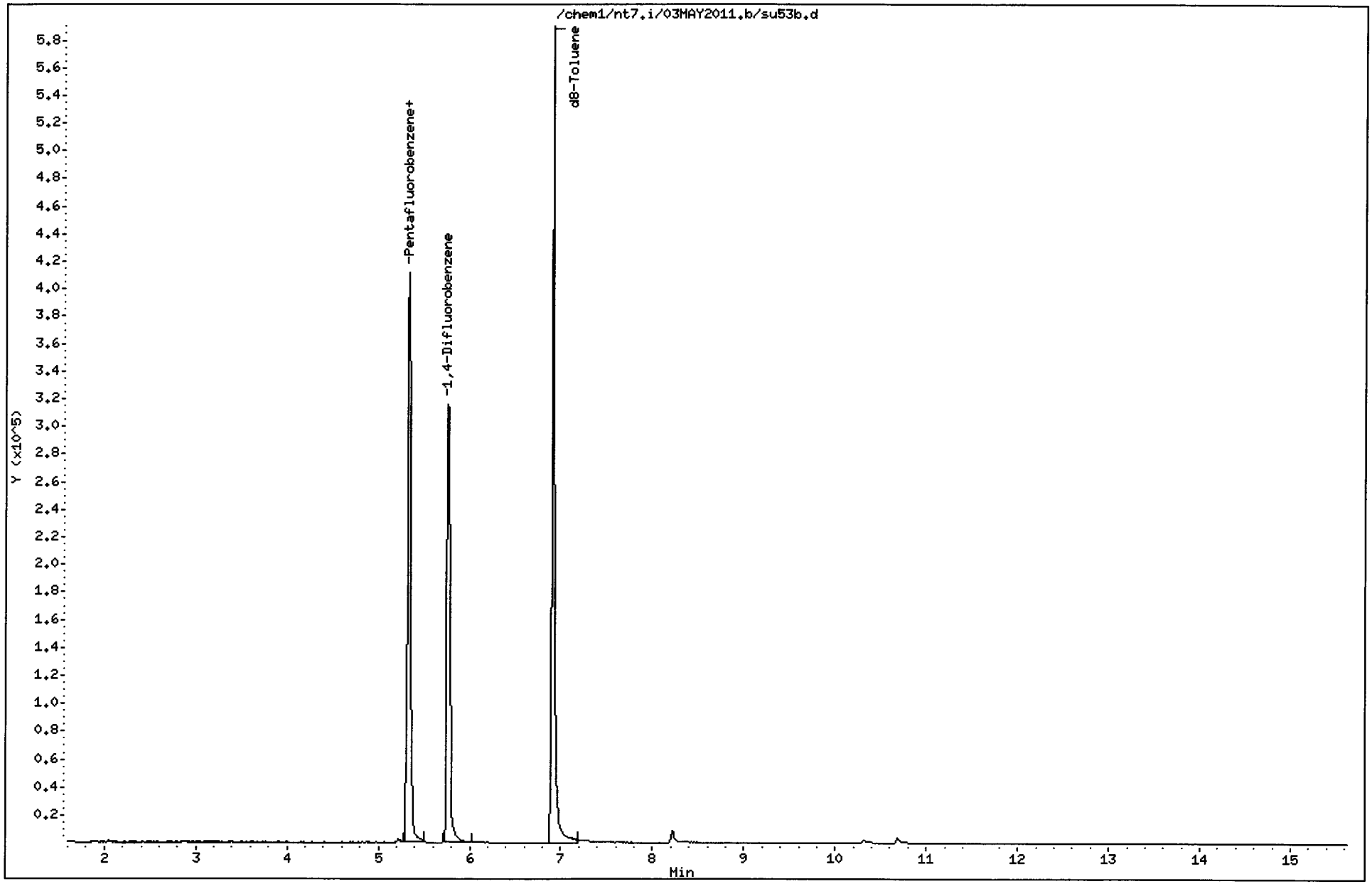
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	990.46	99.05	80-126
$ 9 d8-Toluene	1000.0	964.37	96.44	80-120

Data File: /chem1/nt7.i/03MAY2011.b/su53b.d
Date : 03-MAY-2011 20:39
Client ID: MW15042811
Sample Info: SU53B,10,10,0,

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

Column phase: RTXVMS

SU53 : 99427



CO-ELUTION SUMMARY FOR FILE - su53b.d

Lab ID: SU53B, Method: sim042611.m, Instrument: nt7.i, Date: 03-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC 5/4/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/03MAY2011.b/su53c.d
Lab Smp Id: SU53C Client Smp ID: MW4042811
Inj Date : 03-MAY-2011 21:04
Operator : PC Inst ID: nt7.i
Smp Info : SU53C,10,10,0,
Misc Info : 11-9623
Comment :
Method : /chem1/nt7.i/03MAY2011.b/sim042611.m
Meth Date : 03-May-2011 12:16 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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

		QUANT SIG					CONCENTRATIONS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/L)	FINAL (ug/L)
	1 Vinyl Chloride	62	Compound Not Detected.					
	2 1,1-Dichloroethene	96	Compound Not Detected.					
	175 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	3 cis-1,2-dichloroethene	96	Compound Not Detected.					
	6 Benzene	78	Compound Not Detected.					
*	4 Pentafluorobenzene	168	5.326	5.326	(1.000)	324280	1000.00	
$	5 d4-1,2-Dichloroethane	65	5.335	5.326	(1.002)	286627	980.838	980.84
	176 1,2-Dichloroethane	62	Compound Not Detected.					
	8 Trichloroethene	130	Compound Not Detected.					
*	7 1,4-Difluorobenzene	114	5.766	5.754	(1.000)	565886	1000.00	
$	9 d8-Toluene	98	6.913	6.913	(1.199)	685332	950.672	950.67
	10 Tetrachloroethene	166	Compound Not Detected.					
	11 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: su53c.d
Lab Smp Id: SU53C
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/03MAY2011.b/sim042611.m
Misc Info: 11-9623

Calibration Date: 03-MAY-2011
Calibration Time: 11:29
Client Smp ID: MW4042811
Level: LOW
Sample Type: Groundwater

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	324280	-10.77
7 1,4-Difluorobenze	667797	333898	1335594	565886	-15.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.33	0.00
7 1,4-Difluorobenze	5.75	5.25	6.25	5.77	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
Client SDG: SU53
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: SU53C
Client Smp ID: MW4042811
Level: LOW
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: sim12dca.sub
Method File: /chem1/nt7.i/03MAY2011.b/sim042611.m
Misc Info: 11-9623

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	980.84	98.08	80-126
$ 9 d8-Toluene	1000.0	950.67	95.07	80-120

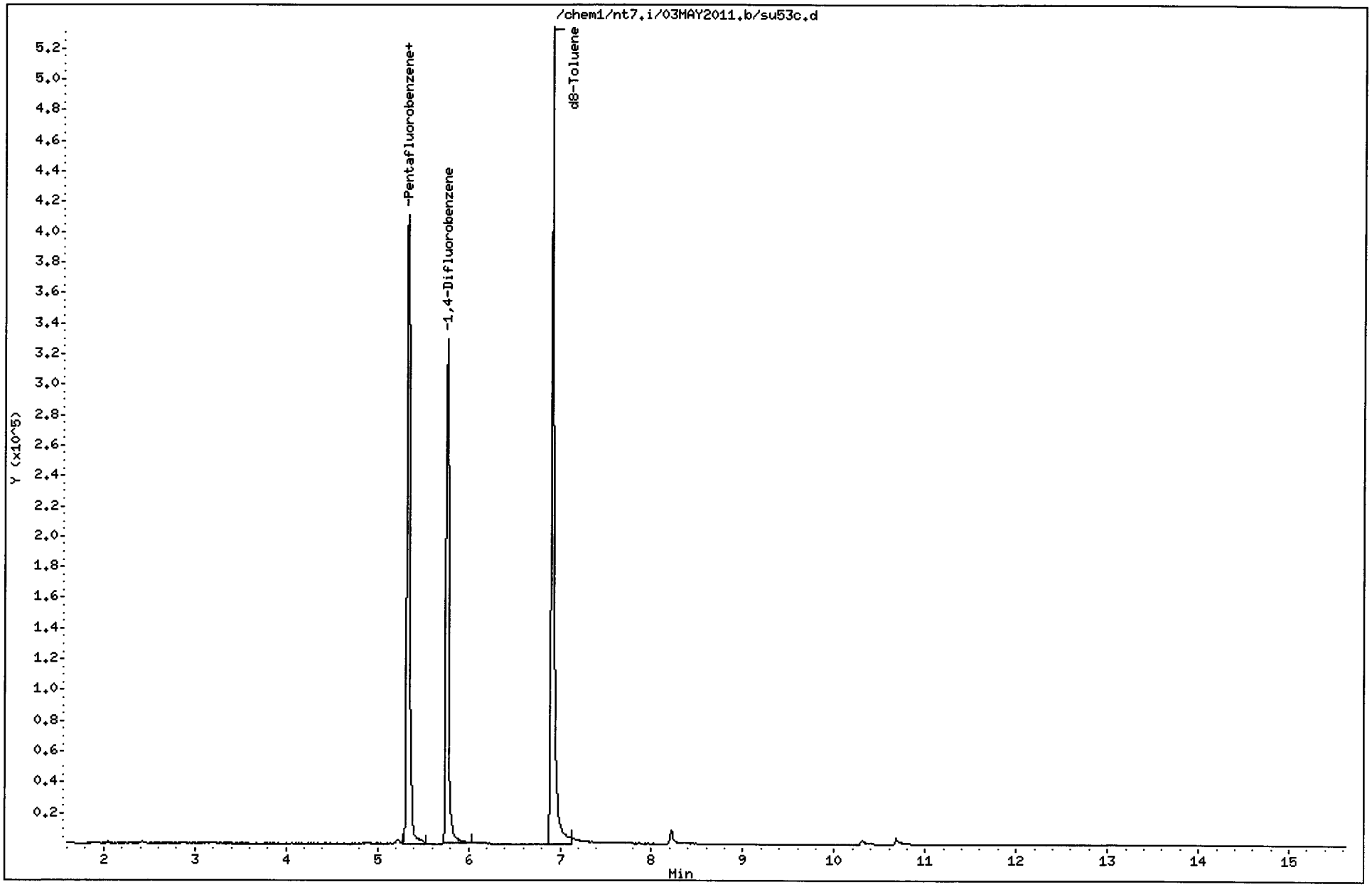
Data File: /chem1/nt7.i/03MAY2011.b/su53c.d
Date : 03-MAY-2011 21:04
Client ID: MW4042811
Sample Info: SU53C,10,10,0,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS

SU53:004432



CO-ELUTION SUMMARY FOR FILE - su53c.d

Lab ID: SU53C, Method: sim042611.m, Instrument: nt7.i, Date: 03-MAY-2011

RT	CO-ELUTION COMPOUNDS

5/4/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/03MAY2011.b/su53d.d
Lab Smp Id: SU53D Client Smp ID: MW17042811
Inj Date : 03-MAY-2011 21:30
Operator : PC Inst ID: nt7.i
Smp Info : SU53D,10,10,0,
Misc Info : 11-9624
Comment :
Method : /chem1/nt7.i/03MAY2011.b/sim042611.m
Meth Date : 03-May-2011 12:16 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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 MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/L)
	1	Vinyl Chloride	62	Compound Not Detected.					
	2	1,1-Dichloroethene	96	Compound Not Detected.					
	175	Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	3	cis-1,2-dichloroethene	96	Compound Not Detected.					
	6	Benzene	78	Compound Not Detected.					
*	4	Pentafluorobenzene	168	5.326	5.326	(1.000)	291433	1000.00	
$	5	d4-1,2-Dichloroethane	65	5.336	5.326	(1.002)	275609	1049.44	1049.4
	176	1,2-Dichloroethane	62	Compound Not Detected.					
	8	Trichloroethene	130	Compound Not Detected.					
*	7	1,4-Difluorobenzene	114	5.766	5.754	(1.000)	551688	1000.00	
$	9	d8-Toluene	98	6.913	6.913	(1.199)	674137	959.208	959.21
	10	Tetrachloroethene	166	Compound Not Detected.					
	11	1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: su53d.d
Lab Smp Id: SU53D
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/03MAY2011.b/sim042611.m
Misc Info: 11-9624

Calibration Date: 03-MAY-2011
Calibration Time: 11:29
Client Smp ID: MW17042811
Level: LOW
Sample Type: Groundwater

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	291433	-19.81
7 1,4-Difluorobenze	667797	333898	1335594	551688	-17.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.33	0.01
7 1,4-Difluorobenze	5.75	5.25	6.25	5.77	0.21

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: SU53
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: SU53D
Client Smp ID: MW17042811
Level: LOW
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: sim12dca.sub
Method File: /chem1/nt7.i/03MAY2011.b/sim042611.m
Misc Info: 11-9624

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	1049.4	104.94	80-126
$ 9 d8-Toluene	1000.0	959.21	95.92	80-120

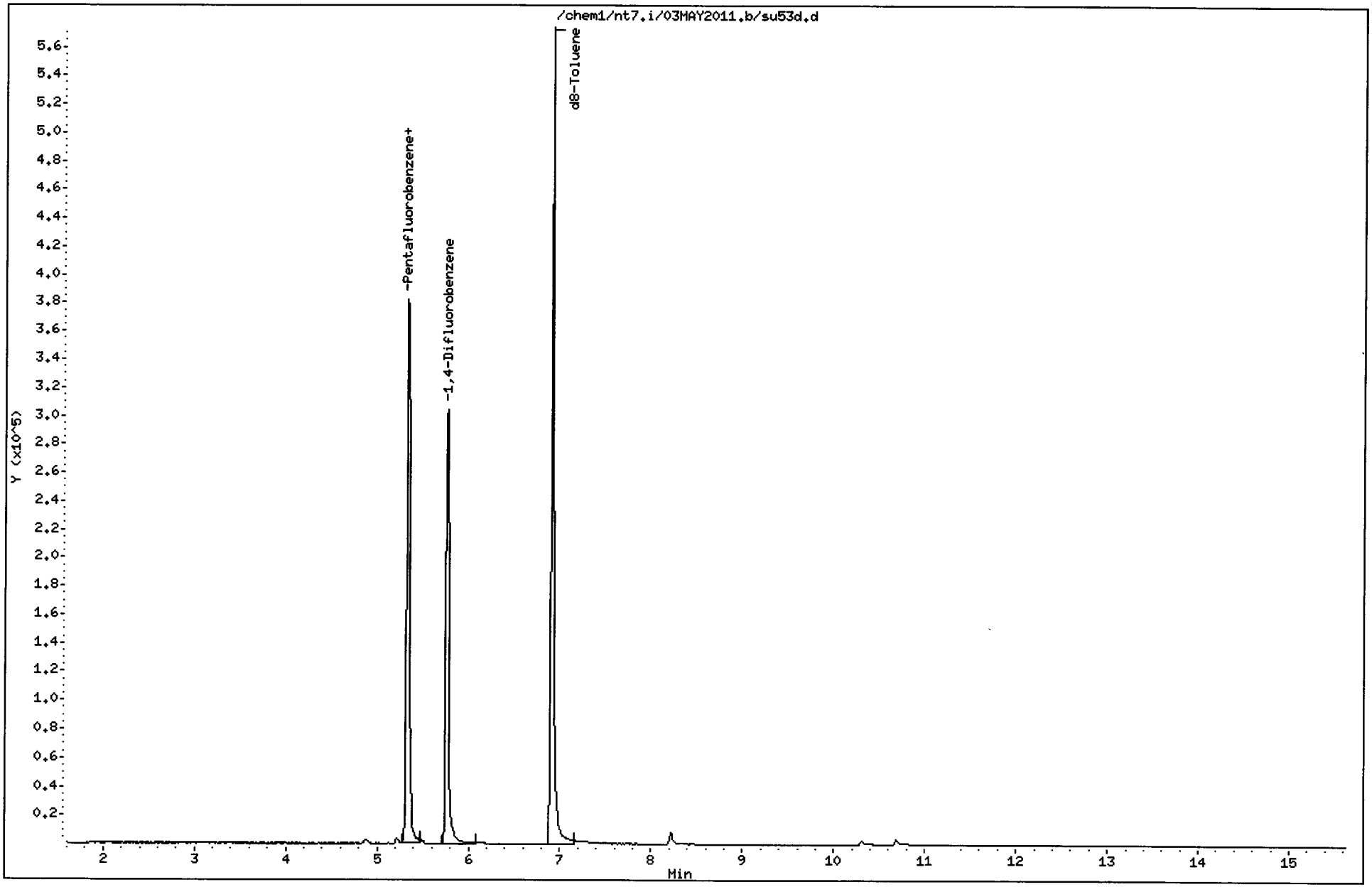
Data File: /chem1/nt7.i/03MAY2011.b/su53d.d
Date : 03-MAY-2011 21:30
Client ID: MW17042811
Sample Info: SU53D,10,10,0,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS

SU53:004437



CO-ELUTION SUMMARY FOR FILE - su53d.d

Lab ID: SU53D, Method: sim042611.m, Instrument: nt7.i, Date: 03-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC 3/4/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/03MAY2011.b/su53e.d
Lab Smp Id: SU53E Client Smp ID: MW14042811
Inj Date : 03-MAY-2011 21:56
Operator : PC Inst ID: nt7.i
Smp Info : SU53E,10,10,0,
Misc Info : 11-9625
Comment :
Method : /chem1/nt7.i/03MAY2011.b/sim042611.m
Meth Date : 03-May-2011 12:16 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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 MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	1 Vinyl Chloride	62	Compound Not Detected.					
	2 1,1-Dichloroethene	96	Compound Not Detected.					
	175 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	3 cis-1,2-dichloroethene	96	Compound Not Detected.					
	6 Benzene	78	Compound Not Detected.					
*	4 Pentafluorobenzene	168	5.325	5.326	(1.000)	307760	1000.00	
$	5 d4-1,2-Dichloroethane	65	5.335	5.326	(1.002)	279037	1006.12	1006.1
	176 1,2-Dichloroethane	62	Compound Not Detected.					
	8 Trichloroethene	130	Compound Not Detected.					
*	7 1,4-Difluorobenzene	114	5.765	5.754	(1.000)	551825	1000.00	
$	9 d8-Toluene	98	6.914	6.913	(1.199)	673498	958.062	958.06
	10 Tetrachloroethene	166	Compound Not Detected.					
	11 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: su53e.d
Lab Smp Id: SU53E
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/03MAY2011.b/sim042611.m
Misc Info: 11-9625

Calibration Date: 03-MAY-2011
Calibration Time: 11:29
Client Smp ID: MW14042811
Level: LOW
Sample Type: Groundwater

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	307760	-15.31
7 1,4-Difluorobenze	667797	333898	1335594	551825	-17.37

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.33	-0.01
7 1,4-Difluorobenze	5.75	5.25	6.25	5.77	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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd Snider
Client SDG: SU53
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: SU53E
Client Smp ID: MW14042811
Level: LOW
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: sim12dca.sub
Method File: /chem1/nt7.i/03MAY2011.b/sim042611.m
Misc Info: 11-9625

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	1006.1	100.61	80-126
$ 9 d8-Toluene	1000.0	958.06	95.81	80-120

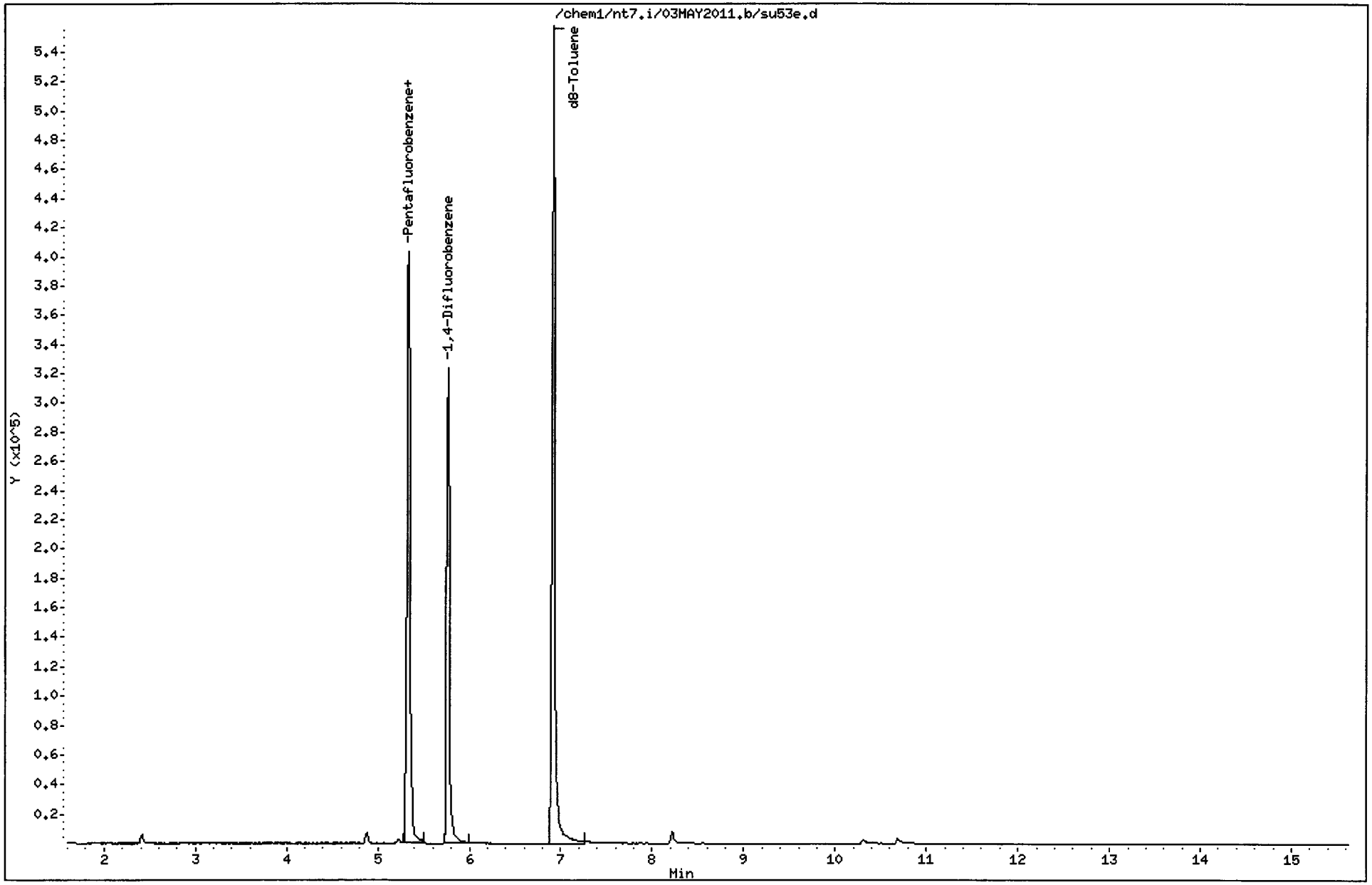
Data File: /chem1/nt7.i/03MAY2011.b/su53e.d
Date : 03-MAY-2011 21:56
Client ID: MW14042811
Sample Info: SU53E,10,10,0,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS

SU53-09442



CO-ELUTION SUMMARY FOR FILE - su53e.d

Lab ID: SU53E, Method: sim042611.m, Instrument: nt7.i, Date: 03-MAY-2011

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Analyst Notes / Corrective Action Log

ARI Project ID: 5473 Client ID: Floyd Snider

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

Parameter(s): 5 in VOA

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

Purge Volume (mL) 10 Curve Date: 4/26/11 Analysis Start Date: 5/4/11

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):

Additional Details on Reverse: Yes / No

Analyst: PC **Date:** 5/5/11

Reviewer: _____ **Date:** _____

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Analyst Notes / Corrective Action Log

ARI Project ID: 5474 Client ID: Floyd Snider

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

Parameter(s): SIM VOA

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

Purge Volume (mL) 10 Curve Date: 4/26/11 Analysis Start Date: 5/4/11

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):

Additional Details on Reverse: Yes / No

Analyst: PL **Date:** 5/5/11

Reviewer: [illegible] **Date:** 5/5/11

Analytical Resources Inc.: Volatile Organics Instrument Log

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

Date: 5/4/11 Analysis: 5 IN VOA Analyst: RC

GC Program: VC Column No: 850322 Column Type: RTX MS

Instrument Tune (.U or .CT.): bfb0504 EM Voltage: 1647

Calibration File: cc0504b Curve Date: 4/26/11

IS/SS	Ical/Ccal	LCS/ICV
VW885-1	VW882-2	VW882-2

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt7.i/04MAY2011'.b

	Time	Filename	LabID	ClientID	WT						
1	0918	bfb0504.d	BFB0504	BFB0504	0.00						
2	0953	cc0504.d	CC0504	CC0504		1 | 5.32	321147 | | 5.76	596355 |			
3	1019	cc0504a.d	CC0504	CC0504		1 | 5.33	178181 | | 5.75	337874 |			
4	1045	cc0504b.d	CC0504	CC0504		1 | 5.33	325620 | | 5.75	607444 |			
5	1121	lcs0504x.d	LCS0504	LCS0504		1 | 5.32	262777 | | 5.76	496109 |			
6	1147	lcs0504y.d	LCS0504	LCS0504		1 | 5.33	332174 | | 5.75	613837 |			
7	1213	mb0504.d	MB0504	MB0504		1 | 5.32	288519 | | 5.76	540873 |			
8	1246	su78b.d	SU78B	trip Blanks	1 <2	1 | 5.33	348685 | | 5.75	610257 |			
9	1312	su73c.d	SU73C	TB-042911	2	1 | 5.32	318932 | | 5.75	579037 |			
10	1338	sv04d.d	SV04D	Trip Blank	2	1 | 5.33	314331 | | 5.76	584294 |			
11	1403	su21b2.d	SU21B	MW11-042711	5	1 | 5.33	314236 | | 5.77	566832 |			
12	1429	su21e2.d	SU21E	MW08-042711	6	1 | 5.32	306214 | | 5.77	555326 |			
13	1455	su53a2.d	SU53A	MW5042811	11	1 | 5.32	284721 | | 5.77	537725 |			
14	1520	su53f2.d	SU53F	MW16042811	7	1 | 5.33	77079 | | 5.77	149271 |			
15	1546	su78a.d	SU78A	AGW182-29-20110429	3	1 | 5.32	286695 | | 5.77	598976 |			
16	1609	su53f3.d	SU53F	MW16042811	7	1 | 5.32	329558 | | 5.77	559059 |			
17	1635	su73a.d	SU73A	MW-01-042911	6	1 | 5.32	327319 | | 5.77	616507 |			
18	1701	su73b.d	SU73B	MW-01-042911-D	7	1 | 5.32	358815 | | 5.77	671821 |			
19	1726	su74a.d	SU74A	B312-042911	3	1 | 5.32	376103 | | 5.77	682816 |			
20	1752	su74b.d	SU74B	B310-042911	2	1 | 5.32	361270 | | 5.77	654245 |			
21	1818	su74c.d	SU74C	B311-042911	6	1 | 5.33	341470 | | 5.77	625591 |			
22	1843	sv04a.d	SV04A	MW29B	9	1 | 5.32	352276 | | 5.77	634564 |			
23	1909	sv04b.d	SV04B	MW31	9 <2	1 | 5.33	335260 | | 5.77	604688 |			
24	1935	sv04c.d	SV04C	MW30C	9	1 | 5.33	326663 | | 5.77	592888 |			

RC 5/5/11

Maintenance / Comments IS delivery problems cc0504, 5453F2

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/04MAY2011.b

ARI Job No.: CC05 Method: sim042611.m Instrument: nt7.i Date: 04-MAY-2011

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1045	cc0504b.d	CC0504	CC0504	1	NO MANUAL INTEGRATION
1121	lcs0504x.d	LCS0504	LCS0504	1	NO MANUAL INTEGRATION
1147	lcs0504y.d	LCS0504	LCS0504	1	NO MANUAL INTEGRATION
1213	mb0504.d	MB0504	MB0504	1	NO MANUAL INTEGRATION
1403	su21b2.d	SU21B	MW11-04271	1	NO MANUAL INTEGRATION
1429	su21e2.d	SU21E	MW08-04271	1	NO MANUAL INTEGRATION
1455	su53a2.d	SU53A	MW5042811	1	NO MANUAL INTEGRATION
1609	su53f3.d	SU53F	MW16042811	1	NO MANUAL INTEGRATION
1635	su73a.d	SU73A	MW-01-0429	1	NO MANUAL INTEGRATION
1701	su73b.d	SU73B	MW-01-0429	1	NO MANUAL INTEGRATION
1312	su73c.d	SU73C	TB-042911	1	NO MANUAL INTEGRATION
1726	su74a.d	SU74A	B312-04291	1	NO MANUAL INTEGRATION
1752	su74b.d	SU74B	B310-04291	1	NO MANUAL INTEGRATION
1818	su74c.d	SU74C	B311-04291	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt7.i/04MAY2011.b

Instrument: nt7.i Date: 04-MAY-2011 Method: sim042611.m

INITIAL CAL: 26-APR-2011

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 04-MAY-2011

Compound	%D
NO Q-FLAGS	

Data File: /chem1/nt7.i/04MAY2011.b/bfb0504.d

Date : 04-MAY-2011 09:18

Client ID: BFB0504

Instrument: nt7.i

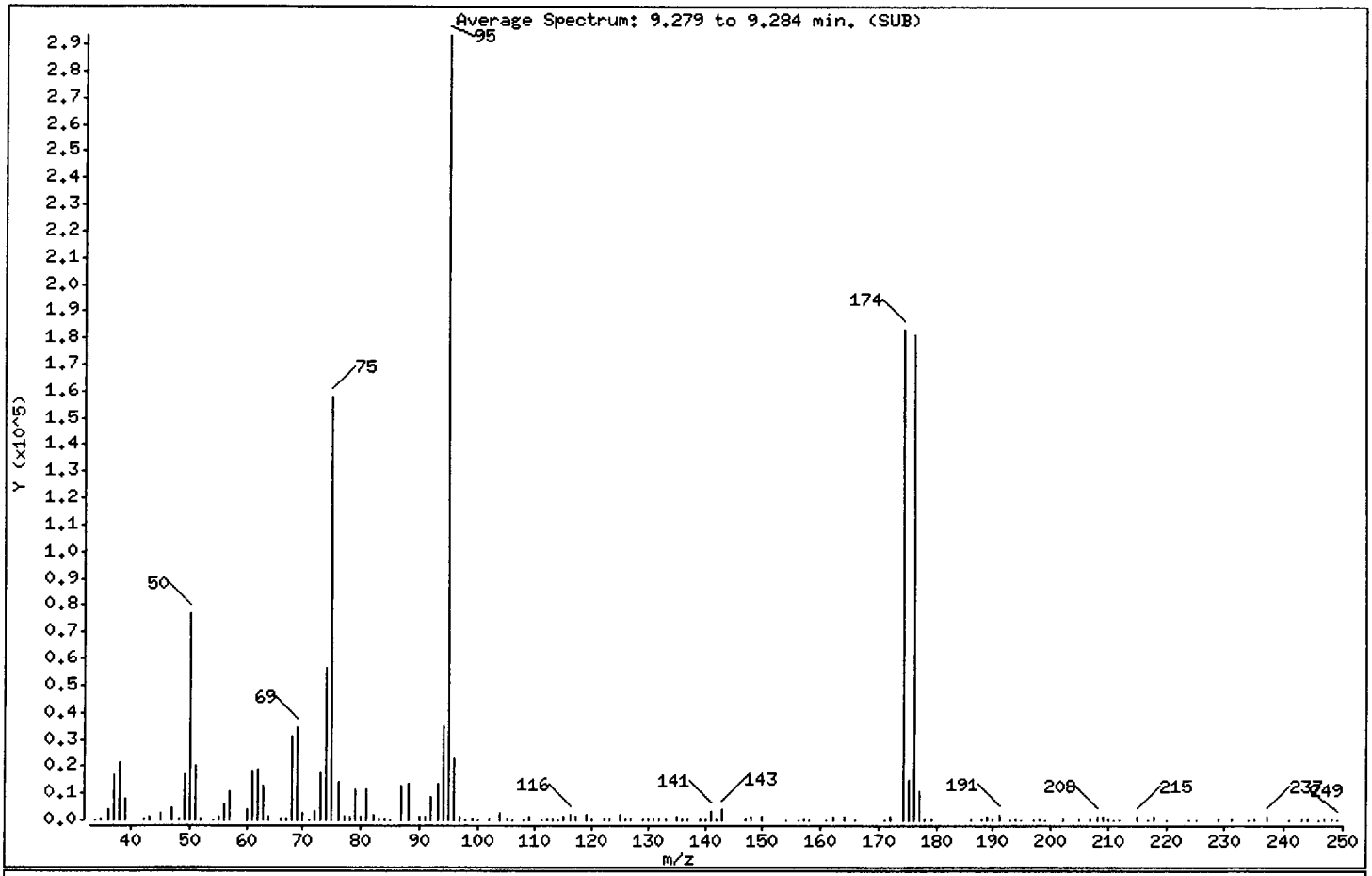
Sample Info: BFB0504,BFB0504,1,04MAY2011,,

Operator: PC

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	26.18
75	30.00 - 66.00% of mass 95	53.86
96	5.00 - 9.00% of mass 95	7.84
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 101.00% of mass 95	62.63
175	4.00 - 9.00% of mass 174	5.00 (7.98)
176	93.00 - 101.00% of mass 174	61.81 (98.70)
177	5.00 - 9.00% of mass 176	3.65 (5.90)

Date : 04-MAY-2011 09:18

Client ID: BFB0504 Instrument: nt7.i

Sample Info: BFB0504,BFB0504,1,04MAY2011,,

Operator: PC

Column phase: RTXVMS Column diameter: 0.18

Data File: bfb0504.d
Spectrum: Average Spectrum: 9.279 to 9.284 min. (SUB)
Location of Maximum: 95.00
Number of points: 152

m/z	Y	m/z	Y	m/z	Y	m/z	Y
34.00	275	81.00	11606	129.00	1010	194.00	774
35.00	584	82.00	2239	130.00	655	195.00	170
36.00	3919	83.00	695	131.00	435	197.00	169
37.00	16816	84.00	414	132.00	347	198.00	359
38.00	21352	85.00	266	133.00	429	199.00	48
39.00	7846	87.00	13043	135.00	1458	201.00	64
42.00	669	88.00	13546	136.00	445	202.00	605
43.00	1131	90.00	1505	137.00	503	204.00	68
45.00	2561	91.00	1024	139.00	642	205.00	761
47.00	4740	92.00	8588	140.00	355	207.00	816
48.00	958	93.00	13664	141.00	3231	208.00	1205
49.00	16696	94.00	35408	142.00	465	209.00	1189
50.00	76816	95.00	293440	143.00	4355	210.00	798
51.00	20048	96.00	23000	147.00	1001	211.00	240
52.00	861	97.00	1236	148.00	1098	212.00	143
54.00	162	98.00	251	150.00	1146	215.00	1249
55.00	1302	99.00	562	151.00	176	217.00	61
56.00	6270	100.00	210	154.00	194	218.00	1219
57.00	10538	102.00	369	156.00	201	220.00	63
60.00	3810	104.00	2629	157.00	533	224.00	258
61.00	17880	105.00	885	158.00	145	225.00	300
62.00	18592	106.00	296	161.00	196	229.00	517
63.00	12796	107.00	277	162.00	1116	231.00	907
64.00	1423	108.00	139	164.00	1073	233.00	51
66.00	511	109.00	1218	166.00	140	234.00	297
67.00	458	111.00	211	171.00	203	235.00	482
68.00	30968	112.00	508	172.00	1044	236.00	266
69.00	34304	113.00	456	174.00	183744	237.00	1141
70.00	2994	114.00	100	175.00	14664	241.00	308
71.00	239	115.00	1675	176.00	181376	243.00	412
72.00	3143	116.00	2191	177.00	10706	244.00	508
73.00	17592	117.00	1070	178.00	392	246.00	37
74.00	56848	119.00	1777	179.00	383	247.00	407
75.00	158016	120.00	451	186.00	374	248.00	823
76.00	14459	122.00	739	188.00	455	249.00	197

Date : 04-MAY-2011 09:18

Client ID: BFB0504 Instrument: nt7.i

Sample Info: BFB0504,BFB0504,1,04MAY2011,,

Operator: PC

Column phase: RTXVMS Column diameter: 0.18

Data File: bfb0504.d

Spectrum: Average Spectrum: 9.279 to 9.284 min. (SUB)

Location of Maximum: 95.00

Number of points: 152

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	1422	123.00	678	189.00	1101		
78.00	1212	125.00	1963	190.00	624		
79.00	11190	126.00	467	191.00	1703		
80.00	1045	127.00	773	193.00	309		

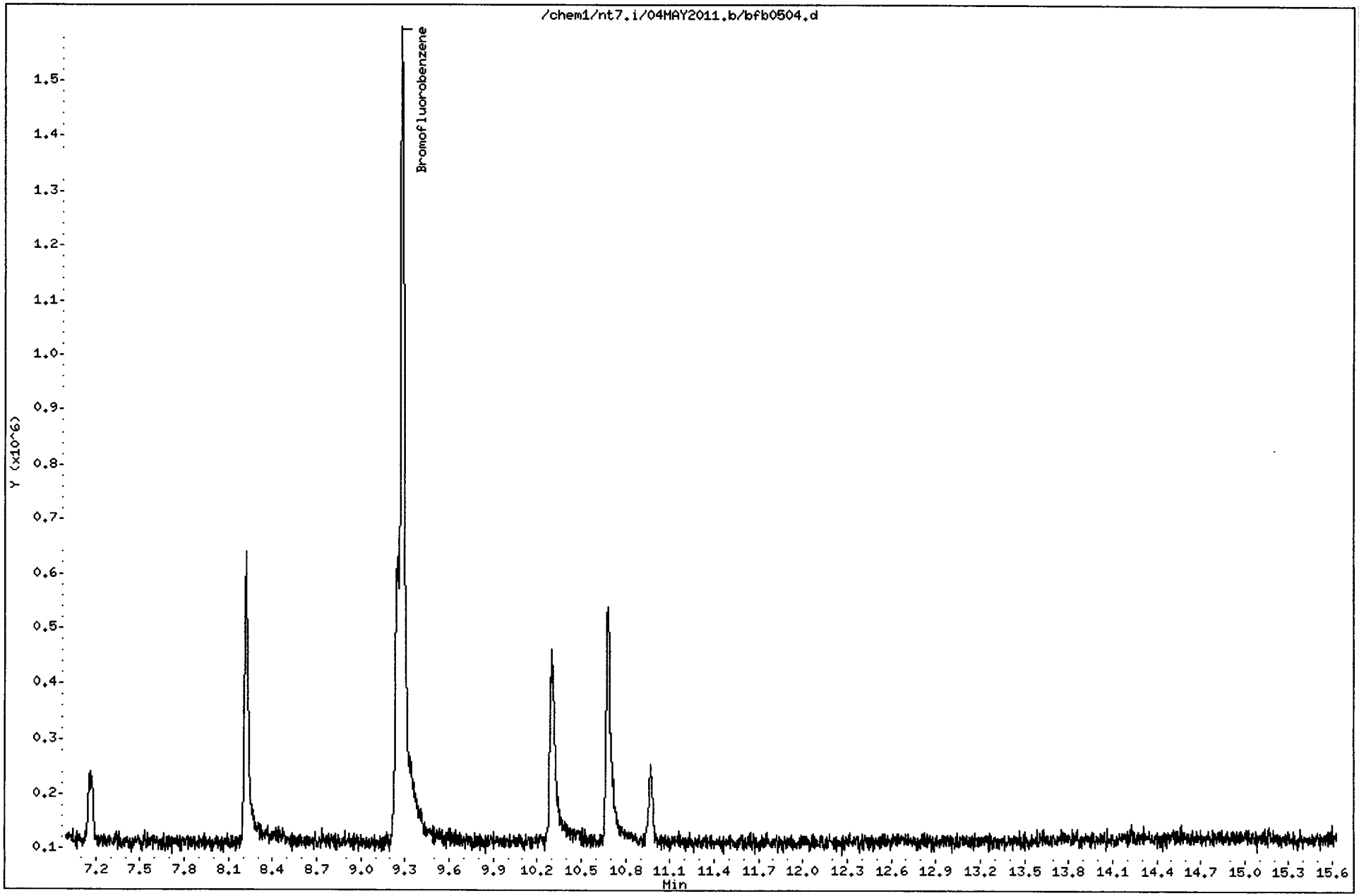
Data File: /chem1/nt7.i/04MAY2011.b/bfb0504.d
Date : 04-MAY-2011 09:18
Client ID: BFB0504
Sample Info: BFB0504,BFB0504,1,04MAY2011,,

Column phase: RTXVMS

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

SJSU-00452



Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/04MAY2011.b/cc0504b.d
Lab Smp Id: CC0504 Client Smp ID: CC0504
Inj Date : 04-MAY-2011 10:45
Operator : PC Inst ID: nt7.i
Smp Info : CC0504,10,10,0,,
Misc Info : 11-
Comment :
Method : /chem1/nt7.i/04MAY2011.b/sim042611.m
Meth Date : 05-May-2011 11:14 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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 MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
1	Vinyl Chloride	62	1.551	1.551	(0.291)	368701	1000.00	1028.9
2	1,1-Dichloroethene	96	2.510	2.510	(0.471)	291648	1000.00	1022.9
175	Trans-1,2-Dichloroethene	96	3.290	3.290	(0.618)	298684	1000.00	1031.1
3	cis-1,2-dichloroethene	96	4.439	4.439	(0.834)	294538	1000.00	952.41
6	Benzene	78	5.212	5.212	(0.906)	1372896	1000.00	987.21
* 4	Pentafluorobenzene	168	5.326	5.326	(1.000)	325620	1000.00	
$ 5	d4-1,2-Dichloroethane	65	5.335	5.335	(1.002)	255850	1000.00	871.92
176	1,2-Dichloroethane	62	5.383	5.383	(1.011)	478688	1000.00	1032.1
8	Trichloroethene	130	5.720	5.720	(0.994)	256861	1000.00	1078.5(Q)
* 7	1,4-Difluorobenzene	114	5.754	5.754	(1.000)	607444	1000.00	
$ 9	d8-Toluene	98	6.913	6.913	(1.201)	777969	1000.00	1005.3
10	Tetrachloroethene	166	7.270	7.270	(1.263)	189909	1000.00	1033.3
11	1,1,2,2-Tetrachloroethane	83	9.457	9.457	(1.643)	230404	1000.00	1047.2

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt7.i Injection Date: 04-MAY-2011 10:45
Lab File ID: cc0504b.d Init. Cal. Date(s): 26-APR-2011 26-APR-2011
Analysis Type: WATER Init. Cal. Times: 08:49 15:00
Lab Sample ID: CC0504 Quant Type: ISTD
Method: /chem1/nt7.i/04MAY2011.b/sim042611.m

COMPOUND	RRF / AMOUNT	RF1000	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
1 Vinyl Chloride	1.10052	1.13230	0.040	2.88766	20.00000	Averaged
2 1,1-Dichloroethene	0.87564	0.89567	0.040	2.28796	20.00000	Averaged
175 Trans-1,2-Dichloroethene	0.88961	0.91728	0.040	3.11043	20.00000	Averaged
3 cis-1,2-dichloroethene	0.94974	0.90454	0.040	-4.75857	20.00000	Averaged
6 Benzene	2.28941	2.26012	0.040	-1.27941	20.00000	Averaged
$ 5 d4-1,2-Dichloroethane	0.90115	0.78573	0.040	-12.80817	20.00000	Averaged
176 1,2-Dichloroethane	1.42431	1.47008	0.040	3.21342	20.00000	Averaged
8 Trichloroethene	0.39208	0.42286	0.040	7.84944	20.00000	Averaged
$ 9 d8-Toluene	1.27392	1.28072	0.040	0.53430	20.00000	Averaged
10 Tetrachloroethene	0.30255	0.31264	0.040	3.33411	20.00000	Averaged
11 1,1,2,2-Tetrachloroethane	0.36220	0.37930	0.040	4.72258	20.00000	Averaged

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: cc0504b.d
Lab Smp Id: CC0504
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-

Calibration Date: 04-MAY-2011
Calibration Time: 10:19
Client Smp ID: CC0504
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

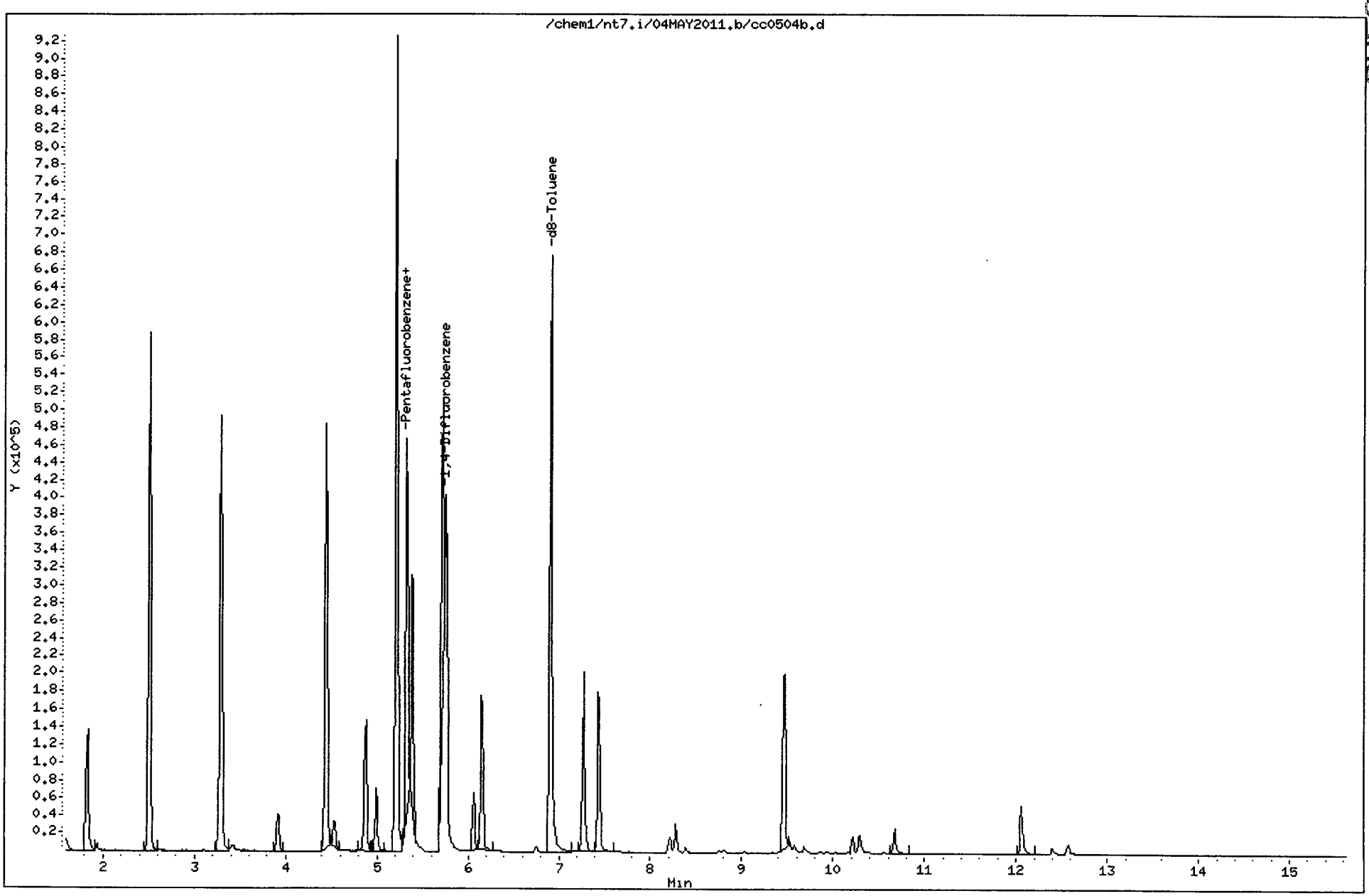
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	325620	-10.40
7 1,4-Difluorobenze	667797	333898	1335594	607444	-9.04

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.33	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/04MAY2011.b/cc0504b.d
Date : 04-MAY-2011 10:45
Client ID: CC0504
Sample Info: CC0504,10,10,0,,
Column phase: RTXVMS

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



SDG: 69157

CO-ELUTION SUMMARY FOR FILE - cc0504b.d

Lab ID: CC0504, Method: sim042611.m, Instrument: nt7.i, Date: 04-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC 5/5/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/04MAY2011.b/lcs0504x.d
Lab Smp Id: LCS0504 Client Smp ID: LCS0504
Inj Date : 04-MAY-2011 11:21
Operator : PC Inst ID: nt7.i
Smp Info : LCS0504,10,10,0,,
Misc Info : 11-
Comment :
Method : /chem1/nt7.i/04MAY2011.b/sim042611.m
Meth Date : 05-May-2011 11:14 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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	1.551	(0.291)	332422	1149.49	1149.5
	2 1,1-Dichloroethene	96	2.504	2.510	(0.470)	261593	1136.88	1136.9
	175 Trans-1,2-Dichloroethene	96	3.283	3.290	(0.617)	268441	1148.32	1148.3
	3 cis-1,2-dichloroethene	96	4.438	4.439	(0.834)	269691	1080.62	1080.6
	6 Benzene	78	5.211	5.212	(0.905)	1241865	1093.39	1093.4
*	4 Pentafluorobenzene	168	5.325	5.326	(1.000)	262777	1000.00	
$	5 d4-1,2-Dichloroethane	65	5.334	5.335	(1.002)	207791	877.485	877.49
	176 1,2-Dichloroethane	62	5.381	5.383	(1.011)	438718	1172.18	1172.2
	8 Trichloroethene	130	5.721	5.720	(0.994)	230303	1183.99	1184.0(Q)
*	7 1,4-Difluorobenzene	114	5.756	5.754	(1.000)	496109	1000.00	
$	9 d8-Toluene	98	6.914	6.913	(1.201)	629175	995.528	995.53
	10 Tetrachloroethene	166	7.270	7.270	(1.263)	173947	1158.90	1158.9
	11 1,1,2,2-Tetrachloroethane	83	9.457	9.457	(1.643)	206828	1151.04	1151.0

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: lcs0504x.d
Lab Smp Id: LCS0504
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-

Calibration Date: 04-MAY-2011
Calibration Time: 10:45
Client Smp ID: LCS0504
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	262777	-27.69
7 1,4-Difluorobenze	667797	333898	1335594	496109	-25.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.32	-0.02
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: 04MAY2011
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS0504 Client Smp ID: LCS0504
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/04MAY2011.b/sim042611.m
Misc Info: 11-

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Vinyl Chloride	1000.0	1149.5	114.95	76-120
176 1,2-Dichloroethane	1000.0	1172.2	117.22	80-128
175 Trans-1,2-Dichloro	1000.0	1148.3	114.83	80-120
2 1,1-Dichloroethene	1000.0	1136.9	113.69	80-120
3 cis-1,2-dichloroet	1000.0	1080.6	108.06	80-120
6 Benzene	1000.0	1093.4	109.34	80-120
8 Trichloroethene	1000.0	1184.0	118.40	80-120
10 Tetrachloroethene	1000.0	1158.9	115.89	80-122
11 1,1,2,2-Tetrachlor	1000.0	1151.0	115.10	80-128

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	877.49	87.75	80-126
$ 9 d8-Toluene	1000.0	995.53	99.55	80-120

Data File: /chem1/nt7.i/04MAY2011.b/lcs0504x.d

Date : 04-MAY-2011 11:21

Client ID: LCS0504

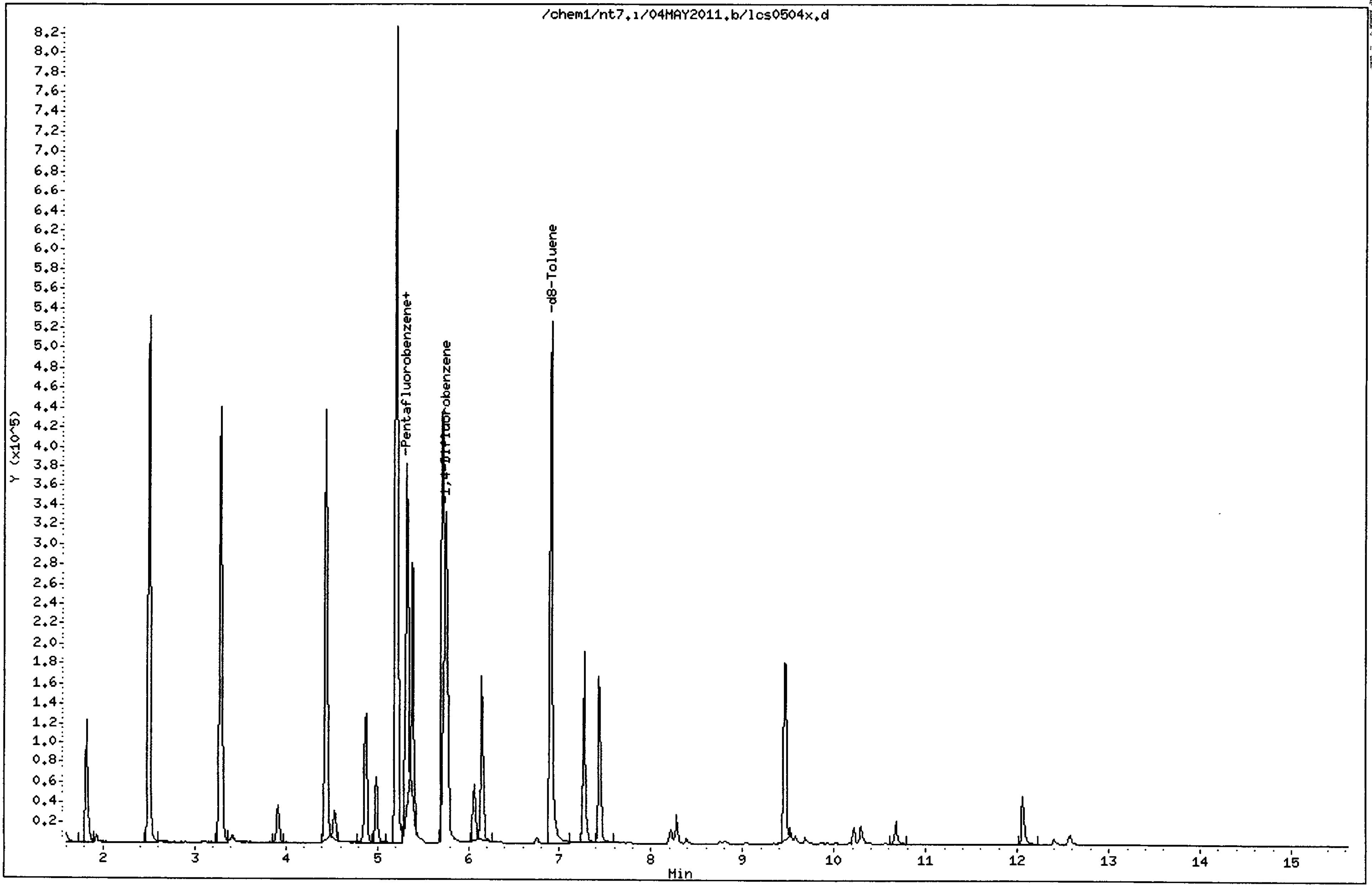
Sample Info: LCS0504,10,10,0,,

Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18



CO-ELUTION SUMMARY FOR FILE - lcs0504x.d

Lab ID: LCS0504, Method: sim042611.m, Instrument: nt7.i, Date: 04-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC 5/5/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/04MAY2011.b/lcs0504y.d
Lab Smp Id: LCS0504 Client Smp ID: LCS0504
Inj Date : 04-MAY-2011 11:47
Operator : PC Inst ID: nt7.i
Smp Info : LCS0504,10,10,0,,
Misc Info : 11-
Comment :
Method : /chem1/nt7.i/04MAY2011.b/sim042611.m
Meth Date : 05-May-2011 11:14 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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	1.552	1.551	(0.291)	316510	865.810	865.81
	2 1,1-Dichloroethene	96	2.510	2.510	(0.471)	255379	878.006	878.01
	175 Trans-1,2-Dichloroethene	96	3.289	3.290	(0.618)	262022	886.696	886.70
	3 cis-1,2-dichloroethene	96	4.439	4.439	(0.834)	260996	827.302	827.30
	6 Benzene	78	5.211	5.212	(0.906)	1206672	858.644	858.64
*	4 Pentafluorobenzene	168	5.325	5.326	(1.000)	332174	1000.00	
$	5 d4-1,2-Dichloroethane	65	5.335	5.335	(1.002)	253719	847.598	847.60
	176 1,2-Dichloroethane	62	5.382	5.383	(1.011)	423111	894.303	894.30
	8 Trichloroethene	130	5.720	5.720	(0.994)	227956	947.163	947.16(Q)
*	7 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	613837	1000.00	
$	9 d8-Toluene	98	6.915	6.913	(1.202)	769804	984.434	984.43
	10 Tetrachloroethene	166	7.271	7.270	(1.264)	175519	945.096	945.10
	11 1,1,2,2-Tetrachloroethane	83	9.458	9.457	(1.644)	201752	907.447	907.45

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: lcs0504y.d
Lab Smp Id: LCS0504
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-

Calibration Date: 04-MAY-2011
Calibration Time: 10:45
Client Smp ID: LCS0504
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	332174	-8.59
7 1,4-Difluorobenze	667797	333898	1335594	613837	-8.08

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.33	-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: Client SDG: 04MAY2011
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS0504 Client Smp ID: LCS0504
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/04MAY2011.b/sim042611.m
Misc Info: 11-

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Vinyl Chloride	1000.0	865.81	86.58	76-120
176 1,2-Dichloroethane	1000.0	894.30	89.43	80-128
175 Trans-1,2-Dichloro	1000.0	886.70	88.67	80-120
2 1,1-Dichloroethene	1000.0	878.01	87.80	80-120
3 cis-1,2-dichloroet	1000.0	827.30	82.73	80-120
6 Benzene	1000.0	858.64	85.86	80-120
8 Trichloroethene	1000.0	947.16	94.72	80-120
10 Tetrachloroethene	1000.0	945.10	94.51	80-122
11 1,1,2,2-Tetrachlor	1000.0	907.45	90.74	80-128

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	847.60	84.76	80-126
$ 9 d8-Toluene	1000.0	984.43	98.44	80-120

Data File: /chem1/nt7.i/04MAY2011.b/lcs0504y.d

Date : 04-MAY-2011 11:47

Client ID: LCS0504

Sample Info: LCS0504,10,10,0,,

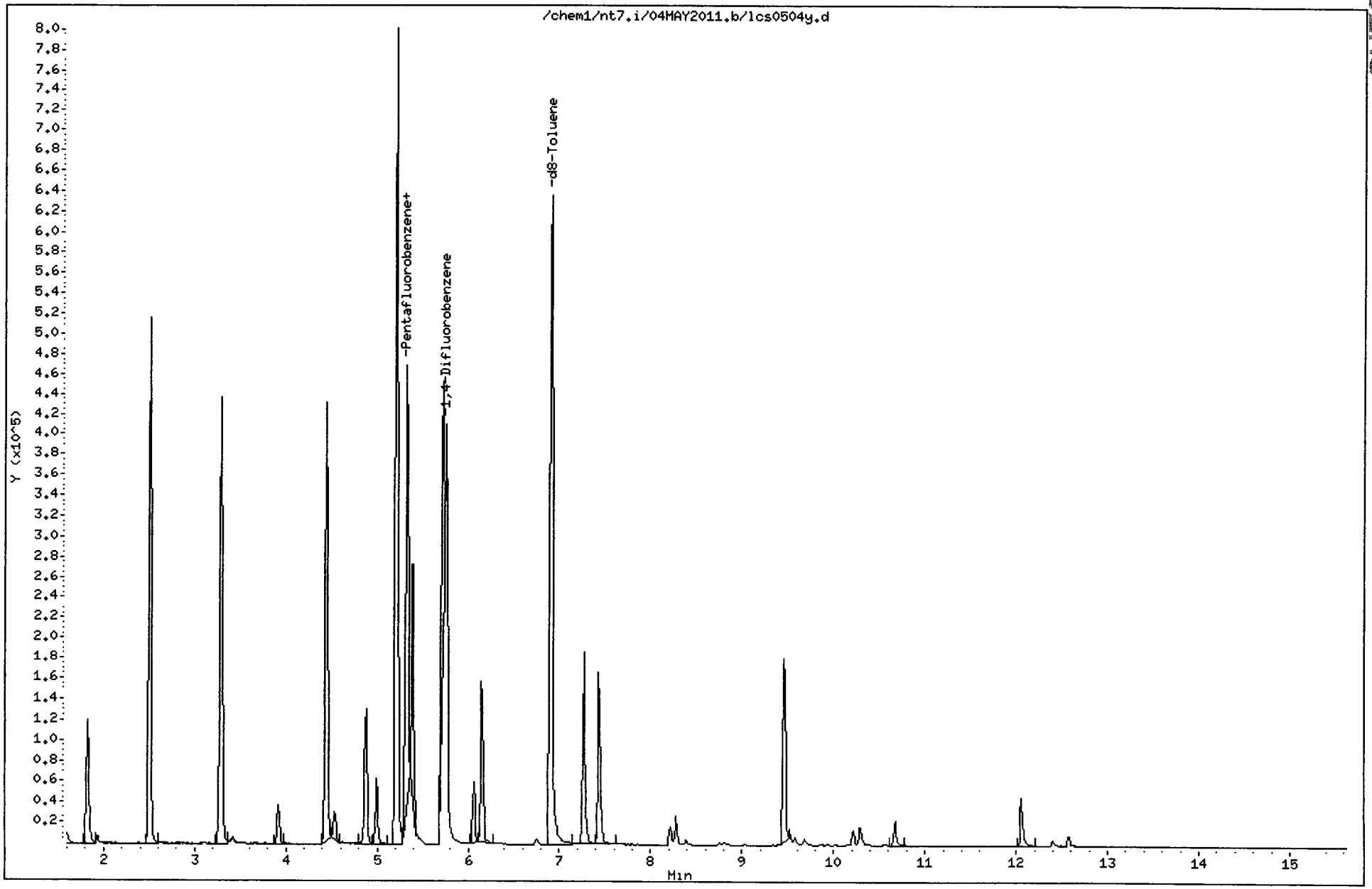
Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18

SJ53:69169



CO-ELUTION SUMMARY FOR FILE - lcs0504y.d

Lab ID: LCS0504, Method: sim042611.m, Instrument: nt7.i, Date: 04-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC 5/5/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/04MAY2011.b/mb0504.d
Lab Smp Id: MB0504 Client Smp ID: MB0504
Inj Date : 04-MAY-2011 12:13
Operator : PC Inst ID: nt7.i
Smp Info : MB0504,10,10,0,,
Misc Info : 11-
Comment :
Method : /chem1/nt7.i/04MAY2011.b/sim042611.m
Meth Date : 05-May-2011 11:15 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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 MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	1 Vinyl Chloride	62	Compound Not Detected.					
	2 1,1-Dichloroethene	96	Compound Not Detected.					
	175 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	3 cis-1,2-dichloroethene	96	Compound Not Detected.					
	6 Benzene	78	Compound Not Detected.					
*	4 Pentafluorobenzene	168	5.325	5.326	(1.000)	288519	1000.00	
$	5 d4-1,2-Dichloroethane	65	5.334	5.335	(1.002)	270071	1038.73	1038.7
	176 1,2-Dichloroethane	62	Compound Not Detected.					
	8 Trichloroethene	130	Compound Not Detected.					
*	7 1,4-Difluorobenzene	114	5.755	5.754	(1.000)	540873	1000.00	
$	9 d8-Toluene	98	6.913	6.913	(1.201)	671164	974.075	974.08
	10 Tetrachloroethene	166	Compound Not Detected.					
	11 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: mb0504.d
Lab Smp Id: MB0504
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-

Calibration Date: 04-MAY-2011
Calibration Time: 10:45
Client Smp ID: MB0504
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	288519	-20.61
7 1,4-Difluorobenze	667797	333898	1335594	540873	-19.01

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.32	-0.02
7 1,4-Difluorobenze	5.75	5.25	6.25	5.76	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: 04MAY2011
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: MB0504 Client Smp ID: MB0504
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/04MAY2011.b/sim042611.m
Misc Info: 11-

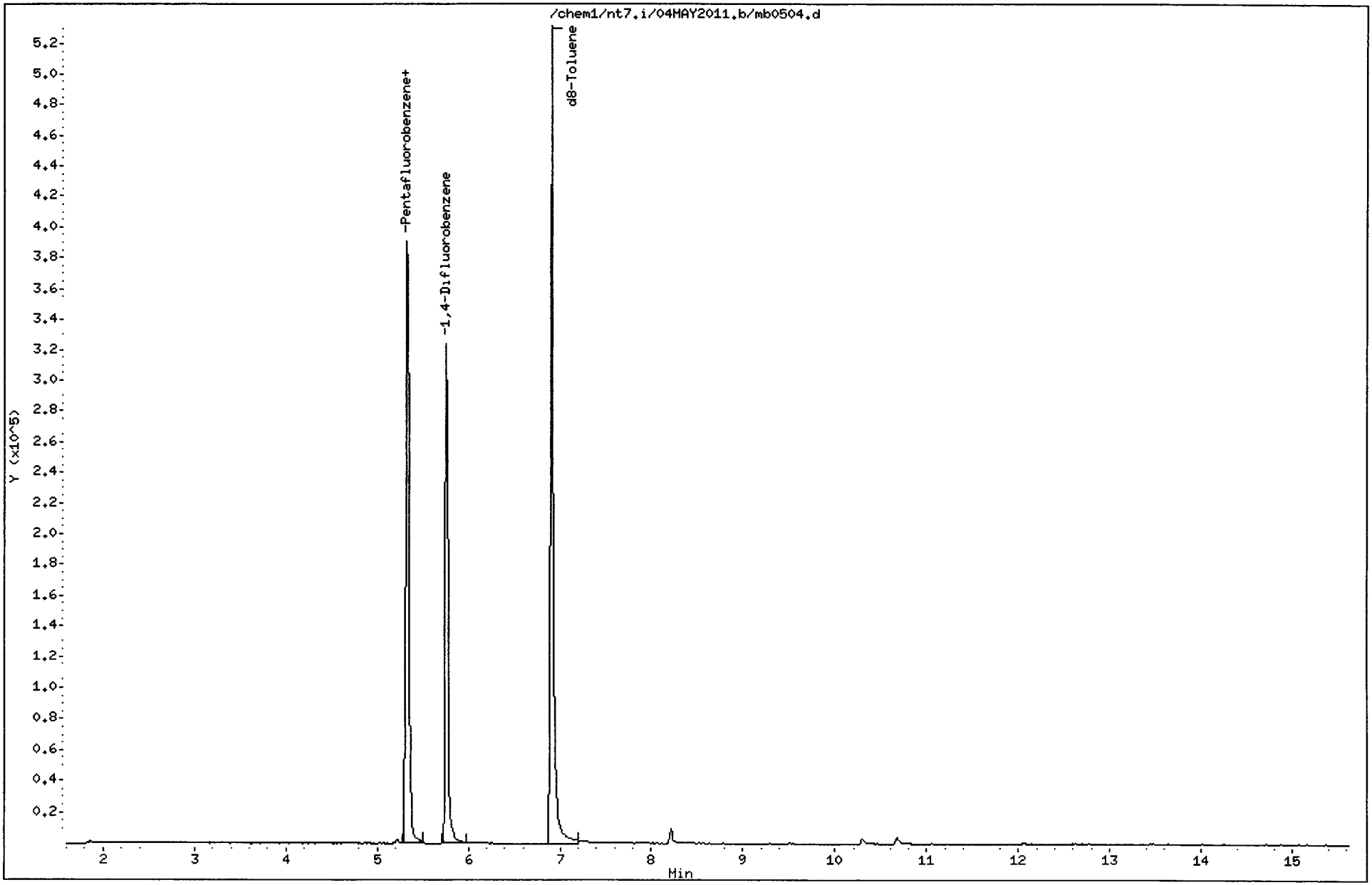
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	1038.7	103.87	80-126
$ 9 d8-Toluene	1000.0	974.08	97.41	80-120

Data File: /chem1/nt7.i/04MAY2011.b/mb0504.d
Date : 04-MAY-2011 12:13
Client ID: MB0504
Sample Info: MB0504,10,10,0,,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



11/10/2011 09:15:15

CO-ELUTION SUMMARY FOR FILE - mb0504.d

Lab ID: MB0504, Method: sim042611.m, Instrument: nt7.i, Date: 04-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC 5/5/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/04MAY2011.b/su73c.d
Lab Smp Id: SU73C Client Smp ID: TB-042911
Inj Date : 04-MAY-2011 13:12
Operator : PC Inst ID: nt7.i
Smp Info : SU73C,10,10,0,,
Misc Info : 11-9764
Comment :
Method : /chem1/nt7.i/04MAY2011.b/sim042611.m
Meth Date : 05-May-2011 11:15 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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 MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	1 Vinyl Chloride	62	Compound Not Detected.					
	2 1,1-Dichloroethene	96	Compound Not Detected.					
	175 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	3 cis-1,2-dichloroethene	96	Compound Not Detected.					
	6 Benzene	78	Compound Not Detected.					
*	4 Pentafluorobenzene	168	5.324	5.326	(1.000)	318932	1000.00	
$	5 d4-1,2-Dichloroethane	65	5.333	5.335	(1.002)	280493	975.944	975.94
	176 1,2-Dichloroethane	62	Compound Not Detected.					
	8 Trichloroethene	130	Compound Not Detected.					
*	7 1,4-Difluorobenzene	114	5.755	5.754	(1.000)	579037	1000.00	
$	9 d8-Toluene	98	6.913	6.913	(1.201)	731399	991.534	991.53
	10 Tetrachloroethene	166	Compound Not Detected.					
	11 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: su73c.d
Lab Smp Id: SU73C
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9764

Calibration Date: 04-MAY-2011
Calibration Time: 10:45
Client Smp ID: TB-042911
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	318932	-12.24
7 1,4-Difluorobenze	667797	333898	1335594	579037	-13.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.32	-0.04
7 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.01

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd Snider
Sample Matrix: LIQUID
Lab Smp Id: SU73C
Level: LOW
Data Type: MS DATA
SpikeList File: special.spk
Sublist File: sim12dca.sub
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9764

Client SDG: SU73
Fraction: VOA
Client Smp ID: TB-042911
Operator: PC
SampleType: SAMPLE
Quant Type: ISTD

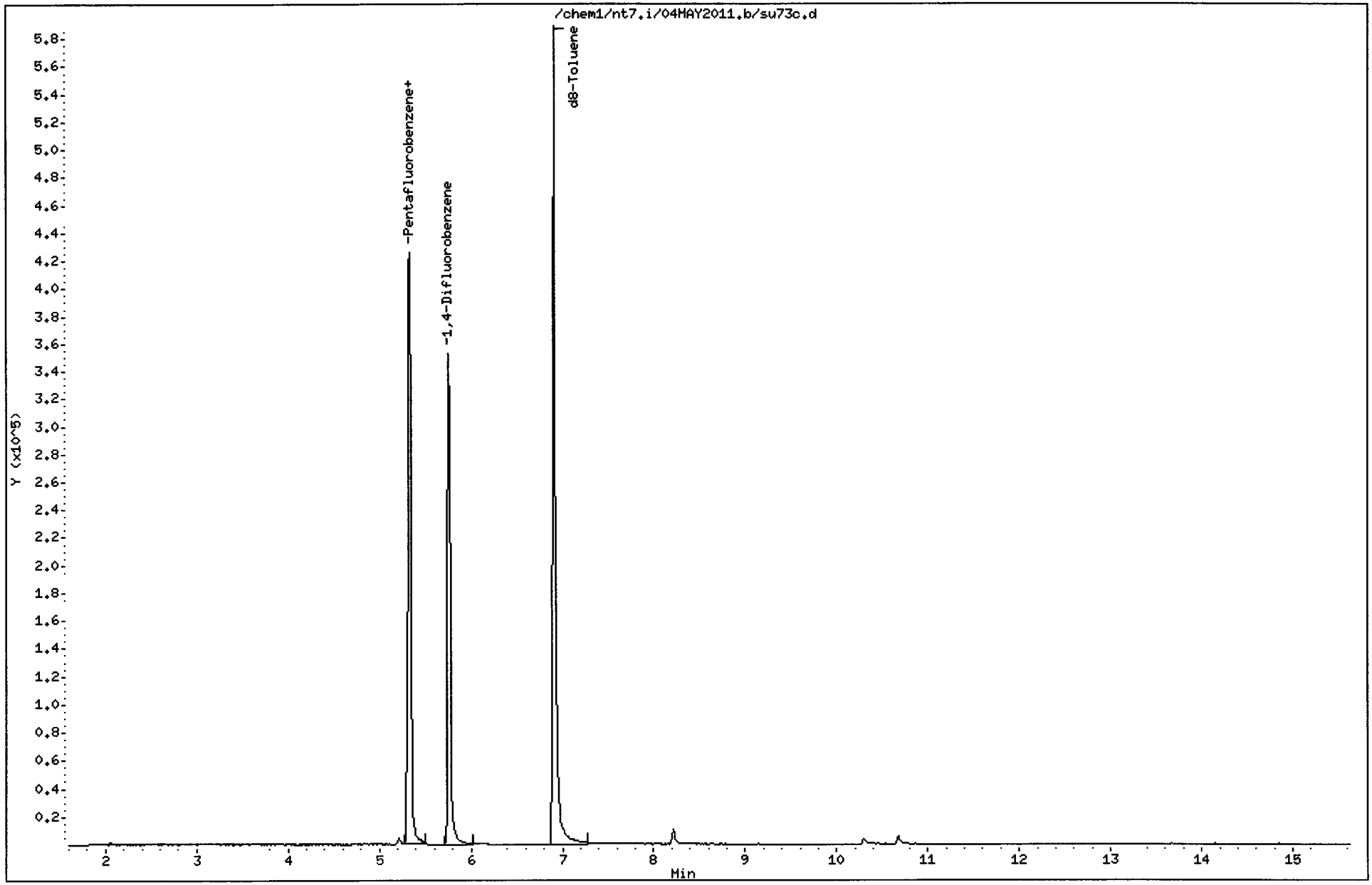
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	975.94	97.59	80-126
$ 9 d8-Toluene	1000.0	991.53	99.15	80-120

Data File: /chem1/nt7.i/04MAY2011.b/su73c.d
Date : 04-MAY-2011 13:12
Client ID: TB-042911
Sample Info: SU73C,10,10,0,,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



SU53:00479

CO-ELUTION SUMMARY FOR FILE - su73c.d

Lab ID: SU73C, Method: sim042611.m, Instrument: nt7.i, Date: 04-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC 5/5/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/04MAY2011.b/su53a2.d
Lab Smp Id: SU53A Client Smp ID: MW5042811
Inj Date : 04-MAY-2011 14:55
Operator : PC Inst ID: nt7.i
Smp Info : SU53A,10,10,0,,
Misc Info : 11-9621
Comment :
Method : /chem1/nt7.i/04MAY2011.b/sim042611.m
Meth Date : 05-May-2011 11:15 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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 MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
1	Vinyl Chloride	62	Compound Not Detected.					
2	1,1-Dichloroethene	96	Compound Not Detected.					
175	Trans-1,2-Dichloroethene	96	Compound Not Detected.					
3	cis-1,2-dichloroethene	96	Compound Not Detected.					
6	Benzene	78	Compound Not Detected.					
* 4	Pentafluorobenzene	168	5.325	5.326	(1.000)	284721	1000.00	
$ 5	d4-1,2-Dichloroethane	65	5.334	5.335	(1.002)	269195	1049.18	1049.2
176	1,2-Dichloroethane	62	Compound Not Detected.					
8	Trichloroethene	130	Compound Not Detected.					
* 7	1,4-Difluorobenzene	114	5.765	5.754	(1.000)	537725	1000.00	
$ 9	d8-Toluene	98	6.914	6.913	(1.199)	670459	978.748	978.75
10	Tetrachloroethene	166	Compound Not Detected.					
11	1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: su53a2.d
Lab Smp Id: SU53A
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9621

Calibration Date: 04-MAY-2011
Calibration Time: 10:45
Client Smp ID: MW5042811
Level: LOW
Sample Type: Groundwater

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	284721	-21.65
7 1,4-Difluorobenze	667797	333898	1335594	537725	-19.48

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.32	-0.01
7 1,4-Difluorobenze	5.75	5.25	6.25	5.77	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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd Snider
Client SDG: SU53
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: SU53A
Client Smp ID: MW5042811
Level: LOW
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: sim12dca.sub
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9621

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	1049.2	104.92	80-126
$ 9 d8-Toluene	1000.0	978.75	97.87	80-120

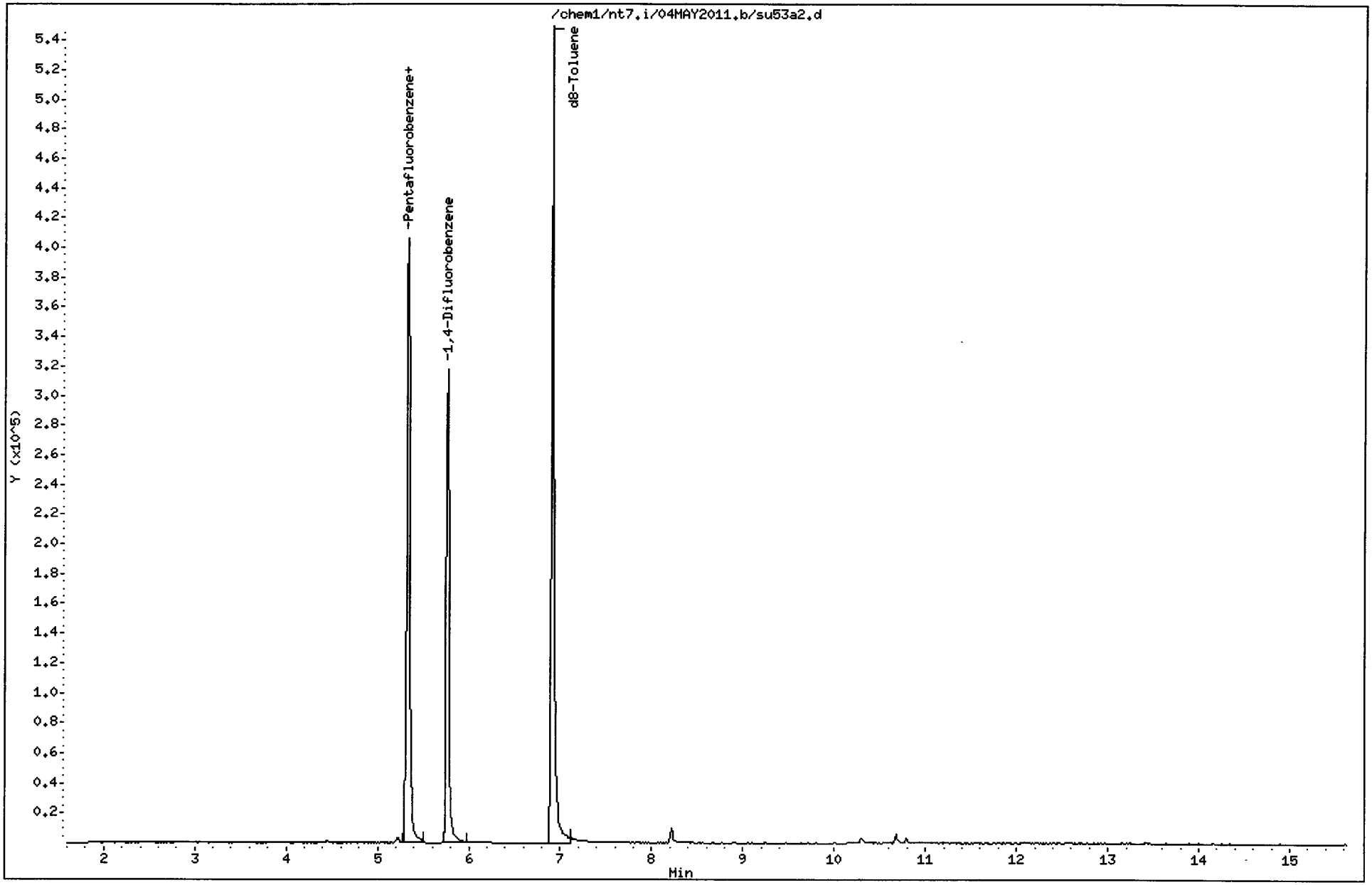
Data File: /chem1/nt7.i/04MAY2011.b/su53a2.d
Date : 04-MAY-2011 14:55
Client ID: MW5042811
Sample Info: SU53A,10,10,0,,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS

SU53:60484



CO-ELUTION SUMMARY FOR FILE - su53a2.d

Lab ID: SU53A, Method: sim042611.m, Instrument: nt7.i, Date: 04-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC 5/5/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/04MAY2011.b/su53f3.d
Lab Smp Id: SU53F Client Smp ID: MW16042811
Inj Date : 04-MAY-2011 16:09
Operator : PC Inst ID: nt7.i
Smp Info : SU53F,10,10,0,,
Misc Info : 11-9626
Comment :
Method : /chem1/nt7.i/04MAY2011.b/sim042611.m
Meth Date : 05-May-2011 11:15 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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

		QUANT SIG					CONCENTRATIONS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/L)	FINAL (ug/L)
	1 Vinyl Chloride	62	Compound Not Detected.					
	2 1,1-Dichloroethene	96	Compound Not Detected.					
	175 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	3 cis-1,2-dichloroethene	96	Compound Not Detected.					
	6 Benzene	78	Compound Not Detected.					
*	4 Pentafluorobenzene	168	5.324	5.326	(1.000)	329558	1000.00	
$	5 d4-1,2-Dichloroethane	65	5.334	5.335	(1.002)	281268	947.087	947.09
	176 1,2-Dichloroethane	62	Compound Not Detected.					
	8 Trichloroethene	130	Compound Not Detected.					
*	7 1,4-Difluorobenzene	114	5.768	5.754	(1.000)	559059	1000.00	
$	9 d8-Toluene	98	6.914	6.913	(1.199)	689254	967.788	967.79
	10 Tetrachloroethene	166	Compound Not Detected.					
	11 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: su53f3.d
Lab Smp Id: SU53F
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9626

Calibration Date: 04-MAY-2011
Calibration Time: 10:45
Client Smp ID: MW16042811
Level: LOW
Sample Type: Groundwater

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	329558	-9.31
7 1,4-Difluorobenze	667797	333898	1335594	559059	-16.28

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.32	-0.02
7 1,4-Difluorobenze	5.75	5.25	6.25	5.77	0.24

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd Snider
Client SDG: SU53
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: SU53F
Client Smp ID: MW16042811
Level: LOW
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: sim12dca.sub
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9626

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	947.09	94.71	80-126
$ 9 d8-Toluene	1000.0	967.79	96.78	80-120

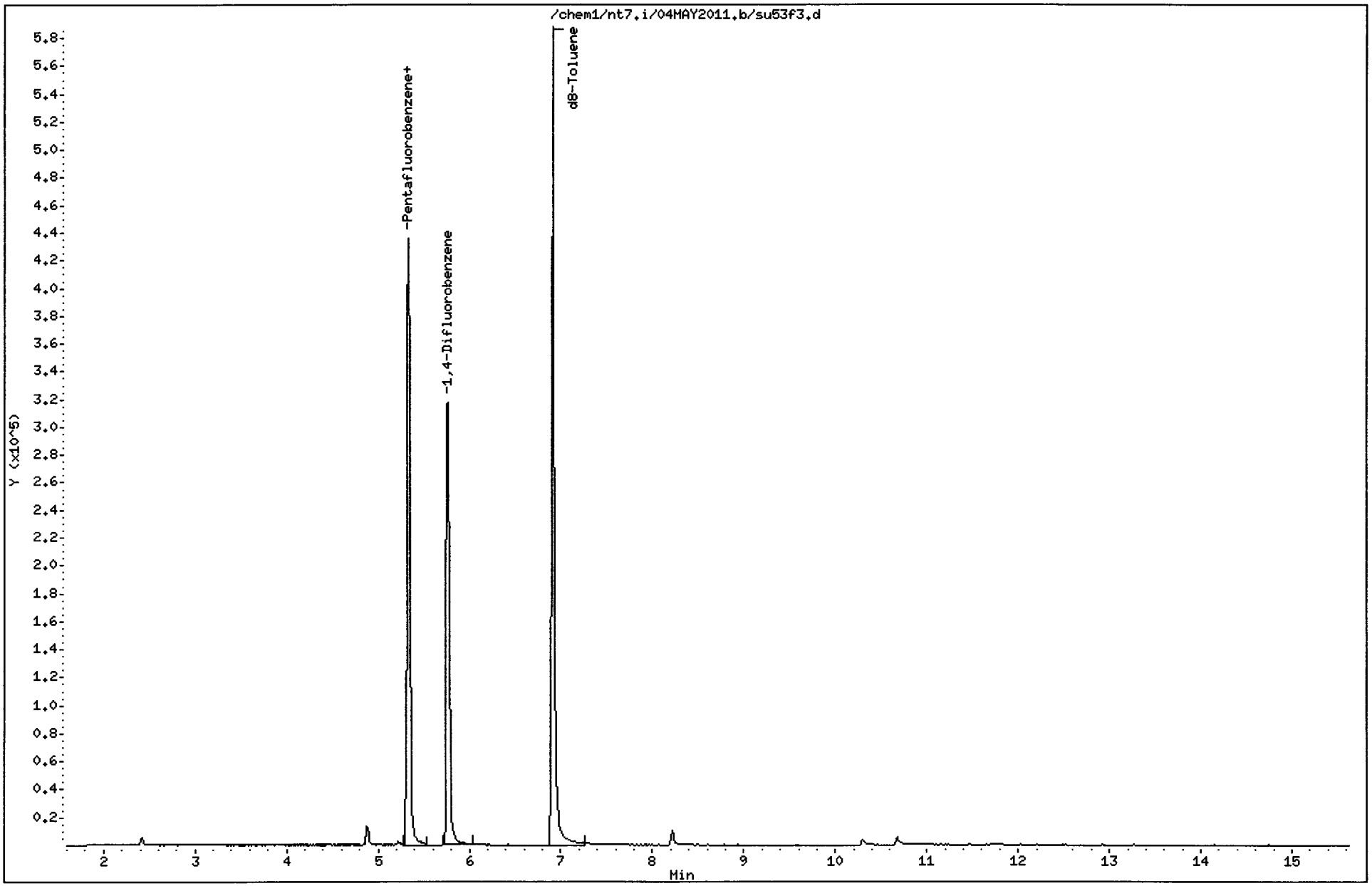
Data File: /chem1/nt7.i/04MAY2011.b/su53f3.d
Date : 04-MAY-2011 16:09
Client ID: MW16042811
Sample Info: SU53F,10,10,0,,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS

SU53:00489



CO-ELUTION SUMMARY FOR FILE - su53f3.d

Lab ID: SU53F, Method: sim042611.m, Instrument: nt7.i, Date: 04-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC 5/5/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/04MAY2011.b/su73a.d
Lab Smp Id: SU73A Client Smp ID: MW-01-042911
Inj Date : 04-MAY-2011 16:35
Operator : PC Inst ID: nt7.i
Smp Info : SU73A,10,10,0,,
Misc Info : 11-9762
Comment :
Method : /chem1/nt7.i/04MAY2011.b/sim042611.m
Meth Date : 05-May-2011 11:15 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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 MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
1	Vinyl Chloride	62	1.553	1.551	(0.292)	12151	33.7319	33.732
2	1,1-Dichloroethene	96	Compound Not Detected.					
175	Trans-1,2-Dichloroethene	96	3.294	3.290	(0.619)	11939	41.0034	41.003
3	cis-1,2-dichloroethene	96	4.444	4.439	(0.834)	48940	157.431	157.43
6	Benzene	78	5.221	5.212	(0.906)	497329	352.357	352.36
* 4	Pentafluorobenzene	168	5.325	5.326	(1.000)	327319	1000.00	
$ 5	d4-1,2-Dichloroethane	65	5.334	5.335	(1.002)	287397	974.345	974.34
176	1,2-Dichloroethane	62	5.391	5.383	(1.012)	12996	27.8765	27.876
8	Trichloroethene	130	5.719	5.720	(0.992)	29385	121.570	121.57(Q)
* 7	1,4-Difluorobenzene	114	5.765	5.754	(1.000)	616507	1000.00	
$ 9	d8-Toluene	98	6.914	6.913	(1.199)	776294	988.432	988.43
10	Tetrachloroethene	166	7.283	7.270	(1.263)	2746	14.7273	14.727
11	1,1,2,2-Tetrachloroethane	83	9.423	9.457	(1.635)	3314	14.8415	14.841(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
Lab File ID: su73a.d
Lab Smp Id: SU73A
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9762

Calibration Date: 04-MAY-2011
Calibration Time: 10:45
Client Smp ID: MW-01-042911
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	327319	-9.93
7 1,4-Difluorobenze	667797	333898	1335594	616507	-7.68

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.32	-0.01
7 1,4-Difluorobenze	5.75	5.25	6.25	5.77	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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd Snider
Client SDG: SU73
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: SU73A
Client Smp ID: MW-01-042911
Level: LOW
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: sim12dca.sub
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9762

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	974.34	97.43	80-126
$ 9 d8-Toluene	1000.0	988.43	98.84	80-120

Data File: /chem1/nt7.i/04MAY2011.b/su73a.d

Date : 04-MAY-2011 16:35

Client ID: MW-01-042911

Sample Info: SU73A,10,10,0,,

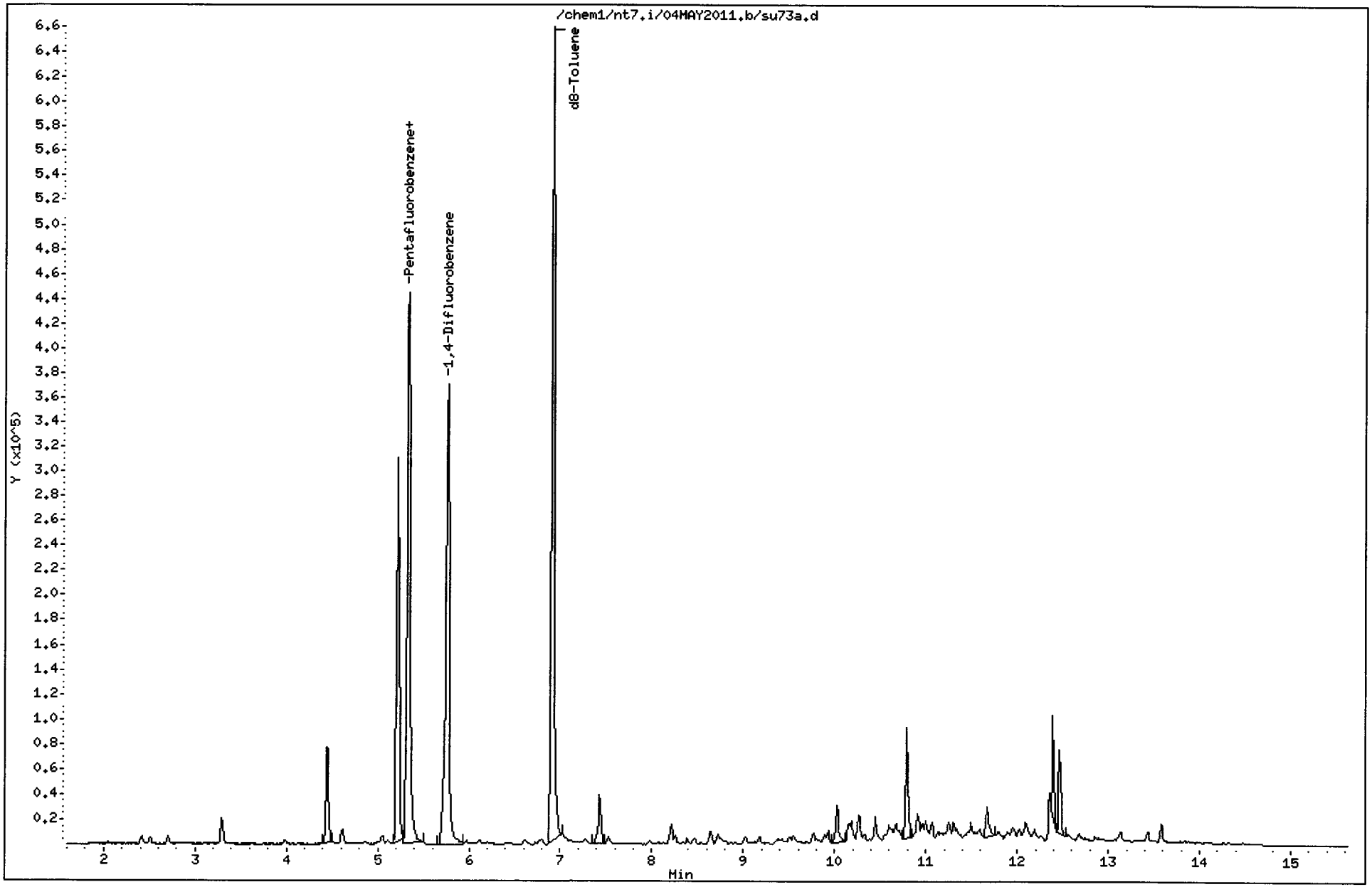
Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18

SU53 : 09455



Data File: /chem1/nt7.i/04MAY2011.b/su73a.d

Date : 04-MAY-2011 16:35

Client ID: MW-01-042911

Instrument: nt7.i

Sample Info: SU73A,10,10,0,,

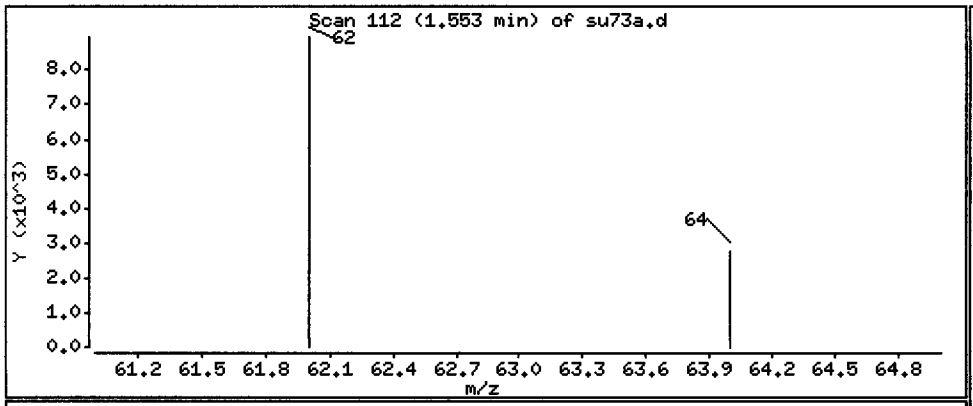
Operator: PC

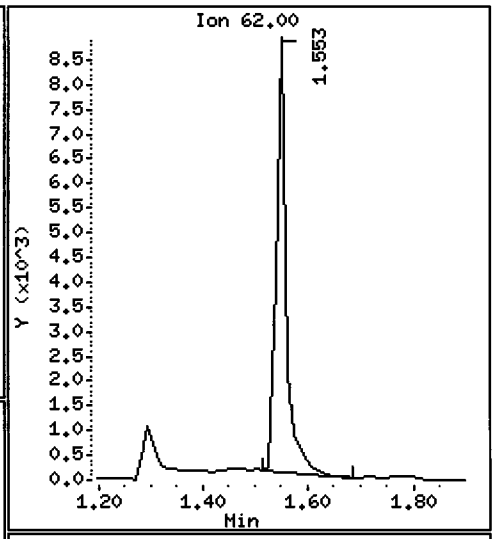
Column phase: RTXVMS

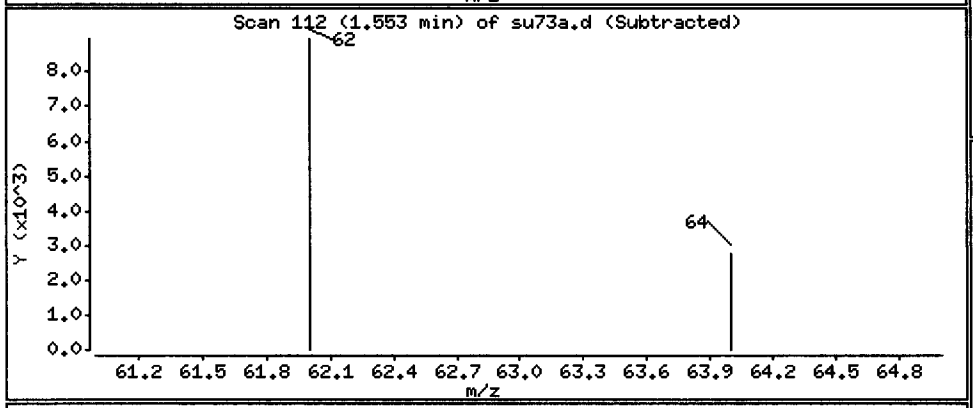
Column diameter: 0.18

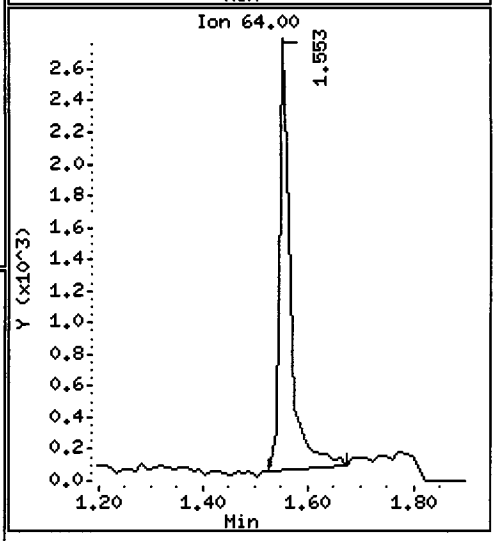
1 Vinyl Chloride

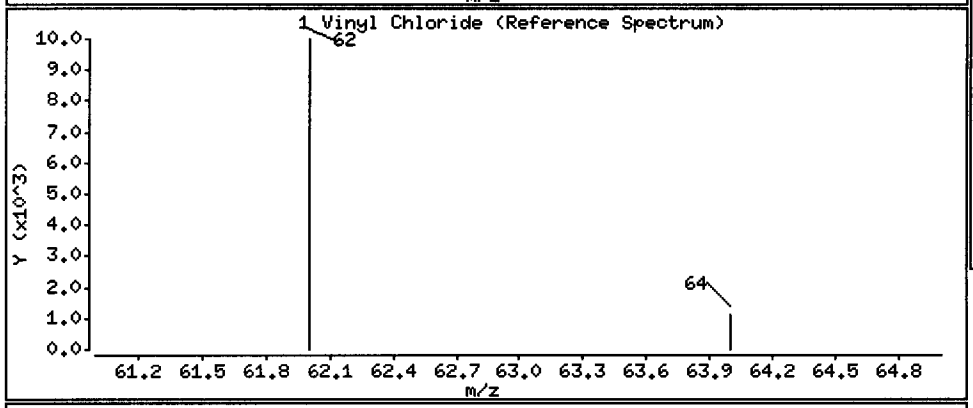
Concentration: 33.732 ug/L

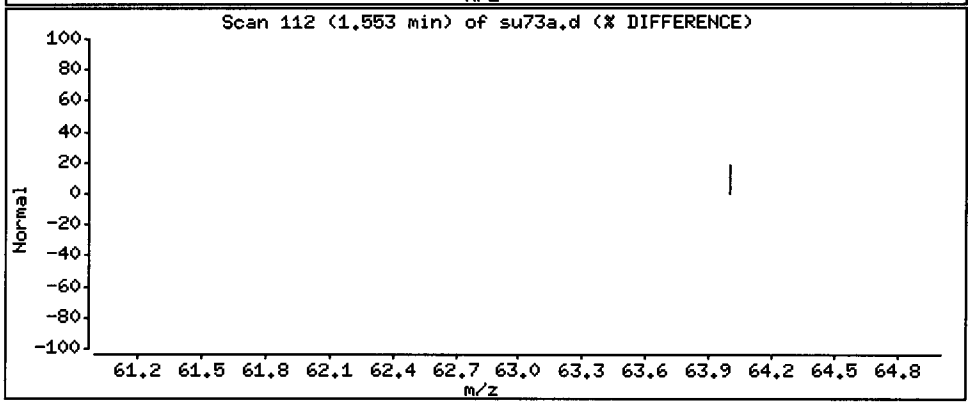












Data File: /chem1/nt7.i/04MAY2011.b/su73a.d

Date : 04-MAY-2011 16:35

Client ID: MW-01-042911

Instrument: nt7.i

Sample Info: SU73A,10,10,0,,

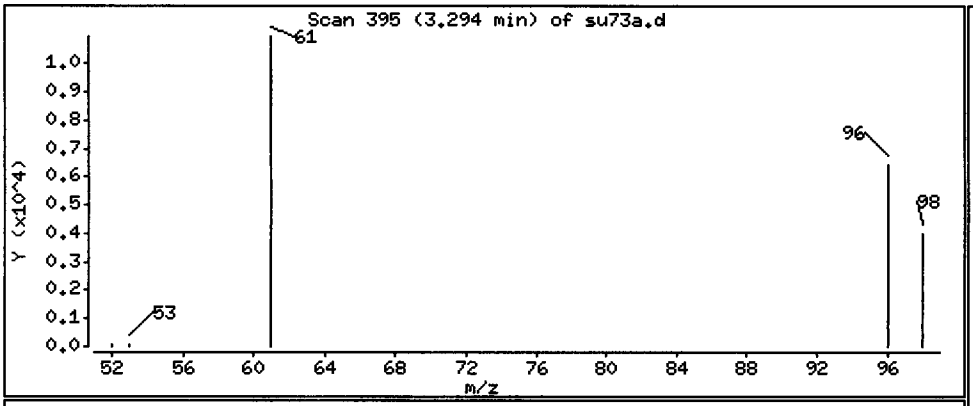
Operator: PC

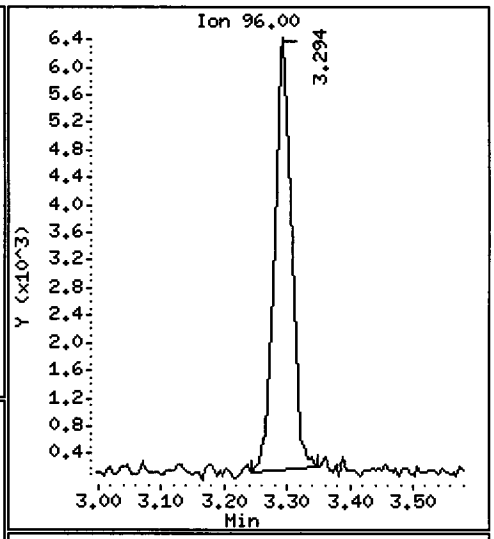
Column phase: RTXVMS

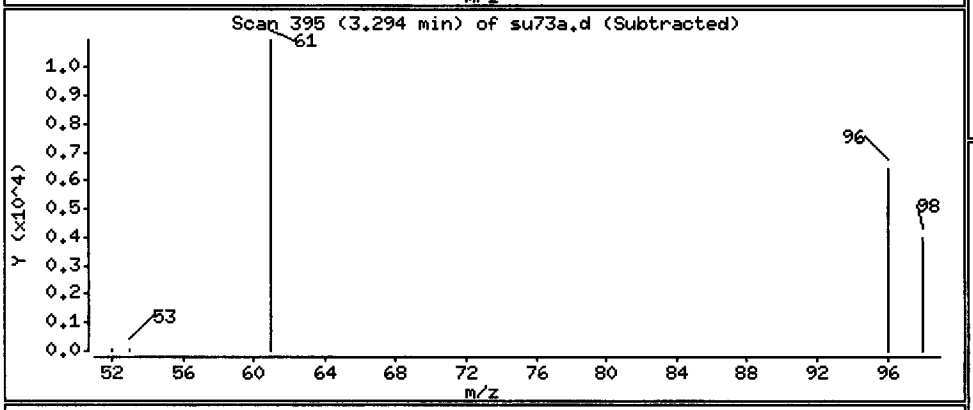
Column diameter: 0.18

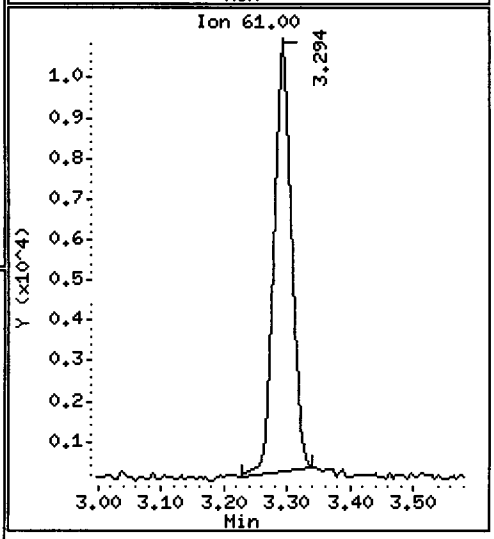
175 Trans-1,2-Dichloroethene

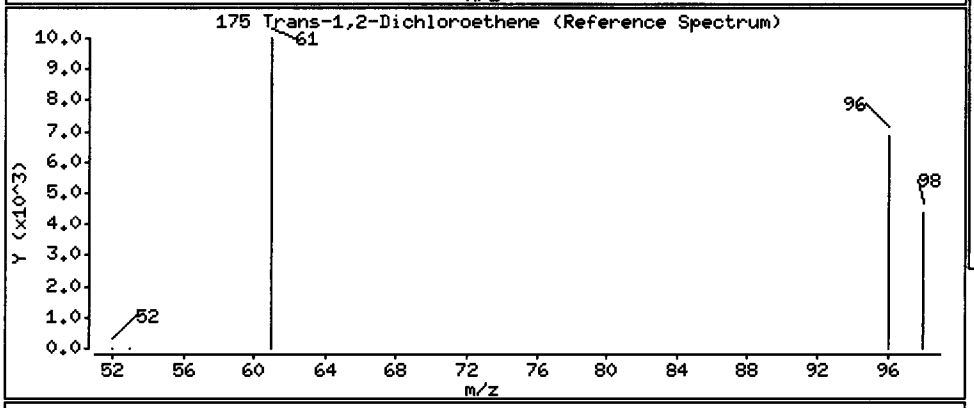
Concentration: 41.003 ug/L

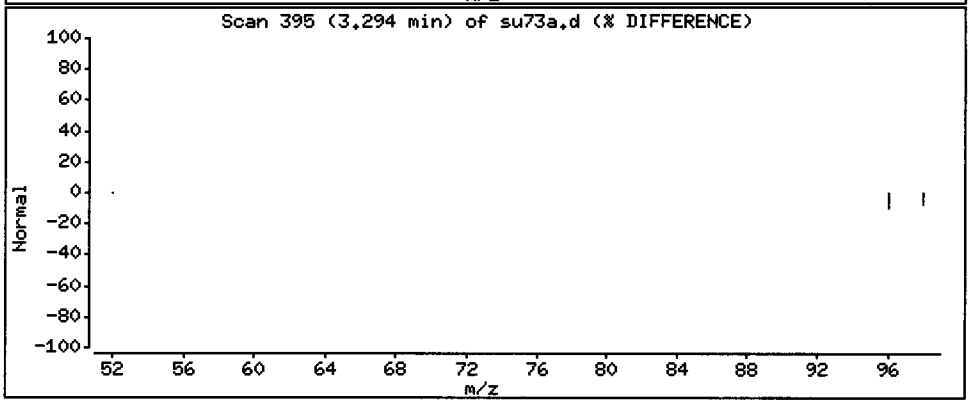












Data File: /chem1/nt7.i/04MAY2011.b/su73a.d

Date : 04-MAY-2011 16:35

Client ID: MW-01-042911

Instrument: nt7.i

Sample Info: SU73A,10,10,0,,

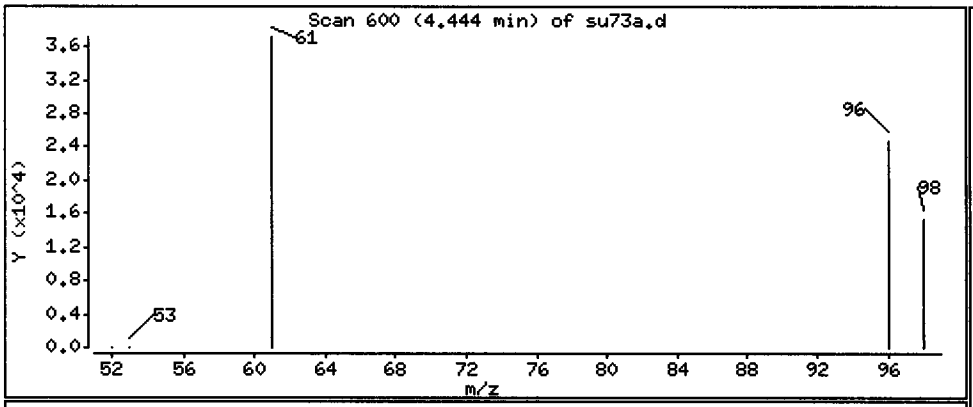
Operator: PC

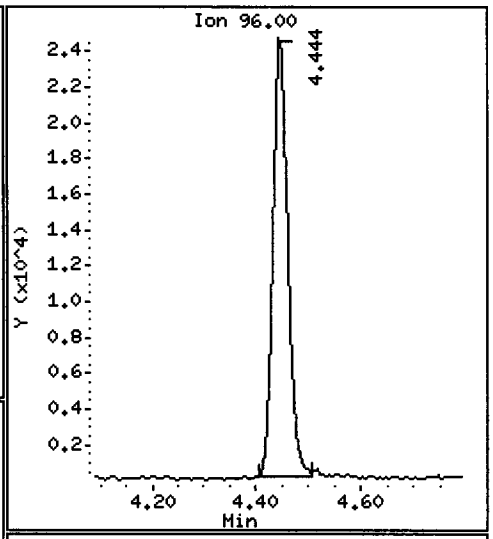
Column phase: RTXVMS

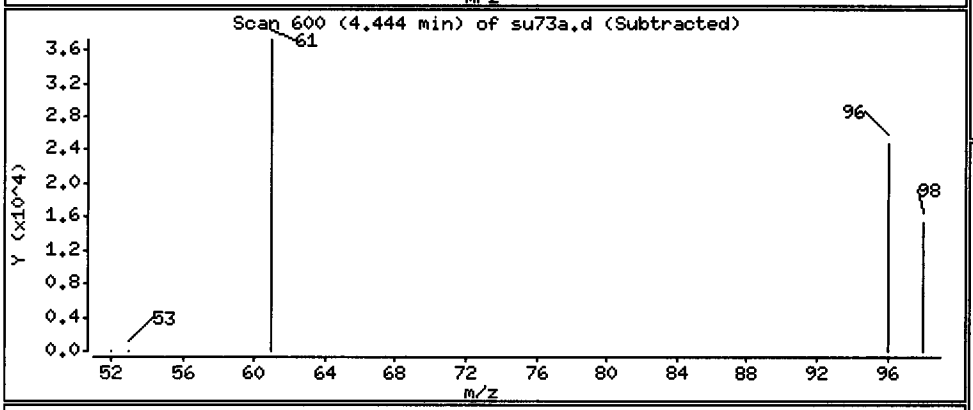
Column diameter: 0.18

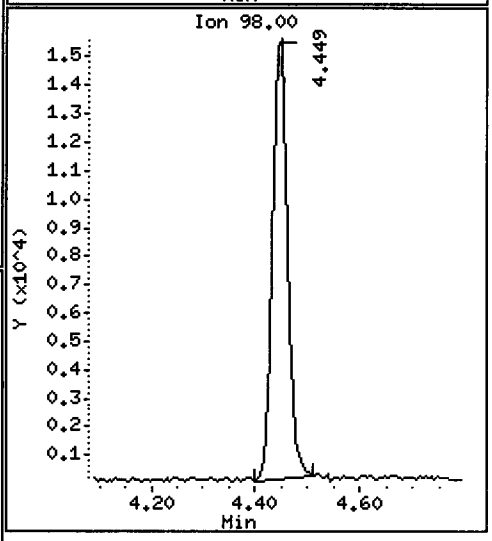
3 cis-1,2-dichloroethene

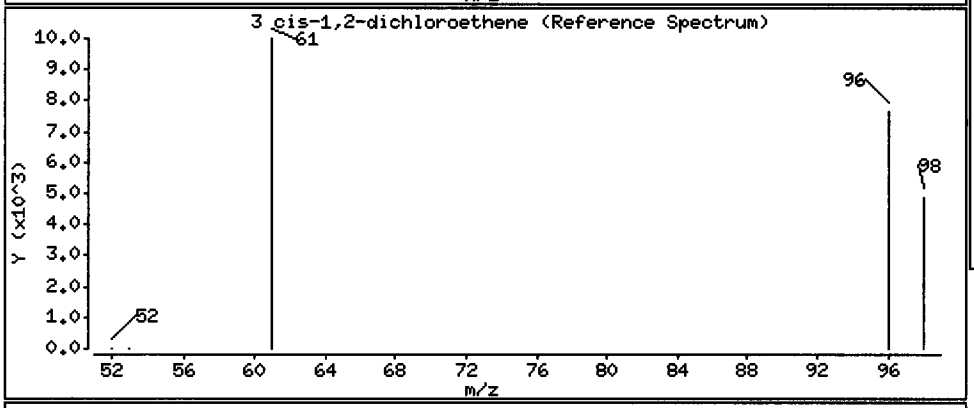
Concentration: 157.43 ug/L

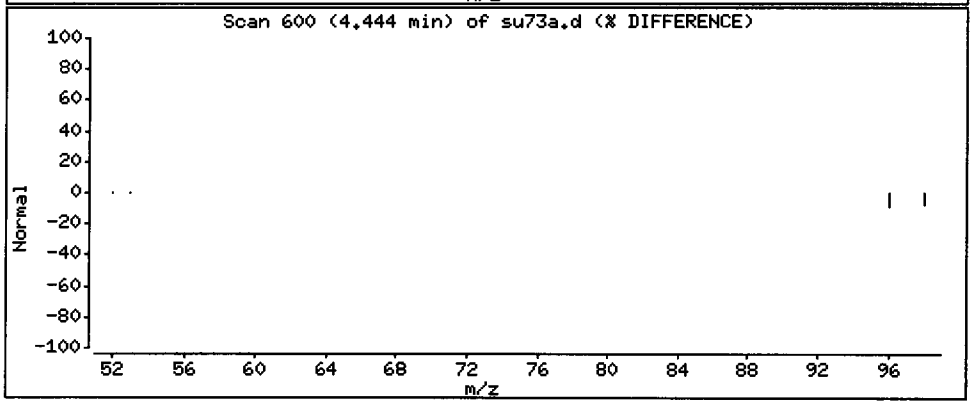












Data File: /chem1/nt7.i/04MAY2011.b/su73a.d

Date : 04-MAY-2011 16:35

Client ID: MW-01-042911

Instrument: nt7.i

Sample Info: SU73A,10,10,0,,

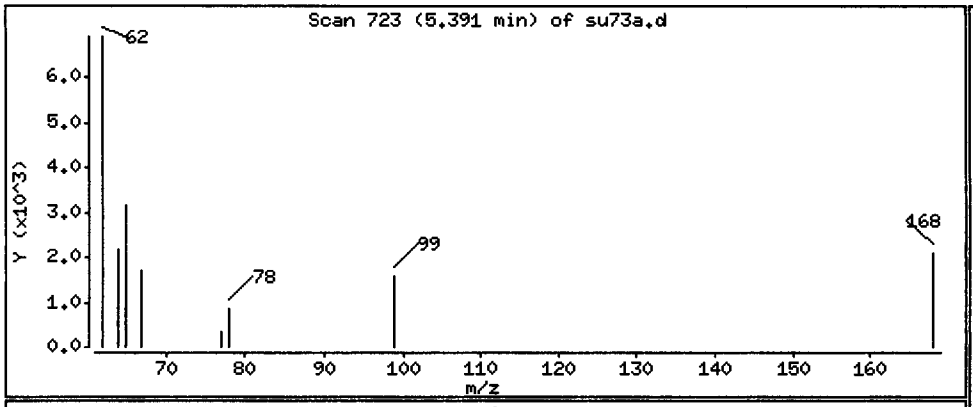
Operator: PC

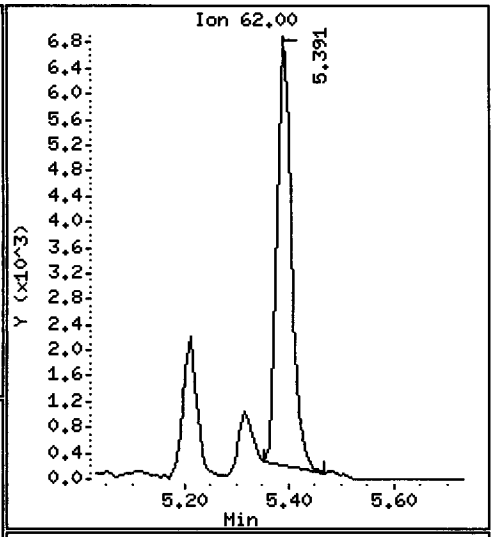
Column phase: RTXVMS

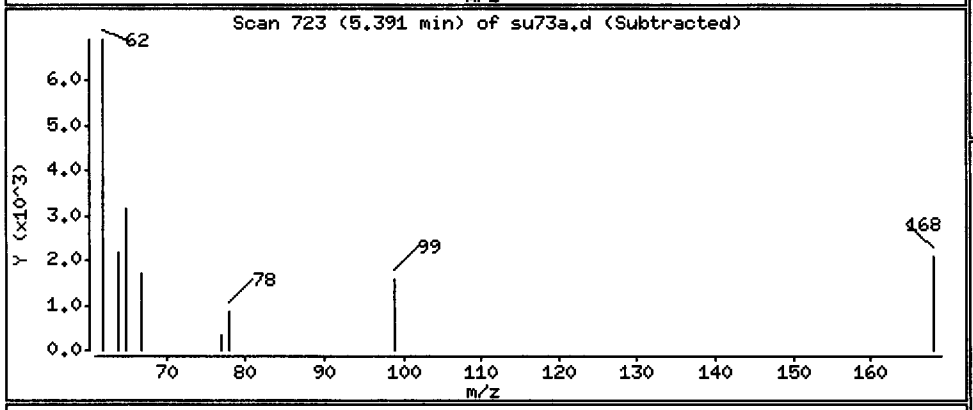
Column diameter: 0.18

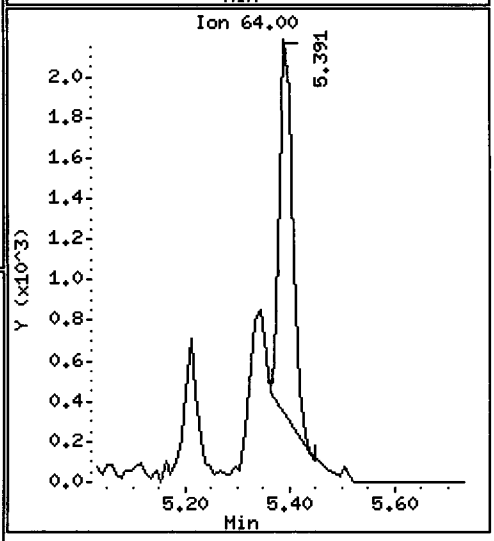
176 1,2-Dichloroethane

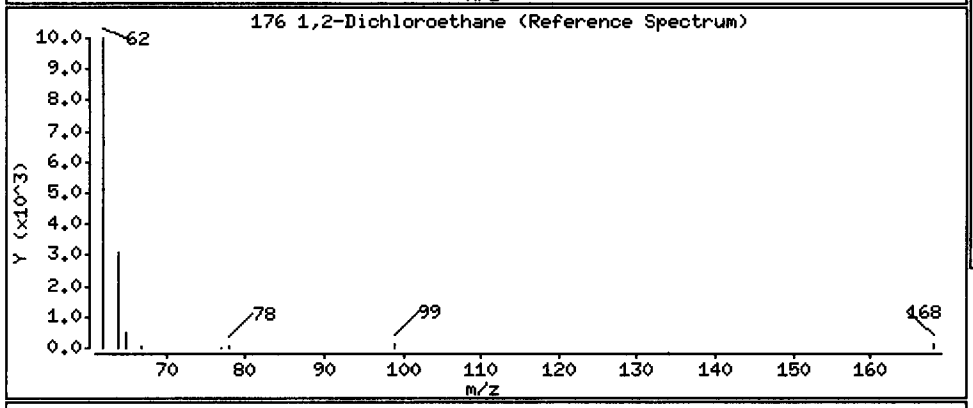
Concentration: 27.876 ug/L

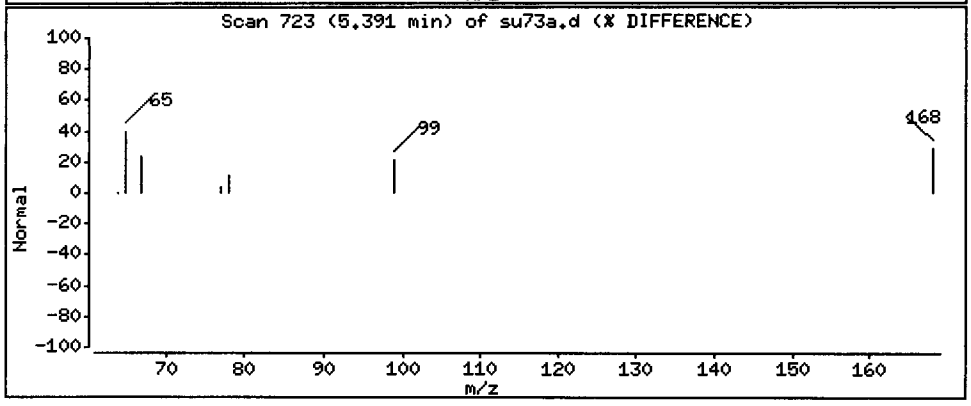












Data File: /chem1/nt7.i/04MAY2011.b/su73a.d

Date : 04-MAY-2011 16:35

Client ID: MW-01-042911

Instrument: nt7.i

Sample Info: SU73A,10,10,0,,

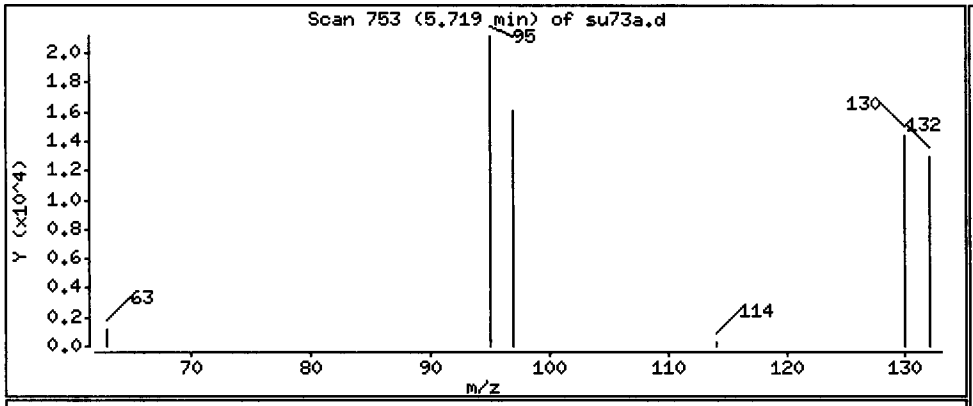
Operator: PC

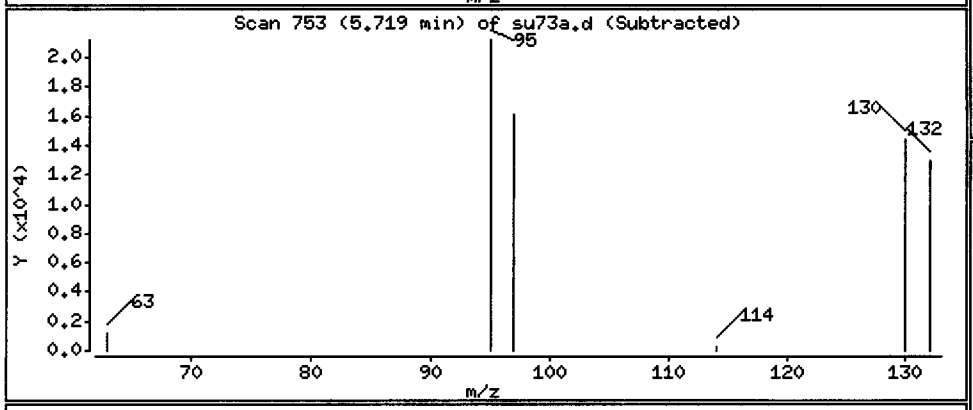
Column phase: RTXVMS

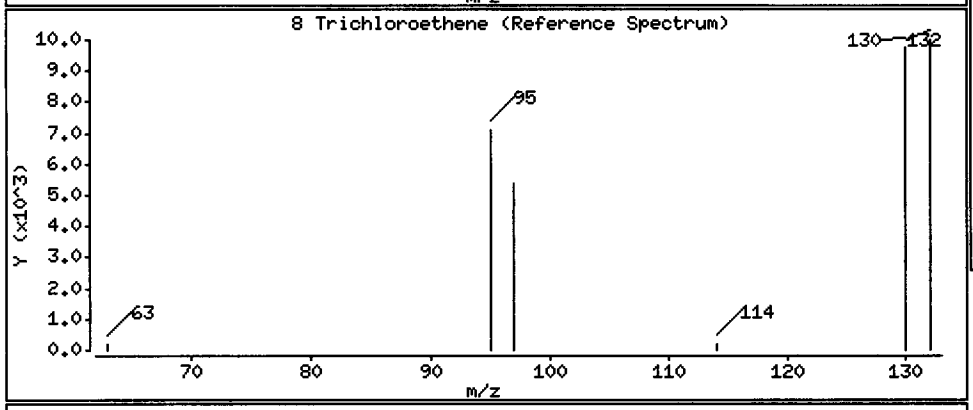
Column diameter: 0.18

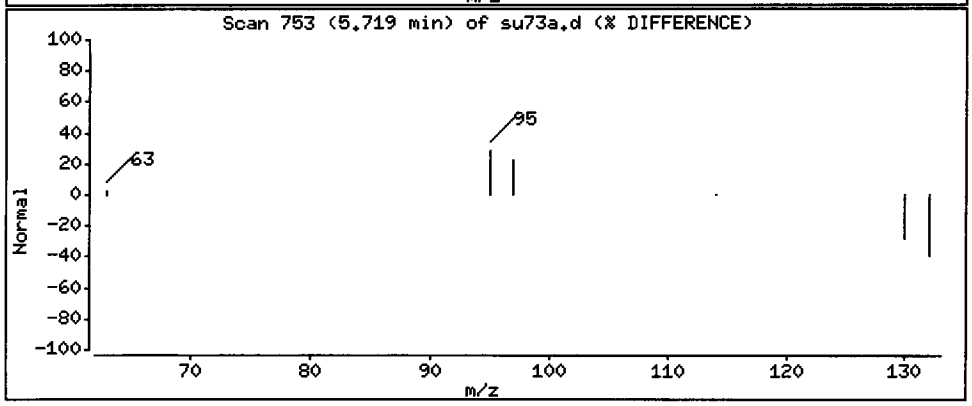
8 Trichloroethene

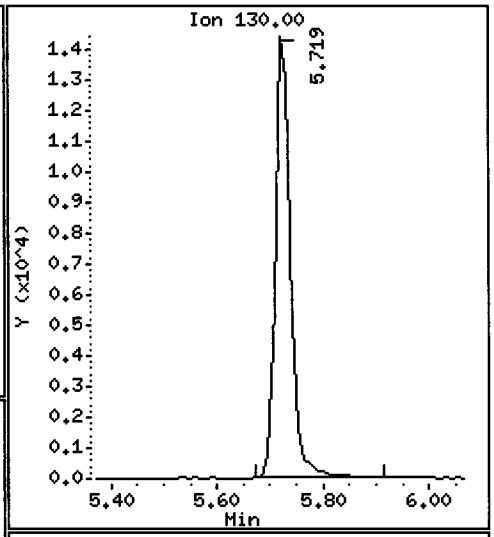
Concentration: 121.57 ug/L

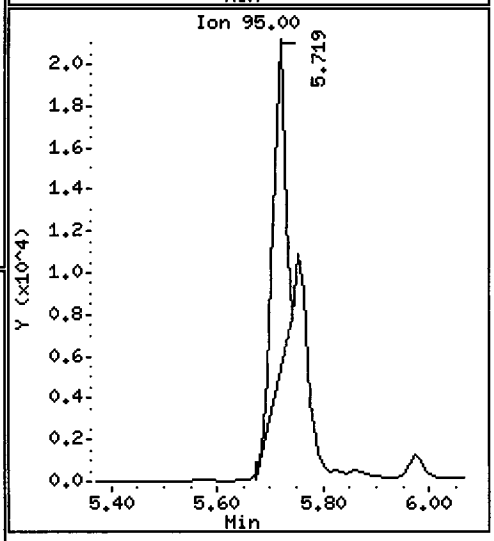












Data File: /chem1/nt7.i/04MAY2011.b/su73a.d

Date : 04-MAY-2011 16:35

Client ID: MW-01-042911

Instrument: nt7.i

Sample Info: SU73A,10,10,0,,

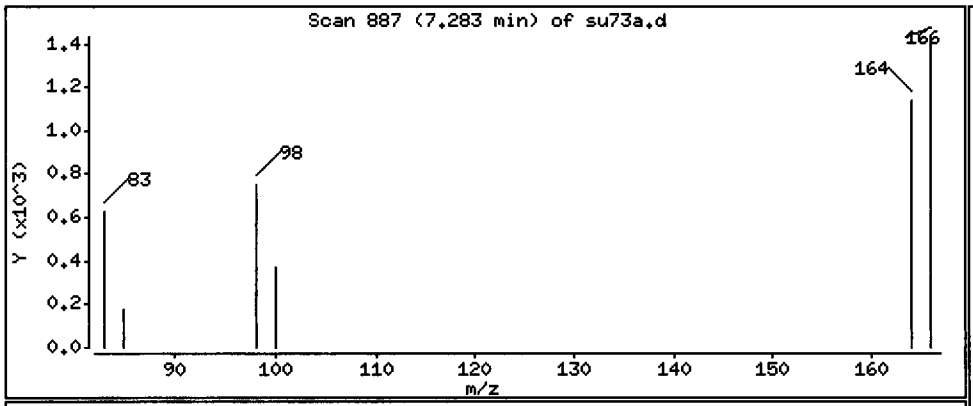
Operator: PC

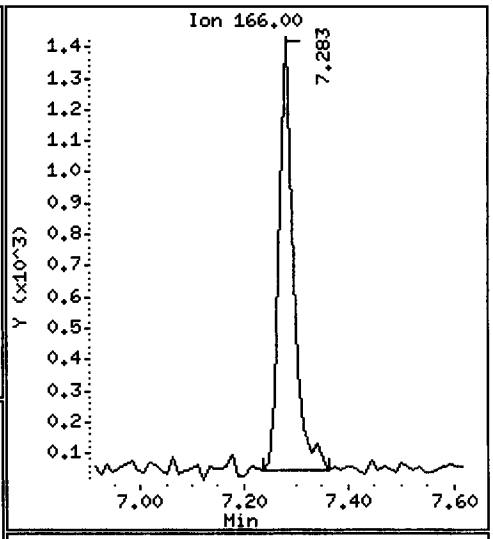
Column phase: RTXVMS

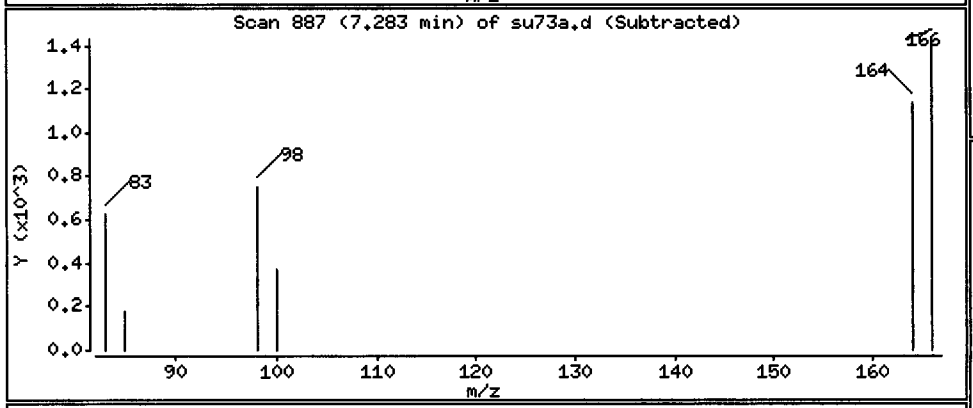
Column diameter: 0.18

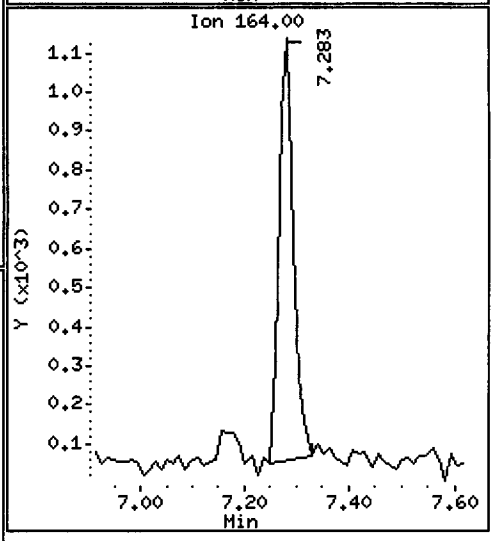
10 Tetrachloroethene

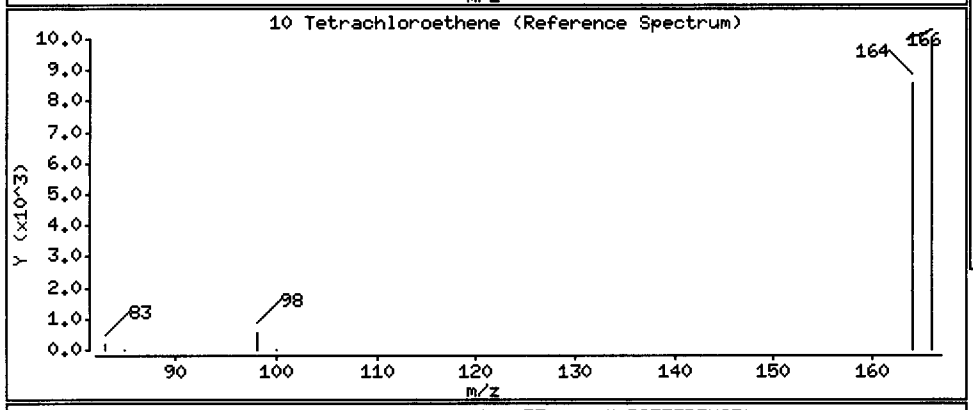
Concentration: 14.727 ug/L

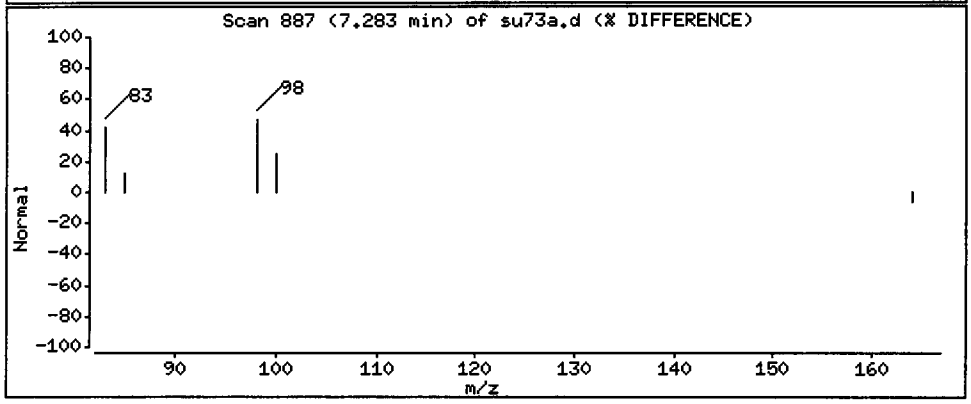












CO-ELUTION SUMMARY FOR FILE - su73a.d

Lab ID: SU73A, Method: sim042611.m, Instrument: nt7.i, Date: 04-MAY-2011

RT	CO-ELUTION COMPOUNDS

5/5/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/04MAY2011.b/su73b.d
Lab Smp Id: SU73B Client Smp ID: MW-01-042911-D
Inj Date : 04-MAY-2011 17:01
Operator : PC Inst ID: nt7.i
Smp Info : SU73B,10,10,0,,
Misc Info : 11-9763
Comment :
Method : /chem1/nt7.i/04MAY2011.b/sim042611.m
Meth Date : 05-May-2011 11:15 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/L)	FINAL (ug/L)
	1	Vinyl Chloride	62	1.551	1.551	(0.291)	13060	33.0740	33.074
	2	1,1-Dichloroethene	96	Compound Not Detected.					
	175	Trans-1,2-Dichloroethene	96	3.295	3.290	(0.619)	13436	42.0942	42.094
	3	cis-1,2-dichloroethene	96	4.445	4.439	(0.835)	54155	158.916	158.92
	6	Benzene	78	5.219	5.212	(0.905)	541826	352.276	352.28
*	4	Pentafluorobenzene	168	5.324	5.326	(1.000)	358815	1000.00	
$	5	d4-1,2-Dichloroethane	65	5.333	5.335	(1.002)	320886	992.388	992.39
	176	1,2-Dichloroethane	62	5.390	5.383	(1.012)	13456	26.3294	26.329
	8	Trichloroethene	130	5.721	5.720	(0.992)	30920	117.387	117.39(Q)
*	7	1,4-Difluorobenzene	114	5.767	5.754	(1.000)	671821	1000.00	
$	9	d8-Toluene	98	6.913	6.913	(1.199)	811975	948.742	948.74
	10	Tetrachloroethene	166	7.281	7.270	(1.263)	2953	14.5325	14.532
	11	1,1,2,2-Tetrachloroethane	83	9.422	9.457	(1.634)	3242	13.3248	13.325(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
Lab File ID: su73b.d
Lab Smp Id: SU73B
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9763

Calibration Date: 04-MAY-2011
Calibration Time: 10:45
Client Smp ID: MW-01-042911-D
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	358815	-1.26
7 1,4-Difluorobenze	667797	333898	1335594	671821	0.60

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.32	-0.04
7 1,4-Difluorobenze	5.75	5.25	6.25	5.77	0.21

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: SU73
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: SU73B
Client Smp ID: MW-01-042911-D
Level: LOW
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: sim12dca.sub
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9763

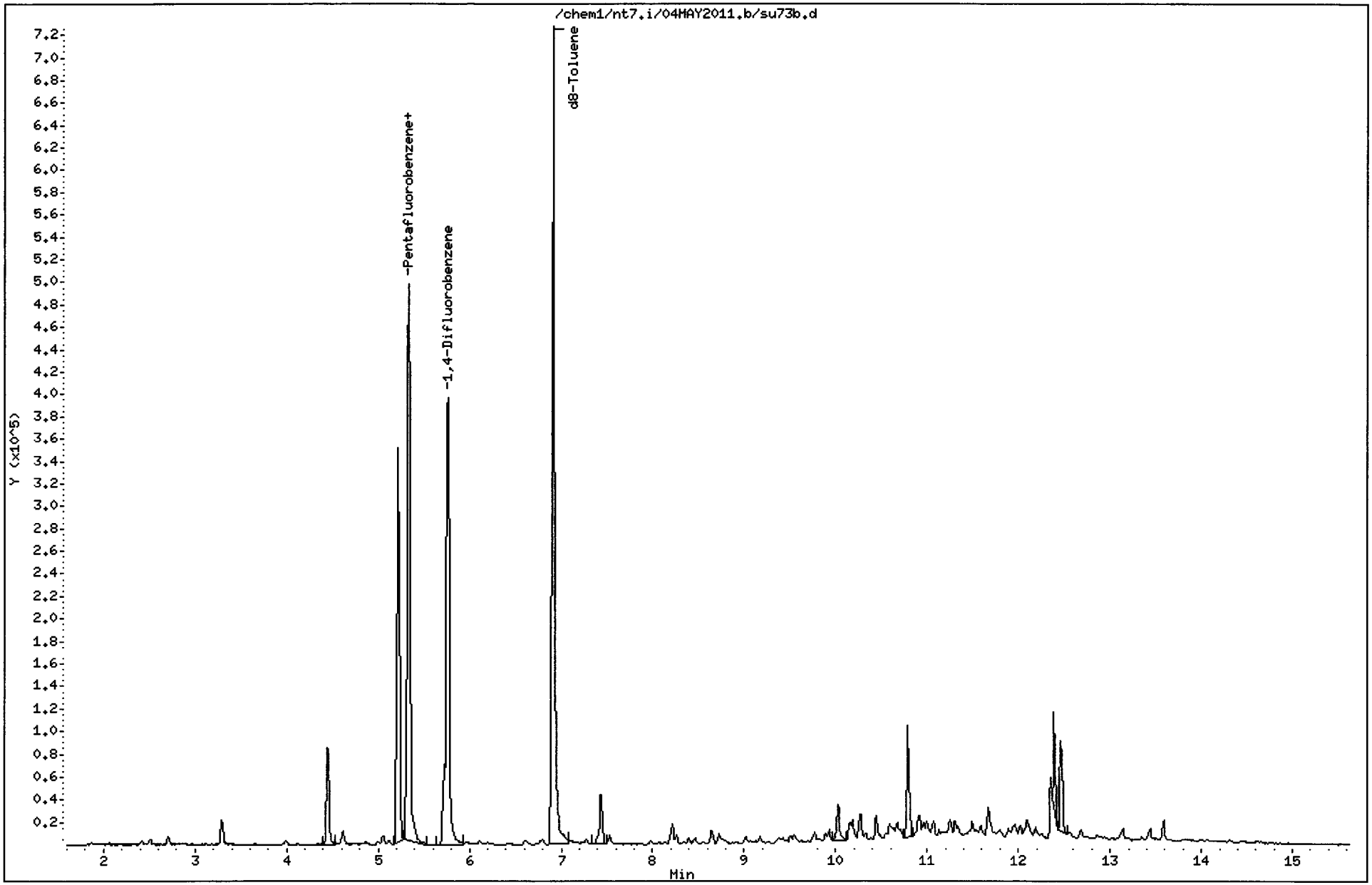
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	992.39	99.24	80-126
$ 9 d8-Toluene	1000.0	948.74	94.87	80-120

Data File: /chem1/nt7.i/04MAY2011.b/su73b.d
Date : 04-MAY-2011 17:01
Client ID: MW-01-042911-D
Sample Info: SU73B,10,10,0,,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



SU53 : 00507

Data File: /chem1/nt7.i/04MAY2011.b/su73b.d

Date : 04-MAY-2011 17:01

Client ID: MW-01-042911-D

Instrument: nt7.i

Sample Info: SU73B,10,10,0,,

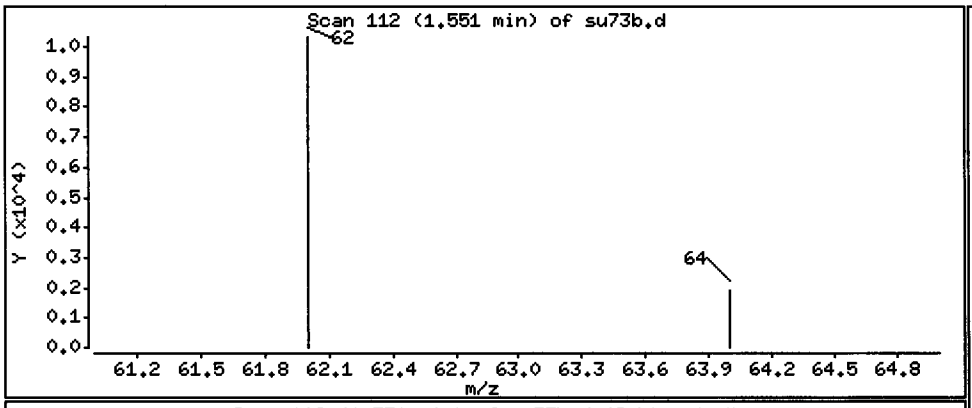
Operator: PC

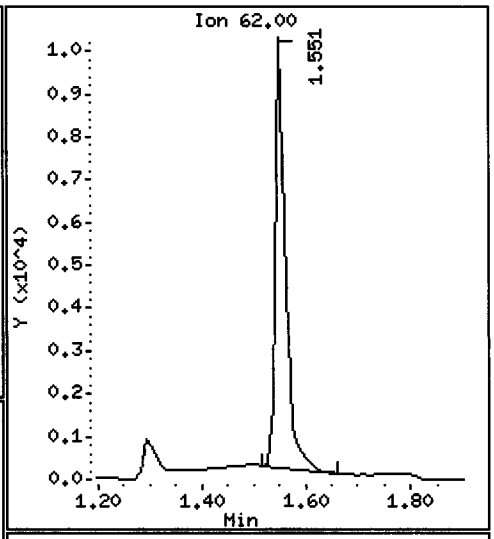
Column phase: RTXVMS

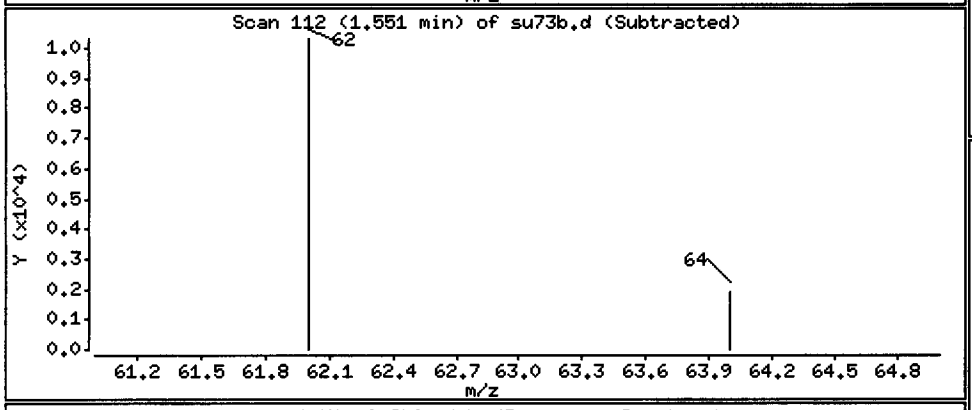
Column diameter: 0.18

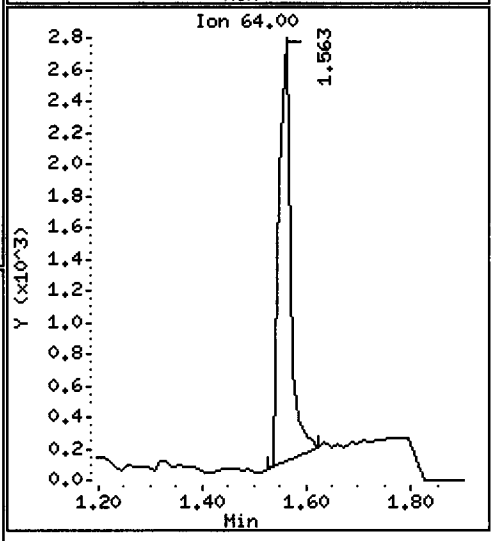
1 Vinyl Chloride

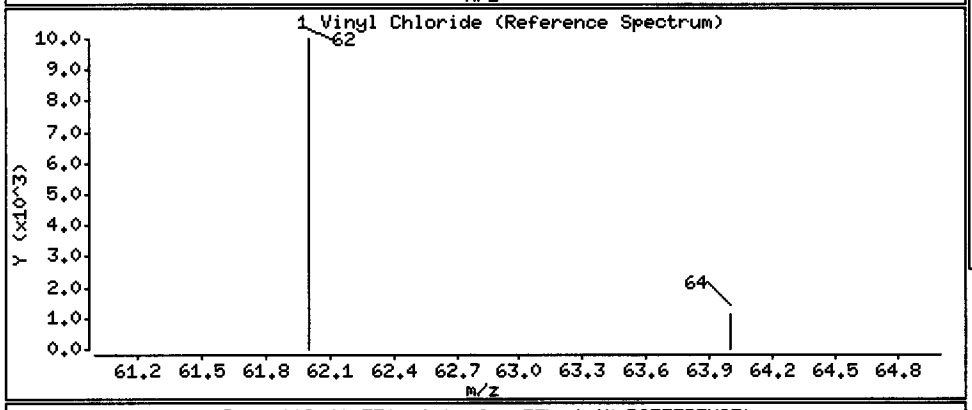
Concentration: 33.074 ug/L

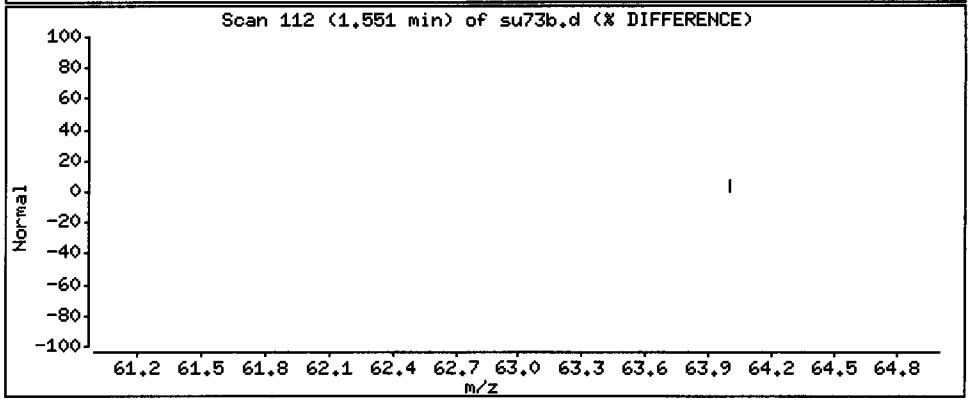












Data File: /chem1/nt7.i/04MAY2011.b/su73b.d

Date : 04-MAY-2011 17:01

Client ID: MW-01-042911-D

Instrument: nt7.i

Sample Info: SU73B,10,10,0,,

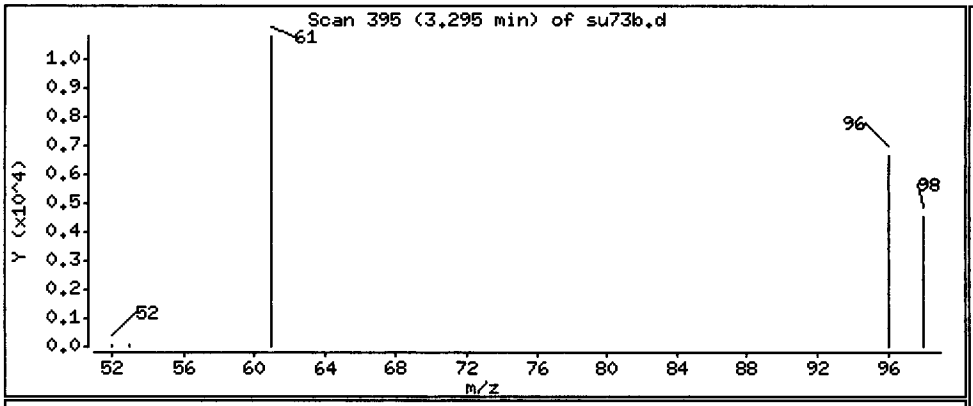
Operator: PC

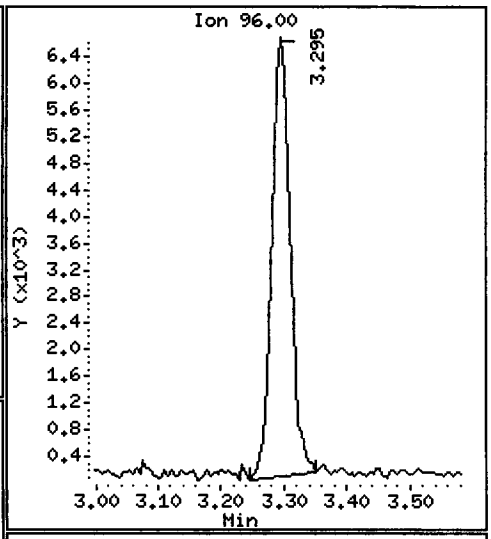
Column phase: RTXVMS

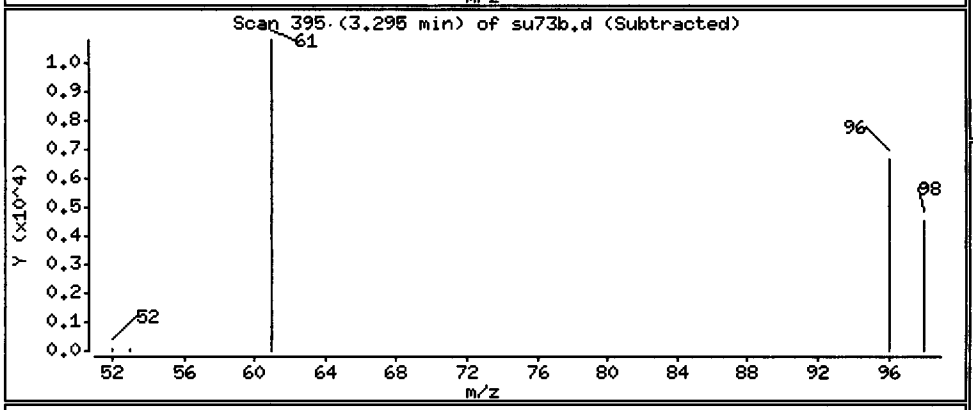
Column diameter: 0.18

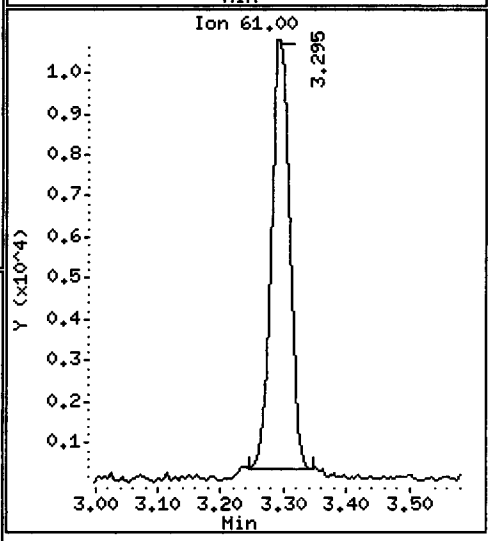
175 Trans-1,2-Dichloroethene

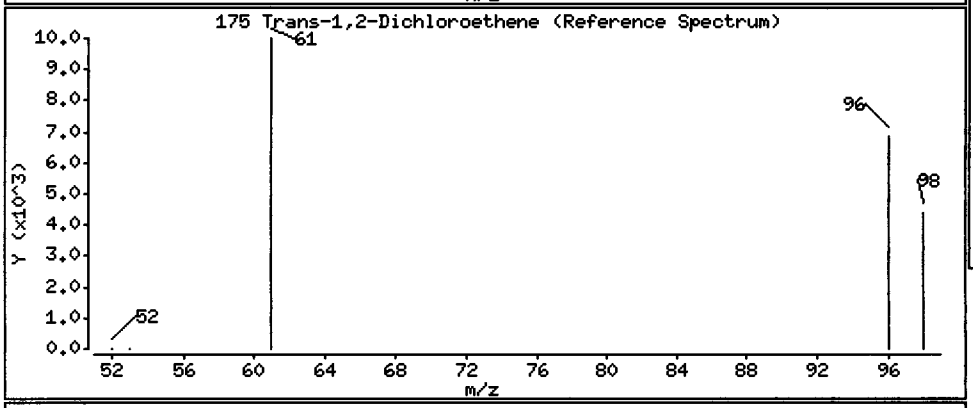
Concentration: 42.094 ug/L

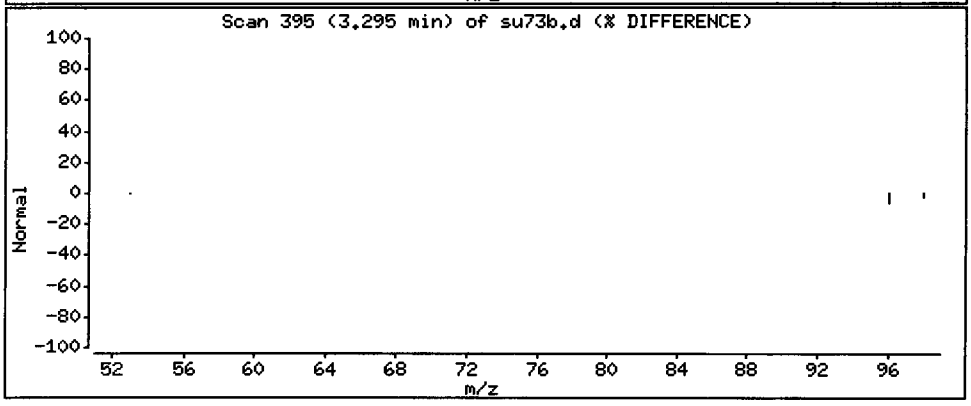












Data File: /chem1/nt7.i/04MAY2011.b/su73b.d

Date : 04-MAY-2011 17:01

Client ID: MW-01-042911-D

Instrument: nt7.i

Sample Info: SU73B,10,10,0,,

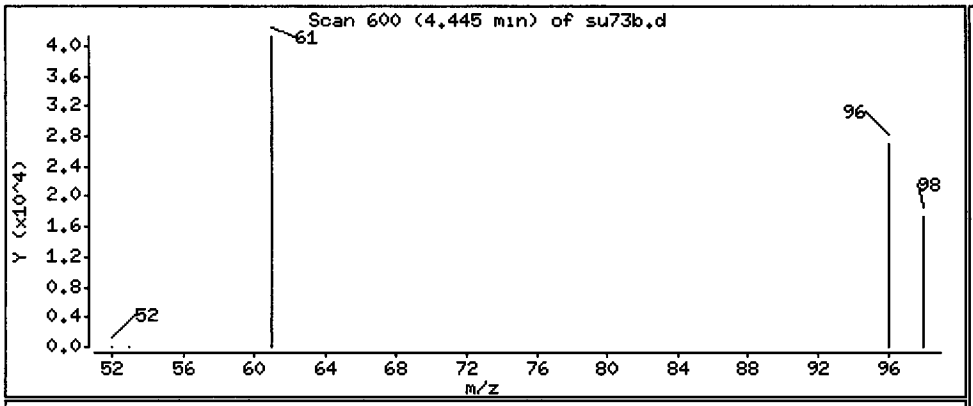
Operator: PC

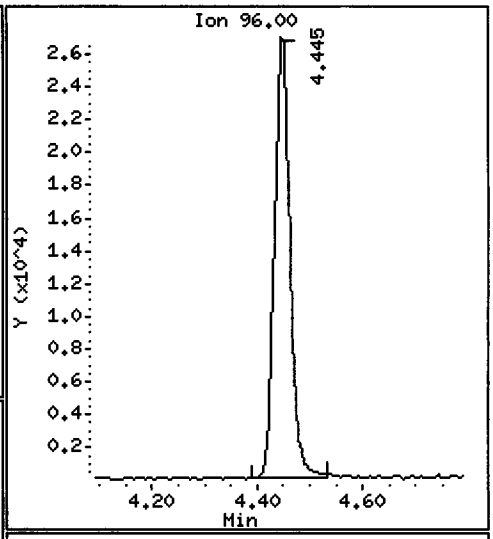
Column phase: RTXVMS

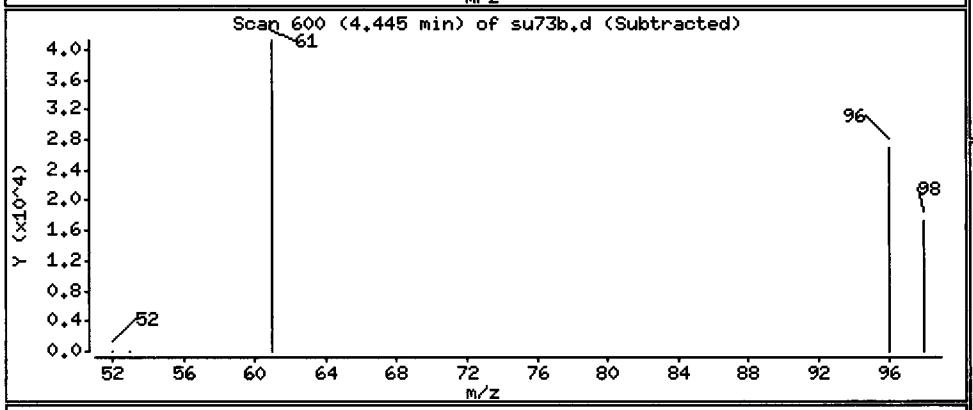
Column diameter: 0.18

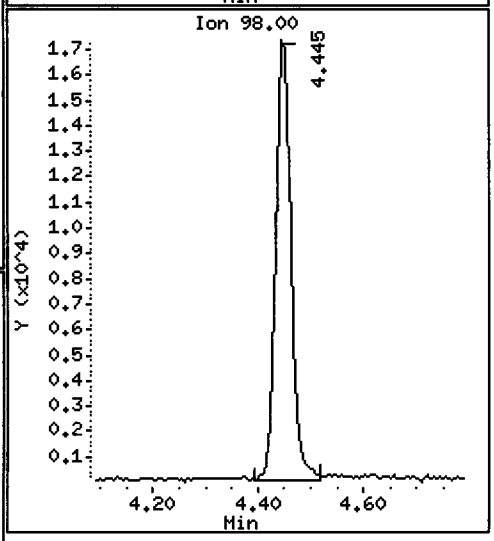
3 cis-1,2-dichloroethene

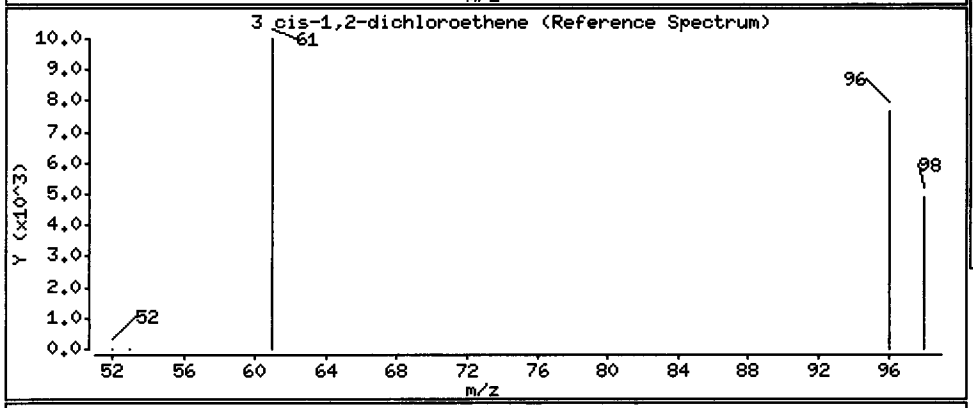
Concentration: 158.92 ug/L

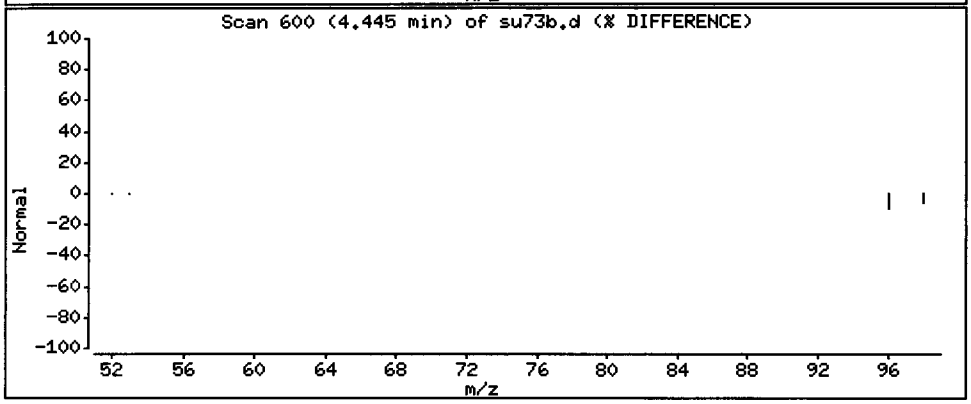












Data File: /chem1/nt7.i/04MAY2011.b/su73b.d

Date : 04-MAY-2011 17:01

Client ID: MW-01-042911-D

Instrument: nt7.i

Sample Info: SU73B,10,10,0,,

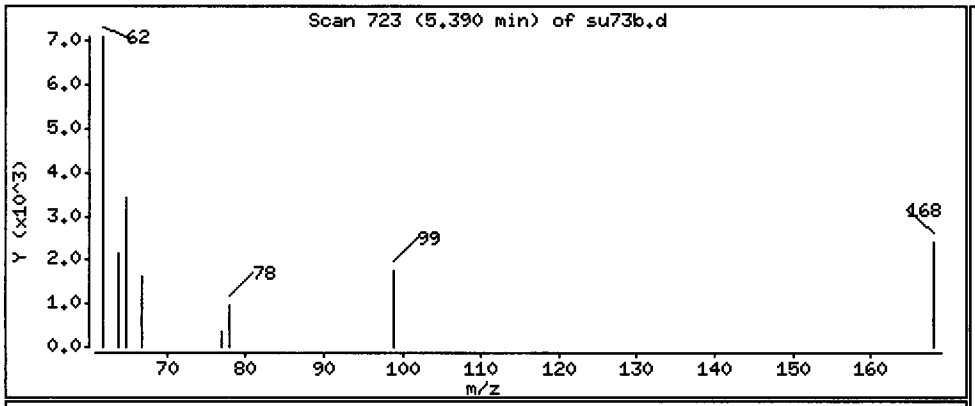
Operator: PC

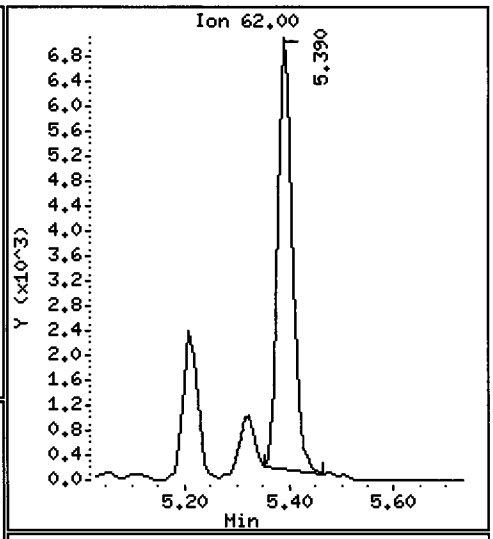
Column phase: RTXVMS

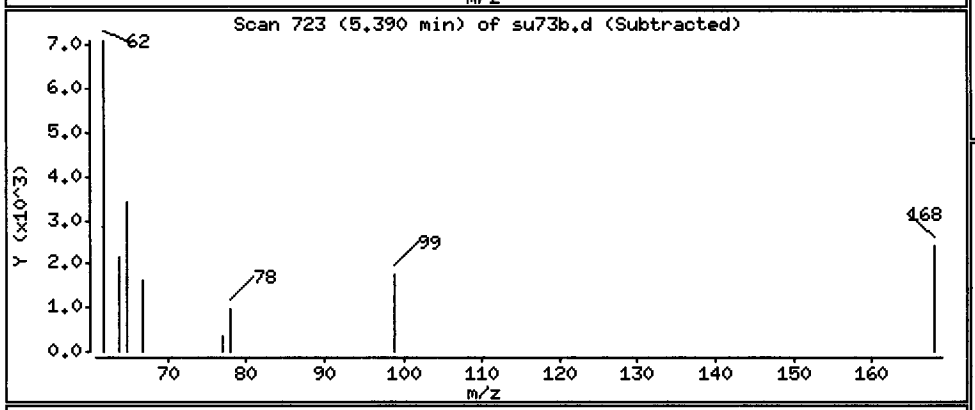
Column diameter: 0.18

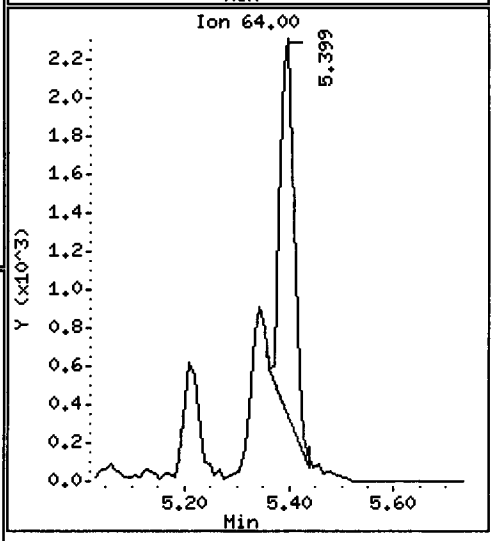
176 1,2-Dichloroethane

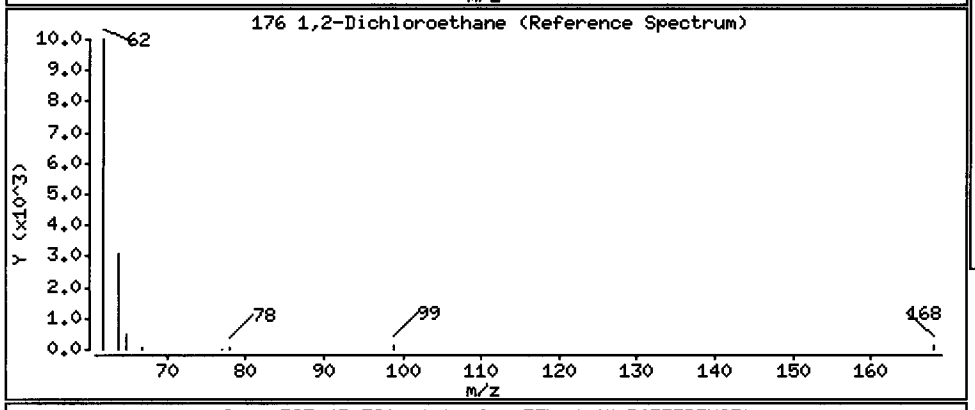
Concentration: 26.329 ug/L

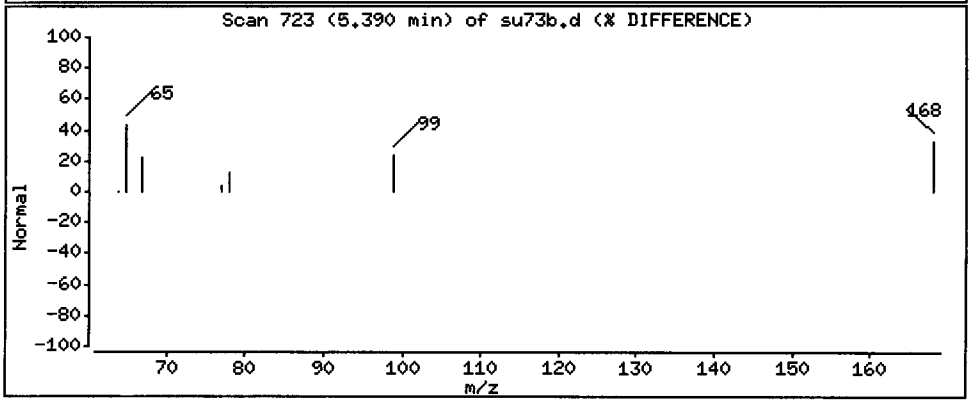












Data File: /chem1/nt7.i/04MAY2011.b/su73b.d

Date : 04-MAY-2011 17:01

Client ID: MW-01-042911-D

Instrument: nt7.i

Sample Info: SU73B,10,10,0,,

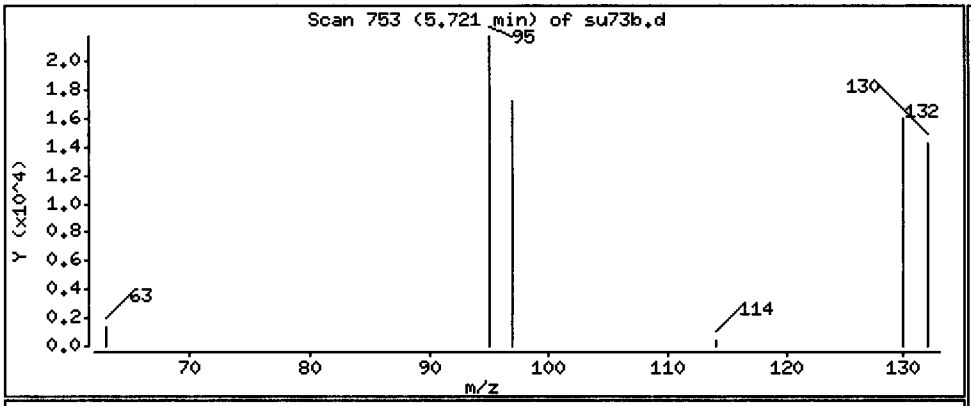
Operator: PC

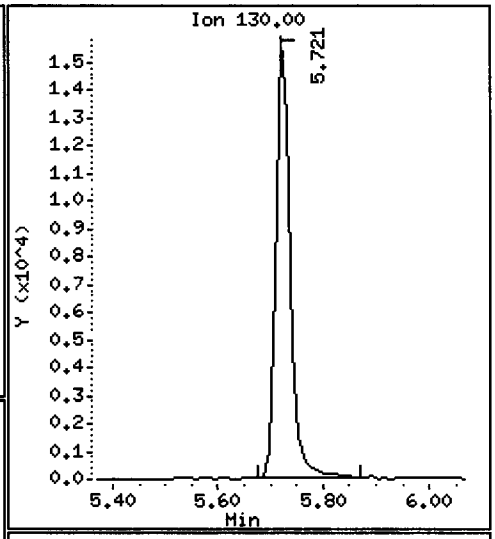
Column phase: RTXVMS

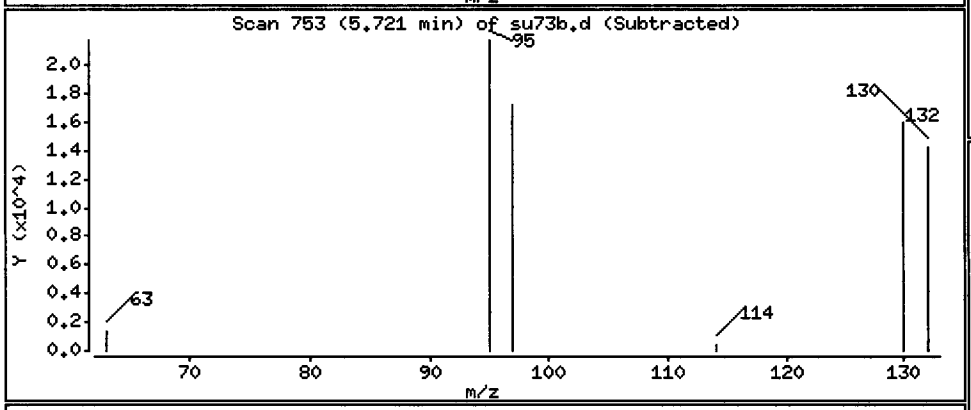
Column diameter: 0.18

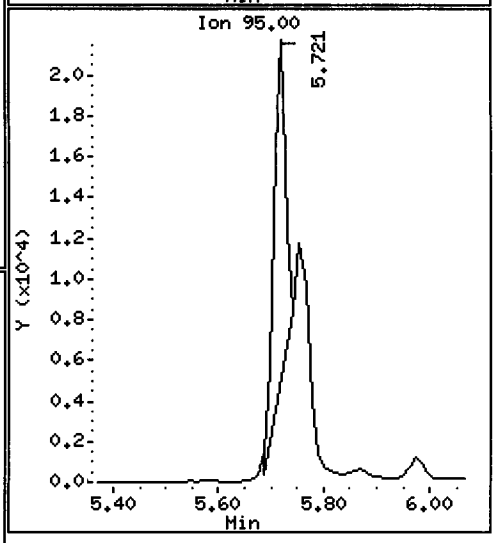
8 Trichloroethene

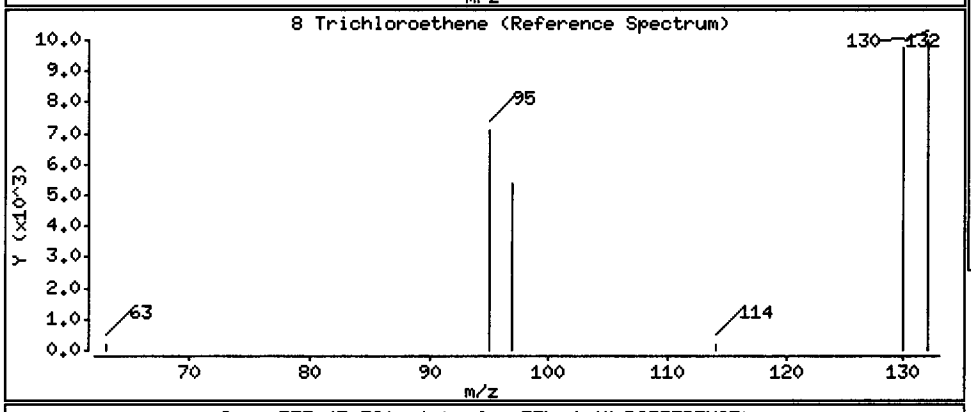
Concentration: 117.39 ug/L

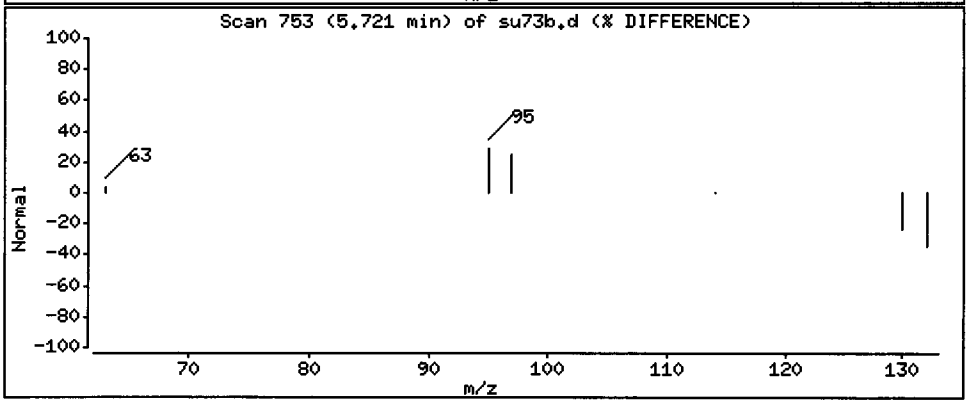












Data File: /chem1/nt7.i/04MAY2011.b/su73b.d

Date : 04-MAY-2011 17:01

Client ID: MW-01-042911-D

Instrument: nt7.i

Sample Info: SU73B,10,10,0,,

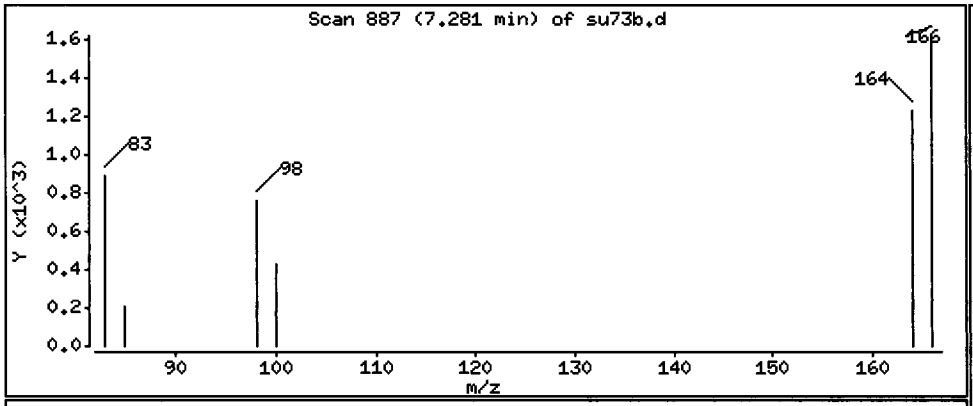
Operator: PC

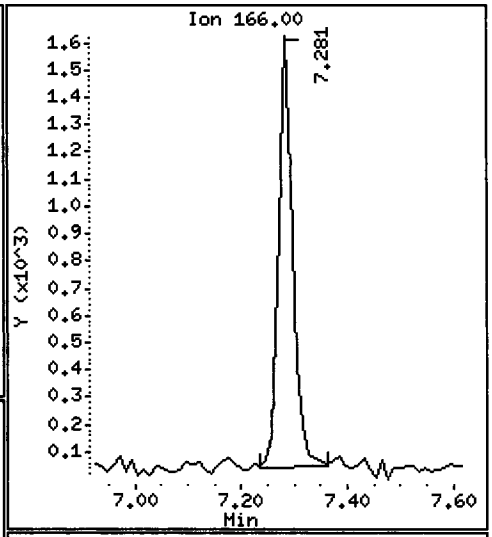
Column phase: RTXVMS

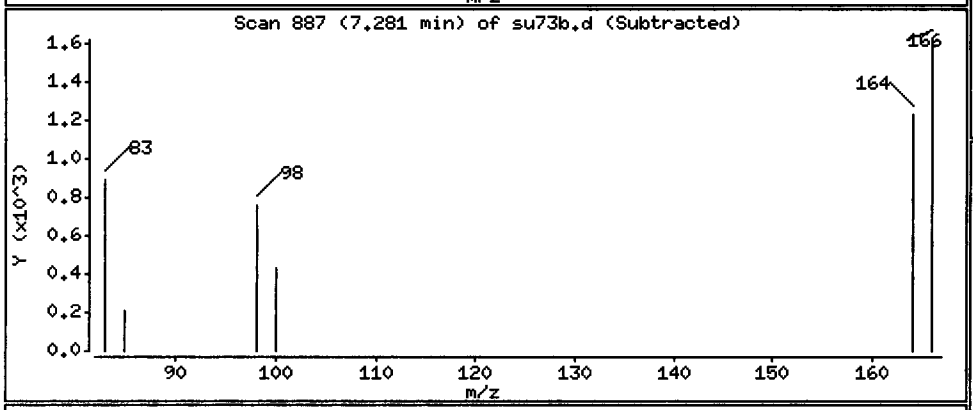
Column diameter: 0.18

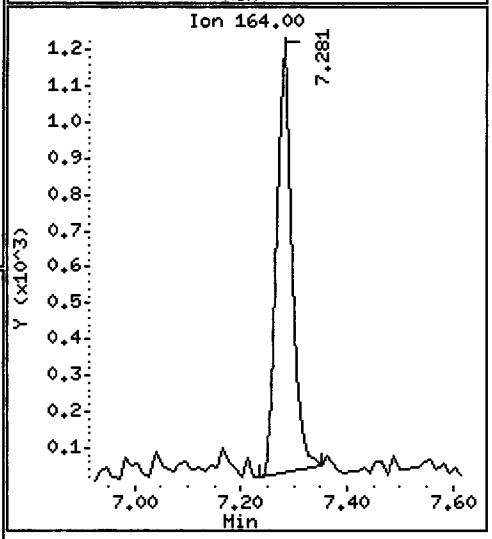
10 Tetrachloroethene

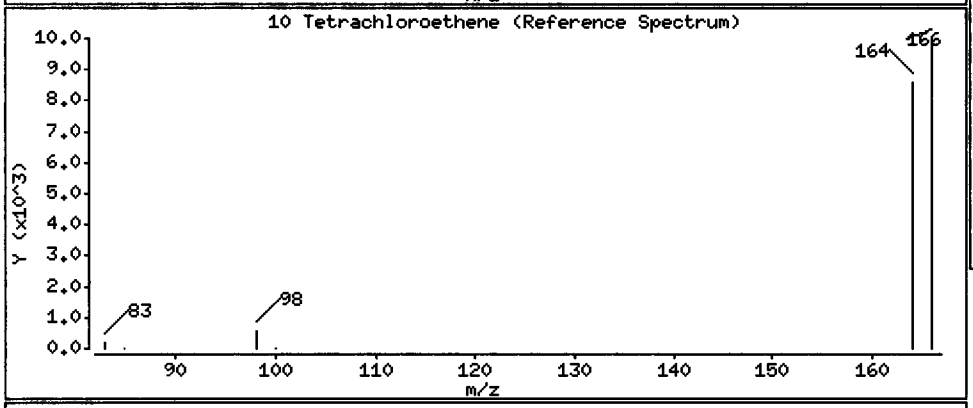
Concentration: 14.532 ug/L

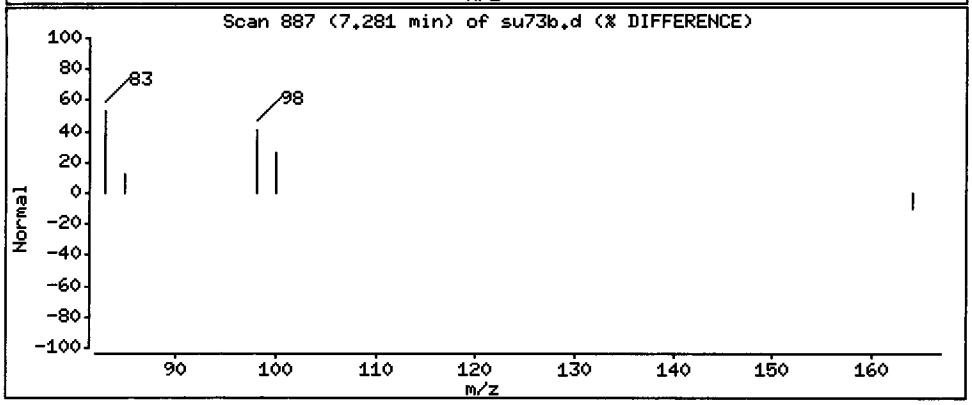












CO-ELUTION SUMMARY FOR FILE - su73b.d

Lab ID: SU73B, Method: sim042611.m, Instrument: nt7.i, Date: 04-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC 5/5/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/04MAY2011.b/su74a.d
Lab Smp Id: SU74A Client Smp ID: B312-042911
Inj Date : 04-MAY-2011 17:26
Operator : PC Inst ID: nt7.i
Smp Info : SU74A,10,10,0,,
Misc Info : 11-9772
Comment :
Method : /chem1/nt7.i/04MAY2011.b/sim042611.m
Meth Date : 05-May-2011 11:15 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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 MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	1 Vinyl Chloride	62	Compound Not Detected.					
	2 1,1-Dichloroethene	96	Compound Not Detected.					
	175 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	3 cis-1,2-dichloroethene	96	Compound Not Detected.					
	6 Benzene	78	Compound Not Detected.					
*	4 Pentafluorobenzene	168	5.325	5.326	(1.000)	376103	1000.00	
$	5 d4-1,2-Dichloroethane	65	5.334	5.335	(1.002)	306110	903.176	903.18
	176 1,2-Dichloroethane	62	Compound Not Detected.					
	8 Trichloroethene	130	Compound Not Detected.					
*	7 1,4-Difluorobenzene	114	5.767	5.754	(1.000)	682816	1000.00	
$	9 d8-Toluene	98	6.914	6.913	(1.199)	834720	959.612	959.61
	10 Tetrachloroethene	166	Compound Not Detected.					
	11 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: su74a.d
Lab Smp Id: SU74A
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9772

Calibration Date: 04-MAY-2011
Calibration Time: 10:45
Client Smp ID: B312-042911
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	376103	3.49
7 1,4-Difluorobenze	667797	333898	1335594	682816	2.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.32	-0.02
7 1,4-Difluorobenze	5.75	5.25	6.25	5.77	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
Client SDG: SU74
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: SU74A
Client Smp ID: B312-042911
Level: LOW
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: sim12dca.sub
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9772

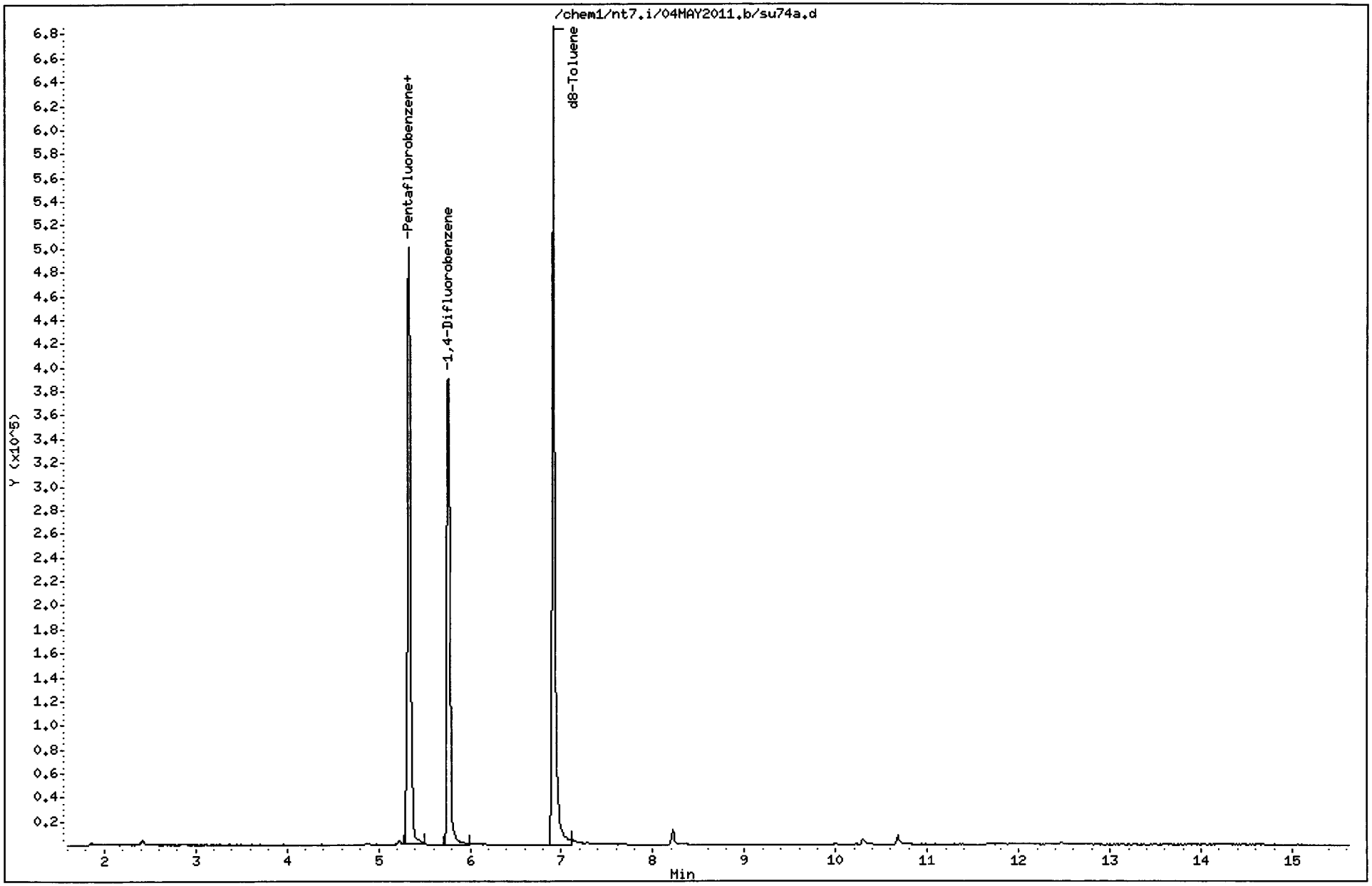
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	903.18	90.32	80-126
$ 9 d8-Toluene	1000.0	959.61	95.96	80-120

Data File: /chem1/nt7.i/04MAY2011.b/su74a.d
Date : 04-MAY-2011 17:26
Client ID: B312-042911
Sample Info: SU74A,10,10,0,,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



SU53:00518

CO-ELUTION SUMMARY FOR FILE - su74a.d

Lab ID: SU74A, Method: sim042611.m, Instrument: nt7.i, Date: 04-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC 5/5/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/04MAY2011.b/su74b.d
Lab Smp Id: SU74B Client Smp ID: B310-042911
Inj Date : 04-MAY-2011 17:52
Operator : PC Inst ID: nt7.i
Smp Info : SU74B,10,10,0,,
Misc Info : 11-9773
Comment :
Method : /chem1/nt7.i/04MAY2011.b/sim042611.m
Meth Date : 05-May-2011 11:15 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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

		QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	1 Vinyl Chloride	62	Compound Not Detected.					
	2 1,1-Dichloroethene	96	Compound Not Detected.					
	175 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	3 cis-1,2-dichloroethene	96	Compound Not Detected.					
	6 Benzene	78	Compound Not Detected.					
*	4 Pentafluorobenzene	168	5.325	5.326	(1.000)	361270	1000.00	
$	5 d4-1,2-Dichloroethane	65	5.334	5.335	(1.002)	302077	927.870	927.87
	176 1,2-Dichloroethane	62	Compound Not Detected.					
	8 Trichloroethene	130	Compound Not Detected.					
*	7 1,4-Difluorobenzene	114	5.766	5.754	(1.000)	654245	1000.00	
$	9 d8-Toluene	98	6.915	6.913	(1.199)	810203	972.103	972.10
	10 Tetrachloroethene	166	Compound Not Detected.					
	11 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: su74b.d
Lab Smp Id: SU74B
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9773

Calibration Date: 04-MAY-2011
Calibration Time: 10:45
Client Smp ID: B310-042911
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	361270	-0.59
7 1,4-Difluorobenze	667797	333898	1335594	654245	-2.03

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.32	-0.02
7 1,4-Difluorobenze	5.75	5.25	6.25	5.77	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
Client SDG: SU74
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: SU74B
Client Smp ID: B310-042911
Level: LOW
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: sim12dca.sub
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9773

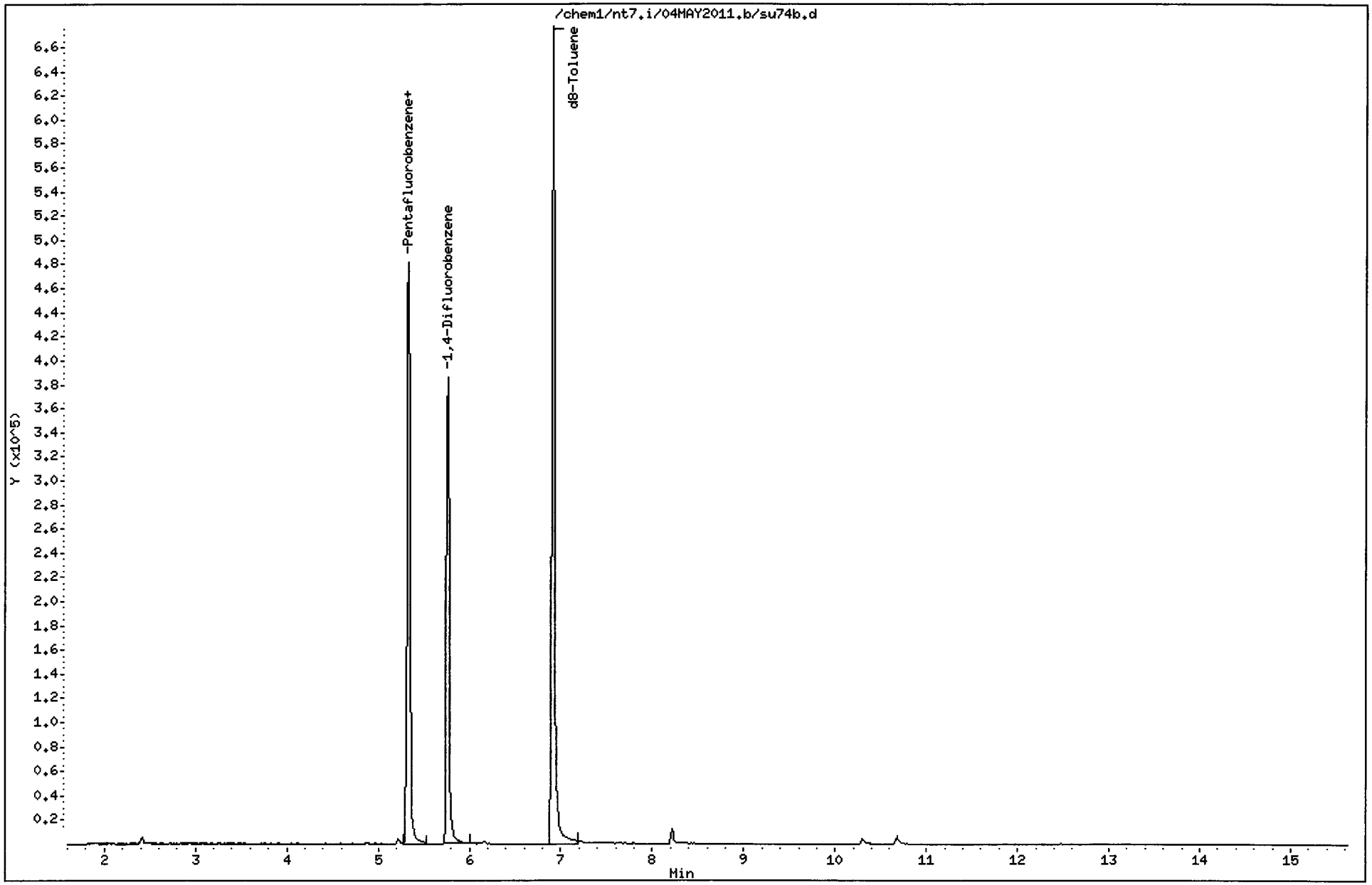
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	927.87	92.79	80-126
$ 9 d8-Toluene	1000.0	972.10	97.21	80-120

Data File: /chem1/nt7.i/04MAY2011.b/su74b.d
Date : 04-MAY-2011 17:52
Client ID: B310-042911
Sample Info: SU74B,10,10,0,,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



SUS3-00523

CO-ELUTION SUMMARY FOR FILE - su74b.d

Lab ID: SU74B, Method: sim042611.m, Instrument: nt7.i, Date: 04-MAY-2011

RT	CO-ELUTION COMPOUNDS

PC 5/5/11

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/04MAY2011.b/su74c.d
Lab Smp Id: SU74C Client Smp ID: B311-042911
Inj Date : 04-MAY-2011 18:18
Operator : PC Inst ID: nt7.i
Smp Info : SU74C,10,10,0,,
Misc Info : 11-9774
Comment :
Method : /chem1/nt7.i/04MAY2011.b/sim042611.m
Meth Date : 05-May-2011 11:15 paul Quant Type: ISTD
Cal Date : 26-APR-2011 15:00 Cal File: 0426019.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 MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	1 Vinyl Chloride	62	Compound Not Detected.					
	2 1,1-Dichloroethene	96	Compound Not Detected.					
	175 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	3 cis-1,2-dichloroethene	96	Compound Not Detected.					
	6 Benzene	78	Compound Not Detected.					
*	4 Pentafluorobenzene	168	5.326	5.326	(1.000)	341470	1000.00	
$	5 d4-1,2-Dichloroethane	65	5.335	5.335	(1.002)	299783	974.217	974.22
	176 1,2-Dichloroethane	62	Compound Not Detected.					
	8 Trichloroethene	130	Compound Not Detected.					
*	7 1,4-Difluorobenzene	114	5.766	5.754	(1.000)	625591	1000.00	
$	9 d8-Toluene	98	6.913	6.913	(1.199)	773241	970.249	970.25
	10 Tetrachloroethene	166	Compound Not Detected.					
	11 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: su74c.d
Lab Smp Id: SU74C
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9774

Calibration Date: 04-MAY-2011
Calibration Time: 10:45
Client Smp ID: B311-042911
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	363407	181704	726814	341470	-6.04
7 1,4-Difluorobenze	667797	333898	1335594	625591	-6.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Pentafluorobenzen	5.33	4.83	5.83	5.33	0.00
7 1,4-Difluorobenze	5.75	5.25	6.25	5.77	0.21

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: SU74
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: SU74C
Client Smp ID: B311-042911
Level: LOW
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: sim12dca.sub
Method File: /chem1/nt7.i/04MAY2011.b/sim042611.m
Misc Info: 11-9774

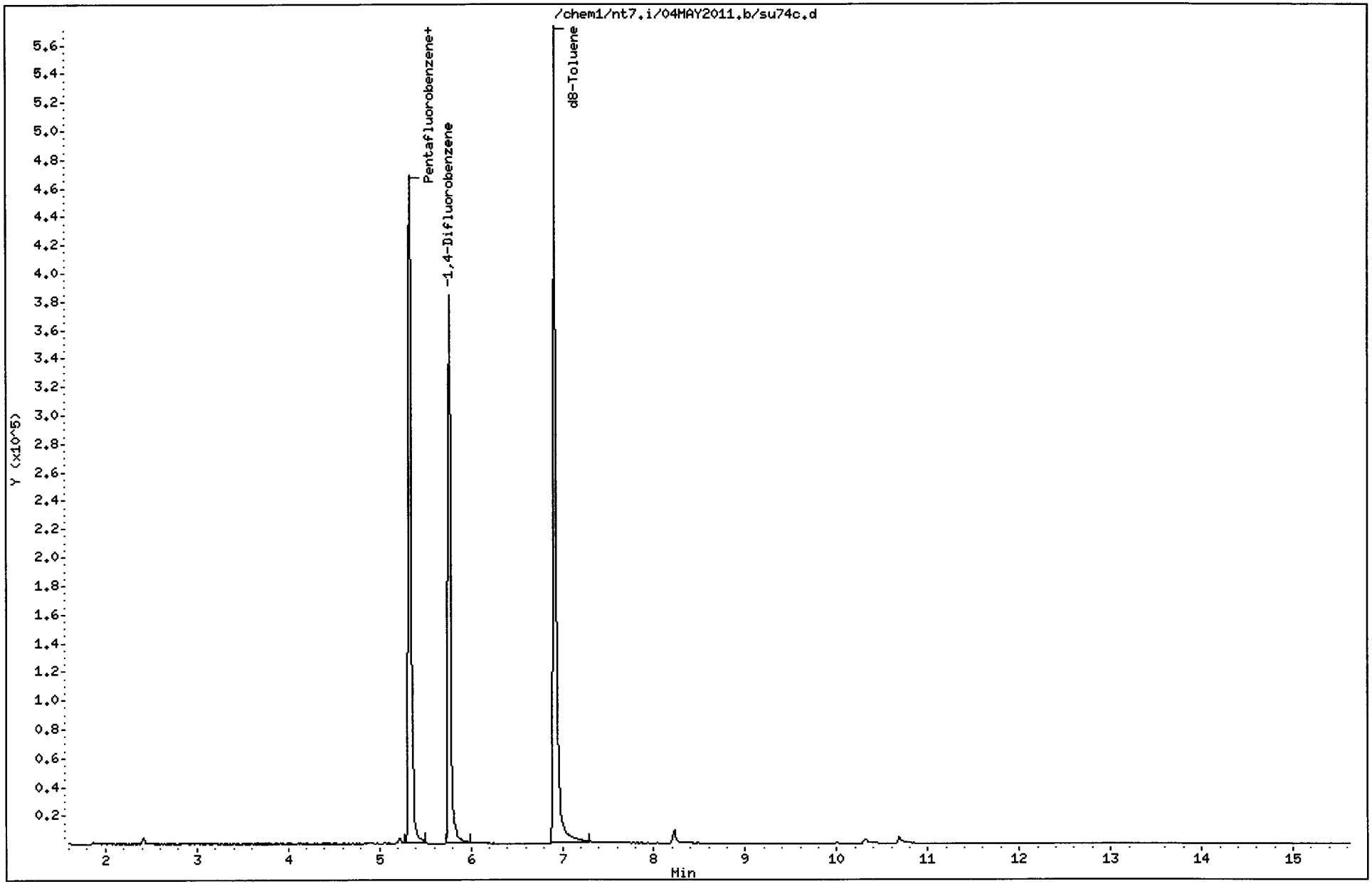
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 d4-1,2-Dichloroeth	1000.0	974.22	97.42	80-126
$ 9 d8-Toluene	1000.0	970.25	97.02	80-120

Data File: /chem1/nt7.i/04MAY2011.b/su74c.d
Date : 04-MAY-2011 18:18
Client ID: B311-042911
Sample Info: SU74C,10,10,0,,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



SU53 : 00528

CO-ELUTION SUMMARY FOR FILE - su74c.d

Lab ID: SU74C, Method: sim042611.m, Instrument: nt7.i, Date: 04-MAY-2011

RT	CO-ELUTION COMPOUNDS

SIM PAH Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: SU53, SU73, SU74

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

SIM PNA-Water
Separatory Funnel (3510C) (SOP # 3311S)
Low Level (0.01ppb)

Preparation Test SIM PNA # 6
ARI Job No(s) 5u45, 5u47, 5u53

Batch set up by: JA

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 (0) 3	Final Effective Volume	Volume to Lab	Comments
	5u45 MBW	Date 5-4-11	500mL					0.5mL	0.5mL	
	SBW	↓	↓					↓	↓	
	SBW Dup.		↓					↓	↓	
	QLS		↓					↓	↓	
10	A	Verified	500mL							
10	B									
14	C									
12	5u47 A									
10	B									
4	5u53 A									
4	B									
13,14,14,	C									
	Cms									
	Cmsd									
16	D									
10	E									
3	F									
Analyst/Date:		PD 5-4-11		YL 5/9/11	CJZ 5/13/11					

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	**1**	**100µL**	10/05/11	NL	PD
Spike	**18**	**100µL**	1/04/12	NL	PD
QLS Spike	**2**	**50µL**	1/04/12	NL	PD
Extraction Time: 11:24					

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)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: SU53 Client ID: Floyd Snider

Parameter: SIM PNA low level Client Project: Lora Lake Apts RI

Note problems, concerns, corrective actions	Analyst/Date
Screens: Soil/Sediment/Solid/Other:	
☐ No Anomalies (standard soil/sediment)	
☐ Wet sediment/sludge=	
☐ Standing Water Decanted=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay (Difficult to homogenize/Mixed with Kitchen Aid)=	
☐ Rocks/Organics=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☑ No Anomalies B-F.	PD 5-4-11
☑ Turbid/Color= A is light tan and not turbid.	PD 5-4-11
☐ Particulates=	
☐ Emulsions=	
☐ Other (Details)=	
☑ Other Notes/Comments=	
K-D Station Recycled K-D flask and Turbon Tubes for Job# SU53.	VL 5/9/11

3056F

Revision 007
02/25/10

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

SIM PNA-Water
Separatory Funnel (3510C) (SOP # 3311S)
Low Level (0.01ppb)

Preparation Test SIM PNA # 6
ARI Job No(s) 5U73, 5U74

Batch set up by: JH

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
	5U73 MBW	Date 5-5-11	500mL					0.5mL	0.5mL	
	SBW									
	~~SBW Dup.~~									
	5U73 QLS									
14	A	Verified								
14	B									
11,13,14	5U74 A									
	Ams									
	Amsd									
13	B									
11	C									
Analyst/Date:	AC 5-5-11			RR 5/16/11	SP 5/17/11	SP 5/17/11				

11-0762
0772

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	**I**	**100µL**	10/05/11	AC	TH
Spike	**18**	**100µL**	11/04/12	AC	TH
QLS Spike	**2**	**50µL**	11/04/12	AC	TH
Extraction Time:	17:53				

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
Both jobs

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: SU73 Client ID: Floyd Snider

Parameter: SIM PNA low level Client Project: Lora Lake Apts RI

Note problems, concerns, corrective actions	Analyst/Date
Screens: Soil/Sediment/Solid/Other:	
☐ No Anomalies (standard soil/sediment)	
☐ Wet sediment/sludge=	
☐ Standing Water Decanted=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay (Difficult to homogenize/Mixed with Kitchen Aid)=	
☐ Rocks/Organics=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☒ Turbid/Color= 'A' and 'B' are light-yellow	AC 5-5-11
☐ Particulates=	
☐ Emulsions=	
☐ Other (Details)=	
☐ Other Notes/Comments=	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: SU74 Client ID: Floyd Snider

Parameter: SIM PNA low level Client Project: Lora Lake Parcel

Note problems, concerns, corrective actions	Analyst/Date
Screens: Soil/Sediment/Solid/Other:	
☐ No Anomalies (standard soil/sediment)	
☐ Wet sediment/sludge=	
☐ Standing Water Decanted=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay (Difficult to homogenize/Mixed with Kitchen Aid)=	
☐ Rocks/Organics=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☒ No Anomalies A-C	AC 5-5-11
☐ Turbid/Color=	
☐ Particulates=	
☐ Emulsions=	
☐ Other (Details)=	
☐ Other Notes/Comments=	

SIM PAH Raw Data
Initial Calibration

ARI Job ID: SU53, SU73, SU74

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: CurvE Client ID: _____

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

Parameter(s): Low Sim PNA's

Instrument: NT-4 NT-6 NT-8 NT-10 (NT11) NT12

Curve Date: 4.30.11 Analysis Start Date: _____

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

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

- 6 point curve, All targets <20% RSD
- fluorene at 123% in ICV, Rest within ±20%

Additional Details on Reverse: Yes / No

Analyst: VB **Date:** 4.30.11

Reviewer: _____ **Date:** 5/2/11

Analytical Resources Inc.: Organics Instrument Log

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

Date: 4.30.11 Analysis: LOW Sim pnA Analyst: VB

GC Program: LOWsim Column No: 195516 Column Type: ZB-5ms

Instrument Tune (.U or .CT.): 110430.U EM Voltage: 1494

Calibration File: DF0430 Curve Date: 4.30.11

IS/SS	Ical/Ccal	LCS/ICV
1754-1	1818-2	1831-1

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20110430.b

	Time	Filename	LabID	ClientId	DF								
1	0952	df0430.d	DF0430		1	NO ISTDS FOUND							
2	1012	ic0430a.d	SIM250		1	6.27	129326	8.47	70573	10.30	113741	13.63	70763	15.61	54896
3	1037	ic0430b.d	SIM1000		1	6.27	133908	8.47	72587	10 30	114760	13 63	78082	15.61	58430
4	1102	ic0430c.d	SIM10		1	6.27	126410	8.47	67004	10.30	107827	13.63	60309	15.61	50334
5	1126	ic0430d.d	SIM500		1	6.27	127404	8 47	72156	10.30	112214	13 63	73029	15 61	55910
6	1151	ic0430e.d	SIM50		1	6.27	128015	8.47	70175	10.30	110629	13.63	63954	15.61	50988
7	1215	ic0430f.d	SIM100		1	6.27	126437	8.47	68901	10.30	107249	13.63	64366	15.61	52142
8	1239	icv0430.d	ICV-250		1	6.27	124975	8.45	70122	10.30	110829	13 63	69995	15.61	54585
9	1303	st19mb.d	ST19MBW1	ST19MBW1	1	6.27	124744	8.47	68608	10.30	113177	13.63	68248	15 61	52447
10	1327	st19sb.d	ST19LCSW1	ST19LCSW1	1	6.27	128882	8.47	75574	10.30	126815	13.63	79459	15.61	60316
11	1351	st19sbd.d	ST19LCSDW1	ST19LCSDW1	1	6.27	131281	8.47	77069	10.30	122701	13.63	75764	15.61	57945
12	1416	st19qls1.d	ST19QLS1		1	6.27	125046	8 47	71997	10 30	122271	13.63	75655	15 61	57284
13	1440	st19a.d	ST19A	NBF-MH178-04	1	6.27	116769	8.47	64407	10.30	103429	13.63	59777	15.61	54631
14	1506	st39a.d	ST39A	KC2062-04211	1	6 27	121438	8.47	67979	10.30	109728	13.63	59371	15.61	50325
15	1531	st39b.d	ST39B	PS2220-04211	1	6.27	121641	8.45	66659	10.30	108292	13 63	60212	15.61	49837
16	1555	st39c.d	ST39C	NF2095-04211	1	6.27	117392	8 47	66158	10.30	106052	13.63	61143	15.61	49446
17	1619	st39d.d	ST39D	SQ1-042111-W	1	6 27	119539	8.45	65648	10.30	105834	13.63	61228	15 61	49006
18	1643	st39e.d	ST39E	SQ3-042111-W	1	6.27	120708	8 47	66746	10.30	109122	13.63	64030	15.61	52334
19	1707	st39f.d	ST39F	SQ4-042111-W	1	6.27	113784	8.47	62955	10.30	102566	13.63	60497	15.61	49543

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control): ICal 0430A

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

VB 5.3.11

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20110430.b

ARI Job No.: DF04 Method: DF8270.m Instrument: nt11.i Date: 30-APR-2011

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0952	df0430.d	DF0430		1	NO MANUAL INTEGRATION
1012	ic0430a.d	SIM250		1	NO MANUAL INTEGRATION
1037	ic0430b.d	SIM1000		1	NO MANUAL INTEGRATION
1102	ic0430c.d	SIM10		1	Total Benzofluoranthenes,
1126	ic0430d.d	SIM500		1	NO MANUAL INTEGRATION
1151	ic0430e.d	SIM50		1	NO MANUAL INTEGRATION
1215	ic0430f.d	SIM100		1	NO MANUAL INTEGRATION
1239	icv0430.d	ICV-250		1	NO MANUAL INTEGRATION

SJSU 005539

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-APR-2011 10:12
End Cal Date : 30-APR-2011 12:15
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20110430.b/lowsim.m
Cal Date : 30-Apr-2011 13:04 van
Curve Type : Average

Calibration File Names:
Level 1: /chem3/nt11.i/20110430.b/ic0430c.d
Level 2: /chem3/nt11.i/20110430.b/ic0430e.d
Level 3: /chem3/nt11.i/20110430.b/ic0430f.d
Level 4: /chem3/nt11.i/20110430.b/ic0430a.d
Level 5: /chem3/nt11.i/20110430.b/ic0430d.d
Level 6: /chem3/nt11.i/20110430.b/ic0430b.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	1.08109	1.02454	1.03280	0.97197	0.89881	0.74598	0.95920	12.667
7 2-Methylnaphthalene	0.59062	0.58399	0.61060	0.60292	0.58723	0.52043	0.58263	5.508
8 1-Methylnaphthalene	0.58524	0.57834	0.61003	0.59640	0.58546	0.51405	0.57825	5.768
9 Dimethylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
10 Acenaphthylene	1.66826	1.55725	1.66572	1.59329	1.53004	1.34692	1.56025	7.601
12 Acenaphthene	1.03009	0.96245	1.04599	1.01243	0.95111	0.89614	0.98304	5.761
13 Diethylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
14 Dibenzofuran	1.55513	1.43789	1.54529	1.50906	1.39255	1.24393	1.44731	8.146
15 Fluorene	1.07158	0.99893	1.06924	1.05521	0.99528	0.94061	1.02181	5.116
17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Phenanthrene	1.11716	1.03908	1.06574	1.01879	0.96695	0.82453	1.00537	10.108
20 Anthracene	0.99919	0.93939	1.01567	0.97270	0.94773	0.83502	0.95162	6.740
21 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Fluoranthene	1.07209	0.94594	1.05030	1.00918	0.99300	0.85825	0.98812	7.843
25 Pyrene	1.94697	1.72074	1.83491	1.73390	1.55148	1.29409	1.68035	13.708
26 Butylbenzylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
27 Bis(2-Ethylhexyl)phthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
28 Benzo(a)anthracene	1.69958	1.39488	1.49874	1.37225	1.30437	1.13458	1.40073	13.541

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-APR-2011 10:12
End Cal Date : 30-APR-2011 12:15
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20110430.b/lowsim.m
Cal Date : 30-Apr-2011 13:04 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	1.67604	1.43397	1.52077	1.39083	1.29800	1.12978	1.40823	13.286
31 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 Total Benzofluoranthenes	1.72587	1.60324	1.70619	1.64091	1.57070	1.44648	1.61557	6.299
34 Benzo(a)pyrene	1.50395	1.38817	1.47919	1.46046	1.41911	1.35740	1.43471	3.921
37 Indeno(1,2,3-cd)pyrene	1.79600	1.69334	1.77473	1.78012	1.70598	1.64018	1.73173	3.545
38 Dibenzo(a,h)anthracene	1.41813	1.31388	1.37321	1.37195	1.32157	1.29488	1.34894	3.446
39 Benzo(g,h,i)perylene	1.63905	1.52695	1.59250	1.56849	1.49632	1.43490	1.54303	4.713
$ 1 D5-Phenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 6 2-Methylnaphthalene-d10	0.61403	0.58474	0.60576	0.59572	0.57112	0.51362	0.58083	6.242
$ 16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 23 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 36 Dibenzo(a,h)anthracene-d14	1.35336	1.19848	1.30187	1.27571	1.19560	1.19068	1.25261	5.429

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20110430.b/lowsim.m
Batch File: /chem3/nt11.i/20110430.b
Inst ID: nt11.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	ic0430a	ic0430b	ic0430c	ic0430d	ic0430e	ic0430f
INJ.DATE:	30-APR-2011	30-APR-2011	30-APR-2011	30-APR-2011	30-APR-2011	30-APR-2011
INJ.TIME:	10:12	10:37	11:02	11:26	11:51	12:15

	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	6.273	6.272	6.273	6.273	6.273	6.272	6.272	6.022-6.522	6.273	0.000
	5 Naphthalene	6.296	6.295	6.296	6.296	6.296	6.295	6.295	6.045-6.545	6.296	0.000
$	6 2-Methylnaphthalene-d1	7.101	7.101	7.101	7.101	7.101	7.101	7.101	6.851-7.351	7.101	0.000
	7 2-Methylnaphthalene	7.136	7.135	7.136	7.136	7.136	7.135	7.135	6.885-7.385	7.136	0.000
	8 1-Methylnaphthalene	7.274	7.273	7.274	7.274	7.274	7.273	7.273	7.023-7.523	7.274	0.000
	9 Dimethylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	10.433	10.183-10.683	+++++	+++++
	10 Acenaphthylene	8.265	8.265	8.265	8.265	8.265	8.265	8.265	8.015-8.515	8.265	0.000
*	11 Acenaphthene-d10	8.466	8.466	8.466	8.466	8.466	8.466	8.466	8.216-8.716	8.466	0.000
	12 Acenaphthene	8.493	8.492	8.493	8.493	8.493	8.492	8.492	8.242-8.742	8.493	0.000
	13 Diethylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	11.543	11.293-11.793	+++++	+++++
	14 Dibenzofuran	8.694	8.694	8.694	8.694	8.694	8.694	8.694	8.444-8.944	8.694	0.000
	15 Fluorene	9.123	9.123	9.123	9.123	9.123	9.123	9.123	8.873-9.373	9.123	0.000
$	16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	12.499	12.249-12.749	+++++	+++++
	17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	13.381	13.131-13.631	+++++	+++++

Reviewer 1 VB Date: 4.30.11

Reviewer 2 [signature] Date: 5/2/11

SDG 35129

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20110430.b/lowsim.m
Batch File: /chem3/nt11.i/20110430.b
Inst ID: nt11.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	18 Phenanthrene-d10	10.303	10.302	10.303	10.302	10.303	10.302	10.302	10.052-10.552	10.302	0.000
	19 Phenanthrene	10.329	10.329	10.329	10.329	10.329	10.329	10.329	10.079-10.579	10.329	0.000
	20 Anthracene	10.383	10.383	10.383	10.383	10.383	10.383	10.383	10.133-10.633	10.383	0.000
	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	11.831	11.831	11.818	11.818	11.818	11.817	11.817	11.567-12.067	11.822	0.007
	25 Pyrene	12.113	12.112	12.113	12.113	12.113	12.112	12.112	11.862-12.362	12.113	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	13.601	13.601	13.601	13.601	13.601	13.601	13.601	13.351-13.851	13.601	0.000
*	29 Chrysene-d12	13.628	13.628	13.628	13.628	13.628	13.628	13.628	13.378-13.878	13.628	0.000
	30 Chrysene	13.655	13.655	13.655	13.655	13.655	13.655	13.655	13.405-13.905	13.655	0.000
	31 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	18.607	18.357-18.857	+++++	+++++
	43 Total Benzofluoranthen	15.042	15.041	15.042	15.042	15.042	15.041	15.041	14.791-15.291	15.042	0.000
	34 Benzo(a)pyrene	15.522	15.512	15.512	15.512	15.512	15.512	15.512	15.262-15.762	15.514	0.004
*	35 Perylene-d12	15.608	15.608	15.609	15.608	15.609	15.608	15.608	15.358-15.858	15.608	0.000
$	36 Dibenzo(a,h)anthracene	17.618	17.618	17.618	17.618	17.618	17.618	17.618	17.368-17.868	17.618	0.000
	37 Indeno(1,2,3-cd)pyrene	17.685	17.685	17.672	17.672	17.672	17.672	17.672	17.422-17.922	17.676	0.007
	38 Dibenzo(a,h)anthracene	17.685	17.685	17.685	17.685	17.685	17.685	17.685	17.435-17.935	17.685	0.000
	39 Benzo(g,h,i)perylene	18.302	18.302	18.289	18.289	18.289	18.289	18.289	18.039-18.539	18.293	0.007

sus3 : 8954

Data File: /chem3/nt11.i/20110430.b/df0430.d

Date : 30-APR-2011 09:52

Client ID:

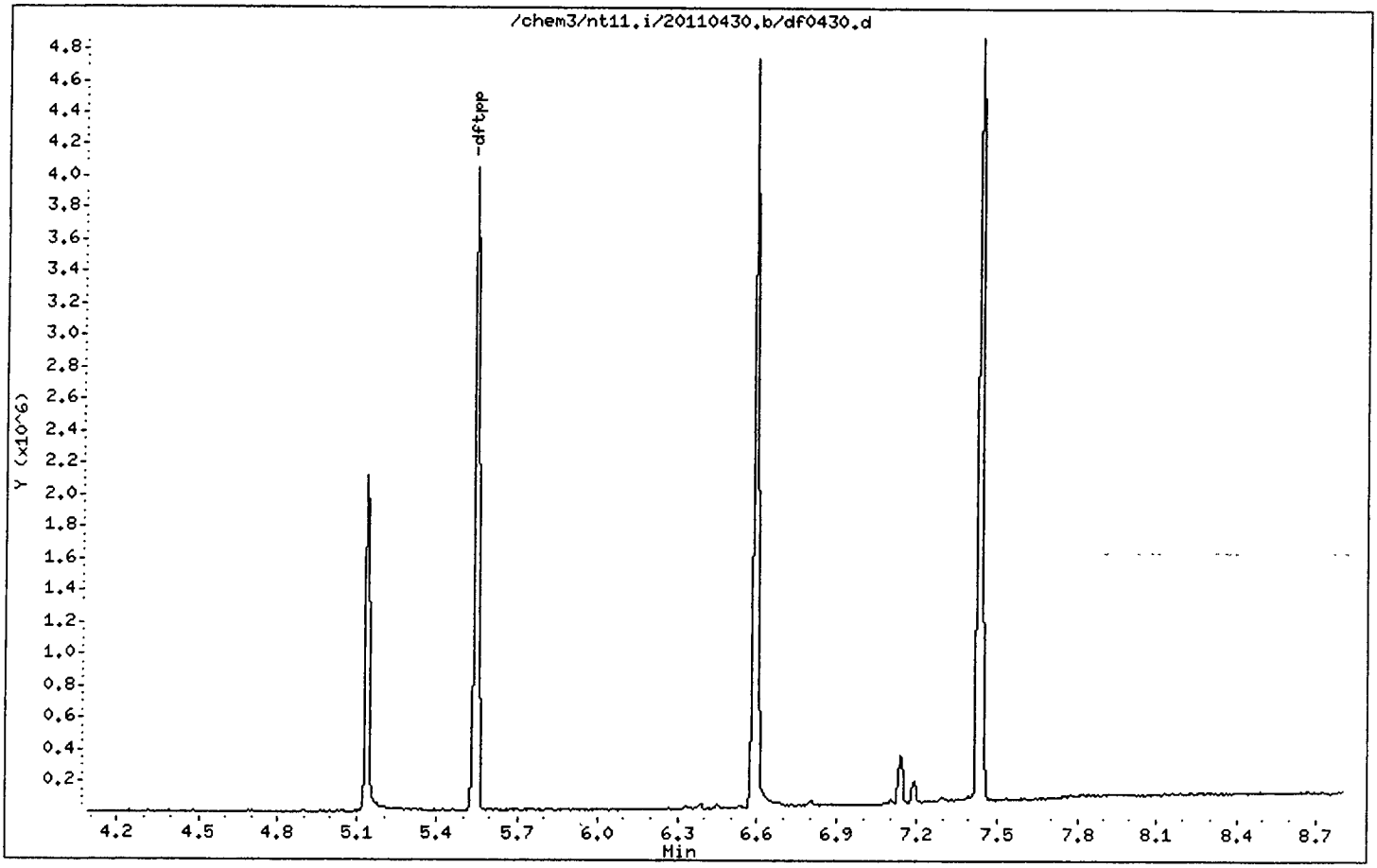
Instrument: nt11.i

Sample Info: DF0430

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem3/nt11.i/20110430.b/df0430.d

Date : 30-APR-2011 09:52

Client ID:

Instrument: nt11.i

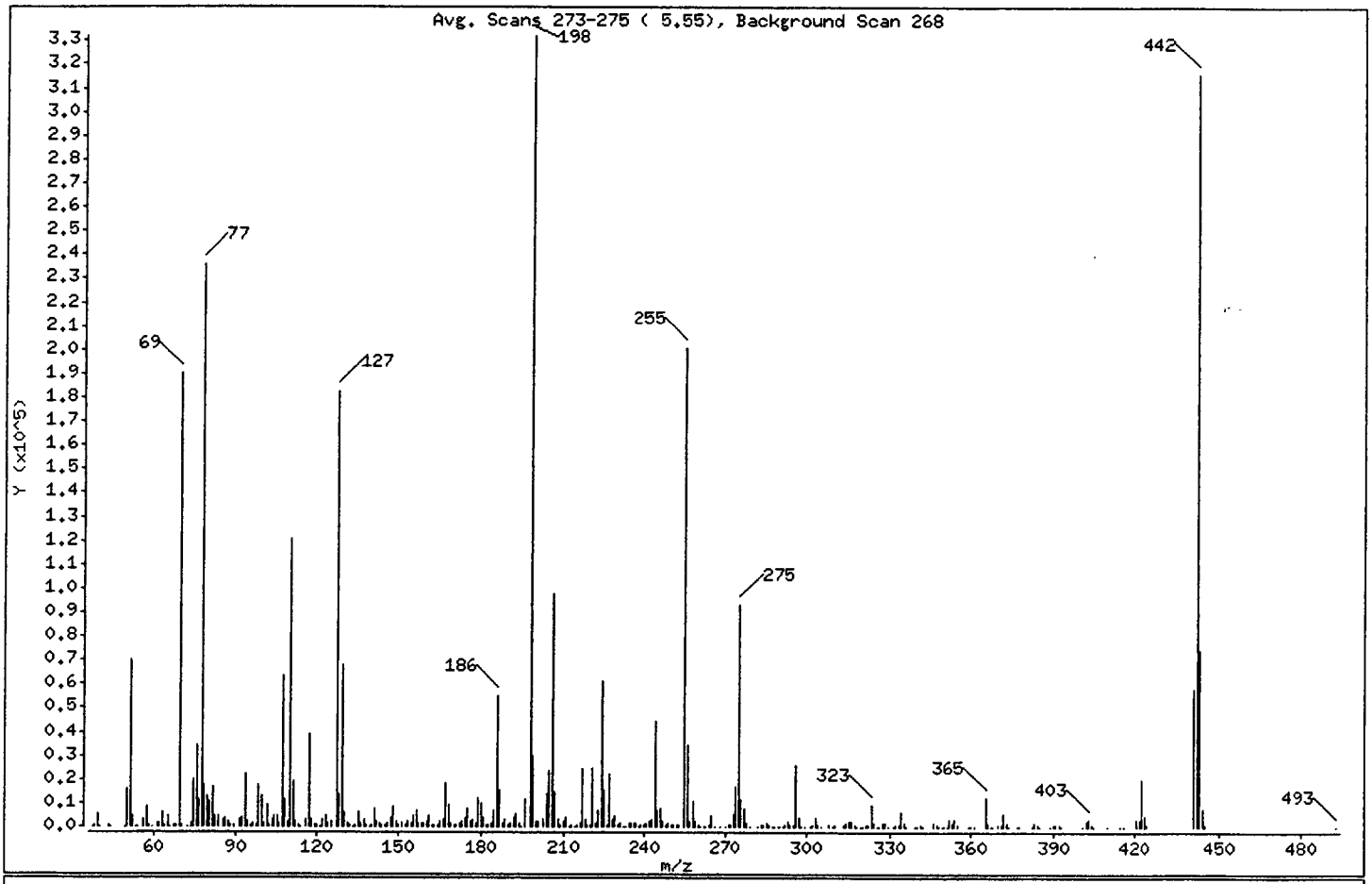
Sample Info: DF0430

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	21.25
68	Less than 2.00% of mass 69	0.25 (0.43)
69	Mass 69 relative abundance	57.16
70	Less than 2.00% of mass 69	0.27 (0.47)
127	10.00 - 80.00% of mass 198	55.04
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.88
275	10.00 - 60.00% of mass 198	28.11
365	Greater than 1.00% of mass 198	3.78
441	0.01 - 24.00% of mass 442	17.37 (18.26)
442	50.00 - 200.00% of mass 198	95.11
443	15.00 - 24.00% of mass 442	22.19 (23.33)

Data File: /chem3/nt11.i/20110430.b/df0430.d

Date : 30-APR-2011 09:52

Client ID:

Instrument: nt11.i

Sample Info: DF0430

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0430.d
Spectrum: Avg. Scans 273-275 (5.55), Background Scan 268
Location of Maximum: 198.00
Number of points: 335

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	226	131.00	1341	217.00	24216	309.00	280
38.00	835	132.00	698	218.00	3205	310.00	536
39.00	5046	133.00	233	219.00	417	311.00	86
40.00	189	134.00	1101	220.00	403	313.00	550
41.00	215	135.00	5774	221.00	24072	314.00	1493
43.00	451	136.00	1811	222.00	1255	315.00	2626
44.00	75	137.00	2870	223.00	6528	316.00	2216
45.00	200	138.00	633	224.00	60832	317.00	561
48.00	108	139.00	167	225.00	15547	318.00	62
49.00	153	140.00	986	226.00	1036	319.00	53
50.00	15982	141.00	7835	227.00	22208	320.00	94
51.00	70512	142.00	2667	228.00	3156	321.00	1049
52.00	4664	143.00	1773	229.00	4918	322.00	517
53.00	309	144.00	682	230.00	614	323.00	9074
54.00	58	145.00	691	231.00	1627	324.00	1671
56.00	3272	146.00	1289	232.00	267	325.00	147
57.00	8045	147.00	4037	233.00	331	326.00	137
58.00	494	148.00	8630	234.00	1274	327.00	1401
59.00	255	149.00	1938	235.00	1538	328.00	1215
61.00	1629	150.00	733	236.00	1432	329.00	136
62.00	1847	151.00	1420	237.00	1637	331.00	52
63.00	5885	152.00	781	238.00	239	332.00	778
64.00	1049	153.00	2232	239.00	552	333.00	1088
65.00	4902	154.00	1687	240.00	810	334.00	5853
66.00	247	155.00	4616	241.00	1365	335.00	1511
67.00	459	156.00	7053	242.00	2415	336.00	230
68.00	814	157.00	1607	243.00	3055	339.00	212
69.00	189632	158.00	1201	244.00	44256	340.00	127
70.00	899	159.00	1289	245.00	6601	341.00	1142
72.00	223	160.00	2097	246.00	7951	342.00	315
73.00	1624	161.00	4411	247.00	2080	346.00	1365
74.00	19680	162.00	823	248.00	469	347.00	620
75.00	34688	163.00	581	249.00	1537	348.00	83
76.00	11536	164.00	717	250.00	410	349.00	60
77.00	235968	165.00	2379	251.00	386	350.00	80

Data File: /chem3/nt11.i/20110430.b/df0430.d

Date : 30-APR-2011 09:52

Client ID:

Instrument: nt11.i

Sample Info: DF0430

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0430.d

Spectrum: Avg. Scans 273-275 (5.55), Background Scan 268

Location of Maximum: 198.00

Number of points: 335

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	17520	166.00	2893	252.00	642	351.00	97
79.00	13267	167.00	18232	253.00	935	352.00	3275
80.00	10539	168.00	9360	255.00	200896	353.00	1748
81.00	16768	169.00	1825	256.00	33992	354.00	3285
82.00	4451	170.00	553	257.00	2234	355.00	662
83.00	4507	171.00	808	258.00	10597	359.00	264
85.00	2740	172.00	1716	259.00	2036	360.00	83
86.00	3664	173.00	1955	260.00	432	361.00	167
87.00	2218	174.00	3714	261.00	293	365.00	12545
88.00	1115	175.00	7966	262.00	114	366.00	1903
89.00	408	176.00	2145	263.00	187	367.00	78
91.00	3360	177.00	3312	264.00	569	368.00	91
92.00	3550	178.00	1277	265.00	4421	370.00	456
93.00	21816	179.00	11860	266.00	251	371.00	759
94.00	1923	180.00	9696	268.00	135	372.00	5196
95.00	496	181.00	3932	270.00	277	373.00	1228
96.00	1579	182.00	674	271.00	482	374.00	165
97.00	575	183.00	634	272.00	485	377.00	68
98.00	17304	184.00	1154	273.00	5642	378.00	80
99.00	12887	185.00	6515	274.00	17072	382.00	52
100.00	1498	186.00	54696	275.00	93264	383.00	1185
101.00	8878	187.00	15313	276.00	11769	384.00	474
102.00	418	188.00	1614	277.00	7779	385.00	121
103.00	2980	189.00	3375	278.00	1457	389.00	93
104.00	4695	190.00	471	279.00	228	390.00	842
105.00	4206	191.00	1688	282.00	357	391.00	583
106.00	1267	192.00	4056	283.00	761	392.00	599
107.00	63248	193.00	5106	284.00	564	393.00	147
108.00	11654	194.00	1327	285.00	1616	401.00	345
109.00	1933	195.00	283	286.00	442	402.00	2144
110.00	120512	196.00	11244	287.00	51	403.00	3089
111.00	18720	198.00	331776	288.00	206	404.00	1027
112.00	2253	199.00	29456	289.00	50	405.00	158
113.00	912	200.00	2249	290.00	371	409.00	67
114.00	258	201.00	2051	291.00	143	410.00	73

Data File: /chem3/nt11.i/20110430.b/df0430.d

Date : 30-APR-2011 09:52

Client ID:

Instrument: nt11.i

Sample Info: DF0430

Operator: VTS

Column phase: ZB-5msi

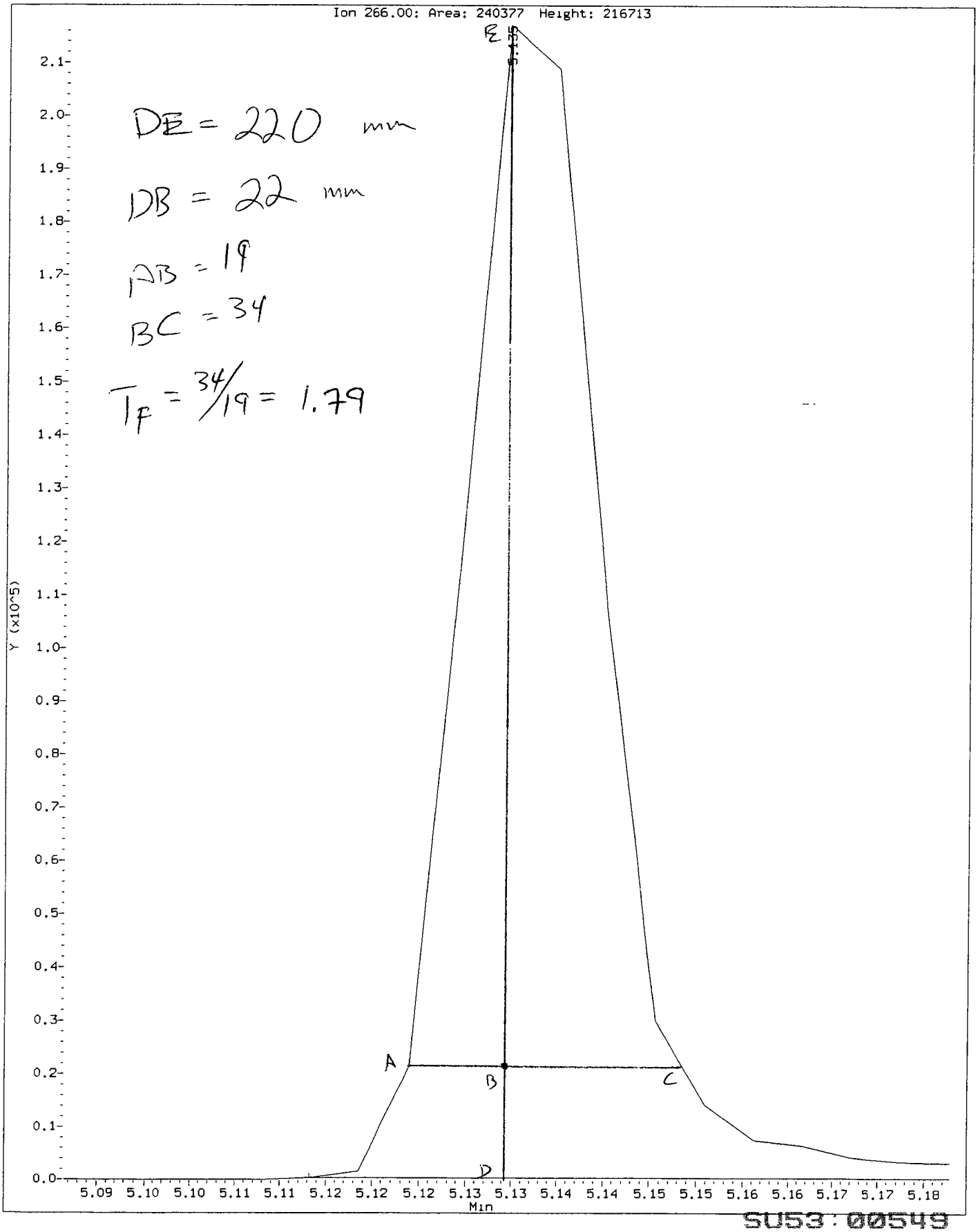
Column diameter: 0.25

Data File: df0430.d
Spectrum: Avg. Scans 273-275 (5.55), Background Scan 268
Location of Maximum: 198.00
Number of points: 335

m/z	Y	m/z	Y	m/z	Y	m/z	Y
116.00	2986	203.00	2725	292.00	579	415.00	323
117.00	38656	204.00	13504	293.00	1983	416.00	68
118.00	2690	205.00	23800	294.00	528	421.00	2775
119.00	601	206.00	97264	295.00	657	422.00	3015
120.00	627	207.00	14188	296.00	25640	423.00	20056
121.00	69	208.00	2965	297.00	3849	424.00	4847
122.00	3288	209.00	880	298.00	343	425.00	554
123.00	4673	210.00	1936	299.00	164	441.00	57616
124.00	1765	211.00	3706	301.00	245	442.00	315520
125.00	2498	212.00	357	302.00	671	443.00	73624
127.00	182592	213.00	507	303.00	3682	444.00	7765
128.00	13673	214.00	223	304.00	1014	445.00	525
129.00	67776	215.00	911	305.00	145	493.00	64
130.00	5837	216.00	1725	308.00	523		

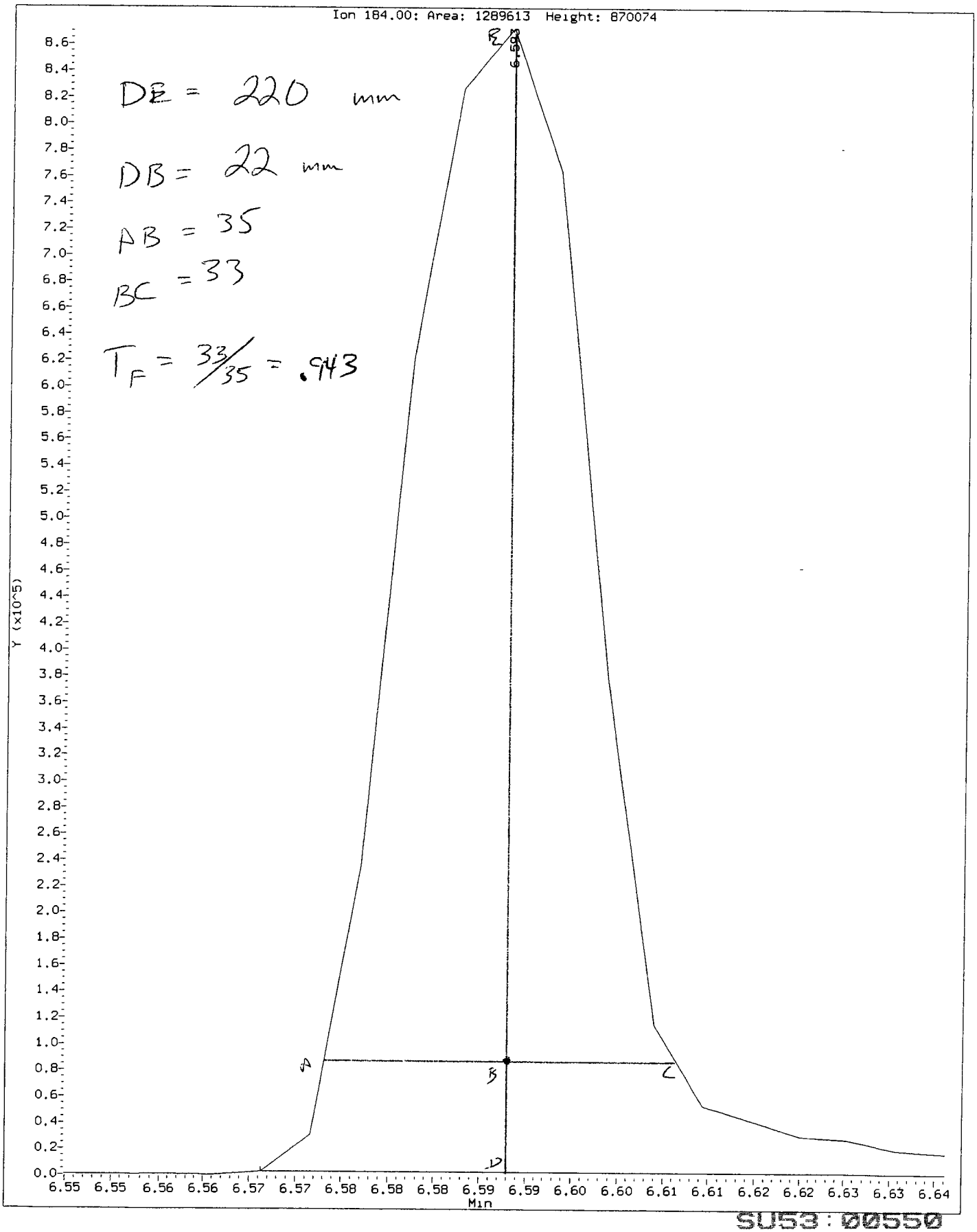
Data File: /chem3/nt11.i/20110430.b/ddt.b/df0430.d
Injection Date: 30-APR-2011 09:52
Instrument: nt11.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.i/20110430.b/ddt.b/df0430.d
Injection Date: 30-APR-2011 09:52
Instrument: nt11.i
Client Sample ID:

Compound: Benzidine
CAS Number:



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

Data file: /chem3/nt11.i/20110430.b/ddt.b/df0430.d ARI ID: DF0430
Method: /chem3/nt11.i/20110430.b/ddt.b/sw846ddt.m Misc:
Analysis Date: 30-APR-2011 09:52 Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	5.135	240377
Benzidine	6.593	1289613
4,4'-DDE	6.807	3713
4,4'-DDD	7.138	62455
4,4'-DDT	7.437	801029

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

$$\text{DDT Percent Breakdown} = \frac{(3713 + 62455) * 100}{(3713 + 62455 + 801029)}$$

DDT Percent Breakdown = 7.6 %

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110430.b/ic0430a.d
Lab Smp Id: SIM250
Inj Date : 30-APR-2011 10:12
Operator : VTS Inst ID: nt11.i
Smp Info : SIM250
Misc Info :
Comment :
Method : /chem3/nt11.i/20110430.b/lowsim.m
Meth Date : 30-Apr-2011 13:05 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 2 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.273	6.272	(1.000)	129326	200.000	
	5 Naphthalene	128	6.296	6.295	(1.004)	157126	250.000	253
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	96303	250.000	256
	7 2-Methylnaphthalene	142	7.136	7.135	(1.138)	97467	250.000	259
	8 1-Methylnaphthalene	142	7.274	7.273	(1.160)	96412	250.000	258
	10 Acenaphthylene	152	8.265	8.265	(0.976)	140554	250.000	255
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	70573	200.000	
	12 Acenaphthene	153	8.493	8.492	(1.003)	89313	250.000	257
	14 Dibenzofuran	168	8.694	8.694	(1.027)	133124	250.000	261
	15 Fluorene	166	9.123	9.123	(1.078)	93087	250.000	258
*	18 Phenanthrene-d10	188	10.303	10.302	(1.000)	113741	200.000	
	19 Phenanthrene	178	10.329	10.329	(1.003)	144848	250.000	253
	20 Anthracene	178	10.383	10.383	(1.008)	138295	250.000	256
	24 Fluoranthene	202	11.831	11.817	(1.148)	143481	250.000	255
	25 Pyrene	202	12.113	12.112	(0.889)	153370	250.000	258
	28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	121381	250.000	245
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	70763	200.000	
	30 Chrysene	228	13.655	13.655	(1.002)	123024	250.000	247
	43 Total Benzofluoranthenes	252	15.042	15.041	(0.964)	225199	500.000	508
	34 Benzo(a)pyrene	252	15.522	15.512	(0.994)	100217	250.000	254
*	35 Perylene-d12	264	15.608	15.608	(1.000)	54896	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	17.685	17.672	(1.133)	122152	250.000	257
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	87539	250.000	255
	38 Dibenzo(a,h)anthracene	278	17.685	17.685	(1.133)	94143	250.000	254
	39 Benzo(g,h,i)perylene	276	18.302	18.289	(1.173)	107630	250.000	254

4.30.11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0430a.d
Lab Smp Id: SIM250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110430.b/lowsim.m
Misc Info:

Calibration Date: 30-APR-2011
Calibration Time: 10:12

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	129326	0.00
11 Acenaphthene-d10	70573	35286	141146	70573	0.00
18 Phenanthrene-d10	113741	56870	227482	113741	0.00
29 Chrysene-d12	70763	35382	141526	70763	0.00
35 Perylene-d12	54896	27448	109792	54896	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	0.00

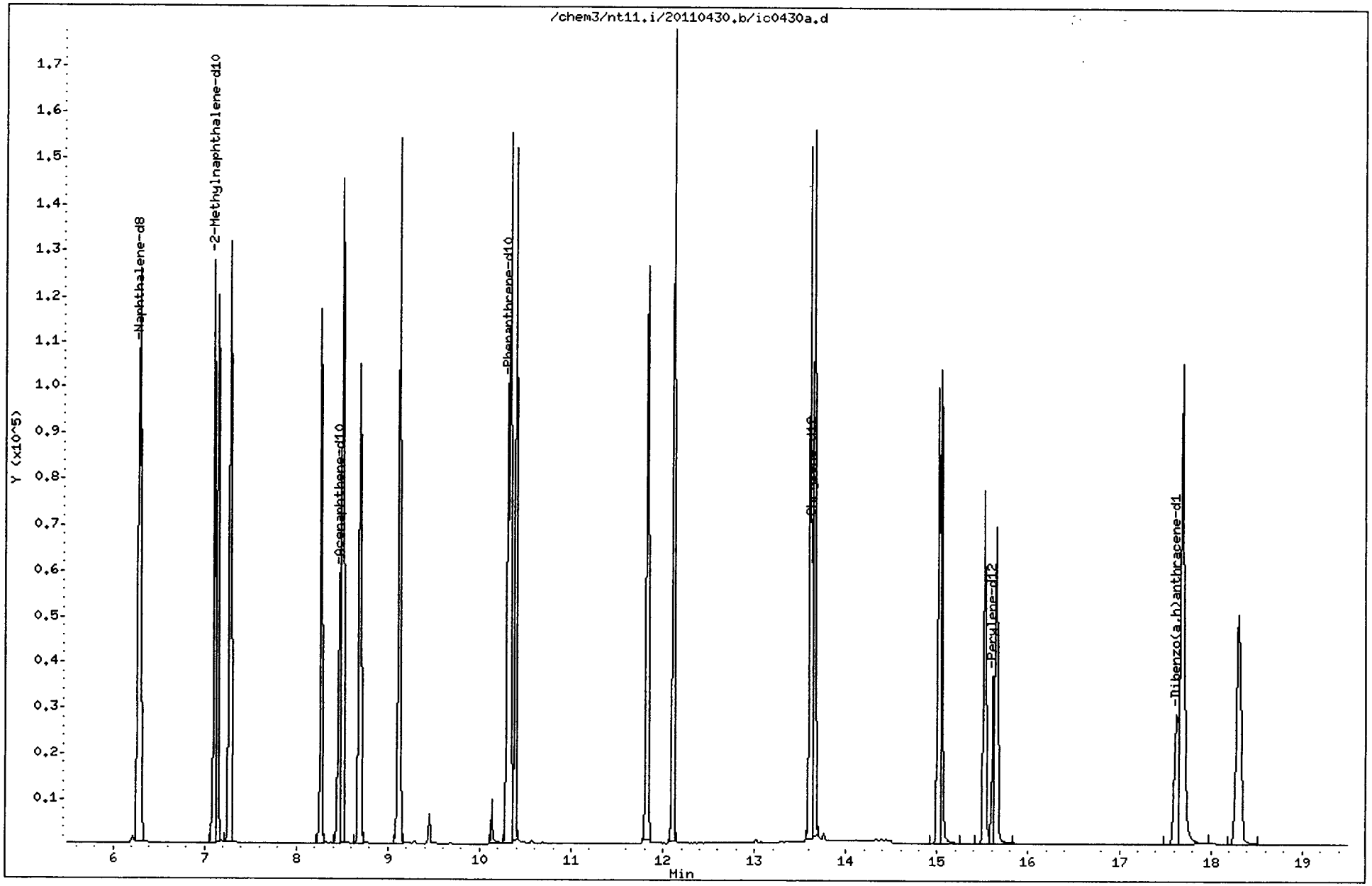
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20110430.b/ic0430a.d
Date : 30-APR-2011 10:12
Client ID:
Sample Info: SIM250

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi



SUSQ 05551

CO-ELUTION SUMMARY FOR FILE - ic0430a.d

Lab ID: SIM250, Method: lowsim.m, Instrument: nt11.i, Date: 30-APR-2011

RT	CO-ELUTION COMPOUNDS
17.685	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
17.685	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110430.b/ic0430b.d
Lab Smp Id: SIM1000
Inj Date : 30-APR-2011 10:37
Operator : VTS Inst ID: nt11.i
Smp Info : SIM1000
Misc Info :
Comment :
Method : /chem3/nt11.i/20110430.b/lowsim.m
Meth Date : 30-Apr-2011 13:05 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 3 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnalmn.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.272	6.272	(1.000)	133908	200.000	
	5 Naphthalene	128	6.295	6.295	(1.004)	499464	1000.00	778
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	343890	1000.00	884
	7 2-Methylnaphthalene	142	7.135	7.135	(1.138)	348447	1000.00	893
	8 1-Methylnaphthalene	142	7.273	7.273	(1.160)	344176	1000.00	889
	10 Acenaphthylene	152	8.265	8.265	(0.976)	488844	1000.00	863
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	72587	200.000	
	12 Acenaphthene	153	8.492	8.492	(1.003)	325241	1000.00	912
	14 Dibenzofuran	168	8.694	8.694	(1.027)	451464	1000.00	859
	15 Fluorene	166	9.123	9.123	(1.078)	341381	1000.00	921
*	18 Phenanthrene-d10	188	10.302	10.302	(1.000)	114760	200.000	
	19 Phenanthrene	178	10.329	10.329	(1.003)	473114	1000.00	820
	20 Anthracene	178	10.383	10.383	(1.008)	479136	1000.00	877
	24 Fluoranthene	202	11.831	11.817	(1.148)	492461	1000 00	869
	25 Pyrene	202	12.112	12.112	(0.889)	505226	1000.00	770
	28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	442950	1000.00	810
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	78082	200.000	
	30 Chrysene	228	13.655	13.655	(1.002)	441076	1000.00	802
	43 Total Benzofluoranthenes	252	15.041	15.041	(0.964)	845178	2000.00	1790
	34 Benzo(a)pyrene	252	15.512	15.512	(0.994)	396564	1000.00	946
*	35 Perylene-d12	264	15.608	15.608	(1.000)	58430	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	17.685	17.672	(1.133)	479179	1000.00	947
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	347856	1000.00	951
	38 Dibenzo(a,h)anthracene	278	17.685	17.685	(1.133)	378298	1000.00	960
	39 Benzo(g,h,i)perylene	276	18.302	18.289	(1.173)	419205	1000.00	930

VB
4.30.11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0430b.d
Lab Smp Id: SIM1000
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110430.b/lowsim.m
Misc Info:

Calibration Date: 30-APR-2011
Calibration Time: 10:12
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	133908	3.54
11 Acenaphthene-d10	70573	35286	141146	72587	2.85
18 Phenanthrene-d10	113741	56870	227482	114760	0.90
29 Chrysene-d12	70763	35382	141526	78082	10.34
35 Perylene-d12	54896	27448	109792	58430	6.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	0.00

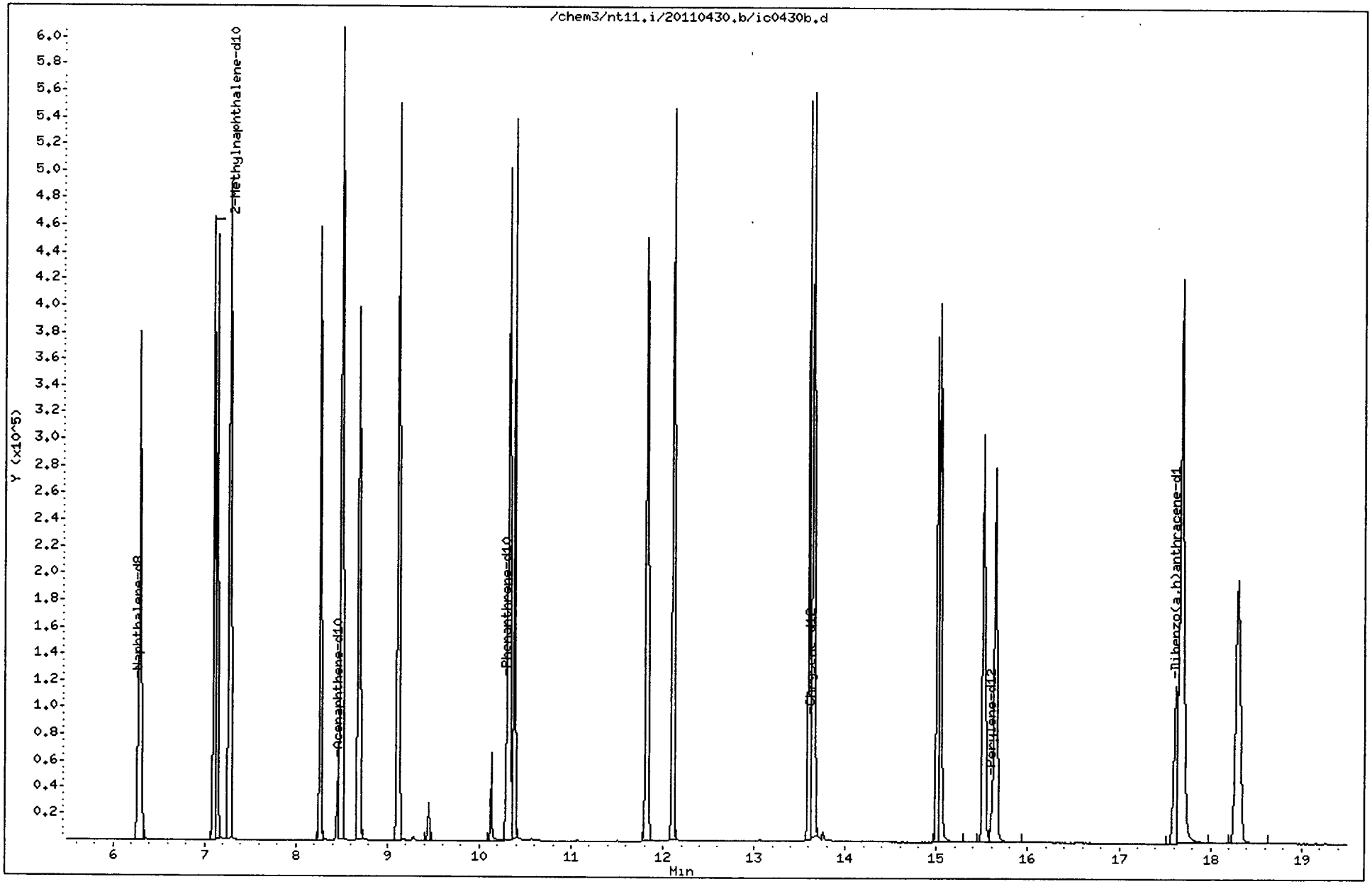
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20110430.b/ic0430b.d
Date : 30-APR-2011 10:37
Client ID:
Sample Info: SIM1000

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: ZB-5ms1



SUSS 00558

CO-ELUTION SUMMARY FOR FILE - ic0430b.d

Lab ID: SIM1000, Method: lowsim.m, Instrument: nt11.i, Date: 30-APR-2011

RT	CO-ELUTION COMPOUNDS
17.685	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
17.685	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110430.b/ic0430c.d
Lab Smp Id: SIM10
Inj Date : 30-APR-2011 11:02
Operator : VTS Inst ID: nt11.i
Smp Info : SIM10
Misc Info :
Comment :
Method : /chem3/nt11.i/20110430.b/lowsim.m
Meth Date : 30-Apr-2011 13:05 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnalmn.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.273	6.272	(1.000)	126410	200.000	
	5 Naphthalene	128	6.296	6.295	(1.004)	6833	10.0000	11.3
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	3881	10.0000	10.6
	7 2-Methylnaphthalene	142	7.136	7.135	(1.138)	3733	10.0000	10.1
	8 1-Methylnaphthalene	142	7.274	7.273	(1.160)	3699	10.0000	10.1
	10 Acenaphthylene	152	8.265	8.265	(0.976)	5589	10.0000	10.7
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	67004	200.000	
	12 Acenaphthene	153	8.493	8.492	(1.003)	3451	10.0000	10.5
	14 Dibenzofuran	168	8.694	8.694	(1.027)	5210	10.0000	10.7
	15 Fluorene	166	9.123	9.123	(1.078)	3590	10.0000	10.5
*	18 Phenanthrene-d10	188	10.303	10.302	(1.000)	107827	200.000	
	19 Phenanthrene	178	10.329	10.329	(1.003)	6023	10.0000	11.1
	20 Anthracene	178	10.383	10.383	(1.008)	5387	10.0000	10.5
	24 Fluoranthene	202	11.818	11.817	(1.147)	5780	10.0000	10.8
	25 Pyrene	202	12.113	12.112	(0.889)	5871	10.0000	11 6
	28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	5125	10.0000	12.1
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	60309	200.000	
	30 Chrysene	228	13.655	13.655	(1.002)	5054	10.0000	11.9
	43 Total Benzofluoranthenes	252	15.042	15.041	(0.964)	8687	20.0000	21.4(M)
	34 Benzo(a)pyrene	252	15.512	15.512	(0.994)	3785	10.0000	10.5
*	35 Perylene-d12	264	15.609	15.608	(1.000)	50334	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	17.672	17.672	(1.132)	4520	10.0000	10.4
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	3406	10.0000	10.8
	38 Dibenzo(a,h)anthracene	278	17.685	17.685	(1.133)	3569	10.0000	10.5
	39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	4125	10.0000	10.6

V15
4.30.11

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: ic0430c.d
Lab Smp Id: SIM10
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110430.b/lowsim.m
Misc Info:

Calibration Date: 30-APR-2011
Calibration Time: 10:12

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	126410	-2.25
11 Acenaphthene-d10	70573	35286	141146	67004	-5.06
18 Phenanthrene-d10	113741	56870	227482	107827	-5.20
29 Chrysene-d12	70763	35382	141526	60309	-14.77
35 Perylene-d12	54896	27448	109792	50334	-8.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	0.00

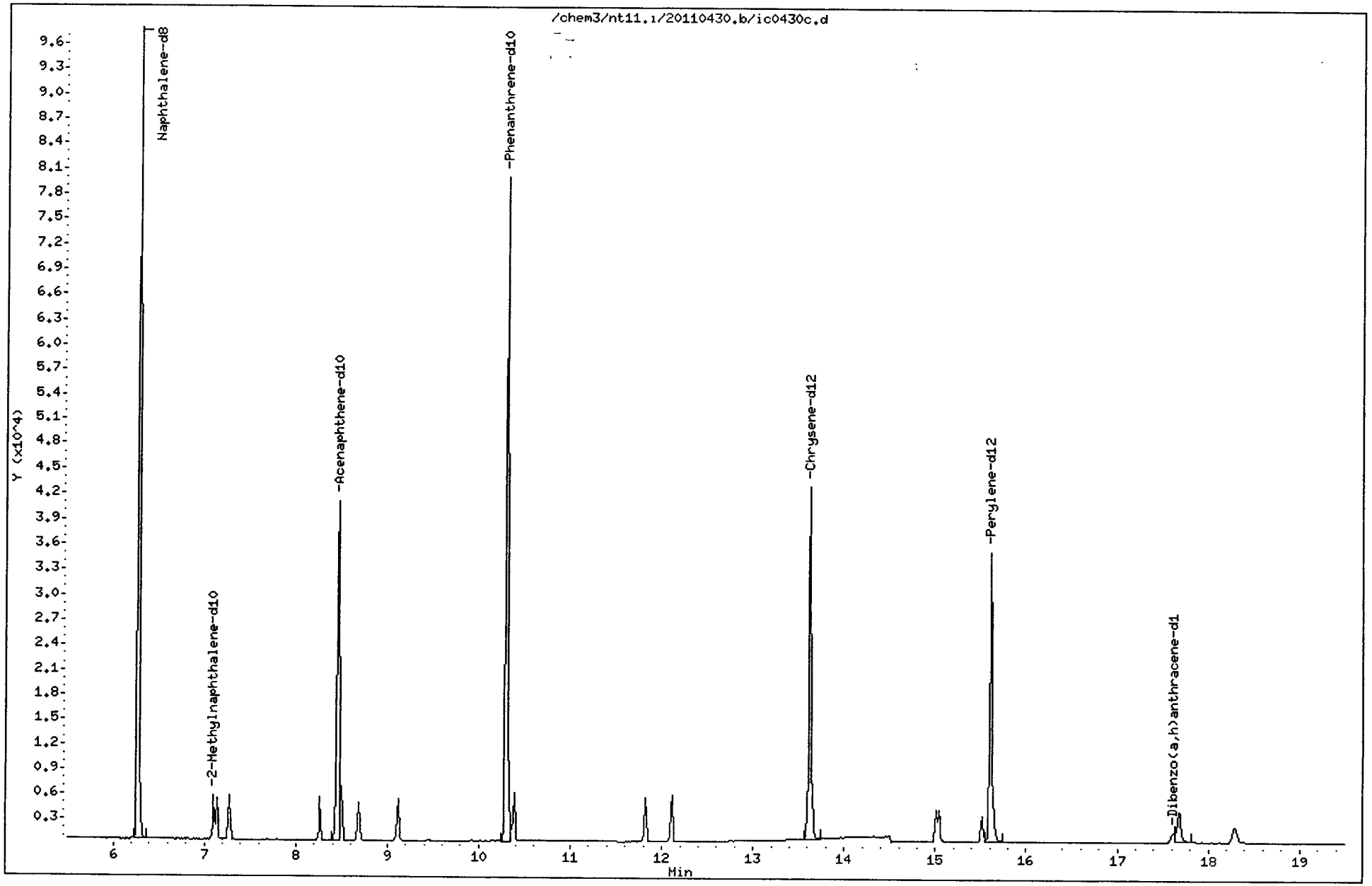
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20110430.b/ic0430c.d
Date : 30-APR-2011 11:02
Client ID:
Sample Info: SIM10

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi

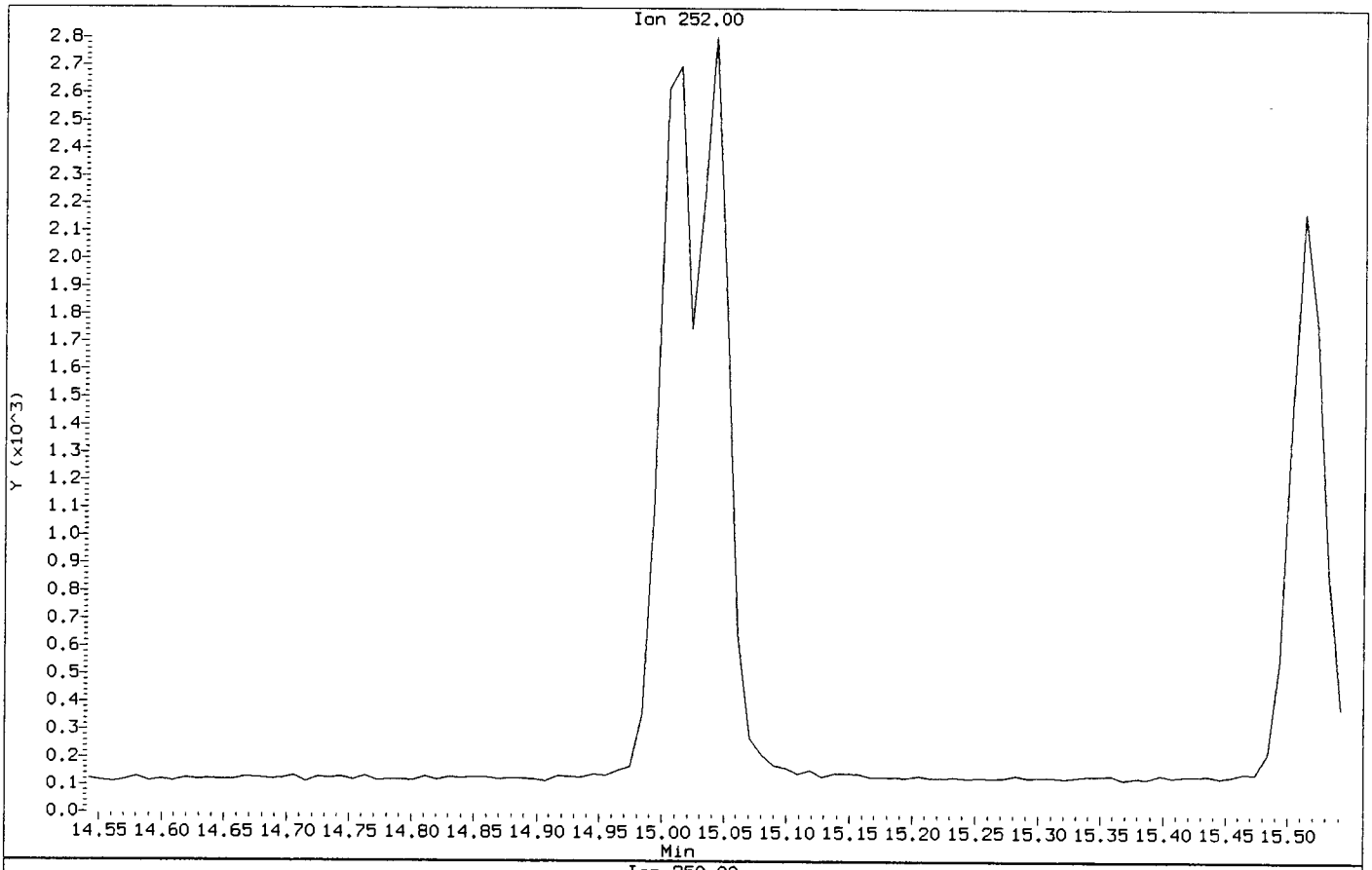


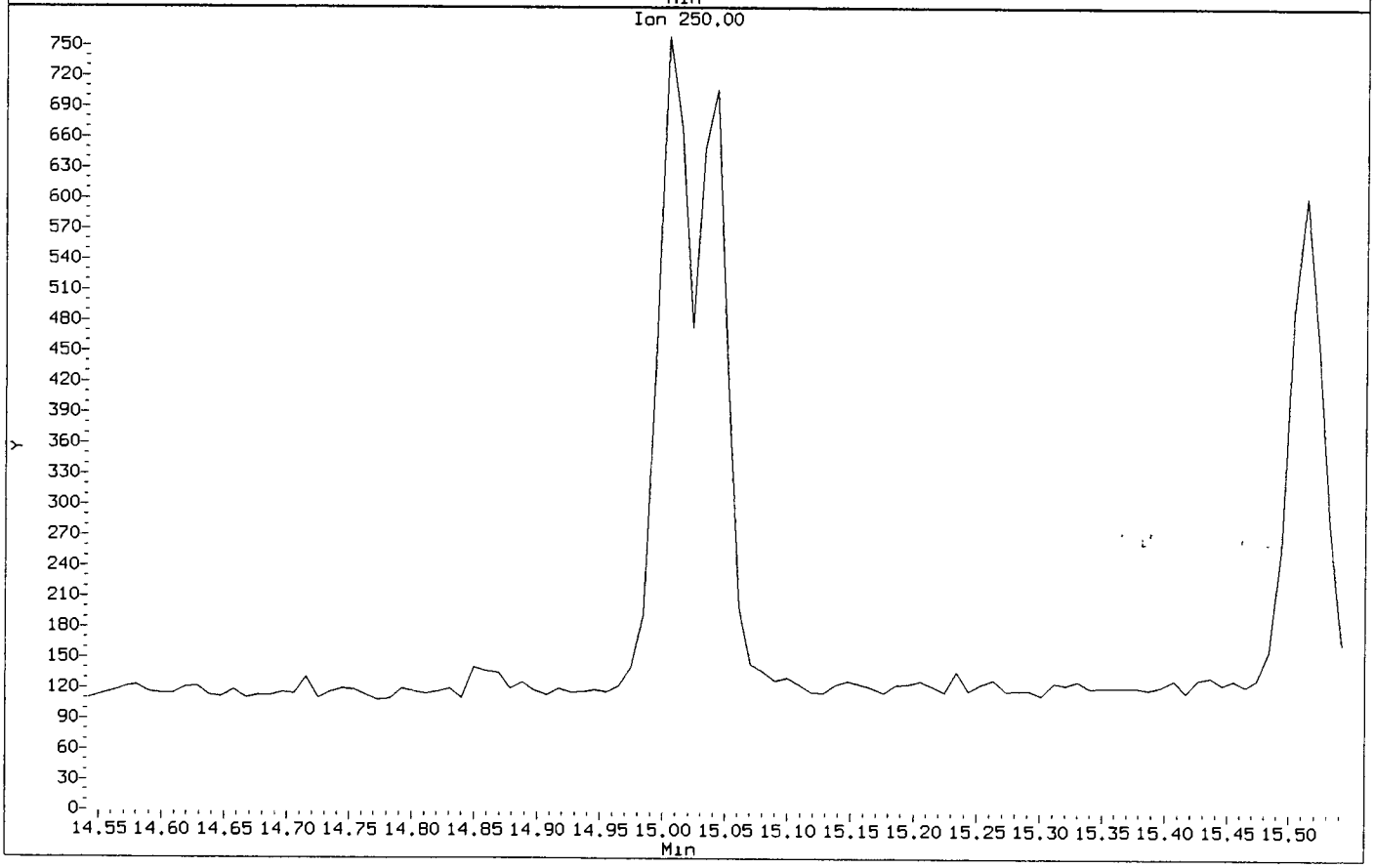
SU53:00569

VB
4.30.11

Data File: /chem3/nt11.i/20110430.b/ic0430c.d
Injection Date: 30-APR-2011 11:02
Instrument: nt11.i
Client Sample ID:

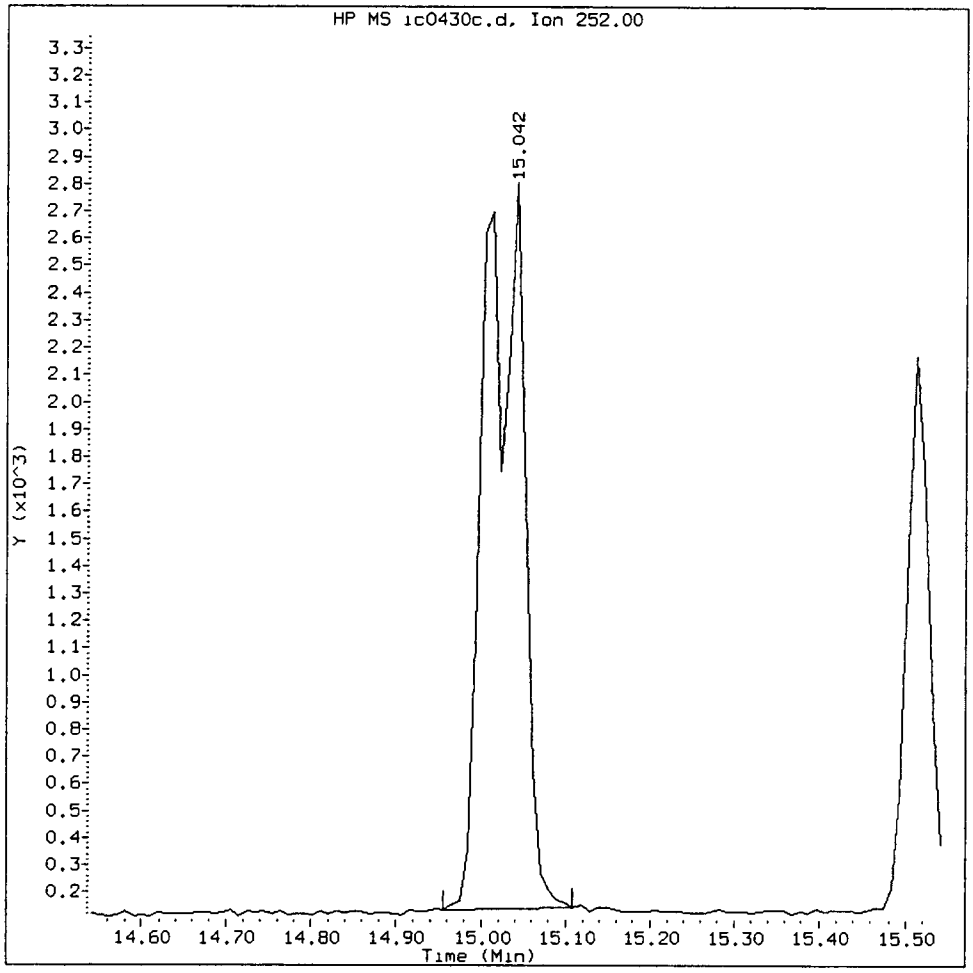
Compound: Total Benzofluoranthenes
CAS Number:





SIM10, /chem3/nt11.i/20110430.b/ic0430c.d

Total Benzofluoranthenes Amount: 21.37 Area: 8687



MANUAL INTEGRATION for Total Benzofluoranthenes

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

5. Other _____

Analyst: VB Date: 4-30-11

CO-ELUTION SUMMARY FOR FILE - ic0430c.d

Lab ID: SIM10, Method: lowsim.m, Instrument: nt11.i, Date: 30-APR-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110430.b/ic0430d.d
Lab Smp Id: SIM500
Inj Date : 30-APR-2011 11:26
Operator : VTS Inst ID: nt11.i
Smp Info : SIM500
Misc Info :
Comment :
Method : /chem3/nt11.i/20110430.b/lowsim.m
Meth Date : 30-Apr-2011 13:05 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.273	6.272	(1.000)	127404	200.000	
	5 Naphthalene	128	6.296	6.295	(1.004)	286280	500.000	469
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	181907	500.000	492
	7 2-Methylnaphthalene	142	7.136	7.135	(1.138)	187040	500.000	504
	8 1-Methylnaphthalene	142	7.274	7.273	(1.160)	186475	500.000	506
	10 Acenaphthylene	152	8.265	8.265	(0.976)	276004	500.000	490
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	72156	200.000	
	12 Acenaphthene	153	8.493	8.492	(1.003)	171570	500.000	484
	14 Dibenzofuran	168	8.694	8.694	(1.027)	251202	500.000	481
	15 Fluorene	166	9.123	9.123	(1.078)	179539	500.000	487
*	18 Phenanthrene-d10	188	10.302	10.302	(1.000)	112214	200.000	
	19 Phenanthrene	178	10.329	10.329	(1.003)	271263	500.000	481
	20 Anthracene	178	10.383	10.383	(1.008)	265871	500.000	498
	24 Fluoranthene	202	11.818	11.817	(1.147)	278570	500.000	502
	25 Pyrene	202	12.113	12.112	(0.889)	283258	500.000	462
	28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	238142	500.000	466
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	73029	200.000	
	30 Chrysene	228	13.655	13.655	(1.002)	236979	500.000	461
	43 Total Benzofluoranthenes	252	15.042	15.041	(0.964)	439089	1000.00	972
	34 Benzo(a)pyrene	252	15.512	15.512	(0.994)	198356	500.000	495
*	35 Perylene-d12	264	15.608	15.608	(1.000)	55910	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	17.672	17.672	(1.132)	238454	500.000	493
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	167115	500.000	477
	38 Dibenzo(a,h)anthracene	278	17.685	17.685	(1.133)	184723	500.000	490
	39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	209148	500.000	485

UJ
4-30-11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0430d.d
Lab Smp Id: SIM500
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110430.b/lowsim.m
Misc Info:

Calibration Date: 30-APR-2011
Calibration Time: 10:12

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	127404	-1.49
11 Acenaphthene-d10	70573	35286	141146	72156	2.24
18 Phenanthrene-d10	113741	56870	227482	112214	-1.34
29 Chrysene-d12	70763	35382	141526	73029	3.20
35 Perylene-d12	54896	27448	109792	55910	1.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	0.00

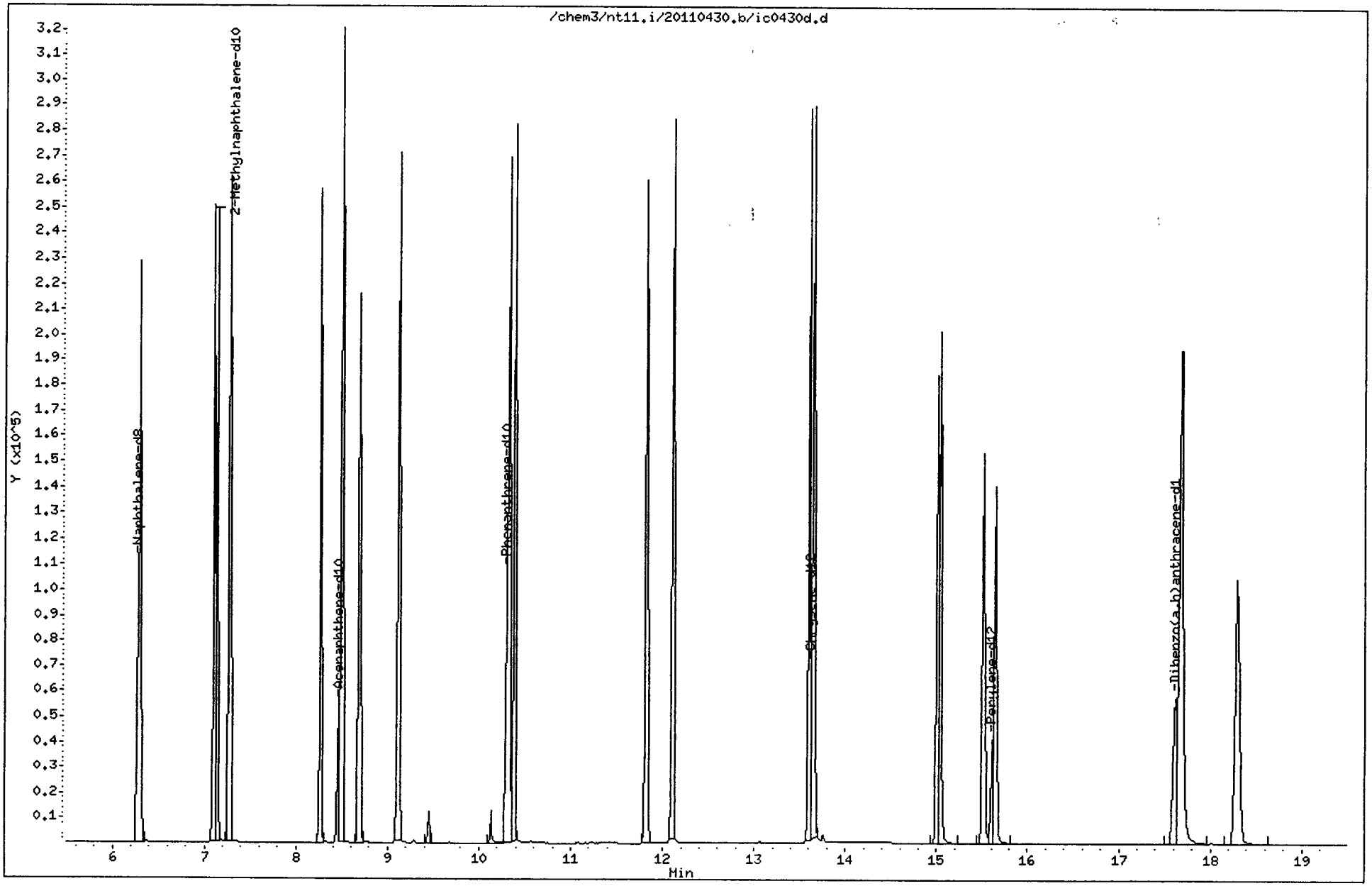
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20110430.b/ic0430d.d
Date : 30-APR-2011 11:26
Client ID:
Sample Info: SIM500

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi



SUSS 00569

CO-ELUTION SUMMARY FOR FILE - ic0430d.d

Lab ID: SIM500, Method: lowsim.m, Instrument: nt11.i, Date: 30-APR-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110430.b/ic0430e.d
Lab Smp Id: SIM50
Inj Date : 30-APR-2011 11:51
Operator : VTS Inst ID: nt11.i
Smp Info : SIM50
Misc Info :
Comment :
Method : /chem3/nt11.i/20110430.b/lowsim.m
Meth Date : 30-Apr-2011 13:05 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 6 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.273	6.272	(1.000)	128015	200.000	
	5 Naphthalene	128	6.296	6.295	(1.004)	32789	50.0000	53.4
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	18714	50.0000	50.3
	7 2-Methylnaphthalene	142	7.136	7.135	(1.138)	18690	50.0000	50.1
	8 1-Methylnaphthalene	142	7.274	7.273	(1.160)	18509	50.0000	50.0
	10 Acenaphthylene	152	8.265	8.265	(0.976)	27320	50.0000	49.9
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	70175	200.000	
	12 Acenaphthene	153	8.493	8.492	(1.003)	16885	50.0000	49.0
	14 Dibenzofuran	168	8.694	8.694	(1.027)	25226	50.0000	49.7
	15 Fluorene	166	9.123	9.123	(1.078)	17525	50.0000	48.9
*	18 Phenanthrene-d10	188	10.303	10.302	(1.000)	110629	200.000	
	19 Phenanthrene	178	10.329	10.329	(1.003)	28738	50.0000	51.7
	20 Anthracene	178	10.383	10.383	(1.008)	25981	50.0000	49.4
	24 Fluoranthene	202	11.818	11.817	(1.147)	26162	50.0000	47.9
	25 Pyrene	202	12.113	12.112	(0.889)	27512	50.0000	51.2
	28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	22302	50.0000	49.8
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	63954	200.000	
	30 Chrysene	228	13.655	13.655	(1.002)	22927	50.0000	50.9
	43 Total Benzofluoranthenes	252	15.042	15.041	(0.964)	40873	100.000	99.2
	34 Benzo(a)pyrene	252	15.512	15.512	(0.994)	17695	50.0000	48.4
*	35 Perylene-d12	264	15.609	15.608	(1.000)	50988	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	17.672	17.672	(1.132)	21585	50.0000	48.9
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	15277	50.0000	47.8
	38 Dibenzo(a,h)anthracene	278	17.685	17.685	(1.133)	16748	50.0000	48.7
	39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	19464	50.0000	49.5

VJS
4-30-11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0430e.d
Lab Smp Id: SIM50
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110430.b/lowsim.m
Misc Info:

Calibration Date: 30-APR-2011
Calibration Time: 10:12

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	128015	-1.01
11 Acenaphthene-d10	70573	35286	141146	70175	-0.56
18 Phenanthrene-d10	113741	56870	227482	110629	-2.74
29 Chrysene-d12	70763	35382	141526	63954	-9.62
35 Perylene-d12	54896	27448	109792	50988	-7.12

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	0.00

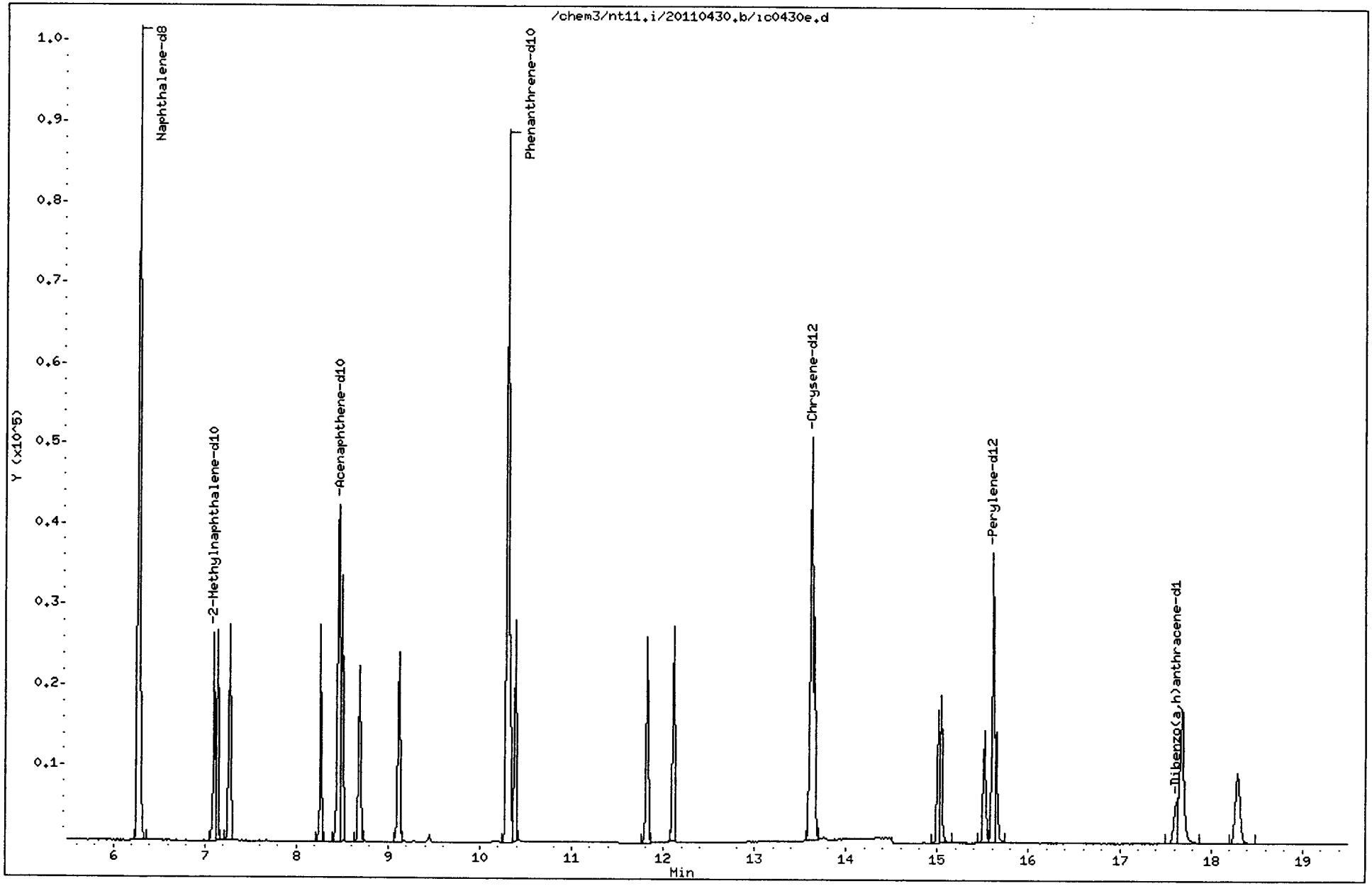
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20110430.b/ic0430e.d
Date : 30-APR-2011 11:51
Client ID:
Sample Info: SIM50

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi



SI53:09573

CO-ELUTION SUMMARY FOR FILE - ic0430e.d

Lab ID: SIM50, Method: lowsim.m, Instrument: nt11.i, Date: 30-APR-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110430.b/ic0430f.d
Lab Smp Id: SIM100
Inj Date : 30-APR-2011 12:15
Operator : VTS Inst ID: nt11.i
Smp Info : SIM100
Misc Info :
Comment :
Method : /chem3/nt11.i/20110430.b/lowsim.m
Meth Date : 30-Apr-2011 13:05 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.272	6.272	(1.000)	126437	200.000	
	5 Naphthalene	128	6.295	6.295	(1.004)	65292	100.000	108
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	38295	100.000	104
	7 2-Methylnaphthalene	142	7.135	7.135	(1.138)	38601	100.000	105
	8 1-Methylnaphthalene	142	7.273	7.273	(1.160)	38565	100.000	105
	10 Acenaphthylene	152	8.265	8.265	(0.976)	57385	100.000	107
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	68901	200.000	
	12 Acenaphthene	153	8.492	8.492	(1.003)	36035	100.000	106
	14 Dibenzofuran	168	8.694	8.694	(1.027)	53236	100.000	107
	15 Fluorene	166	9.123	9.123	(1.078)	36836	100.000	105
*	18 Phenanthrene-d10	188	10.302	10.302	(1.000)	107249	200.000	
	19 Phenanthrene	178	10.329	10.329	(1.003)	57150	100.000	106
	20 Anthracene	178	10.383	10.383	(1.008)	54465	100.000	107
	24 Fluoranthene	202	11.817	11.817	(1.147)	56322	100.000	106
	25 Pyrene	202	12.112	12.112	(0.889)	59053	100.000	109
	28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	48234	100.000	107
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	64366	200.000	
	30 Chrysene	228	13.655	13.655	(1.002)	48943	100.000	108
	43 Total Benzofluoranthenes	252	15.041	15.041	(0.964)	88964	200.000	211
	34 Benzo(a)pyrene	252	15.512	15.512	(0.994)	38564	100.000	103
*	35 Perylene-d12	264	15.608	15.608	(1.000)	52142	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	17.672	17.672	(1.132)	46269	100.000	102
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	33941	100.000	104
	38 Dibenzo(a,h)anthracene	278	17.685	17.685	(1.133)	35801	100.000	102
	39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	41518	100.000	103

VJ3
4.30.11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0430f.d
Lab Smp Id: SIM100
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110430.b/lowsim.m
Misc Info:

Calibration Date: 30-APR-2011
Calibration Time: 10:12

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	126437	-2.23
11 Acenaphthene-d10	70573	35286	141146	68901	-2.37
18 Phenanthrene-d10	113741	56870	227482	107249	-5.71
29 Chrysene-d12	70763	35382	141526	64366	-9.04
35 Perylene-d12	54896	27448	109792	52142	-5.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	0.00

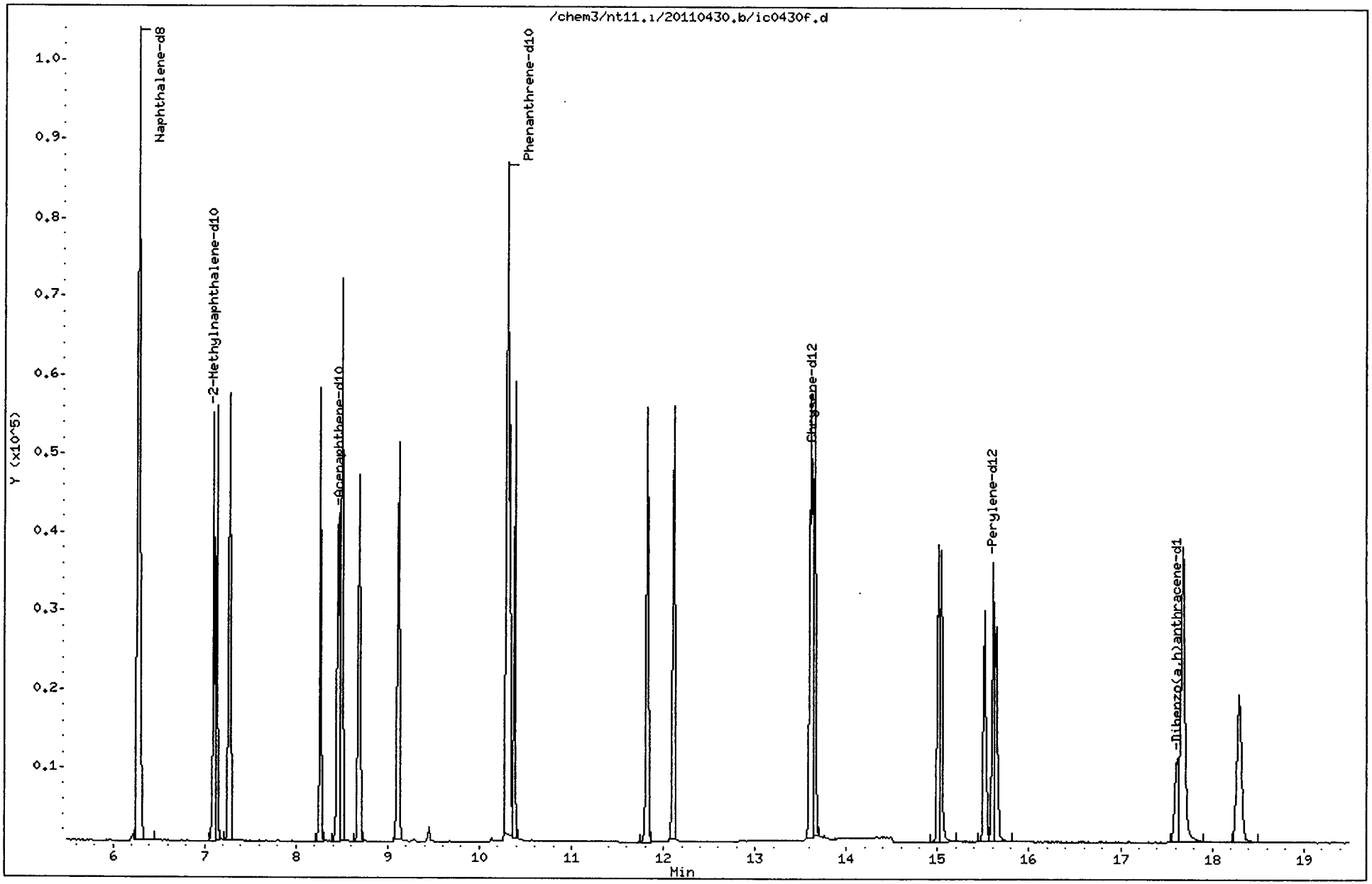
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20110430.b/ic0430f.d
Date : 30-APR-2011 12:15
Client ID:
Sample Info: SIM100

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi



SUS3:00577

CO-ELUTION SUMMARY FOR FILE - ic0430f.d

Lab ID: SIM100, Method: lowsim.m, Instrument: nt11.i, Date: 30-APR-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110430.b/icv0430.d
Lab Smp Id: ICV-250
Inj Date : 30-APR-2011 12:39
Operator : VTS Inst ID: nt11.i
Smp Info : ICV-250
Misc Info :
Comment :
Method : /chem3/nt11.i/20110430.b/lowsim.m
Meth Date : 30-Apr-2011 14:37 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	4 Naphthalene-d8	136	6.273	6.272	(1.000)	124975	200.000	
	5 Naphthalene	128	6.296	6.295	(1.004)	173843	290.039	290
$	6 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	7 2-Methylnaphthalene	142	~~7.274~~	7.135	(1.160)	94554	~~259.712~~	260
	8 1-Methylnaphthalene	142	7.274	7.273	(1.160)	94554	261.680	262
	10 Acenaphthylene	152	8.265	8.265	(0.978)	163303	298.522	299
*	11 Acenaphthene-d10	164	8.452	8.466	(1.000)	70122	200.000	
	12 Acenaphthene	153	8.493	8.492	(1.005)	100025	290.212	290
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	9.123	9.123	(1.079)	110202	307.606	308
*	18 Phenanthrene-d10	188	10.302	10.302	(1.000)	110829	200.000	
	19 Phenanthrene	178	10.329	10.329	(1.003)	163542	293.547	294
	20 Anthracene	178	10.383	10.383	(1.008)	152395	288.991	289
	24 Fluoranthene	202	11.817	11.817	(1.147)	162660	297.061	297
	25 Pyrene	202	12.113	12.112	(0.889)	168034	285.733	286
	28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	136905	279.272	279
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	69995	200.000	
	30 Chrysene	228	13.655	13.655	(1.002)	140351	284.777	285
	43 Total Benzofluoranthenes	252	15.041	15.041	(0.964)	256486	581.696	582
	34 Benzo(a)pyrene	252	15.512	15.512	(0.994)	110447	282.062	282
*	35 Perylene-d12	264	15.608	15.608	(1.000)	54585	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	17.672	17.672	(1.132)	133097	281.608	282
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	17.685	17.685	(1.133)	102758	279.114	279
	39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	119260	283.189	283

@250

1232

UB
4.30.11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: icv0430.d
Lab Smp Id: ICV-250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110430.b/lowsim.m
Misc Info:

Calibration Date: 30-APR-2011
Calibration Time: 10:12

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	124975	-3.36
11 Acenaphthene-d10	70573	35286	141146	70122	-0.64
18 Phenanthrene-d10	113741	56870	227482	110829	-2.56
29 Chrysene-d12	70763	35382	141526	69995	-1.09
35 Perylene-d12	54896	27448	109792	54585	-0.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.45	-0.16
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	0.00

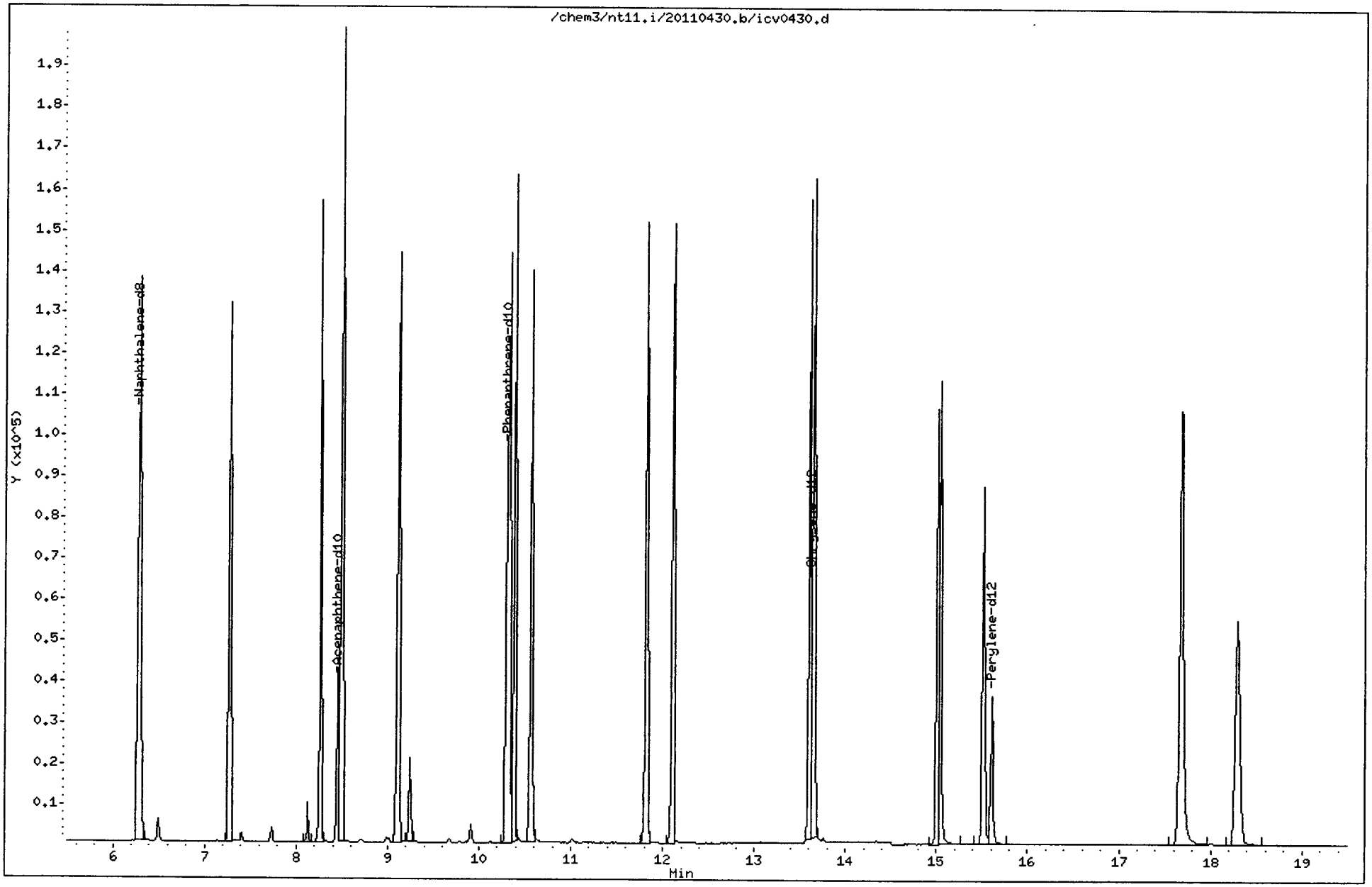
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20110430.b/icv0430.d
Date : 30-APR-2011 12:39
Client ID:
Sample Info: ICV-250

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi



SUS3:00581

CO-ELUTION SUMMARY FOR FILE - icv0430.d

Lab ID: ICV-250, Method: lowsim.m, Instrument: nt11.i, Date: 30-APR-2011

RT	CO-ELUTION COMPOUNDS
7.274	1-Methylnaphthalene and ~~2-Methylnaphthalene~~

NOT IN ICV

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

ARI Job ID: SU53, SU73, SU74

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: SU53 Client ID: Floyd Snyder

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

Parameter(s): SIM PNA L.L

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 04/30/11 Analysis Start Date: 05/16/11

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

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

Additional Details on Reverse: Yes / No

Analyst: YZ **Date:** 5/20/11

Reviewer: [signature] **Date:** 5/20/11

Analytical Resources Inc.: Organics Instrument Log

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

Date: 5/16/11 Analysis: Low SIM PAH Analyst: YZ

GC Program: Low SIM Column No: 196516 Column Type: ZB5 msi

Instrument Tune (.U or .CT.): 110430u EM Voltage: 1474

Calibration File: DF 0516 Curve Date: 04/30/11

IS/SS	Ical/Ccal	LCS/ICV
1754-1	1818-2	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20110516.b

	Time	Filename	LabID	ClientId	DF								
1	1043	su21c d	SU21C	MW10-042711	1	6 27	115895	8 47	66799	10.30	113038	13.63	72524	15.61	60672
2	1107	su21d.d	SU21D	MW09-042711	1	6 27	116896	8 45	68135	10 30	116708	13.63	75275	15 61	62256
3	1131	su21e d	SU21E	MW08-042711	1	6 27	121086	8.45	70652	10 30	115647	13.63	75741	15 61	63723
4	1156	su21f d	SU21F	MW12-042711	1	6 27	115933	8 47	68372	10.30	113477	13.63	74607	15 61	61690
5	1220	su45mb d	SU45MBW1	SU45MBW1	1	6 27	114372	8 45	63779	10 30	101283	13 63	66352	15 61	57382
6	1333	su45qls d	SU45QLS		1	6.27	116798	8 45	67069	10 30	110231	13.63	70277	15 61	59877
7	1244	su45sb d	SU45LCSW1	SU45LCSW1	1	6 27	122313	8 45	72780	10 30	119298	13.63	78581	15 61	65906
8	1308	su45sbd.d	SU45LCSDW1	SU45LCSDW1	1	6 27	118073	8 45	69478	10.30	106510	13.63	71825	15.61	60831
9	1357	su45a d	SU45A	PS2220-04271	1	6 27	123112	8 47	73762	10 30	122629	13 63	75002	15.62	66199
10	1421	su45b d	SU45B	NF20925-0427	1	6 27	110636	8 47	64734	10 30	104703	13 63	66073	15 61	59685
11	1446	su45c d	SU45C	BDC2088-0427	1	6 27	124452	8 45	72832	10 30	119394	13 63	79460	15.61	69050
12	1510	su47a d	SU47A	DK1-042711-W	1	6 27	121199	8 47	70565	10.30	119220	13 63	73532	15.61	64621
13	1534	su47b d	SU47B	DK2-042711-W	1	6 27	113494	8.47	66738	10 30	109012	13 63	70695	15.62	62178
14	1558	su53a d	SU53A	MW5042811	1	6 27	118071	8 47	70065	10 30	113950	13.63	77577	15 61	66676
15	1623	su53b d	SU53B	MW15042811	1	6 27	121196	8.47	70575	10 30	118974	13.63	78241	15.61	66146
16	1647	su53c d	SU53C	MW4042811	1	6 27	120343	8 47	72423	10 30	123589	13 63	81508	15.61	68851
17	1711	su53cms d	SU53CMS	MW4042811 MS	1	6 27	120332	8 47	72647	10.30	120641	13.63	83655	15 61	69114
18	1736	su53cmsd d	SU53CMSD	MW4042811 MS	1	6 27	123172	8 45	72829	10 30	121870	13 63	81868	15 61	69858
19	1800	su53d d	SU53D	MW17042811	1	6 27	124759	8 47	72222	10 30	122396	13 63	80713	15 61	66914
20	1824	su53e.d	SU53E	MW14042811	1	6 27	121662	8 45	70080	10 30	118353	13.63	78044	15 61	67186
21	1848	su53f d	SU53F	MW16042811	1	6.27	122354	8 45	68437	10 30	113162	13.63	75098	15 61	65013

YZ 5/20/11

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.

Data File: /chem3/nt11.i/20110516.b/df0516.d

Date : 16-MAY-2011 10:04

Client ID:

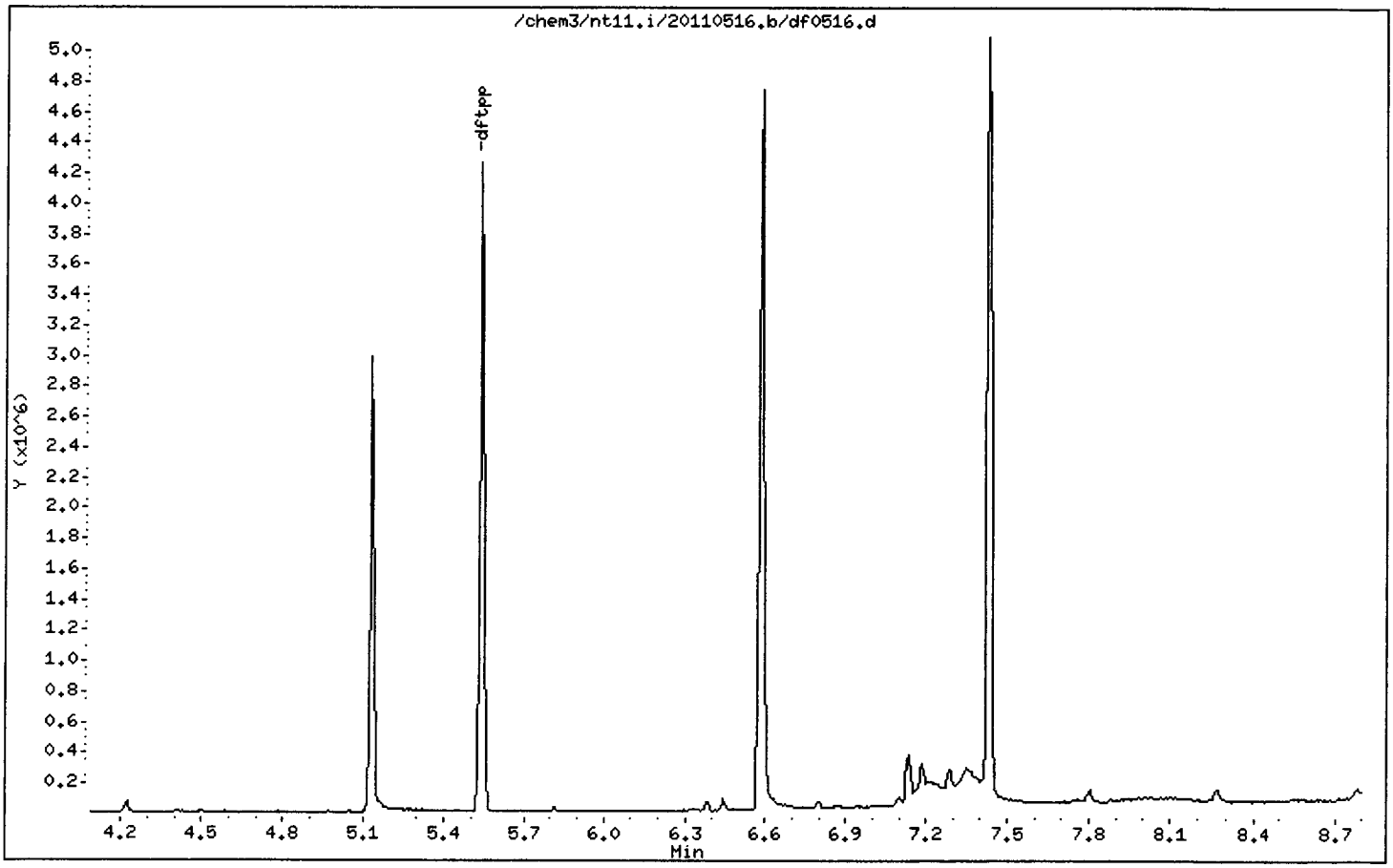
Instrument: nt11.i

Sample Info: DF0516

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem3/nt11.i/20110516.b/df0516.d

Date : 16-MAY-2011 10:04

Client ID:

Instrument: nt11.i

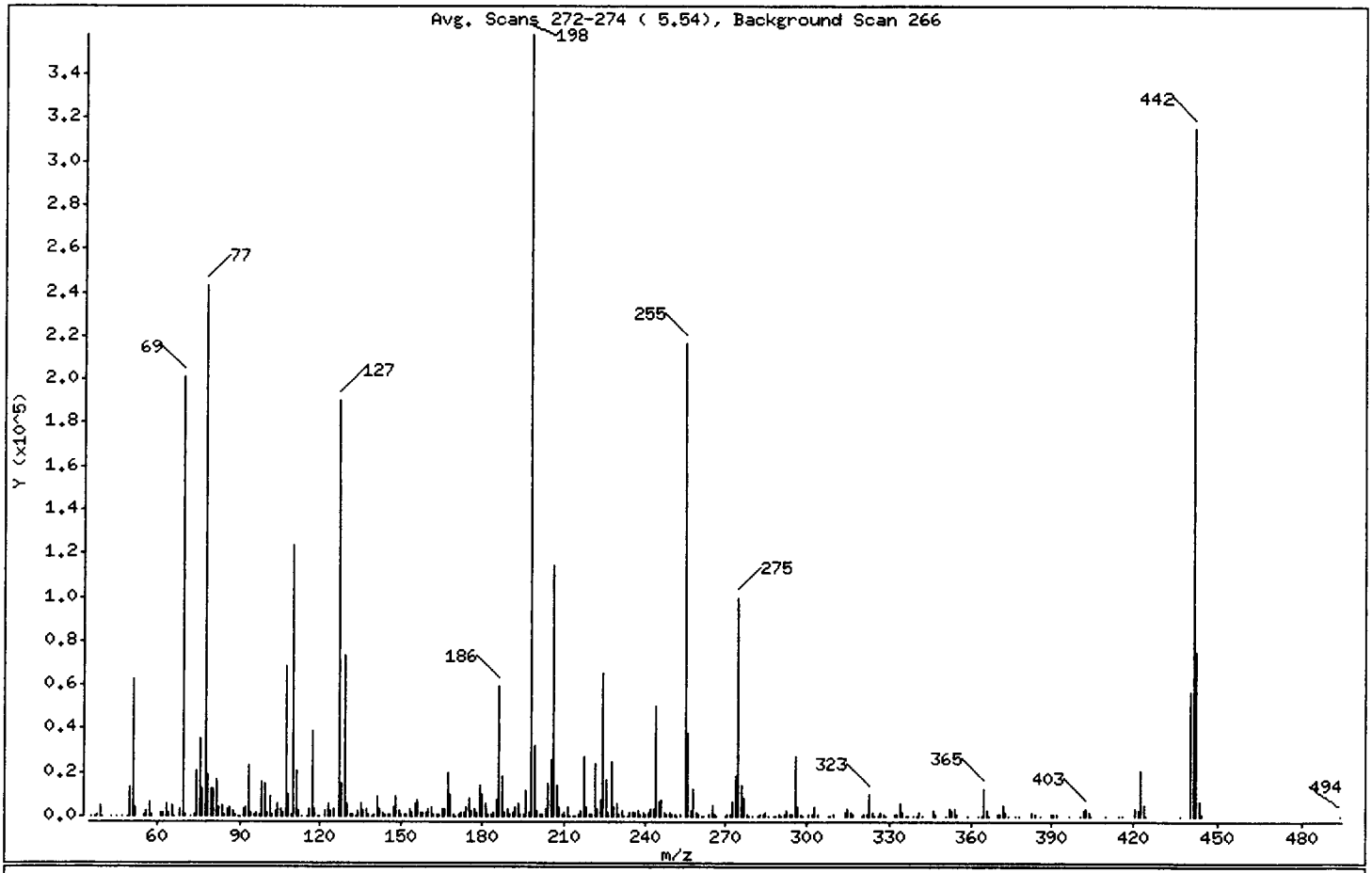
Sample Info: DF0516

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	17.43
68	Less than 2.00% of mass 69	0.91 (1.61)
69	Mass 69 relative abundance	56.08
70	Less than 2.00% of mass 69	0.26 (0.46)
127	10.00 - 80.00% of mass 198	52.99
197	Less than 2.00% of mass 198	0.45
199	5.00 - 9.00% of mass 198	8.92
275	10.00 - 60.00% of mass 198	27.72
365	Greater than 1.00% of mass 198	3.52
441	0.01 - 24.00% of mass 442	15.96 (18.15)
442	50.00 - 200.00% of mass 198	87.96
443	15.00 - 24.00% of mass 442	20.92 (23.78)

Data File: /chem3/nt11.i/20110516.b/df0516.d

Date : 16-MAY-2011 10:04

Client ID:

Instrument: nt11.i

Sample Info: DF0516

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0516.d
Spectrum: Avg. Scans 272-274 (5.54), Background Scan 266
Location of Maximum: 198.00
Number of points: 327

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	55	130.00	6124	212.00	394	301.00	530
37.00	261	131.00	1189	213.00	361	302.00	672
38.00	465	132.00	681	214.00	145	303.00	3936
39.00	4583	133.00	262	215.00	981	304.00	999
40.00	309	134.00	2263	216.00	2164	306.00	95
41.00	239	135.00	5572	217.00	27080	308.00	391
43.00	65	136.00	2272	218.00	3748	309.00	282
45.00	121	137.00	3566	219.00	520	310.00	477
47.00	59	138.00	768	220.00	502	314.00	1481
49.00	271	139.00	110	221.00	24232	315.00	3553
50.00	13063	140.00	691	222.00	2949	316.00	1867
51.00	62440	141.00	9392	223.00	7628	317.00	463
52.00	3707	142.00	3086	224.00	65320	320.00	70
55.00	513	143.00	1875	225.00	16608	321.00	1018
56.00	2498	144.00	673	226.00	1729	322.00	630
57.00	6987	145.00	640	227.00	25088	323.00	9894
58.00	510	146.00	1157	228.00	3872	324.00	1993
59.00	58	147.00	4197	229.00	5371	325.00	130
61.00	1667	148.00	9462	230.00	808	326.00	110
62.00	1991	149.00	2203	231.00	2151	327.00	1343
63.00	5971	150.00	648	232.00	252	328.00	857
64.00	1255	151.00	1177	233.00	292	329.00	304
65.00	4592	152.00	707	234.00	1714	332.00	728
66.00	265	153.00	3064	235.00	1778	333.00	880
68.00	3242	154.00	1881	236.00	1360	334.00	5607
69.00	200896	155.00	5396	237.00	2616	335.00	1648
70.00	930	156.00	7721	238.00	449	336.00	366
72.00	77	157.00	1460	239.00	1275	337.00	54
73.00	1126	158.00	1747	240.00	743	339.00	50
74.00	20976	159.00	1452	241.00	1274	340.00	133
75.00	35712	160.00	3044	242.00	2973	341.00	1264
76.00	12195	161.00	4475	243.00	3038	342.00	326
77.00	243328	162.00	930	244.00	50368	346.00	2060
78.00	18840	163.00	528	245.00	6768	347.00	466
79.00	11943	164.00	483	246.00	7401	351.00	354

Date : 16-MAY-2011 10:04

Client ID: Instrument: nt11.i

Sample Info: DF0516

Operator: VTS

Column phase: ZB-5ms1 Column diameter: 0.25

Data File: df0516.d
Spectrum: Avg. Scans 272-274 (5.54), Background Scan 266
Location of Maximum: 198.00
Number of points: 327

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	12159	165.00	3157	247.00	1872	352.00	3037
81.00	16832	166.00	3200	248.00	612	353.00	2379
82.00	3731	167.00	19456	249.00	1570	354.00	2980
83.00	4929	168.00	10002	250.00	566	355.00	450
84.00	440	169.00	1068	251.00	428	357.00	82
85.00	3186	170.00	251	252.00	351	359.00	311
86.00	4405	171.00	719	253.00	944	363.00	63
87.00	2093	172.00	1483	255.00	216640	364.00	60
88.00	887	173.00	1786	256.00	37904	365.00	12604
89.00	111	174.00	4193	257.00	2542	366.00	2285
90.00	129	175.00	7973	258.00	12555	367.00	109
91.00	3630	176.00	2348	259.00	2029	370.00	457
92.00	4079	177.00	3355	260.00	432	371.00	950
93.00	22976	178.00	1293	261.00	234	372.00	4727
94.00	1907	179.00	13917	262.00	53	373.00	1568
95.00	785	180.00	10116	264.00	627	374.00	200
96.00	1466	181.00	5393	265.00	4843	377.00	157
97.00	499	182.00	674	266.00	1011	378.00	118
98.00	15240	183.00	730	267.00	83	383.00	1327
99.00	14927	184.00	1330	270.00	95	384.00	461
100.00	1344	185.00	7814	271.00	534	386.00	143
101.00	9116	186.00	59448	272.00	897	390.00	769
102.00	683	187.00	17976	273.00	6733	391.00	615
103.00	2298	188.00	1333	274.00	17984	392.00	425
104.00	5463	189.00	3366	275.00	99312	397.00	61
105.00	3444	190.00	861	276.00	13717	401.00	369
106.00	1573	191.00	1719	277.00	8285	402.00	2425
107.00	68048	192.00	4216	278.00	1005	403.00	3129
108.00	10158	193.00	5928	279.00	122	404.00	1267
109.00	642	194.00	782	280.00	122	405.00	63
110.00	123216	195.00	869	282.00	337	410.00	57
111.00	20608	196.00	11897	283.00	1038	415.00	83
112.00	2365	197.00	1606	284.00	872	416.00	68
113.00	374	198.00	358208	285.00	1537	421.00	3059
115.00	317	199.00	31936	286.00	333	422.00	2752

Date : 16-MAY-2011 10:04

Client ID: Instrument: nt11.1

Sample Info: DF0516

Operator: VTS

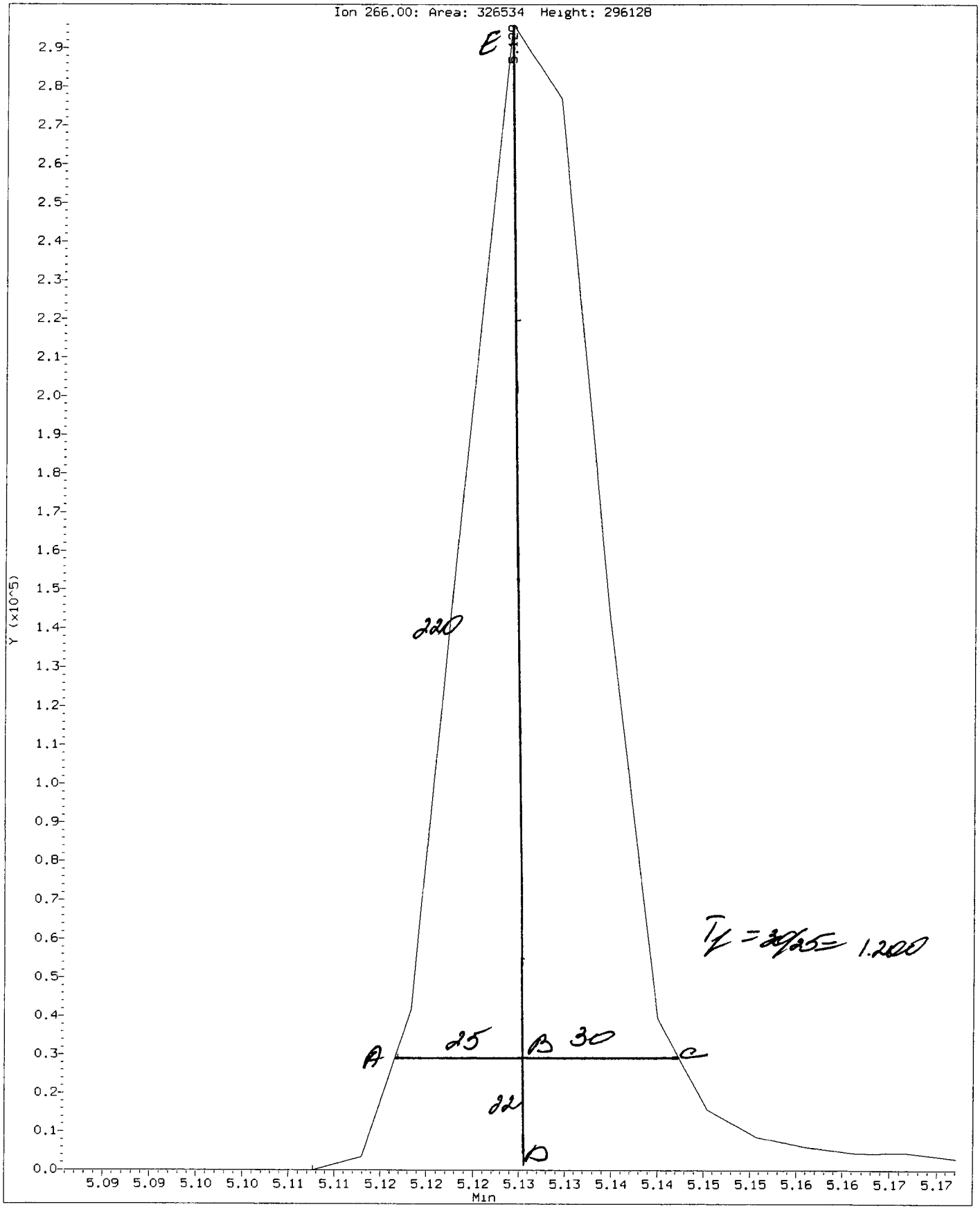
Column phase: ZB-5msi Column diameter: 0.25

Data File: df0516.d
Spectrum: Avg. Scans 272-274 (5.54), Background Scan 266
Location of Maximum: 198.00
Number of points: 327

m/z	Y	m/z	Y	m/z	Y	m/z	Y
116.00	3241	200.00	2339	288.00	256	423.00	20704
117.00	38776	201.00	878	289.00	306	424.00	4616
118.00	2928	202.00	726	290.00	440	425.00	383
119.00	401	203.00	3398	291.00	322	430.00	56
120.00	408	204.00	14711	292.00	429	437.00	52
122.00	2580	205.00	25280	293.00	2361	441.00	57176
123.00	5684	206.00	114152	294.00	492	442.00	315072
124.00	2616	207.00	13991	295.00	444	443.00	74936
125.00	3028	208.00	4219	296.00	27192	444.00	6354
127.00	189824	209.00	1001	297.00	4292	445.00	577
128.00	14574	210.00	1641	298.00	413	494.00	53
129.00	72968	211.00	3864	299.00	152		

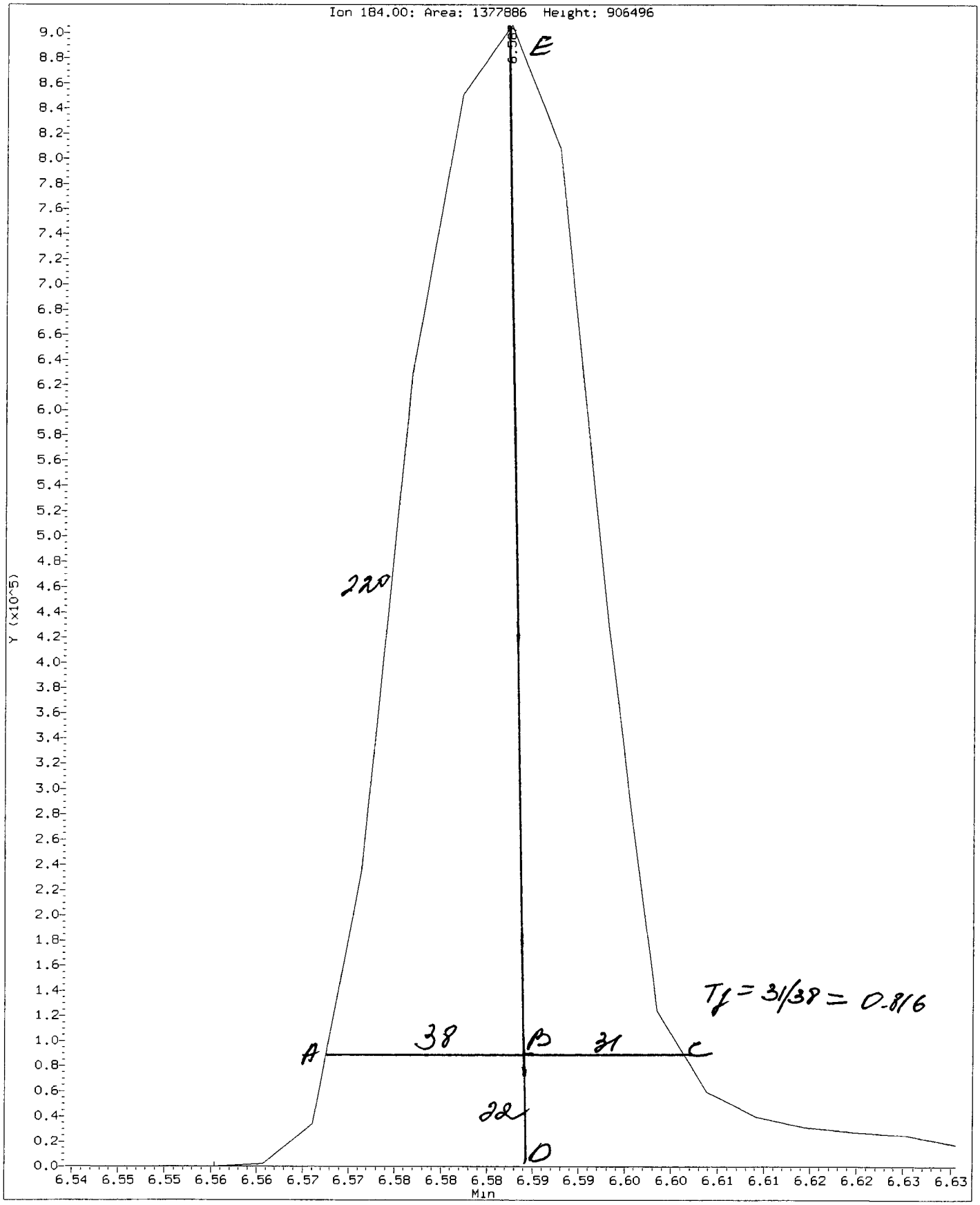
Data File: /chem3/nt11.1/20110516.b/ddt.b/df0516.d
Injection Date: 16-MAY-2011 10:04
Instrument: nt11.1
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.i/20110516.b/ddt.b/df0516.d
Injection Date: 16-MAY-2011 10:04
Instrument: nt11.i
Client Sample ID:

Compound: Benzidine
CAS Number:



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

Data file: /chem3/nt11.i/20110516.b/ddt.b/df0516.d ARI ID: DF0516
Method: /chem3/nt11.i/20110516.b/ddt.b/sw846ddt.m Misc:
Analysis Date: 16-MAY-2011 10:04 Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	5.129	326534
Benzidine	6.587	1377885
4,4'-DDE	6.801	6502
4,4'-DDD	7.138	55534
4,4'-DDT	7.432	822529

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

$$\text{DDT Percent Breakdown} = \frac{(\ 6502 + 55534) * 100}{(\ 6502 + 55534 + 822529)}$$

DDT Percent Breakdown = 7.0 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 16-MAY-2011 10:19
Lab File ID: cc0516.d Init. Cal. Date(s): 30-APR-2011 30-APR-2011
Analysis Type: Init. Cal. Times: 10:12 12:15
Lab Sample ID: CC0514 Quant Type: ISTD
Method: /chem3/nt11.i/20110516.b/lowsim.m

COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
5 Naphthalene	0.95920	0.96878	0.010	0.99873	20.00000	Averaged
$ 6 2-Methylnaphthalene-d10	0.58083	0.60424	0.010	4.02979	20.00000	Averaged
7 2-Methylnaphthalene	0.58263	0.60448	0.010	3.75036	20.00000	Averaged
8 1-Methylnaphthalene	0.57825	0.61500	0.010	6.35566	20.00000	Averaged
10 Acenaphthylene	1.56025	1.62832	0.010	4.36286	20.00000	Averaged
12 Acenaphthene	0.98304	1.00196	0 010	1.92467	20.00000	Averaged
14 Dibenzofuran	1.44731	1.52314	0.010	5.23928	20.00000	Averaged
15 Fluorene	1.02181	1.07888	0.010	5.58546	20.00000	Averaged
19 Phenanthrene	1.00537	0 97708	0.010	-2.81451	20.00000	Averaged
20 Anthracene	0.95162	0.97044	0.010	1.97791	20.00000	Averaged
24 Fluoranthene	0.98812	1.05213	0.010	6.47737	20.00000	Averaged
25 Pyrene	1.68035	1 62150	0.010	-3.50230	20.00000	Averaged
28 Benzo(a)anthracene	1.40073	1.35742	0.010	-3.09225	20.00000	Averaged
30 Chrysene	1 40823	1.38003	0.010	-2.00267	20.00000	Averaged
43 Total Benzofluoranthenes	1.61557	1.53358	0.010	-5.07482	20.00000	Averaged
34 Benzo(a)pyrene	1.43471	1.38494	0.010	-3.46940	20.00000	Averaged
37 Indeno(1,2,3-cd)pyrene	1.73173	1.70705	0.010	-1.42499	20.00000	Averaged
$ 36 Dibenzo(a,h)anthracene-d14	1.25261	1.22798	0.010	-1.96650	20.00000	Averaged
38 Dibenzo(a,h)anthracene	1.34894	1.34622	0.010	-0.20140	20.00000	Averaged
39 Benzo(g,h,i)perylene	1.54303	1.50008	0.010	-2.78373	20.00000	Averaged

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110516.b/cc0516.d
Lab Smp Id: CC0514
Inj Date : 16-MAY-2011 10:19
Operator : VTS Inst ID: nt11.i

YZ 5/16/11

Smp Info : CC0514
Misc Info :
Comment :
Method : /chem3/nt11.i/20110516.b/lowsim.m
Meth Date : 16-May-2011 12:01 yev Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.272	6.272	(1.000)	121727	200.000	
	5 Naphthalene	128	6.295	6.295	(1.004)	147408	250.000	252
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	91940	250.000	260
	7 2-Methylnaphthalene	142	7.135	7.135	(1.138)	91977	250.000	259
	8 1-Methylnaphthalene	142	7.273	7.273	(1.160)	93578	250.000	266
	10 Acenaphthylene	152	8.265	8.265	(0.976)	142243	250.000	261
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	69884	200.000	
	12 Acenaphthene	153	8.492	8.492	(1.003)	87526	250.000	255
	14 Dibenzofuran	168	8.694	8.694	(1.027)	133054	250.000	263
	15 Fluorene	166	9.123	9.123	(1.078)	94246	250.000	264
*	18 Phenanthrene-d10	188	10.302	10.302	(1.000)	116143	200.000	
	19 Phenanthrene	178	10.329	10.329	(1.003)	141851	250.000	243
	20 Anthracene	178	10.383	10.383	(1.008)	140888	250.000	255
	24 Fluoranthene	202	11.817	11.817	(1.147)	152747	250.000	266
	25 Pyrene	202	12.112	12.112	(0.889)	157723	250.000	241
	28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	132036	250.000	242
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	77816	200.000	
	30 Chrysene	228	13.655	13.655	(1.002)	134235	250.000	245
	43 Total Benzofluoranthenes	252	15.041	15.041	(0.964)	246664	500.000	475
	34 Benzo(a)pyrene	252	15.512	15.512	(0.994)	111378	250.000	241
*	35 Perylene-d12	264	15.608	15.608	(1.000)	64337	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	17.672	17.672	(1.132)	137283	250.000	246
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	98755	250.000	245
	38 Dibenzo(a,h)anthracene	278	17.685	17.685	(1.133)	108264	250.000	249
	39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	120638	250.000	243

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: cc0516.d
Lab Smp Id: CC0514
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info:

Calibration Date: 16-MAY-2011
Calibration Time: 10:19
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	121727	-5.88
11 Acenaphthene-d10	70573	35286	141146	69884	-0.98
18 Phenanthrene-d10	113741	56870	227482	116143	2.11
29 Chrysene-d12	70763	35382	141526	77816	9.97
35 Perylene-d12	54896	27448	109792	64337	17.20

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	0.00

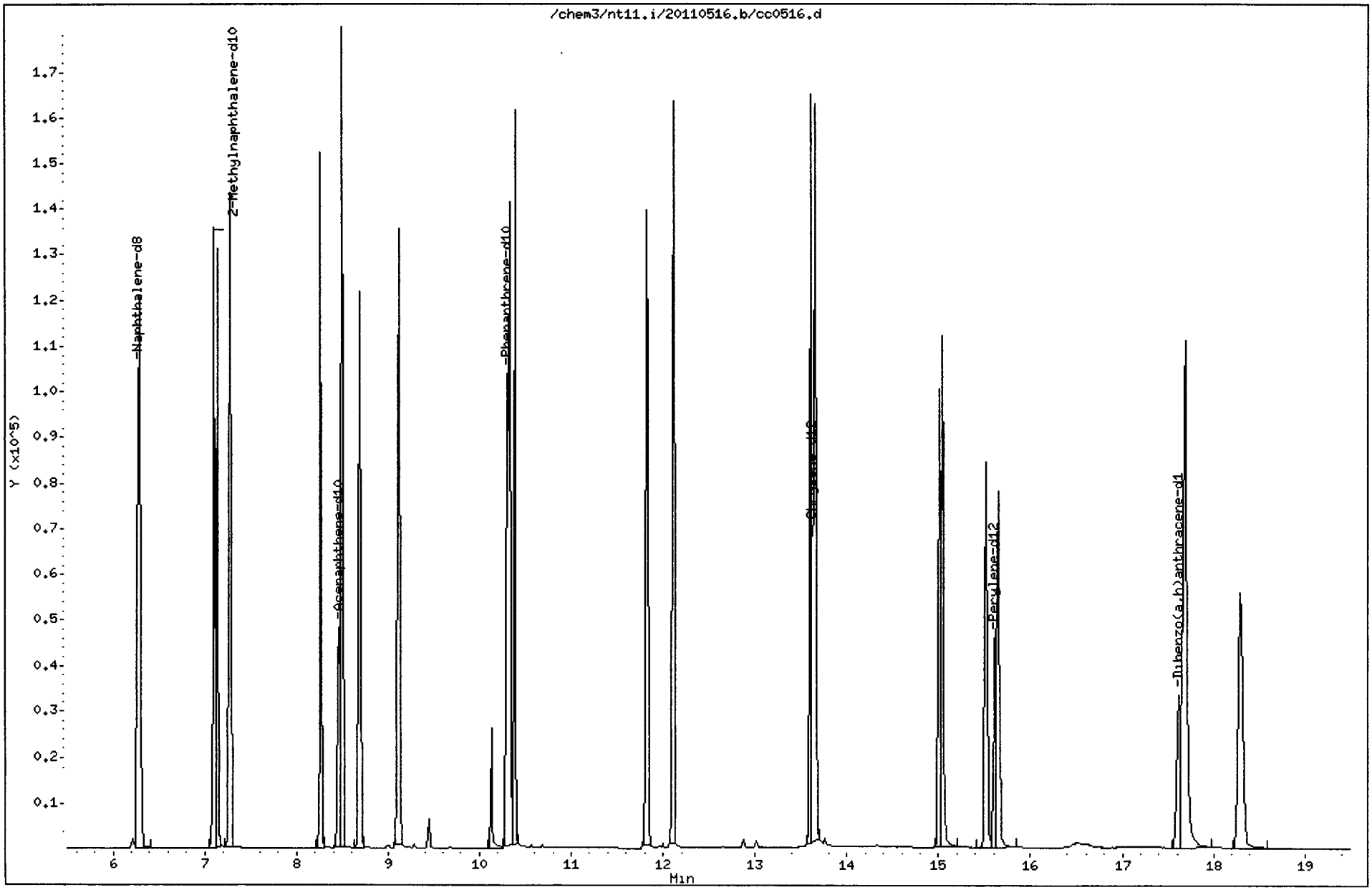
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20110516.b/cc0516.d
Date : 16-MAY-2011 10:19
Client ID:
Sample Info: CC0514

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi



SLS&C 16500

CO-ELUTION SUMMARY FOR FILE - cc0516.d

Lab ID: CC0514, Method: lowsim.m, Instrument: nt11.i, Date: 16-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/20/11

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110516.b/su45mb.d
Lab Smp Id: SU45MBW1 Client Smp ID: SU45MBW1
Inj Date : 16-MAY-2011 12:20
Operator : VTS Inst ID: nt11.i
Smp Info : SU45MBW1
Misc Info : 11-9581
Comment :
Method : /chem3/nt11.i/20110516.b/lowsim.m
Meth Date : 16-May-2011 12:01 yev Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	6.273	6.272	(1.000)	114372	200.000	
	5 Naphthalene	128	6.296	6.295	(1.004)	4465	8.13999 J	8.14(R)
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	58475	176.047	176
	7 2-Methylnaphthalene	142	7.136	7.135	(1.138)	1836	5.51047 J	5.51(R)
	8 1-Methylnaphthalene	142	7.274	7.273	(1.160)	1661	5.02300 J	5.02(R)
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.452	8.466	(1.000)	63779	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	10.303	10.302	(1.000)	101283	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)	CONCENTRATIONS FINAL (ug/L)
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	66352	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	15.609	15.608	(1.000)	57382	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	80121	222.938	223
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Newfields
Client SDG: SU45
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: SU45MBW1
Client Smp ID: SU45MBW1
Level: LOW
Operator: VTS
Data Type: MS DATA
SampleType: BLANK
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9581

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	176	58.68	31-109
$ 36 Dibenzo(a,h)anthra	300	223	74.31	10-133

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: su45mb.d
Lab Smp Id: SU45MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9581

Calibration Date: 16-MAY-2011
Calibration Time: 10:19
Client Smp ID: SU45MBW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	114372	-11.56
11 Acenaphthene-d10	70573	35286	141146	63779	-9.63
18 Phenanthrene-d10	113741	56870	227482	101283	-10.95
29 Chrysene-d12	70763	35382	141526	66352	-6.23
35 Perylene-d12	54896	27448	109792	57382	4.53

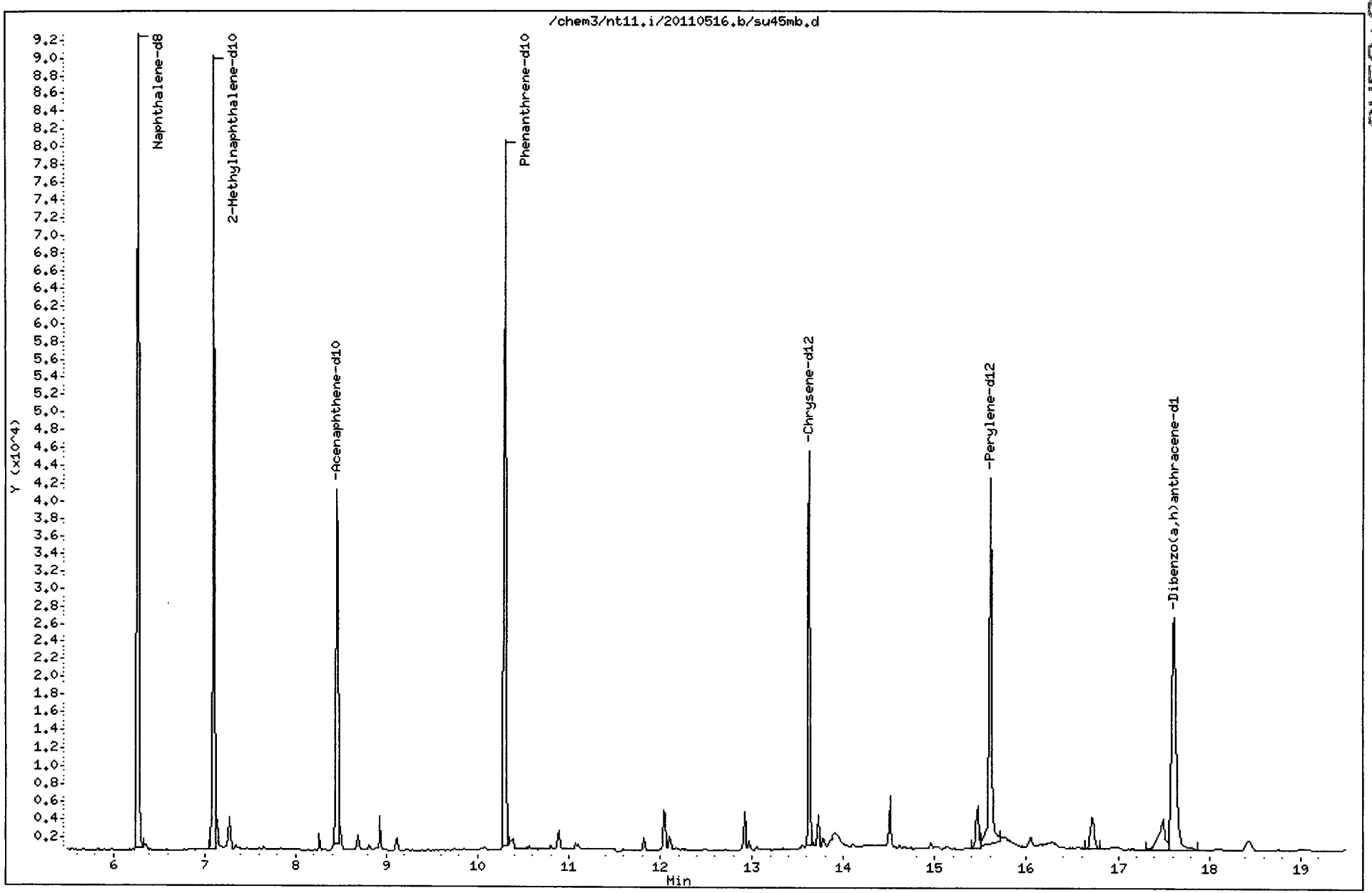
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.45	-0.16
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	0.00

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/20110516.b/su45mb.d
Date : 16-MAY-2011 12:20
Client ID: SU45MBW1
Sample Info: SU45MBW1
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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

SU53:66603



Data File: /chem3/nt11.i/20110516.b/su45mb.d

Date : 16-MAY-2011 12:20

Client ID: SU45MBW1

Instrument: nt11.i

Sample Info: SU45MBW1

Volume Injected (uL): 2.0

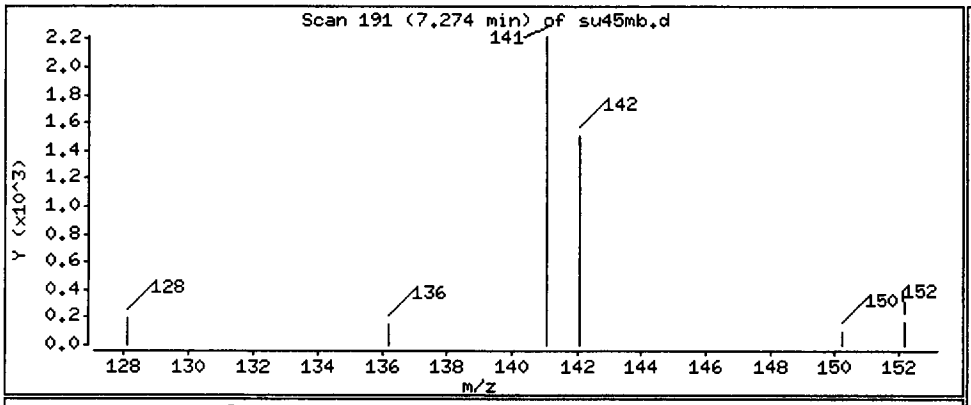
Operator: VTS

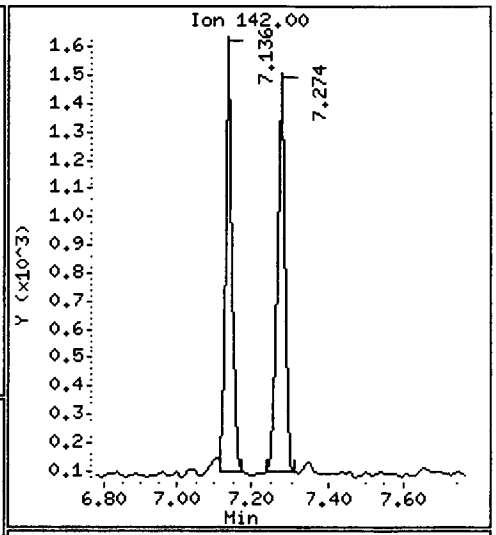
Column phase: ZB-5ms1

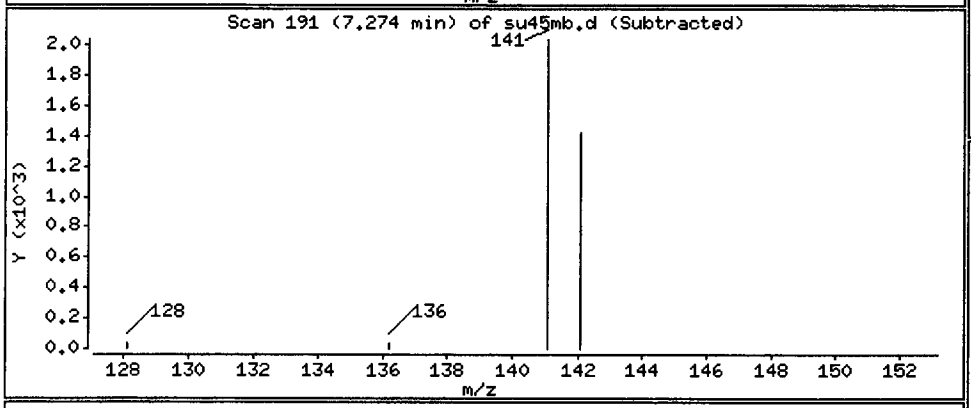
Column diameter: 0.25

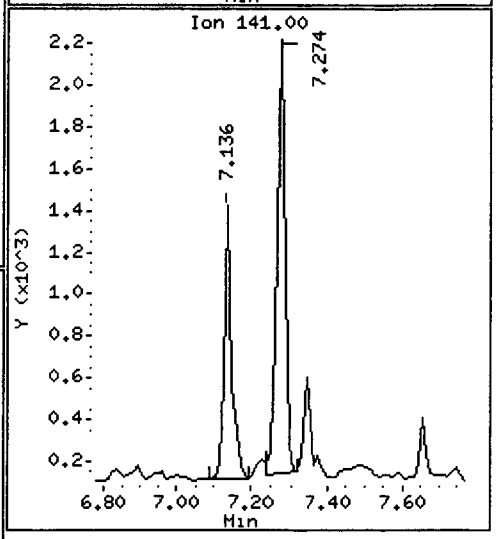
8 1-Methylnaphthalene

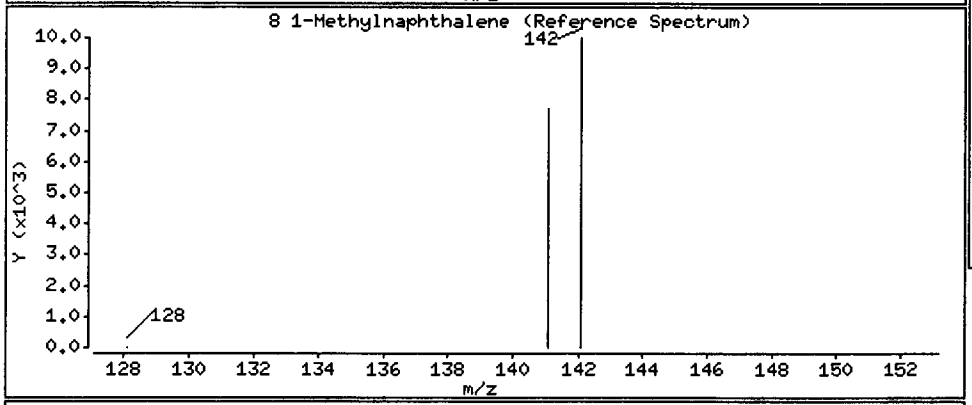
Concentration: 5.02 ug/L

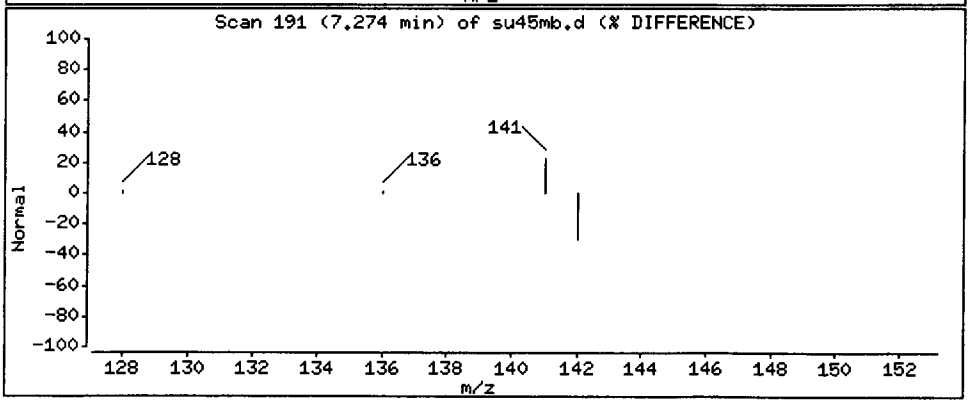












Data File: /chem3/nt11.i/20110516.b/su45mb.d

Date : 16-MAY-2011 12:20

Client ID: SU45MBW1

Instrument: nt11.i

Sample Info: SU45MBW1

Volume Injected (uL): 2.0

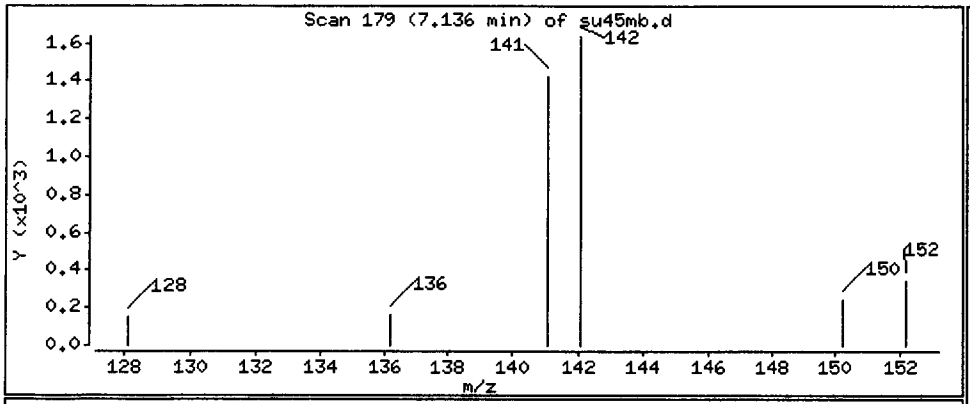
Operator: VTS

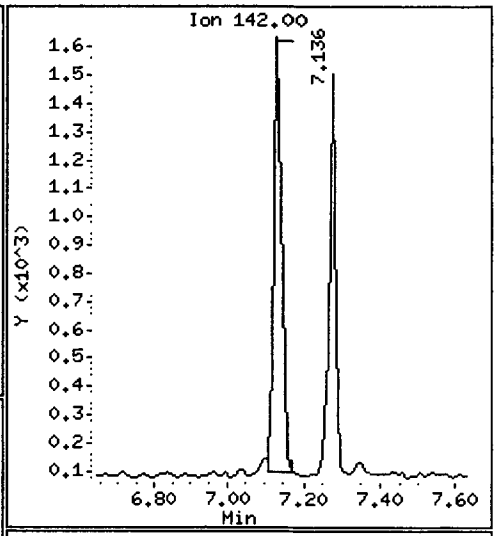
Column phase: ZB-5ms1

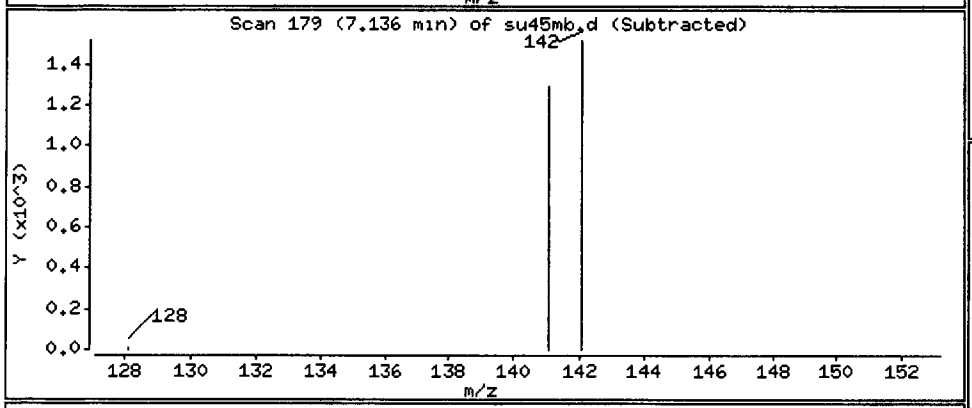
Column diameter: 0.25

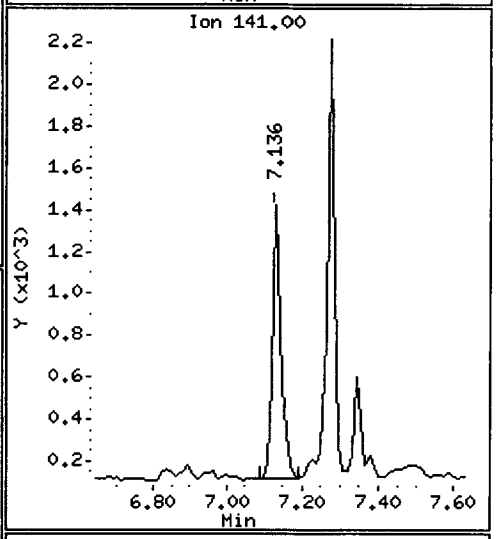
7 2-Methylnaphthalene

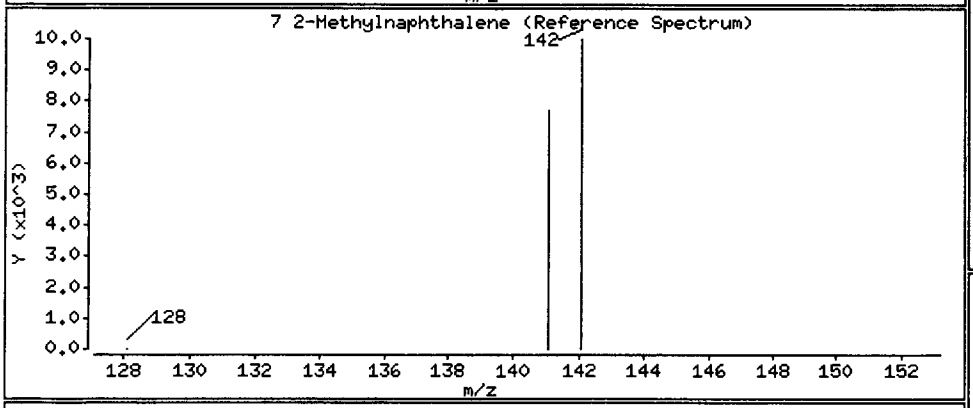
Concentration: 5.51 ug/L

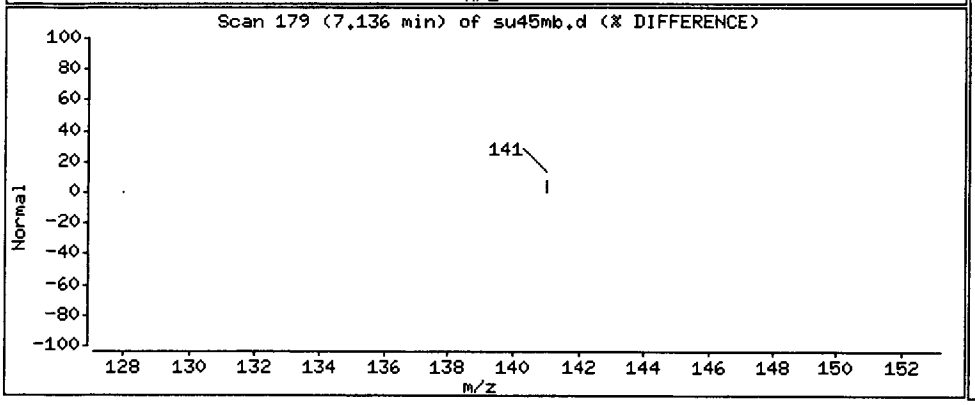


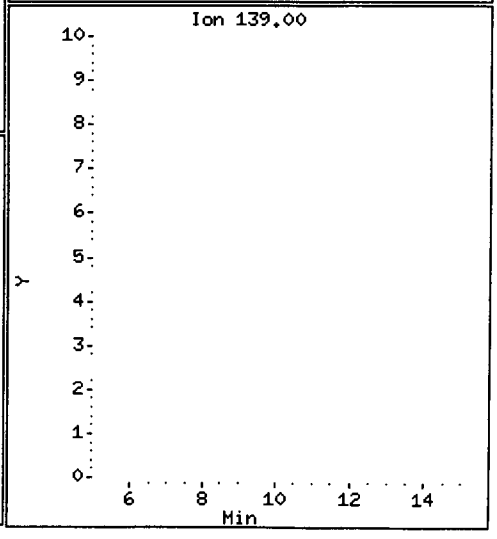












Data File: /chem3/nt11.i/20110516.b/su45mb.d

Date : 16-MAY-2011 12:20

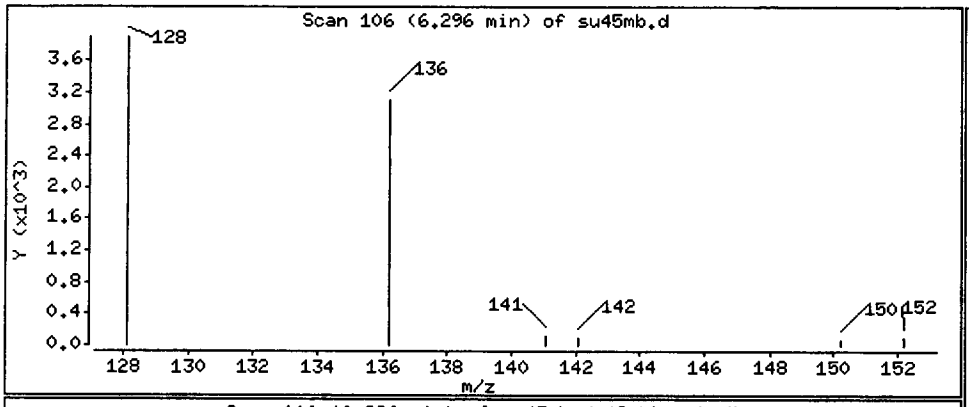
Client ID: SU45MBW1 Instrument: nt11.i

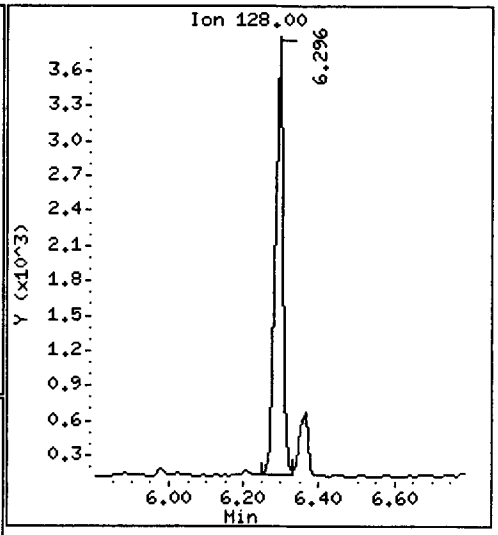
Sample Info: SU45MBW1

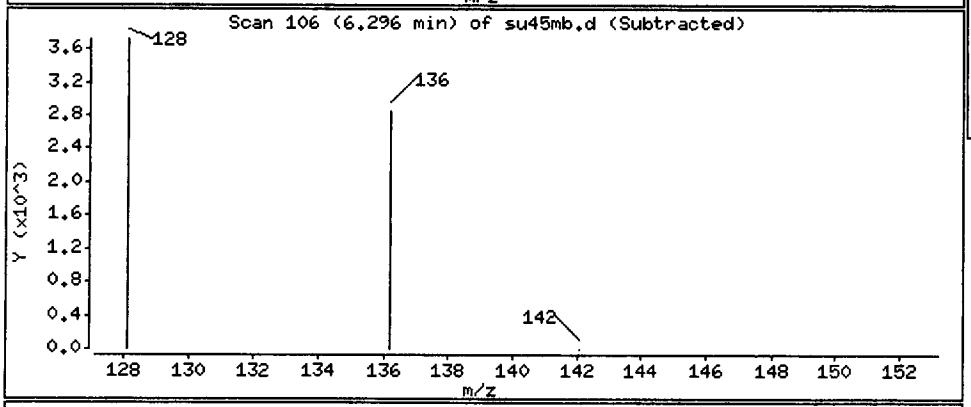
Volume Injected (uL): 2.0 Operator: VTS

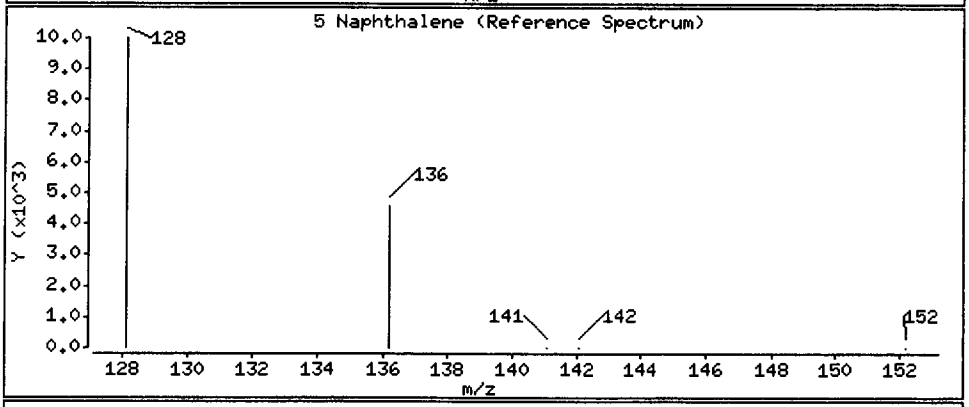
Column phase: ZB-5msi Column diameter: 0.25

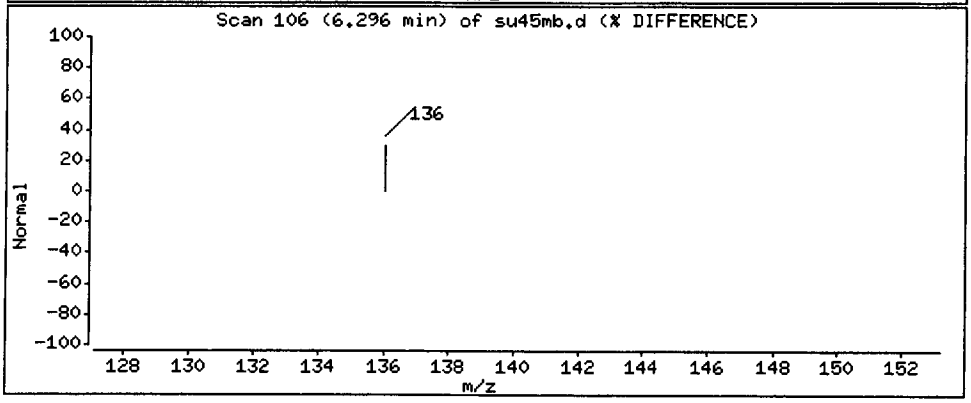
5 Naphthalene Concentration: 8.14 ug/L











CO-ELUTION SUMMARY FOR FILE - su45mb.d

Lab ID: SU45MBW1, Method: lowsim.m, Instrument: nt11.i, Date: 16-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

IZ 5/20/11

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110516.b/su45sb.d
Lab Smp Id: SU45LCSW1 Client Smp ID: SU45LCSW1
Inj Date : 16-MAY-2011 12:44
Operator : VTS Inst ID: nt11.i
Smp Info : SU45LCSW1
Misc Info : 11-9581
Comment :
Method : /chem3/nt11.i/20110516.b/lowsim.m
Meth Date : 16-May-2011 12:01 yev Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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	6.272	6.272	(1.000)	122313	200.000	
	5 Naphthalene	128	6.295	6.295	(1.004)	98229	167.452 B	167
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	62873	176.999	177
	7 2-Methylnaphthalene	142	7.135	7.135	(1.138)	61048	171.330 B	171
	8 1-Methylnaphthalene	142	7.273	7.273	(1.160)	60009	169.690 B	170
	10 Acenaphthylene	152	8.265	8.265	(0.978)	99202	174.721	175
*	11 Acenaphthene-d10	164	8.452	8.466	(1.000)	72780	200.000	
	12 Acenaphthene	153	8.492	8.492	(1.005)	61022	170.583	171
	14 Dibenzofuran	168	8.694	8.694	(1.029)	94337	179.118	179
	15 Fluorene	166	9.123	9.123	(1.079)	68916	185.339	185
*	18 Phenanthrene-d10	188	10.302	10.302	(1.000)	119298	200.000	
	19 Phenanthrene	178	10.329	10.329	(1.003)	113584	189.403	189
	20 Anthracene	178	10.383	10.383	(1.008)	100062	176.280	176
	24 Fluoranthene	202	11.817	11.817	(1.147)	135036	229.105	229
	25 Pyrene	202	12.112	12.112	(0.889)	141447	214.243	214

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	110991	201.672	202
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	78581	200.000	
	30 Chrysene	228	13.655	13.655	(1.002)	115568	208.870	209
	43 Total Benzofluoranthenes	252	15.041	15.041	(0.964)	212302	398.781	399
	34 Benzo(a)pyrene	252	15.512	15.512	(0.994)	81184	171.716	172
*	35 Perylene-d12	264	15.608	15.608	(1.000)	65906	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	17.672	17.672	(1.132)	108377	189.917	190
$	36 Dibenzo(a,h)anthracene-d14	292	17.605	17.618	(1.128)	83892	203.239	203
	38 Dibenzo(a,h)anthracene	278	17.685	17.685	(1.133)	87083	195.906	196
	39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	89729	176.467	176

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: su45sb.d
Lab Smp Id: SU45LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9581

Calibration Date: 16-MAY-2011
Calibration Time: 10:19
Client Smp ID: SU45LCSW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	122313	-5.42
11 Acenaphthene-d10	70573	35286	141146	72780	3.13
18 Phenanthrene-d10	113741	56870	227482	119298	4.89
29 Chrysene-d12	70763	35382	141526	78581	11.05
35 Perylene-d12	54896	27448	109792	65906	20.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.45	-0.16
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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: Newfields
Sample Matrix: LIQUID
Lab Smp Id: SU45LCSW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9581

Client SDG: SU45
Fraction: SV
Client Smp ID: SU45LCSW1
Operator: VTS
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	167	55.82	41-101
7 2-Methylnaphthalen	300	171	57.11	47-100
8 1-Methylnaphthalen	300	170	56.56	30-160
10 Acenaphthylene	300	175	58.24	35-100
12 Acenaphthene	300	171	56.86	43-104
14 Dibenzofuran	300	179	59.71	37-100
15 Fluorene	300	185	61.78	51-103
19 Phenanthrene	300	189	63.13	55-109
20 Anthracene	300	176	58.76	30-101
24 Fluoranthene	300	229	76.37	49-123
25 Pyrene	300	214	71.41	48-120
28 Benzo(a)anthracene	300	202	67.22	43-113
30 Chrysene	300	209	69.62	59-112
43 Total Benzofluoran	600	399	66.46	30-160
34 Benzo(a)pyrene	300	172	57.24	10-100
37 Indeno(1,2,3-cd)py	300	190	63.31	43-112
38 Dibenzo(a,h)anthra	300	196	65.30	42-114
39 Benzo(g,h,i)peryle	300	176	58.82	31-118

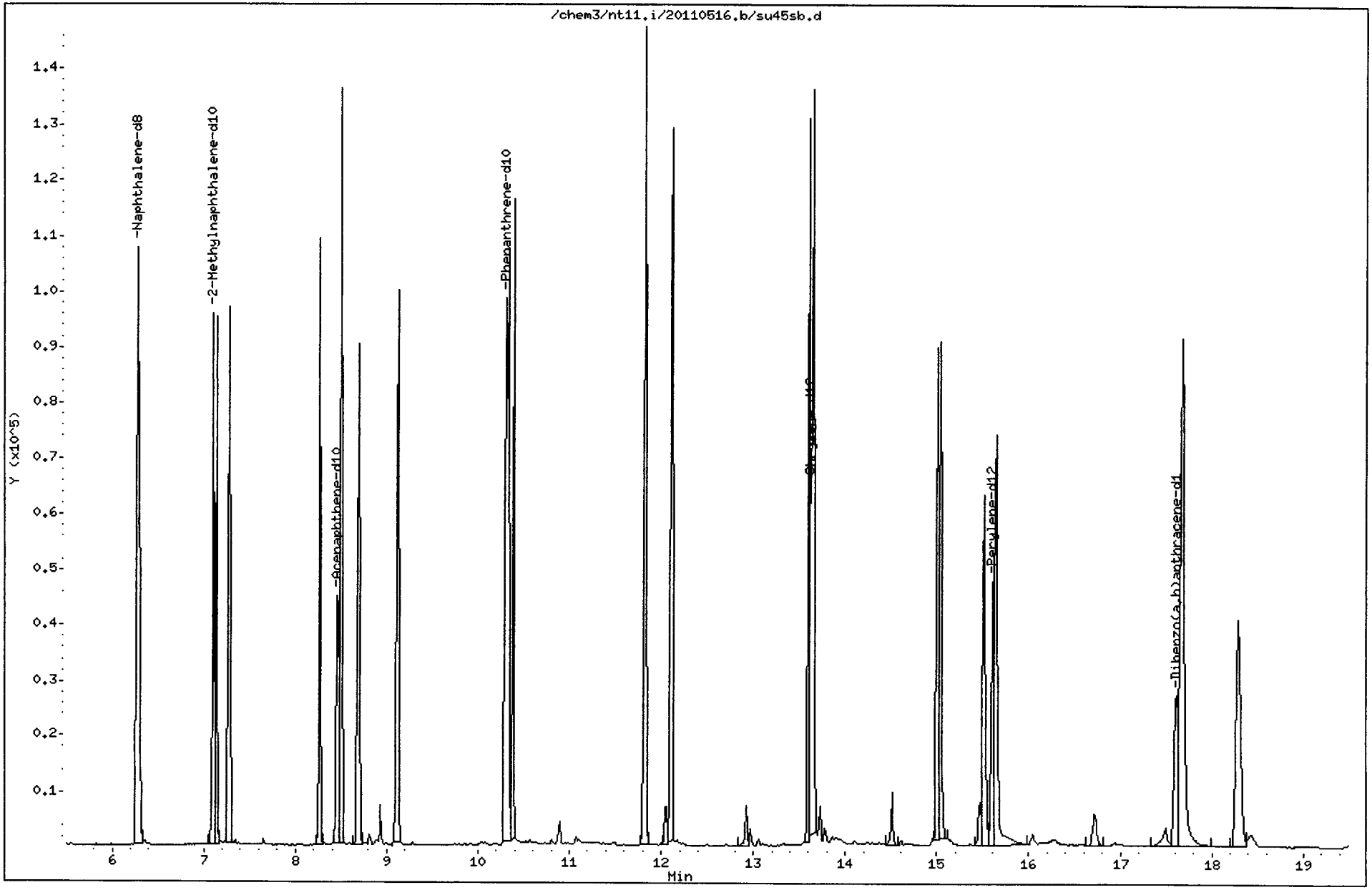
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	177	59.00	31-109
$ 36 Dibenzo(a,h)anthra	300	203	67.75	10-133

Data File: /chem3/nt11.i/20110516.b/su45sb.d
Date : 16-MAY-2011 12:44
Client ID: SU45LCSW1
Sample Info: SU45LCSW1
Volume Injected (uL): 2.0
Column phase: ZB-5msi

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

SU53:00512



CO-ELUTION SUMMARY FOR FILE - su45sb.d

Lab ID: SU45LCSW1, Method: lowsim.m, Instrument: nt11.i, Date: 16-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc. YZ 5/20/11

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110516.b/su45sbd.d
Lab Smp Id: SU45LCSDW1 Client Smp ID: SU45LCSDW1
Inj Date : 16-MAY-2011 13:08
Operator : VTS Inst ID: nt11.i
Smp Info : SU45LCSDW1
Misc Info : 11-9581
Comment :
Method : /chem3/nt11.i/20110516.b/lowsim.m
Meth Date : 16-May-2011 12:01 yev Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 10 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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	6.273	6.272	(1.000)	118073	200.000	
	5 Naphthalene	128	6.296	6.295	(1.004)	107608	190.027	190
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	67507	196.869	197
	7 2-Methylnaphthalene	142	7.136	7.135	(1.138)	67200	195.368	195
	8 1-Methylnaphthalene	142	7.274	7.273	(1.160)	68388	200.328	200
	10 Acenaphthylene	152	8.265	8.265	(0.978)	107164	197.714	198
*	11 Acenaphthene-d10	164	8.452	8.466	(1.000)	69478	200.000	
	12 Acenaphthene	153	8.493	8.492	(1.005)	67398	197.361	197
	14 Dibenzofuran	168	8.694	8.694	(1.029)	102383	203.634	204
	15 Fluorene	166	9.123	9.123	(1.079)	75234	211.947	212
*	18 Phenanthrene-d10	188	10.303	10.302	(1.000)	106510	200.000	
	19 Phenanthrene	178	10.329	10.329	(1.003)	117672	219.778	220
	20 Anthracene	178	10.383	10.383	(1.008)	104227	205.663	206
	24 Fluoranthene	202	11.818	11.817	(1.147)	137354	261.017	261
	25 Pyrene	202	12.113	12.112	(0.889)	142379	235.940	236

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	116169	230.935	231
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	71825	200.000	
	30 Chrysene	228	13.655	13.655	(1.002)	117969	233.265	233
	43 Total Benzofluoranthenes	252	15.042	15.041	(0.964)	224361	456.592	457
	34 Benzo(a)pyrene	252	15.512	15.512	(0.994)	87780	201.157	201
*	35 Perylene-d12	264	15.609	15.608	(1.000)	60831	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	17.672	17.672	(1.132)	115786	219.827	220
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	87383	229.358	229
	38 Dibenzo(a,h)anthracene	278	17.685	17.685	(1.133)	92809	226.206	226
	39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	96488	205.590	206

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: su45sbd.d
Lab Smp Id: SU45LCSDW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9581

Calibration Date: 16-MAY-2011
Calibration Time: 10:19
Client Smp ID: SU45LCSDW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	118073	-8.70
11 Acenaphthene-d10	70573	35286	141146	69478	-1.55
18 Phenanthrene-d10	113741	56870	227482	106510	-6.36
29 Chrysene-d12	70763	35382	141526	71825	1.50
35 Perylene-d12	54896	27448	109792	60831	10.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.45	-0.16
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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: Newfields
Sample Matrix: LIQUID
Lab Smp Id: SU45LCSDW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9581

Client SDG: SU45
Fraction: SV
Client Smp ID: SU45LCSDW1
Operator: VTS
SampleType: LCSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	190	63.34	41-101
7 2-Methylnaphthalen	300	195	65.12	47-100
8 1-Methylnaphthalen	300	200	66.78	30-160
10 Acenaphthylene	300	198	65.90	35-100
12 Acenaphthene	300	197	65.79	43-104
14 Dibenzofuran	300	204	67.88	37-100
15 Fluorene	300	212	70.65	51-103
19 Phenanthrene	300	220	73.26	55-109
20 Anthracene	300	206	68.55	30-101
24 Fluoranthene	300	261	87.01	49-123
25 Pyrene	300	236	78.65	48-120
28 Benzo(a)anthracene	300	231	76.98	43-113
30 Chrysene	300	233	77.75	59-112
43 Total Benzofluoran	600	457	76.10	30-160
34 Benzo(a)pyrene	300	201	67.05	10-100
37 Indeno(1,2,3-cd)py	300	220	73.28	43-112
38 Dibenzo(a,h)anthra	300	226	75.40	42-114
39 Benzo(g,h,i)peryle	300	206	68.53	31-118

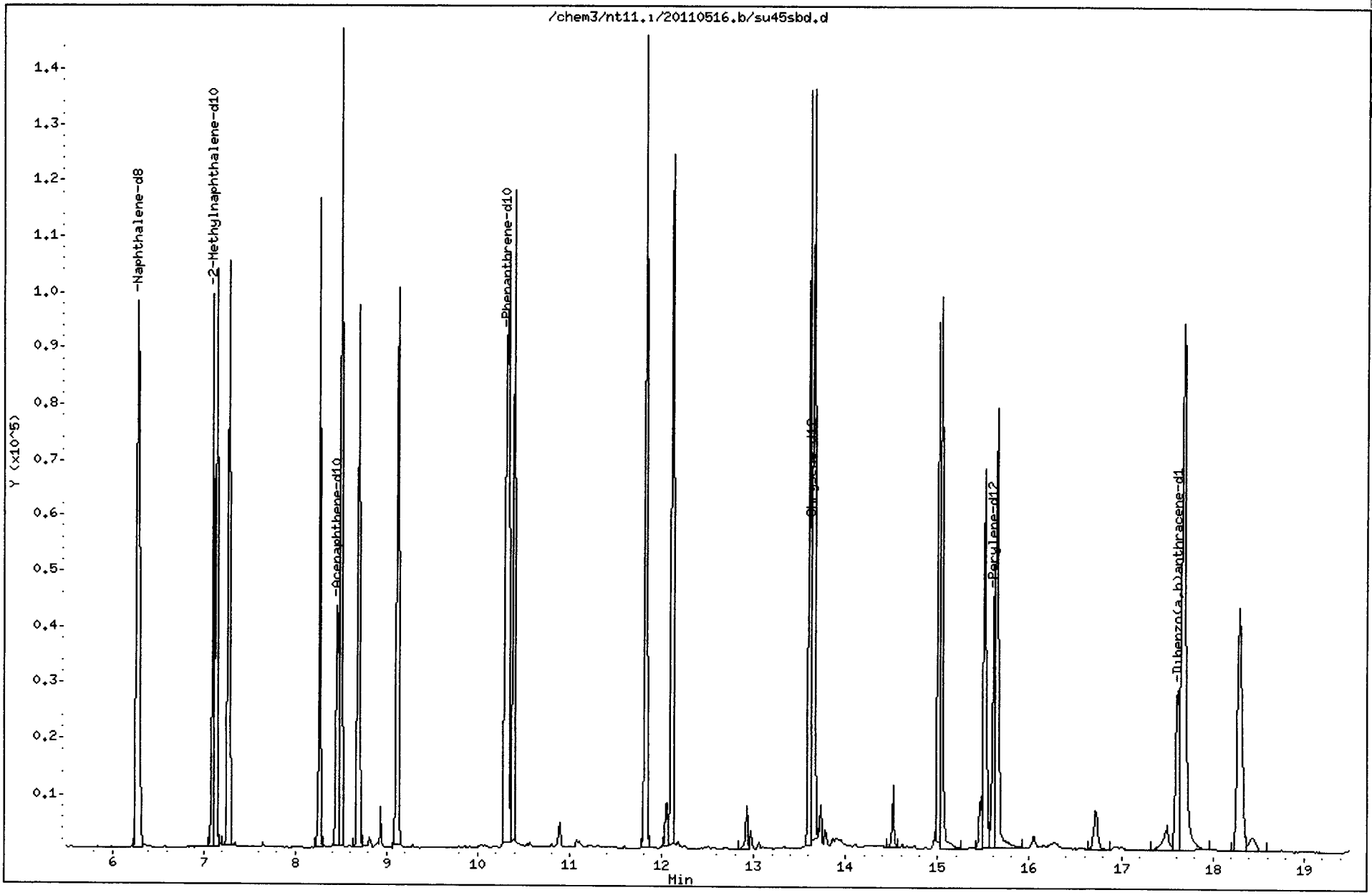
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	197	65.62	31-109
$ 36 Dibenzo(a,h)anthra	300	229	76.45	10-133

Data File: /chem3/nt11.i/20110516.b/su45sbd.d
Date : 16-MAY-2011 13:08
Client ID: SU45LCSDW1
Sample Info: SU45LCSDW1
Volume Injected (uL): 2.0
Column phase: ZB-5ms1

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

SU53:00618



CO-ELUTION SUMMARY FOR FILE - su45sbd.d

Lab ID: SU45LCSDW1, Method: lowsim.m, Instrument: nt11.i, Date: 16-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

12 5/20/11

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110516.b/su53a.d
Lab Smp Id: SU53A Client Smp ID: MW5042811
Inj Date : 16-MAY-2011 15:58
Operator : VTS Inst ID: nt11.i
Smp Info : SU53A
Misc Info : 11-9621
Comment :
Method : /chem3/nt11.i/20110516.b/lowsim.m
Meth Date : 16-May-2011 12:01 yev Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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	6.272	6.272	(1.000)	118071	200.000	
	5 Naphthalene	128	6.295	6.295	(1.004)	13317	23.5172 B	23.5
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	58429	170.398	170
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	70065	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	10.302	10.302	(1.000)	113950	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)	CONCENTRATIONS FINAL (ug/L)
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	77577	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	15.608	15.608	(1.000)	66676	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	82434	197.401	197
	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
Lab File ID: su53a.d
Lab Smp Id: SU53A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9621

Calibration Date: 16-MAY-2011
Calibration Time: 10:19
Client Smp ID: MW5042811
Level: LOW
Sample Type: Groundwater

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	118071	-8.70
11 Acenaphthene-d10	70573	35286	141146	70065	-0.72
18 Phenanthrene-d10	113741	56870	227482	113950	0.18
29 Chrysene-d12	70763	35382	141526	77577	9.63
35 Perylene-d12	54896	27448	109792	66676	21.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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: SU53A
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9621

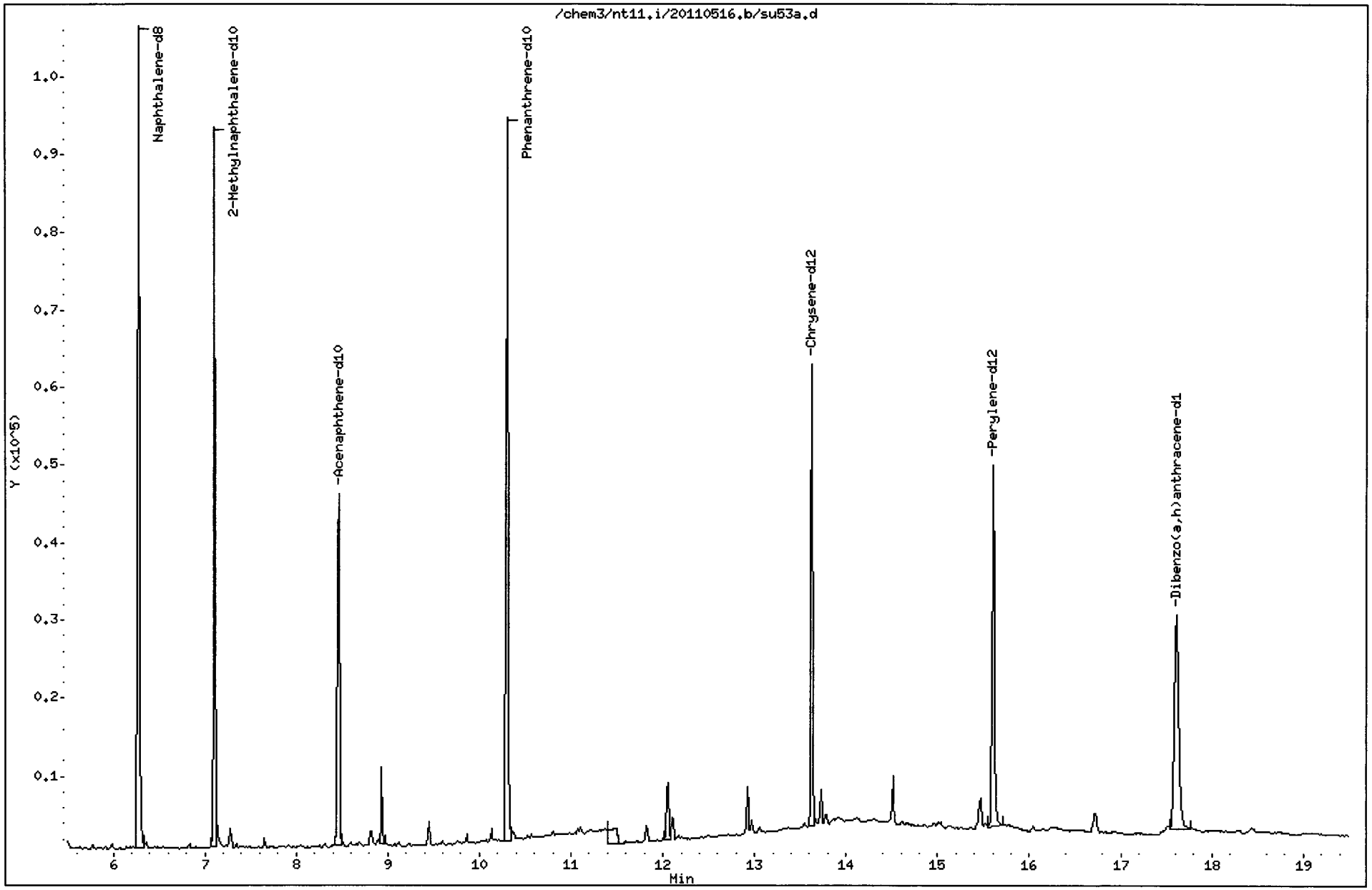
Client SDG: SU53
Fraction: SV
Client Smp ID: MW5042811
Operator: VTS
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	170	56.80	31-109
$ 36 Dibenzo(a,h)anthra	300	197	65.80	10-133

Data File: /chem3/nt11.i/20110516.b/su53a.d
Date : 16-MAY-2011 15:58
Client ID: MW5042811
Sample Info: SU53A
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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

SU53A 05/16/11



CO-ELUTION SUMMARY FOR FILE - su53a.d

Lab ID: SU53A, Method: lowsim.m, Instrument: nt11.i, Date: 16-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

yz 5/20/11

Data file : /chem3/nt11.i/20110516.b/su53b.d
Lab Smp Id: SU53B Client Smp ID: MW15042811
Inj Date : 16-MAY-2011 16:23
Operator : VTS Inst ID: nt11.i
Smp Info : SU53B
Misc Info : 11-9622
Comment :
Method : /chem3/nt11.i/20110516.b/lowsim.m
Meth Date : 16-May-2011 12:01 yev Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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

		QUANT SIG					CONCENTRATIONS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL (ug/L)
*	4 Naphthalene-d8	136	6.273	6.272	(1.000)	121196	200.000	
	5 Naphthalene	128	6.296	6.295	(1.004)	8462	14.5582 B	14.6
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	57777	164.152	164
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	70575	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	10.302	10.302	(1.000)	118974	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)	CONCENTRATIONS FINAL (ug/L)
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	78241	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	15.608	15.608	(1.000)	66146	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	76304	184.186	184
	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
Lab File ID: su53b.d
Lab Smp Id: SU53B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9622

Calibration Date: 16-MAY-2011
Calibration Time: 10:19
Client Smp ID: MW15042811
Level: LOW
Sample Type: Groundwater

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	121196	-6.29
11 Acenaphthene-d10	70573	35286	141146	70575	0.00
18 Phenanthrene-d10	113741	56870	227482	118974	4.60
29 Chrysene-d12	70763	35382	141526	78241	10.57
35 Perylene-d12	54896	27448	109792	66146	20.49

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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

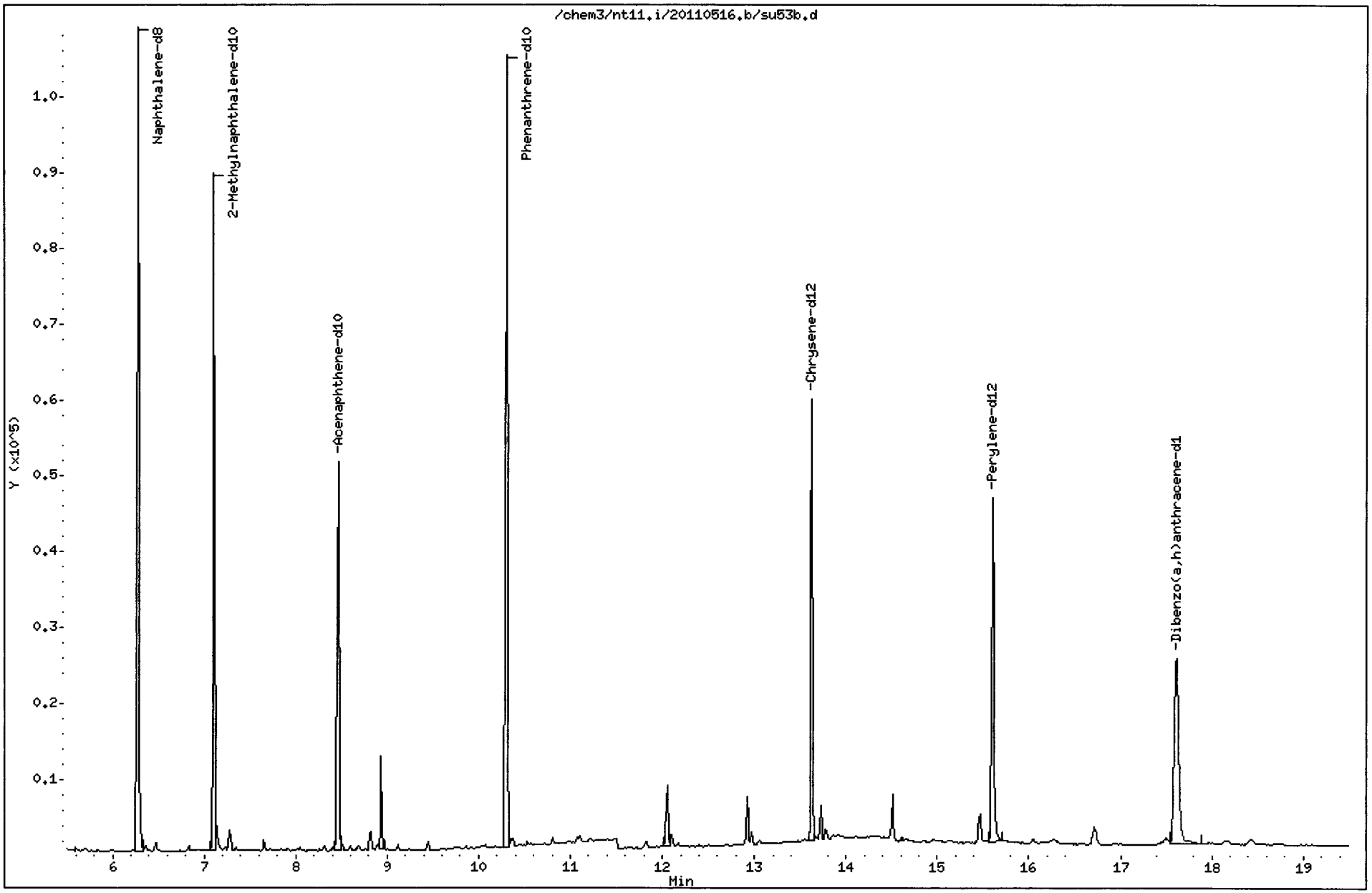
Client Name: Floyd Snider
Client SDG: SU53
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: SU53B
Client Smp ID: MW15042811
Level: LOW
Operator: VTS
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9622

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	164	54.72	31-109
$ 36 Dibenzo(a,h)anthra	300	184	61.40	10-133

Data File: /chem3/nt11.i/20110516.b/su53b.d
Date : 16-MAY-2011 16:23
Client ID: MW15042811
Sample Info: SU53B
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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

SU53:99639



CO-ELUTION SUMMARY FOR FILE - su53b.d

Lab ID: SU53B, Method: lowsim.m, Instrument: nt11.i, Date: 16-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

yz 5/20/11

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110516.b/su53c.d
Lab Smp Id: SU53C Client Smp ID: MW4042811
Inj Date : 16-MAY-2011 16:47
Operator : VTS Inst ID: nt11.i
Smp Info : SU53C
Misc Info : 11-9623
Comment :
Method : /chem3/nt11.i/20110516.b/lowsim.m
Meth Date : 16-May-2011 12:01 yev Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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	6.273	6.272	(1.000)	120343	200.000	
	5 Naphthalene	128	6.296	6.295	(1.004)	11928	20.6666 B	20.7
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	61101	174.826	175
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	72423	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	10.302	10.302	(1.000)	123589	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	13.628	13.628	(1.000)	81508	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	15.608	15.608	(1.000)	68851	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	73735	170.992	171
	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
Lab File ID: su53c.d
Lab Smp Id: SU53C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9623

Calibration Date: 16-MAY-2011
Calibration Time: 10:19
Client Smp ID: MW4042811
Level: LOW
Sample Type: Groundwater

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	120343	-6.95
11 Acenaphthene-d10	70573	35286	141146	72423	2.62
18 Phenanthrene-d10	113741	56870	227482	123589	8.66
29 Chrysene-d12	70763	35382	141526	81508	15.18
35 Perylene-d12	54896	27448	109792	68851	25.42

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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

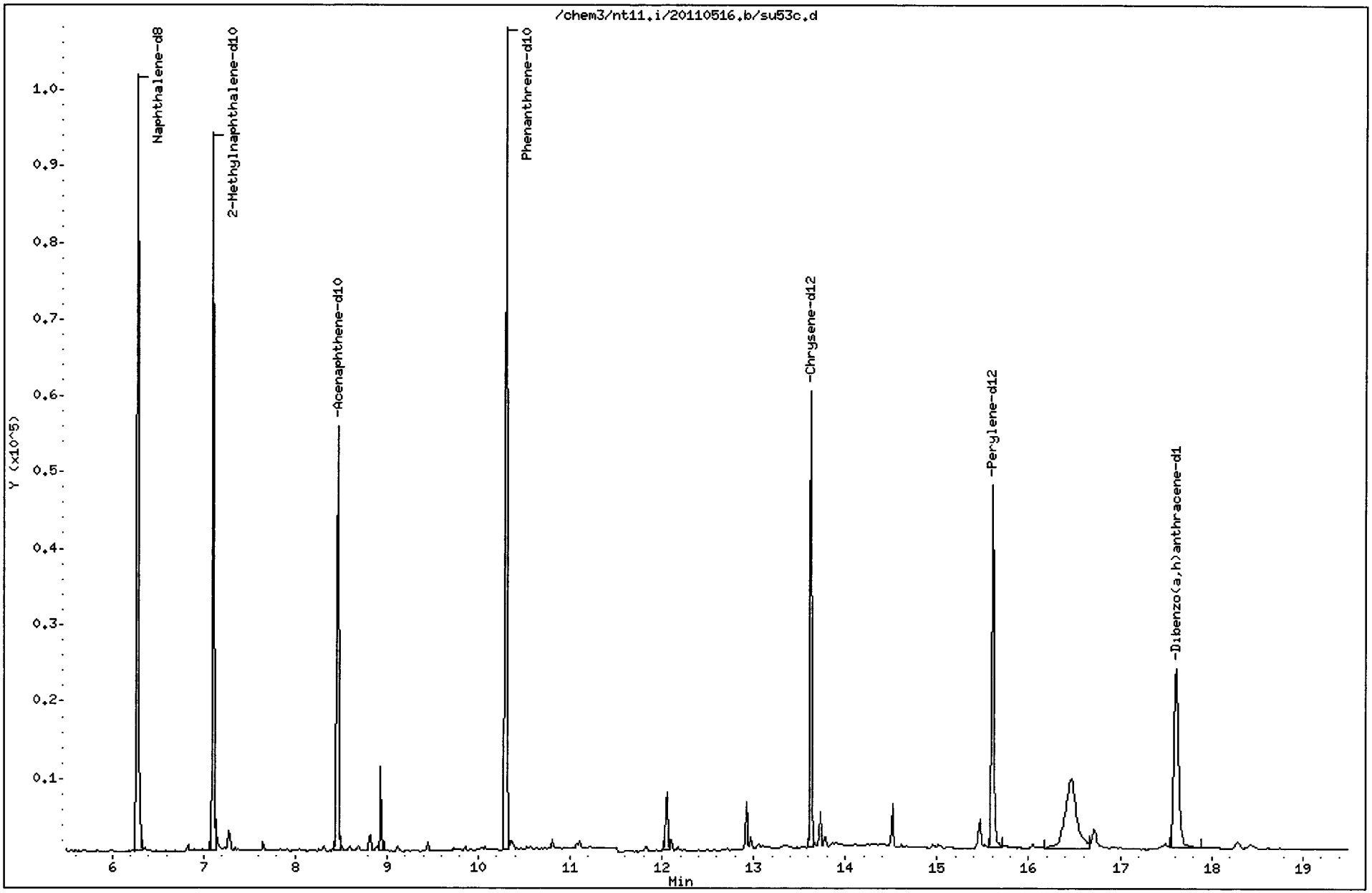
Client Name: Floyd Snider
Client SDG: SU53
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: SU53C
Client Smp ID: MW4042811
Level: LOW
Operator: VTS
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9623

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	175	58.28	31-109
$ 36 Dibenzo(a,h)anthra	300	171	57.00	10-133

Data File: /chem3/nt11.i/20110516.b/su53c.d
Date : 16-MAY-2011 16:47
Client ID: MW4042811
Sample Info: SU53C
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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

SU53:00636



CO-ELUTION SUMMARY FOR FILE - su53c.d

Lab ID: SU53C, Method: lowsim.m, Instrument: nt11.i, Date: 16-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

YZ 5/24/11

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110516.b/su53cms.d
Lab Smp Id: SU53CMS Client Smp ID: MW4042811 MS
Inj Date : 16-MAY-2011 17:11
Operator : VTS Inst ID: nt11.i
Smp Info : SU53CMS
Misc Info : 11-9623
Comment :
Method : /chem3/nt11.i/20110516.b/lowsim.m
Meth Date : 16-May-2011 12:01 yev Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 20 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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)	CONCENTRATIONS FINAL (ug/L)
* 4 Naphthalene-d8	136	6.273	6.272	(1.000)	120332	200.000	
5 Naphthalene	128	6.296	6.295	(1.004)	106442	184.440	184
$ 6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	61033	174.648	175
7 2-Methylnaphthalene	142	7.136	7.135	(1.138)	60842	173.563	174
8 1-Methylnaphthalene	142	7.274	7.273	(1.160)	60817	174.806	175
10 Acenaphthylene	152	8.265	8.265	(0.976)	96731	170.681	171
* 11 Acenaphthene-d10	164	8.466	8.466	(1.000)	72647	200.000	
12 Acenaphthene	153	8.493	8.492	(1.003)	59676	167.126	167
14 Dibenzofuran	168	8.694	8.694	(1.027)	93843	178.506	179
15 Fluorene	166	9.123	9.123	(1.078)	69356	186.864	187
* 18 Phenanthrene-d10	188	10.302	10.302	(1.000)	120641	200.000	
19 Phenanthrene	178	10.329	10.329	(1.003)	115580	190.585	191
20 Anthracene	178	10.383	10.383	(1.008)	97631	170.083	170
24 Fluoranthene	202	11.818	11.817	(1.147)	133404	223.817	224
25 Pyrene	202	12.113	12.112	(0.889)	137843	196.121	196

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	113697	194.058	194
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	83655	200.000	
	30 Chrysene	228	13.655	13.655	(1.002)	114025	193.582	194
	43 Total Benzofluoranthenes	252	15.003	15.041	(0.961)	220236	394.483	394
	34 Benzo(a)pyrene	252	15.512	15.512	(0.994)	81406	164.193	164
*	35 Perylene-d12	264	15.608	15.608	(1.000)	69114	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	17.672	17.672	(1.132)	115362	192.774	193
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	85207	196.844	197
	38 Dibenzo(a,h)anthracene	278	17.685	17.685	(1.133)	91340	195.945	196
	39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	96383	180.754	181

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: su53cms.d
Lab Smp Id: SU53CMS
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9623

Calibration Date: 16-MAY-2011
Calibration Time: 10:19
Client Smp ID: MW4042811 MS
Level: LOW
Sample Type: Groundwater

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	120332	-6.95
11 Acenaphthene-d10	70573	35286	141146	72647	2.94
18 Phenanthrene-d10	113741	56870	227482	120641	6.07
29 Chrysene-d12	70763	35382	141526	83655	18.22
35 Perylene-d12	54896	27448	109792	69114	25.90

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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

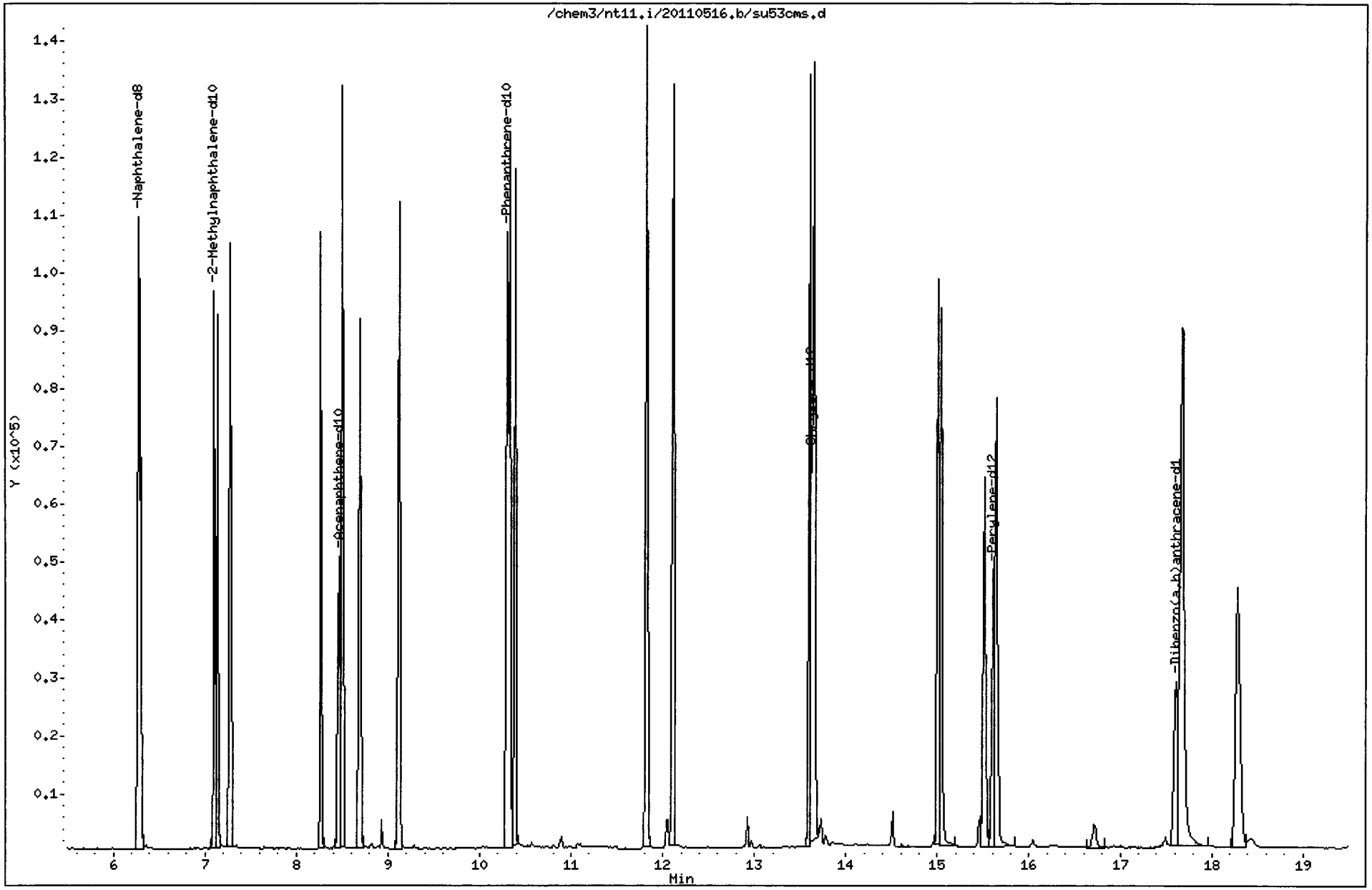
Client Name: Floyd Snid
Client SDG: SU53
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: SU53CMS
Client Smp ID: MW4042811 MS
Level: LOW
Operator: VTS
Data Type: MS DATA
SampleType: MS
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9623

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	184	61.48	41-101
7 2-Methylnaphthalen	300	174	57.85	47-100
8 1-Methylnaphthalen	300	175	58.27	30-160
10 Acenaphthylene	300	171	56.89	35-100
12 Acenaphthene	300	167	55.71	43-104
14 Dibenzofuran	300	179	59.50	37-100
15 Fluorene	300	187	62.29	51-103
19 Phenanthrene	300	191	63.53	55-109
20 Anthracene	300	170	56.69	30-101
24 Fluoranthene	300	224	74.61	49-123
25 Pyrene	300	196	65.37	48-120
28 Benzo(a)anthracene	300	194	64.69	43-113
30 Chrysene	300	194	64.53	59-112
43 Total Benzofluoran	600	394	65.75	30-160
34 Benzo(a)pyrene	300	164	54.73	10-100
37 Indeno(1,2,3-cd)py	300	193	64.26	43-112
38 Dibenzo(a,h)anthra	300	196	65.31	42-114
39 Benzo(g,h,i)peryle	300	181	60.25	31-118

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	175	58.22	31-109
$ 36 Dibenzo(a,h)anthra	300	197	65.61	10-133

Data File: /chem3/nt11.i/20110516.b/su53cms.d
Date : 16-MAY-2011 17:11
Client ID: MW4042811 MS
Sample Info: SU53CMS
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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



SU53:006642

CO-ELUTION SUMMARY FOR FILE - su53cms.d

Lab ID: SU53CMS, Method: lowsim.m, Instrument: nt11.i, Date: 16-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM YZ 5/26/11

Data file : /chem3/nt11.i/20110516.b/su53cmsd.d
Lab Smp Id: SU53CMSD Client Smp ID: MW4042811 MSD
Inj Date : 16-MAY-2011 17:36
Operator : VTS Inst ID: nt11.i
Smp Info : SU53CMSD
Misc Info : 11-9623
Comment :
Method : /chem3/nt11.i/20110516.b/lowsim.m
Meth Date : 16-May-2011 12:01 yev Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 21 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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	6.273	6.272	(1.000)	123172	200.000	
5 Naphthalene	128	6.296	6.295	(1.004)	113231	191.680	192
$ 6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	65551	183.251	183
7 2-Methylnaphthalene	142	7.136	7.135	(1.138)	66703	185.896	186
8 1-Methylnaphthalene	142	7.274	7.273	(1.160)	67110	188.447	188
10 Acenaphthylene	152	8.265	8.265	(0.978)	105490	185.671	186
* 11 Acenaphthene-d10	164	8.452	8.466	(1.000)	72829	200.000	
12 Acenaphthene	153	8.493	8.492	(1.005)	64169	179.259	179
14 Dibenzofuran	168	8.694	8.694	(1.029)	98448	186.798	187
15 Fluorene	166	9.123	9.123	(1.079)	74706	200.776	201
* 18 Phenanthrene-d10	188	10.303	10.302	(1.000)	121870	200.000	
19 Phenanthrene	178	10.329	10.329	(1.003)	125336	204.588	205
20 Anthracene	178	10.383	10.383	(1.008)	105741	182.353	182
24 Fluoranthene	202	11.818	11.817	(1.147)	139234	231.242	231
25 Pyrene	202	12.113	12.112	(0.889)	148678	216.154	216

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	120053	209.379	209
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	81868	200.000	
	30 Chrysene	228	13.655	13.655	(1.002)	123030	213.429	213
	43 Total Benzofluoranthenes	252	15.042	15.041	(0.964)	237908	421.598	422
	34 Benzo(a)pyrene	252	15.512	15.512	(0.994)	87813	175.229	175
*	35 Perylene-d12	264	15.608	15.608	(1.000)	69858	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	17.672	17.672	(1.132)	126150	208.556	209
$	36 Dibenzo(a,h)anthracene-d14	292	17.605	17.618	(1.128)	91394	208.888	209
	38 Dibenzo(a,h)anthracene	278	17.685	17.685	(1.133)	99032	210.183	210
	39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	105162	195.118	195

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: su53cmsd.d
Lab Smp Id: SU53CMSD
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9623

Calibration Date: 16-MAY-2011
Calibration Time: 10:19
Client Smp ID: MW4042811 MSD
Level: LOW
Sample Type: Groundwater

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	123172	-4.76
11 Acenaphthene-d10	70573	35286	141146	72829	3.20
18 Phenanthrene-d10	113741	56870	227482	121870	7.15
29 Chrysene-d12	70763	35382	141526	81868	15.69
35 Perylene-d12	54896	27448	109792	69858	27.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.45	-0.16
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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 Snid
Client SDG: SU53
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: SU53CMSD
Client Smp ID: MW4042811 MSD
Level: LOW
Operator: VTS
Data Type: MS DATA
SampleType: MS
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9623

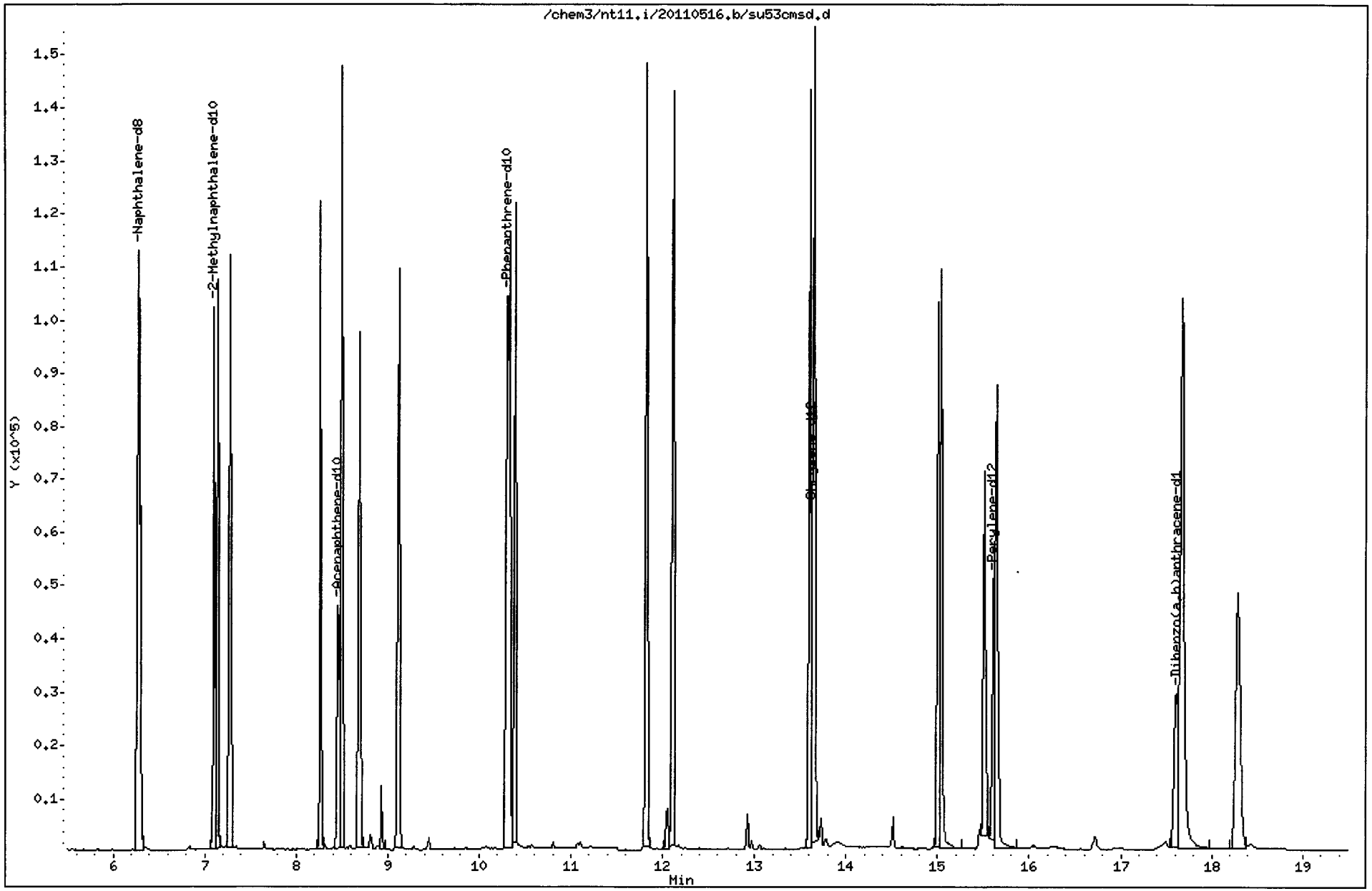
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	192	63.89	41-101
7 2-Methylnaphthalen	300	186	61.97	47-100
8 1-Methylnaphthalen	300	188	62.82	30-160
10 Acenaphthylene	300	186	61.89	35-100
12 Acenaphthene	300	179	59.75	43-104
14 Dibenzofuran	300	187	62.27	37-100
15 Fluorene	300	201	66.93	51-103
19 Phenanthrene	300	205	68.20	55-109
20 Anthracene	300	182	60.78	30-101
24 Fluoranthene	300	231	77.08	49-123
25 Pyrene	300	216	72.05	48-120
28 Benzo(a)anthracene	300	209	69.79	43-113
30 Chrysene	300	213	71.14	59-112
43 Total Benzofluoran	600	422	70.27	30-160
34 Benzo(a)pyrene	300	175	58.41	10-100
37 Indeno(1,2,3-cd)py	300	209	69.52	43-112
38 Dibenzo(a,h)anthra	300	210	70.06	42-114
39 Benzo(g,h,i)peryle	300	195	65.04	31-118

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	183	61.08	31-109
$ 36 Dibenzo(a,h)anthra	300	209	69.63	10-133

Data File: /chem3/nt11.i/20110516.b/su53cmsd.d
Date : 16-MAY-2011 17:36
Client ID: MW4042811 MSD
Sample Info: SU53CMSD
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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

SU53 : 84900



CO-ELUTION SUMMARY FOR FILE - su53cmsd.d

Lab ID: SU53CMSD, Method: lowsim.m, Instrument: nt11.i, Date: 16-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

YE 5/20/11

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110516.b/su53d.d
Lab Smp Id: SU53D Client Smp ID: MW17042811
Inj Date : 16-MAY-2011 18:00
Operator : VTS Inst ID: nt11.i
Smp Info : SU53D
Misc Info : 11-9624
Comment :
Method : /chem3/nt11.i/20110516.b/lowsim.m
Meth Date : 16-May-2011 12:01 yev Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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	6.273	6.272	(1.000)	124759	200.000	
	5 Naphthalene	128	6.296	6.295	(1.004)	11805	19.7295 B	19.7
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	69736	192.470	192
	7 2-Methylnaphthalene	142	7.136	7.135	(1.138)	2160	5.94316 BJ	5.94
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	72222	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	10.303	10.302	(1.000)	122396	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)	CONCENTRATIONS FINAL (ug/L)
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	80713	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	15.609	15.608	(1.000)	66914	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	87147	207.945	208
	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
Lab File ID: su53d.d
Lab Smp Id: SU53D
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9624

Calibration Date: 16-MAY-2011
Calibration Time: 10:19
Client Smp ID: MW17042811
Level: LOW
Sample Type: Groundwater

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	124759	-3.53
11 Acenaphthene-d10	70573	35286	141146	72222	2.34
18 Phenanthrene-d10	113741	56870	227482	122396	7.61
29 Chrysene-d12	70763	35382	141526	80713	14.06
35 Perylene-d12	54896	27448	109792	66914	21.89

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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

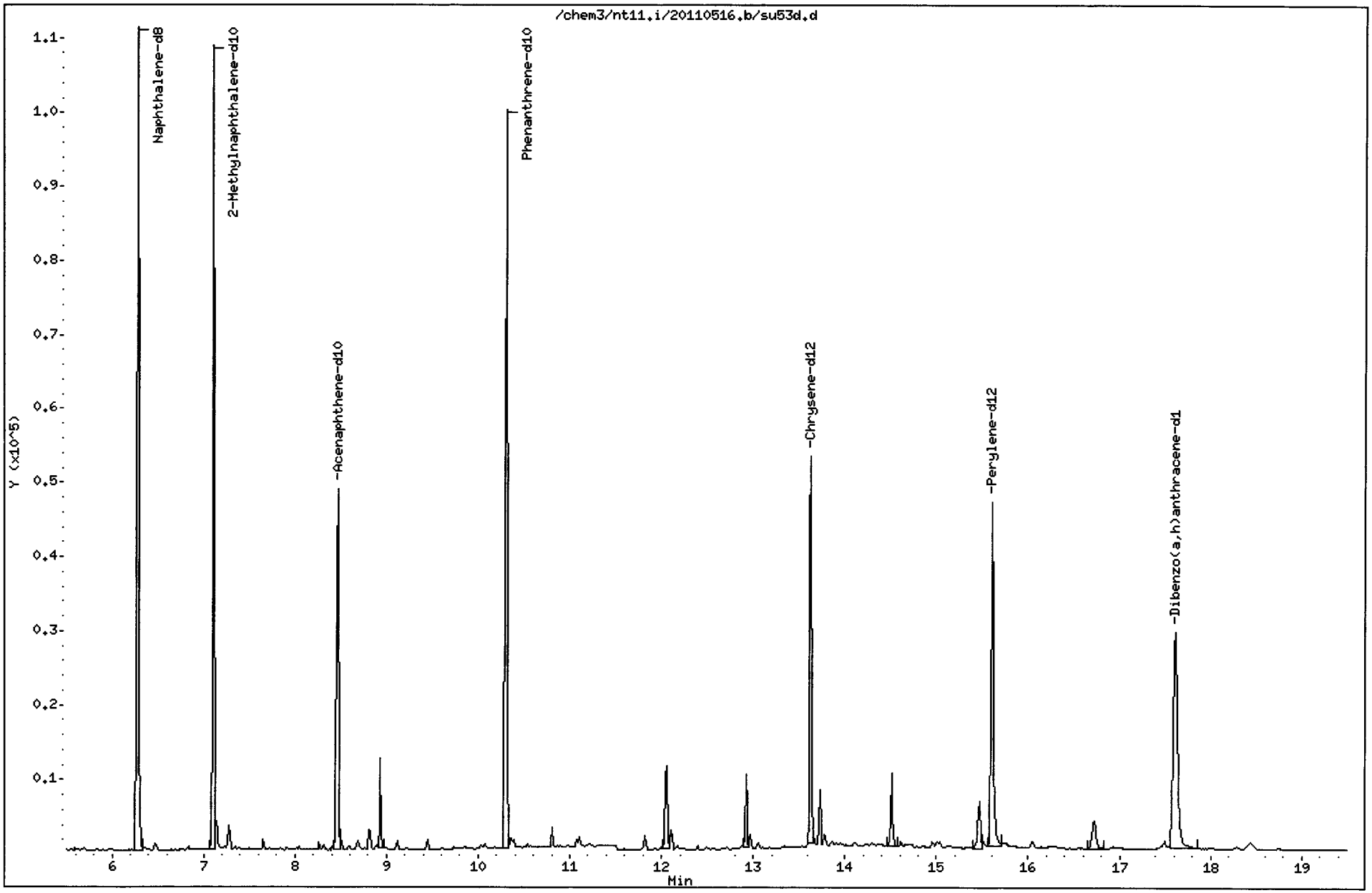
Client Name: Floyd Snider
Client SDG: SU53
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: SU53D
Client Smp ID: MW17042811
Level: LOW
Operator: VTS
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9624

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	192	64.16	31-109
$ 36 Dibenzo(a,h)anthra	300	208	69.31	10-133

Data File: /chem3/nt11.i/20110516.b/su53d.d
Date : 16-MAY-2011 18:00
Client ID: MW17042811
Sample Info: SU53D
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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

SU53:00654



Data File: /chem3/nt11.i/20110516.b/su53d.d

Date : 16-MAY-2011 18:00

Client ID: MW17042811

Instrument: nt11.i

Sample Info: SU53D

Volume Injected (uL): 2.0

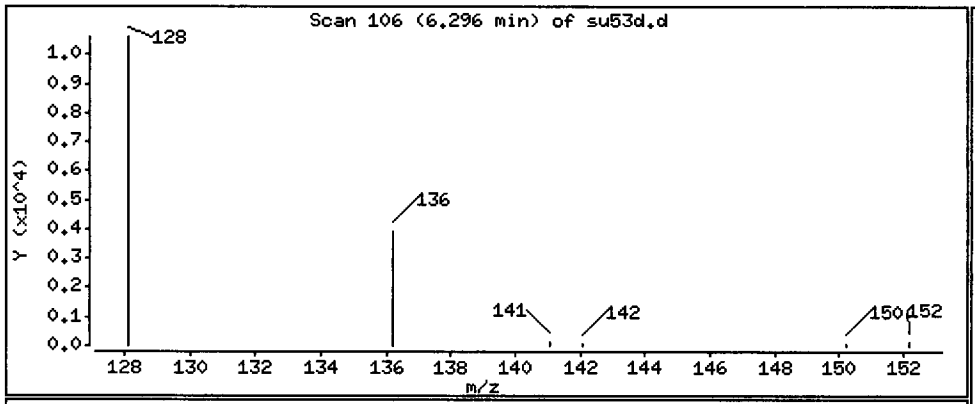
Operator: VTS

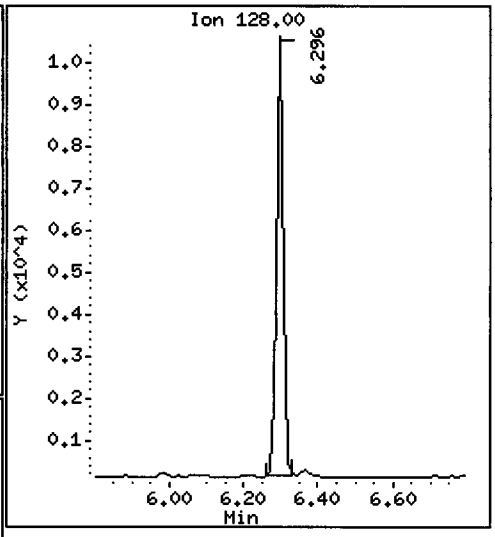
Column phase: ZB-5msi

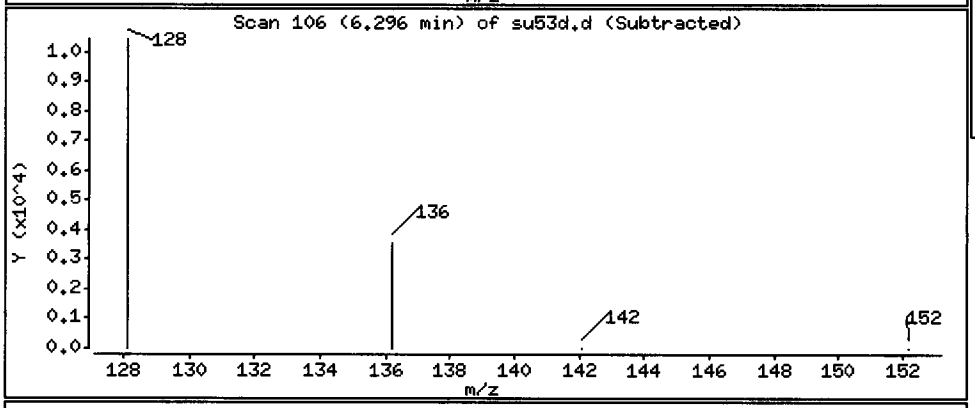
Column diameter: 0.25

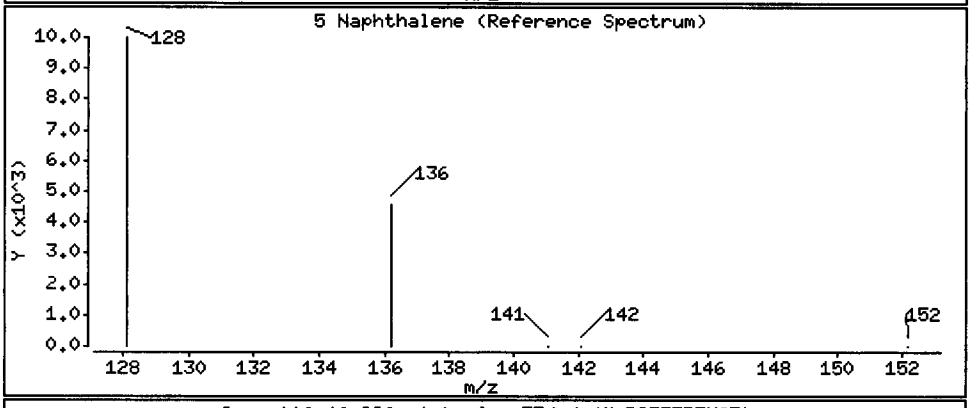
5 Naphthalene

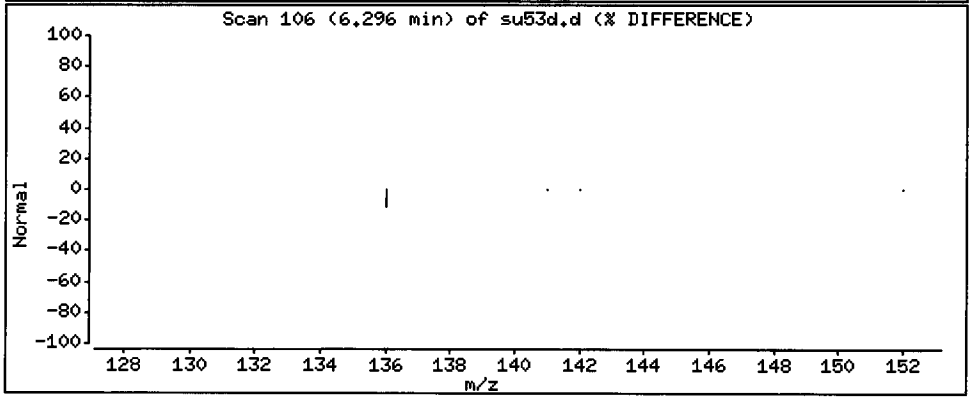
Concentration: 19.7 ug/L











CO-ELUTION SUMMARY FOR FILE - su53d.d

Lab ID: SU53D, Method: lowsim.m, Instrument: nt11.i, Date: 16-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/26/11

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110516.b/su53e.d
Lab Smp Id: SU53E Client Smp ID: MW14042811
Inj Date : 16-MAY-2011 18:24
Operator : VTS Inst ID: nt11.i
Smp Info : SU53E
Misc Info : 11-9625
Comment :
Method : /chem3/nt11.i/20110516.b/lowsim.m
Meth Date : 16-May-2011 12:01 yev Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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	6.273	6.272	(1.000)	121662	200.000	
	5 Naphthalene	128	6.296	6.295	(1.004)	8472	14.5196 B	14.5
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	57145	161.734	162
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.452	8.466	(1.000)	70080	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	10.303	10.302	(1.000)	118353	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)	CONCENTRATIONS FINAL (ug/L)
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	78044	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	15.609	15.608	(1.000)	67186	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	77401	183.942	184
	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
Lab File ID: su53e.d
Lab Smp Id: SU53E
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9625

Calibration Date: 16-MAY-2011
Calibration Time: 10:19
Client Smp ID: MW14042811
Level: LOW
Sample Type: Groundwater

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	121662	-5.93
11 Acenaphthene-d10	70573	35286	141146	70080	-0.70
18 Phenanthrene-d10	113741	56870	227482	118353	4.05
29 Chrysene-d12	70763	35382	141526	78044	10.29
35 Perylene-d12	54896	27448	109792	67186	22.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.45	-0.16
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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

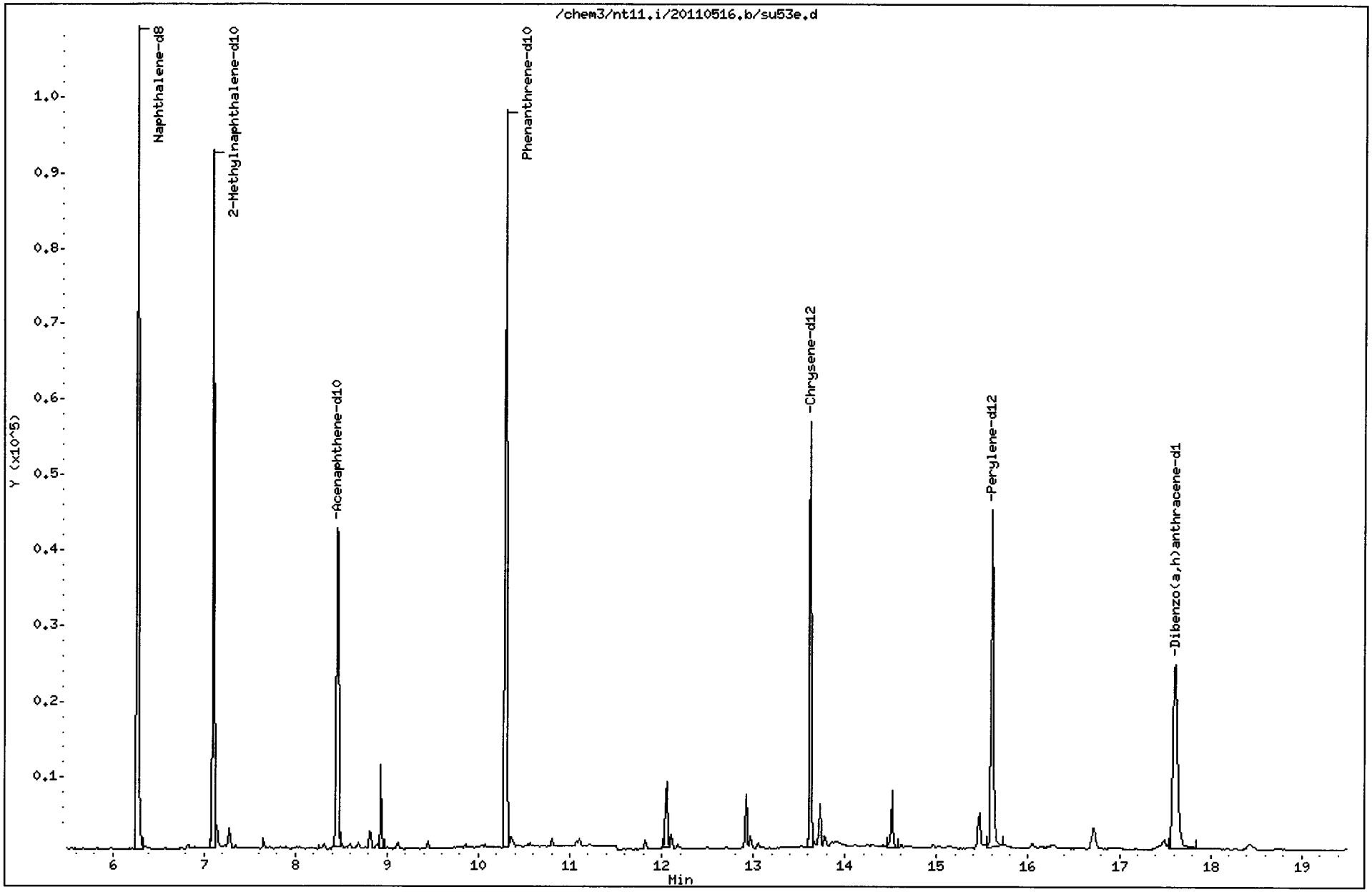
Client Name: Floyd Snider
Client SDG: SU53
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: SU53E
Client Smp ID: MW14042811
Level: LOW
Operator: VTS
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9625

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	162	53.91	31-109
$ 36 Dibenzo(a,h)anthra	300	184	61.31	10-133

Data File: /chem3/nt11.i/20110516.b/su53e.d
Date : 16-MAY-2011 18:24
Client ID: MW14042811
Sample Info: SU53E
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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

SU53 00661



CO-ELUTION SUMMARY FOR FILE - su53e.d

Lab ID: SU53E, Method: lowsim.m, Instrument: nt11.i, Date: 16-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

YZ 5/20/11

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110516.b/su53f.d
Lab Smp Id: SU53F Client Smp ID: MW16042811
Inj Date : 16-MAY-2011 18:48
Operator : VTS Inst ID: nt11.i
Smp Info : SU53F
Misc Info : 11-9626
Comment :
Method : /chem3/nt11.i/20110516.b/lowsim.m
Meth Date : 16-May-2011 12:01 yev Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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	6.273	6.272	(1.000)	122354	200.000	
	5 Naphthalene	128	6.296	6.295	(1.004)	6478	11.0394 B	11.0
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	68055	191.523	192
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.452	8.466	(1.000)	68437	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	10.303	10.302	(1.000)	113162	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	13.628	13.628	(1.000)	75098	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	15.608	15.608	(1.000)	65013	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	84432	207.357 ✓	207
	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
Lab File ID: su53f.d
Lab Smp Id: SU53F
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9626

Calibration Date: 16-MAY-2011
Calibration Time: 10:19
Client Smp ID: MW16042811
Level: LOW
Sample Type: Groundwater

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	122354	-5.39
11 Acenaphthene-d10	70573	35286	141146	68437	-3.03
18 Phenanthrene-d10	113741	56870	227482	113162	-0.51
29 Chrysene-d12	70763	35382	141526	75098	6.13
35 Perylene-d12	54896	27448	109792	65013	18.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.45	-0.16
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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

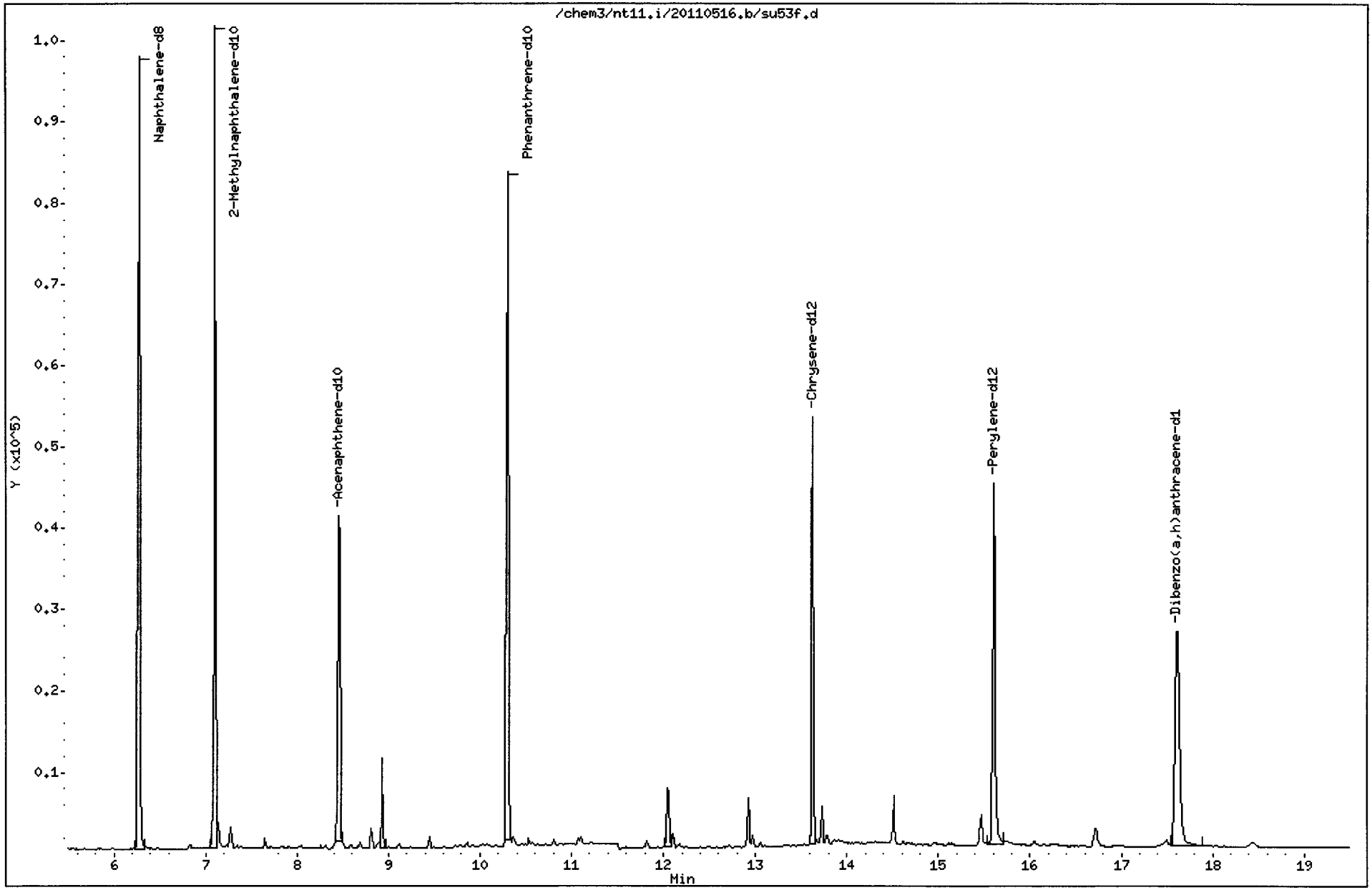
Client Name: Floyd Snider
Client SDG: SU53
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: SU53F
Client Smp ID: MW16042811
Level: LOW
Operator: VTS
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110516.b/lowsim.m
Misc Info: 11-9626

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	192	63.84	31-109
$ 36 Dibenzo(a,h)anthra	300	207	69.12	10-133

Data File: /chem3/nt11.i/20110516.b/su53f.d
Date : 16-MAY-2011 18:48
Client ID: MW16042811
Sample Info: SU53F
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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

SU53:69667



CO-ELUTION SUMMARY FOR FILE - su53f.d

Lab ID: SU53F, Method: lowsim.m, Instrument: nt11.i, Date: 16-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: 5473 Client ID: Floyd Smith

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

Parameter(s): Low Sim PNA

Instrument: NT-4 NT-6 NT-8 NT-10 (NT11) NT12

Curve Date: 4.30.11 Analysis Start Date: 5.19.11

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

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

- Batched with 5474

Additional Details on Reverse: Yes / No

Analyst: VB **Date:** 5.21.11

Reviewer: [signature] **Date:** 5/23/11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: SU474 Client ID: Floyd Snider

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

Parameter(s): low sim PNA's

Instrument: NT-4 NT-6 NT-8 NT-10 (NT11) NT12

Curve Date: 4.30.11 Analysis Start Date: 5.19.11

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

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

Batched with SU473

Additional Details on Reverse: Yes / No

Analyst: VB **Date:** 5.21.11

Reviewer: [signature] **Date:** 5/23/11

Analytical Resources Inc.: Organics Instrument Log

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

Date: 5·19·11 Analysis: Low sim pnA Analyst: VTS

GC Program: Lowsim Column No: 195516 Column Type: ZB·5msi

Instrument Tune (.U or .CT.): 110430.U EM Voltage: 1471

Calibration File: df 0519 Curve Date: 4·30·11

IS/SS	Ical/Ccal	LCS/ICV
1754-1	1818-2	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chems/nt11.i/20110519.b

	Time	Filename	LabID	ClientId	DF								
1	0921	df0519.d	DF0519		1	NO ISTDS FOUND							
2	0935	cc0519.d	CC0519		1	6.27	114549	8.47	64310	10 30	104174	13 63	70778	15.61	59638
3	1022	su27mb.d	SU27MBW1	SU27MBW1	1	6 27	118831	8 47	68562	10 30	114667	13 63	74843	15 62	59215
4	1046	su27sb.d	SU27LCSW1	SU27LCSW1	1	6 27	119449	8.45	69410	10.30	113813	13.63	76346	15.61	62403
5	1111	su27sbd.d	SU27LCSDW1	SU27LCSDW1	1	6.27	122344	8.45	69852	10.30	114624	13.63	75188	15 61	63734
6	1135	su27qls1.d	SU27QLS1		1	6.27	121395	8 45	69500	10 30	116695	13.63	73615	15.61	63376
7	1159	su27a d	SU27A	NBF-MH178-04	10	6.27	118225	8.45	67543	10.30	109552	13.63	74123	15 61	66554
8	1223	su27b.d	SU27B	NBF-MH108-04	1	6 27	122126	8 45	70871	10 30	115616	13.63	76560	15.61	66882
9	1248	su27c.d	SU27C	NBF-LS431-04	1	6.27	119921	8 45	70202	10.30	112463	13.63	72336	15.61	64599
10	1312	su73mb.d	SU73MBW1	SU73MBW1	1	6 27	124138	8.45	70204	10.30	114479	13.63	73529	15.61	64698
11	1336	su73sb d	SU73LCSW1	SU73LCSW1	1	6.27	118038	8 47	69817	10 30	118403	13.63	80682	15.61	63399
12	1400	su73qls1.d	SU73QLS1		1	6.27	117835	8.45	69735	10.30	117102	13 63	76143	15.61	61325
13	1425	su73a.d	SU73A	MW-01-042911	1	6.27	125849	8.45	79455	10.30	124833	13.63	77890	15 61	65588
14	1449	su73b.d	SU73B	MW-01-042911	1	6.27	120625	8.47	76759	10.30	123762	13.63	76395	15.61	61863
15	1513	su74a.d	SU74A	B312-042911	1	6.27	119557	8.47	70279	10 30	120326	13 63	77405	15.61	63881
16	1538	su74ams.d	SU74AMS	B312-042911	1	6.27	115311	8 47	68463	10 30	116747	13 63	77009	15.61	63699
17	1602	su74amsd.d	SU74AMSD	B312-042911	1	6.27	116649	8.47	69292	10 30	119369	13 63	81533	15.61	64909
18	1626	su74b.d	SU74B	B310-042911	1	6.27	115855	8.45	68143	10.30	111834	13.63	71589	15.61	61430
19	1650	su74c.d	SU74C	B311-042911	1	6.27	114081	8 47	66837	10.30	111242	13 63	75124	15.61	62191
20	1715	sv26mb.d	SV26MBW1	SV26MBW1	1	6 27	120849	8 45	69902	10.30	117286	13 63	77841	15.61	64770
21	1739	sv26sb.d	SV26LCSW1	SV26LCSW1	1	6.27	114530	8 47	69705	10.30	116813	13.63	81559	15.61	65062
22	1803	sv26sbd.d	SV26LCSDW1	SV26LCSDW1	1	6 27	120523	8 47	71170	10.30	122905	13.63	84347	15.60	67785
23	1827	sv26qls1 d	SV26QLS1		1	6.27	118981	8.47	69648	10.30	118870	13.63	81289	15.60	65121
24	1852	sv26a.d	SV26A	JBLM_01035_0	1	6 27	120491	8.47	69969	10.30	119389	13 63	79755	15.61	66588
25	1916	sv26b.d	SV26B	JBLM_01035_0	1	6.27	117485	8.47	69292	10.30	119631	13 63	79743	15.61	64652
26	1940	sv26c.d	SV26C	JBLM_03627_0	1	6.27	116473	8 47	67087	10 30	116543	13.63	79492	15.61	63996
27	2004	sv26d.d	SV26D	JBLM_03627_0	1	6.27	116520	8.47	67062	10.30	115098	13.63	79473	15 61	63899
28	2028	sv26e.d	SV26E	JBLM_03627_0	1	6.28	118706	8.47	69276	10.30	118510	13.63	81598	15 60	65861
29	2053	sv26ems d	SV26EMS	JBLM_03627_0	1	6 27	120775	8.45	71629	10.30	120730	13 63	82906	15.60	68476
30	2117	sv26emsd d	SV26EMSD	JBLM_03627_0	1	6 27	120112	8.45	70067	10 30	114346	13.63	78516	15.60	67054
31	2141	sv26f.d	SV26F	JBLM_03945_0	1	6.27	119660	8.45	69828	10.30	113360	13.63	77464	15.60	63997

VTS 5·21·BU53 : 00671

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20110519.b

ARI Job No.: DF05 Method: DF8270.m Instrument: nt11.i Date: 19-MAY-2011

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0921	df0519.d	DF0519		1	NO MANUAL INTEGRATION
0935	cc0519.d	CC0519		1	NO MANUAL INTEGRATION
1425	su73a.d	SU73A	MW-01-0429	1	NO MANUAL INTEGRATION
1449	su73b.d	SU73B	MW-01-0429	1	NO MANUAL INTEGRATION
1312	su73mb.d	SU73MBW1	SU73MBW1	1	NO MANUAL INTEGRATION
1336	su73sb.d	SU73LCSW1	SU73LCSW1	1	NO MANUAL INTEGRATION
1513	su74a.d	SU74A	B312-04291	1	NO MANUAL INTEGRATION
1538	su74ams.d	SU74AMS	B312-04291	1	NO MANUAL INTEGRATION
1602	su74amsd.d	SU74AMSD	B312-04291	1	NO MANUAL INTEGRATION
1626	su74b.d	SU74B	B310-04291	1	NO MANUAL INTEGRATION
1650	su74c.d	SU74C	B311-04291	1	NO MANUAL INTEGRATION

27906 :ESOS

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt11.i/20110519.b

Instrument: nt11.i Date: 19-MAY-2011 Method: lowsim.m

INITIAL CAL: 30-APR-2011

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 19-MAY-2011

Compound	%D
NO Q-FLAGS	

Data File: /chem3/nt11.i/20110519.b/df0519.d

Date : 19-MAY-2011 09:21

Client ID:

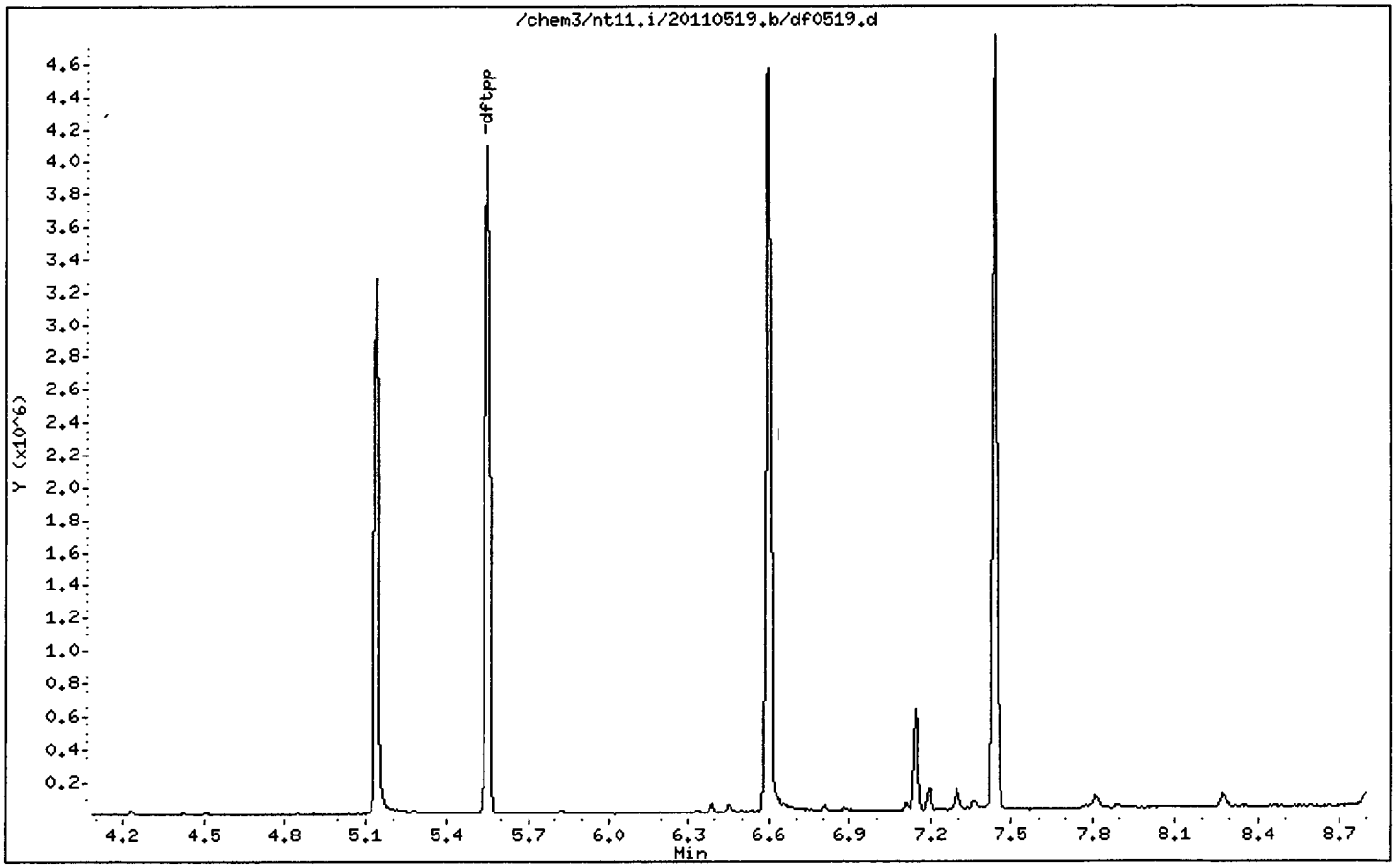
Instrument: nt11.i

Sample Info: DF0519

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem3/nt11.i/20110519.b/df0519.d

Date : 19-MAY-2011 09:21

Client ID:

Instrument: nt11.i

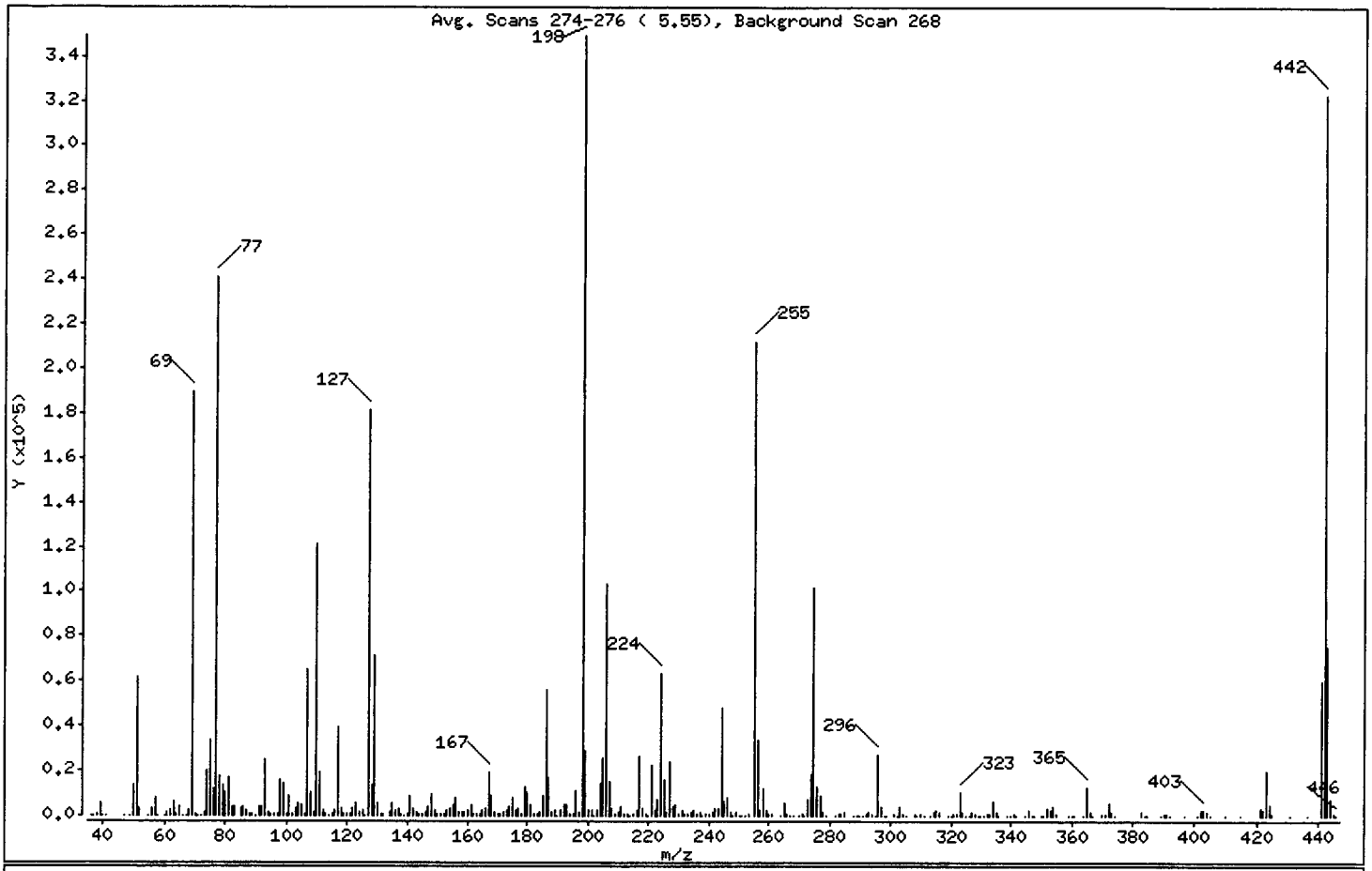
Sample Info: DF0519

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	17.59
68	Less than 2.00% of mass 69	0.73 (1.35)
69	Mass 69 relative abundance	54.30
70	Less than 2.00% of mass 69	0.34 (0.63)
127	10.00 - 80.00% of mass 198	51.86
197	Less than 2.00% of mass 198	0.53
199	5.00 - 9.00% of mass 198	8.37
275	10.00 - 60.00% of mass 198	29.17
365	Greater than 1.00% of mass 198	3.59
441	0.01 - 24.00% of mass 442	17.18 (18.59)
442	50.00 - 200.00% of mass 198	92.39
443	15.00 - 24.00% of mass 442	21.50 (23.27)

Data File: /chem3/nt11.i/20110519.b/df0519.d

Date : 19-MAY-2011 09:21

Client ID:

Instrument: nt11.i

Sample Info: DF0519

Operator: VTS

Column phase: ZB-5ms

Column diameter: 0.25

Data File: df0519.d
Spectrum: Avg. Scans 274-276 (5.55), Background Scan 268
Location of Maximum: 198.00
Number of points: 338

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	67	128.00	13589	213.00	507	308.00	713
37.00	323	129.00	71128	214.00	56	309.00	150
38.00	775	130.00	5811	215.00	1096	310.00	411
39.00	5327	131.00	801	216.00	2193	311.00	162
40.00	270	132.00	728	217.00	26456	313.00	272
41.00	247	133.00	190	218.00	3067	314.00	1270
47.00	100	134.00	1962	219.00	689	315.00	2785
49.00	95	135.00	5398	220.00	286	316.00	1731
50.00	13674	136.00	2476	221.00	22680	317.00	255
51.00	61464	137.00	3047	222.00	2483	319.00	98
52.00	3139	138.00	571	223.00	6843	320.00	175
53.00	158	139.00	216	224.00	63504	321.00	1158
55.00	105	140.00	851	225.00	16031	322.00	694
56.00	3050	141.00	9135	226.00	1653	323.00	10365
57.00	7875	142.00	3160	227.00	24424	324.00	1941
58.00	224	143.00	1602	228.00	3850	325.00	266
59.00	270	144.00	564	229.00	5061	326.00	273
60.00	61	145.00	768	230.00	471	327.00	1612
61.00	1498	146.00	1685	231.00	2218	328.00	798
62.00	2535	147.00	4317	232.00	505	329.00	374
63.00	6404	148.00	9800	233.00	480	330.00	89
64.00	1173	149.00	2450	234.00	1263	331.00	93
65.00	3854	150.00	794	235.00	2183	332.00	1027
66.00	153	151.00	1019	236.00	1113	333.00	908
67.00	364	152.00	402	237.00	1500	334.00	6057
68.00	2558	153.00	2579	238.00	289	335.00	1769
69.00	189696	154.00	2847	239.00	835	336.00	174
70.00	1191	155.00	4982	240.00	687	339.00	168
71.00	44	156.00	7977	241.00	1290	340.00	113
72.00	104	157.00	1844	242.00	2878	341.00	1107
73.00	1740	158.00	1747	243.00	2949	342.00	228
74.00	19960	159.00	1418	244.00	48072	345.00	211
75.00	33408	160.00	2631	245.00	6806	346.00	2094
76.00	12262	161.00	4478	246.00	7991	347.00	372
77.00	241024	162.00	1095	247.00	1757	348.00	50

Date : 19-MAY-2011 09:21

Client ID: Instrument: nt11.i

Sample Info: DF0519

Operator: VTS

Column phase: ZB-5msi Column diameter: 0.25

Data File: df0519.d
Spectrum: Avg. Scans 274-276 (5.55), Background Scan 268
Location of Maximum: 198.00
Number of points: 338

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	17448	163.00	621	248.00	396	350.00	67
79.00	13968	164.00	603	249.00	1632	351.00	106
80.00	10616	165.00	2622	250.00	394	352.00	3544
81.00	16648	166.00	2964	251.00	372	353.00	2210
82.00	4192	167.00	19080	252.00	216	354.00	3996
83.00	3904	168.00	8804	253.00	1163	355.00	716
84.00	252	169.00	1638	255.00	211840	359.00	394
85.00	3134	170.00	780	256.00	33552	360.00	71
86.00	3753	171.00	623	257.00	2598	361.00	76
87.00	2019	172.00	1749	258.00	11989	364.00	76
88.00	552	173.00	2096	259.00	2359	365.00	12557
89.00	827	174.00	3971	260.00	604	366.00	1463
90.00	78	175.00	8256	261.00	467	367.00	166
91.00	3981	176.00	2097	264.00	353	370.00	427
92.00	4224	177.00	3612	265.00	5334	371.00	679
93.00	24664	178.00	1153	266.00	528	372.00	5802
94.00	1593	179.00	12939	267.00	50	373.00	1512
95.00	827	180.00	10095	268.00	302	374.00	282
96.00	532	181.00	4905	270.00	321	377.00	92
97.00	522	182.00	820	271.00	526	383.00	1578
98.00	16166	183.00	834	272.00	373	384.00	360
99.00	14280	184.00	1308	273.00	7046	385.00	146
100.00	1117	185.00	8949	274.00	18856	388.00	52
101.00	8777	186.00	56032	275.00	101928	389.00	50
102.00	550	187.00	17088	276.00	13011	390.00	906
103.00	2954	188.00	1977	277.00	8488	391.00	578
104.00	5285	189.00	2794	278.00	1375	392.00	223
105.00	4699	190.00	399	279.00	385	397.00	91
106.00	862	191.00	2010	282.00	276	401.00	296
107.00	65240	192.00	4840	283.00	819	402.00	2498
108.00	10267	193.00	4926	284.00	675	403.00	2592
109.00	1960	194.00	844	285.00	1724	404.00	1478
110.00	121264	195.00	787	286.00	284	405.00	172
111.00	19600	196.00	11542	288.00	60	410.00	74
112.00	2541	197.00	1857	289.00	187	415.00	56

Data File: /chem3/nt11.i/20110519.b/df0519.d

Date : 19-MAY-2011 09:21

Client ID:

Instrument: nt11.i

Sample Info: DF0519

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0519.d

Spectrum: Avg. Scans 274-276 (5.55), Background Scan 268

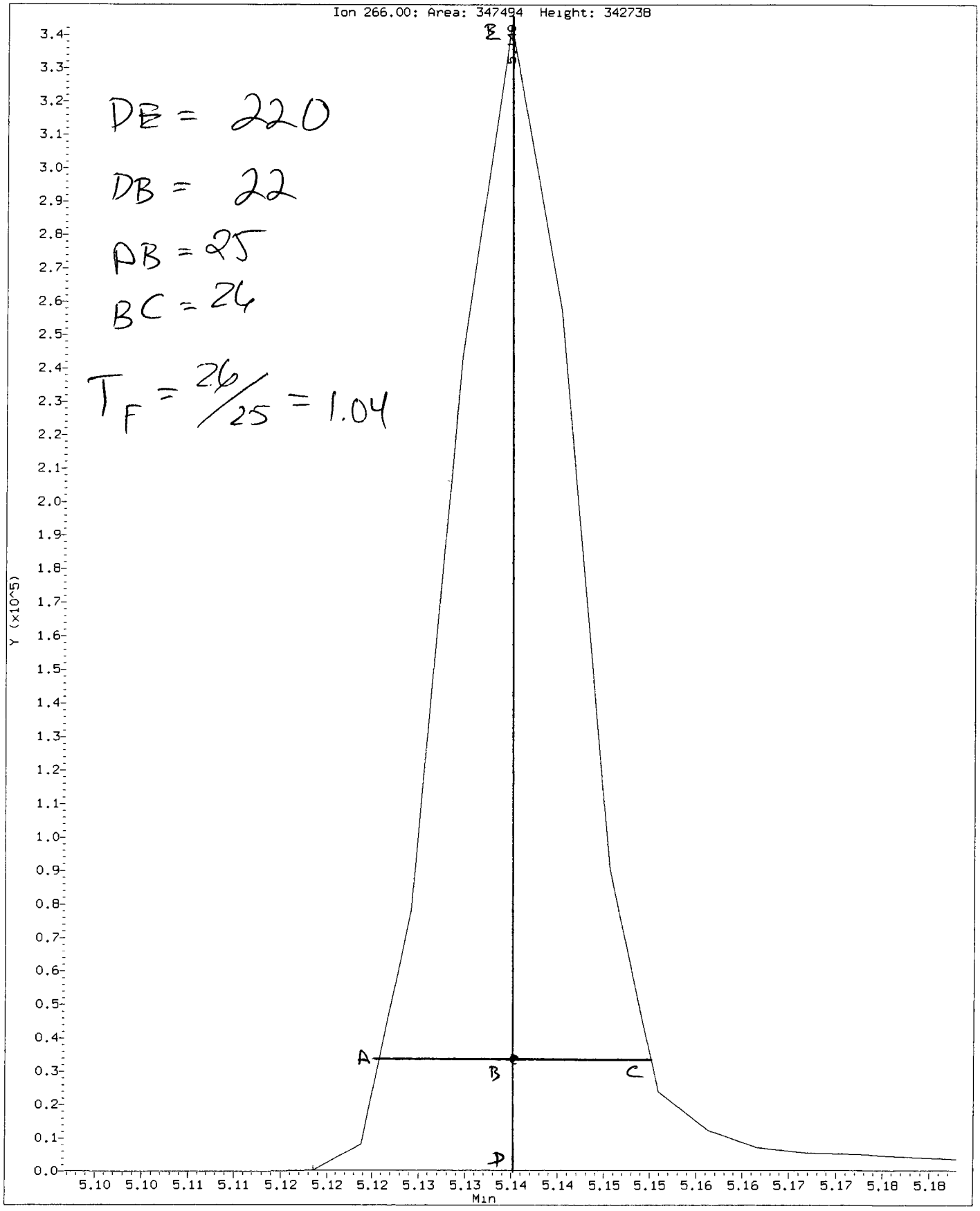
Location of Maximum: 198.00

Number of points: 338

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	964	198.00	349376	290.00	231	421.00	2829
114.00	81	199.00	29240	291.00	184	422.00	2645
115.00	492	200.00	2113	292.00	487	423.00	20144
116.00	2468	201.00	2299	293.00	1442	424.00	4822
117.00	39280	202.00	316	294.00	525	425.00	810
118.00	2822	203.00	2390	295.00	372	431.00	51
119.00	588	204.00	14416	296.00	27088	436.00	70
120.00	732	205.00	25600	297.00	3943	441.00	60016
121.00	416	206.00	103832	298.00	376	442.00	322752
122.00	3510	207.00	15051	299.00	57	443.00	75104
123.00	5822	208.00	3507	301.00	436	444.00	7413
124.00	1998	209.00	986	302.00	399	445.00	455
125.00	2139	210.00	1626	303.00	3748	446.00	63
126.00	177	211.00	4126	304.00	1045		
127.00	181184	212.00	734	305.00	58		

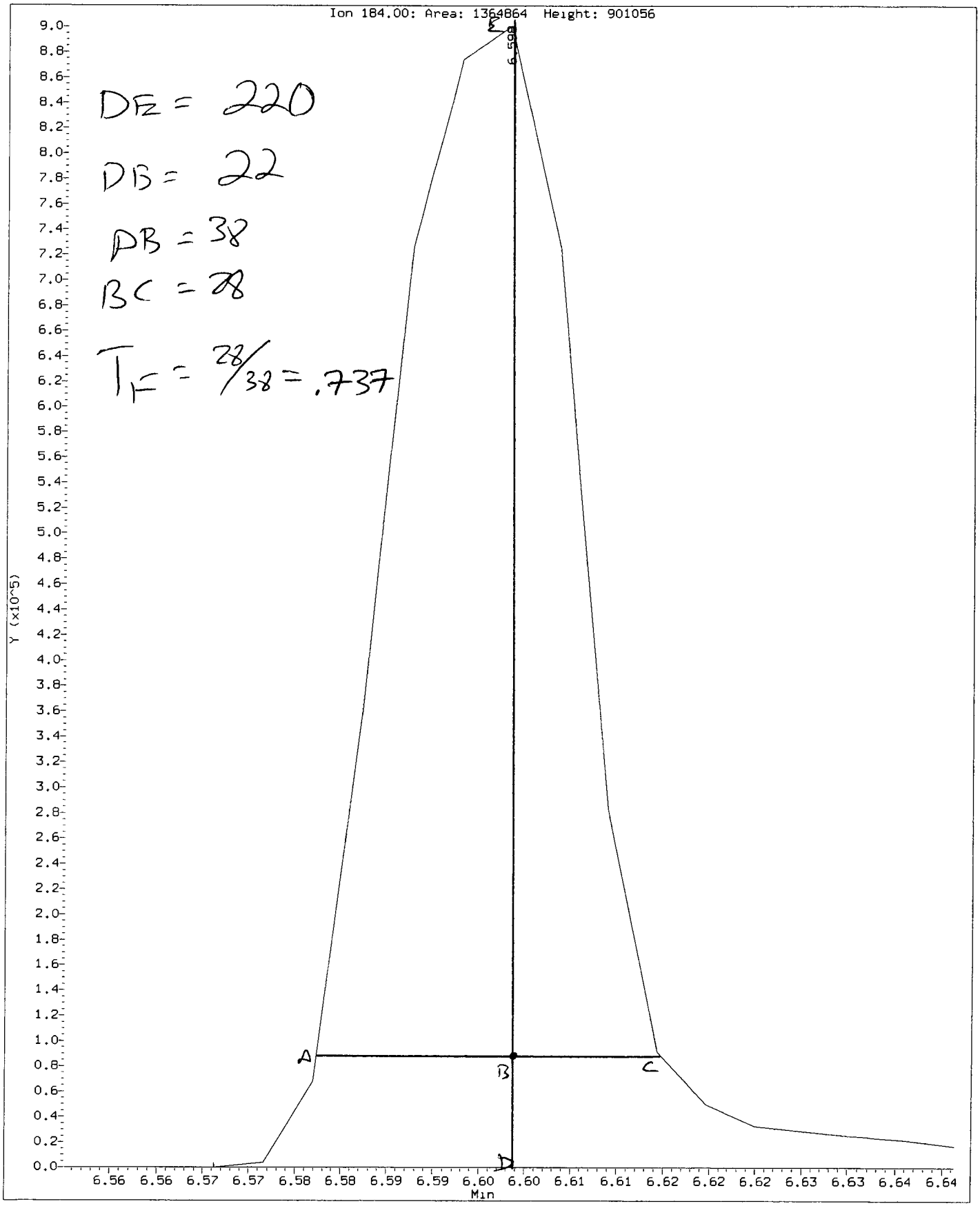
Data File: /chem3/nt11.i/20110519.b/ddt.b/df0519.d
Injection Date: 19-MAY-2011 09:21
Instrument: nt11.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.1/20110519.b/ddt.b/df0519.d
Injection Date: 19-MAY-2011 09:21
Instrument: nt11.1
Client Sample ID:

Compound: Benzidine
CAS Number:



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

Data file: /chem3/nt11.i/20110519.b/ddt.b/df0519.d ARI ID: DF0519
Method: /chem3/nt11.i/20110519.b/ddt.b/sw846ddt.m Misc:
Analysis Date: 19-MAY-2011 09:21 Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	5.140	347494
Benzidine	6.598	1364864
4,4'-DDE	6.812	4721
4,4'-DDD	7.143	122728
4,4'-DDT	7.442	802102

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

$$\text{DDT Percent Breakdown} = \frac{(4721 + 122728) * 100}{(4721 + 122728 + 802102)}$$

DDT Percent Breakdown = 13.7 %

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110519.b/cc0519.d
Lab Smp Id: CC0519
Inj Date : 19-MAY-2011 09:35
Operator : VTS Inst ID: nt11.i
Smp Info : CC0519
Misc Info :
Comment :
Method : /chem3/nt11.i/20110519.b/lowsim.m
Meth Date : 19-May-2011 10:16 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.273	6.273	(1.000)	114549	200.000	
	5 Naphthalene	128	6.296	6.296	(1.004)	138990	250.000	253
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	86347	250.000	260
	7 2-Methylnaphthalene	142	7.135	7.135	(1.138)	87163	250.000	261
	8 1-Methylnaphthalene	142	7.274	7.274	(1.160)	86191	250.000	260
	10 Acenaphthylene	152	8.265	8.265	(0.976)	129364	250.000	258
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	64310	200.000	
	12 Acenaphthene	153	8.493	8.493	(1.003)	80824	250.000	256
	14 Dibenzofuran	168	8.694	8.694	(1.027)	123065	250.000	264
	15 Fluorene	166	9.123	9.123	(1.078)	84790	250.000	258
*	18 Phenanthrene-d10	188	10.302	10.302	(1.000)	104174	200.000	
	19 Phenanthrene	178	10.329	10.329	(1.003)	131746	250.000	252
	20 Anthracene	178	10.383	10.383	(1.008)	125152	250.000	252
	24 Fluoranthene	202	11.831	11.831	(1.148)	135125	250.000	263
	25 Pyrene	202	12.112	12.112	(0.889)	141507	250.000	238
	28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	119334	250.000	241
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	70778	200.000	
	30 Chrysene	228	13.655	13.655	(1.002)	124251	250.000	249
	43 Total Benzofluoranthenes	252	15.041	15.041	(0.964)	238592	500.000	495
	34 Benzo(a)pyrene	252	15.522	15.522	(0.994)	107156	250.000	250
*	35 Perylene-d12	264	15.608	15.608	(1.000)	59638	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	17.672	17.672	(1.132)	131243	250.000	254
$	36 Dibenzo(a,h)anthracene-d14	292	17.618	17.618	(1.129)	94220	250.000	252
	38 Dibenzo(a,h)anthracene	278	17.685	17.685	(1.133)	102113	250.000	254
	39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	111159	250.000	242

5.19.11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: cc0519.d
Lab Smp Id: CC0519
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info:

Calibration Date: 19-MAY-2011
Calibration Time: 09:35
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	114549	-11.43
11 Acenaphthene-d10	70573	35286	141146	64310	-8.87
18 Phenanthrene-d10	113741	56870	227482	104174	-8.41
29 Chrysene-d12	70763	35382	141526	70778	0.02
35 Perylene-d12	54896	27448	109792	59638	8.64

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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: 19-MAY-2011 09:35
Lab File ID: cc0519.d Init. Cal. Date(s): 30-APR-2011 30-APR-2011
Analysis Type: Init. Cal. Times: 10:12 12:15
Lab Sample ID: CC0519 Quant Type: ISTD
Method: /chem3/nt11.i/20110519.b/lowsim.m

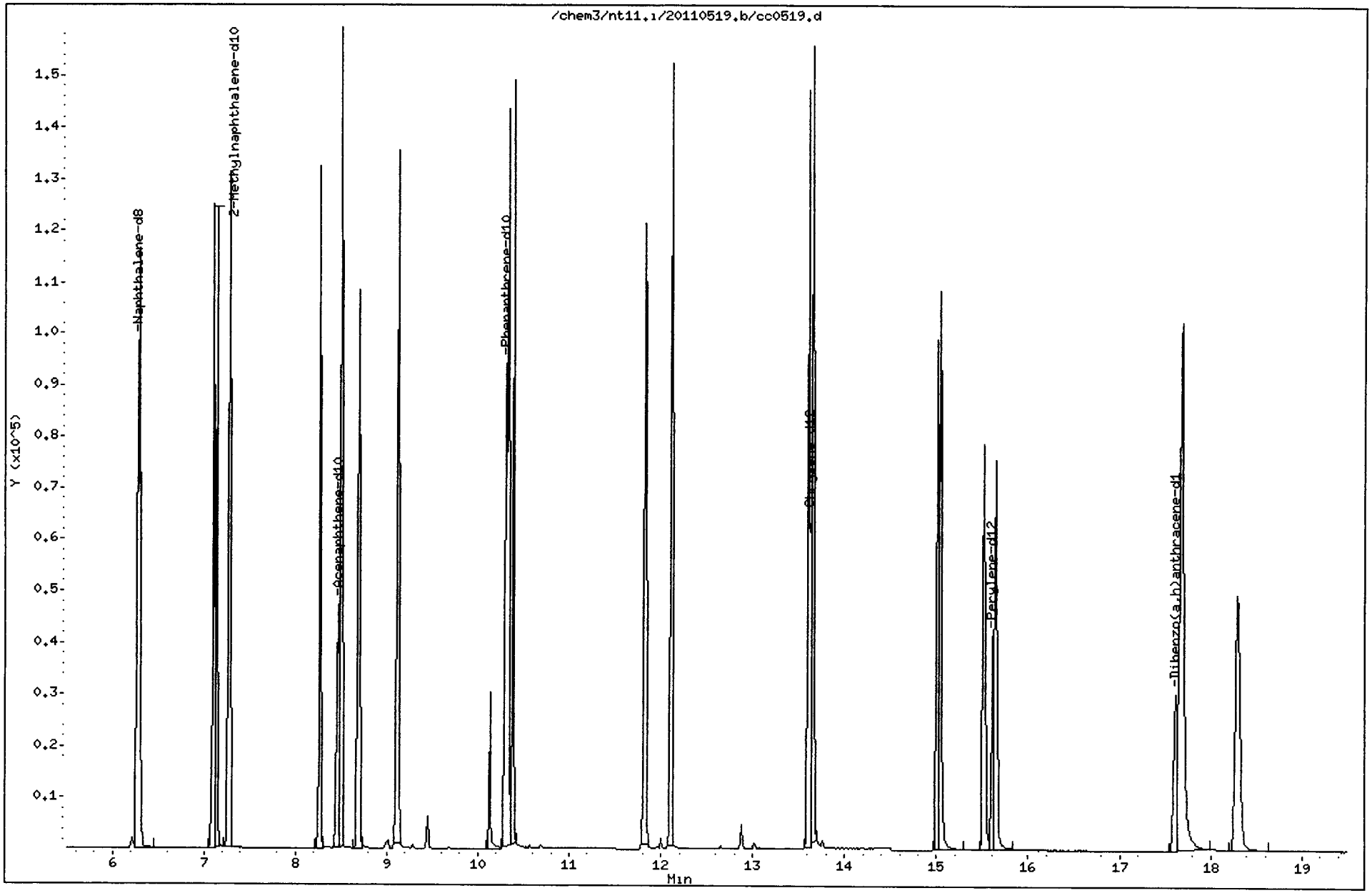
COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
5 Naphthalene	0.95920	0.97069	0.010	1.19855	20.00000	Averaged
$ 6 2-Methylnaphthalene-d10	0.58083	0.60304	0.010	3.82264	20.00000	Averaged
7 2-Methylnaphthalene	0.58263	0.60873	0.010	4.48010	20.00000	Averaged
8 1-Methylnaphthalene	0.57825	0.60195	0.010	4.09858	20.00000	Averaged
10 Acenaphthylene	1.56025	1.60924	0.010	3.14029	20.00000	Averaged
12 Acenaphthene	0.98304	1.00542	0.010	2.27676	20.00000	Averaged
14 Dibenzofuran	1.44731	1.53088	0.010	5.77417	20.00000	Averaged
15 Fluorene	1.02181	1.05475	0.010	3.22390	20.00000	Averaged
19 Phenanthrene	1.00537	1.01174	0.010	0.63307	20.00000	Averaged
20 Anthracene	0.95162	0.96110	0.010	0.99675	20.00000	Averaged
24 Fluoranthene	0.98812	1.03769	0.010	5.01606	20.00000	Averaged
25 Pyrene	1.68035	1.59944	0.010	-4.81527	20.00000	Averaged
28 Benzo(a)anthracene	1.40073	1.34882	0.010	-3.70618	20.00000	Averaged
30 Chrysene	1.40823	1.40440	0.010	-0.27169	20.00000	Averaged
43 Total Benzofluoranthenes	1.61557	1.60024	0.010	-0.94837	20.00000	Averaged
34 Benzo(a)pyrene	1.43471	1.43740	0.010	0.18731	20.00000	Averaged
37 Indeno(1,2,3-cd)pyrene	1.73173	1.76051	0.010	1.66202	20.00000	Averaged
$ 36 Dibenzo(a,h)anthracene-d14	1.25261	1.26388	0.010	0.89964	20.00000	Averaged
38 Dibenzo(a,h)anthracene	1.34894	1.36975	0.010	1.54316	20.00000	Averaged
39 Benzo(g,h,i)perylene	1.54303	1.49109	0.010	-3.36609	20.00000	Averaged

Data File: /chem3/nt11.i/20110519.b/cc0519.d
Date : 19-MAY-2011 09:35
Client ID:
Sample Info: CC0519

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi



SUS3:00685

CO-ELUTION SUMMARY FOR FILE - cc0519.d

Lab ID: CC0519, Method: lowsim.m, Instrument: nt11.i, Date: 19-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110519.b/su73mb.d
Lab Smp Id: SU73MBW1 Client Smp ID: SU73MBW1
Inj Date : 19-MAY-2011 13:12
Operator : VTS Inst ID: nt11.i
Smp Info : SU73MBW1
Misc Info : 11-9762
Comment :
Method : /chem3/nt11.i/20110519.b/lowsim.m
Meth Date : 19-May-2011 10:16 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 8 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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)	CONCENTRATIONS FINAL (ug/L)
* 4 Naphthalene-d8	136	6.273	6.273	(1.000)	124138	200.000	
5 Naphthalene	128	Compound Not Detected.					
$ 6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	72398	200.817	201
7 2-Methylnaphthalene	142	Compound Not Detected.					
8 1-Methylnaphthalene	142	Compound Not Detected.					
10 Acenaphthylene	152	Compound Not Detected.					
* 11 Acenaphthene-d10	164	8.452	8.466	(1.000)	70204	200.000	
12 Acenaphthene	153	Compound Not Detected.					
14 Dibenzofuran	168	Compound Not Detected.					
15 Fluorene	166	Compound Not Detected.					
* 18 Phenanthrene-d10	188	10.303	10.302	(1.000)	114479	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)	CONCENTRATIONS FINAL (ug/L)
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	73529	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	15.609	15.608	(1.000)	64698	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	17.605	17.618	(1.128)	78077	192.684	193
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					

VTS
5.21.11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: su73mb.d
Lab Smp Id: SU73MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9762

Calibration Date: 19-MAY-2011
Calibration Time: 09:35
Client Smp ID: SU73MBW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	124138	-4.01
11 Acenaphthene-d10	70573	35286	141146	70204	-0.52
18 Phenanthrene-d10	113741	56870	227482	114479	0.65
29 Chrysene-d12	70763	35382	141526	73529	3.91
35 Perylene-d12	54896	27448	109792	64698	17.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.45	-0.16
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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: SU73MBW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9762

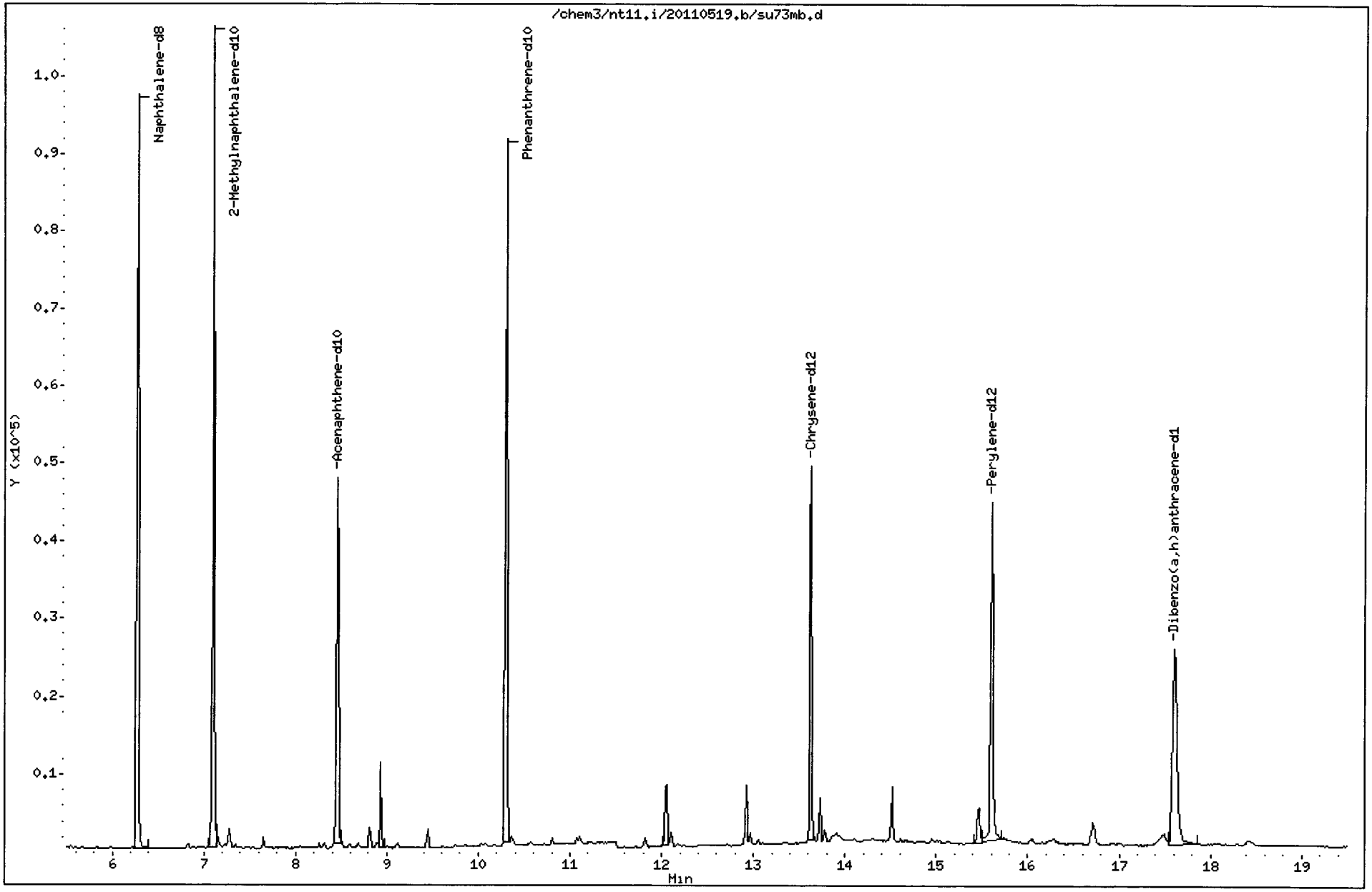
Client SDG: SU73
Fraction: SV
Client Smp ID: SU73MBW1
Operator: VTS
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	201	66.94	31-109
$ 36 Dibenzo(a,h)anthra	300	193	64.23	10-133

Data File: /chem3/nt11.i/20110519.b/su73mb.d
Date : 19-MAY-2011 13:12
Client ID: SU73MBW1
Sample Info: SU73MBW1
Volume Injected (uL): 2.0
Column phase: ZB-5msi

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25



SU53:00691

CO-ELUTION SUMMARY FOR FILE - su73mb.d

Lab ID: SU73MBW1, Method: lowsim.m, Instrument: nt11.i, Date: 19-MAY-2011

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110519.b/su73sb.d
Lab Smp Id: SU73LCSW1 Client Smp ID: SU73LCSW1
Inj Date : 19-MAY-2011 13:36
Operator : VTS Inst ID: nt11.i
Smp Info : SU73LCSW1
Misc Info : 11-9762
Comment :
Method : /chem3/nt11.i/20110519.b/lowsim.m
Meth Date : 19-May-2011 10:16 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	6.273	6.273	(1.000)	118038	200.000	
	5 Naphthalene	128	6.296	6.296	(1.004)	93777	165.652	166
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	59237	172.803	173
	7 2-Methylnaphthalene	142	7.136	7.135	(1.138)	58645	170.547	171
	8 1-Methylnaphthalene	142	7.274	7.274	(1.160)	58069	170.151	170
	10 Acenaphthylene	152	8.265	8.265	(0.976)	89939	165.129	165
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	69817	200.000	
	12 Acenaphthene	153	8.493	8.493	(1.003)	57282	166.924	167
	14 Dibenzofuran	168	8.694	8.694	(1.027)	92411	182.907	183
	15 Fluorene	166	9.123	9.123	(1.078)	69068	193.631	194
*	18 Phenanthrene-d10	188	10.303	10.302	(1.000)	118403	200.000	
	19 Phenanthrene	178	10.329	10.329	(1.003)	112988	189.833	190
	20 Anthracene	178	10.383	10.383	(1.008)	66135	117.391	117
	24 Fluoranthene	202	11.818	11.831	(1.147)	129959	222.158	222
	25 Pyrene	202	12.113	12.112	(0.889)	134747	198.780	199

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	101248	179.178	179
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	80682	200.000	
	30 Chrysene	228	13.655	13.655	(1.002)	110210	194.000	194
	43 Total Benzofluoranthenes	252	15.003	15.041	(0.961)	199514	389.580	390
	34 Benzo(a)pyrene	252	15.512	15.522	(0.994)	41164	90.5107	90.5
*	35 Perylene-d12	264	15.608	15.608	(1.000)	63399	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	17.672	17.672	(1.132)	91227	166.185	166
$	36 Dibenzo(a,h)anthracene-d14	292	17.605	17.618	(1.128)	71270	179.489	179
	38 Dibenzo(a,h)anthracene	278	17.672	17.685	(1.132)	75033	175.472	175
	39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	72619	148.464	148

VR 5-21-11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: su73sb.d
Lab Smp Id: SU73LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9762

Calibration Date: 19-MAY-2011
Calibration Time: 09:35
Client Smp ID: SU73LCSW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	118038	-8.73
11 Acenaphthene-d10	70573	35286	141146	69817	-1.07
18 Phenanthrene-d10	113741	56870	227482	118403	4.10
29 Chrysene-d12	70763	35382	141526	80682	14.02
35 Perylene-d12	54896	27448	109792	63399	15.49

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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: SU73LCSW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9762

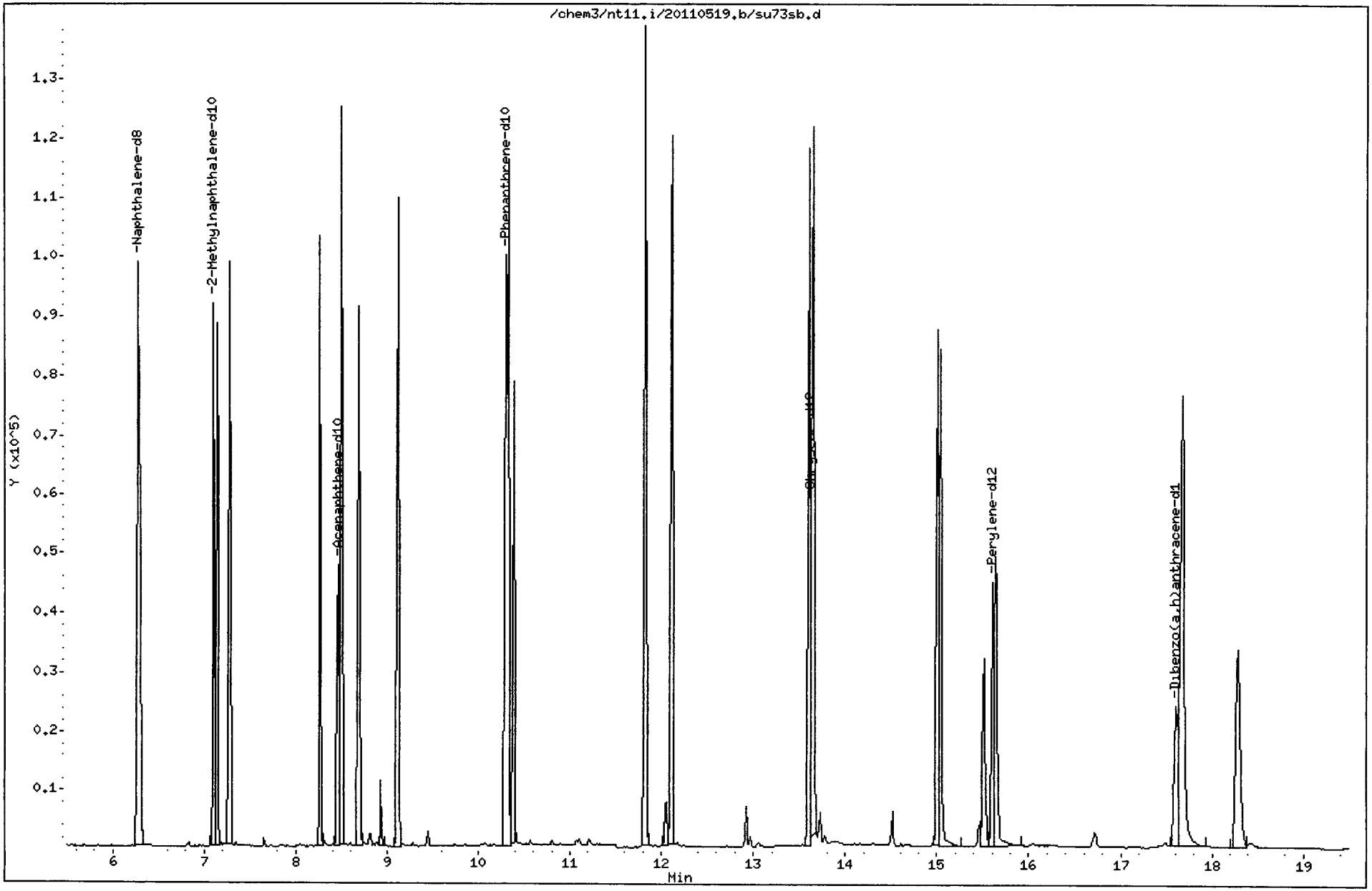
Client SDG: SU73
Fraction: SV
Client Smp ID: SU73LCSW1
Operator: VTS
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	166	55.22	41-101
7 2-Methylnaphthalen	300	171	56.85	47-100
8 1-Methylnaphthalen	300	170	56.72	30-160
10 Acenaphthylene	300	165	55.04	35-100
12 Acenaphthene	300	167	55.64	43-104
14 Dibenzofuran	300	183	60.97	37-100
15 Fluorene	300	194	64.54	51-103
19 Phenanthrene	300	190	63.28	55-109
20 Anthracene	300	117	39.13	30-101
24 Fluoranthene	300	222	74.05	49-123
25 Pyrene	300	199	66.26	48-120
28 Benzo(a)anthracene	300	179	59.73	43-113
30 Chrysene	300	194	64.67	59-112
43 Total Benzofluoran	600	390	64.93	30-160
34 Benzo(a)pyrene	300	90.5	30.17	10-100
37 Indeno(1,2,3-cd)py	300	166	55.39	43-112
38 Dibenzo(a,h)anthra	300	175	58.49	42-114
39 Benzo(g,h,i)peryle	300	148	49.49	31-118

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	173	57.60	31-109
$ 36 Dibenzo(a,h)anthra	300	179	59.83	10-133

Data File: /chem3/nt11.i/20110519.b/su73sb.d
Date : 19-MAY-2011 13:36
Client ID: SU73LCSW1
Sample Info: SU73LCSW1
Volume Injected (uL): 2.0
Column phase: ZB-5ms1

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



SU53:00697

CO-ELUTION SUMMARY FOR FILE - su73sb.d

Lab ID: SU73LCSW1, Method: lowsim.m, Instrument: nt11.i, Date: 19-MAY-2011

RT	CO-ELUTION COMPOUNDS
17.672	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
17.672	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110519.b/su73a.d
Lab Smp Id: SU73A Client Smp ID: MW-01-042911
Inj Date : 19-MAY-2011 14:25
Operator : VTS Inst ID: nt11.i
Smp Info : SU73A
Misc Info : 11-9762
Comment :
Method : /chem3/nt11.i/20110519.b/lowsim.m
Meth Date : 19-May-2011 10:16 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	6.273	6.273	(1.000)	125849	200.000	
	5 Naphthalene	128	6.296	6.296	(1.004)	996523	1651.05	1650
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	68027	186.127	186
	7 2-Methylnaphthalene	142	7.136	7.135	(1.138)	271109	739.486	739
	8 1-Methylnaphthalene	142	7.274	7.274	(1.160)	460069	1264.41	1260
	10 Acenaphthylene	152	8.265	8.265	(0.978)	21125	34.0810	34.1
*	11 Acenaphthene-d10	164	8.452	8.466	(1.000)	79455	200.000	
	12 Acenaphthene	153	8.493	8.493	(1.005)	93467	239.330	239
	14 Dibenzofuran	168	8.694	8.694	(1.029)	83874	145.873	146
	15 Fluorene	166	9.123	9.123	(1.079)	124764	307.346	307
*	18 Phenanthrene-d10	188	10.303	10.302	(1.000)	124833	200.000	
	19 Phenanthrene	178	10.329	10.329	(1.003)	70891	112.970	113
	20 Anthracene	178	10.383	10.383	(1.008)	29685	49.9775	50.0
	24 Fluoranthene	202	11.818	11.831	(1.147)	23695	38.4190	38.4
	25 Pyrene	202	12.113	12.112	(0.889)	28323	43.2801	43.3
	28 Benzo(a)anthracene	228	Compound Not Detected.					

NR

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	77890	200.000	
	30 Chrysene	228	13.641	13.655	(1.001)	4367	7.96266	7.96
	43 Total Benzofluoranthenes	252	Compound Not Detected.					
	34 Benzo(a)pyrene	252	15.512	15.522	(0.994)	2697	5.73220	5.73
*	35 Perylene-d12	264	15.609	15.608	(1.000)	65588	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	17.605	17.618	(1.128)	79447	193.404	193
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	2586	~~5.11044~~	5.11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: su73a.d
Lab Smp Id: SU73A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9762

Calibration Date: 19-MAY-2011
Calibration Time: 09:35
Client Smp ID: MW-01-042911
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	125849	-2.69
11 Acenaphthene-d10	70573	35286	141146	79455	12.59
18 Phenanthrene-d10	113741	56870	227482	124833	9.75
29 Chrysene-d12	70763	35382	141526	77890	10.07
35 Perylene-d12	54896	27448	109792	65588	19.48

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.45	-0.16
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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: SU73A
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9762

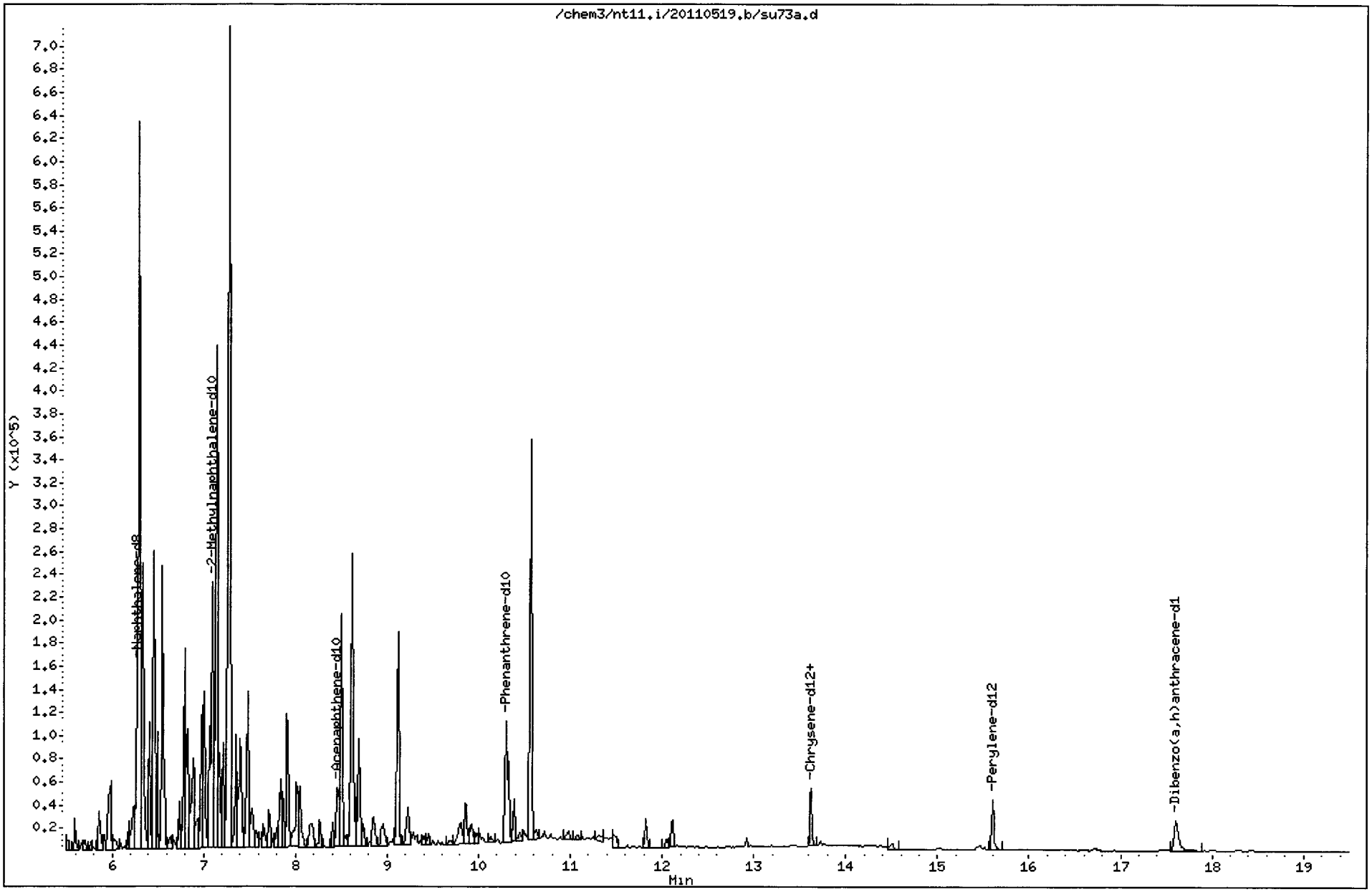
Client SDG: SU73
Fraction: SV
Client Smp ID: MW-01-042911
Operator: VTS
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	186	62.04	31-109
$ 36 Dibenzo(a,h)anthra	300	193	64.47	10-133

Data File: /chem3/nt11.i/20110519.b/su73a.d
Date : 19-MAY-2011 14:25
Client ID: MW-01-042911
Sample Info: SU73A
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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

SU53:00793



Data File: /chem3/nt11.i/20110519.b/su73a.d

Date : 19-MAY-2011 14:25

Client ID: MW-01-042911 Instrument: nt11.i

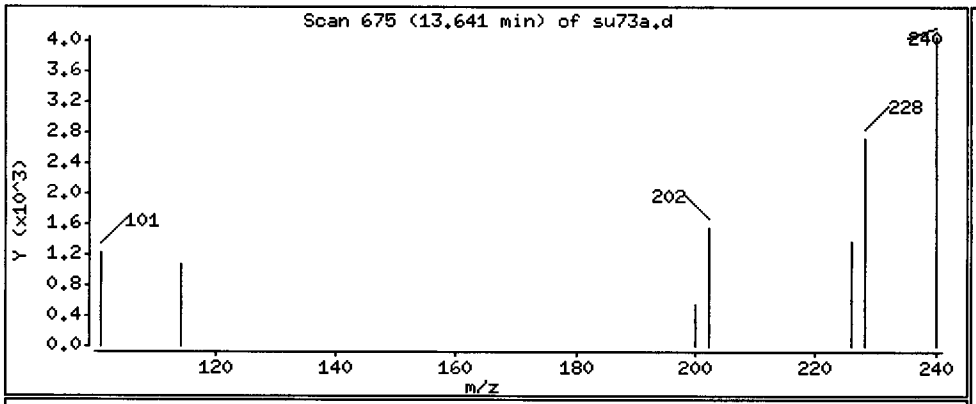
Sample Info: SU73A

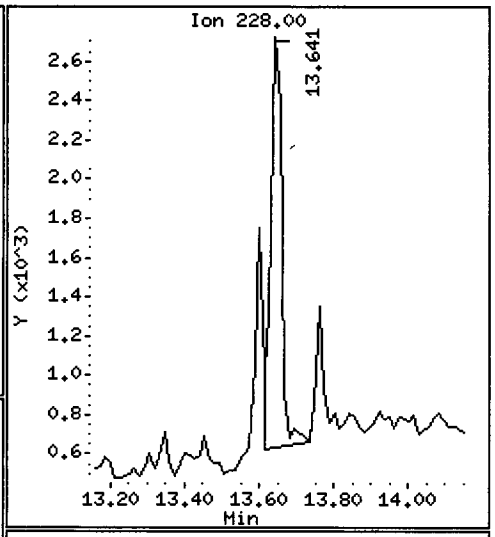
Volume Injected (uL): 2.0 Operator: VTS

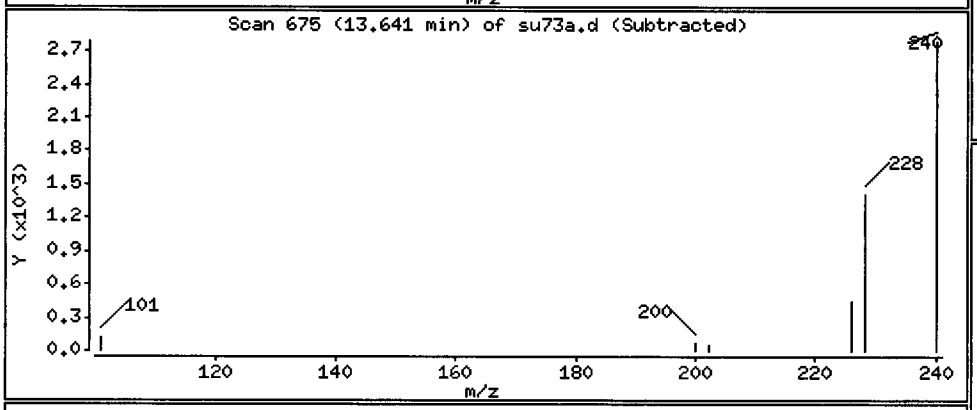
Column phase: ZB-5msi Column diameter: 0.25

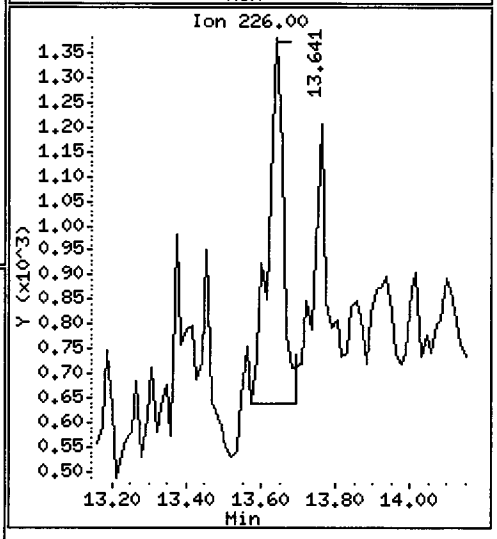
30 Chrysene Concentration: 7.96 ug/L

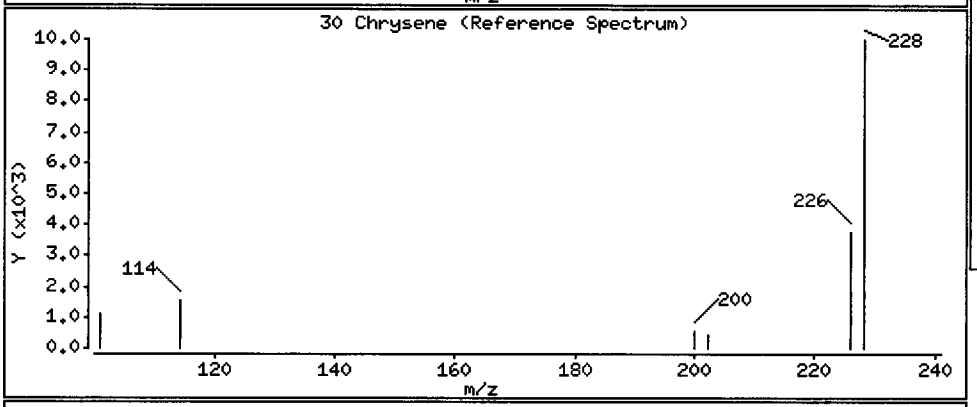
JLR

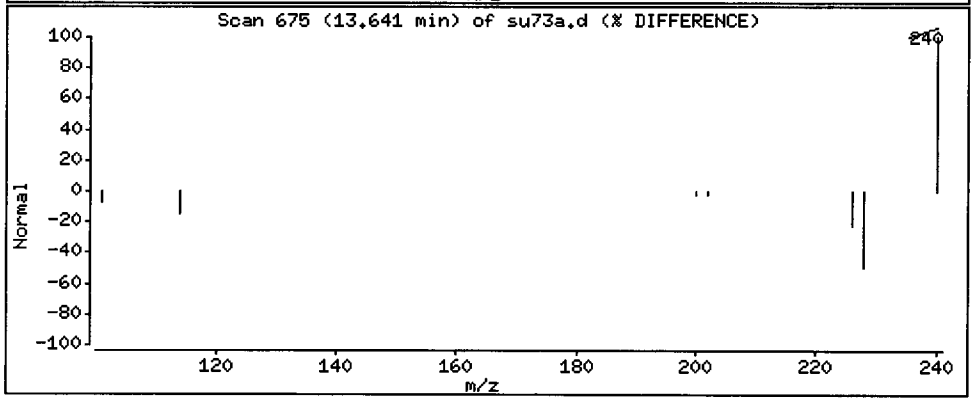












Data File: /chem3/nt11.i/20110519.b/su73a.d

Date : 19-MAY-2011 14:25

Client ID: MW-01-042911

Instrument: nt11.i

Sample Info: SU73A

Volume Injected (uL): 2.0

Operator: VTS

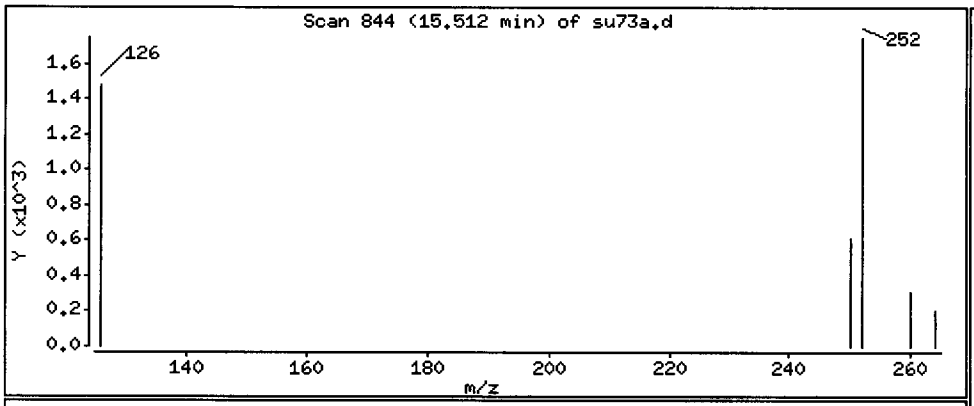
Column phase: ZB-5msi

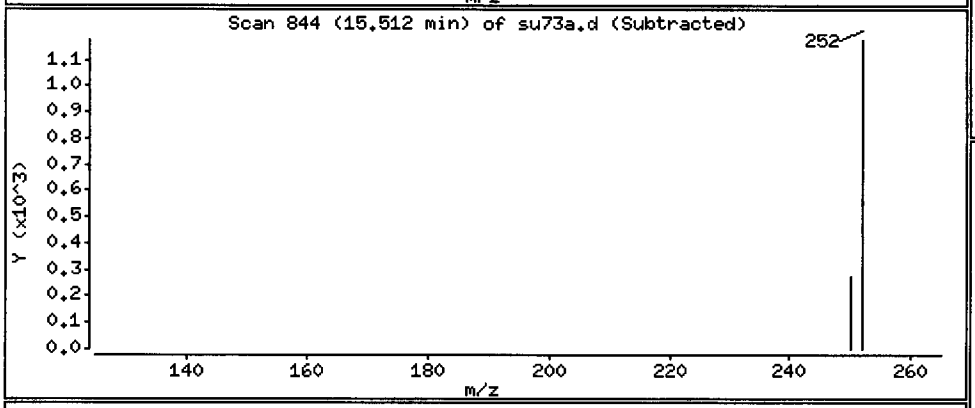
Column diameter: 0.25

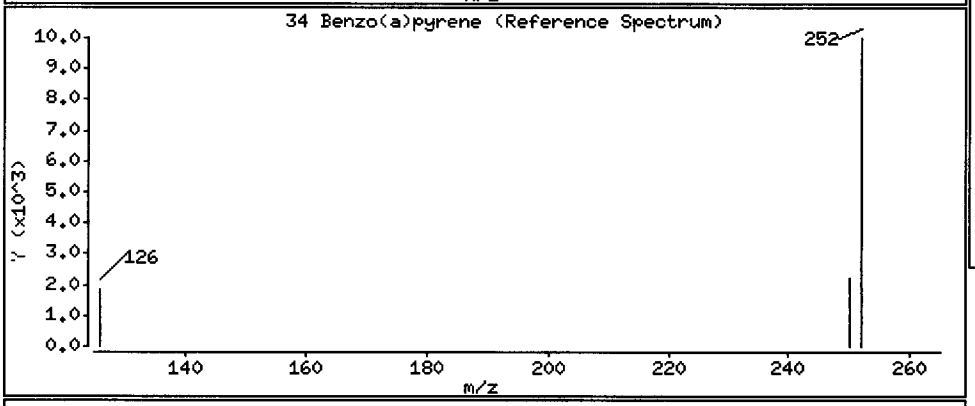
JLR

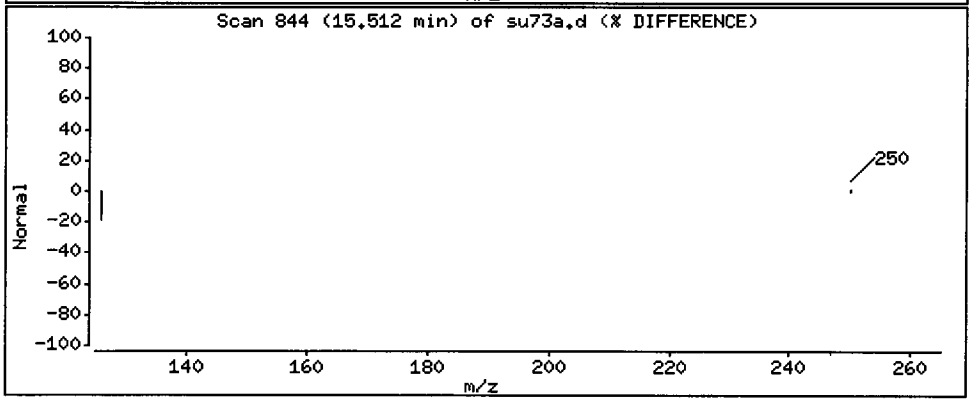
34 Benzo(a)pyrene

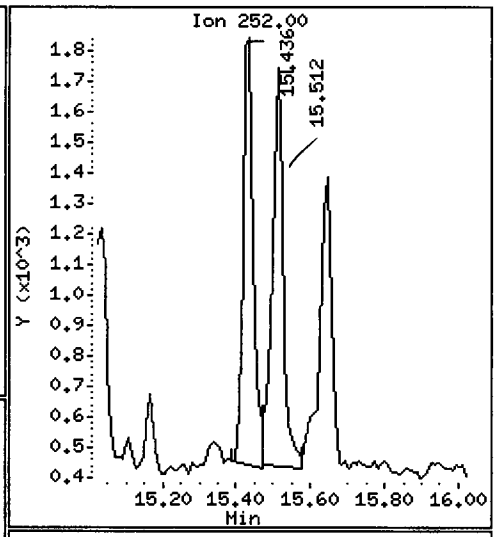
Concentration: 5.73 ug/L

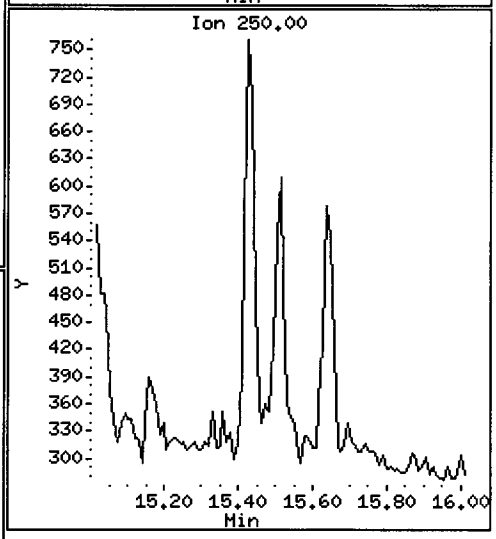












CO-ELUTION SUMMARY FOR FILE - su73a.d

Lab ID: SU73A, Method: lowsim.m, Instrument: nt11.i, Date: 19-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110519.b/su73b.d
Lab Smp Id: SU73B Client Smp ID: MW-01-042911-D
Inj Date : 19-MAY-2011 14:49
Operator : VTS Inst ID: nt11.i
Smp Info : SU73B
Misc Info : 11-9763
Comment :
Method : /chem3/nt11.i/20110519.b/lowsim.m
Meth Date : 19-May-2011 10:16 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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)	CONCENTRATIONS FINAL (ug/L)	
*	4 Naphthalene-d8	136	6.273	6.273	(1.000)	120625	200.000		
	5 Naphthalene	128	6.296	6.296	(1.004)	946982	1636.92	1640	NR
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	65011	185.579	186	
	7 2-Methylnaphthalene	142	7.136	7.135	(1.138)	253480	721.343	721	
	8 1-Methylnaphthalene	142	7.274	7.274	(1.160)	434695	1246.41	1250	
	10 Acenaphthylene	152	8.265	8.265	(0.976)	19632	32.7848	32.8	
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	76759	200.000		
	12 Acenaphthene	153	8.493	8.493	(1.003)	90780	240.614	241	
	14 Dibenzofuran	168	8.694	8.694	(1.027)	76551	137.813	138	
	15 Fluorene	166	9.123	9.123	(1.078)	118891	303.165	303	
*	18 Phenanthrene-d10	188	10.303	10.302	(1.000)	123762	200.000		
	19 Phenanthrene	178	10.329	10.329	(1.003)	68511	110.122	110	
	20 Anthracene	178	10.383	10.383	(1.008)	31184	52.9556	53.0	
	24 Fluoranthene	202	11.818	11.831	(1.147)	27180	44.4509	44.5	
	25 Pyrene	202	12.113	12.112	(0.889)	30599	47.6730	47.7	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	3109	5.81073	5.81
*	29 Chrysene-d12	240	13.628	13.628	(1.000)	76395	200.000	
	30 Chrysene	228	13.641	13.655	(1.001)	5752	10.6933	10.7
	43 Total Benzofluoranthenes	252	Compound Not Detected.					
	34 Benzo(a)pyrene	252	15.512	15.522	(0.994)	3805	8.57409	8.57
*	35 Perylene-d12	264	15.609	15.608	(1.000)	61863	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	17.605	17.618	(1.128)	75857	195.784	196
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	3589	~~7.51964~~	7.52

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: su73b.d
Lab Smp Id: SU73B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9763

Calibration Date: 19-MAY-2011
Calibration Time: 09:35
Client Smp ID: MW-01-042911-D
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	120625	-6.73
11 Acenaphthene-d10	70573	35286	141146	76759	8.77
18 Phenanthrene-d10	113741	56870	227482	123762	8.81
29 Chrysene-d12	70763	35382	141526	76395	7.96
35 Perylene-d12	54896	27448	109792	61863	12.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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: SU73B
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9763

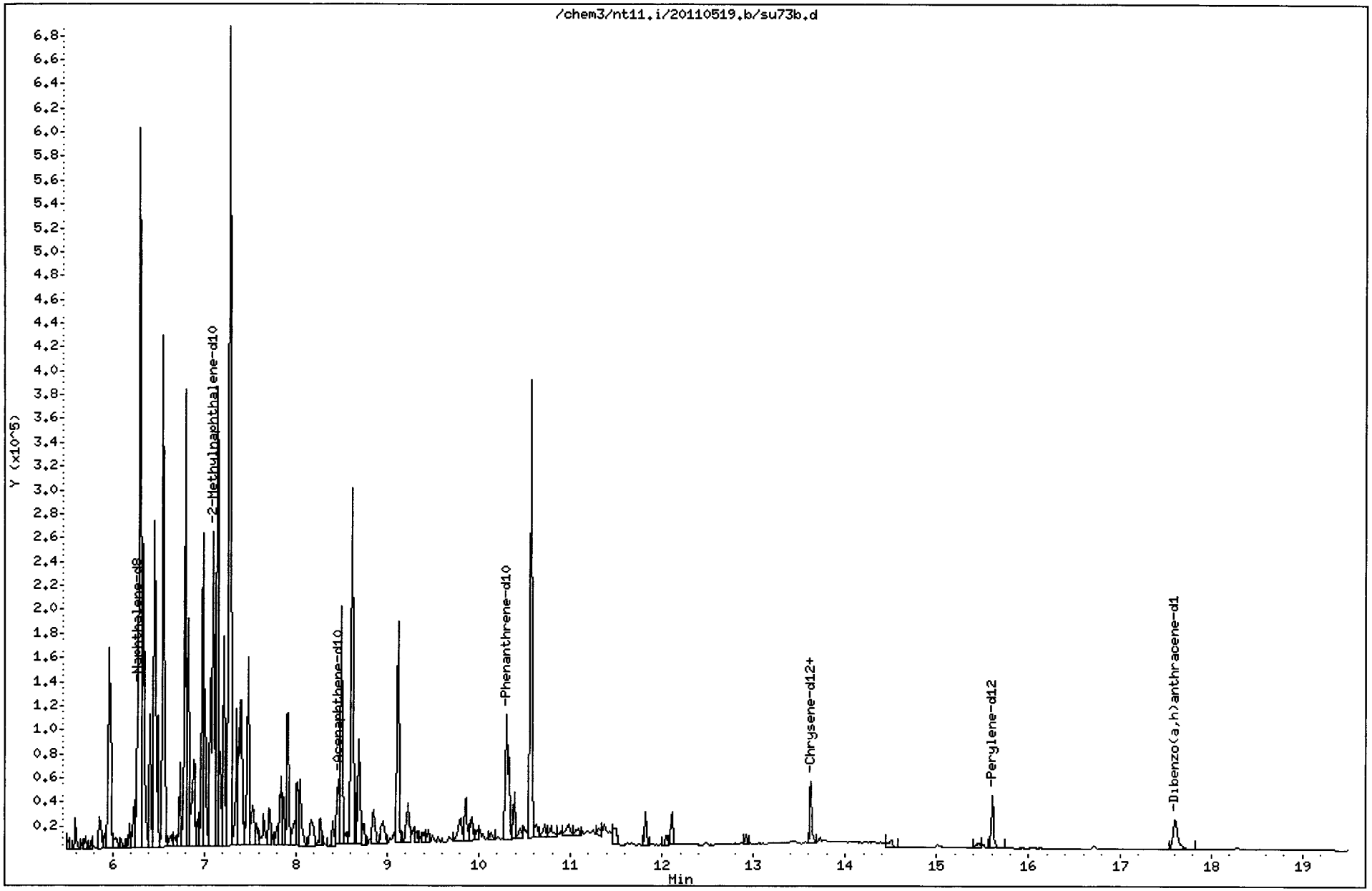
Client SDG: SU73
Fraction: SV
Client Smp ID: MW-01-042911-D
Operator: VTS
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	186	61.86	31-109
$ 36 Dibenzo(a,h)anthra	300	196	65.26	10-133

Data File: /chem3/nt11.i/20110519.b/su73b.d
Date : 19-MAY-2011 14:49
Client ID: MW-01-042911-D
Sample Info: SU73B
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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

SU53:99711



Data File: /chem3/nt11.i/20110519.b/su73b.d

Date : 19-MAY-2011 14:49

Client ID: MW-01-042911-D

Instrument: nt11.i

Sample Info: SU73B

Volume Injected (uL): 2.0

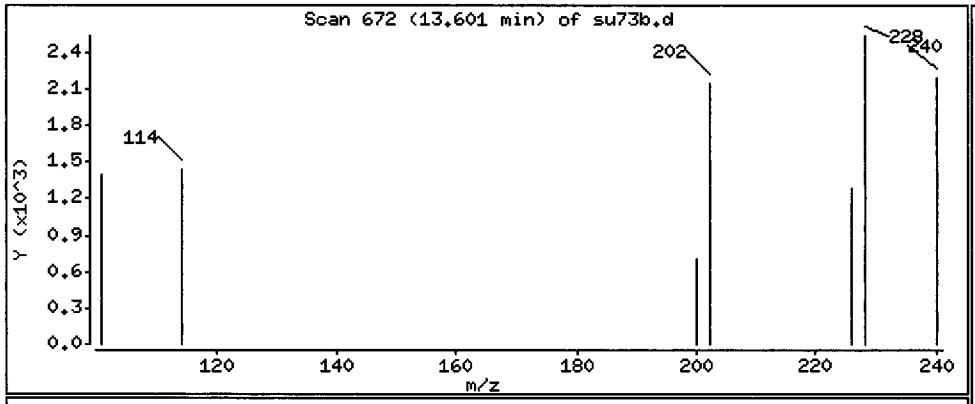
Operator: VTS

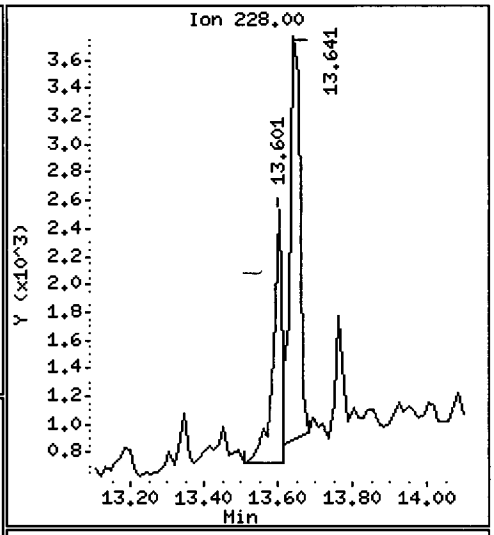
Column phase: ZB-5msi

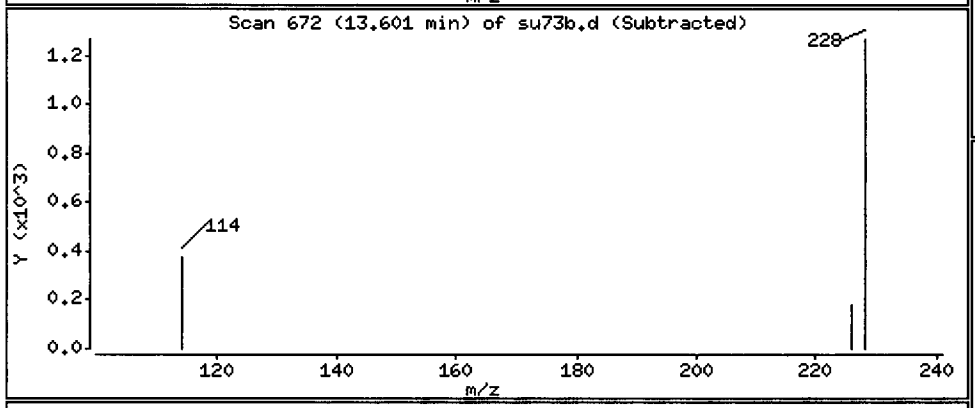
Column diameter: 0.25

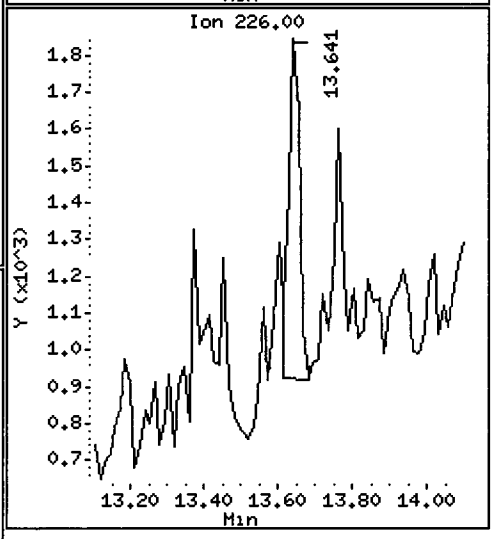
28 Benzo(a)anthracene

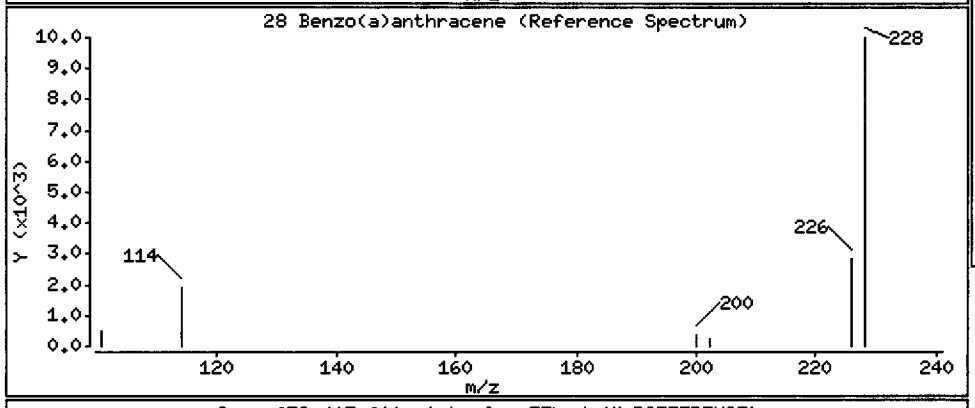
Concentration: 5.81 ug/L

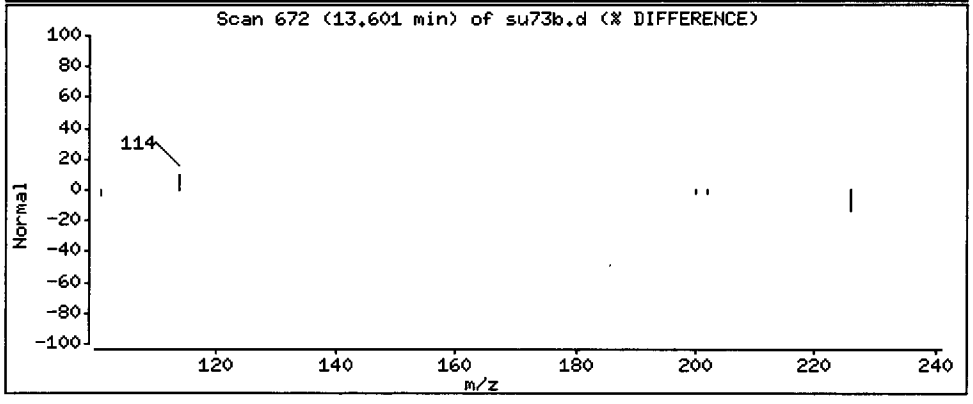












Data File: /chem3/nt11.i/20110519.b/su73b.d

Date : 19-MAY-2011 14:49

Client ID: MW-01-042911-D

Instrument: nt11.i

Sample Info: SU73B

Volume Injected (uL): 2.0

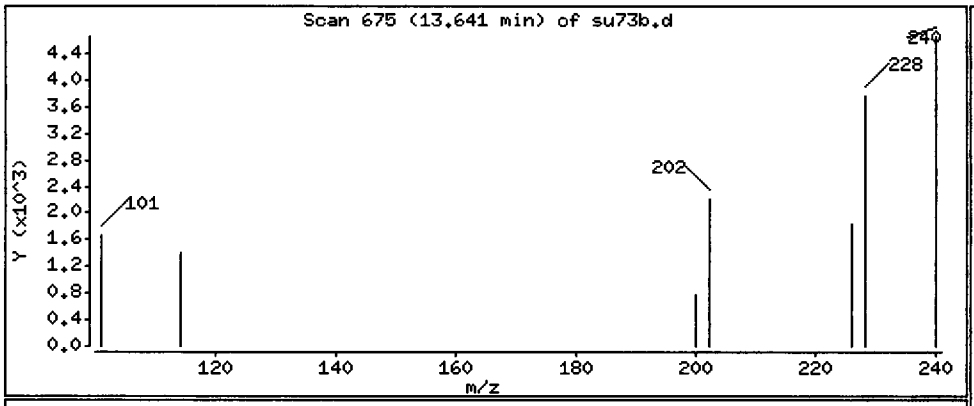
Operator: VTS

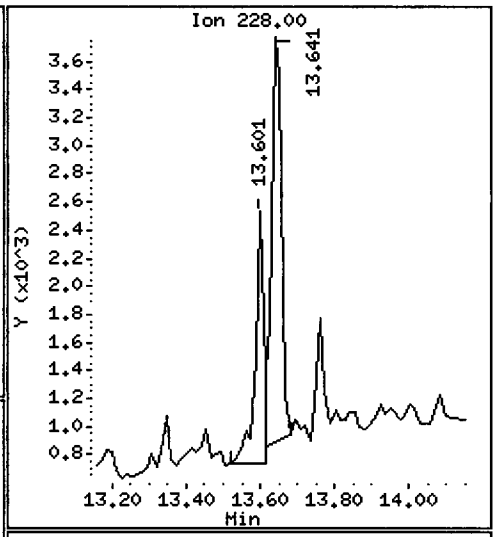
Column phase: ZB-5msi

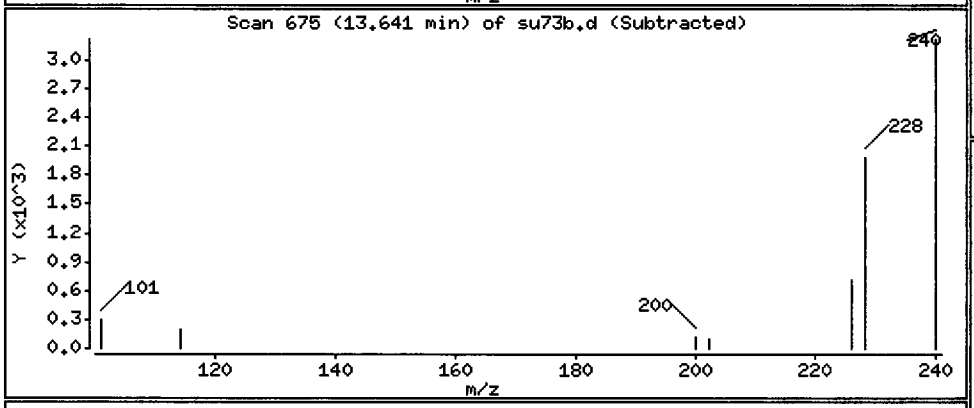
Column diameter: 0.25

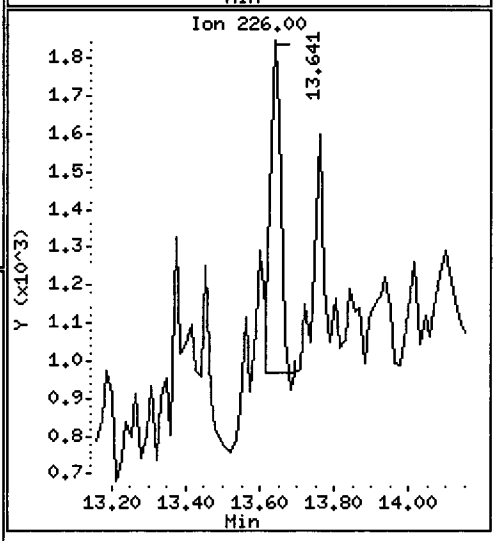
30 Chrysene

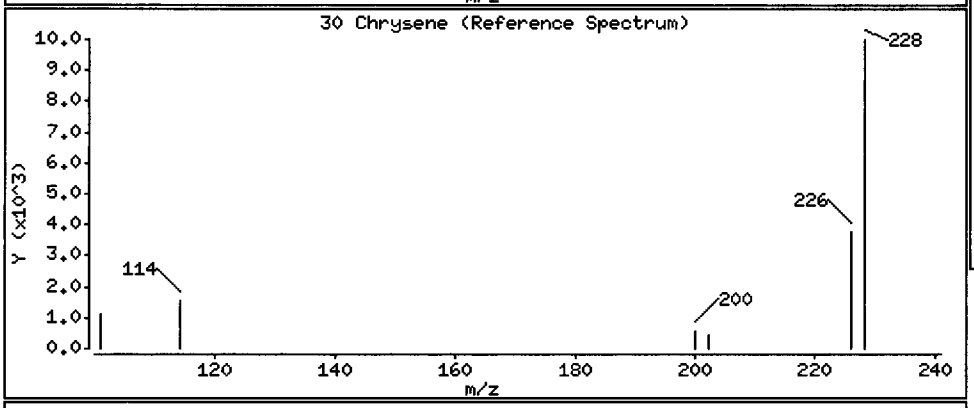
Concentration: 10.7 ug/L

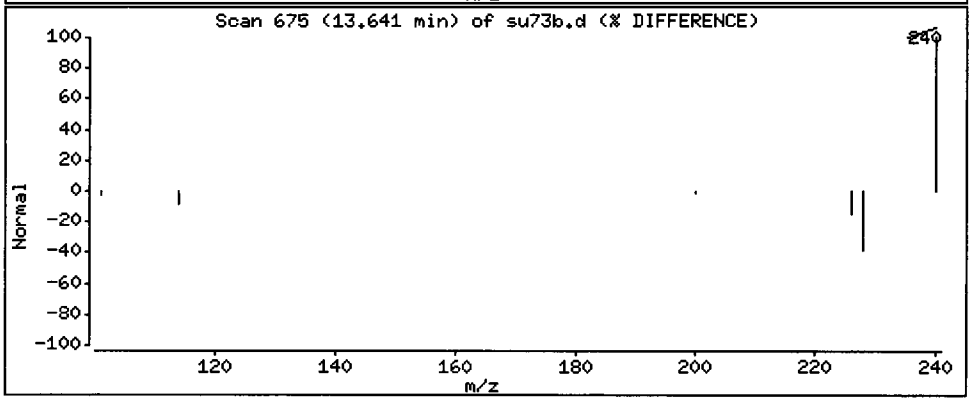












Data File: /chem3/nt11.i/20110519.b/su73b.d

Date : 19-MAY-2011 14:49

Client ID: MW-01-042911-D

Instrument: nt11.i

Sample Info: SU73B

Volume Injected (uL): 2.0

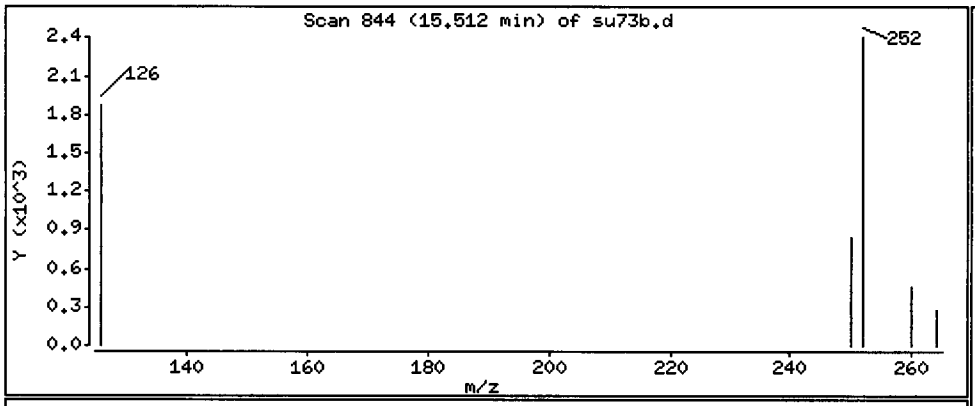
Operator: VTS

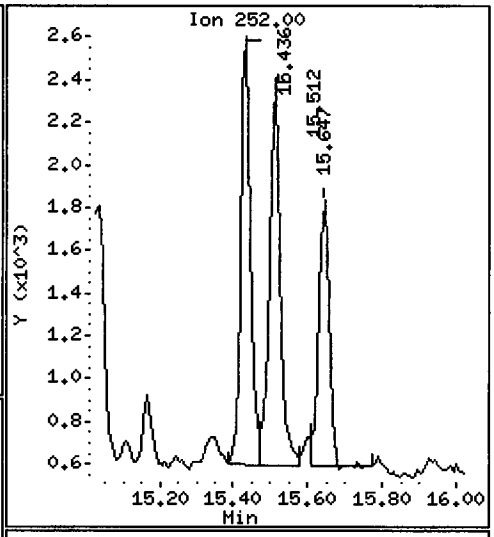
Column phase: ZB-5msi

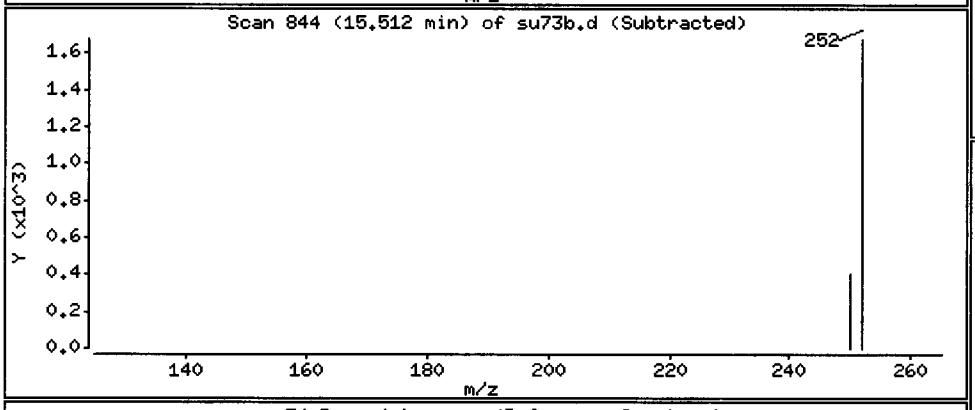
Column diameter: 0.25

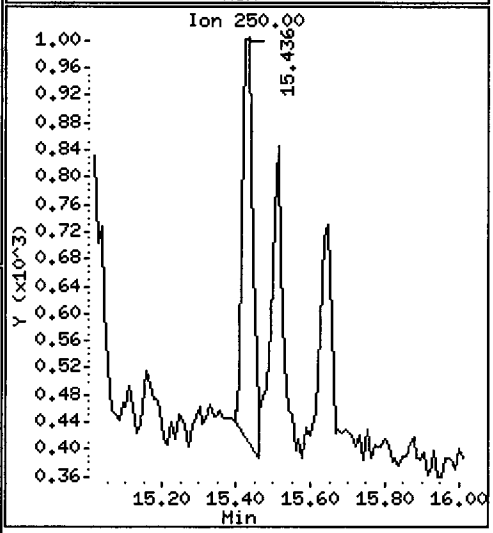
34 Benzo(a)pyrene

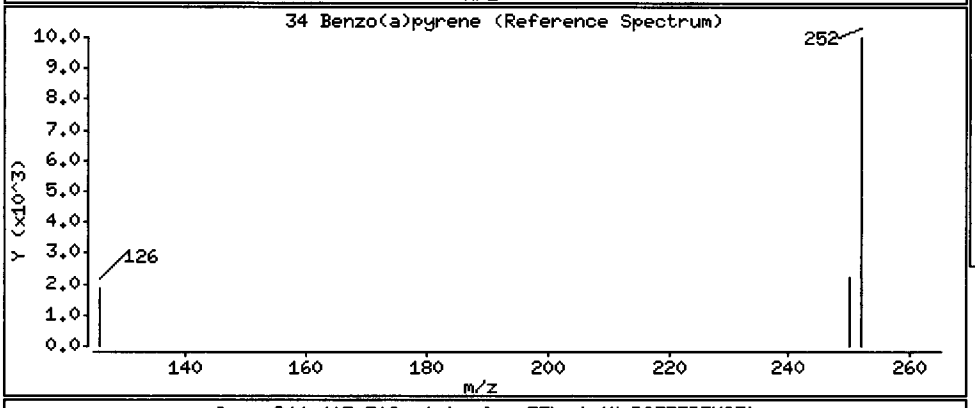
Concentration: 8.57 ug/L

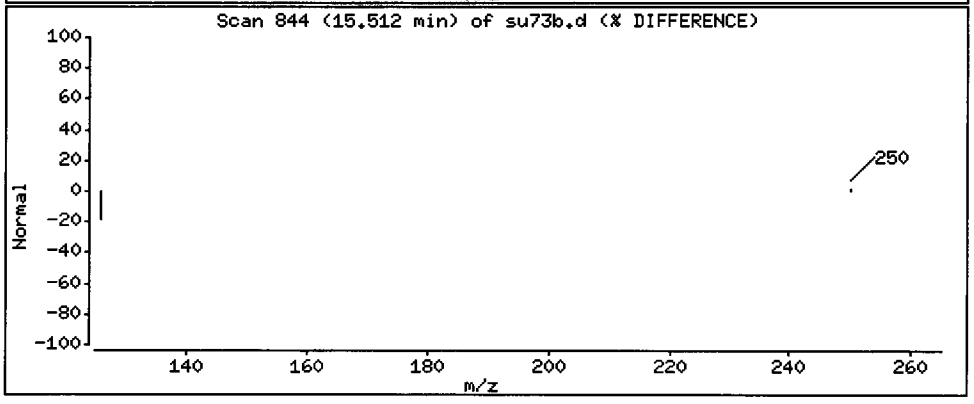












CO-ELUTION SUMMARY FOR FILE - su73b.d

Lab ID: SU73B, Method: lowsim.m, Instrument: nt11.i, Date: 19-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110519.b/su74a.d
Lab Smp Id: SU74A Client Smp ID: B312-042911
Inj Date : 19-MAY-2011 15:13
Operator : VTS Inst ID: nt11.i
Smp Info : SU74A
Misc Info : 11-9772
Comment :
Method : /chem3/nt11.i/20110519.b/lowsim.m
Meth Date : 19-May-2011 10:16 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	6.272	6.273	(1.000)	119557	200.000	
	5 Naphthalene	128	6.296	6.296	(1.004)	21789	38.0001	38.0
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	57649	166.033	166
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	70279	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	10.302	10.302	(1.000)	120326	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.					

NR

	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	13.628	13.628	(1.000)	77405	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	15.608	15.608	(1.000)	63881	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	17.605	17.618	(1.128)	84567	211.369	211
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					

VJS
5-21-11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: su74a.d
Lab Smp Id: SU74A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9772

Calibration Date: 19-MAY-2011
Calibration Time: 09:35
Client Smp ID: B312-042911
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	119557	-7.55
11 Acenaphthene-d10	70573	35286	141146	70279	-0.42
18 Phenanthrene-d10	113741	56870	227482	120326	5.79
29 Chrysene-d12	70763	35382	141526	77405	9.39
35 Perylene-d12	54896	27448	109792	63881	16.37

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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

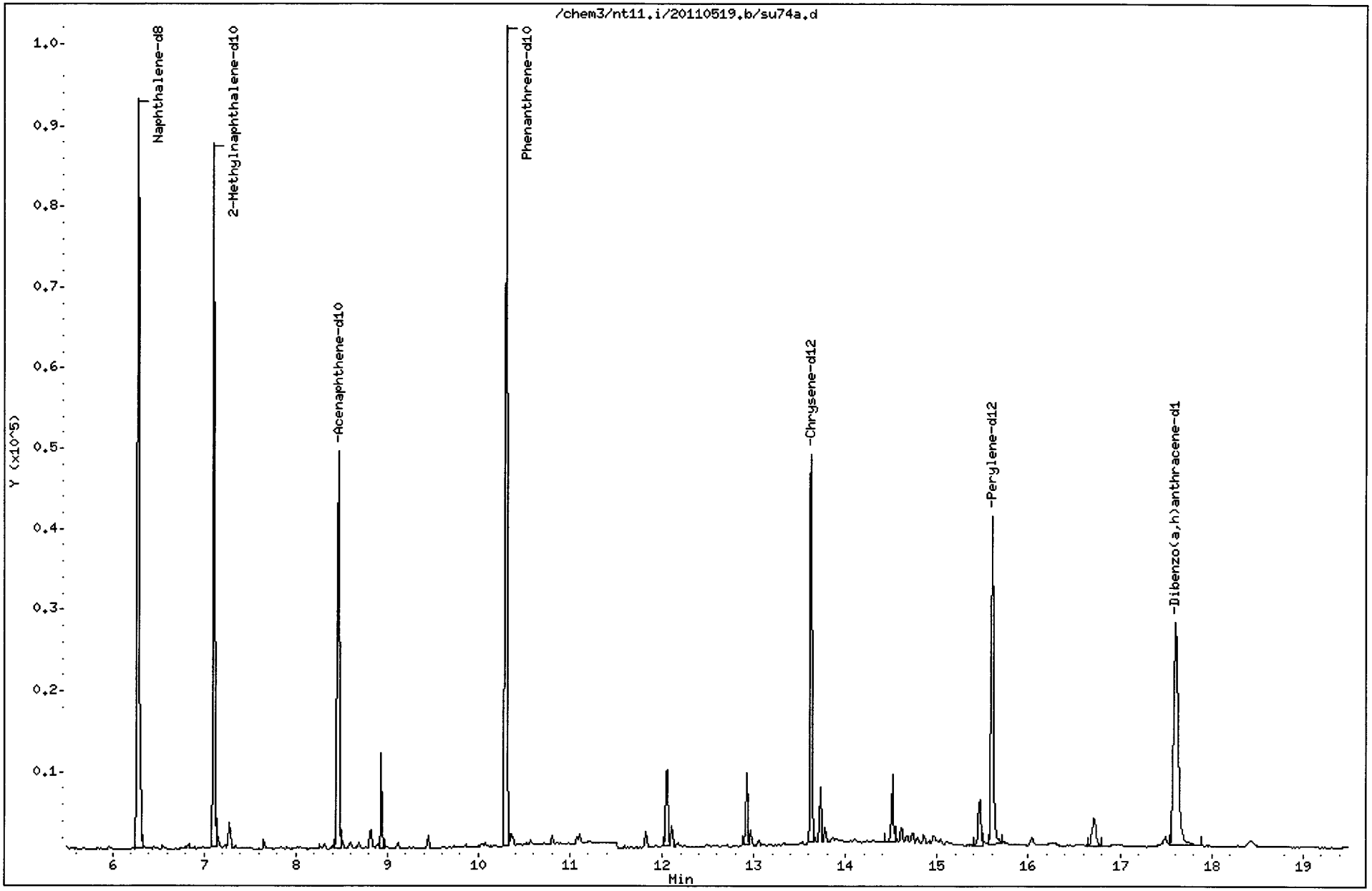
Client Name: Floyd Snider
Client SDG: SU74
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: SU74A
Client Smp ID: B312-042911
Level: LOW
Operator: VTS
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9772

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	166	55.34	31-109
$ 36 Dibenzo(a,h)anthra	300	211	70.46	10-133

Data File: /chem3/nt11.i/20110519.b/su74a.d
Date : 19-MAY-2011 15:13
Client ID: B312-042911
Sample Info: SU74A
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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

SU53:00720



CO-ELUTION SUMMARY FOR FILE - su74a.d

Lab ID: SU74A, Method: lowsim.m, Instrument: nt11.i, Date: 19-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110519.b/su74ams.d
Lab Smp Id: SU74AMS Client Smp ID: B312-042911 MS
Inj Date : 19-MAY-2011 15:38
Operator : VTS Inst ID: nt11.i
Smp Info : SU74AMS
Misc Info : 11-9772
Comment :
Method : /chem3/nt11.i/20110519.b/lowsim.m
Meth Date : 19-May-2011 10:16 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 14 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	6.272	6.273	(1.000)	115311	200.000	
	5 Naphthalene	128	6.295	6.296	(1.004)	100281	181.330	181
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	53752	160.510	161
	7 2-Methylnaphthalene	142	7.135	7.135	(1.138)	53080	158.014	158
	8 1-Methylnaphthalene	142	7.273	7.274	(1.160)	52881	158.614	159
	10 Acenaphthylene	152	8.265	8.265	(0.976)	87960	164.690	165
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	68463	200.000	
	12 Acenaphthene	153	8.492	8.493	(1.003)	54497	161.949	162
	14 Dibenzofuran	168	8.694	8.694	(1.027)	86227	174.043	174
	15 Fluorene	166	9.123	9.123	(1.078)	66114	189.015	189
*	18 Phenanthrene-d10	188	10.302	10.302	(1.000)	116747	200.000	
	19 Phenanthrene	178	10.329	10.329	(1.003)	112949	192.459	192
	20 Anthracene	178	10.383	10.383	(1.008)	102862	185.172	185
	24 Fluoranthene	202	11.817	11.831	(1.147)	137086	237.665	238
	25 Pyrene	202	12.112	12.112	(0.889)	138824	214.562	215

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	114632	212.539	213
* 29 Chrysene-d12	240	13.628	13.628	(1.000)	77009	200.000	
30 Chrysene	228	13.655	13.655	(1.002)	113383	209.104	209
43 Total Benzofluoranthenes	252	15.003	15.041	(0.961)	216974	421.678	422
34 Benzo(a)pyrene	252	15.512	15.522	(0.994)	85347	186.776	187
* 35 Perylene-d12	264	15.608	15.608	(1.000)	63699	200.000	
37 Indeno(1,2,3-cd)pyrene	276	17.672	17.672	(1.132)	112313	203.633	204
$ 36 Dibenzo(a,h)anthracene-d14	292	17.605	17.618	(1.128)	85359	213.958	214
38 Dibenzo(a,h)anthracene	278	17.672	17.685	(1.132)	88236	205.377	205
39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	93469	190.191	190

VB 5-21-11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: su74ams.d
Lab Smp Id: SU74AMS
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9772

Calibration Date: 19-MAY-2011
Calibration Time: 09:35
Client Smp ID: B312-042911 MS
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	115311	-10.84
11 Acenaphthene-d10	70573	35286	141146	68463	-2.99
18 Phenanthrene-d10	113741	56870	227482	116747	2.64
29 Chrysene-d12	70763	35382	141526	77009	8.83
35 Perylene-d12	54896	27448	109792	63699	16.04

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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

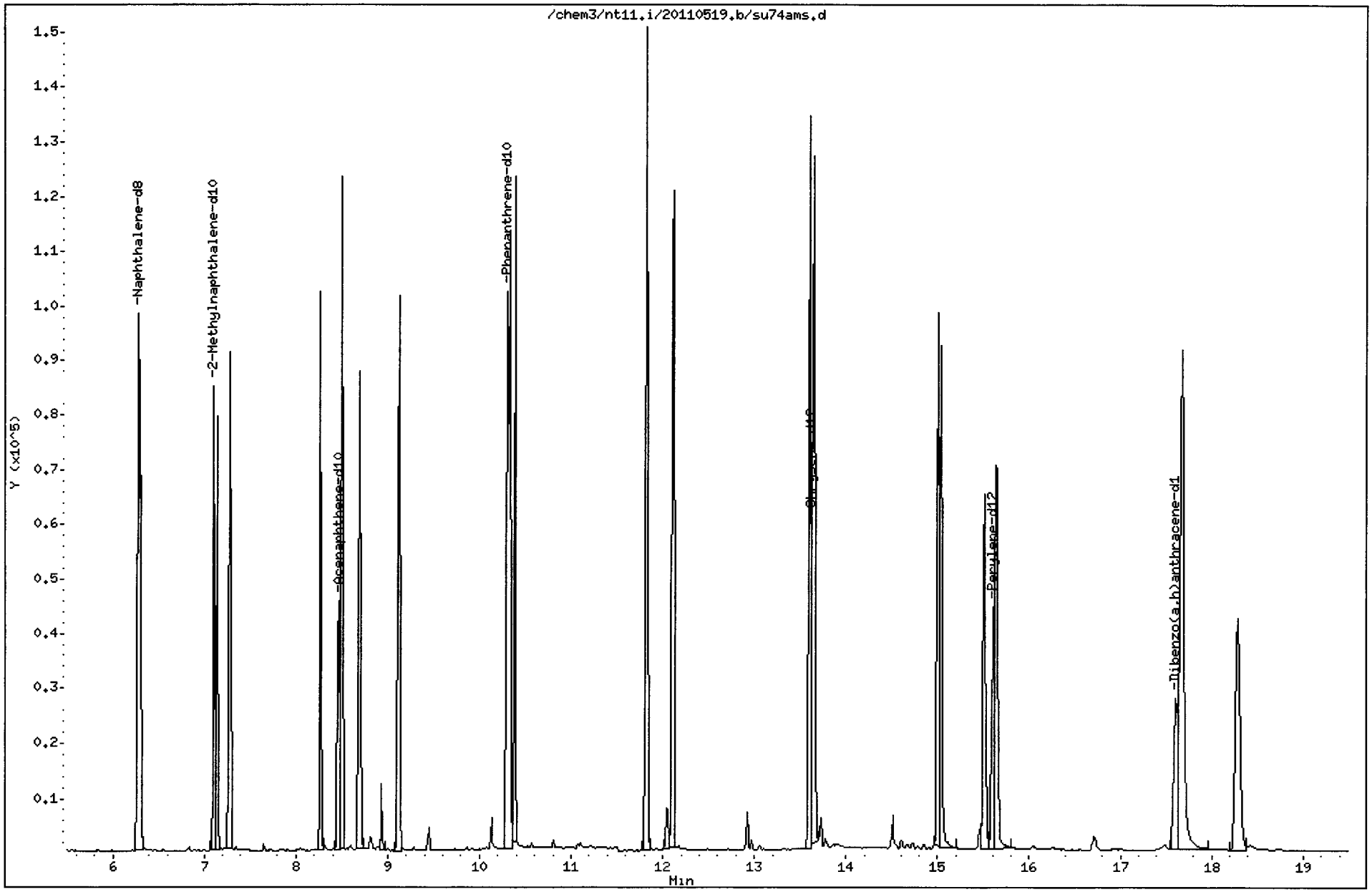
Client Name: Floyd Snid
Client SDG: SU74
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: SU74AMS
Client Smp ID: B312-042911 MS
Level: LOW
Operator: VTS
Data Type: MS DATA
SampleType: MS
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9772

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	181	60.44	41-101
7 2-Methylnaphthalen	300	158	52.67	47-100
8 1-Methylnaphthalen	300	159	52.87	30-160
10 Acenaphthylene	300	165	54.90	35-100
12 Acenaphthene	300	162	53.98	43-104
14 Dibenzofuran	300	174	58.01	37-100
15 Fluorene	300	189	63.01	51-103
19 Phenanthrene	300	192	64.15	55-109
20 Anthracene	300	185	61.72	30-101
24 Fluoranthene	300	238	79.22	49-123
25 Pyrene	300	215	71.52	48-120
28 Benzo(a)anthracene	300	213	70.85	43-113
30 Chrysene	300	209	69.70	59-112
43 Total Benzofluoran	600	422	70.28	30-160
34 Benzo(a)pyrene	300	187	62.26	10-100
37 Indeno(1,2,3-cd)py	300	204	67.88	43-112
38 Dibenzo(a,h)anthra	300	205	68.46	42-114
39 Benzo(g,h,i)peryle	300	190	63.40	31-118

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	161	53.50	31-109
$ 36 Dibenzo(a,h)anthra	300	214	71.32	10-133

Data File: /chem3/nt11.i/20110519.b/su74ams.d
Date : 19-MAY-2011 15:38
Client ID: B312-042911 MS
Sample Info: SU74AMS
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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



SU53 : 66726

CO-ELUTION SUMMARY FOR FILE - su74ams.d

Lab ID: SU74AMS, Method: lowsim.m, Instrument: nt11.i, Date: 19-MAY-2011

RT	CO-ELUTION COMPOUNDS
17.672	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
17.672	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110519.b/su74amsd.d
Lab Smp Id: SU74AMSD Client Smp ID: B312-042911 MSD
Inj Date : 19-MAY-2011 16:02
Operator : VTS Inst ID: nt11.i
Smp Info : SU74AMSD
Misc Info : 11-9772
Comment :
Method : /chem3/nt11.i/20110519.b/lowsim.m
Meth Date : 19-May-2011 10:16 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 15 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	6.273	6.273	(1.000)	116649	200.000	
	5 Naphthalene	128	6.296	6.296	(1.004)	101695	181.778	182
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	54091	159.670	160
	7 2-Methylnaphthalene	142	7.147	7.135	(1.139)	54295	159.777	160
	8 1-Methylnaphthalene	142	7.274	7.274	(1.160)	54526	161.672	162
	10 Acenaphthylene	152	8.265	8.265	(0.976)	87127	161.178	161
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	69292	200.000	
	12 Acenaphthene	153	8.493	8.493	(1.003)	56154	164.876	165
	14 Dibenzofuran	168	8.694	8.694	(1.027)	85580	170.670	171
	15 Fluorene	166	9.123	9.123	(1.078)	66117	186.763	187
*	18 Phenanthrene-d10	188	10.302	10.302	(1.000)	119369	200.000	
	19 Phenanthrene	178	10.329	10.329	(1.003)	114609	190.998	191
	20 Anthracene	178	10.383	10.383	(1.008)	103147	181.607	182
	24 Fluoranthene	202	11.817	11.831	(1.147)	140722	238.610	239
	25 Pyrene	202	12.113	12.112	(0.889)	145400	212.257	212

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
28 Benzo(a)anthracene	228	13.601	13.601	(0.998)	123032	215.456	215
* 29 Chrysene-d12	240	13.628	13.628	(1.000)	81533	200.000	
30 Chrysene	228	13.655	13.655	(1.002)	123899	215.820	216
43 Total Benzofluoranthenes	252	15.003	15.041	(0.961)	229162	437.062	437
34 Benzo(a)pyrene	252	15.512	15.522	(0.994)	86098	184.907	185
* 35 Perylene-d12	264	15.608	15.608	(1.000)	64909	200.000	
37 Indeno(1,2,3-cd)pyrene	276	17.672	17.672	(1.132)	116567	207.406	207
$ 36 Dibenzo(a,h)anthracene-d14	292	17.605	17.618	(1.128)	85828	211.123	211
38 Dibenzo(a,h)anthracene	278	17.685	17.685	(1.133)	92900	212.202	212
39 Benzo(g,h,i)perylene	276	18.289	18.289	(1.172)	98461	196.614	197

VS
5-21-11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: su74amsd.d
Lab Smp Id: SU74AMSD
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9772

Calibration Date: 19-MAY-2011
Calibration Time: 09:35
Client Smp ID: B312-042911 MSD
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	116649	-9.80
11 Acenaphthene-d10	70573	35286	141146	69292	-1.82
18 Phenanthrene-d10	113741	56870	227482	119369	4.95
29 Chrysene-d12	70763	35382	141526	81533	15.22
35 Perylene-d12	54896	27448	109792	64909	18.24

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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

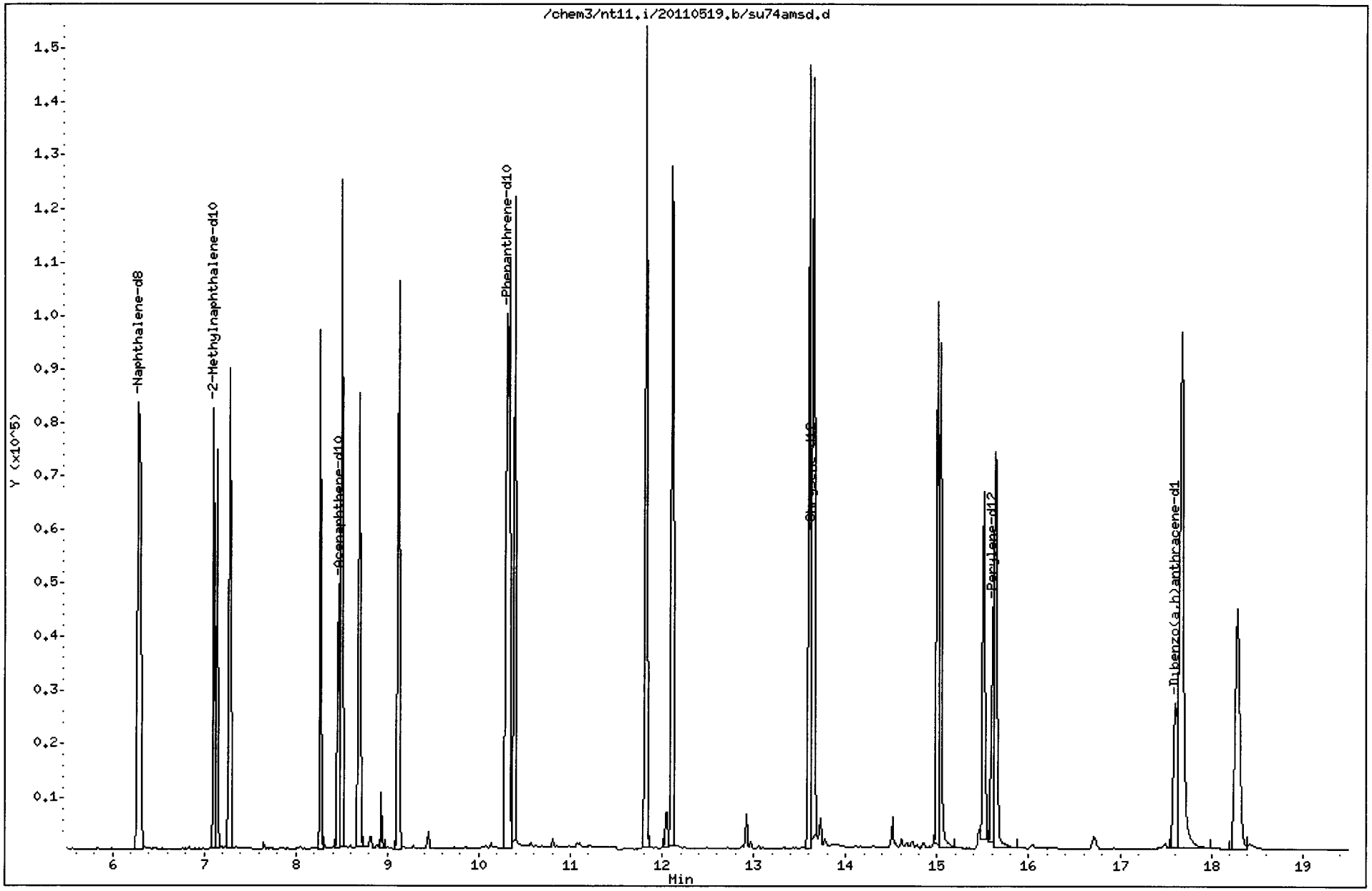
Client Name: Floyd Snid
Client SDG: SU74
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: SU74AMSD
Client Smp ID: B312-042911 MSD
Level: LOW
Operator: VTS
Data Type: MS DATA
SampleType: MS
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9772

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	182	60.59	41-101
7 2-Methylnaphthalen	300	160	53.26	47-100
8 1-Methylnaphthalen	300	162	53.89	30-160
10 Acenaphthylene	300	161	53.73	35-100
12 Acenaphthene	300	165	54.96	43-104
14 Dibenzofuran	300	171	56.89	37-100
15 Fluorene	300	187	62.25	51-103
19 Phenanthrene	300	191	63.67	55-109
20 Anthracene	300	182	60.54	30-101
24 Fluoranthene	300	239	79.54	49-123
25 Pyrene	300	212	70.75	48-120
28 Benzo(a)anthracene	300	215	71.82	43-113
30 Chrysene	300	216	71.94	59-112
43 Total Benzofluoran	600	437	72.84	30-160
34 Benzo(a)pyrene	300	185	61.64	10-100
37 Indeno(1,2,3-cd)py	300	207	69.14	43-112
38 Dibenzo(a,h)anthra	300	212	70.73	42-114
39 Benzo(g,h,i)peryle	300	197	65.54	31-118

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	160	53.22	31-109
$ 36 Dibenzo(a,h)anthra	300	211	70.37	10-133

Data File: /chem3/nt11.i/20110519.b/su74amsd.d
Date : 19-MAY-2011 16:02
Client ID: B312-042911 MSD
Sample Info: SU74AMSD
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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



SU53:00732

CO-ELUTION SUMMARY FOR FILE - su74amsd.d

Lab ID: SU74AMSD, Method: lowsim.m, Instrument: nt11.i, Date: 19-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110519.b/su74b.d
Lab Smp Id: SU74B Client Smp ID: B310-042911
Inj Date : 19-MAY-2011 16:26
Operator : VTS Inst ID: nt11.i
Smp Info : SU74B
Misc Info : 11-9773
Comment :
Method : /chem3/nt11.i/20110519.b/lowsim.m
Meth Date : 19-May-2011 10:16 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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)	CONCENTRATIONS FINAL (ug/L)
* 4 Naphthalene-d8	136	6.273	6.273	(1.000)	115855	200.000	
5 Naphthalene	128	6.296	6.296	(1.004)	18202	32.7587	32.8
$ 6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	63611	189.059	189
7 2-Methylnaphthalene	142	Compound Not Detected.					
8 1-Methylnaphthalene	142	Compound Not Detected.					
10 Acenaphthylene	152	Compound Not Detected.					
* 11 Acenaphthene-d10	164	8.452	8.466	(1.000)	68143	200.000	
12 Acenaphthene	153	Compound Not Detected.					
14 Dibenzofuran	168	Compound Not Detected.					
15 Fluorene	166	Compound Not Detected.					
* 18 Phenanthrene-d10	188	10.303	10.302	(1.000)	111834	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	13.628	13.628	(1.000)	71589	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	15.608	15.608	(1.000)	61430	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	17.605	17.618	(1.128)	82881	215.420	215
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					

V15
5-21-11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: su74b.d
Lab Smp Id: SU74B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9773

Calibration Date: 19-MAY-2011
Calibration Time: 09:35
Client Smp ID: B310-042911
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	115855	-10.42
11 Acenaphthene-d10	70573	35286	141146	68143	-3.44
18 Phenanthrene-d10	113741	56870	227482	111834	-1.68
29 Chrysene-d12	70763	35382	141526	71589	1.17
35 Perylene-d12	54896	27448	109792	61430	11.90

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.45	-0.16
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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

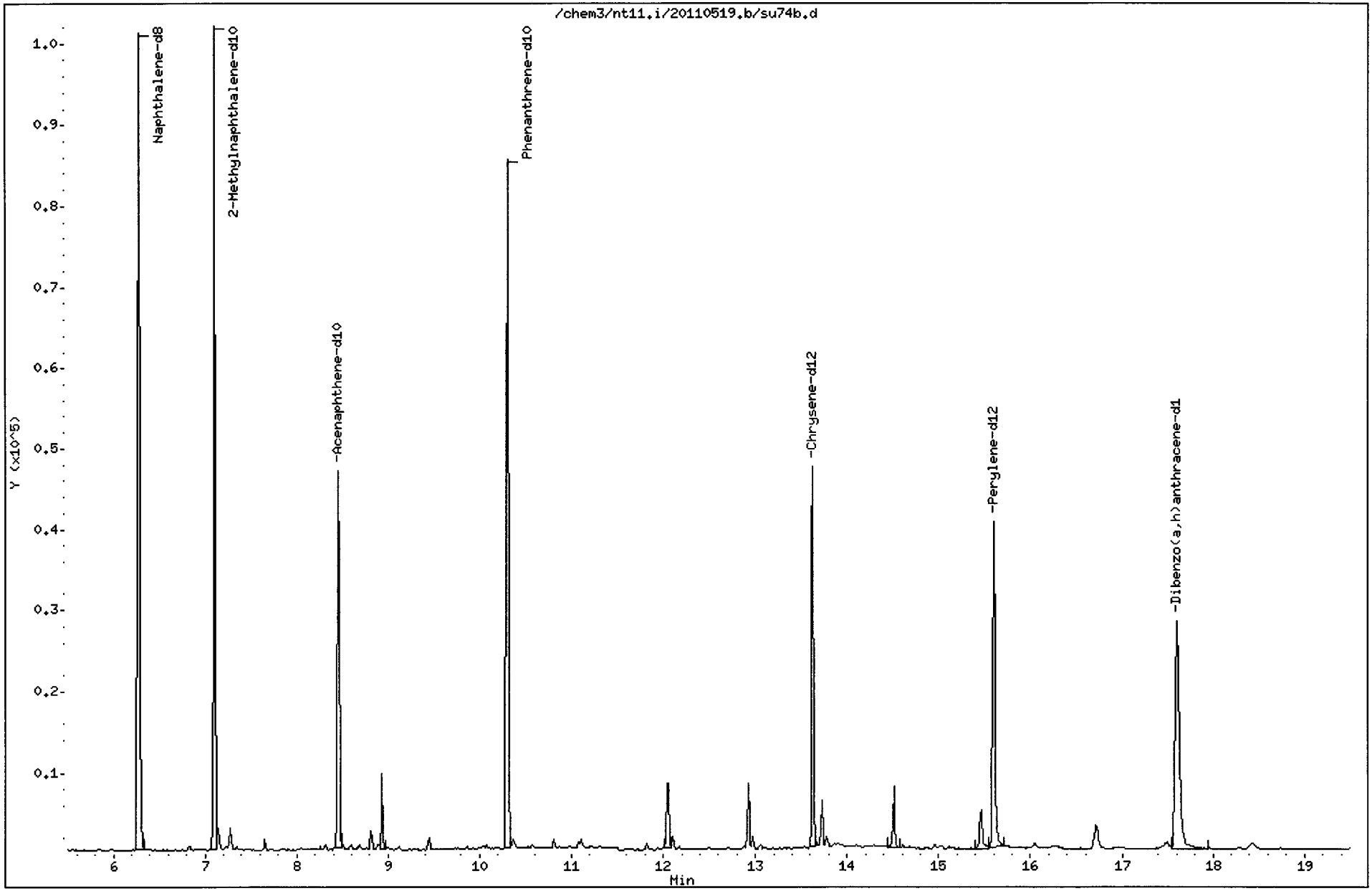
Client Name: Floyd Snider
Client SDG: SU74
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: SU74B
Client Smp ID: B310-042911
Level: LOW
Operator: VTS
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9773

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	189	63.02	31-109
$ 36 Dibenzo(a,h)anthra	300	215	71.81	10-133

Data File: /chem3/nt11.i/20110519.b/su74b.d
Date : 19-MAY-2011 16:26
Client ID: B310-042911
Sample Info: SU74B
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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

SU53:00738



CO-ELUTION SUMMARY FOR FILE - su74b.d

Lab ID: SU74B, Method: lowsim.m, Instrument: nt11.i, Date: 19-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20110519.b/su74c.d
Lab Smp Id: SU74C Client Smp ID: B311-042911
Inj Date : 19-MAY-2011 16:50
Operator : VTS Inst ID: nt11.i
Smp Info : SU74C
Misc Info : 11-9774
Comment :
Method : /chem3/nt11.i/20110519.b/lowsim.m
Meth Date : 19-May-2011 10:16 van Quant Type: ISTD
Cal Date : 30-APR-2011 12:15 Cal File: ic0430f.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pna1mn.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)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	6.273	6.273	(1.000)	114081	200.000	
	5 Naphthalene	128	6.296	6.296	(1.004)	12585	~~23.001~~8	23.0 NR
$	6 2-Methylnaphthalene-d10	152	7.101	7.101	(1.132)	65729	198.391	198
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.466	8.466	(1.000)	66837	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	10.303	10.302	(1.000)	111242	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	13.628	13.628	(1.000)	75124	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	15.608	15.608	(1.000)	62191	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	17.605	17.618	(1.128)	83928	215.472	215
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					

VR 5-21-11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: su74c.d
Lab Smp Id: SU74C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9774

Calibration Date: 19-MAY-2011
Calibration Time: 09:35
Client Smp ID: B311-042911
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	129326	64663	258652	114081	-11.79
11 Acenaphthene-d10	70573	35286	141146	66837	-5.29
18 Phenanthrene-d10	113741	56870	227482	111242	-2.20
29 Chrysene-d12	70763	35382	141526	75124	6.16
35 Perylene-d12	54896	27448	109792	62191	13.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.27	5.77	6.77	6.27	0.00
11 Acenaphthene-d10	8.47	7.97	8.97	8.47	0.00
18 Phenanthrene-d10	10.30	9.80	10.80	10.30	0.00
29 Chrysene-d12	13.63	13.13	14.13	13.63	0.00
35 Perylene-d12	15.61	15.11	16.11	15.61	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.

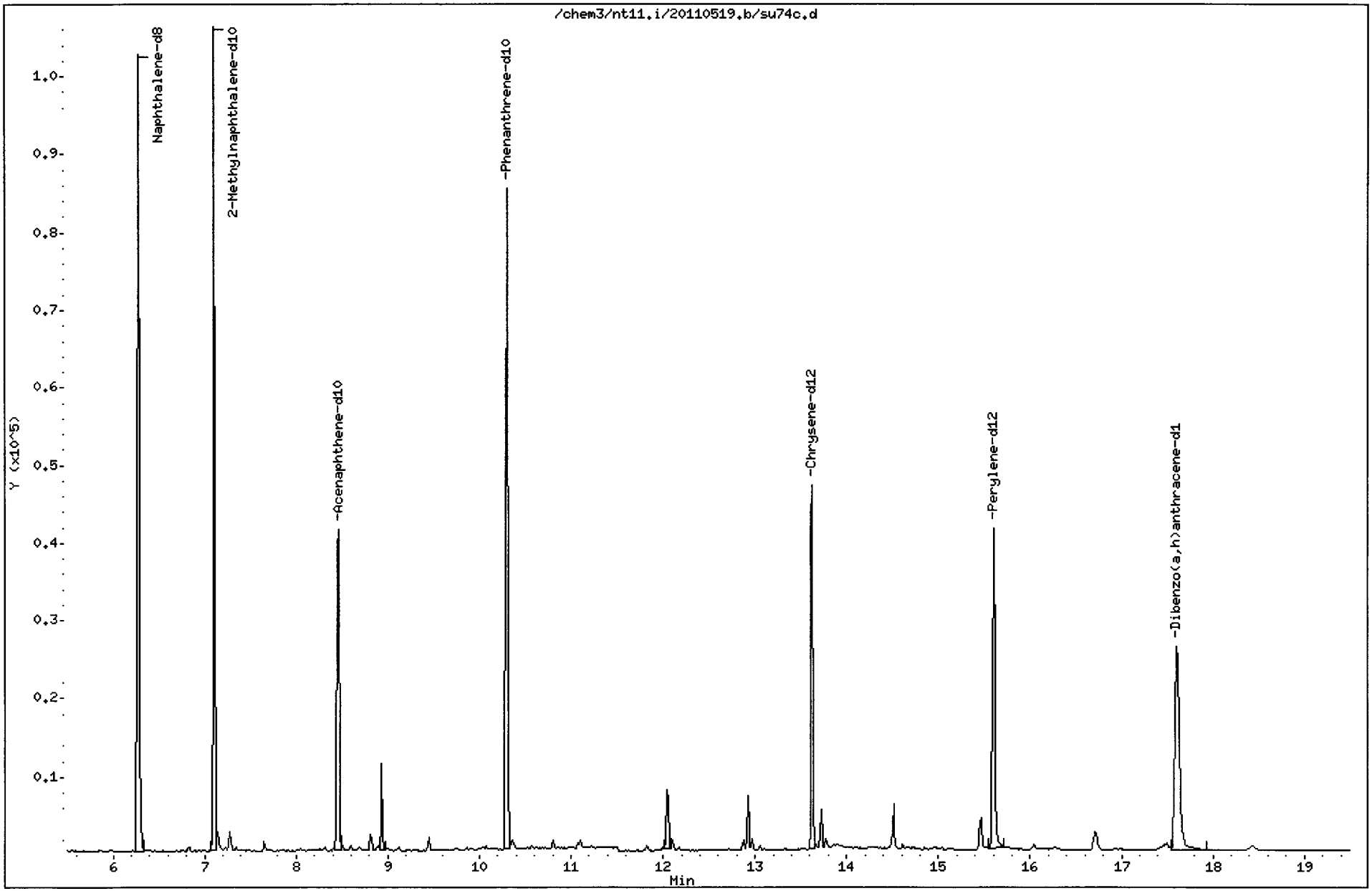
RECOVERY REPORT

Client Name: Floyd Snider
Client SDG: SU74
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: SU74C
Client Smp ID: B311-042911
Level: LOW
Operator: VTS
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: pna1mn.sub
Method File: /chem3/nt11.i/20110519.b/lowsim.m
Misc Info: 11-9774

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	198	66.13	31-109
$ 36 Dibenzo(a,h)anthra	300	215	71.82	10-133

Data File: /chem3/nt11.i/20110519.b/su74c.d
Date : 19-MAY-2011 16:50
Client ID: B311-042911
Sample Info: SU74C
Volume Injected (uL): 2.0
Column phase: ZB-5msi

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



SIS2 : 66715

CO-ELUTION SUMMARY FOR FILE - su74c.d

Lab ID: SU74C, Method: lowsim.m, Instrument: nt11.i, Date: 19-MAY-2011

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

PCP/Chlorophenols Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: SU53, SU73, SU74

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

8041 PCP – Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test PCP # 1

In-House (0.25ppb)

ARI Job No(s) SU53

Batch set up by: JH

Bottle #	Extraction Requirements	Verify Client ID	Volume Extracted	KD Exchange To Hexane (X2)	Turbo Vap 1 2 3	Volume to Lab	Derivitize	Final Effective Volume	Comments
	SU53 MBW	Date 5-4-11	500mL	↓		10mL	20µL 2mp	50mL	
	↓ SBW	↓	↓	↓		↓	20µL Dry Hex	↓	
	~~SBWDup.~~		↓			↓		↓	
	SU53 QLS	↓	↓	↓		↓	↓	↓	
7	A	verified	↓	↓		↓	↓	↓	
56,7	B	↓	↓	↓		↓	↓	↓	Homogenized
↓	BMS	↓	475	↓		↓	↓	↓	
↓	BMSD	↓	↓	↓		↓	↓	↓	
11	C	↓	500	↓		↓	↓	↓	1:5 ab[illegible] 1ml when using syringe MH 5/14.
13	D	↓	↓	↓		↓	↓	↓	
12	E	↓	↓	↓		↓	↓	↓	
~~9~~ 11	F	↓	↓	↓		↓	↓	↓	
							AR 5/16/2011		
Analyst/Date:	AC 5-4-11			RR 5/12/11		MHS 5/14/11	AR 5/16/2011	MHS 5/14/11	

AC 5-4-11

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	F 1791-3	100µL 12.5	12/09/11	AC	TH
Spike	6 1791-5	100µL 12.5/125	12/10/11	AC	TH
QLS Spike	16	50µL	12/10/11	AC	TH
Extraction Time: 17:35			Derivitized by: AR 5		Diazald ID: I

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.

7. Vial at 10mL into Herb tubes using Hexane. 8. GC Analyst to Derivitize.

6-592

A. Archive Y / N

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: SU53 Client ID: Floyd Surder

Parameter: PCP Client Project: Loma Lake Apts RI

Note problems, concerns, corrective actions	Analyst/Date
Screens: Soil/Sediment/Solid/Other:	
☐ No Anomalies (standard soil/sediment)	
☐ Wet sediment/sludge=	
☐ Standing Water Decanted=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay (Difficult to homogenize/Mixed with Kitchen Aid)=	
☐ Rocks/Organics=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☒ No Anomalies E,F	AC 5-4-11
☒ Turbid/Color= A,B,C,D are light-yellow	
☐ Particulates=	
☐ Emulsions=	
☐ Other (Details)=	
☐ Other Notes/Comments=	

3056F

Revision 007
02/25/10

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

8041 PCP – Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test PCP # 1

In-House (0.25ppb)

ARI Job No(s) 5473, 5474

Batch set up by: ~~JH~~

Bottle #	Extraction Requirements	Verify Client ID	Volume Extracted	KD Exchange To Hexane (X2)	Turbo Vap 1 2 3	Volume to Lab	Derivitize	Final Effective Volume	Comments
	5473 MBW	Date 5-5-11	500mL	↓		10mL		50mL	
	SBW	↓	↓	↓		↓		↓	
	~~SBWDup.~~		↓			↓		↓	
	5473 QLS	5-5-11	↓			↓		↓	
13	A	verified	5mL						
11,12,13	B								
	BMS								
	BMSD								
12	5474 A								
11	B								
13	C			✓					
				YL					
Analyst/Date:		PD 5-5-11		5/13/11		MHS/14/1		MHS/14/1	

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	F 1791-3	100µL 12.5	12/19/11	NL	PD
Spike	6 1791-5	100µL 12.5 25	12/14/11	NL	PD
QLS Spike	16	50µL	12/14/11	NL	PD
Extraction Time: 15:36			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.

7. Vial at 10mL into Herb tubes using Hexane. 8. GC Analyst to Derivitize.

A. Archive Y /(N)

6626

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: SU73 Client ID: Floyd Snider

Parameter: PCP Client Project: Lora Lake Apts RI

Note problems, concerns, corrective actions	Analyst/Date
Screens: Soil/Sediment/Solid/Other:	
☐ No Anomalies (standard soil/sediment)	
☐ Wet sediment/sludge=	
☐ Standing Water Decanted=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay (Difficult to homogenize/Mixed with Kitchen Aid)=	
☐ Rocks/Organics=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☑ Turbid/Color= A, B, are light tan not turbid.	PDS-5-11
☐ Particulates=	
☐ Emulsions=	
☐ Other (Details)=	
☐ Other Notes/Comments=	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: 5U74 Client ID: Floyd Snider

Parameter: PCP Client Project: Lora Lake Parcel

Note problems, concerns, corrective actions	Analyst/Date
Screens: Soil/Sediment/Solid/Other:	
☐ **No Anomalies (standard soil/sediment)**	
☐ **Wet sediment/sludge=**	
☐ **Standing Water Decanted=**	
☐ **Standing Water Homogenized (Shared samples)=**	
☐ **Clay (Difficult to homogenize/Mixed with Kitchen Aid)=**	
☐ **Rocks/Organics=**	
☐ **Oily, obvious fuel/sulfur odors=**	
☐ **Other (Details)=**	
Aqueous:	
☑ **No Anomalies** A-C.	PD5-5-11
☐ **Turbid/Color=**	
☐ **Particulates=**	
☐ **Emulsions=**	
☐ **Other (Details)=**	
☐ **Other Notes/Comments=**	

PCP/Chlorophenols Raw Data
Initial Calibration

ARI Job ID: SU53, SU73, SU74

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: Cl. Phenols 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: 5/4/2011 Analysis Start: 5/4/2011

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

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

Col 2 Quadratic-forced: 2,4-DCP; 2,3,4-TCP & 2,3,4,5-TTCP

Col 1 Quadratic-forced: 2,4-DCP & 2,4,5-TCP

Additional Details on Reverse: Yes / No

Analyst: _____ **Date:** 5/6/2011

Reviewer: _____ **Date:** 5/6/11

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd1.i/PCP20110504.b/ical-2.b

ARI Job No.: PCPD Method: PCPB.m Instrument: ecd1.i Date: 04-MAY-2011

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1356	0504A009.d	PCPD		1	NO MANUAL INTEGRATION
1432	0504A010.d	PCPA		1	NO MANUAL INTEGRATION
1508	0504A011.d	PCPB		1	NO MANUAL INTEGRATION
1544	0504A012.d	PCPC		1	NO MANUAL INTEGRATION
1621	0504A013.d	PCPE		1	NO MANUAL INTEGRATION
1657	0504A014.d	PCPF		1	NO MANUAL INTEGRATION
1733	0504A015.d	PCP ICV		1	NO MANUAL INTEGRATION

SUBJECT TO REVISION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd1.i/PCP20110504.b/ical-1.b

ARI Job No.: PCPD Method: PCP.m Instrument: ecd1.i Date: 04-MAY-2011

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1356	0504A009.d	PCPD		1	NO MANUAL INTEGRATION
1432	0504A010.d	PCPA		1	2,3,4,5-Tetrachlorophenol,
1508	0504A011.d	PCPB		1	NO MANUAL INTEGRATION
1544	0504A012.d	PCPC		1	NO MANUAL INTEGRATION
1621	0504A013.d	PCPE		1	NO MANUAL INTEGRATION
1657	0504A014.d	PCPF		1	NO MANUAL INTEGRATION
1733	0504A015.d	PCP ICV		1	NO MANUAL INTEGRATION

SLS3 00755

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd1.i/PCP20110504.b/PCPB.m
Batch File: /chem2/ecd1.i/PCP20110504.b/ical-2.b
Inst ID: ecd1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0504A009	0504A010	0504A011	0504A012	0504A013	0504A014	0504A015
INJ.DATE:	04-MAY-2011	04-MAY-2011	04-MAY-2011	04-MAY-2011	04-MAY-2011	04-MAY-2011	04-MAY-2011
INJ.TIME:	13:56	14:32	15:08	15:44	16:21	16:57	17:33

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	2,4-Dichlorophenol	13.820	13.824	13.821	13.821	13.821	13.820	13.822	13.820	13.750-13.890	13.821	0.001
2	2,4,6-Trichlorophenol	14.311	14.314	14.311	14.312	14.312	14.311	14.313	14.311	14.241-14.381	14.312	0.001
3	2,3,6-Trichlorophenol	15.557	15.560	15.557	15.558	15.558	15.559	15.560	15.557	15.487-15.627	15.558	0.001
4	2,4,5-Trichlorophenol	17.474	17.477	17.475	17.474	17.475	17.475	17.476	17.474	17.404-17.544	17.475	0.001
5	2,3,5,6-Tetrachlorophe	18.814	18.816	18.814	18.814	18.814	18.814	18.816	18.814	18.744-18.884	18.814	0.001
6	2,3,4-Trichlorophenol	19.023	19.025	19.024	19.023	19.023	19.023	19.024	19.023	18.953-19.093	19.024	0.001
$ 7	2,4,6-Tribromophenol (	20.936	20.937	20.936	20.936	20.937	20.937	20.938	20.936	20.866-21.006	20.937	0.001
8	2,3,4,5-Tetrachlorophe	22.080	22.082	22.081	22.080	22.081	22.081	22.081	22.080	22.010-22.150	22.081	0.001
9	Pentachlorophenol	22.967	22.968	22.967	22.967	22.967	22.968	22.968	22.967	22.897-23.037	22.968	0.001

Reviewer 1 AR Date: 5/6/2011
Reviewer 2 Date: 5/6/11

SUB 0075536

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd1.i/PCP20110504.b/PCP.m
Batch File: /chem2/ecd1.i/PCP20110504.b/ical-1.b
Inst ID: ecd1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0504A009	0504A010	0504A011	0504A012	0504A013	0504A014	0504A015
INJ.DATE:	04-MAY-2011	04-MAY-2011	04-MAY-2011	04-MAY-2011	04-MAY-2011	04-MAY-2011	04-MAY-2011
INJ.TIME:	13:56	14:32	15:08	15:44	16:21	16:57	17:33

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	2,4-Dichlorophenol	12.555	12.560	12.557	12.556	12.556	12.556	12.557	12.555	12.485-12.625	12.557	0.002
2	2,4,6-Trichlorophenol	13.101	13.104	13.101	13.102	13.101	13.102	13.103	13.101	13.031-13.171	13.102	0.001
3	2,3,6-Trichlorophenol	14.097	14.100	14.097	14.097	14.097	14.097	14.099	14.097	14.027-14.167	14.098	0.001
4	2,4,5-Trichlorophenol	15.845	15.849	15.845	15.846	15.845	15.846	15.847	15.845	15.775-15.915	15.846	0.001
5	2,3,4-Trichlorophenol	17.351	17.355	17.352	17.352	17.352	17.351	17.354	17.351	17.281-17.421	17.353	0.001
6	2,3,5,6-Tetrachlorophe	17.153	17.155	17.153	17.153	17.153	17.154	17.155	17.153	17.083-17.223	17.154	0.001
$ 7	2,4,6-Tribromophenol (	18.596	18.598	18.596	18.596	18.596	18.596	18.598	18.596	18.526-18.666	18.597	0.001
8	2,3,4,5-Tetrachlorophe	20.155	20.157	20.156	20.155	20.155	20.155	20.157	20.155	20.085-20.225	20.156	0.001
9	Pentachlorophenol	20.997	21.000	20.998	20.998	20.998	20.999	20.999	20.997	20.927-21.067	20.998	0.001

Reviewer 1 _____ Date: 5/6/2011
Reviewer 2 _____ Date: 5/6/11

JSJ59 : 6575T

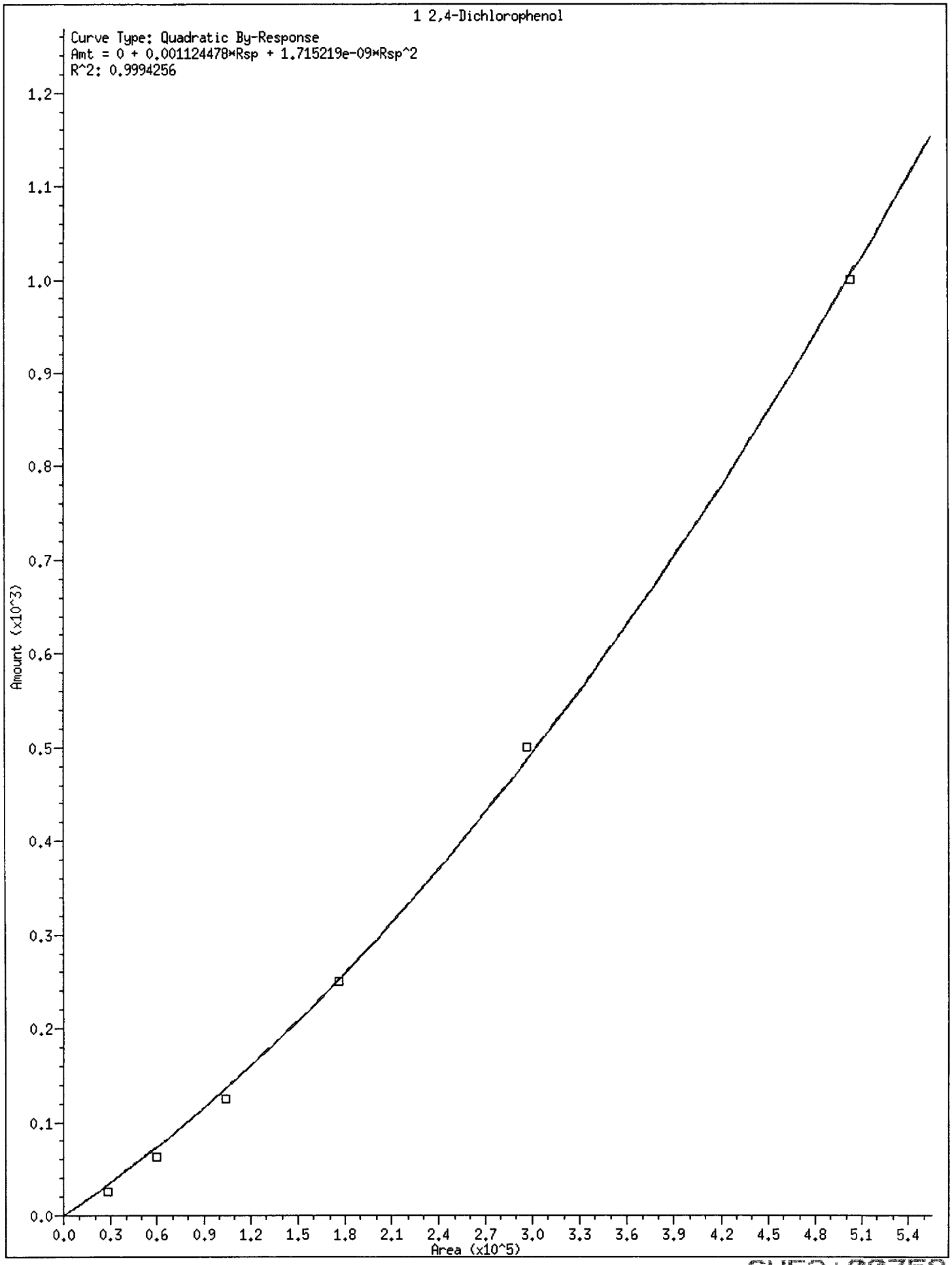
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

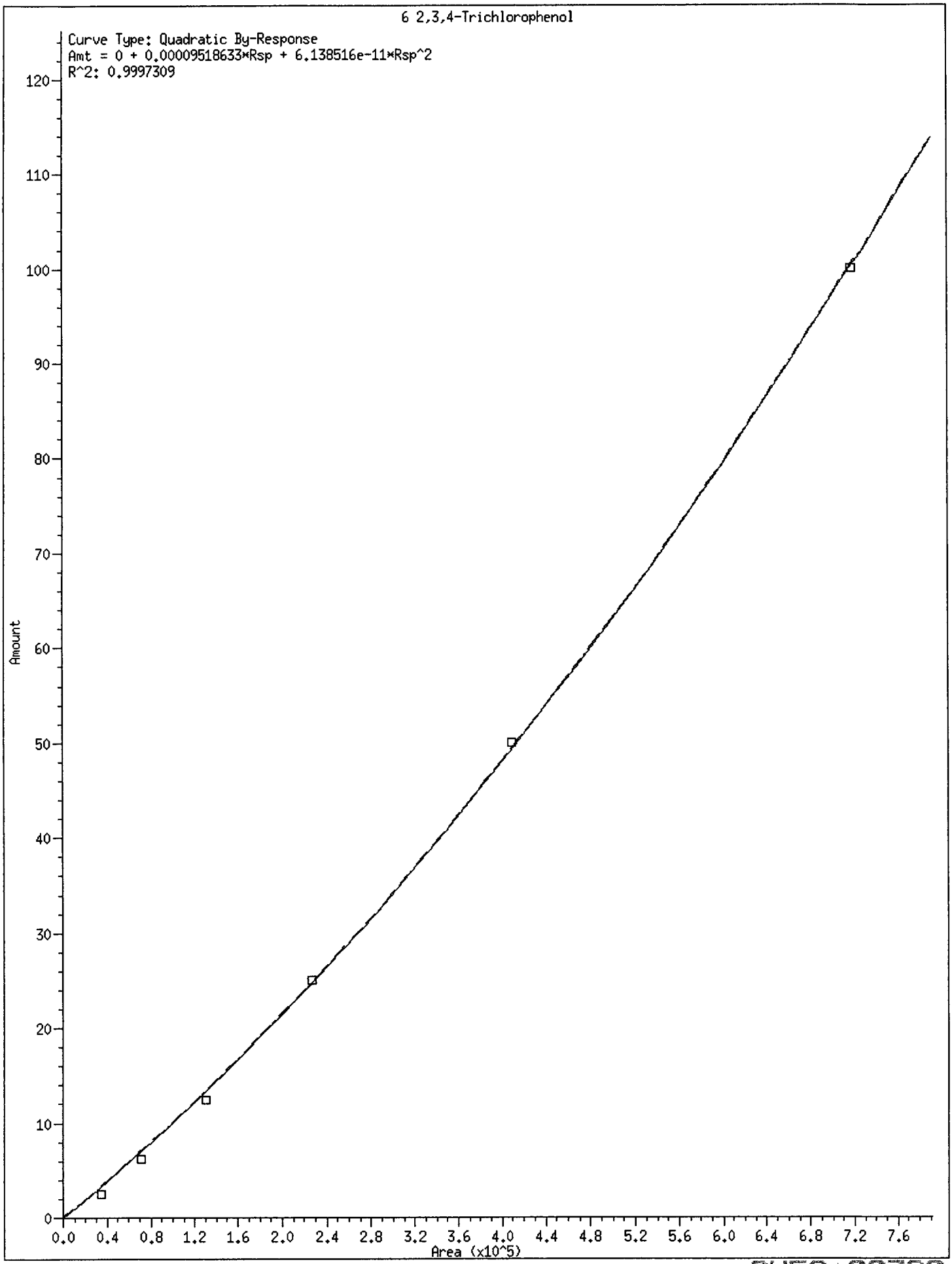
Start Cal Date : 04-MAY-2011 13:56
End Cal Date : 04-MAY-2011 16:57
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd1.i/PCP20110504.b/PCPB.m
Cal Date : 06-May-2011 10:29 aron
Curve Type : Average

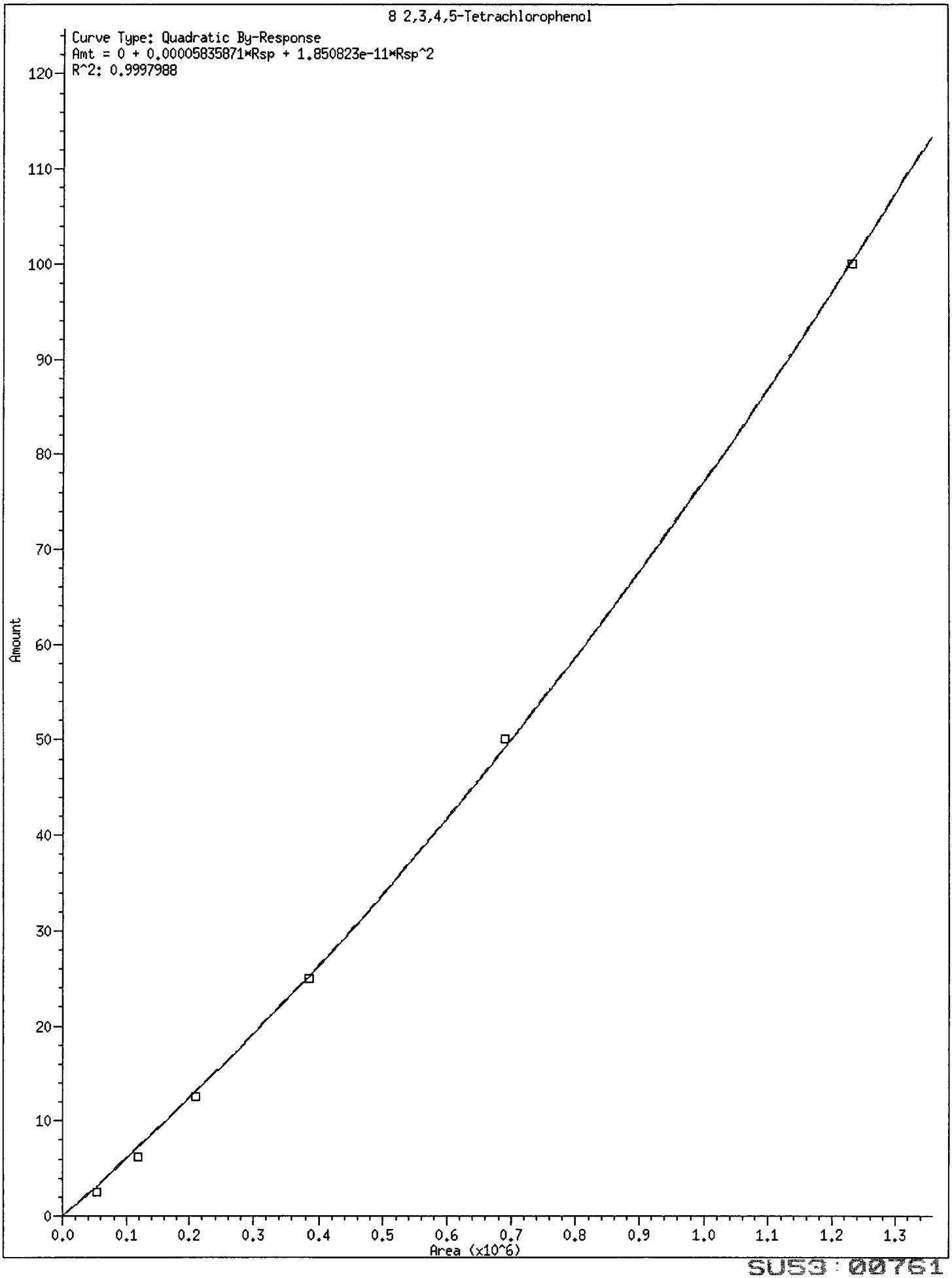
Calibration File Names:
Level 1: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A010.d
Level 2: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A011.d
Level 3: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A012.d
Level 4: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A009.d
Level 5: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A013.d
Level 6: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A014.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	1124	962	835	702	594	505	787	29.552	<-
2 2,4,6-Trichlorophenol	18173	16199	15364	13872	12302	11052	14494	18.054	
3 2,3,6-Trichlorophenol	17538	16304	15194	13812	12444	10949	14373	17.093	
4 2,4,5-Trichlorophenol	10375	9203	8375	7827	6888	5906	8096	19.784	
5 2,3,5,6-Tetrachlorophenol	28198	24060	22545	20410	19063	17352	21938	17.734	
6 2,3,4-Trichlorophenol	13793	11382	10368	9080	8182	7194	10000	23.857	<-
8 2,3,4,5-Tetrachlorophenol	21700	18848	16677	15352	13827	12342	16458	20.753	<-
9 Pentachlorophenol	35686	31408	28958	26156	24465	22293	28161	17.390	
$ 7 2,4,6-Tribromophenol (surr)	26776	22121	21311	19850	18746	17341	21024	15.703	


1 2,4-Dichlorophenol
Curve Type: Quadratic By-Response
Amt = 0 + 0.001124478*Rsp + 1.715219e-09*Rsp^2
R^2: 0.9994256
Amount (x10^3)
Area (x10^5)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8
5.1
5.4

SU53 : 00759


6 2,3,4-Trichlorophenol
Curve Type: Quadratic By-Response
Amt = 0 + 0.00009518633*Rsp + 6.138516e-11*Rsp^2
R^2: 0.9997309
Amount
Area (x10^5)
0
10
20
30
40
50
60
70
80
90
100
110
120
0.0
0.4
0.8
1.2
1.6
2.0
2.4
2.8
3.2
3.6
4.0
4.4
4.8
5.2
5.6
6.0
6.4
6.8
7.2
7.6


8 2,3,4,5-Tetrachlorophenol
Curve Type: Quadratic By-Response
Amt = 0 + 0.00005835871*Rsp + 1.850823e-11*Rsp^2
R^2: 0.9997988
Amount
Area (x10^6)
0
10
20
30
40
50
60
70
80
90
100
110
120
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-MAY-2011 13:56
End Cal Date : 04-MAY-2011 16:57
Quant Method : ESTD
Origin : Force
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd1.i/PCP20110504.b/PCPB.m
Cal Date : 06-May-2011 10:29 aron

Calibration File Names:
Level 1: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A010.d
Level 2: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A011.d
Level 3: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A012.d
Level 4: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A009.d
Level 5: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A013.d
Level 6: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A014.d

	Compound	2 Level 1	6 Level 2	12 Level 3	25 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
1	2,4-Dichlorophenol	28101	60102	104374	175491	297223	504644	QUAD	0.000e+00	0.00112	1.715e-09	0.99943
2	2,4,6-Trichlorophenol	18173	16199	15364	13872	12302	11052	AVRG		14494		18.05411
3	2,3,6-Trichlorophenol	17538	16304	15194	13812	12444	10949	AVRG		14373		17.09291
4	2,4,5-Trichlorophenol	10375	9203	8375	7827	6888	5906	AVRG		8096		19.78419
5	2,3,5,6-Tetrachlorophenol	28198	24060	22545	20410	19063	17352	AVRG		21938		17.73407
6	2,3,4-Trichlorophenol	34482	71137	129601	227012	409120	719354	QUAD	0.000e+00	0.00010	6.139e-11	0.99973
8	2,3,4,5-Tetrachlorophenol	54250	117798	208459	383811	691341	1234197	QUAD	0.000e+00	0.00006	1.851e-11	0.99980
9	Pentachlorophenol	35686	31408	28958	26156	24465	22293	AVRG		28161		17.38988
7	2,4,6-Tribromophenol (surr)	26776	22121	21311	19850	18746	17341	AVRG		21024		15.70277

2962 05/06/11

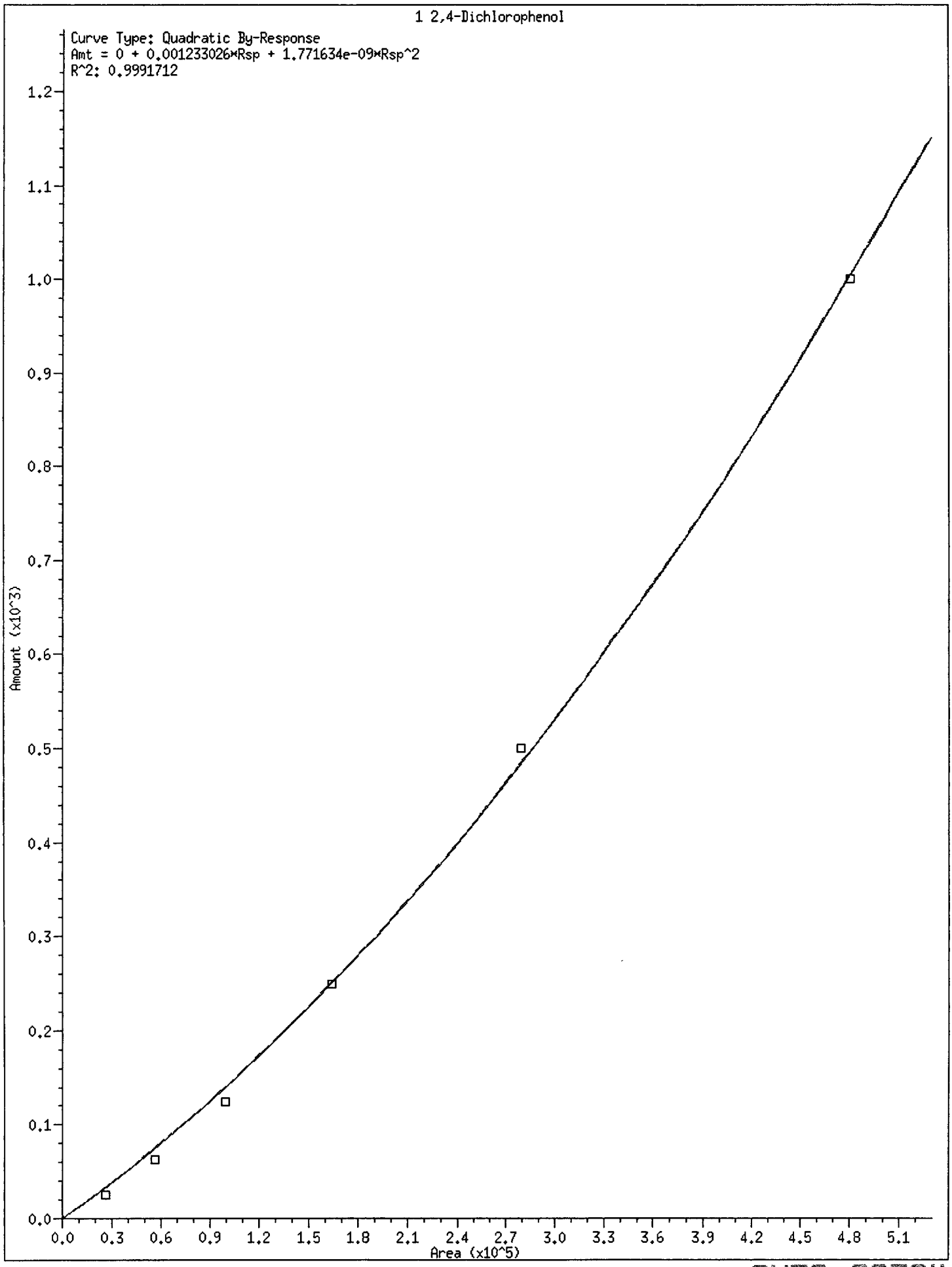
Analytical Resources, Inc.

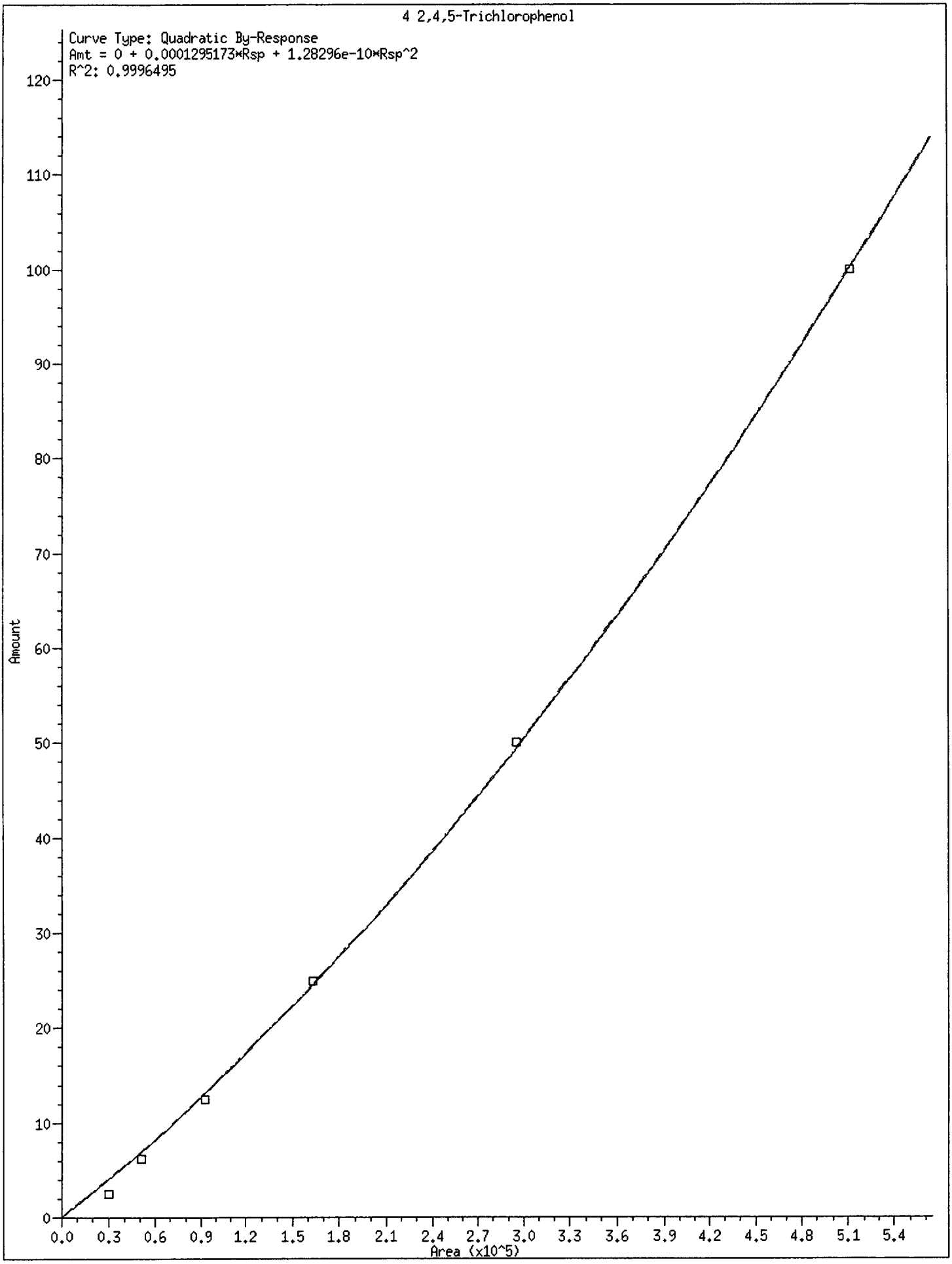
INITIAL CALIBRATION DATA

Start Cal Date : 04-MAY-2011 13:56
End Cal Date : 04-MAY-2011 16:57
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd1.i/PCP20110504.b/PCP.m
Cal Date : 06-May-2011 10:50 aron
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A010.d
Level 2: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A011.d
Level 3: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A012.d
Level 4: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A009.d
Level 5: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A013.d
Level 6: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A014.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	1040	896	796	655	559	482	738	28.677	<-
2 2,4,6-Trichlorophenol	15281	13835	12795	11181	10412	9532	12173	17.948	
3 2,3,6-Trichlorophenol	14259	12818	11863	10765	9925	9085	11453	16.712	
4 2,4,5-Trichlorophenol	12140	8082	7421	6534	5905	5130	7535	33.025	<-
5 2,3,4-Trichlorophenol	10565	9519	8778	7811	7138	6322	8355	18.794	
6 2,3,5,6-Tetrachlorophenol	20194	18565	17499	16125	15182	13876	16907	13.661	
8 2,3,4,5-Tetrachlorophenol	16824	14772	13475	11938	10977	9904	12982	19.728	
9 Pentachlorophenol	24557	22356	20781	19124	17785	16292	20149	15.089	
$ 7 2,4,6-Tribromophenol (surr)	18340	16896	15885	15230	14566	13549	15744	10.839	


1 2,4-Dichlorophenol
Curve Type: Quadratic By-Response
Amt = 0 + 0.001233026*Rsp + 1.771634e-09*Rsp^2
R^2: 0.9991712
Amount (x10^3)
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1
Area (x10^5)


4 2,4,5-Trichlorophenol
Curve Type: Quadratic By-Response
Amt = 0 + 0.0001295173*Rsp + 1.28296e-10*Rsp^2
R^2: 0.9996495
Amount
Area (x10^5)
0
10
20
30
40
50
60
70
80
90
100
110
120
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8
5.1
5.4

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-MAY-2011 13:56
End Cal Date : 04-MAY-2011 16:57
Quant Method : ESTD
Origin : Force
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd1.i/PCP20110504.b/PCP.m
Cal Date : 06-May-2011 10:50 aron

Calibration File Names:
Level 1: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A010.d
Level 2: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A011.d
Level 3: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A012.d
Level 4: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A009.d
Level 5: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A013.d
Level 6: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A014.d

	2	6	12	25	50	100		Coefficients			%RSD
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2	or R^2
1 2,4-Dichlorophenol	25994	56009	99540	163817	279617	481637	QUAD	0.000e+00	0.00123	1.772e-09	0.99917
2 2,4,6-Trichlorophenol	15281	13835	12795	11181	10412	9532	AVRG		12173		17.94765
3 2,3,6-Trichlorophenol	14259	12818	11863	10765	9925	9085	AVRG		11453		16.71151
4 2,4,5-Trichlorophenol	30350	50514	92760	163352	295231	512989	QUAD	0.000e+00	0.00013	1.283e-10	0.99965
5 2,3,4-Trichlorophenol	10565	9519	8778	7811	7138	6322	AVRG		8355		18.79441
6 2,3,5,6-Tetrachlorophenol	20194	18565	17499	16125	15182	13876	AVRG		16907		13.66148
8 2,3,4,5-Tetrachlorophenol	16824	14772	13475	11938	10977	9904	AVRG		12982		19.72816
9 Pentachlorophenol	24557	22356	20781	19124	17785	16292	AVRG		20149		15.08931
7 2,4,6-Tribromophenol (surr)	18340	16896	15885	15230	14566	13549	AVRG		15744		10.83879

SDG 7665

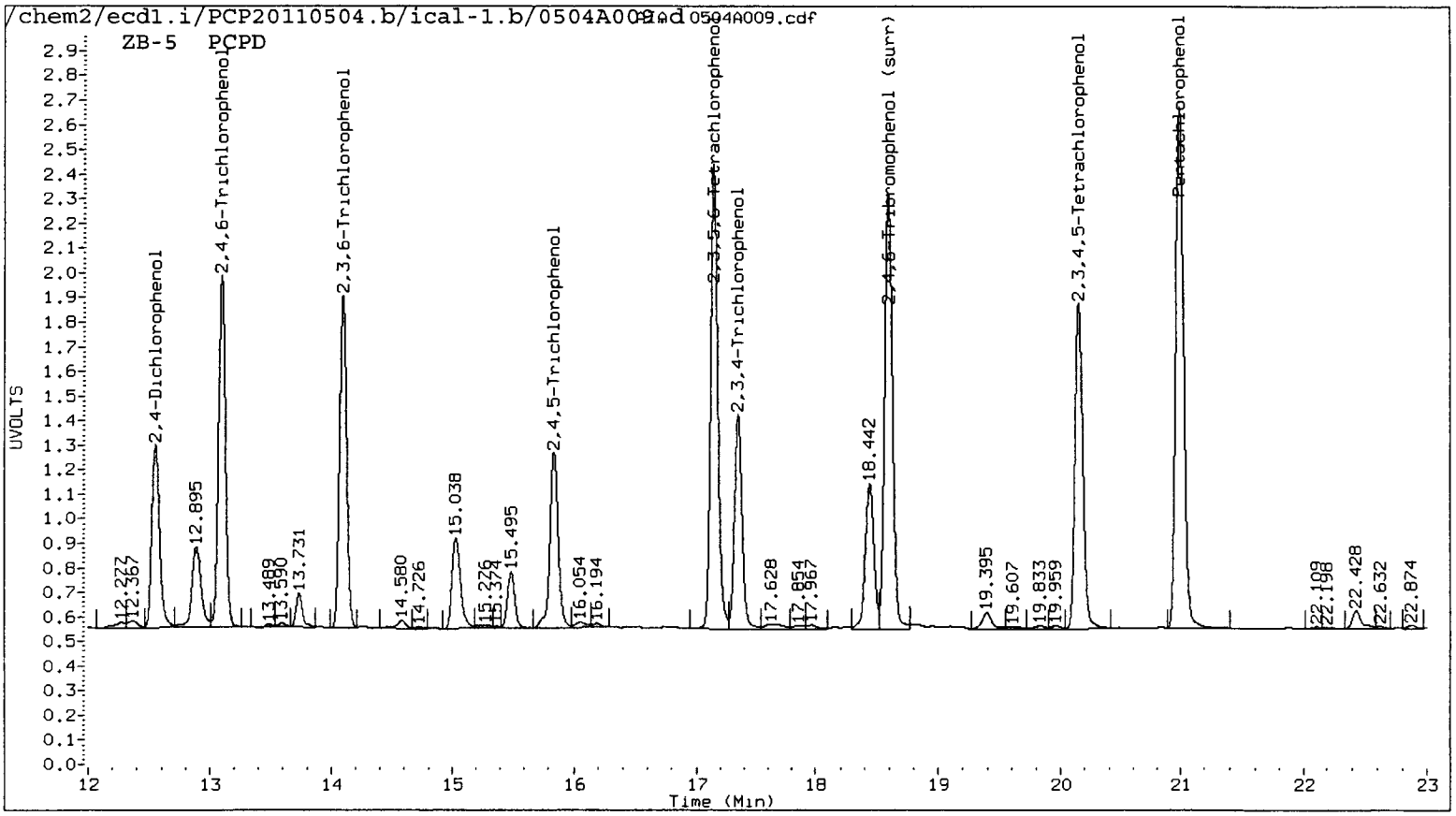
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A009.d ARI ID: PCPD
Data file 2: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A009.d Client ID:
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 04-MAY-2011 13:56
Compound Sublist: all Report Date: 05/06/2011 10:51
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB-5 on col	ZB35 on col	RPD	Compound
20.997	0.000	478095	22.967	0.000	653905	23.7278	23.2203	2.2	Pentachlorophenol
13.101	0.000	279531	14.311	0.000	346808	22.9636	23.9281	4.1	2,4,6-Trichlorophenol
14.097	0.000	269131	15.557	0.000	345288	23.4995	24.0227	2.2	2,3,6-Trichlorophenol
15.845	0.000	163352	17.474	0.000	195681	24.5803	24.1710	1.7	2,4,5-Trichlorophenol
17.351	0.000	195271	19.023	0.000	227012	23.3708	24.7719	5.8	2,3,4-Trichlorophenol
17.153	0.000	403117	18.814	0.000	510260	23.8436	23.2592	2.5	2,3,5,6-Tetrachlorophenol
20.155	0.000	298448	22.080	0.000	383811	22.9898	25.1252	8.9	2,3,4,5-Tetrachlorophenol
12.555	0.000	163817	13.820	0.000	175491	249.5342	250.1594	0.3	2,4-Dichlorophenol
18.596	0.000	380744	20.936	0.000	496261	24.2	23.6	2.4	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	96.7	94.4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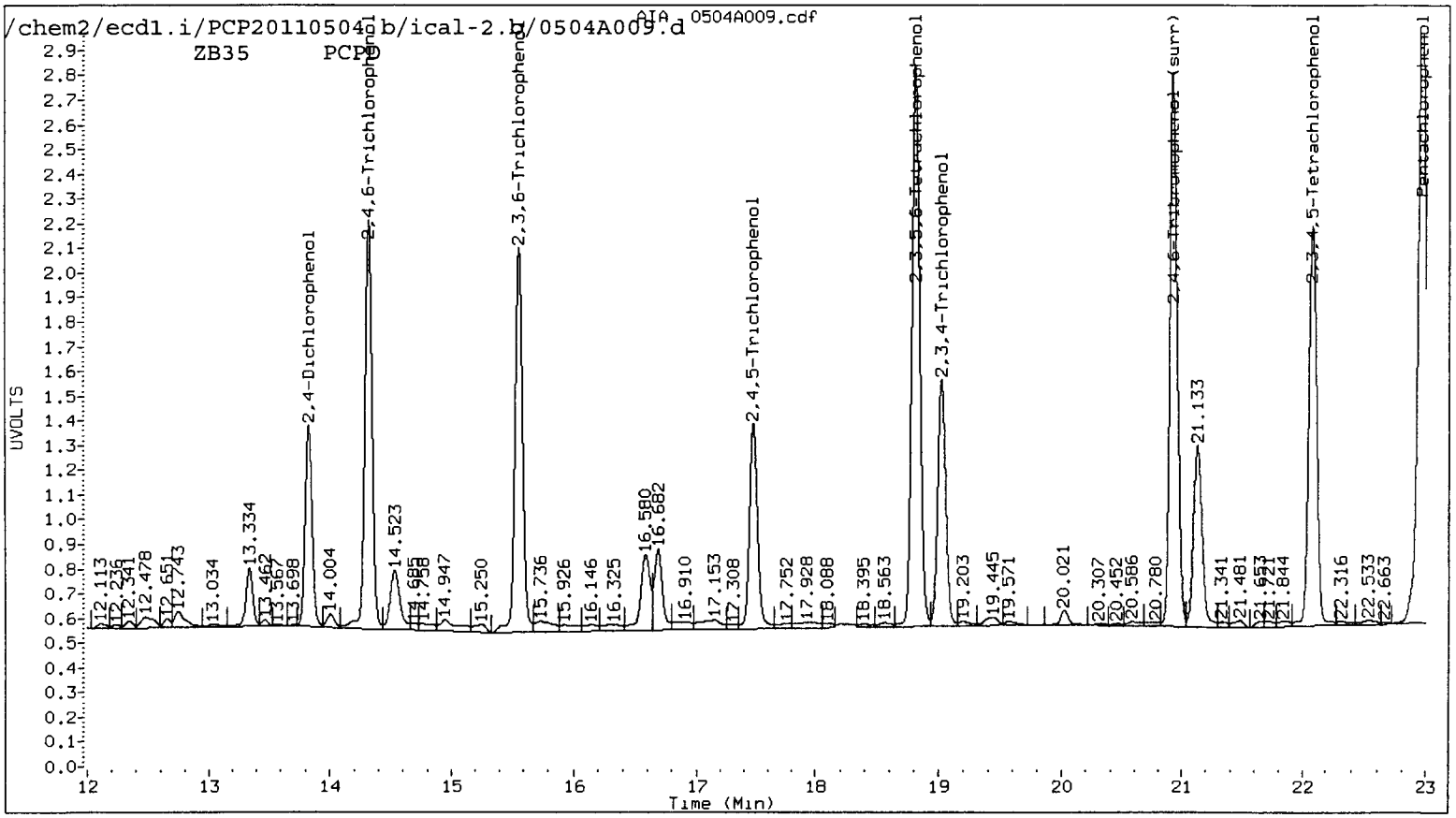
DIA 0504A009.cdf
ZB-5 PCPD
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
12.895
13.731
15.038
15.495
16.054
16.194
18.442
19.395
19.607
19.833
19.959
22.428
22.632
22.874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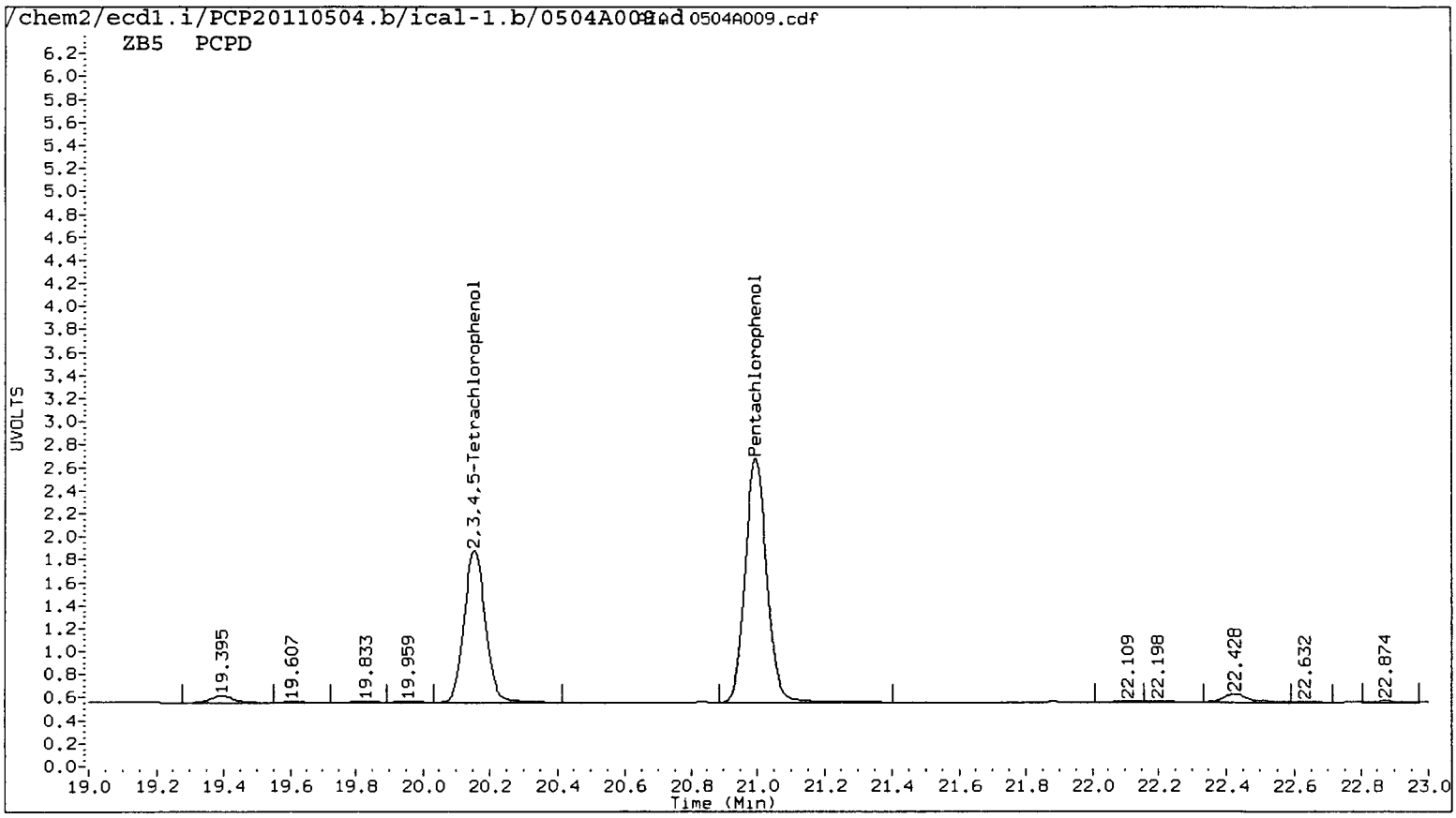
DIA 0504A009.cdf
ZB35 PCPD
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
13.334
14.004
14.523
15.736
16.580
16.682
16.910
17.153
17.308
17.752
17.928
18.088
18.395
18.563
19.203
19.445
19.571
20.021
20.307
20.452
20.586
20.780
21.133
21.341
21.481
21.653
21.721
21.844
22.316
22.533
22.663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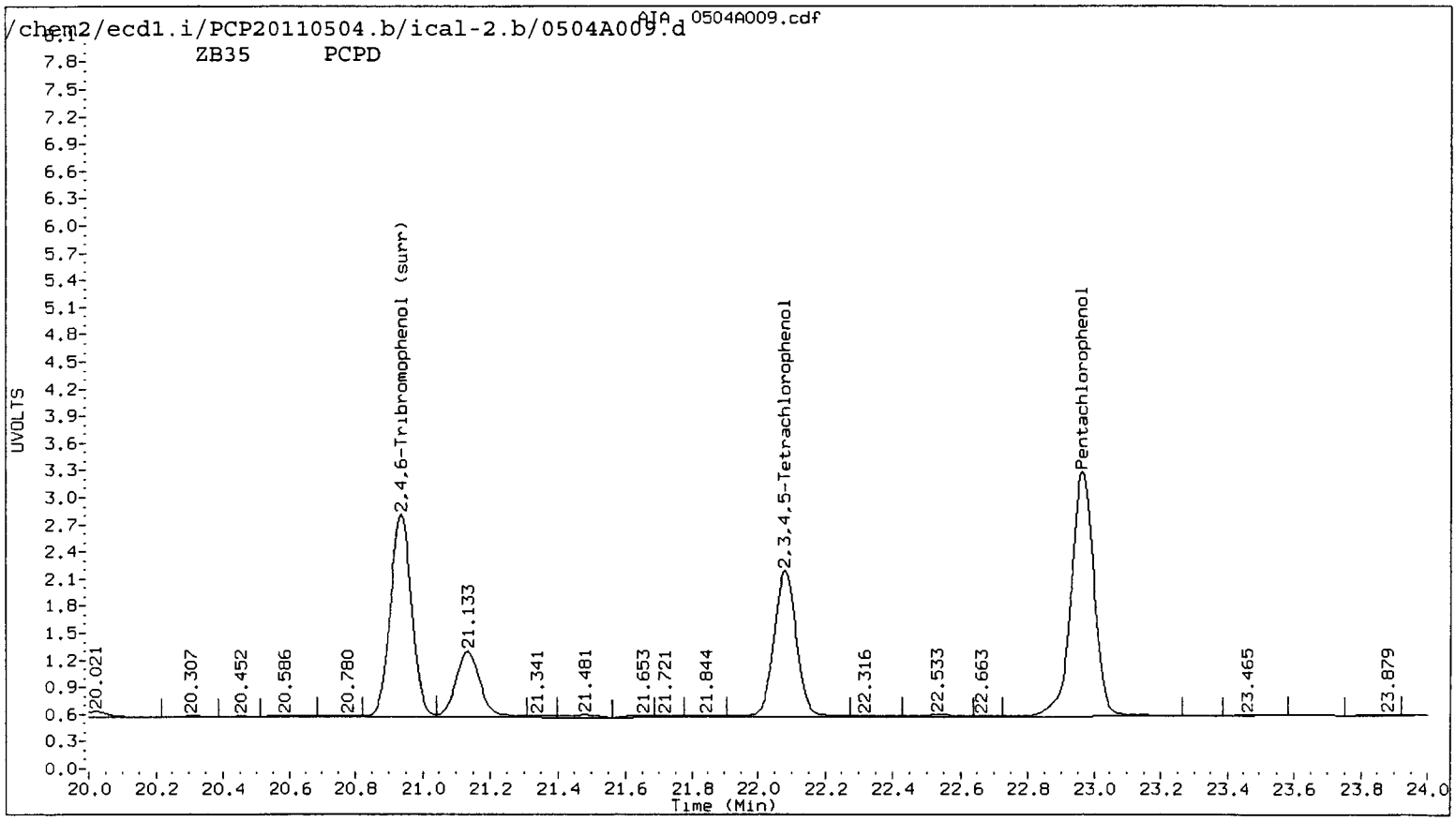
AJA 0504A009.cdf
ZB5 PCPD
UVOLTS
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
19.395
19.607
19.833
19.959
22.109
22.198
22.428
22.632
22.874
Time (Min)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AJA 0504A009.cdf
ZB35 PCPD
UVOLTS
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
20.021
20.307
20.452
20.586
20.780
21.133
21.341
21.481
21.653
21.721
21.844
22.316
22.533
22.663
23.465
23.879
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A009.d

Date : 04-MAY-2011 13:56

Client ID:

Instrument: ecd1.i

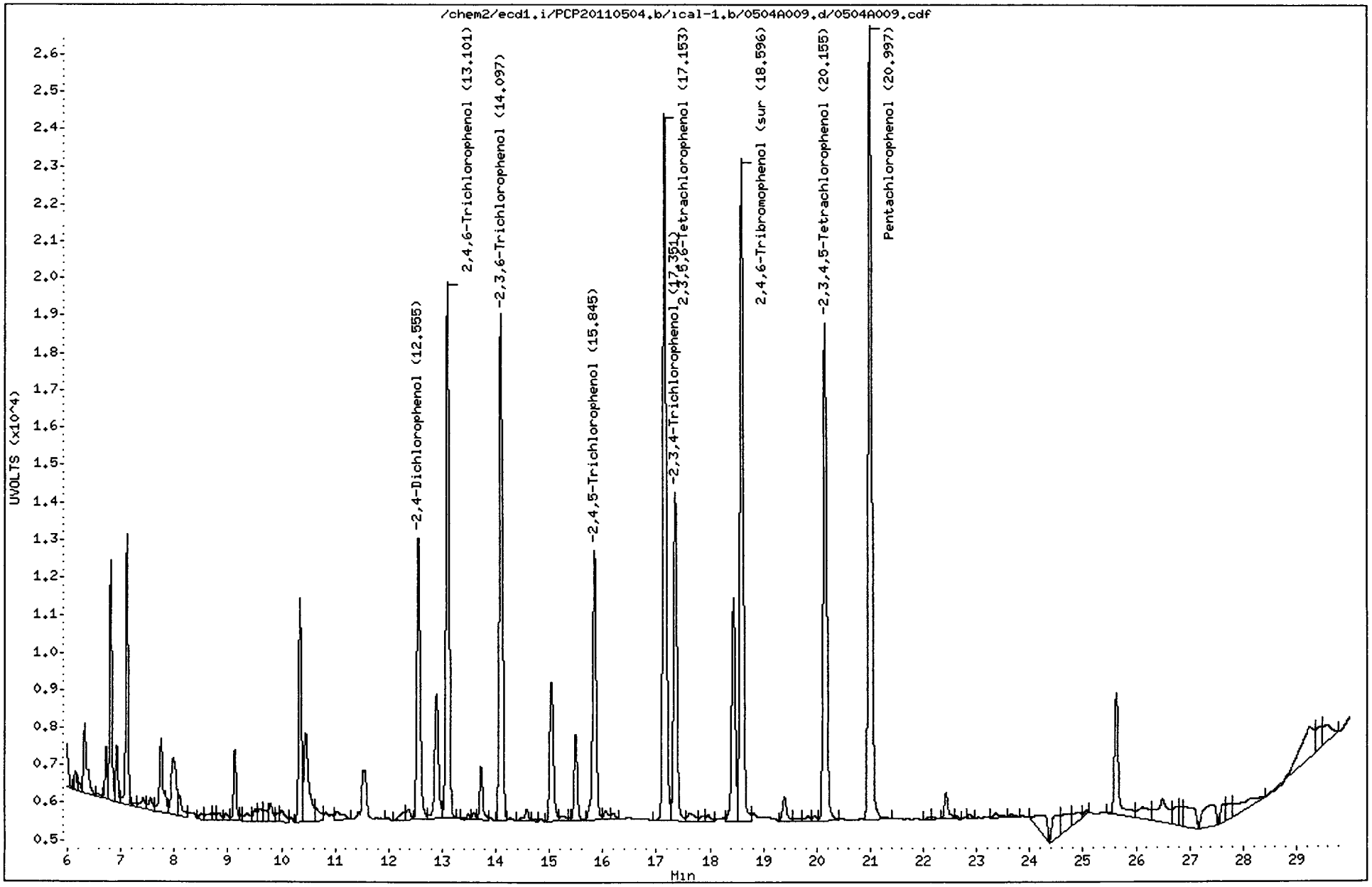
Sample Info: PCPD

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

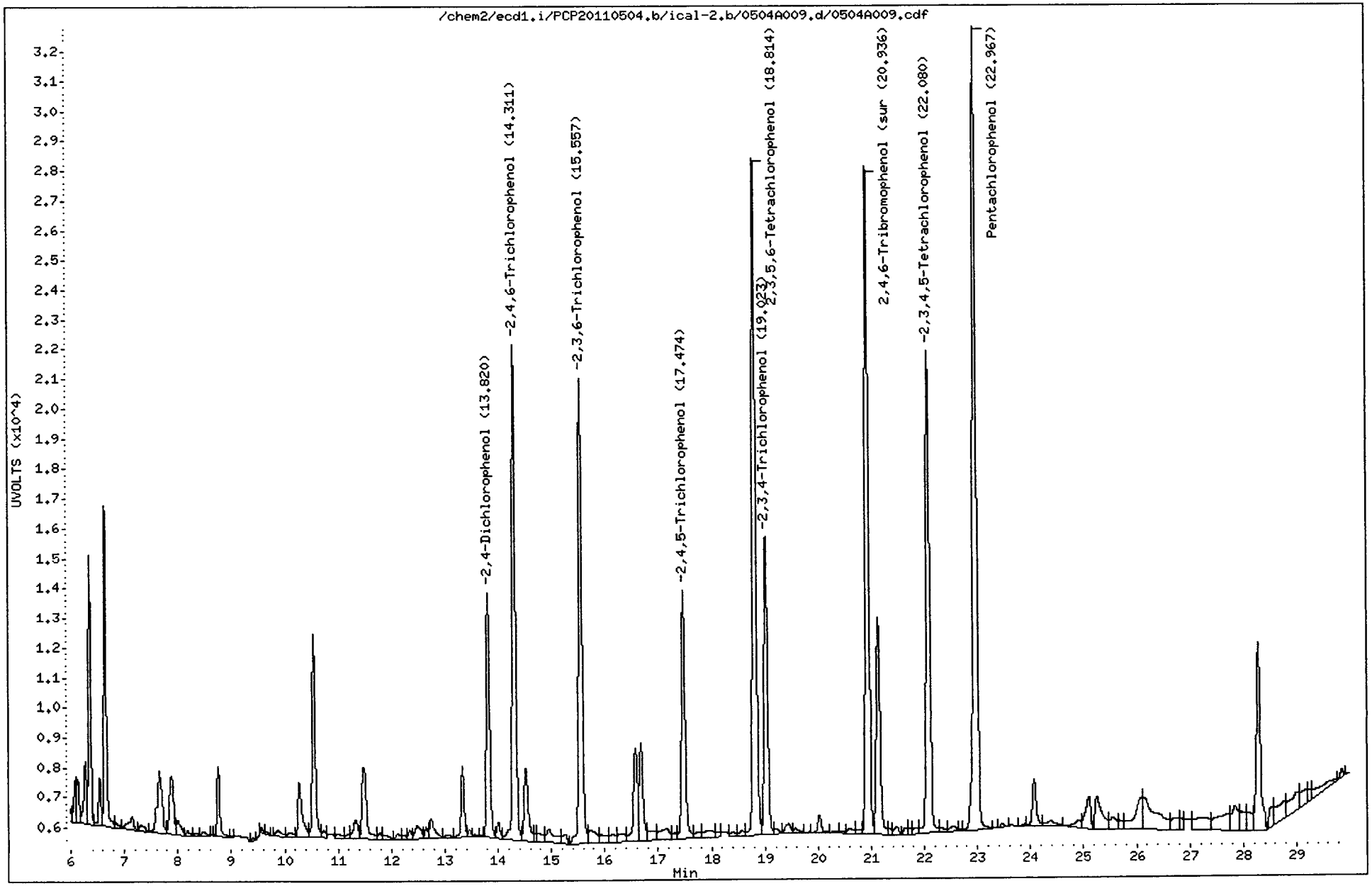
Column diameter: 0.53



SUS3 : 00776

Data File: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A009.d
Date : 04-MAY-2011 13:56
Client ID:
Sample Info: PCPD
Purge Volume: 500.0
Column phase: STX CLP2

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



SUBJECT TO 00774

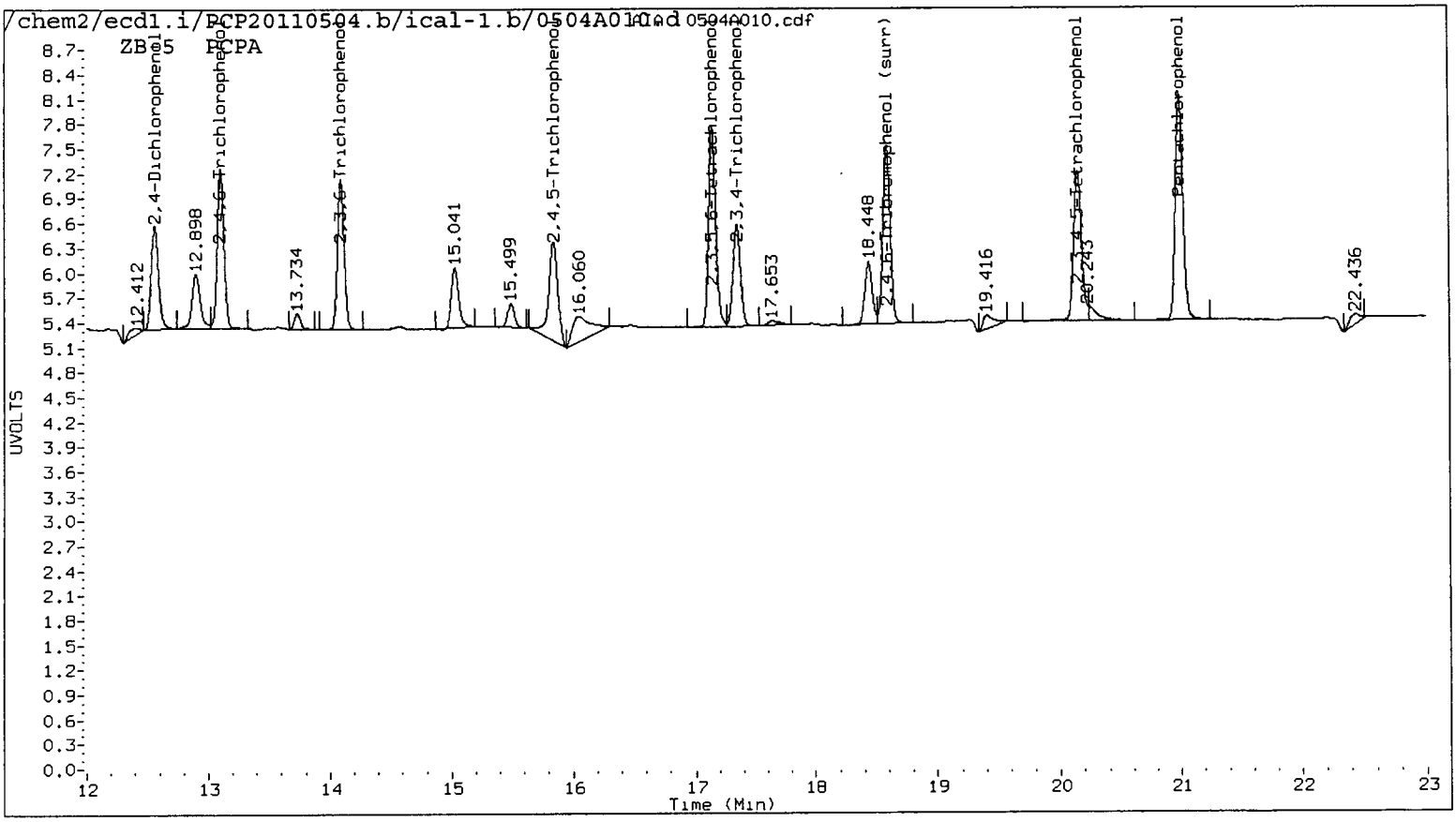
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A010.d ARI ID: PCPA
Data file 2: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A010.d Client ID:
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 04-MAY-2011 14:32
Compound Sublist: all Report Date: 05/06/2011 10:51
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.000	0.002	61392	22.968	0.001	89214	3.0469	3.1680	3.9	Pentachlorophenol
13.104	0.003	38202	14.314	0.003	45432	3.1383	3.1346	0.1	2,4,6-Trichlorophenol
14.100	0.003	35647	15.560	0.003	43844	3.1126	3.0504	2.0	2,3,6-Trichlorophenol
15.849	0.004	30350	17.477	0.003	25938	4.0490	3.2039	23.3	2,4,5-Trichlorophenol
17.355	0.004	26413	19.025	0.002	34482	3.1612	3.3552	6.0	2,3,4-Trichlorophenol
17.155	0.003	50484	18.816	0.002	70494	2.9860	3.2133	7.3	2,3,5,6-Tetrachlorophenol
20.157	0.002	42060	22.082	0.002	54250	3.2399	3.2204	0.6	2,3,4,5-Tetrachlorophenol
12.560	0.005	25994	13.824	0.004	28101	33.2484	32.9534	0.9	2,4-Dichlorophenol
18.598	0.002	45851	20.937	0.001	66939	2.9	3.2	8.9	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	11.6	12.7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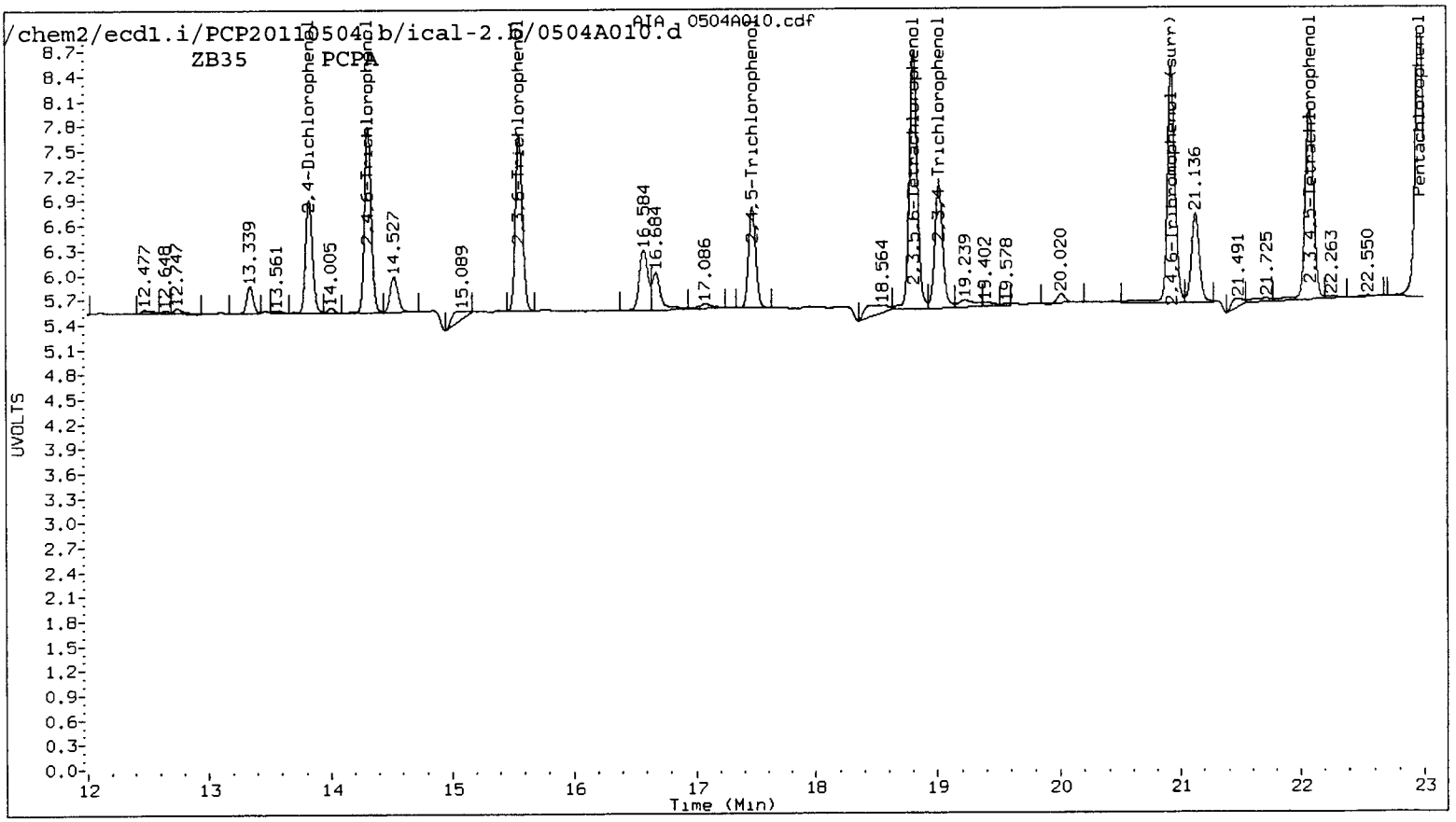
AIA 0504A010.cdf
ZB35 PCPA
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
12.412
12.898
13.734
15.041
15.499
16.060
17.653
18.448
19.416
20.243
22.436
UVOLTS
Time (Min)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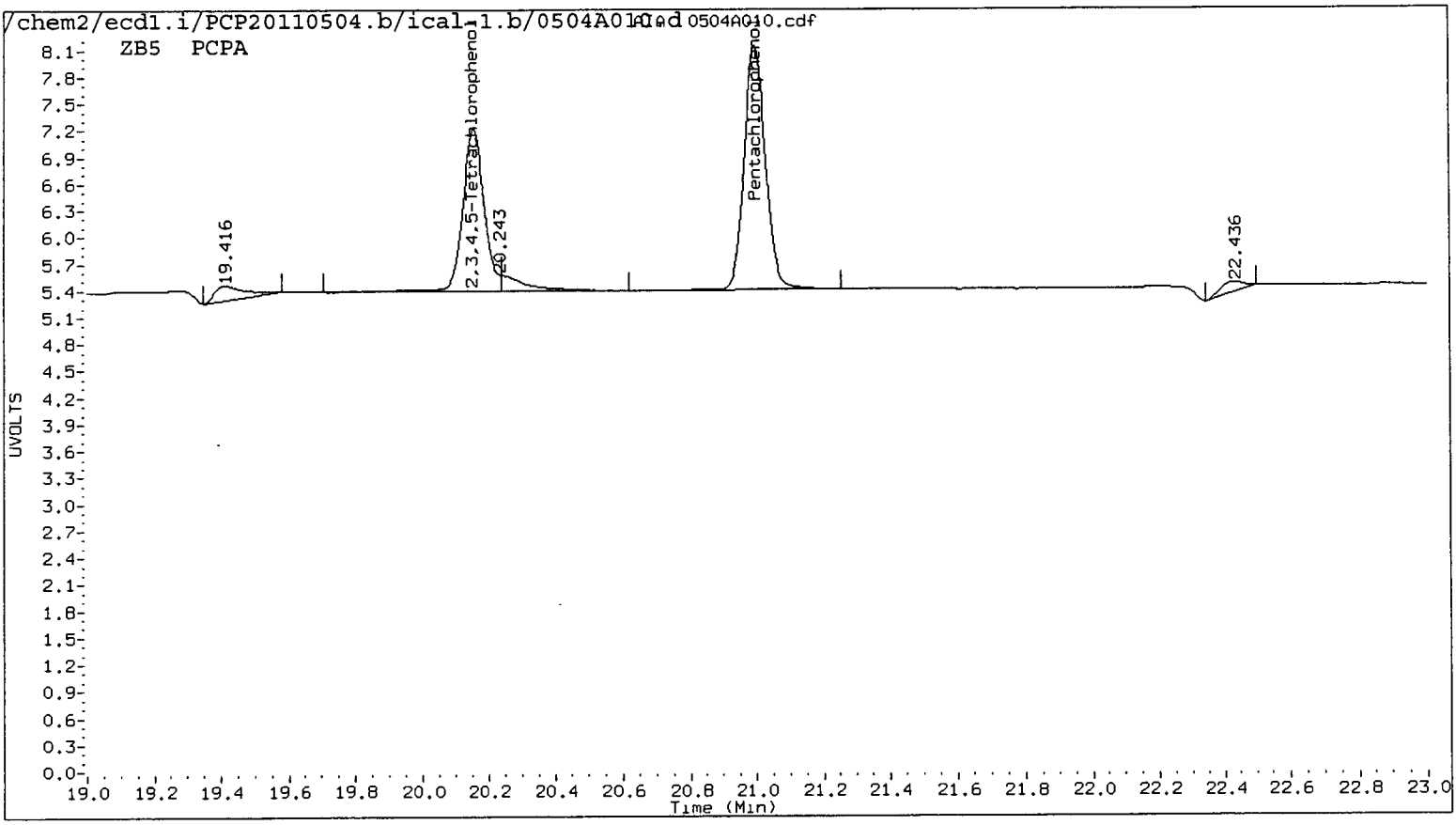
AIA 0504A010.cdf
ZB35 PCPA
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
12.477
12.648
12.947
13.339
13.561
14.005
14.527
15.089
16.584
16.684
17.086
18.564
19.239
19.402
19.578
20.020
21.136
21.491
21.725
22.263
22.550
UVOLTS
Time (Min)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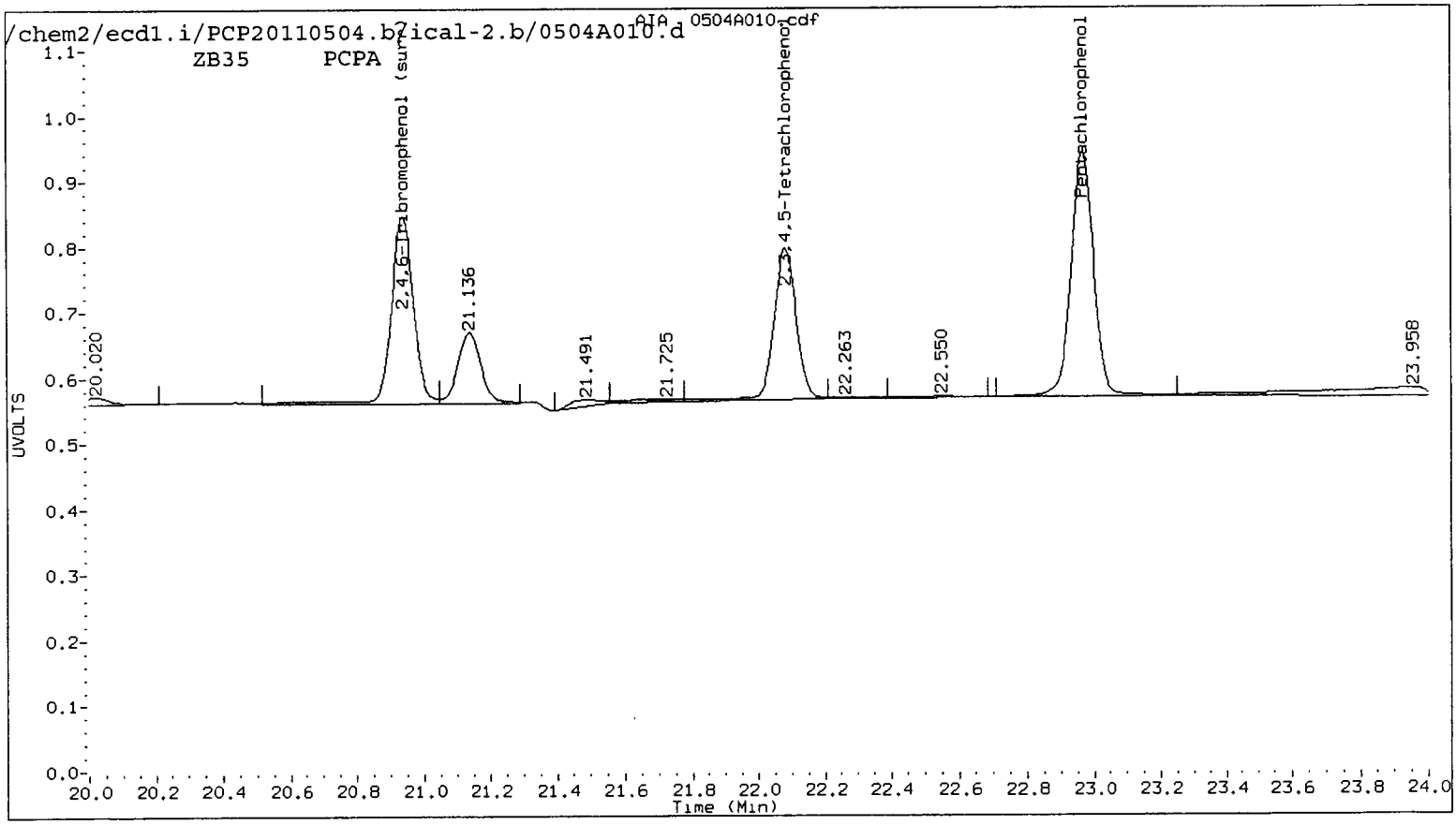
AIA 0504A010.cdf
ZB5 PCPA
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
19.416
20.243
22.436
UVOLTS
Time (Min)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AIA 0504A010.cdf
ZB35 PCPA
2,4,6-Tribromophenol (surr
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
20.020
21.136
21.491
21.725
22.263
22.550
23.958
UVOLTS
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A010.d

Page 1

Date : 04-MAY-2011 14:32

Client ID:

Instrument: ecd1.i

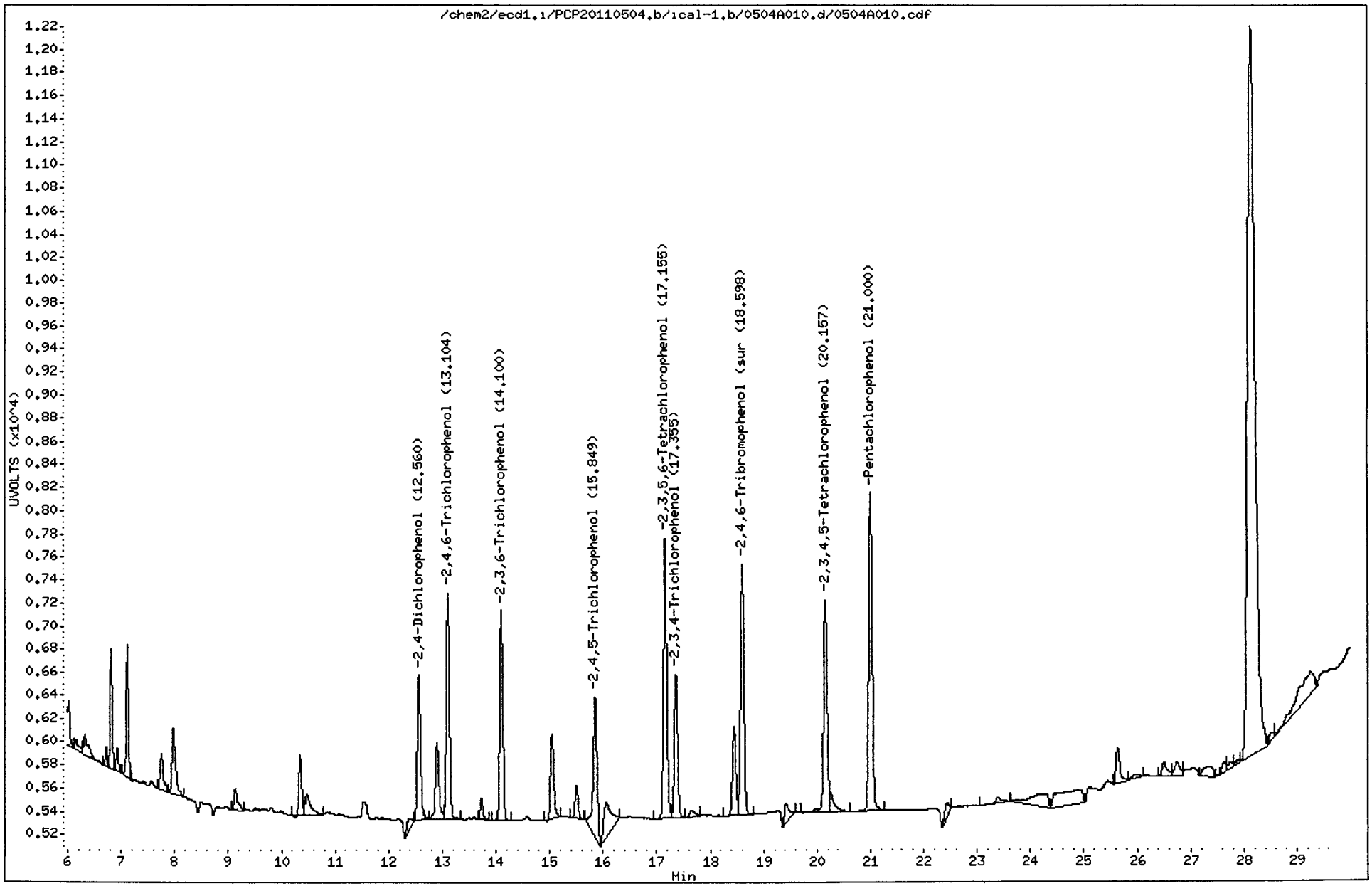
Sample Info: PCPA

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

Column diameter: 0.53



SU53 : 00775

Data File: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A010.d

Date : 04-MAY-2011 14:32

Client ID:

Instrument: ecd1.i

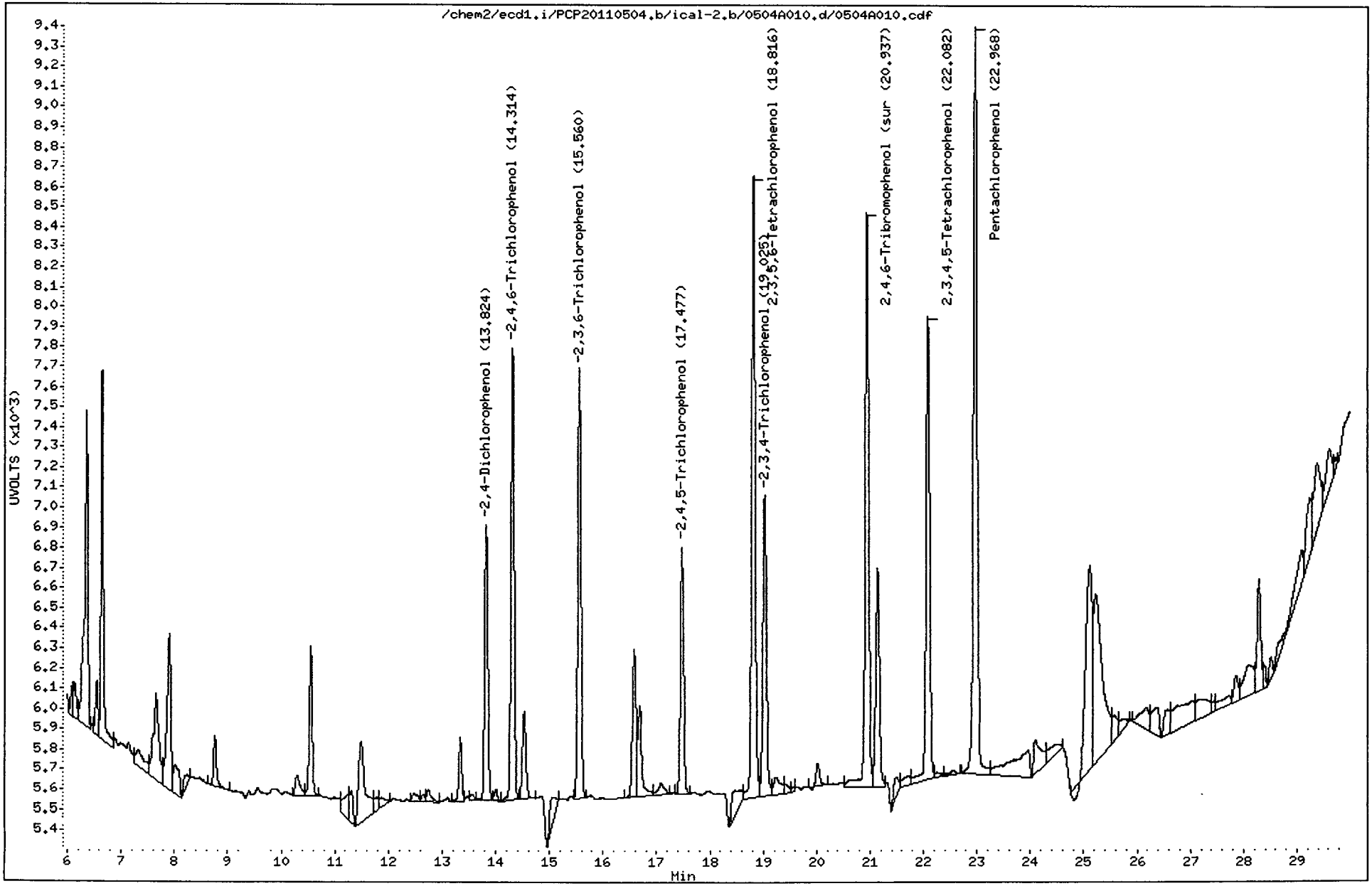
Sample Info: PCPA

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



SUS3:00776

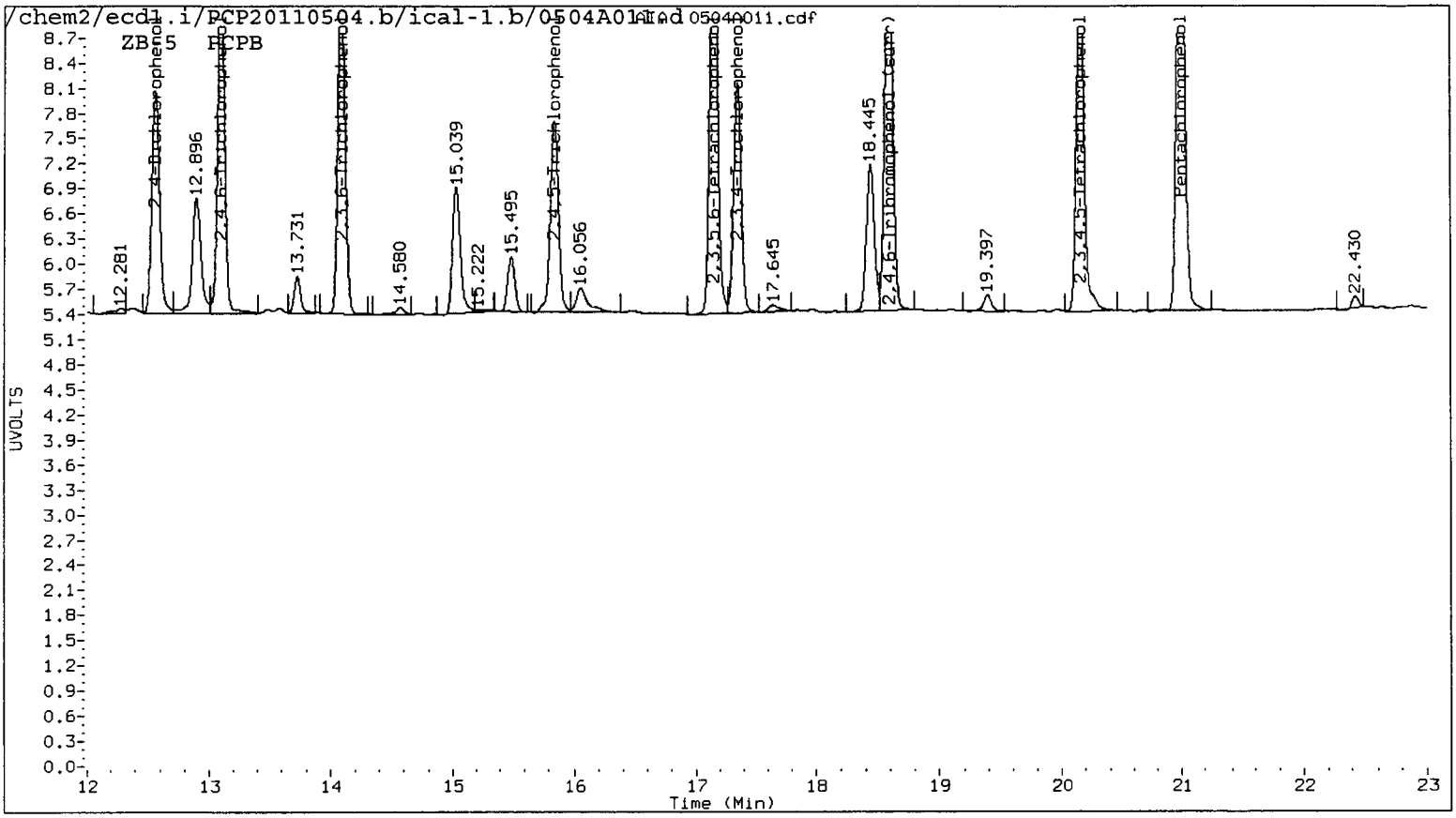
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A011.d ARI ID: PCPB
Data file 2: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A011.d Client ID:
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 04-MAY-2011 15:08
Compound Sublist: all Report Date: 05/06/2011 10:51
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
20.998	0.001	139728	22.967	0.000	196299	6.9347	6.9706	0.5	Pentachlorophenol
13.101	0.000	86469	14.311	0.000	101246	7.1035	6.9855	1.7	2,4,6-Trichlorophenol
14.097	0.000	80111	15.557	0.000	101902	6.9950	7.0896	1.3	2,3,6-Trichlorophenol
15.845	0.000	50514	17.475	0.001	57517	6.8698	7.1047	3.4	2,4,5-Trichlorophenol
17.352	0.001	59492	19.024	0.001	71137	7.1202	7.0819	0.5	2,3,4-Trichlorophenol
17.153	0.000	116029	18.814	0.000	150373	6.8629	6.8545	0.1	2,3,5,6-Tetrachlorophenol
20.156	0.001	92328	22.081	0.001	117798	7.1121	7.1314	0.3	2,3,4,5-Tetrachlorophenol
12.557	0.002	56009	13.821	0.001	60102	74.6182	73.7791	1.1	2,4-Dichlorophenol
18.596	0.000	105601	20.936	0.000	138254	6.7	6.6	2.0	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	26.8	26.3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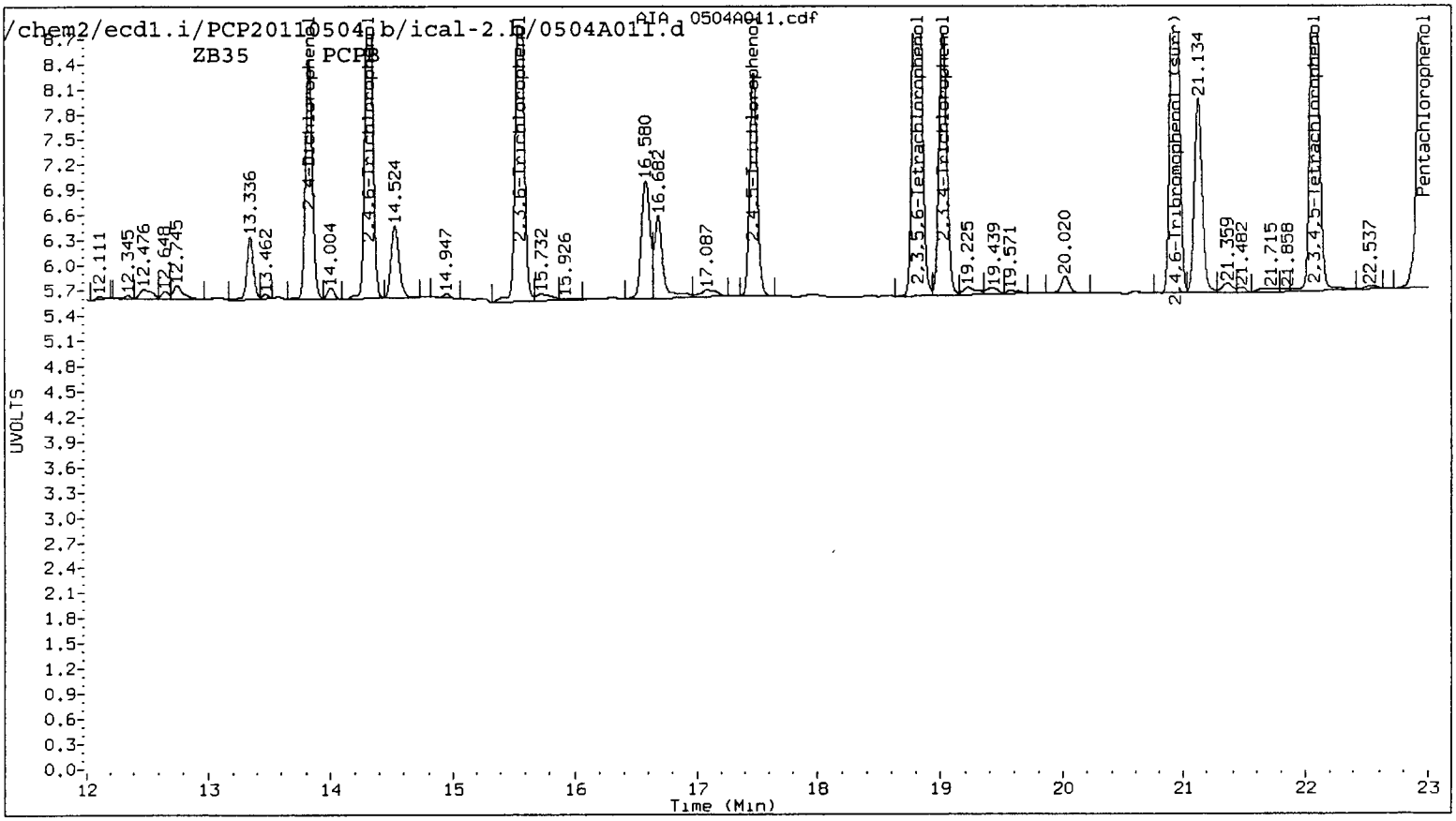
AIA 0504A011.cdf
ZB5 PCPB
12.281
12.896
13.731
14.580
15.039
15.222
15.495
16.056
17.645
18.445
19.397
22.430
Pentachlorophenol
UVOLTS
Time (Min)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AIA 0504A011.cdf
ZB35 PCPB
12.111
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12.648
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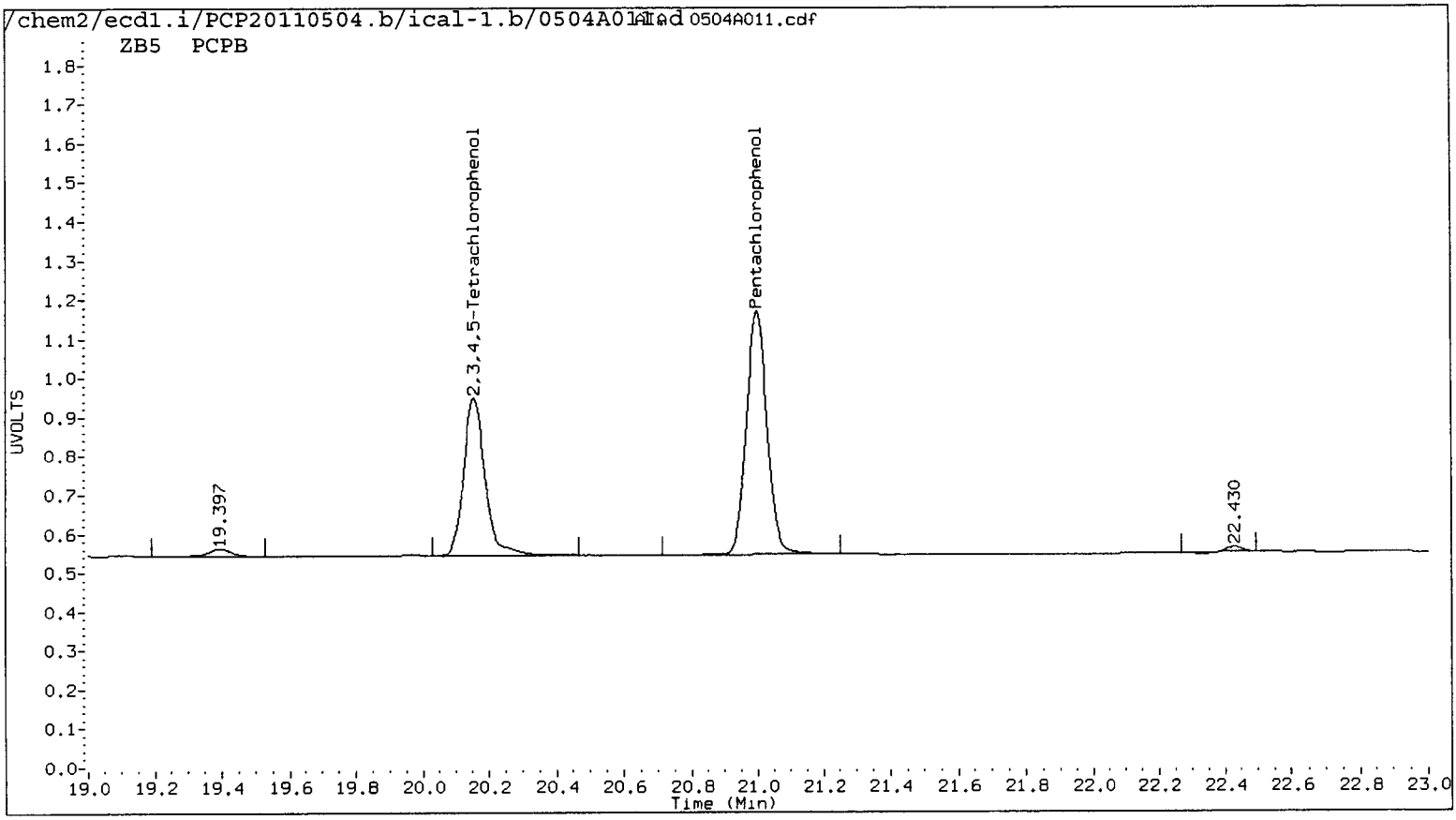
13.336
13.462
14.004
14.524
14.947
15.732
15.926
16.580
16.682
17.087
19.225
19.439
19.571
20.020
21.134
21.359
21.482
21.715
21.858
22.537
Pentachlorophenol
UVOLTS
Time (Min)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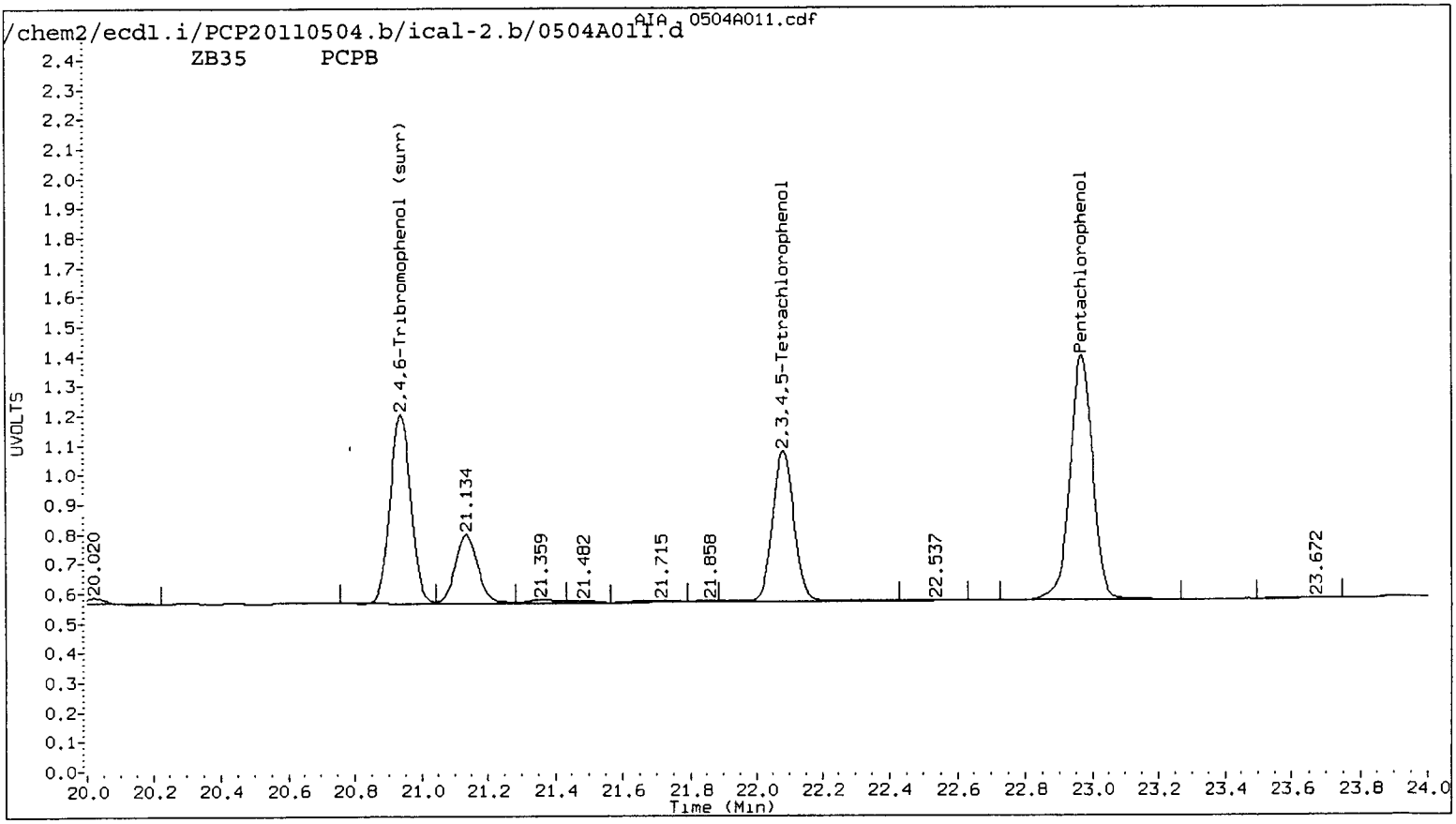
ZB5 PCPB
UVOLTS
19.397
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
22.430
Time (Min)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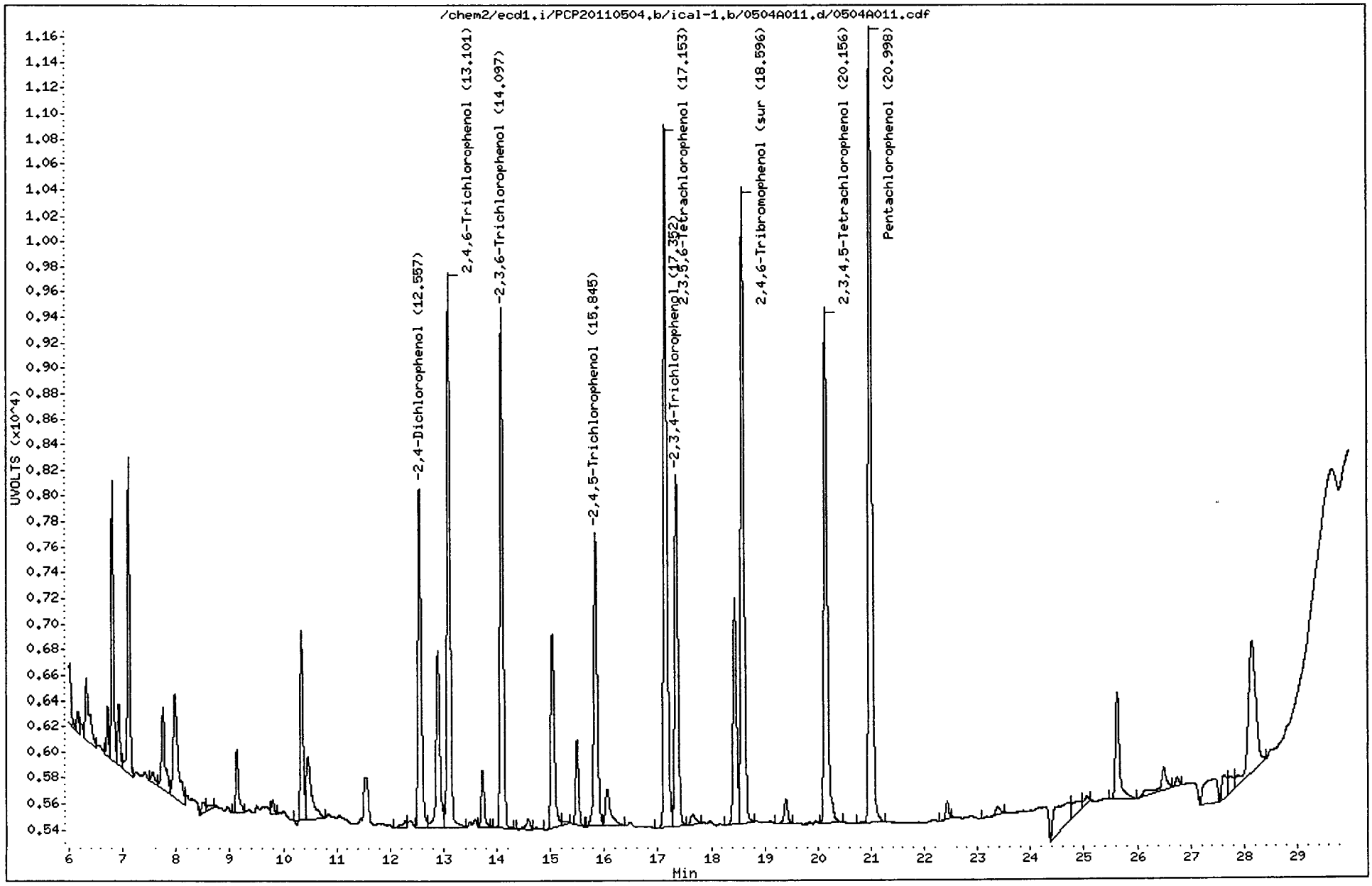
ZB35 PCPB
UVOLTS
20.020
2,4,6-Tribromophenol (surr)
21.134
21.359
21.482
21.715
21.858
2,3,4,5-Tetrachlorophenol
22.537
Pentachlorophenol
23.672
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A011.d
Date : 04-MAY-2011 15:08
Client ID:
Sample Info: PCPB
Purge Volume: 500.0
Column phase: STX CLP1

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



SLS3 : 00769

Data File: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A011.d

Page 1

Date : 04-MAY-2011 15:08

Client ID:

Instrument: ecd1.i

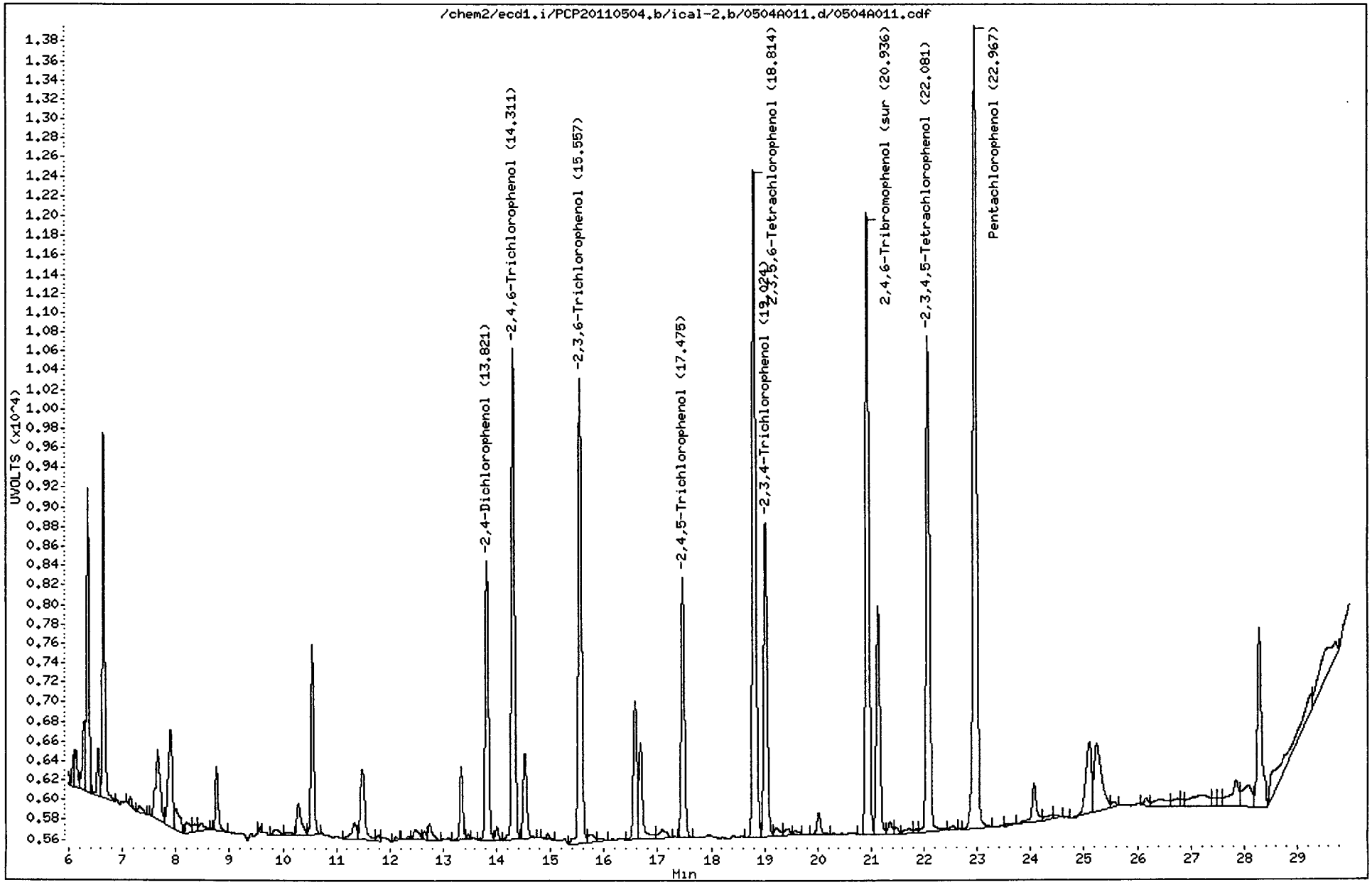
Sample Info: PCPB

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



SUS3 : 8078 1

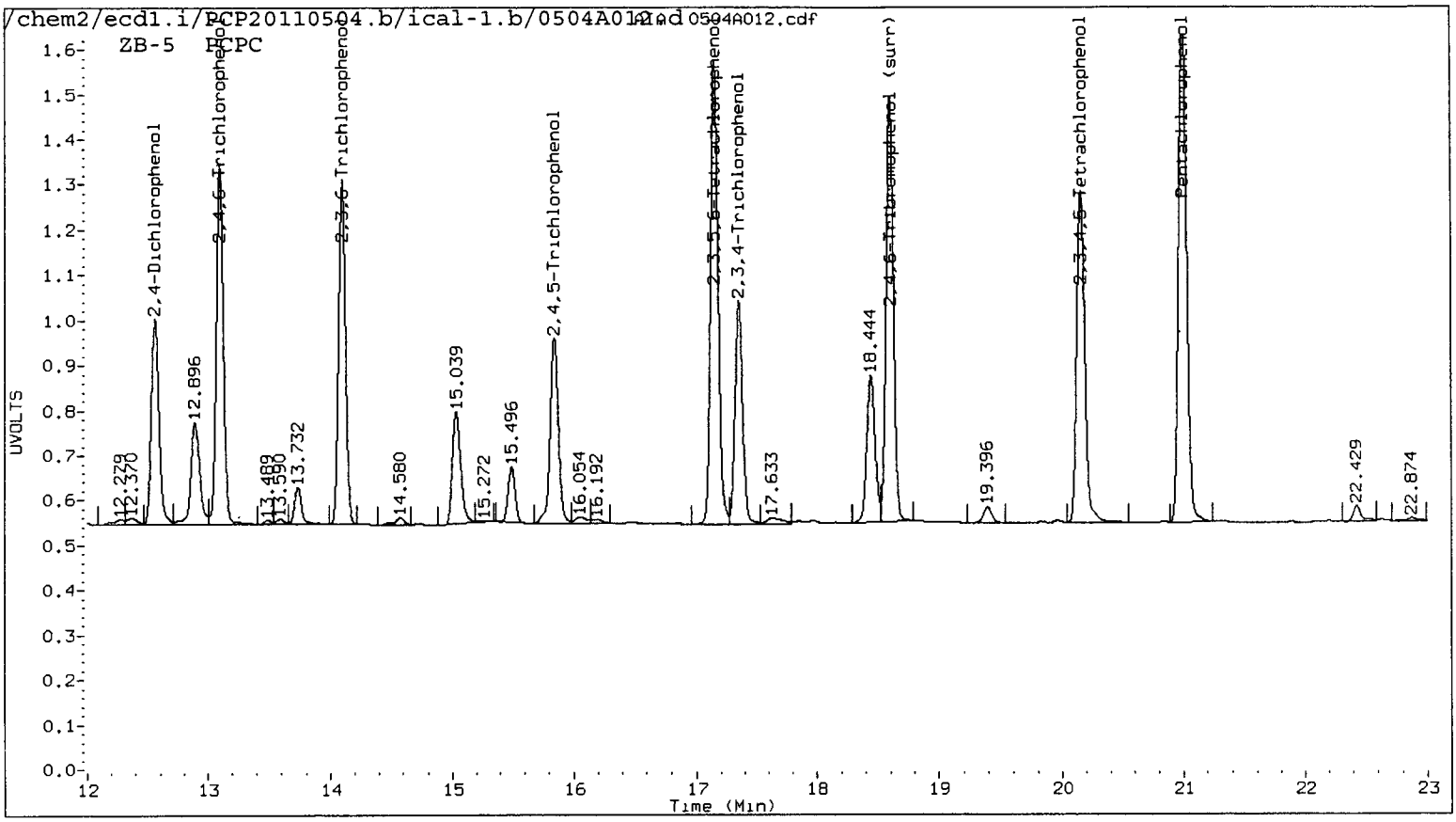
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A012.d ARI ID: PCPC
Data file 2: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A012.d Client ID:
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 04-MAY-2011 15:44
Compound Sublist: all Report Date: 05/06/2011 10:51
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
20.998	0.000	259764	22.967	0.000	361971	12.8921	12.8537	0.3	Pentachlorophenol
13.102	0.001	159940	14.312	0.001	192050	13.1391	13.2505	0.8	2,4,6-Trichlorophenol
14.097	0.000	148290	15.558	0.001	189925	12.9481	13.2136	2.0	2,3,6-Trichlorophenol
15.846	0.001	92760	17.474	0.000	104692	13.1179	12.9318	1.4	2,4,5-Trichlorophenol
17.352	0.001	109723	19.023	0.000	129601	13.1321	13.3673	1.8	2,3,4-Trichlorophenol
17.153	0.001	218741	18.814	0.000	281810	12.9381	12.8458	0.7	2,3,5,6-Tetrachlorophenol
20.155	0.000	168443	22.080	0.000	208459	12.9754	12.9697	0.0	2,3,4,5-Tetrachlorophenol
12.556	0.001	99540	13.821	0.001	104374	140.2891	136.0517	3.1	2,4-Dichlorophenol
18.596	0.000	198567	20.936	0.000	266388	12.6	12.7	0.5	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	50.4	50.7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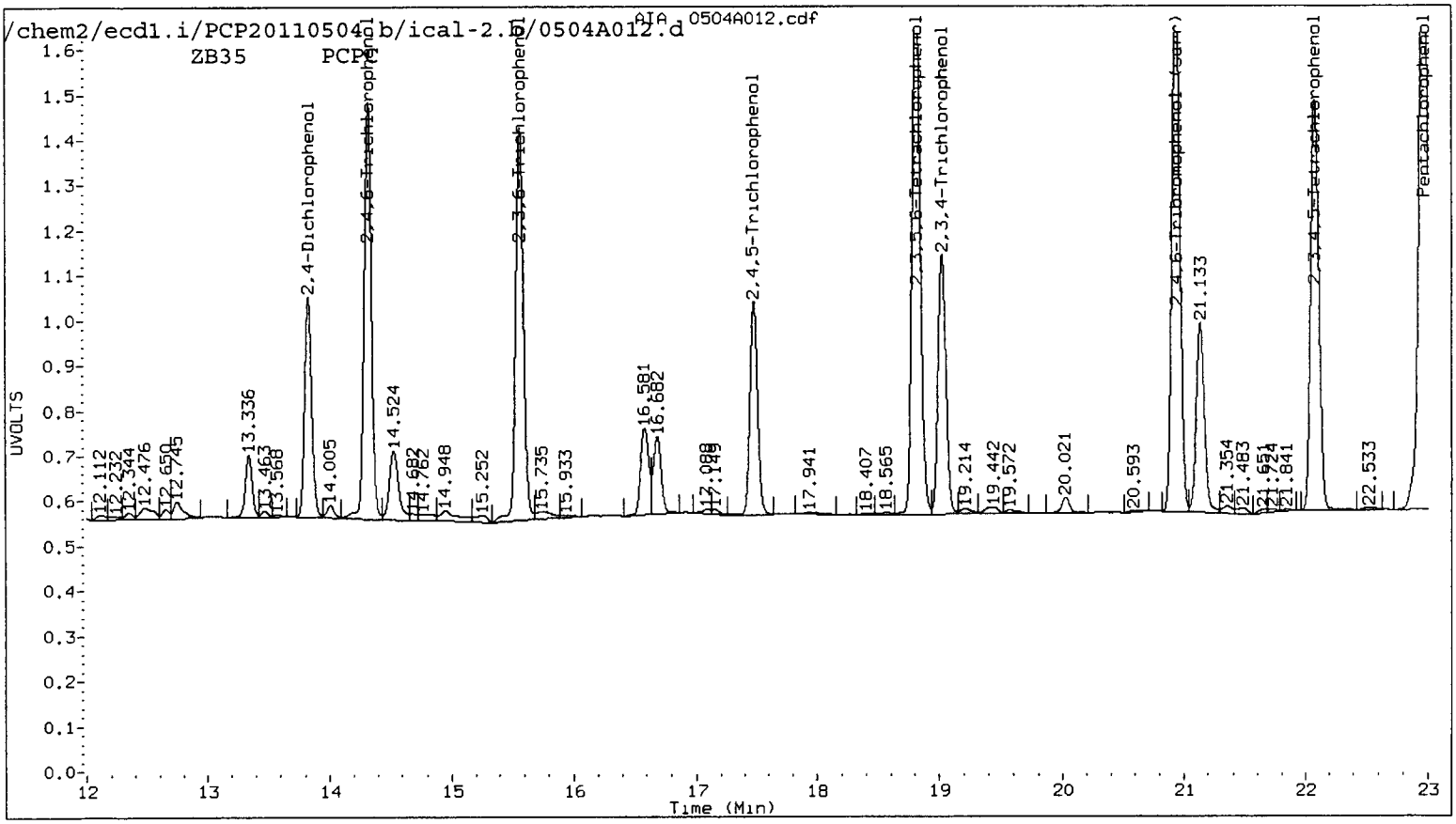
AIA 0504A012.cdf
ZB-5 PCPC
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,5-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
12.896
13.732
15.039
15.496
18.444
19.396
22.429
22.874
UVOLTS
Time (Min)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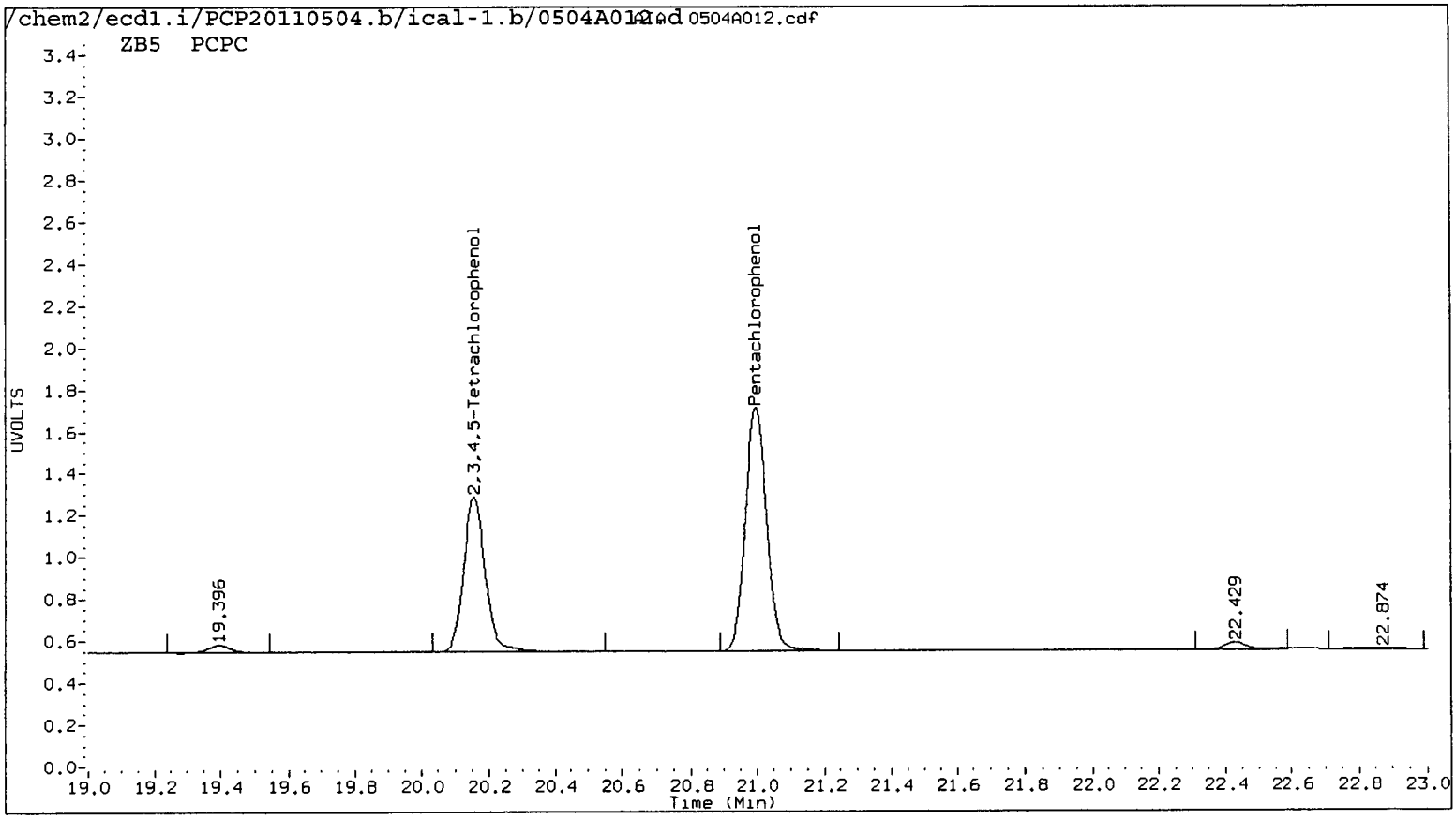
AIA 0504A012.cdf
ZB35 PCPC
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
13.336
14.524
16.581
16.682
21.133
UVOLTS
Time (Min)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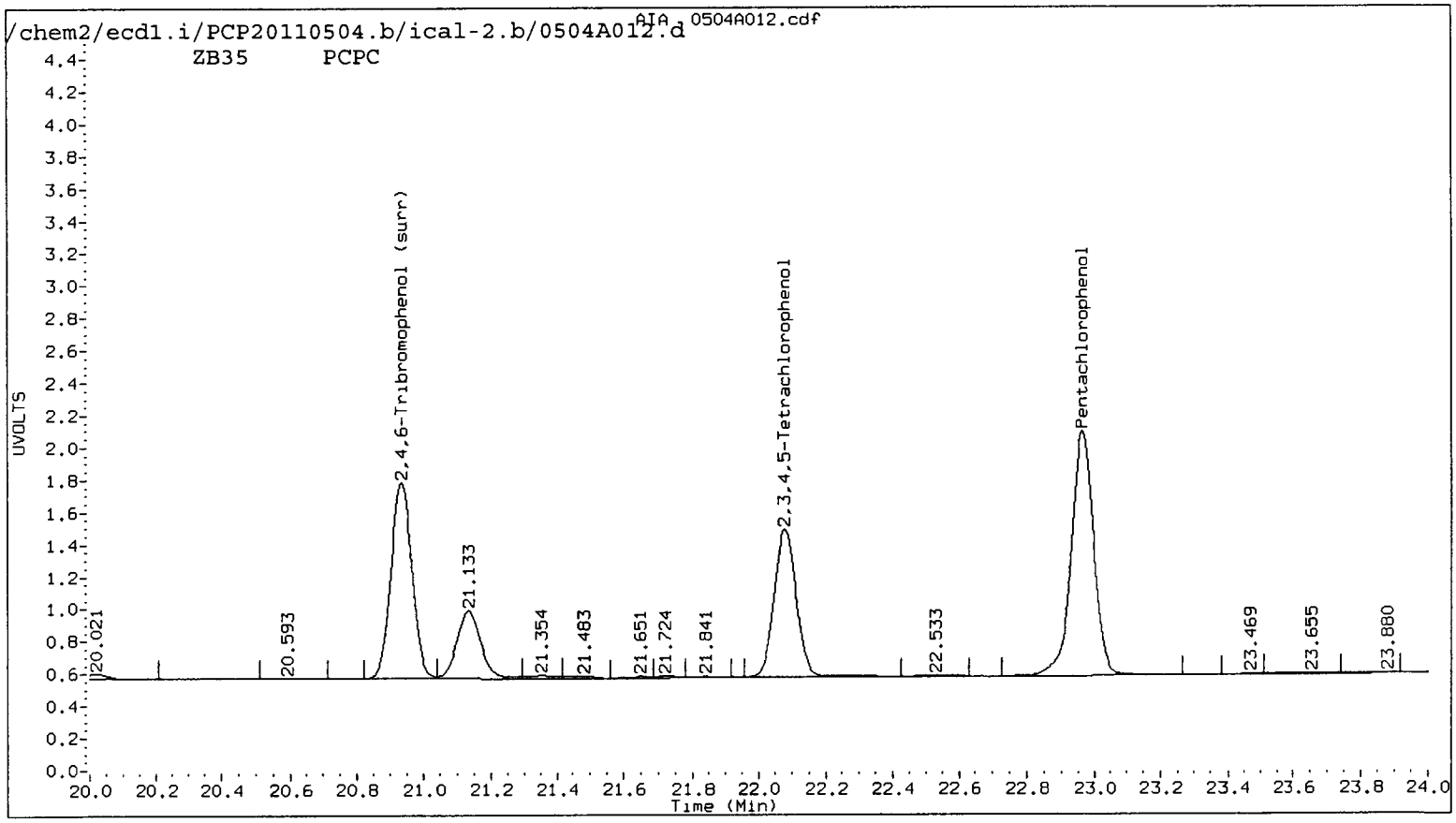
0504A012.cdf
ZB5 PCPC
UVOLTS
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
19.396
22.429
22.874
Time (Min)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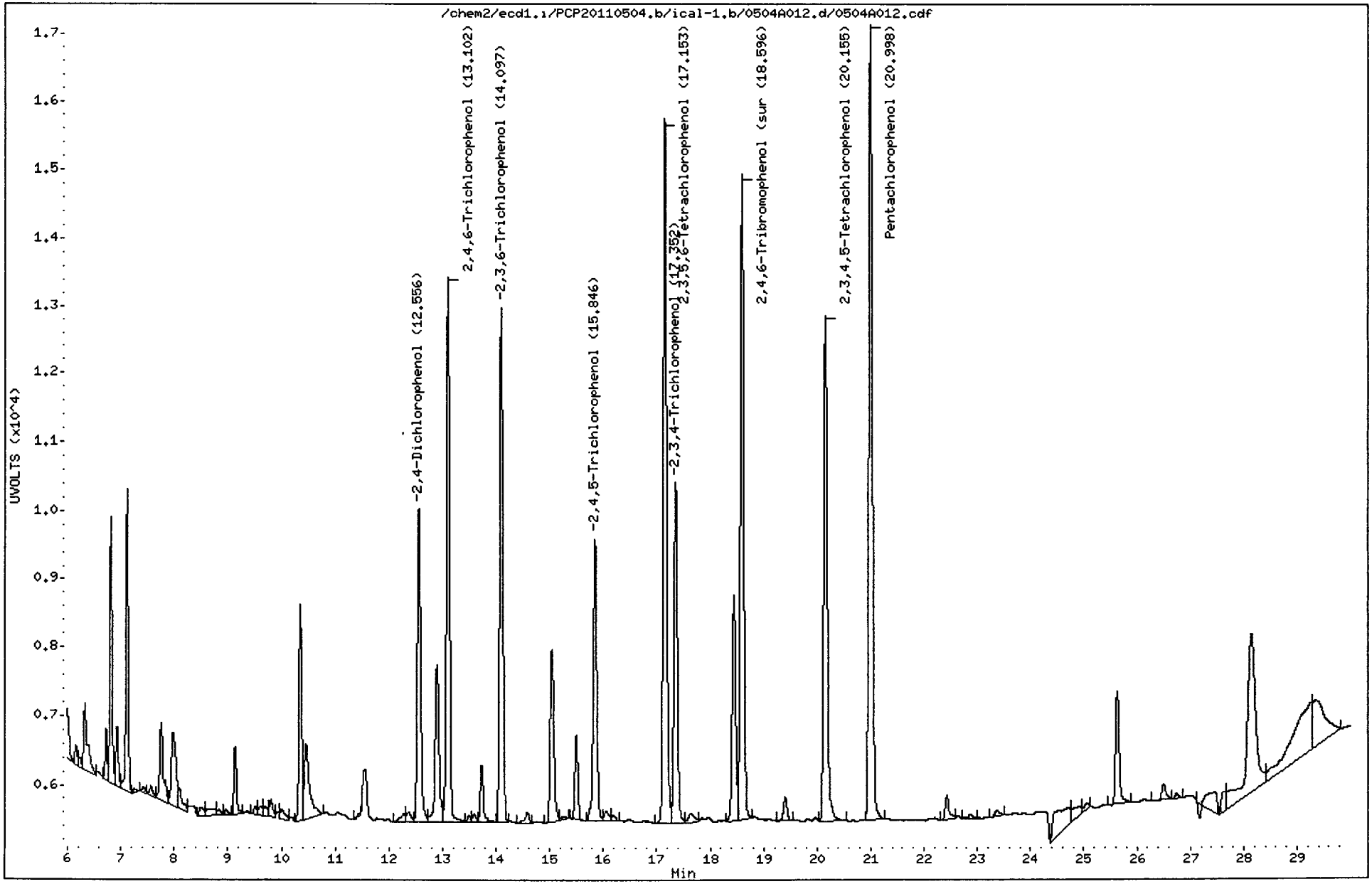
AIA 0504A012.cdf
ZB35 PCPC
UVOLTS
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
20.021
20.593
21.133
21.354
21.463
21.651
21.724
21.841
22.533
23.469
23.655
23.880
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A012.d
Date : 04-MAY-2011 15:44
Client ID:
Sample Info: PCPC
Purge Volume: 500.0
Column phase: STX CLP1

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



SUS3 : 90785

Data File: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A012.d

Page 1

Date : 04-MAY-2011 15:44

Client ID:

Instrument: ecd1.i

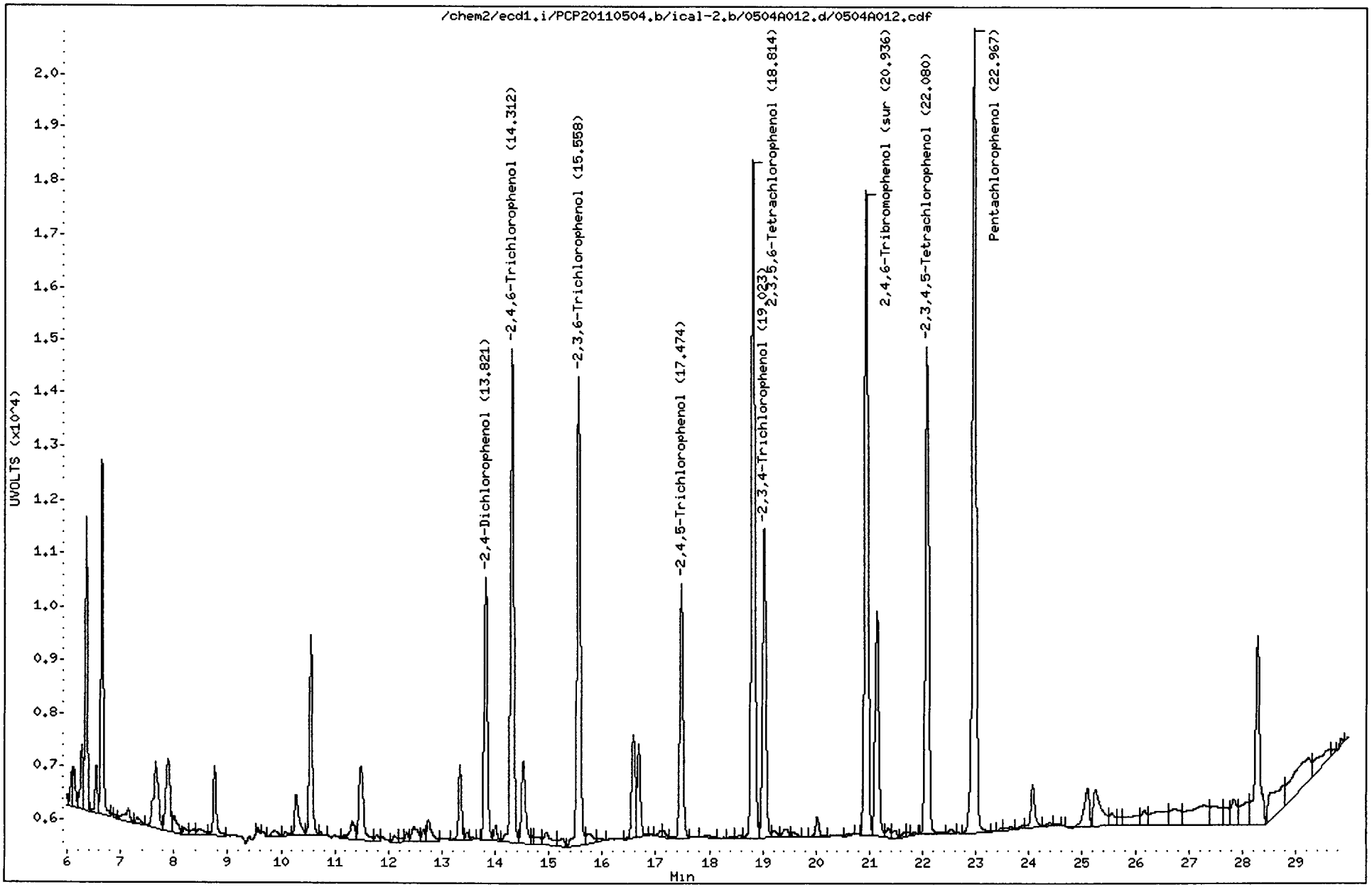
Sample Info: PCPC

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



SUS3 : 00785

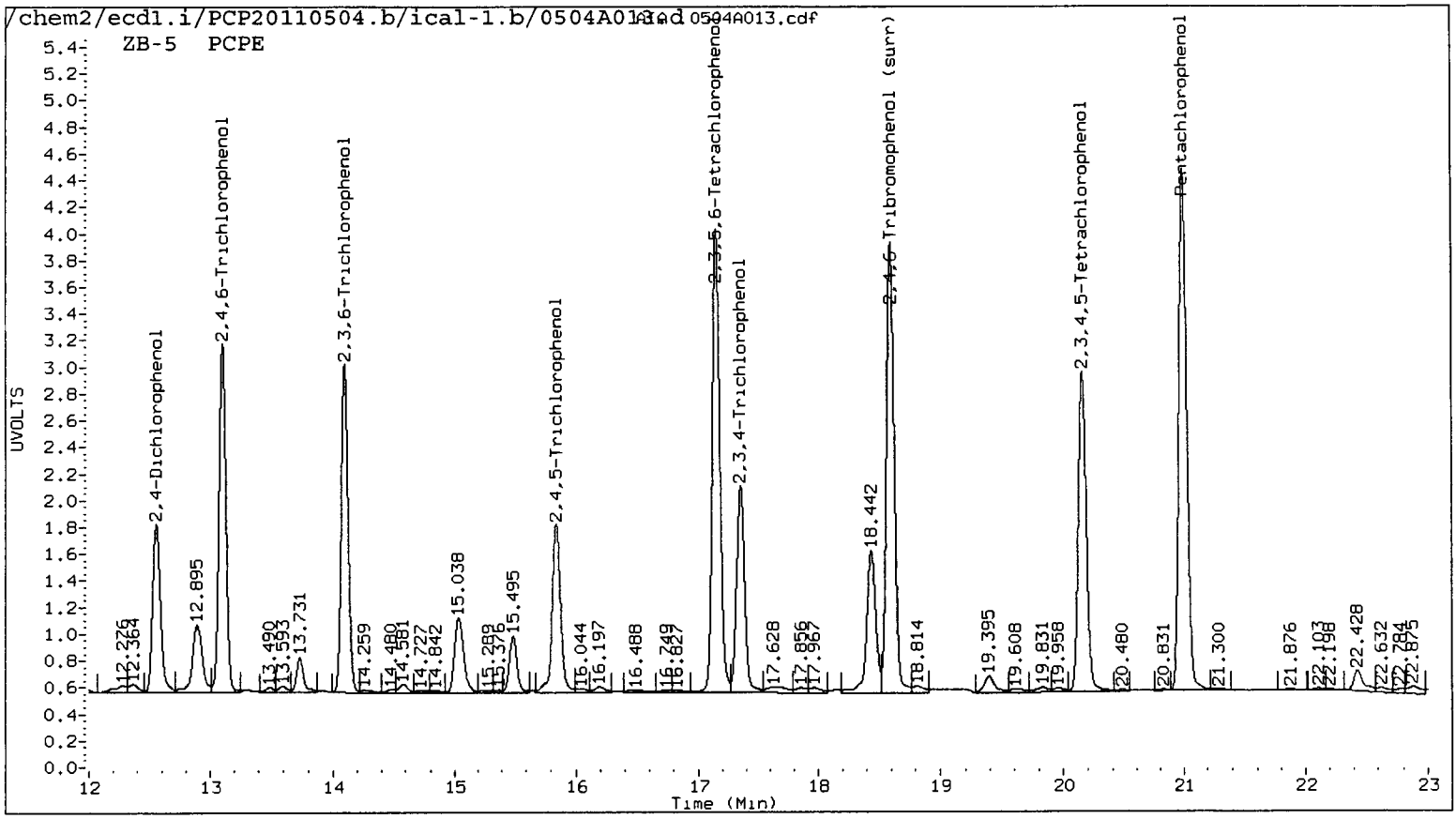
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A013.d ARI ID: PCPE
Data file 2: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A013.d Client ID:
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 04-MAY-2011 16:21
Compound Sublist: all Report Date: 05/06/2011 10:51
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
20.998	0.001	889243	22.967	0.000	1223251	44.1330	43.4380	1.6	Pentachlorophenol
13.101	0.000	520607	14.312	0.001	615086	42.7681	42.4380	0.8	2,4,6-Trichlorophenol
14.097	0.000	496269	15.558	0.001	622220	43.3323	43.2897	0.1	2,3,6-Trichlorophenol
15.845	0.000	295231	17.475	0.001	344386	49.4200	42.5395	15.0	2,4,5-Trichlorophenol
17.352	0.000	356877	19.023	0.000	409120	42.7124	49.2172	14.2	2,3,4-Trichlorophenol
17.153	0.001	759088	18.814	0.000	953164	44.8986	43.4481	3.3	2,3,5,6-Tetrachlorophenol
20.155	0.000	548832	22.081	0.001	691341	42.2771	49.1918	15.1	2,3,4,5-Tetrachlorophenol
12.556	0.001	279617	13.821	0.001	297223	483.2915	485.7456	0.5	2,4-Dichlorophenol
18.596	0.001	728285	20.937	0.001	937307	46.3	44.6	3.7	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	185.0	178.3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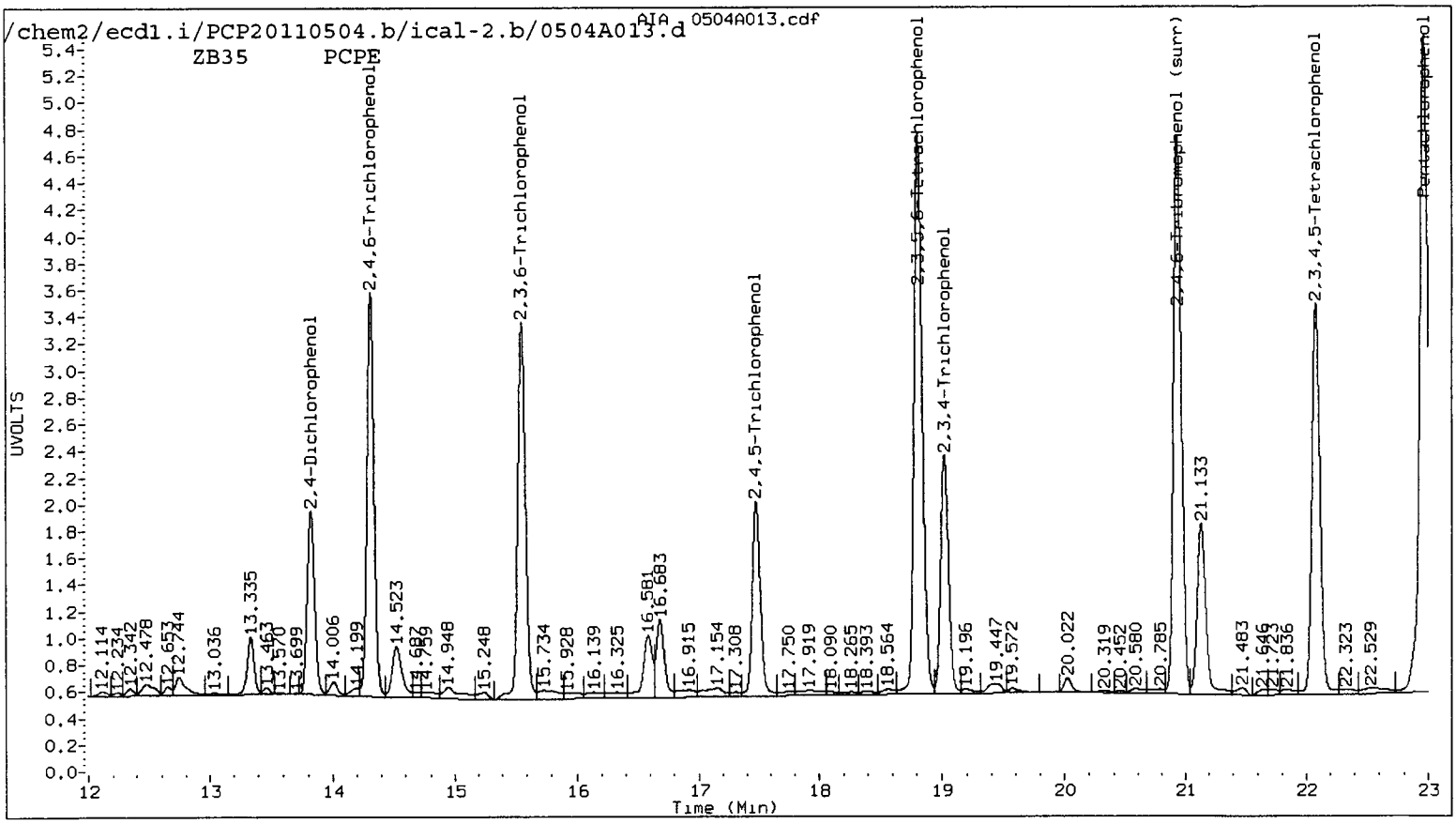
AIA 0504A013.cdf
ZB-5 PCPE
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
12.895
13.731
15.038
15.495
18.442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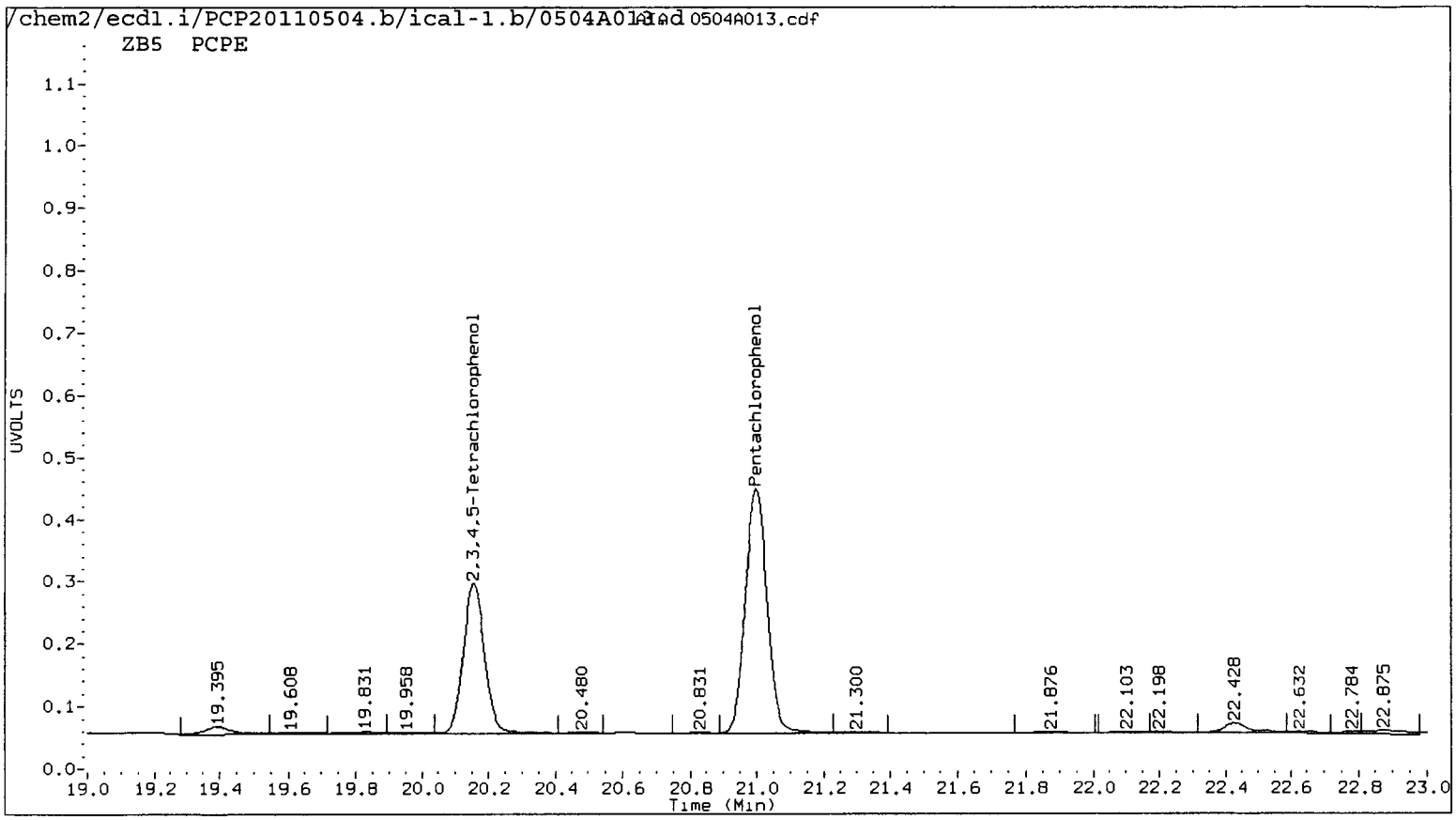
AIA 0504A013.cdf
ZB35 PCPE
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
13.335
14.006
14.523
16.581
16.683
21.133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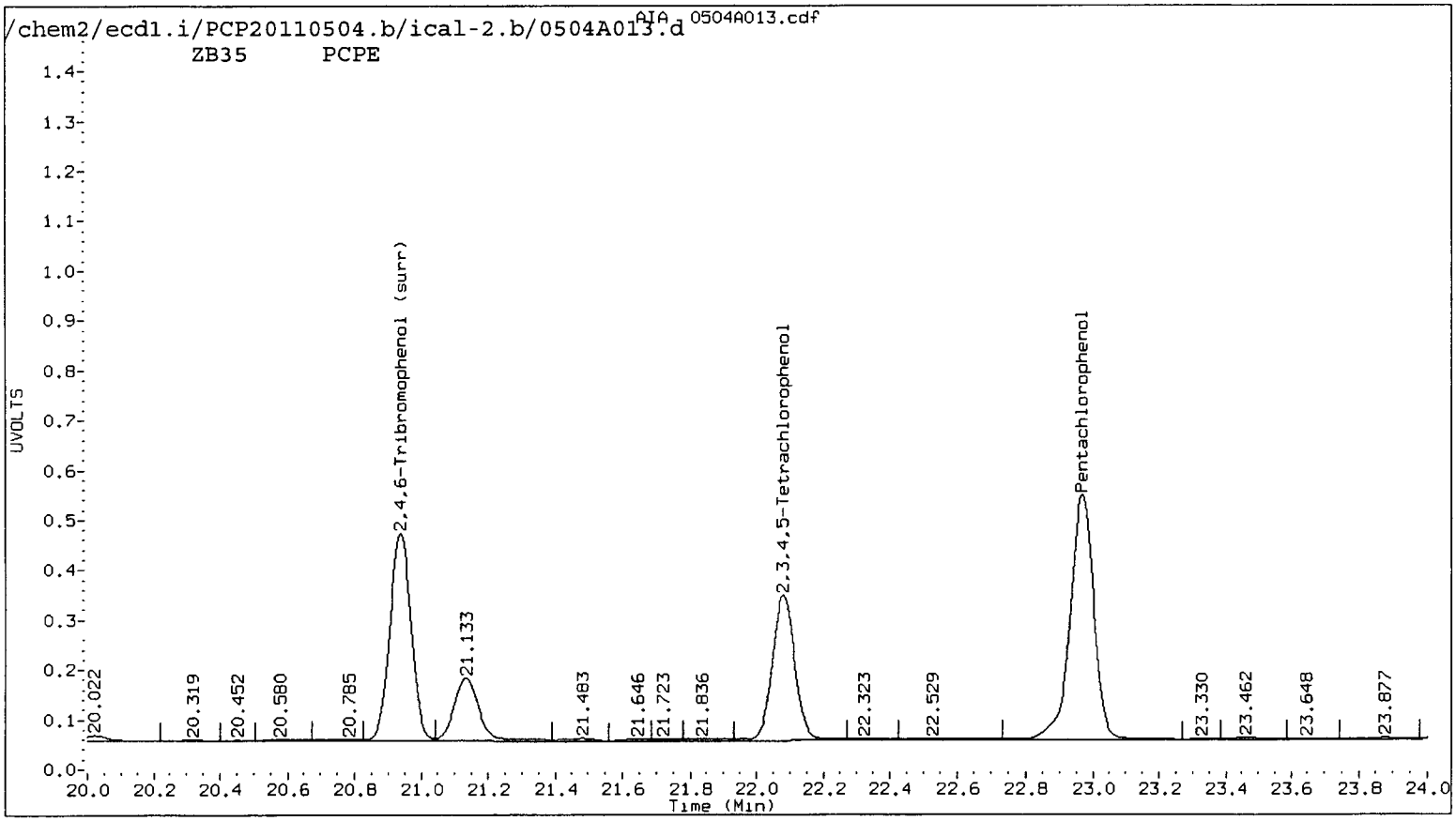
AIA 0504A013.cdf
ZB5 PCPE
UVOLTS
Time (Min)
19.395
19.608
19.831
19.958
2,3,4,5-Tetrachlorophenol
20.480
20.831
Pentachlorophenol
21.300
21.876
22.103
22.198
22.428
22.632
22.784
22.875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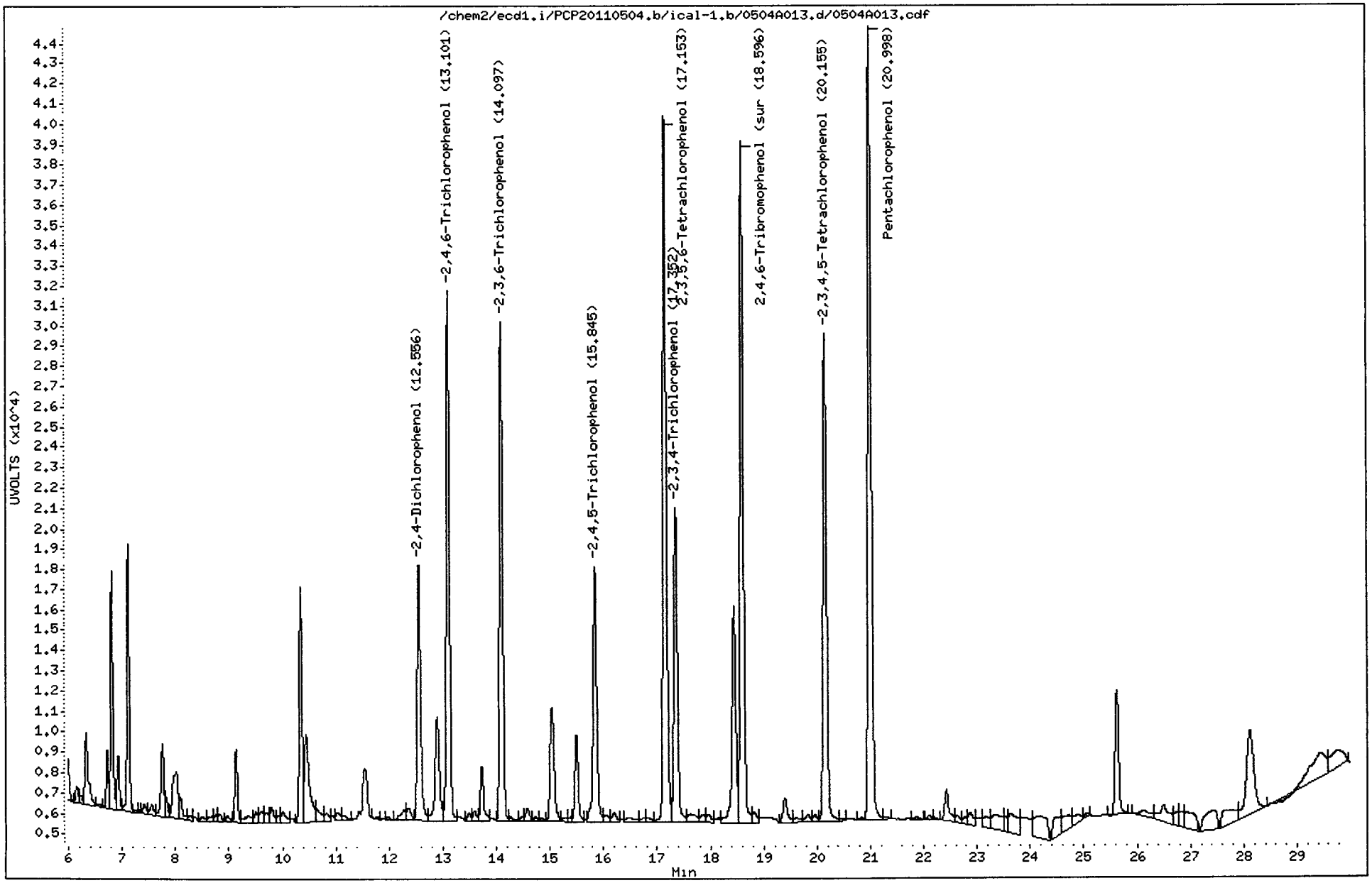
AIA 0504A013.cdf
ZB35 PCPE
UVOLTS
Time (Min)
20.022
20.319
20.452
20.580
20.785
2,4,6-Tribromophenol (surr)
21.133
21.483
21.646
21.723
21.836
2,3,4,5-Tetrachlorophenol
22.323
22.529
Pentachlorophenol
23.330
23.462
23.648
23.877

Data File: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A013.d
Date : 04-MAY-2011 16:21
Client ID:
Sample Info: PCPE
Purge Volume: 500.0
Column phase: STX CLP1

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



SLS3 : 007790

Data File: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A013.d

Page 1

Date : 04-MAY-2011 16:21

Client ID:

Instrument: ecd1.i

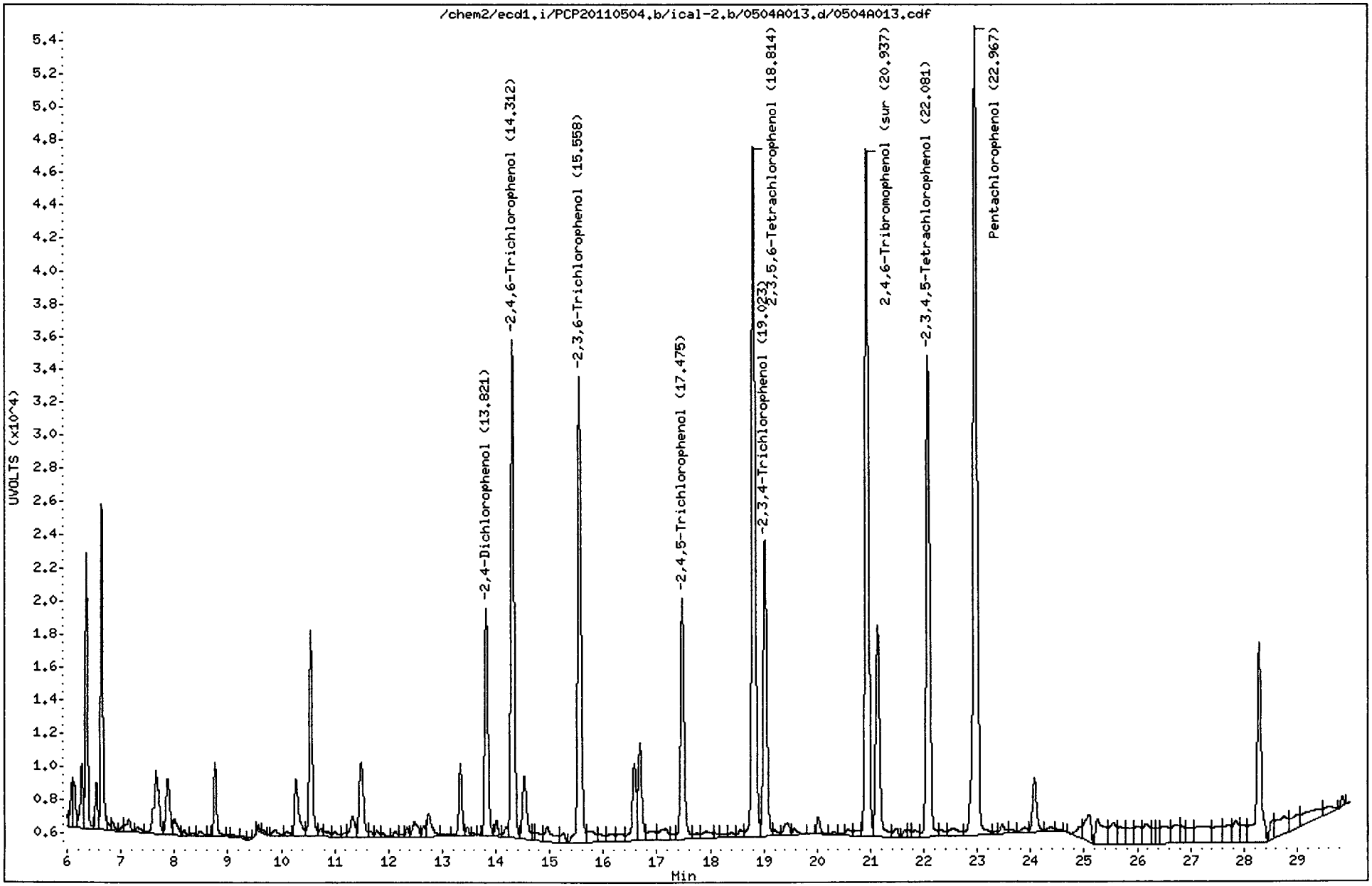
Sample Info: PCPE

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



SUS3 : 00791

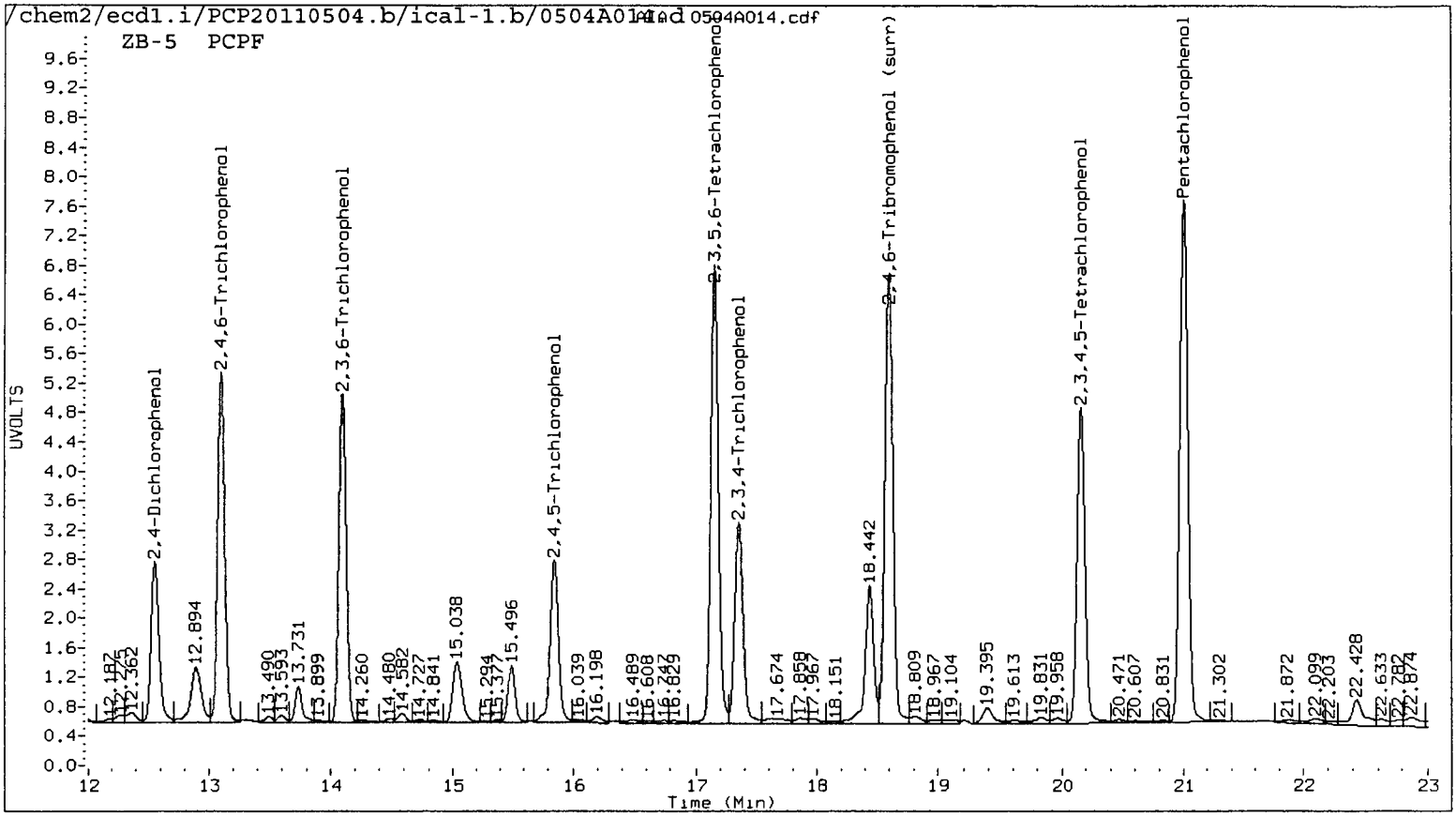
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A014.d ARI ID: PCPF
Data file 2: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A014.d Client ID:
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 04-MAY-2011 16:57
Compound Sublist: all Report Date: 05/06/2011 10:51
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
20.999	0.002	1629183	22.968	0.001	2229293	80.8562	79.1628	2.1	Pentachlorophenol
13.102	0.001	953234	14.311	0.000	1105237	78.3086	76.2560	2.7	2,4,6-Trichlorophenol
14.097	0.000	908546	15.559	0.002	1094858	79.3307	76.1725	4.1	2,3,6-Trichlorophenol
15.846	0.001	512989	17.475	0.001	590583	100.2030	72.9504	31.5	2,4,5-Trichlorophenol
17.351	0.000	632191	19.023	0.000	719354	75.6631	100.2377	27.9	2,3,4-Trichlorophenol
17.154	0.001	1387633	18.814	0.000	1735216	82.0758	79.0964	3.7	2,3,5,6-Tetrachloropheno
20.155	0.000	990411	22.081	0.001	1234197	76.2925	100.2187	27.1	2,3,4,5-Tetrachloropheno
12.556	0.001	481637	13.820	0.000	504644	1004.8445	1004.2680	0.1	2,4-Dichlorophenol
18.596	0.001	1354876	20.937	0.001	1734112	86.1	82.5	4.2	2,4,6-Tribromophenol (sur

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	344.2	329.9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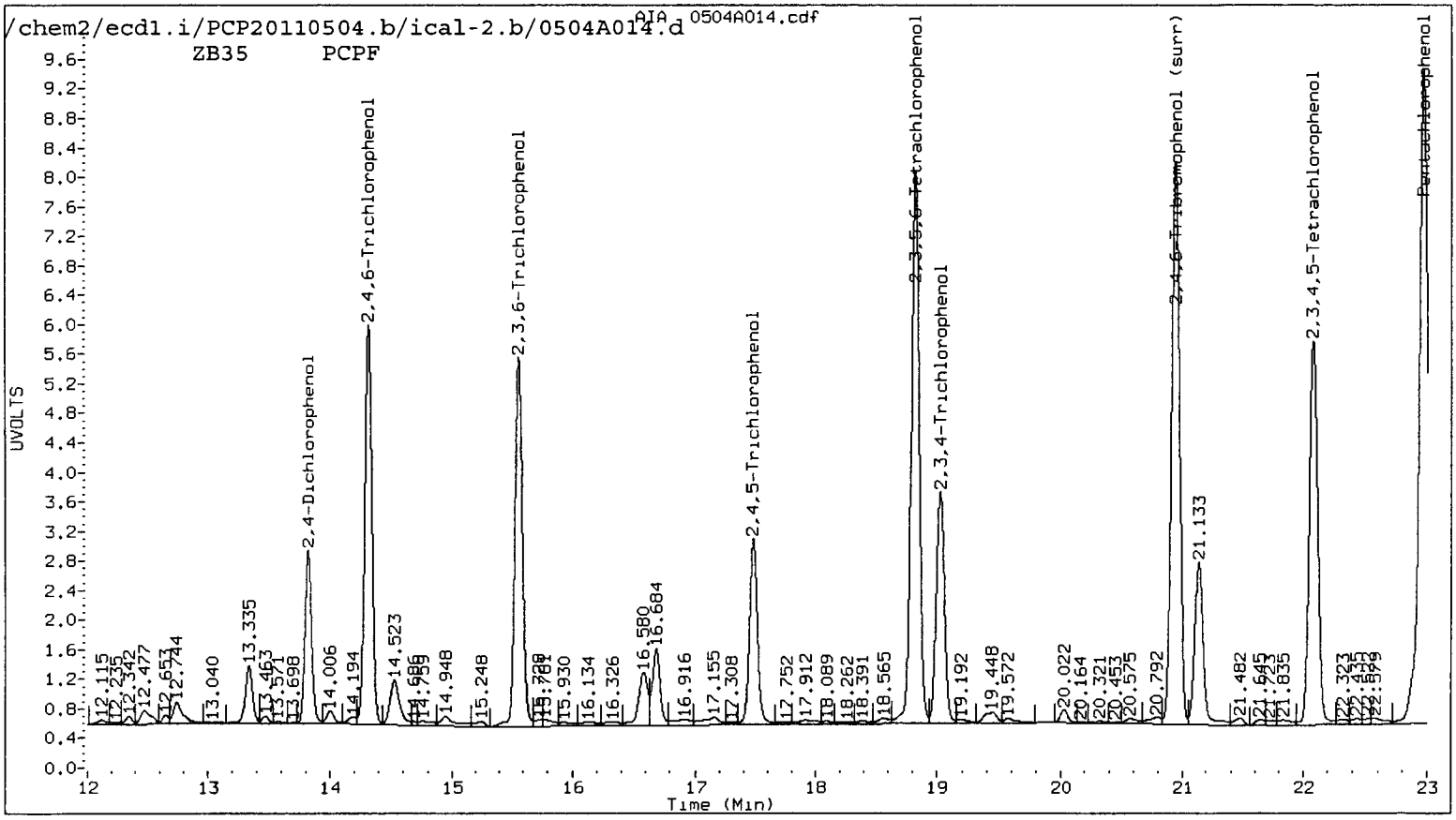
AIA 0504A014.cdf
ZB-5 PCPF
UVOLTS
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
Time (Min)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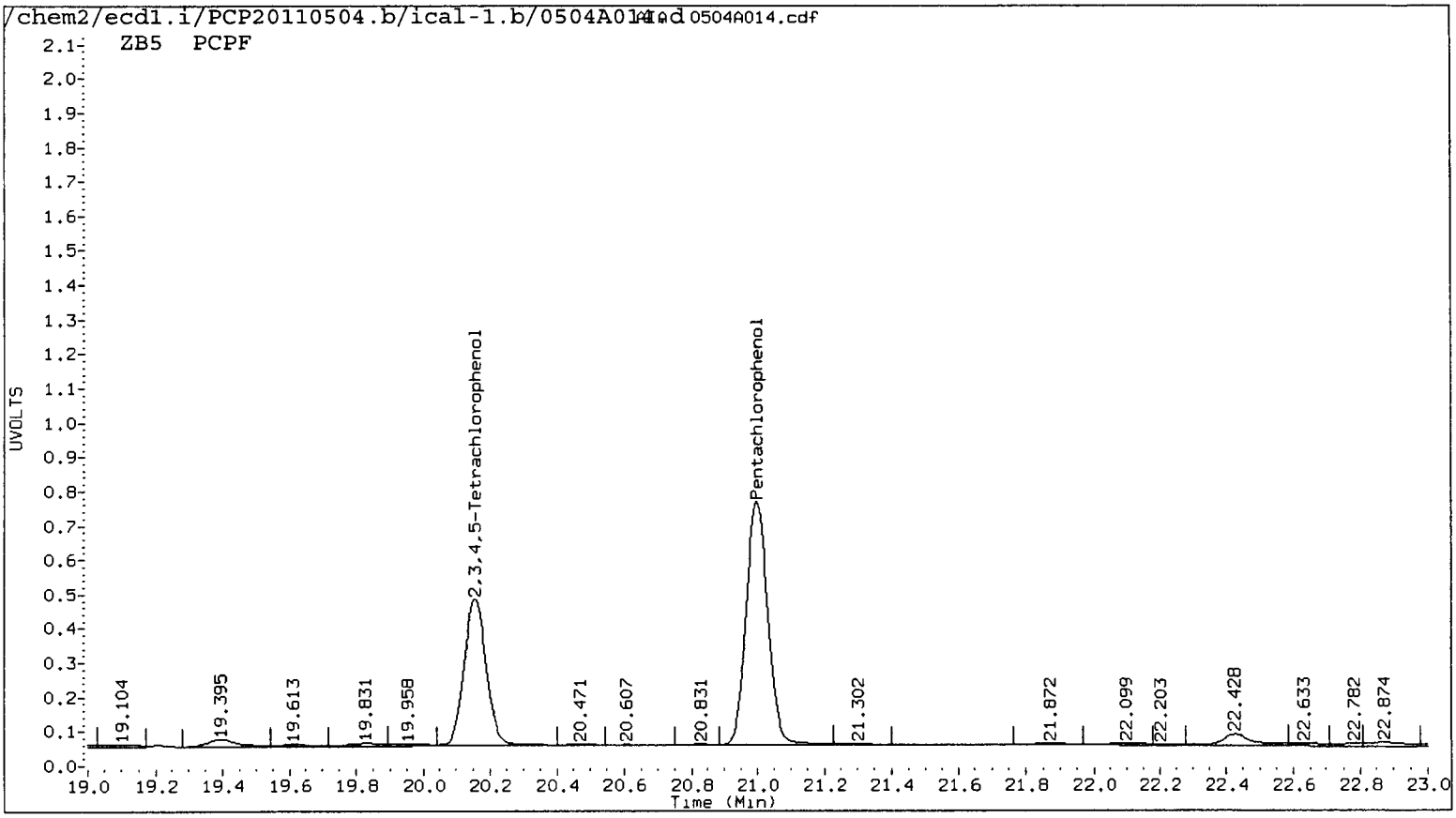
AIA 0504A014.cdf
ZB35 PCPF
UVOLTS
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
Time (Min)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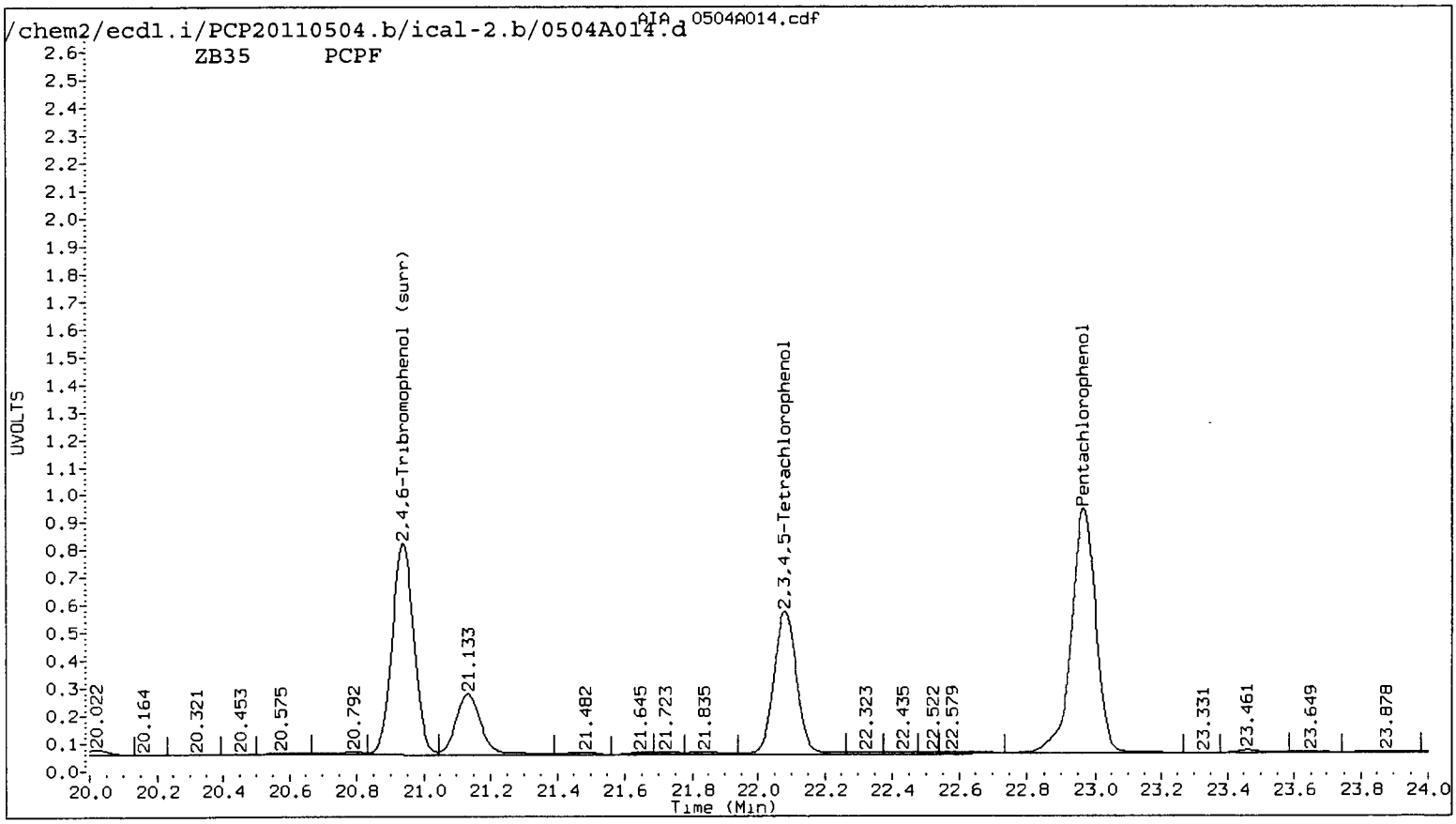
AIA 0504A014.cdf
ZB5 PCPF
UVOLTS
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
19.104
19.395
19.613
19.831
19.958
20.471
20.607
20.831
21.302
21.872
22.099
22.203
22.428
22.633
22.782
22.874
Time (Min)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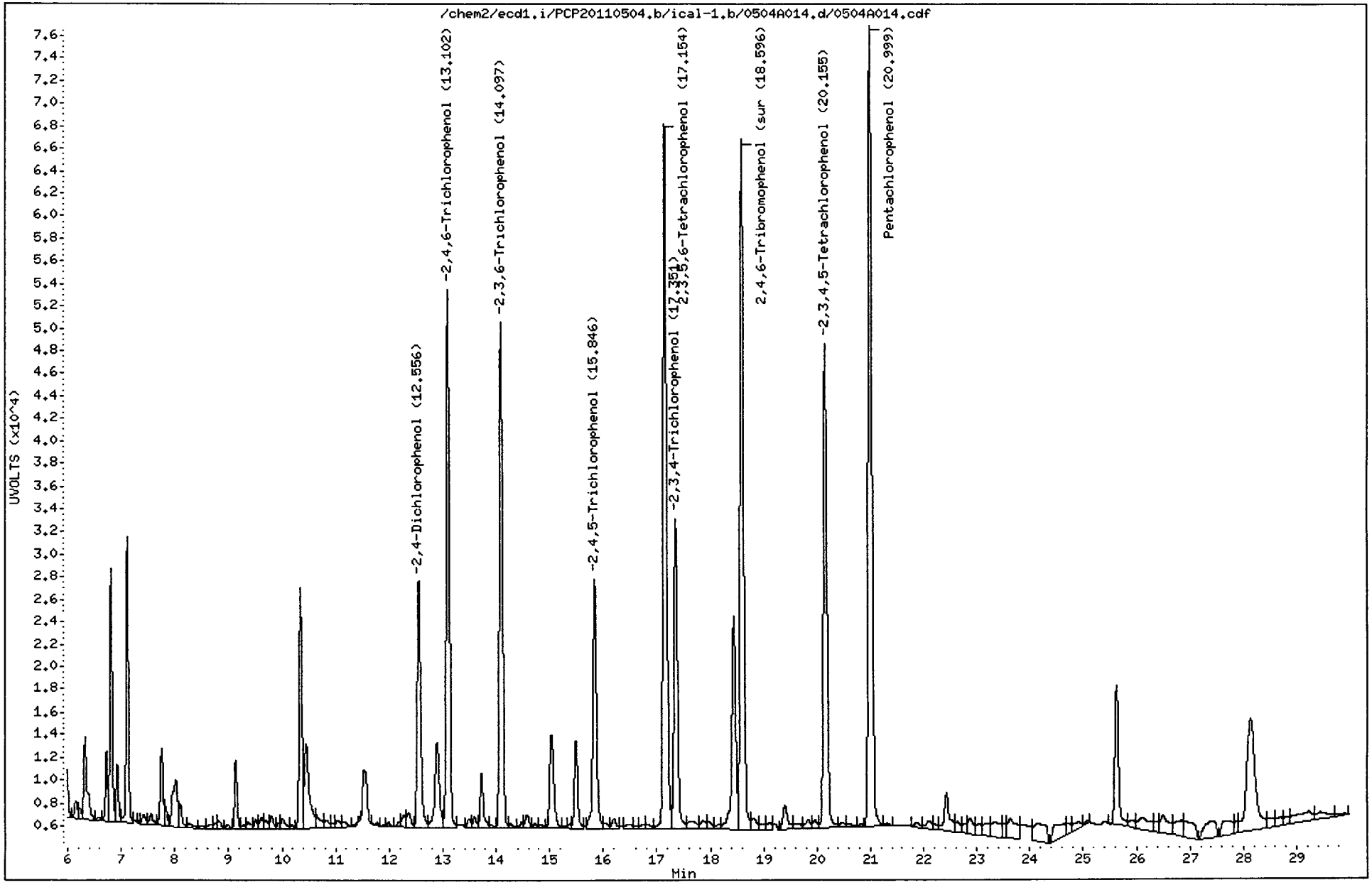
AIA 0504A014.cdf
ZB35 PCPF
UVOLTS
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
20.022
20.164
20.321
20.453
20.575
20.792
21.133
21.482
21.645
21.723
21.835
22.323
22.435
22.522
22.579
23.331
23.461
23.649
23.878
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A014.d
Date : 04-MAY-2011 16:57
Client ID:
Sample Info: PCPF
Purge Volume: 500.0
Column phase: STX CLP1

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



SUS3 : 55LS 00795

Data File: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A014.d

Page 1

Date : 04-MAY-2011 16:57

Client ID:

Instrument: ecd1.i

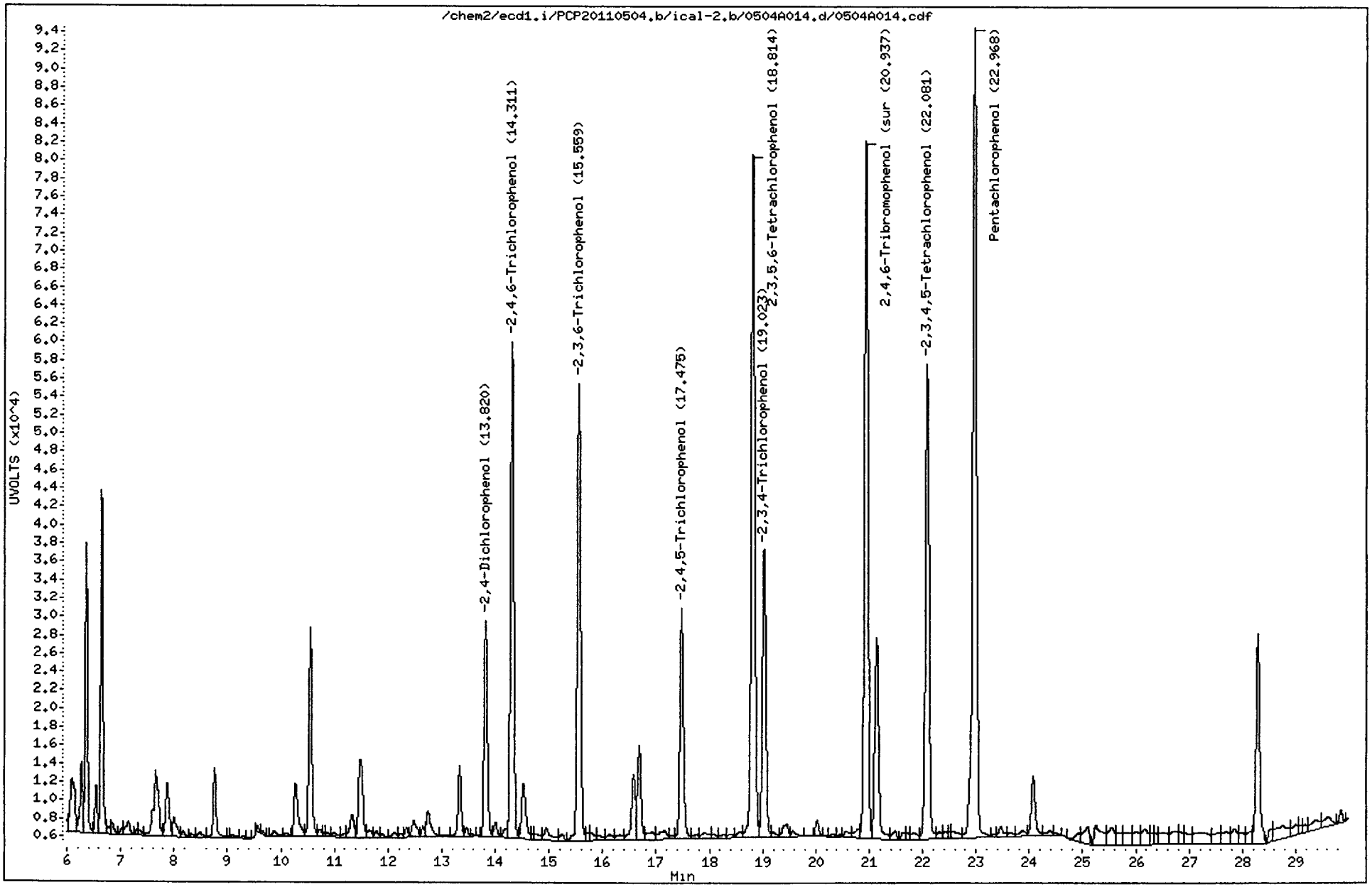
Sample Info: PCPF

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



96/00 : 6515

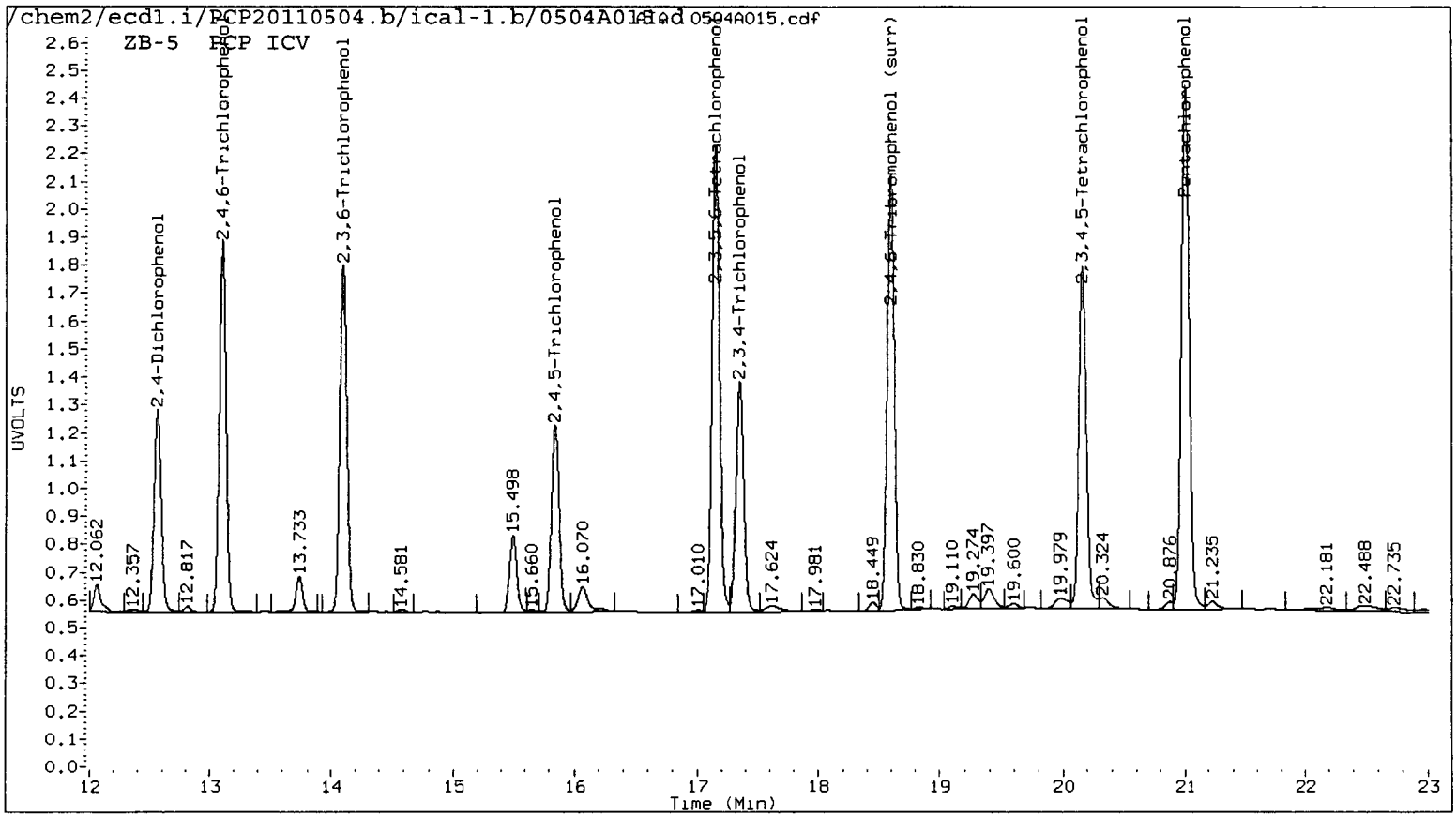
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A015.d ARI ID: PCP ICV
Data file 2: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A015.d Client ID:
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 04-MAY-2011 17:33
Compound Sublist: all Report Date: 05/06/2011 10:51
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB-5 on col	ZB35 on col	RPD	Compound
20.999	0.002	419390	22.968	0.001	573013	20.8143	20.3478	2.3	Pentachlorophenol
13.103	0.002	261364	14.313	0.002	313109	21.4712	21.6030	0.6	2,4,6-Trichlorophenol
14.099	0.002	249795	15.560	0.003	297315	21.8111	20.6851	5.3	2,3,6-Trichlorophenol
15.847	0.002	142426	17.476	0.002	175158	21.0491	21.6360	2.7	2,4,5-Trichlorophenol
17.354	0.002	182226	19.024	0.001	220578	21.8095	23.9827	9.5	2,3,4-Trichlorophenol
17.155	0.002	353209	18.816	0.002	460959	20.8916	21.0119	0.6	2,3,5,6-Tetrachlorophenol
20.157	0.002	280017	22.081	0.001	345838	21.5700	22.3963	3.8	2,3,4,5-Tetrachlorophenol
12.557	0.002	154019	13.822	0.002	166897	231.9359	235.4487	1.5	2,4-Dichlorophenol
18.598	0.002	326814	20.938	0.002	449994	20.8	21.4	3.1	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	83.3	81.4
2,4,6-Trichlorophenol	85.9	86.4
2,3,6-Trichlorophenol	87.2	82.7
2,4,5-Trichlorophenol	84.2	86.5
2,3,4-Trichlorophenol	87.2	95.9
2,3,5,6-Tetrachlorophenol	83.6	84.0
2,3,4,5-Tetrachlorophenol	86.3	89.6
2,4-Dichlorophenol	92.8	94.2
2,4,6-TBP (surr)	~~41.5~~ 83.0	42.8 85.6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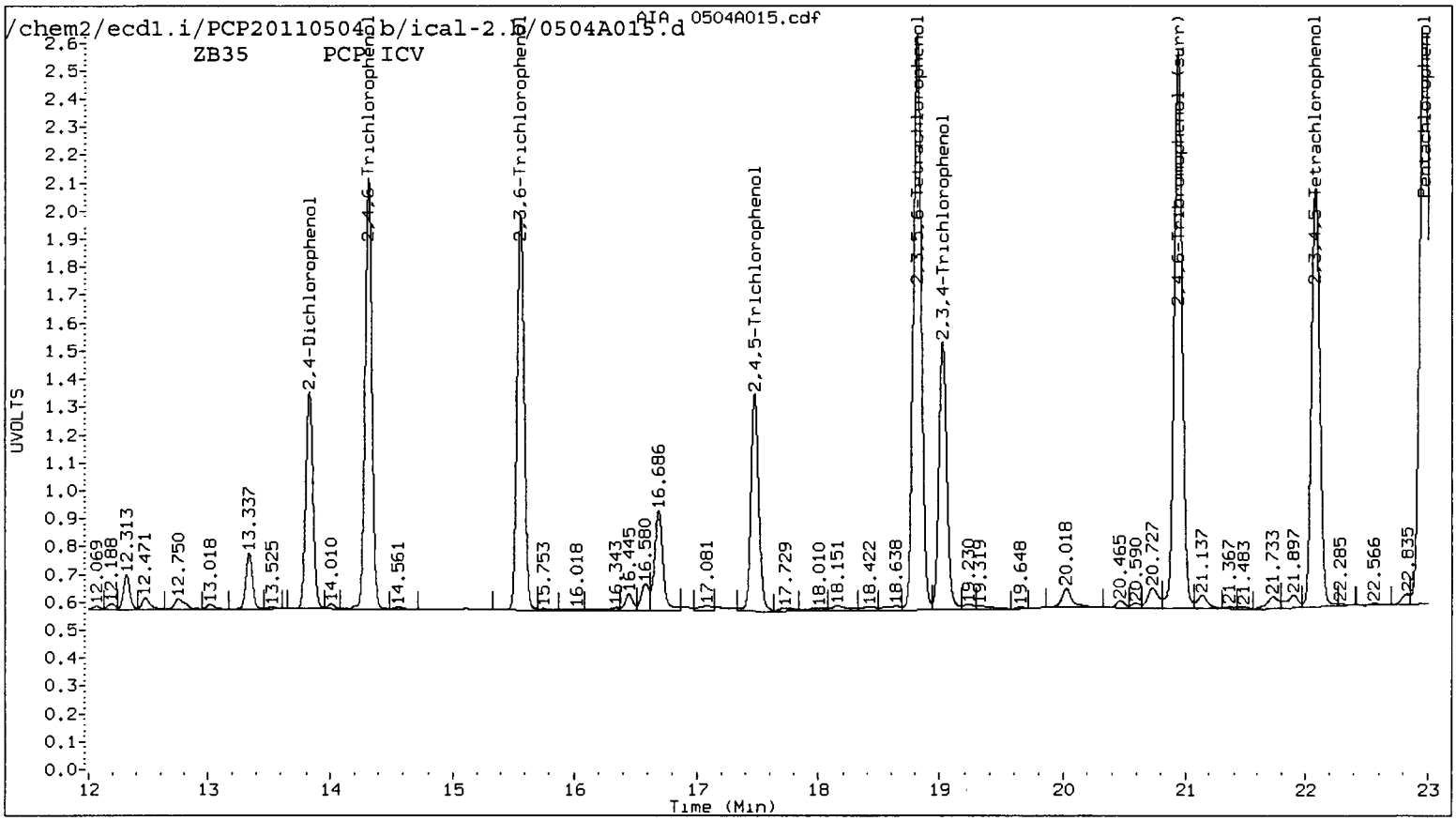
0504A015.cdf
ZB-5 PCP ICV
UVOLTS
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
12.062
12.357
12.817
13.733
14.581
15.498
15.660
16.070
17.010
17.624
17.981
18.449
18.830
19.110
19.274
19.397
19.600
19.979
20.324
20.876
21.235
22.181
22.488
22.735
Time (Min)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0504A015.cdf
ZB35 PCP ICV
UVOLTS
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
12.069
12.188
12.313
12.471
12.750
13.018
13.337
13.525
14.010
14.561
15.753
16.018
16.343
16.445
16.580
16.686
17.081
17.729
18.010
18.151
18.422
18.638
19.230
19.319
19.648
20.018
20.465
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22.285
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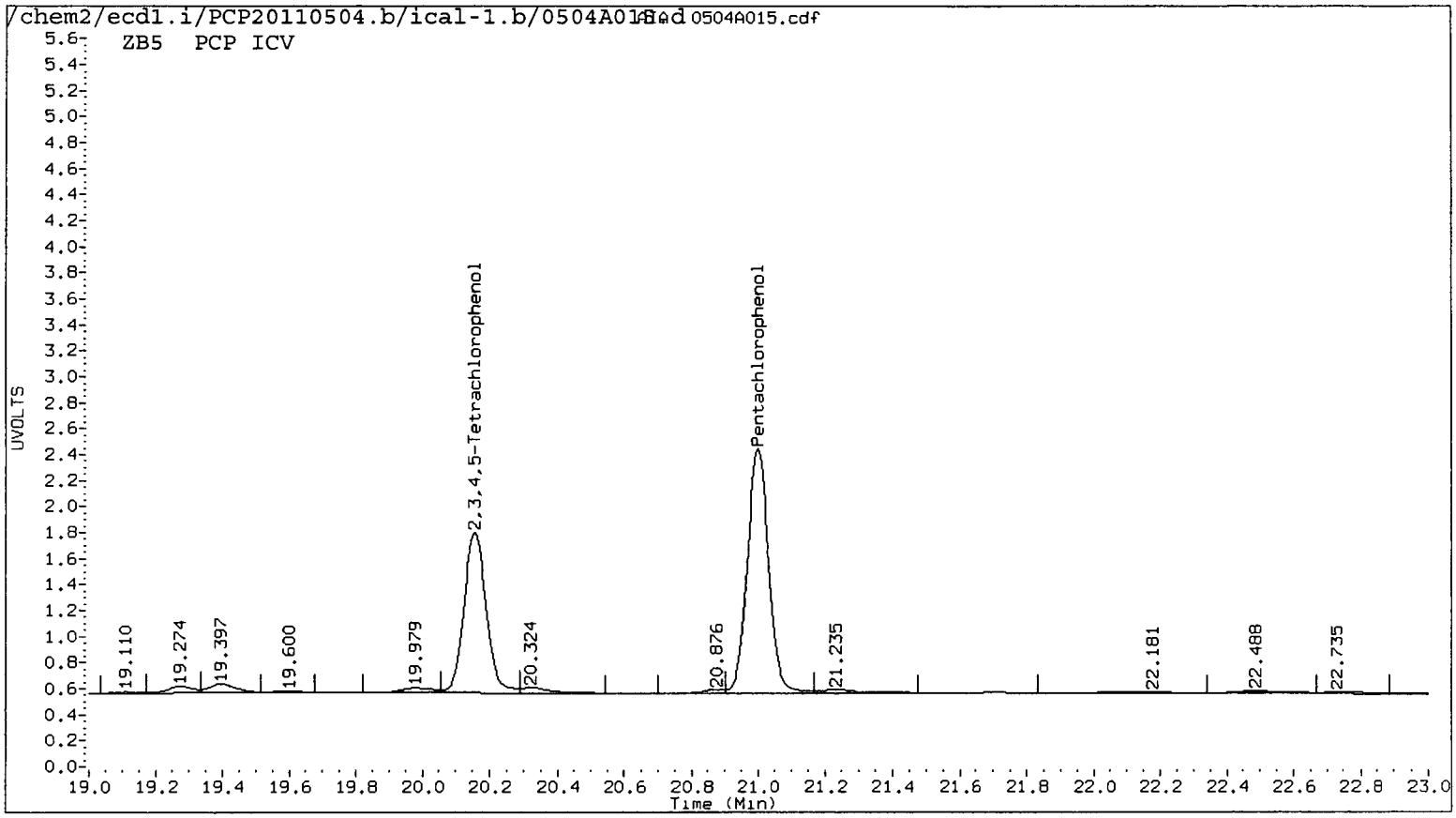
22.835
Time (Min)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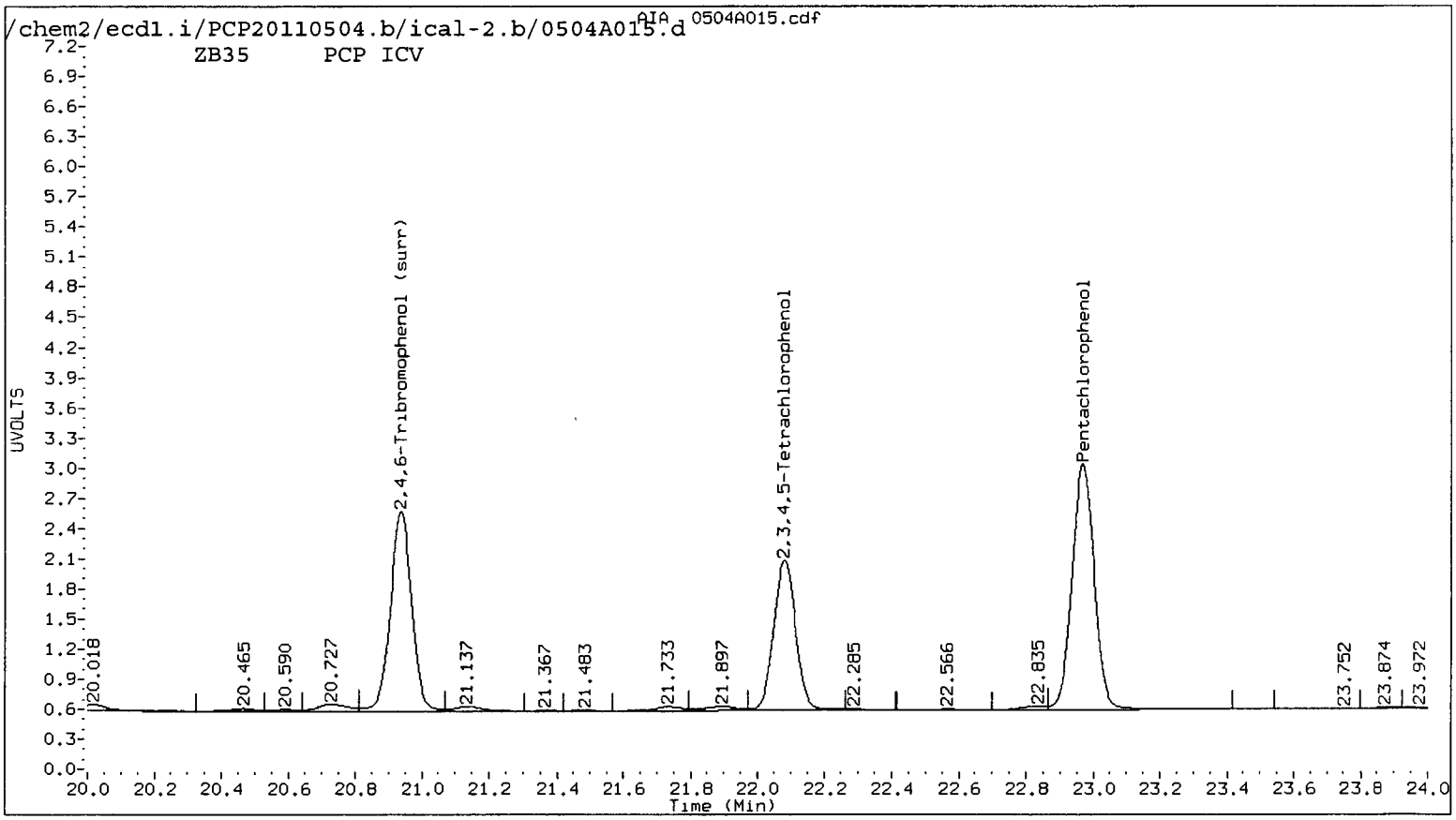
ZB5 PCP ICV
UVOLTS
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
19.110
19.274
19.397
19.600
19.979
20.324
20.876
21.235
22.181
22.488
22.735
Time (Min)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ZB35 PCP ICV
UVOLTS
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
20.018
20.465
20.590
20.727
21.137
21.367
21.483
21.733
21.897
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23.972
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/ical-1.b/0504A015.d

Page 1

Date : 04-MAY-2011 17:33

Client ID:

Instrument: ecd1.i

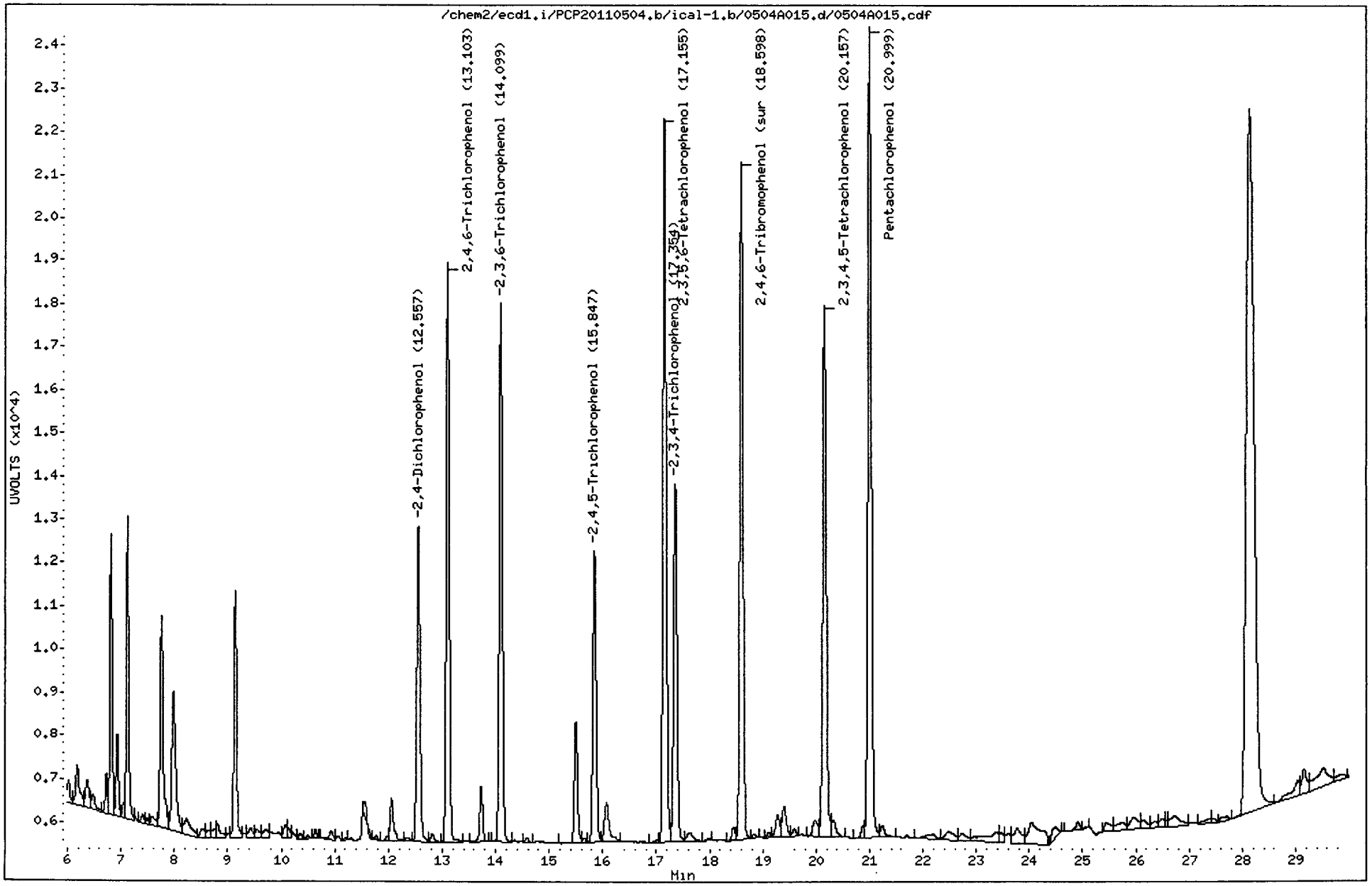
Sample Info: PCP ICV

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

Column diameter: 0.53



SUS3 : 00809

Data File: /chem2/ecd1.i/PCP20110504.b/ical-2.b/0504A015.d

Page 1

Date : 04-MAY-2011 17:33

Client ID:

Instrument: ecd1.i

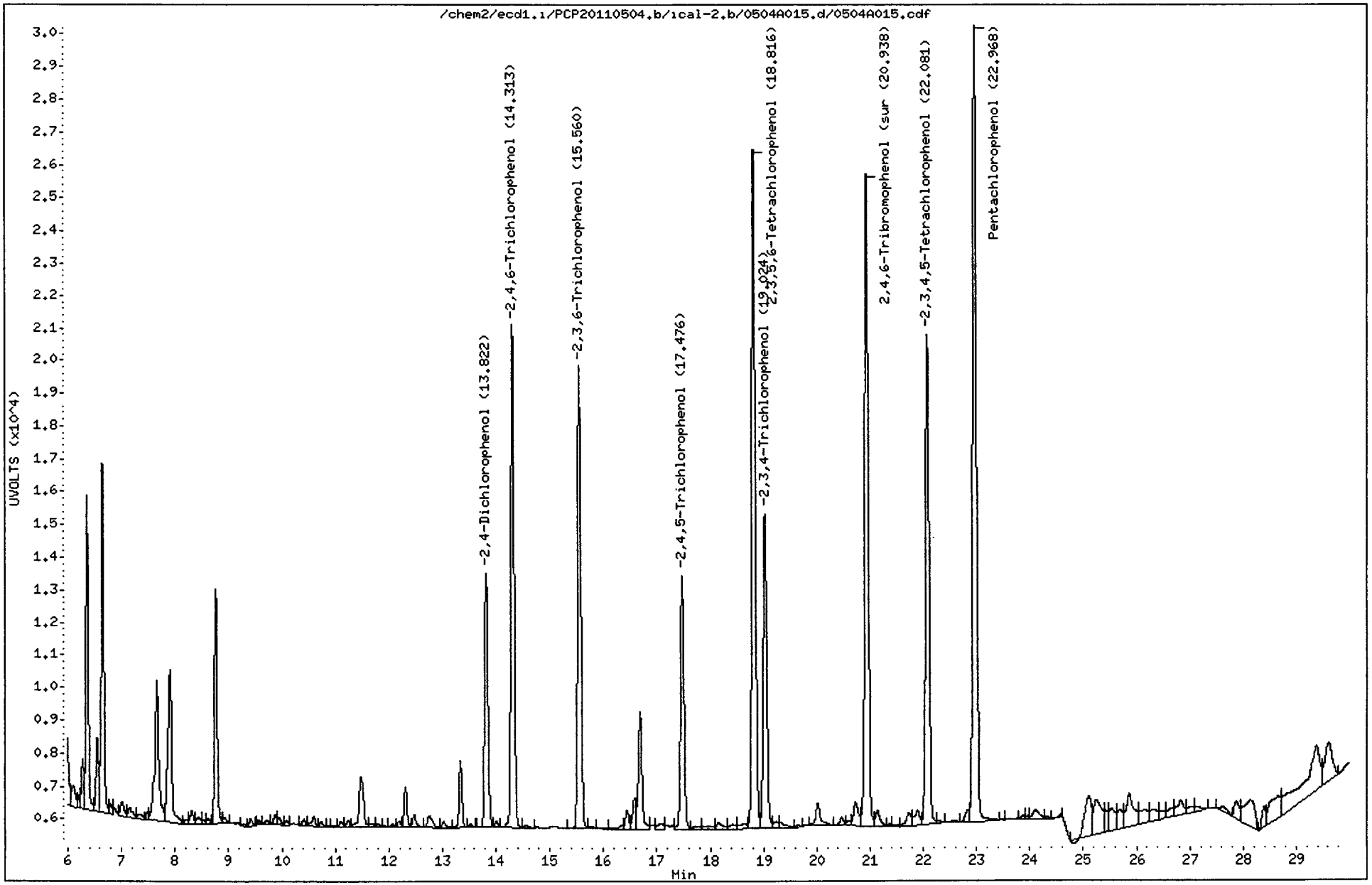
Sample Info: PCP ICV

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



T9300 : ESTS

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

ARI Job ID: SU53, SU73, SU74

GC Analyst Notes / Corrective Action Log

ARI Project ID: SU53 Client ID: Floyd-Snider

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

Parameter(s): 0.25 µg/L RL

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: 5/4/2011 Analysis Start: 5/16/2011

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

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

① For requested emp's
- No yflags assigned
- Forms batched w/ SU73 & 74

Additional Details on Reverse: Yes / No

Analyst: _____ **Date:** 5/18/2011

Reviewer: _____ **Date:** 5/18/11

Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: SU73 Client ID: Floyd Snider

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

Parameter(s): _____

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: 5/4/2011 Analysis Start: 5/10/2011

Endrin/DDT Breakdown <15%? YES / NO / NA Method Blank In Control? YES / NO

ICal Meets RF & %RSD Criteria? YES / NO LCS/LCSD Recovery In Control? YES / NO

CCal Meets RF & %RSD Criteria? YES / NO Surrogate Recovery In Control? YES / NO

Manual Integrations for ICal? YES / NO Manual Integrations for Samples? YES / NO

Internal Standard Meets Criteria? YES / NO / NA Special Analysis Criteria Met? YES / NO / NA

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

① For requested cmpds
- No y-flags assigned
- Forms batched w/ SU53 & SU74
- LIMS batched w/SU74 only

Additional Details on Reverse: Yes / No

Analyst: _____ **Date:** 5/15/2011

Reviewer: _____ **Date:** 5/11/11

Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: SU74 Client ID: Floyd

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: 5/4/2011 Analysis Start: 5/16/2011

Endrin/DDT Breakdown <15%? YES / NO / NA
Method Blank In Control? YES / NO (1)
ICal Meets RF & %RSD Criteria? YES / NO
LCS/LCSD Recovery In Control? YES / NO (1)
CCal Meets RF & %RSD Criteria? YES / NO (1)
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
VDF

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

(1) For Requested empols
- No yflags assigned
- Forms batched w/ su73 & su53
- Lims batched w/ su73 only

Additional Details on Reverse: Yes / No

Analyst: _____ **Date:** 5/18/2011

Reviewer: _____ **Date:** 5/18/11

Analytical Resources Inc.: Organics Instrument Log

ECD1 Serial No.: 3410A39690

Date: 5/16/2011 Analysis: PCP Analyst: AR

GC Program: Herb.M Column No: 922995/801698 Column Type: ~~ZB~~ STX-CLP 1/2 AR 5/18/2011

Calibration File: PCP20110504b Curve Date: 5/4/2011 Injection Vol.: 2µL

IS/SS	Ical/Ccal	LCS/ICV
	1791-6	1820-4

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd1.i/PCP20110504.b/0516-2.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	16-MAY-2011 12:46	0516A001.d	1	RINSE	
2	16-MAY-2011 13:06	0516A002.d	1	SU53C	
3	16-MAY-2011 13:43	0516A003.d	1	RINSE	
4	16-MAY-2011 14:03	0516A004.d	1	RINSE	
5	16-MAY-2011 14:23	0516A005.d	1	PCP	
6	16-MAY-2011 14:59	0516A006.d	1	PCP CCAL - Passes	
7	16-MAY-2011 15:36	0516A007.d	1	SU53MBW1	
8	16-MAY-2011 16:12	0516A008.d	1	SU53LCSW1	
9	16-MAY-2011 16:48	0516A009.d	1	SU53QLS	
10	16-MAY-2011 17:25	0516A010.d	1	SU53A	
11	16-MAY-2011 18:01	0516A011.d	1	SU53B	
12	16-MAY-2011 18:37	0516A012.d	1	SU53BMS	
13	16-MAY-2011 19:14	0516A013.d	1	SU53BMSD	
14	16-MAY-2011 19:50	0516A014.d	1	PCP	
15	16-MAY-2011 20:27	0516A015.d	1	PCP CCAL - Passes	
16	16-MAY-2011 21:03	0516A016.d	1	SU53C	
17	16-MAY-2011 21:39	0516A017.d	1	SU53D	
18	16-MAY-2011 22:16	0516A018.d	1	SU53E	
19	16-MAY-2011 22:52	0516A019.d	1	SU53F	
20	16-MAY-2011 23:28	0516A020.d	1	PCP	
21	17-MAY-2011 00:04	0516A021.d	1	PCP CCAL - Passes	
22	17-MAY-2011 00:41	0516A022.d	1	SU73MBW1	
23	17-MAY-2011 01:17	0516A023.d	1	SU73LCSW1	
24	17-MAY-2011 01:53	0516A024.d	1	SU73QLS	
25	17-MAY-2011 02:29	0516A025.d	1	SU73A	
26	17-MAY-2011 03:06	0516A026.d	1	SU73B	
27	17-MAY-2011 03:42	0516A027.d	1	SU73BMS	
28	17-MAY-2011 04:18	0516A028.d	1	SU73BMSD	
29	17-MAY-2011 04:54	0516A029.d	1	SU74A	
30	17-MAY-2011 05:31	0516A030.d	1	SU74B	
31	17-MAY-2011 06:07	0516A031.d	1	SU74C	
32	17-MAY-2011 06:43	0516A032.d	1	PCP	
33	17-MAY-2011 07:19	0516A033.d	1	PCP CCAL - Passes	

AR 5/18/2011

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

AR 5/18/2011

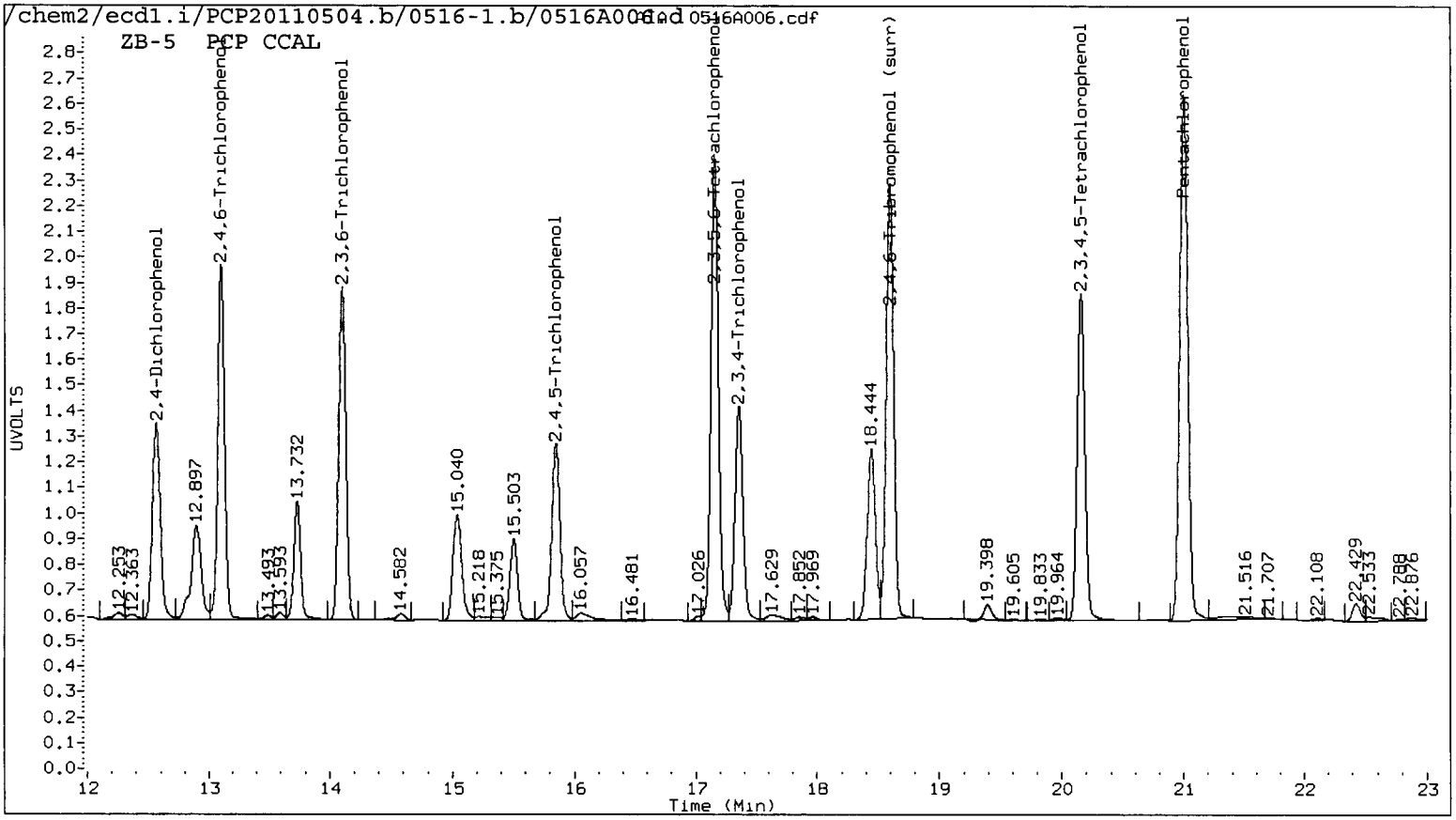
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A006.d ARI ID: PCP CCAL
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A006.d Client ID:
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 16-MAY-2011 14:59
Compound Sublist: all Report Date: 05/18/2011 09:24
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.000	0.002	464148	22.970	0.003	606699	23.0356	21.5440	6.7	Pentachlorophenol
13.103	0.002	280213	14.313	0.002	317716	23.0197	21.9209	4.9	2,4,6-Trichlorophenol
14.099	0.002	258799	15.560	0.003	307930	22.5974	21.4236	5.3	2,3,6-Trichlorophenol
15.847	0.002	159029	17.476	0.002	187883	23.8418	23.2079	2.7	2,4,5-Trichlorophenol
17.354	0.003	189962	19.024	0.001	217453	22.7355	23.6013	3.7	2,3,4-Trichlorophenol
17.155	0.002	391755	18.815	0.001	476034	23.1716	21.6991	6.6	2,3,5,6-Tetrachlorophenol
20.157	0.002	289355	22.082	0.002	360667	22.2894	23.4556	5.1	2,3,4,5-Tetrachlorophenol
12.560	0.005	173370	13.822	0.002	163387	267.0214	229.5148	15.1	2,4-Dichlorophenol
18.597	0.002	359910	20.938	0.002	464858	22.9	22.1	3.3	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	92.1	86.2
2,4,6-Trichlorophenol	92.1	87.7
2,3,6-Trichlorophenol	90.4	85.7
2,4,5-Trichlorophenol	95.4	92.8
2,3,4-Trichlorophenol	90.9	94.4
2,3,5,6-Tetrachlorophenol	92.7	86.8
2,3,4,5-Tetrachlorophenol	89.2	93.8
2,4-Dichlorophenol	106.8	91.8
2,4,6-TBP (surr)	91.4	88.4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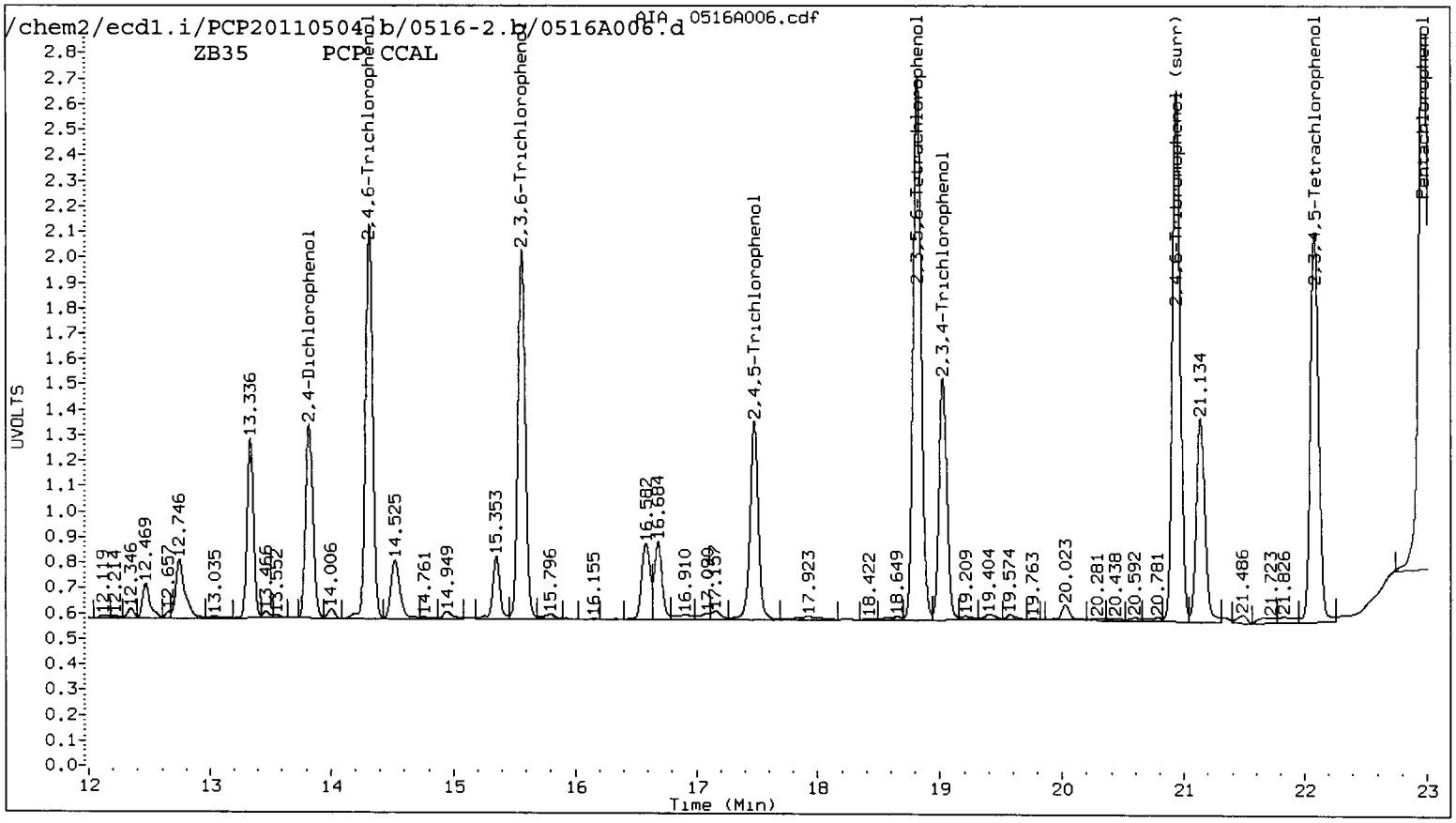
ZB-5 PCP CCAL
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol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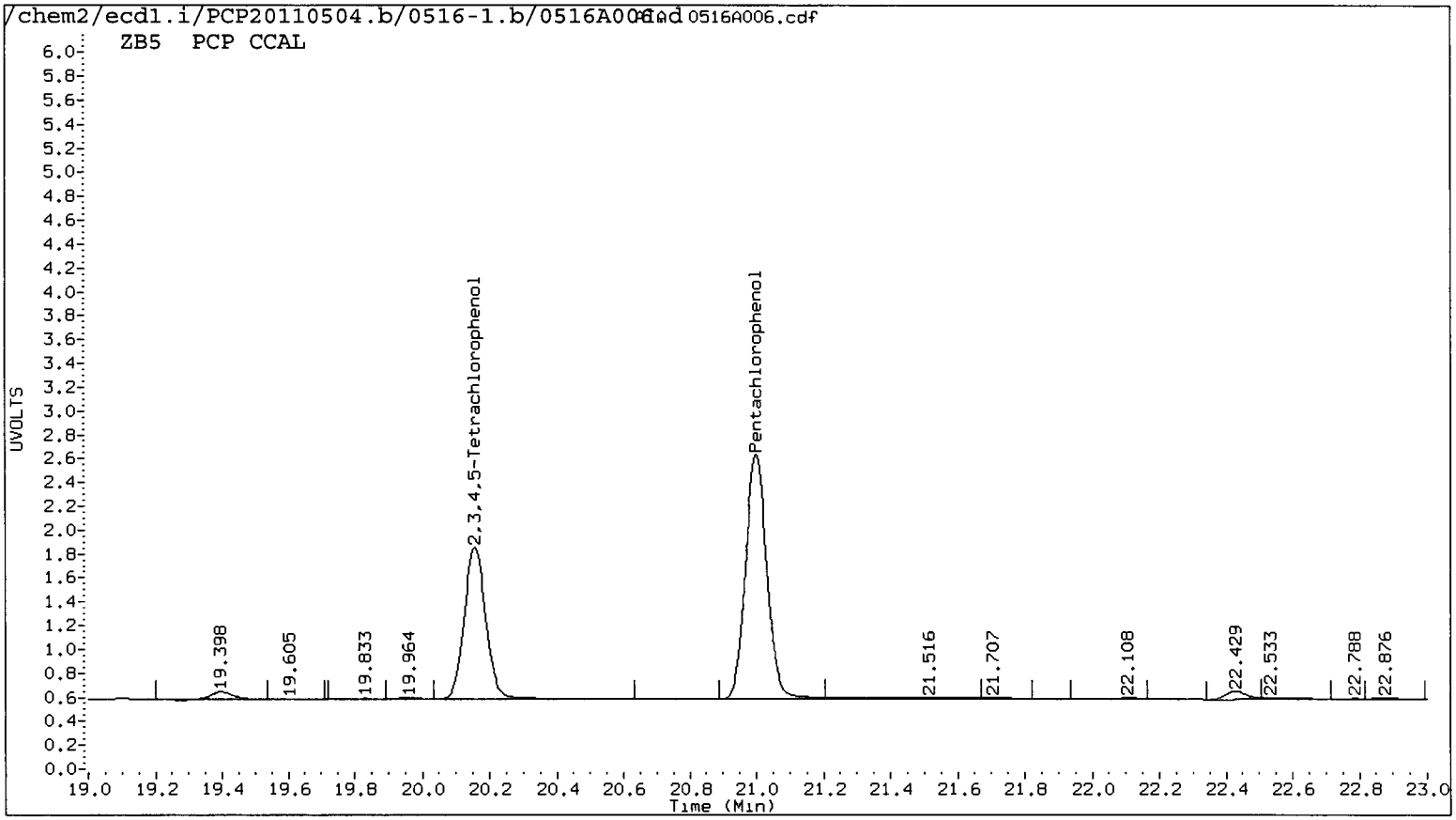
ZB35 PCP CCAL
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol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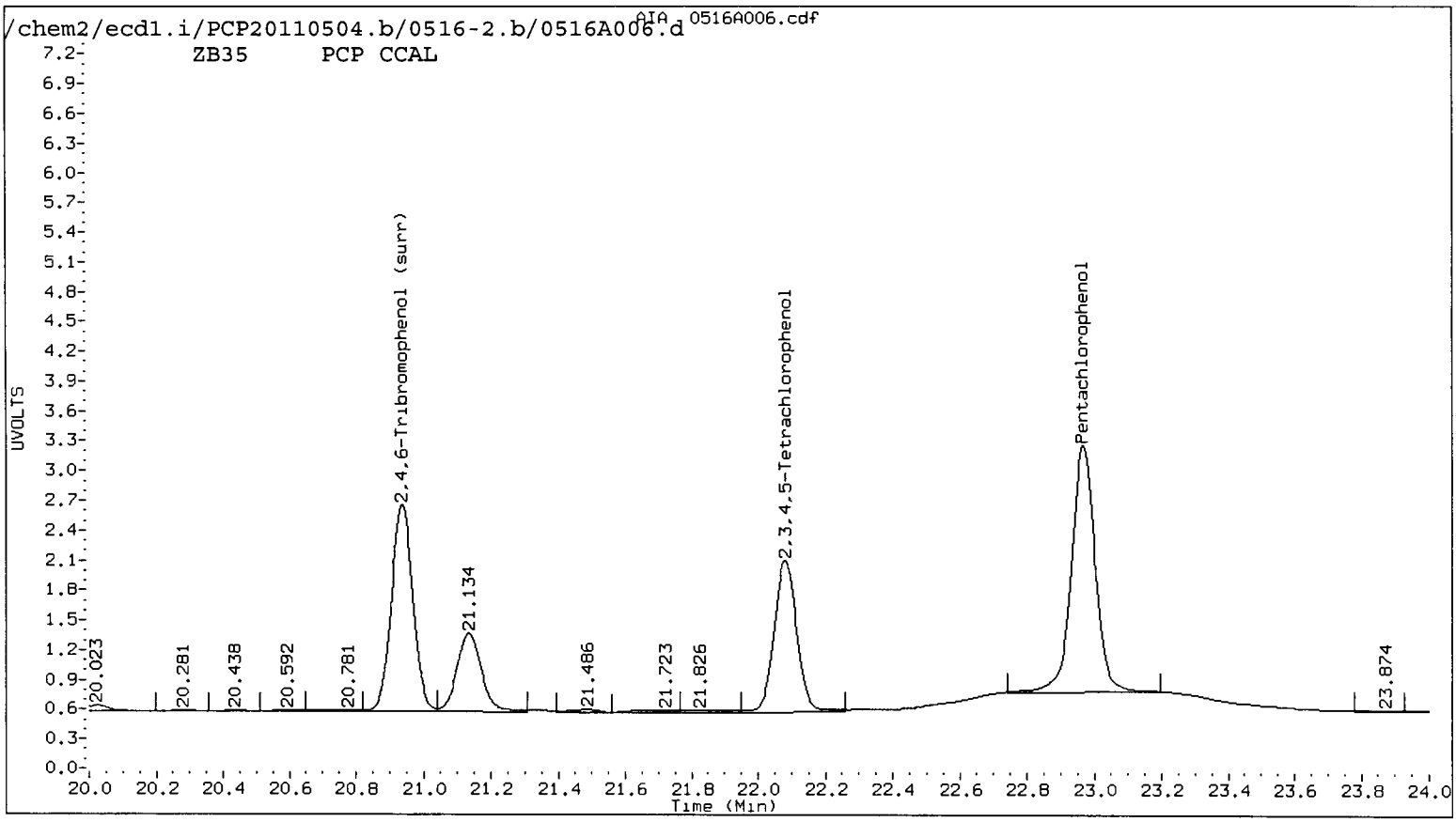
ZB5 PCP CCAL
UVOLTS
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
19.398
19.605
19.833
19.964
21.516
21.707
22.108
22.429
22.533
22.788
22.876
Time (Min)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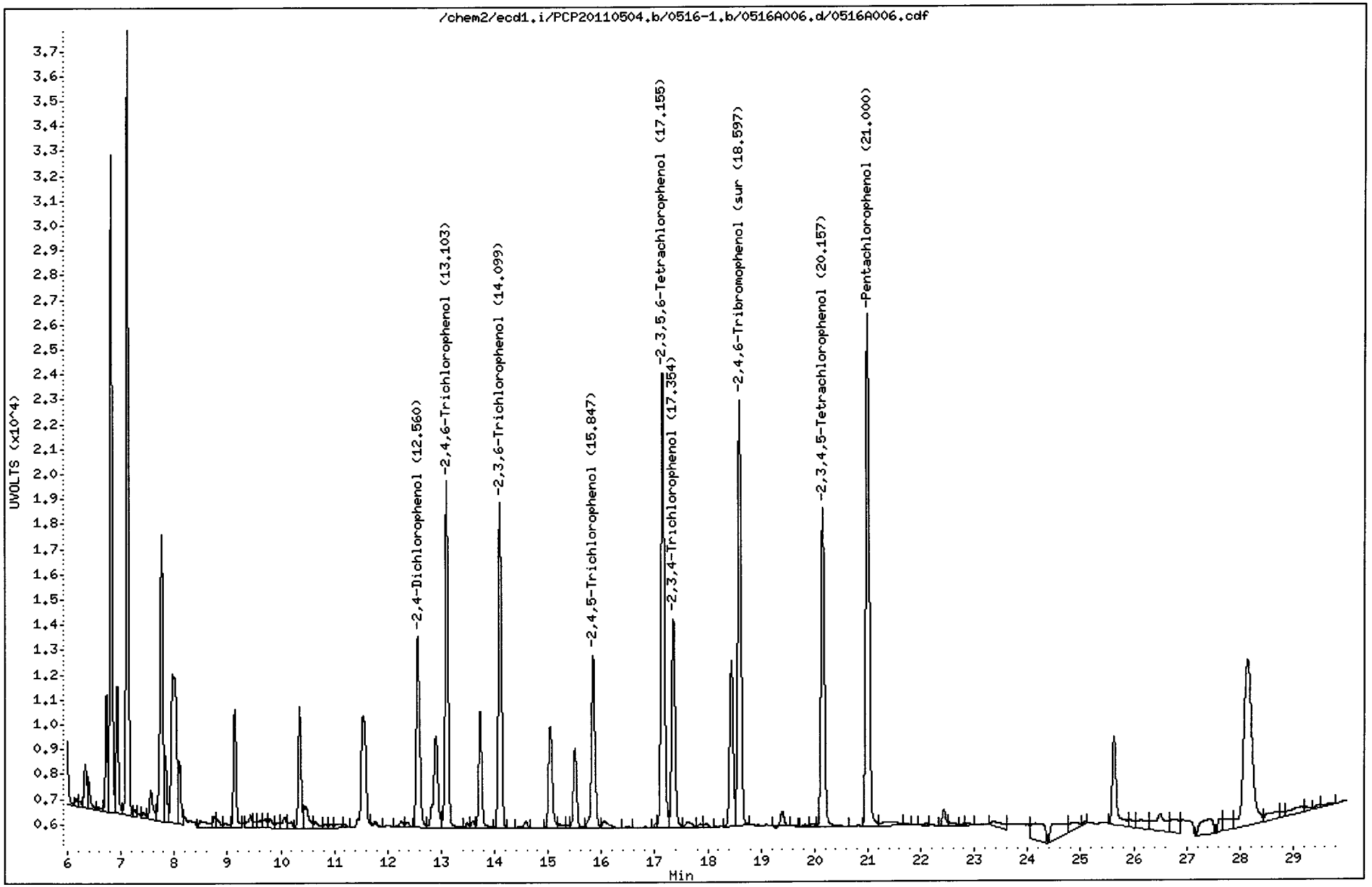
ZB35 PCP CCAL
UVOLTS
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
20.023
20.281
20.438
20.592
20.781
21.134
21.486
21.723
21.826
23.874
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A006.d
Date : 16-MAY-2011 14:59
Client ID:
Sample Info: PCP CCAL
Purge Volume: 500.0
Column phase: STX CLP1

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



SUSS : 00814

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A006.d

Date : 16-MAY-2011 14:59

Client ID:

Sample Info: PCP CCAL

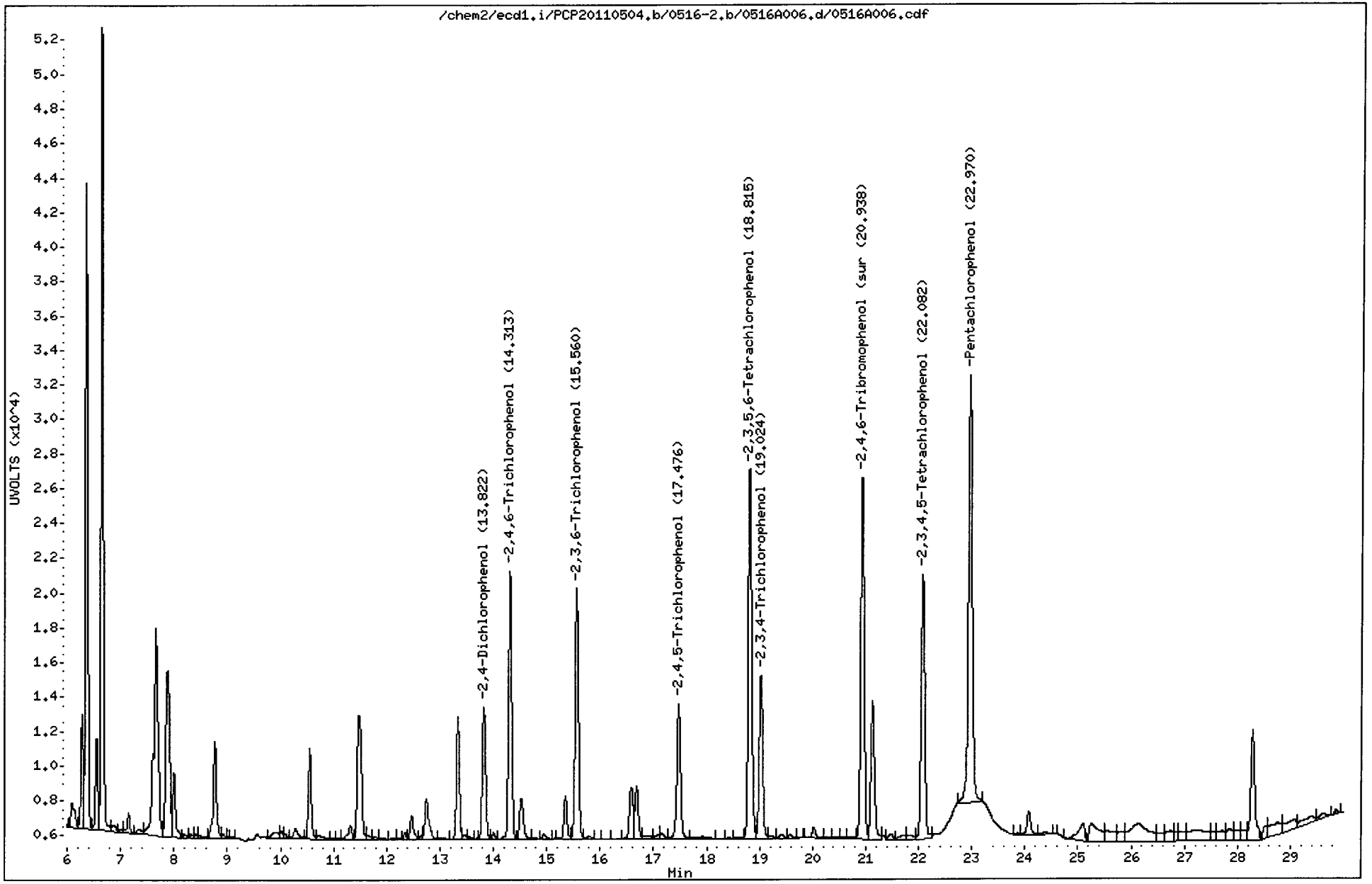
Purge Volume: 500.0

Column phase: STX CLP2

Instrument: ecd1.i

Operator: ar

Column diameter: 0.53



SUS3 : 00811

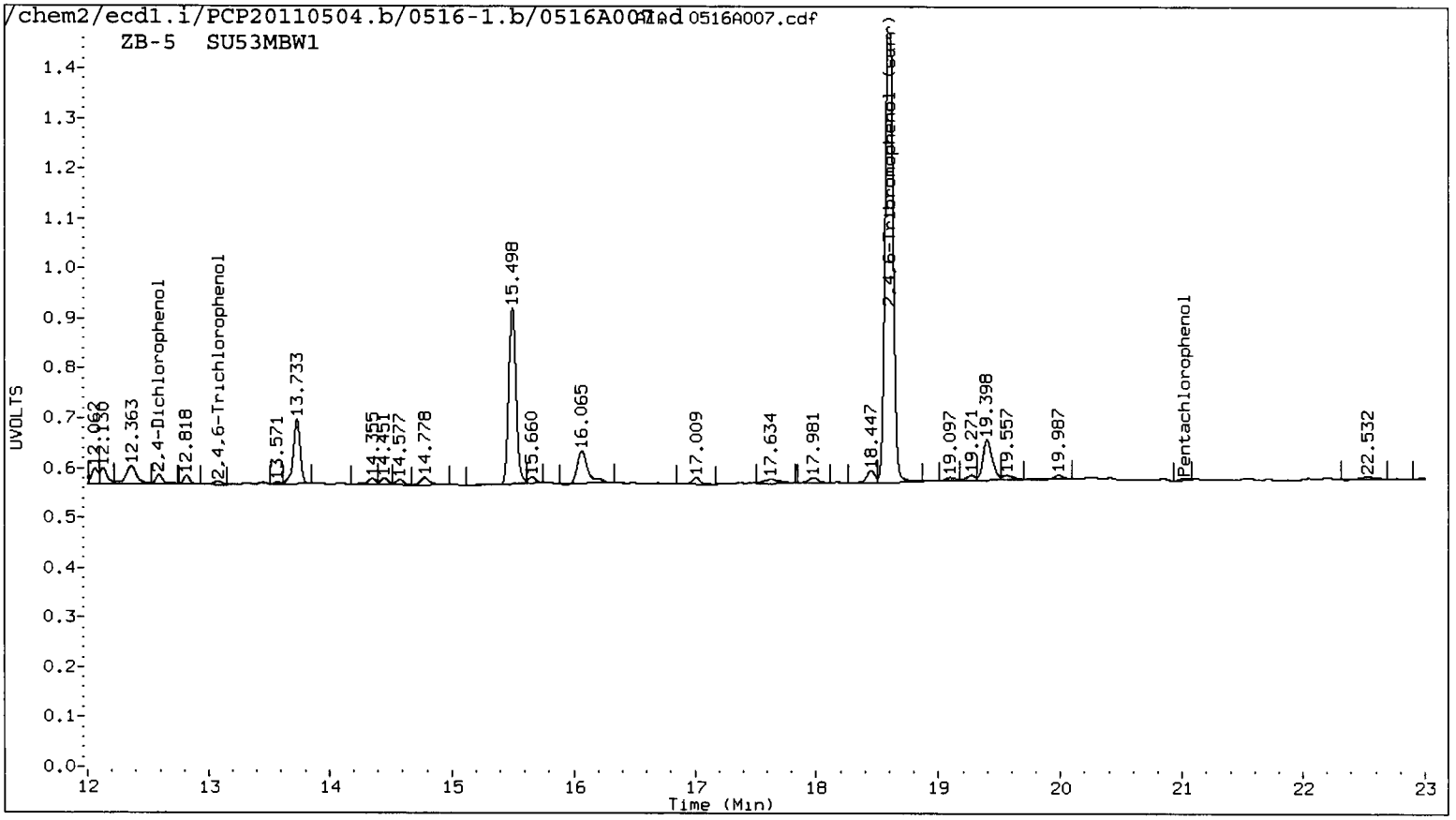
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A007.d ARI ID: SU53MBW1
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A007.d Client ID: SU53MBW1
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 16-MAY-2011 15:36
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col RT	ZB-5 Col Shift	ZB-5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB-5 on col	ZB35 on col	RPD	Compound
21.012	0.015	830	----			0.0412	0.0000	---	Pentachlorophenol
13.079	-0.022	1432	14.366	0.055	1210	0.1177	0.0835	34.0	2,4,6-Trichlorophenol
----			15.550	-0.007	1731	0.0000	0.1205	---	2,3,6-Trichlorophenol
----			----			0.0000	0.0000	---	2,4,5-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,4-Trichlorophenol
----			18.757	-0.057	6611	0.0000	0.3014	---	2,3,5,6-Tetrachlorophenol
----			22.022	-0.058	910	0.0000	0.0531	---	2,3,4,5-Tetrachlorophenol
12.588	0.033	3736	----			4.6317	0.0000	---	2,4-Dichlorophenol
18.597	0.001	222056	20.936	0.000	290671	14.1	13.8	2.0	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	56.4	55.3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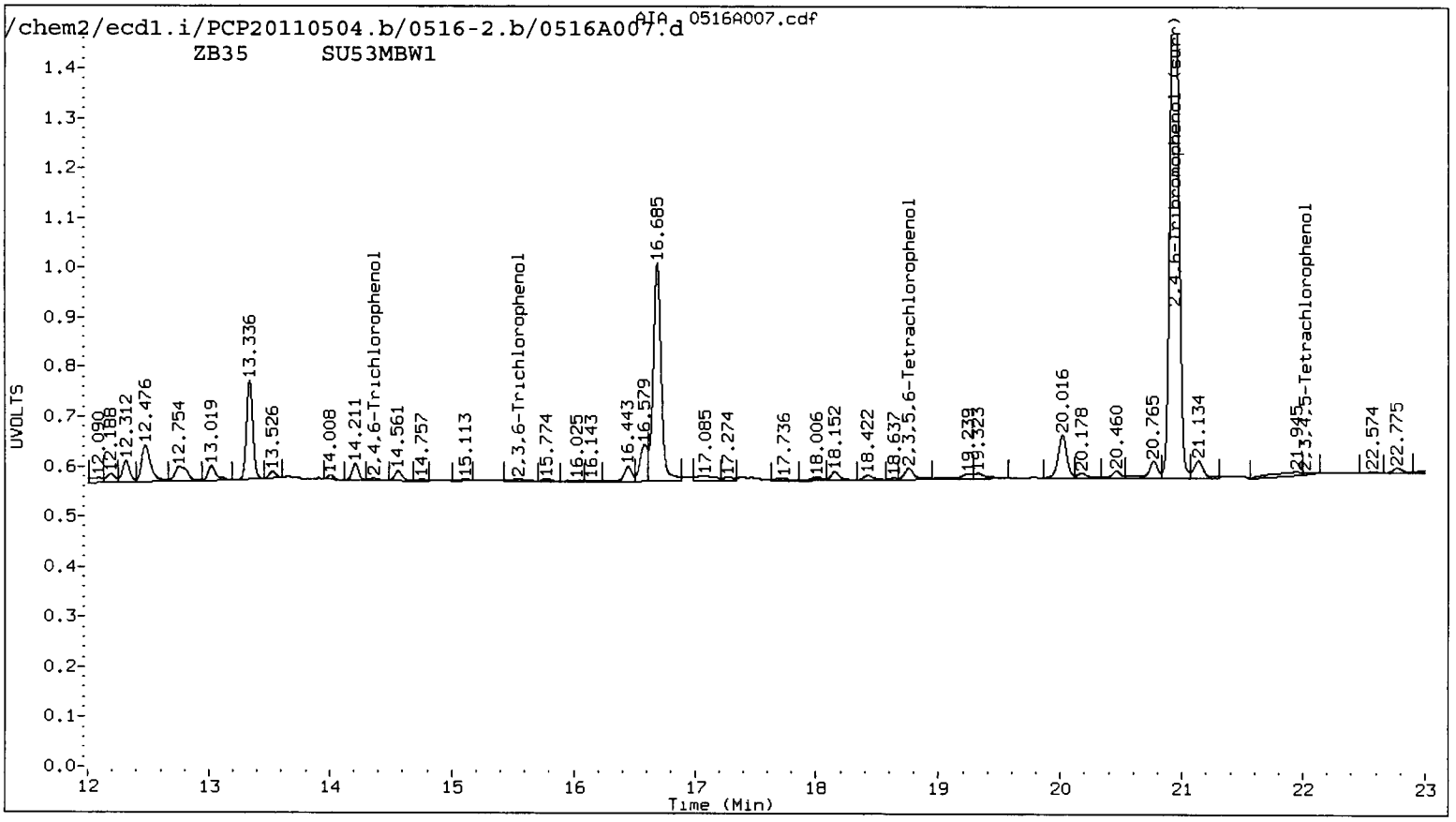
AIA 0516A007.cdf
ZB-5 SU53MBW1
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,4,6-Tribromophenol (surr)
Pentachlorophenol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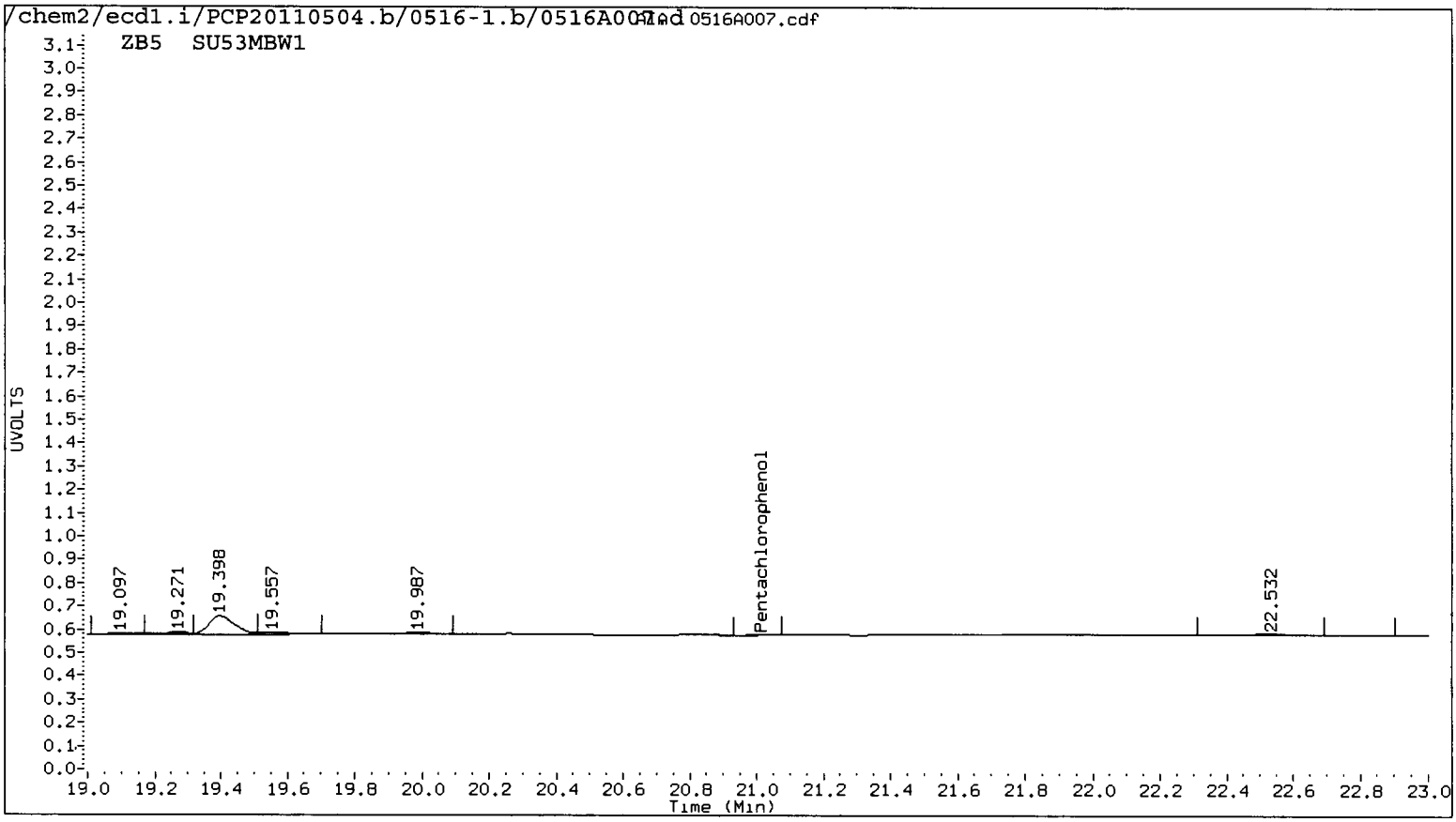
AIA 0516A007.cdf
ZB35 SU53MBW1
UVOLTS
Time (Min)
2,3,6-Trichlorophenol
2,4,6-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol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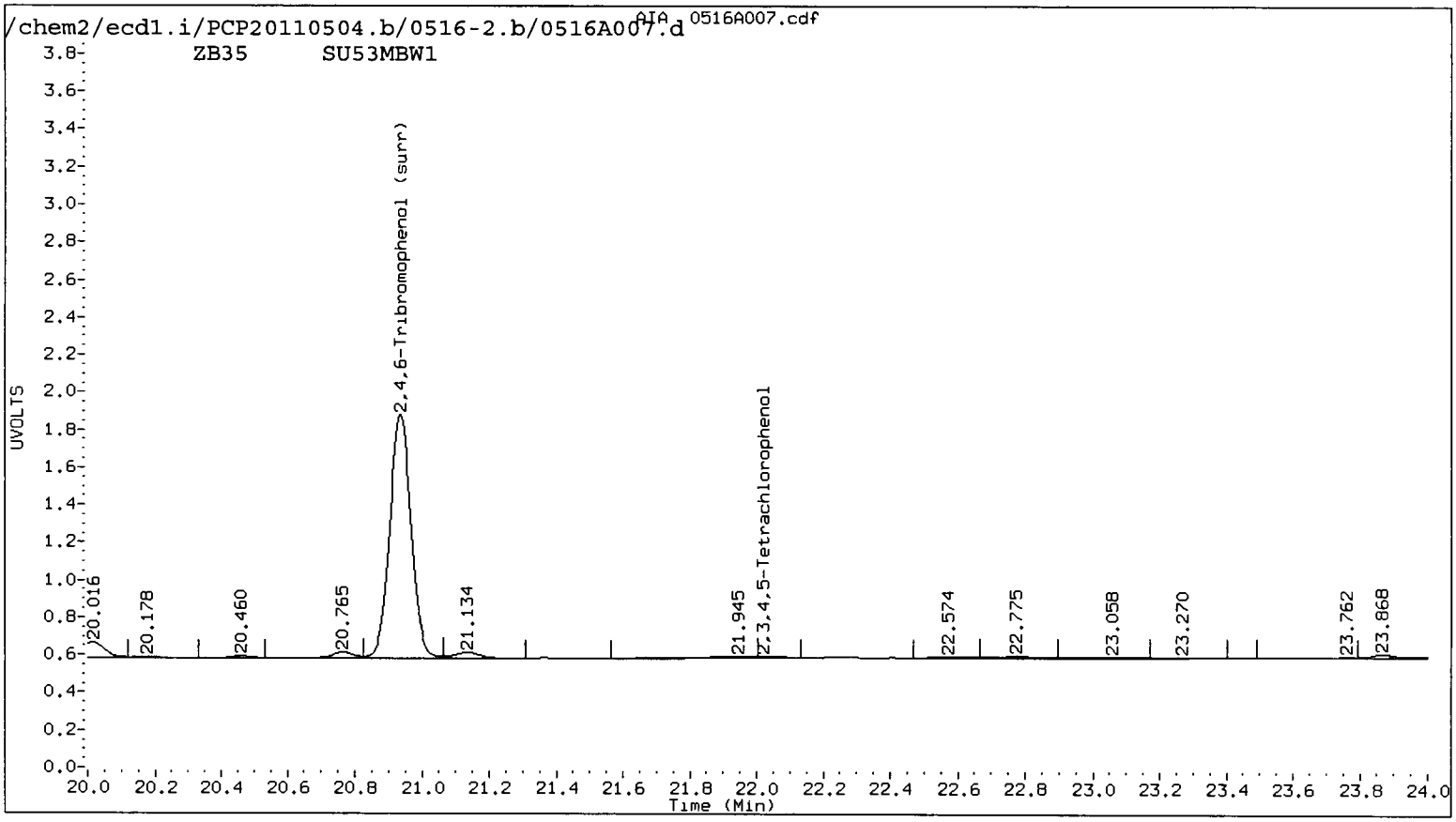
0516A007.cdf
ZB5 SU53MBW1
UVOLTS
19.097
19.271
19.398
19.557
19.987
Pentachlorophenol
22.532
Time (Min)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0516A007.cdf
ZB35 SU53MBW1
UVOLTS
20.016
20.178
20.460
20.765
2,4,6-Tribromophenol (surr)
21.134
21.945
2,3,4,5-Tetrachlorophenol
22.574
22.775
23.058
23.270
23.762
23.868
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A007.d

Date : 16-MAY-2011 15:36

Client ID: SU53MBW1

Instrument: ecd1.i

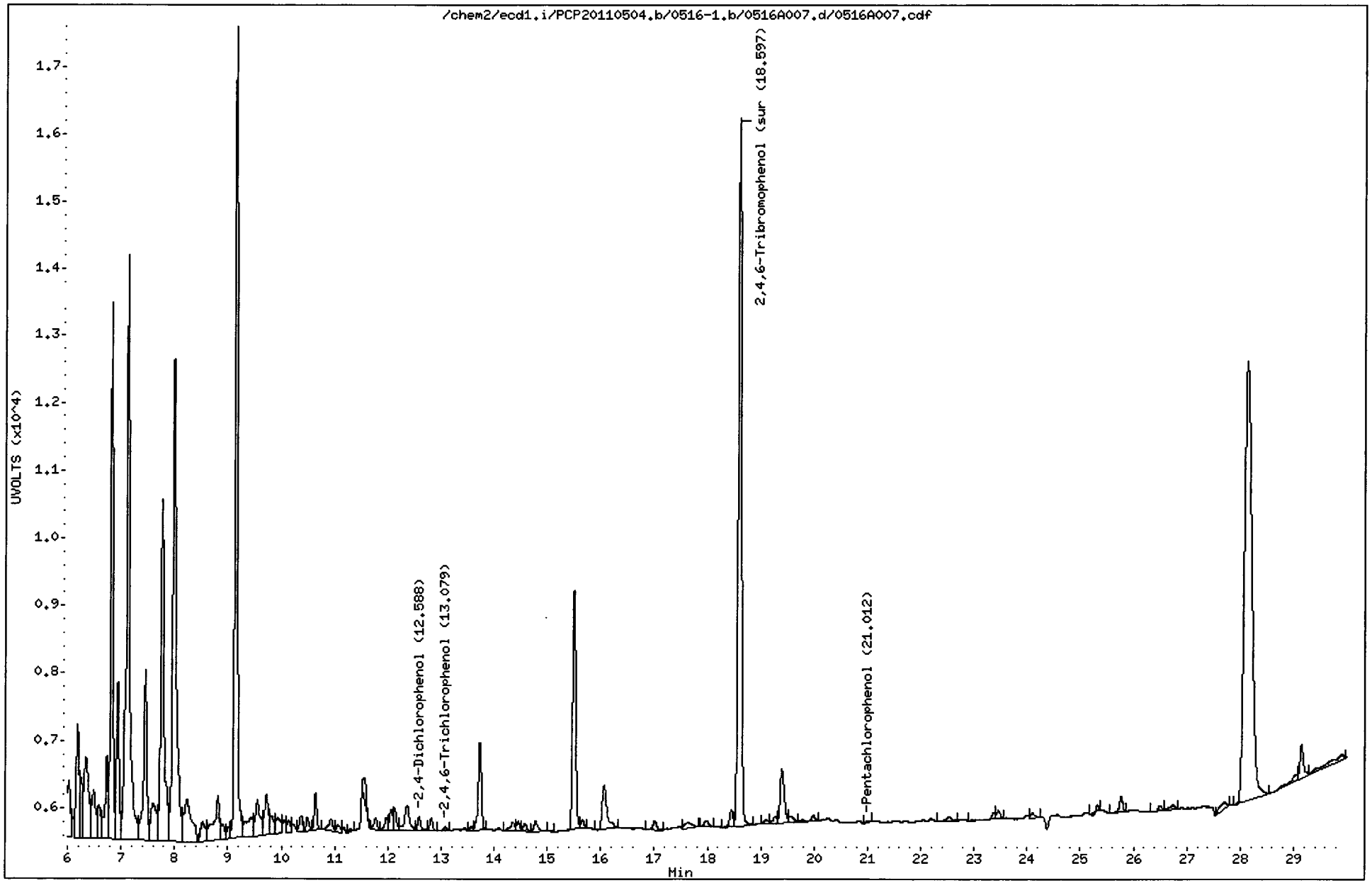
Sample Info: SU53MBW1

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

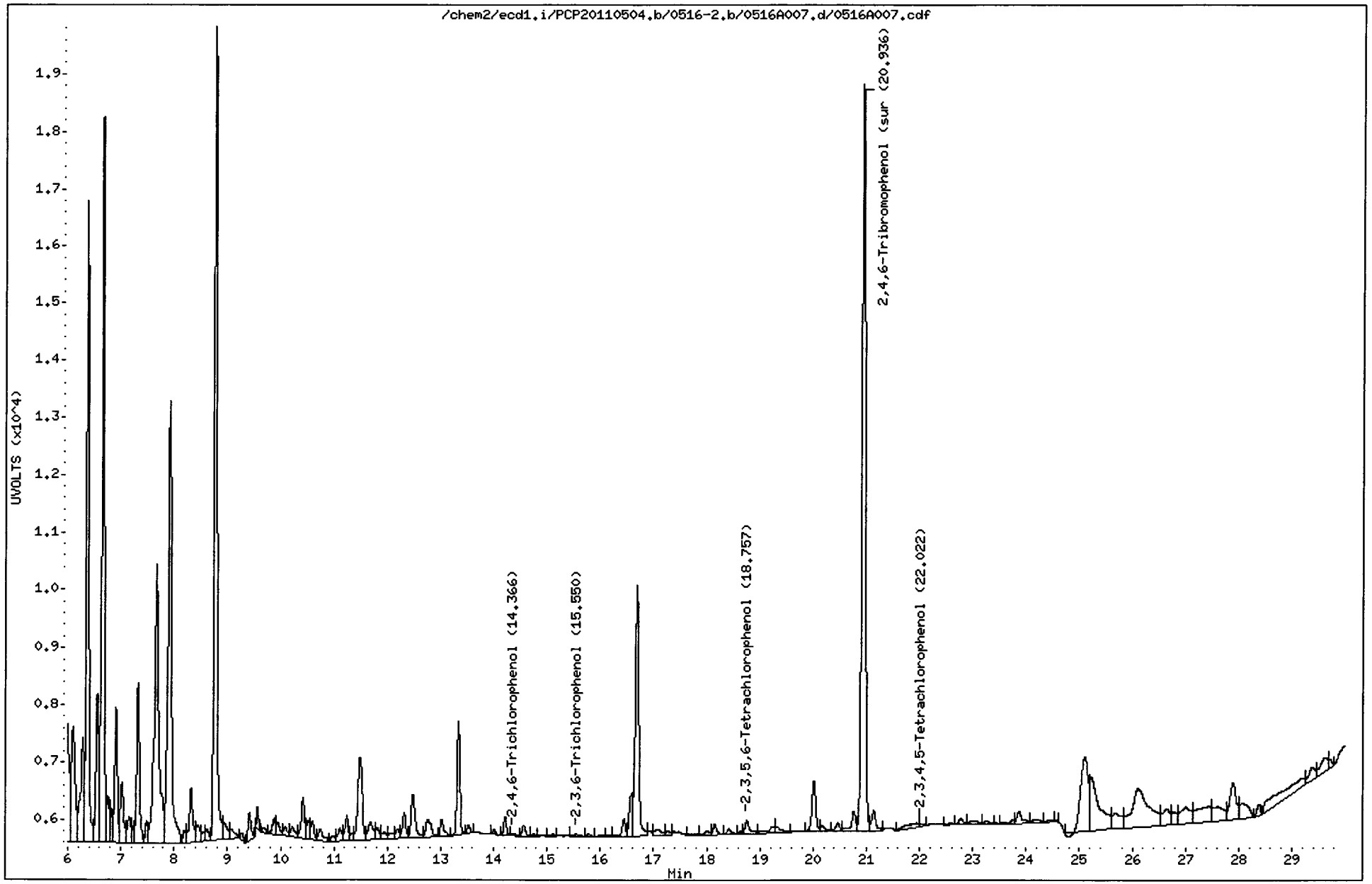
Column diameter: 0.53



SU53 : 00815

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A007.d
Date : 16-MAY-2011 15:36
Client ID: SU53MBW1
Sample Info: SU53MBW1
Purge Volume: 500.0
Column phase: STX CLP2

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



SU53:091800

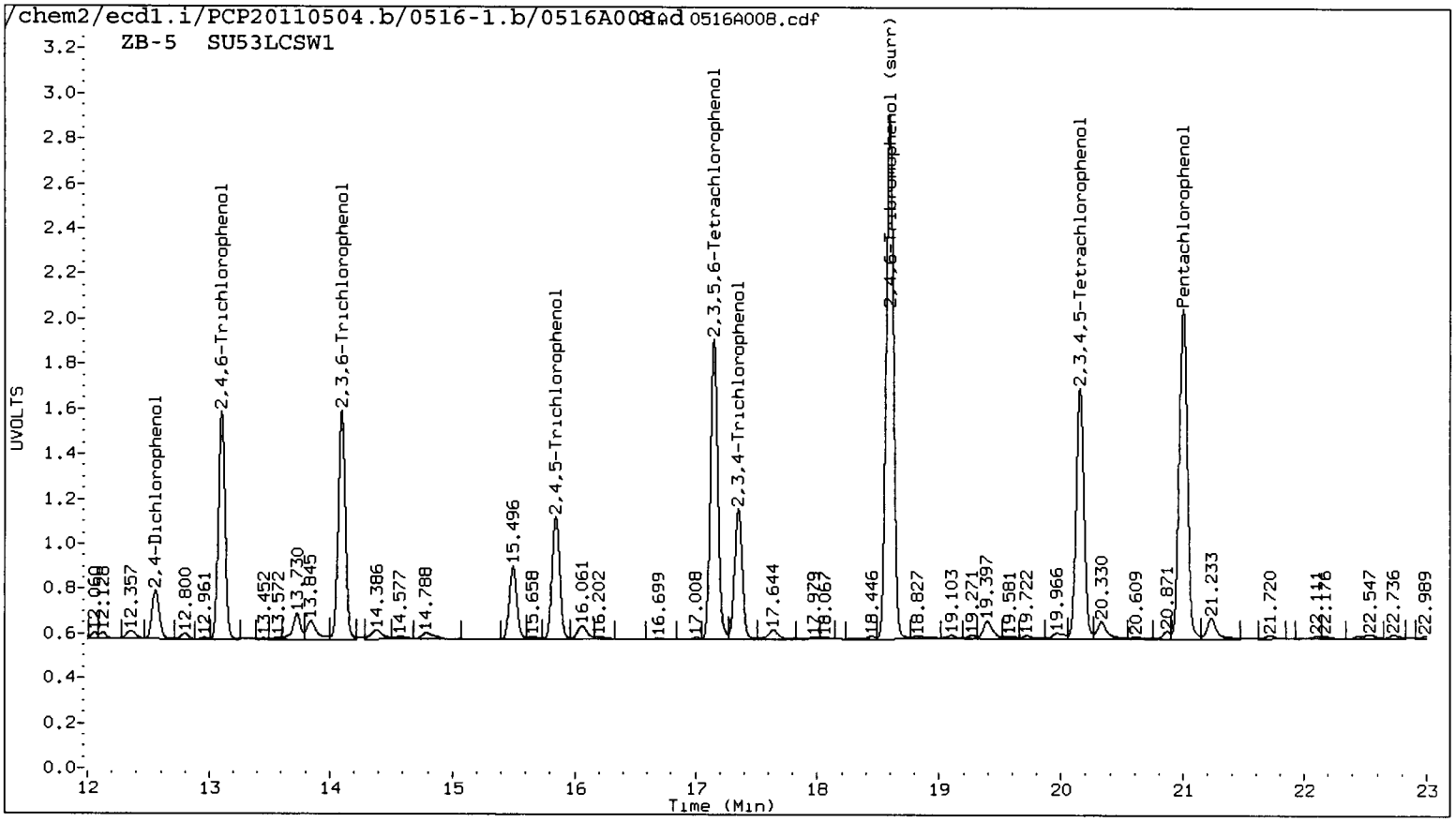
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A008.d ARI ID: SU53LCSW1
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A008.d Client ID: SU53LCSW1
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 16-MAY-2011 16:12
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
20.997	0.000	331863	22.967	0.000	458787	16.4703	16.2917	1.1	Pentachlorophenol
13.101	0.000	198467	14.311	0.000	231509	16.3042	15.9730	2.1	2,4,6-Trichlorophenol
14.097	0.000	206408	15.557	0.000	245179	18.0228	17.0579	5.5	2,3,6-Trichlorophenol
15.845	0.000	116016	17.474	0.000	135437	16.7531	16.7296	0.1	2,4,5-Trichlorophenol
17.352	0.000	128471	19.022	-0.001	150186	15.3759	15.6803	2.0	2,3,4-Trichlorophenol
17.152	0.000	282825	18.813	-0.001	360233	16.7286	16.4205	1.9	2,3,5,6-Tetrachlorophenol
20.155	0.000	251189	22.079	-0.001	311238	19.3494	19.9564	3.1	2,3,4,5-Tetrachlorophenol
12.557	0.002	44077	13.821	0.001	49134	57.7907	59.3915	2.7	2,4-Dichlorophenol
18.595	0.000	495363	20.936	0.000	638621	31.5	30.4	3.5	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	65.9	65.2
2,4,6-Trichlorophenol	65.2	63.9
2,3,6-Trichlorophenol	72.1	68.2
2,4,5-Trichlorophenol	67.0	66.9
2,3,4-Trichlorophenol	61.5	62.7
2,3,5,6-Tetrachlorophenol	66.9	65.7
2,3,4,5-Tetrachlorophenol	77.4	79.8
2,4-Dichlorophenol	23.1	23.8
2,4,6-TBP (surr)	62.9	60.8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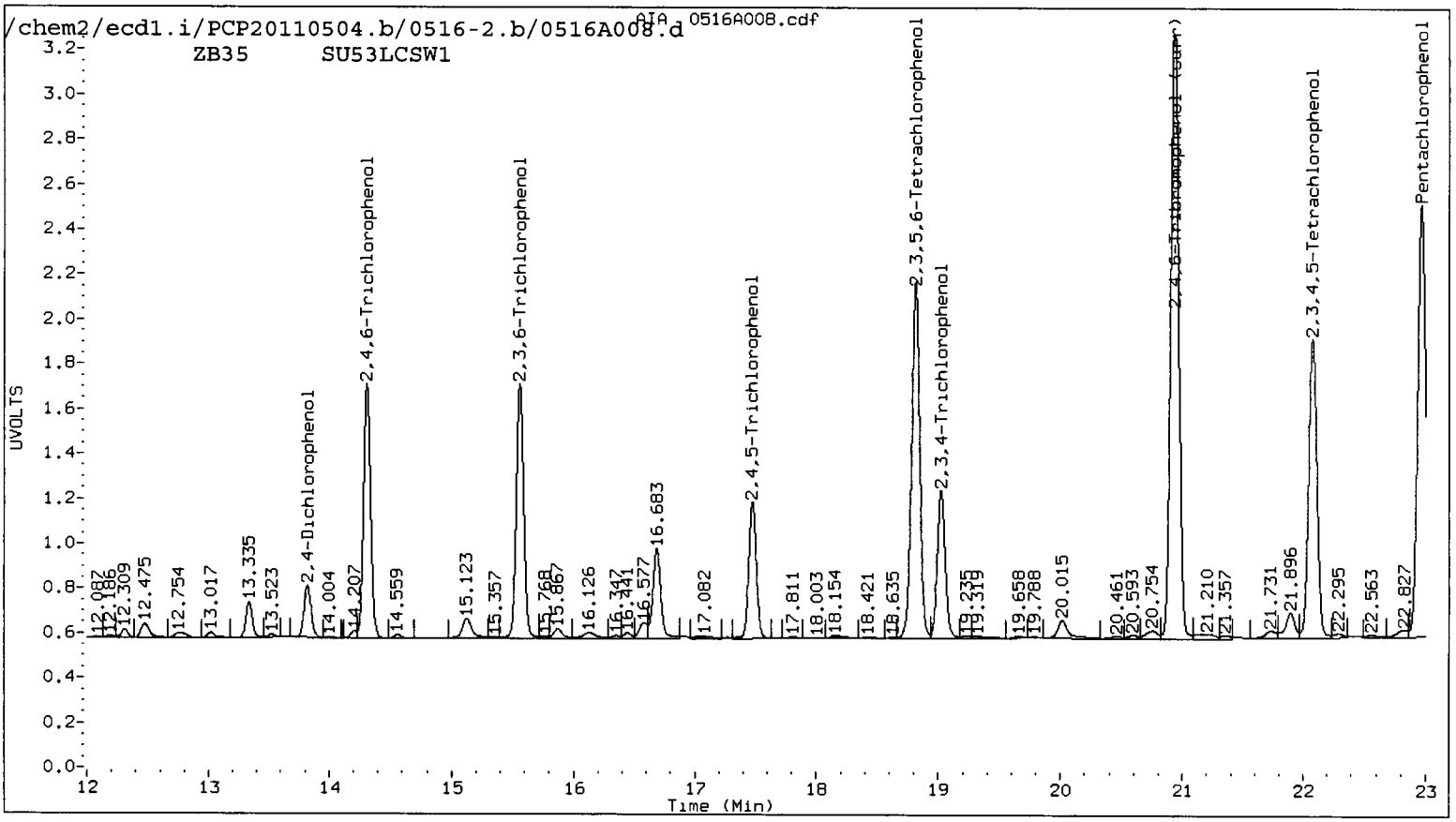
0516A008.cdf
ZB-5 SU53LCSW1
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol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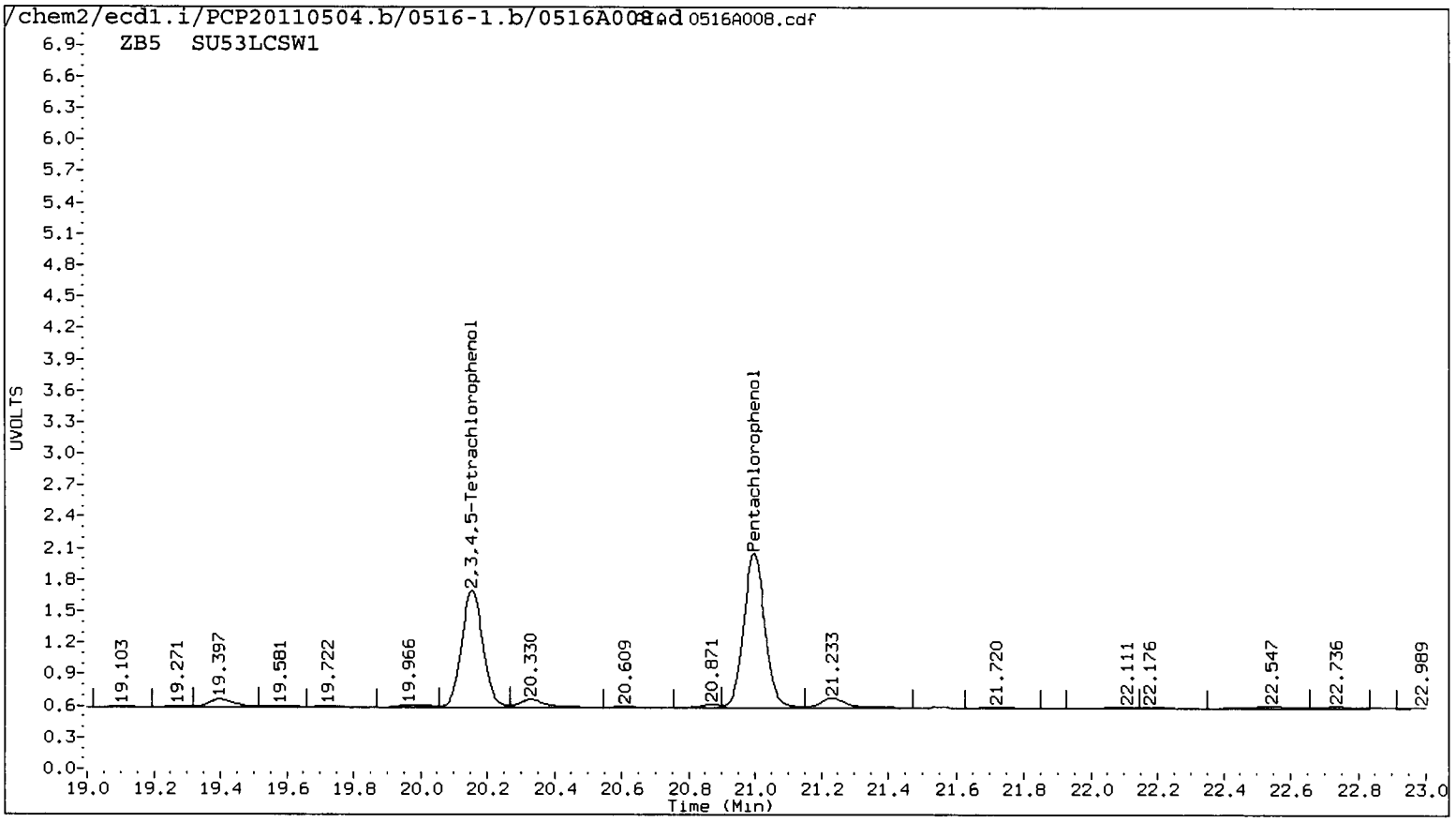
0516A008.cdf
ZB35 SU53LCSW1
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol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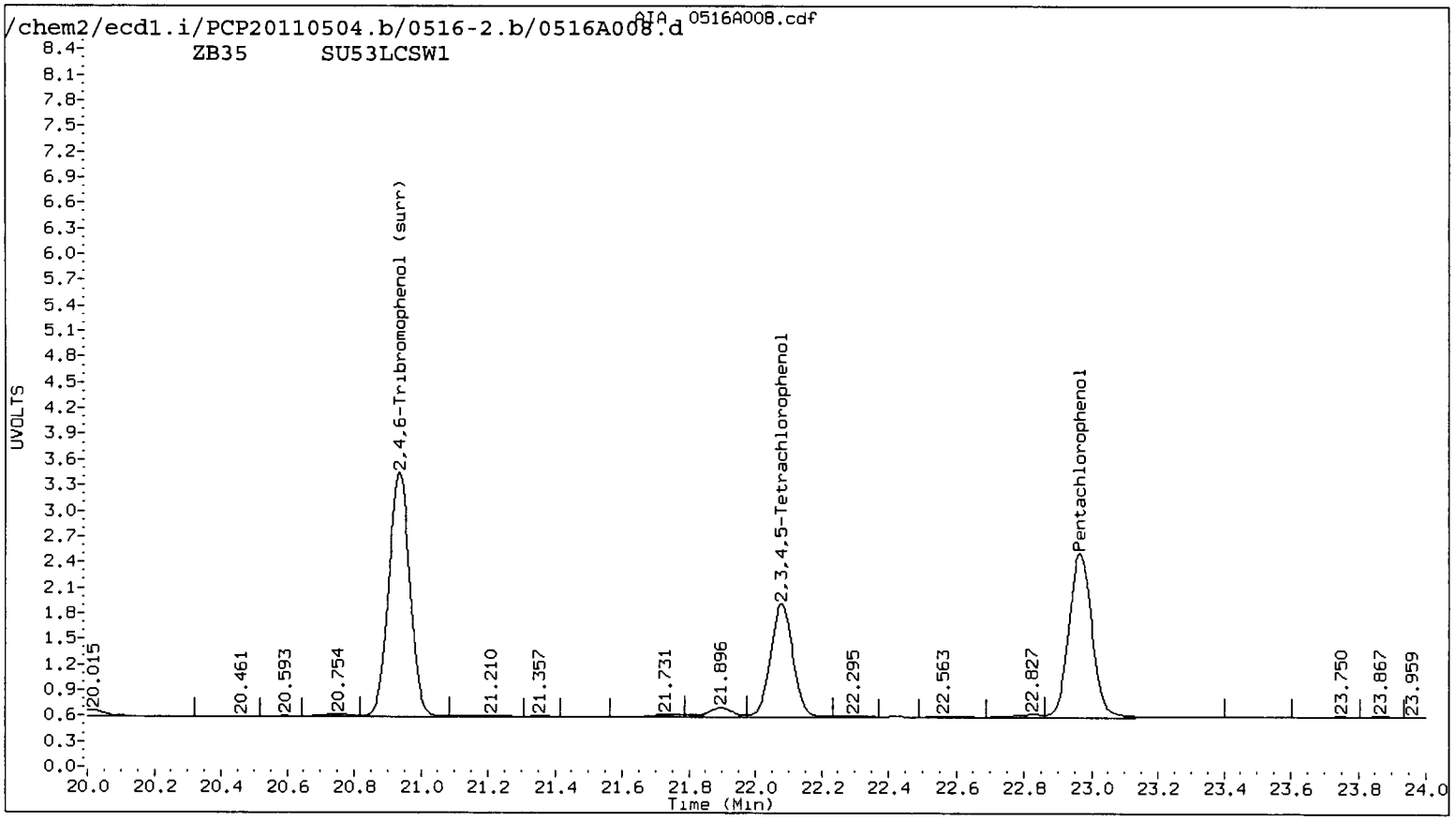
0516A008.cdf
ZB5 SU53LCSW1
UVOLTS
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
19.103
19.271
19.397
19.581
19.722
19.966
20.330
20.609
20.871
21.233
21.720
22.111
22.176
22.547
22.736
22.989
Time (Min)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0516A008.cdf
ZB35 SU53LCSW1
UVOLTS
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
20.015
20.461
20.593
20.754
21.210
21.357
21.731
21.896
22.295
22.563
22.827
23.750
23.867
23.959
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A008.d

Date : 16-MAY-2011 16:12

Client ID: SU53LCSW1

Instrument: ecd1.i

Sample Info: SU53LCSW1

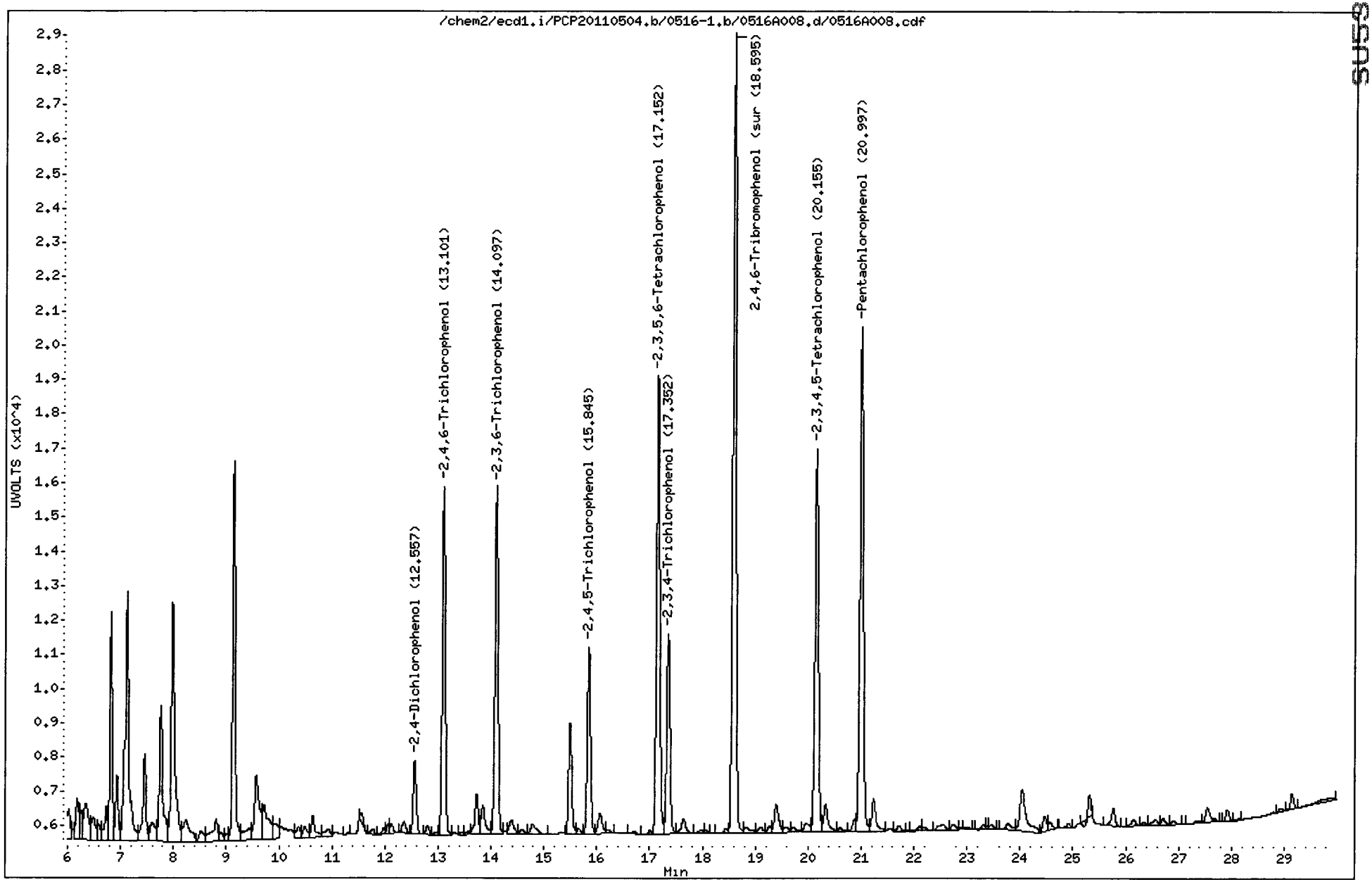
Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

Column diameter: 0.53

SU53:00820



Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A008.d

Page 1

Date : 16-MAY-2011 16:12

Client ID: SU53LCSW1

Instrument: ecd1.i

Sample Info: SU53LCSW1

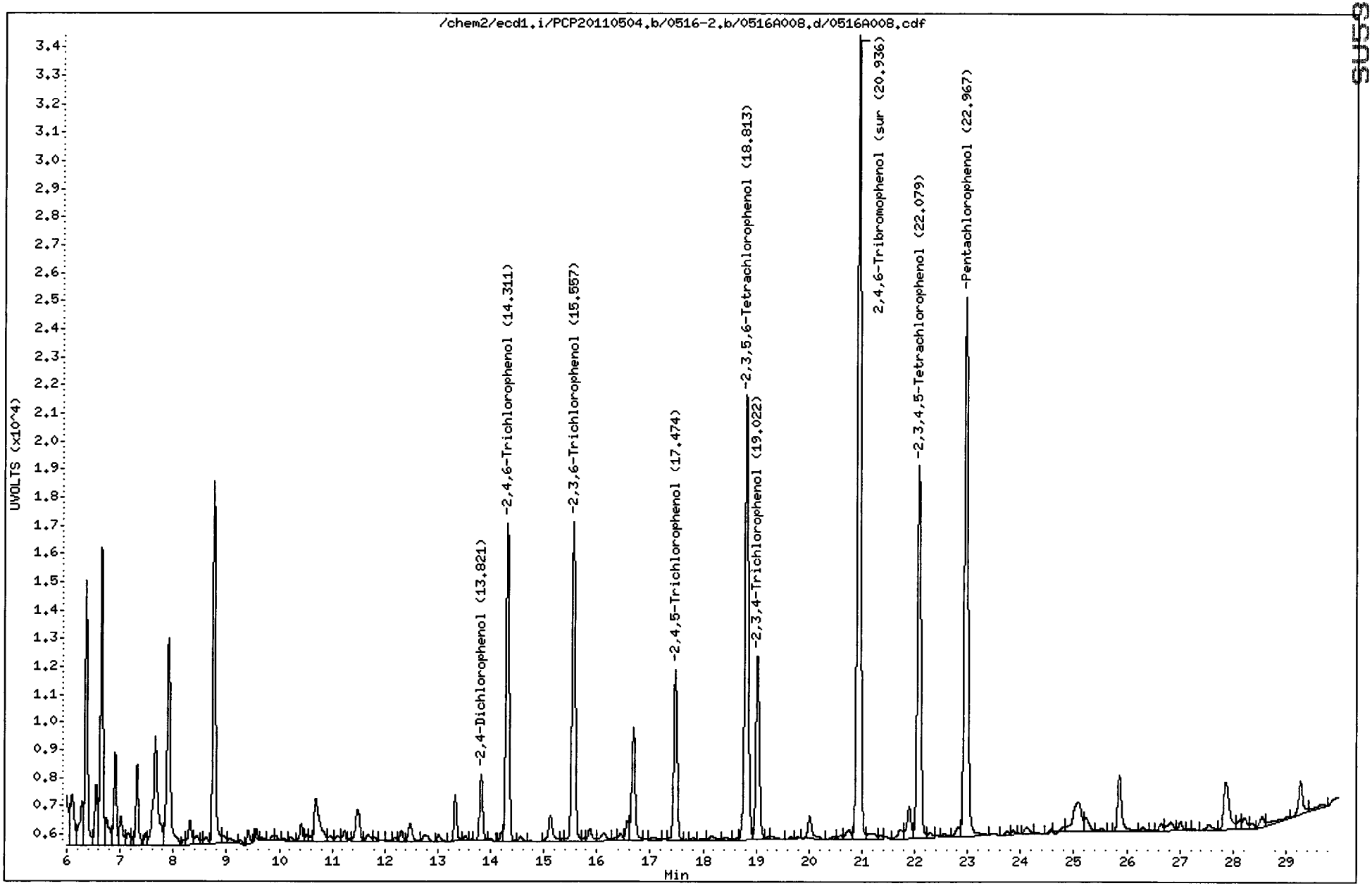
Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53

SU53:00821



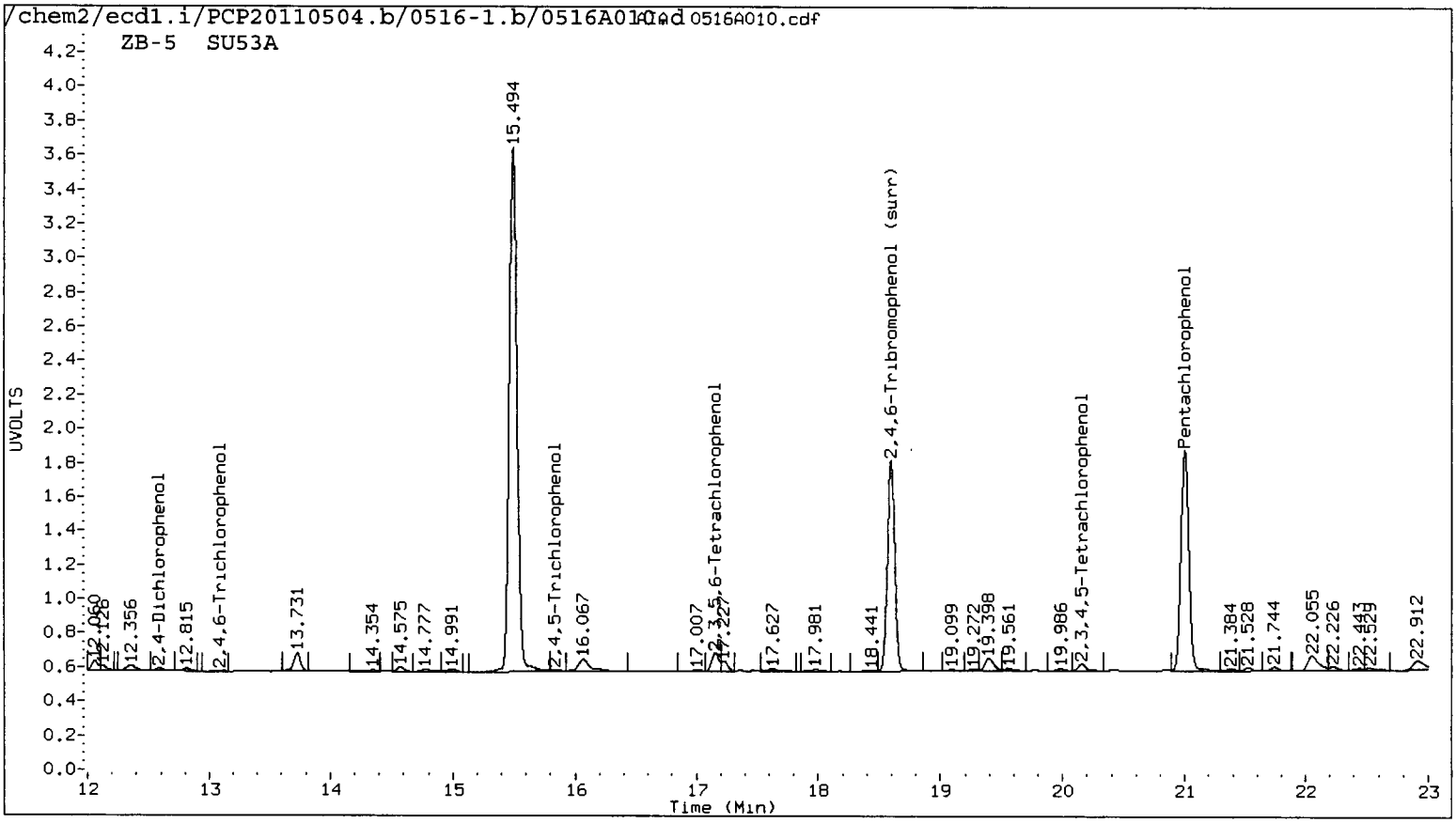
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A010.d ARI ID: SU53A
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A010.d Client ID: MW5042811
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 16-MAY-2011 17:25
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
20.999	0.002	289677	22.968	0.001	383485	14.3767	13.6177	5.4	Pentachlorophenol
13.088	-0.013	1585	14.317	0.006	1877	0.1302	0.1296	0.5	2,4,6-Trichlorophenol
----			15.544	-0.013	6029	0.0000	0.4195	---	2,3,6-Trichlorophenol
15.835	-0.010	2690	17.473	-0.002	2554	0.3494	0.3155	10.2	2,4,5-Trichlorophenol
----			19.019	-0.004	962	0.0000	0.0917	---	2,3,4-Trichlorophenol
17.154	0.002	22049	18.818	0.004	45902	1.3042	2.0924	46.4*	2,3,5,6-Tetrachlorophenol
20.158	0.003	8627	22.082	0.002	12397	0.6646	0.7263	8.9	2,3,4,5-Tetrachlorophenol
12.586	0.031	3021	----			3.7411	0.0000	---	2,4-Dichlorophenol
18.597	0.001	261720	20.937	0.001	338365	16.6	16.1	3.2	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	66.5	64.4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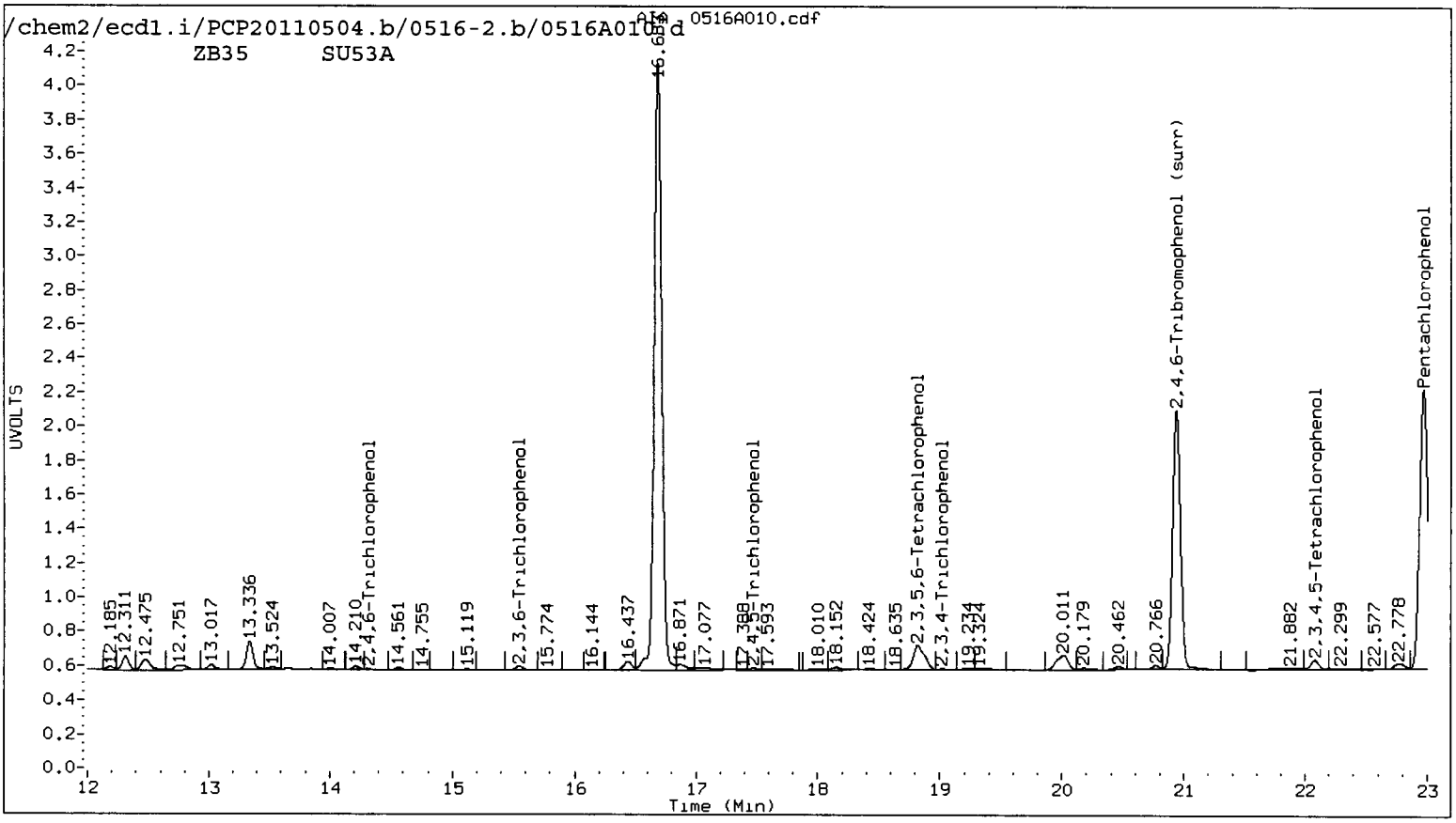
0516A010.cdf
ZB-5 SU53A
UVOLTS
Time (Min)
12.060
12.128
12.356
2,4-Dichlorophenol
12.815
2,4,6-Trichlorophenol
13.731
14.354
14.575
14.777
14.991
15.494
2,4,5-Trichlorophenol
16.067
17.007
2,3,5,6-Tetrachlorophenol
17.627
17.981
18.441
2,4,6-Tribromophenol (surr)
19.099
19.272
19.398
19.561
19.986
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
21.384
21.528
21.744
22.055
22.226
22.443
22.529
22.912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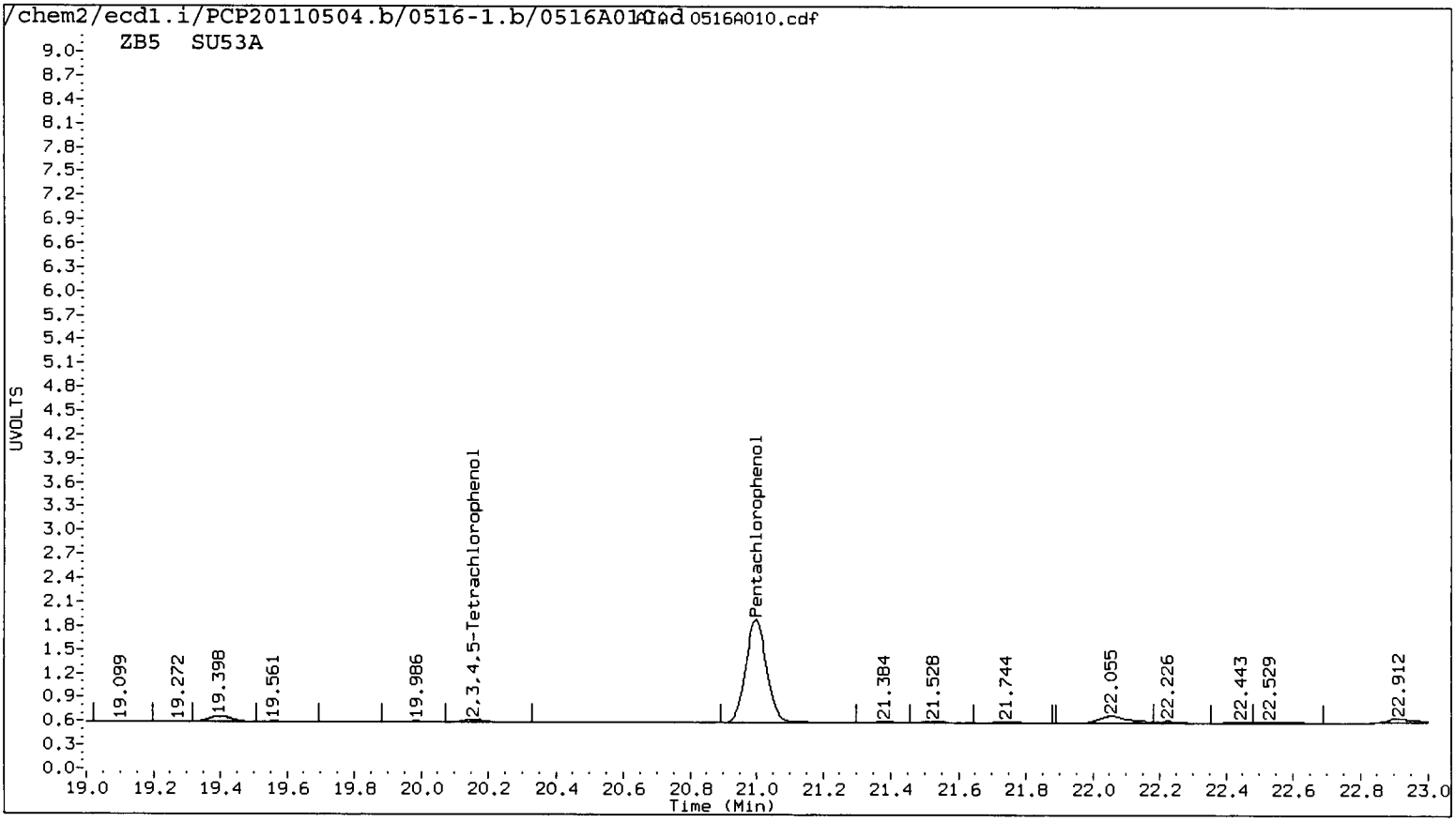
0516A010.cdf
ZB35 SU53A
UVOLTS
Time (Min)
12.185
12.311
12.475
12.751
13.017
13.336
13.524
14.007
14.210
2,4,6-Trichlorophenol
14.561
14.755
15.119
2,3,6-Trichlorophenol
15.774
16.144
16.437
16.687
16.871
17.077
17.388
2,4,5-Trichlorophenol
17.593
18.010
18.152
18.424
18.635
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
19.234
19.324
20.011
20.179
20.462
20.766
2,4,6-Tribromophenol (surr)
21.882
2,3,4,5-Tetrachlorophenol
22.299
22.577
22.778
Pentachlorophenol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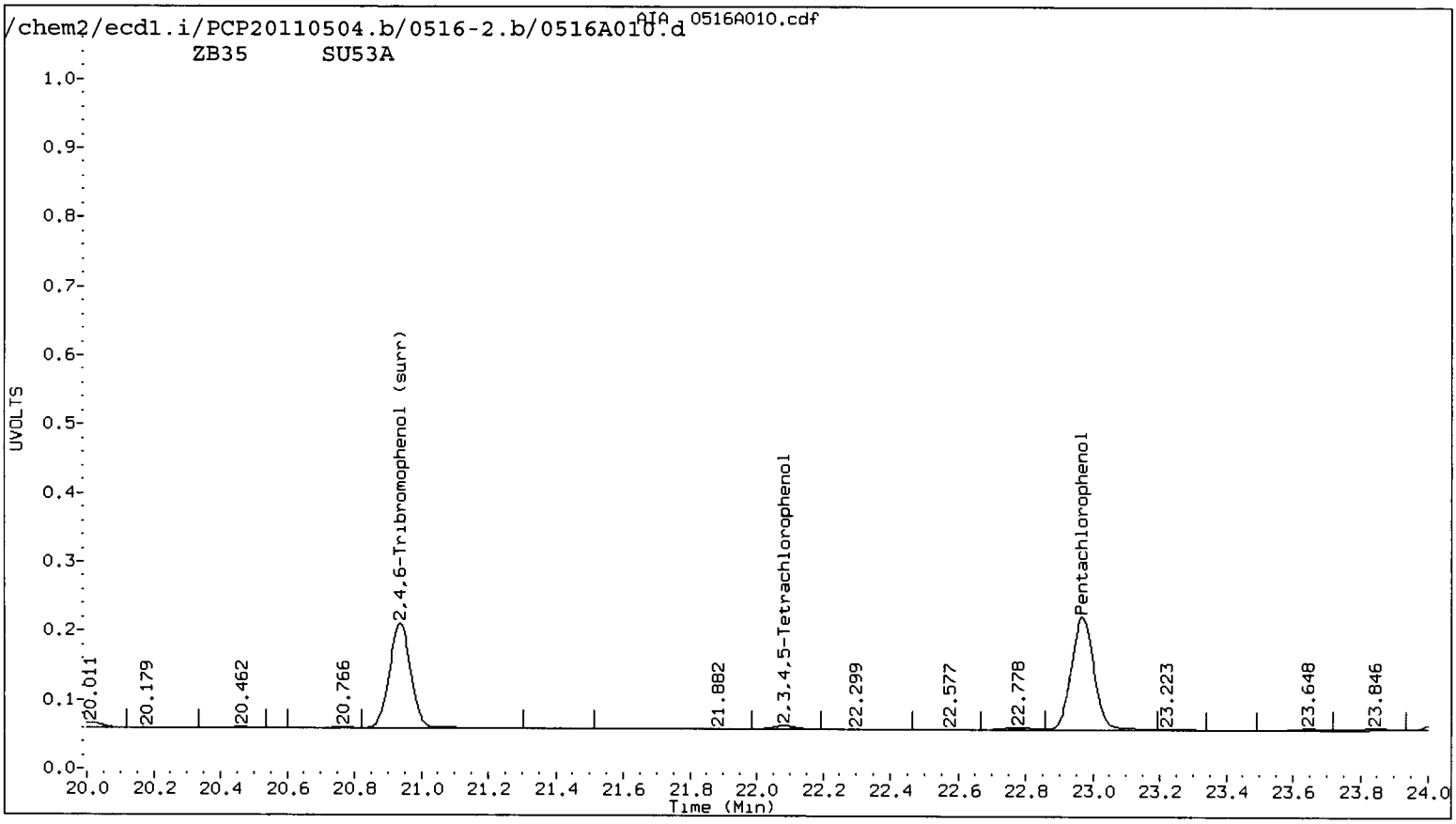
AIA 0516A010.cdf
ZB5 SU53A
UVOLTS
Time (Min)
19.099
19.272
19.398
19.561
19.986
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
21.384
21.528
21.744
22.055
22.226
22.443
22.529
22.912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AIA 0516A010.cdf
ZB35 SU53A
UVOLTS
Time (Min)
20.011
20.179
20.462
20.766
2,4,6-Tribromophenol (surr)
21.882
2,3,4,5-Tetrachlorophenol
22.299
22.577
22.778
Pentachlorophenol
23.223
23.648
23.846

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A010.d
Date : 16-MAY-2011 17:25
Client ID: MW5042811
Sample Info: SU53A
Purge Volume: 500.0
Column phase: STX CLP1

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

/chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A010.d/0516A010.cdf

UVOLTS (x10^4)

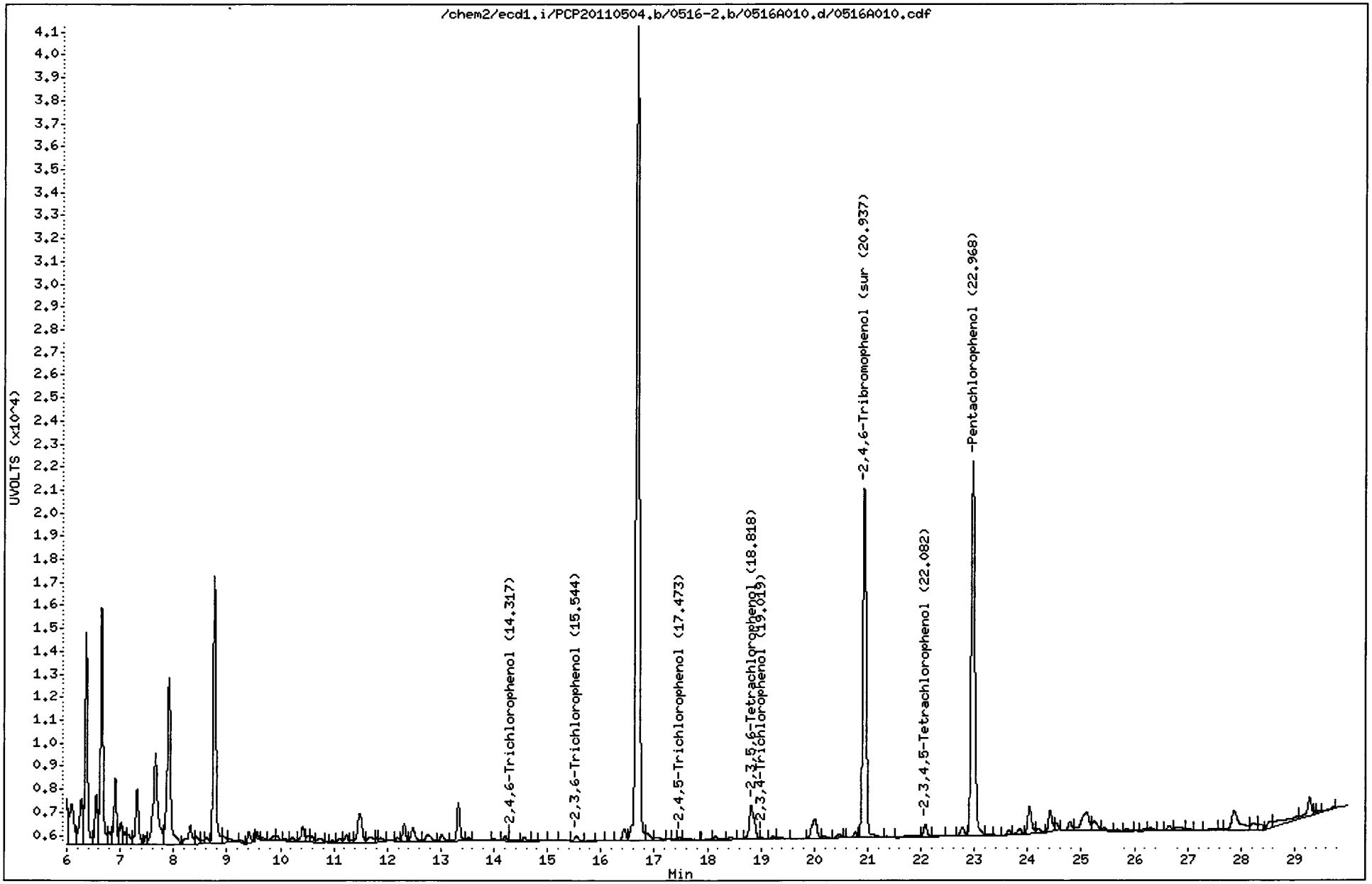
-2,4-Dichlorophenol (12.586)
-2,4,6-Trichlorophenol (13.088)
-2,4,5-Trichlorophenol (15.835)
-2,3,5,6-Tetrachlorophenol (17.154)
-2,4,6-Tribromophenol (sur (18.597)
-2,3,4,5-Tetrachlorophenol (20.158)
-Pentachlorophenol (20.999)

Min

SU53 : 52800

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A010.d
Date : 16-MAY-2011 17:25
Client ID: MW5042811
Sample Info: SU53A
Purge Volume: 500.0
Column phase: STX CLP2

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



SU53 : 00826

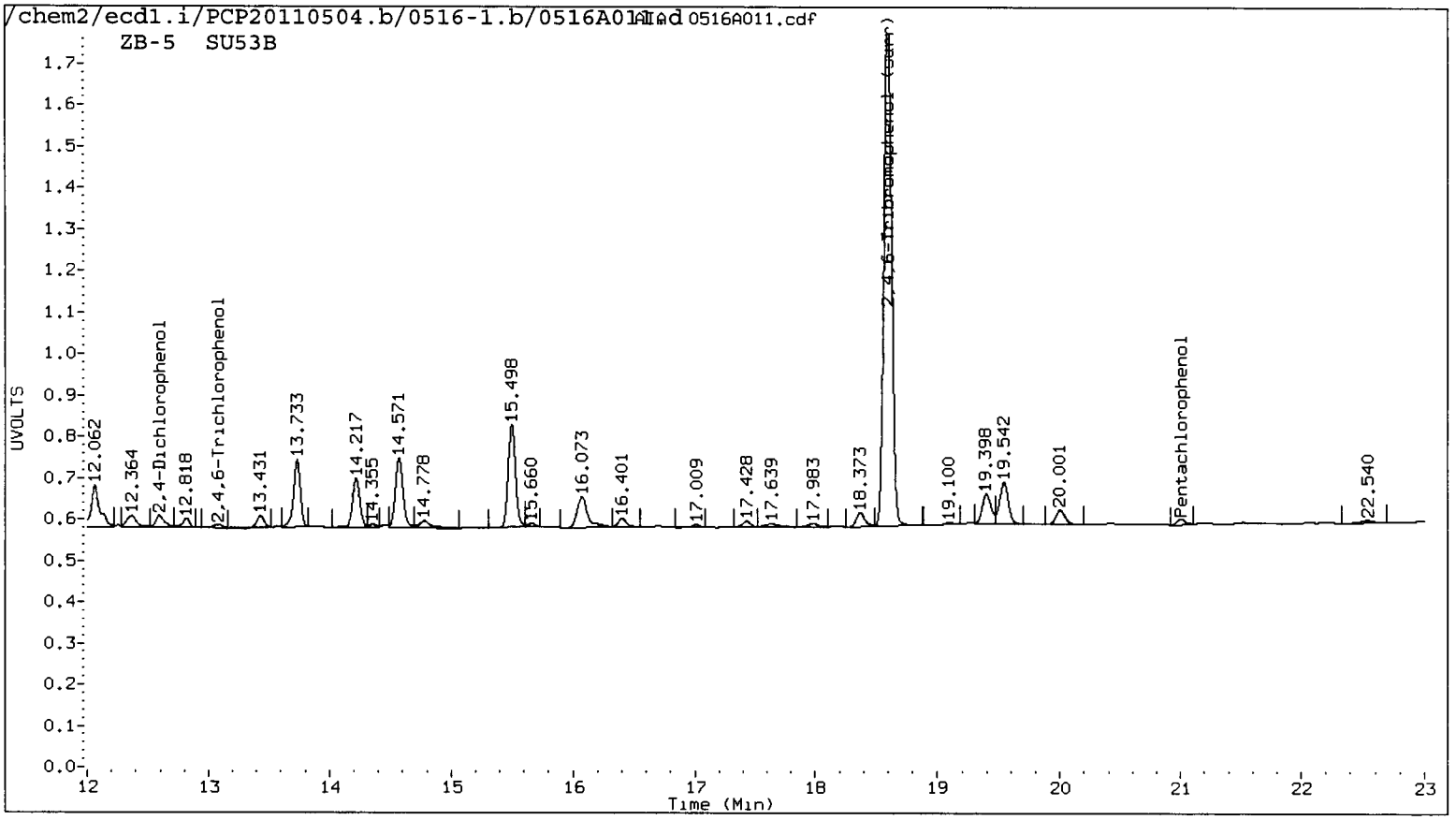
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A011.d ARI ID: SU53B
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A011.d Client ID: MW15042811
Method: /chem2/ecd1.i/PCP.m Injection Date: 16-MAY-2011 18:01
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.004	0.007	3050	22.972	0.005	5071	0.1514	0.1801	17.3	Pentachlorophenol
13.079	-0.022	1969	----			0.1618	0.0000	---	2,4,6-Trichlorophenol
----			15.535	-0.022	2406	0.0000	0.1674	---	2,3,6-Trichlorophenol
----			----			0.0000	0.0000	---	2,4,5-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,4-Trichlorophenol
----			18.827	0.013	2342	0.0000	0.1068	---	2,3,5,6-Tetrachlorophenol
----			22.078	-0.002	1426	0.0000	0.0833	---	2,3,4,5-Tetrachlorophenol
12.590	0.035	7449	----			9.2834	0.0000	---	2,4-Dichlorophenol
18.598	0.002	267390	20.938	0.002	349655	17.0	16.6	2.1	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	67.9	66.5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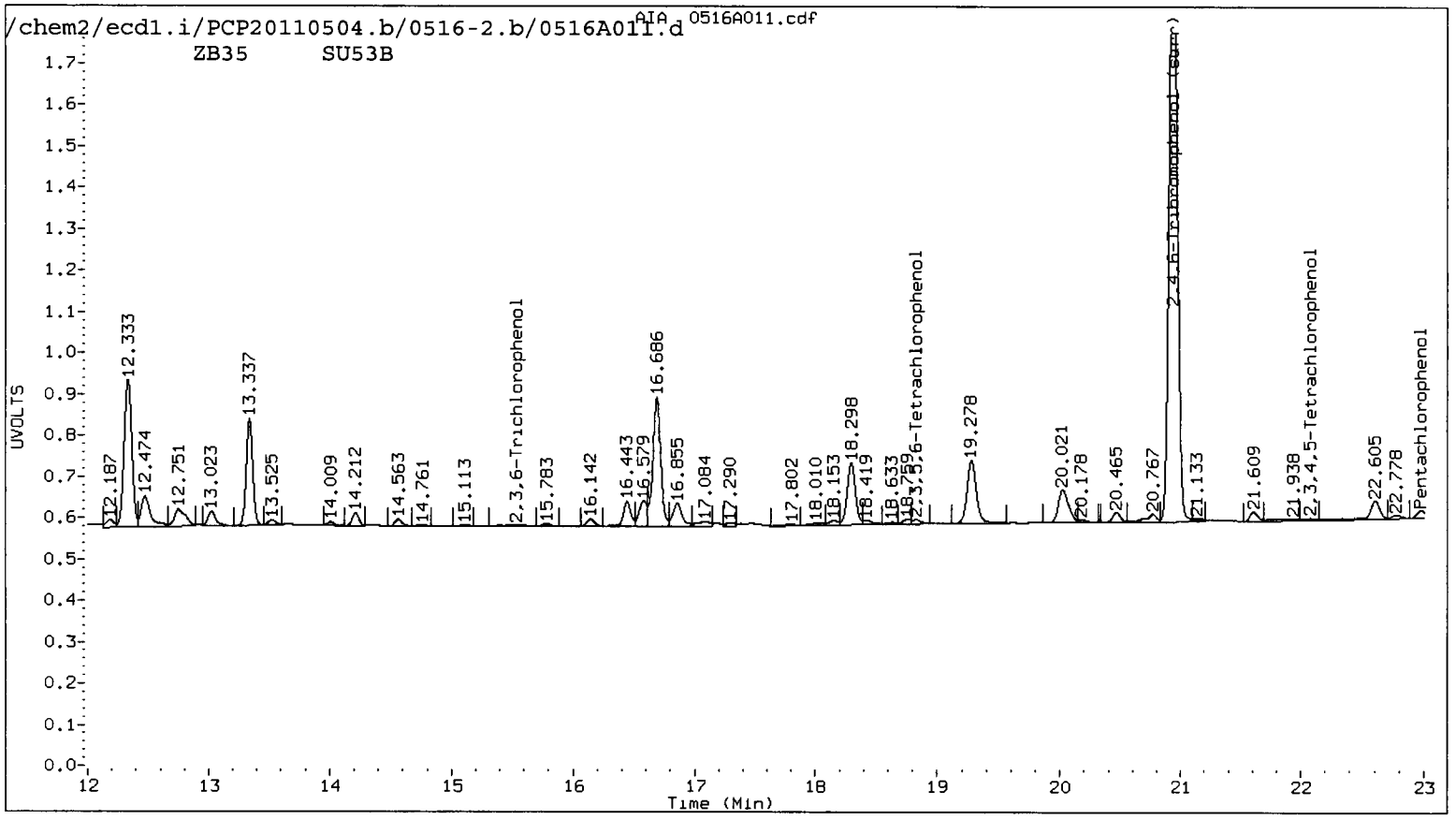
AIA 0516A011.cdf
ZB-5 SU53B
UVOLTS
Time (Min)
12.062
12.364
2,4-Dichlorophenol
12.818
2,4,6-Trichlorophenol
13.431
13.733
14.217
14.355
14.571
14.778
15.498
15.660
16.073
16.401
17.009
17.428
17.639
17.983
18.373
2,4,6-Tribromophenol (surr)
19.100
19.398
19.542
20.001
Pentachlorophenol
22.540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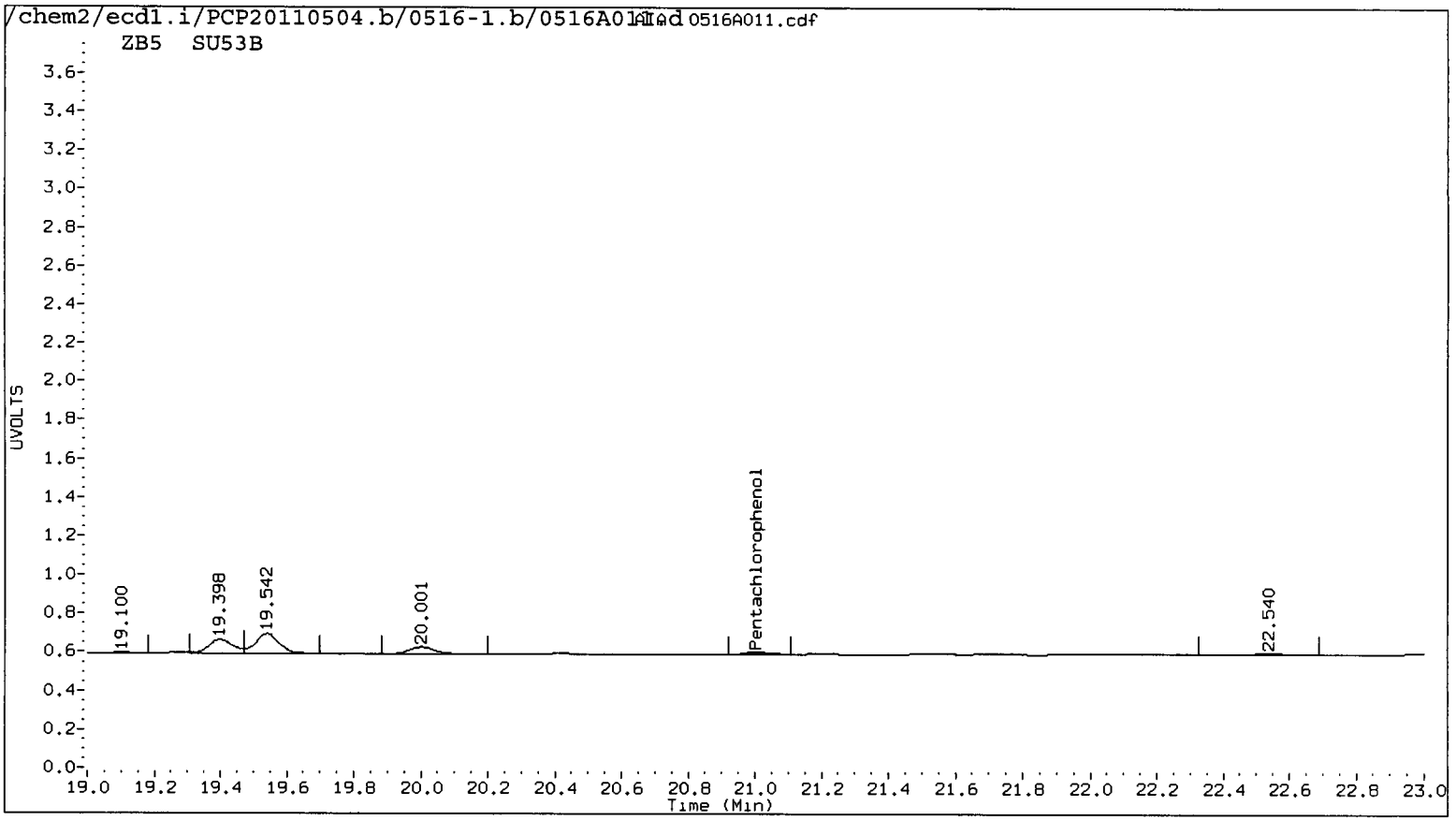
AIA 0516A011.cdf
ZB35 SU53B
UVOLTS
Time (Min)
12.187
12.333
12.474
12.751
13.023
13.337
13.525
14.009
14.212
14.563
14.761
15.113
2,3,6-Trichlorophenol
15.783
16.142
16.443
16.579
16.686
16.855
17.084
17.290
17.802
18.010
18.153
18.298
18.419
18.633
18.759
2,3,5,6-Tetrachlorophenol
19.278
20.021
20.178
20.465
20.767
2,4,6-Tribromophenol (surr)
21.133
21.609
21.938
2,3,4,5-Tetrachlorophenol
22.605
22.778
Pentachlorophenol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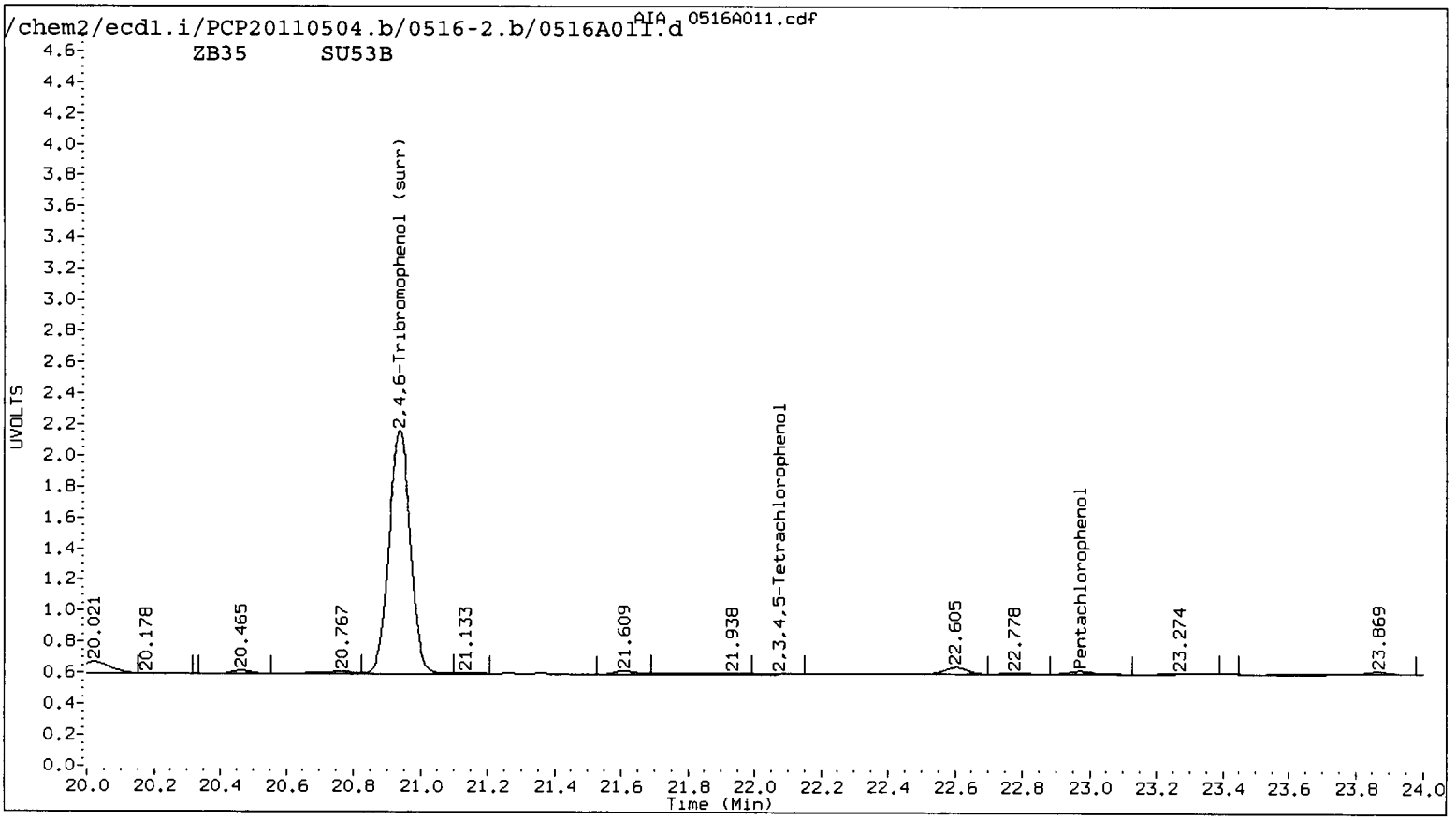
ZB5 SU53B
UVOLTS
Time (Min)
19.100
19.398
19.542
20.001
Pentachlorophenol
22.540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ZB35 SU53B
UVOLTS
Time (Min)
20.021
20.178
20.465
20.767
2,4,6-Tribromophenol (surr)
21.133
21.609
21.938
2,3,4,5-Tetrachlorophenol
22.605
22.778
Pentachlorophenol
23.274
23.869

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A011.d

Page 1

Date : 16-MAY-2011 18:01

Client ID: MW15042811

Instrument: ecd1.i

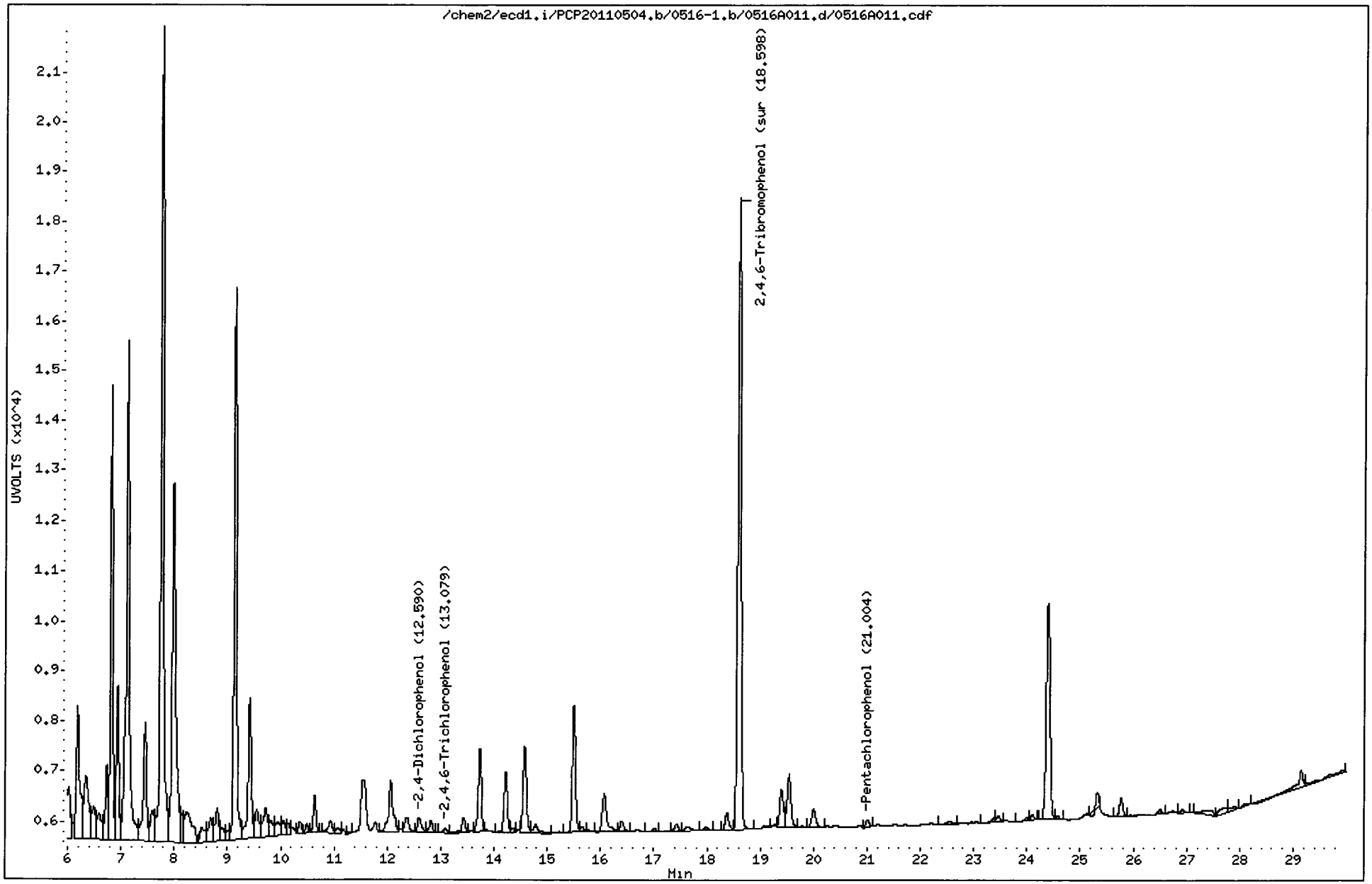
Sample Info: SU53B

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

Column diameter: 0.53



SU53 : 008230

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A011.d

Date : 16-MAY-2011 18:01

Client ID: MW15042811

Instrument: ecd1.i

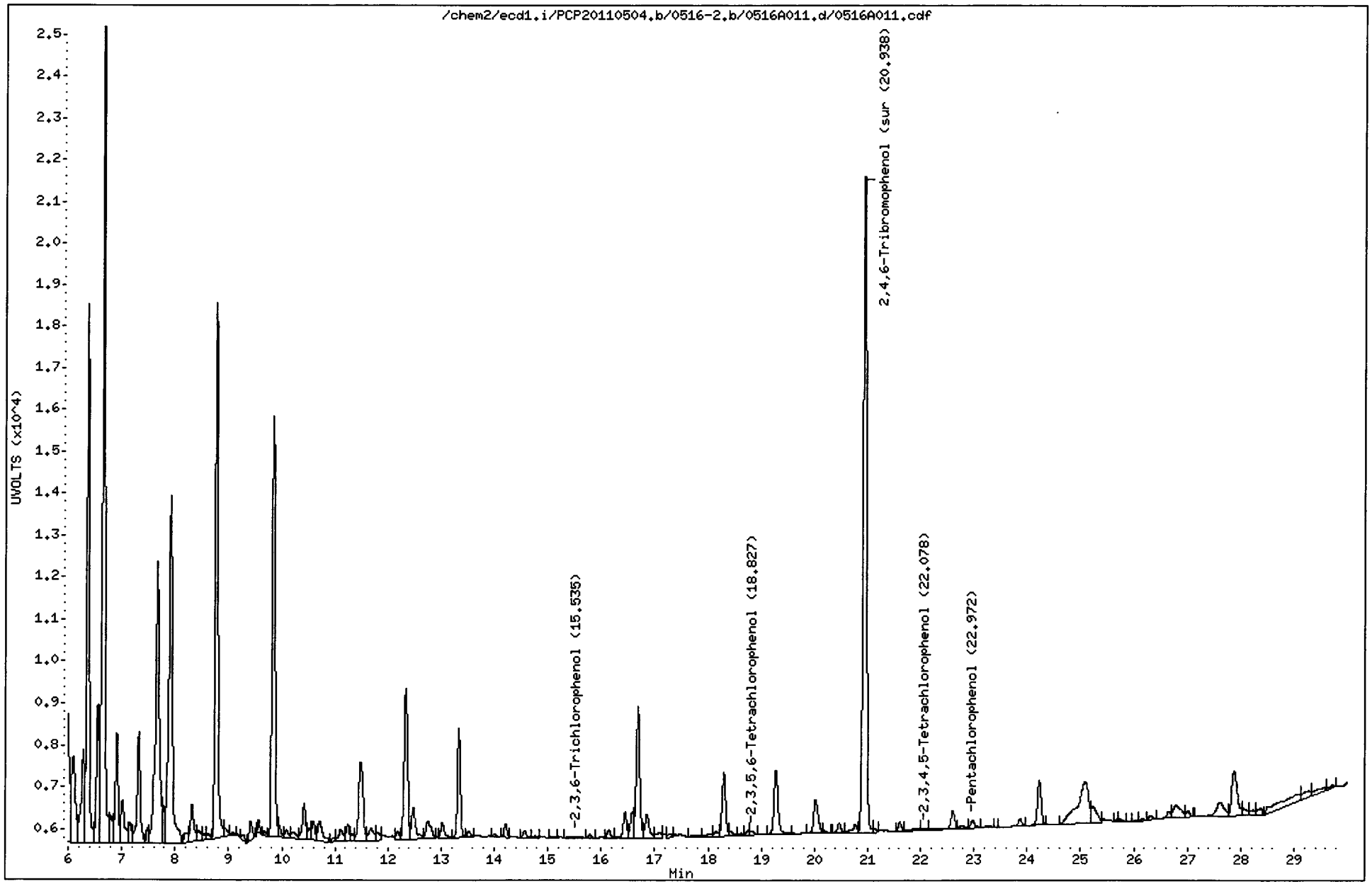
Sample Info: SU53B

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



SU53 : 00831

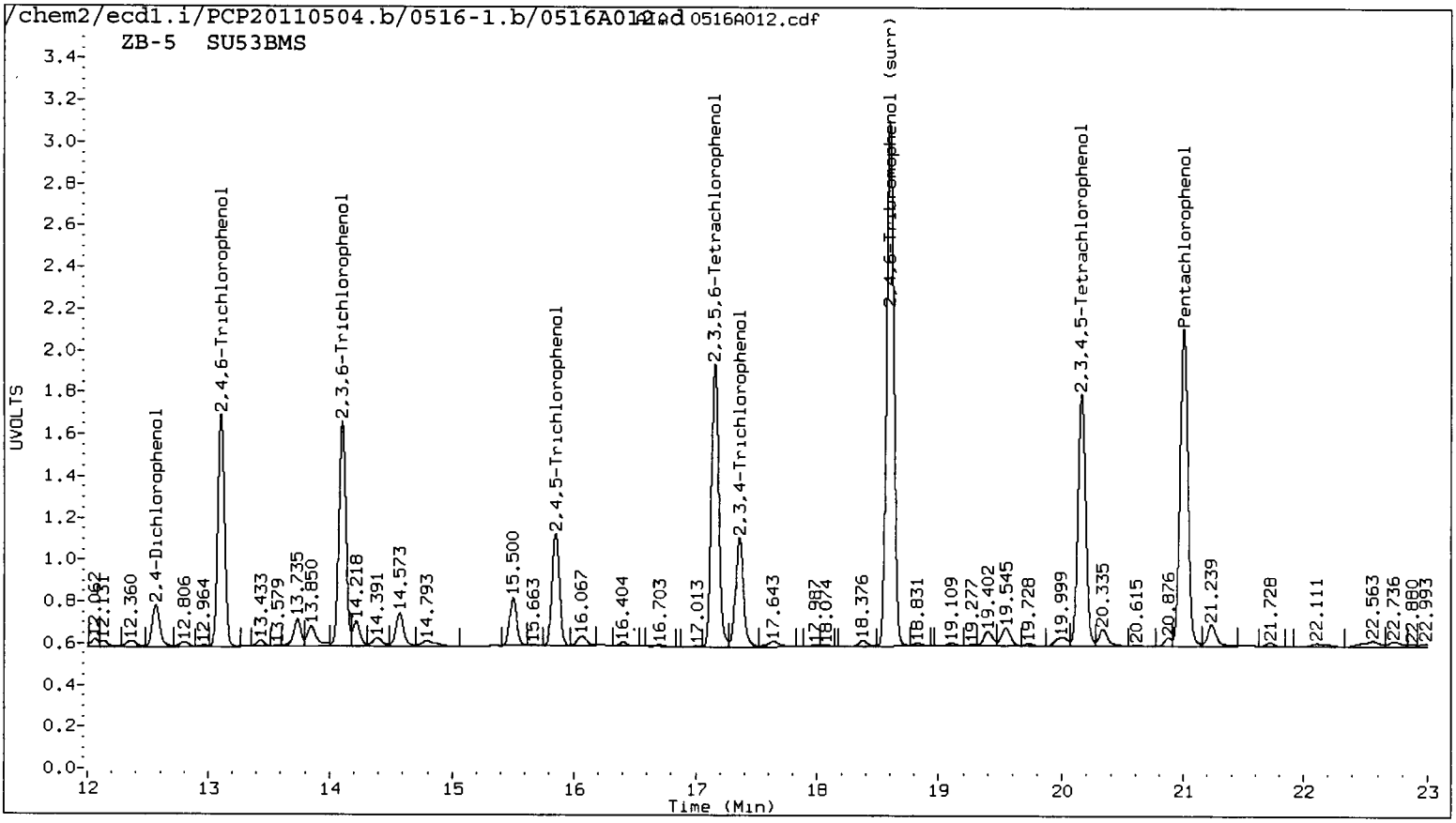
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A012.d ARI ID: SU53BMS
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A012.d Client ID: MW15042811 MS
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 16-MAY-2011 18:37
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col RT	ZB-5 Col Shift	ZB-5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB-5 on col	ZB35 on col	RPD	Compound
21.002	0.005	341784	22.972	0.005	475761	16.9627	16.8944	0.4	Pentachlorophenol
13.105	0.004	218292	14.315	0.004	254514	17.9328	17.5603	2.1	2,4,6-Trichlorophenol
14.101	0.004	218366	15.562	0.005	265409	19.0669	18.4653	3.2	2,3,6-Trichlorophenol
15.850	0.005	113816	17.479	0.005	137092	16.4032	16.9340	3.2	2,4,5-Trichlorophenol
17.357	0.005	118034	19.027	0.004	134244	14.1268	13.8845	1.7	2,3,4-Trichlorophenol
17.157	0.004	287593	18.818	0.004	361154	17.0106	16.4625	3.3	2,3,5,6-Tetrachlorophenol
20.160	0.005	270870	22.084	0.004	334901	20.8655	21.6203	3.6	2,3,4,5-Tetrachlorophenol
12.561	0.006	43384	13.825	0.005	44834	56.8289	53.8633	5.4	2,4-Dichlorophenol
18.600	0.005	531775	20.940	0.004	686825	33.8	32.7	3.3	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	67.9	67.6
2,4,6-Trichlorophenol	71.7	70.2
2,3,6-Trichlorophenol	76.3	73.9
2,4,5-Trichlorophenol	65.6	67.7
2,3,4-Trichlorophenol	56.5	55.5
2,3,5,6-Tetrachlorophenol	68.0	65.9
2,3,4,5-Tetrachlorophenol	83.5	86.5
2,4-Dichlorophenol	22.7	21.5
2,4,6-TBP (surr)	67.6	65.3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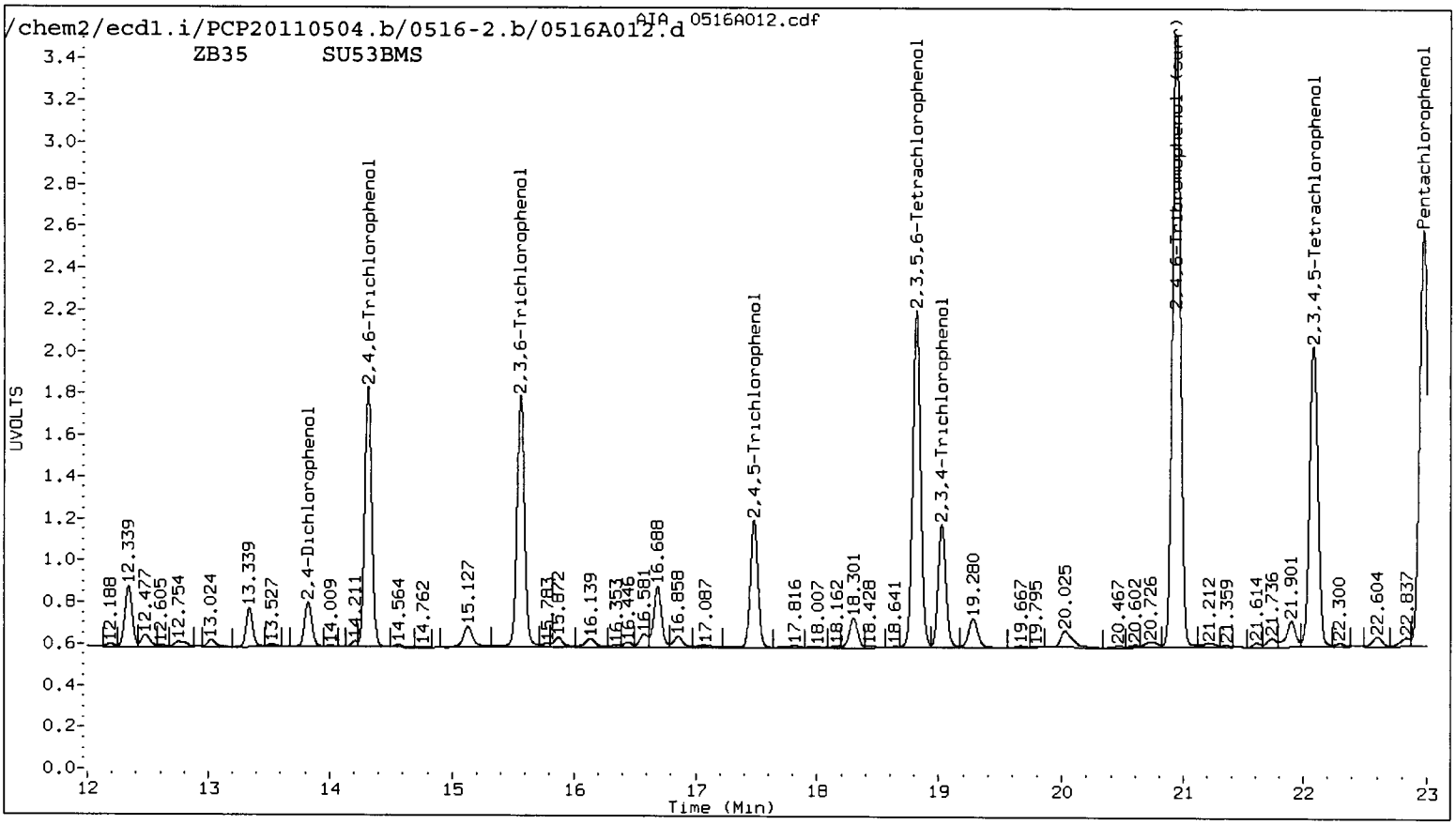
0516A012.cdf
ZB-5 SU53BMS
UVOLTS
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
Time (Min)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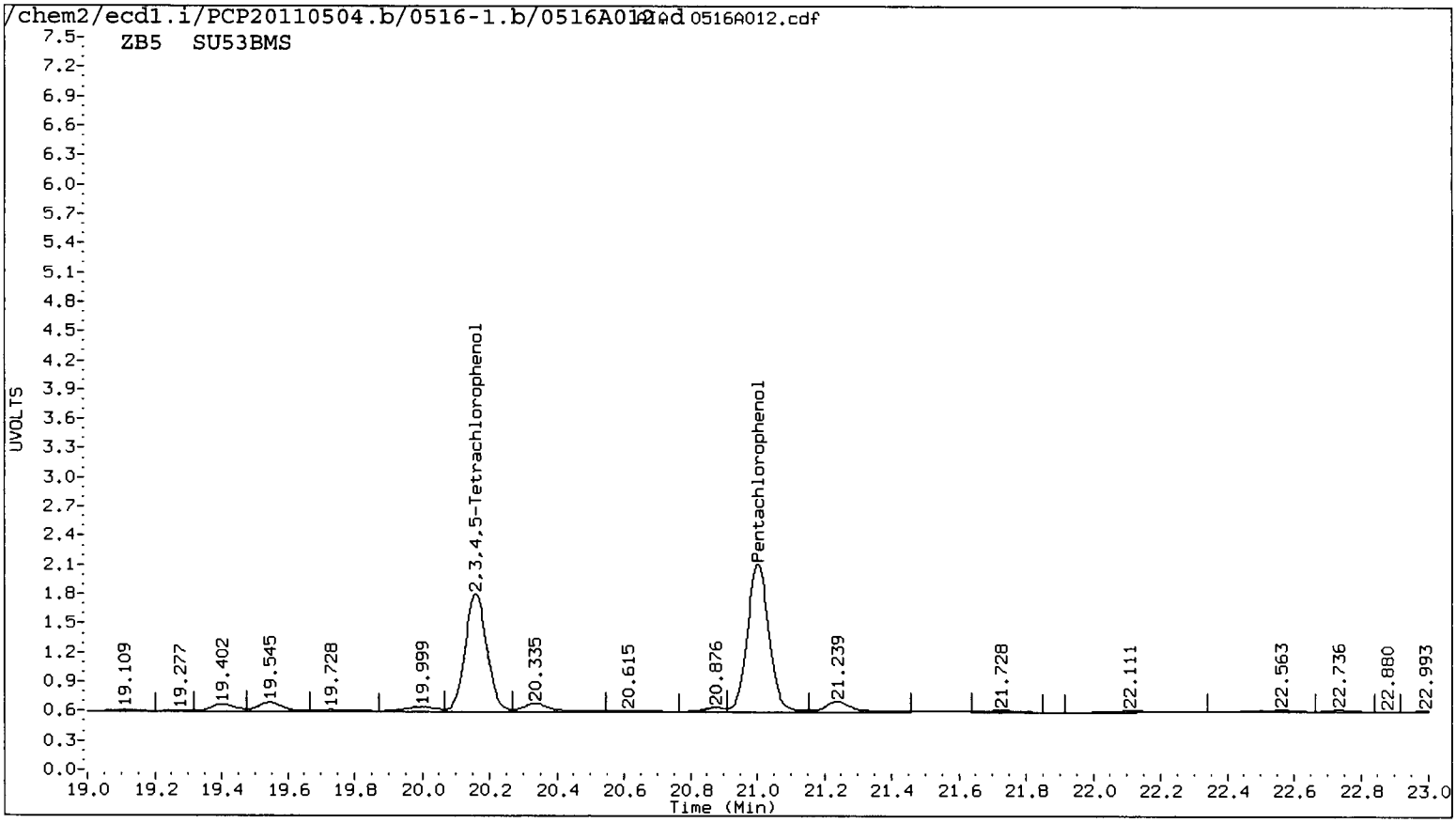
0516A012.cdf
ZB35 SU53BMS
UVOLTS
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
Time (Min)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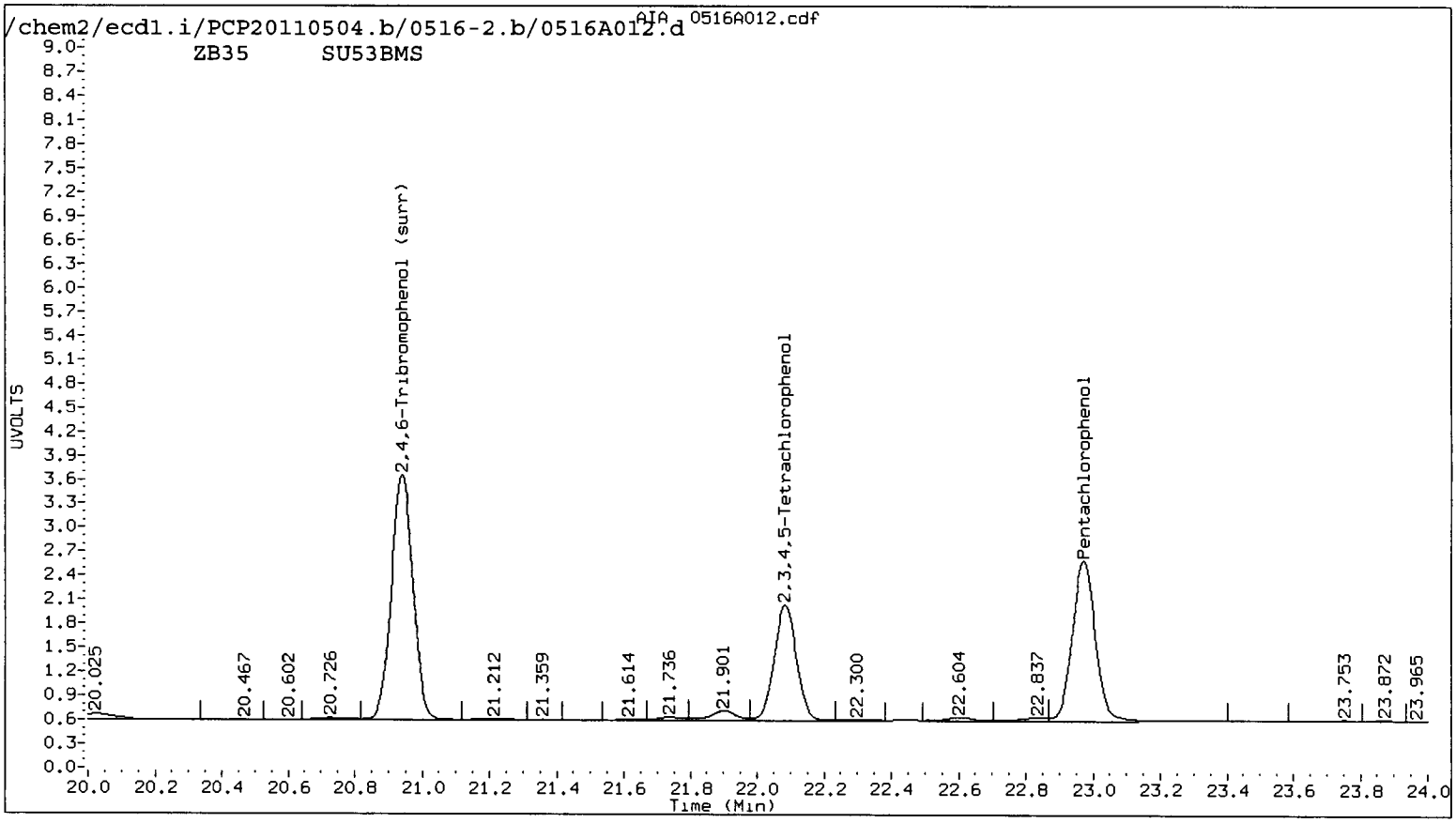
0516A012.cdf
ZB5 SU53BMS
UVOLTS
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
19.109
19.277
19.402
19.545
19.728
19.999
20.335
20.615
20.876
21.239
21.728
22.111
22.563
22.736
22.880
22.993
Time (Min)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0516A012.cdf
ZB35 SU53BMS
UVOLTS
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
20.025
20.467
20.602
20.726
21.212
21.359
21.614
21.736
21.901
22.300
22.604
22.837
23.753
23.872
23.965
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A012.d

Page 1

Date : 16-MAY-2011 18:37

Client ID: MW15042811 MS

Instrument: ecd1.i

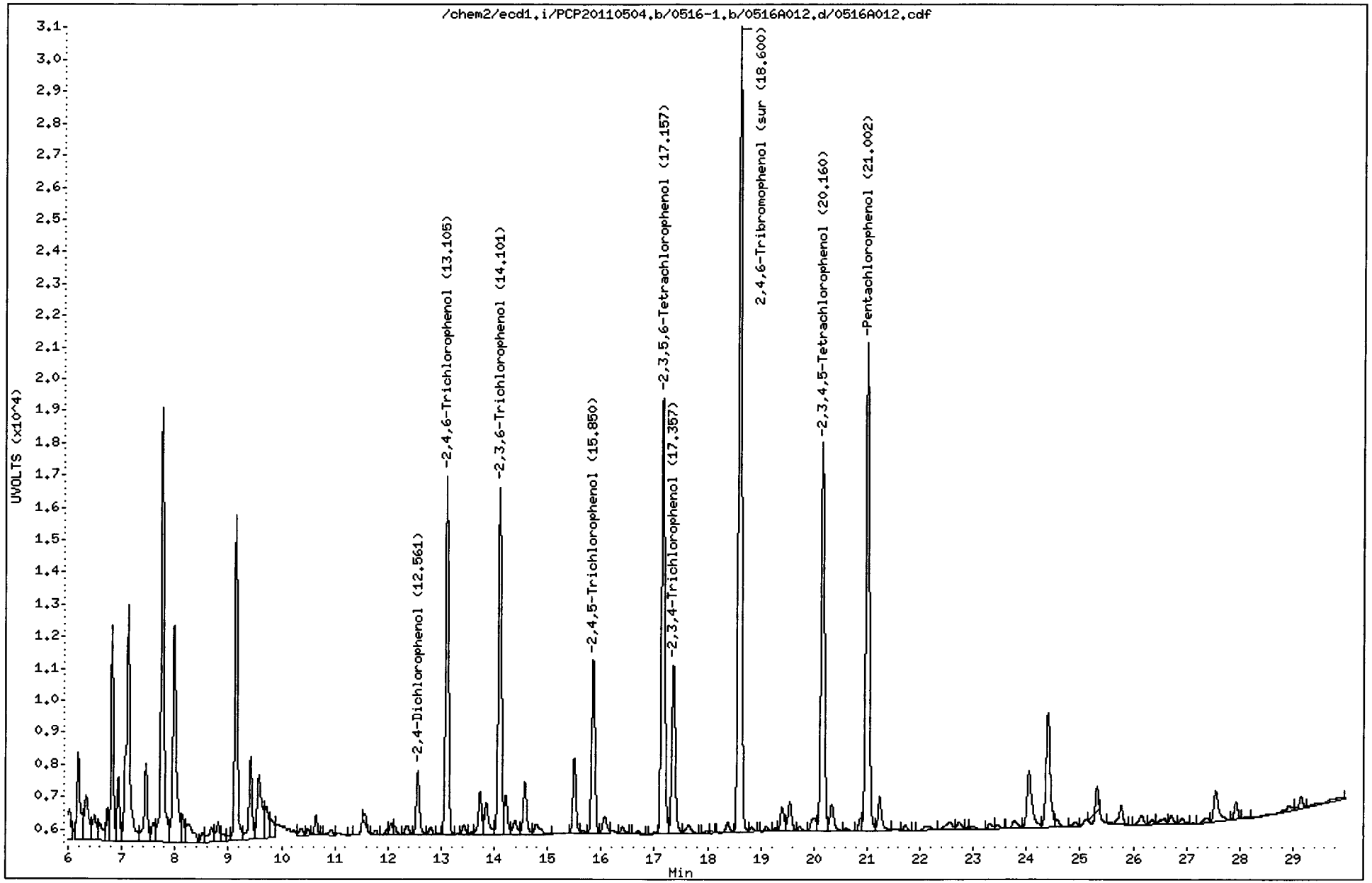
Sample Info: SU53BMS

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

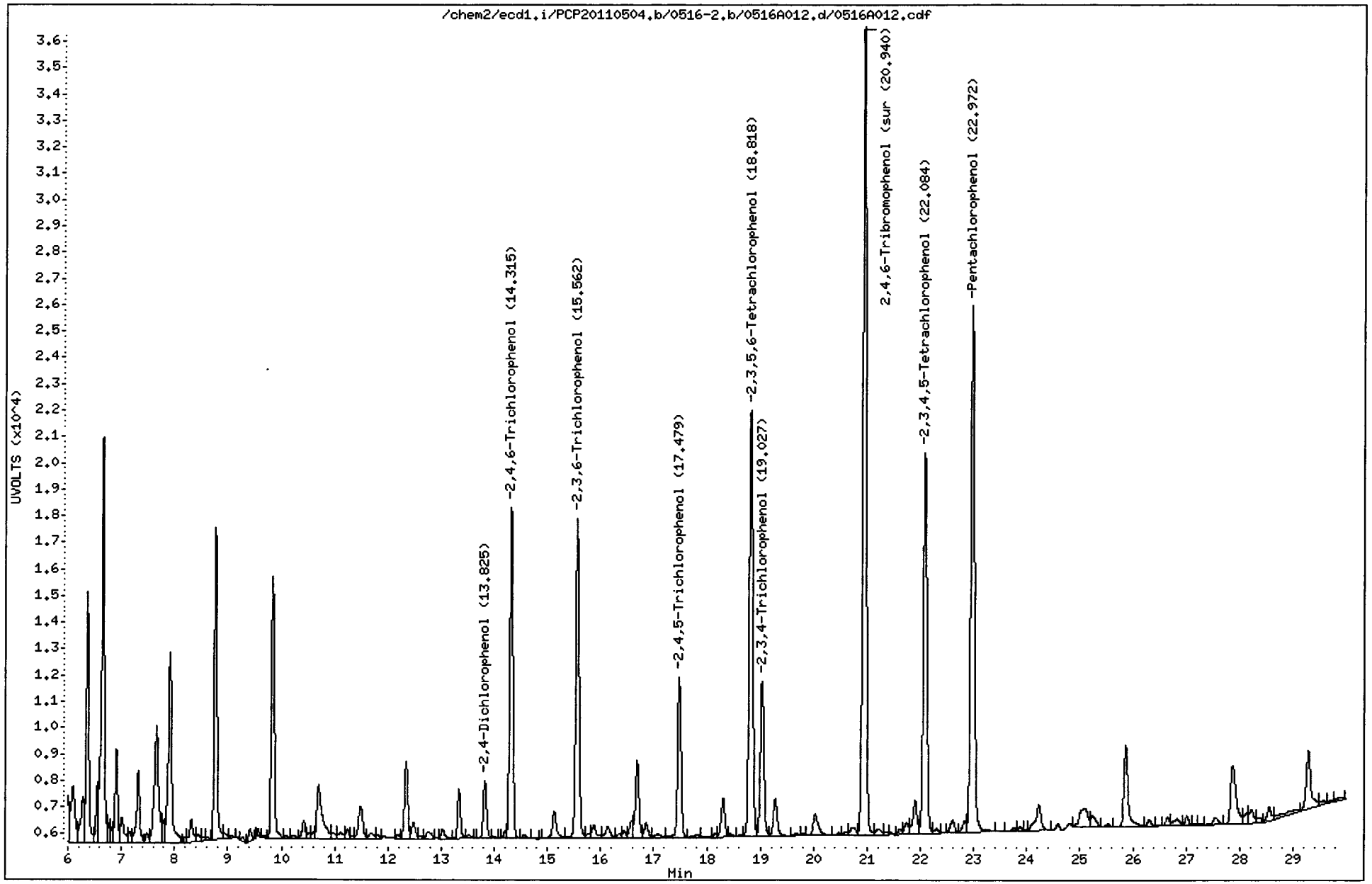
Column diameter: 0.53



SU53 : 00835

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A012.d
Date : 16-MAY-2011 18:37
Client ID: MW15042811 MS
Sample Info: SU53BMS
Purge Volume: 500.0
Column phase: STX CLP2

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



SU53 : 008836

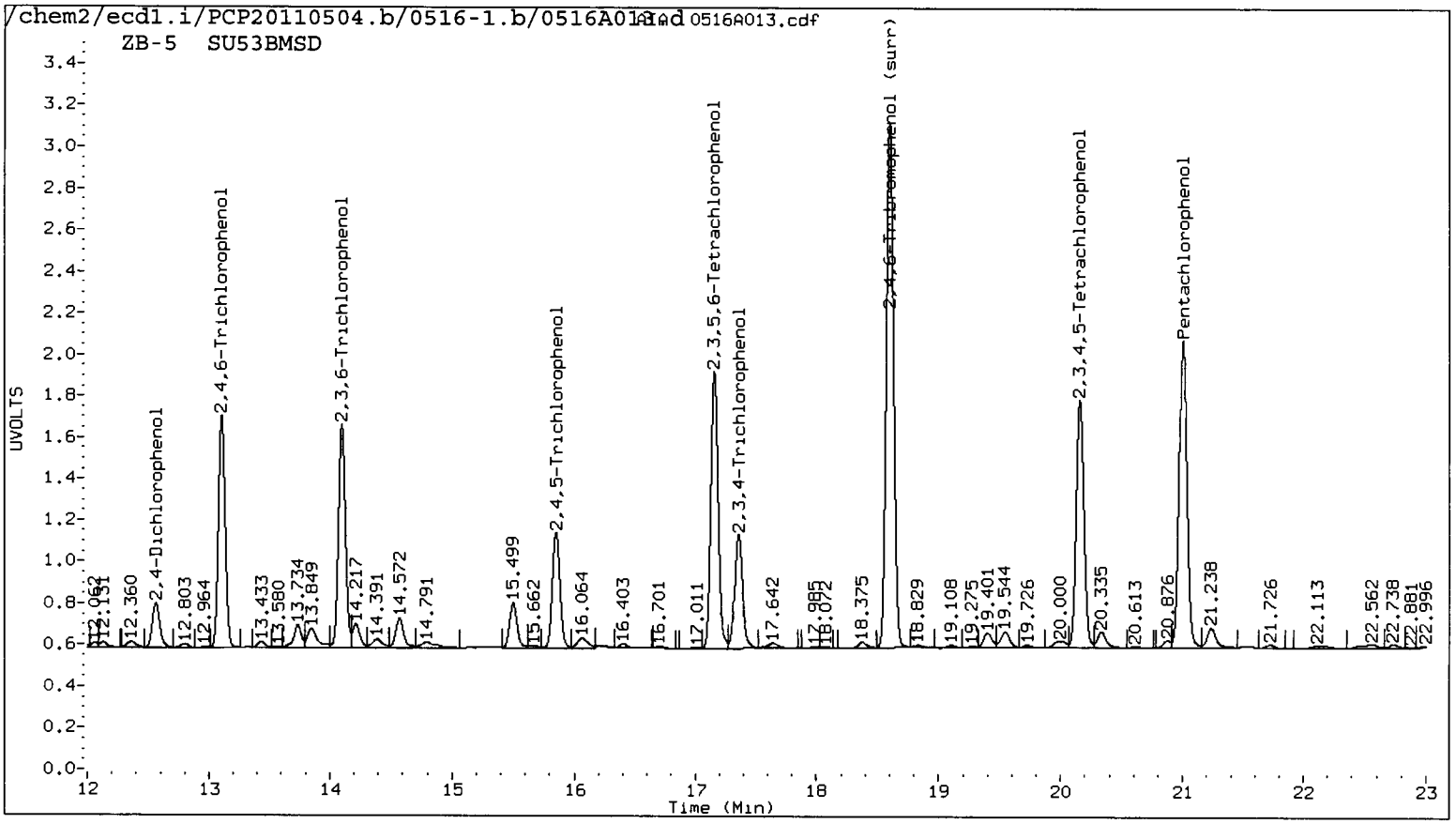
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A013.d ARI ID: SU53BMSD
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A013.d Client ID: MW15042811 MSD
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 16-MAY-2011 19:14
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.002	0.005	333163	22.972	0.005	464693	16.5348	16.5014	0.2	Pentachlorophenol
13.104	0.003	219576	14.314	0.003	255632	18.0383	17.6374	2.2	2,4,6-Trichlorophenol
14.100	0.003	218963	15.561	0.004	264103	19.1191	18.3745	4.0	2,3,6-Trichlorophenol
15.849	0.004	118587	17.477	0.003	138450	17.1633	17.1017	0.4	2,4,5-Trichlorophenol
17.356	0.004	123706	19.027	0.004	140899	14.8057	14.6304	1.2	2,3,4-Trichlorophenol
17.156	0.004	284068	18.817	0.003	356655	16.8021	16.2574	3.3	2,3,5,6-Tetrachlorophenol
20.159	0.004	268654	22.084	0.004	333661	20.6948	21.5326	4.0	2,3,4,5-Tetrachlorophenol
12.561	0.006	45091	13.824	0.004	48235	59.2014	58.2305	1.7	2,4-Dichlorophenol
18.599	0.004	533514	20.940	0.004	691309	33.9	32.9	3.0	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	66.1	66.0
2,4,6-Trichlorophenol	72.2	70.5
2,3,6-Trichlorophenol	76.5	73.5
2,4,5-Trichlorophenol	68.7	68.4
2,3,4-Trichlorophenol	59.2	58.5
2,3,5,6-Tetrachlorophenol	67.2	65.0
2,3,4,5-Tetrachlorophenol	82.8	86.1
2,4-Dichlorophenol	23.7	23.3
2,4,6-TBP (surr)	67.8	65.8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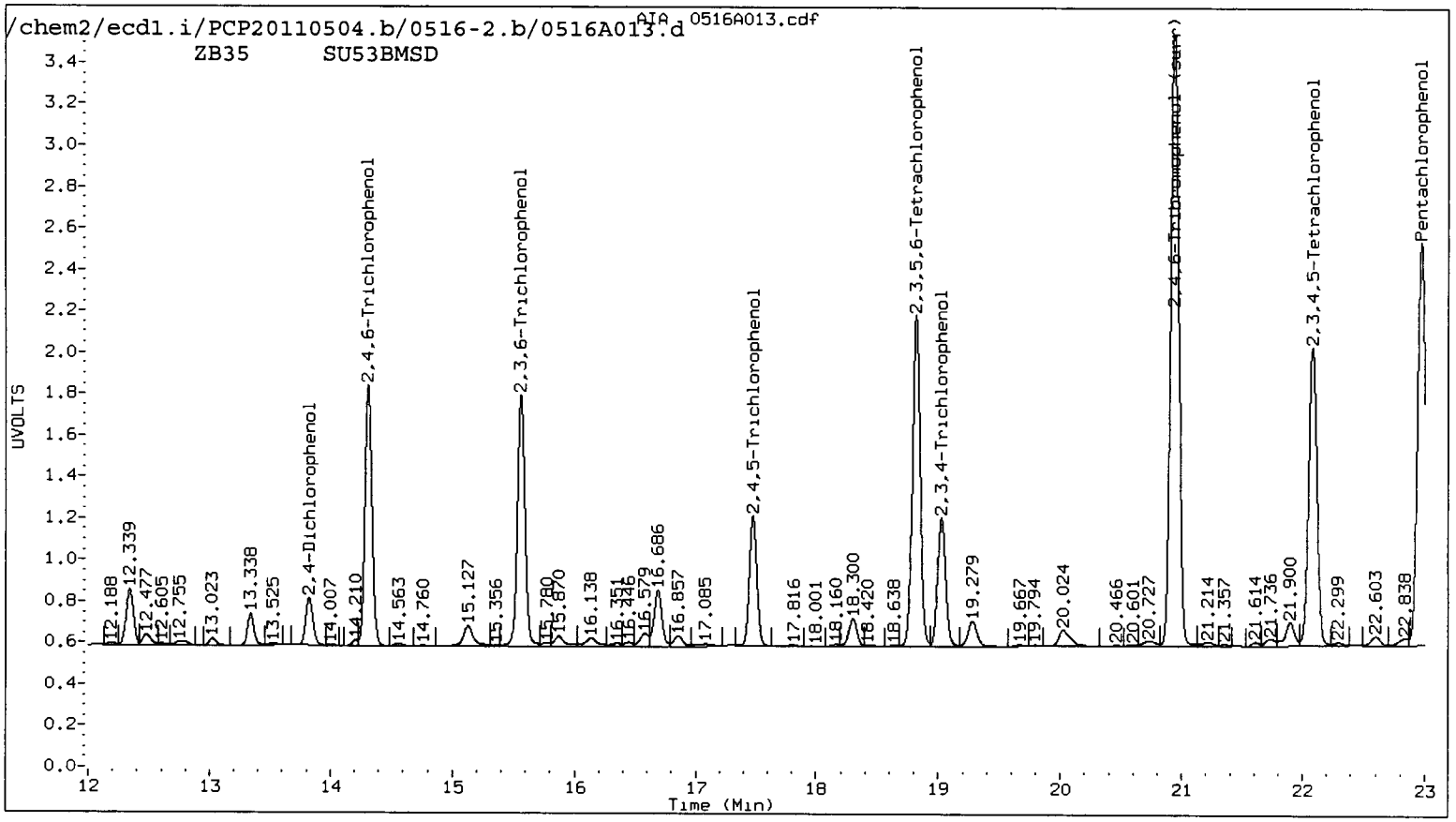
AIA 0516A013.cdf
ZB-5 SU53BMSD
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol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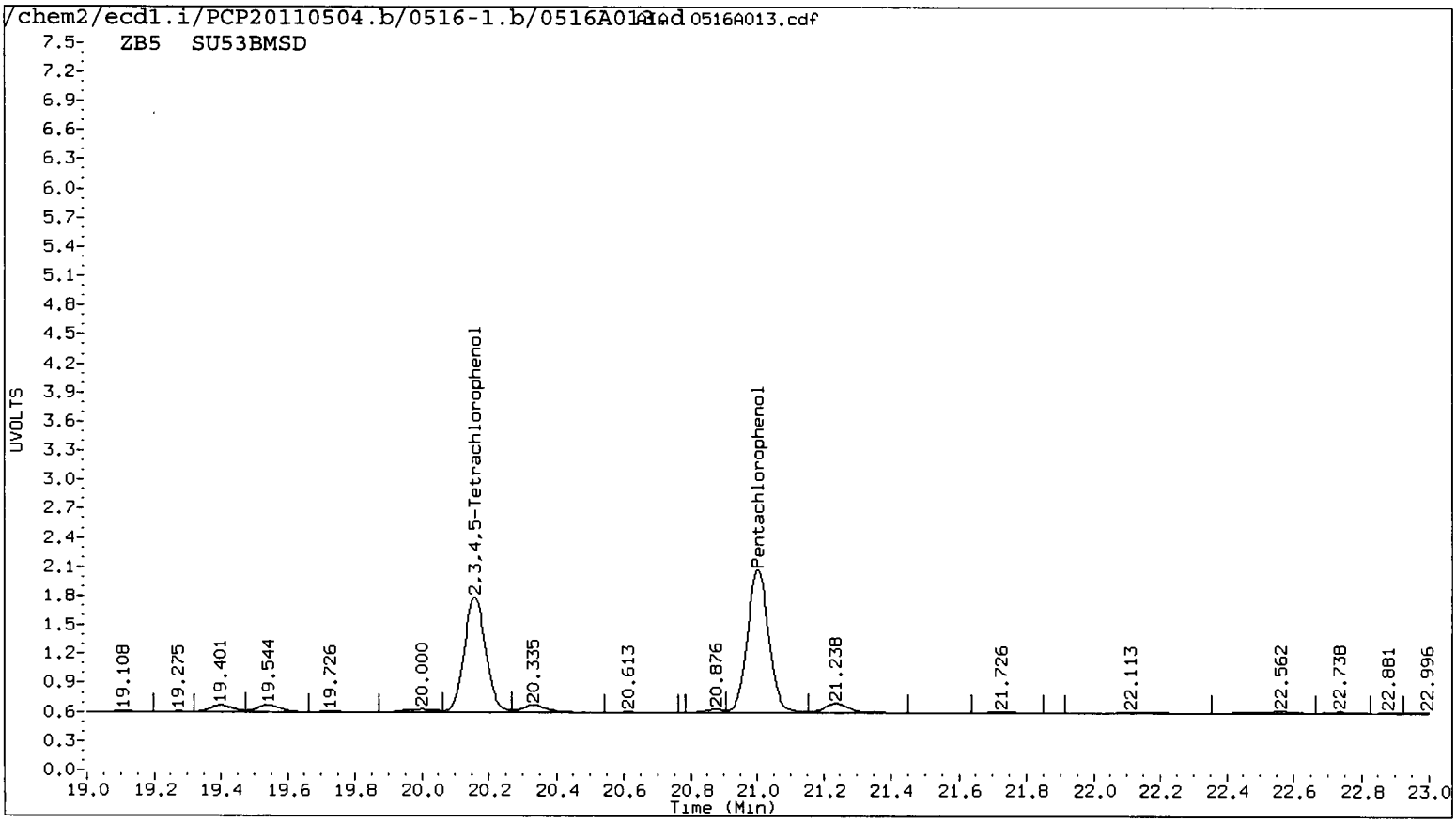
AIA 0516A013.cdf
ZB35 SU53BMSD
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol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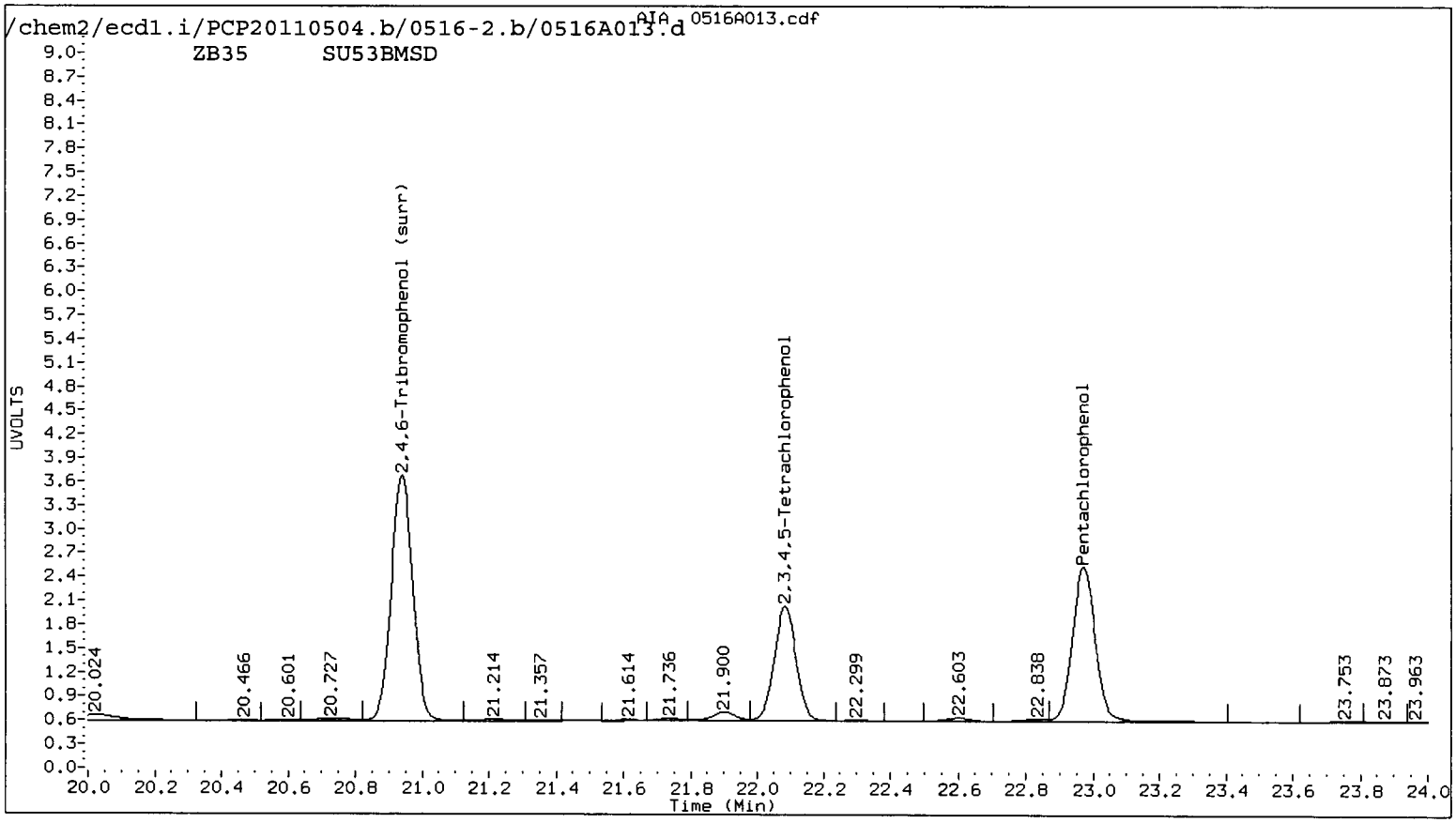
AIA 0516A013.cdf
ZB5 SU53BMSD
UVOLTS
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
19.108
19.275
19.401
19.544
19.726
20.000
20.335
20.613
20.876
21.238
21.726
22.113
22.562
22.738
22.881
22.996
Time (Min)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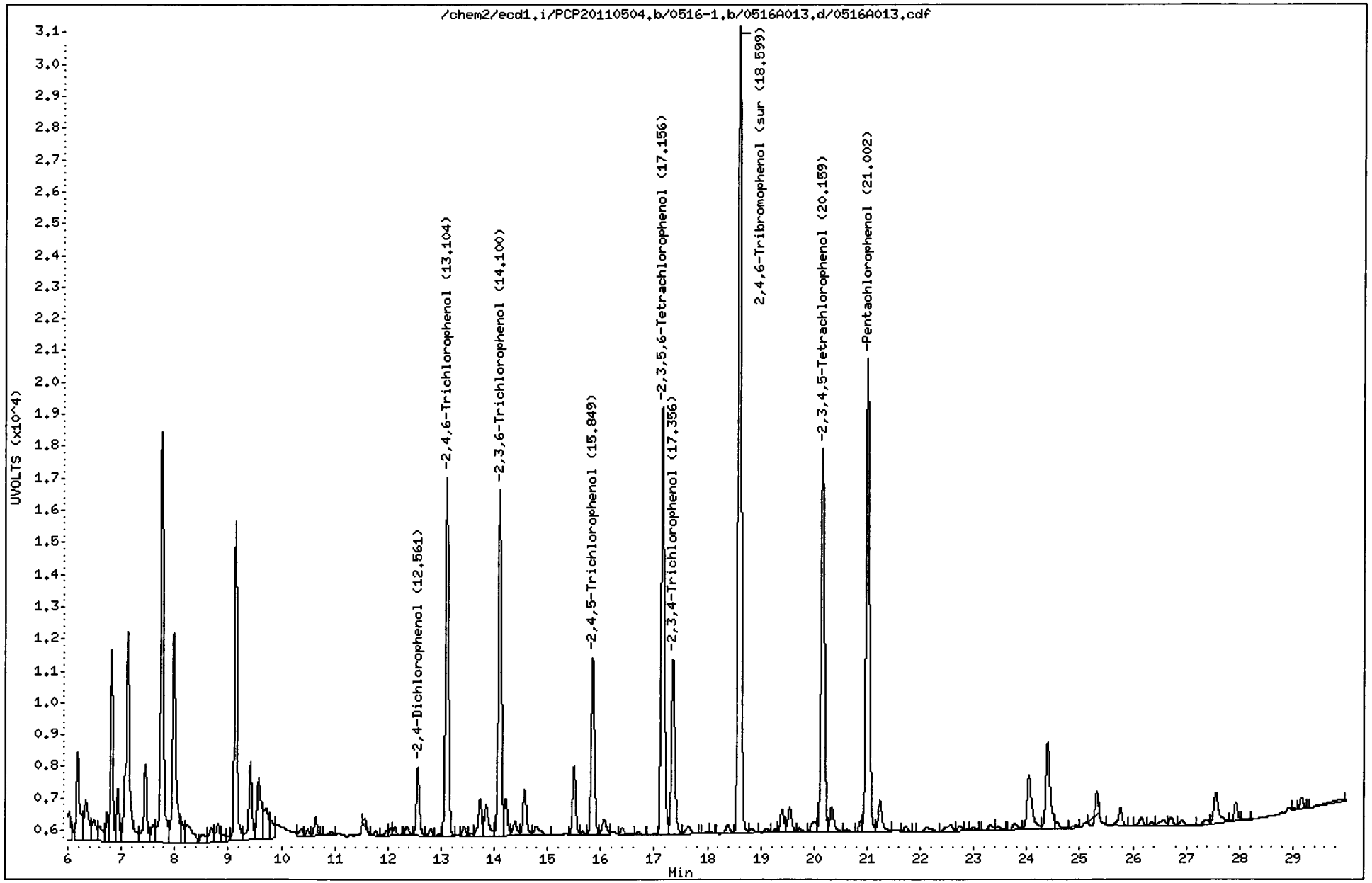
AIA 0516A013.cdf
ZB35 SU53BMSD
UVOLTS
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
20.024
20.466
20.601
20.727
21.214
21.357
21.614
21.736
21.900
22.299
22.603
22.838
23.753
23.873
23.963
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A013.d
Date : 16-MAY-2011 19:14
Client ID: MW15042811 MSD
Sample Info: SU53BMSD
Purge Volume: 500.0
Column phase: STX CLP1

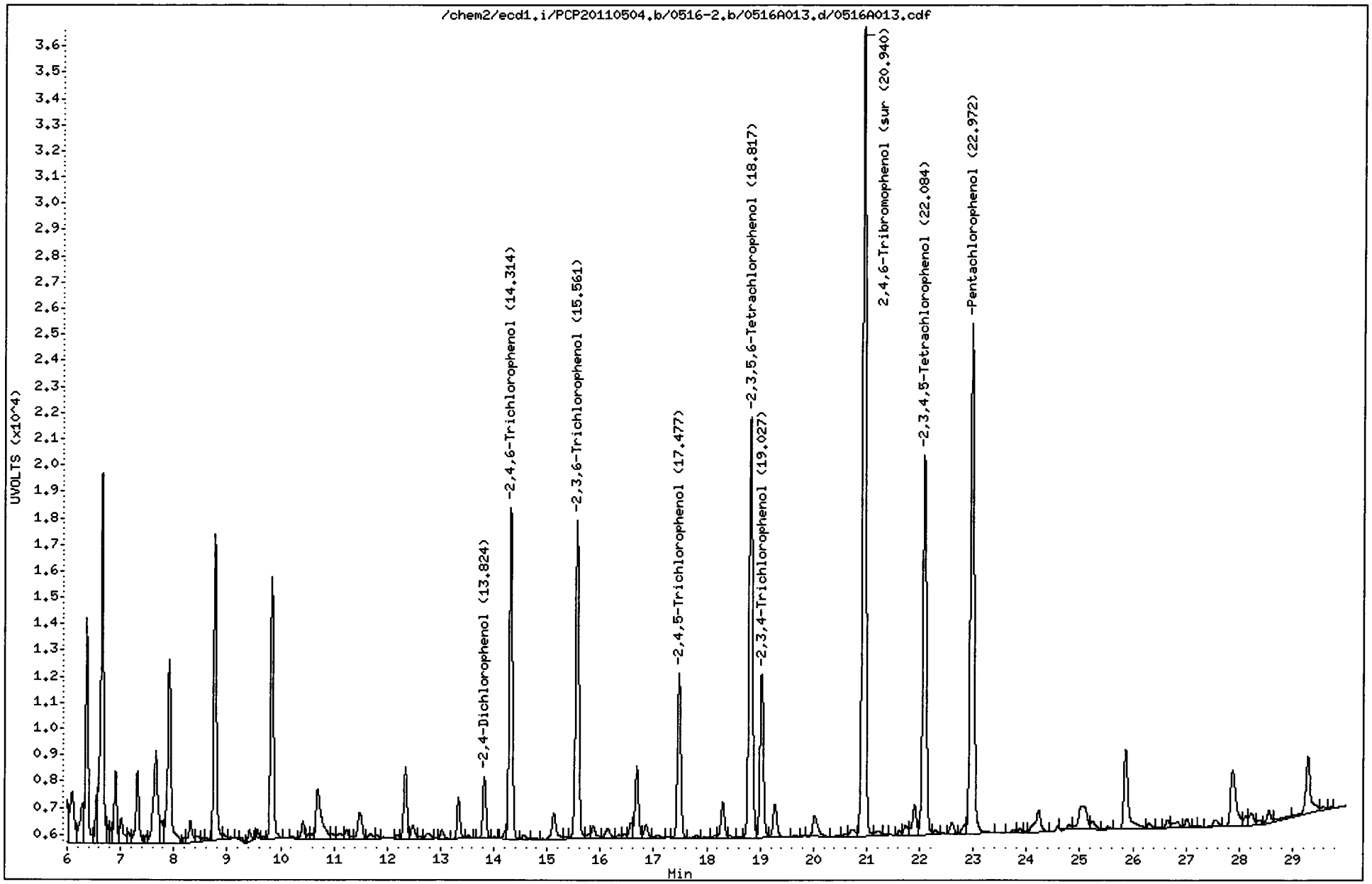
Instrument: ecd1.i
Operator: ar
Column diameter: 0.53



SU53 : 05180

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A013.d
Date : 16-MAY-2011 19:14
Client ID: MW15042811 MSD
Sample Info: SU53BMSD
Purge Volume: 500.0
Column phase: STX CLP2

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



SU53 : 8SIS

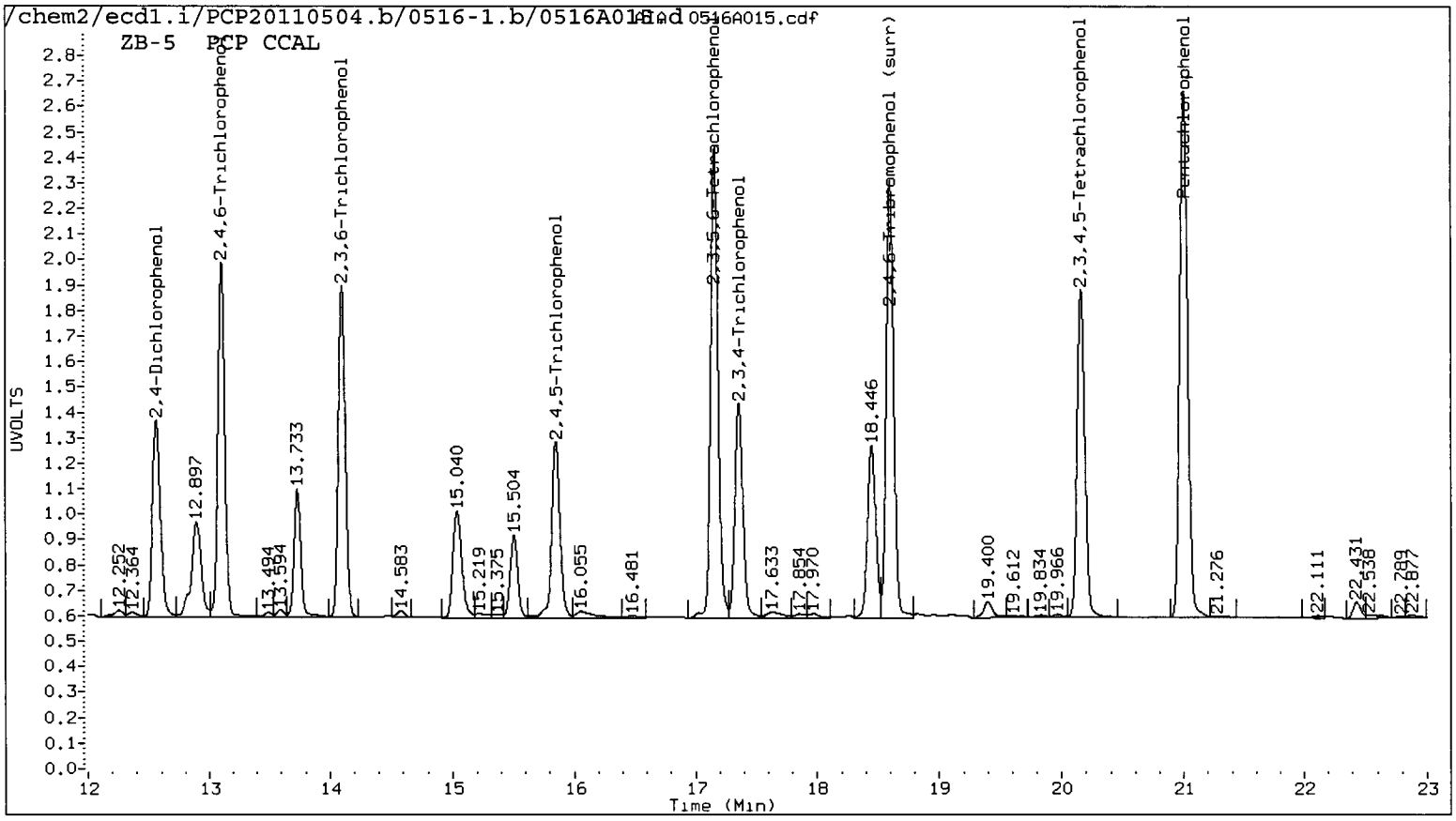
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A015.d ARI ID: PCP CCAL
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A015.d Client ID:
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 16-MAY-2011 20:27
Compound Sublist: all Report Date: 05/18/2011 09:24
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col RT	ZB-5 Col Shift	ZB-5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB-5 on col	ZB35 on col	RPD	Compound
21.002	0.004	464956	22.971	0.004	633900	23.0757	22.5100	2.5	Pentachlorophenol
13.104	0.003	280797	14.314	0.003	321014	23.0676	22.1485	4.1	2,4,6-Trichlorophenol
14.100	0.003	259603	15.561	0.004	314088	22.6675	21.8521	3.7	2,3,6-Trichlorophenol
15.848	0.003	160920	17.477	0.003	190167	24.1643	23.4901	2.8	2,4,5-Trichlorophenol
17.355	0.004	192114	19.026	0.003	221045	22.9930	24.0399	4.5	2,3,4-Trichlorophenol
17.156	0.004	397651	18.817	0.003	483981	23.5204	22.0613	6.4	2,3,5,6-Tetrachlorophenol
20.159	0.004	287562	22.084	0.004	366084	22.1512	23.8447	7.4	2,3,4,5-Tetrachlorophenol
12.561	0.006	174700	13.823	0.003	164617	269.4803	231.5887	15.1	2,4-Dichlorophenol
18.599	0.004	371476	20.940	0.004	469532	23.6	22.3	5.5	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	92.3	90.0
2,4,6-Trichlorophenol	92.3	88.6
2,3,6-Trichlorophenol	90.7	87.4
2,4,5-Trichlorophenol	96.7	94.0
2,3,4-Trichlorophenol	92.0	96.2
2,3,5,6-Tetrachlorophenol	94.1	88.2
2,3,4,5-Tetrachlorophenol	88.6	95.4
2,4-Dichlorophenol	107.8	92.6
2,4,6-TBP (surr)	94.4	89.3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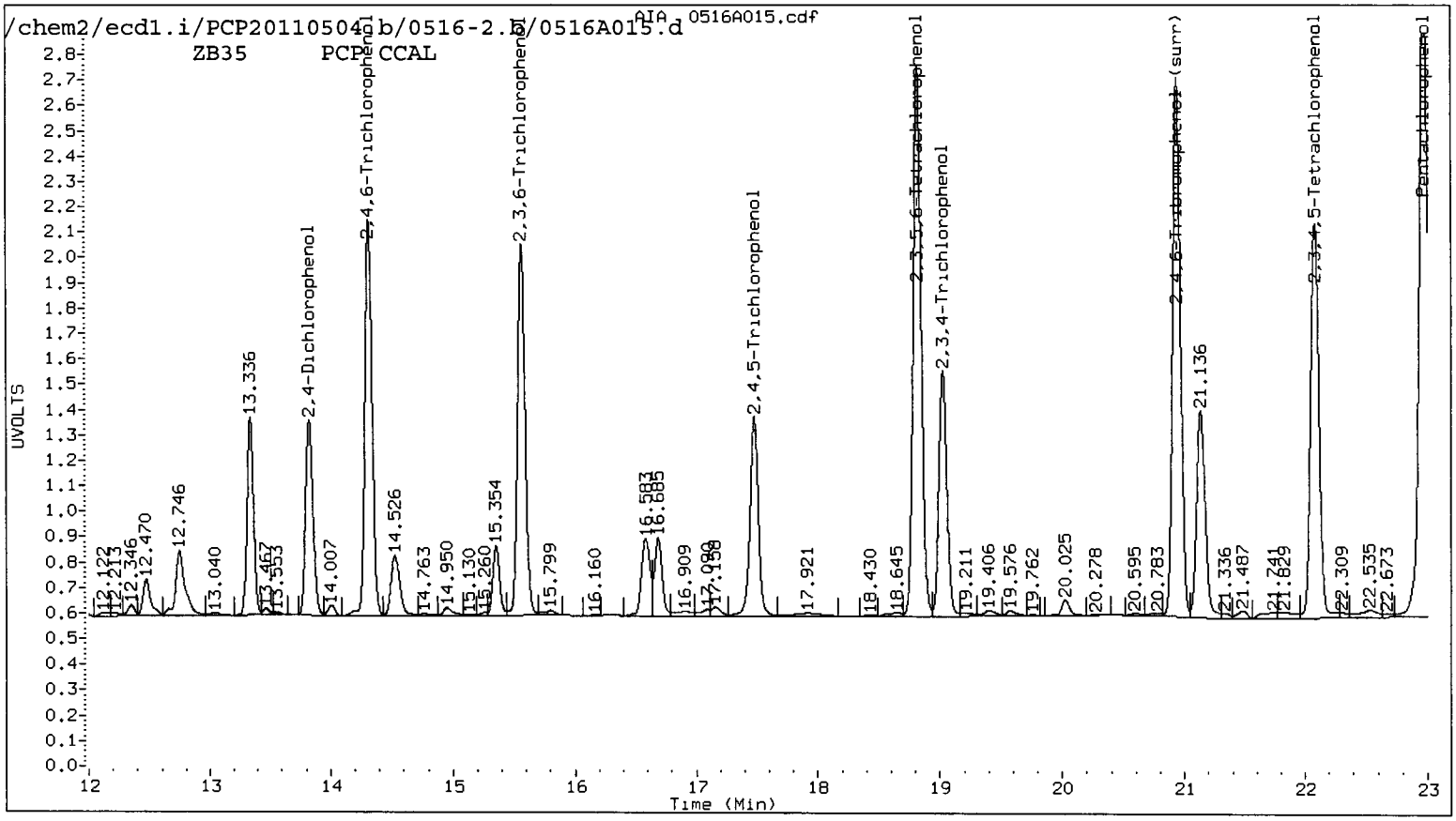
0516A015.cdf
ZB-5 PCP CCAL
UVOLTS
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
Time (Min)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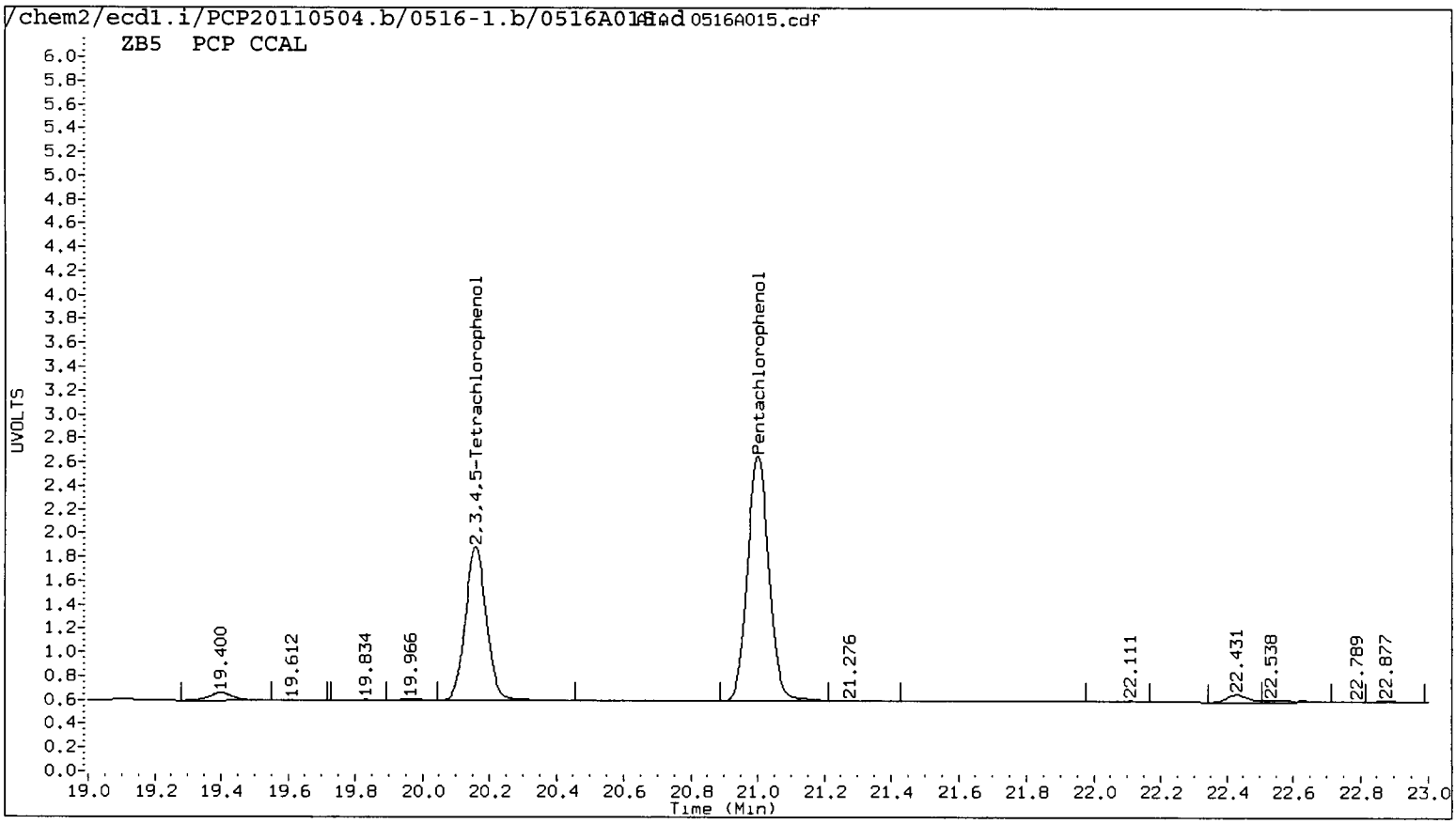
0516A015.cdf
ZB35 PCP CCAL
UVOLTS
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
Time (Min)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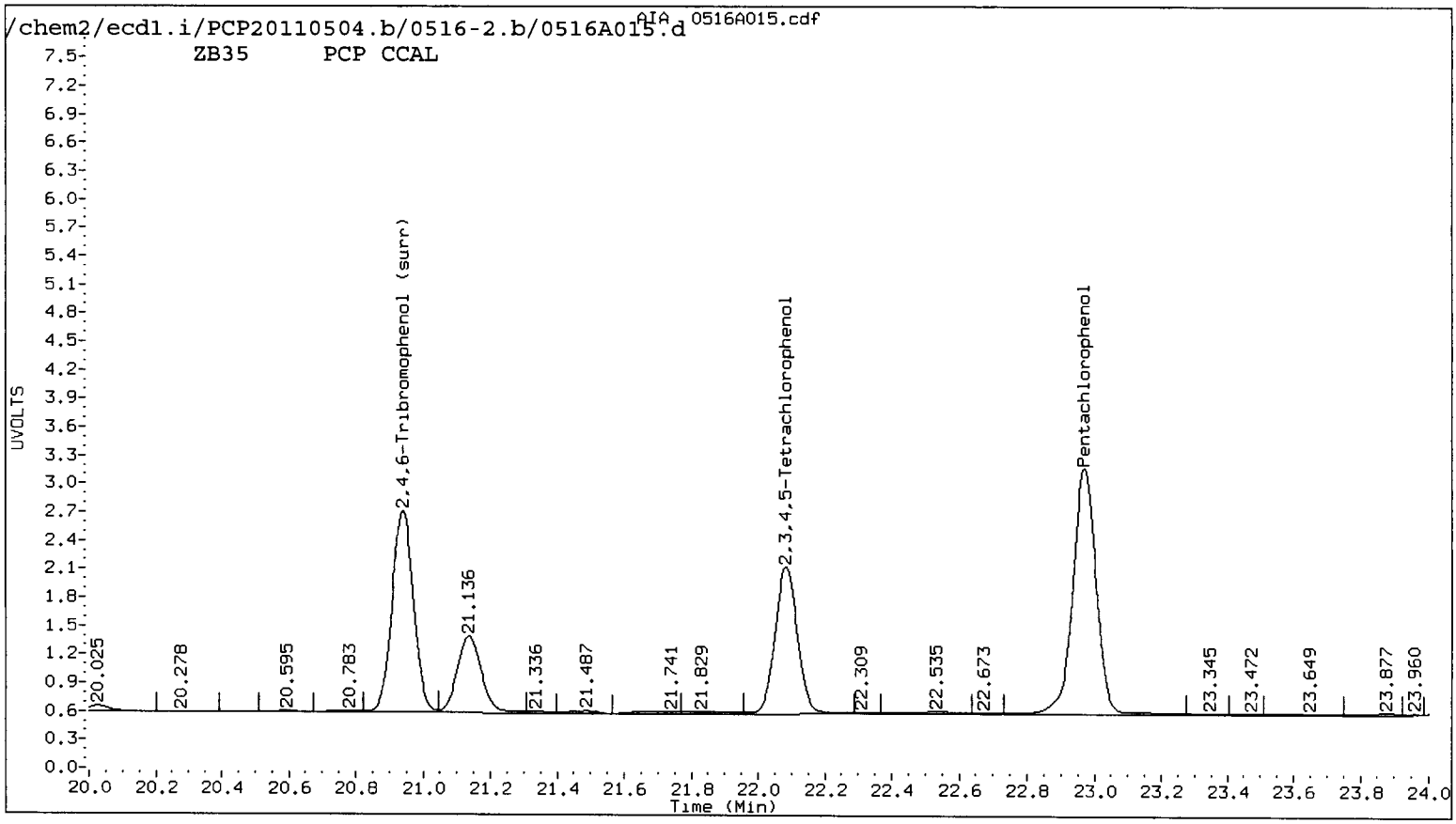
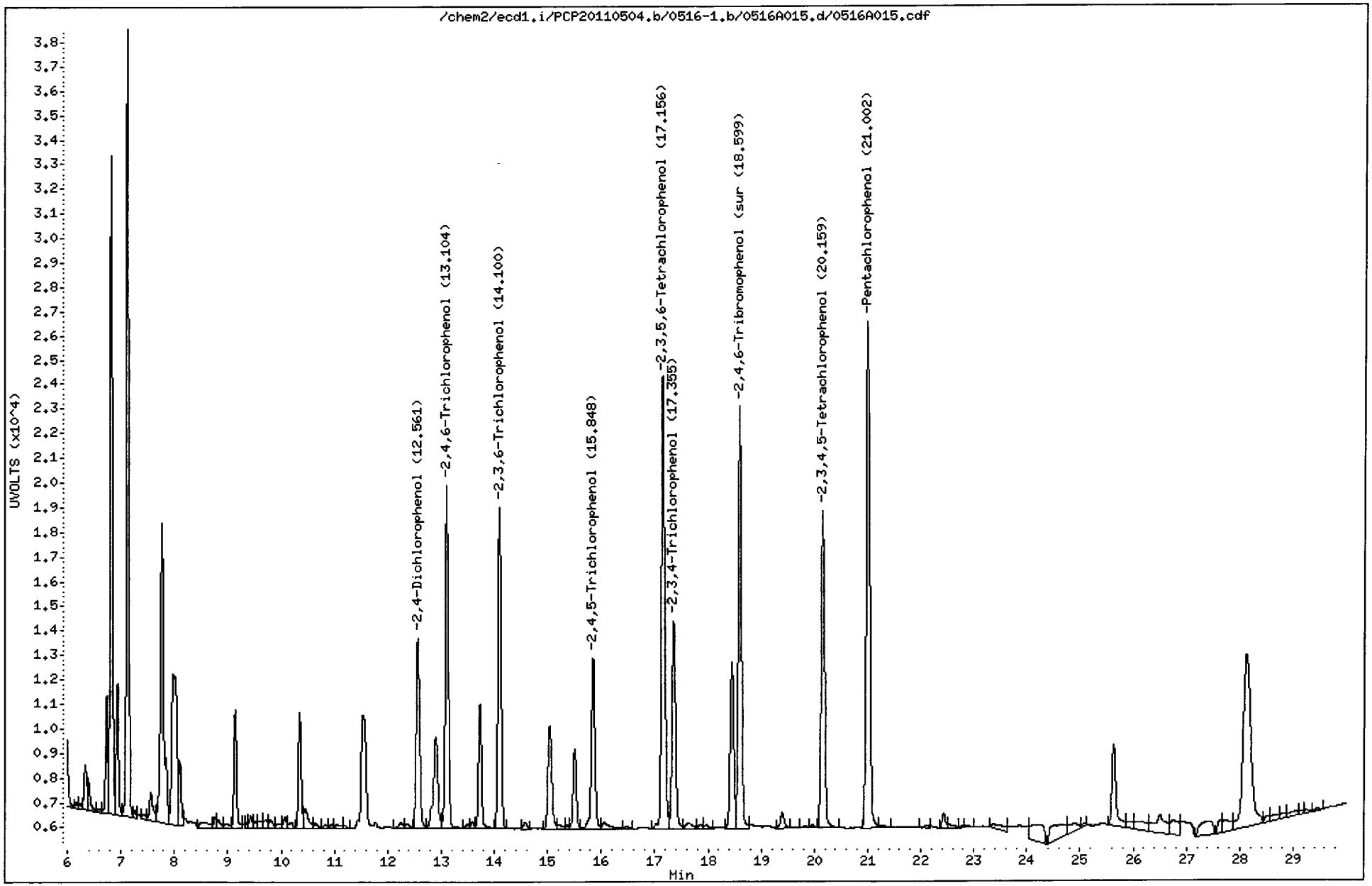
ZB5 PCP CCAL
UVOLTS
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
19.400
19.612
19.834
19.966
21.276
22.111
22.431
22.538
22.789
22.877
Time (Min)


/chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A015.d 0516A015.cdf
ZB35 PCP CCAL
UVOLTS
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
20.025
20.278
20.595
20.783
21.136
21.336
21.487
21.741
21.829
22.309
22.535
22.673
23.345
23.472
23.649
23.877
23.960
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A015.d
Date : 16-MAY-2011 20:27
Client ID:
Sample Info: PCP CCAL
Purge Volume: 500.0
Column phase: STX CLP1

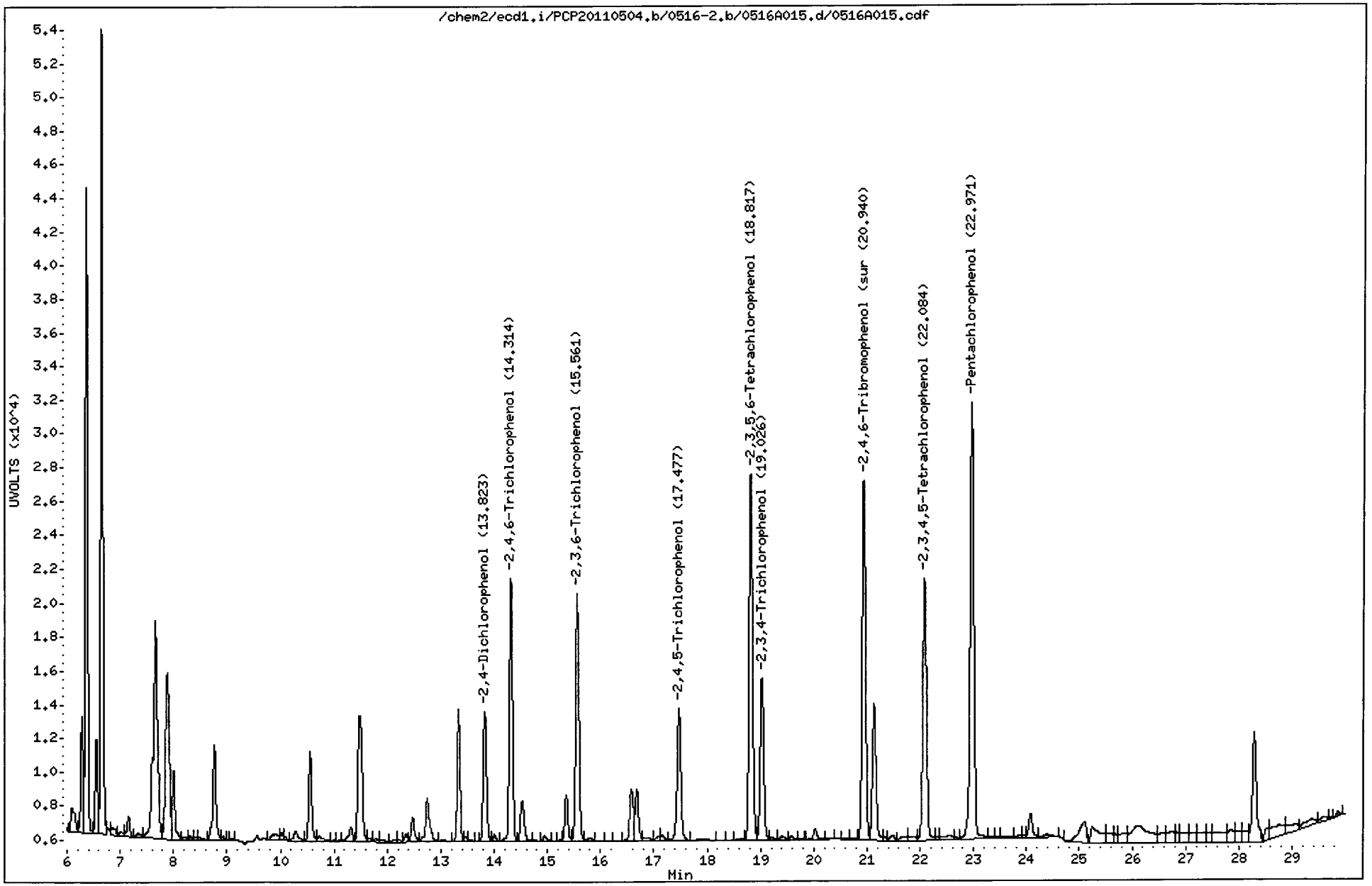
Instrument: ecd1.i
Operator: ar
Column diameter: 0.53



Sh800:ESNS

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A015.d
Date : 16-MAY-2011 20:27
Client ID:
Sample Info: PCP CCAL
Purge Volume: 500.0
Column phase: STX CLP2

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



9h800:ESDS

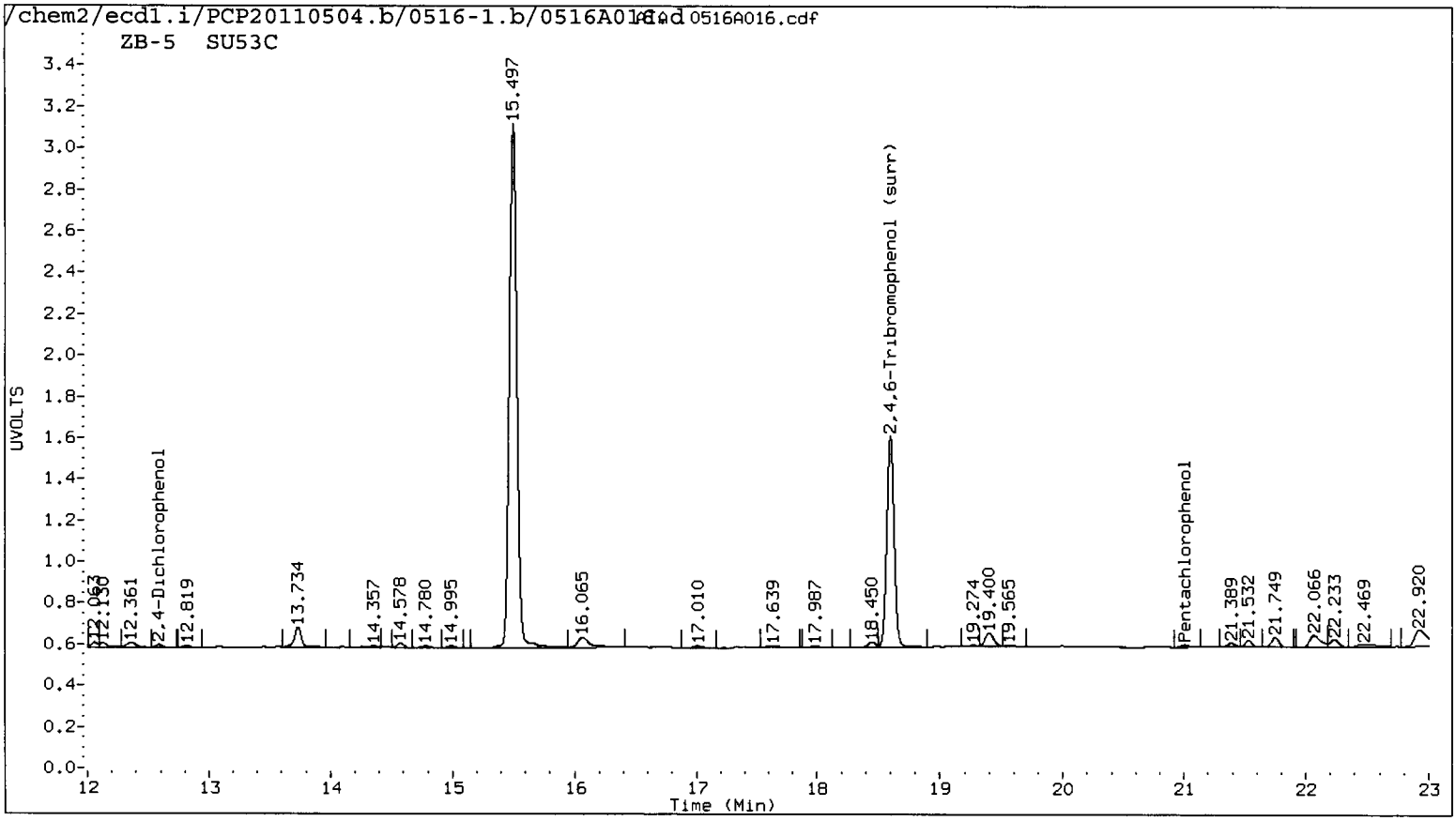
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A016.d ARI ID: SU53C
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A016.d Client ID: MW4042811
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 16-MAY-2011 21:03
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col RT	ZB-5 Col Shift	ZB-5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB-5 on col	ZB35 on col	RPD	Compound
21.007	0.009	3085	22.973	0.006	4405	0.1531	0.1564	2.1	Pentachlorophenol
----			14.368	0.057	1292	0.0000	0.0892	---	2,4,6-Trichlorophenol
----			15.546	-0.011	5062	0.0000	0.3522	---	2,3,6-Trichlorophenol
----			----			0.0000	0.0000	---	2,4,5-Trichlorophenol
----			19.027	0.005	1645	0.0000	0.1568	---	2,3,4-Trichlorophenol
----			18.759	-0.055	2628	0.0000	0.1198	---	2,3,5,6-Tetrachlorophenol
----			22.076	-0.004	571	0.0000	0.0334	---	2,3,4,5-Tetrachlorophenol
12.588	0.033	2629	----			3.2548	0.0000	---	2,4-Dichlorophenol
18.601	0.005	217604	20.940	0.004	279404	13.8	13.3	3.9	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	55.3	53.2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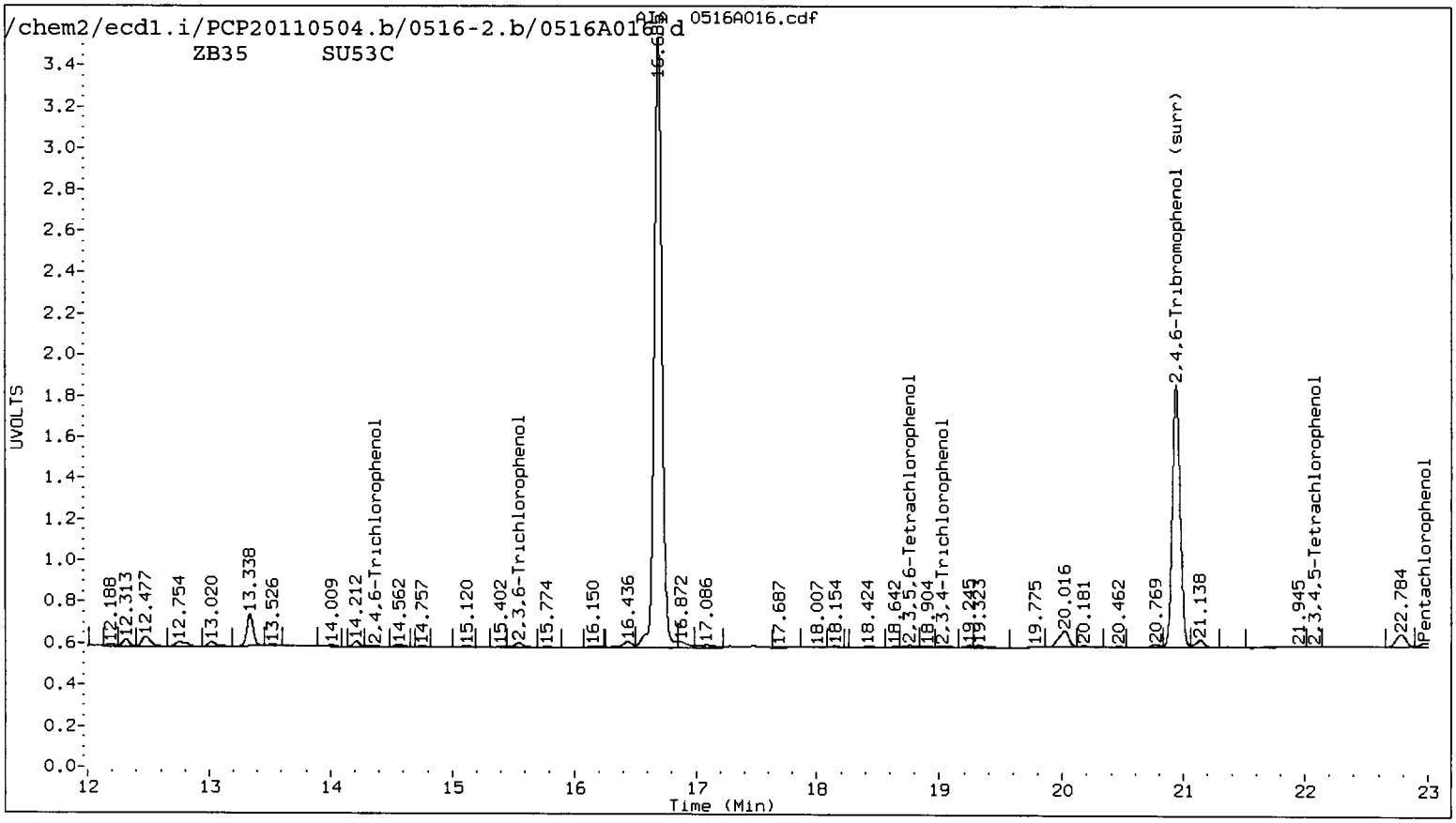
0516A016.cdf
ZB-5 SU53C
UVOLTS
Time (Min)
15.497
2,4,6-Tribromophenol (surr)
2,4-Dichlorophenol
Pentachlorophenol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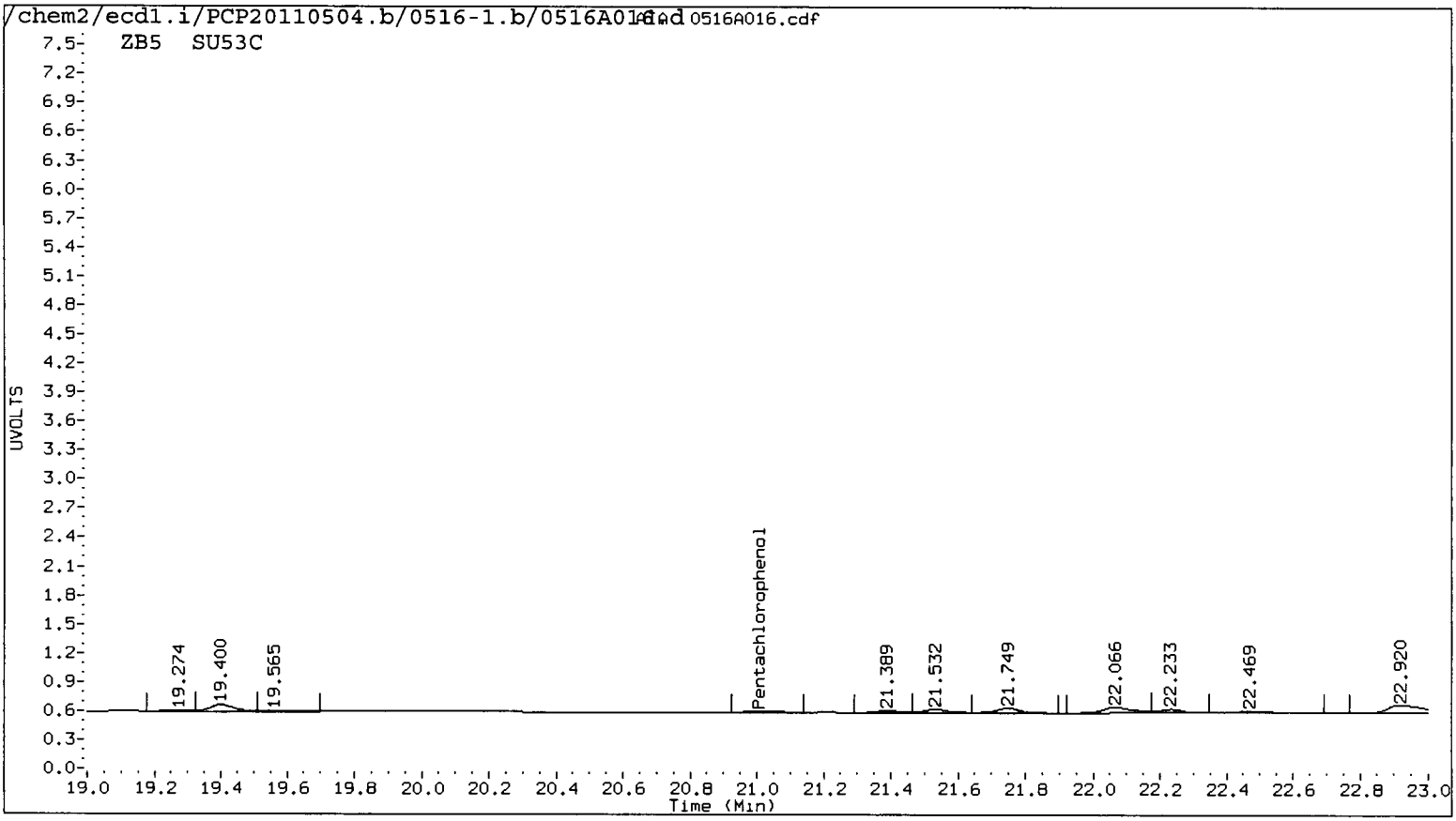
0516A016.cdf
ZB35 SU53C
UVOLTS
Time (Min)
2,4,6-Tribromophenol (surr)
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,3,4,5-Tetrachlorophenol
Pentachlorophenol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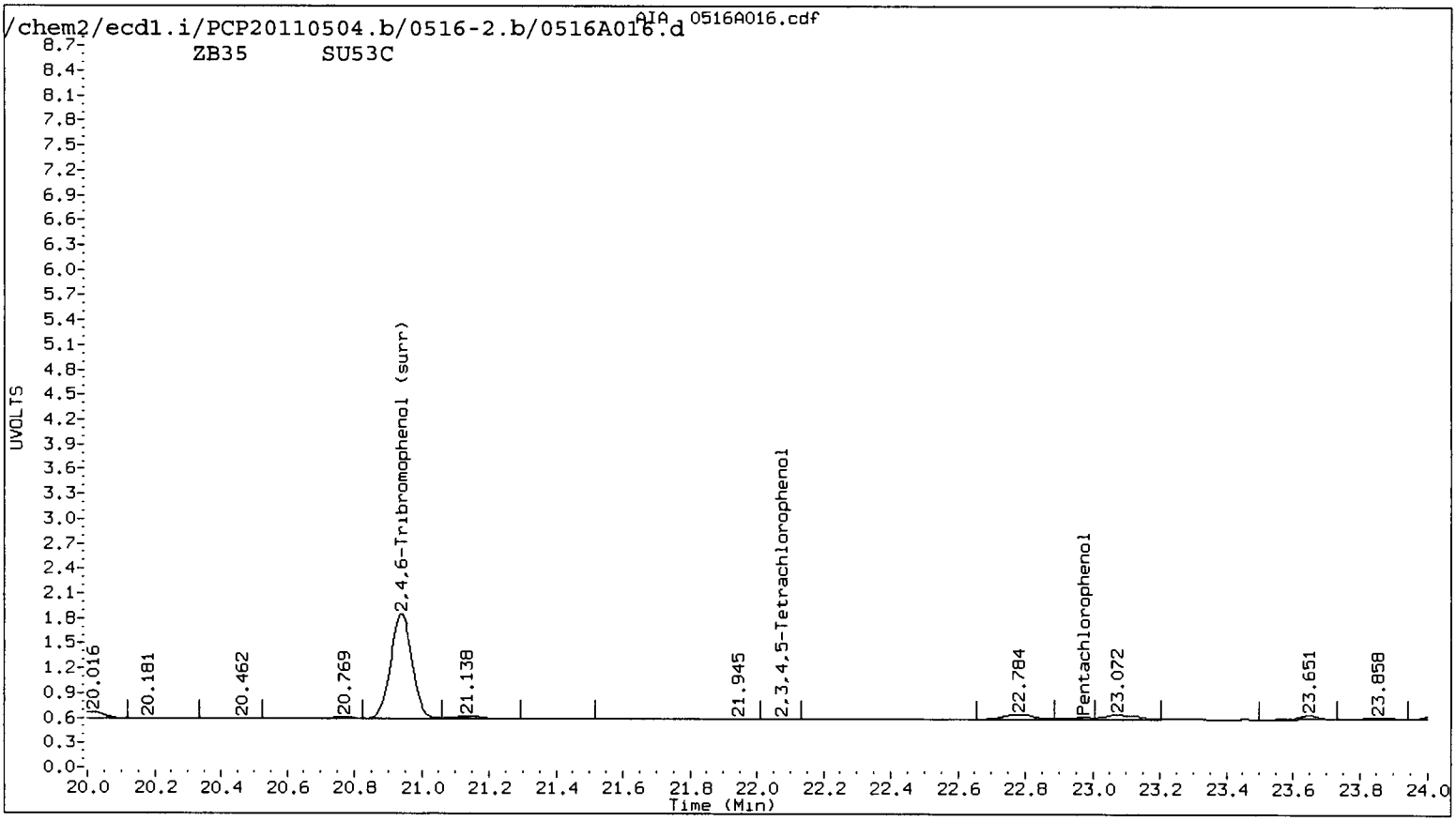
ZB5 SU53C
UVOLTS
Time (Min)
19.274
19.400
19.565
Pentachlorophenol
21.389
21.532
21.749
22.066
22.233
22.469
22.920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ZB35 SU53C
UVOLTS
Time (Min)
20.016
20.181
20.462
20.769
2,4,6-Tribromophenol (surr)
21.138
21.945
2,3,4,5-Tetrachlorophenol
22.784
Pentachlorophenol
23.072
23.651
23.858

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A016.d

Page 1

Date : 16-MAY-2011 21:03

Client ID: MW4042811

Instrument: ecd1.i

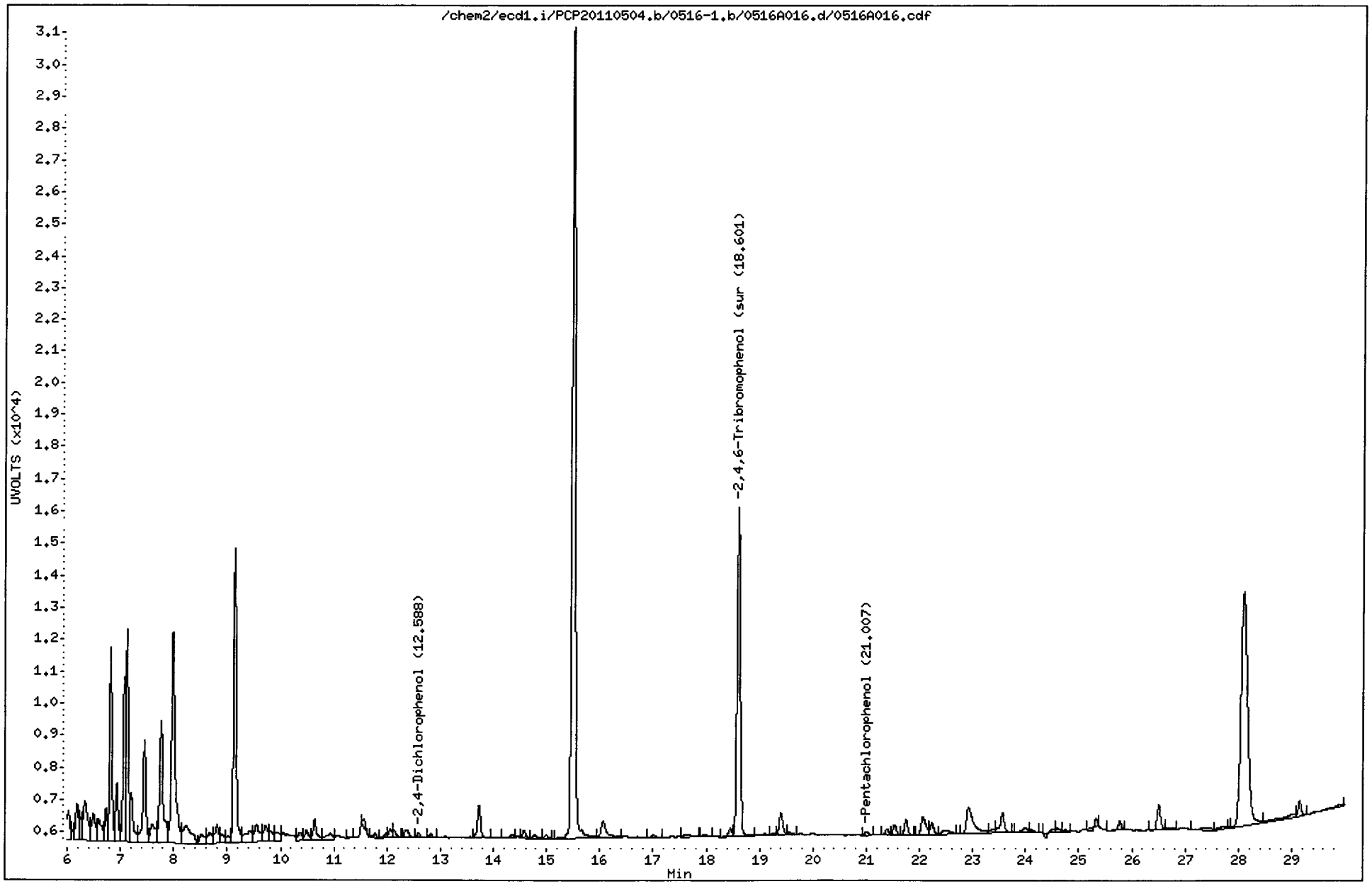
Sample Info: SU53C

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

Column diameter: 0.53



SU53 : 00850

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A016.d

Page 1

Date : 16-MAY-2011 21:03

Client ID: MW4042811

Instrument: ecd1.i

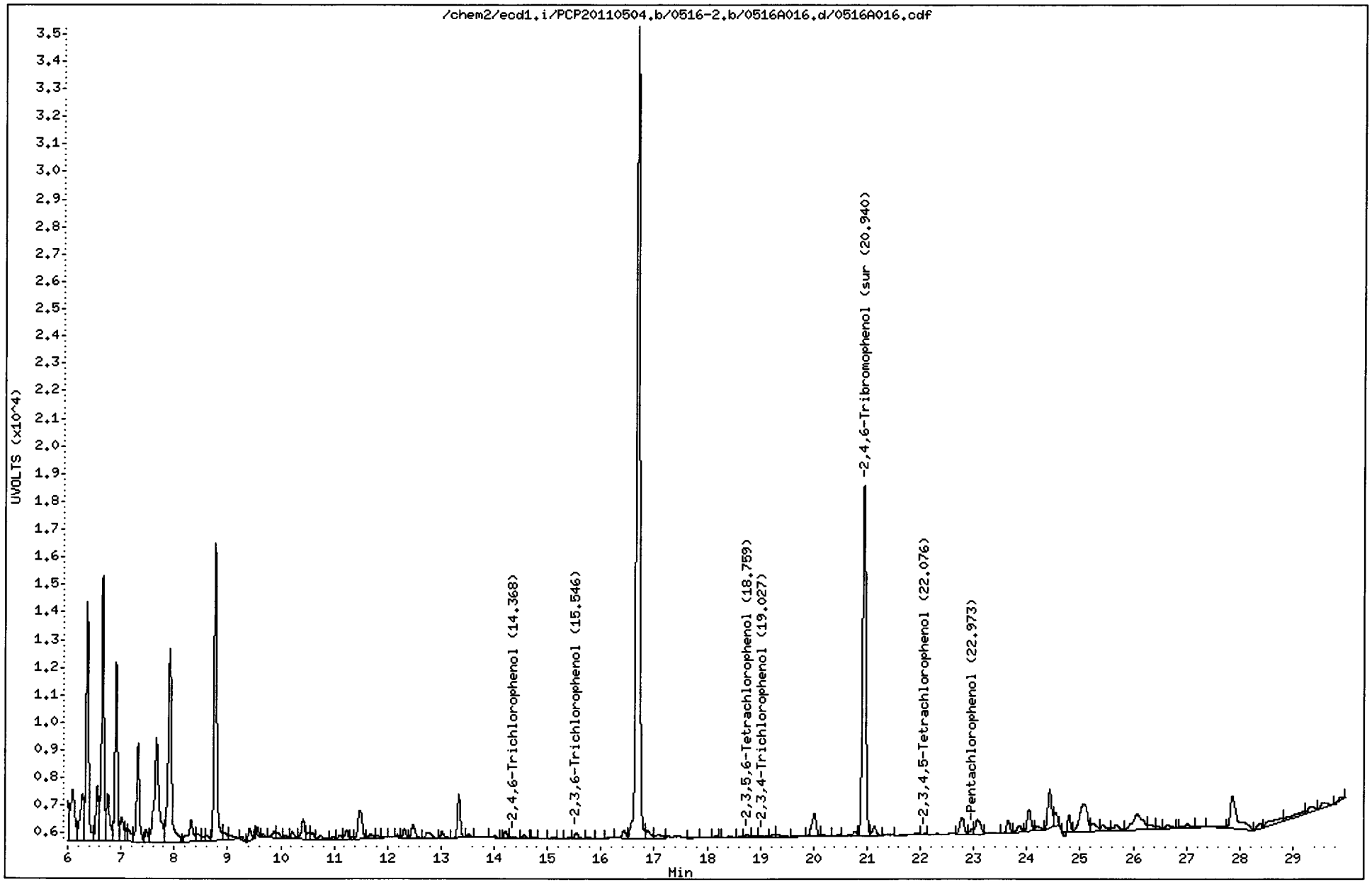
Sample Info: SU53C

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



SU53 : 00851

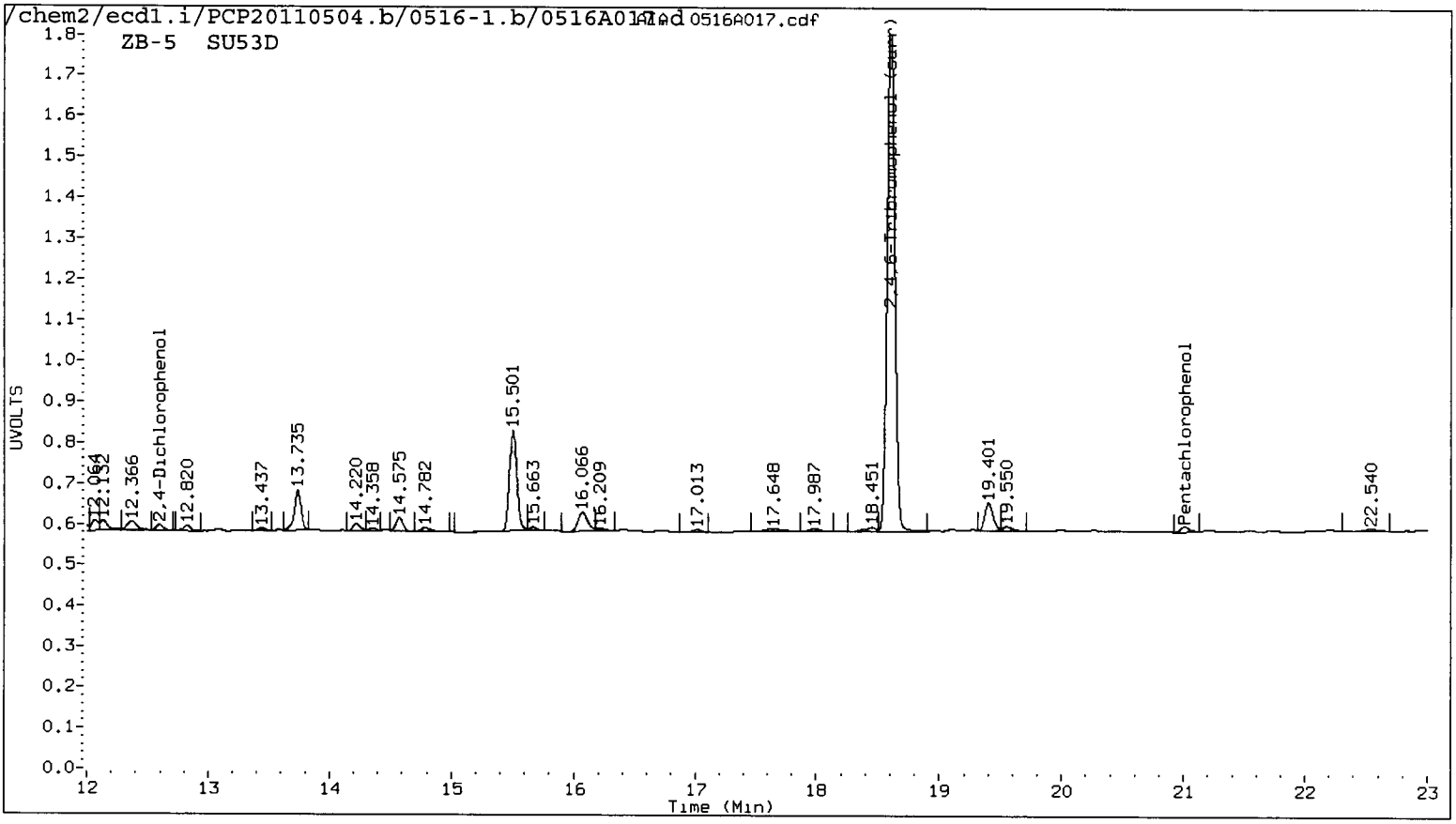
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A017.d ARI ID: SU53D
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A017.d Client ID: MW17042811
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 16-MAY-2011 21:39
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.007	0.010	2919	22.975	0.008	5073	0.1449	0.1802	21.7	Pentachlorophenol
----			----			0.0000	0.0000	---	2,4,6-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,6-Trichlorophenol
----			17.473	-0.001	3311	0.0000	0.4091	---	2,4,5-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,4-Trichlorophenol
----			18.842	0.028	1705	0.0000	0.0778	---	2,3,5,6-Tetrachlorophenol
----			----			0.0000	0.0000	---	2,3,4,5-Tetrachlorophenol
12.590	0.035	2609	----			3.2297	0.0000	---	2,4-Dichlorophenol
18.601	0.005	271802	20.941	0.005	355546	17.3	16.9	2.1	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	69.1	67.6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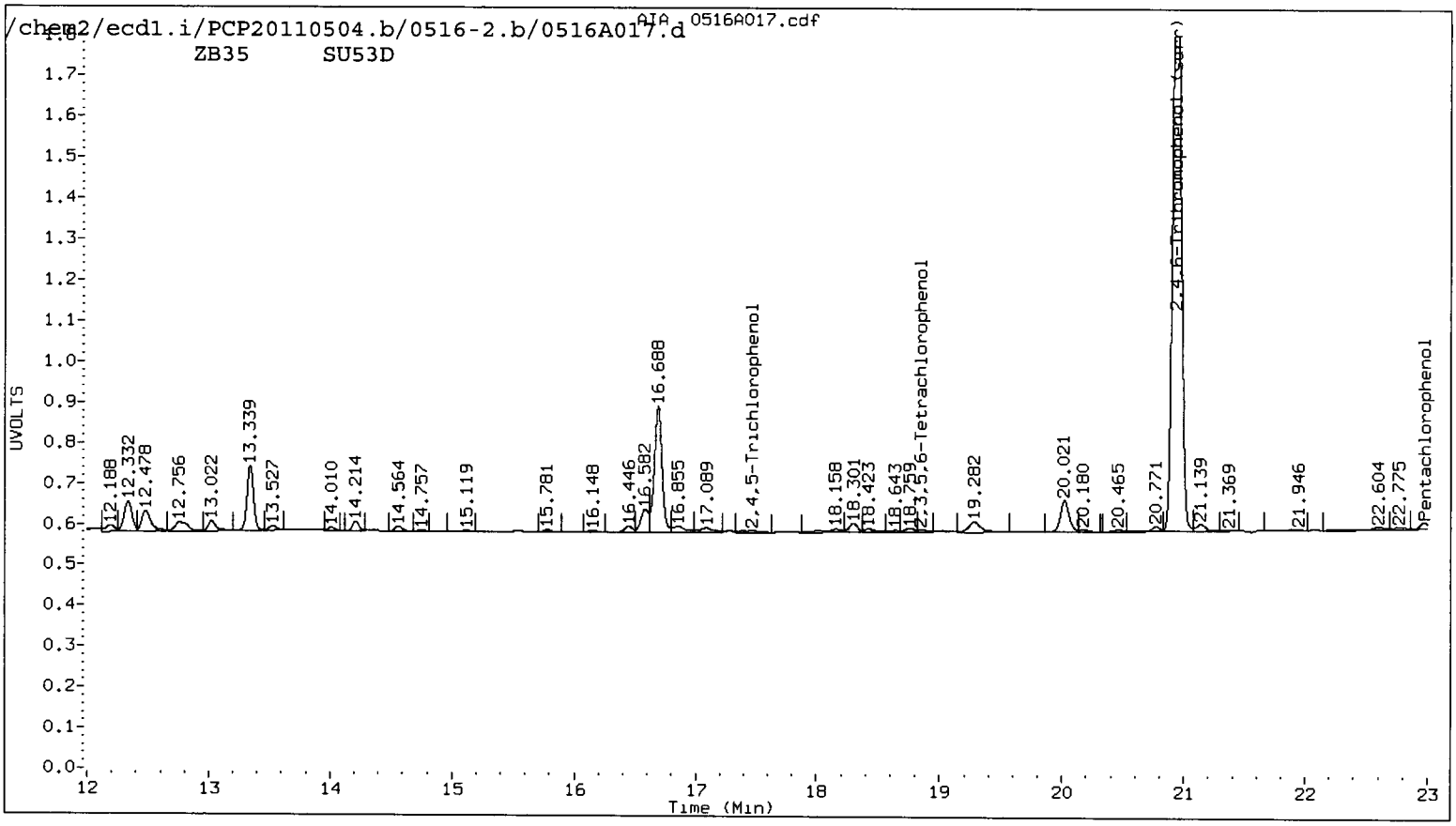
ZB-5 SU53D
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Tribromophenol (surr)
Pentachlorophenol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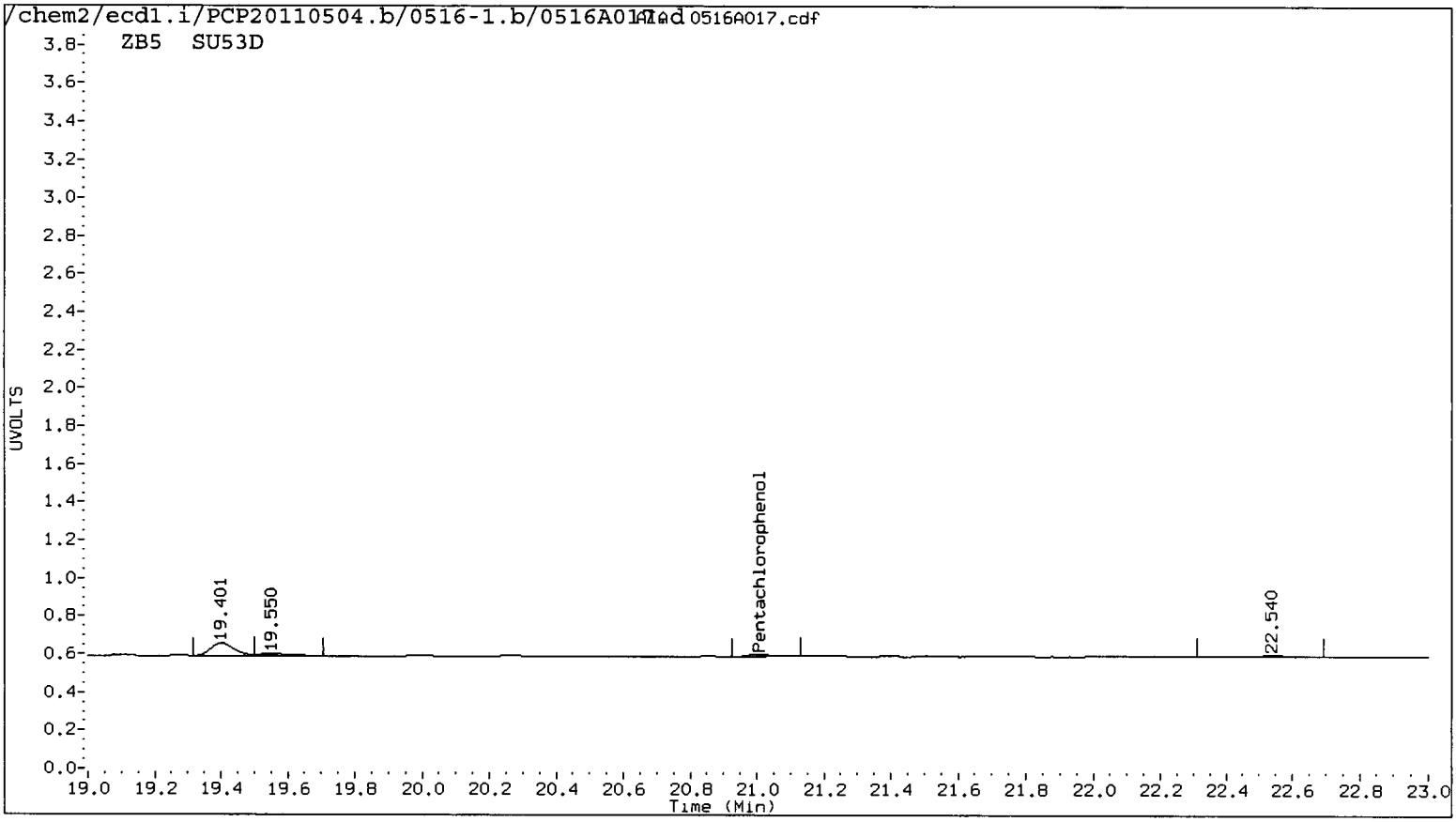
ZB35 SU53D
UVOLTS
Time (Min)
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,4,6-Tribromophenol (surr)
Pentachlorophenol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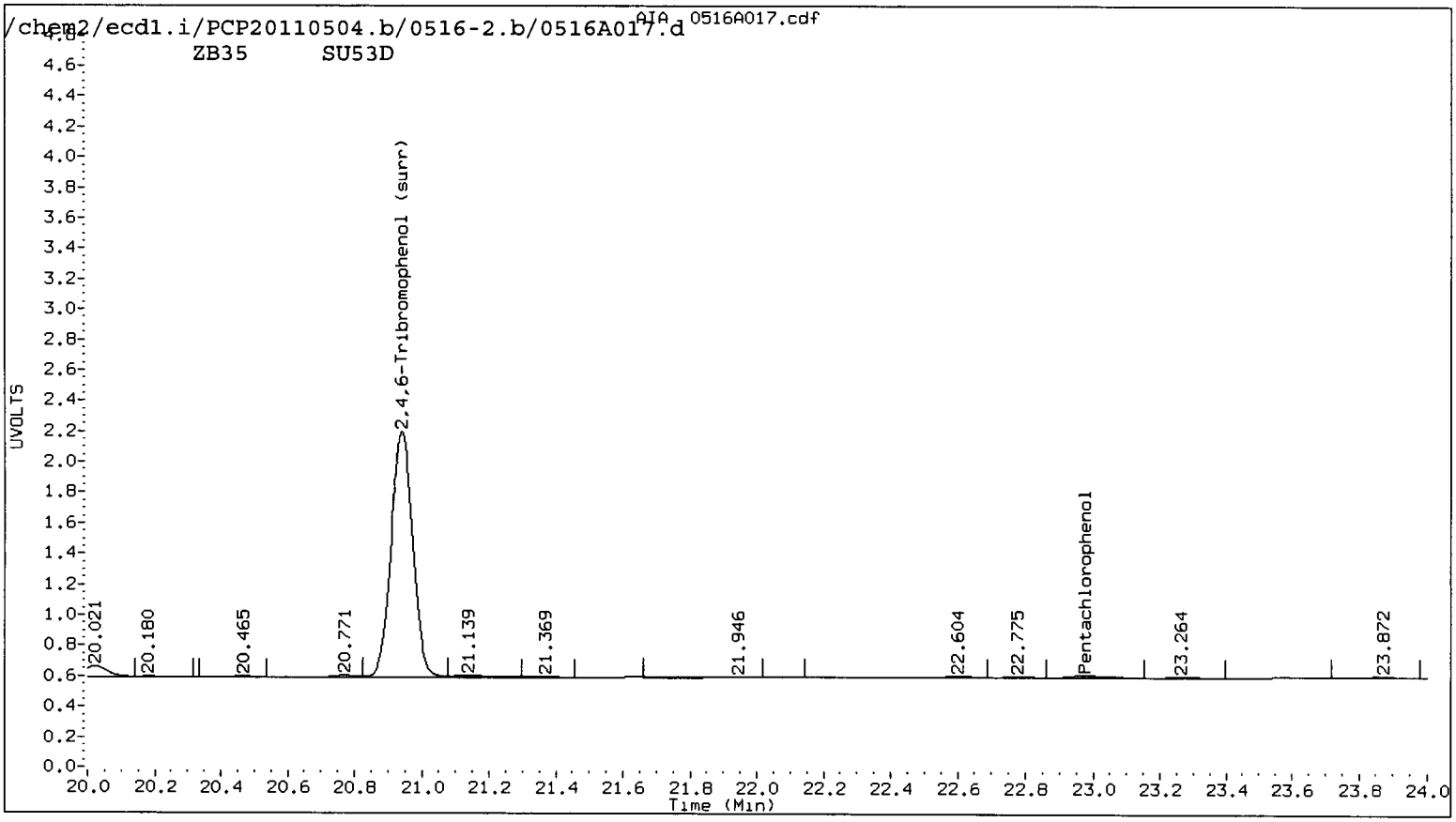
ZB5 SU53D
UVOLTS
19.401
19.550
Pentachlorophenol
22.540
Time (Min)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AIA 0516A017.cdf
ZB35 SU53D
UVOLTS
20.021
20.180
20.465
20.771
2,4,6-Tribromophenol (surr)
21.139
21.369
21.946
22.604
22.775
Pentachlorophenol
23.264
23.872
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A017.d

Page 1

Date : 16-MAY-2011 21:39

Client ID: MW17042811

Instrument: ecd1.i

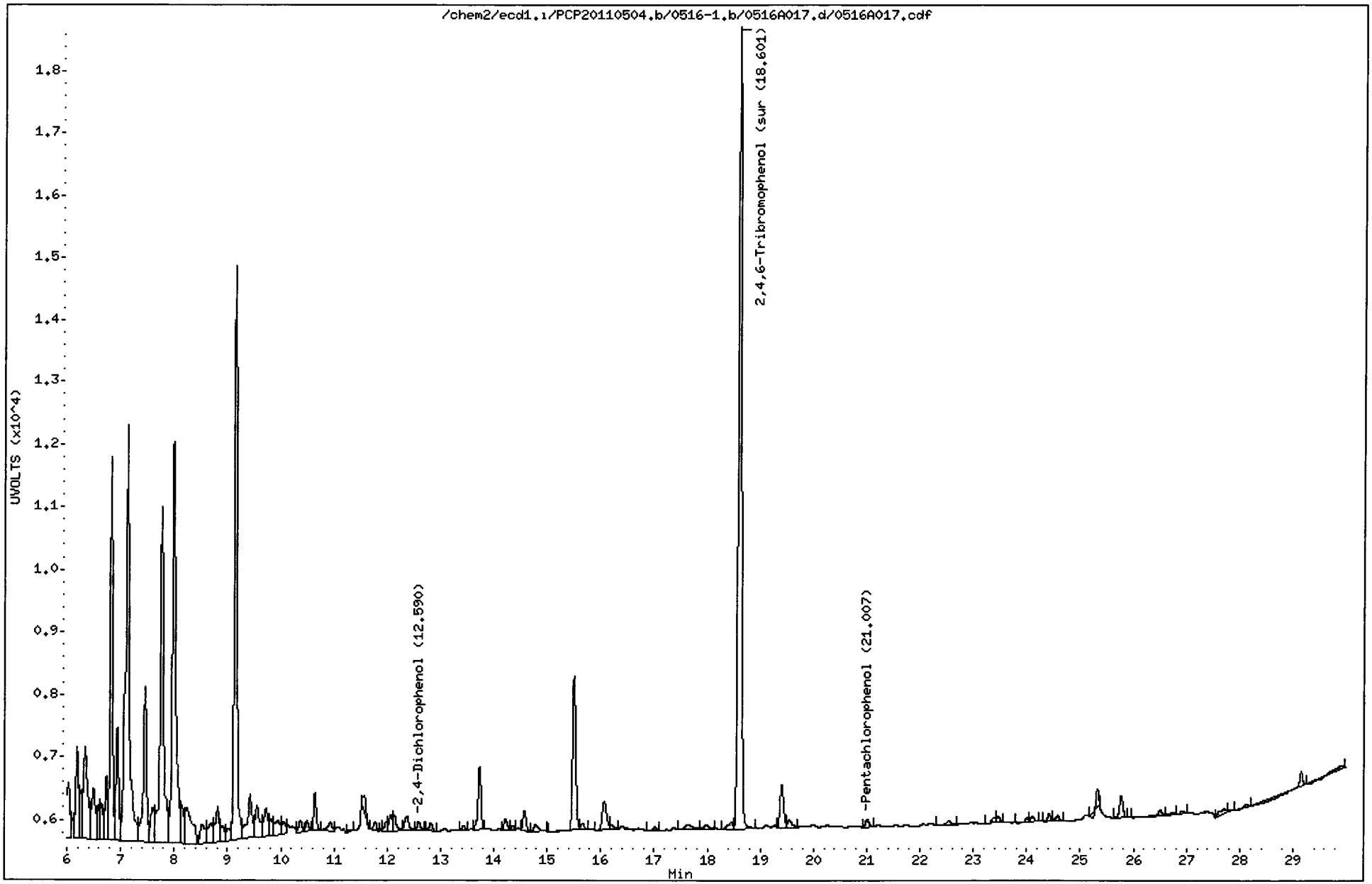
Sample Info: SU53D

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

Column diameter: 0.53



SU53:0085S

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A017.d

Page 1

Date : 16-MAY-2011 21:39

Client ID: MW17042811

Instrument: ecd1.i

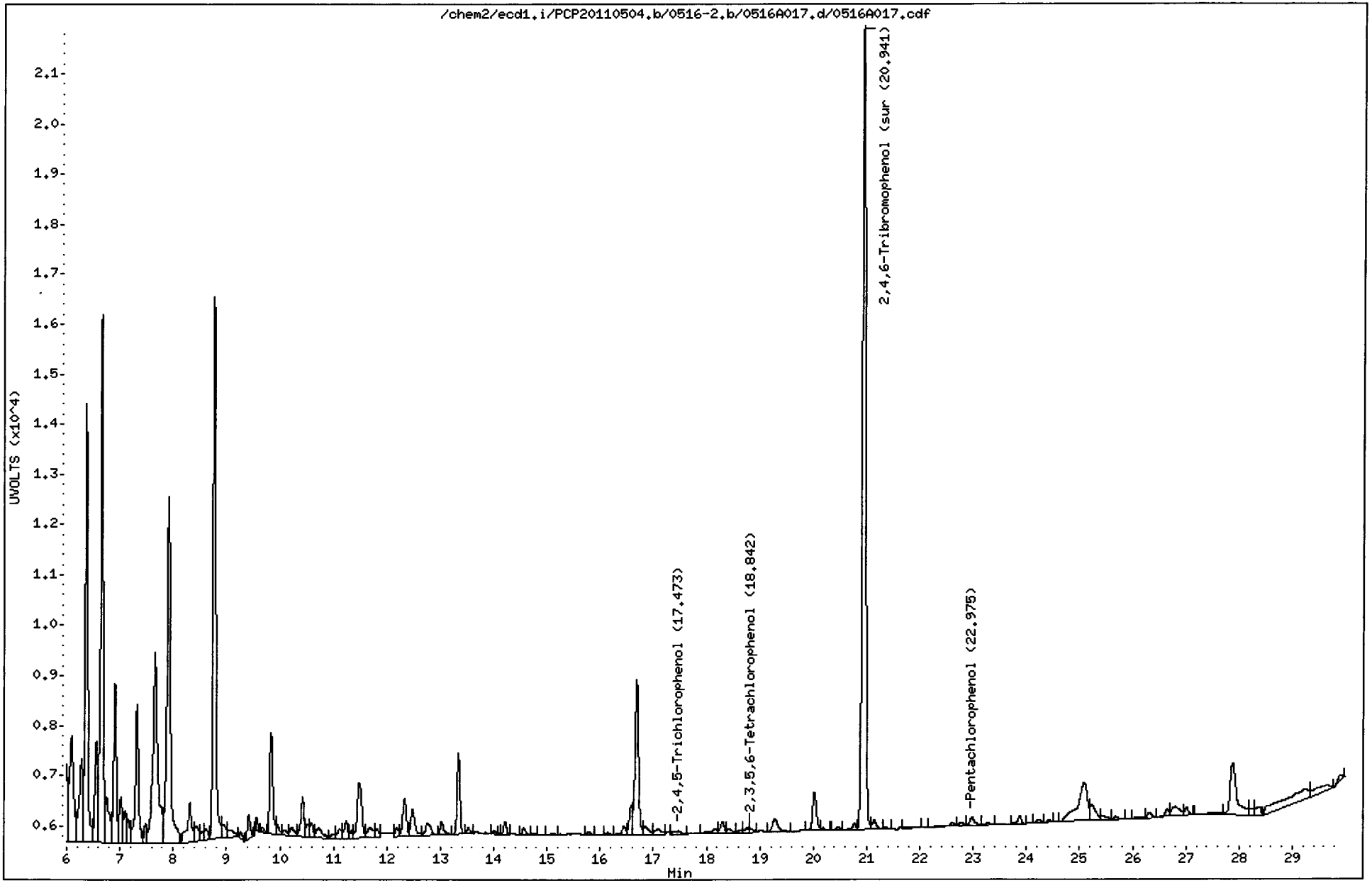
Sample Info: SU53D

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



SU53 : 00856

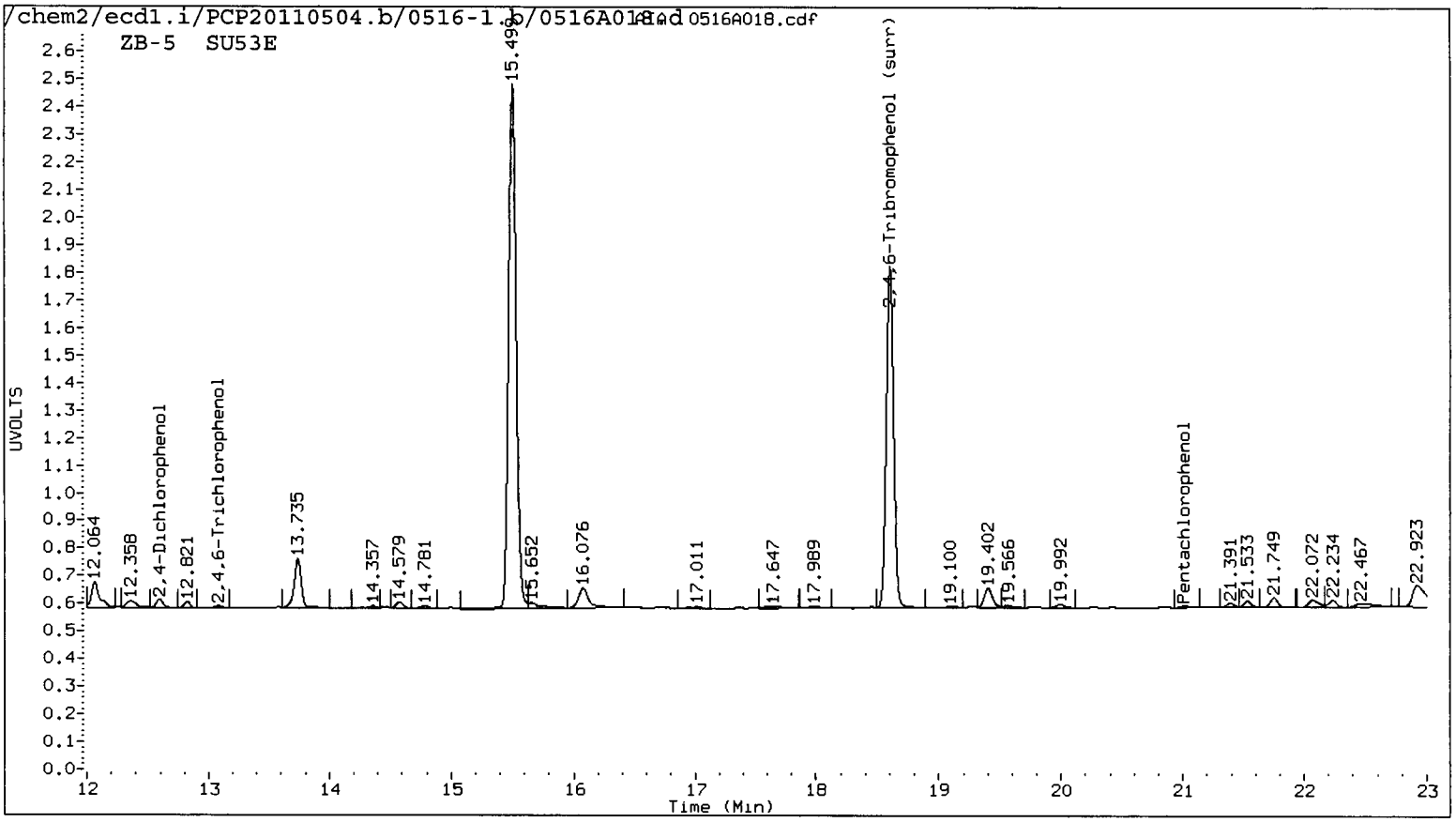
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A018.d ARI ID: SU53E
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A018.d Client ID: MW14042811
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 16-MAY-2011 22:16
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.011	0.014	1645	----			0.0817	0.0000	---	Pentachlorophenol
13.080	-0.021	1971	----			0.1619	0.0000	---	2,4,6-Trichlorophenol
----			15.547	-0.010	5009	0.0000	0.3485	---	2,3,6-Trichlorophenol
----			----			0.0000	0.0000	---	2,4,5-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,4-Trichlorophenol
----			18.758	-0.056	1331	0.0000	0.0607	---	2,3,5,6-Tetrachlorophenol
----			----			0.0000	0.0000	---	2,3,4,5-Tetrachlorophenol
12.591	0.036	7155	----			8.9136	0.0000	---	2,4-Dichlorophenol
18.602	0.006	264026	20.941	0.005	344265	16.8	16.4	2.4	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	67.1	65.5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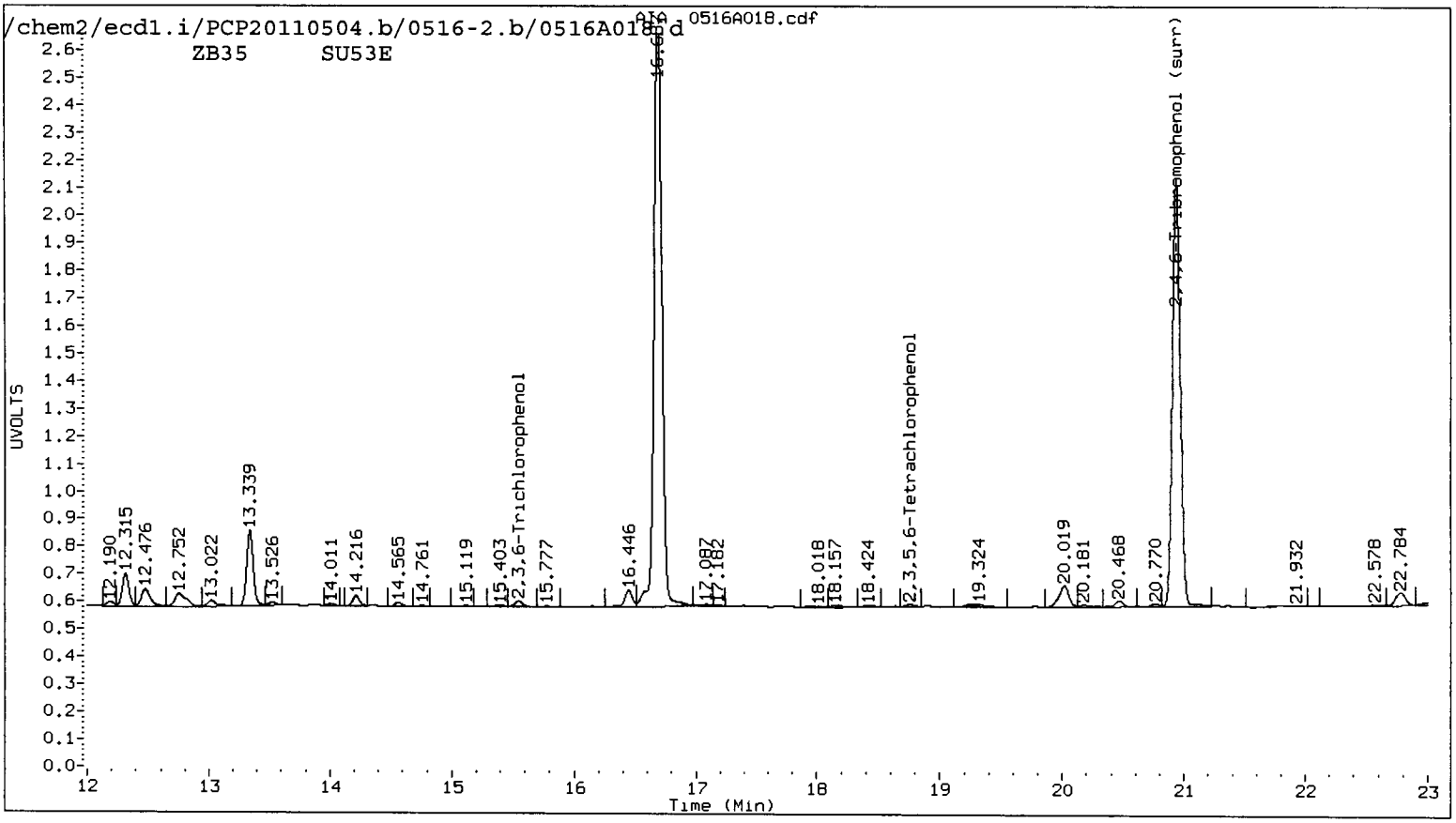
0516A018.cdf
ZB-5 SU53E
UVOLTS
Time (Min)
12.064
12.358
2,4-Dichlorophenol
12.821
2,4,6-Trichlorophenol
13.735
14.357
14.579
14.781
15.490
15.652
16.076
17.011
17.647
17.989
2,4,6-Tribromophenol (surr)
19.100
19.402
19.566
19.992
Pentachlorophenol
21.391
21.533
21.749
22.072
22.234
22.467
22.923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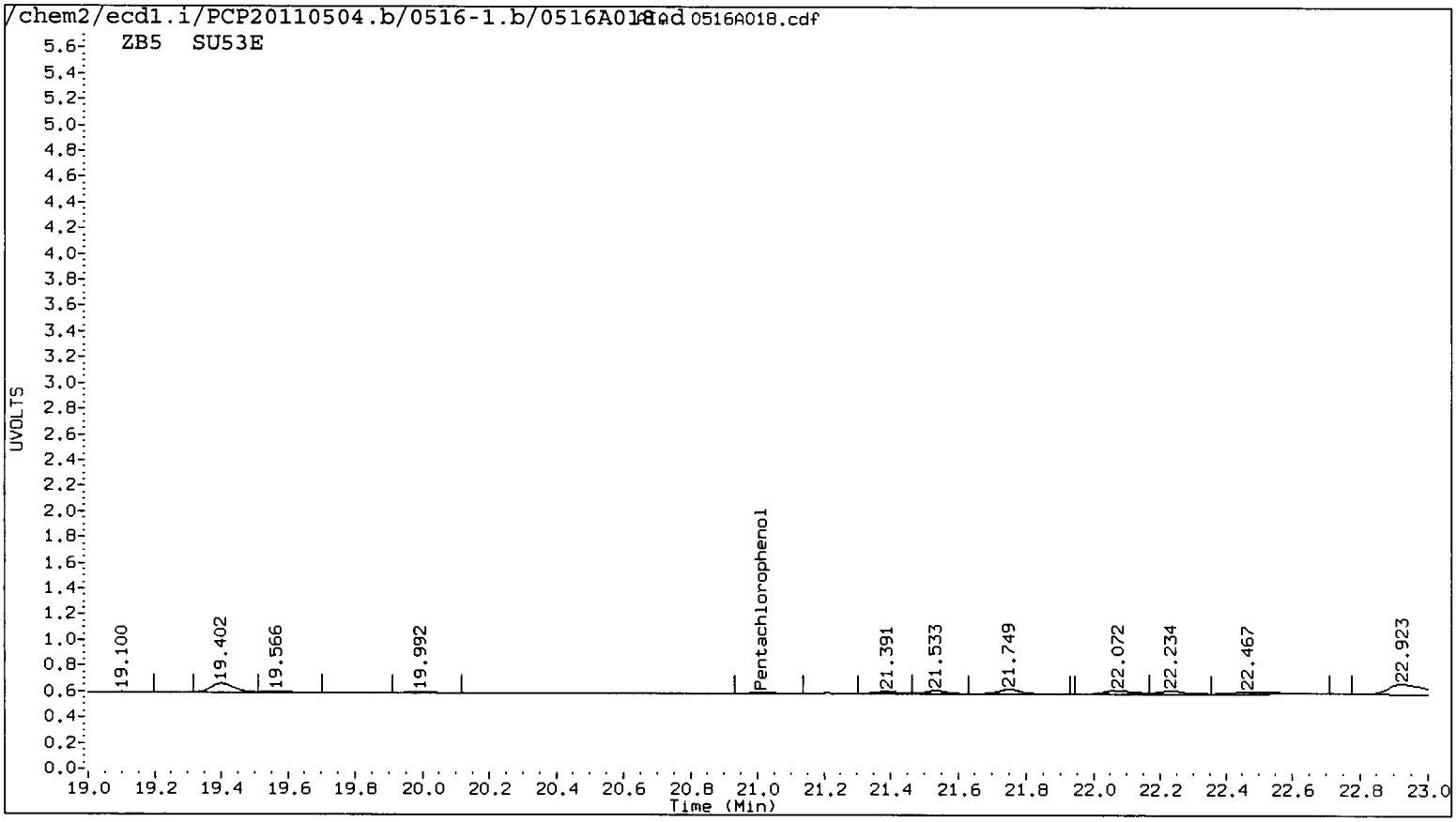
0516A018.cdf
ZB35 SU53E
UVOLTS
Time (Min)
12.190
12.315
12.476
12.752
13.022
13.339
13.526
14.011
14.216
14.565
14.761
15.119
15.403
2,3,6-Trichlorophenol
15.777
16.446
17.087
17.182
18.018
18.157
18.424
2,3,5,6-Tetrachlorophenol
19.324
20.019
20.181
20.468
20.770
2,4,6-Tribromophenol (surr)
21.932
22.578
22.784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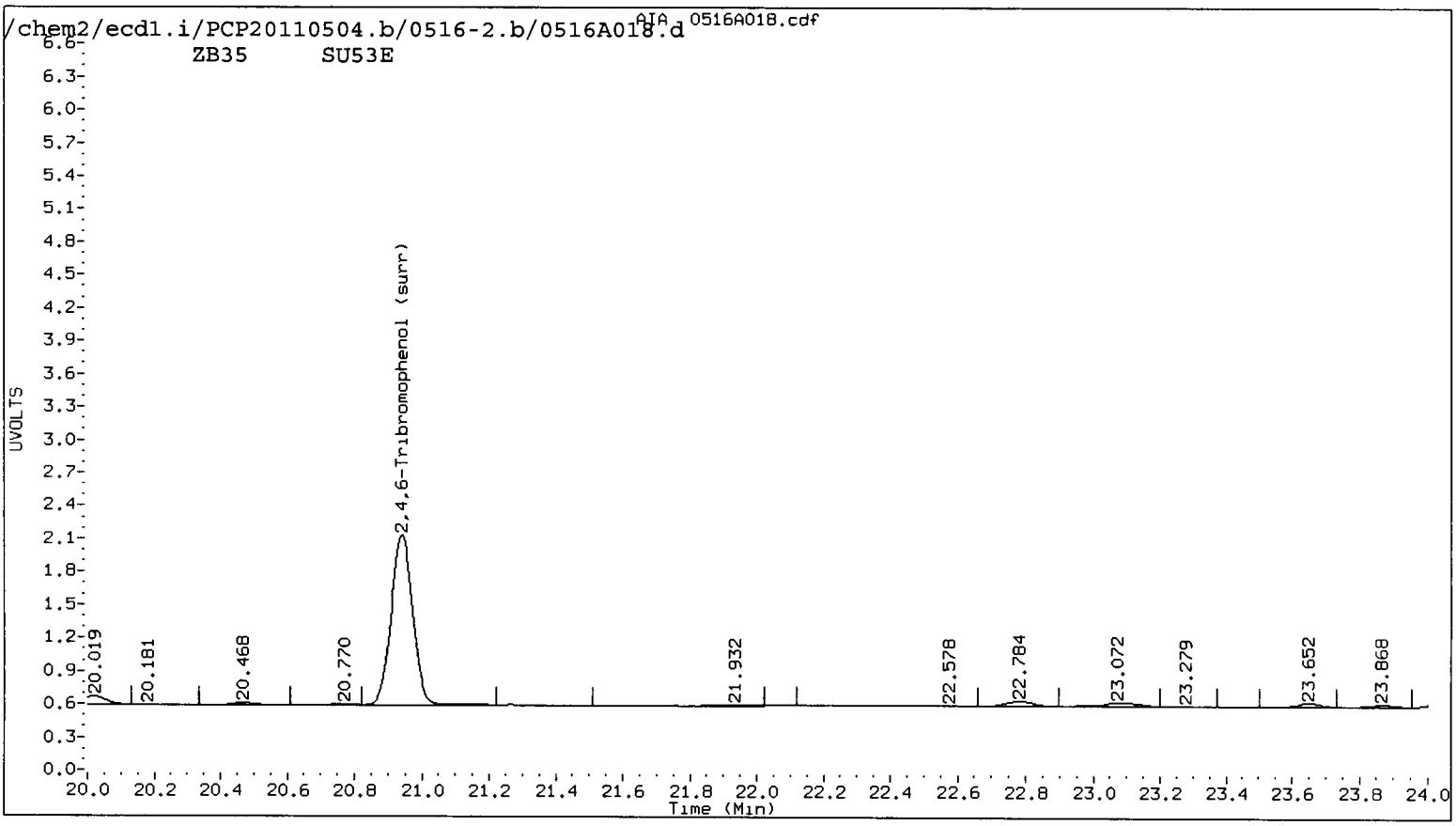
0516A018.cdf
ZB5 SU53E
UVOLTS
Time (Min)
19.100
19.402
19.566
19.992
Pentachlorophenol
21.391
21.533
21.749
22.072
22.234
22.467
22.923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0516A018.cdf
ZB35 SU53E
UVOLTS
Time (Min)
20.019
20.181
20.468
20.770
2,4,6-Tribromophenol (surr)
21.932
22.578
22.784
23.072
23.279
23.652
23.868

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A018.d

Date : 16-MAY-2011 22:16

Client ID: MW14042811

Instrument: ecd1.i

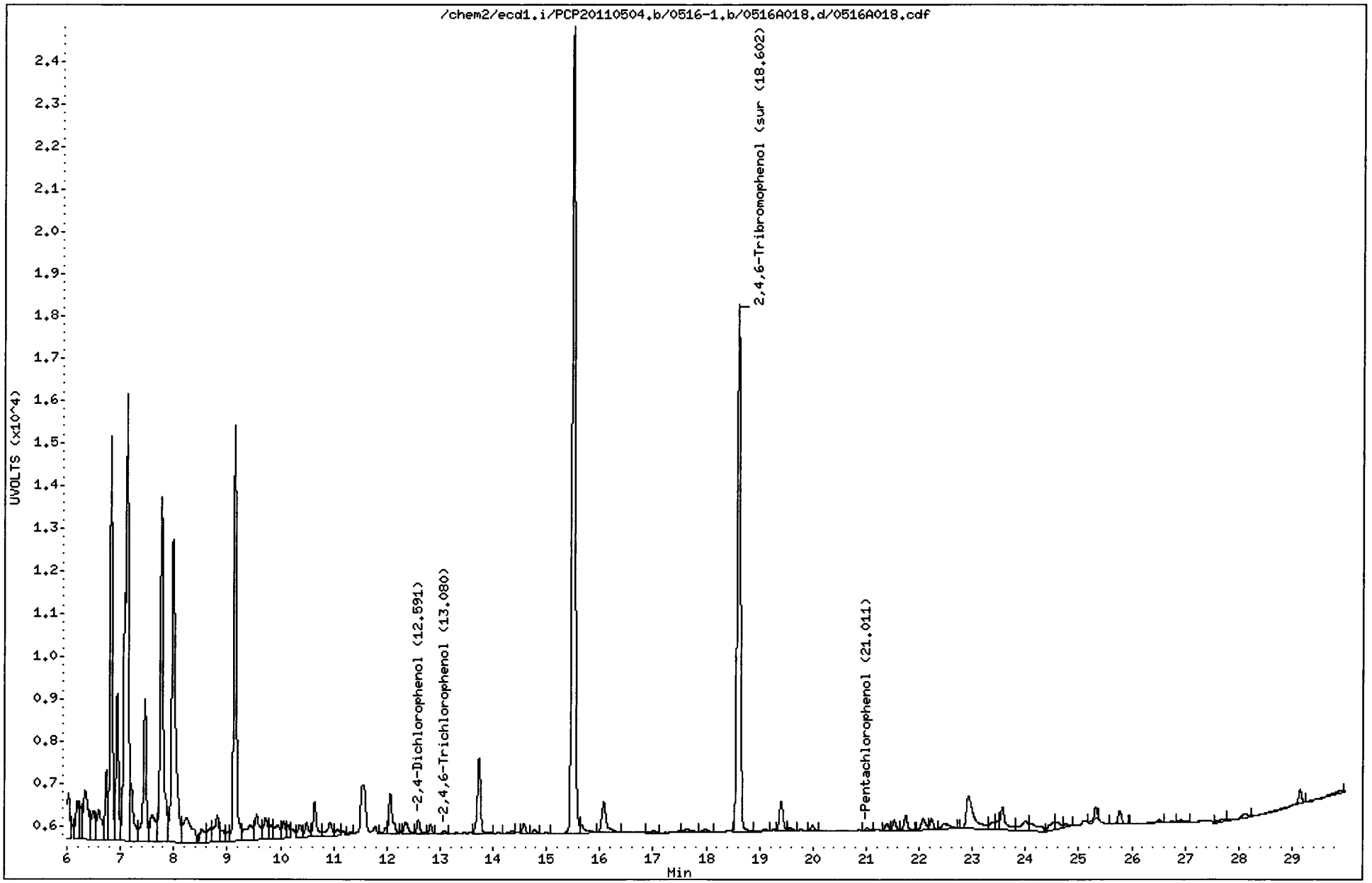
Sample Info: SU53E

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

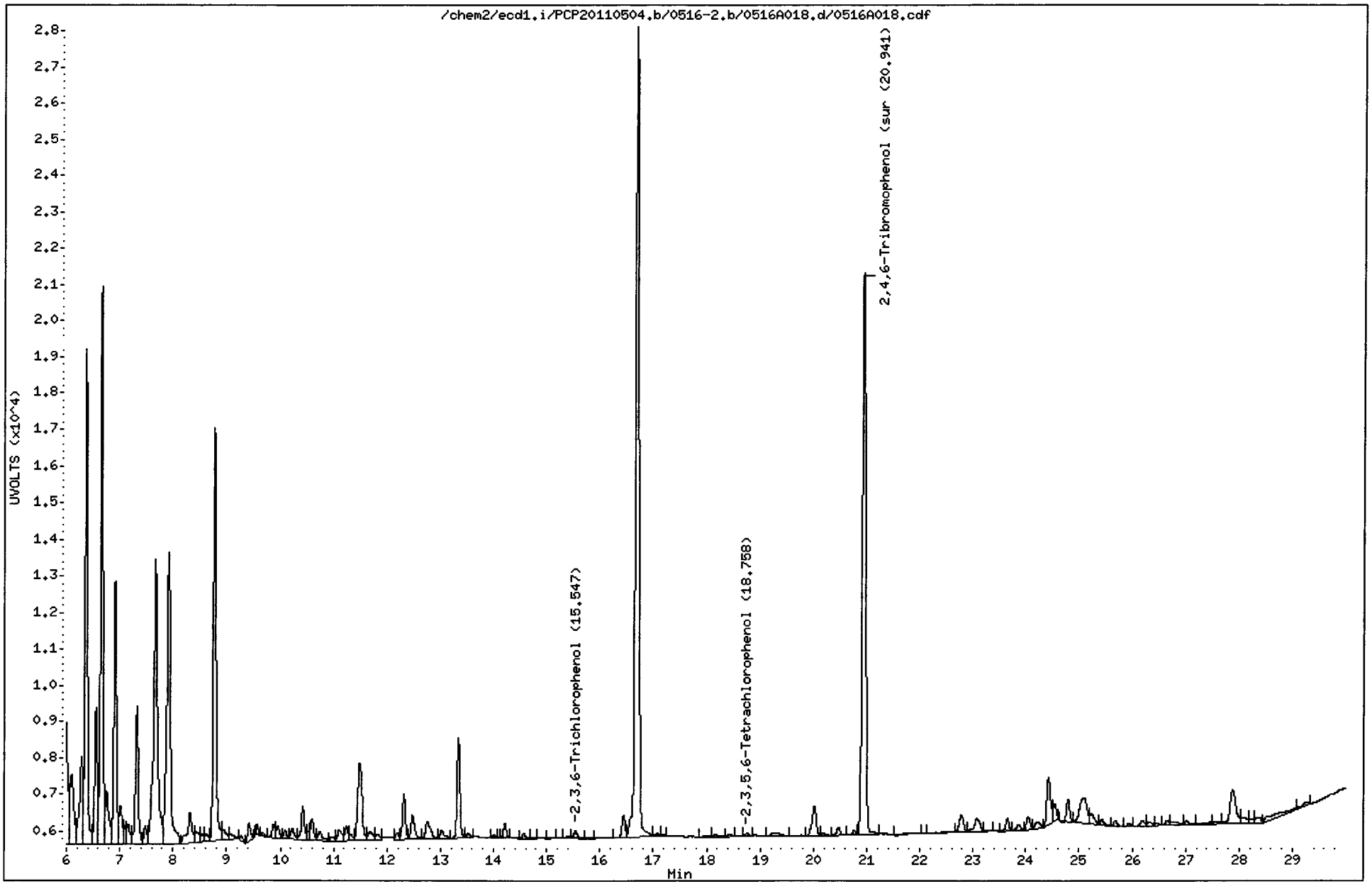
Column diameter: 0.53



SU53 : 09800

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A018.d
Date : 16-MAY-2011 22:16
Client ID: MW14042811
Sample Info: SU53E
Purge Volume: 500.0
Column phase: STX CLP2

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



SU53 : 00861

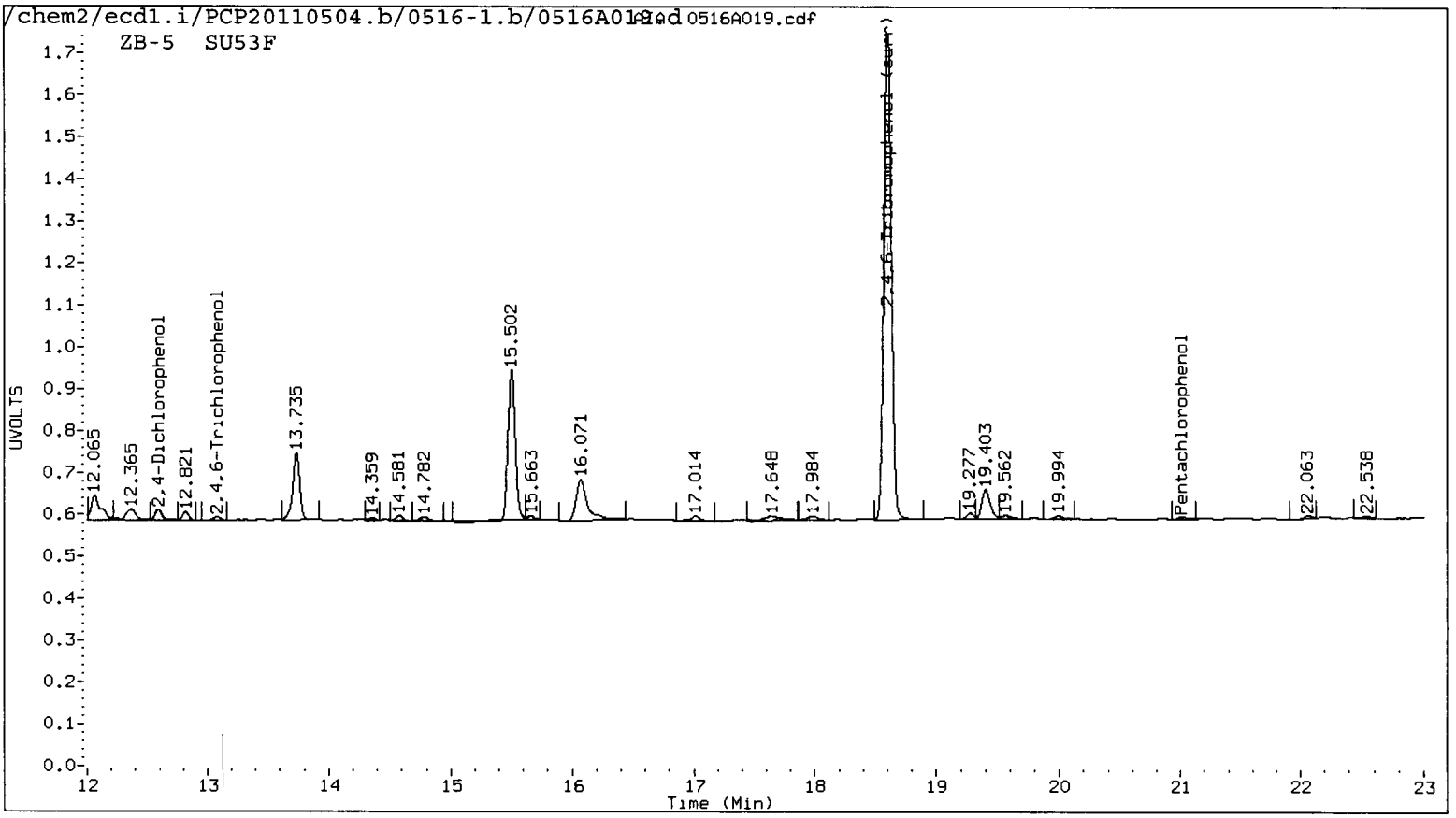
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A019.d ARI ID: SU53F
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A019.d Client ID: MW16042811
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 16-MAY-2011 22:52
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.011	0.014	1646	22.977	0.010	2532	0.0817	0.0899	9.6	Pentachlorophenol
13.080	-0.021	1854	----			0.1523	0.0000	---	2,4,6-Trichlorophenol
----			15.554	-0.003	1932	0.0000	0.1344	---	2,3,6-Trichlorophenol
----			----			0.0000	0.0000	---	2,4,5-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,4-Trichlorophenol
----			18.756	-0.058	3266	0.0000	0.1489	---	2,3,5,6-Tetrachlorophenol
----			22.083	0.003	4965	0.0000	0.2902	---	2,3,4,5-Tetrachlorophenol
12.590	0.035	6096	13.840	0.020	827	7.5824	0.9314	156.2*	2,4-Dichlorophenol
18.603	0.007	263574	20.942	0.006	348729	16.7	16.6	0.9	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	67.0	66.3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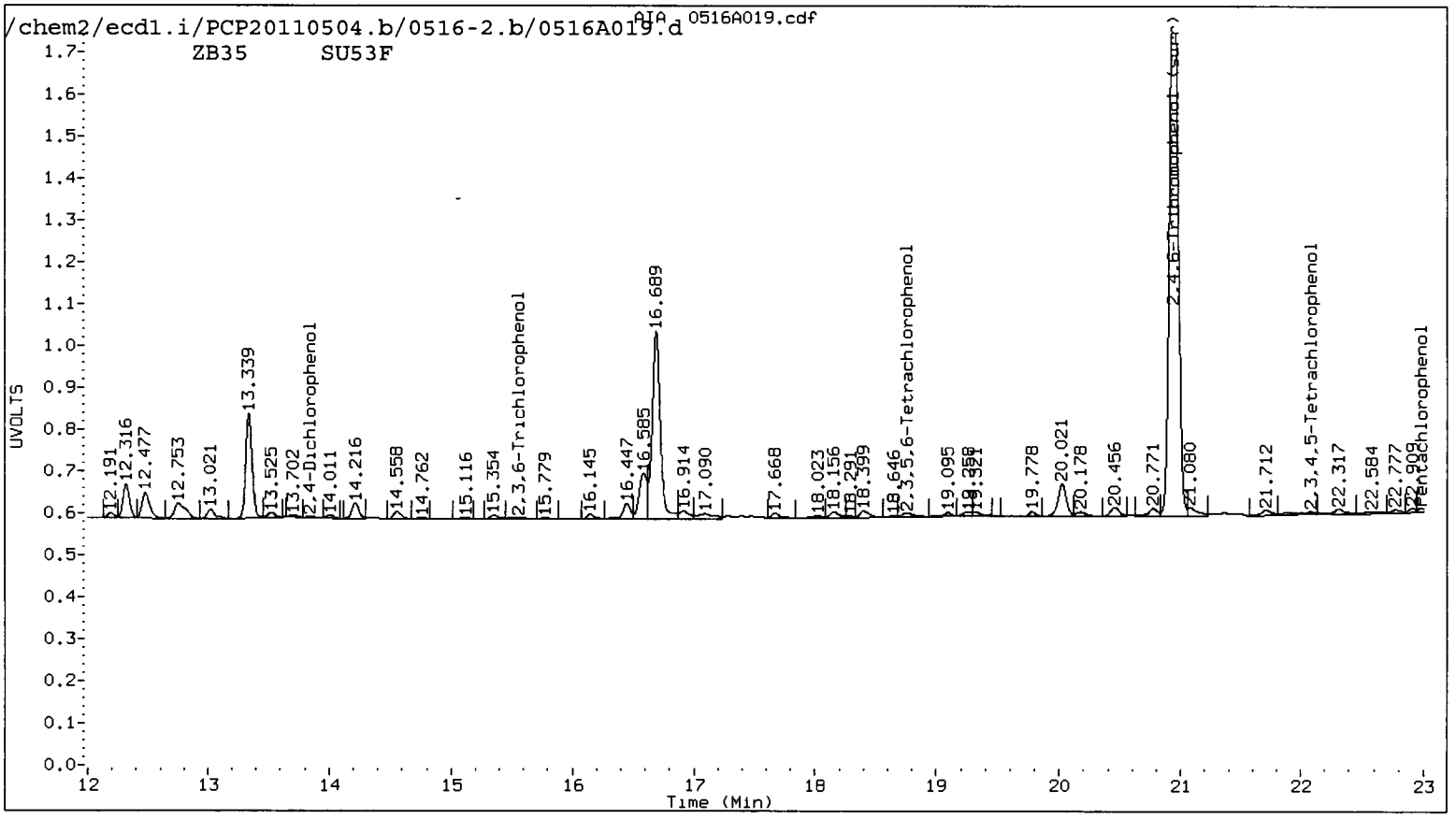
ZB-5 SU53F
UVOLTS
12.065
12.365
2,4-Dichlorophenol
12.821
2,4,6-Trichlorophenol
13.735
14.359
14.581
14.782
15.502
15.663
16.071
17.014
17.648
17.984
2,4,6-Tribromophenol (surr)
19.277
19.403
19.562
19.994
Pentachlorophenol
22.063
22.538
Time (Min)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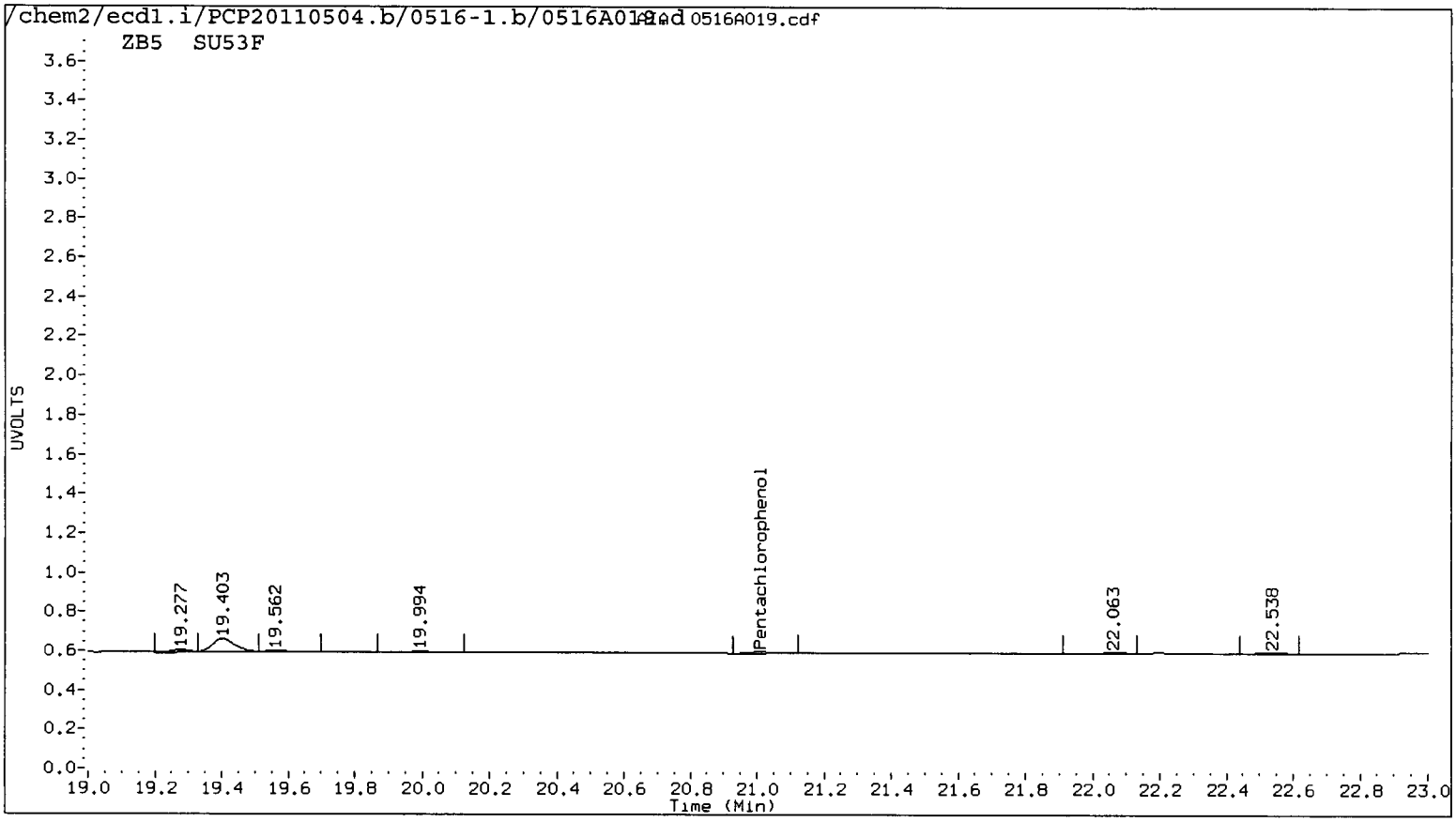
ZB35 SU53F
UVOLTS
12.191
12.316
12.477
12.753
13.021
13.339
13.525
13.702
2,4-Dichlorophenol
14.011
14.216
14.558
14.762
15.116
15.354
2,3,6-Trichlorophenol
15.779
16.145
16.447
16.585
16.689
16.914
17.090
17.668
18.023
18.156
18.399
2,3,5,6-Tetrachlorophenol
19.095
19.778
20.021
20.178
20.456
20.771
2,4,6-Tribromophenol (surr)
21.080
21.712
2,3,4,5-Tetrachlorophenol
22.317
22.584
22.777
Pentachlorophenol
Time (Min)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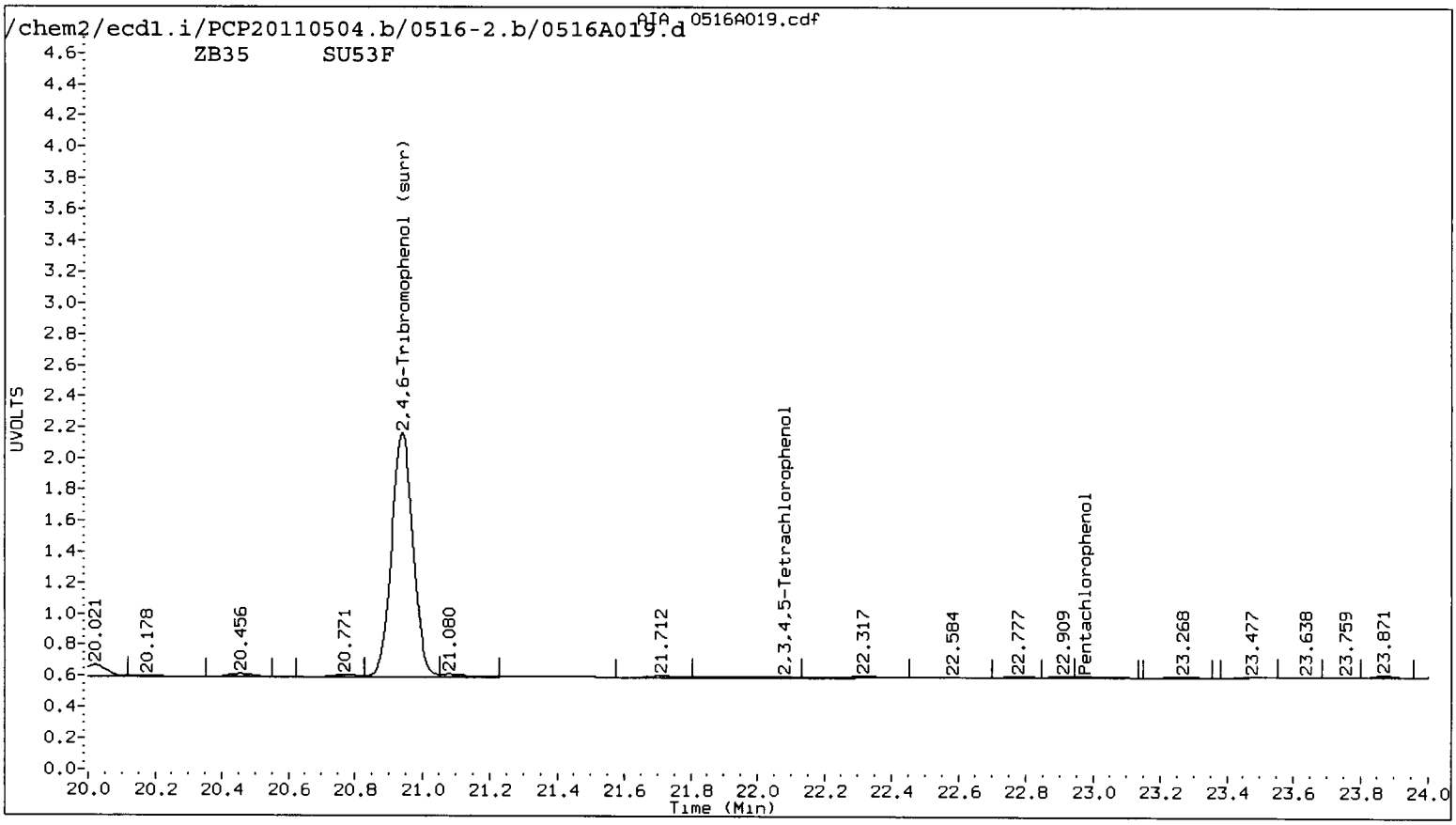
ZB5 SU53F
UVOLTS
19.277
19.403
19.562
19.994
Pentachlorophenol
22.063
22.538
Time (Min)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ZB35 SU53F
UVOLTS
20.021
20.178
20.456
20.771
2,4,6-Tribromophenol (surr)
21.080
21.712
2,3,4,5-Tetrachlorophenol
22.317
22.584
22.777
22.909
Pentachlorophenol
23.268
23.477
23.638
23.759
23.871
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A019.d

Date : 16-MAY-2011 22:52

Client ID: MW16042811

Instrument: ecd1.i

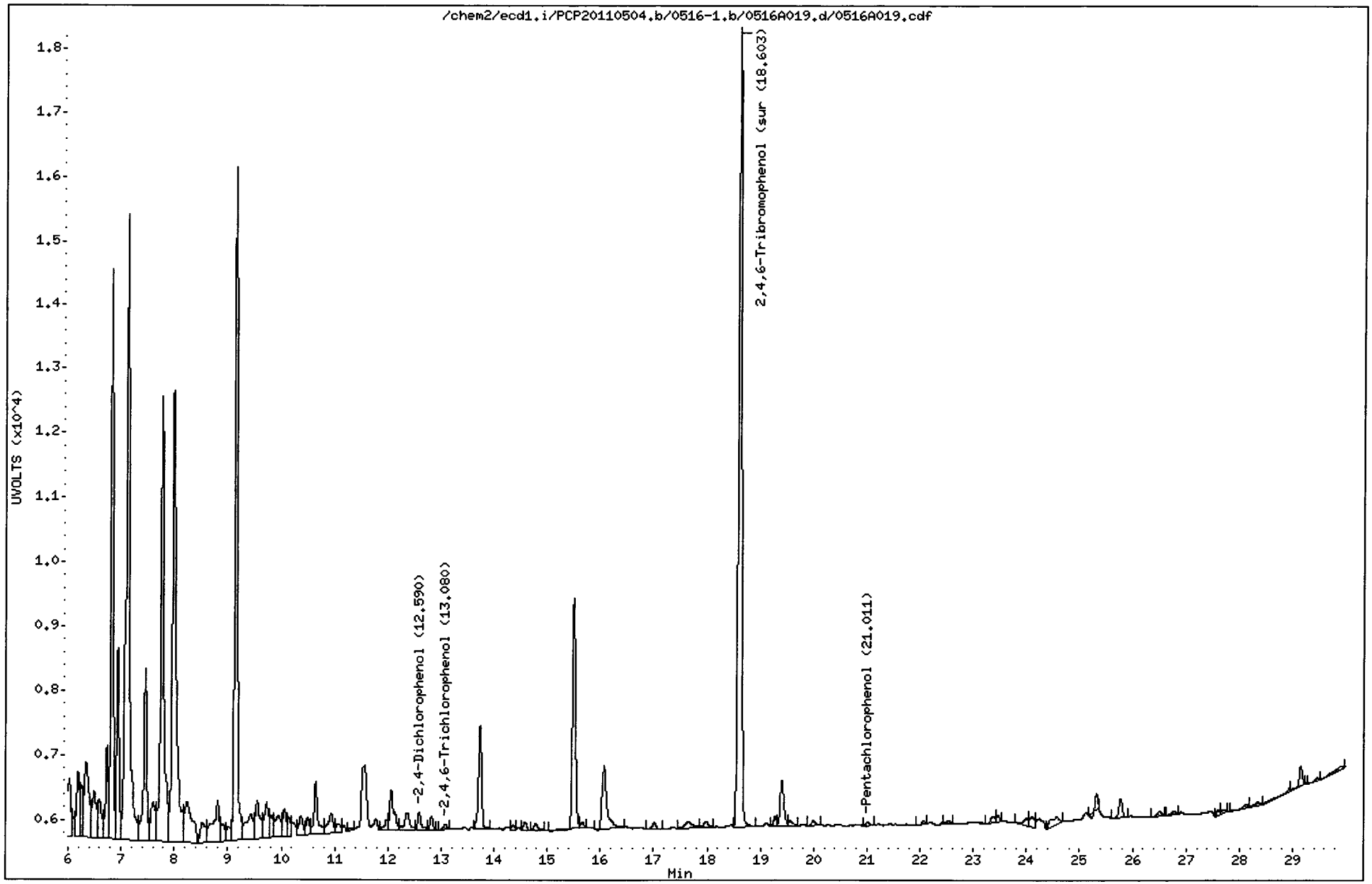
Sample Info: SU53F

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

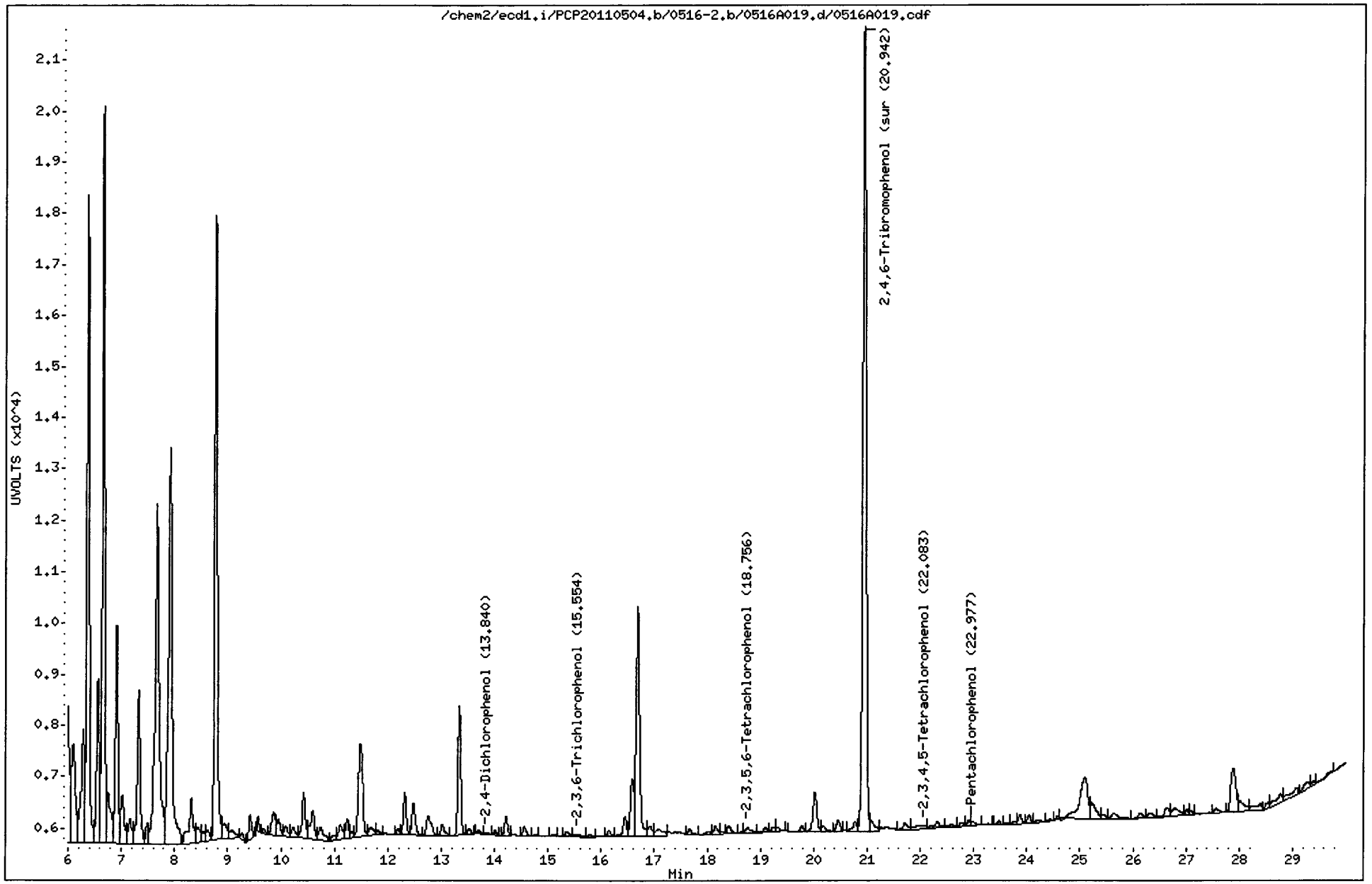
Column diameter: 0.53



SU53 : 59800

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A019.d
Date : 16-MAY-2011 22:52
Client ID: MW16042811
Sample Info: SU53F
Purge Volume: 500.0
Column phase: STX CLP2

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



SU53 : 99800

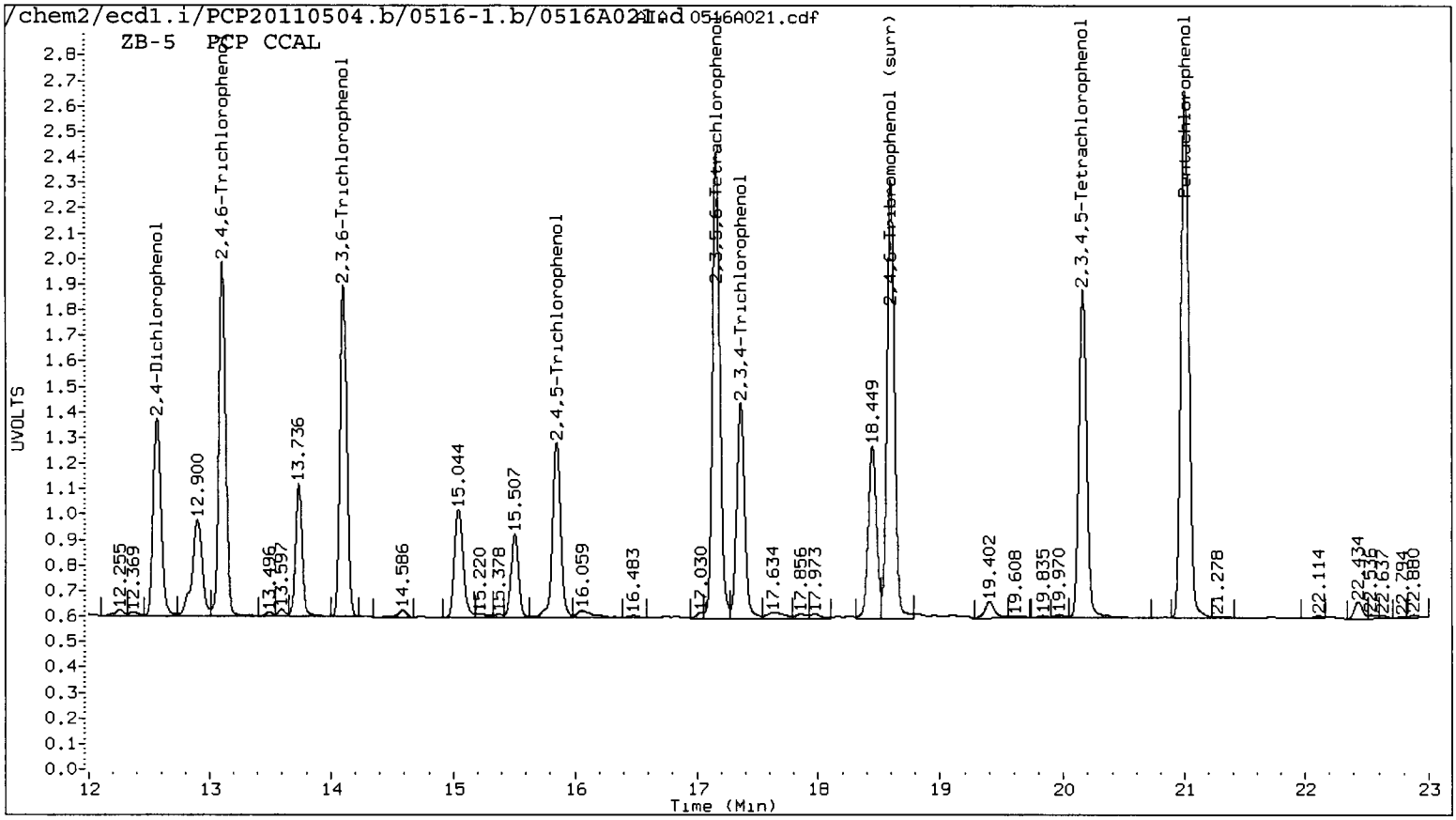
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A021.d ARI ID: PCP CCAL
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A021.d Client ID:
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 17-MAY-2011 00:04
Compound Sublist: all Report Date: 05/18/2011 09:24
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.004	0.007	465902	22.974	0.007	635188	23.1227	22.5557	2.5	Pentachlorophenol
13.107	0.006	281484	14.317	0.006	322018	23.1241	22.2177	4.0	2,4,6-Trichlorophenol
14.103	0.006	258565	15.563	0.006	313899	22.5769	21.8389	3.3	2,3,6-Trichlorophenol
15.851	0.006	159595	17.479	0.005	190477	23.9382	23.5283	1.7	2,4,5-Trichlorophenol
17.358	0.007	191653	19.028	0.005	218923	22.9378	23.7806	3.6	2,3,4-Trichlorophenol
17.159	0.006	393464	18.820	0.006	482149	23.2727	21.9778	5.7	2,3,5,6-Tetrachlorophenol
20.161	0.007	291735	22.086	0.006	370757	22.4727	24.1811	7.3	2,3,4,5-Tetrachlorophenol
12.564	0.009	176223	13.826	0.006	164465	272.3052	231.3324	16.3	2,4-Dichlorophenol
18.602	0.007	372324	20.942	0.006	472286	23.6	22.5	5.1	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	92.5	90.2
2,4,6-Trichlorophenol	92.5	88.9
2,3,6-Trichlorophenol	90.3	87.4
2,4,5-Trichlorophenol	95.8	94.1
2,3,4-Trichlorophenol	91.8	95.1
2,3,5,6-Tetrachlorophenol	93.1	87.9
2,3,4,5-Tetrachlorophenol	89.9	96.7
2,4-Dichlorophenol	108.9	92.5
2,4,6-TBP (surr)	94.6	89.9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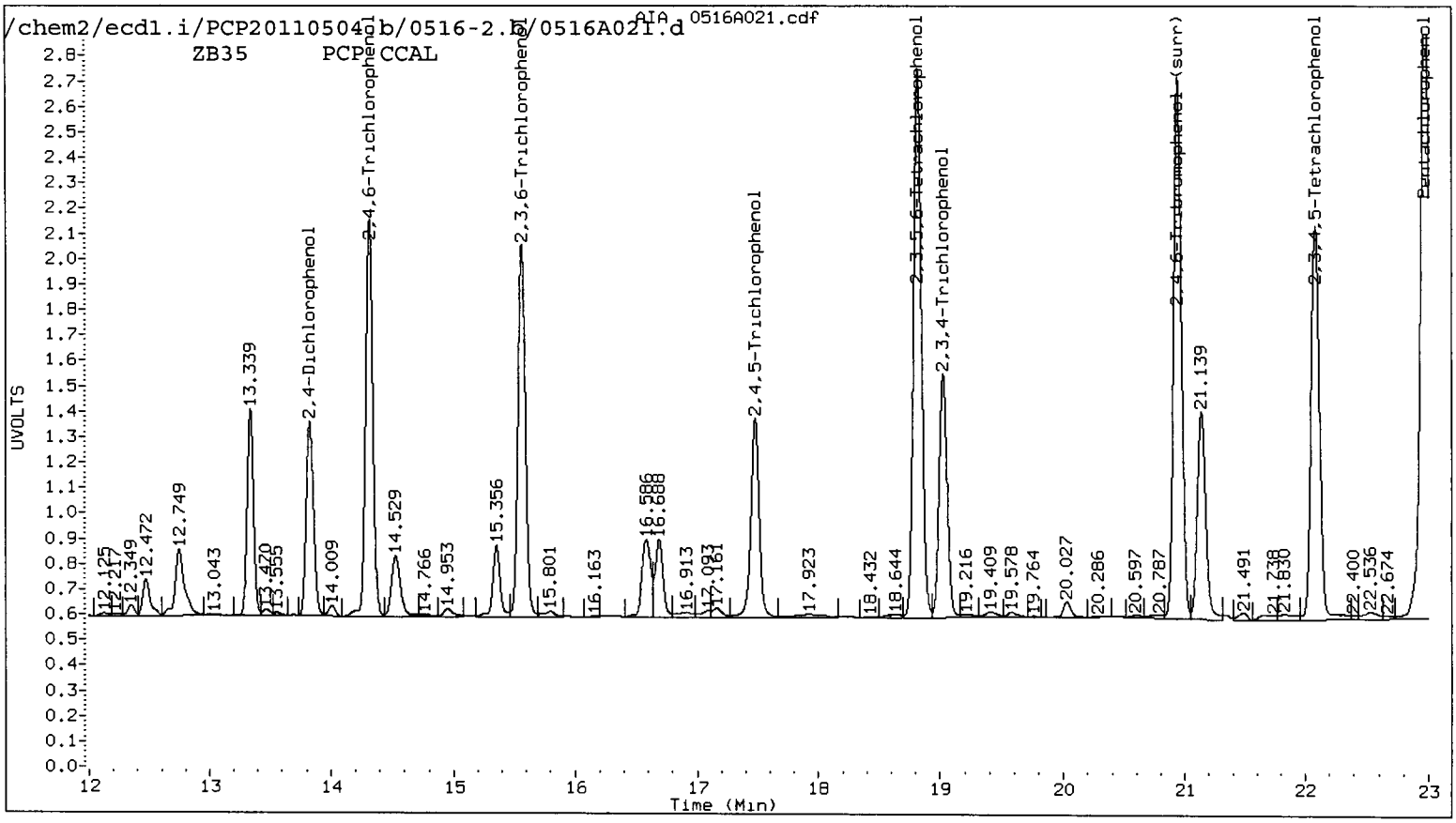
AIA 0516A021.cdf
ZB-5 PCP CCAL
UVOLTS
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
12.900
13.736
15.044
15.507
18.449
21.278
Time (Min)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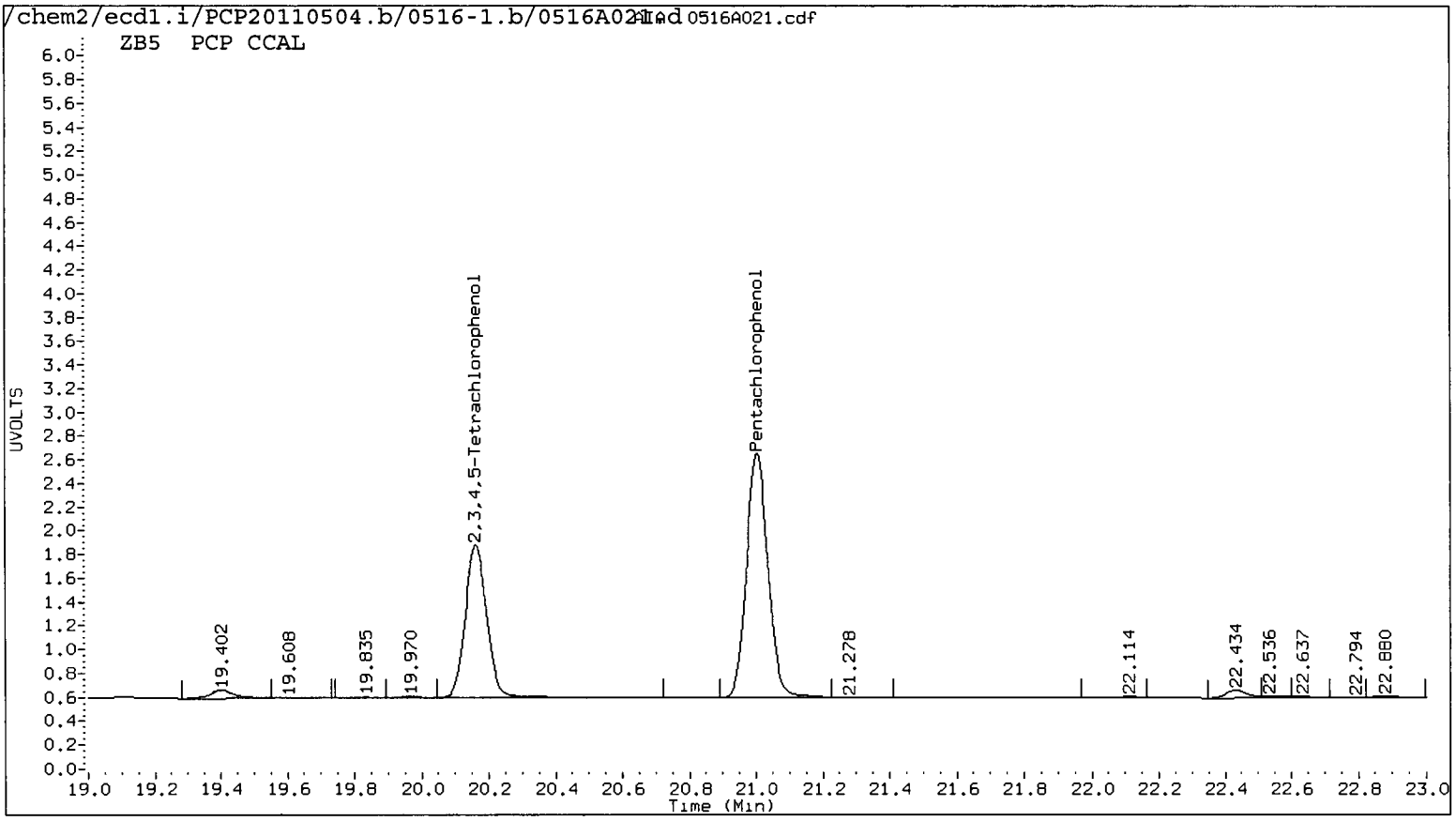
AIA 0516A021.cdf
ZB35 PCP CCAL
UVOLTS
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
12.749
13.339
14.529
15.356
21.139
Time (Min)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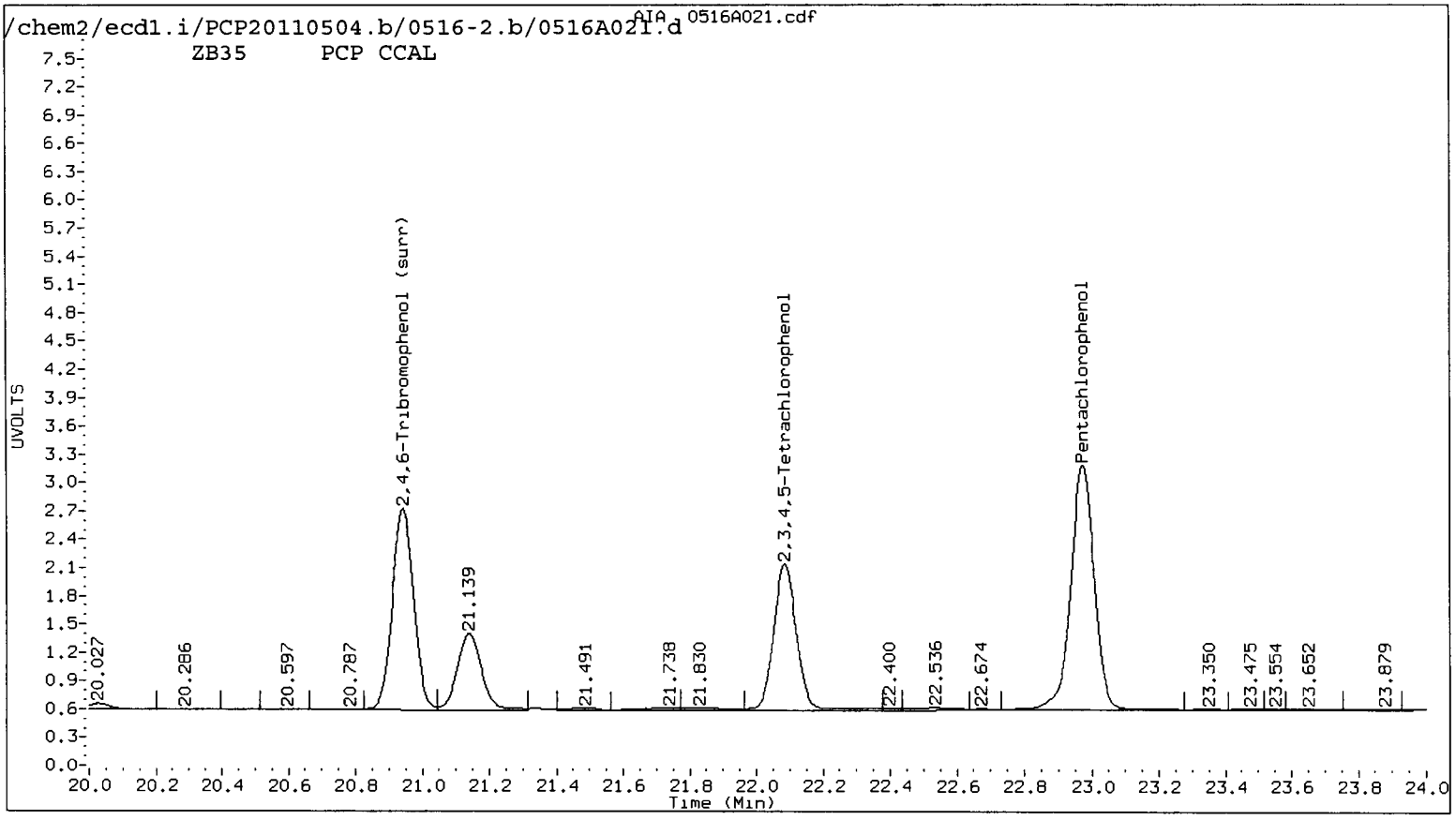
AIA 0516A021.cdf
ZB5 PCP CCAL
UVOLTS
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
19.402
19.608
19.835
19.970
21.278
22.114
22.434
22.536
22.637
22.794
22.880
Time (Min)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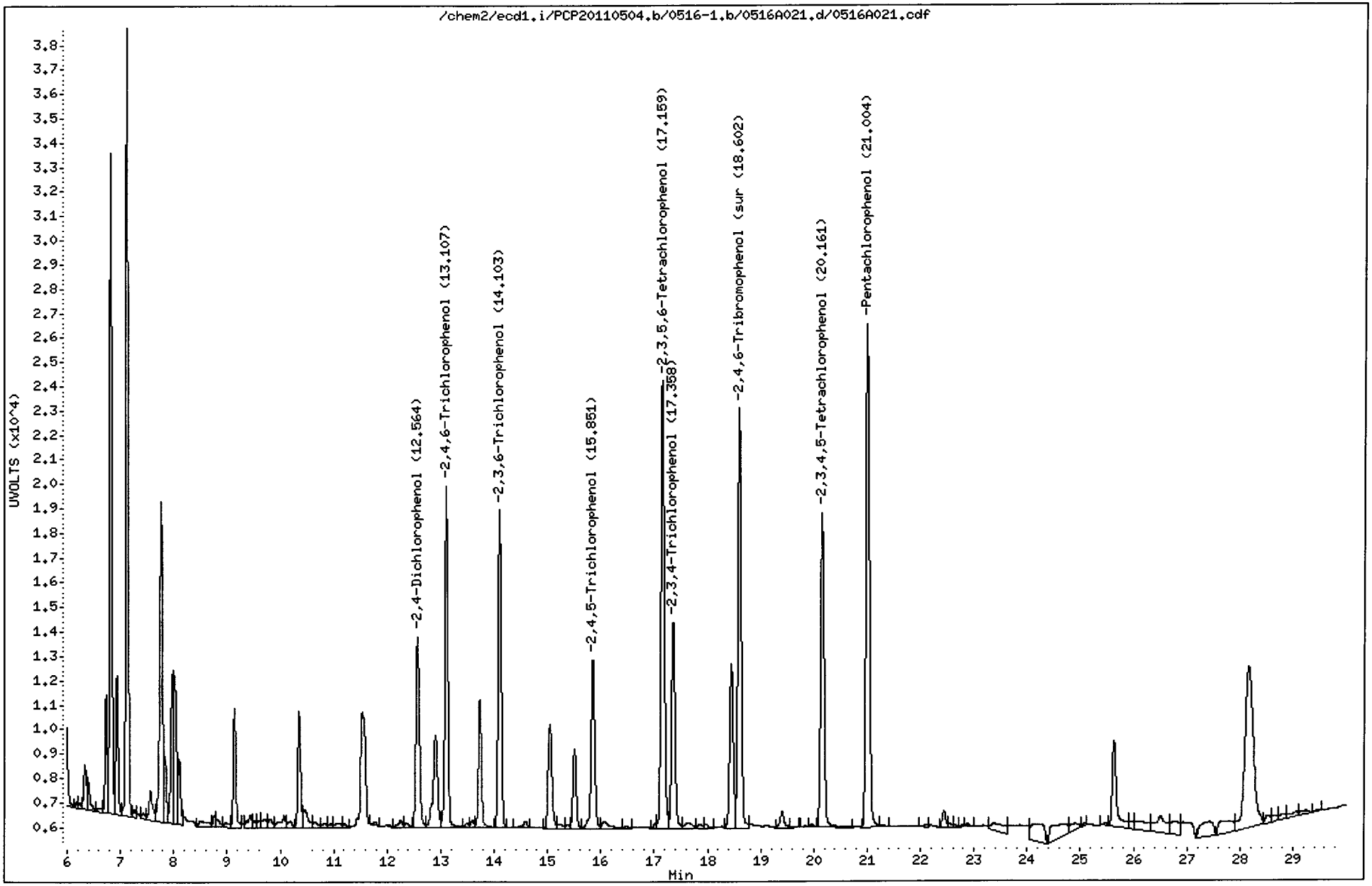
AIA 0516A021.cdf
ZB35 PCP CCAL
UVOLTS
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
20.027
20.286
20.597
20.787
21.139
21.491
21.738
21.830
22.400
22.536
22.674
23.350
23.475
23.554
23.652
23.879
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A021.d
Date : 17-MAY-2011 00:04
Client ID:
Sample Info: PCP CCAL
Purge Volume: 500.0
Column phase: STX CLP1

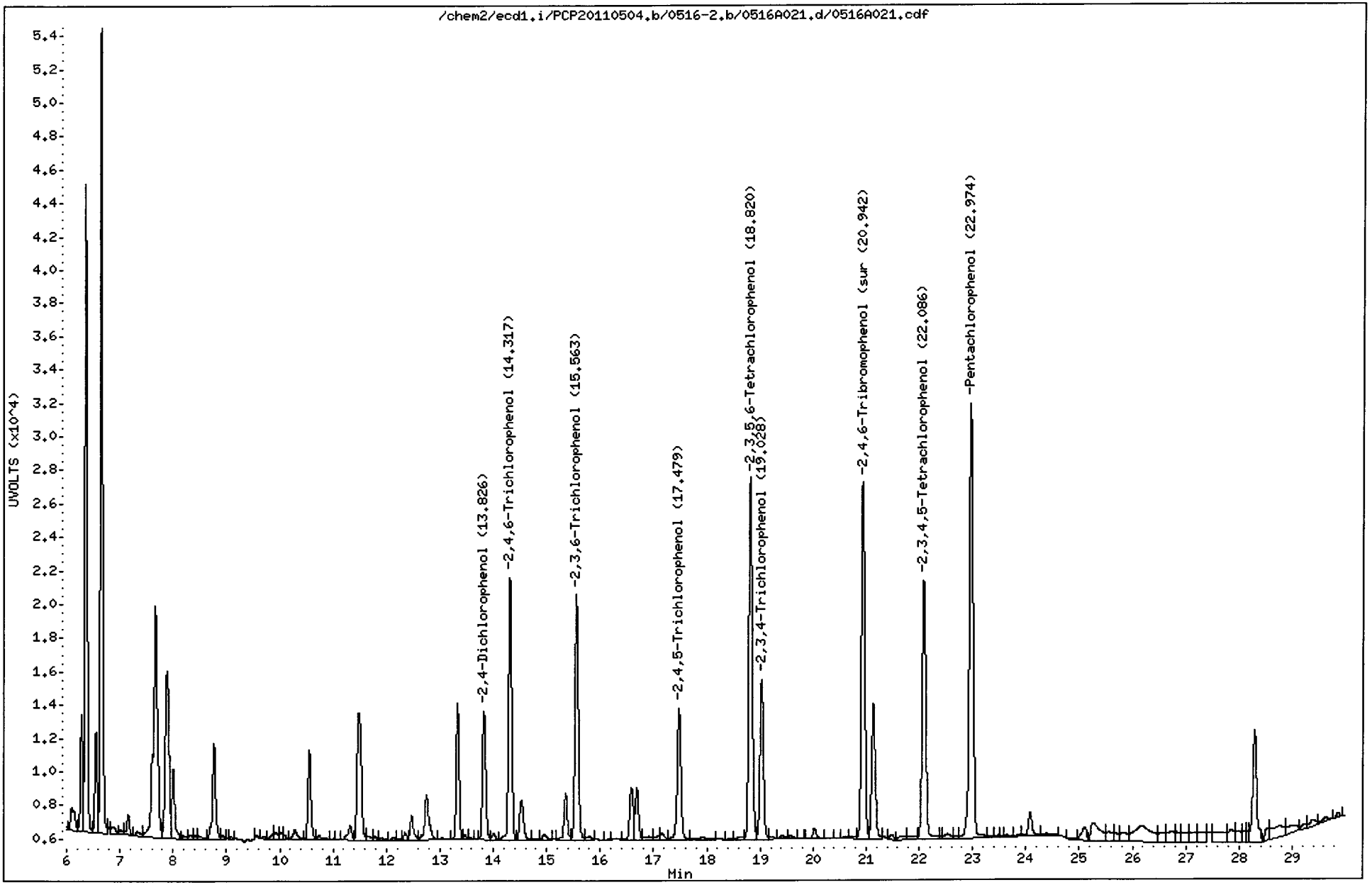
Instrument: ecd1.i
Operator: ar
Column diameter: 0.53



SUSS : 00870

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A021.d
Date : 17-MAY-2011 00:04
Client ID:
Sample Info: PCP CCAL
Purge Volume: 500.0
Column phase: STX CLP2

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



SUSS 00871

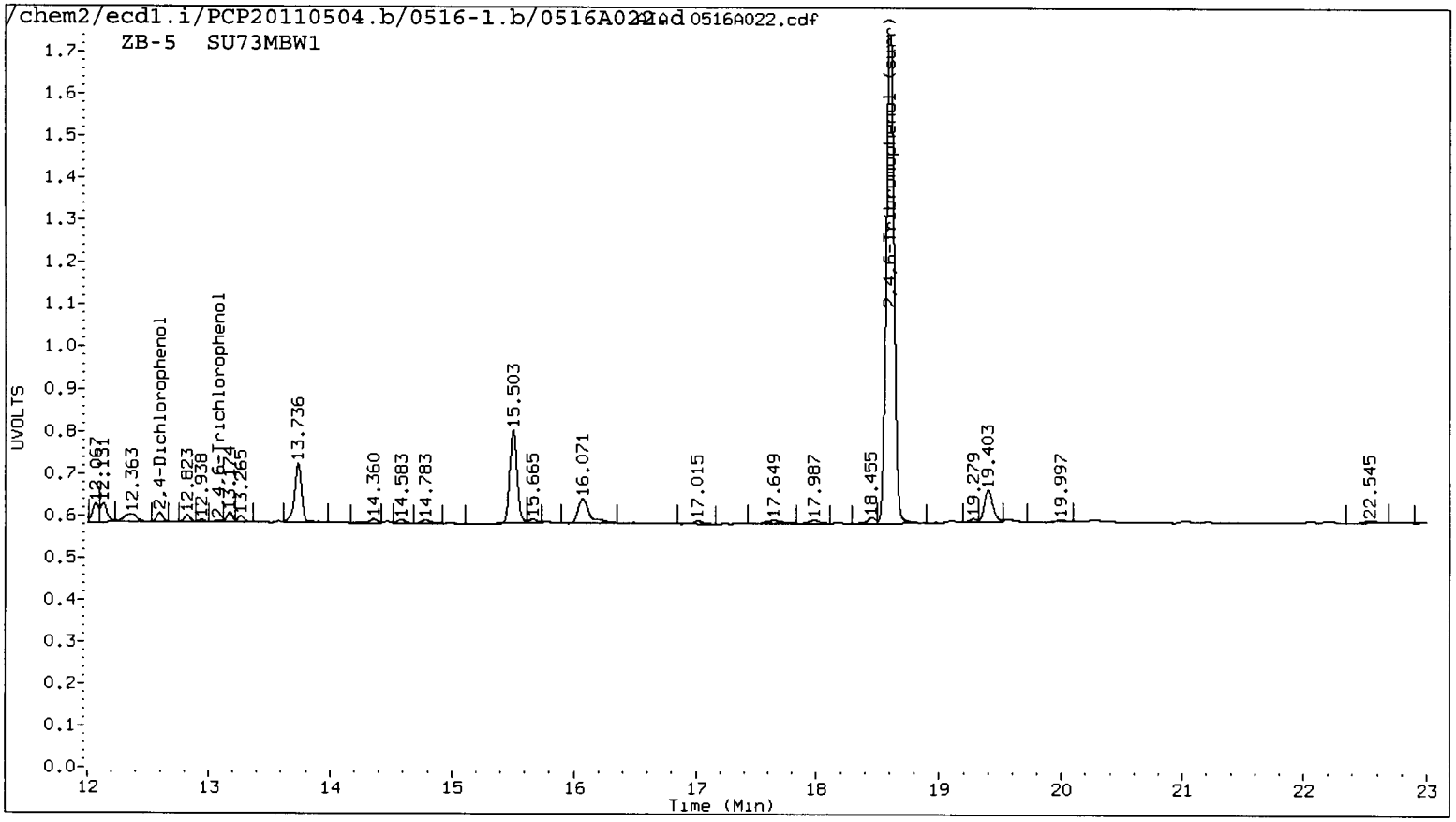
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A022.d ARI ID: SU73MBW1
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A022.d Client ID: SU73MBW1
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 17-MAY-2011 00:41
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col RT	ZB-5 Col Shift	ZB-5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB-5 on col	ZB35 on col	RPD	Compound
----			22.996	0.029	1966	0.0000	0.0698	---	Pentachlorophenol
13.080	-0.021	1038	14.351	0.040	1544	0.0853	0.1066	22.2	2,4,6-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,6-Trichlorophenol
----			----			0.0000	0.0000	---	2,4,5-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,4-Trichlorophenol
----			18.758	-0.056	1877	0.0000	0.0856	---	2,3,5,6-Tetrachlorophenol
----			----			0.0000	0.0000	---	2,3,4,5-Tetrachlorophenol
12.592	0.037	3732	----			4.6263	0.0000	---	2,4-Dichlorophenol
18.603	0.008	263124	20.943	0.007	346454	16.7	16.5	1.4	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	66.8	65.9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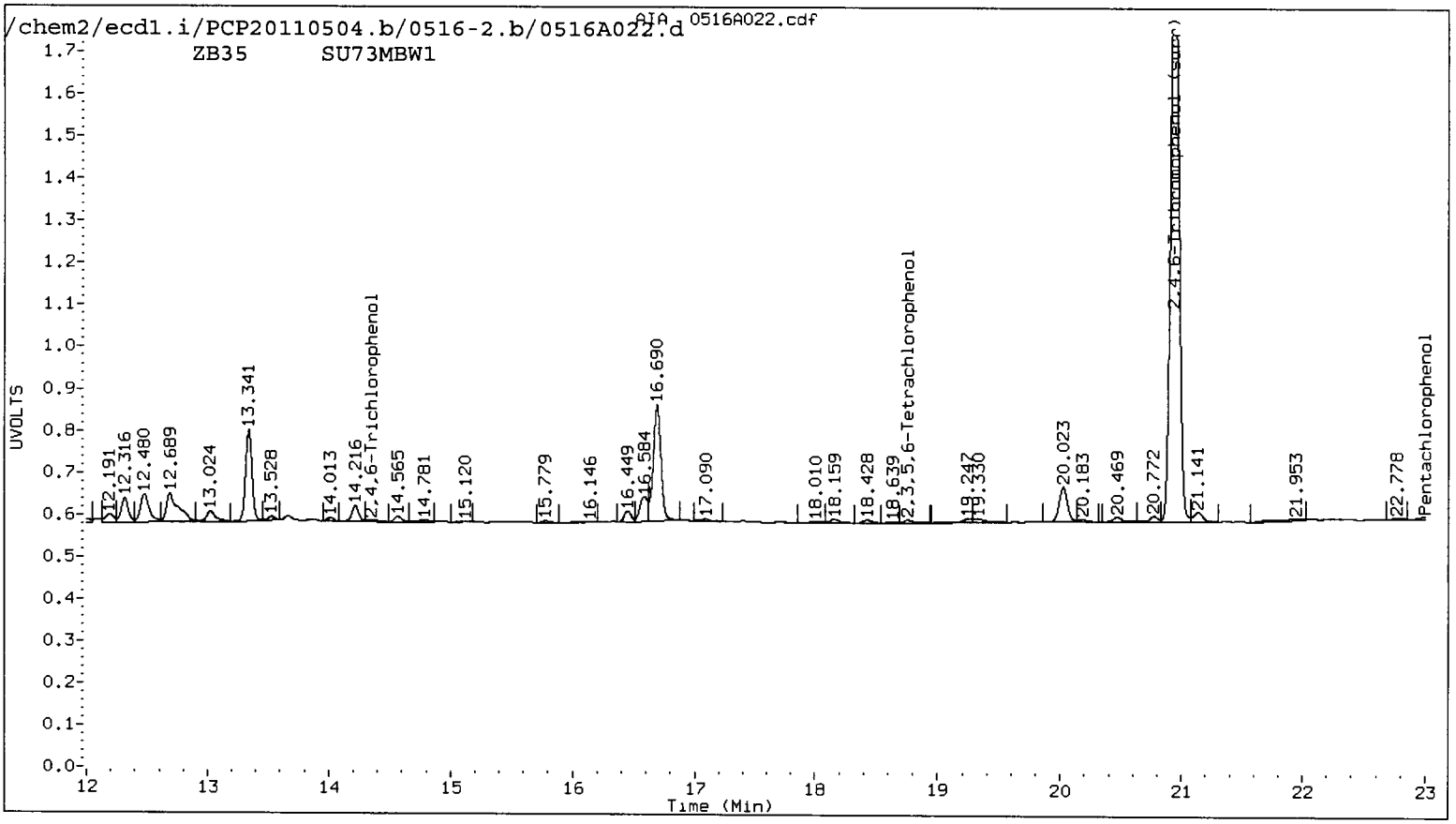
0516A022.cdf
ZB-5 SU73MBW1
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
13.736
15.503
16.071
17.015
17.649
17.987
18.455
19.279
19.403
19.997
22.545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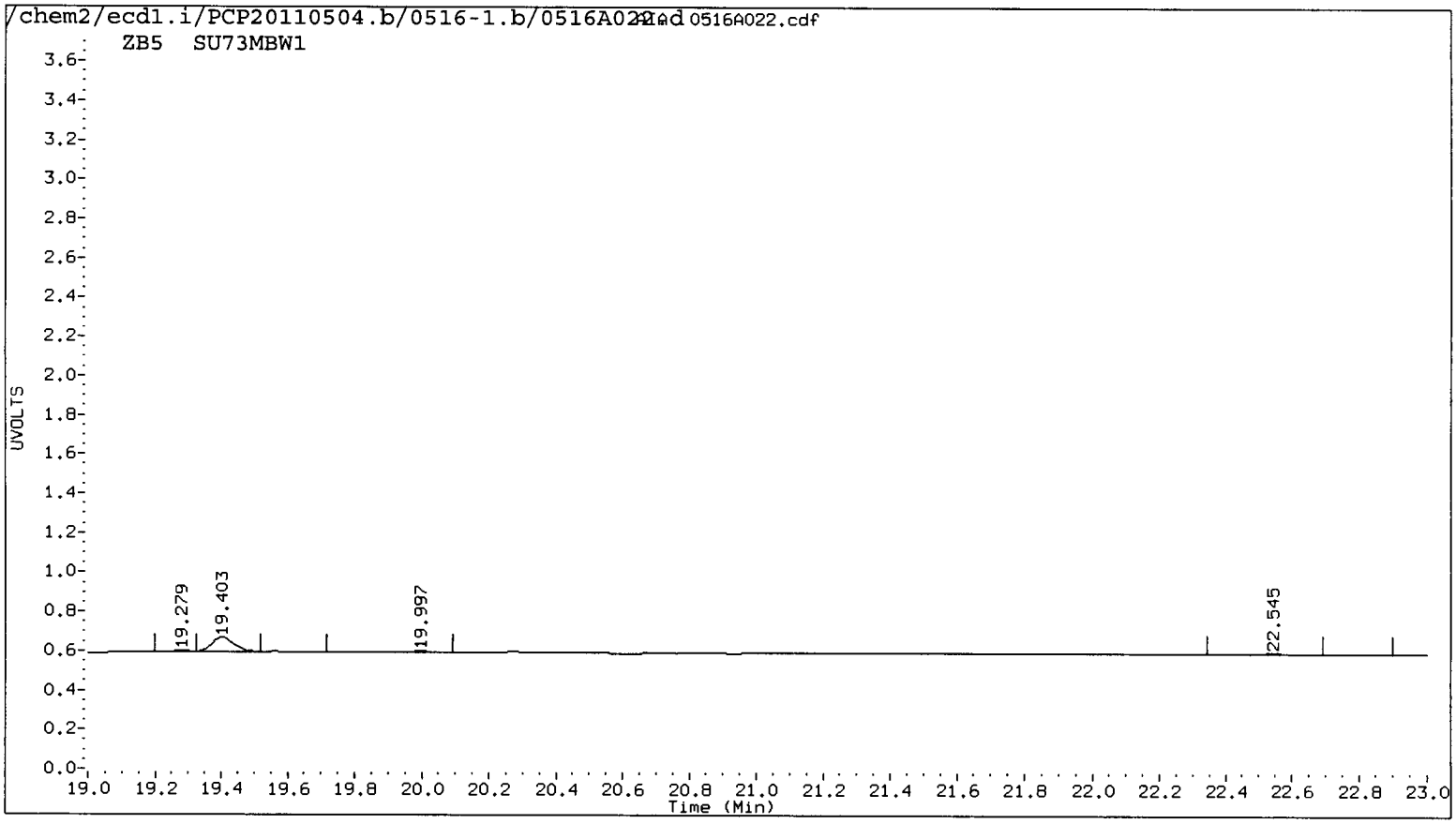
0516A022.cdf
ZB35 SU73MBW1
UVOLTS
Time (Min)
13.341
14.216
2,4,6-Trichlorophenol
16.690
2,3,5,6-Tetrachlorophenol
Pentachlorophenol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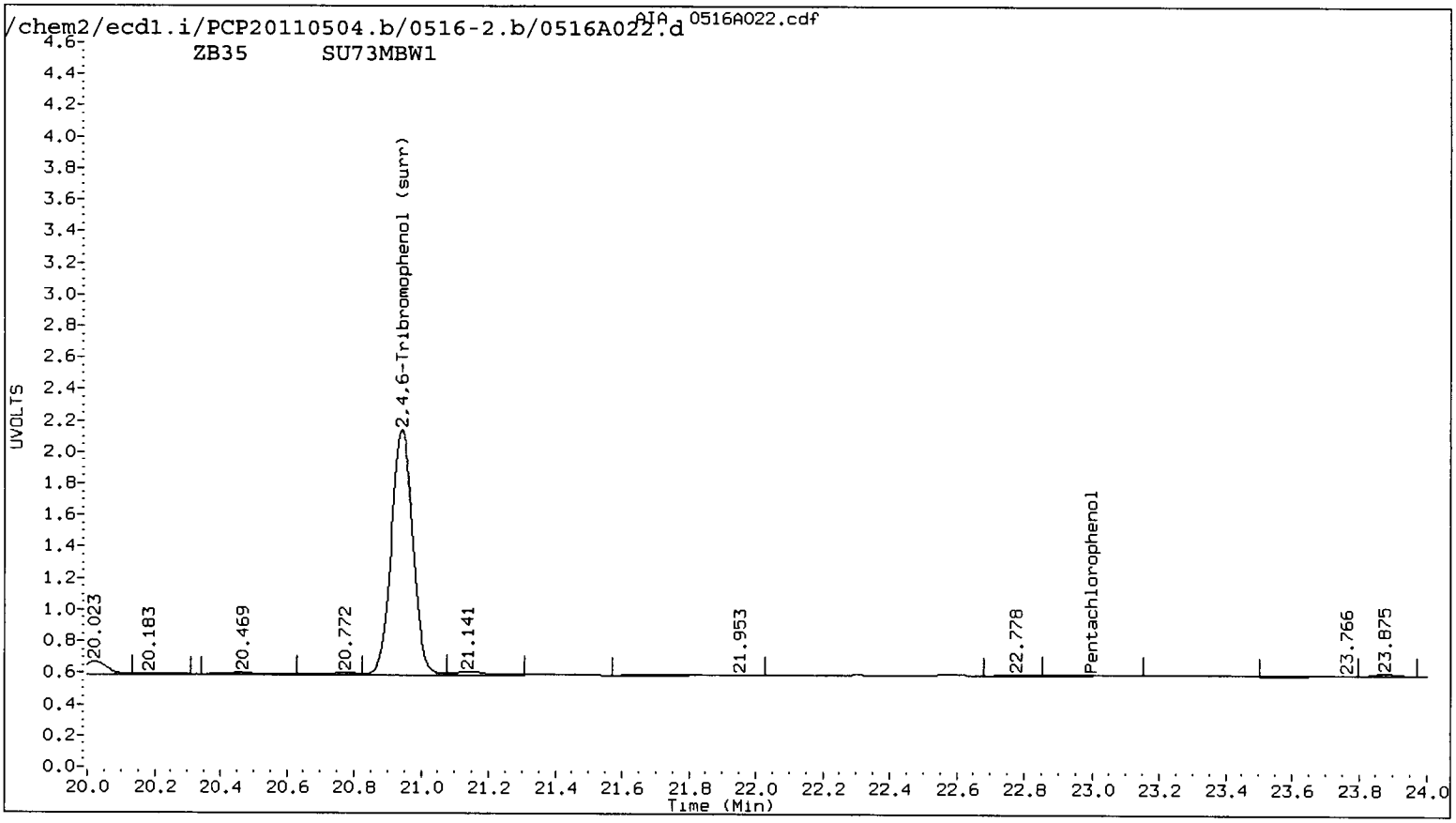
ZB5 SU73MBW1
UVOLTS
19.279
19.403
19.997
22.545
Time (Min)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ZB35 SU73MBW1
UVOLTS
20.023
20.183
20.469
20.772
2,4,6-Tribromophenol (surr)
21.141
21.953
22.778
Pentachlorophenol
23.766
23.875
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A022.d

Date : 17-MAY-2011 00:41

Client ID: SU73MBW1

Instrument: ecd1.i

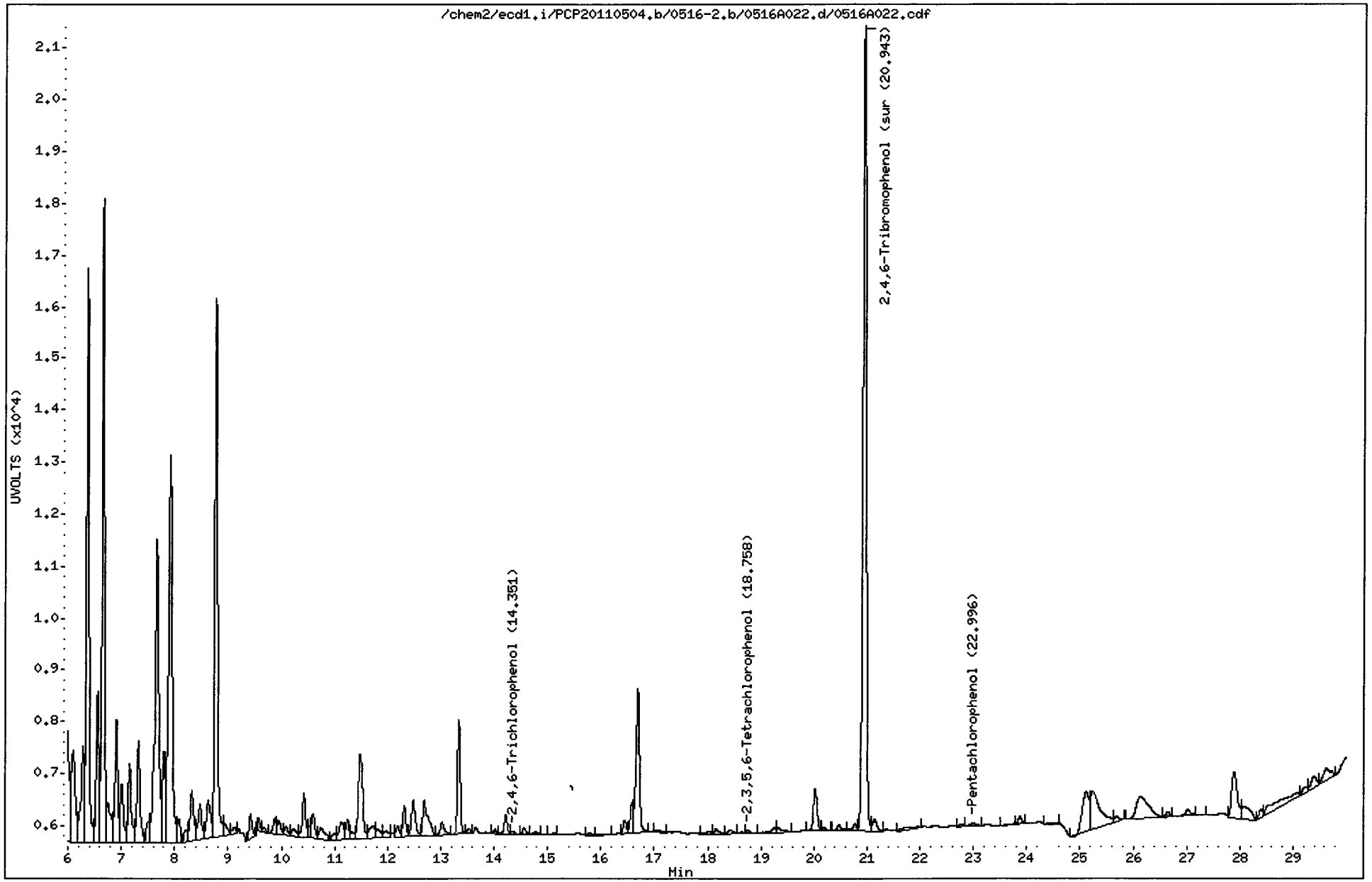
Sample Info: SU73MBW1

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



SU53 : 008775

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A022.d

Page 1

Date : 17-MAY-2011 00:41

Client ID: SU73MBW1

Instrument: ecd1.i

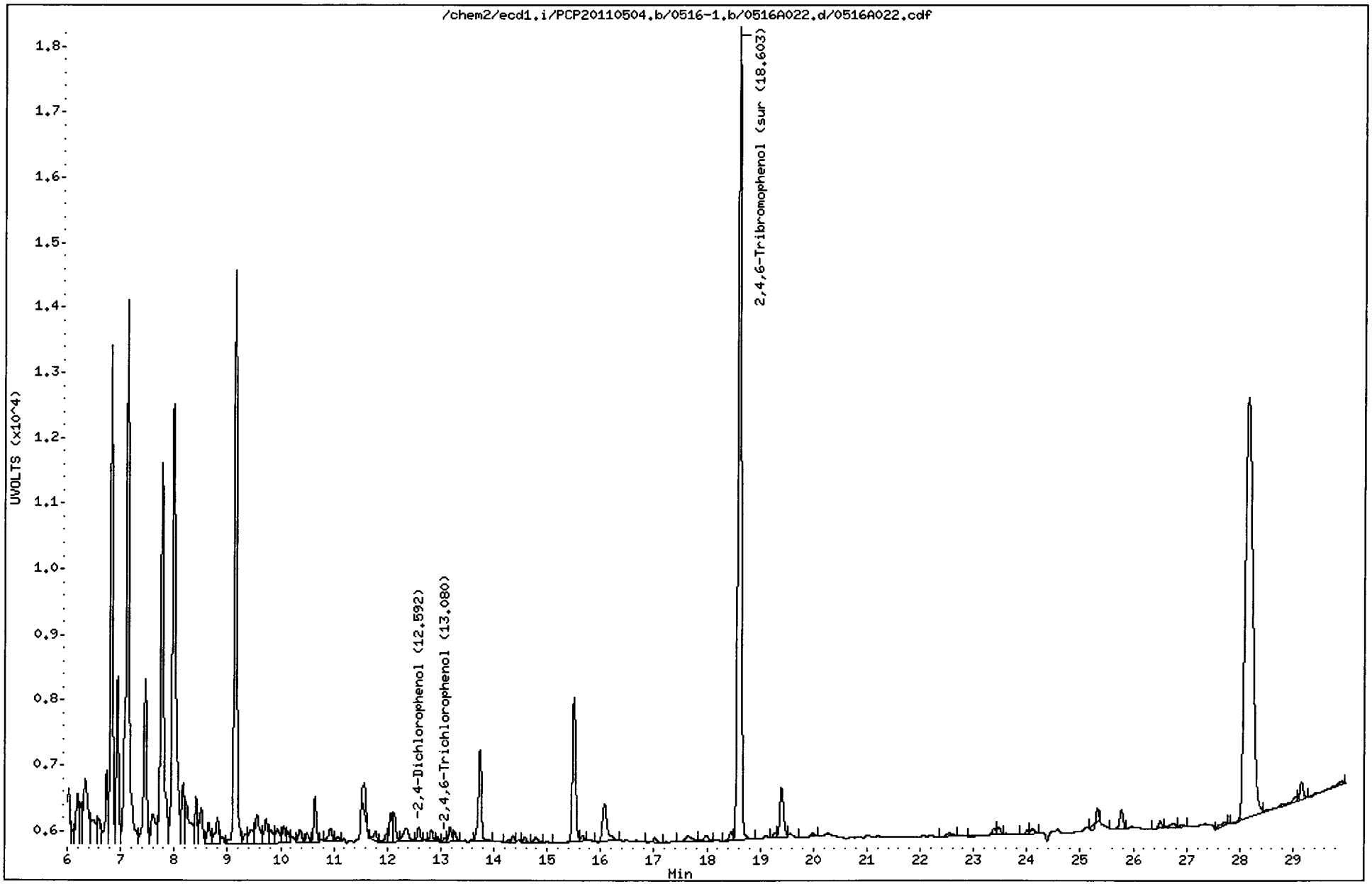
Sample Info: SU73MBW1

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

Column diameter: 0.53



SU53 : 00876

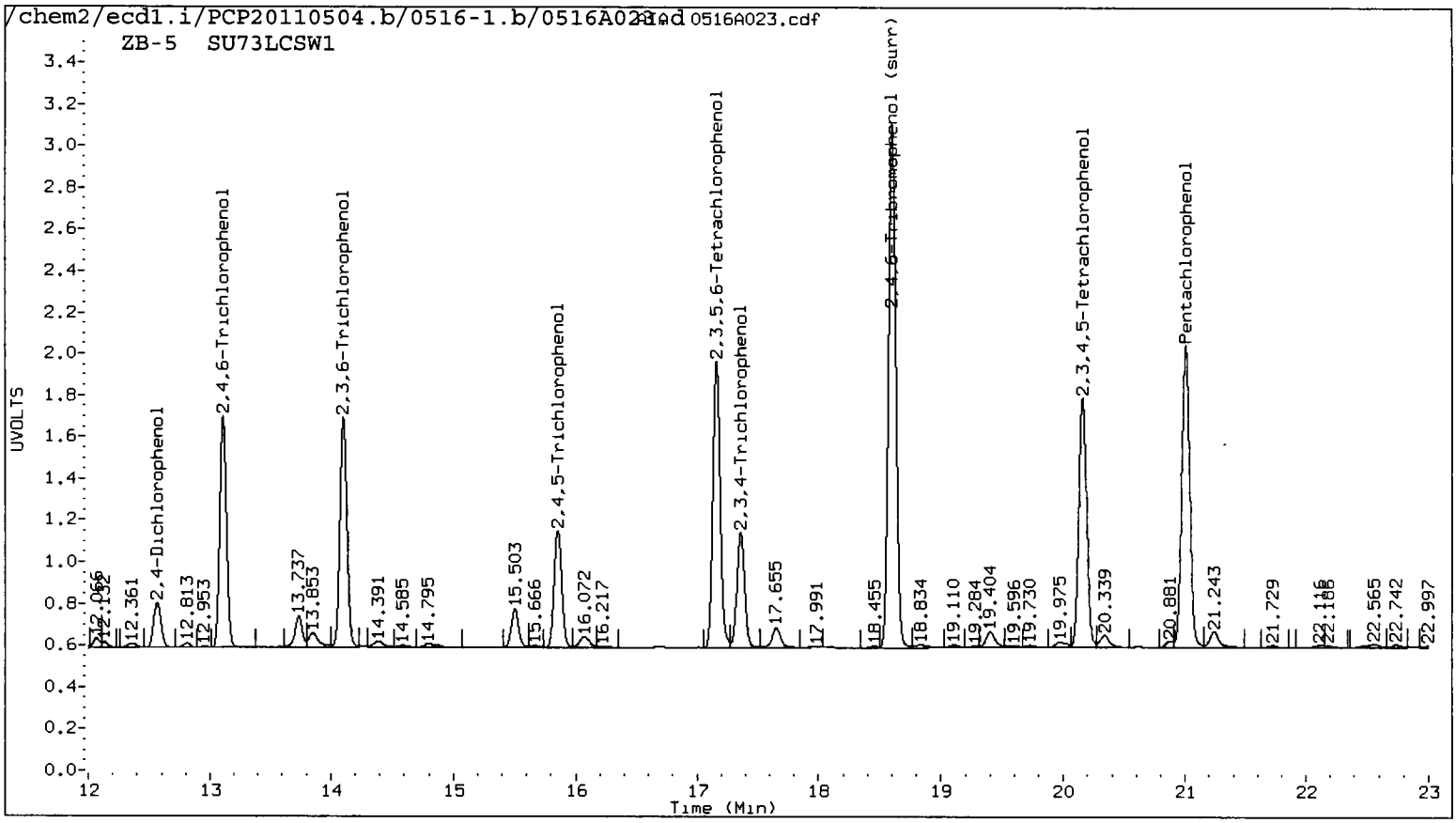
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A023.d ARI ID: SU73LCSW1
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A023.d Client ID: SU73LCSW1
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 17-MAY-2011 01:17
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.005	0.008	329768	22.975	0.008	460221	16.3664	16.3426	0.1	Pentachlorophenol
13.108	0.007	219345	14.318	0.007	257601	18.0193	17.7733	1.4	2,4,6-Trichlorophenol
14.103	0.006	224057	15.564	0.007	268767	19.5638	18.6989	4.5	2,3,6-Trichlorophenol
15.852	0.007	120186	17.481	0.007	139540	17.4194	17.2365	1.1	2,4,5-Trichlorophenol
17.359	0.008	121979	19.030	0.007	143753	14.5990	14.9519	2.4	2,3,4-Trichlorophenol
17.160	0.007	291934	18.820	0.006	386170	17.2674	17.6028	1.9	2,3,5,6-Tetrachlorophenol
20.163	0.008	268613	22.087	0.007	335971	20.6916	21.6960	4.7	2,3,4,5-Tetrachlorophenol
12.564	0.009	45042	13.827	0.007	46857	59.1331	56.4564	4.6	2,4-Dichlorophenol
18.603	0.007	535652	20.943	0.007	695040	34.0	33.1	2.9	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	65.5	65.4
2,4,6-Trichlorophenol	72.1	71.1
2,3,6-Trichlorophenol	78.3	74.8
2,4,5-Trichlorophenol	69.7	68.9
2,3,4-Trichlorophenol	58.4	59.8
2,3,5,6-Tetrachlorophenol	69.1	70.4
2,3,4,5-Tetrachlorophenol	82.8	86.8
2,4-Dichlorophenol	23.7	22.6
2,4,6-TBP (surr)	68.0	66.1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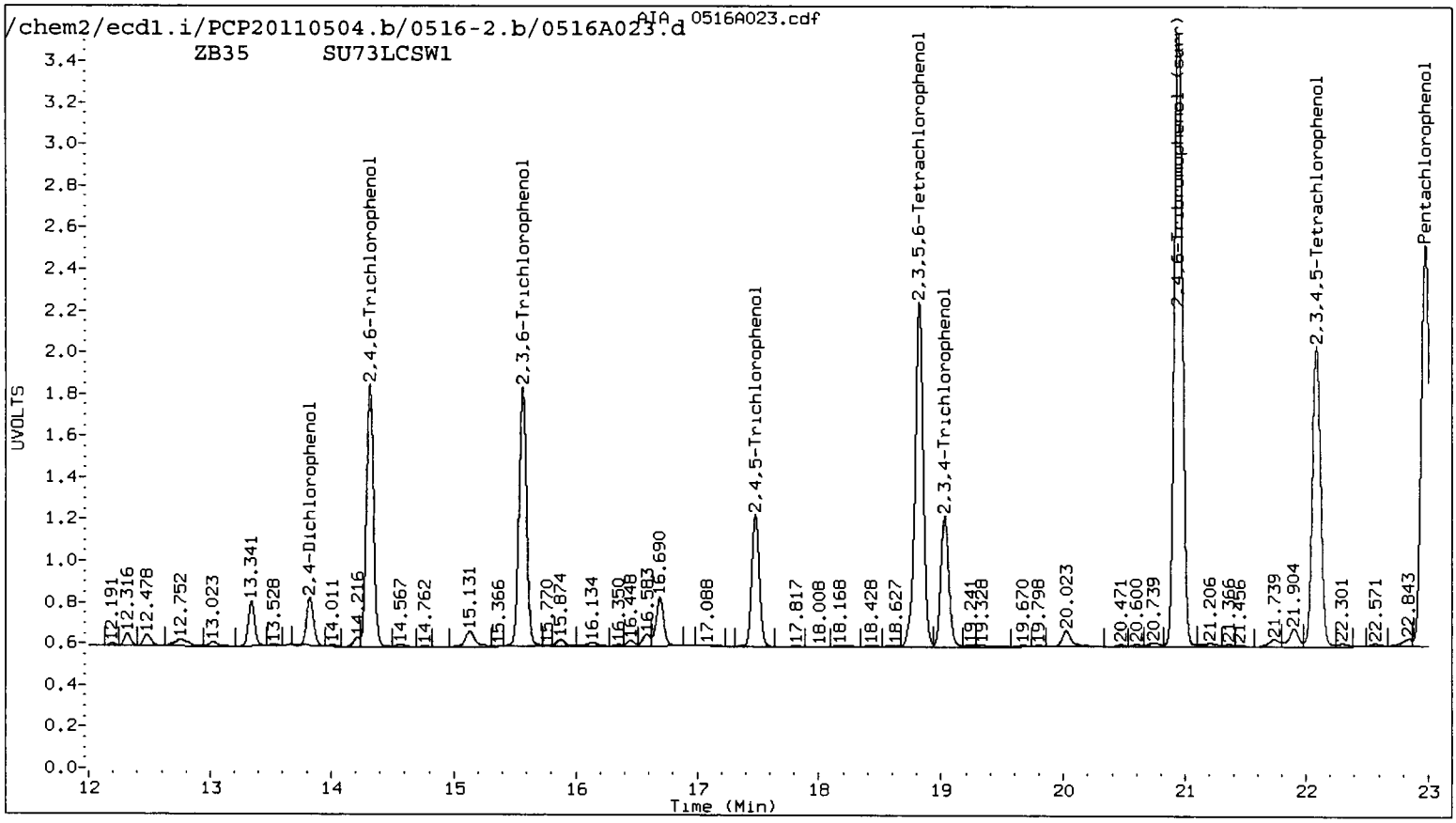
AIA 0516A023.cdf
ZB-5 SU73LCSW1
UVOLTS
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
Time (Min)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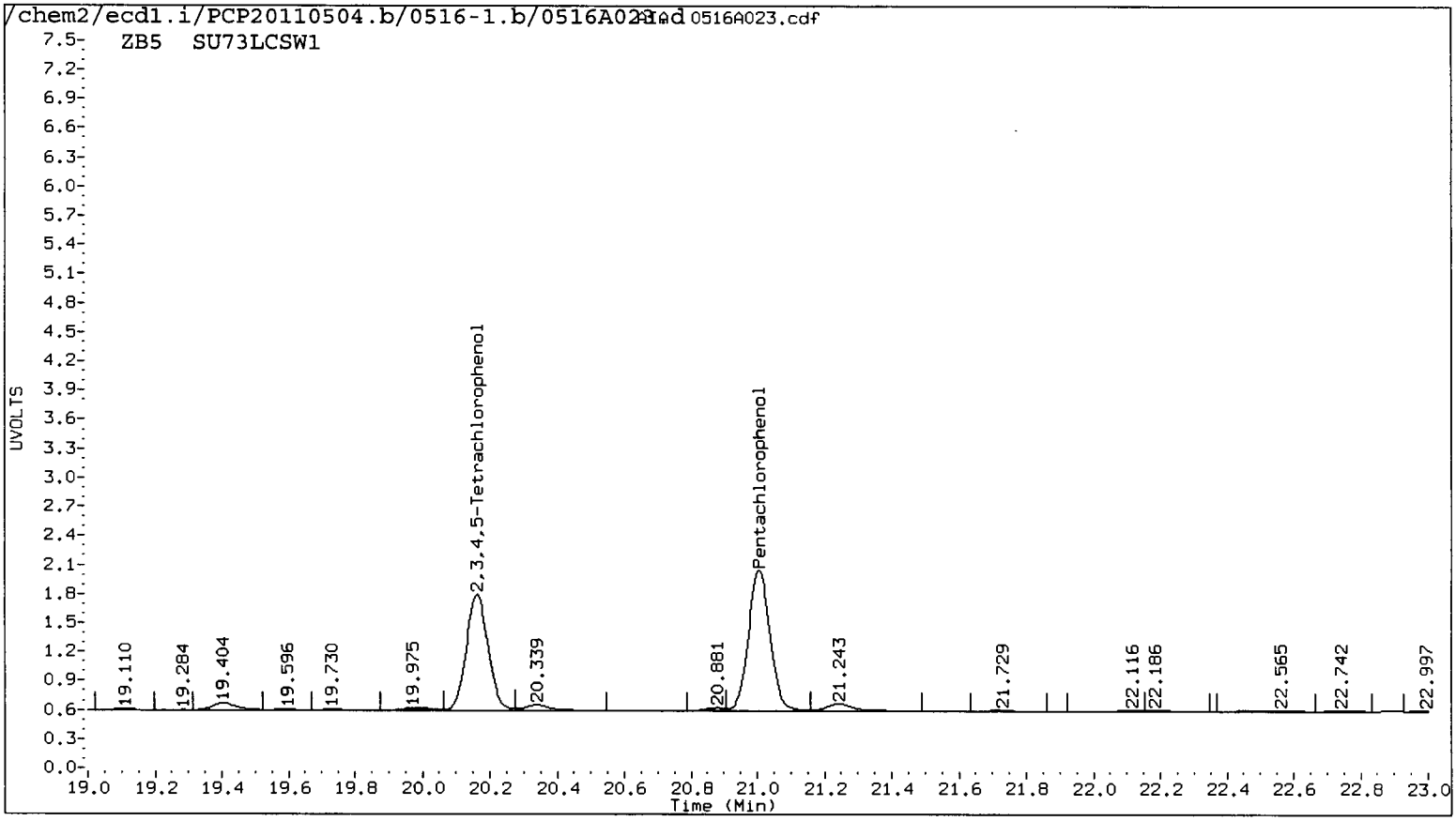
AIA 0516A023.cdf
ZB35 SU73LCSW1
UVOLTS
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
Time (Min)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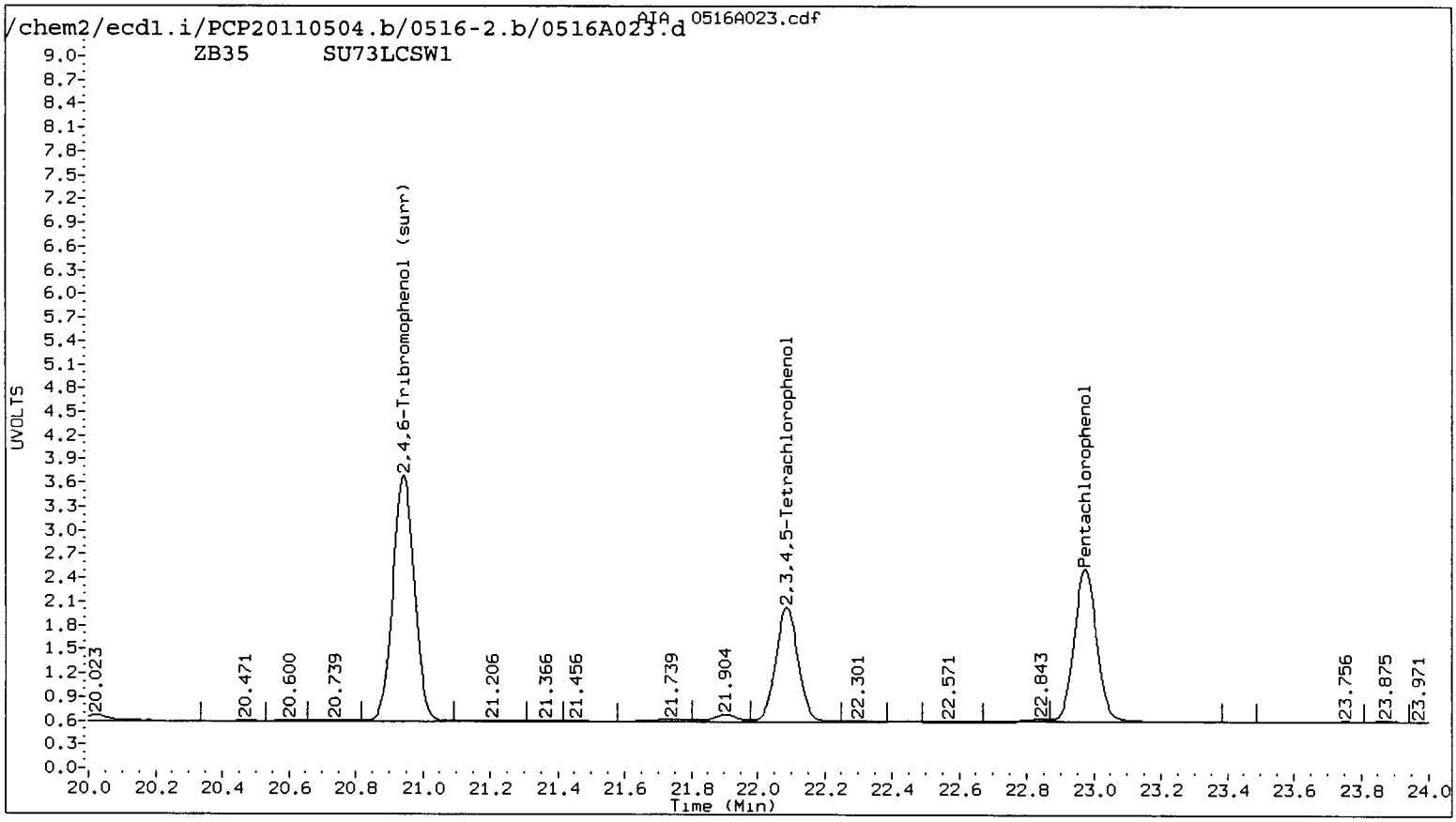
AIA 0516A023.cdf
ZB5 SU73LCSW1
UVOLTS
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
19.110
19.284
19.404
19.596
19.730
19.975
20.339
20.881
21.243
21.729
22.116
22.186
22.565
22.742
22.997
Time (Min)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AIA 0516A023.cdf
ZB35 SU73LCSW1
UVOLTS
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
20.023
20.471
20.600
20.739
21.206
21.366
21.456
21.739
21.904
22.301
22.571
22.843
23.756
23.875
23.971
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A023.d

Page 1

Date : 17-MAY-2011 01:17

Client ID: SU73LCSW1

Instrument: ecd1.i

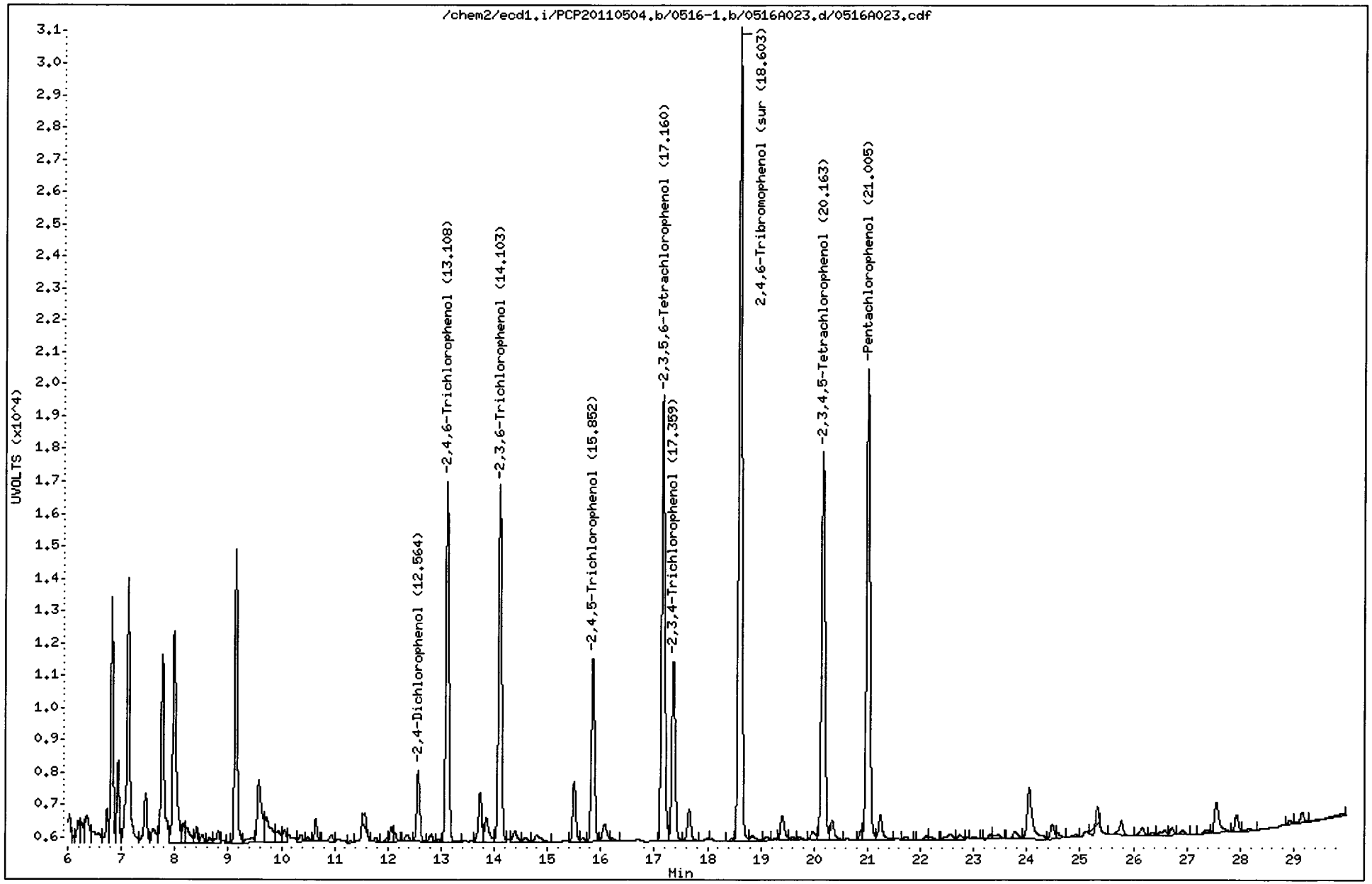
Sample Info: SU73LCSW1

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

Column diameter: 0.53



SU53 : 00880

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A023.d

Page 1

Date : 17-MAY-2011 01:17

Client ID: SU73LCSW1

Instrument: ecd1.i

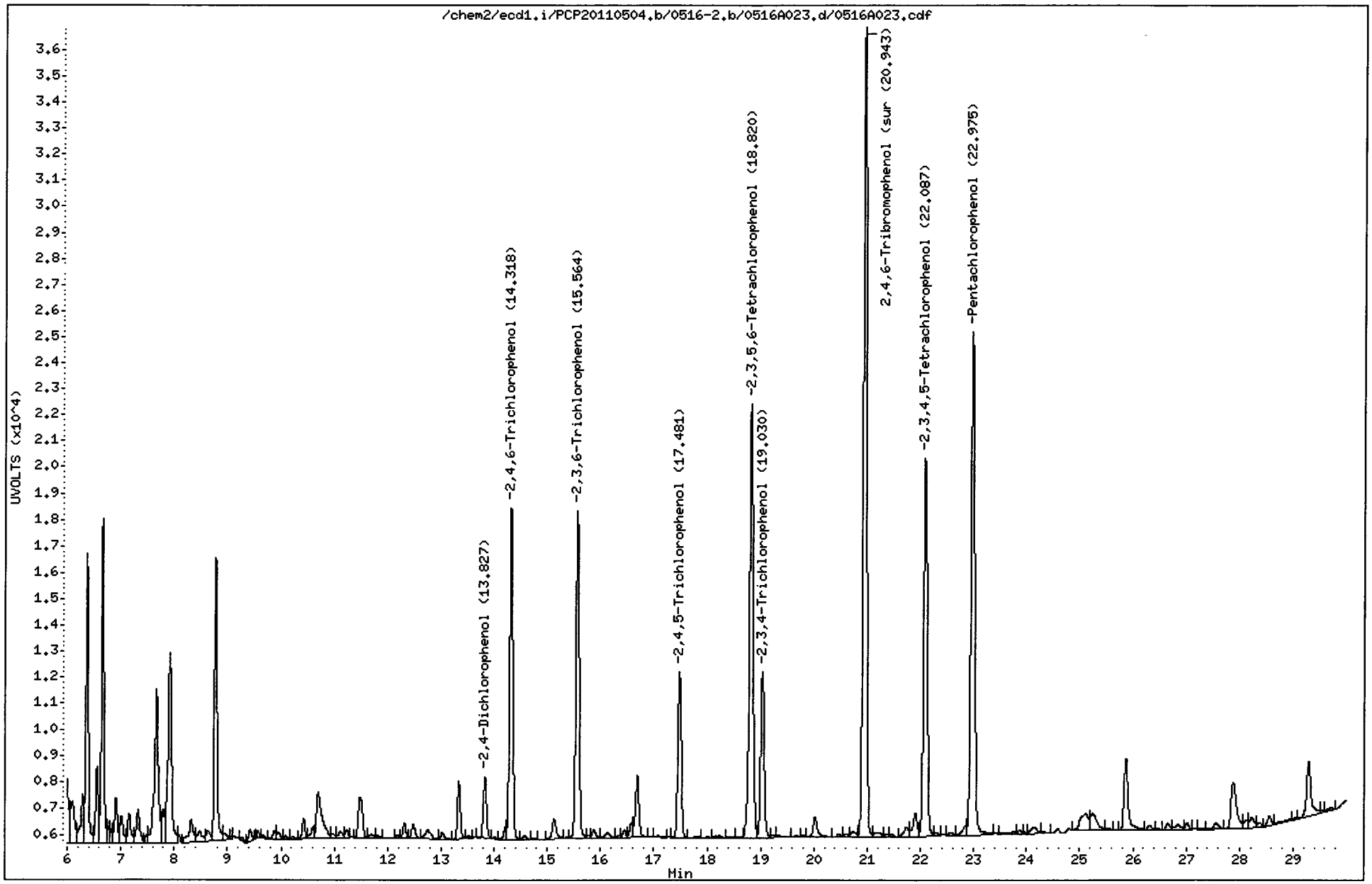
Sample Info: SU73LCSW1

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



SU53 : 00881

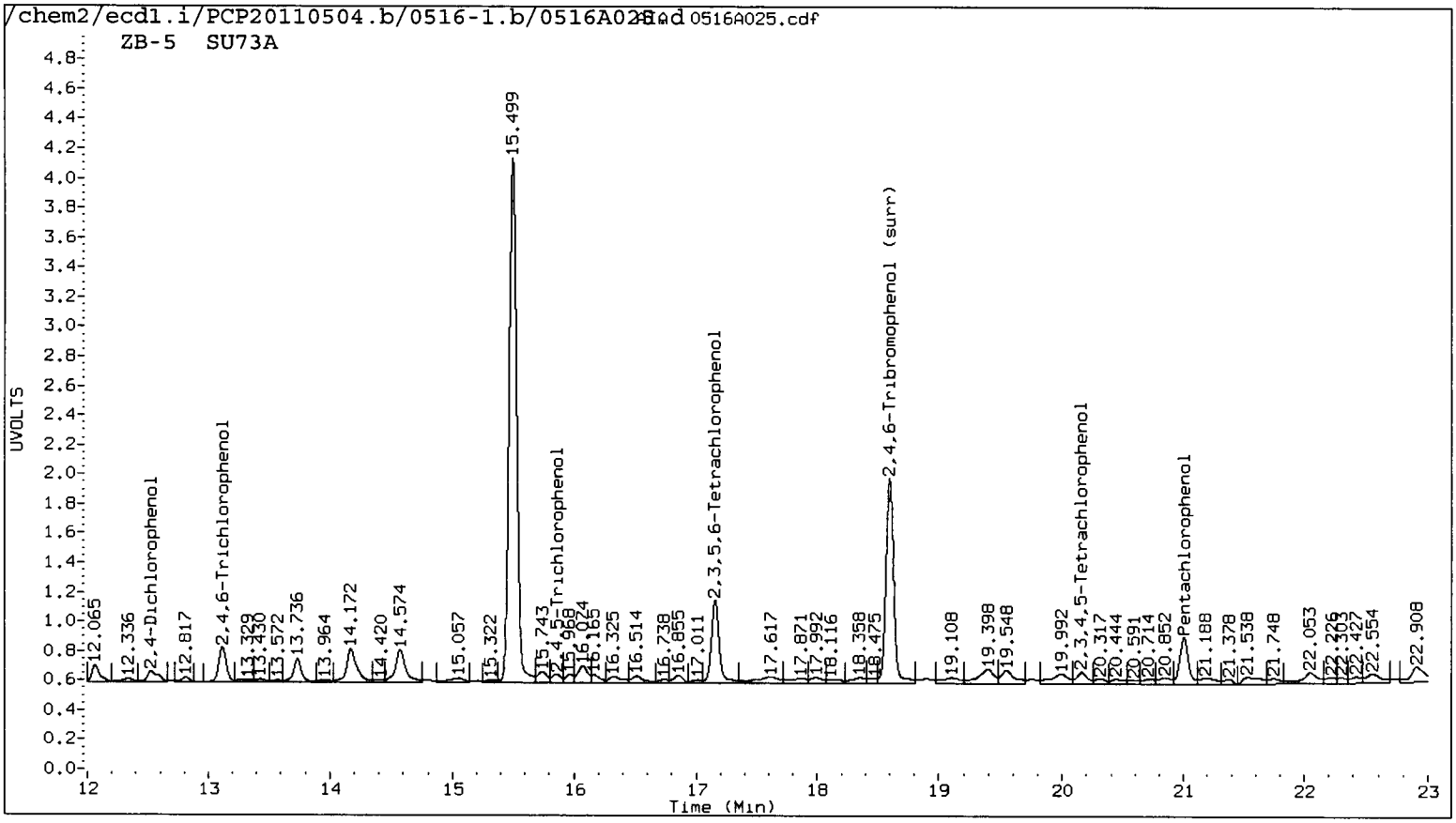
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A025.d ARI ID: SU73A
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A025.d Client ID: MW-01-042911
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 17-MAY-2011 02:29
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.004	0.007	78634	22.974	0.007	114179	3.9026	4.0546	3.8	Pentachlorophenol
13.119	0.018	53051	14.318	0.007	24520	4.3582	1.6918	88.1*	2,4,6-Trichlorophenol
----			15.556	-0.001	15797	0.0000	1.0991	---	2,3,6-Trichlorophenol
15.859	0.014	14028	17.481	0.007	16244	1.8422	2.0065	8.5	2,4,5-Trichlorophenol
----			19.091	0.068	13075	0.0000	1.2551	---	2,3,4-Trichlorophenol
17.158	0.006	128890	18.820	0.006	170386	7.6236	7.7667	1.9	2,3,5,6-Tetrachlorophenol
20.161	0.006	23267	22.085	0.005	22214	1.7923	1.3055	31.4	2,3,4,5-Tetrachlorophenol
12.527	-0.028	22218	13.799	-0.021	56529	28.2710	69.0471	83.8*	2,4-Dichlorophenol
18.601	0.006	310947	20.942	0.006	388041	19.7	18.5	6.8	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	79.0	73.8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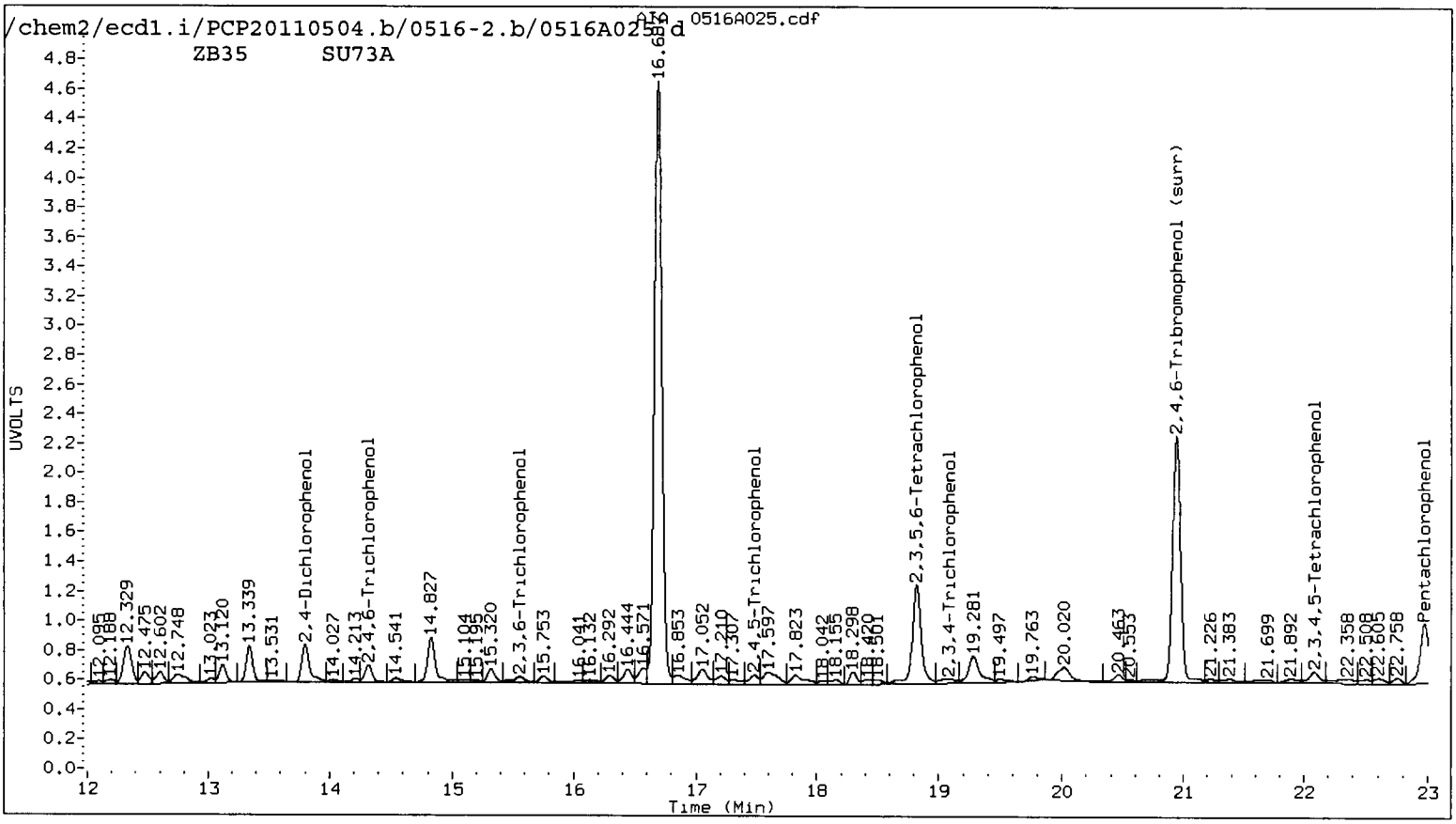
ZB-5 SU73A
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol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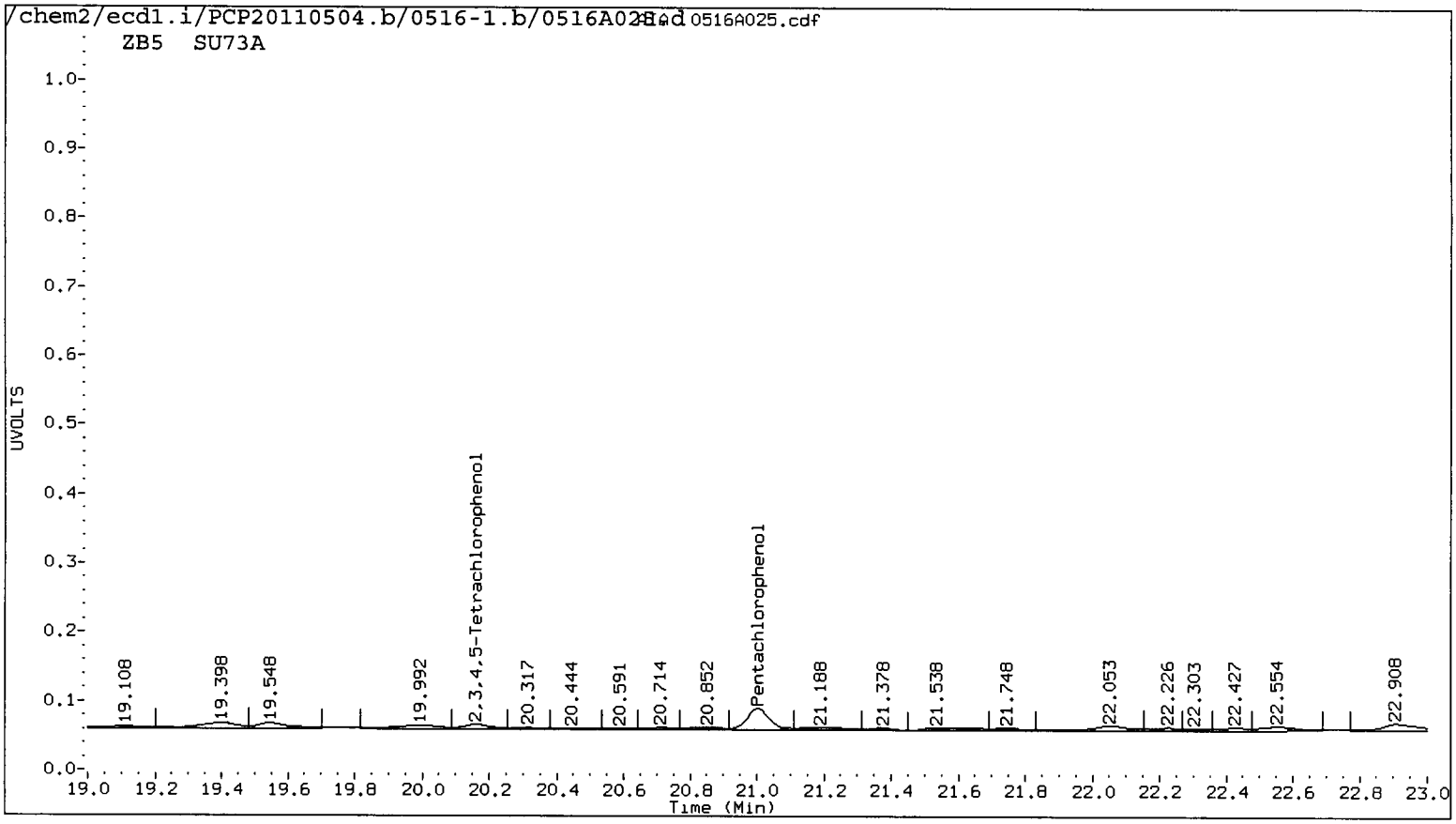
ZB35 SU73A
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol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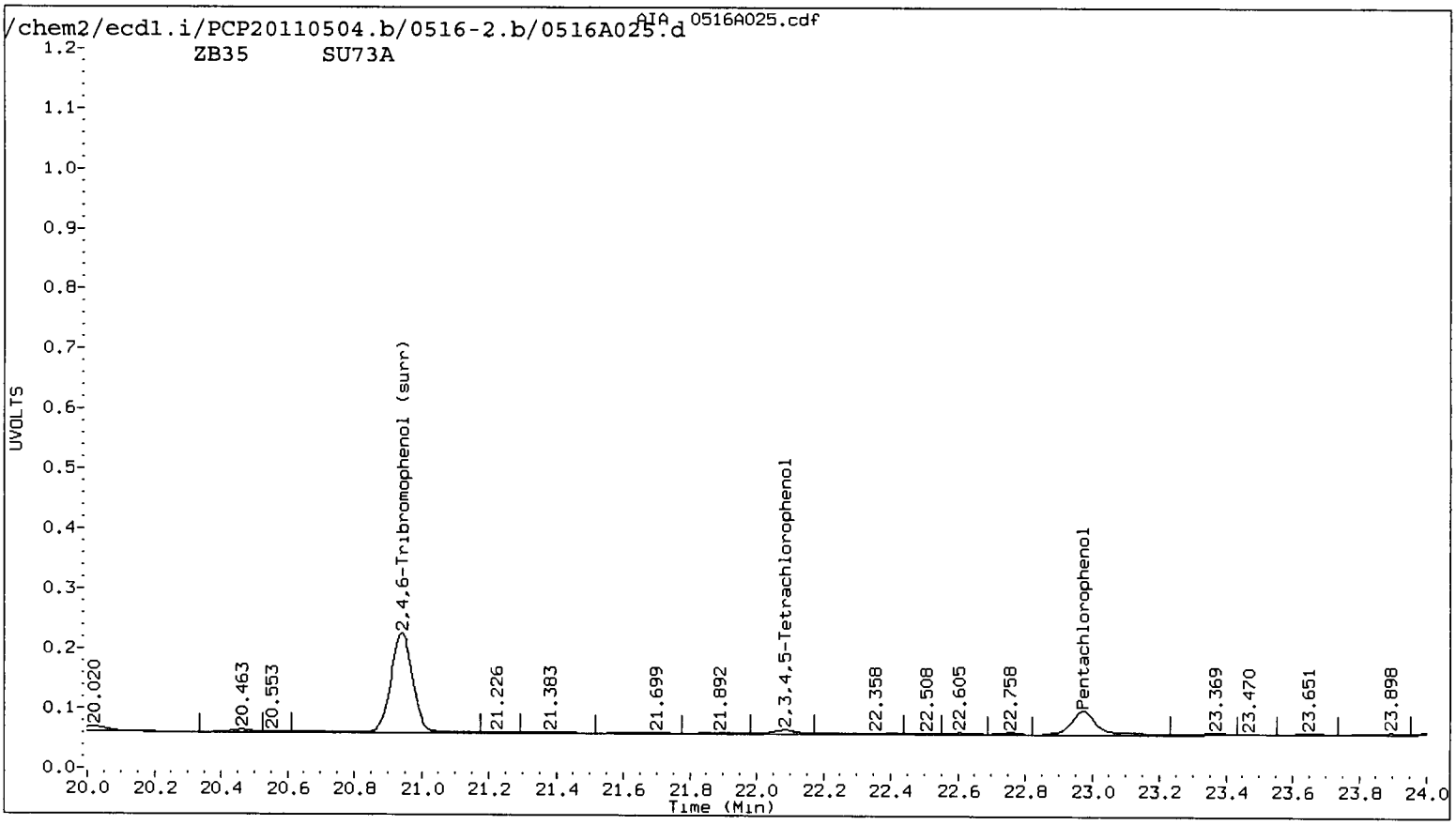
ZB5 SU73A
UVOLTS
Time (Min)
19.108
19.398
19.548
19.992
2,3,4,5-Tetrachlorophenol
20.317
20.444
20.591
20.714
20.852
Pentachlorophenol
21.188
21.378
21.538
21.748
22.053
22.226
22.303
22.427
22.554
22.908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ZB35 SU73A
UVOLTS
Time (Min)
20.020
20.463
20.553
2,4,6-Tribromophenol (surr)
21.226
21.383
21.699
21.892
2,3,4,5-Tetrachlorophenol
22.358
22.508
22.605
22.758
Pentachlorophenol
23.369
23.470
23.651
23.898

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A025.d

Page 1

Date : 17-MAY-2011 02:29

Client ID: MW-01-042911

Instrument: ecd1.i

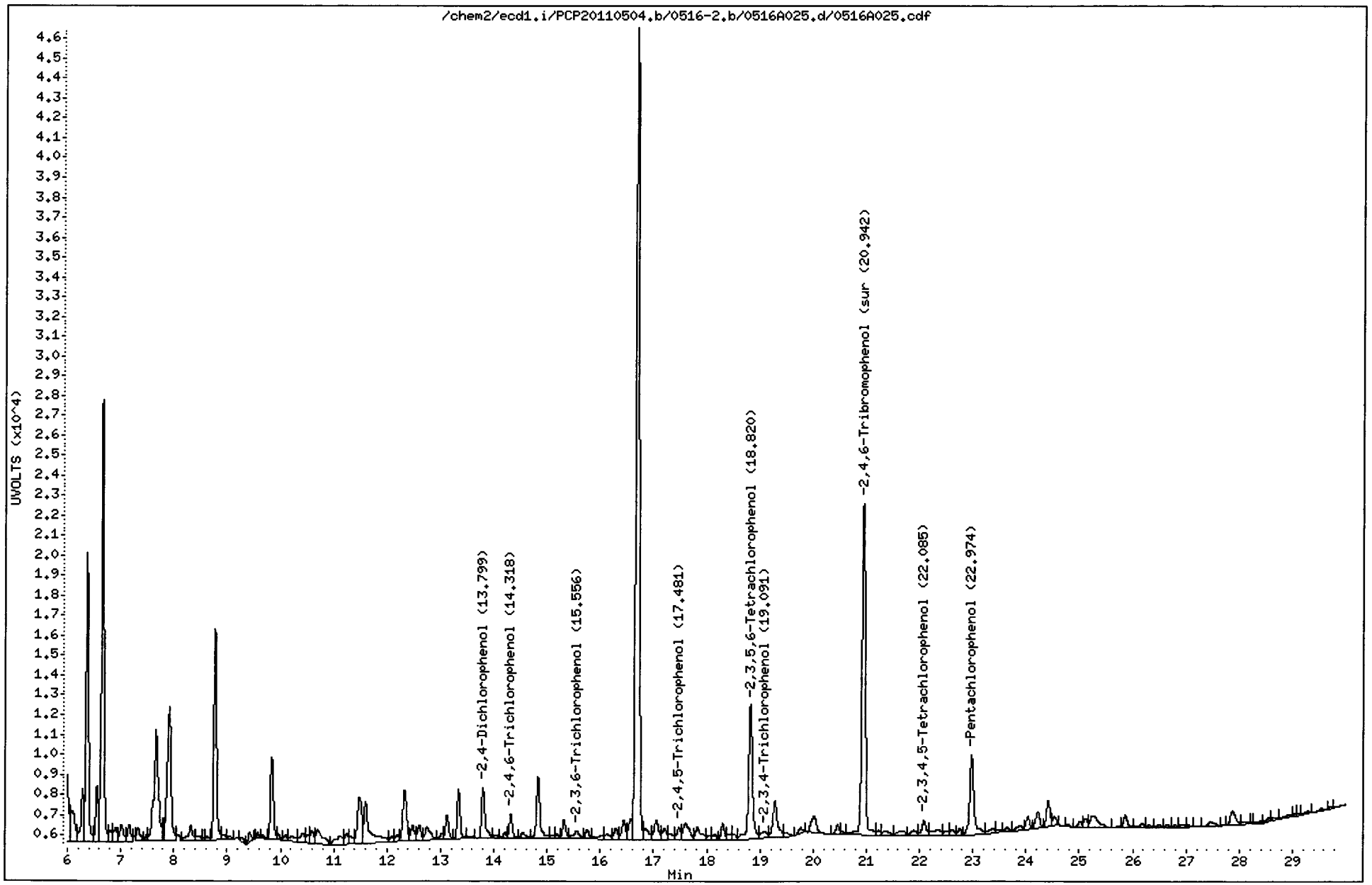
Sample Info: SU73A

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



SU73 : ESTS

S8800 : 00685

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A025.d

Date : 17-MAY-2011 02:29

Client ID: MW-01-042911

Instrument: ecd1.1

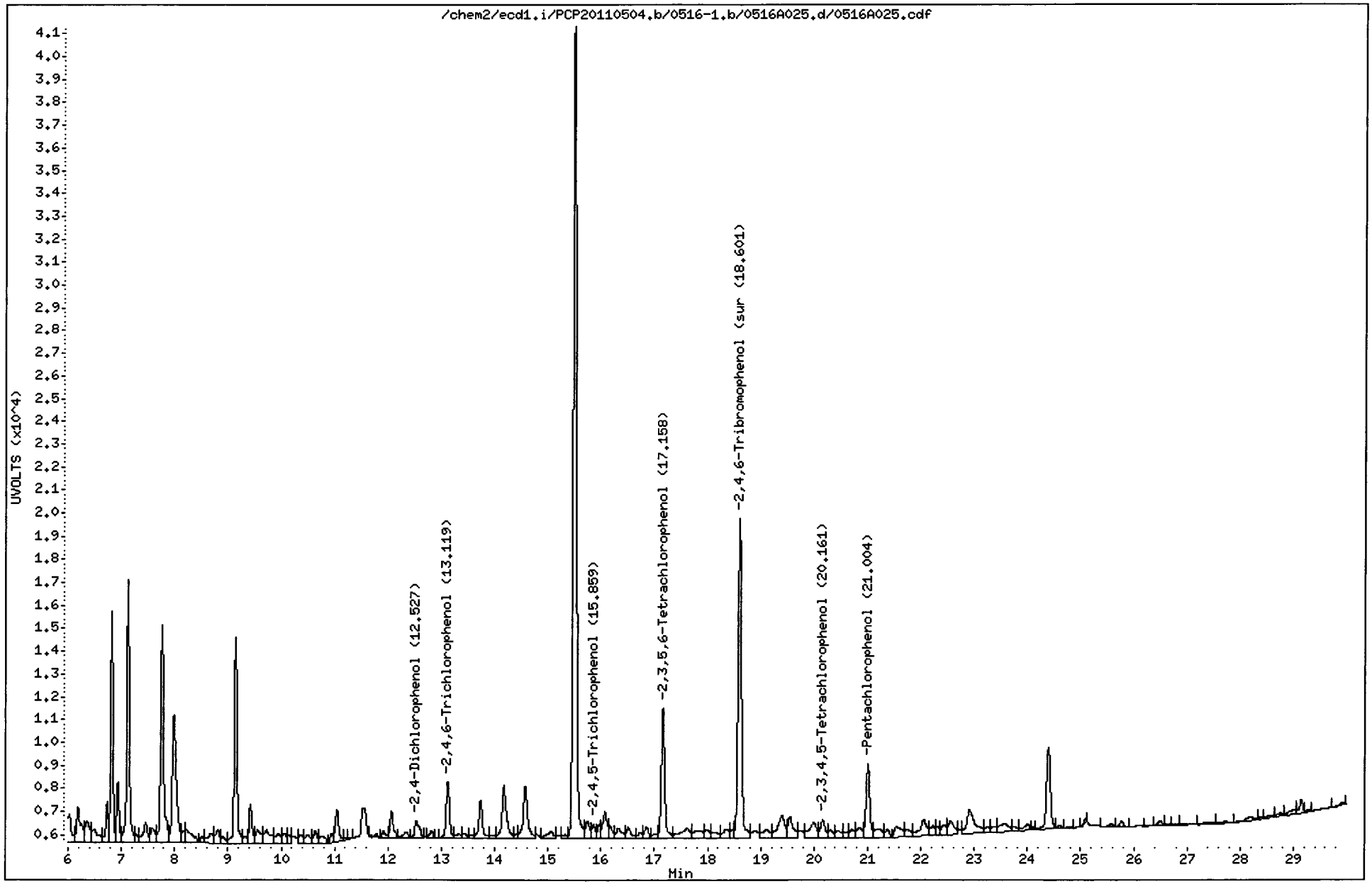
Sample Info: SU73A

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

Column diameter: 0.53



SU53 : 00886

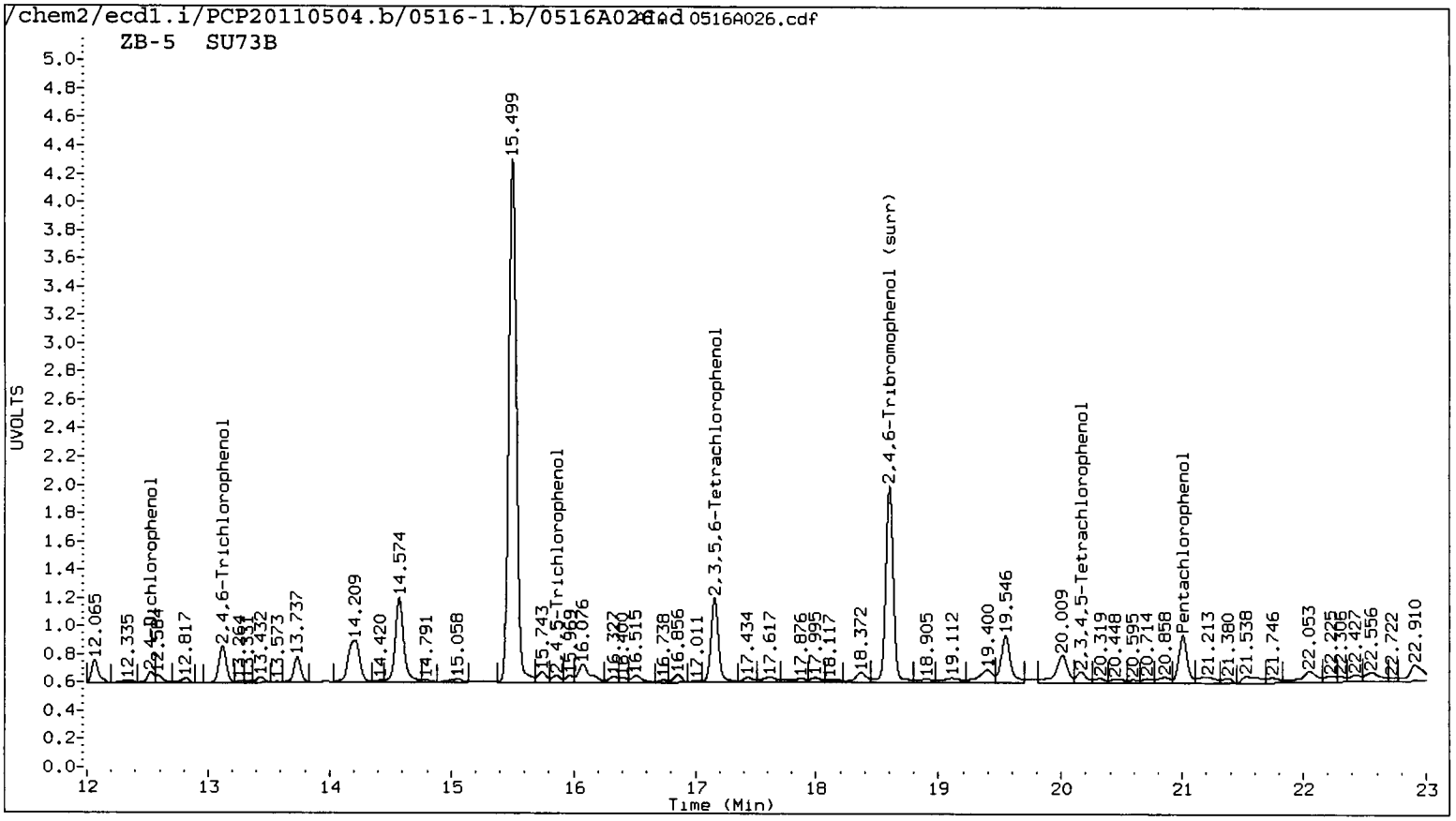
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A026.d ARI ID: SU73B
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A026.d Client ID: MW-01-042911-D
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 17-MAY-2011 03:06
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.005	0.008	82922	22.975	0.008	119682	4.1154	4.2500	3.2	Pentachlorophenol
13.121	0.020	57747	14.319	0.008	26142	4.7440	1.8037	89.8*	2,4,6-Trichlorophenol
----			15.559	0.002	13247	0.0000	0.9217	---	2,3,6-Trichlorophenol
15.859	0.014	11238	17.483	0.009	13446	1.4718	1.6610	12.1	2,4,5-Trichlorophenol
----			----			0.0000	0.0000	---	2,3,4-Trichlorophenol
17.159	0.007	131934	18.821	0.007	175132	7.8037	7.9831	2.3	2,3,5,6-Tetrachlorophenol
20.162	0.007	23053	22.087	0.007	23314	1.7759	1.3707	25.8	2,3,4,5-Tetrachlorophenol
12.528	-0.027	16010	13.800	-0.020	65269	20.1950	80.7014	119.9*	2,4-Dichlorophenol
18.603	0.007	312665	20.943	0.007	381091	19.9	18.1	9.1	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	79.4	72.5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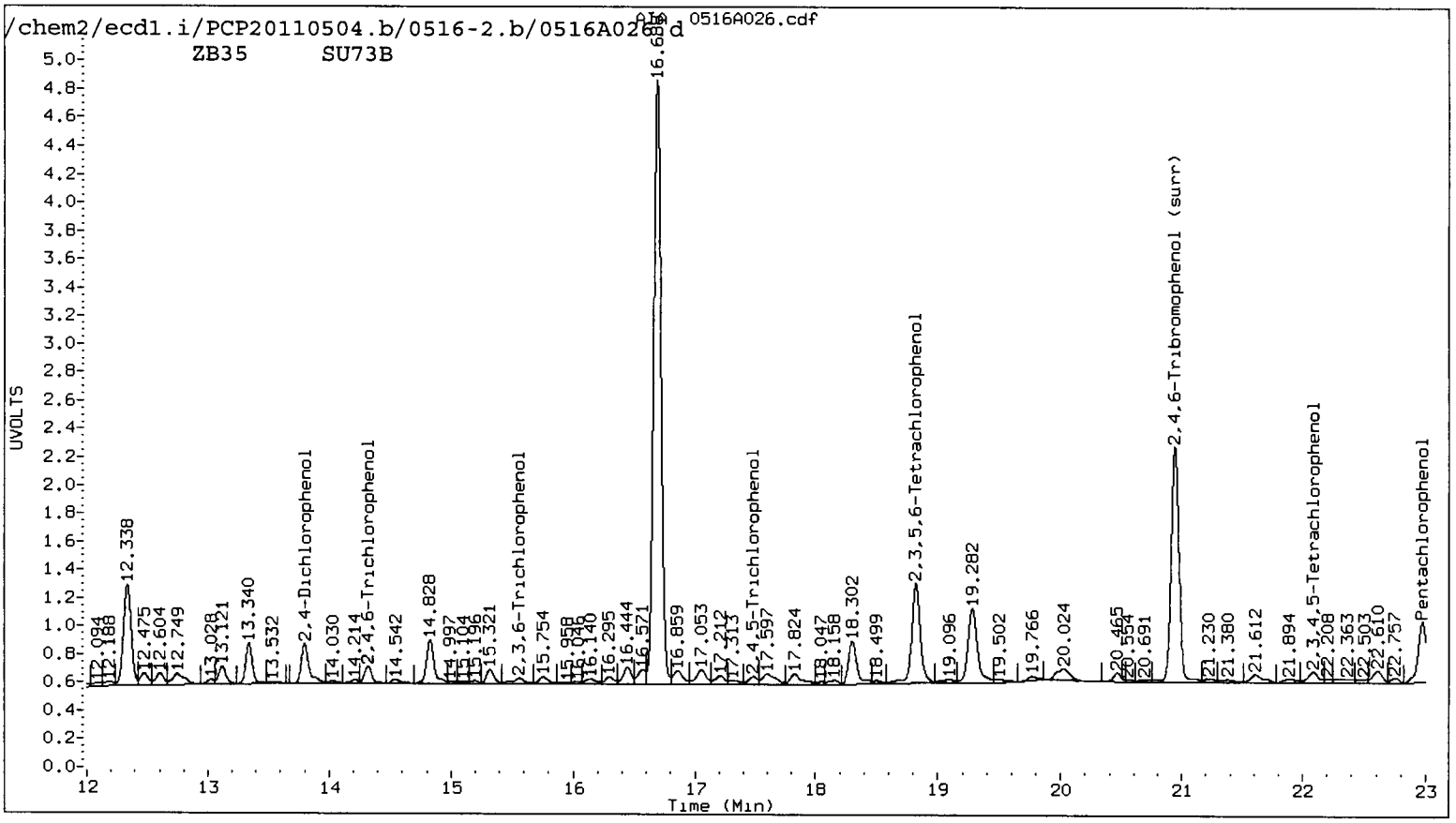
0516A026.cdf
ZB-5 SU73B
UVOLTS
Time (Min)
12.065
2,4-Dichlorophenol
2,4,6-Trichlorophenol
14.209
14.420
14.574
14.791
15.058
15.499
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,4,6-Tribromophenol (surr)
18.372
18.905
19.112
19.400
19.546
20.009
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
21.213
21.380
21.538
21.746
22.053
22.910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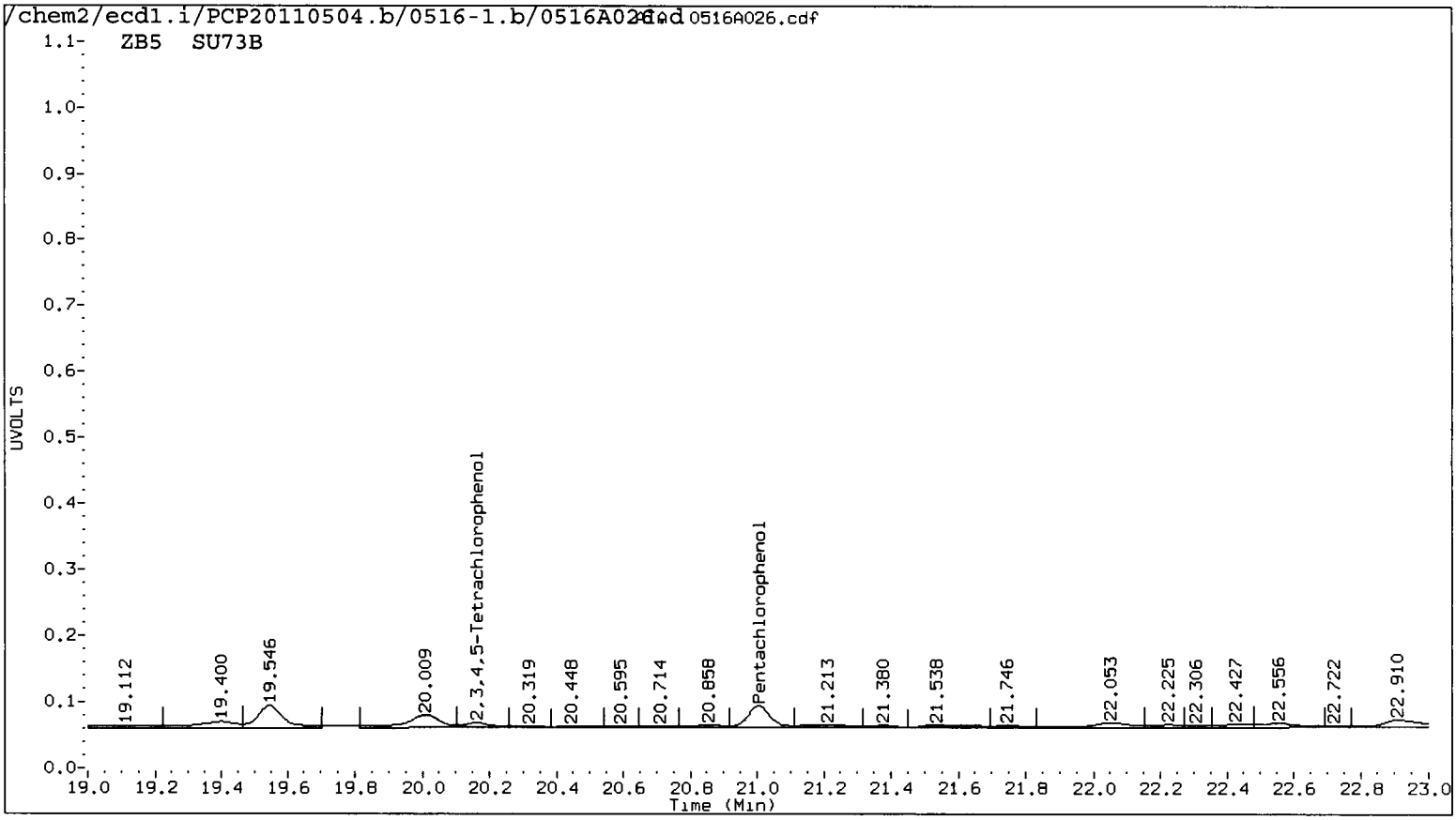
0516A026.cdf
ZB35 SU73B
UVOLTS
Time (Min)
12.338
13.340
2,4-Dichlorophenol
2,4,6-Trichlorophenol
14.828
2,3,6-Trichlorophenol
16.859
17.053
2,4,5-Trichlorophenol
17.824
18.302
2,3,5,6-Tetrachlorophenol
19.096
19.282
19.502
19.766
20.024
2,4,6-Tribromophenol (surr)
21.230
21.380
21.612
21.894
2,3,4,5-Tetrachlorophenol
22.363
22.610
22.757
Pentachlorophenol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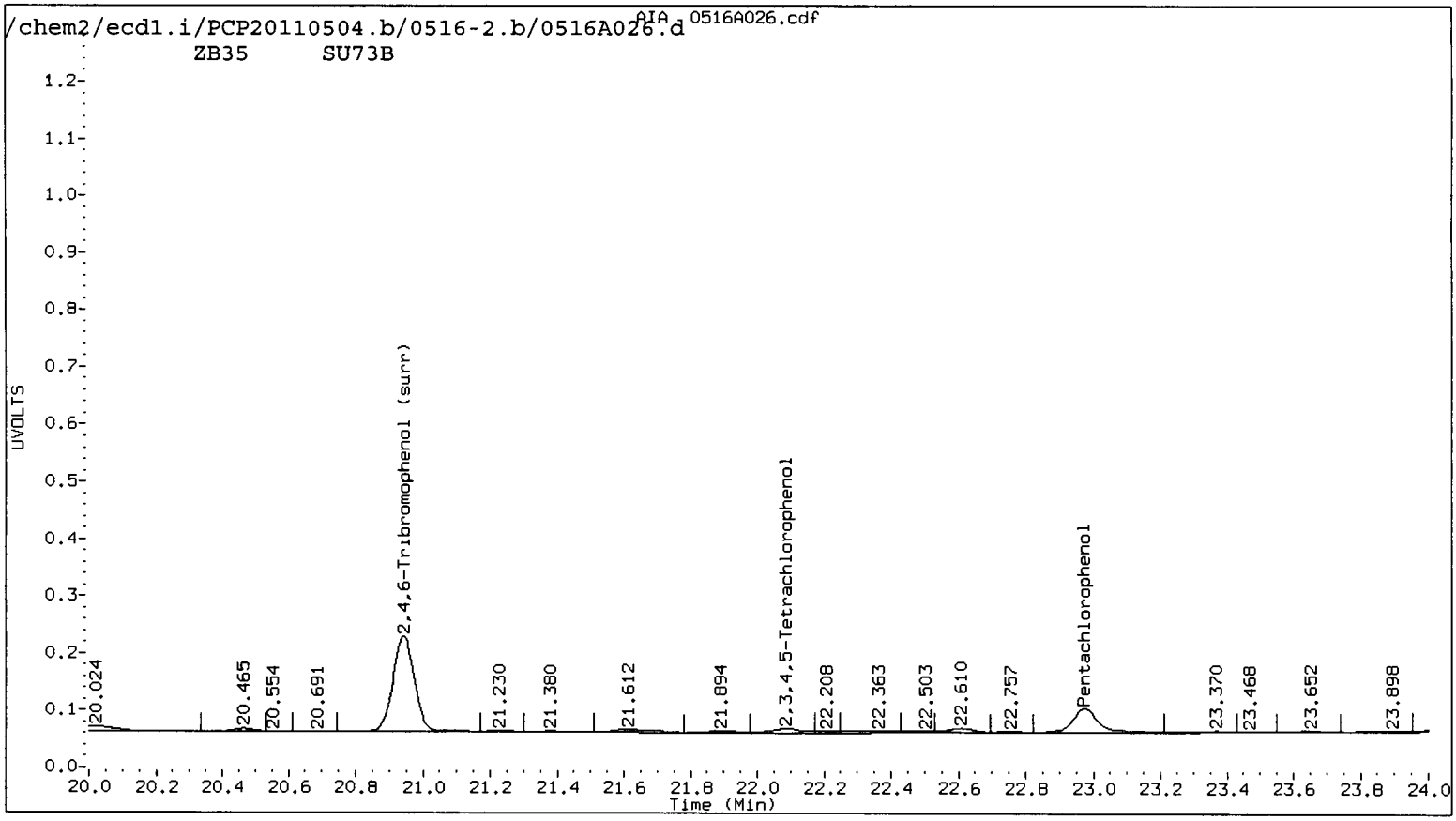
0516A026.cdf
ZB5 SU73B
UVOLTS
Time (Min)
19.112
19.400
19.546
20.009
2,3,4,5-Tetrachlorophenol
20.319
20.448
20.595
20.714
20.858
Pentachlorophenol
21.213
21.380
21.538
21.746
22.053
22.225
22.306
22.427
22.556
22.722
22.910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0516A026.cdf
ZB35 SU73B
UVOLTS
Time (Min)
20.024
20.465
20.554
20.691
2,4,6-Tribromophenol (surr)
21.230
21.380
21.612
21.894
2,3,4,5-Tetrachlorophenol
22.208
22.363
22.503
22.610
22.757
Pentachlorophenol
23.370
23.468
23.652
23.898

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A026.d

Page 1

Date : 17-MAY-2011 03:06

Client ID: MW-01-042911-D

Instrument: ecd1.i

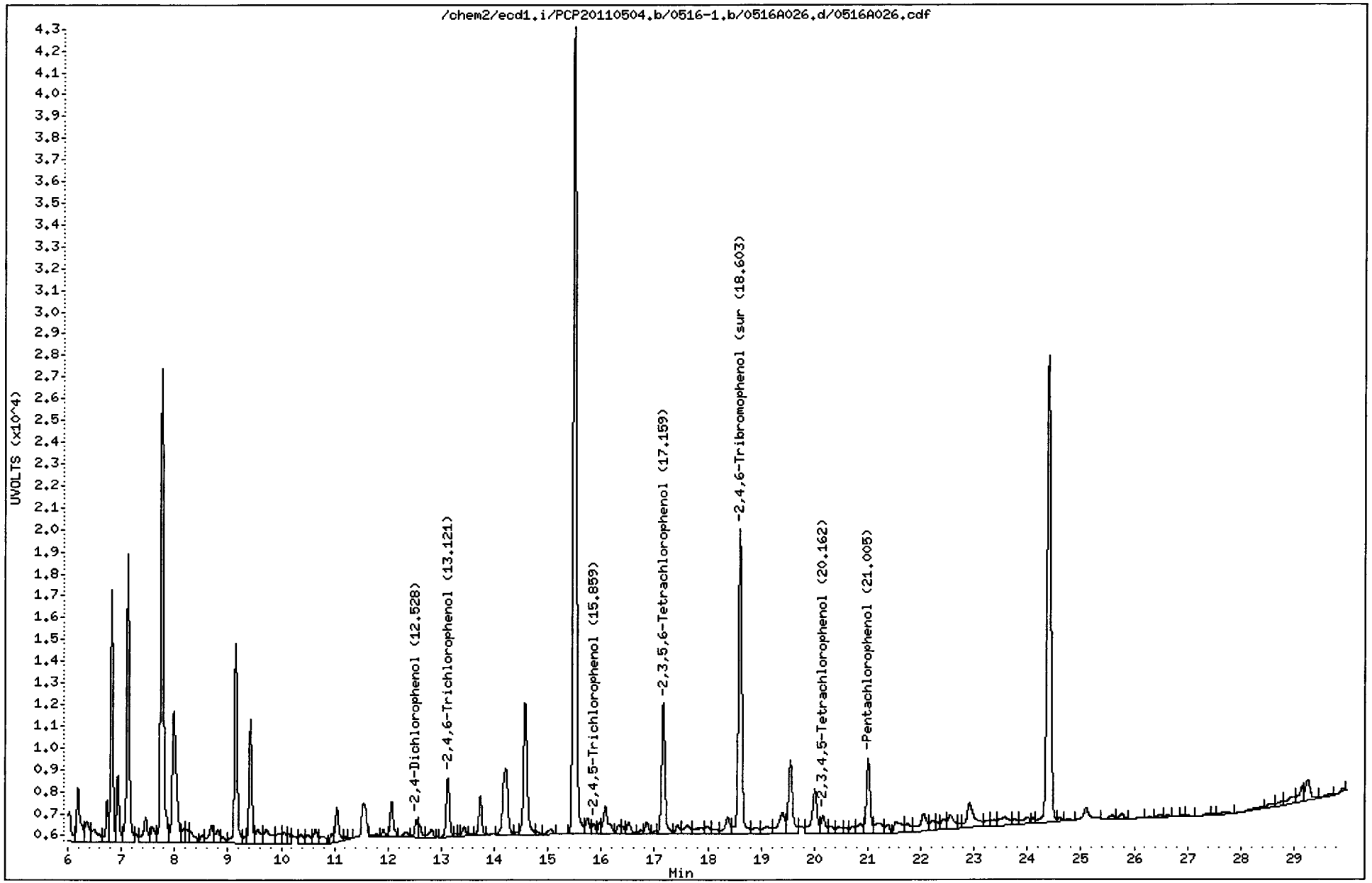
Sample Info: SU73B

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

Column diameter: 0.53



SU53 : 06800

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A026.d

Page 1

Date : 17-MAY-2011 03:06

Client ID: MW-01-042911-D

Instrument: ecd1.i

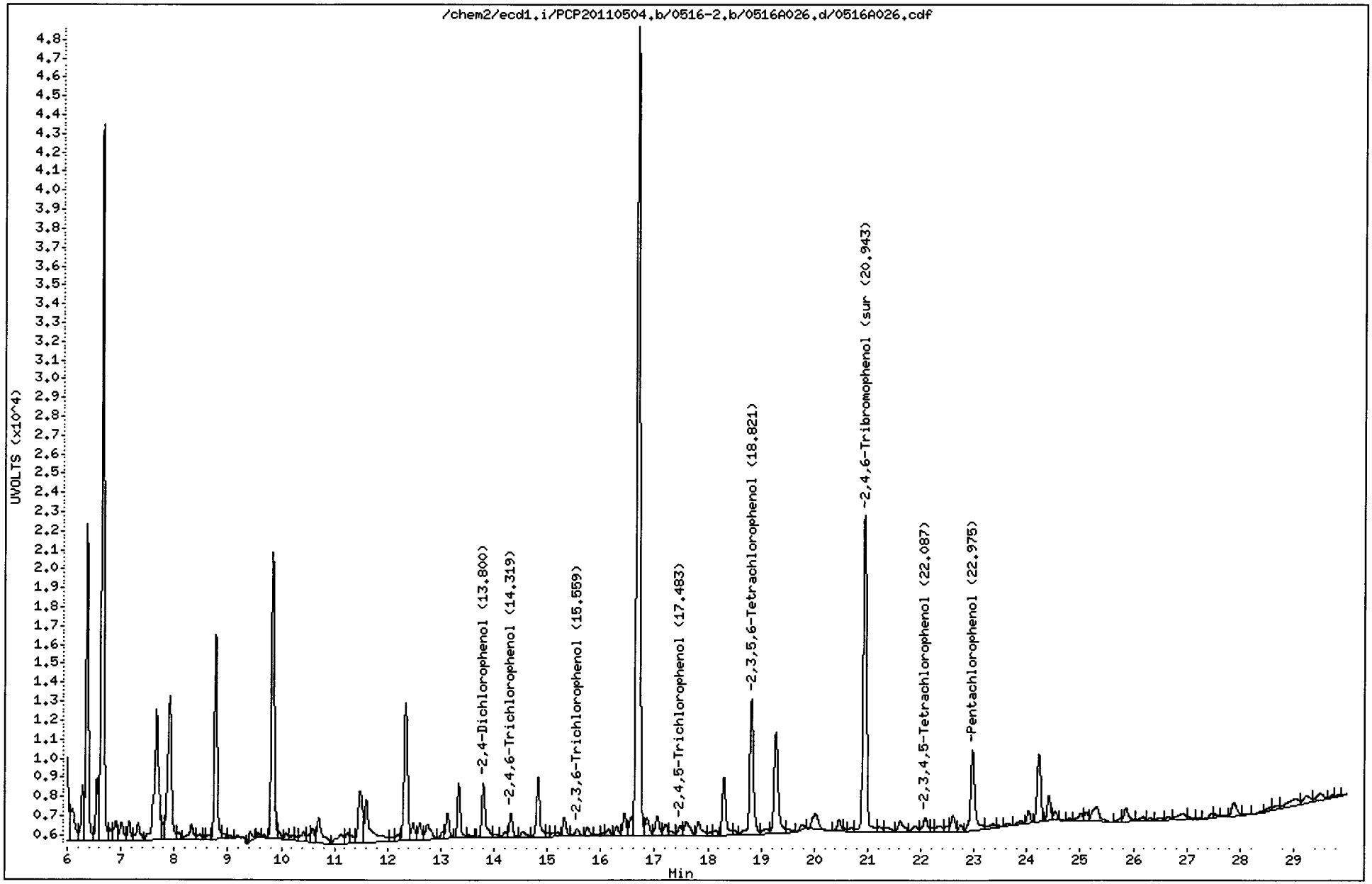
Sample Info: SU73B

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



SU53 : 00891

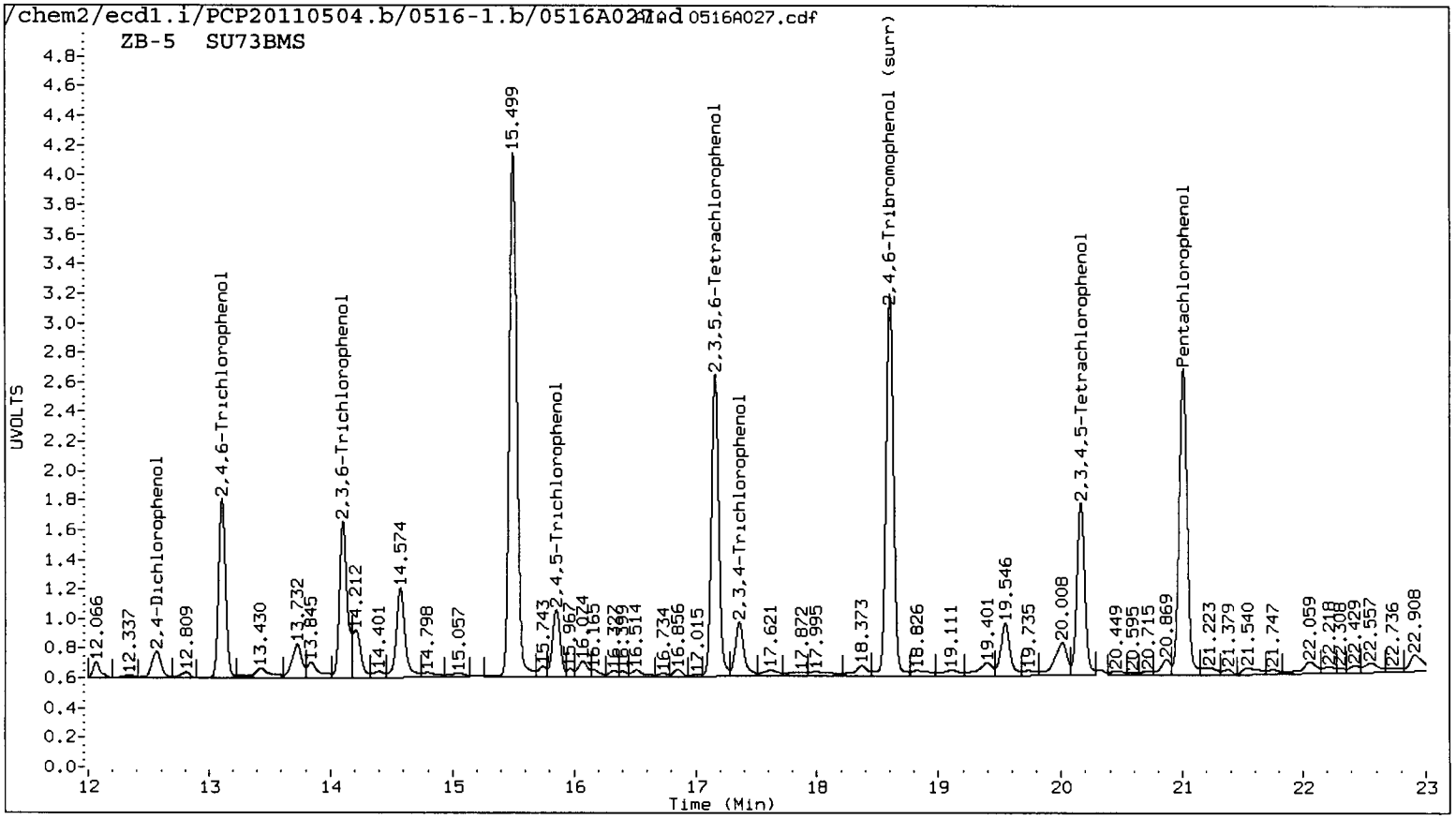
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A027.d ARI ID: SU73BMS
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A027.d Client ID: MW-01-042911-D MS
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 17-MAY-2011 03:42
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.005	0.008	474298	22.975	0.008	613655	23.5394	21.7911	7.7	Pentachlorophenol
13.109	0.008	245828	14.318	0.007	260570	20.1949	17.9781	11.6	2,4,6-Trichlorophenol
14.103	0.006	238074	15.563	0.006	292253	20.7877	20.3329	2.2	2,3,6-Trichlorophenol
15.853	0.008	100746	17.481	0.007	115391	14.3506	14.2535	0.7	2,4,5-Trichlorophenol
17.359	0.007	94239	19.031	0.008	101465	11.2789	10.2901	9.2	2,3,4-Trichlorophenol
17.159	0.007	435825	18.821	0.007	545259	25.7782	24.8546	3.6	2,3,5,6-Tetrachlorophenol
20.162	0.007	268031	22.087	0.007	309262	20.6468	19.8184	4.1	2,3,4,5-Tetrachlorophenol
12.561	0.006	49251	13.809	-0.011	86160	65.0262	109.6186	51.1*	2,4-Dichlorophenol
18.602	0.007	562865	20.944	0.008	692585	35.8	32.9	8.2	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	94.2	87.2
2,4,6-Trichlorophenol	80.8	71.9
2,3,6-Trichlorophenol	83.2	81.3
2,4,5-Trichlorophenol	57.4	57.0
2,3,4-Trichlorophenol	45.1	41.2
2,3,5,6-Tetrachlorophenol	103.1	99.4
2,3,4,5-Tetrachlorophenol	82.6	79.3
2,4-Dichlorophenol	26.0	43.8
2,4,6-TBP (surr)	71.5	65.9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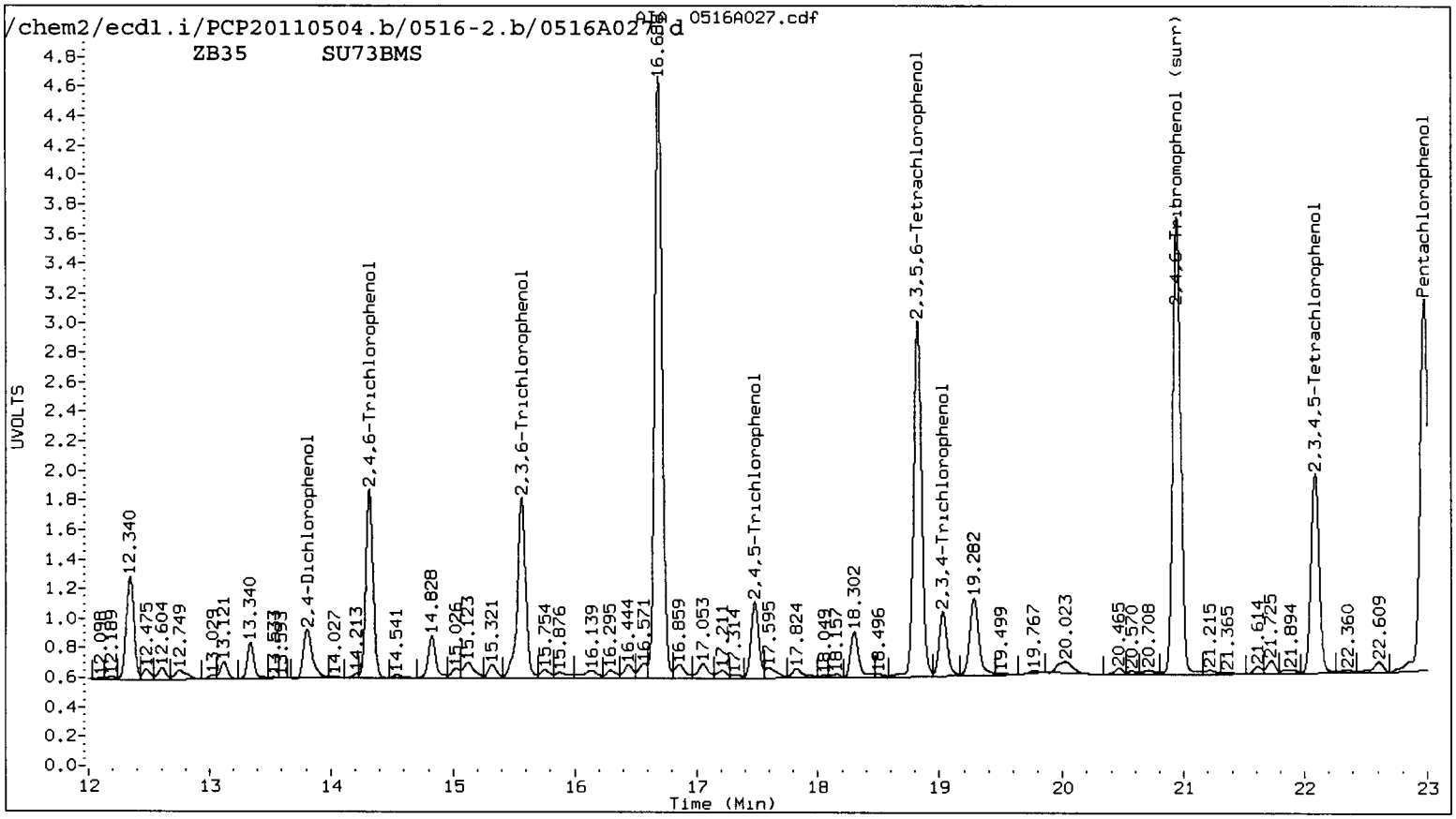
0516A027.cdf
ZB-5 SU73BMS
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol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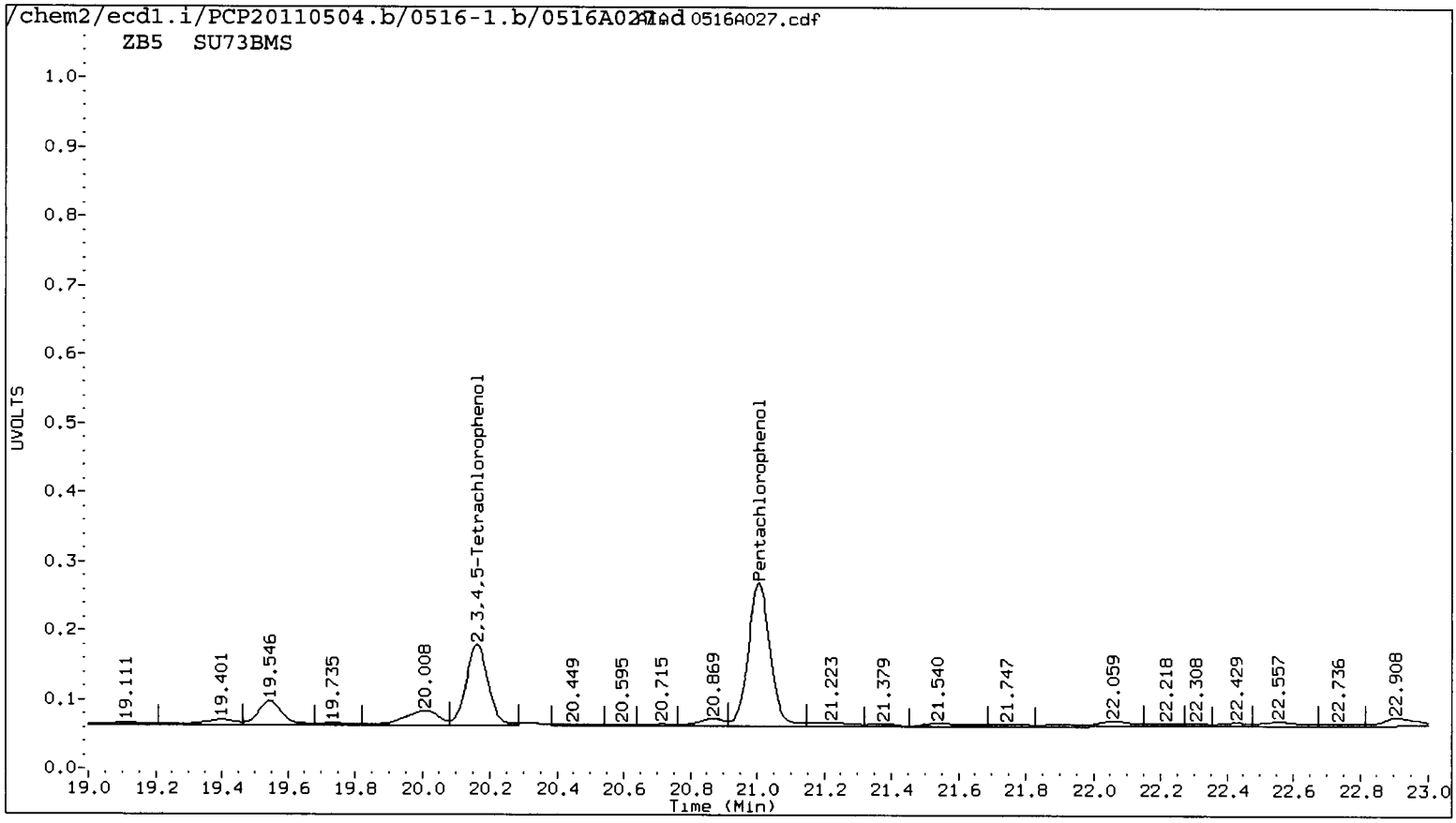
0516A027.cdf
ZB35 SU73BMS
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol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AIA 0516A027.cdf
ZB5 SU73BMS
UVOLTS
Time (Min)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
19.111
19.401
19.546
19.735
20.008
20.449
20.595
20.715
20.869
21.223
21.379
21.540
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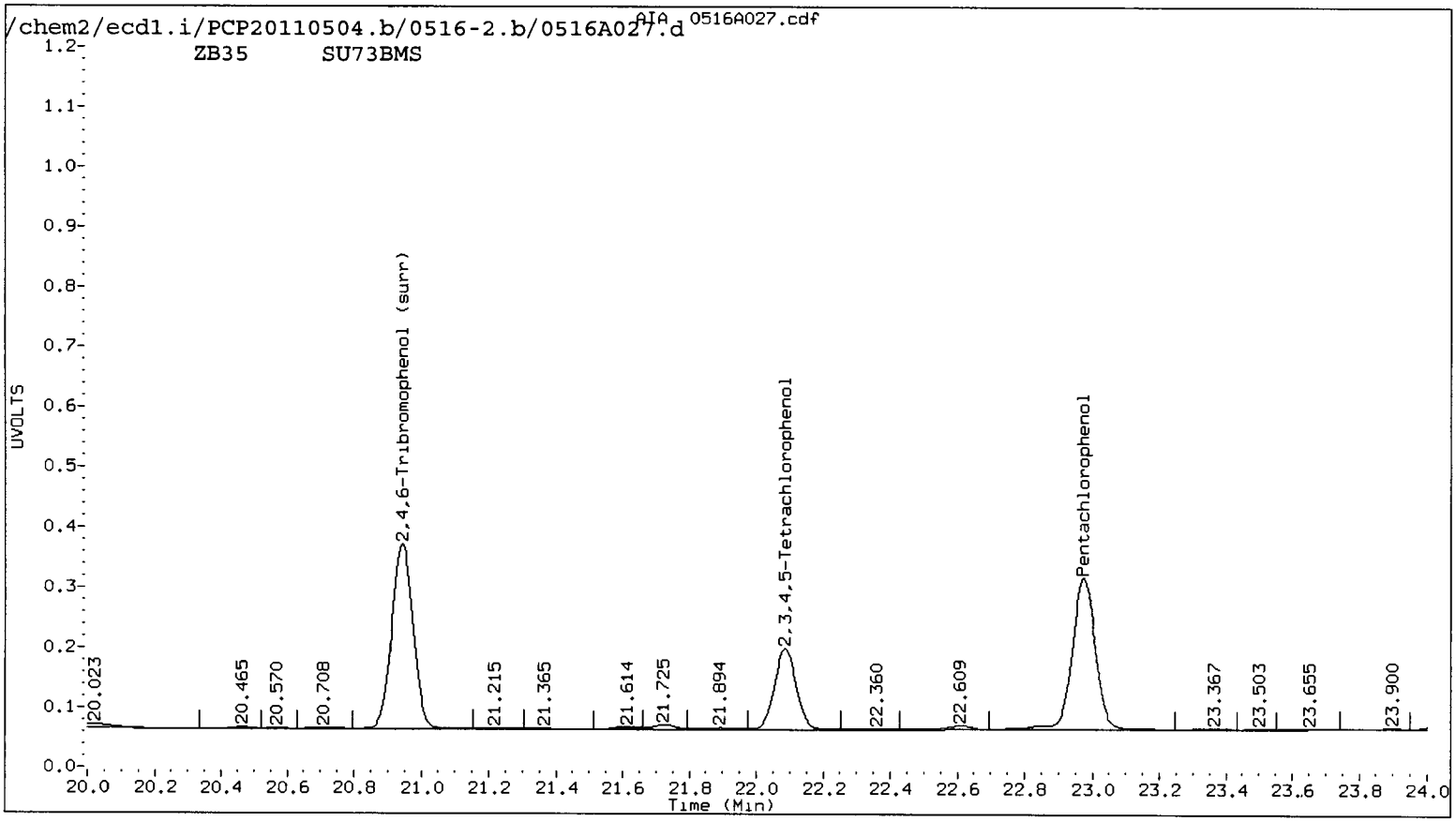
22.308
22.429
22.557
22.736
22.908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AIA 0516A027.cdf
ZB35 SU73BMS
UVOLTS
Time (Min)
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
20.023
20.465
20.570
20.708
21.215
21.365
21.614
21.725
21.894
22.360
22.609
23.367
23.503
23.655
23.900

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A027.d

Page 1

Date : 17-MAY-2011 03:42

Client ID: MW-01-042911-D MS

Instrument: ecd1.i

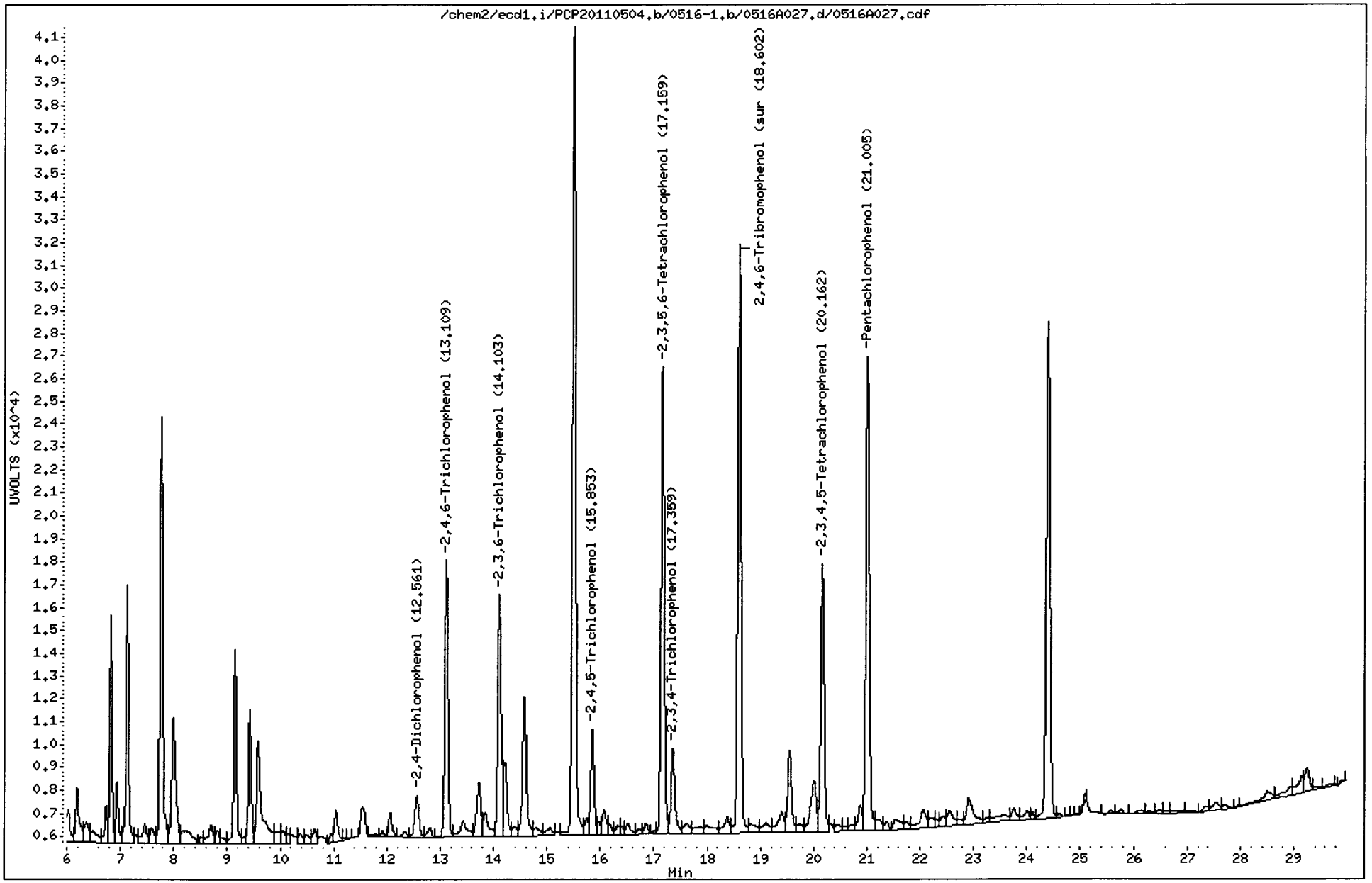
Sample Info: SU73BMS

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

Column diameter: 0.53



SU53 : 56800895

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A027.d

Page 1

Date : 17-MAY-2011 03:42

Client ID: MW-01-042911-D MS

Instrument: ecd1.i

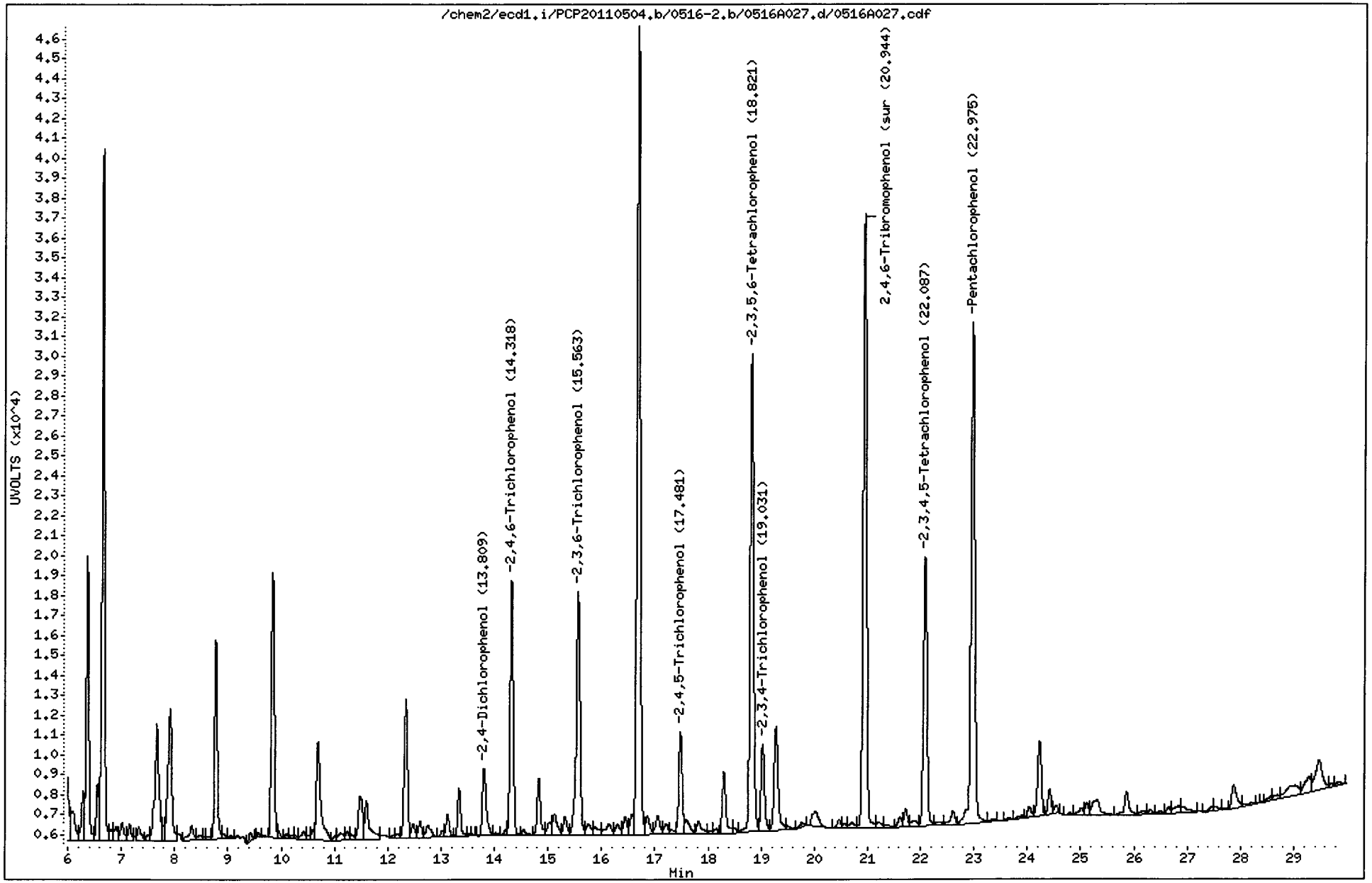
Sample Info: SU73BMS

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



SU53 : 00896

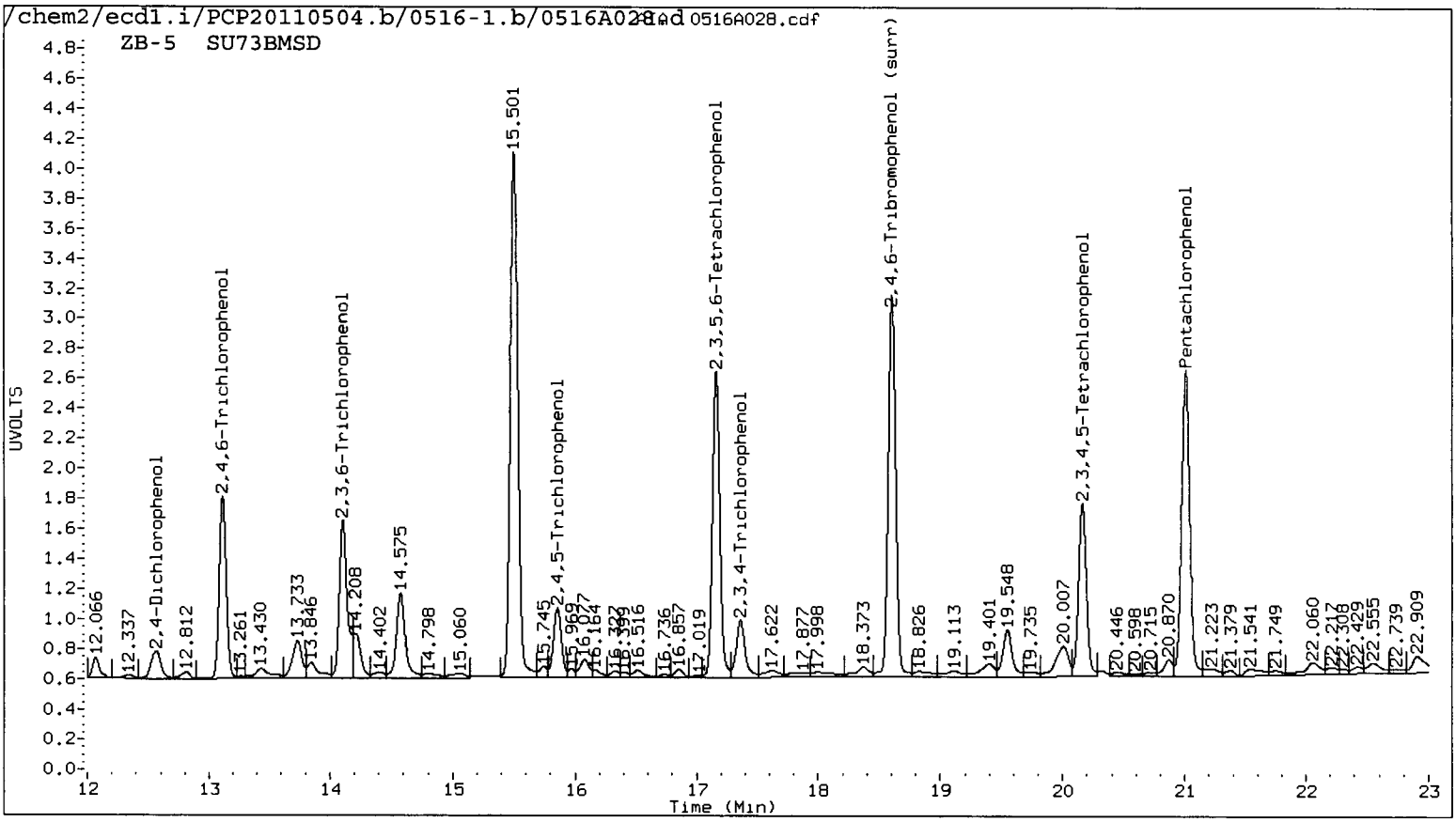
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A028.d ARI ID: SU73BMSD
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A028.d Client ID: MW-01-042911-D MSD
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 17-MAY-2011 04:18
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.006	0.009	466027	22.975	0.008	604150	23.1289	21.4535	7.5	Pentachlorophenol
13.110	0.009	248167	14.318	0.007	259415	20.3870	17.8984	13.0	2,4,6-Trichlorophenol
14.104	0.007	243817	15.564	0.007	292617	21.2892	20.3582	4.5	2,3,6-Trichlorophenol
15.854	0.009	103482	17.482	0.008	116825	14.7766	14.4306	2.4	2,4,5-Trichlorophenol
17.360	0.008	96466	19.031	0.008	102763	11.5455	10.4299	10.2	2,3,4-Trichlorophenol
17.160	0.008	433587	18.821	0.007	536481	25.6459	24.4545	4.8	2,3,5,6-Tetrachlorophenol
20.163	0.008	261777	22.088	0.008	303350	20.1650	19.4063	3.8	2,3,4,5-Tetrachlorophenol
12.562	0.007	51392	13.808	-0.012	91183	68.0471	116.7942	52.7*	2,4-Dichlorophenol
18.604	0.008	553257	20.944	0.008	676721	35.1	32.2	8.8	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	92.5	85.8
2,4,6-Trichlorophenol	81.5	71.6
2,3,6-Trichlorophenol	85.2	81.4
2,4,5-Trichlorophenol	59.1	57.7
2,3,4-Trichlorophenol	46.2	41.7
2,3,5,6-Tetrachlorophenol	102.6	97.8
2,3,4,5-Tetrachlorophenol	80.7	77.6
2,4-Dichlorophenol	27.2	46.7
2,4,6-TBP (surr)	70.3	64.4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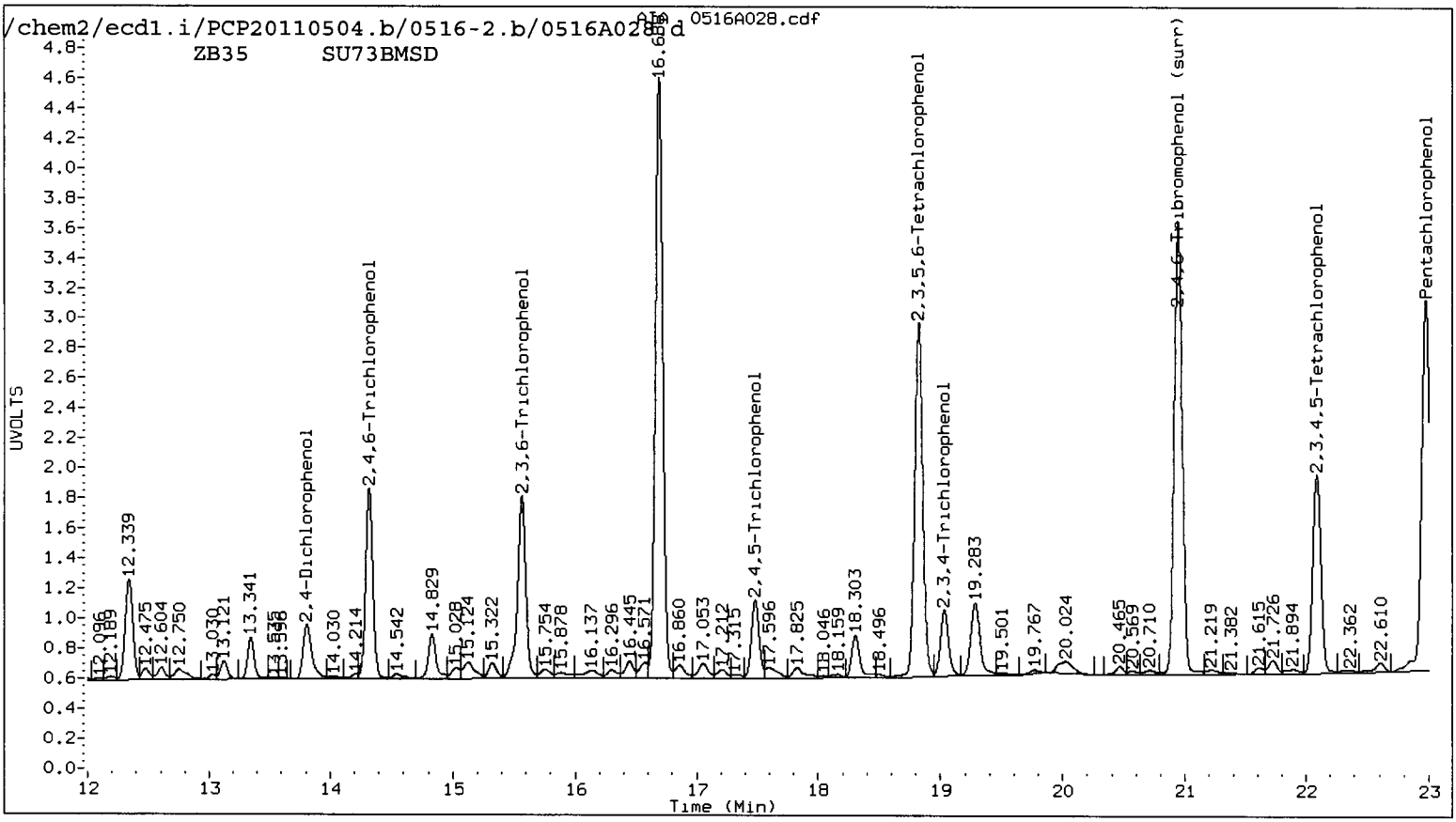
0516A028.cdf
ZB-5 SU73BMSD
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol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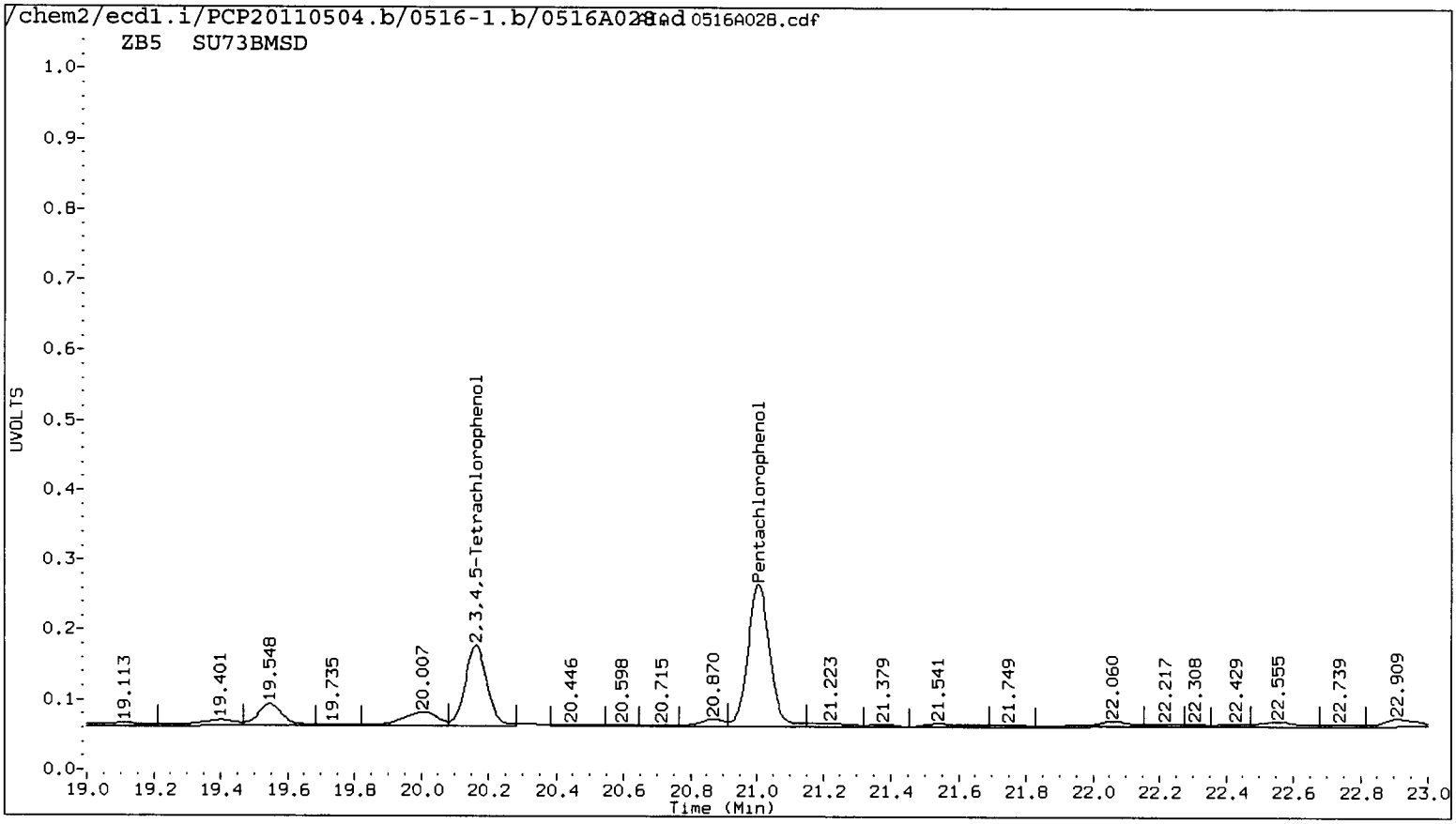
0516A028.cdf
ZB35 SU73BMSD
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol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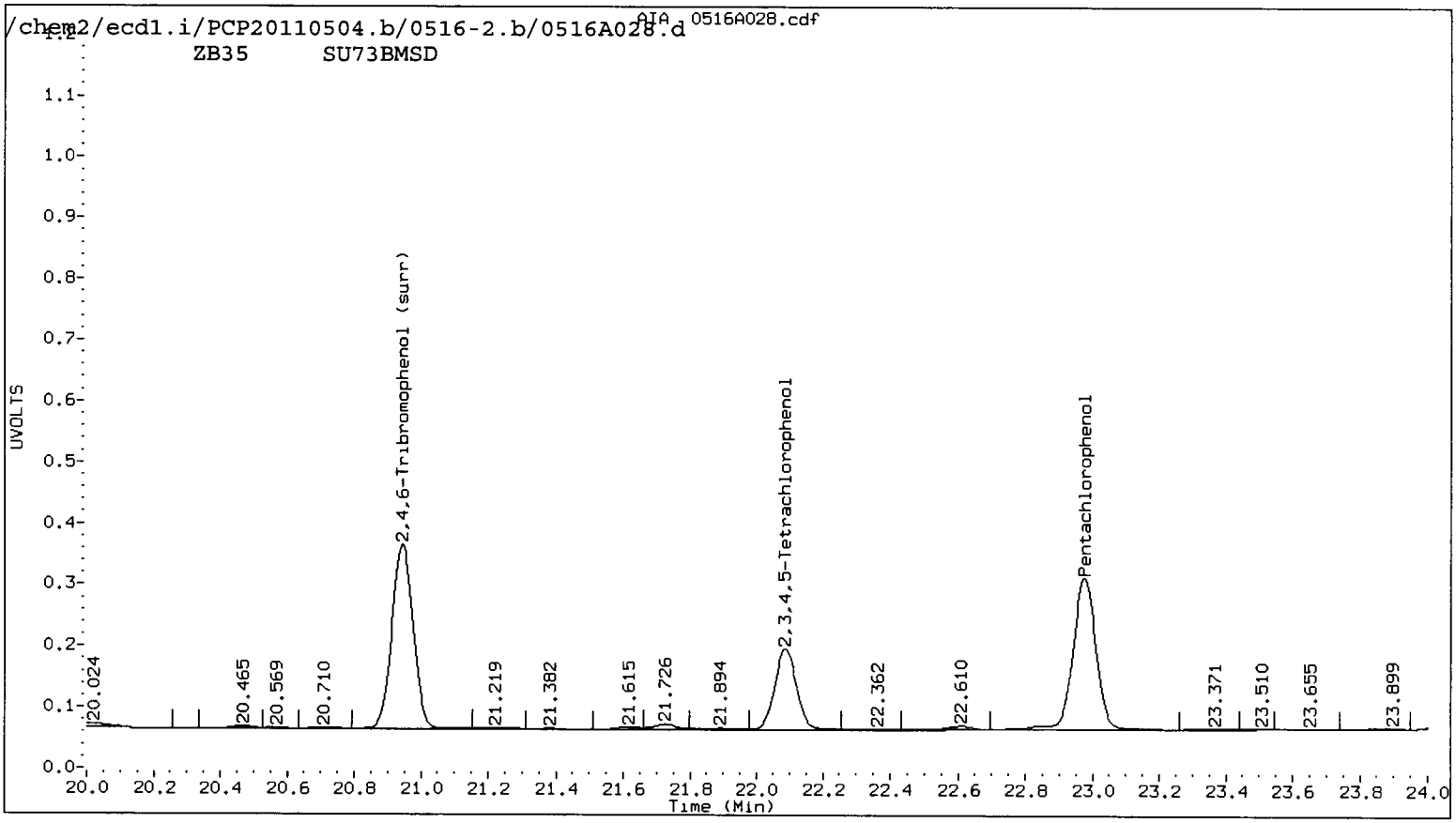
ZB5 SU73BMSD
UVOLTS
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
19.113
19.401
19.548
19.735
20.007
20.446
20.598
20.715
20.870
21.223
21.379
21.541
21.749
22.060
22.217
22.308
22.429
22.555
22.739
22.909
Time (Min)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ZB35 SU73BMSD
UVOLTS
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
20.024
20.465
20.569
20.710
21.219
21.382
21.615
21.726
21.894
22.362
22.610
23.371
23.510
23.655
23.899
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A028.d

Page 1

Date : 17-MAY-2011 04:18

Client ID: MW-01-042911-D MSD

Instrument: ecd1.i

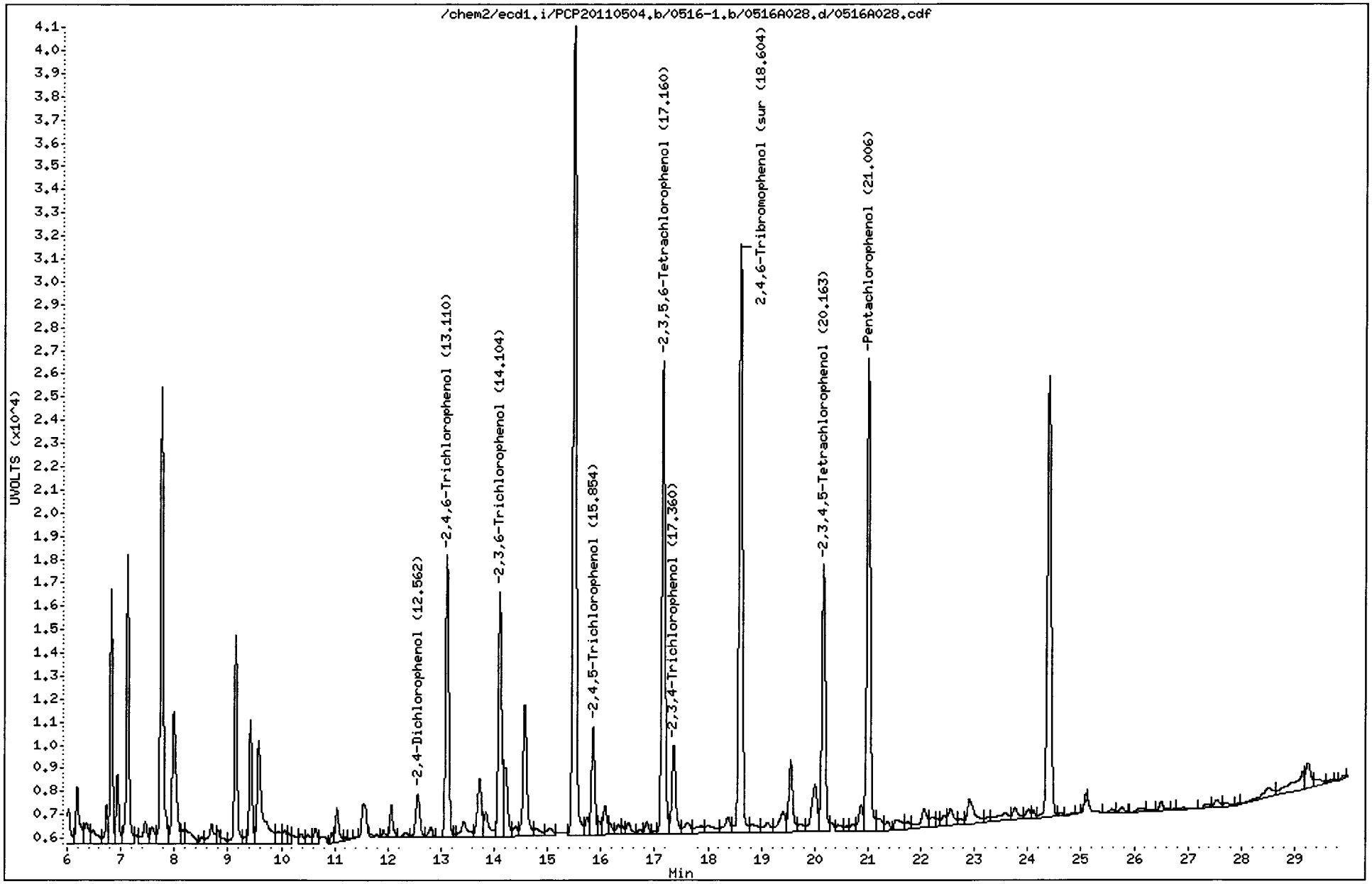
Sample Info: SU73BMSD

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

Column diameter: 0.53



SU53 : 00900

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A028.d

Date : 17-MAY-2011 04:18

Client ID: MW-01-042911-D MSD

Instrument: ecd1.i

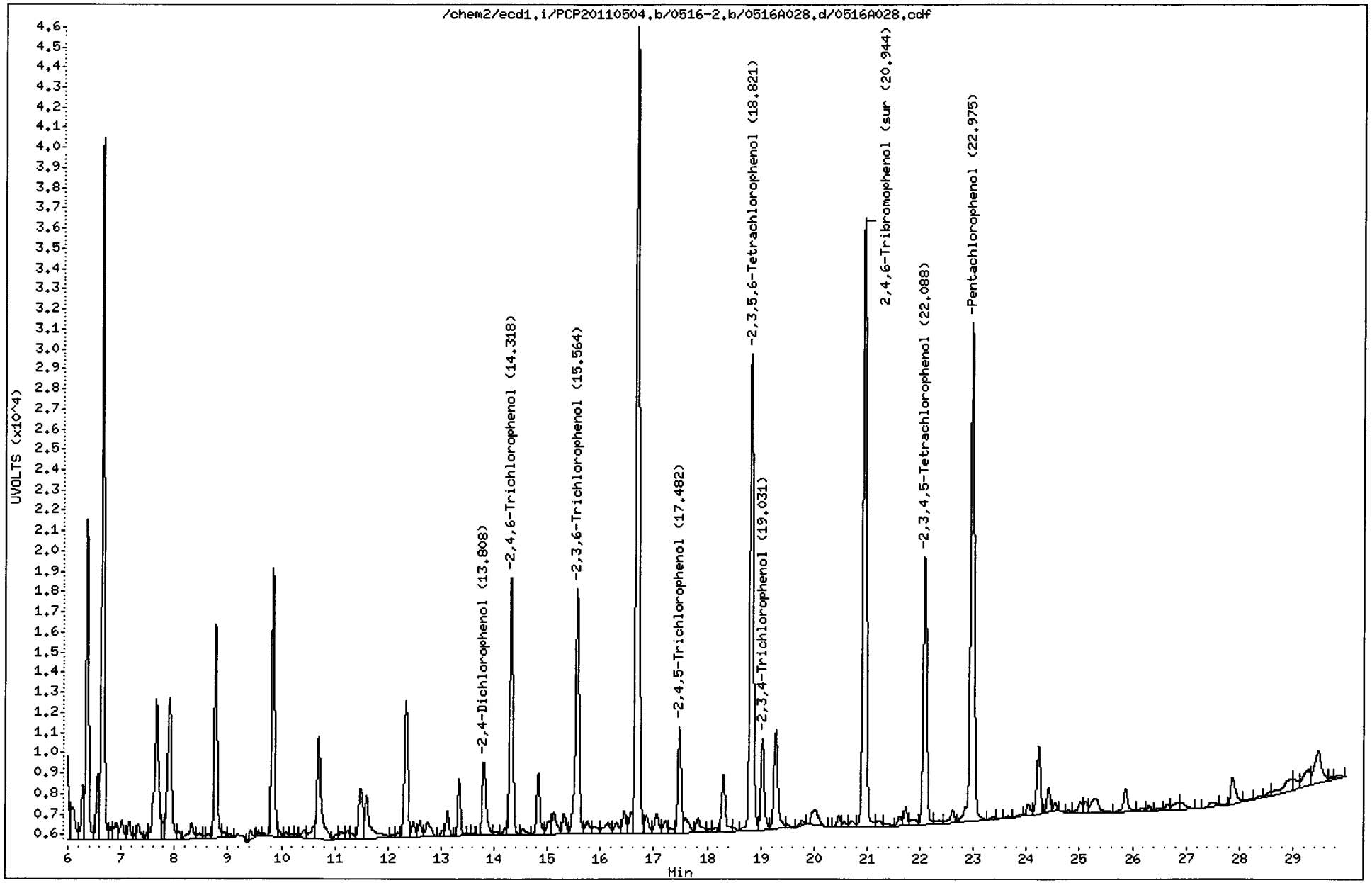
Sample Info: SU73BMSD

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



SU53 : 09901

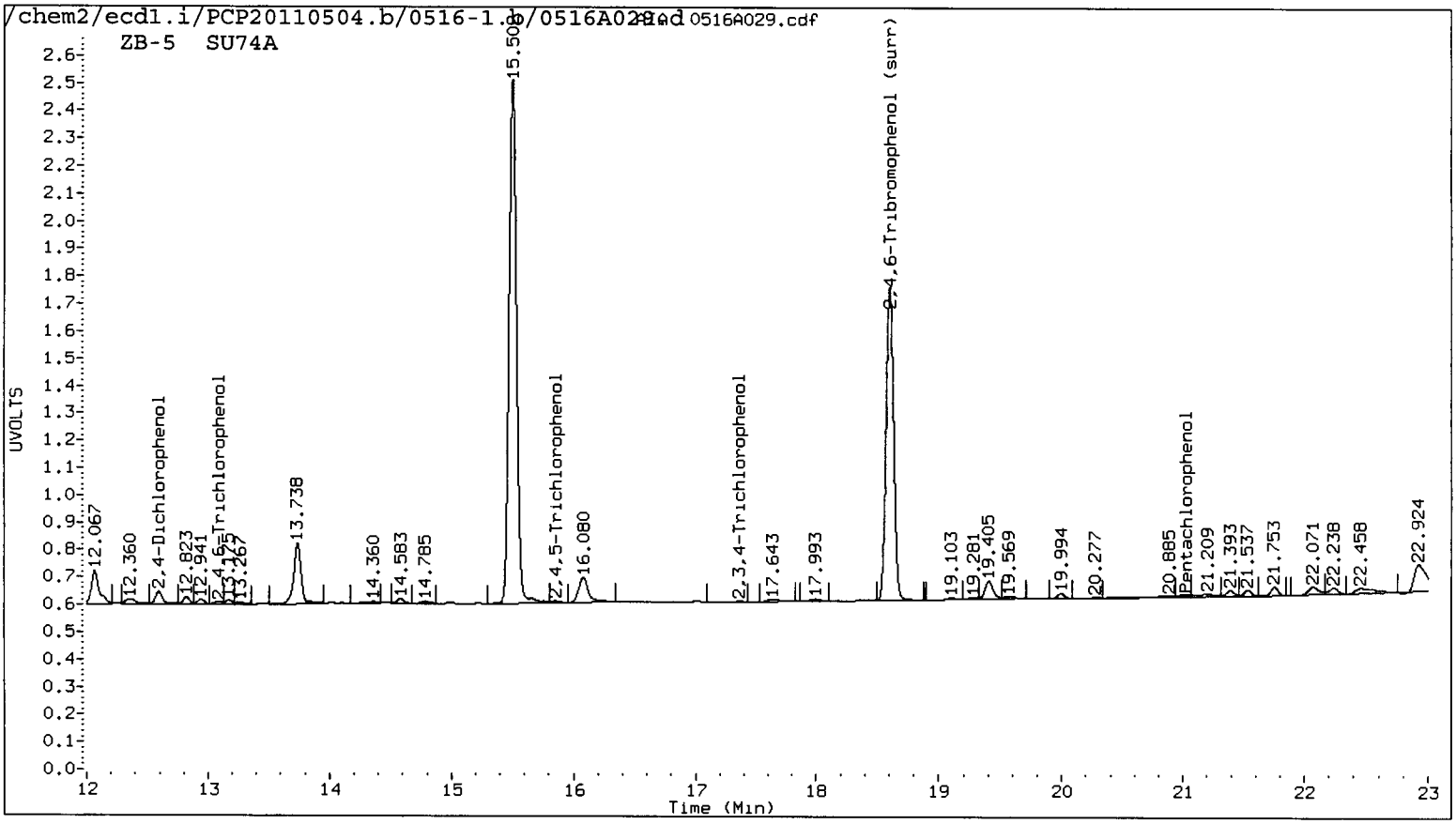
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A029.d ARI ID: SU74A
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A029.d Client ID: B312-042911
Method: /chem2/ecd1.i/PCP.m Injection Date: 17-MAY-2011 04:54
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.026	0.028	2735	----			0.1357	0.0000	---	Pentachlorophenol
13.087	-0.014	1833	14.319	0.008	2285	0.1506	0.1577	4.6	2,4,6-Trichlorophenol
----			15.548	-0.009	5469	0.0000	0.3805	---	2,3,6-Trichlorophenol
15.850	0.005	1645	17.480	0.006	3364	0.2134	0.4156	64.3*	2,4,5-Trichlorophenol
17.362	0.011	1289	19.032	0.009	1726	0.1543	0.1645	6.4	2,3,4-Trichlorophenol
----			18.759	-0.055	2310	0.0000	0.1053	---	2,3,5,6-Tetrachlorophenol
----			22.098	0.018	2765	0.0000	0.1615	---	2,3,4,5-Tetrachlorophenol
12.592	0.037	9599	----			11.9998	0.0000	---	2,4-Dichlorophenol
18.605	0.010	241984	20.945	0.009	318417	15.4	15.1	1.5	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	61.5	60.6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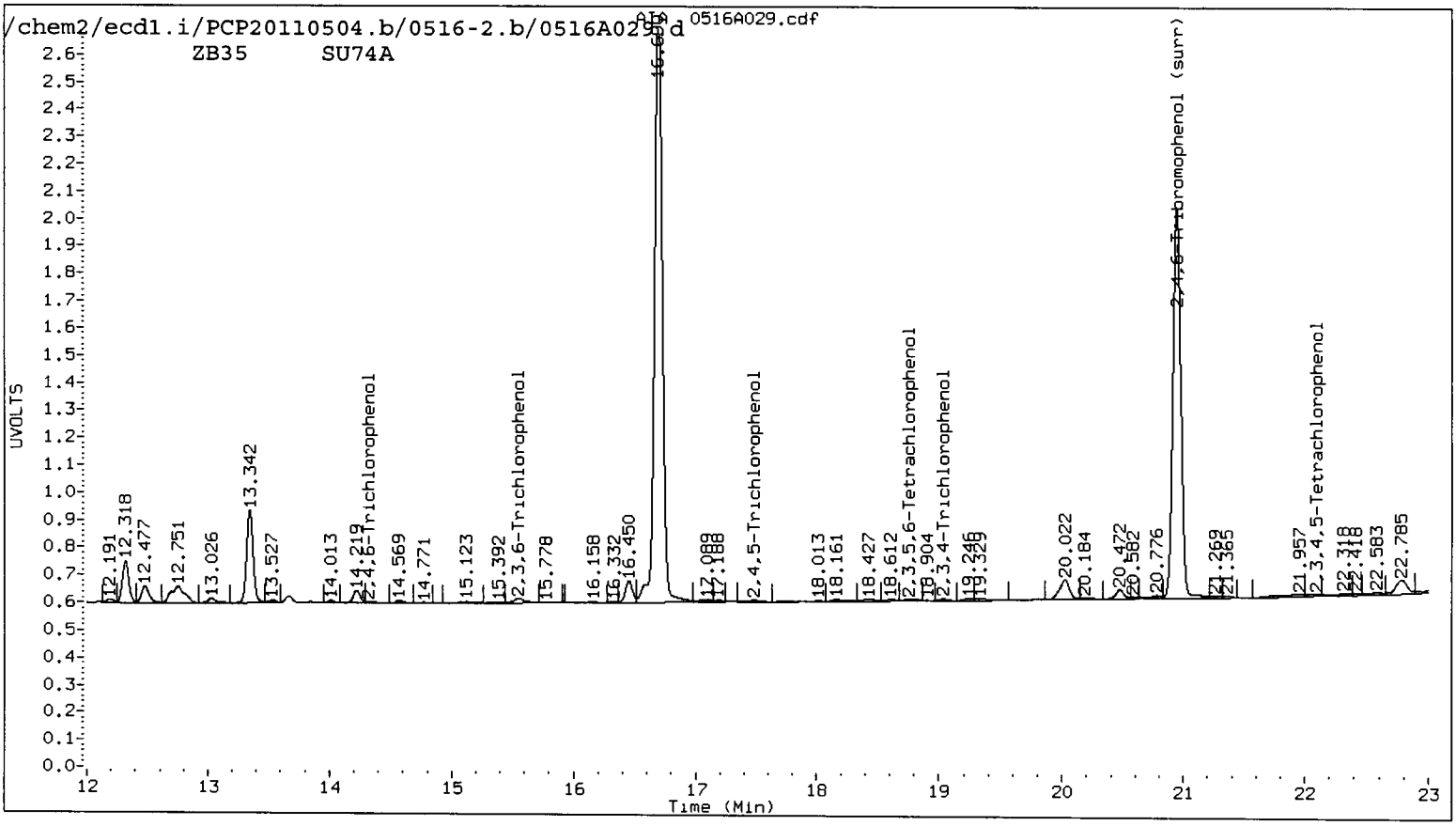
ZB-5 SU74A
UVOLTS
Time (Min)
12.067
12.360
2,4-Dichlorophenol
12.823
12.941
2,4,6-Trichlorophenol
13.267
13.738
14.360
14.583
14.785
15.506
2,4,5-Trichlorophenol
16.080
2,3,4-Trichlorophenol
17.643
17.993
2,4,6-Tribromophenol (surr)
19.103
19.281
19.405
19.569
19.994
20.277
20.885
Pentachlorophenol
21.209
21.393
21.537
21.753
22.071
22.238
22.458
22.924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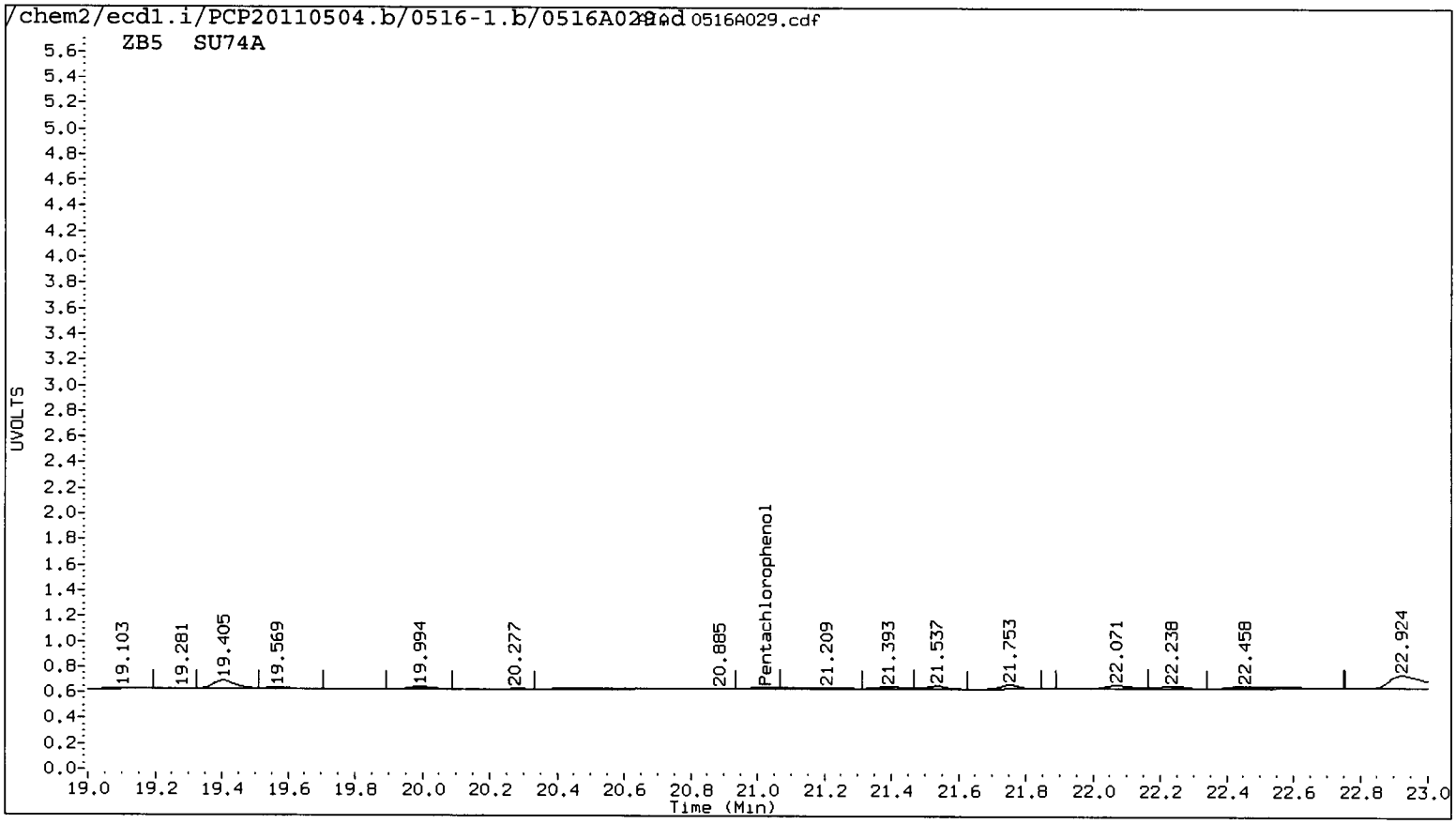
ZB35 SU74A
UVOLTS
Time (Min)
12.191
12.318
12.477
12.751
13.026
13.342
13.527
14.013
14.219
2,4,6-Trichlorophenol
14.569
14.771
15.123
15.392
2,3,6-Trichlorophenol
15.778
16.158
16.332
16.450
16.689
17.088
17.188
2,4,5-Trichlorophenol
18.013
18.161
18.427
18.612
2,3,5,6-Tetrachlorophenol
18.904
2,3,4-Trichlorophenol
19.246
19.329
20.022
20.184
20.472
20.582
20.776
2,4,6-Tribromophenol (surr)
21.269
21.365
21.957
2,3,4,5-Tetrachlorophenol
22.318
22.418
22.583
22.785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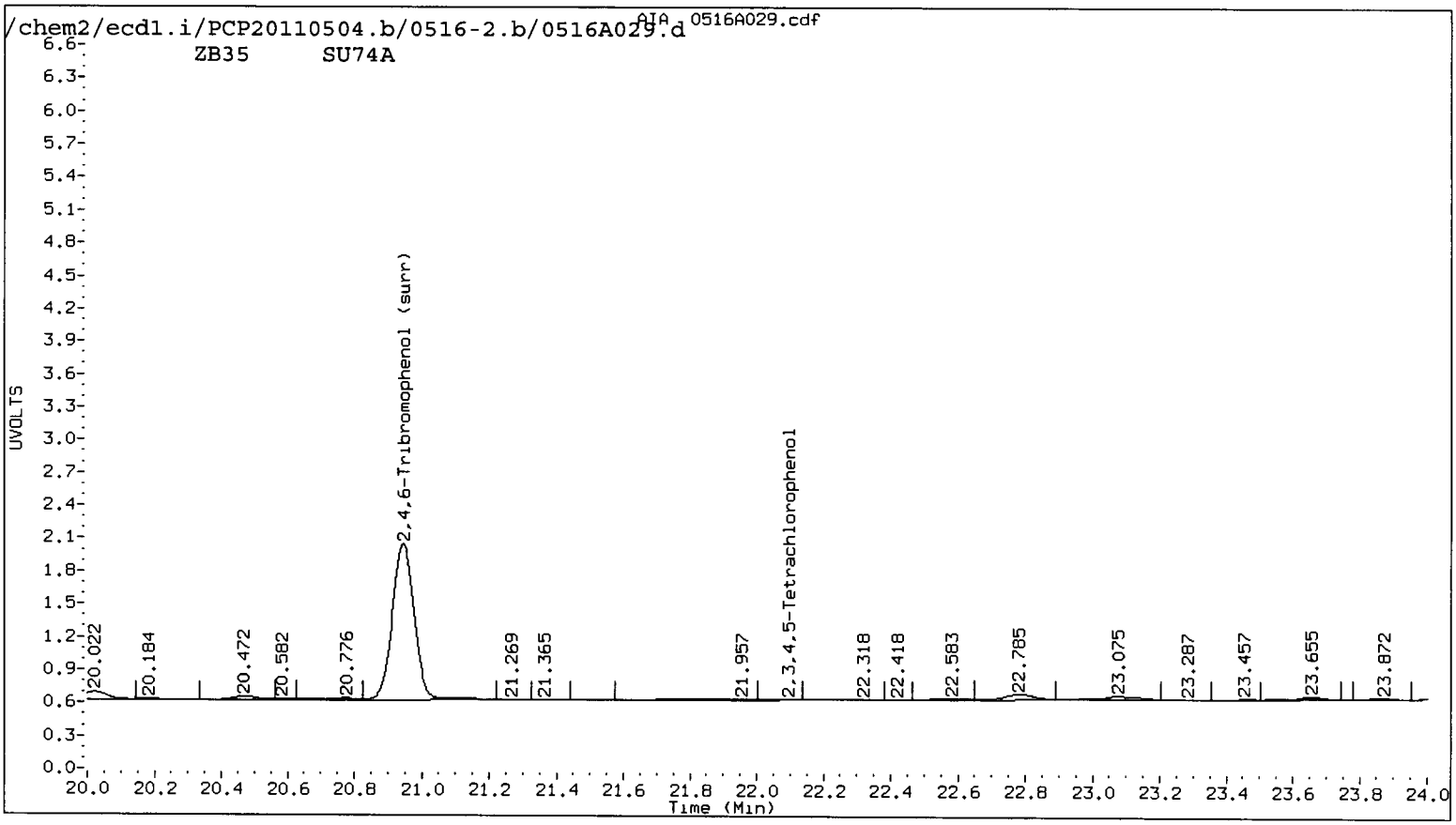
0516A029.cdf
ZB5 SU74A
UVOLTS
Time (Min)
19.103
19.281
19.405
19.569
19.994
20.277
20.885
Pentachlorophenol
21.209
21.393
21.537
21.753
22.071
22.238
22.458
22.924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ZB35 SU74A
UVOLTS
Time (Min)
20.022
20.184
20.472
20.582
20.776
2,4,6-Tribromophenol (surr)
21.269
21.365
21.957
2,3,4,5-Tetrachlorophenol
22.318
22.418
22.583
22.785
23.075
23.287
23.457
23.655
23.872

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A029.d

Date : 17-MAY-2011 04:54

Client ID: B312-042911

Instrument: ecd1.i

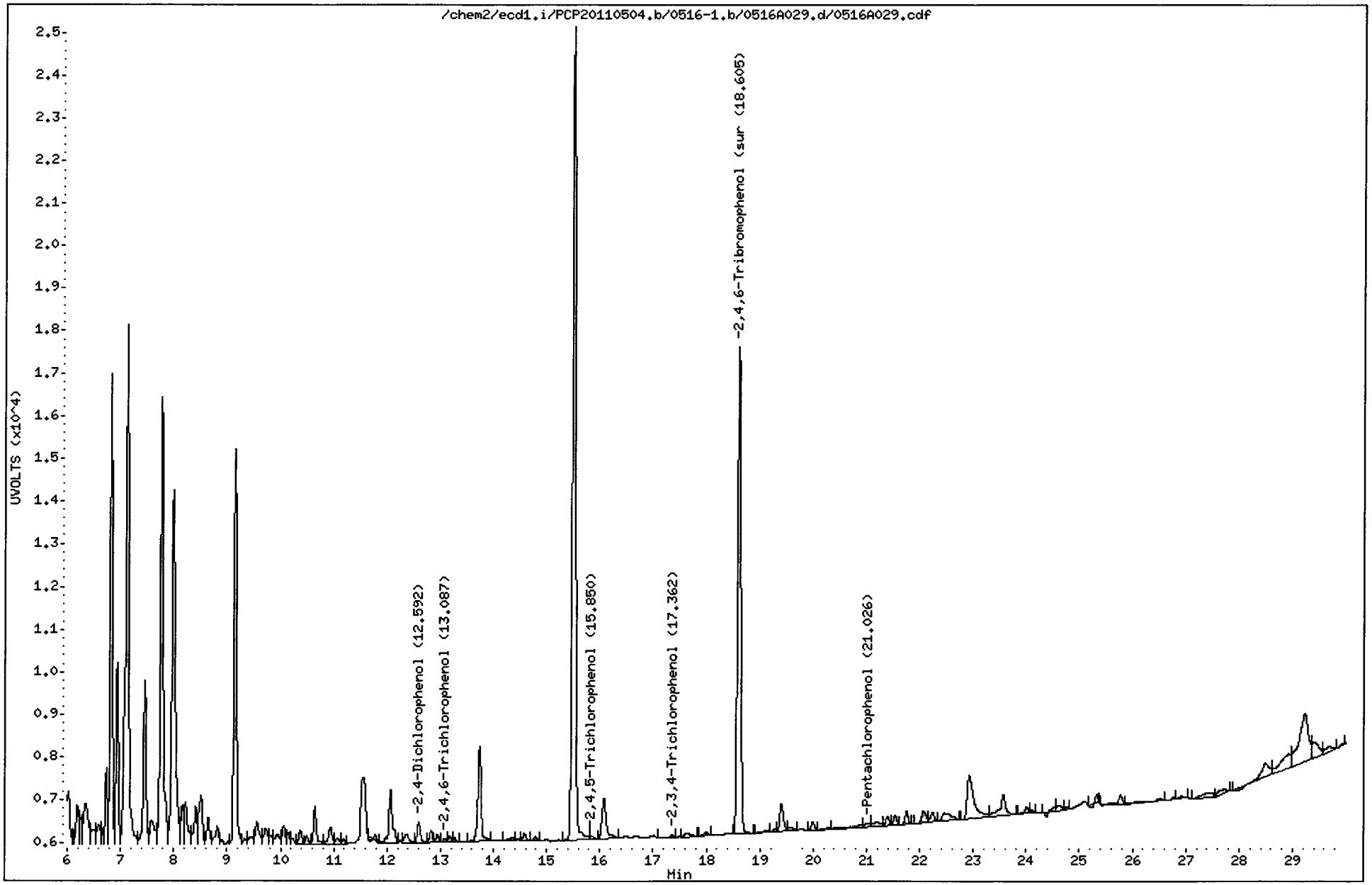
Sample Info: SU74A

Purge Volume: 500.0

Operator: ar

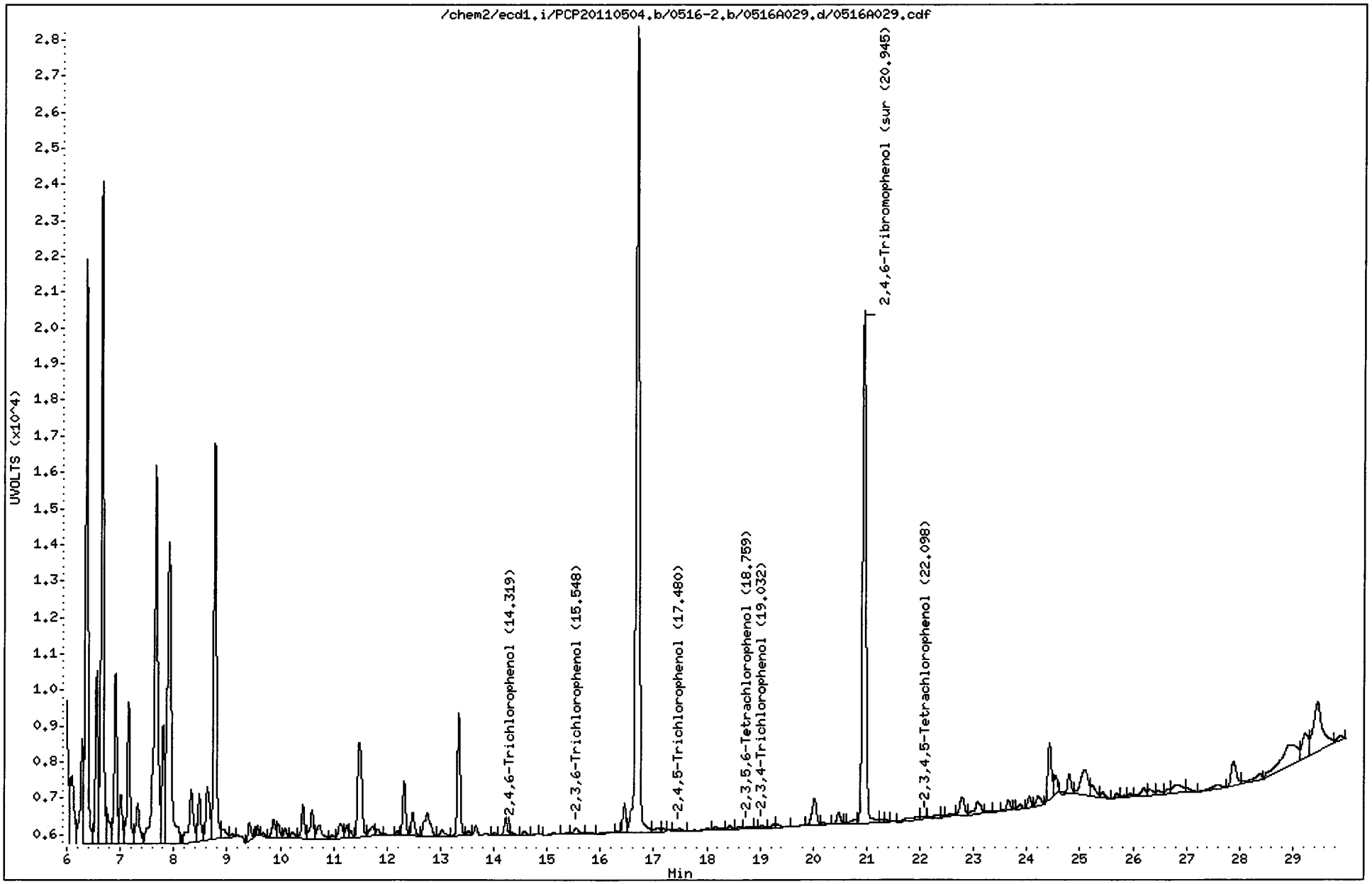
Column phase: STX CLP1

Column diameter: 0.53



SU53 : 0500

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A029.d
Date : 17-MAY-2011 04:54
Client ID: B312-042911
Instrument: ecd1.i
Sample Info: SU74A
Purge Volume: 500.0
Operator: ar
Column phase: STX CLP2
Column diameter: 0.53



SU53 : 9600

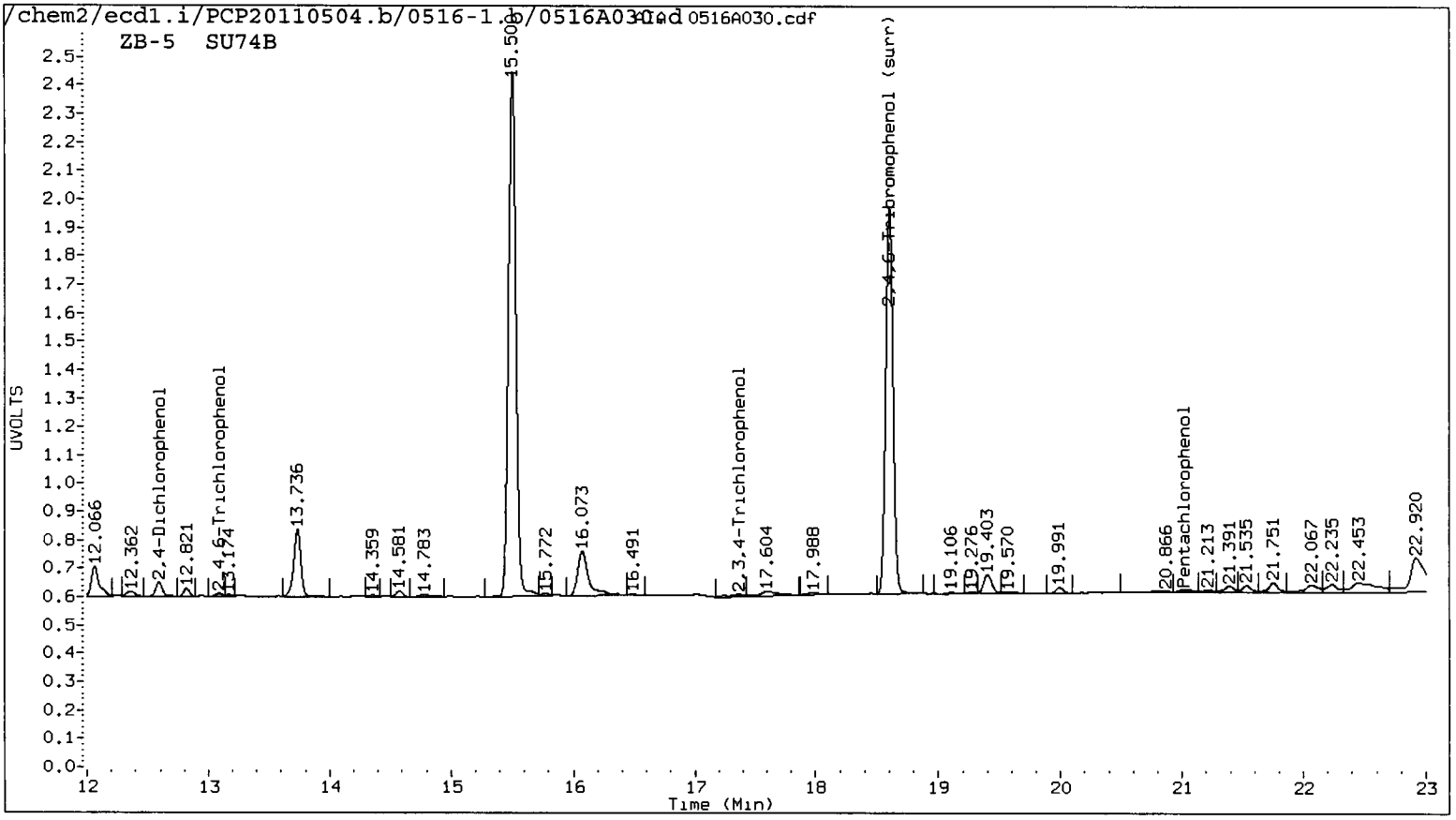
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

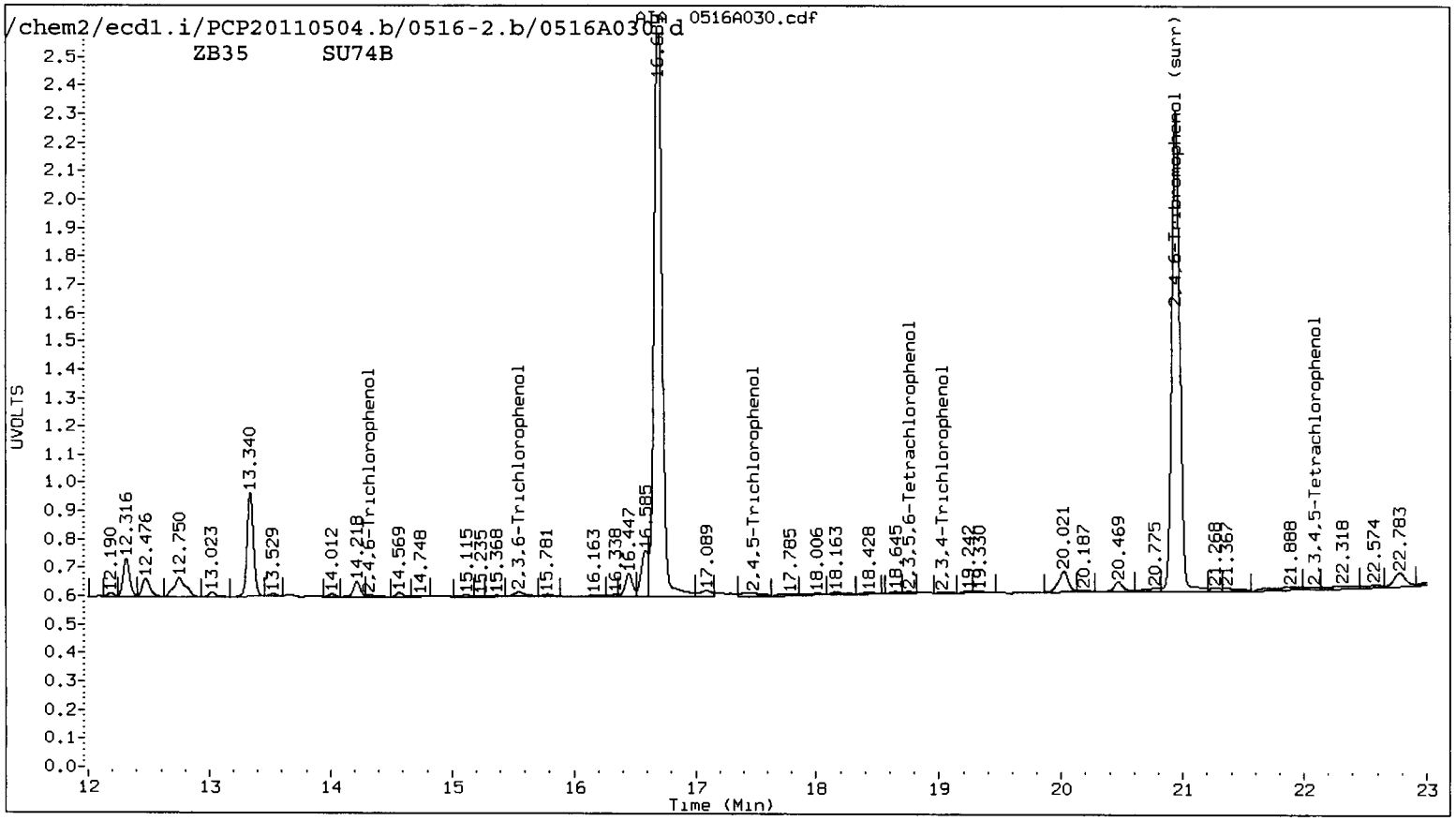
Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A030.d ARI ID: SU74B
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A030.d Client ID: B310-042911
Method: /chem2/ecd1.i/PCP.m Injection Date: 17-MAY-2011 05:31
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.021	0.024	4557	----			0.2262	0.0000	---	Pentachlorophenol
13.090	-0.011	2392	14.318	0.007	2194	0.1966	0.1514	26.0	2,4,6-Trichlorophenol
----			15.550	-0.007	5730	0.0000	0.3987	---	2,3,6-Trichlorophenol
----			17.477	0.003	7844	0.0000	0.9690	---	2,4,5-Trichlorophenol
17.365	0.014	3250	19.030	0.007	996	0.3890	0.0949	121.6*	2,3,4-Trichlorophenol
----			18.757	-0.057	1683	0.0000	0.0768	---	2,3,5,6-Tetrachlorophenol
----			22.083	0.003	4123	0.0000	0.2410	---	2,3,4,5-Tetrachlorophenol
12.590	0.035	11232	----			14.0732	0.0000	---	2,4-Dichlorophenol
18.604	0.008	286764	20.944	0.008	382494	18.2	18.2	0.1	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	72.9	72.8


/chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A030.d
0516A030.cdf
ZB-5 SU74B
UVOLTS
Time (Min)
12.066
12.362
2,4-Dichlorophenol
12.821
2,4,6-Trichlorophenol
13.174
13.736
14.359
14.581
14.783
15.500
15.772
16.073
16.491
2,3,4-Trichlorophenol
17.604
17.988
2,4,6-Tribromophenol (surr)
19.106
19.276
19.403
19.570
19.991
20.866
Pentachlorophenol
21.213
21.391
21.535
21.751
22.067
22.235
22.453
22.920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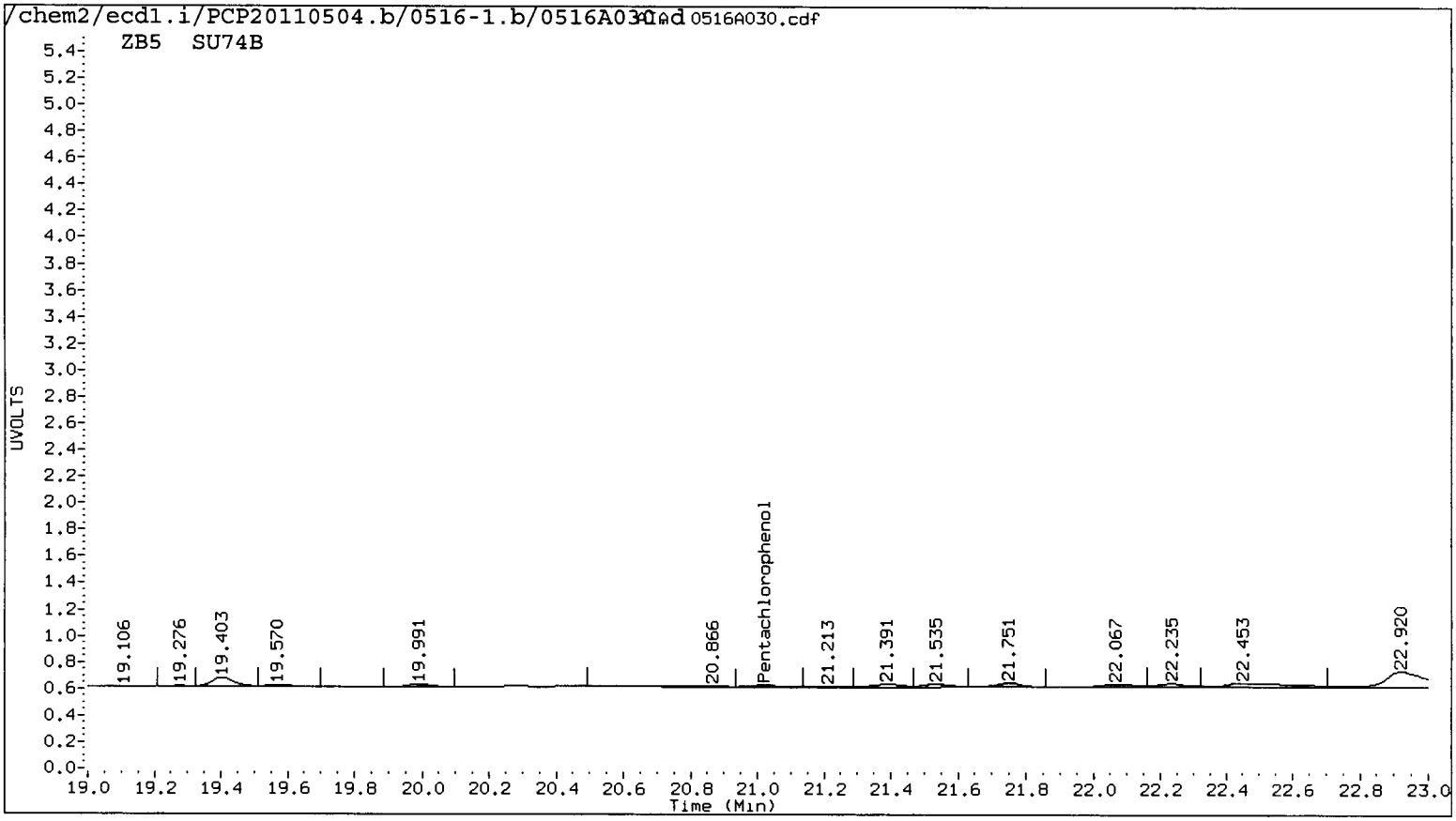
0516A030.cdf
ZB35 SU74B
UVOLTS
Time (Min)
12.190
12.316
12.476
12.750
13.023
13.340
13.529
14.012
14.218
2,4,6-Trichlorophenol
14.569
14.748
15.115
15.235
15.368
2,3,6-Trichlorophenol
15.781
16.163
16.338
16.447
16.585
17.089
2,4,5-Trichlorophenol
17.785
18.006
18.163
18.428
18.645
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
19.342
19.330
20.021
20.187
20.469
20.775
2,4,6-Tribromophenol (surr)
21.268
21.387
21.888
2,3,4,5-Tetrachlorophenol
22.318
22.574
22.783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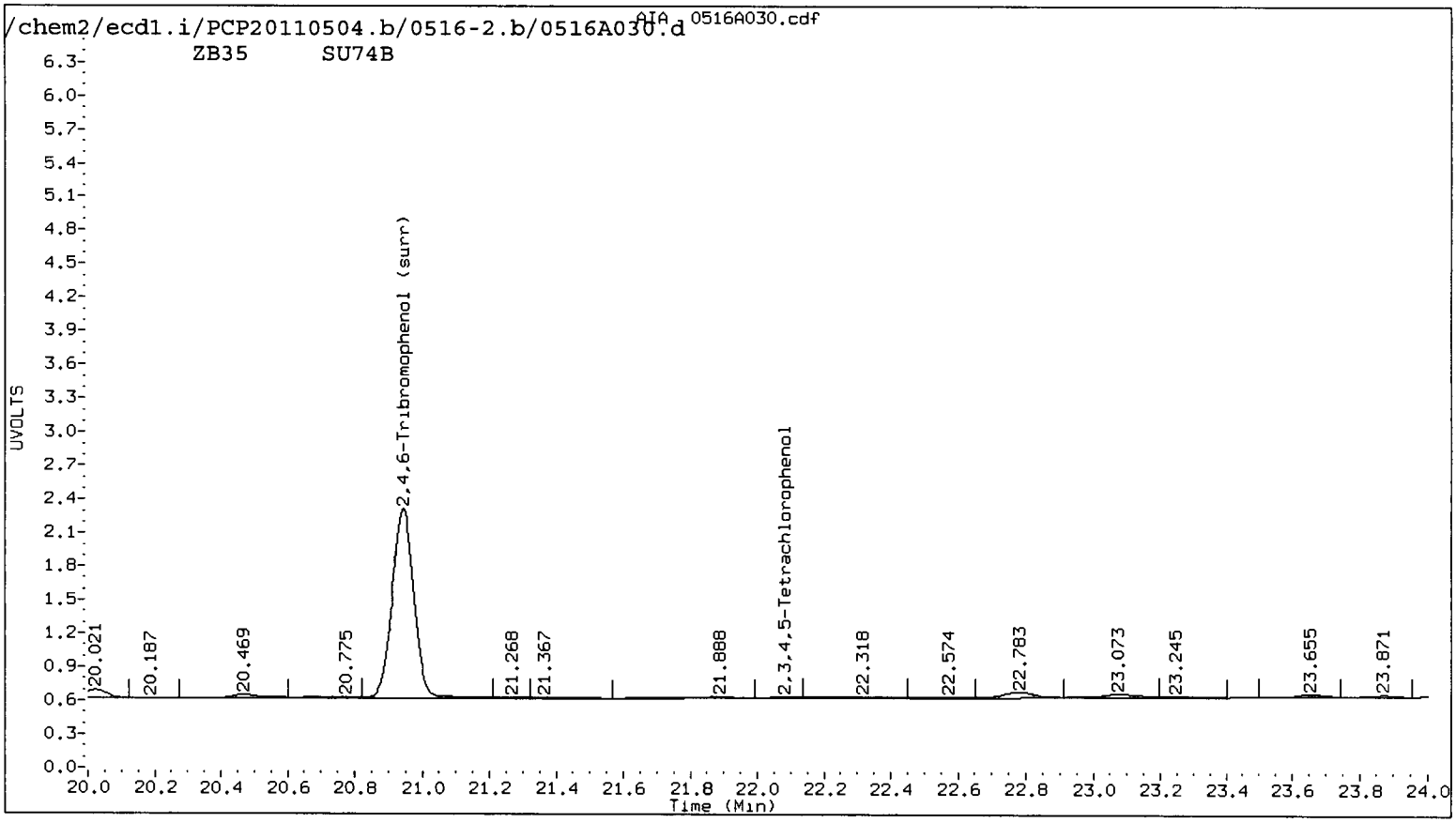
AIA 0516A030.cdf
ZB5 SU74B
UVOLTS
19.106
19.276
19.403
19.570
19.991
20.866
Pentachlorophenol
21.213
21.391
21.535
21.751
22.067
22.235
22.453
22.920
Time (Min)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AIA 0516A030.cdf
ZB35 SU74B
UVOLTS
20.021
20.187
20.469
20.775
2,4,6-Tribromophenol (surr)
21.268
21.367
21.888
2,3,4,5-Tetrachlorophenol
22.318
22.574
22.783
23.073
23.245
23.655
23.871
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A030.d

Date : 17-MAY-2011 05:31

Client ID: B310-042911

Instrument: ecd1.i

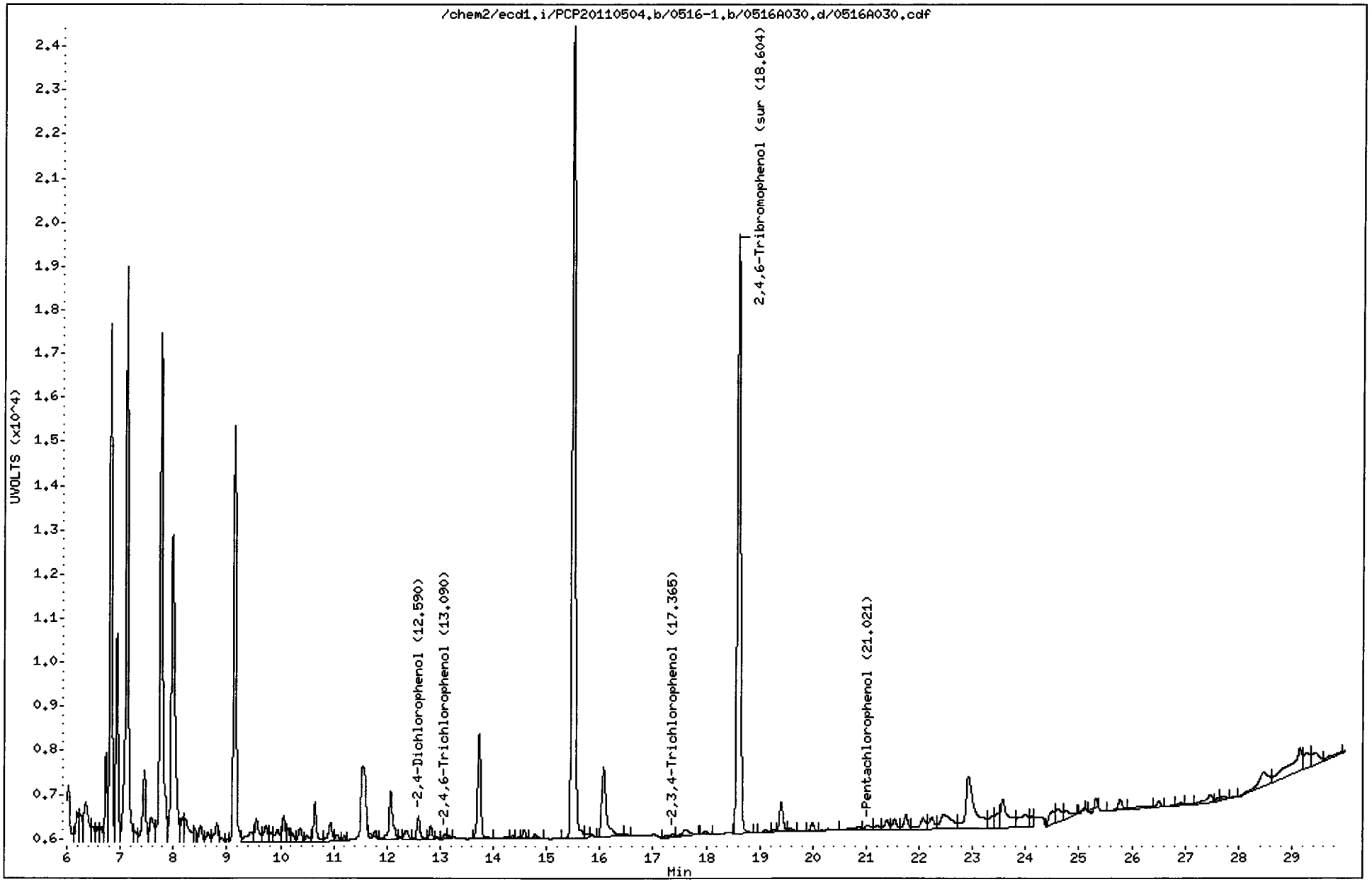
Sample Info: SU74B

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

Column diameter: 0.53



SUS3 : 00910

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A030.d

Date : 17-MAY-2011 05:31

Client ID: B310-042911

Instrument: ecd1.i

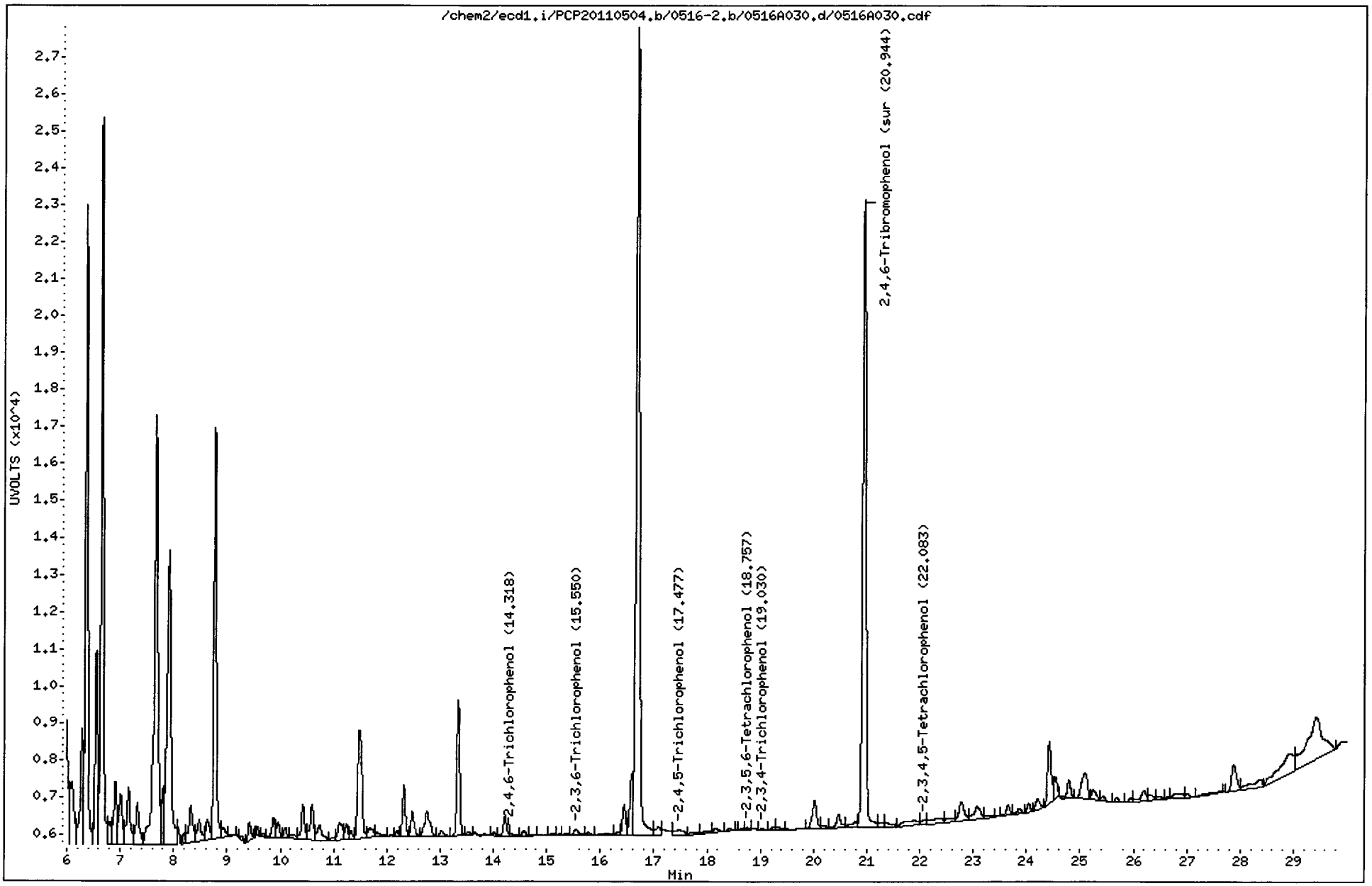
Sample Info: SU74B

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP2

Column diameter: 0.53



SU53 : 00911

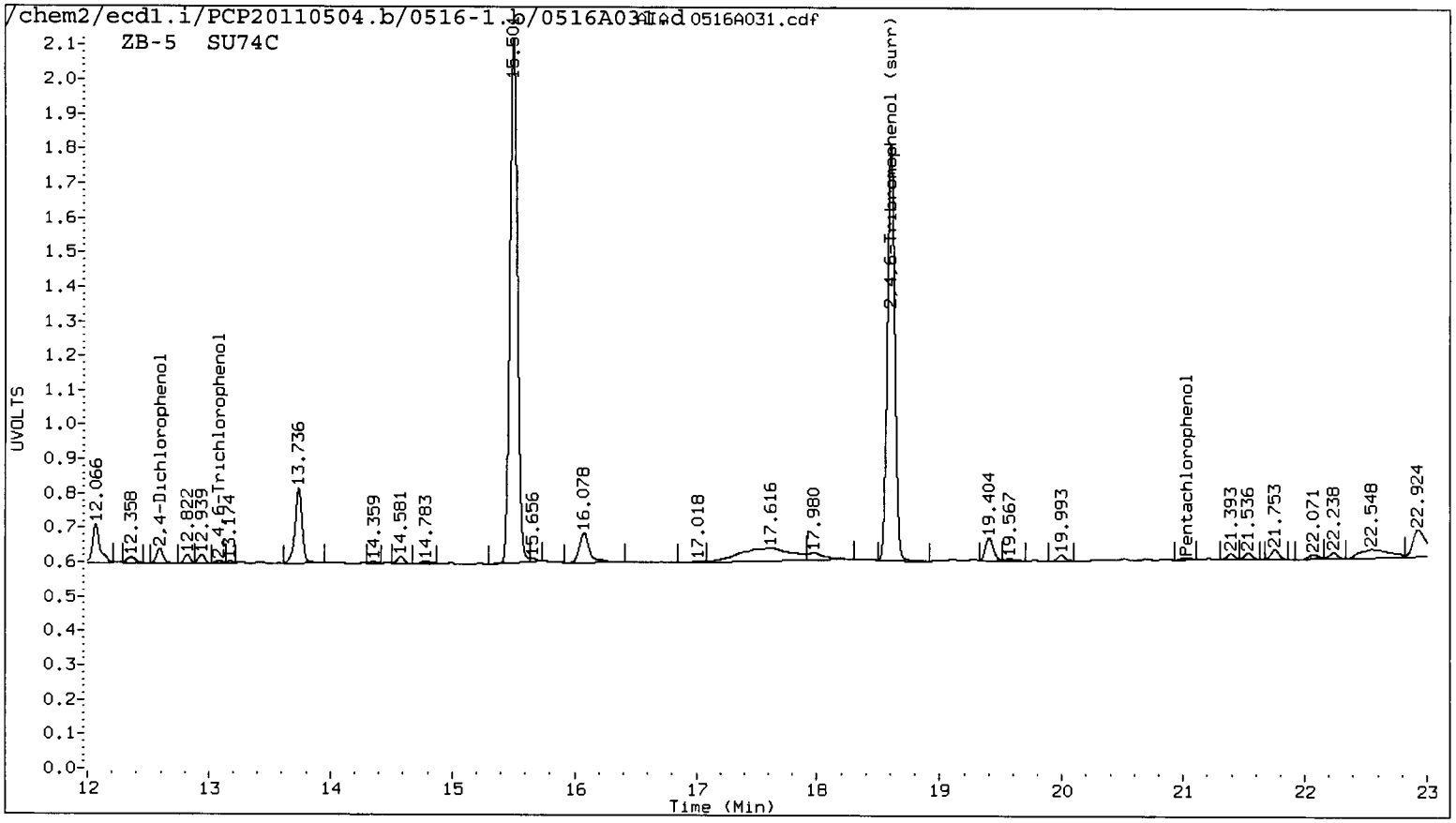
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A031.d ARI ID: SU74C
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A031.d Client ID: B311-042911
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 17-MAY-2011 06:07
Compound Sublist: all Report Date: 05/18/2011 10:16
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col RT	ZB-5 Col Shift	ZB-5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB-5 on col	ZB35 on col	RPD	Compound
21.024	0.027	1370	----			0.0680	0.0000	---	Pentachlorophenol
13.083	-0.018	1559	14.322	0.011	2707	0.1281	0.1868	37.2	2,4,6-Trichlorophenol
----			15.548	-0.009	4405	0.0000	0.3065	---	2,3,6-Trichlorophenol
----			17.477	0.003	3111	0.0000	0.3843	---	2,4,5-Trichlorophenol
----			19.024	0.001	728	0.0000	0.0693	---	2,3,4-Trichlorophenol
----			18.758	-0.056	1477	0.0000	0.0674	---	2,3,5,6-Tetrachlorophenol
----			----			0.0000	0.0000	---	2,3,4,5-Tetrachlorophenol
12.591	0.036	8950	----			11.1784	0.0000	---	2,4-Dichlorophenol
18.604	0.009	254513	20.943	0.007	335515	16.2	16.0	1.3	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
2,4,6-TBP (surr)	64.7	63.8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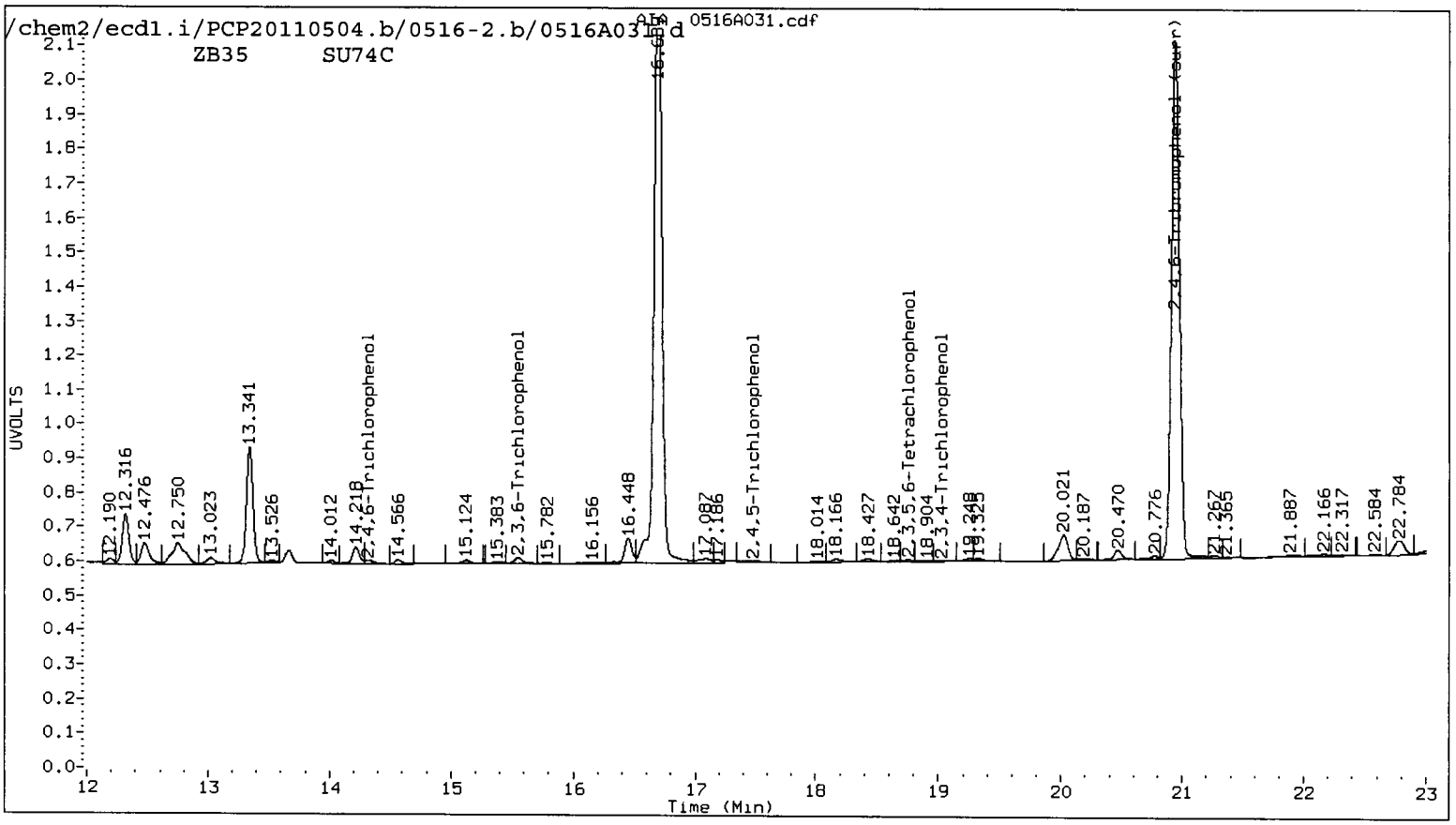
0516A031.cdf
ZB-5 SU74C
UVOLTS
Time (Min)
12.066
12.358
2.4-Dichlorophenol
12.822
12.939
2,4,6-Trichlorophenol
13.174
13.736
14.359
14.581
14.783
15.506
15.656
16.078
17.018
17.616
17.980
2,4,6-Tribromophenol (surr)
19.404
19.567
19.993
Pentachlorophenol
21.393
21.536
21.753
22.071
22.238
22.548
22.924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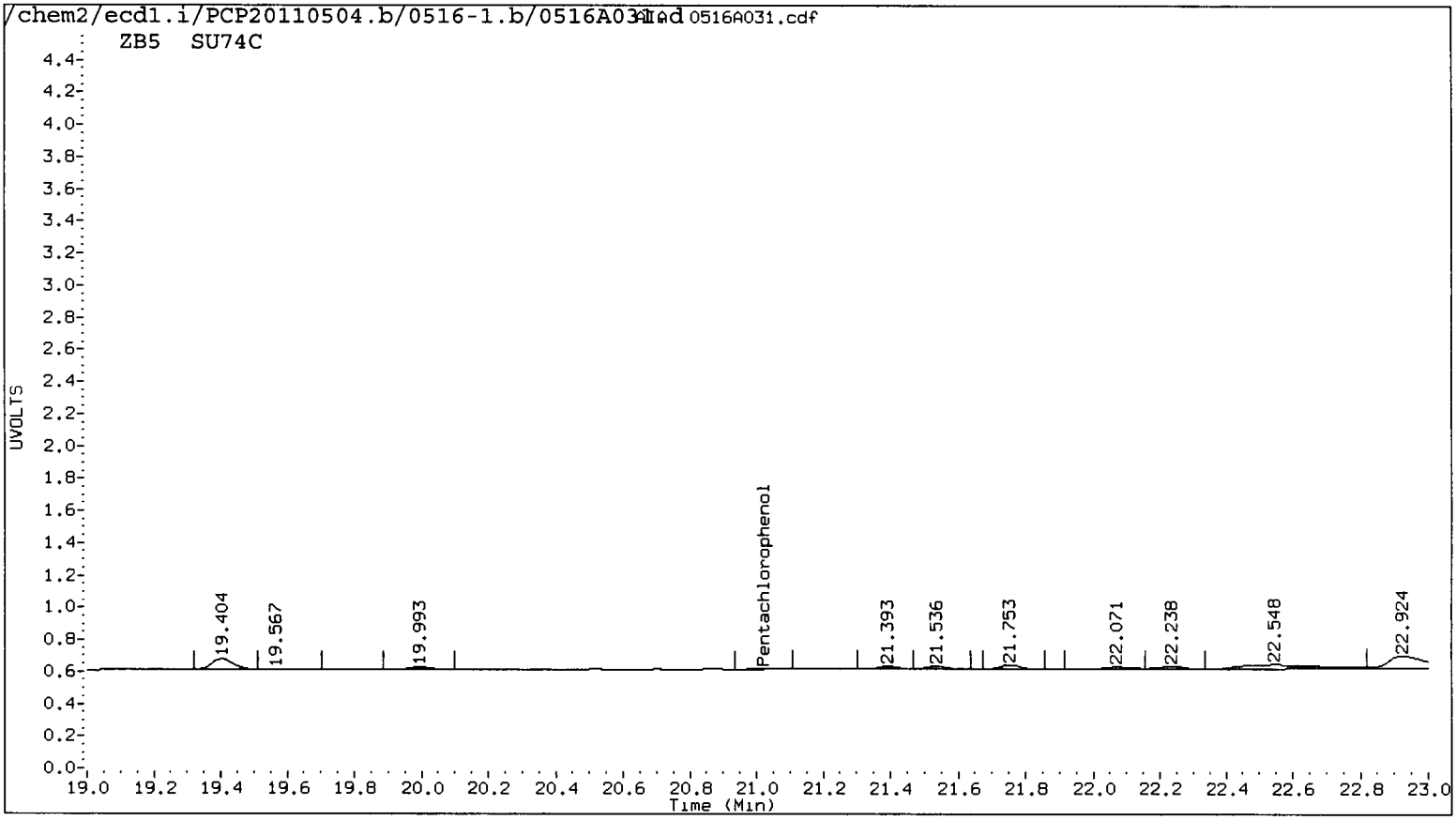
ZB35 SU74C
UVOLTS
Time (Min)
12.190
12.316
12.476
12.750
13.023
13.341
13.526
14.012
14.218
2,4,6-Trichlorophenol
14.566
15.124
15.383
2,3,6-Trichlorophenol
15.782
16.156
16.448
17.087
17.186
2,4,5-Trichlorophenol
18.014
18.166
18.427
18.642
2,3,5,6-Tetrachlorophenol
18.904
2,3,4-Trichlorophenol
20.021
20.187
20.470
20.776
2,4,6-Tribromophenol (surr)
21.267
21.365
21.887
22.166
22.317
22.584
22.784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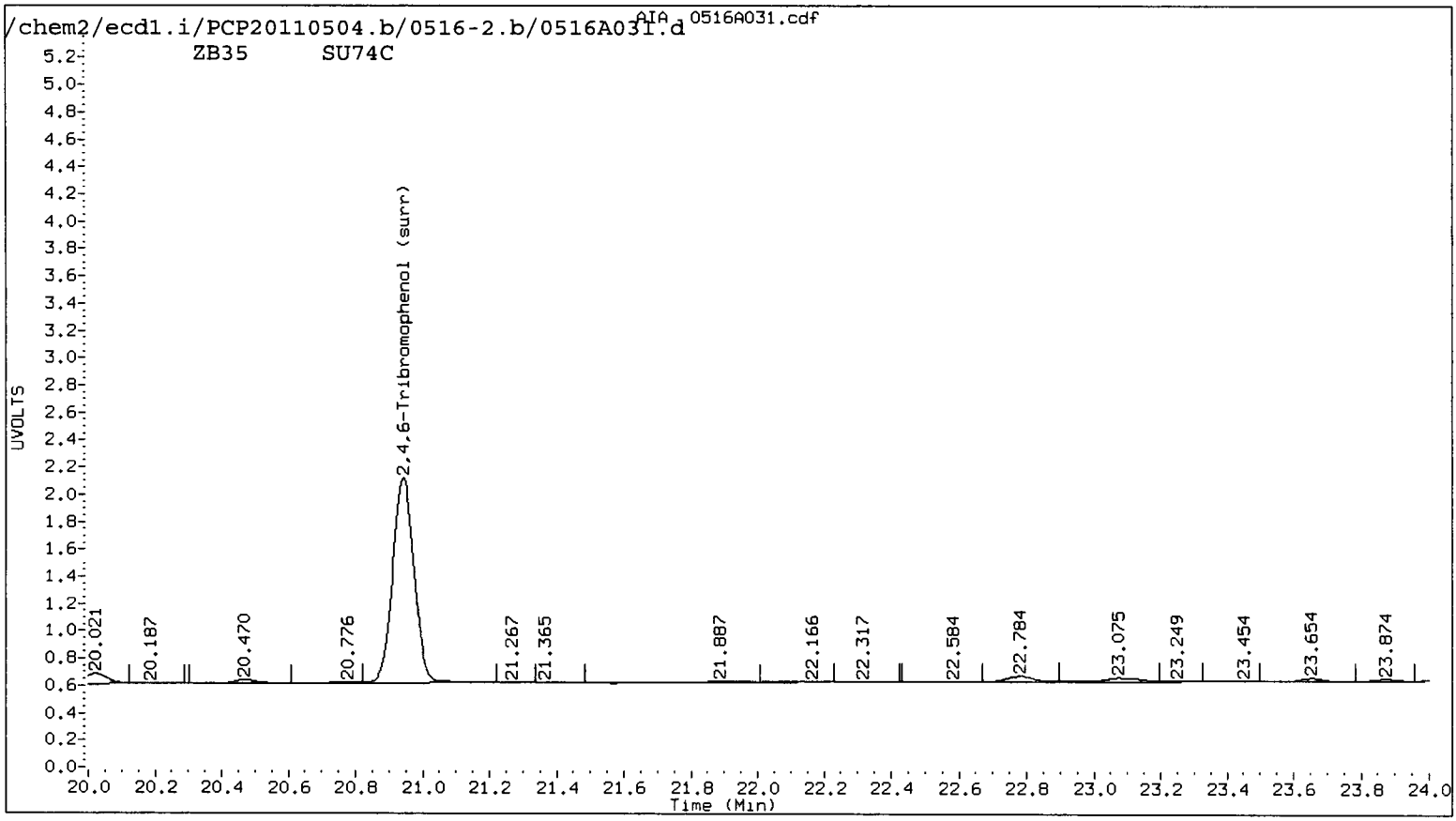
0516A031.cdf
ZB5 SU74C
UVOLTS
Time (Min)
19.404
19.567
19.993
Pentachlorophenol
21.393
21.536
21.753
22.071
22.238
22.548
22.924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0516A031.cdf
ZB35 SU74C
UVOLTS
Time (Min)
20.021
20.187
20.470
20.776
2,4,6-Tribromophenol (surr)
21.267
21.365
21.887
22.166
22.317
22.584
22.784
23.075
23.249
23.454
23.654
23.874

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A031.d

Page 1

Date : 17-MAY-2011 06:07

Client ID: B311-042911

Instrument: ecd1.i

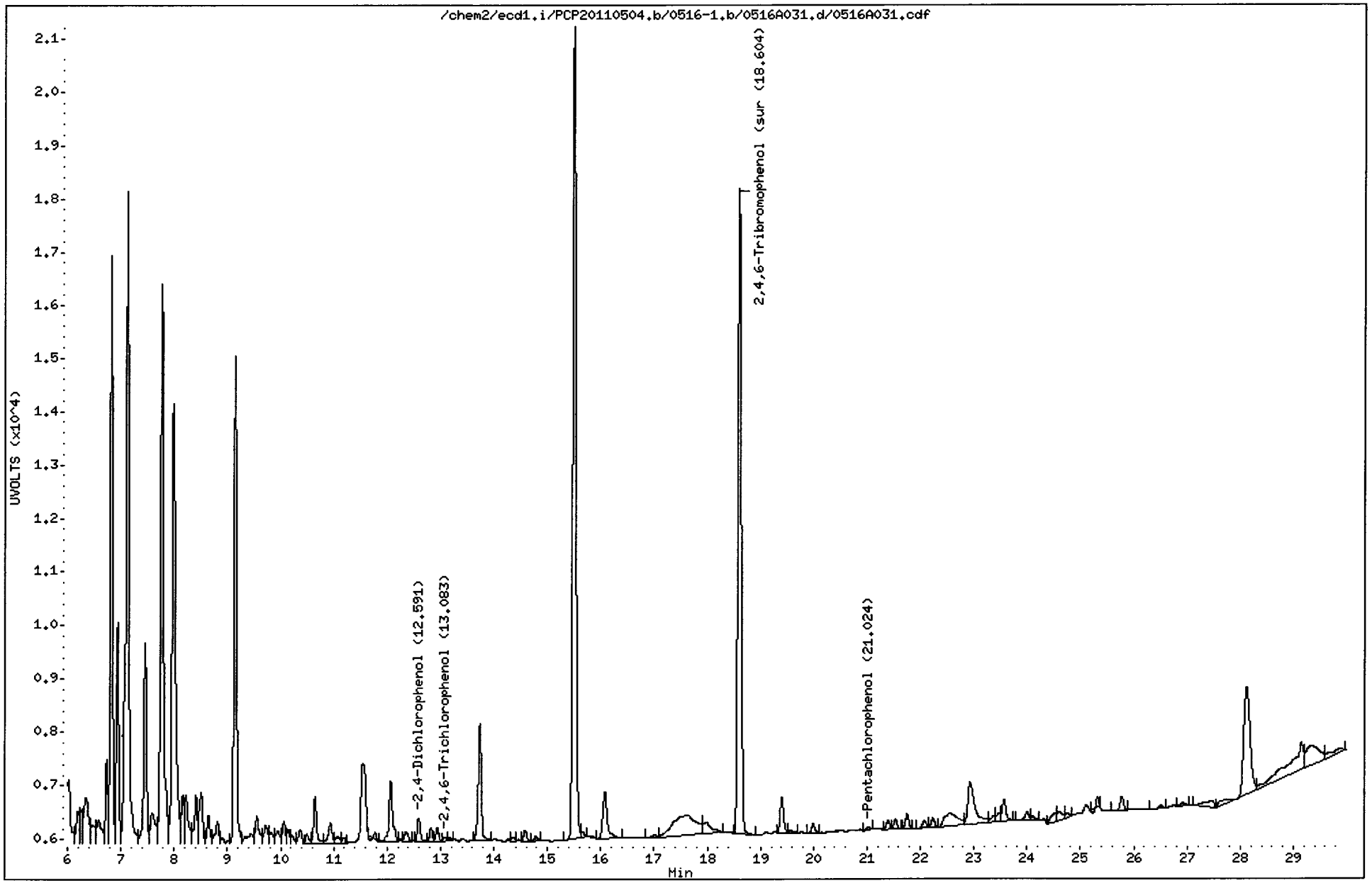
Sample Info: SU74C

Purge Volume: 500.0

Operator: ar

Column phase: STX CLP1

Column diameter: 0.53



SU5300915

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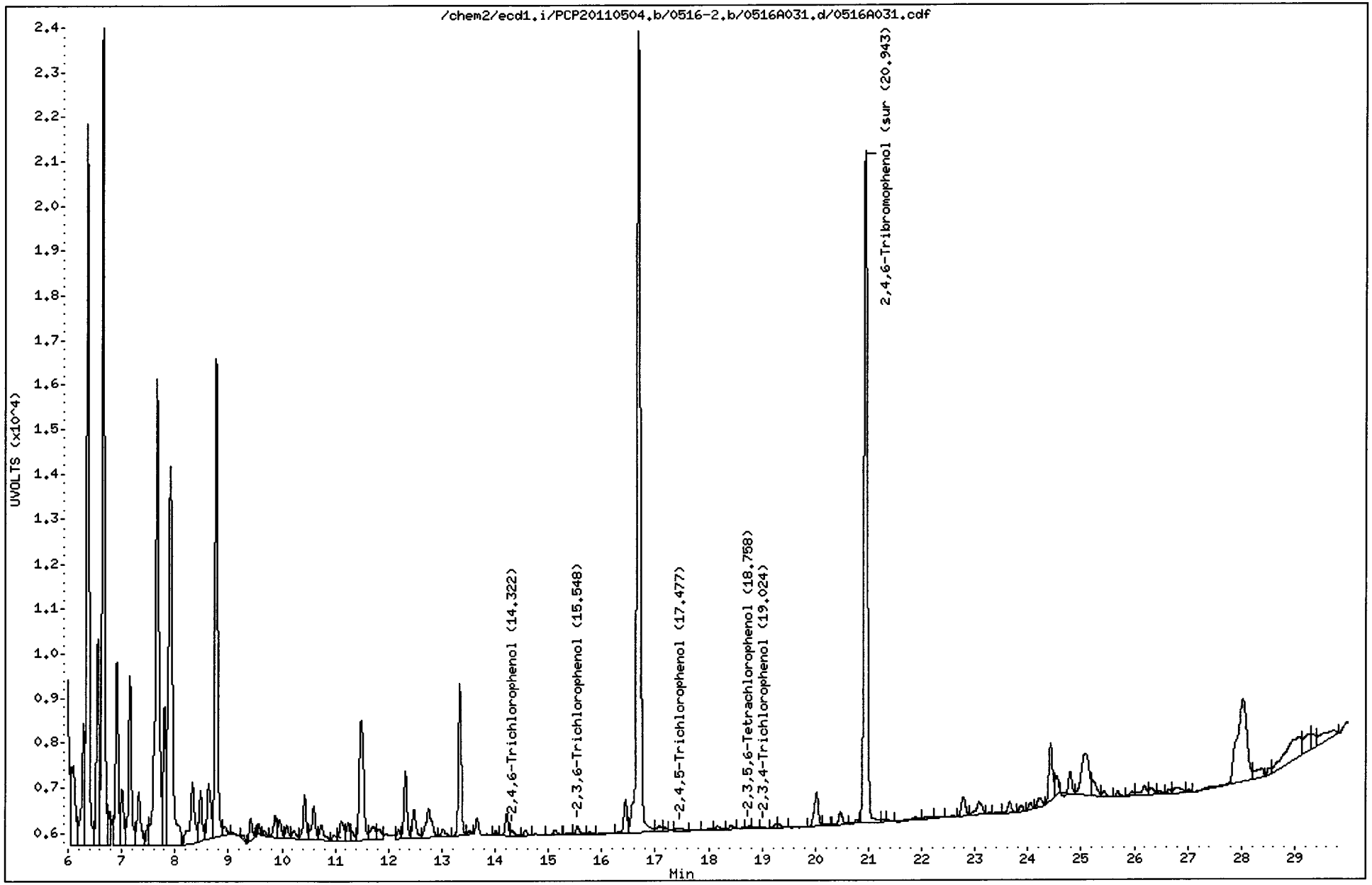
Date : 17-MAY-2011 06:07
Client ID: B311-042911
Sample Info: SU74C
Purge Volume: 500.0
Column phase: STX CLP2

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



91600:ESDS

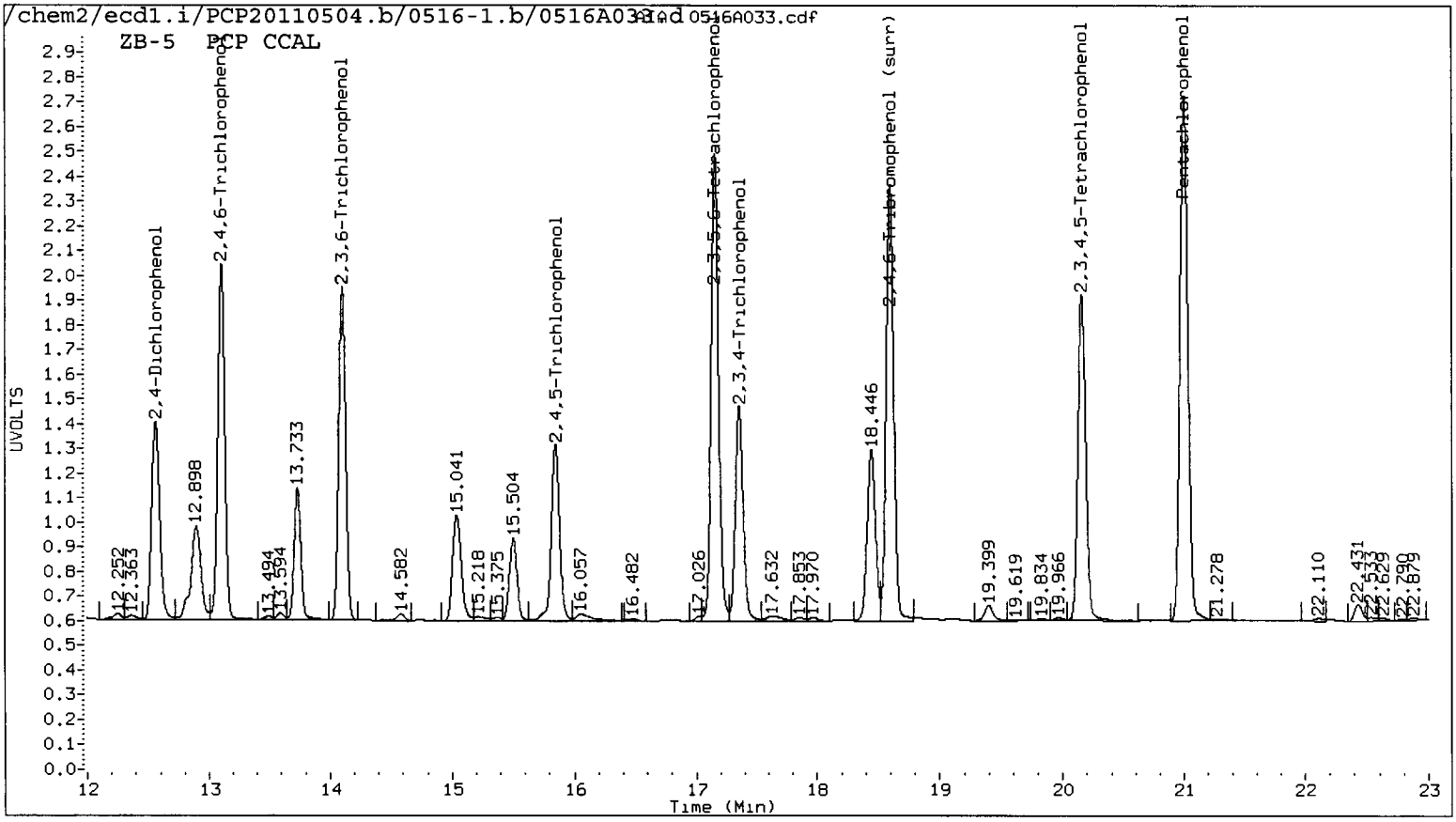
Analytical Resources Inc.
Dual Column 8041 Chlorinated Phenols Quantitation Report

Data file 1: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A033.d ARI ID: PCP CCAL
Data file 2: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A033.d Client ID:
Method: /chem2/ecd1.i/PCP20110504.b/PCP.m Injection Date: 17-MAY-2011 07:19
Compound Sublist: all Report Date: 05/18/2011 09:24
Instrument: ecd1.i Matrix: WATER
Operator: ar Dilution Factor: 1.000

ZB-5 Col			ZB35 Col			ZB-5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound
21.002	0.004	480494	22.971	0.004	654456	23.8469	23.2399	2.6	Pentachlorophenol
13.104	0.003	292366	14.315	0.004	335287	24.0180	23.1332	3.8	2,4,6-Trichlorophenol
14.100	0.003	269534	15.561	0.004	325675	23.5347	22.6582	3.8	2,3,6-Trichlorophenol
15.848	0.003	164651	17.477	0.003	197341	24.8033	24.3762	1.7	2,4,5-Trichlorophenol
17.355	0.004	197880	19.026	0.003	227423	23.6832	24.8225	4.7	2,3,4-Trichlorophenol
17.156	0.004	408133	18.818	0.004	501081	24.1403	22.8408	5.5	2,3,5,6-Tetrachlorophenol
20.159	0.004	299110	22.084	0.004	375439	23.0408	24.5190	6.2	2,3,4,5-Tetrachlorophenol
12.561	0.006	183029	13.824	0.004	170858	285.0291	242.1985	16.2	2,4-Dichlorophenol
18.599	0.004	383235	20.940	0.004	487123	24.3	23.2	4.9	2,4,6-Tribromophenol (surr)

PERCENT RECOVERY

COMPOUND	Col1	Col2
Pentachlorophenol	95.4	93.0
2,4,6-Trichlorophenol	96.1	92.5
2,3,6-Trichlorophenol	94.1	90.6
2,4,5-Trichlorophenol	99.2	97.5
2,3,4-Trichlorophenol	94.7	99.3
2,3,5,6-Tetrachlorophenol	96.6	91.4
2,3,4,5-Tetrachlorophenol	92.2	98.1
2,4-Dichlorophenol	114.0	96.9
2,4,6-TBP (surr)	97.4	92.7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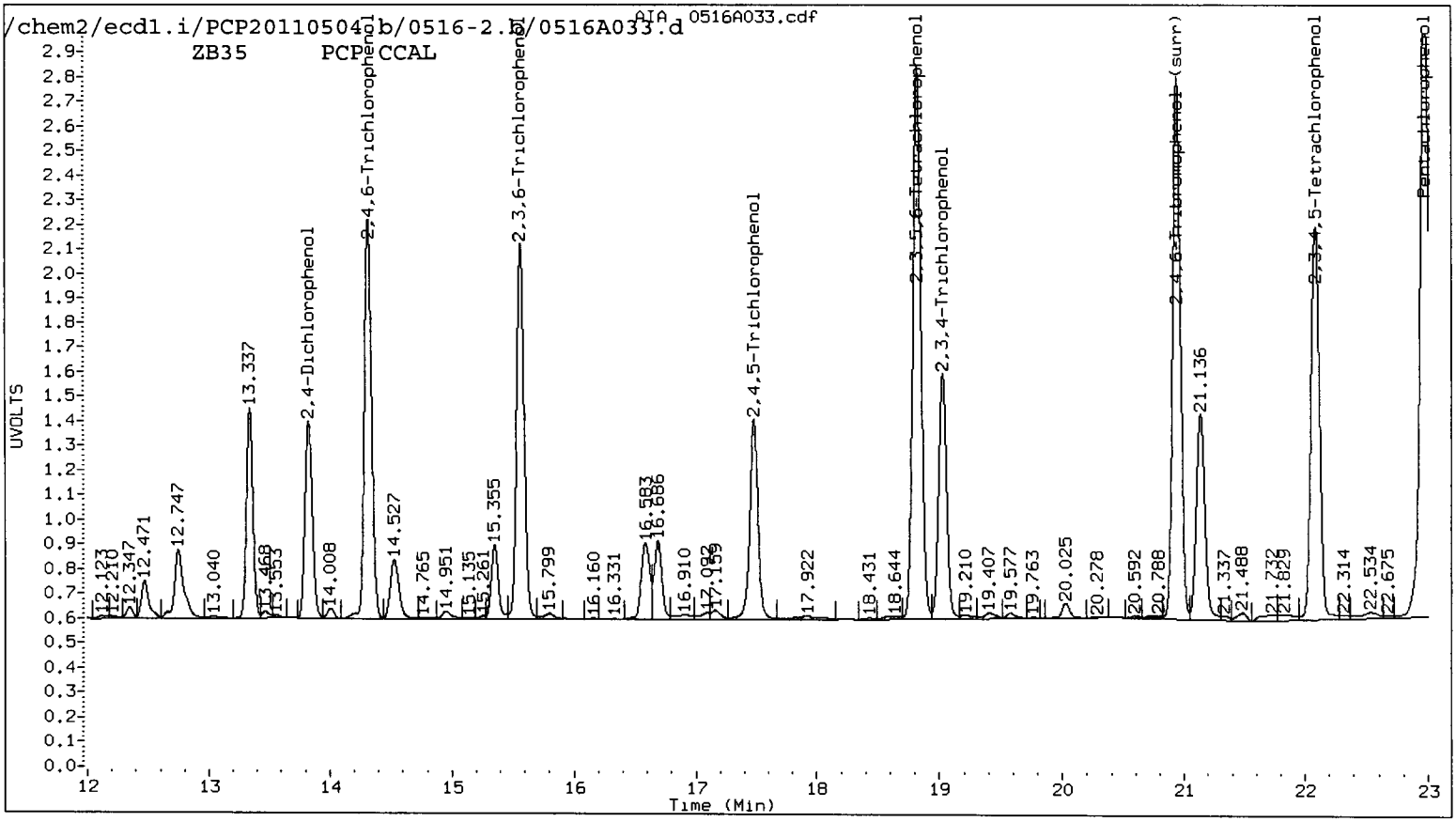
0516A033.cdf
ZB-5 PCP CCAL
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
12.898
13.733
15.041
15.504
18.446
21.278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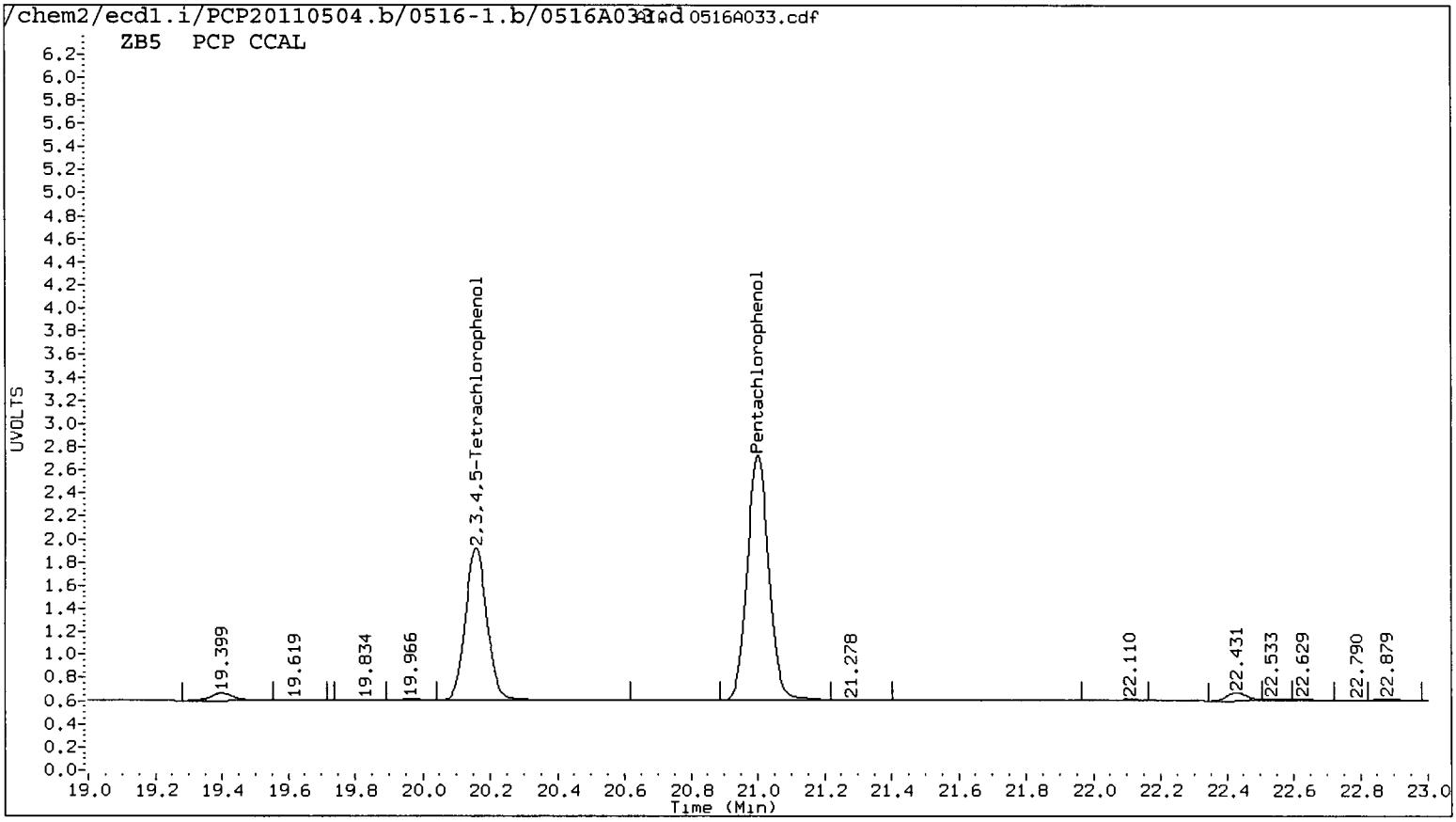
0516A033.cdf
ZB35 PCP CCAL
UVOLTS
Time (Min)
2,4-Dichlorophenol
2,4,6-Trichlorophenol
2,3,6-Trichlorophenol
2,4,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,4-Trichlorophenol
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
12.747
13.337
14.008
14.527
15.355
15.799
16.583
16.686
21.136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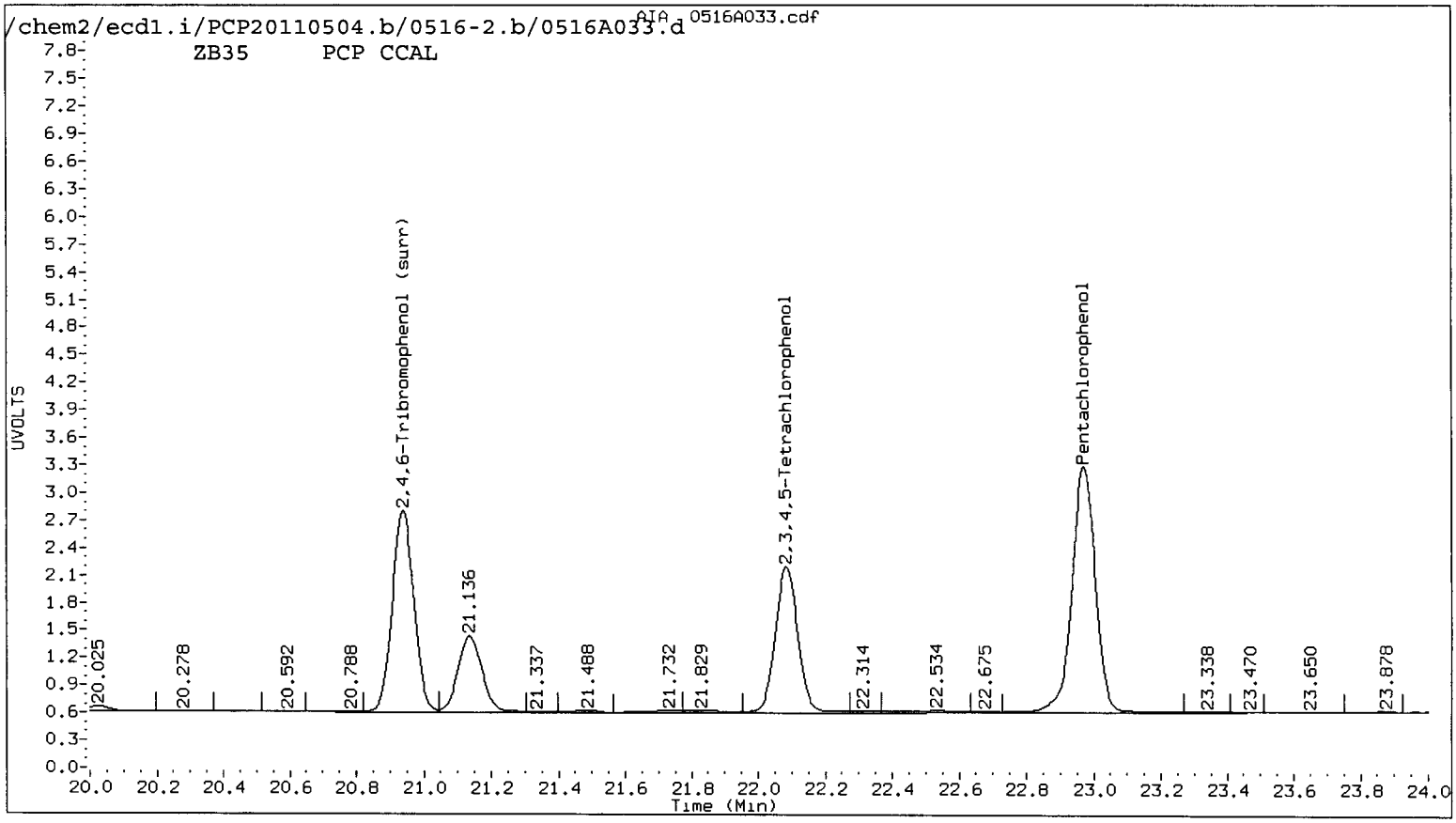
0516A033.cdf
ZB5 PCP CCAL
UVOLTS
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
19.399
19.619
19.834
19.966
21.278
22.110
22.431
22.533
22.629
22.790
22.879
Time (Min)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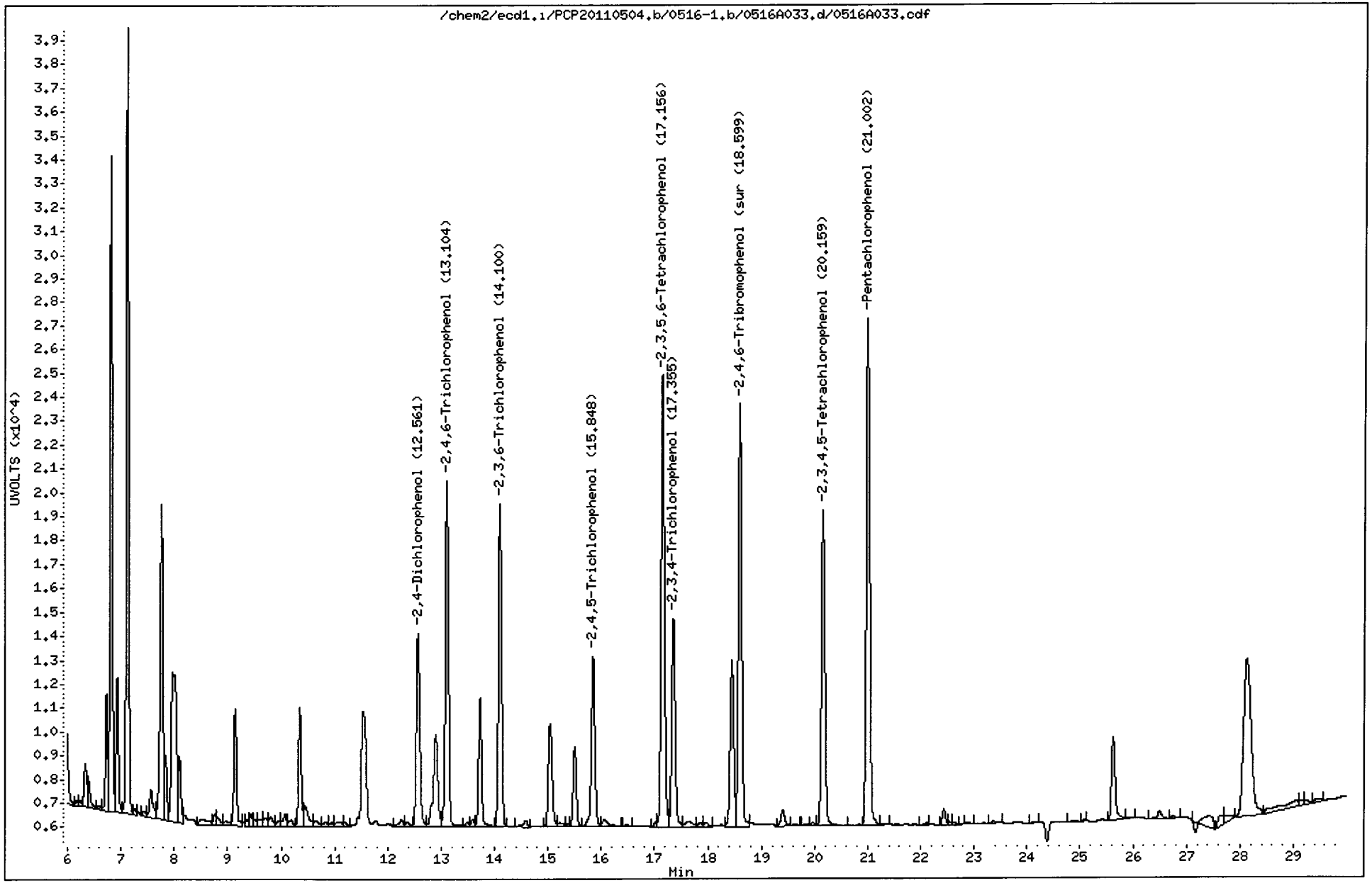
0516A033.cdf
ZB35 PCP CCAL
UVOLTS
2,4,6-Tribromophenol (surr)
2,3,4,5-Tetrachlorophenol
Pentachlorophenol
20.025
20.278
20.592
20.788
21.136
21.337
21.488
21.732
21.829
22.314
22.534
22.675
23.338
23.470
23.650
23.878
Time (Min)

Data File: /chem2/ecd1.i/PCP20110504.b/0516-1.b/0516A033.d
Date : 17-MAY-2011 07:19
Client ID:
Sample Info: PCP CCAL
Purge Volume: 500.0
Column phase: STX CLP1

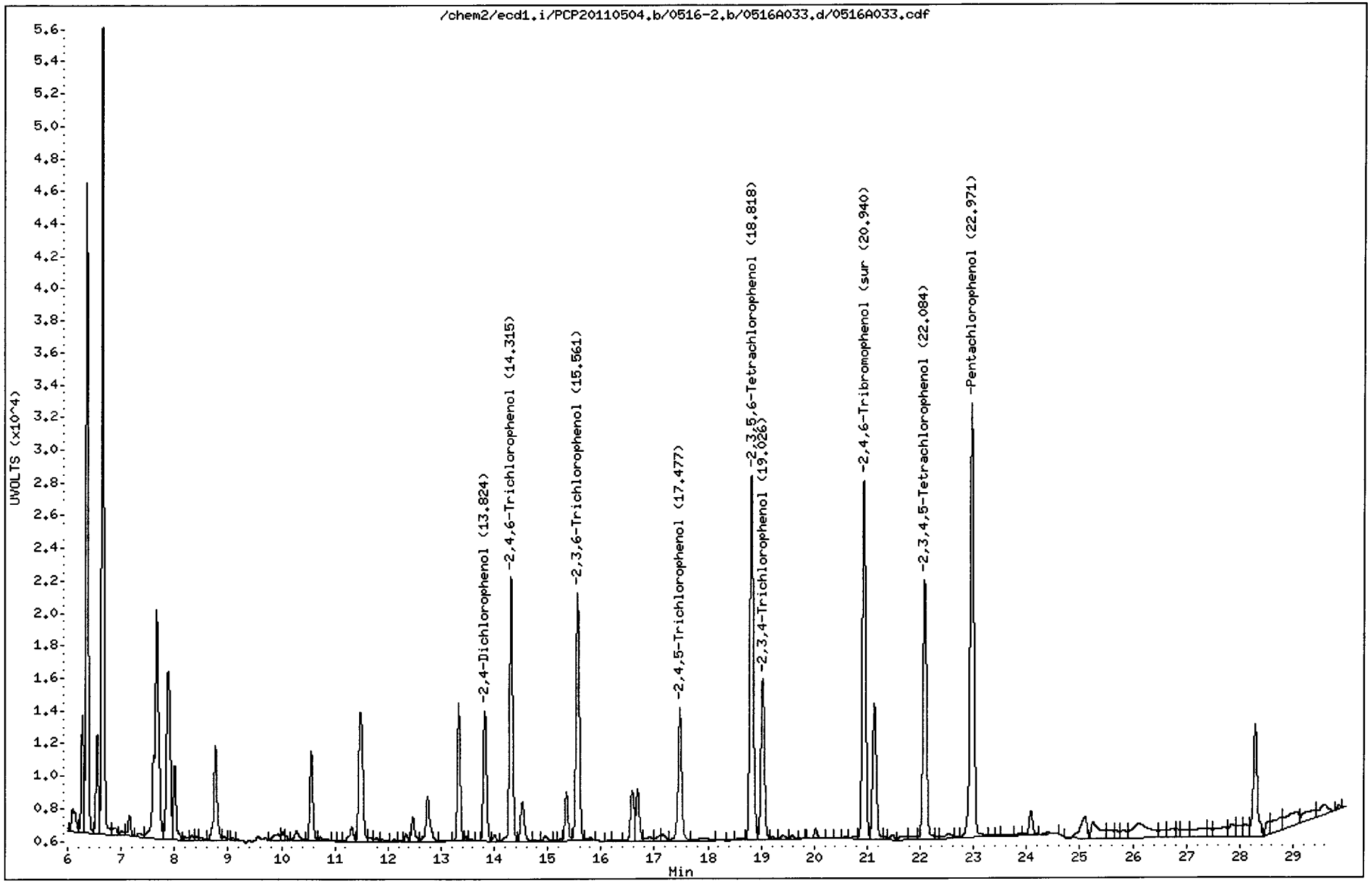
Instrument: ecd1.i
Operator: ar
Column diameter: 0.53



SUS3 : 00920

Data File: /chem2/ecd1.i/PCP20110504.b/0516-2.b/0516A033.d
Date : 17-MAY-2011 07:19
Client ID:
Sample Info: PCP CCAL
Purge Volume: 500.0
Column phase: STX CLP2

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



SUS3 : 00921

TPHD Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: SU53, SU73, SU74

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(NWTPHD)/ NWHCID –Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test (TPHD)/HCID # 1
ARI Job No(s) SU53

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

Bottle #	Extraction Requirements	Verify Client ID	Volume Extracted	DryVap Or (KD)	Turbo Vap (1) 2 3	Acid/Silica Clean (1:1) (Y) N	Final Effective Volume	Volume to Lab	Comments
	SU53 MBW	Date 5-4-11	500mL	↓	↓	1mL	1mL	1mL	
	↓ SBW	↓	↓	↓	↓	↓	↓	↓	
	~~SBW Dup.~~		↓			↓	↓	↓	
	SU53 QLS	5-4-11	↓	↓	↓	↓	↓	↓	
5,6,8	A	verified	500ml	↓	↓	↓	↓	↓	
↓	AMS	↓	↓	↓	↓	↓	↓	↓	
	AMSD								
3	B								
12	C								
11	D								
11	E								
10	F	↓	↓	↓	↓	↓	↓	↓	
				YL					
Analyst/Date:		PD 5-4-11		5/4/11	ND 05/05/11	ND 05/05/11	ND 05/05/11	ND 05/05/11	

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	**O2**	**100µL**	2/24/12	NL	PD
Spike	**11**	**100µL**	11/4/11	NL	PD
QLS Spike	**18 D**	**50µL**	6/24/11	NL	PD
Extraction Time:	09:24				

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)**

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: SU53 Client ID: Floyd Snider

Parameter: TPHD w/Acid Si Client Project: Loma Lake Apts RI

Note problems, concerns, corrective actions	Analyst/Date
Screens: Soil/Sediment/Solid/Other:	
☐ No Anomalies (standard soil/sediment)	
☐ Wet sediment/sludge=	
☐ Standing Water Decanted=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay (Difficult to homogenize/Mixed with Kitchen Aid)=	
☐ Rocks/Organics=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☑ No Anomalies E, F.	PD 5-4-11
☑ Turbid/Color= A-D are light tan and not turbid.	PD 5-4-11
☐ Particulates=	
☐ Emulsions=	
☐ Other (Details)=	
☐ Other Notes/Comments=	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(NWTPHD) / NWHCID –Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test (TPHD)/HCID # 1
ARI Job No(s) 5u73, 5u74

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

Bottle #	Extraction Requirements	Verify Client ID	Volume Extracted	DryVap Or (KD)	Turbo Vap 1 (2) 3	Acid/Silica Clean (1:1) (Y) N	Final Effective Volume	Volume to Lab	Comments
	5u73 MBW	Date 5-5-11	500mL			1mL	1mL	1mL	
	SBW								
	~~SBW Dup.~~								
	5u73 QLS								
10-12	A	✓							
10-12	AMS								
10-12	AMSD								
10	B								
10	5u74 A								
10	B								
10	C								
					CJZ				
Analyst/Date:	TS 5-5-11			PR 5/6/11	5/10/11				

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	**O2**	**100µL**	2/04/12	NL	PD
Spike	**11**	**100µL**	11/01/11	NL	PD
QLS Spike	**18D**	**50µL**	6/02/11	NL	PD
Extraction Time:					

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

Revision 13
01/06/2011

SU53 : 00525

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: SU73 Client ID: Floyd Snider

Parameter: TPHD w/Acid Si Client Project: Loon Lake Apts RI

Note problems, concerns, corrective actions	Analyst/Date
Screens: Soil/Sediment/Solid/Other:	
☒ No Anomalies (standard soil/sediment)	TS 5/3/11
☐ Wet sediment/sludge=	
☐ Standing Water Decanted=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay (Difficult to homogenize/Mixed with Kitchen Aid)=	
☐ Rocks/Organics=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates=	
☐ Emulsions=	
☐ Other (Details)=	
☐ Other Notes/Comments=	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: SU74 Client ID: Floyd Snider

Parameter: TPHD w/Acid Client Project: Lora Lake Parcel

Note problems, concerns, corrective actions	Analyst/Date
Screens: Soil/Sediment/Solid/Other:	
☐ No Anomalies (standard soil/sediment)	
☐ Wet sediment/sludge=	
☐ Standing Water Decanted=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay (Difficult to homogenize/Mixed with Kitchen Aid)=	
☐ Rocks/Organics=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☒ No Anomalies	TJ 5/5/11
☐ Turbid/Color=	
☐ Particulates=	
☐ Emulsions=	
☐ Other (Details)=	
☐ Other Notes/Comments=	

TPHD Raw Data
Initial Calibration

ARI Job ID: SU53, SU73, SU74

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: Diesel CURVE Client ID: ART

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 #2, AK102, o-Terphenyl

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: 1/20/11 Analysis Start: 1/20/11

Endrin/DDT Breakdown <15%? YES / NO / NA
ICal Meets RF & %RSD Criteria? (YES) / NO
CCal Meets RF & %RSD Criteria? YES / NO
Manual Integrations for ICal? (YES) / NO
Internal Standard Meets Criteria? YES / NO / (NA)

Method Blank In Control? YES / NO (N/A)
LCS/LCSD Recovery In Control? YES / NO
Surrogate Recovery In Control? YES / NO
Manual Integrations for Samples? (YES) / NO
Special Analysis Criteria Met? YES / NO (NA)

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

Additional Details on Reverse: Yes (No)

Analyst: MD **Date:** 1/31/11

Reviewer: MD **Date:** 2-1-11

6/18/10

Version 007

m 4060F

Analytical Resources Inc.: Organics Instrument Log

FID-9 Agilent 6850 - Serial No.: US10404004

Date: 1/20/11 Analysis: NWTPHD Analyst: JM

GC Program: TPH Column No: 977444 Column Type: VTX-1

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

Calibration File: — Curve Date: 1/20/11

IS/SS | **Ical/Ccal** | **LCS/ICV**

1786-1
1771-2
1777-3
1755-2

	Inject Date/Time	Filename	DF	LabID
1	20-JAN-2011 12:42	0120A001.D	1	RINSE
2	20-JAN-2011 13:03	0120A002.D	1	RINSE
3	20-JAN-2011 13:24	0120A003.D	1	RINSE
4	20-JAN-2011 15:09	0120A004.D	1	RINSE
5	20-JAN-2011 15:30	0120A005.D	1	RT
6	20-JAN-2011 15:52	0120A006.D	1	IB
7	20-JAN-2011 16:13	0120A007.D	1	DIESEL 50
8	20-JAN-2011 16:34	0120A008.D	1	DIESEL 100
9	20-JAN-2011 16:56	0120A009.D	1	DIESEL 250
10	20-JAN-2011 17:17	0120A010.D	1	DIESEL 500
11	20-JAN-2011 17:39	0120A011.D	1	DIESEL 1000
12	20-JAN-2011 18:00	0120A012.D	1	Blank
13	20-JAN-2011 18:22	0120A013.D	1	DIESEL ICV
14	20-JAN-2011 18:43	0120A014.D	1	DIESEL 2500
15	20-JAN-2011 19:04	0120A015.D	1	MOIL 100
16	20-JAN-2011 19:26	0120A016.D	1	MOIL 250
17	20-JAN-2011 19:47	0120A017.D	1	MOIL 500
18	20-JAN-2011 20:08	0120A018.D	1	MOIL 1000
19	20-JAN-2011 20:30	0120A019.D	1	MOIL 2500
20	20-JAN-2011 20:51	0120A020.D	1	MOIL 5000
21	20-JAN-2011 21:12	0120A021.D	1	MOIL ICV
22	20-JAN-2011 21:34	0120A022.D	1	DIESEL#1
23	20-JAN-2011 21:55	0120A023.D	1	MOIL#1
24	20-JAN-2011 22:16	0120A024.D	1	SE57MBW1
25	20-JAN-2011 22:38	0120A025.D	1	SE57LCSW1
26	20-JAN-2011 22:59	0120A026.D	1	SE57LCSDW1
27	20-JAN-2011 23:21	0120A027.D	1	SE57QLS
28	20-JAN-2011 23:42	0120A028.D	1	SE57A
29	21-JAN-2011 00:03	0120A029.D	1	SF16MBS1
30	21-JAN-2011 00:25	0120A030.D	1	SF16LCSS1
31	21-JAN-2011 00:46	0120A031.D	1	SF16LCSDS1
32	21-JAN-2011 01:08	0120A032.D	1	SF16QLS
33	21-JAN-2011 01:29	0120A033.D	10	SF16A
34	21-JAN-2011 01:50	0120A034.D	5	SF16B
35	21-JAN-2011 02:12	0120A035.D	1	DIESEL#2
36	21-JAN-2011 02:33	0120A036.D	1	MOIL#2

JM 1/24/11

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.

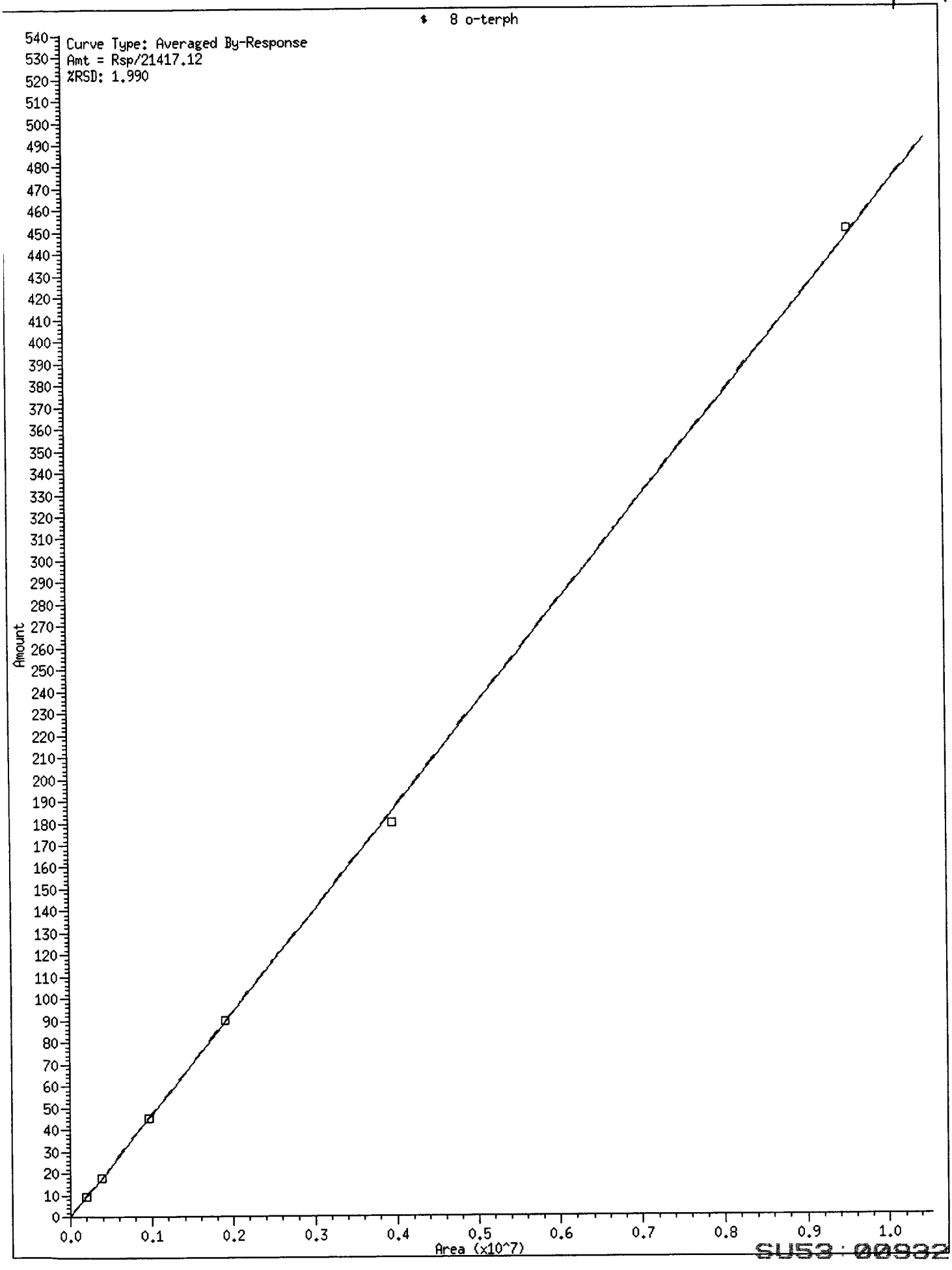
MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/fid9.i/20110120.b

ARI Job No.: DIES Method: ftphfid9a.m Instrument: fid9.i Date: 20-JAN-2011

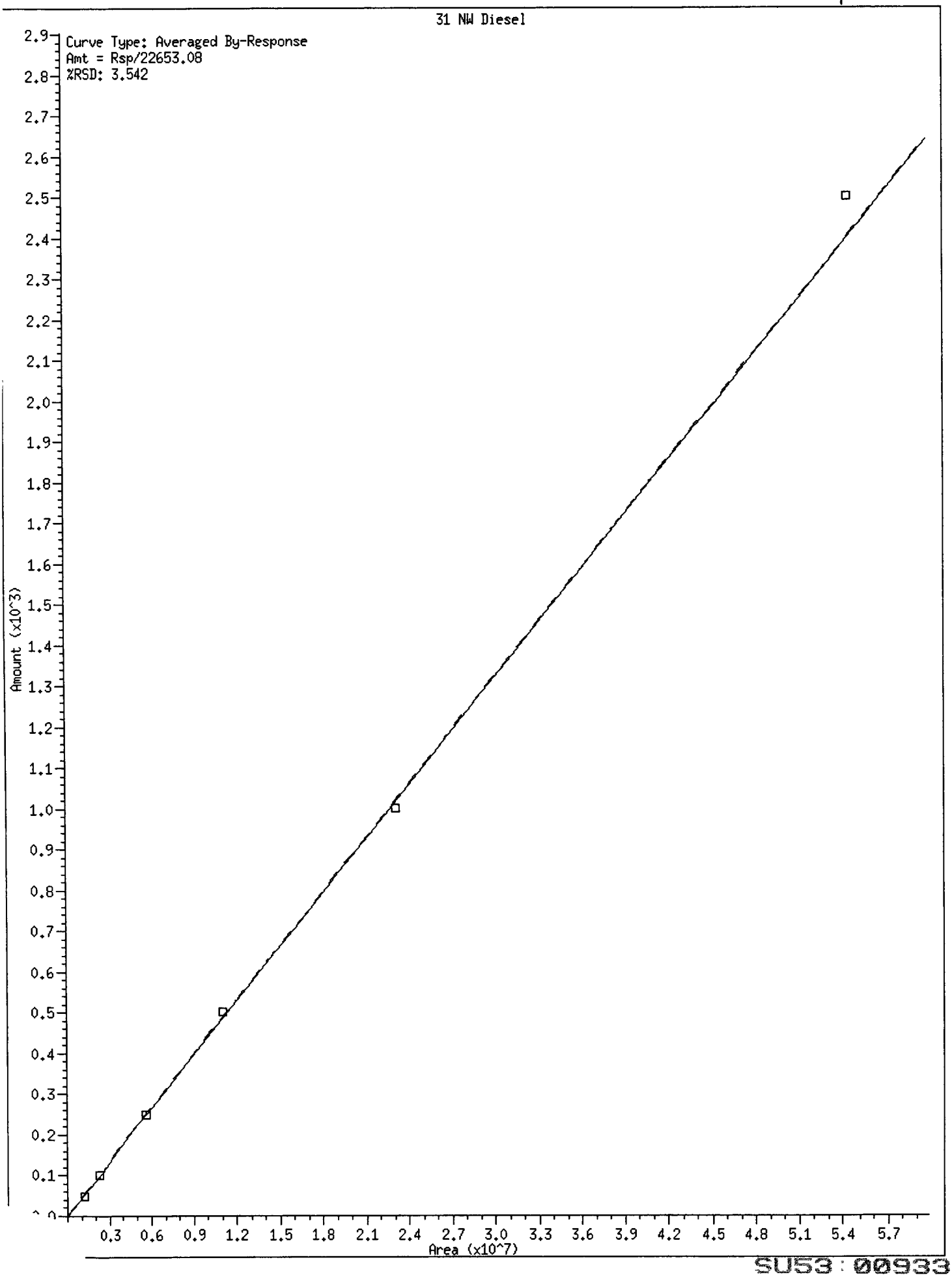
Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1613	0120A007.D	DIESEL 50	DIESEL 50	1	o-terph,
1634	0120A008.D	DIESEL 100	DIESEL 100	1	o-terph,
1656	0120A009.D	DIESEL 250	DIESEL 250	1	o-terph,
1717	0120A010.D	DIESEL 500	DIESEL 500	1	o-terph,
1739	0120A011.D	DIESEL 1000	DIESEL 100	1	o-terph,
1800	0120A012.D	Blank		1	NO MANUAL INTEGRATION
1822	0120A013.D	DIESEL ICV		1	o-terph,
1843	0120A014.D	DIESEL 2500	DIESEL 250	1	o-terph,

SU53 00931

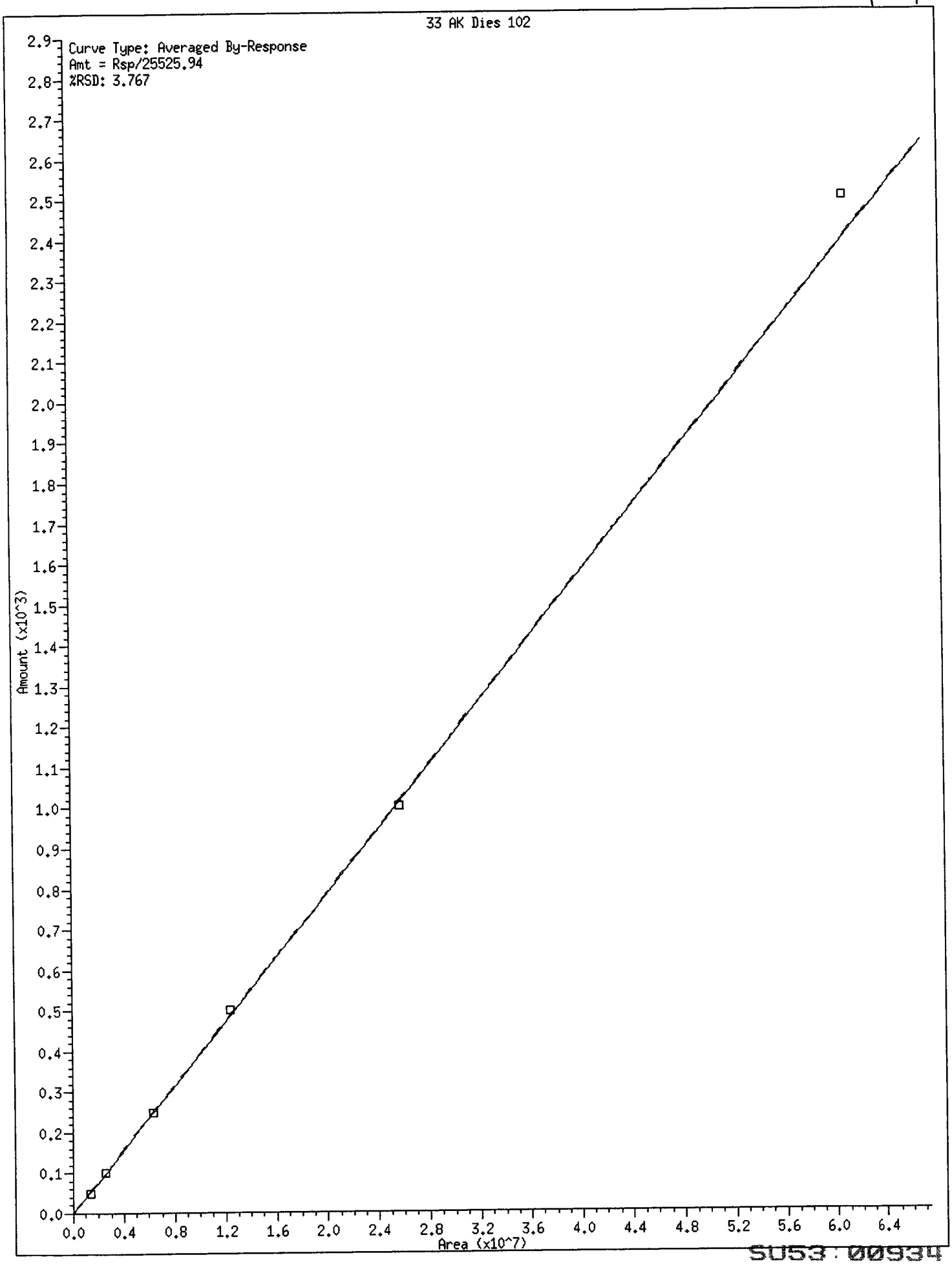
FID 9
1/20/11


8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/21417.12
%RSD: 1.990
Amount
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0

FID 9
1/20/11


31 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/22653.08
%RSD: 3.542
Amount (x10^3)
Area (x10^7)

FID 9
1/20/11


33 AK Dies 102
Curve Type: Averaged By-Response
Amt = Rsp/25525.94
%RSD: 3.767
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
2.9
0.0
0.4
0.8
1.2
1.6
2.0
2.4
2.8
3.2
3.6
4.0
4.4
4.8
5.2
5.6
6.0
6.4

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/fid9.i/20110120.b/ftphfid9a.m
Batch File: /chem2/fid9.i/20110120.b
Inst ID: fid9.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0120A015	0120A016	0120A017	0120A018	0120A019	0120A020
INJ.DATE:	20-JAN-2011	20-JAN-2011	20-JAN-2011	20-JAN-2011	20-JAN-2011	20-JAN-2011
INJ.TIME:	19:04	19:26	19:47	20:08	20:30	20:51

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	1.389	1.321	1.323	1.320	1.322	1.324	1.303	1.203-1.403	1.333	0.028
	37 JET-A	1.376	1.370	1.368	1.371	1.378	1.370	1.370	1.320-1.420	1.372	0.004
	2 C8	1.520	1.516	1.529	1.512	1.515	1.529	1.519	1.419-1.619	1.520	0.007
	3 C10	1.989	1.987	1.986	1.988	1.988	1.985	1.988	1.938-2.038	1.987	0.001
	4 C12	2.634	2.624	2.617	2.631	2.626	2.625	2.623	2.573-2.673	2.626	0.006
	5 C14	3.146	3.163	3.148	3.147	3.165	3.162	3.156	3.106-3.206	3.155	0.009
	6 C16	3.622	3.617	3.626	3.633	3.631	3.629	3.627	3.577-3.677	3.626	0.006
	7 C18	4.057	4.054	4.052	4.052	4.051	4.051	4.049	3.999-4.099	4.053	0.002
$	8 o-terph	4.171	4.170	4.168	4.169	4.167	4.166	4.168	4.118-4.218	4.169	0.002
	9 C20	4.438	4.435	4.431	4.436	4.436	4.438	4.435	4.385-4.485	4.436	0.003
	10 C22	4.821	4.825	4.823	4.828	4.828	4.831	4.827	4.777-4.877	4.826	0.004
	11 C24	5.322	5.324	5.320	5.329	5.327	5.322	5.324	5.274-5.374	5.324	0.003
	12 C25	5.544	5.549	5.545	5.550	5.549	5.550	5.548	5.498-5.598	5.548	0.003
	13 C26	5.750	5.752	5.746	5.746	5.747	5.743	5.749	5.699-5.799	5.748	0.003
	14 C28	6.101	6.104	6.106	6.104	6.101	6.106	6.104	6.054-6.154	6.104	0.002
$	15 Triacon Surr	6.413	6.419	6.424	6.435	6.459	6.496	6.422	6.372-6.472	6.441	0.032
	16 C32	6.693	6.694	6.694	6.696	6.693	6.698	6.696	6.646-6.746	6.695	0.002

Reviewer 1 _____ Date: 1/31/11
Reviewer 2 _____ Date: 2.1.11

SUB: 00935

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/fid9.i/20110120.b/ftphfid9a.m
Batch File: /chem2/fid9.i/20110120.b
Inst ID: fid9.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	6.953	6.958	6.964	6.965	6.956	6.958	6.959	6.909-7.009	6.959	0.005
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	12.769	12.669-12.869	+++++	+++++
19 C36	7.214	7.203	7.205	7.209	7.215	7.214	7.209	7.159-7.259	7.210	0.005
20 C38	7.451	7.447	7.447	7.456	7.446	7.452	7.448	7.398-7.498	7.450	0.004
21 C40	7.731	7.722	7.725	7.719	7.723	7.722	7.723	7.673-7.773	7.724	0.004
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	+++++	+++++

SUS3:00936

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A005.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: RT
Client ID: RT
Injection: 20-JAN-2011 15:30
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.303	0.000	383937	277413	GAS (Tol-C12)	998508	48	M
C8	1.519	0.000	53885	28465	DIESEL (C12-C24)	1655661	73	
C10	1.988	0.000	657169	294726	M.OIL (C24-C38)	1825693	138	
C12	2.623	0.000	676220	289238	AK-102 (C10-C25)	2271772	89	
C14	3.156	0.000	587065	285605	AK-103 (C25-C36)	1573197	185	
C16	3.627	0.000	678327	282100				
C18	4.049	0.000	649103	277428				
C20	4.435	0.000	617954	270911				
C22	4.827	0.000	422551	260123				
C24	5.324	0.000	385629	251401				
C25	5.548	0.000	508484	337875				
C26	5.749	0.000	386378	243690				
C28	6.104	0.000	394465	236165				
C32	6.696	0.000	375697	230951	JP-4 (Tol-C14)	1294923	79	M
C34	6.959	0.000	351484	236984	BUNKERC (C10-C38)	4092053	484	
Filter Peak	----							
C36	7.209	0.000	339607	248990				
C38	7.448	0.000	272516	232146				
C40	7.723	0.000	188027	195470				
o-terph	4.168	0.000	1676827	913732	JET-A (C10-C18)	1475173	107	
Triacon Surr	6.422	0.000	1043688	719648	JP8 (Tol-C16)	1582493	90	M

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	913732	42.7	94.8
Triacontane	719648	40.8	90.7

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

1/31/11

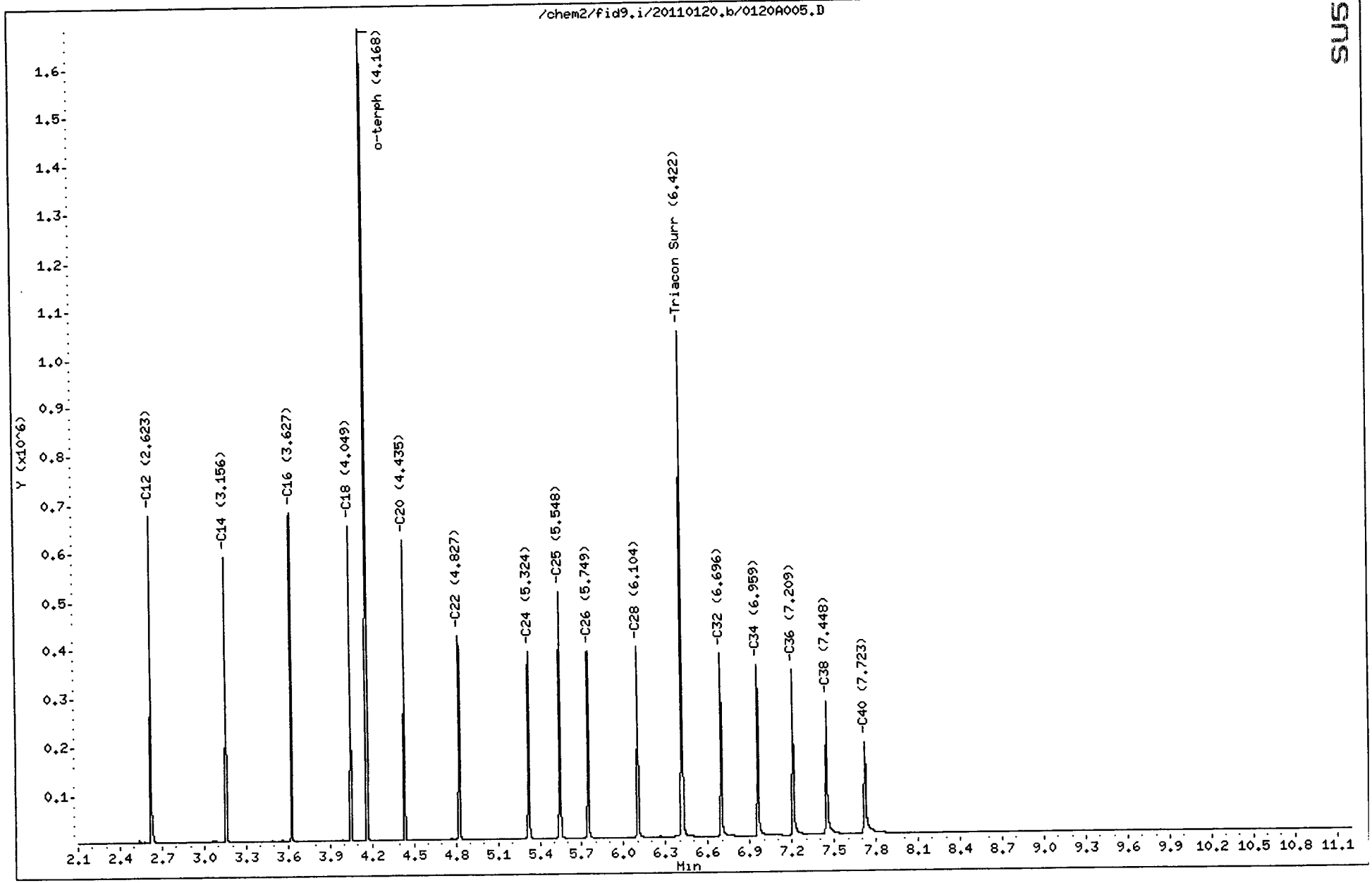
Data File: /chem2/fid9.i/20110120.b/0120A005.D
Date : 20-JAN-2011 15:30
Client ID: RT
Sample Info: RT

Column phase: RTX-1

Instrument: fid9.i

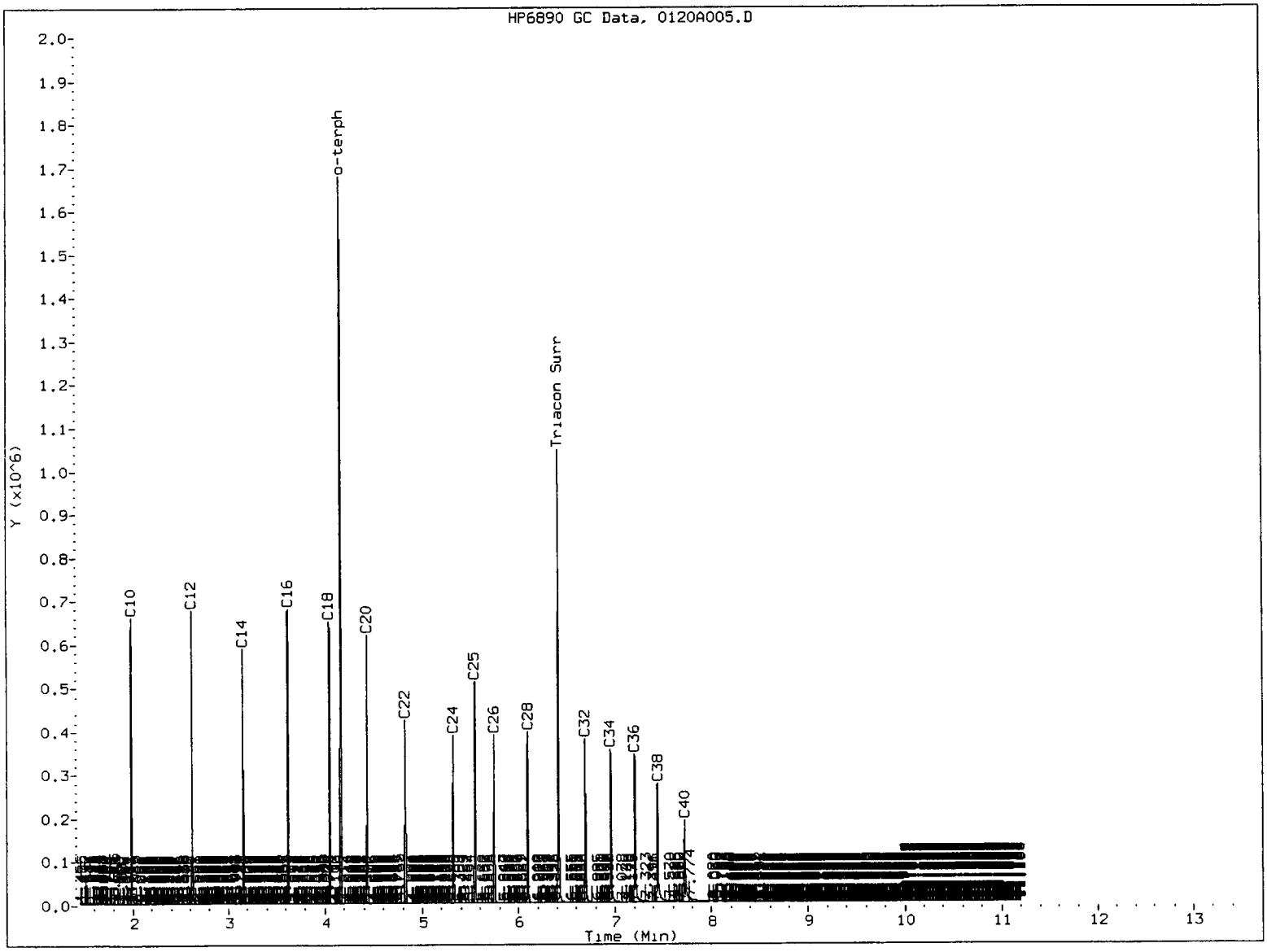
Operator: JR
Column diameter: 0.25

SUS8:00930



FID:9A-2C/RTX-1 RT

FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 1/31/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A006.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: IB
Client ID:
Injection: 20-JAN-2011 15:52
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.322	0.019	63463	64572	GAS (Tol-C12)	139212	7
C8	1.519	0.000	7460	7425	DIESEL (C12-C24)	22665	1
C10	1.987	-0.001	1338	1740	M.OIL (C24-C38)	44620	3
C12	2.612	-0.011	706	1274	AK-102 (C10-C25)	44595	2
C14	3.152	-0.005	306	190	AK-103 (C25-C36)	32471	4
C16	3.625	-0.002	165	22			
C18	4.049	0.000	184	200			
C20	4.437	0.002	136	115			
C22	4.830	0.003	67	18			
C24	5.318	-0.006	33	22			
C25	5.546	-0.002	53	25			
C26	5.745	-0.004	45	34			
C28	6.099	-0.005	256	173			
C32	6.695	-0.001	1292	2211	JP-4 (Tol-C14)	148417	9
C34	6.957	-0.002	875	1419	BUNKERC (C10-C38)	89113	11
Filter Peak	----						
C36	7.209	0.000	656	194			
C38	7.447	-0.001	938	390			
C40	7.718	-0.005	1264	377			
o-terph	4.171	0.003	1830174	1085386	JET-A (C10-C18)	40391	3
Triacon Surr	6.421	-0.001	1029861	732679	JP8 (Tol-C16)	154222	9

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1085386	50.7	112.6
Triacontane	732679	41.6	92.4

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

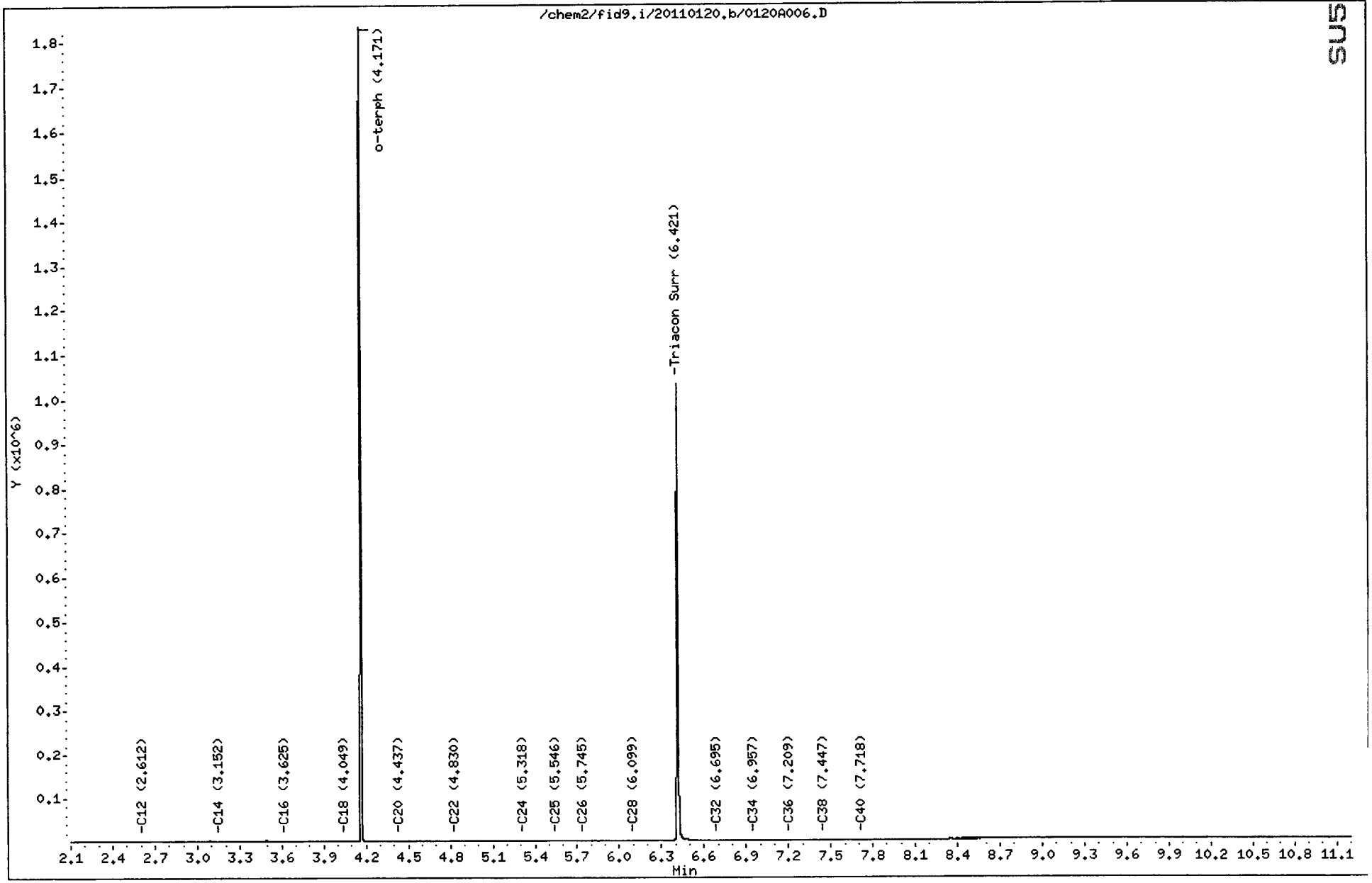
Data File: /chem2/fid9.i/20110120.b/0120A006.D
Date : 20-JAN-2011 15:52
Client ID:
Sample Info: IB

Instrument: fid9.i

Operator: JR
Column diameter: 0.25

Column phase: RTX-1

SUS3:00941



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A007.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: DIESEL 50
Client ID: DIESEL 50
Injection: 20-JAN-2011 16:13
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.325	0.022	4316	9749	GAS (Tol-C12)	260141	12
C8	1.518	-0.001	4723	3015	DIESEL (C12-C24)	1201950	53
C10	1.986	-0.002	9019	7034	M.OIL (C24-C38)	29106	2
C12	2.624	0.002	19691	12552	AK-102 (C10-C25)	1361439	53 M
C14	3.160	0.003	35985	22344	AK-103 (C25-C36)	17309	2
C16	3.627	0.000	64307	36363			
C18	4.048	-0.001	56312	40699			
C20	4.434	-0.001	30544	20004			
C22	4.826	-0.001	9899	9065			
C24	5.323	-0.001	2311	2776			
C25	5.548	0.000	882	943			
C26	5.749	0.000	291	394			
C28	6.100	-0.003	38	22			
C32	6.691	-0.005	160	58	JP-4 (Tol-C14)	484680	30
C34	6.953	-0.006	440	580	BUNKERC (C10-C38)	1387701	164 M
Filter Peak	----						
C36	7.210	0.001	507	457			
C38	7.447	-0.001	794	282			
C40	7.725	0.003	1071	320			
o-terph	4.162	-0.006	439550	196937	JET-A (C10-C18)	1030119	75
Triacon Surr	6.413	-0.008	226	272	JP8 (Tol-C16)	799073	45

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	196937	9.2	20.4
Triacontane	272	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

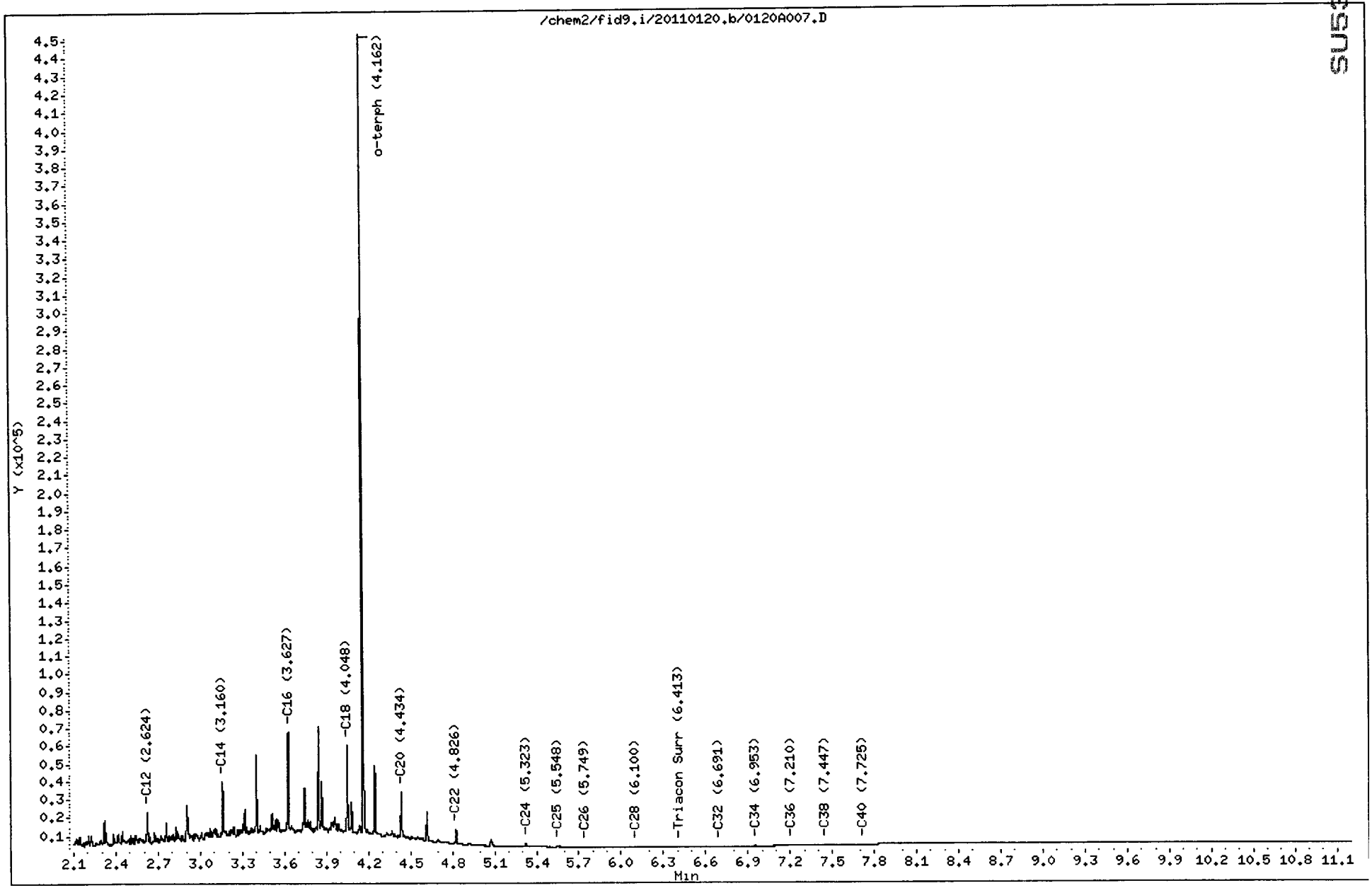
Data File: /chem2/fid9.i/20110120.b/0120A007.D
Date : 20-JAN-2011 16:13
Client ID: DIESEL 50
Sample Info: DIESEL 50

Column phase: RTX-1

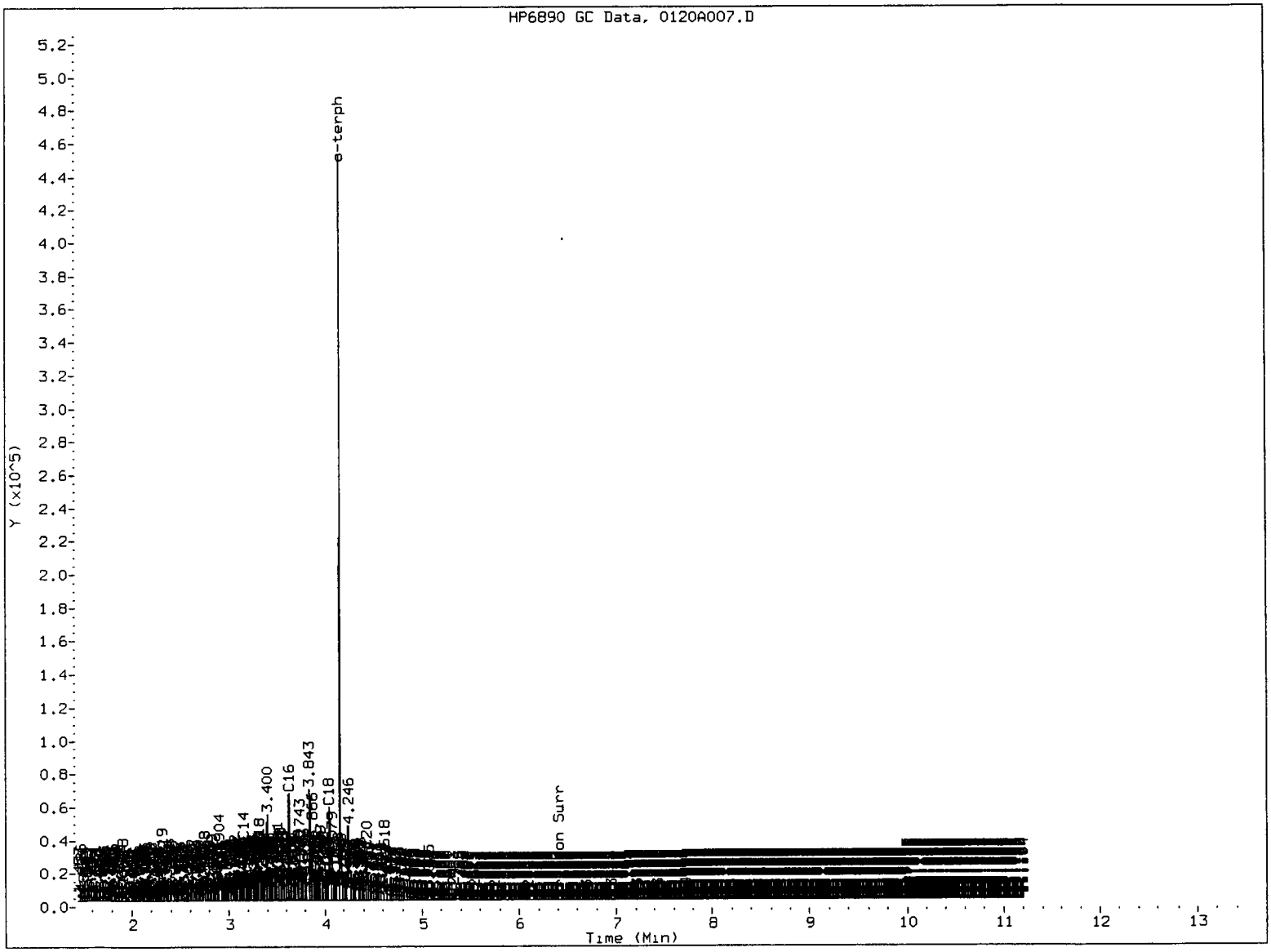
Instrument: fid9.i

Operator: JR
Column diameter: 0.25

SUS8:00913



FID:9A-2C/RTX-1 DIESEL 50 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 1/31/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A008.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: DIESEL 100
Client ID: DIESEL 100
Injection: 20-JAN-2011 16:34
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.323	0.020	4200	1169	GAS (Tol-C12)	431533	21
C8	1.519	0.000	3135	1746	DIESEL (C12-C24)	2250682	99
C10	1.986	-0.002	16882	11699	M.OIL (C24-C38)	37206	3
C12	2.624	0.001	37179	23233	AK-102 (C10-C25)	2548528	100 M
C14	3.158	0.002	67785	42725	AK-103 (C25-C36)	22817	3
C16	3.626	-0.001	123251	70743			
C18	4.047	-0.003	108435	68087			
C20	4.434	-0.002	59788	39985			
C22	4.825	-0.003	20235	17023			
C24	5.322	-0.002	4892	5420			
C25	5.546	-0.002	1976	2143			
C26	5.749	0.000	641	866			
C28	6.101	-0.003	63	36			
C32	6.697	0.001	141	107	JP-4 (Tol-C14)	830791	51
C34	6.959	0.000	643	897	BUNKERC (C10-C38)	2580649	305 M
Filter Peak	----						
C36	7.206	-0.003	455	223			
C38	7.448	-0.001	744	288			
C40	7.725	0.003	995	554			
o-terph	4.163	-0.005	800604	375926	JET-A (C10-C18)	1919949	139
Triacon Surr	6.413	-0.009	215	233	JP8 (Tol-C16)	1419731	81

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	375926	17.6	39.0
Triacontane	233	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

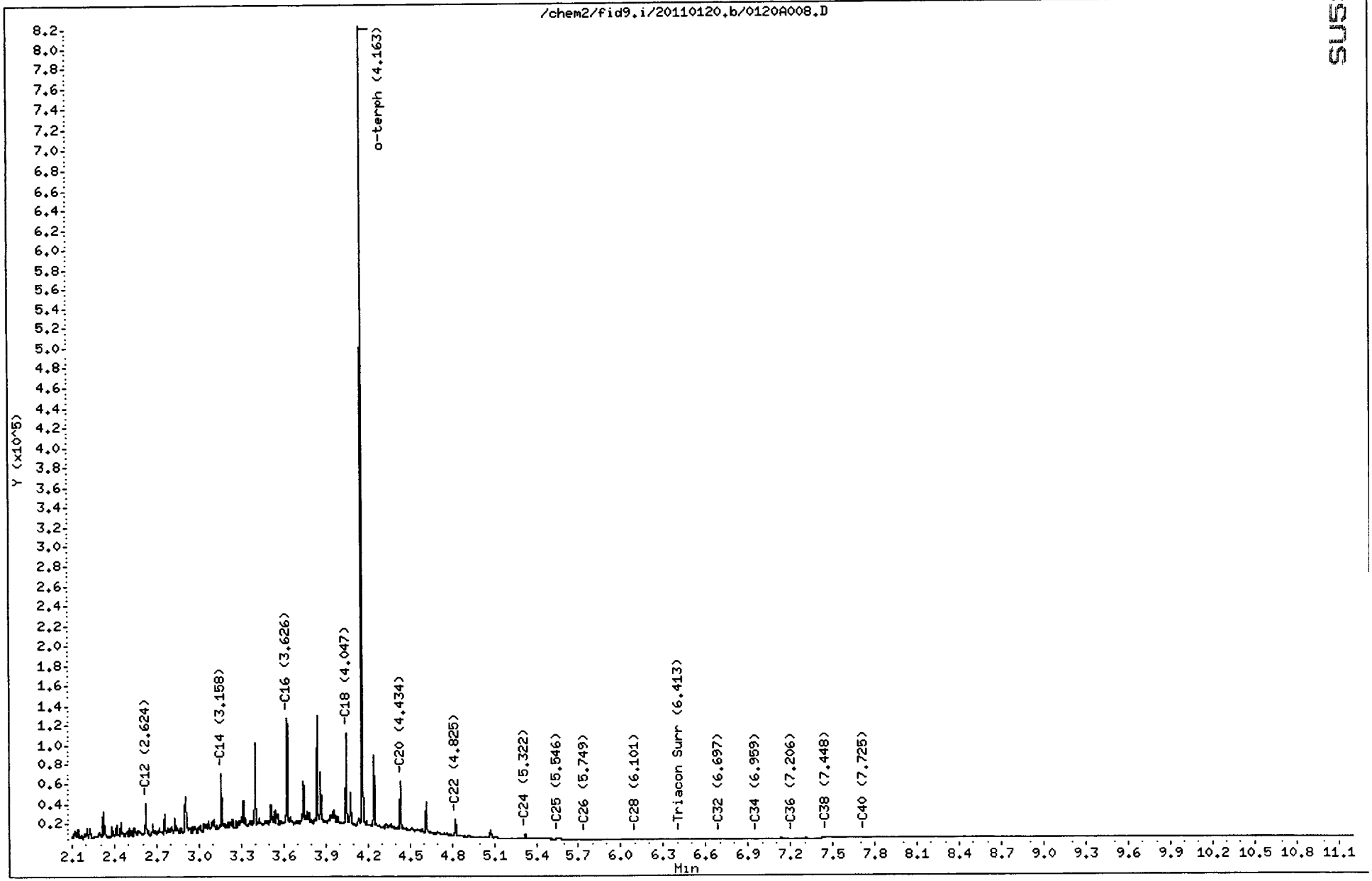
Data File: /chem2/fid9.i/20110120.b/0120A008.D
Date : 20-JAN-2011 16:34
Client ID: DIESEL 100
Sample Info: DIESEL 100

Column phase: RTX-1

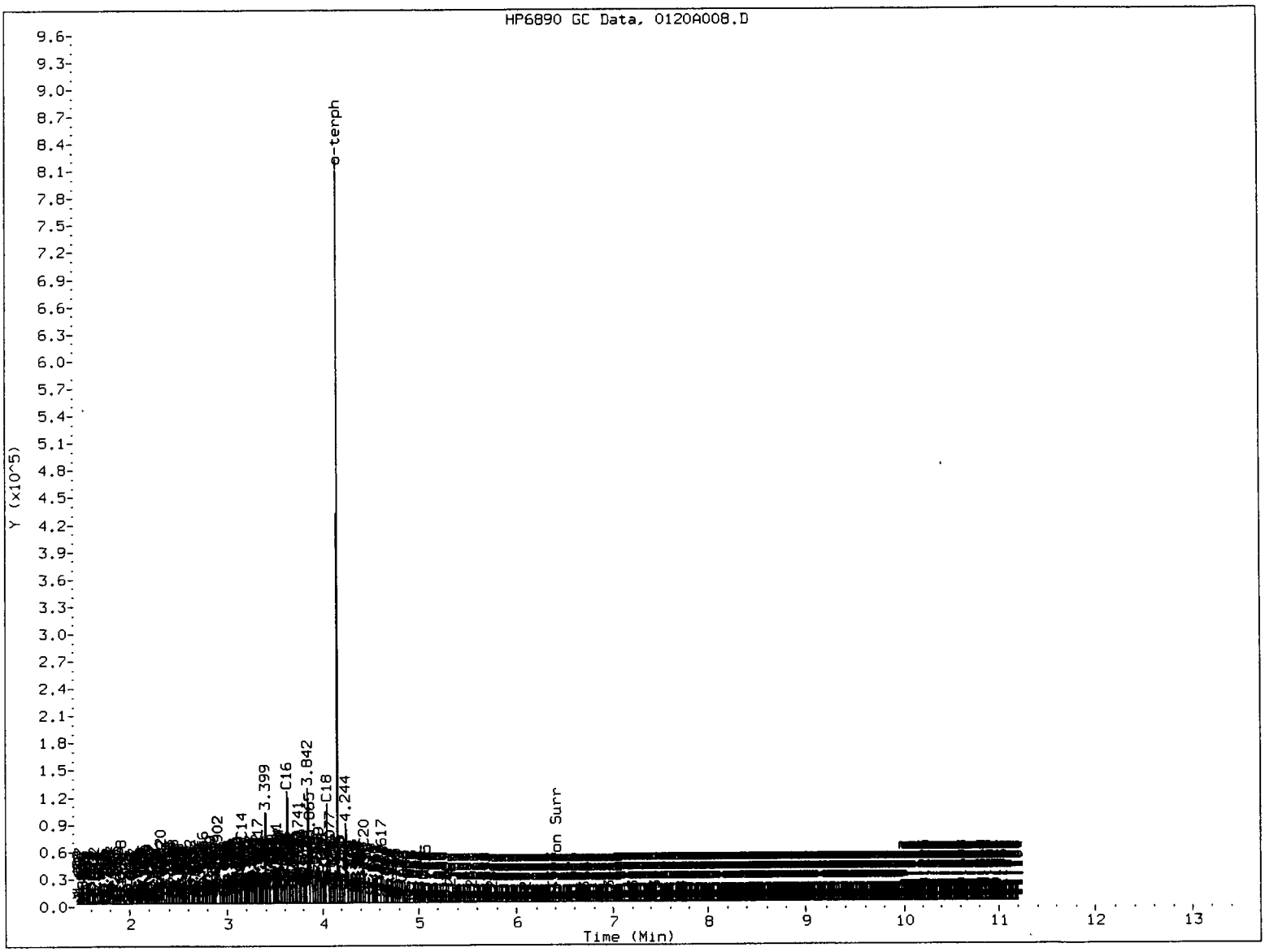
Instrument: fid9.i

Operator: JR
Column diameter: 0.25

SUS8:00946



FID:9A-2C/RTX-1 DIESEL 100 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 1/3/16

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A009.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: DIESEL 250
Client ID: DIESEL 250
Injection: 20-JAN-2011 16:56
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.324	0.021	6031	7453	GAS (Tol-C12)	963284	46
C8	1.507	-0.012	7475	8561	DIESEL (C12-C24)	5612665	248
C10	1.986	-0.002	38817	27322	M.OIL (C24-C38)	62594	5
C12	2.624	0.001	90323	57014	AK-102 (C10-C25)	6319024	248 M
C14	3.158	0.001	171050	104020	AK-103 (C25-C36)	36765	4
C16	3.628	0.001	304099	171492			
C18	4.050	0.001	266328	193663			
C20	4.436	0.000	157838	100369			
C22	4.827	0.000	53206	41402			
C24	5.324	-0.001	13583	13064			
C25	5.547	-0.001	5666	9897			
C26	5.750	0.001	2020	3391			
C28	6.103	-0.001	182	194			
C32	6.699	0.003	100	53	JP-4 (Tol-C14)	1958006	119
C34	6.959	0.000	367	620	BUNKERC (C10-C38)	6363986	752 M
Filter Peak	----						
C36	7.208	0.000	395	317			
C38	7.449	0.000	650	230			
C40	7.722	-0.001	878	488			
o-terph	4.172	0.004	1648781	956101	JET-A (C10-C18)	4720353	342
Triacon Surr	6.414	-0.008	263	238	JP8 (Tol-C16)	3414412	194

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	956101	44.6	99.2
Triacontane	238	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

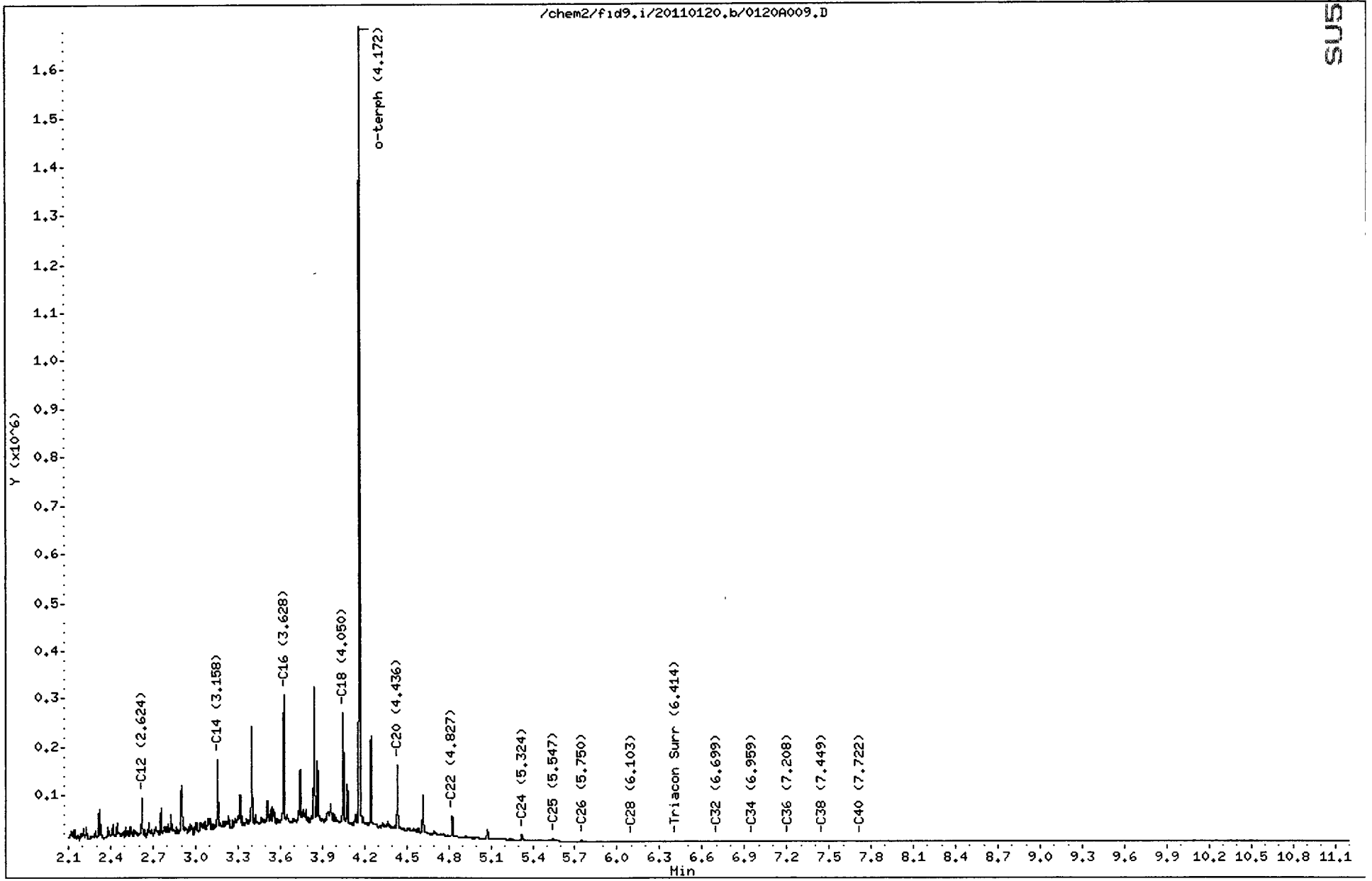
Data File: /chem2/fid9.i/20110120.b/0120A009.D
Date : 20-JAN-2011 16:56
Client ID: DIESEL 250
Sample Info: DIESEL 250

Column phase: RTX-1

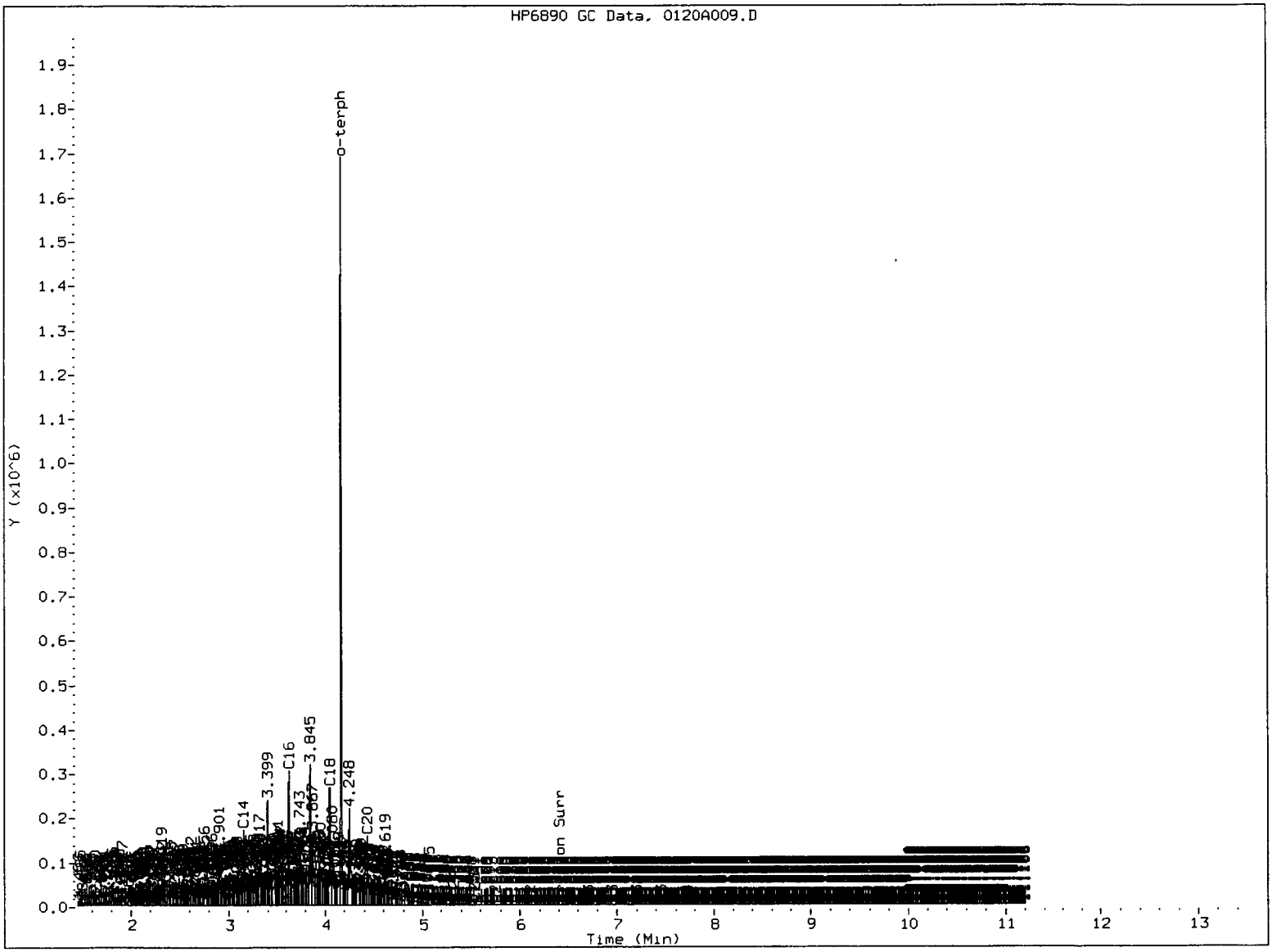
Instrument: fid9.i

Operator: JR
Column diameter: 0.25

SU53:00949



FID:9A-2C/RTX-1 DIESEL 250 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 4/21/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A010.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: DIESEL 500
Client ID: DIESEL 500
Injection: 20-JAN-2011 17:17
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.398	0.095	17869	25462	GAS (Tol-C12)	1776175	85
C8	1.514	-0.005	10549	10477	DIESEL (C12-C24)	11068698	489
C10	1.990	0.001	68837	52395	M.OIL (C24-C38)	109996	8
C12	2.625	0.002	174291	112795	AK-102 (C10-C25)	12428725	487 M
C14	3.159	0.003	325720	204440	AK-103 (C25-C36)	67014	8
C16	3.631	0.004	588845	333085			
C18	4.054	0.004	491538	360935			
C20	4.438	0.002	312537	204051			
C22	4.829	0.001	108927	91605			
C24	5.325	0.001	28104	25796			
C25	5.549	0.001	12072	11710			
C26	5.751	0.002	4559	6993			
C28	6.106	0.002	441	521			
C32	6.692	-0.005	44	18	JP-4 (Tol-C14)	3717778	227
C34	6.955	-0.004	136	31	BUNKERC (C10-C38)	12502293	1478 M
Filter Peak	----						
C36	7.213	0.004	308	87			
C38	7.449	0.001	535	104			
C40	7.727	0.004	758	345			
o-terph	4.180	0.011	2578275	1912252	JET-A (C10-C18)	9190576	665
Triacon Surr	6.419	-0.003	302	246	JP8 (Tol-C16)	6564939	373

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1912252	89.3	198.4
Triacontane	246	0.0	0.0

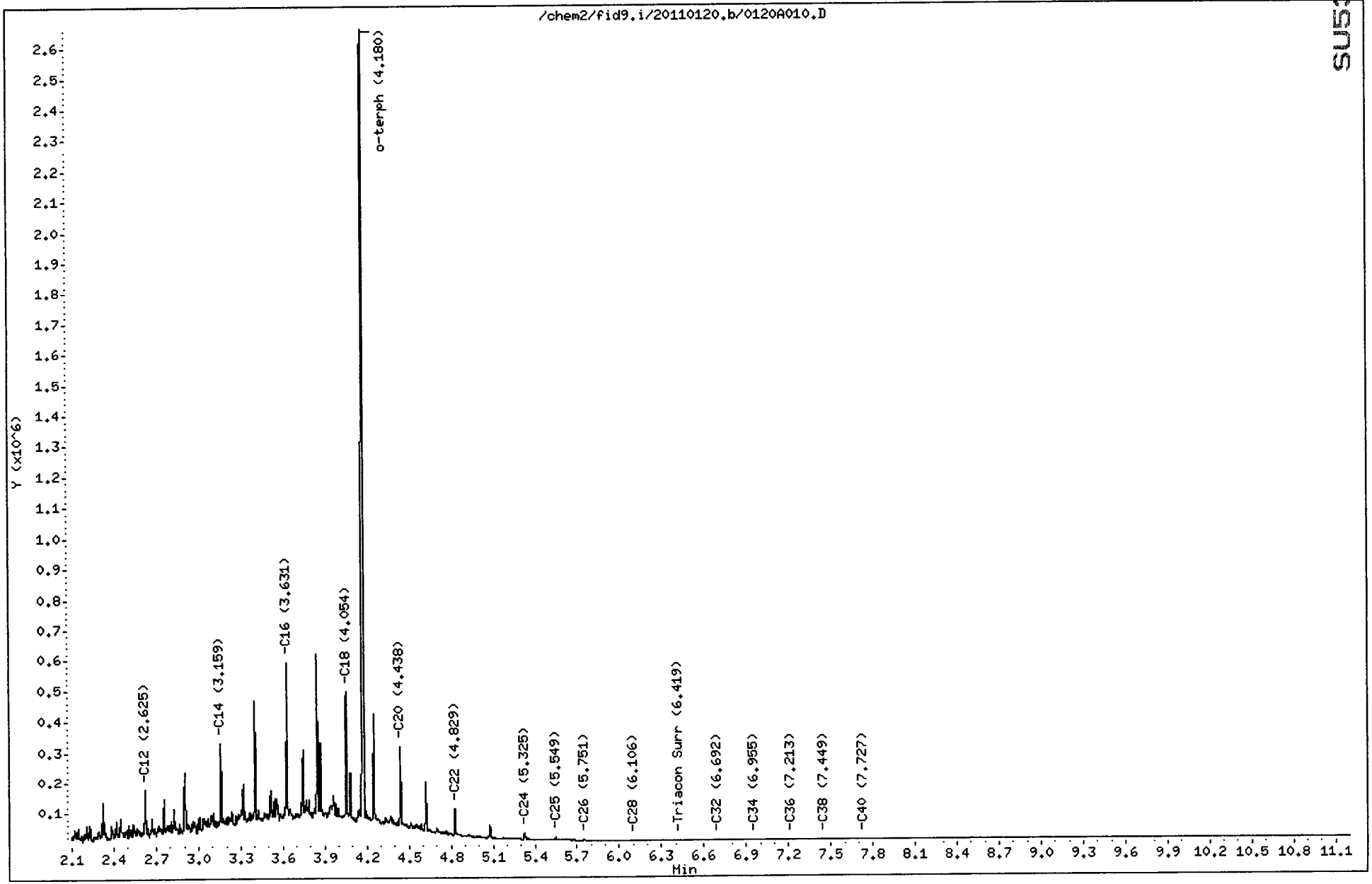
Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110120.b/0120A010.D
Date : 20-JAN-2011 17:17
Client ID: DIESEL 500
Sample Info: DIESEL 500

Column phase: RTX-1

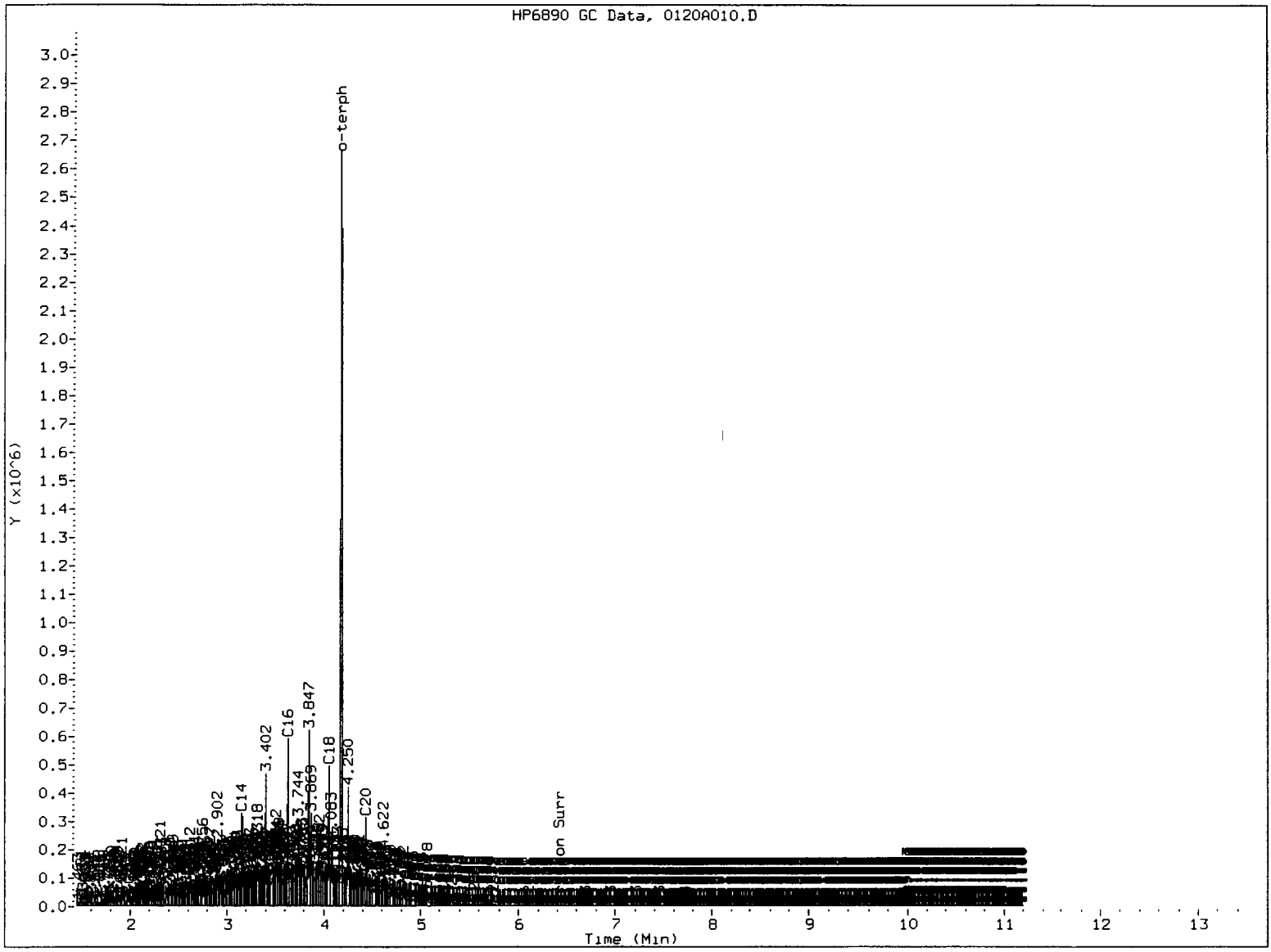
Instrument: fid9.i

Operator: JR
Column diameter: 0.25



SU53:00952

FID:9A-2C/RTX-1 DIESEL 500 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 1/31/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A011.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: DIESEL 1000
Client ID: DIESEL 1000
Injection: 20-JAN-2011 17:39
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.339	0.037	8762	8760	GAS (Tol-C12)	3594386	171
C8	1.518	-0.001	27057	15884	DIESEL (C12-C24)	23038155	1017
C10	1.990	0.002	167929	83497	M.OIL (C24-C38)	219685	17
C12	2.624	0.002	354185	174409	AK-102 (C10-C25)	25837848	1012 M
C14	3.160	0.003	609754	427306	AK-103 (C25-C36)	133603	16
C16	3.633	0.007	1068780	958419			
C18	4.058	0.009	864857	707464			
C20	4.441	0.006	605141	435620			
C22	4.832	0.005	224884	186854			
C24	5.325	0.001	58350	55840			
C25	5.547	0.000	26518	36505			
C26	5.750	0.001	10341	13202			
C28	6.105	0.002	1103	1230			
C32	6.695	-0.002	28	7	JP-4 (Tol-C14)	7593788	463
C34	6.964	0.006	325	397	BUNKERC (C10-C38)	25977309	3070 M
Filter Peak	----						
C36	7.209	0.001	234	71			
C38	7.450	0.001	456	432			
C40	7.723	0.000	644	165			
o-terph	4.189	0.020	3635682	3957673	JET-A (C10-C18)	19204582	1390
Triacon Surr	6.417	-0.005	287	303	JP8 (Tol-C16)	13546339	770

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

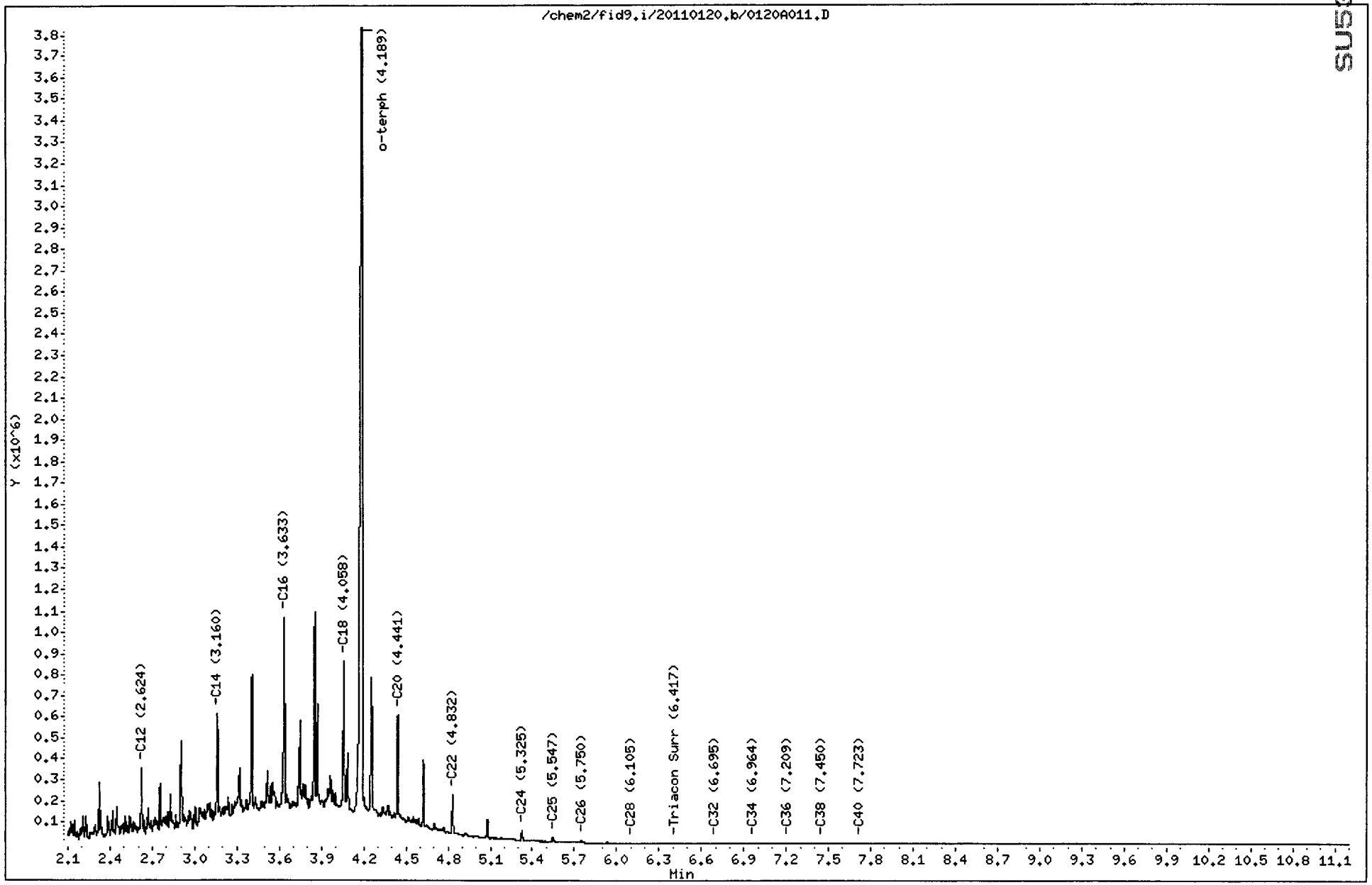
Surrogate	Area	Amount	%Rec
o-Terphenyl	3957673	184.8	410.6
Triacontane	303	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

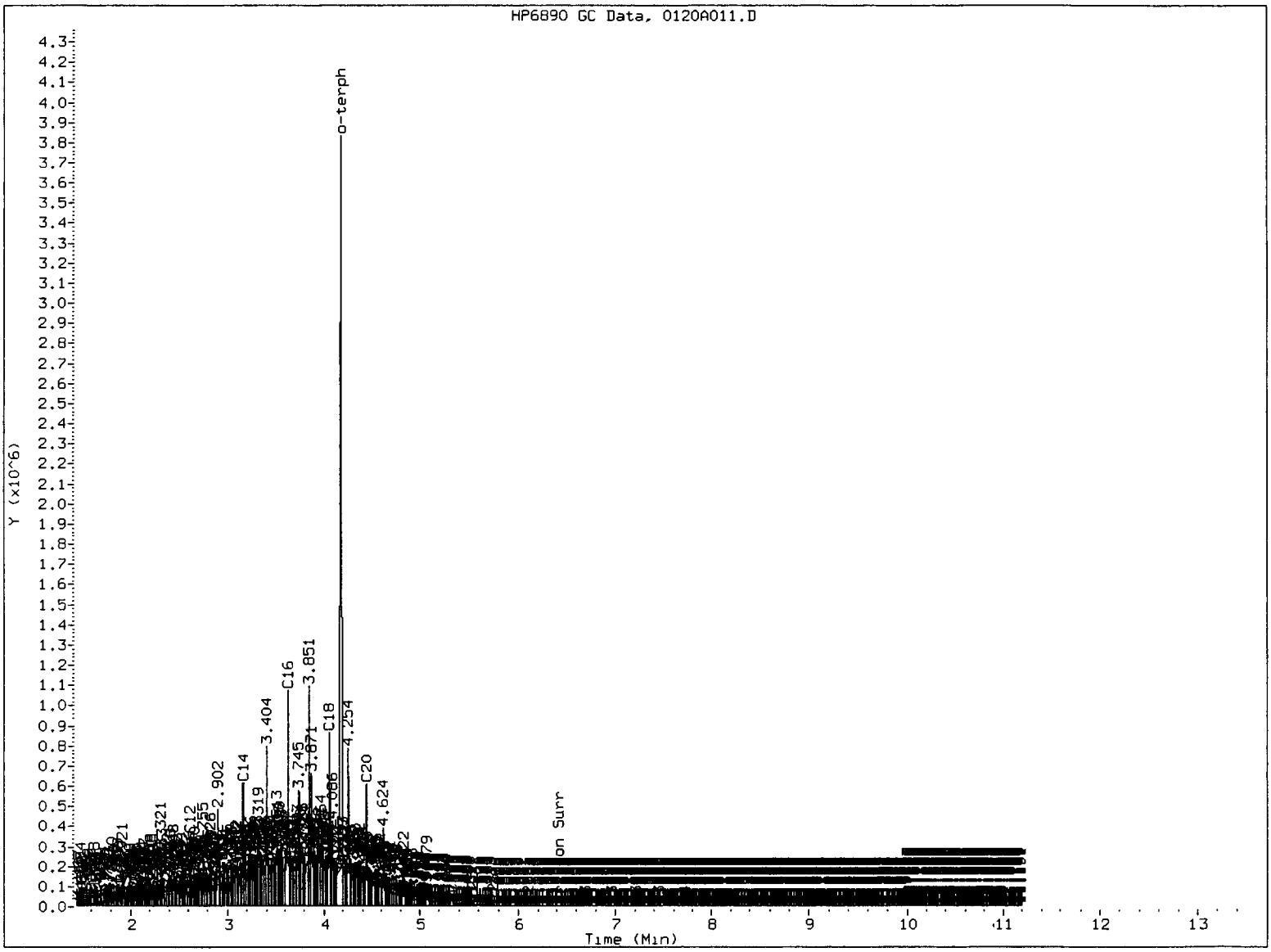
Data File: /chem2/fid9.i/20110120.b/0120A011.D
Date : 20-JAN-2011 17:39
Client ID: DIESEL 1000
Sample Info: DIESEL 1000

Instrument: fid9.i
Operator: JR
Column phase: RTX-1
Column diameter: 0.25

SUS8:69955



FID:9A-2C/RTX-1 DIESEL 1000 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 6/3/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A014.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: DIESEL 2500
Client ID: DIESEL 2500
Injection: 20-JAN-2011 18:43
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.330	0.028	48886	26518	GAS (Tol-C12)	8667864	413
C8	1.508	-0.011	190423	87408	DIESEL (C12-C24)	54366154	2400
C10	1.987	-0.001	102013	58742	M.OIL (C24-C38)	543839	41
C12	2.619	-0.004	305381	143525	AK-102 (C10-C25)	61175498	2397 M
C14	3.166	0.009	1051930	1383534	AK-103 (C25-C36)	356328	42
C16	3.629	0.003	853504	782975			
C18	4.072	0.023	1511636	2155998			
C20	4.427	-0.008	328601	332087			
C22	4.818	-0.009	106423	27542			
C24	5.327	0.003	145102	128963			
C25	5.548	0.000	65057	80959			
C26	5.749	0.000	26815	29609			
C28	6.105	0.001	3174	3628			
C32	6.702	0.006	80	45	JP-4 (Tol-C14)	18199514	1110
C34	6.953	-0.006	332	298	BUNKERC (C10-C38)	61535761	7273 M
Filter Peak	----						
C36	7.210	0.001	164	108			
C38	7.451	0.003	415	337			
C40	7.721	-0.002	462	387			
o-terph	4.211	0.043	5440645	9564784	JET-A (C10-C18)	45697491	3307
Triacon Surr	6.414	-0.008	657	826	JP8 (Tol-C16)	32362224	1839

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	9564784	446.6	992.4
Triacontane	826	0.0	0.1

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

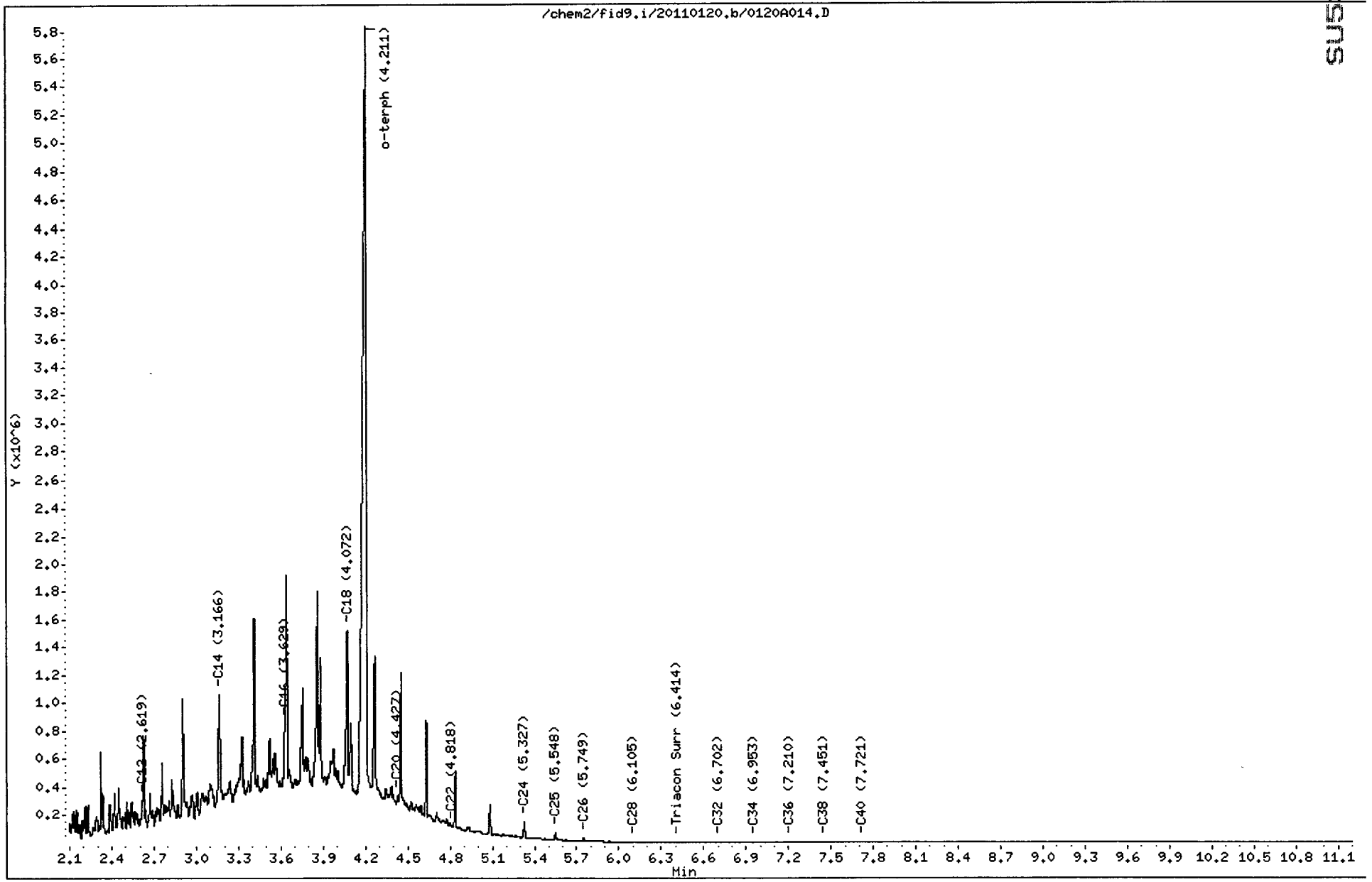
Data File: /chem2/fid9.i/20110120.b/0120A014.D
Date : 20-JAN-2011 18:43
Client ID: DIESEL 2500
Sample Info: DIESEL 2500

Column phase: RTX-1

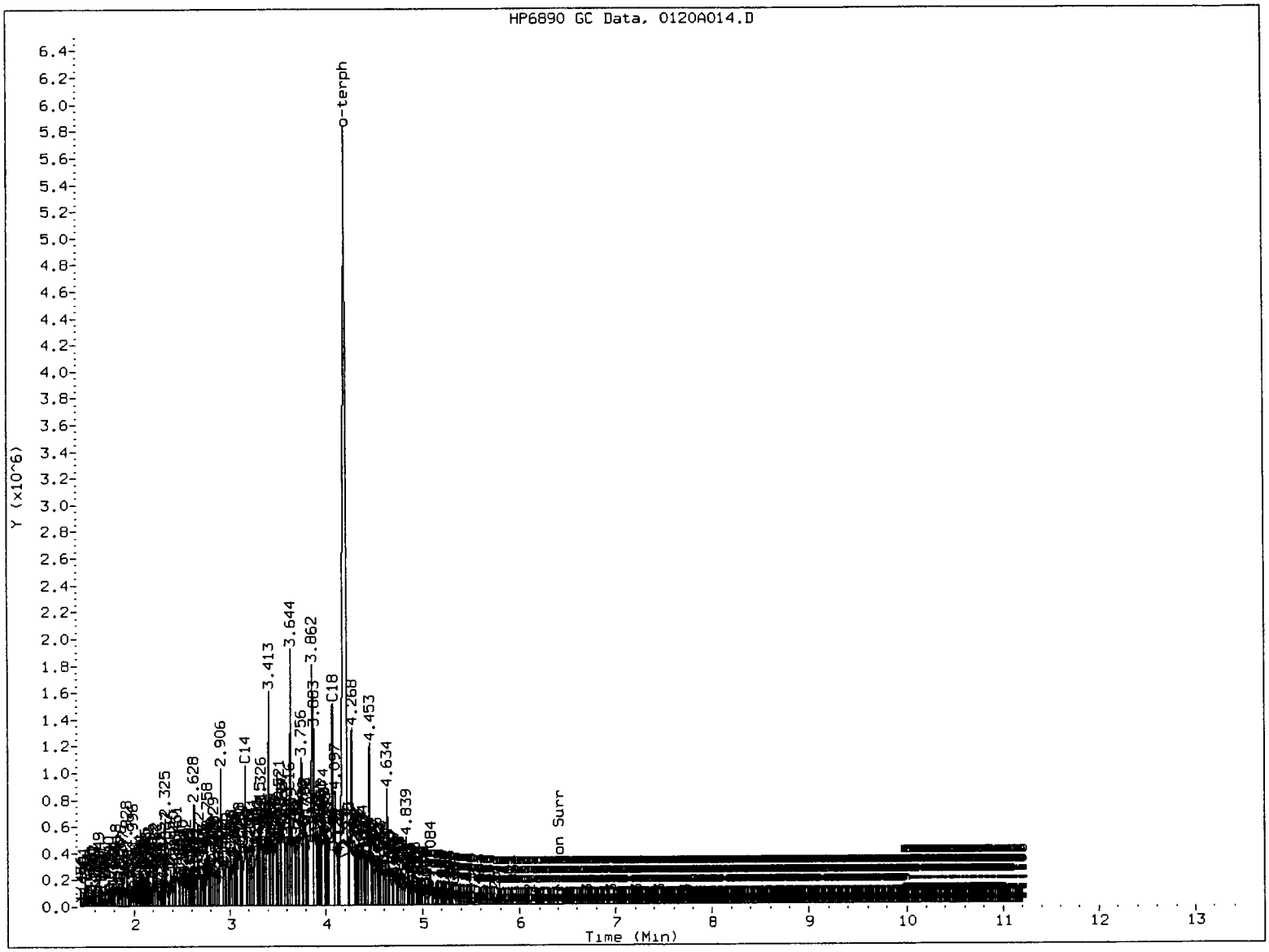
Instrument: fid9.i

Operator: JR
Column diameter: 0.25

SU53:00958



FID:9A-2C/RTX-1 DIESEL 2500 FID:9A SIGNAL



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/20110120.b/0120A013.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: DIESEL ICV
Client ID:
Injection: 20-JAN-2011 18:22
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.327	0.025	8596	8590	GAS (Tol-C12)	2594437	123
C8	1.523	0.004	6840	3036	DIESEL (C12-C24)	4085957	180
C10	1.988	0.000	72486	51468	M.OIL (C24-C38)	110276	8
C12	2.624	0.002	85424	49972	AK-102 (C10-C25)	5879609	230 M
C14	3.160	0.003	152285	89305	AK-103 (C25-C36)	80325	9
C16	3.629	0.002	166029	96649			
C18	4.050	0.001	135860	89403			
C20	4.437	0.001	78367	50620			
C22	4.829	0.002	30349	28725			
C24	5.326	0.002	12083	12408			
C25	5.548	0.001	7380	9404			
C26	5.751	0.002	4267	5788			
C28	6.106	0.003	995	1156			
C32	6.695	-0.001	53	37	JP-4 (Tol-C14)	3670118	224
C34	6.957	-0.002	297	405	BUNKERC (C10-C38)	5966862	705 M
Filter Peak	----						
C36	7.211	0.003	316	158			
C38	7.449	0.001	554	552			
C40	7.724	0.001	729	493			
o-terph	4.175	0.006	2105422	1323882	JET-A (C10-C18)	4718740	341
Triacon Surr	6.415	-0.007	636	658	JP8 (Tol-C16)	4675611	266

72%
100

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1323882	61.8	137.4
Triacontane	658	0.0	0.1

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110120.b/0120A013.D

Date : 20-JAN-2011 18:22

Client ID:

Sample Info: DIESEL ICV

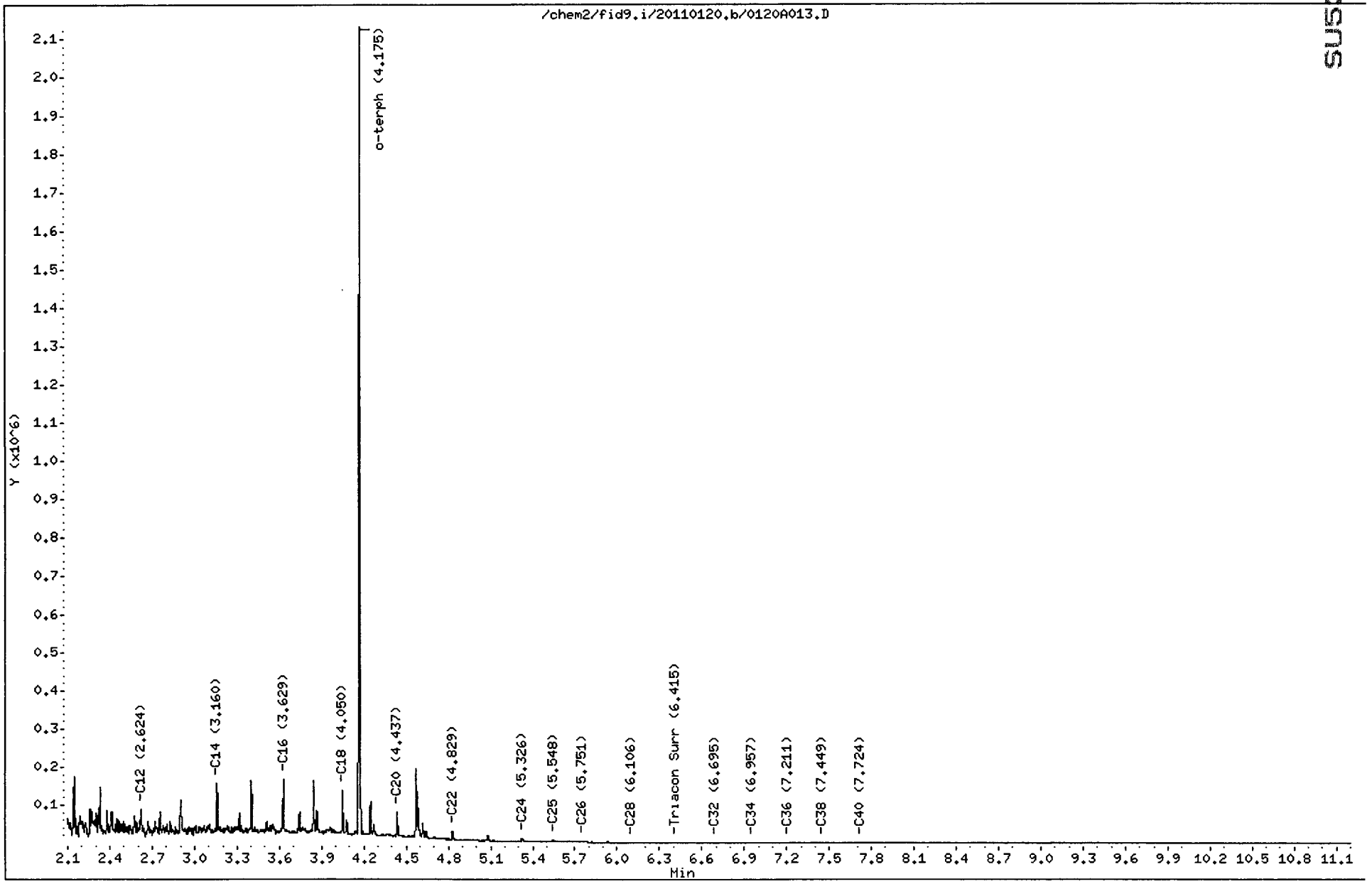
Column phase: RTX-1

Instrument: fid9.i

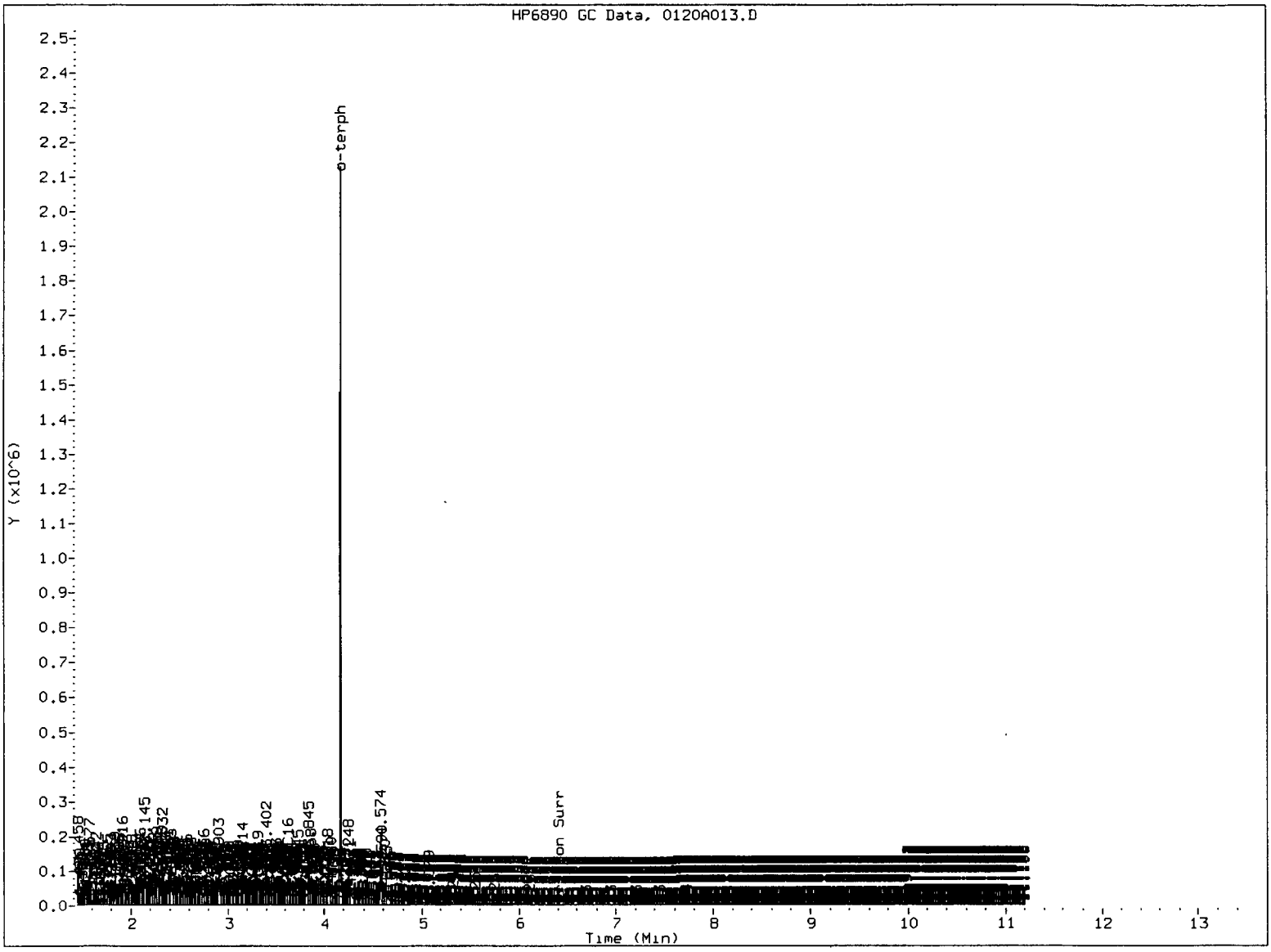
Operator: JR

Column diameter: 0.25

SUSB:00961



FID:9A-2C/RTX-1 DIESEL ICV FID:9A SIGNAL



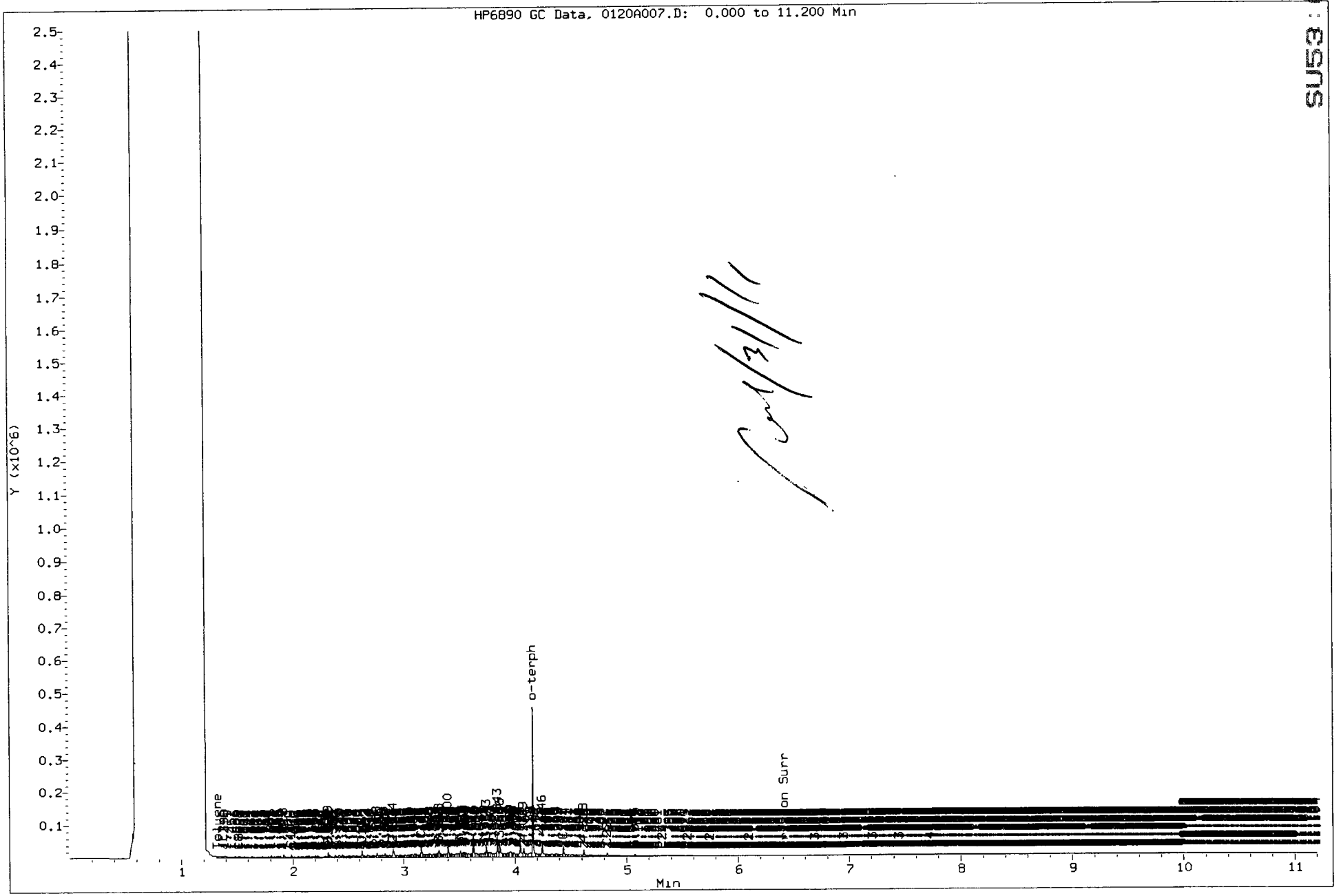
MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 4/27/11

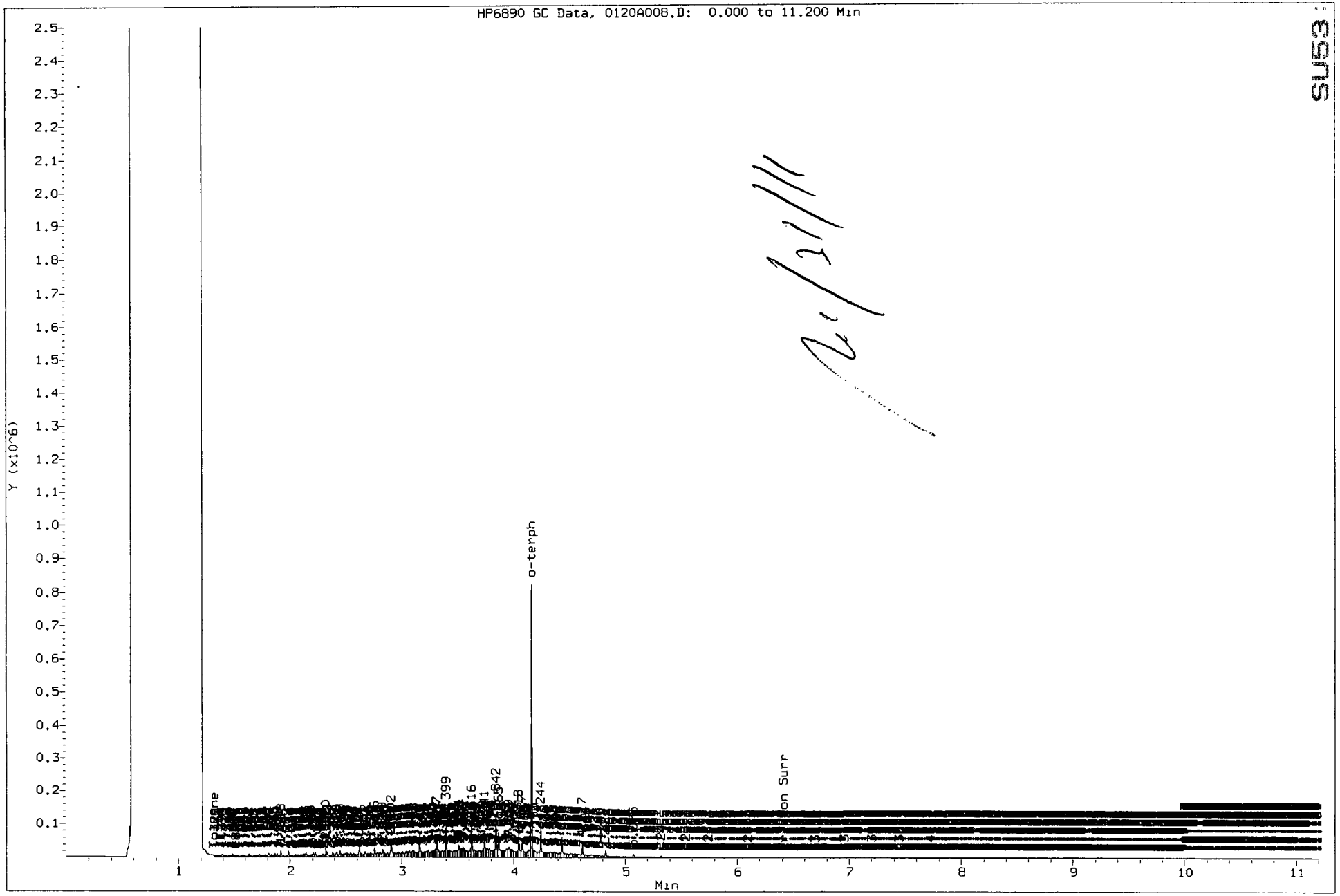
Data File: /chem2/fid9.i/20110120.b/0120A007.D
Injection Date: 20-JAN-2011 16:13
Instrument: fid9.i
Client Sample ID: DIESEL 50



SU53:000563

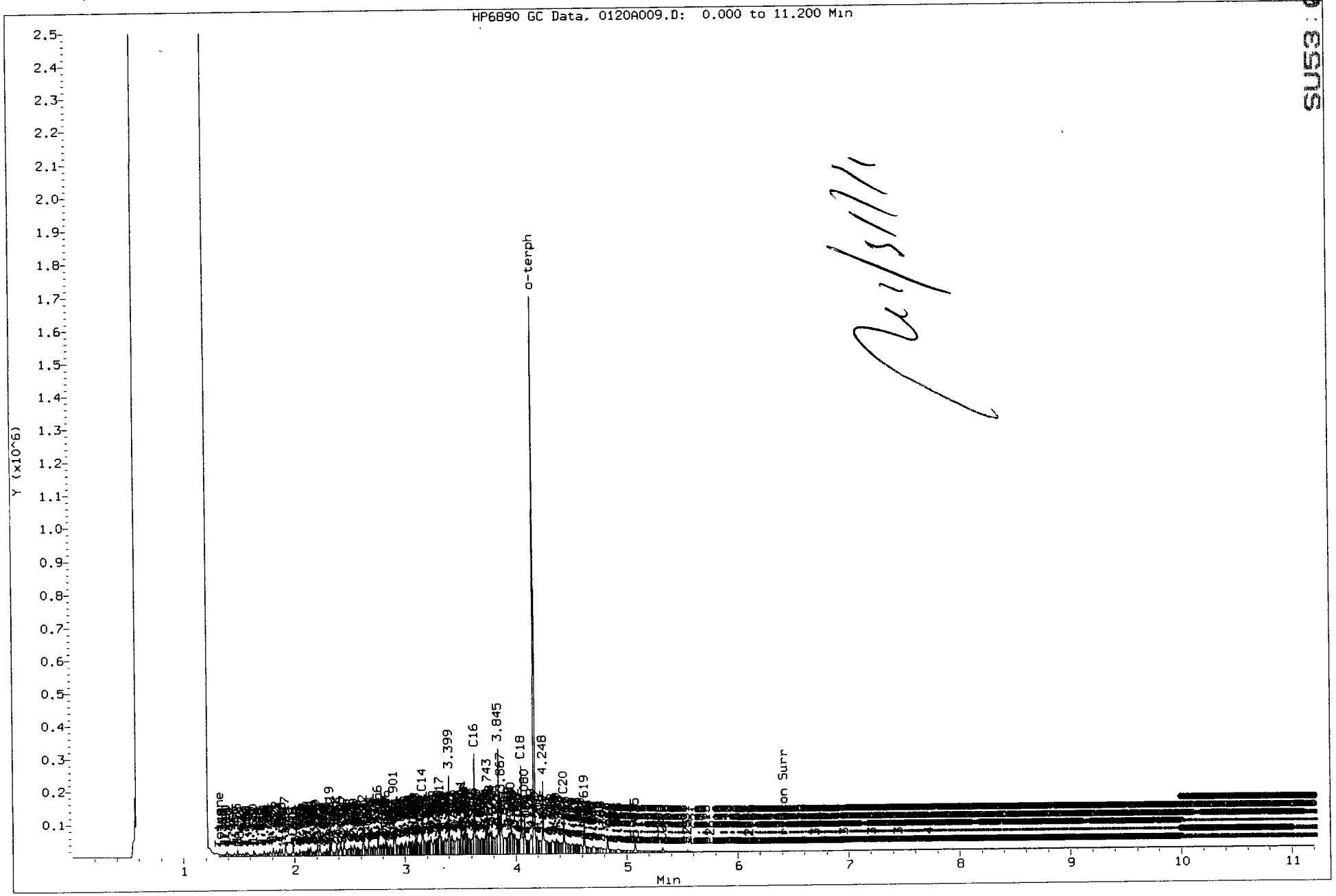
Data File: /chem2/fid9.i/20110120.b/0120A008.D
Injection Date: 20-JAN-2011 16:34
Instrument: fid9.i
Client Sample ID: DIESEL 100

SUS3 : 00964



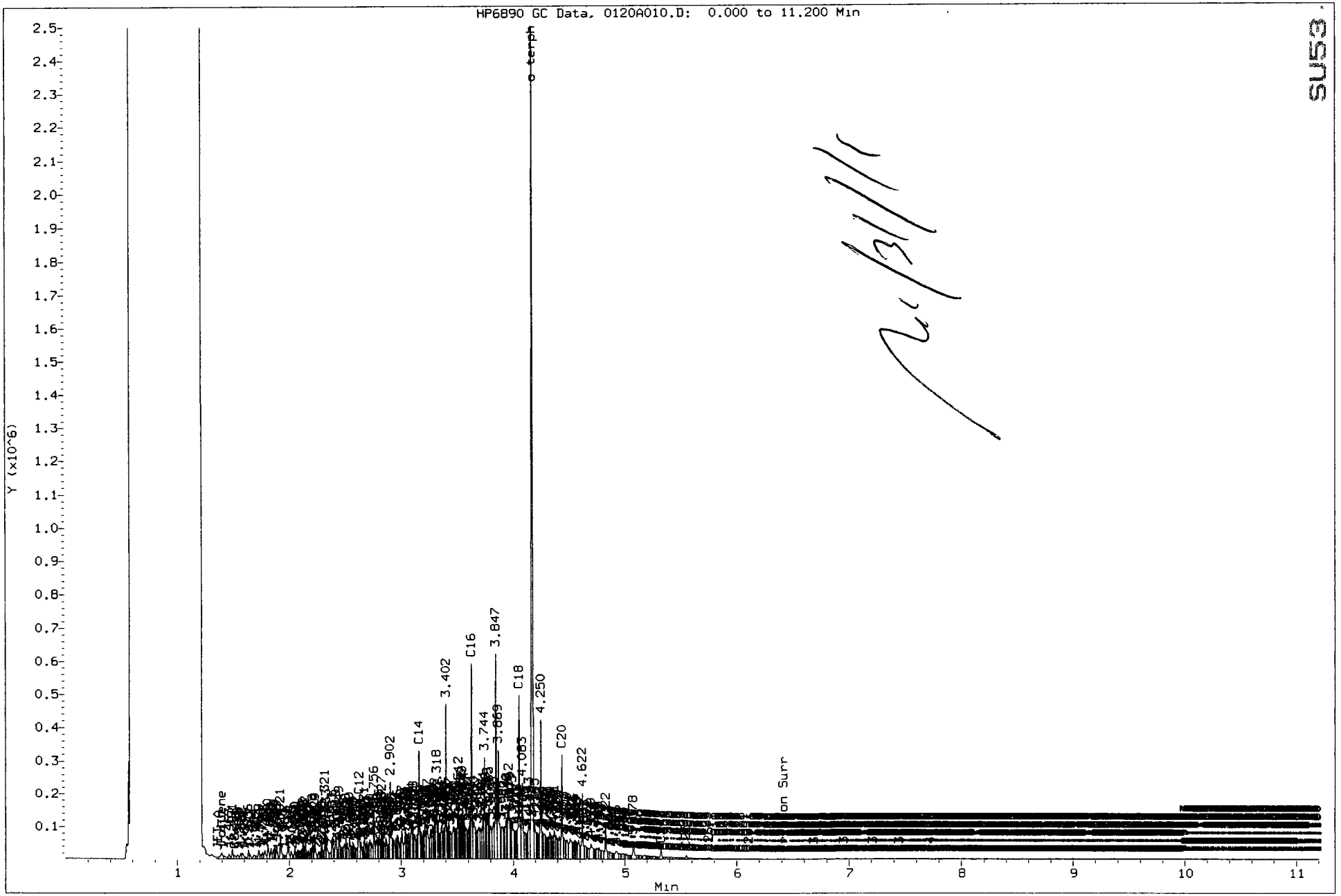
Data File: /chem2/fid9.i/20110120.b/0120A009.D
Injection Date: 20-JAN-2011 16:56
Instrument: fid9.i
Client Sample ID: DIESEL 250

SJ53 : 00965



Data File: /chem2/fid9.i/20110120.b/0120A010.D
Injection Date: 20-JAN-2011 17:17
Instrument: fid9.i
Client Sample ID: DIESEL 500

SU53 000966



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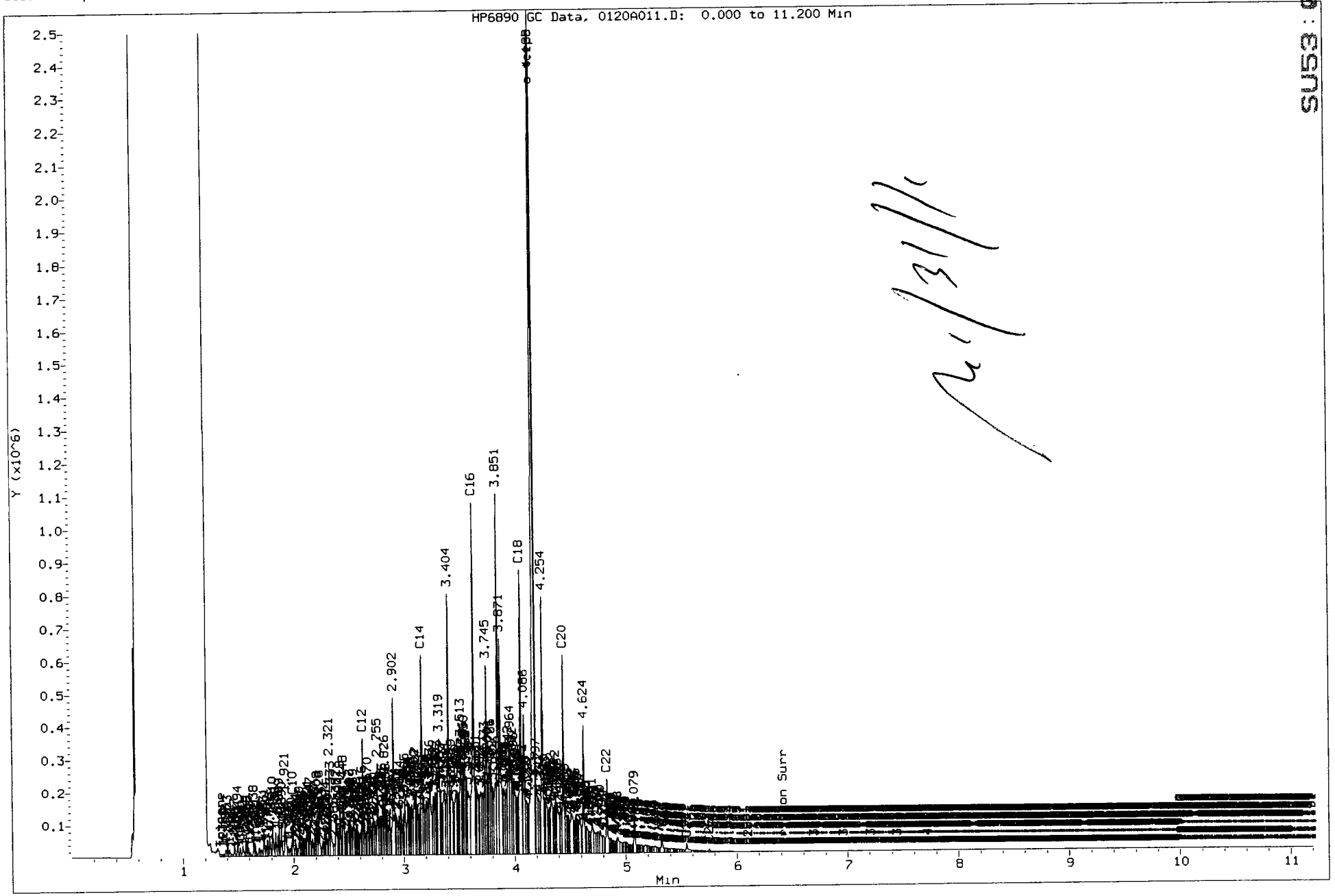
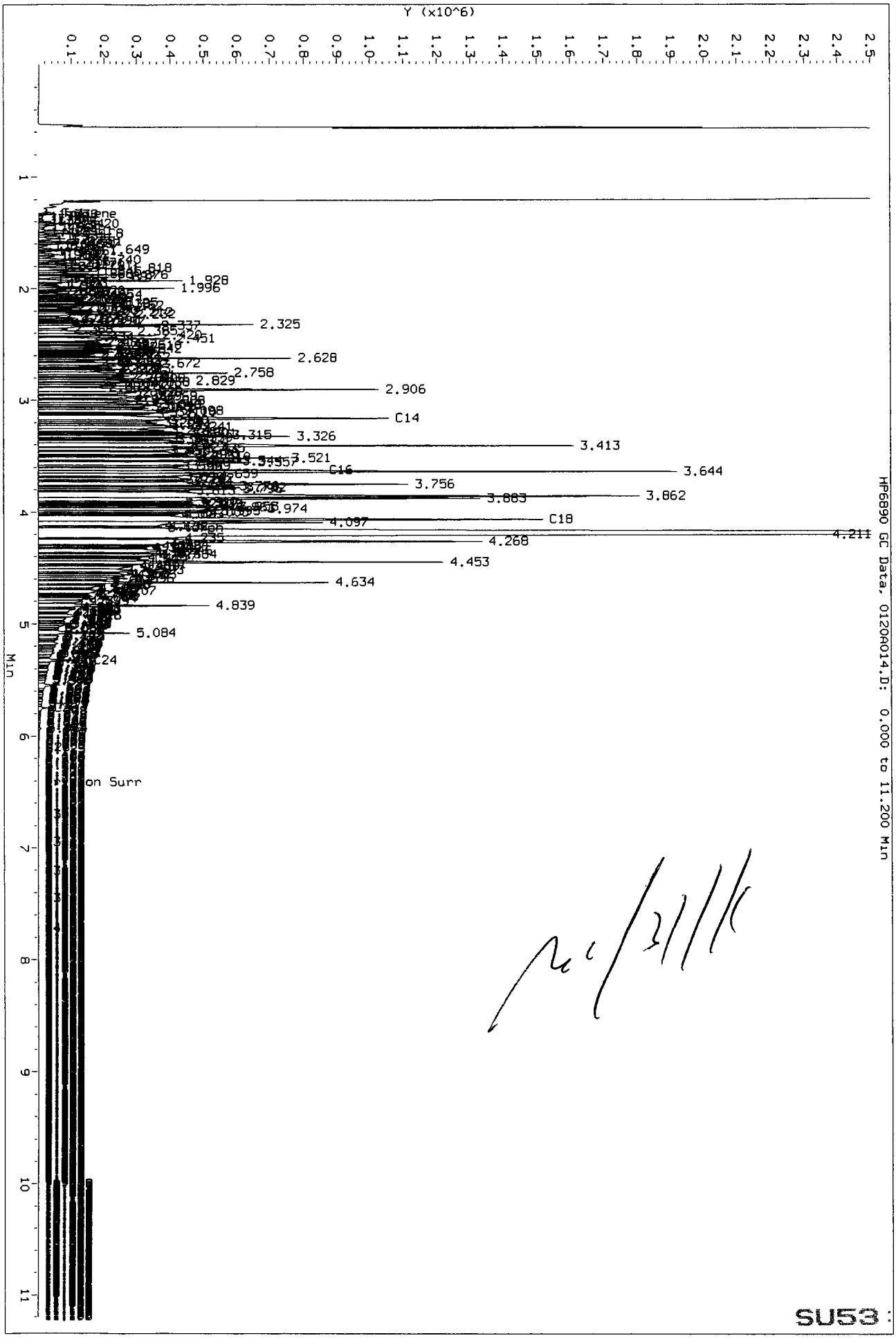
Instrument: fid9.i
Client Sample ID: DIESEL 1000

SUS3 : 59967





Data File: /chem2/fid9.i/20110120.b/0120A014.D
Injection Date: 20-JAN-2011 18:43
Instrument: fid9.i
Client Sample ID: DIESEL 2500

HP6890 GC Data, 0120A014.D: 0.000 to 11.200 Min

SU53 : 00968

Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: M.Oil 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): 30 wt. M.Oil, 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: 1/20/11 Analysis Start: 1/20/11

Endrin/DDT Breakdown <15%? YES / NO / NA Method Blank In Control? YES / NO N/A

ICal Meets RF & %RSD Criteria? YES / NO LCS/LCSD Recovery In Control? YES / NO

CCal Meets RF & %RSD Criteria? YES / NO N/A Surrogate Recovery In Control? YES / NO

Manual Integrations for ICal? YES / NO Manual Integrations for Samples? YES / NO

Internal Standard Meets Criteria? YES / NO / NA Special Analysis Criteria Met? YES / NO / NA

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

Additional Details on Reverse: Yes / No

Analyst: MD **Date:** 1/31/11

Reviewer: VB **Date:** 2.1.11

Analytical Resources Inc.: Organics Instrument Log

FID-9 Agilent 6850 - Serial No.: US10404004

Date: 1/20/11 Analysis: NWTPHD Analyst: MM

GC Program: TPH Column No: 977444 Column Type: VTX-1

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

Calibration File: — Curve Date: 1/20/11

IS/SS | **Ical/Ccal** | **LCS/ICV**

1786-1
1771-2
1777-3
1771-2

	Inject Date/Time	Filename	DF	LabID
1	20-JAN-2011 12:42	0120A001.D	1	RINSE
2	20-JAN-2011 13:03	0120A002.D	1	RINSE
3	20-JAN-2011 13:24	0120A003.D	1	RINSE
4	20-JAN-2011 15:09	0120A004.D	1	RINSE
5	20-JAN-2011 15:30	0120A005.D	1	RT
6	20-JAN-2011 15:52	0120A006.D	1	IB
7	20-JAN-2011 16:13	0120A007.D	1	DIESEL 50
8	20-JAN-2011 16:34	0120A008.D	1	DIESEL 100
9	20-JAN-2011 16:56	0120A009.D	1	DIESEL 250
10	20-JAN-2011 17:17	0120A010.D	1	DIESEL 500
11	20-JAN-2011 17:39	0120A011.D	1	DIESEL 1000
12	20-JAN-2011 18:00	0120A012.D	1	Blank
13	20-JAN-2011 18:22	0120A013.D	1	DIESEL ICV
14	20-JAN-2011 18:43	0120A014.D	1	DIESEL 2500
15	20-JAN-2011 19:04	0120A015.D	1	MOIL 100
16	20-JAN-2011 19:26	0120A016.D	1	MOIL 250
17	20-JAN-2011 19:47	0120A017.D	1	MOIL 500
18	20-JAN-2011 20:08	0120A018.D	1	MOIL 1000
19	20-JAN-2011 20:30	0120A019.D	1	MOIL 2500
20	20-JAN-2011 20:51	0120A020.D	1	MOIL 5000
21	20-JAN-2011 21:12	0120A021.D	1	MOIL ICV
22	20-JAN-2011 21:34	0120A022.D	1	DIESEL#1
23	20-JAN-2011 21:55	0120A023.D	1	MOIL#1
24	20-JAN-2011 22:16	0120A024.D	1	SE57MBW1
25	20-JAN-2011 22:38	0120A025.D	1	SE57LCSW1
26	20-JAN-2011 22:59	0120A026.D	1	SE57LCSDW1
27	20-JAN-2011 23:21	0120A027.D	1	SE57QLS
28	20-JAN-2011 23:42	0120A028.D	1	SE57A
29	21-JAN-2011 00:03	0120A029.D	1	SF16MBS1
30	21-JAN-2011 00:25	0120A030.D	1	SF16LCSS1
31	21-JAN-2011 00:46	0120A031.D	1	SF16LCSDS1
32	21-JAN-2011 01:08	0120A032.D	1	SF16QLS
33	21-JAN-2011 01:29	0120A033.D	10	SF16A
34	21-JAN-2011 01:50	0120A034.D	5	SF16B
35	21-JAN-2011 02:12	0120A035.D	1	DIESEL#2
36	21-JAN-2011 02:33	0120A036.D	1	MOIL#2

MM

MM 1/24/11

Maintenance / Comments

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

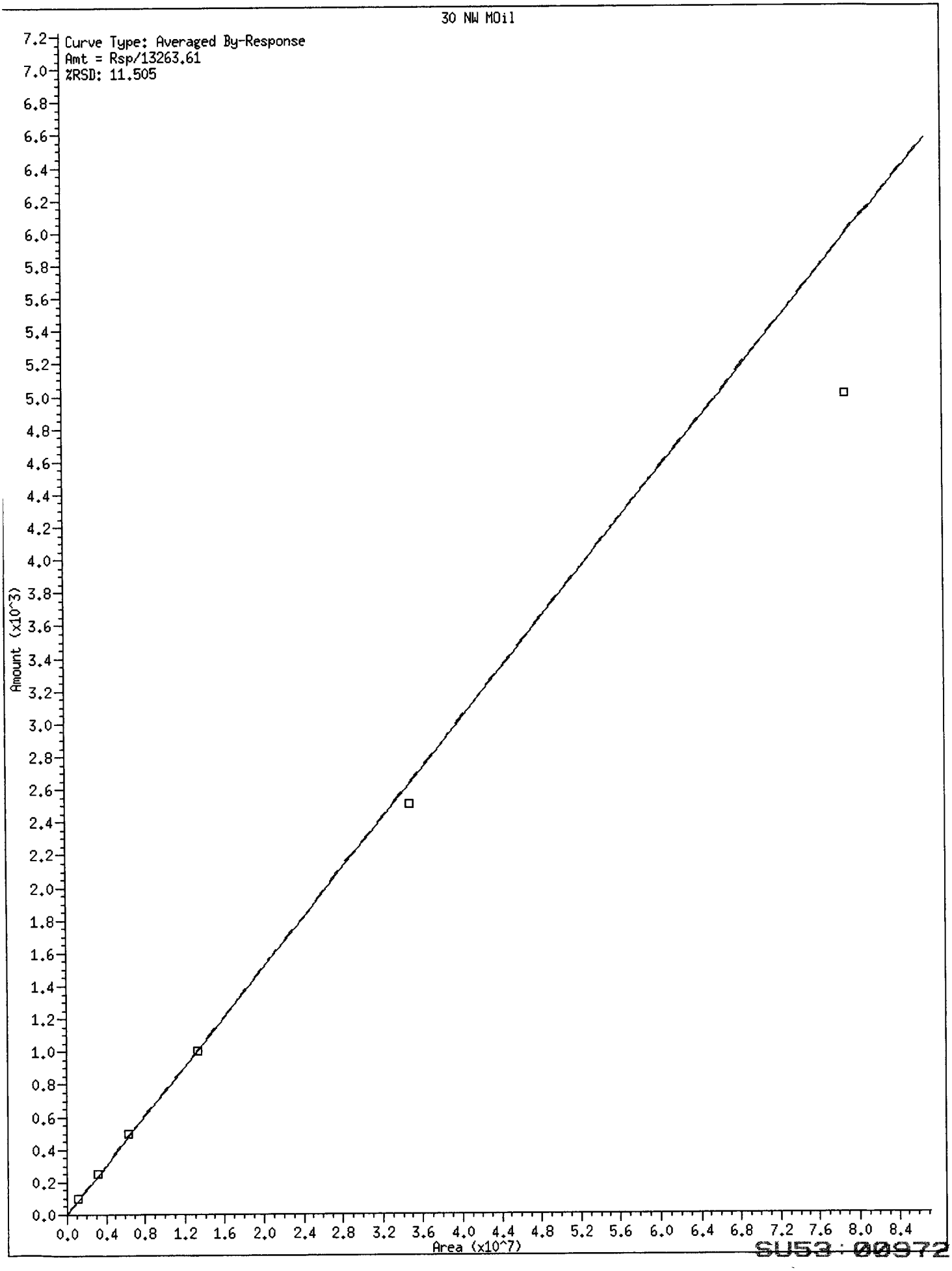
Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

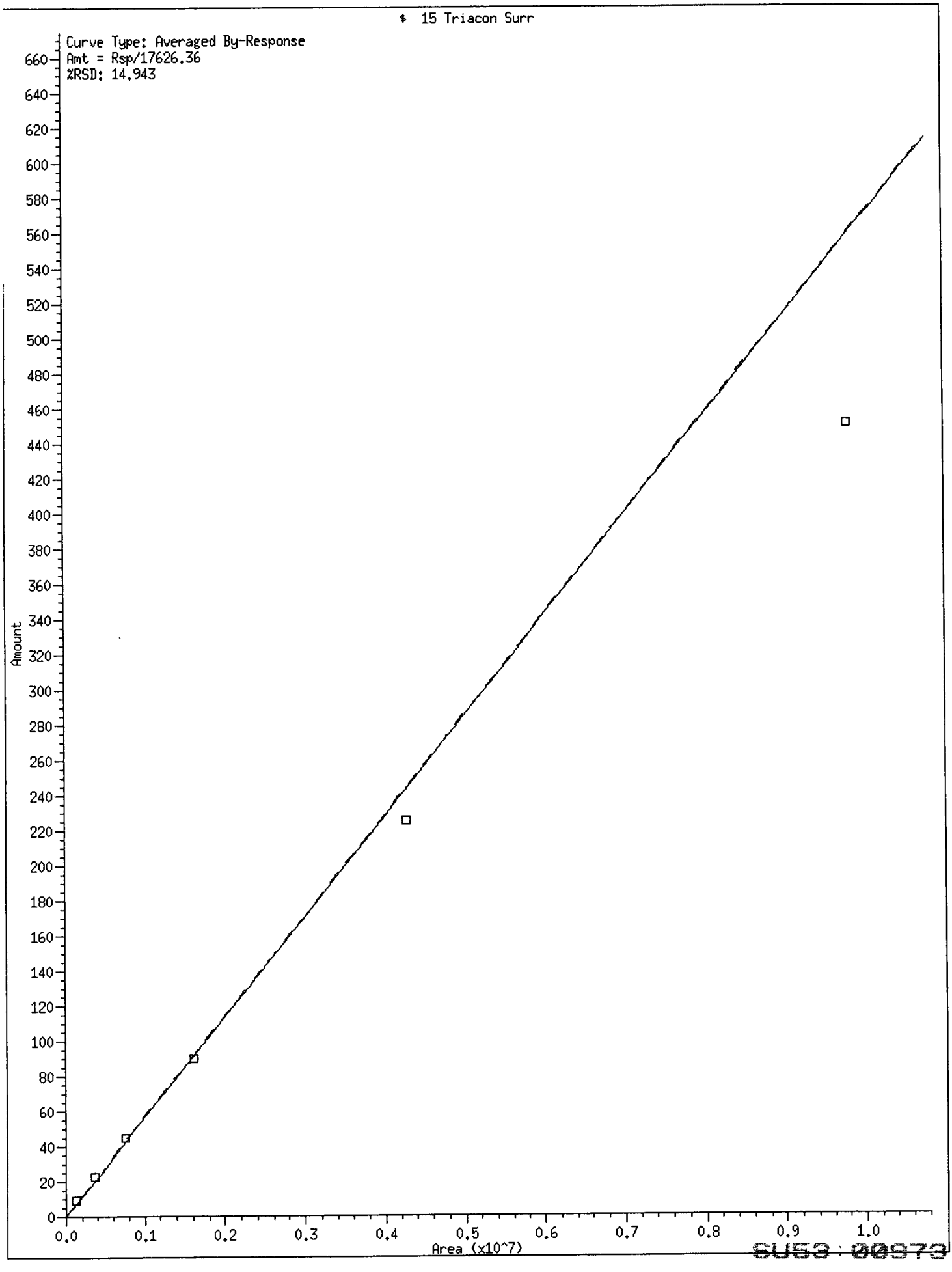
MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/fid9.i/20110120.b

ARI Job No.: MOIL Method: ftphfid9a.m Instrument: fid9.i Date: 20-JAN-2011

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1904	0120A015.D	MOIL 100	MOIL 100	1	Triacon Surr,
1926	0120A016.D	MOIL 250	MOIL 250	1	Triacon Surr,
1947	0120A017.D	MOIL 500	MOIL 500	1	Triacon Surr,
2008	0120A018.D	MOIL 1000	MOIL 1000	1	Triacon Surr,
2030	0120A019.D	MOIL 2500	MOIL 2500	1	Triacon Surr,
2051	0120A020.D	MOIL 5000	MOIL 5000	1	Triacon Surr,
2112	0120A021.D	MOIL ICV		1	Triacon Surr,

SUSS:00971


30 NW MOil
Curve Type: Averaged By-Response
Amt = Rsp/13263.61
%RSD: 11.505
Amount (x10^3)
Area (x10^7)
7.2
7.0
6.8
6.6
6.4
6.2
6.0
5.8
5.6
5.4
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.0 0.4 0.8 1.2 1.6 2.0 2.4 2.8 3.2 3.6 4.0 4.4 4.8 5.2 5.6 6.0 6.4 6.8 7.2 7.6 8.0 8.4


$ 15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/17626.36
%RSD: 14.943
Amount
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
420
440
460
480
500
520
540
560
580
600
620
640
660

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/fid9.i/20110120.b/ftphfid9a.m
Batch File: /chem2/fid9.i/20110120.b
Inst ID: fid9.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0120A007	0120A008	0120A009	0120A010	0120A011	0120A014
INJ.DATE:	20-JAN-2011	20-JAN-2011	20-JAN-2011	20-JAN-2011	20-JAN-2011	20-JAN-2011
INJ.TIME:	16:13	16:34	16:56	17:17	17:39	18:43

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	1.325	1.323	1.324	1.398	1.339	1.330	1.303	1.203-1.403	1.340	0.029
	37 JET-A	1.375	1.379	1.376	1.364	1.370	1.379	1.370	1.320-1.420	1.374	0.006
	2 C8	1.518	1.519	1.507	1.514	1.518	1.508	1.519	1.419-1.619	1.514	0.005
	3 C10	1.986	1.986	1.986	1.990	1.990	1.987	1.988	1.938-2.038	1.987	0 002
	4 C12	2.624	2.624	2.624	2.625	2.624	2.619	2.623	2.573-2.673	2.623	0.002
	5 C14	3.160	3.158	3.158	3.159	3.160	3.166	3.156	3.106-3.206	3.160	0.003
	6 C16	3.627	3.626	3.628	3.631	3.633	3.629	3.627	3.577-3.677	3.629	0.003
	7 C18	4.048	4.047	4.050	4.054	4.058	4.072	4.049	3.999-4.099	4.055	0.010
$	8 o-terph	4.162	4.163	4.172	4.180	4.189	4.211	4.168	4.118-4.218	4.179	0.019
	9 C20	4.434	4.434	4.436	4.438	4.441	4.427	4.435	4.385-4.485	4.435	0.005
	10 C22	4.826	4.825	4.827	4.829	4.832	4.818	4.827	4.777-4.877	4.826	0.005
	11 C24	5.323	5.322	5.324	5.325	5.325	5.327	5.324	5.274-5.374	5.324	0.002
	12 C25	5.548	5.546	5.547	5.549	5.547	5.548	5.548	5.498-5.598	5.547	0.001
	13 C26	5.749	5.749	5.750	5.751	5.750	5.749	5.749	5.699-5.799	5.750	0.001
	14 C28	6.100	6.101	6.103	6.106	6.105	6.105	6.104	6.054-6.154	6.103	0.003
$	15 Triacon Surr	6.413	6.413	6.414	6.419	6.417	6.414	6.422	6.372-6.472	6.415	0.002
	16 C32	6.691	6.697	6.699	6.692	6.695	6.702	6.696	6.646-6.746	6.696	0.004

Reviewer 1 _____ Date: 2/1/11
Reviewer 2 _____ Date: 2-1-11

SU53:0097Y

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/fid9.i/20110120.b/ftphfid9a.m
Batch File: /chem2/fid9.i/20110120.b
Inst ID: fid9.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	6.953	6.959	6.959	6.955	6.964	6.953	6.959	6.909-7.009	6.957	0.005
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	12.769	12.669-12.869	+++++	+++++
19 C36	7.210	7.206	7.208	7.213	7.209	7.210	7.209	7.159-7.259	7.209	0.002
20 C38	7.447	7.448	7.449	7.449	7.450	7.451	7.448	7.398-7.498	7.449	0.001
21 C40	7.725	7.725	7.722	7.727	7.723	7.721	7.723	7.673-7.773	7.724	0.002
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	+++++	+++++

SUS3 : 009775

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A005.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: RT
Client ID: RT
Injection: 20-JAN-2011 15:30
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.303	0.000	383937	277413	GAS (Tol-C12)	998508	48 M
C8	1.519	0.000	53885	28465	DIESEL (C12-C24)	1655661	73
C10	1.988	0.000	657169	294726	M.OIL (C24-C38)	1825693	138
C12	2.623	0.000	676220	289238	AK-102 (C10-C25)	2271772	89
C14	3.156	0.000	587065	285605	AK-103 (C25-C36)	1573197	185
C16	3.627	0.000	678327	282100			
C18	4.049	0.000	649103	277428			
C20	4.435	0.000	617954	270911			
C22	4.827	0.000	422551	260123			
C24	5.324	0.000	385629	251401			
C25	5.548	0.000	508484	337875			
C26	5.749	0.000	386378	243690			
C28	6.104	0.000	394465	236165			
C32	6.696	0.000	375697	230951	JP-4 (Tol-C14)	1294923	79 M
C34	6.959	0.000	351484	236984	BUNKERC (C10-C38)	4092053	484
Filter Peak	----						
C36	7.209	0.000	339607	248990			
C38	7.448	0.000	272516	232146			
C40	7.723	0.000	188027	195470			
o-terph	4.168	0.000	1676827	913732	JET-A (C10-C18)	1475173	107
Triacon Surr	6.422	0.000	1043688	719648	JP8 (Tol-C16)	1582493	90 M

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	913732	42.7	94.8
Triacontane	719648	40.8	90.7

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

1/31/11

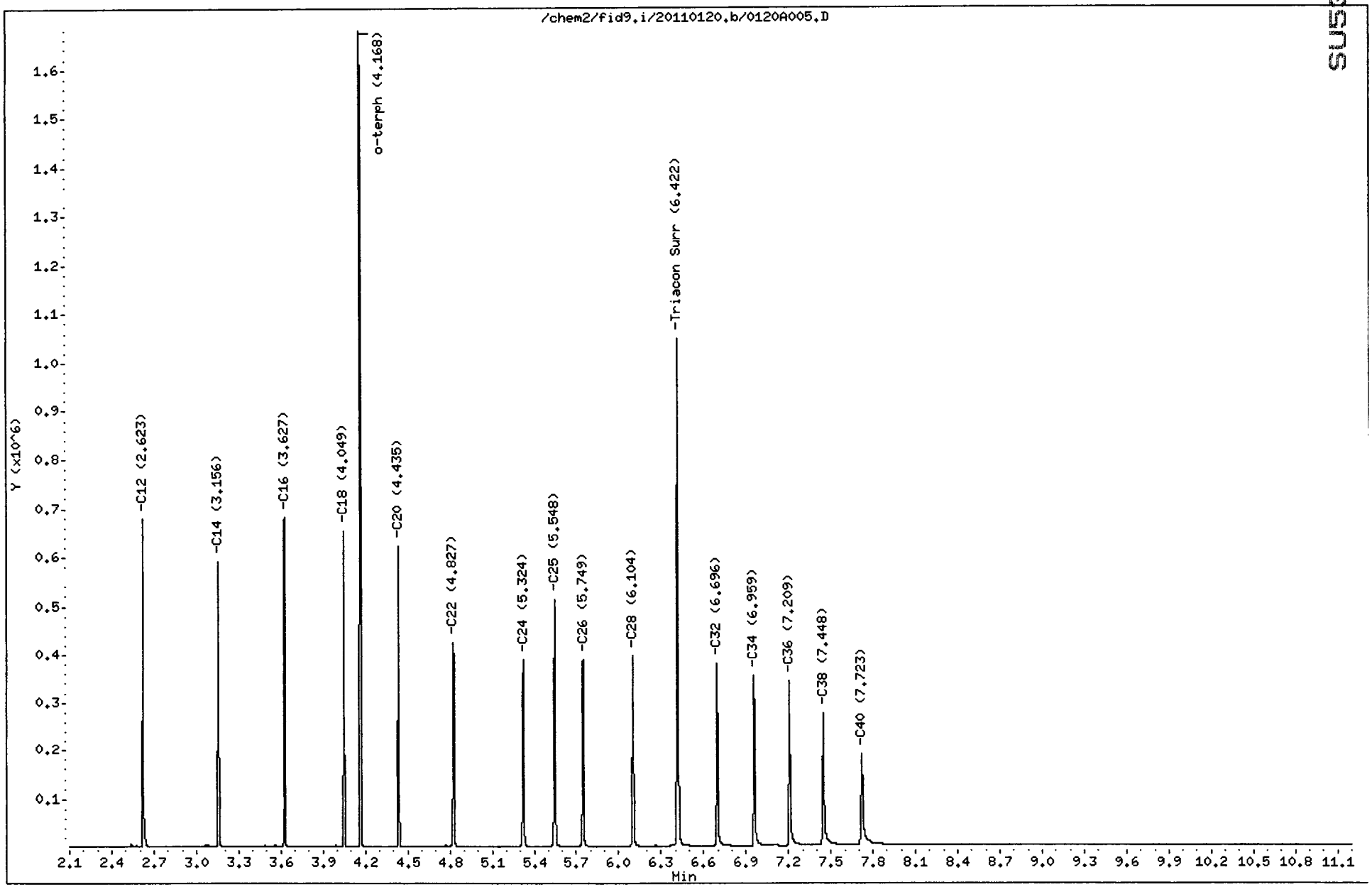
Data File: /chem2/fid9.i/20110120.b/0120A005.D
Date : 20-JAN-2011 15:30
Client ID: RT
Sample Info: RT

Column phase: RTX-1

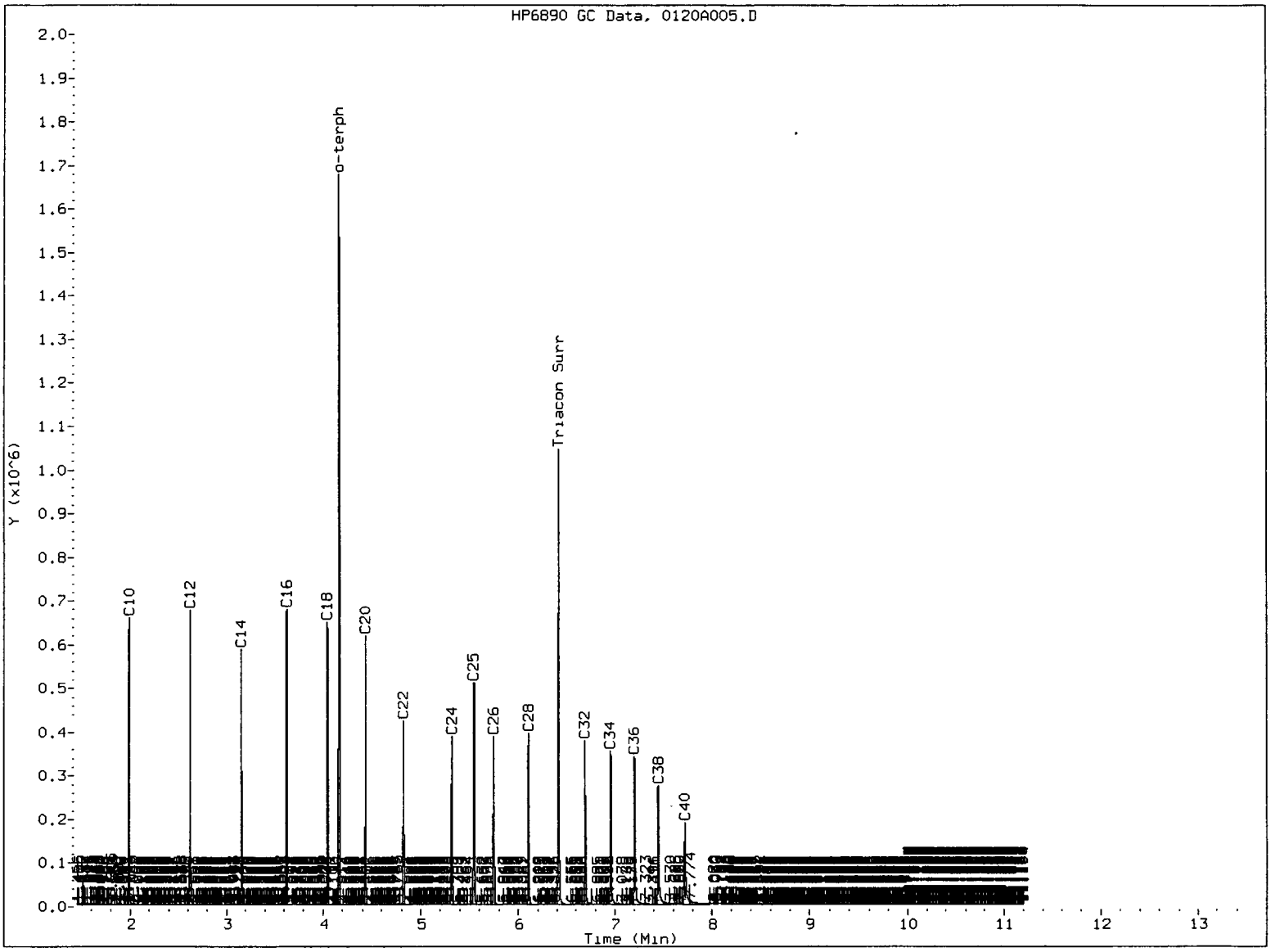
Instrument: fid9.i

Operator: JR
Column diameter: 0.25

SU58:00977



FID:9A-2C/RTX-1 RT FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 7/31/15

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A006.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: IB
Client ID:
Injection: 20-JAN-2011 15:52
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.322	0.019	63463	64572	GAS (Tol-C12)	139212	7
C8	1.519	0.000	7460	7425	DIESEL (C12-C24)	22665	1
C10	1.987	-0.001	1338	1740	M.OIL (C24-C38)	44620	3
C12	2.612	-0.011	706	1274	AK-102 (C10-C25)	44595	2
C14	3.152	-0.005	306	190	AK-103 (C25-C36)	32471	4
C16	3.625	-0.002	165	22			
C18	4.049	0.000	184	200			
C20	4.437	0.002	136	115			
C22	4.830	0.003	67	18			
C24	5.318	-0.006	33	22			
C25	5.546	-0.002	53	25			
C26	5.745	-0.004	45	34			
C28	6.099	-0.005	256	173			
C32	6.695	-0.001	1292	2211	JP-4 (Tol-C14)	148417	9
C34	6.957	-0.002	875	1419	BUNKERC (C10-C38)	89113	11
Filter Peak	----						
C36	7.209	0.000	656	194			
C38	7.447	-0.001	938	390			
C40	7.718	-0.005	1264	377			
o-terph	4.171	0.003	1830174	1085386	JET-A (C10-C18)	40391	3
Triacon Surr	6.421	-0.001	1029861	732679	JP8 (Tol-C16)	154222	9

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1085386	50.7	112.6
Triacontane	732679	41.6	92.4

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

2 1/31/11

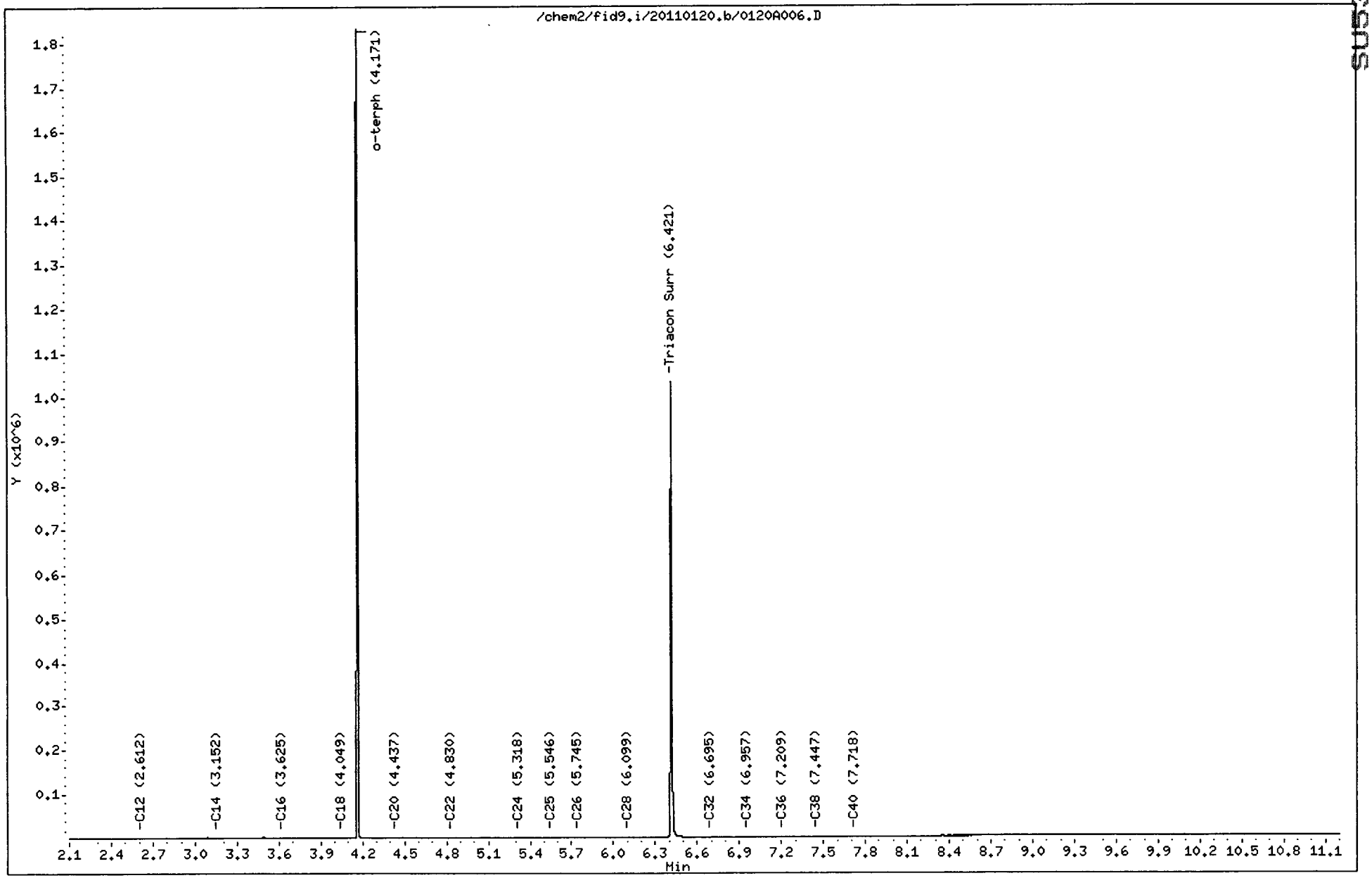
Data File: /chem2/fid9.i/20110120.b/0120A006.D
Date : 20-JAN-2011 15:52
Client ID:
Sample Info: IB

Column phase: RTX-1

Instrument: fid9.i

Operator: JR
Column diameter: 0.25

SUS3:00980



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A015.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: MOIL 100
Client ID: MOIL 100
Injection: 20-JAN-2011 19:04
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.389	0.087	5706	7708	GAS (Tol-C12)	93925	4
C8	1.520	0.001	2852	4411	DIESEL (C12-C24)	144444	6
C10	1.989	0.001	1022	660	M.OIL (C24-C38)	1136455	86
C12	2.634	0.011	1012	2014	AK-102 (C10-C25)	193252	8
C14	3.146	-0.010	120	106	AK-103 (C25-C36)	953994	112 M
C16	3.622	-0.004	46	22			
C18	4.057	0.008	518	366			
C20	4.438	0.003	947	1071			
C22	4.821	-0.006	1921	1273			
C24	5.322	-0.002	3662	2456			
C25	5.544	-0.004	4924	3028			
C26	5.750	0.001	6100	2283			
C28	6.101	-0.003	8149	3201			
C32	6.693	-0.003	11119	10215	JP-4 (Tol-C14)	99958	6
C34	6.953	-0.006	12526	8399	BUNKERC (C10-C38)	1301044	154 M
Filter Peak	----						
C36	7.214	0.005	11528	8064			
C38	7.451	0.003	10890	5404			
C40	7.731	0.008	7400	1762			
o-terph	4.171	0.003	3037	2005	JET-A (C10-C18)	37543	3
Triacon Surr	6.413	-0.008	240819	127466	JP8 (Tol-C16)	104076	6

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2005	0.1	0.2
Triacontane	127466	7.2	16.1

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110120.b/0120A015.D

Date : 20-JAN-2011 19:04

Client ID: MOIL 100

Sample Info: MOIL 100

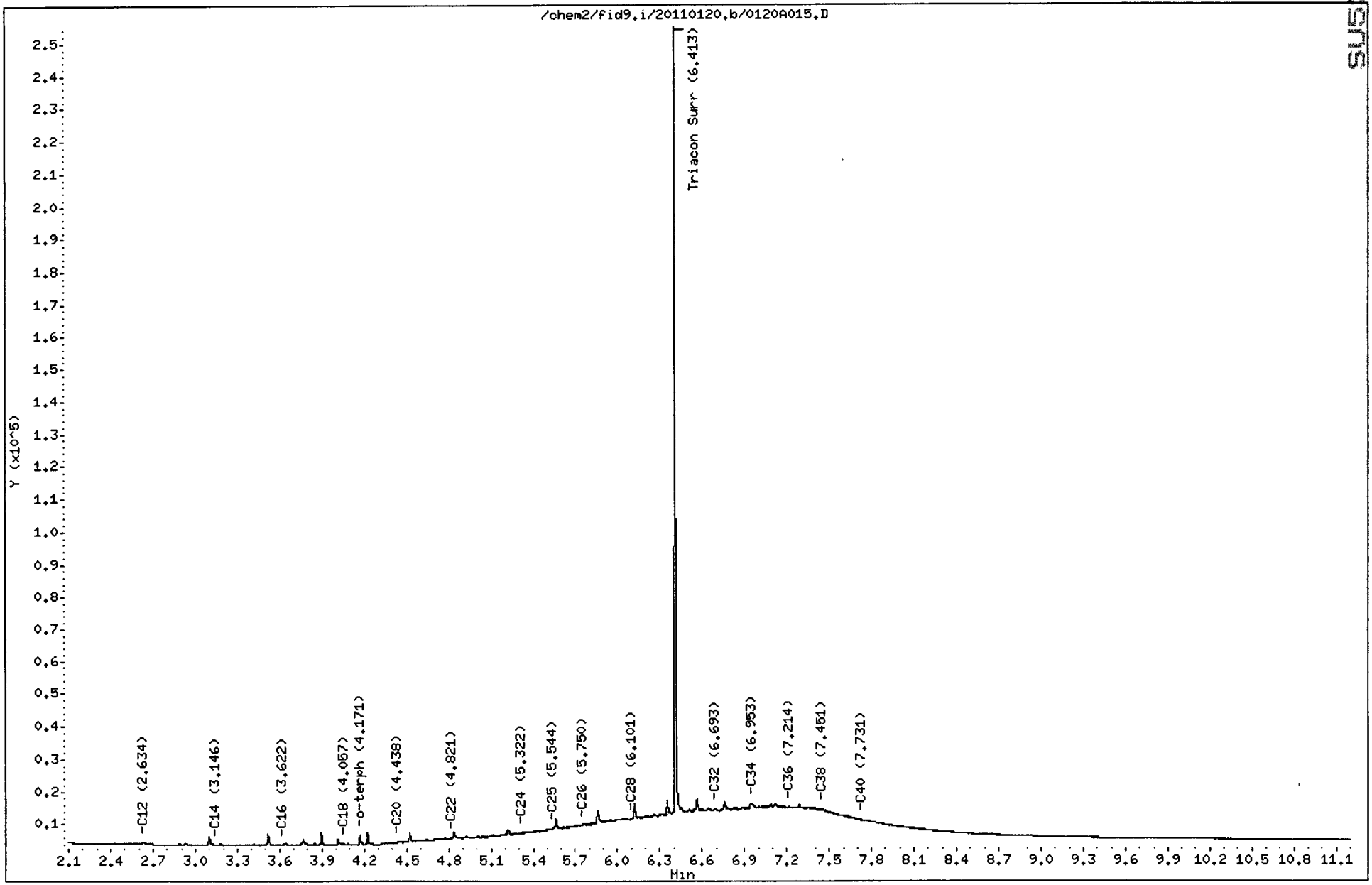
Column phase: RTX-1

Instrument: fid9.i

Operator: JR

Column diameter: 0.25

SUSB:00982



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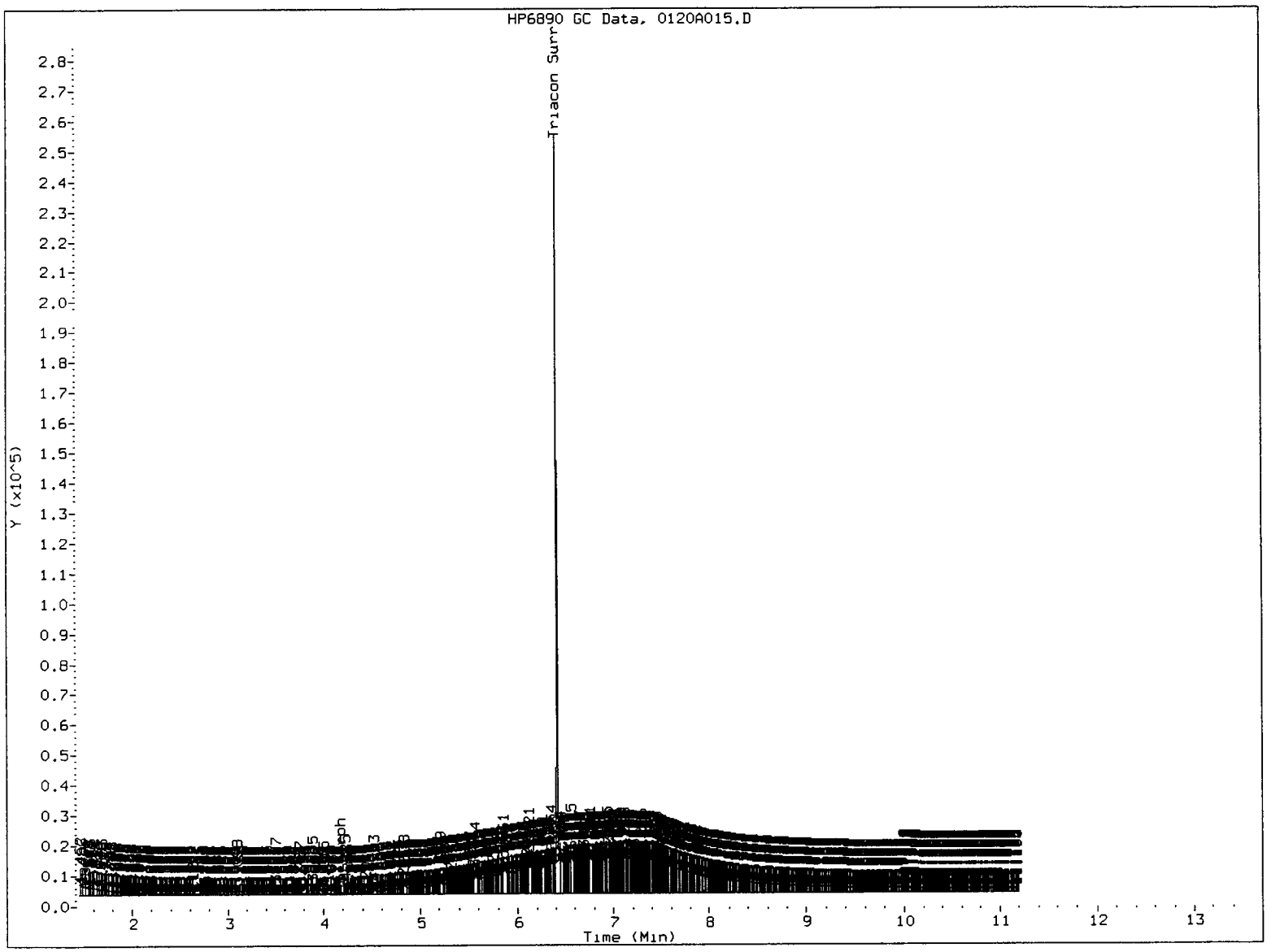
FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/31/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A016.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: MOIL 250
Client ID: MOIL 250
Injection: 20-JAN-2011 19:26
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.321	0.018	24499	34002	GAS (Tol-C12)	114803	5
C8	1.516	-0.003	2675	5530	DIESEL (C12-C24)	373276	16
C10	1.987	-0.001	1203	885	M.OIL (C24-C38)	3123579	235
C12	2.624	0.001	598	824	AK-102 (C10-C25)	480106	19
C14	3.163	0.006	127	50	AK-103 (C25-C36)	2638889	311 M
C16	3.617	-0.010	58	52			
C18	4.054	0.005	452	382			
C20	4.435	0.000	2268	2105			
C22	4.825	-0.002	5668	1790			
C24	5.324	0.000	10732	11256			
C25	5.549	0.002	14199	4769			
C26	5.752	0.003	17383	4783			
C28	6.104	0.000	22804	8180			
C32	6.694	-0.003	31340	34792	JP-4 (Tol-C14)	121010	7
C34	6.958	-0.001	33740	8677	BUNKERC (C10-C38)	3517328	416 M
Filter Peak	----						
C36	7.203	-0.006	32178	16433			
C38	7.447	-0.001	29073	8093			
C40	7.722	0.000	19542	5834			
o-terph	4.170	0.002	1505	1077	JET-A (C10-C18)	38228	3
Triacon Surr	6.419	-0.003	614748	364454	JP8 (Tol-C16)	123044	7

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1077	0.1	0.1
Triacontane	364454	20.7	45.9

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110120.b/0120A016.D

Date : 20-JAN-2011 19:26

Client ID: MOIL 250

Sample Info: MOIL 250

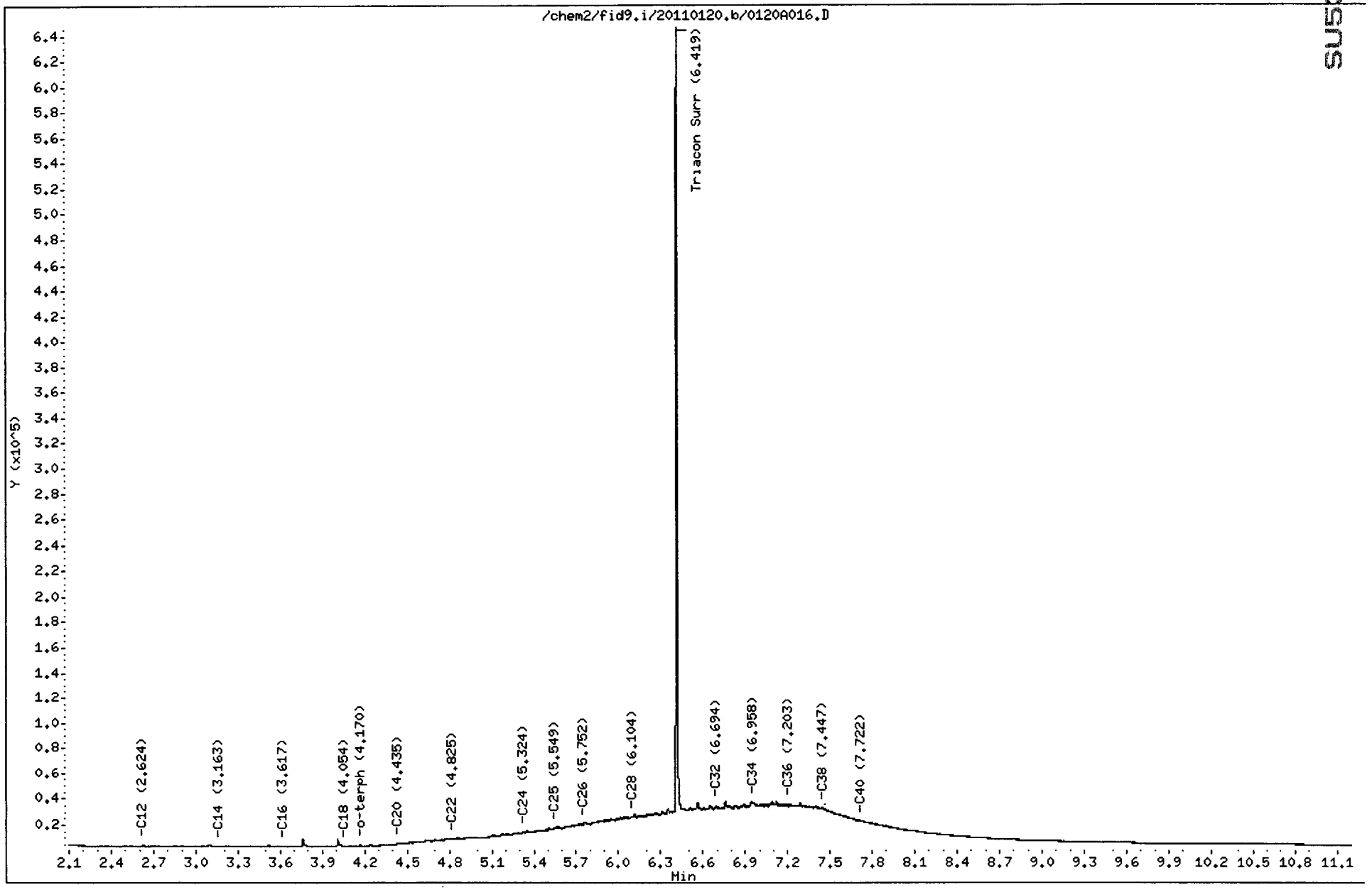
Column phase: RTX-1

Instrument: fid9.i

Operator: JR

Column diameter: 0.25

SU58 : 00985



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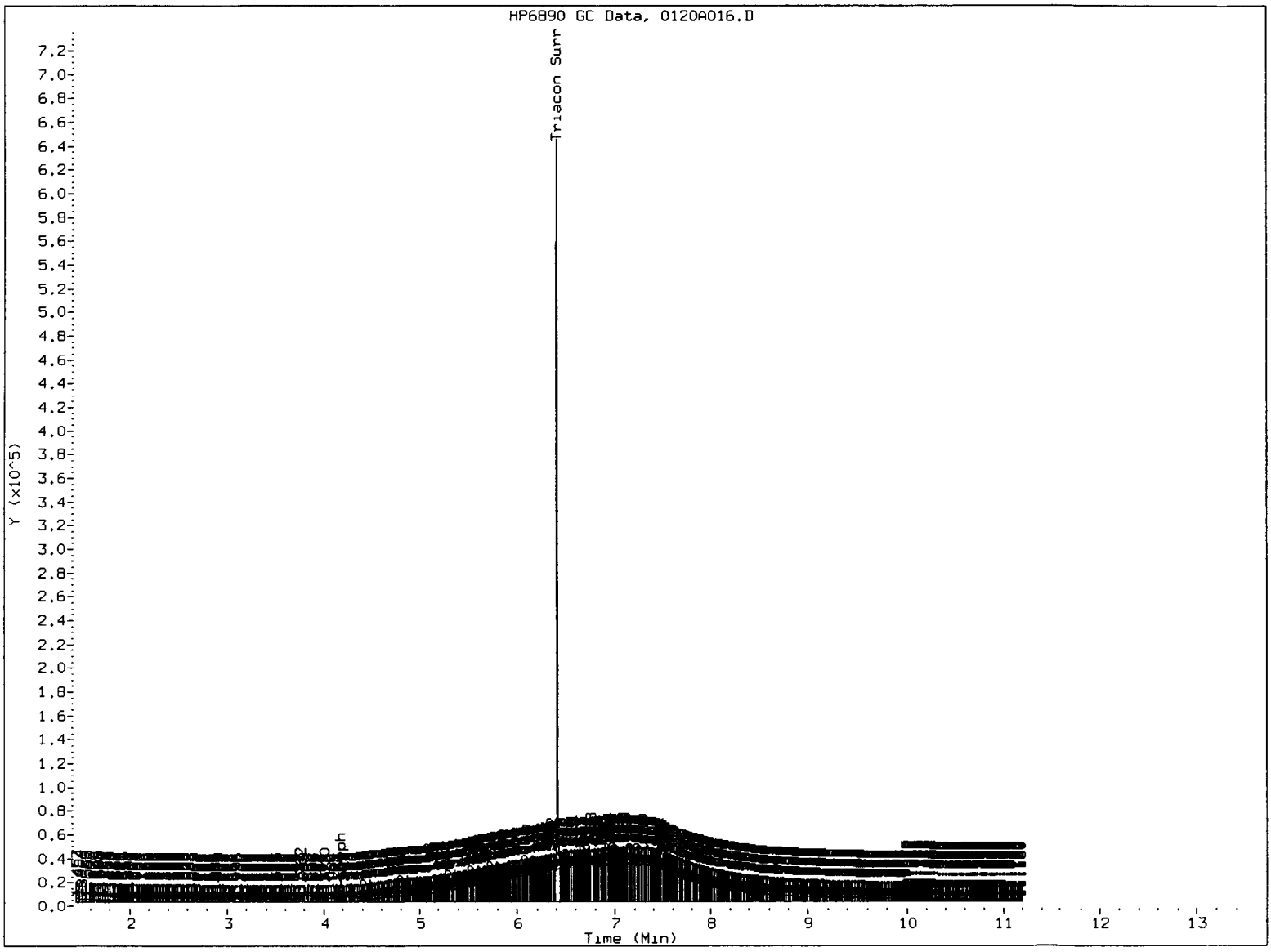


MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 1/31/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A017.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: MOIL 500
Client ID: MOIL 500
Injection: 20-JAN-2011 19:47
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.323	0.021	43781	53443	GAS (Tol-C12)	132643	6
C8	1.529	0.010	2512	2544	DIESEL (C12-C24)	765586	34
C10	1.986	-0.002	1542	1015	M.OIL (C24-C38)	6320045	476
C12	2.617	-0.006	678	708	AK-102 (C10-C25)	939777	37
C14	3.148	-0.008	142	100	AK-103 (C25-C36)	5282599	622 M
C16	3.626	-0.001	77	13			
C18	4.052	0.003	831	494			
C20	4.431	-0.005	4546	5044			
C22	4.823	-0.004	11920	8256			
C24	5.320	-0.004	21050	17048			
C25	5.545	-0.002	28543	17168			
C26	5.746	-0.003	34993	21041			
C28	6.106	0.002	46559	26544			
C32	6.694	-0.003	64675	67176	JP-4 (Tol-C14)	139331	8
C34	6.964	0.005	69256	121592	BUNKERC (C10-C38)	7106881	840 M
Filter Peak	----						
C36	7.205	-0.004	65634	19550			
C38	7.447	-0.002	58235	26479			
C40	7.725	0.002	37847	15702			
o-terph	4.168	0.000	2027	1735	JET-A (C10-C18)	49436	4
Triacon Surr	6.424	0.002	1065133	748192	JP8 (Tol-C16)	141822	8

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1735	0.1	0.2
Triacontane	748192	42.4	94.3

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

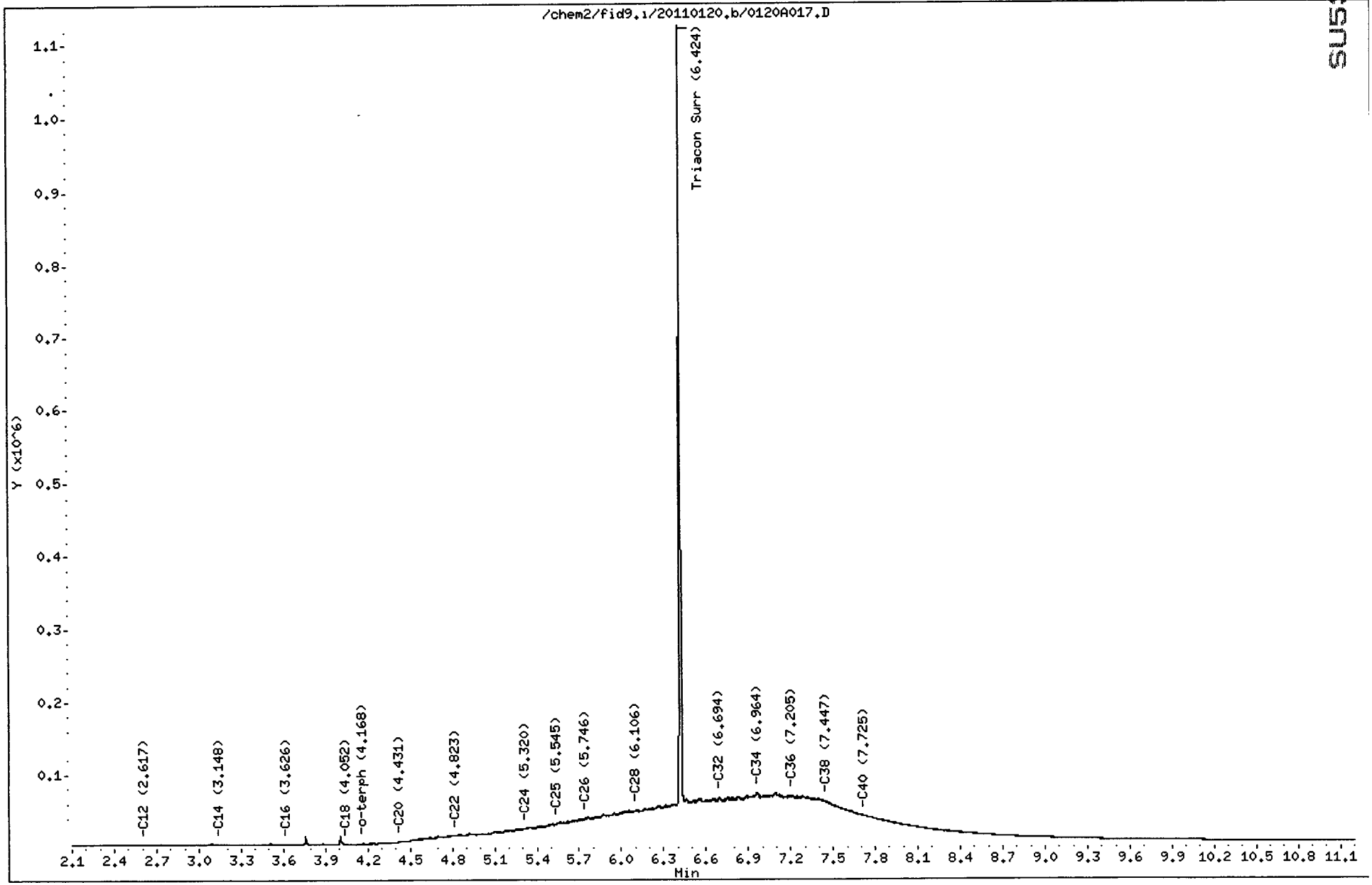
Data File: /chem2/fid9.i/20110120.b/0120A017.D
Date : 20-JAN-2011 19:47
Client ID: MOIL 500
Sample Info: MOIL 500

Column phase: RTX-1

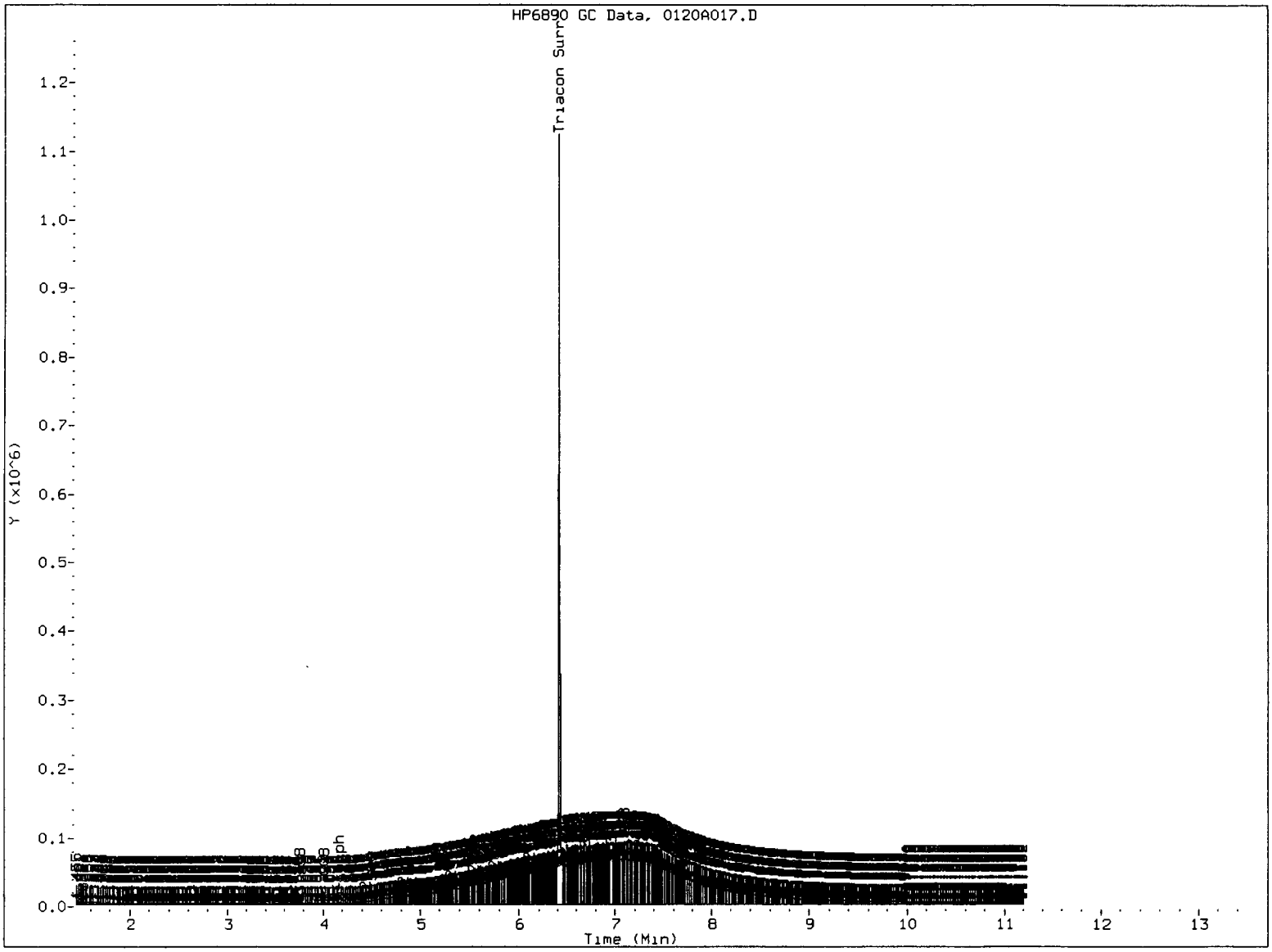
Instrument: fid9.i

Operator: JR
Column diameter: 0.25

SU58:00988



FID:9A-2C/RTX-1 MOIL 500 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 4/27/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A018.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: MOIL 1000
Client ID: MOIL 1000
Injection: 20-JAN-2011 20:08
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.320	0.017	81843	97285	GAS (Tol-C12)	203748	10
C8	1.512	-0.007	3230	2286	DIESEL (C12-C24)	1518852	67
C10	1.988	0.000	2360	1715	M.OIL (C24-C38)	13320247	1004
C12	2.631	0.008	888	1273	AK-102 (C10-C25)	1901920	75
C14	3.147	-0.009	228	186	AK-103 (C25-C36)	11226532	1321 M
C16	3.633	0.006	484	380			
C18	4.052	0.002	1613	1006			
C20	4.436	0.000	8959	3409			
C22	4.828	0.001	23167	5519			
C24	5.329	0.004	43630	18705			
C25	5.550	0.002	58165	21998			
C26	5.746	-0.003	70440	20651			
C28	6.104	0.000	96699	66092			
C32	6.696	0.000	139289	146808	JP-4 (Tol-C14)	213446	13
C34	6.965	0.006	148583	95849	BUNKERC (C10-C38)	14867691	1757 M
Filter Peak	----						
C36	7.209	0.000	140688	112362			
C38	7.456	0.007	118466	87213			
C40	7.719	-0.004	80471	71825			
o-terph	4.169	0.000	2612	2816	JET-A (C10-C18)	78477	6
Triacon Surr	6.435	0.013	1715980	1612172	JP8 (Tol-C16)	216255	12

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2816	0.1	0.3
Triacontane	1612172	91.5	203.3

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

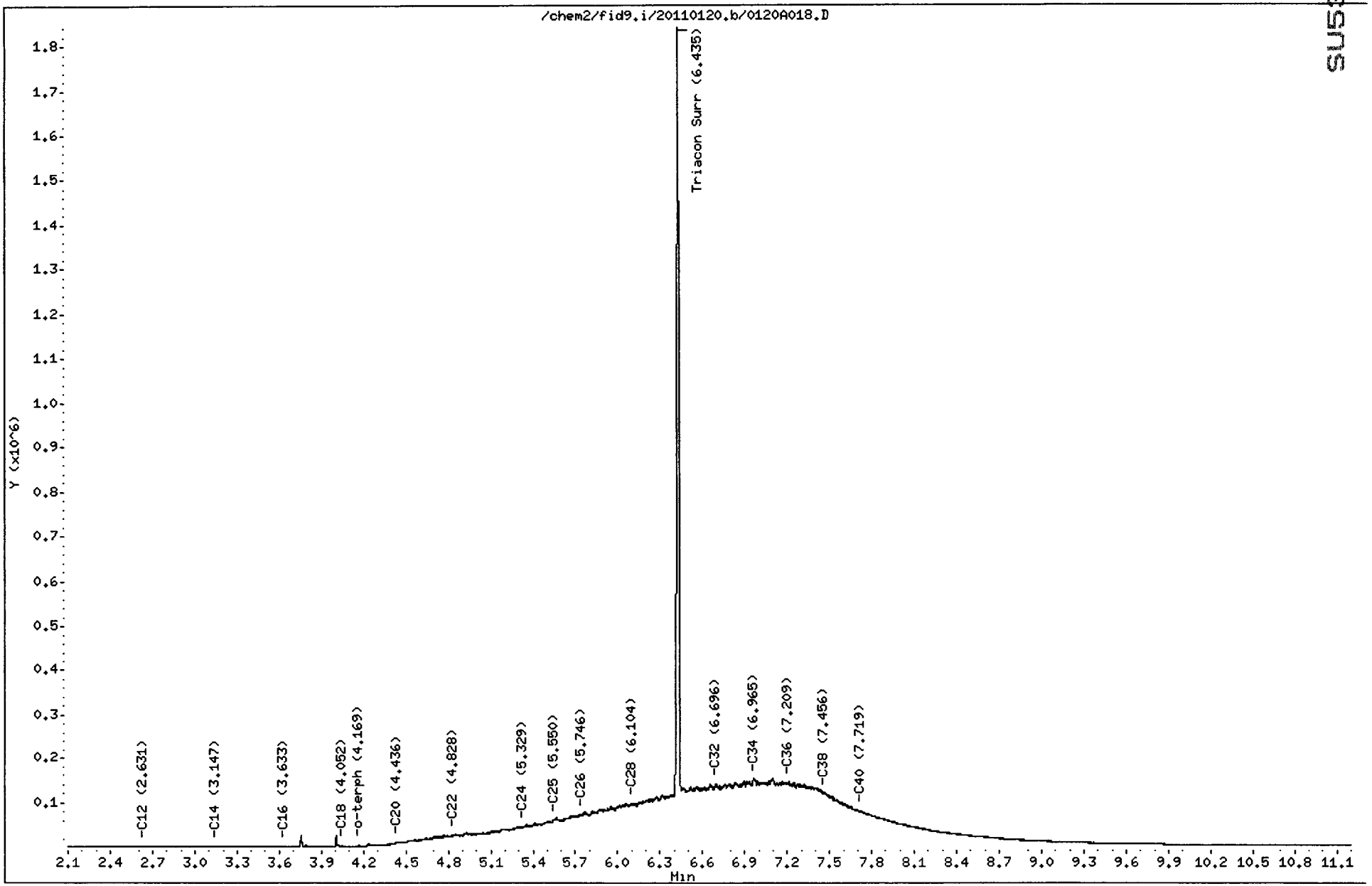
Data File: /chem2/fid9.i/20110120.b/0120A018.D
Date : 20-JAN-2011 20:08
Client ID: MOIL 1000
Sample Info: MOIL 1000

Column phase: RTX-1

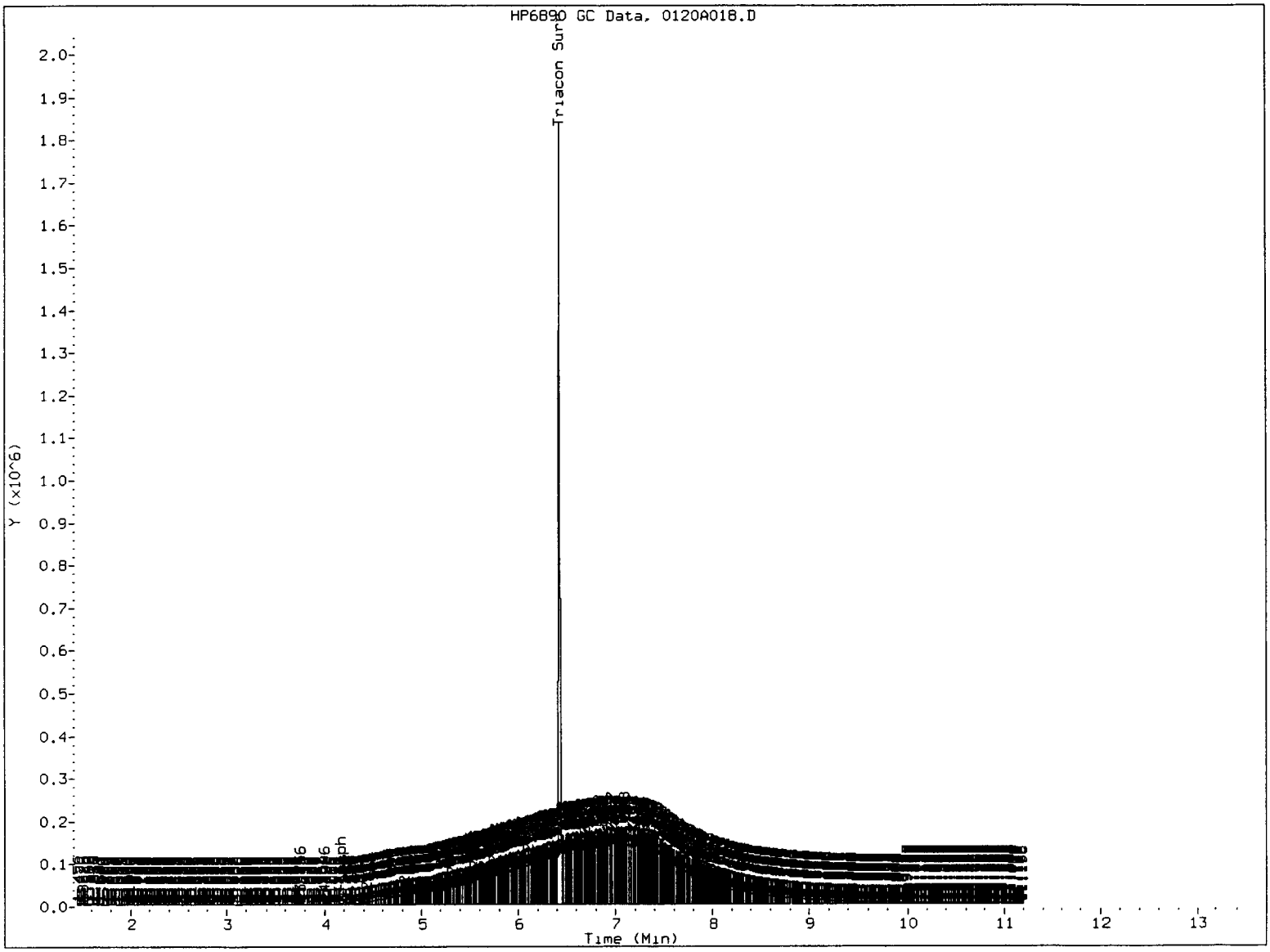
Instrument: fid9.i

Operator: JR
Column diameter: 0.25

SUSB:00991



FID:9A-2C/RTX-1 MOIL 1000 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 1/31/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A019.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: MOIL 2500
Client ID: MOIL 2500
Injection: 20-JAN-2011 20:30
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.322	0.019	181583	186696	GAS (Tol-C12)	263341	13
C8	1.515	-0.004	2499	4083	DIESEL (C12-C24)	3680611	162
C10	1.988	0.000	3206	3587	M.OIL (C24-C38)	34819034	2625
C12	2.626	0.004	1670	1694	AK-102 (C10-C25)	4557026	179
C14	3.165	0.009	1498	1077	AK-103 (C25-C36)	29454729	3466 M
C16	3.631	0.005	1192	1020			
C18	4.051	0.002	3711	2646			
C20	4.436	0.000	21315	10282			
C22	4.828	0.001	57158	58841			
C24	5.327	0.003	101911	38344			
C25	5.549	0.001	142178	140332			
C26	5.747	-0.002	177672	119296			
C28	6.101	-0.002	241046	47751			
C32	6.693	-0.003	352576	179610	JP-4 (Tol-C14)	273996	17
C34	6.956	-0.003	371047	123726	BUNKERC (C10-C38)	38519660	4553 M
Filter Peak	----						
C36	7.215	0.006	363055	255103			
C38	7.446	-0.002	301713	113104			
C40	7.723	0.000	184864	69317			
o-terph	4.167	-0.002	4283	4343	JET-A (C10-C18)	126434	9
Triacon Surr	6.459	0.037	3154654	4283818	JP8 (Tol-C16)	279224	16

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	4343	0.2	0.5
Triacontane	4283818	243.0	540.1

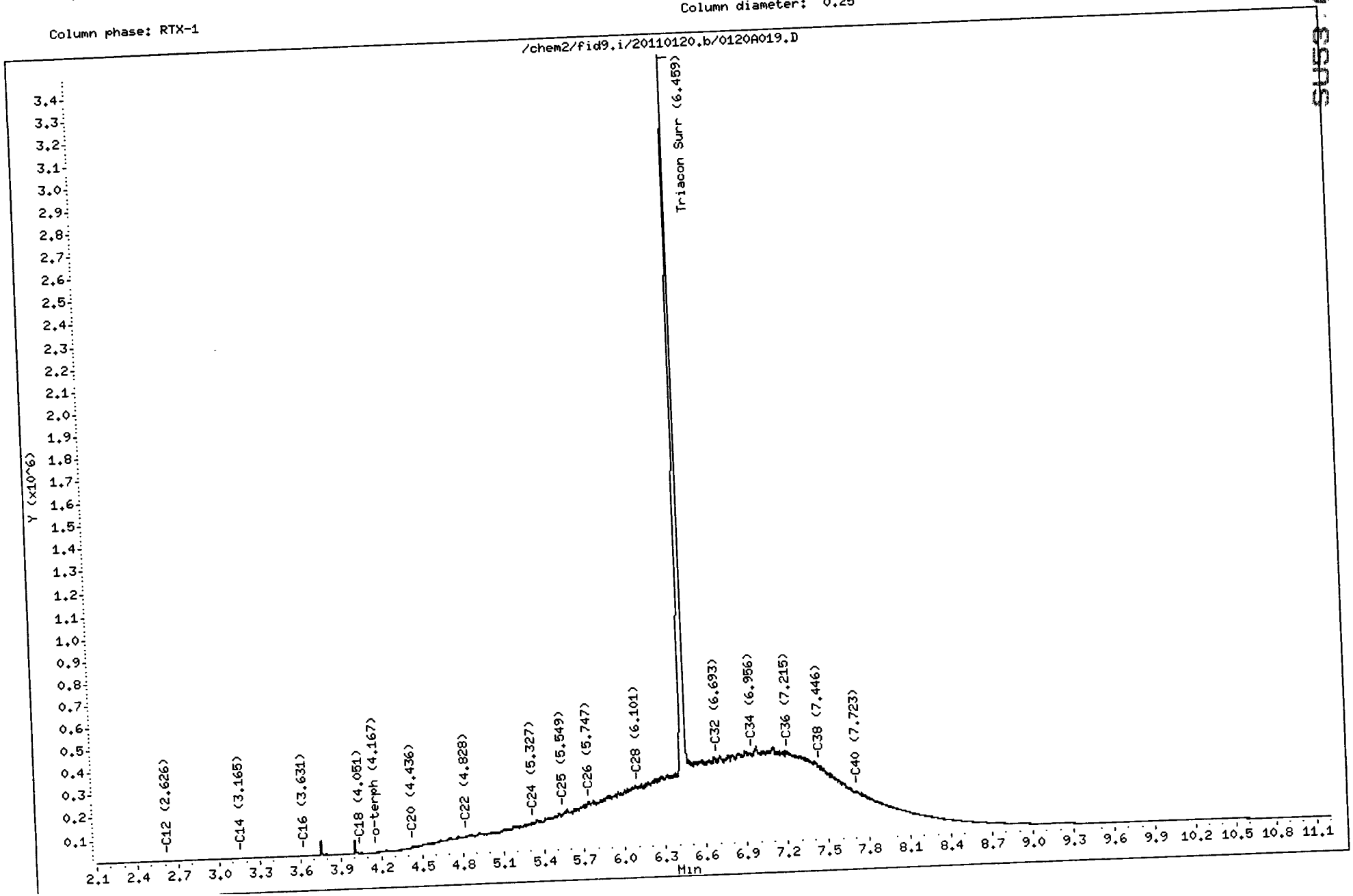
Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110120.b/0120A019.D
Date : 20-JAN-2011 20:30
Client ID: MOIL 2500
Sample Info: MOIL 2500

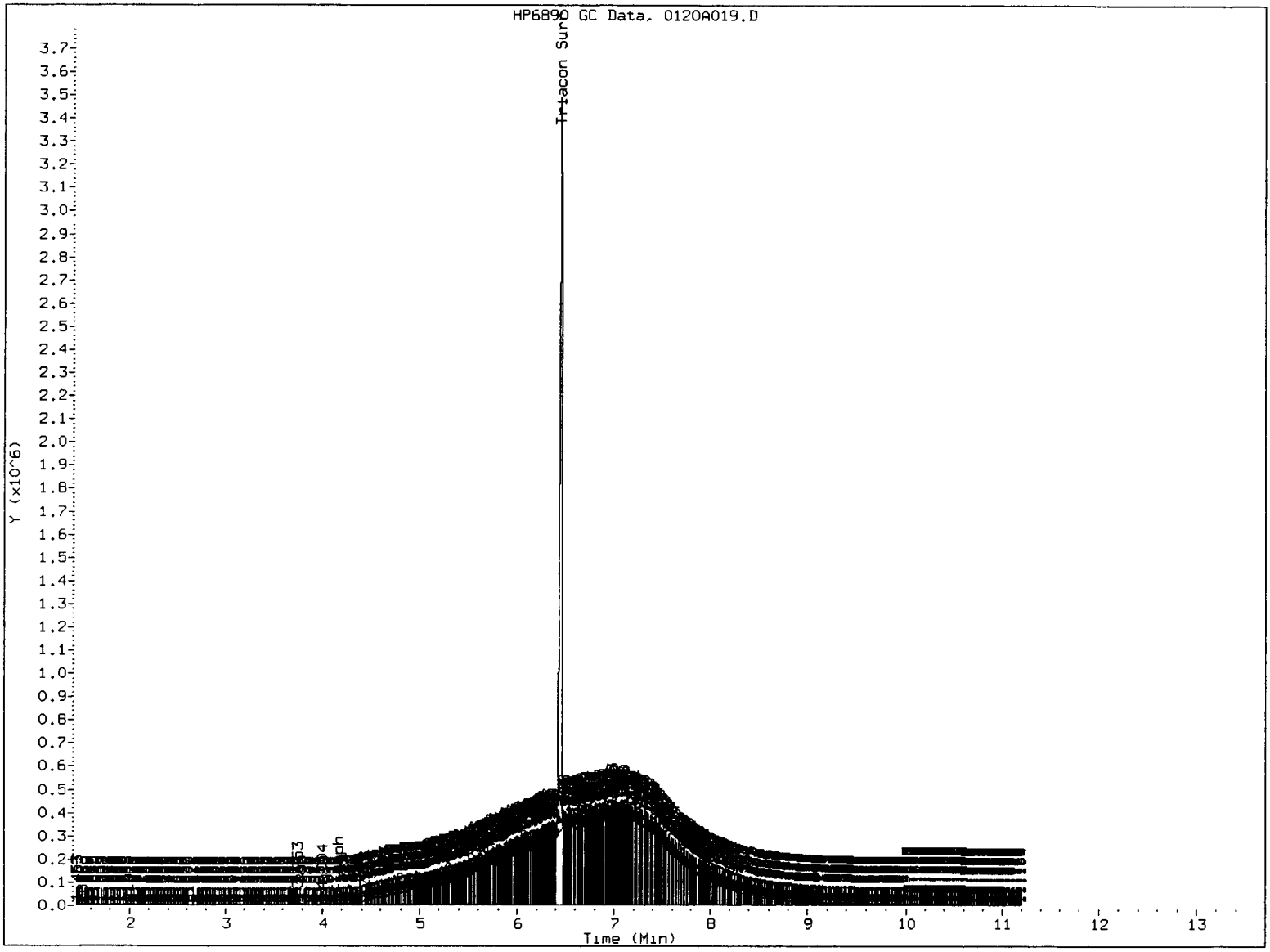
Instrument: fid9.i

Operator: JR
Column diameter: 0.25

Column phase: RTX-1



FID:9A-2C/RTX-1 MOIL 2500 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 1/31/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A020.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: MOIL 5000
Client ID: MOIL 5000
Injection: 20-JAN-2011 20:51
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.324	0.021	384362	214781	GAS (Tol-C12)	307819	15
C8	1.529	0.010	2486	2344	DIESEL (C12-C24)	8245277	364
C10	1.985	-0.003	8171	4428	M.OIL (C24-C38)	79174165	5969
C12	2.625	0.002	5015	2946	AK-102 (C10-C25)	10265591	402
C14	3.162	0.006	3723	2076	AK-103 (C25-C36)	68553822	8067 M
C16	3.629	0.003	2606	1651			
C18	4.051	0.001	7928	5724			
C20	4.438	0.003	47245	18359			
C22	4.831	0.004	128308	39842			
C24	5.322	-0.002	241324	137531			
C25	5.550	0.002	308754	126492			
C26	5.743	-0.006	457198	467304			
C28	6.106	0.003	566412	190357			
C32	6.698	0.001	855276	348917	JP-4 (Tol-C14)	325031	20
C34	6.958	-0.001	881639	293712	BUNKERC (C10-C38)	87442633	10336 M
Filter Peak	----						
C36	7.214	0.005	801988	376629			
C38	7.452	0.004	563279	502147			
C40	7.722	-0.001	241022	143323			
o-terph	4.166	-0.003	7763	9588	JET-A (C10-C18)	251715	18
Triacon Surr	6.496	0.075	4155743	9818370	JP8 (Tol-C16)	335455	19

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	9588	0.4	1.0
Triacontane	9818370	557.0	1237.8

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

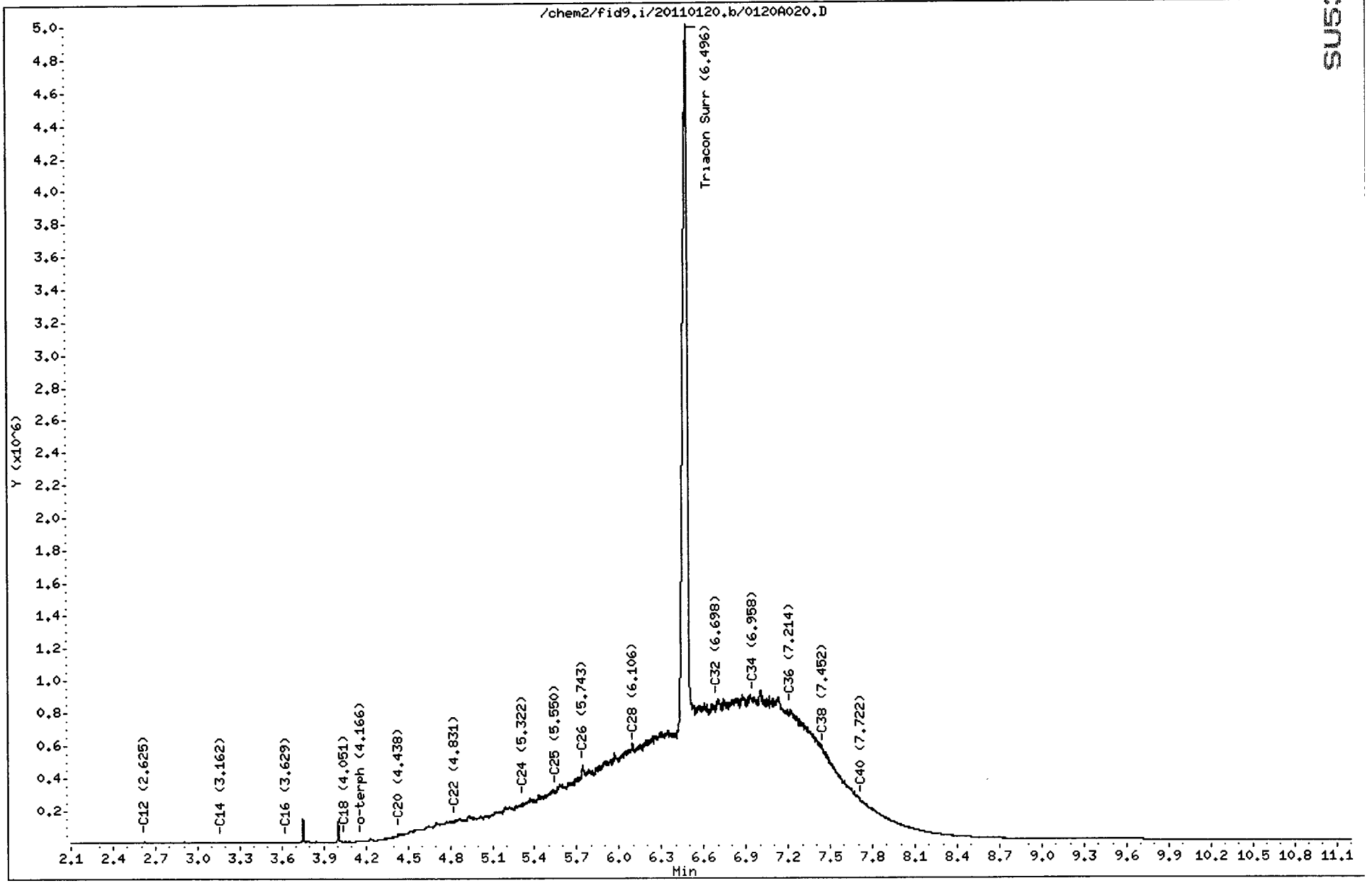
Data File: /chem2/fid9.i/20110120.b/0120A020.D
Date : 20-JAN-2011 20:51
Client ID: MOIL 5000
Sample Info: MOIL 5000

Column phase: RTX-1

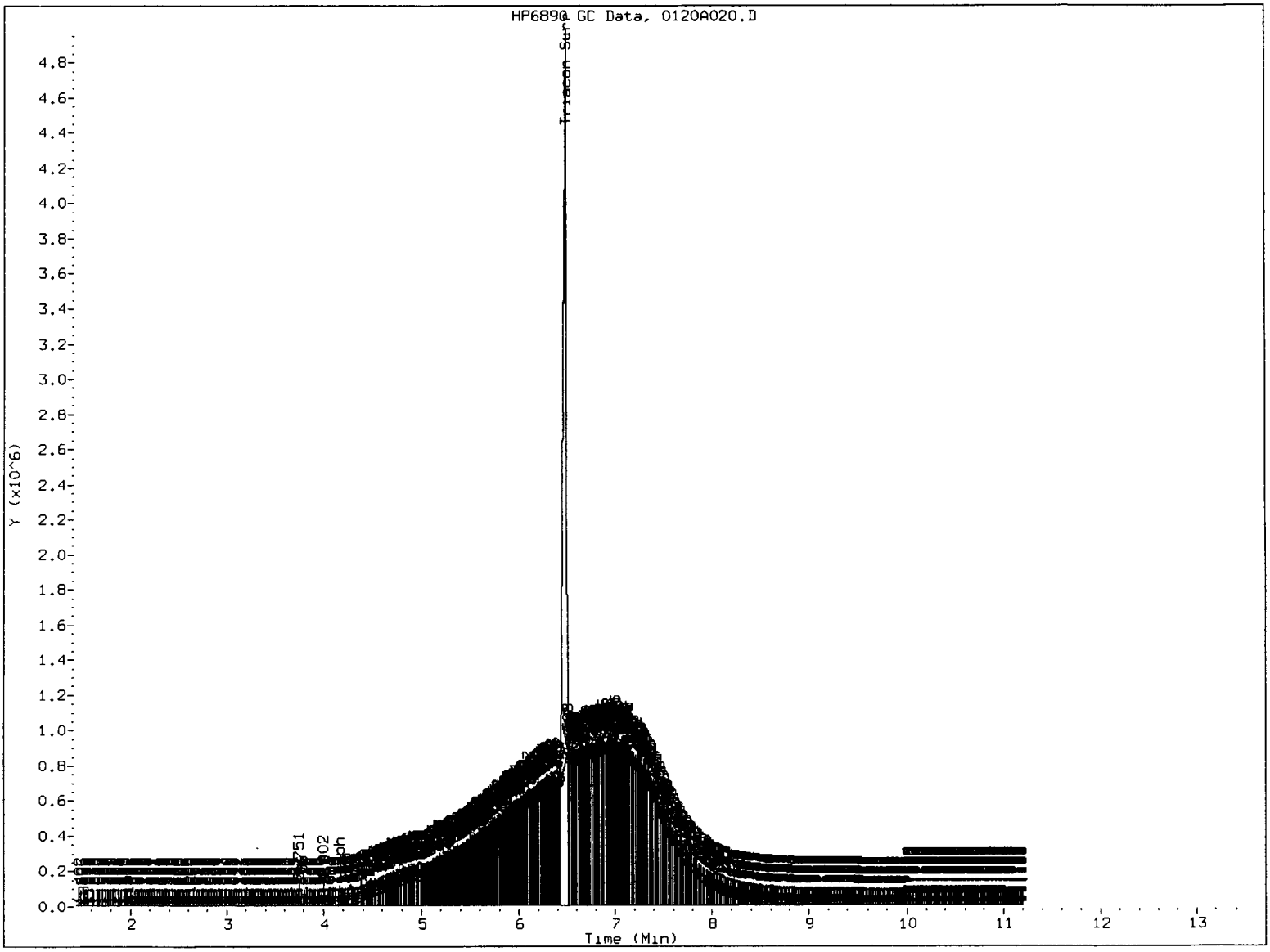
Instrument: fid9.i

Operator: JR
Column diameter: 0.25

SUS#: 00997



FID:9A-2C/RTX-1 MOIL 5000 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 1/31/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110120.b/0120A021.D
Method: /chem2/fid9.i/20110120.b/ftphfid9a.m
Instrument: fid9.i
Operator: JR
Report Date: 01/31/2011

ARI ID: MOIL ICV
Client ID:
Injection: 20-JAN-2011 21:12
Dilution Factor: 1
Macro: 20-JAN-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.324	0.022	44320	50117	GAS (Tol-C12)	136658	7	
C8	1.533	0.014	2616	2149	DIESEL (C12-C24)	538793	24	
C10	1.989	0.001	1562	1745	M.OIL (C24-C38)	5432551	410	82%
C12	2.609	-0.013	390	355	AK-102 (C10-C25)	689107	27	
C14	3.156	-0.001	155	99	AK-103 (C25-C36)	4380704	515	M
C16	3.626	-0.001	82	12				
C18	4.055	0.006	664	630				
C20	4.438	0.003	3115	3440				
C22	4.827	-0.001	8284	2608				
C24	5.325	0.001	15523	16382				
C25	5.549	0.001	20595	10950				
C26	5.747	-0.002	24839	4923				
C28	6.101	-0.003	34160	7461				
C32	6.696	-0.001	53883	31547	JP-4 (Tol-C14)	142919	9	
C34	6.960	0.002	64809	30650	BUNKERC (C10-C38)	5992347	708	M
Filter Peak	----							
C36	7.210	0.001	67841	12118				
C38	7.448	0.000	64571	17929				
C40	7.725	0.002	44664	18424				
o-terph	4.171	0.003	1796	1471	JET-A (C10-C18)	46651	3	
Triacon Surr	6.416	-0.005	466501	267769	JP8 (Tol-C16)	144649	8	

M Indicates manual integration within range.
Range Times: NW Diesel(2.623 - 5.324) AK102(1.99 - 5.55) Jet A(1.99 - 4.05)
NW M.Oil(5.32 - 7.45) AK103(5.55 - 7.21) OR Diesel(1.99 - 6.10)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1471	0.1	0.2
Triacontane	267769	15.2	33.8

Low bet Triacontane I.C.V. is not required.

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	8460.3	18-SEPT-2010
JP-8	17594.0	25-MAY-2010

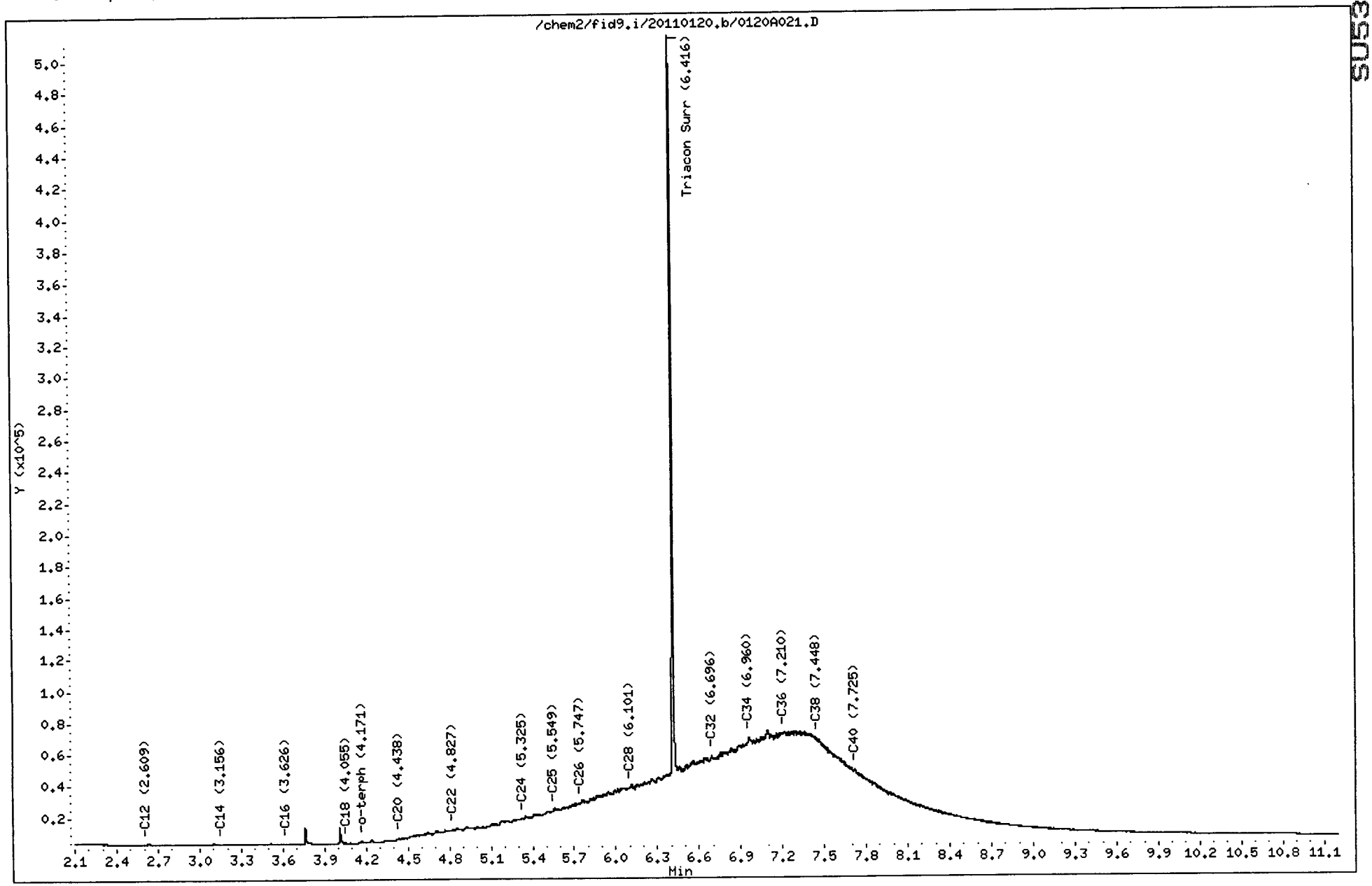
Data File: /chem2/fid9.i/20110120.b/0120A021.D
Date : 20-JAN-2011 21:12
Client ID:
Sample Info: MOIL ICV

Column phase: RTX-1

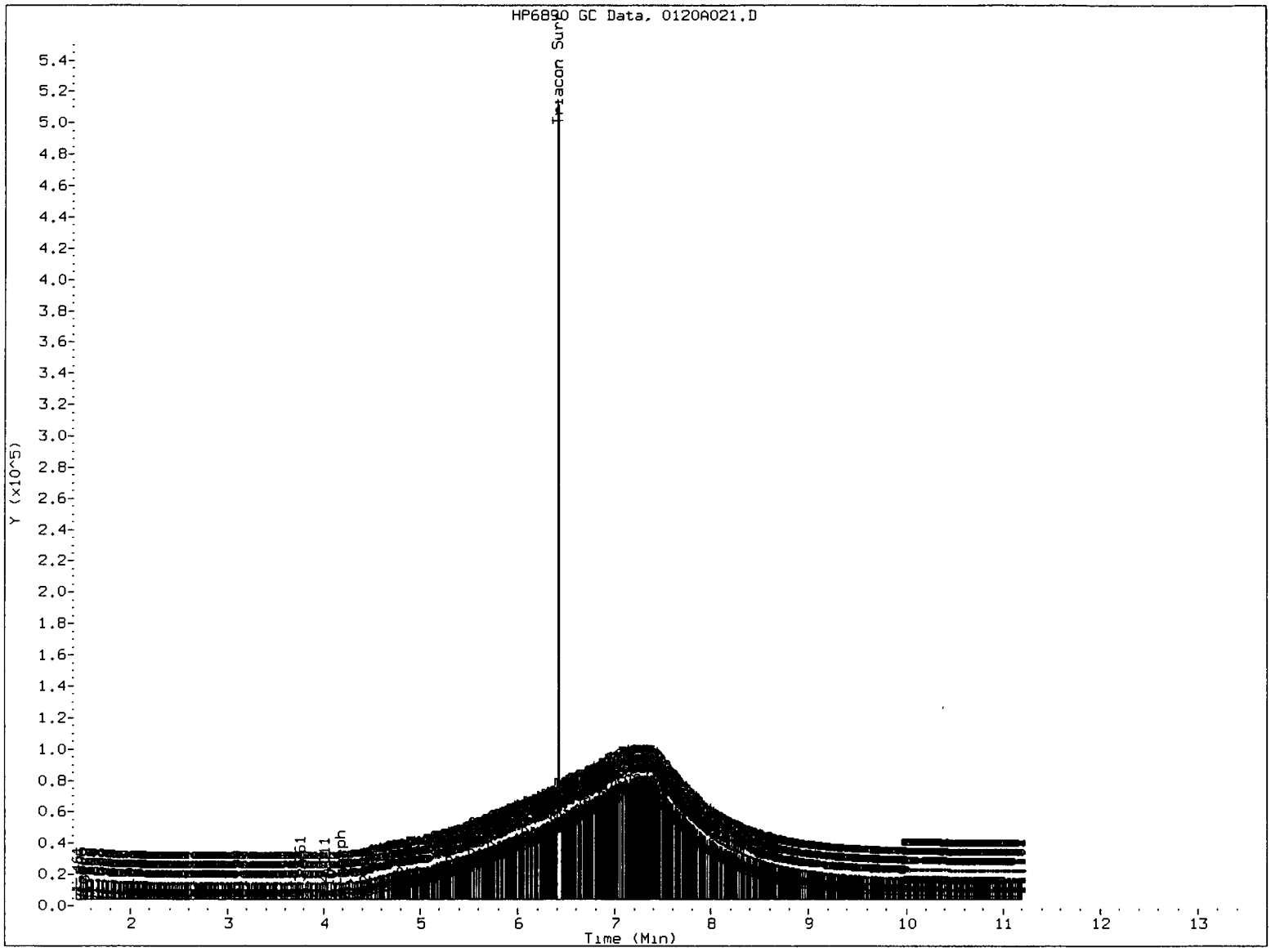
Instrument: fid9.i

Operator: JR
Column diameter: 0.25

SUS3-01009



FID:9A-2C/RTX-1 MOIL ICV FID:9A SIGNAL



MANUAL INTEGRATION

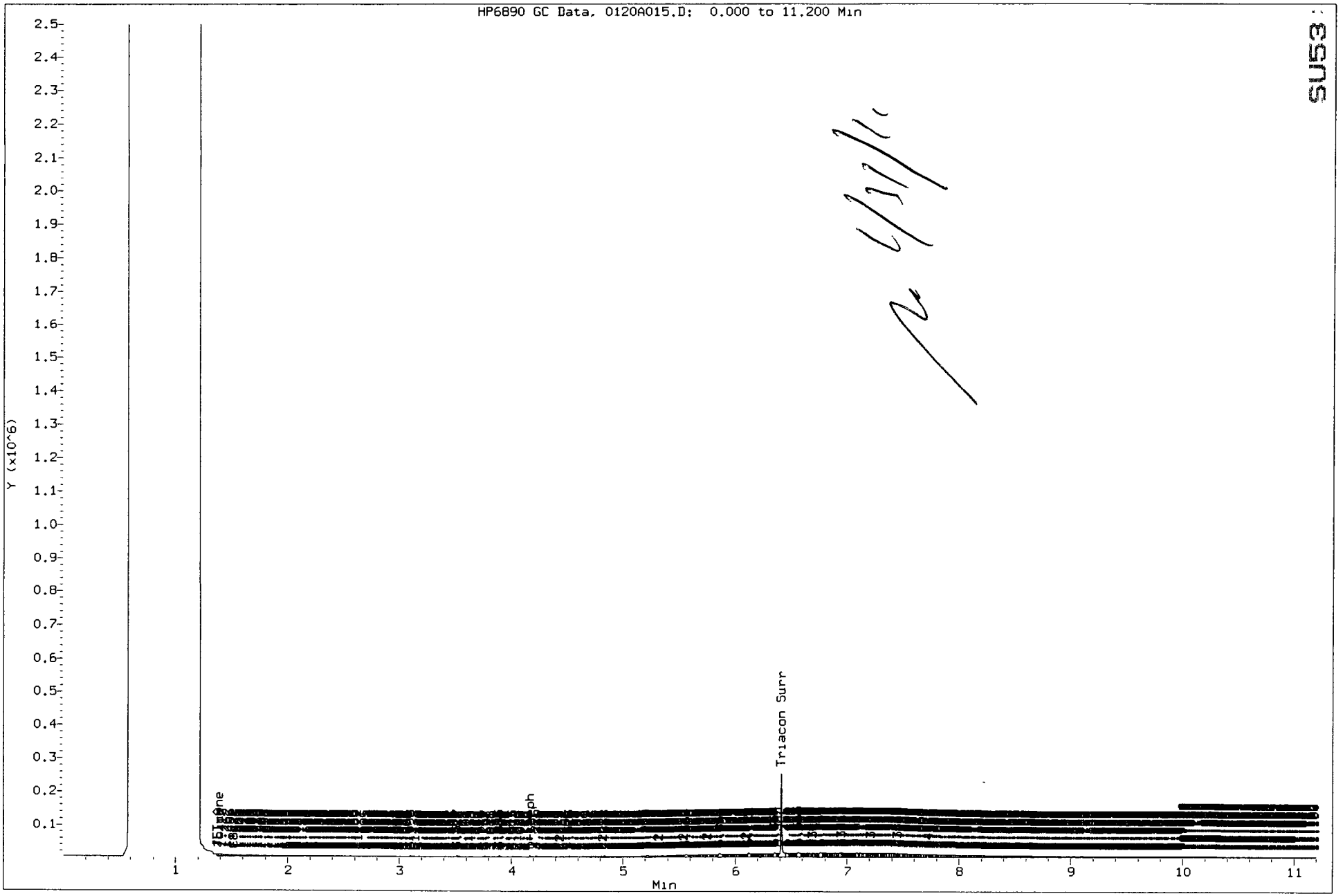
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

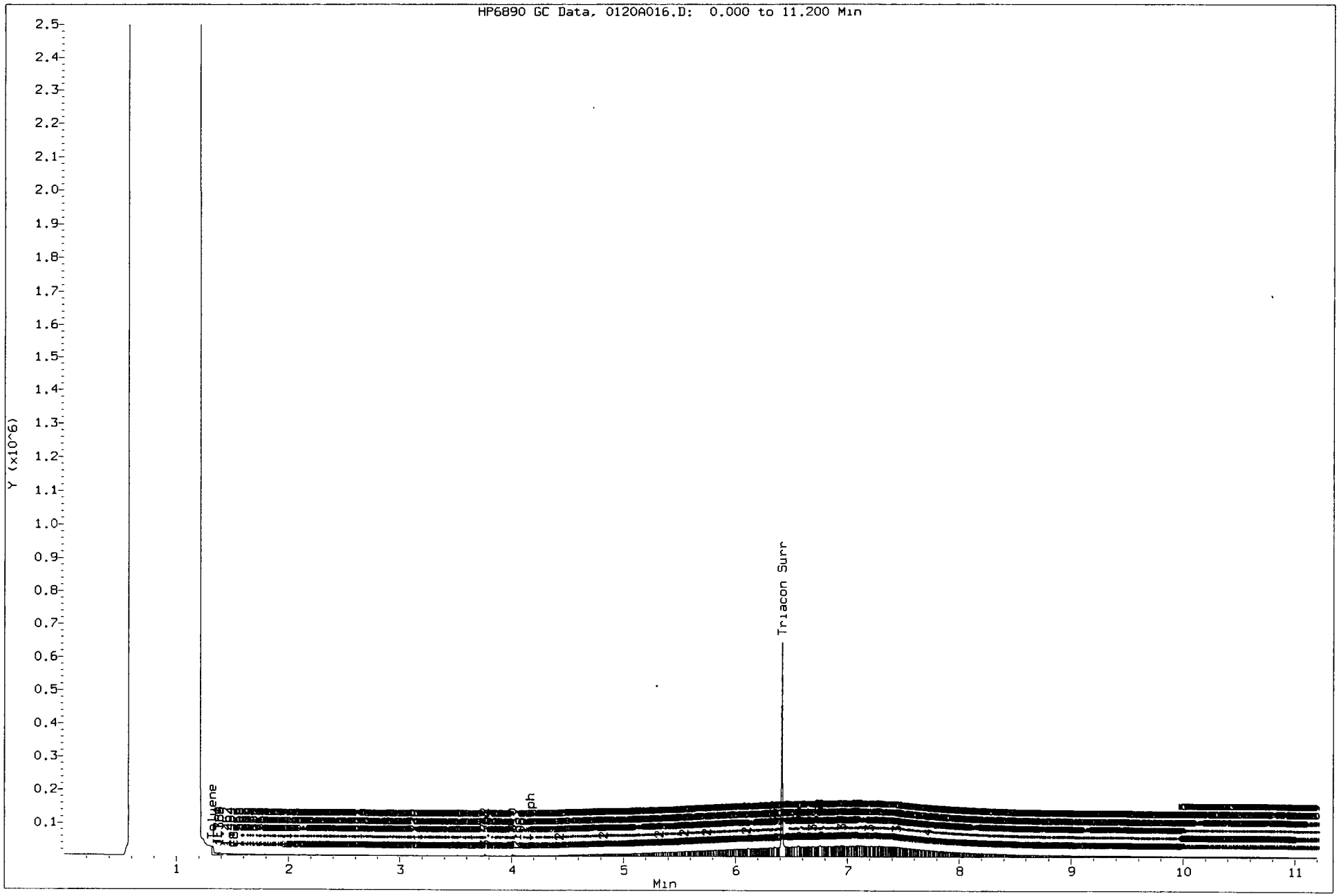
Analyst: _____ Date: 1/23/11

Data File: /chem2/fid9.i/20110120.b/0120A015.D
Injection Date: 20-JAN-2011 19:04
Instrument: fid9.i
Client Sample ID: MOIL 100

SU53:01002



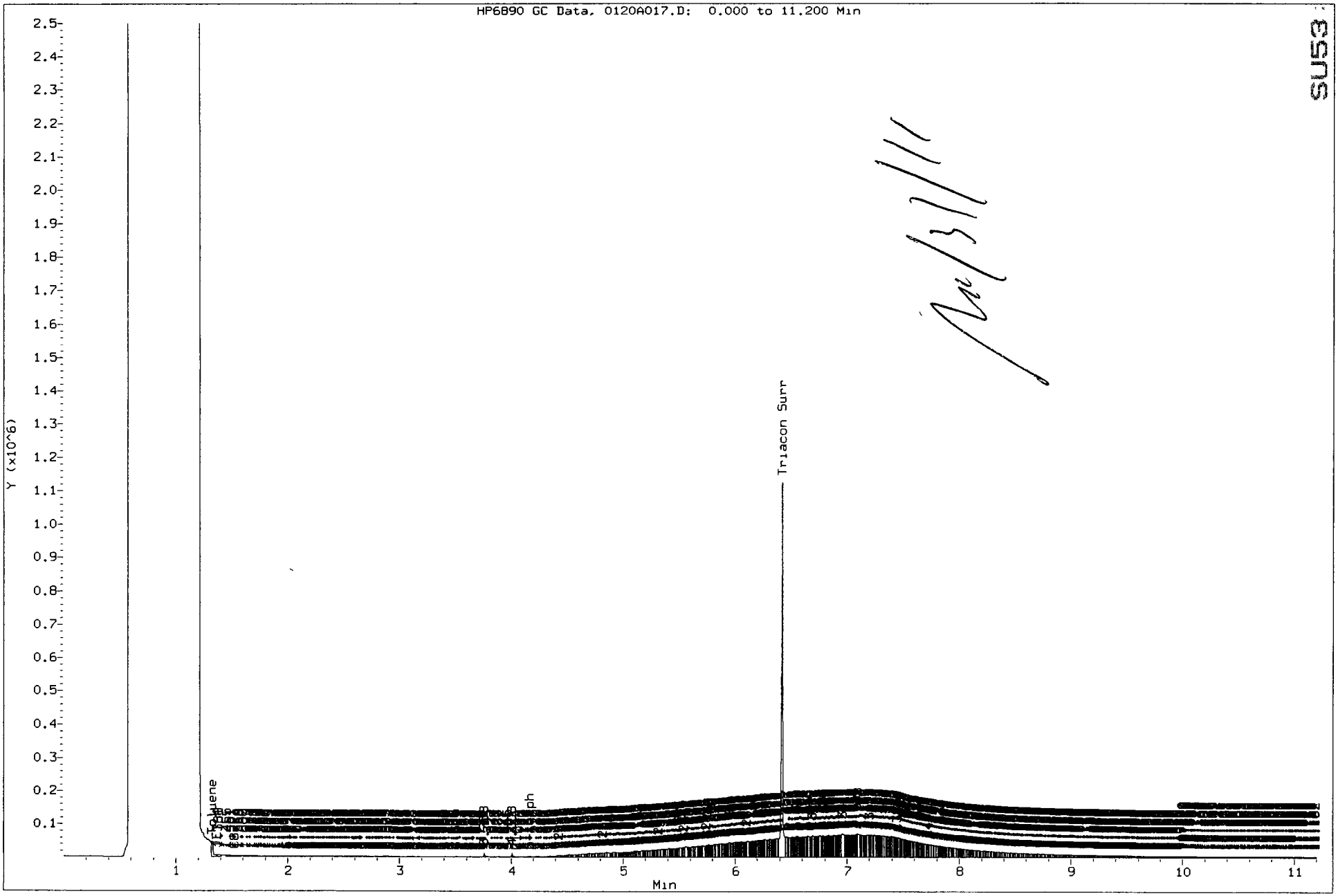
Data File: /chem2/fid9.i/20110120.b/0120A016.D
Injection Date: 20-JAN-2011 19:26
Instrument: fid9.i
Client Sample ID: MOIL 250



SU53:01003

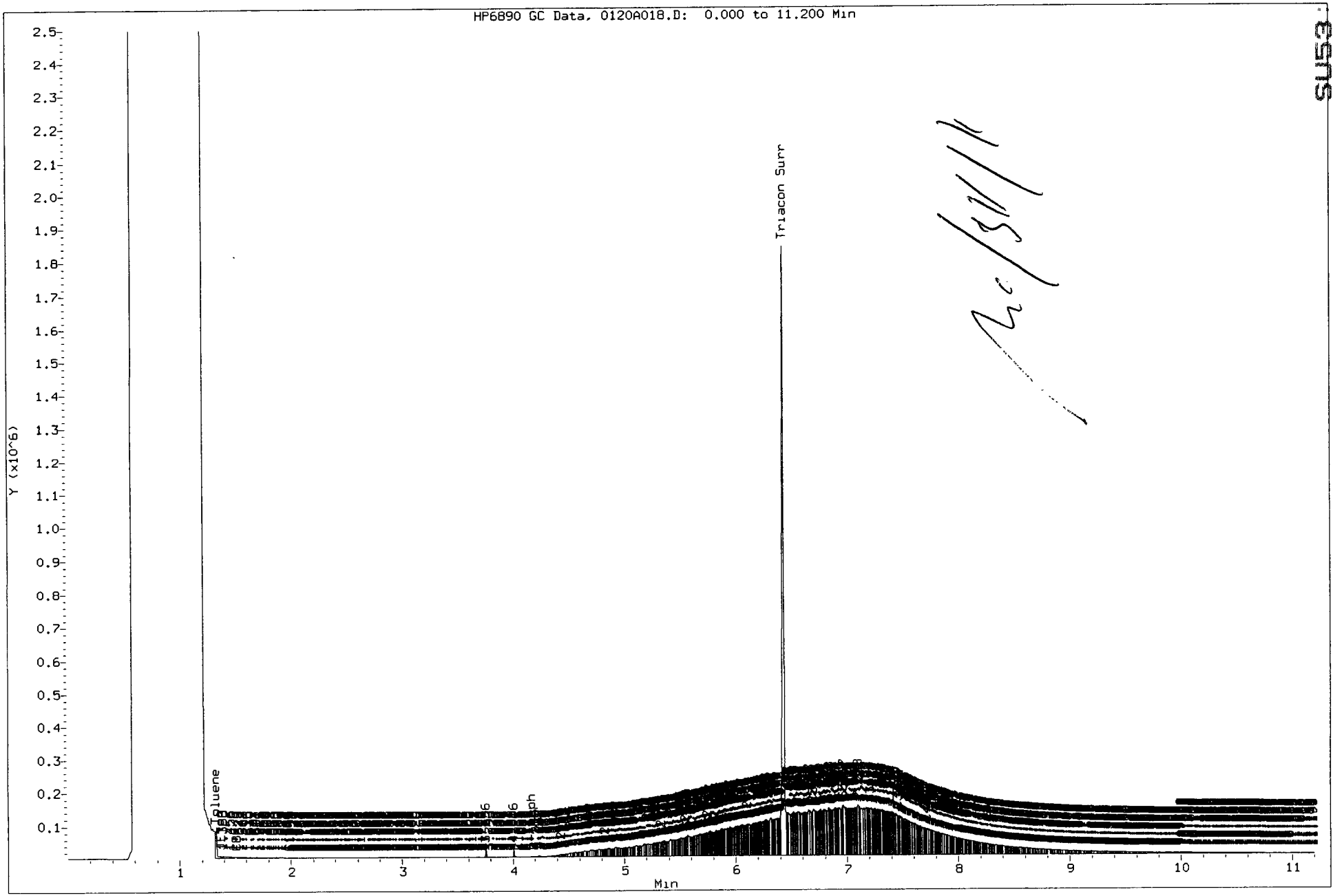
Data File: /chem2/fid9.i/20110120.b/0120A017.D
Injection Date: 20-JAN-2011 19:47
Instrument: fid9.i
Client Sample ID: MOIL 500

SUS3 01001

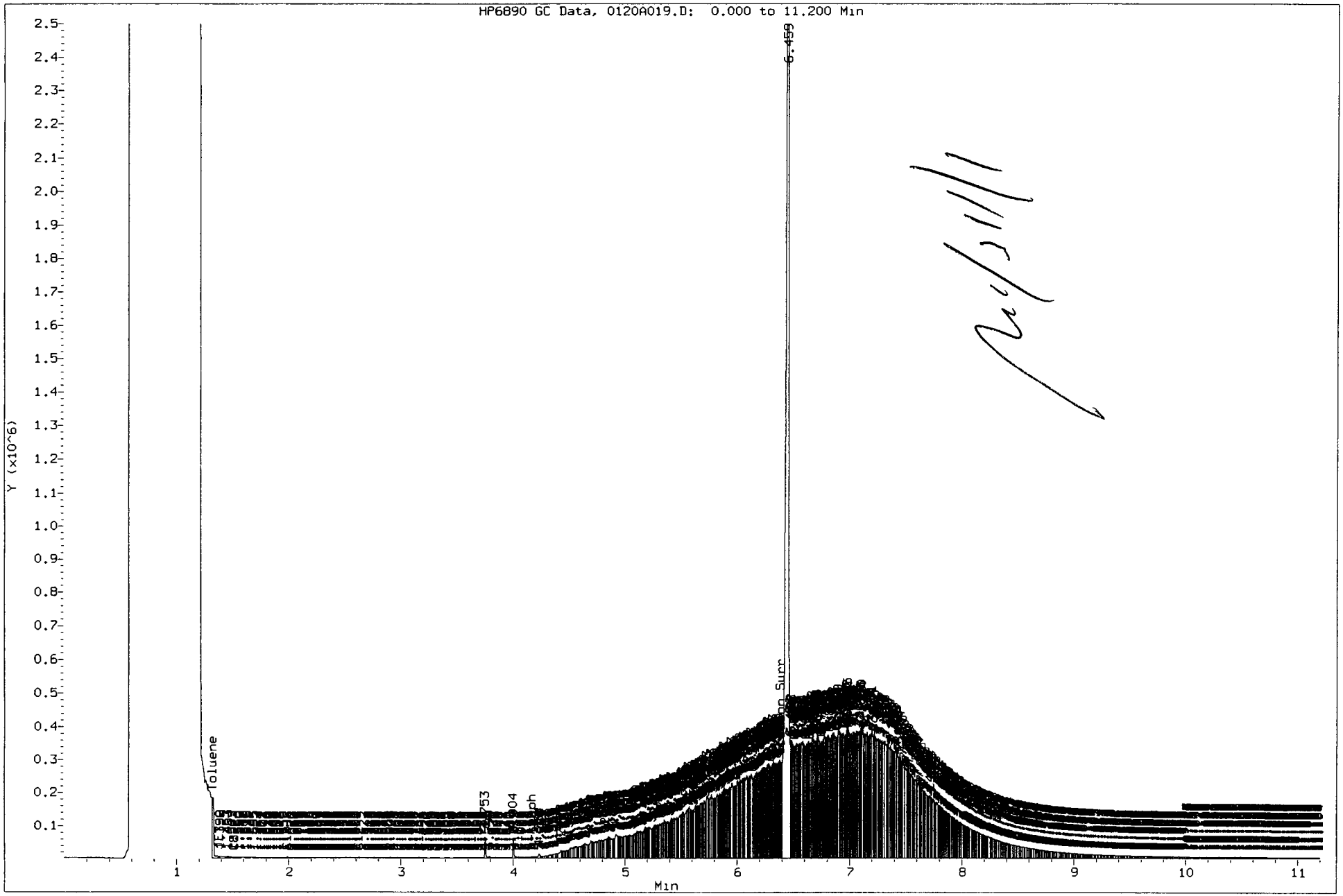


Data File: /chem2/fid9.i/20110120.b/0120A018.D
Injection Date: 20-JAN-2011 20:08
Instrument: fid9.i
Client Sample ID: MOIL 1000

SL53 01095

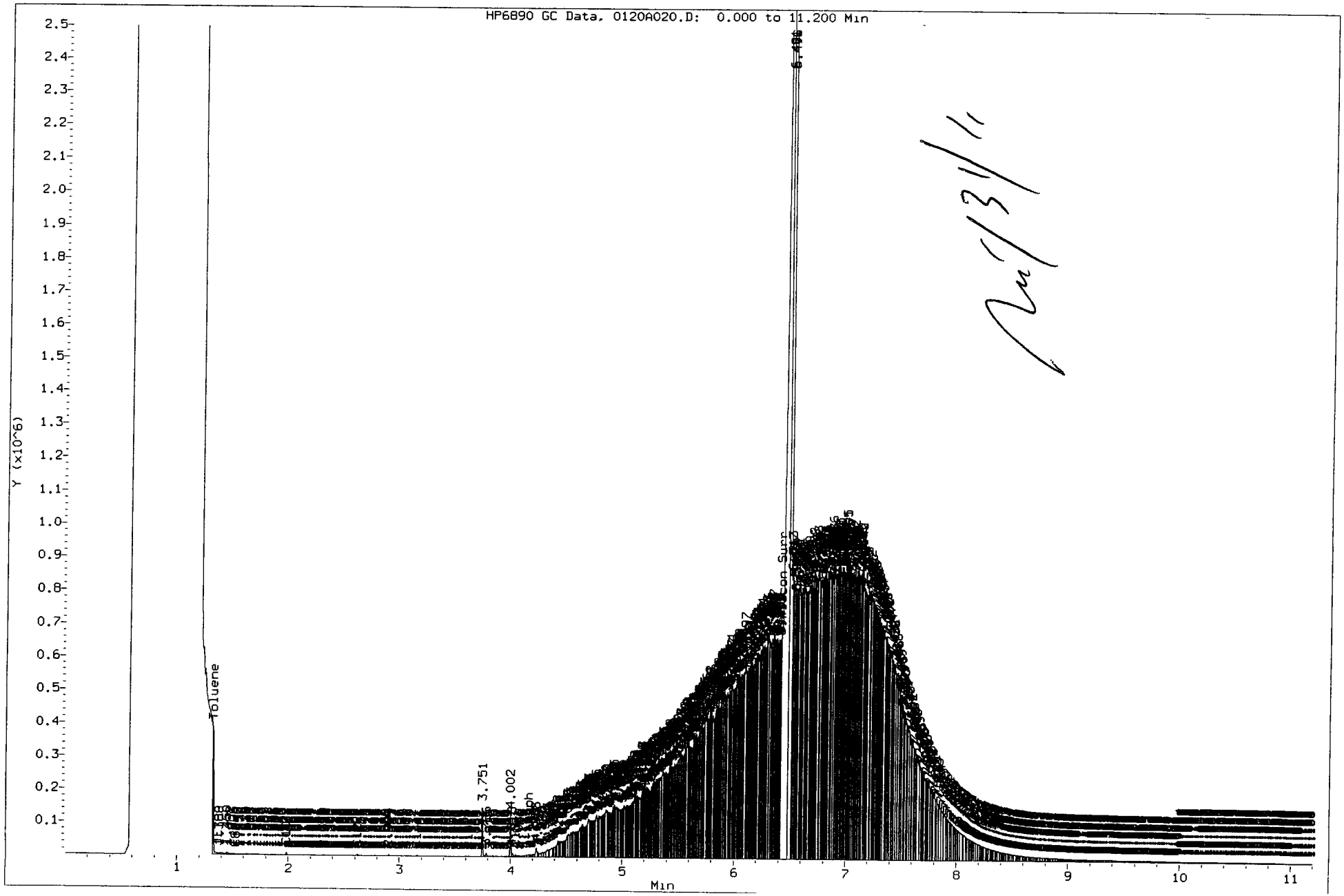


Data File: /chem2/fid9.i/20110120.b/0120A019.D
Injection Date: 20-JAN-2011 20:30
Instrument: fid9.i
Client Sample ID: MOIL 2500



SU53:010006

Data File: /chem2/fid9.1/20110120.b/0120A020.D
Injection Date: 20-JAN-2011 20:51
Instrument: fid9.1
Client Sample ID: MOIL 5000



SU53 : 01007

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

ARI Job ID: SU53, SU73, SU74

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: SU53 Client ID: Floyd-Snider

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

Parameter(s): Diesel, Mot. oil-aph.

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

Dates: Curve: 1/20/11 Analysis Start: 5/5/11

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

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

Additional Details on Reverse: Yes / No

Analyst: MB **Date:** 5/9/11

Reviewer: [signature] **Date:** 5/9/11

Analytical Resources Inc.: Organics Instrument Log

FID-9 Agilent 6850 - Serial No.: US10404004

Date: 5/5/11 Analysis: NWTPHD Analyst: JM

GC Program: TPH Column No: 974444 Column Type: DB-1

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

Calibration File: — Curve Date: 4/28/11

IS/SS	Ical/Ccal	LCS/ICV
	HP6-1	
	707-2	
	772-3	
	705-2	

	Inject Date/Time	Filename	DF	LabID
1	05-MAY-2011 10:26	0505A001.D	1	RINSE
2	05-MAY-2011 10:47	0505A002.D	1	RT
3	05-MAY-2011 11:09	0505A003.D	1	IB
4	05-MAY-2011 11:31	0505A004.D	1	DIESEL#1
5	05-MAY-2011 11:52	0505A005.D	1	MOIL#1
6	05-MAY-2011 13:58	0505A006.D	1	SU96A
7	05-MAY-2011 14:20	0505A007.D	1	SU96B
8	05-MAY-2011 14:42	0505A008.D	1	SV05A
9	05-MAY-2011 15:04	0505A009.D	1	SV05B
10	05-MAY-2011 15:25	0505A010.D	1	SU96LCSS1
11	05-MAY-2011 15:47	0505A011.D	1	SU96LCSDS1
12	05-MAY-2011 16:09	0505A012.D	1	SU96MBS1
13	05-MAY-2011 16:31	0505A013.D	1	DIESEL#2
14	05-MAY-2011 16:53	0505A014.D	1	MOIL#2

Maintenance / Comments Rerun. Rerun continues on next page. JM 5/6/11

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

FID-9 Agilent 6850 - Serial No.: US10404004

Date: 5/5/11 Analysis: NWTPH-D Analyst: MD

GC Program: TPH Column No: 977444 Column Type: RTX-1

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

Calibration File: — Curve Date: 1/20/11

IS/SS	Ical/Ccal	LCS/ICV
	1786-1	
	175-2	
	177-3	
	17JV-2	

	Inject Date/Time	Filename	DF	LabID
1	05-MAY-2011 17:15	0505A015.D	1	SU53MBW1
2	05-MAY-2011 17:36	0505A016.D	1	SU53LCSW1
3	05-MAY-2011 17:58	0505A017.D	1	SU53QLS
4	05-MAY-2011 18:20	0505A018.D	1	SU53A
5	05-MAY-2011 18:42	0505A019.D	1	SU53AMS
6	05-MAY-2011 19:03	0505A020.D	1	SU53AMSD
7	05-MAY-2011 19:25	0505A021.D	1	SU53B
8	05-MAY-2011 19:47	0505A022.D	1	SU53C
9	05-MAY-2011 20:09	0505A023.D	1	SU53D
10	05-MAY-2011 20:30	0505A024.D	1	SU53E
11	05-MAY-2011 20:52	0505A025.D	1	SU53F
12	05-MAY-2011 21:14	0505A026.D	1	DIESEL#3
13	05-MAY-2011 21:35	0505A027.D	1	MOIL#3

MD

MS 5/6/11

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/20110505.b

ARI Job No.: SU53 Method: ftphfid9a.m Instrument: fid9.i Date: 05-MAY-2011

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1715	0505A015.D	SU53MBW1	SU53MBW1	1	NO MANUAL INTEGRATION
1736	0505A016.D	SU53LCSW1	SU53LCSW1	1	o-terph,
1820	0505A018.D	SU53A	MW5042811	1	NO MANUAL INTEGRATION
1842	0505A019.D	SU53AMS	MW5042811	1	o-terph,
1903	0505A020.D	SU53AMSD	MW5042811	1	o-terph,
1925	0505A021.D	SU53B	MW15042811	1	NO MANUAL INTEGRATION
1947	0505A022.D	SU53C	MW4042811	1	NO MANUAL INTEGRATION
2009	0505A023.D	SU53D	MW17042811	1	NO MANUAL INTEGRATION
2030	0505A024.D	SU53E	MW14042811	1	NO MANUAL INTEGRATION

SU53 05012

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A002.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

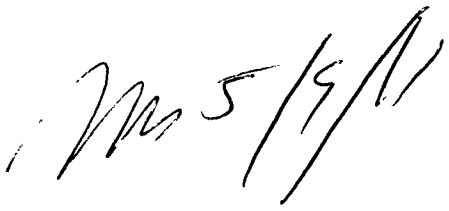
ARI ID: RT
Client ID: RT
Injection: 05-MAY-2011 10:47
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.600	0.000	626	639	GAS (Tol-C12)	375667	17.88
C8	1.271	0.000	176377	132802	DIESEL (C12-C24)	1196332	52.81
C10	1.975	0.000	322954	177583	M.OIL (C24-C38)	1576731	118.88
C12	2.620	0.000	151556	167731	AK-102 (C10-C25)	1562055	61.19
C14	3.157	0.000	183885	158682	AK-103 (C25-C36)	1420179	167.12
C16	3.621	0.000	217787	170805			
C18	4.035	0.000	284566	168245			
C20	4.424	0.000	306896	177310			
C22	4.812	0.000	276612	184813			
C24	5.308	0.000	276846	192004			
C25	5.532	0.000	411216	280837			
C26	5.733	0.000	314429	200396			
C28	6.088	0.000	360531	223269			
C32	6.679	0.000	340316	205074	JP-4 (Tol-C14)	564557	34.43
C34	6.941	0.000	301944	192468	BUNKERC (C10-C38)	3137774	421.49
Filter Peak	----						
C36	7.191	0.000	261860	165658			
C38	7.431	0.000	168674	116133			
C40	7.700	0.000	43252	51582			
o-terph	4.151	0.000	947038	585113	JET-A (C10-C18)	940544	68.06
Triacon Surr	6.406	0.000	965511	636115	JP8 (Tol-C16)	760120	43.20

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	585113	27.3	60.7
Triacontane	636115	36.1	80.2



Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110505.b/0505A002.D

Date : 05-MAY-2011 10:47

Client ID: RT

Sample Info: RT

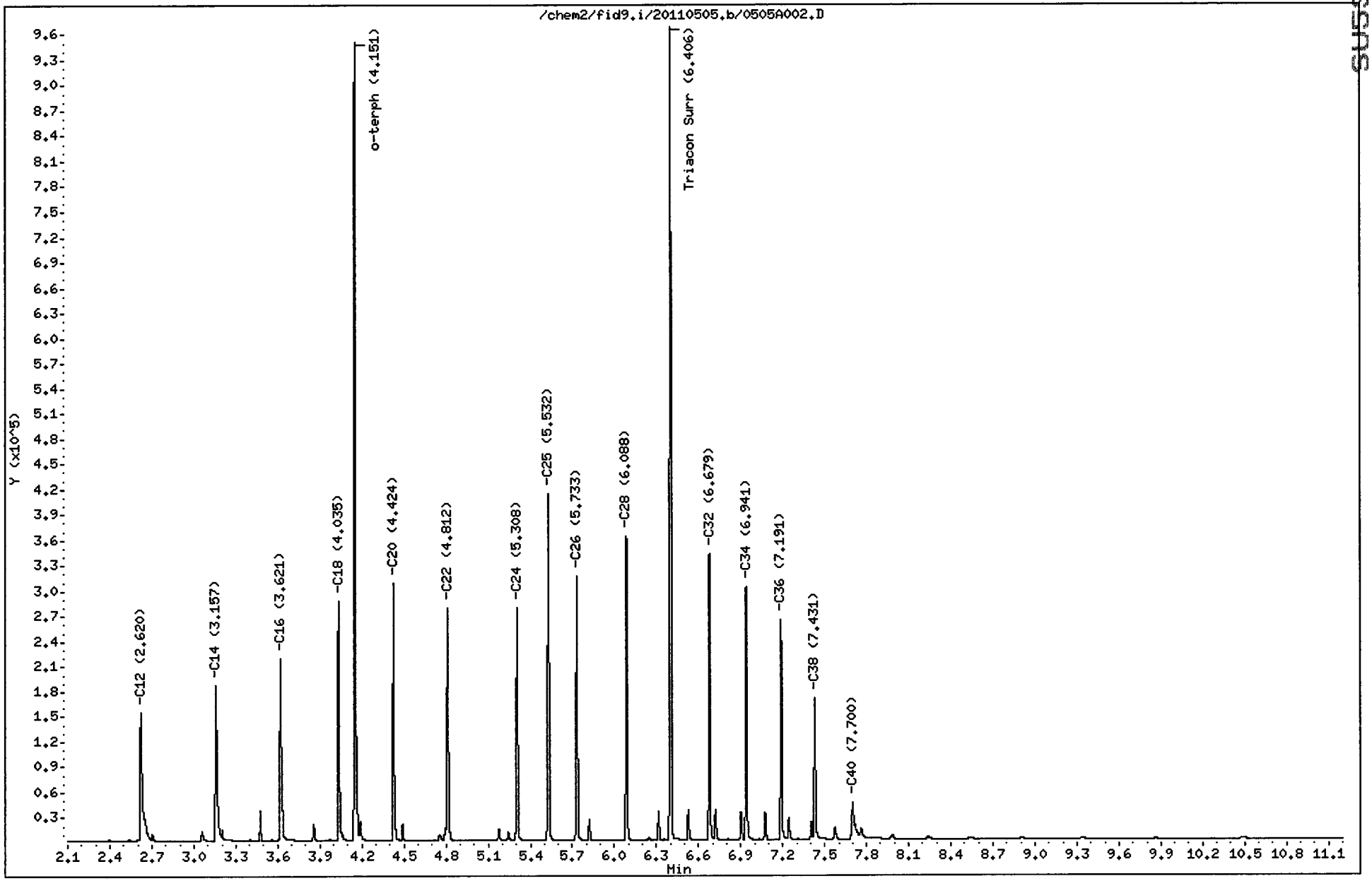
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SUSS : 01011



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A003.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: IB
Client ID: IB
Injection: 05-MAY-2011 11:09
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.597	-0.002	774	331	GAS (Tol-C12)	29430	1.40
C8	----				DIESEL (C12-C24)	83446	3.68
C10	1.983	0.009	1509	1397	M.OIL (C24-C38)	330060	24.88
C12	2.594	-0.026	3731	5835	AK-102 (C10-C25)	101673	3.98
C14	3.156	-0.001	369	401	AK-103 (C25-C36)	307584	36.19
C16	3.623	0.003	238	149			
C18	4.036	0.001	226	130			
C20	4.428	0.004	369	319			
C22	4.804	-0.008	4499	4675			
C24	5.313	0.005	625	550			
C25	5.521	-0.011	14006	9337			
C26	5.726	-0.007	55	37			
C28	6.081	-0.007	41767	30927			
C32	6.673	-0.006	660	759	JP-4 (Tol-C14)	49750	3.03
C34	6.955	0.014	438	355	BUNKERC (C10-C38)	431157	57.92
Filter Peak	----						
C36	7.184	-0.007	470	102			
C38	7.443	0.013	537	386			
C40	7.692	-0.007	559	360			
o-terph	4.152	0.001	1254565	838659	JET-A (C10-C18)	59099	4.28
Triacon Surr	6.406	0.001	1106447	748737	JP8 (Tol-C16)	63006	3.58

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	838659	39.2	87.0
Triacontane	748737	42.5	94.4

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

5/5/11

Data File: /chem2/fid9.i/20110505.b/0505A003.D

Date : 05-MAY-2011 11:09

Client ID: IB

Sample Info: IB

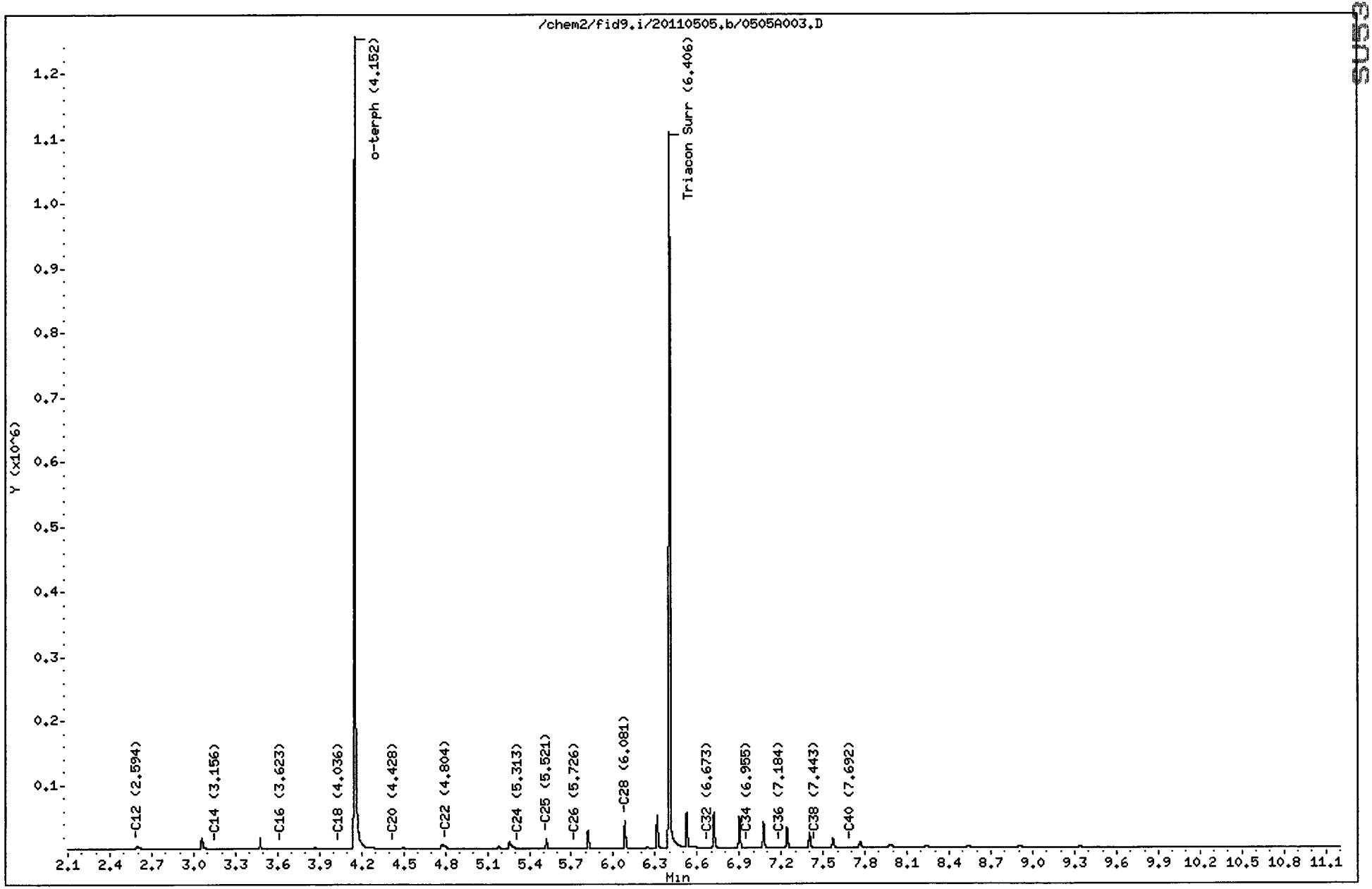
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SUSQ-01016



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A013.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: DIESEL#2
Client ID: LORA LAKES APT. RI
Injection: 05-MAY-2011 16:31
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.619	0.019	10169	15899	GAS (Tol-C12)	784878	37.36	
C8	1.324	0.053	3072	1345	DIESEL (C12-C24)	5690895	251.22	
C10	1.979	0.005	28122	25232	M.OIL (C24-C38)	170722	12.87	
C12	2.621	0.001	65505	52666	AK-102 (C10-C25)	6337542	248.28	M
C14	3.150	-0.007	141354	103460	AK-103 (C25-C36)	137436	16.17	
C16	3.617	-0.004	291699	162669				
C18	4.037	0.002	256189	176251				
C20	4.425	0.001	150694	105151				
C22	4.814	0.002	56231	58753				
C24	5.313	0.005	11440	17726				
C25	5.527	-0.005	14021	12514				
C26	5.730	-0.003	1218	580				
C28	6.087	-0.001	18771	13306				
C32	6.685	0.006	50	38	JP-4 (Tol-C14)	1721197	104.97	
C34	6.951	0.010	32	11	BUNKERC (C10-C38)	6486064	871.27	M
Filter Peak	----							
C36	7.196	0.004	67	31				
C38	7.421	-0.010	5842	4305				
C40	7.701	0.002	454	597				
o-terph	4.157	0.006	1687284	971488	JET-A (C10-C18)	4573912	330.99	
Triacon Surr	6.403	-0.002	134	23	JP8 (Tol-C16)	3167142	180.01	

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	971488	45.4	100.8
Triacontane	23	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110505.b/0505A013.D

Date : 05-MAY-2011 16:31

Client ID: LORA LAKES APT. RI

Sample Info: DIESEL#2

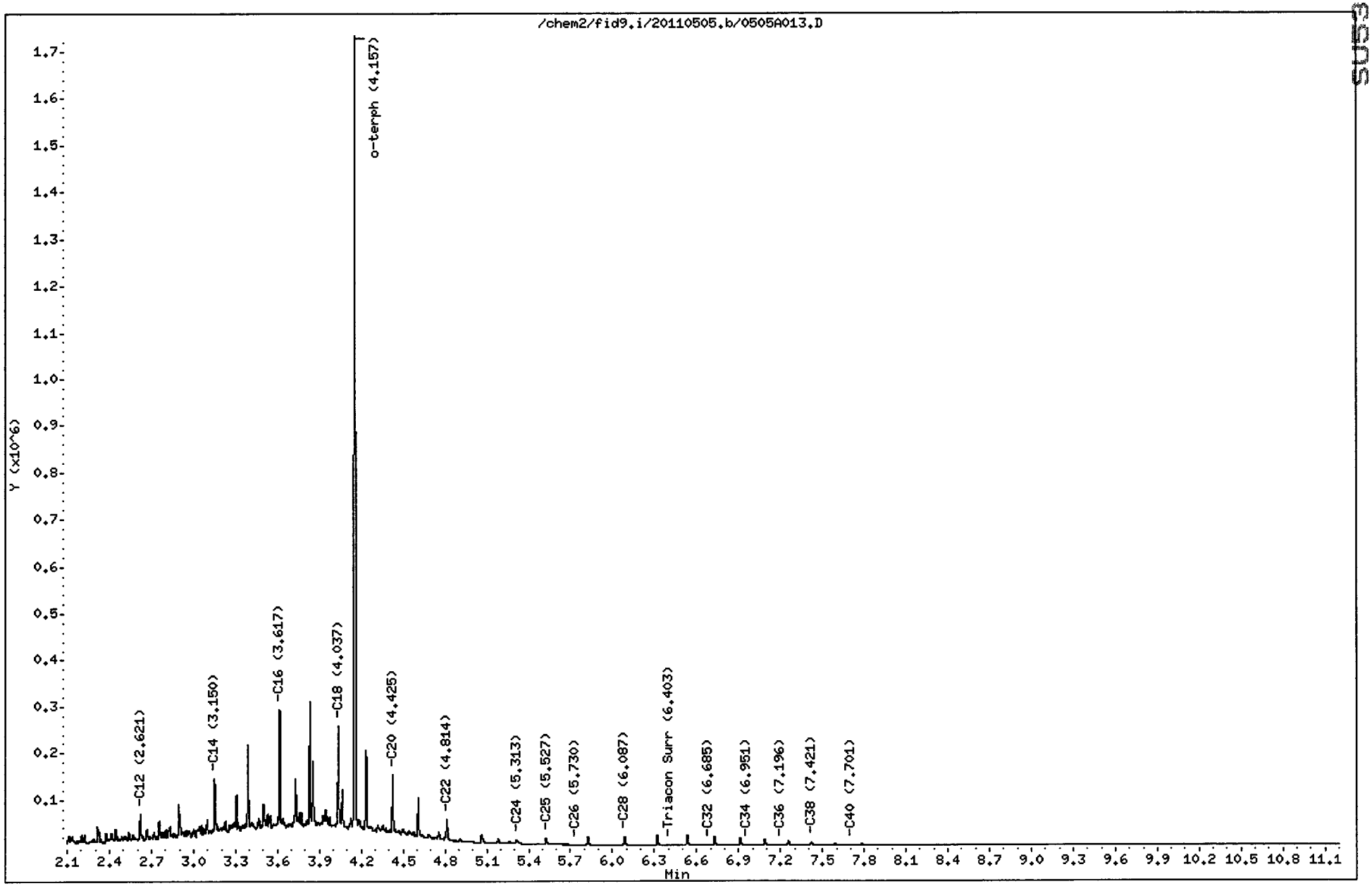
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SUSQ 01018



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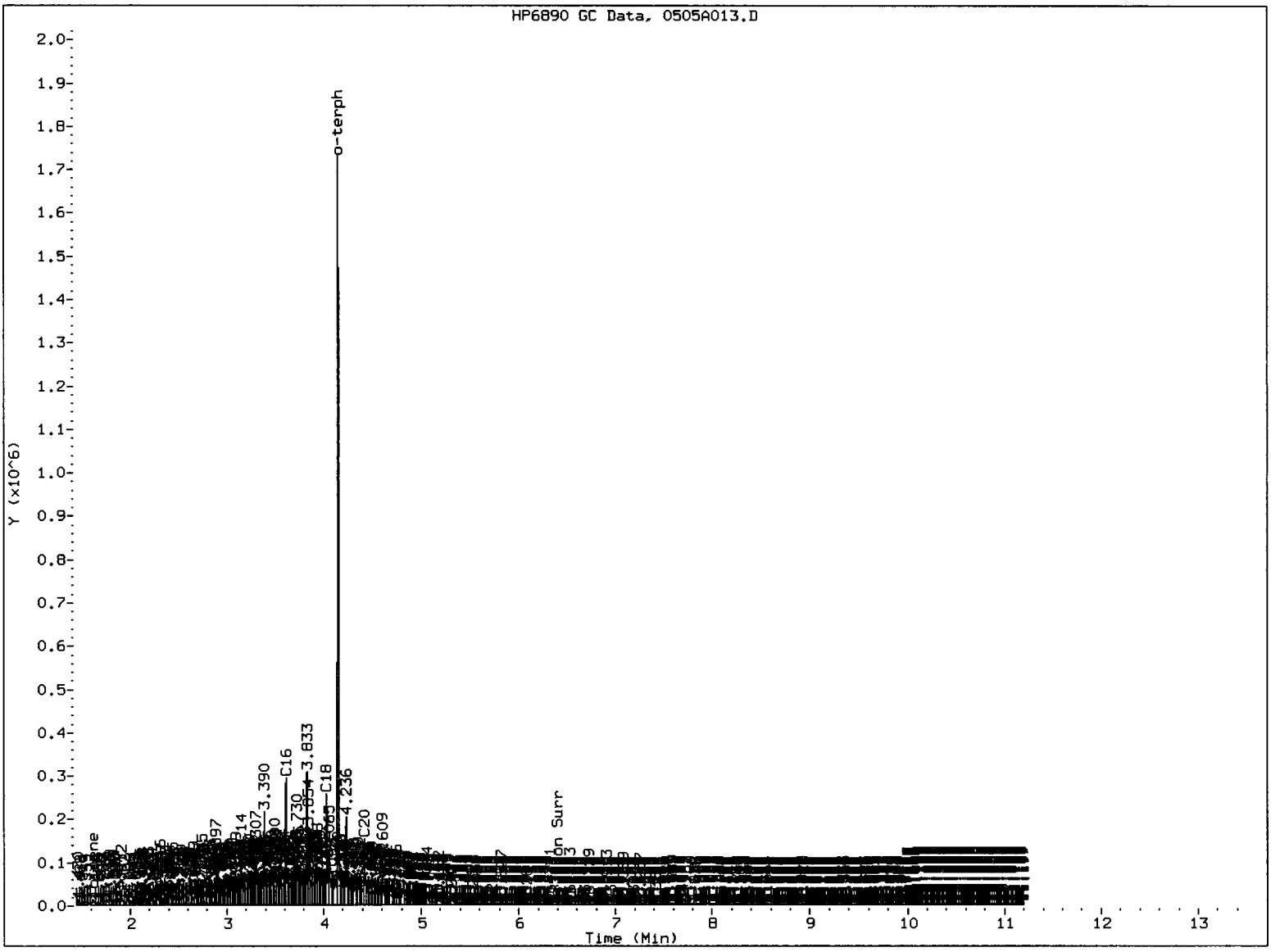


MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/9/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A014.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: MOIL#2
Client ID: LORA LAKES APT. RI
Injection: 05-MAY-2011 16:53
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.597	-0.003	688	440	GAS (Tol-C12)	18435	0.88
C8	1.356	0.085	2500	1929	DIESEL (C12-C24)	857688	37.86
C10	1.982	0.008	1248	1254	M.OIL (C24-C38)	6546657	493.58
C12	2.598	-0.022	1724	2049	AK-102 (C10-C25)	1063619	41.67
C14	3.155	-0.002	67	36	AK-103 (C25-C36)	5938010	698.74 M
C16	3.633	0.013	51	19			
C18	4.049	0.014	432	149			
C20	4.424	0.000	5141	4855			
C22	4.810	-0.002	13067	3335			
C24	5.303	-0.005	25694	19541			
C25	5.533	0.001	35515	11023			
C26	5.738	0.004	44633	22206			
C28	6.082	-0.006	71078	72954			
C32	6.680	0.000	75622	49785	JP-4 (Tol-C14)	24619	1.50
C34	6.941	0.000	62709	18566	BUNKERC (C10-C38)	7412807	995.76 M
Filter Peak	----						
C36	7.187	-0.004	44512	29472			
C38	7.427	-0.004	24011	20727			
C40	7.699	-0.001	9651	7574			
o-terph	4.143	-0.008	728	664	JET-A (C10-C18)	42271	3.06
Triacon Surr	6.415	0.009	1306524	976210	JP8 (Tol-C16)	28569	1.62

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	664	0.0	0.1
Triacontane	976210	55.4	123.1

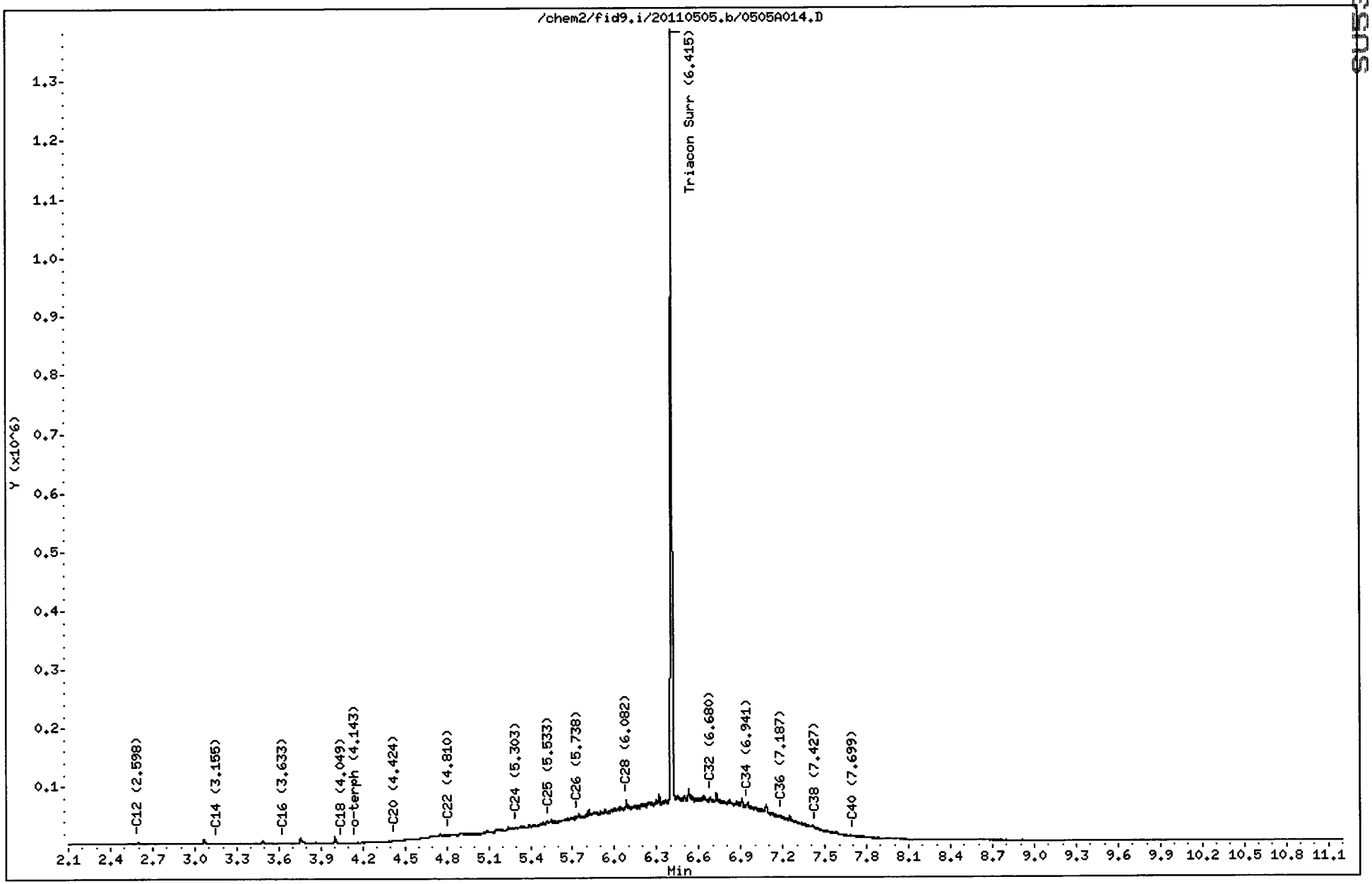
Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110505.b/0505A014.D
Date : 05-MAY-2011 16:53
Client ID: LORA LAKES APT. RI
Sample Info: MOIL#2

Column phase: RTX-1

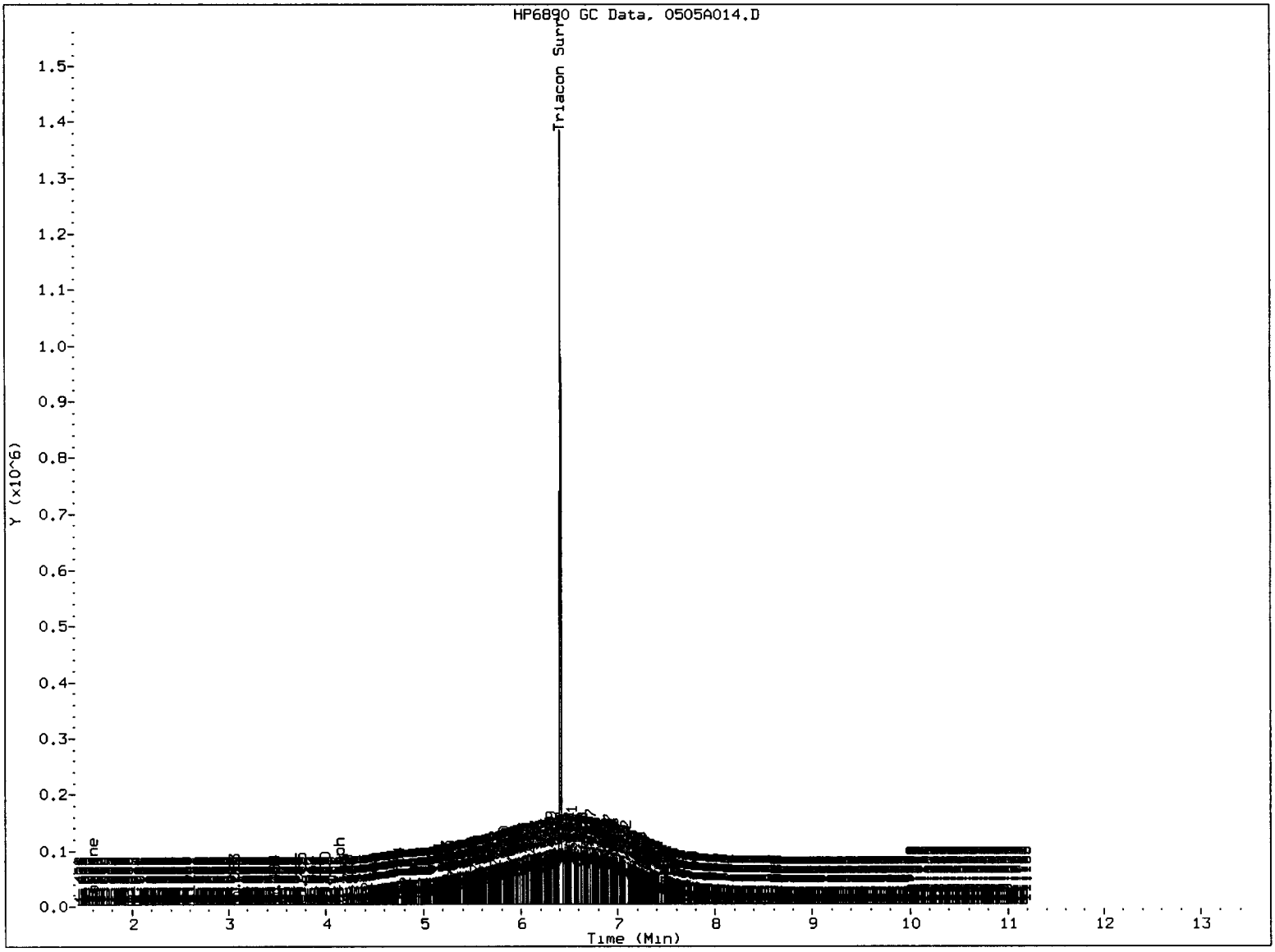
Instrument: fid9.i

Operator: MS
Column diameter: 0.25



SUB: 21021

FID:9A-2C/RTX-1 MOIL#2 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/3/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A015.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: SU53MBW1
Client ID: SU53MBW1
Injection: 05-MAY-2011 17:15
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.595	-0.004	1166	436	GAS (Tol-C12)	38953	1.85
C8	----				DIESEL (C12-C24)	39351	1.74
C10	1.982	0.008	1497	1551	M.OIL (C24-C38)	50556	3.81
C12	2.618	-0.002	529	1281	AK-102 (C10-C25)	58189	2.28
C14	3.154	-0.003	334	365	AK-103 (C25-C36)	43099	5.07
C16	3.616	-0.004	526	529			
C18	4.026	-0.009	410	385			
C20	4.431	0.007	275	176			
C22	4.810	-0.002	246	270			
C24	5.310	0.002	80	25			
C25	5.523	-0.009	283	184			
C26	5.738	0.005	37	14			
C28	6.092	0.004	4255	2604			
C32	6.671	-0.008	608	392	JP-4 (Tol-C14)	47778	2.91
C34	6.942	0.001	441	232	BUNKERC (C10-C38)	108526	14.58
Filter Peak	----						
C36	7.194	0.003	415	277			
C38	7.430	-0.001	477	196			
C40	7.693	-0.007	530	489			
o-terph	4.153	0.002	1322022	878347	JET-A (C10-C18)	44232	3.20
Triacon Surr	6.405	0.000	1117865	823675	JP8 (Tol-C16)	58161	3.31

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	878347	41.0	91.1
Triacontane	823675	46.7	103.8

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

MS 5/9/11

Data File: /chem2/fid9.i/20110505.b/0505A015.D

Date : 05-MAY-2011 17:15

Client ID: SU53MBW1

Sample Info: SU53MBW1

Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

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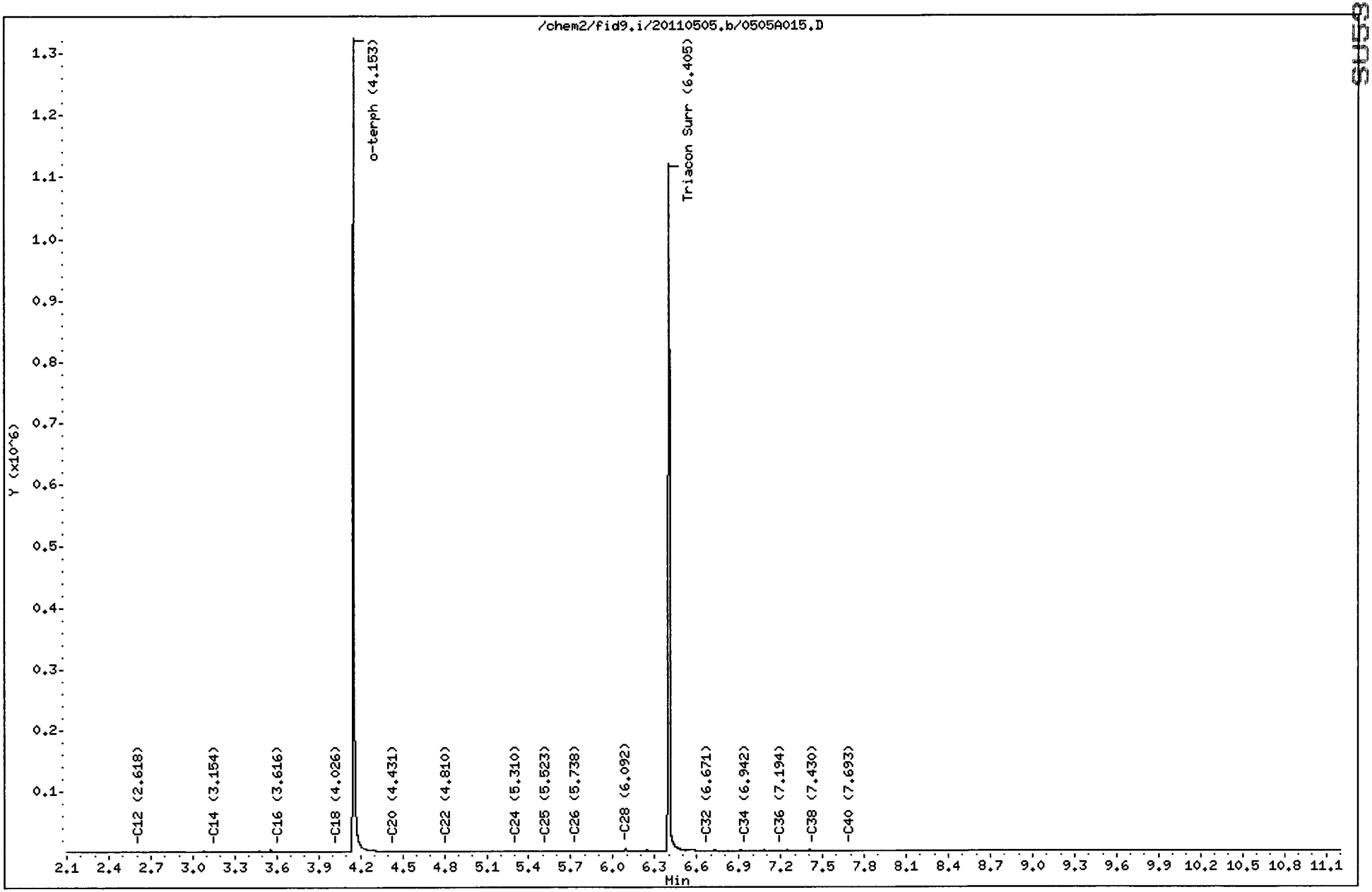


Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A016.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: SU53LCSW1
Client ID: SU53LCSW1
Injection: 05-MAY-2011 17:36
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.612	0.012	37535	29781	GAS (Tol-C12)	3106111	147.84
C8	1.327	0.056	3970	3621	DIESEL (C12-C24)	30151794	1331.02
C10	1.973	-0.001	105913	95951	M.OIL (C24-C38)	418927	31.58
C12	2.628	0.008	95682	68106	AK-102 (C10-C25)	32829511	1286.12
C14	3.147	-0.010	682731	666713	AK-103 (C25-C36)	287250	33.80
C16	3.621	0.001	1259665	1301172			
C18	4.048	0.012	1152602	1014865			
C20	4.430	0.006	800386	621925			
C22	4.817	0.005	314882	274697			
C24	5.306	-0.002	94190	89253			
C25	5.530	-0.003	45292	43717			
C26	5.732	-0.001	18320	17915			
C28	6.089	0.001	4394	4553			
C32	6.677	-0.003	441	367	JP-4 (Tol-C14)	7882395	480.74
C34	6.938	-0.004	223	109	BUNKERC (C10-C38)	33120181	4449.01
Filter Peak	----						
C36	7.188	-0.003	179	34			
C38	7.437	0.006	161	49			
C40	7.703	0.004	191	200			
o-terph	4.161	0.010	1855521	1536759	JET-A (C10-C18)	23460966	1697.72
Triacon Surr	6.407	0.002	1219585	883074	JP8 (Tol-C16)	15478572	879.76

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1536759	71.8	159.5
Triacontane	883074	50.1	111.3

MS 5/9/11

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110505.b/0505A016.D

Date : 05-MAY-2011 17:36

Client ID: SU53LCSW1

Sample Info: SU53LCSW1

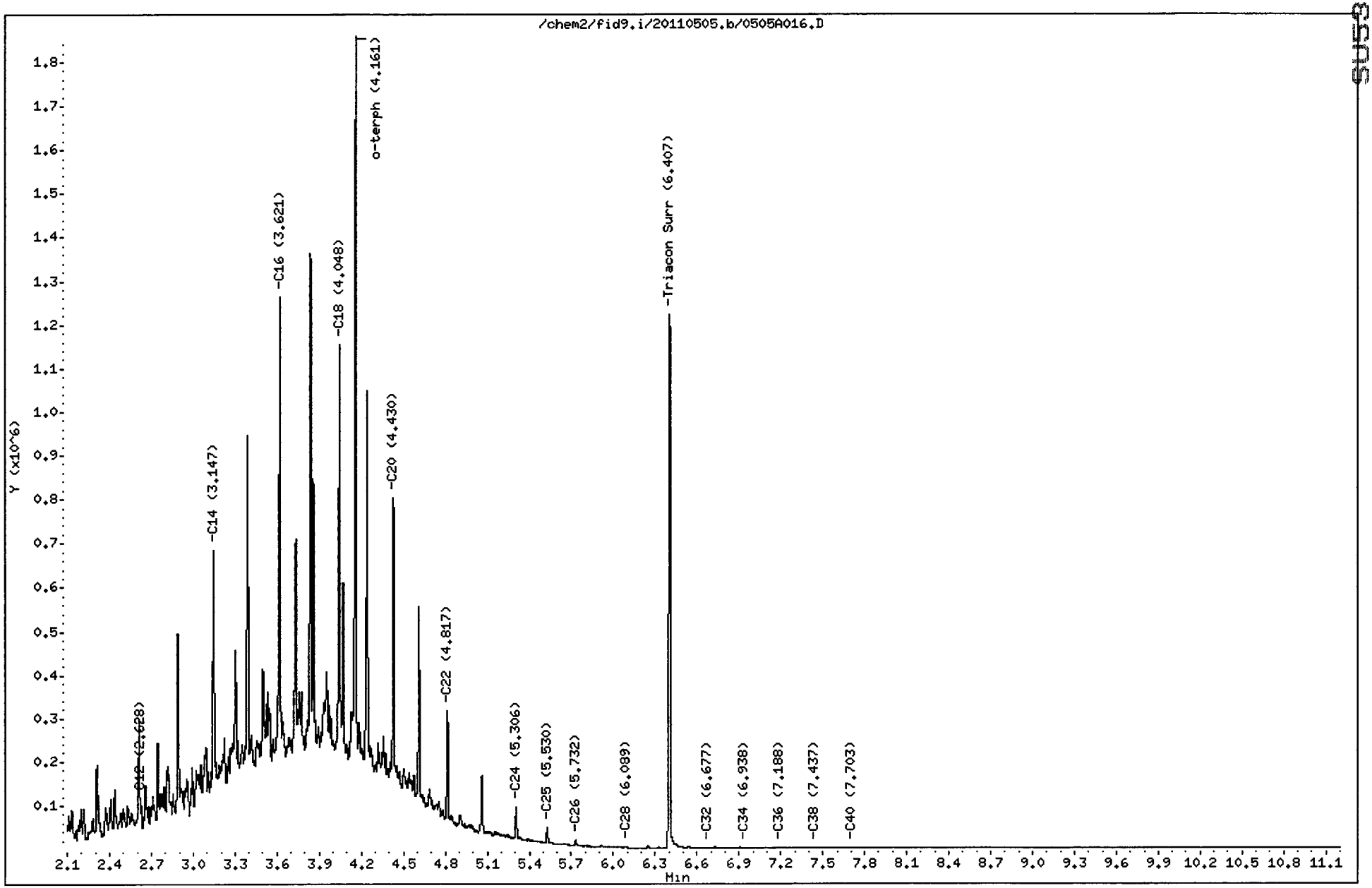
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SU53 : 01026



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A016.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: SU53LCSW1
Client ID: SU53LCSW1
Injection: 05-MAY-2011 17:36
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.612	0.012	37535	29781	GAS (Tol-C12)	3106111	147.84	
C8	1.327	0.056	3970	3621	DIESEL (C12-C24)	30798753	1359.58	
C10	1.973	-0.001	105913	95951	M.OIL (C24-C38)	418927	31.58	
C12	2.628	0.008	95682	68106	AK-102 (C10-C25)	33476470	1311.47	M
C14	3.147	-0.010	682731	666713	AK-103 (C25-C36)	287250	33.80	
C16	3.621	0.001	1259665	1301172				
C18	4.048	0.012	1152602	1014865				
C20	4.430	0.006	800386	621925				
C22	4.817	0.005	314882	274697				
C24	5.306	-0.002	94190	89253				
C25	5.530	-0.003	45292	43717				
C26	5.732	-0.001	18320	17915				
C28	6.089	0.001	4394	4553				
C32	6.677	-0.003	441	367	JP-4 (Tol-C14)	7882395	480.74	
C34	6.938	-0.004	223	109	BUNKERC (C10-C38)	33767141	4535.92	M
Filter Peak	----							
C36	7.188	-0.003	179	34				
C38	7.437	0.006	161	49				
C40	7.703	0.004	191	200				
o-terph	4.161	0.010	1567250	895033	JET-A (C10-C18)	23460966	1697.72	
Triacon Surr	6.407	0.002	1219585	883074	JP8 (Tol-C16)	15478572	879.76	

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	895033	41.8	92.9
Triacontane	883074	50.1	111.3

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110505.b/0505A016.D

Date : 05-MAY-2011 17:36

Client ID: SU53LCSW1

Sample Info: SU53LCSW1

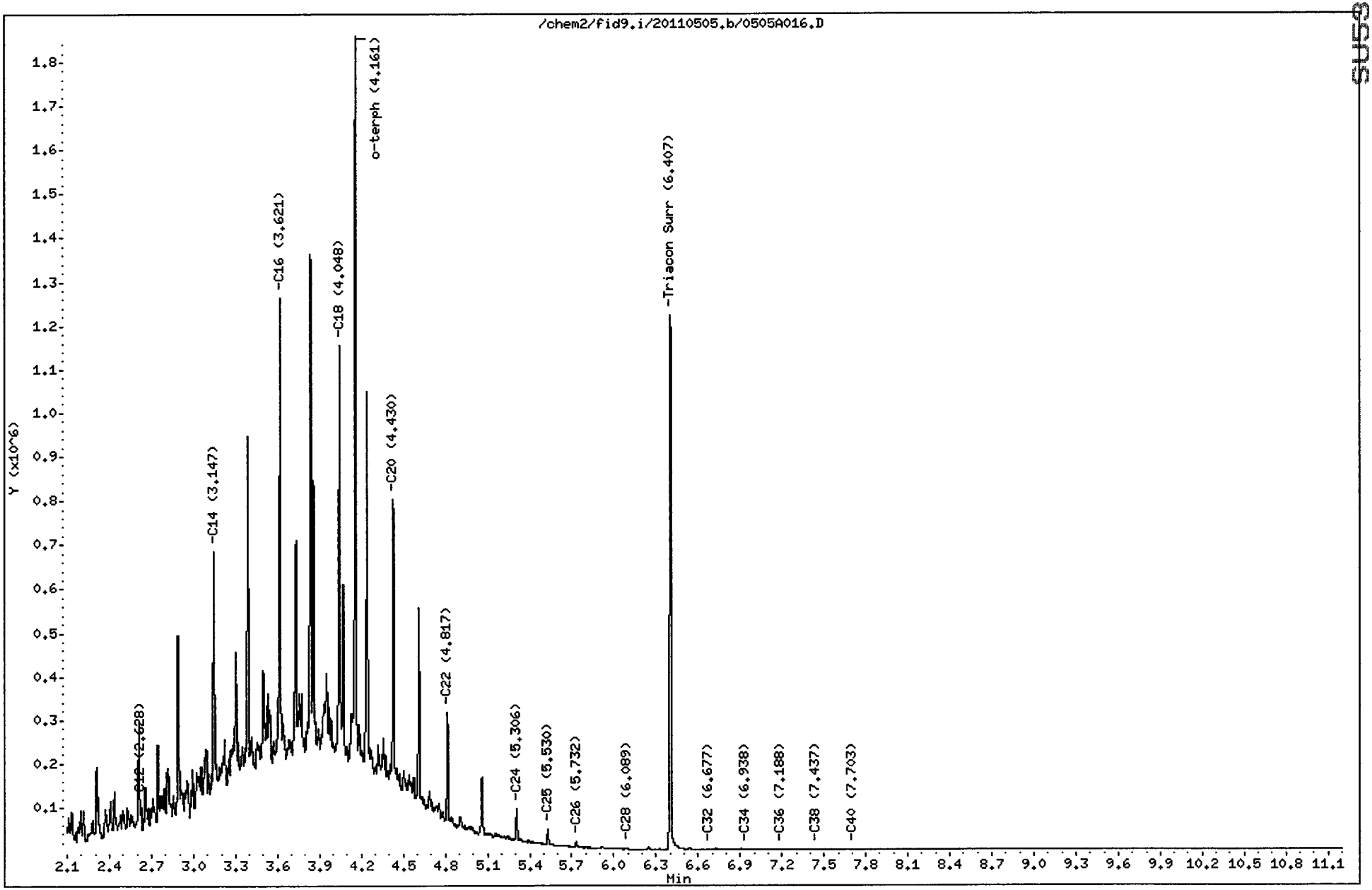
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SU53-010628



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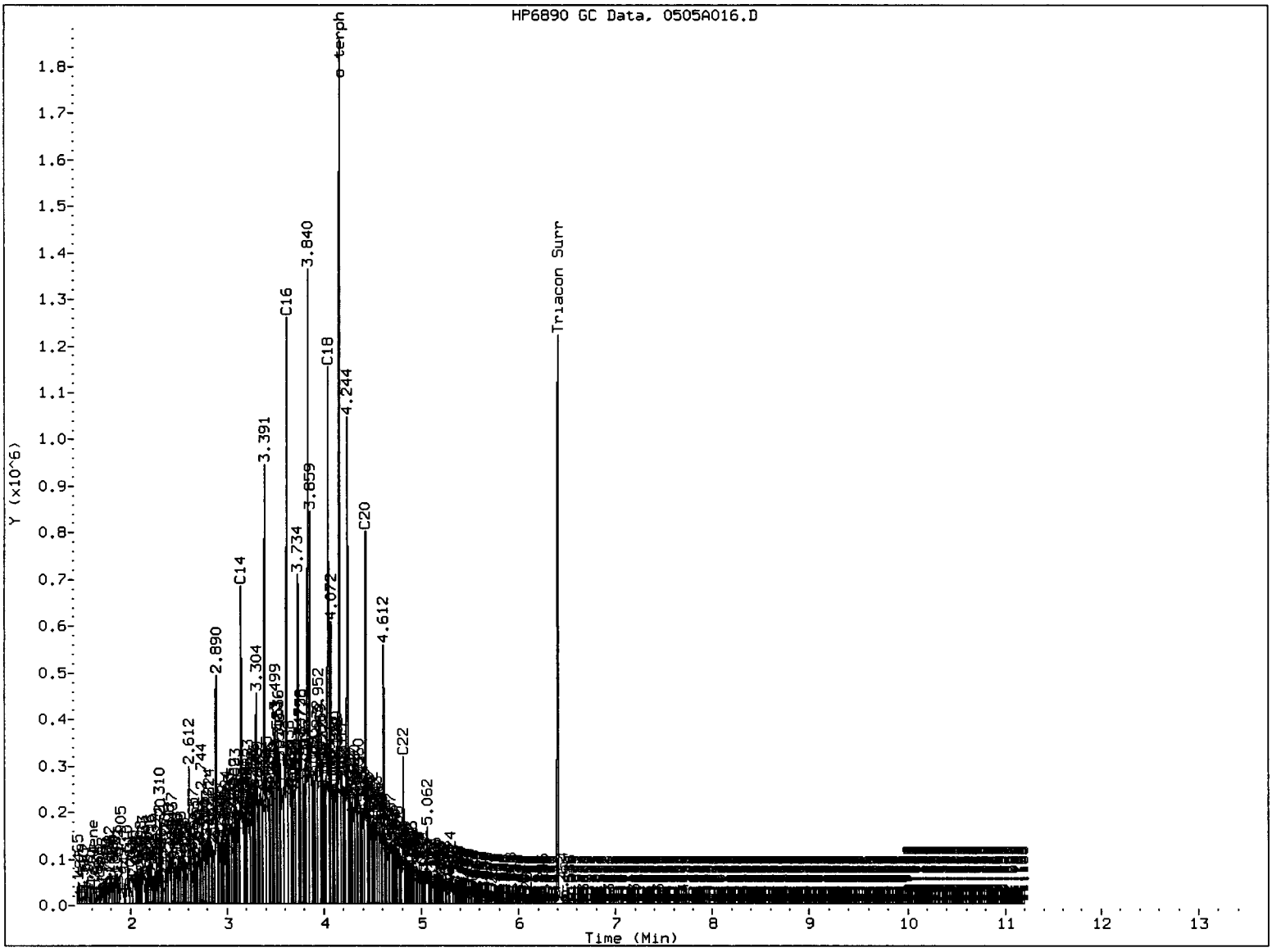


MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/9/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A018.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: SU53A
Client ID: MW5042811
Injection: 05-MAY-2011 18:20
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.611	0.011	1354	3359	GAS (Tol-C12)	42966	2.05
C8	1.357	0.085	3568	2708	DIESEL (C12-C24)	48652	2.15
C10	1.981	0.006	1532	1686	M.OIL (C24-C38)	47494	3.58
C12	2.626	0.005	451	552	AK-102 (C10-C25)	69404	2.72
C14	3.159	0.002	341	424	AK-103 (C25-C36)	42193	4.96
C16	3.619	-0.002	559	417			
C18	4.038	0.002	349	249			
C20	4.423	-0.002	290	202			
C22	4.813	0.000	181	159			
C24	5.309	0.001	95	17			
C25	5.527	-0.005	236	165			
C26	5.737	0.004	40	6			
C28	6.091	0.003	1131	757			
C32	6.674	-0.005	624	702	JP-4 (Tol-C14)	52512	3.20
C34	6.948	0.007	302	188	BUNKERC (C10-C38)	116669	15.67
Filter Peak	----						
C36	7.192	0.001	273	175			
C38	7.428	-0.003	964	1098			
C40	7.695	-0.005	398	288			
o-terph	4.153	0.001	1324929	848610	JET-A (C10-C18)	52756	3.82
Triacon Surr	6.409	0.003	1091434	789533	JP8 (Tol-C16)	64677	3.68

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	848610	39.6	88.1
Triacontane	789533	44.8	99.5

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

5/9/11

Data File: /chem2/fid9.i/20110505.b/0505A018.D

Date : 05-MAY-2011 18:20

Client ID: MW5042811

Sample Info: SU53A

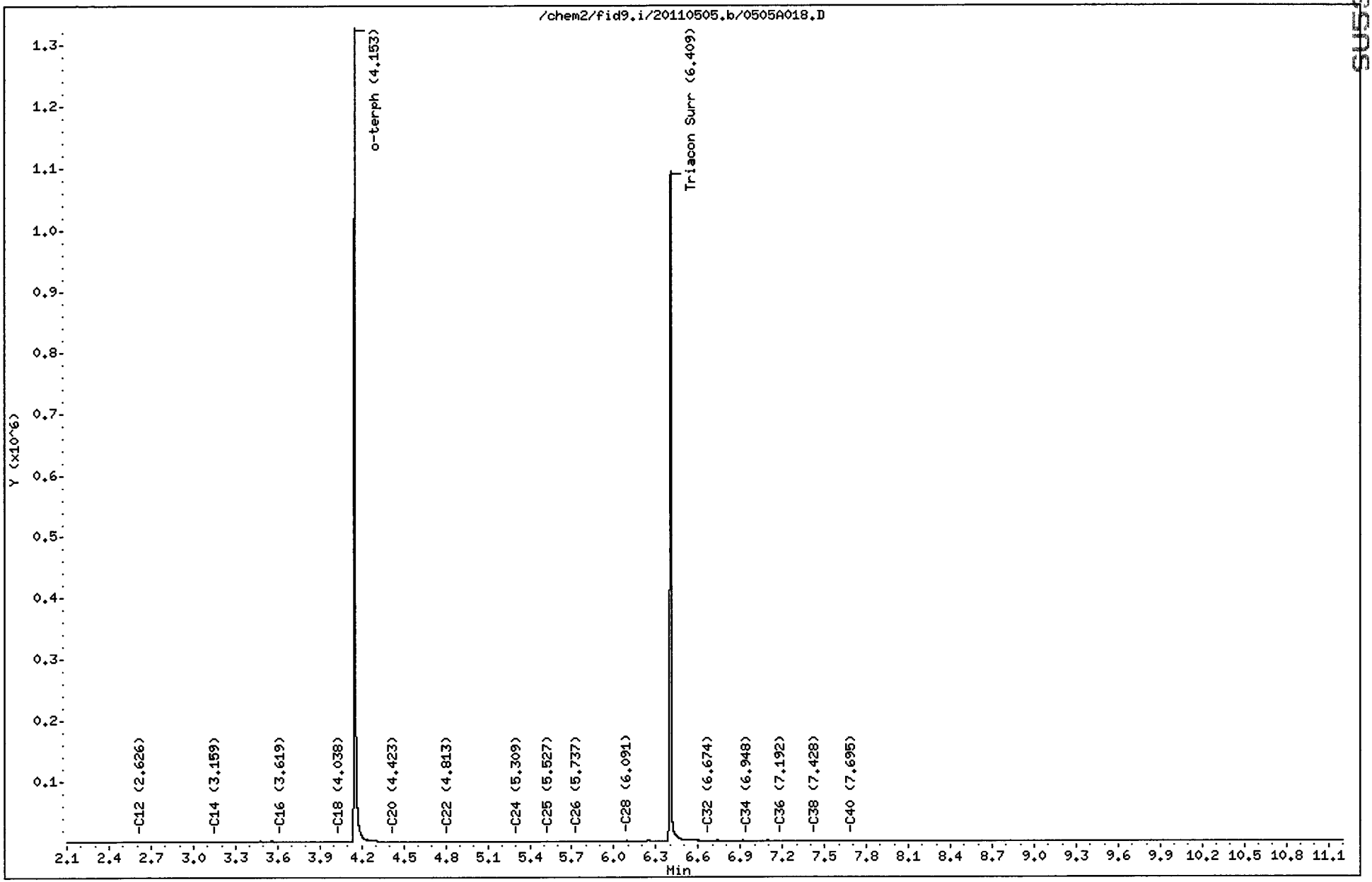
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SU53 : 61031



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A019.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: SU53AMS
Client ID: MW5042811 MS
Injection: 05-MAY-2011 18:42
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.616	0.016	43023	33581	GAS (Tol-C12)	3390348	161.37
C8	1.329	0.058	3781	2435	DIESEL (C12-C24)	30133241	1330.21
C10	1.975	0.001	115192	102215	M.OIL (C24-C38)	430162	32.43
C12	2.613	-0.008	324716	246269	AK-102 (C10-C25)	33064193	1295.32
C14	3.146	-0.012	686788	583482	AK-103 (C25-C36)	295582	34.78
C16	3.619	-0.002	1219755	1234260			
C18	4.046	0.010	1128310	1084228			
C20	4.428	0.004	846038	684442			
C22	4.815	0.003	325821	274371			
C24	5.305	-0.003	94049	91303			
C25	5.529	-0.003	44316	50657			
C26	5.732	-0.002	18704	22486			
C28	6.088	0.000	4414	5388			
C32	6.681	0.002	497	445	JP-4 (Tol-C14)	8183567	499.10
C34	6.942	0.000	280	85	BUNKERC (C10-C38)	33362901	4481.61
Filter Peak	----						
C36	7.197	0.006	196	134			
C38	7.421	-0.010	864	741			
C40	7.702	0.003	139	129			
o-terph	4.159	0.008	1859629	1413828	JET-A (C10-C18)	23759634	1719.34
Triacon Surr	6.407	0.002	1187147	818174	JP8 (Tol-C16)	15791993	897.58

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1413828	66.0	146.7
Triacontane	818174	46.4	103.2

MS 5/9/11

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110505.b/0505A019.D

Date : 05-MAY-2011 18:42

Client ID: MW5042811 MS

Sample Info: SU53AMS

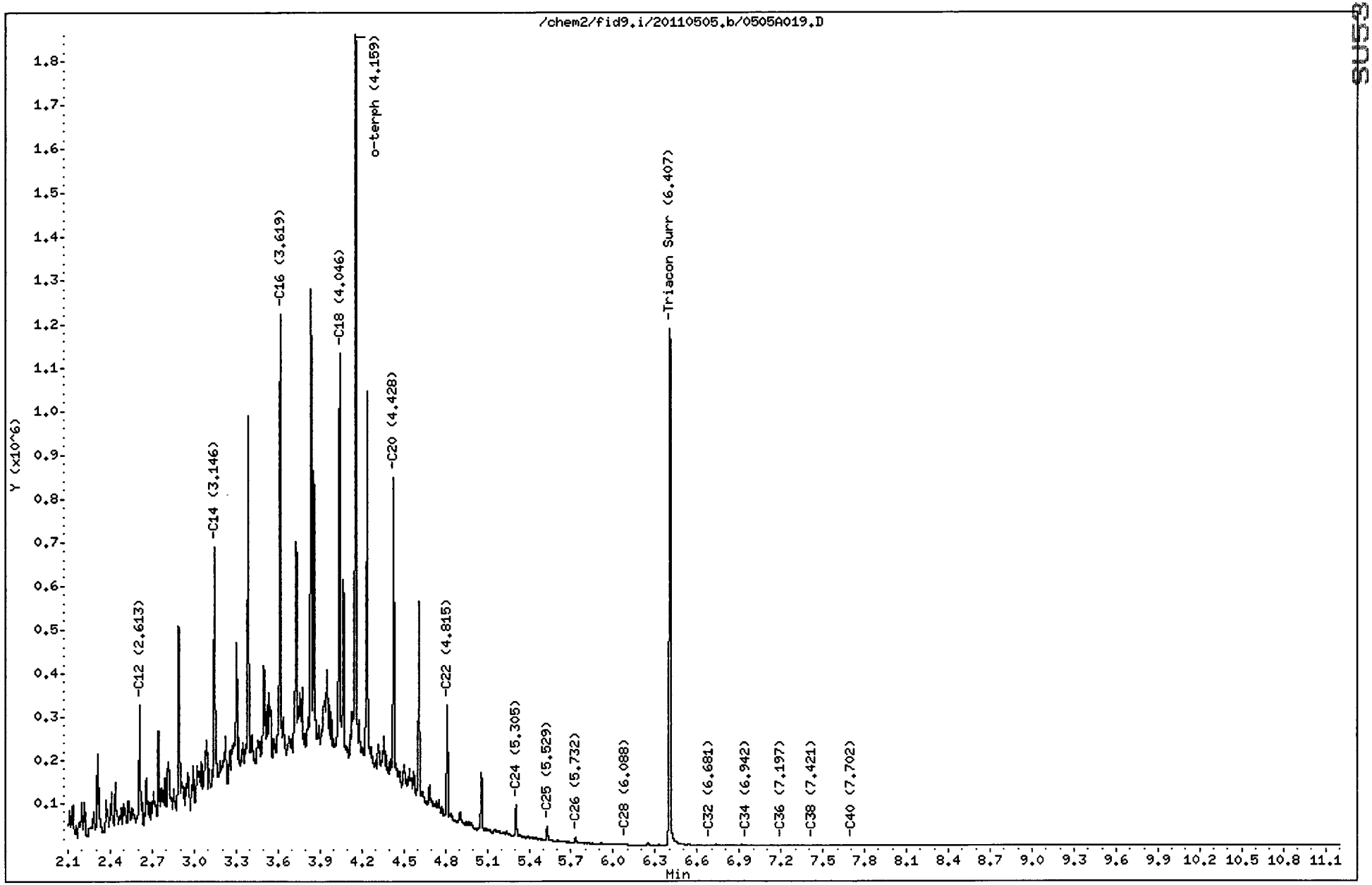
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SU53-01033



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A019.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: SU53AMS
Client ID: MW5042811 MS
Injection: 05-MAY-2011 18:42
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.616	0.016	43023	33581	GAS (Tol-C12)	3390348	161.37	
C8	1.329	0.058	3781	2435	DIESEL (C12-C24)	30734336	1356.74	
C10	1.975	0.001	115192	102215	M.OIL (C24-C38)	430162	32.43	
C12	2.613	-0.008	324716	246269	AK-102 (C10-C25)	33665289	1318.87	M
C14	3.146	-0.012	686788	583482	AK-103 (C25-C36)	295582	34.78	
C16	3.619	-0.002	1219755	1234260				
C18	4.046	0.010	1128310	1084228				
C20	4.428	0.004	846038	684442				
C22	4.815	0.003	325821	274371				
C24	5.305	-0.003	94049	91303				
C25	5.529	-0.003	44316	50657				
C26	5.732	-0.002	18704	22486				
C28	6.088	0.000	4414	5388				
C32	6.681	0.002	497	445	JP-4 (Tol-C14)	8183567	499.10	
C34	6.942	0.000	280	85	BUNKERC (C10-C38)	33963997	4562.36	M
Filter Peak	----							
C36	7.197	0.006	196	134				
C38	7.421	-0.010	864	741				
C40	7.702	0.003	139	129				
o-terph	4.159	0.008	1565570	818033	JET-A (C10-C18)	23759634	1719.34	
Triacon Surr	6.407	0.002	1187147	818174	JP8 (Tol-C16)	15791993	897.58	

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	818033	38.2	84.9
Triacontane	818174	46.4	103.2

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

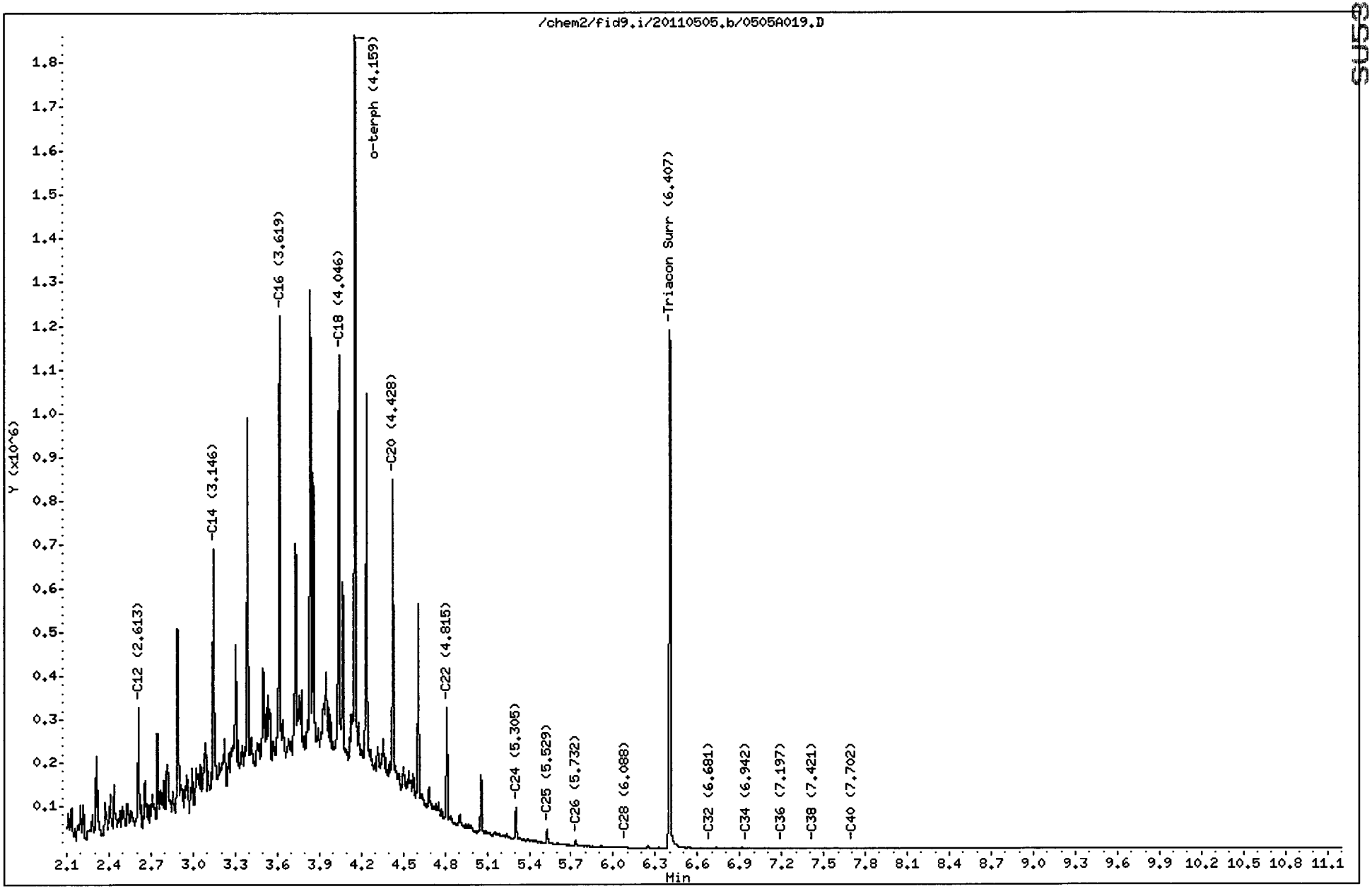
Data File: /chem2/fid9.i/20110505.b/0505A019.D
Date : 05-MAY-2011 18:42
Client ID: MW5042811 MS
Sample Info: SU53AMS

Column phase: RTX-1

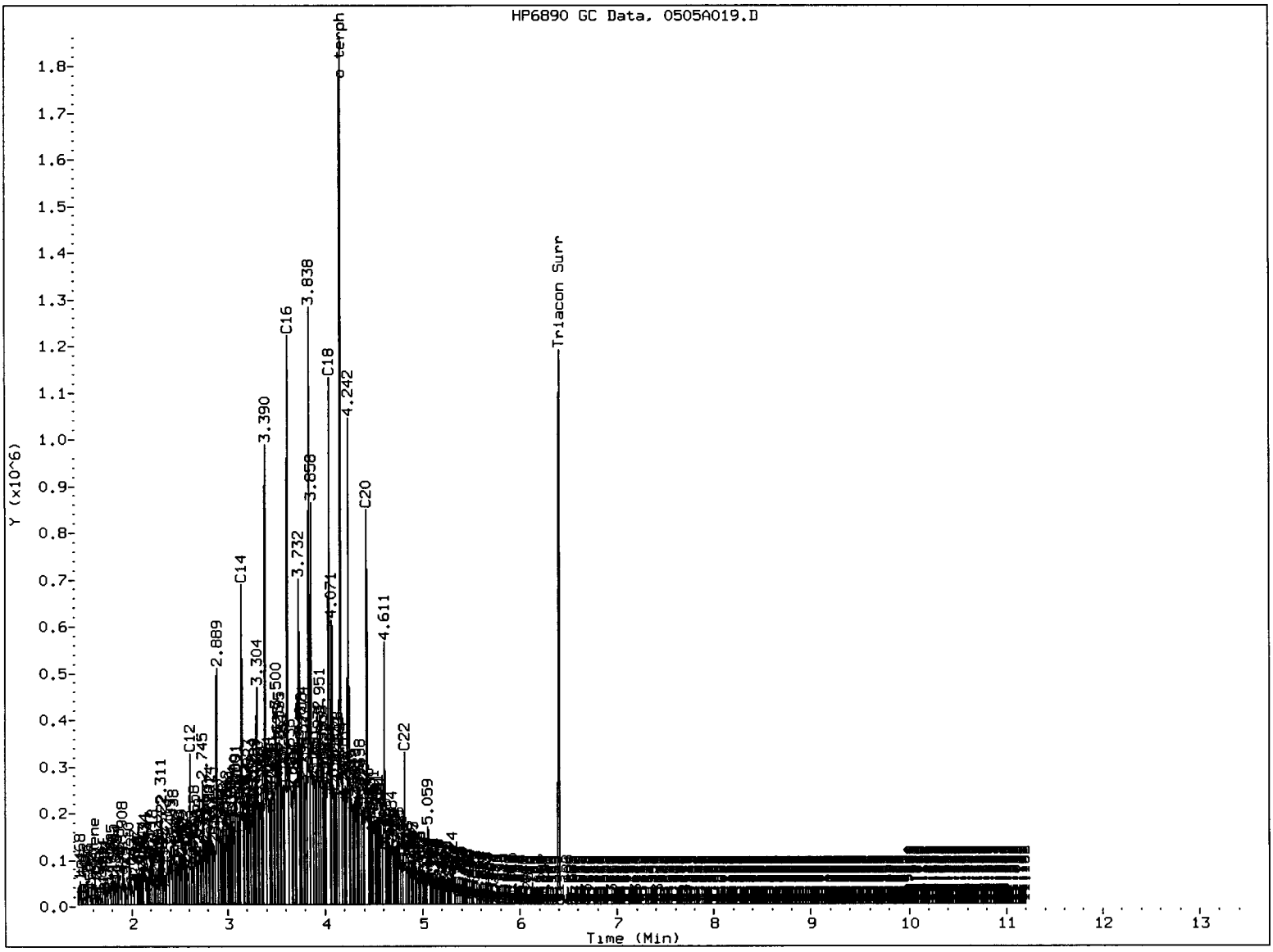
Instrument: fid9.i

Operator: MS
Column diameter: 0.25

SU53:01035



FID:9A-2C/RTX-1 SU53AMS FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/9/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A020.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: SU53AMSD
Client ID: MW5042811 MSD
Injection: 05-MAY-2011 19:03
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.613	0.013	43097	31399	GAS (Tol-C12)	3304373	157.28
C8	1.325	0.054	3096	1899	DIESEL (C12-C24)	29011008	1280.67
C10	1.974	-0.001	112876	102678	M.OIL (C24-C38)	406093	30.62
C12	2.627	0.006	98025	73915	AK-102 (C10-C25)	31841919	1247.43
C14	3.163	0.005	188572	109650	AK-103 (C25-C36)	284104	33.43
C16	3.619	-0.002	1269930	1199875			
C18	4.045	0.009	1080026	1103436			
C20	4.428	0.004	804479	633125			
C22	4.814	0.001	328427	272688			
C24	5.305	-0.003	94206	96751			
C25	5.528	-0.005	41779	49305			
C26	5.733	0.000	17689	21727			
C28	6.091	0.003	4585	5808			
C32	6.674	-0.005	457	411	JP-4 (Tol-C14)	8037811	490.22
C34	6.939	-0.002	232	69	BUNKERC (C10-C38)	32128529	4315.80
Filter Peak	----						
C36	7.198	0.006	149	70			
C38	7.418	-0.013	700	665			
C40	7.699	0.000	124	48			
o-terph	4.159	0.008	1750954	1525786	JET-A (C10-C18)	22861719	1654.36
Triacon Surr	6.407	0.002	1151975	833072	JP8 (Tol-C16)	15355899	872.79

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1525786	71.2	158.3
Triacontane	833072	47.3	105.0

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Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110505.b/0505A020.D

Date : 05-MAY-2011 19:03

Client ID: MW5042811 MSD

Sample Info: SU53AMSD

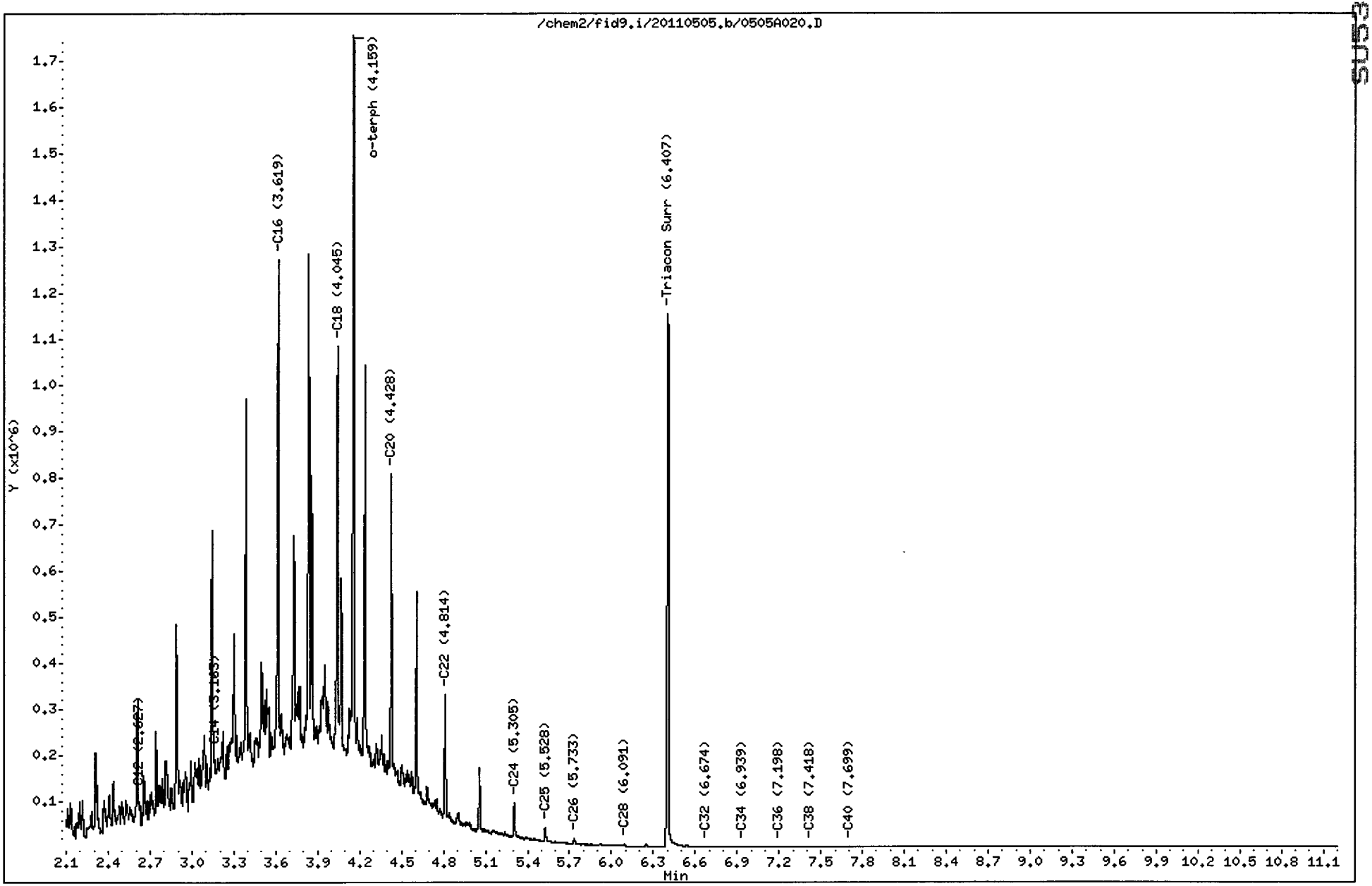
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SU53 : 01038



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A020.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: SU53AMSD
Client ID: MW5042811 MSD
Injection: 05-MAY-2011 19:03
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.613	0.013	43097	31399	GAS (Tol-C12)	3304373	157.28	
C8	1.325	0.054	3096	1899	DIESEL (C12-C24)	29694003	1310.82	
C10	1.974	-0.001	112876	102678	M.OIL (C24-C38)	406093	30.62	
C12	2.627	0.006	98025	73915	AK-102 (C10-C25)	32524914	1274.19	M
C14	3.163	0.005	188572	109650	AK-103 (C25-C36)	284104	33.43	
C16	3.619	-0.002	1269930	1199875				
C18	4.045	0.009	1080026	1103436				
C20	4.428	0.004	804479	633125				
C22	4.814	0.001	328427	272688				
C24	5.305	-0.003	94206	96751				
C25	5.528	-0.005	41779	49305				
C26	5.733	0.000	17689	21727				
C28	6.091	0.003	4585	5808				
C32	6.674	-0.005	457	411	JP-4 (Tol-C14)	8037811	490.22	
C34	6.939	-0.002	232	69	BUNKERC (C10-C38)	32811524	4407.55	M
Filter Peak	----							
C36	7.198	0.006	149	70				
C38	7.418	-0.013	700	665				
C40	7.699	0.000	124	48				
o-terph	4.159	0.008	1467068	847750	JET-A (C10-C18)	22861719	1654.36	
Triacon Surr	6.407	0.002	1151975	833072	JP8 (Tol-C16)	15355899	872.79	

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	847750	39.6	88.0
Triacontane	833072	47.3	105.0

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110505.b/0505A020.D

Date : 05-MAY-2011 19:03

Client ID: MW5042811 MSD

Sample Info: SU53AMSD

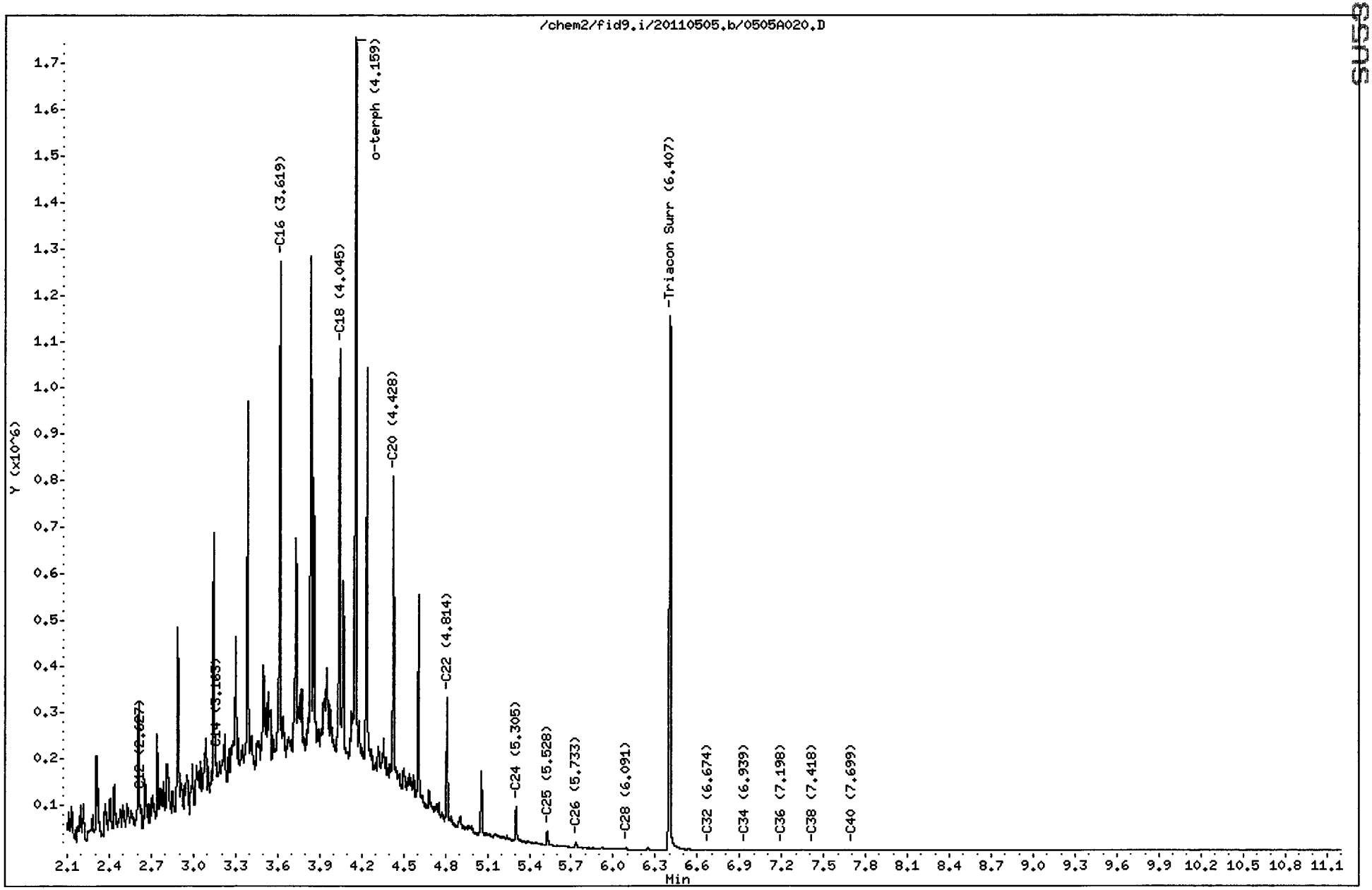
Column phase: RTX-1

Instrument: fid9.i

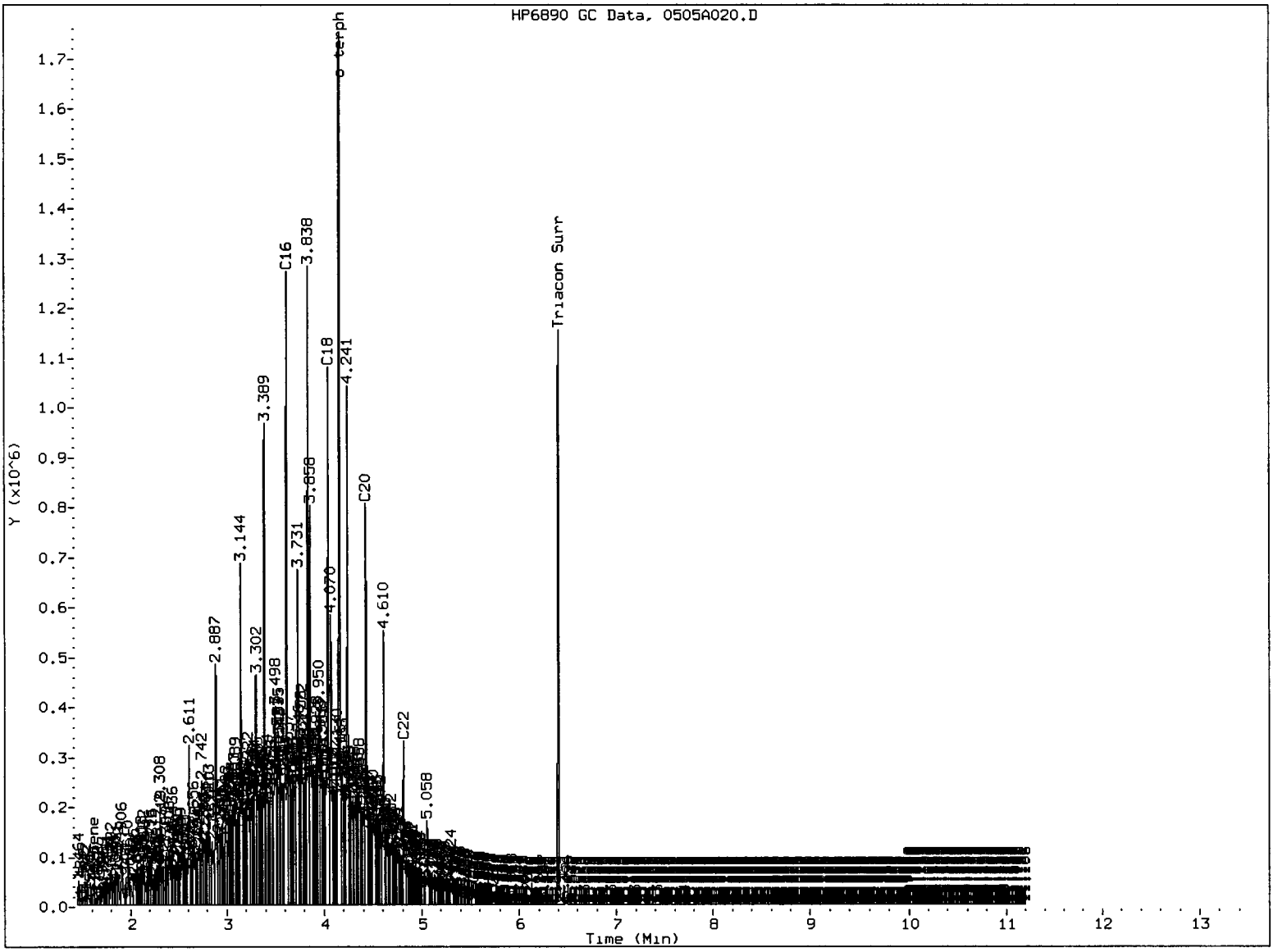
Operator: MS

Column diameter: 0.25

SU53 : 010409



FID:9A-2C/RTX-1 SU53AMSD FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/8/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A021.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: SU53B
Client ID: MW15042811
Injection: 05-MAY-2011 19:25
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.613	0.013	769	1182	GAS (Tol-C12)	21251	1.01
C8	1.347	0.075	2086	457	DIESEL (C12-C24)	45323	2.00
C10	1.982	0.007	979	897	M.OIL (C24-C38)	76389	5.76
C12	2.613	-0.007	420	601	AK-102 (C10-C25)	54178	2.12
C14	3.156	-0.001	146	95	AK-103 (C25-C36)	67402	7.93
C16	3.617	-0.004	609	382			
C18	4.038	0.003	1052	996			
C20	4.419	-0.005	292	189			
C22	4.813	0.000	248	271			
C24	5.303	-0.005	163	79			
C25	5.528	-0.005	522	391			
C26	5.729	-0.004	357	67			
C28	6.092	0.004	2044	1754			
C32	6.679	0.000	788	583	JP-4 (Tol-C14)	24355	1.49
C34	6.951	0.010	564	309	BUNKERC (C10-C38)	129341	17.37
Filter Peak	----						
C36	7.196	0.004	912	553			
C38	7.416	-0.015	1593	2204			
C40	7.698	-0.001	205	39			
o-terph	4.155	0.004	1355255	905762	JET-A (C10-C18)	37889	2.74
Triacon Surr	6.410	0.004	1142964	856850	JP8 (Tol-C16)	37973	2.16

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	905762	42.3	94.0
Triacontane	856850	48.6	108.0

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

5/9/11

Data File: /chem2/fid9.i/20110505.b/0505A021.D

Date : 05-MAY-2011 19:25

Client ID: MW15042811

Sample Info: SU53B

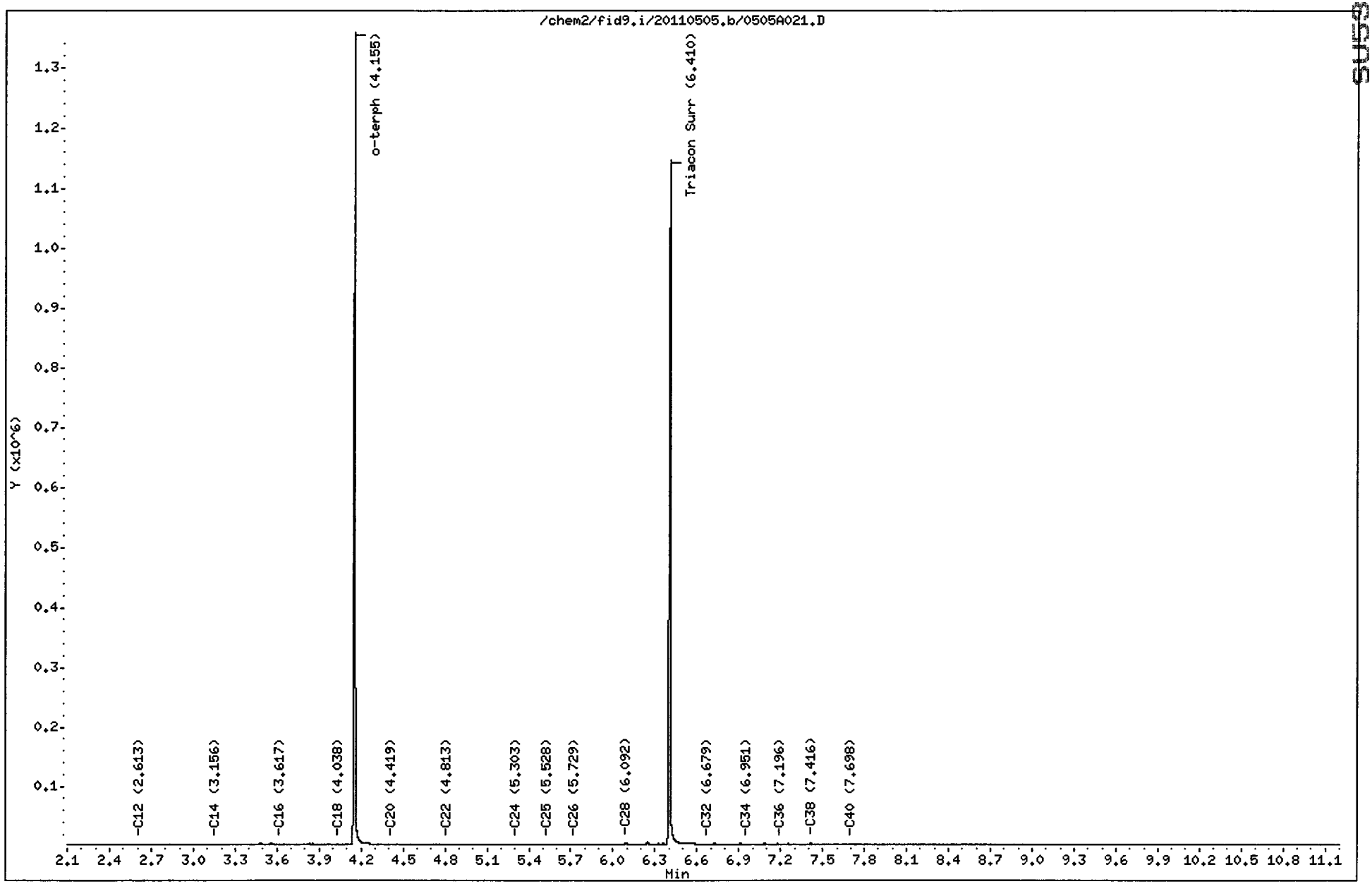
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SU53B : 01013



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A022.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: SU53C
Client ID: MW4042811
Injection: 05-MAY-2011 19:47
Dilution Factor: 1
Macro: 15-FEB-2011

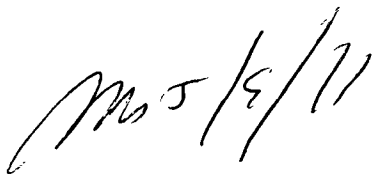
FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.601	0.001	1093	282	GAS (Tol-C12)	35033	1.67
C8	----				DIESEL (C12-C24)	38057	1.68
C10	1.984	0.009	1249	1354	M.OIL (C24-C38)	51053	3.85
C12	2.628	0.008	365	390	AK-102 (C10-C25)	54806	2.15
C14	3.157	-0.001	266	314	AK-103 (C25-C36)	45547	5.36
C16	3.618	-0.003	389	235			
C18	4.028	-0.008	198	217			
C20	4.428	0.004	266	186			
C22	4.813	0.001	190	146			
C24	5.306	-0.002	71	24			
C25	5.526	-0.006	264	168			
C26	5.734	0.001	19	3			
C28	6.094	0.006	1062	768			
C32	6.681	0.001	699	568	JP-4 (Tol-C14)	41931	2.56
C34	6.944	0.003	368	336	BUNKERC (C10-C38)	105693	14.20
Filter Peak	----						
C36	7.193	0.001	281	141			
C38	7.440	0.009	333	117			
C40	7.703	0.004	389	471			
o-terph	4.153	0.002	1287493	875474	JET-A (C10-C18)	35074	2.54
Triacon Surr	6.410	0.004	1154532	822418	JP8 (Tol-C16)	49109	2.79

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	875474	40.9	90.8
Triacontane	822418	46.7	103.7

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010



Data File: /chem2/fid9.i/20110505.b/0505A022.D

Date : 05-MAY-2011 19:47

Client ID: MW4042811

Sample Info: SU53C

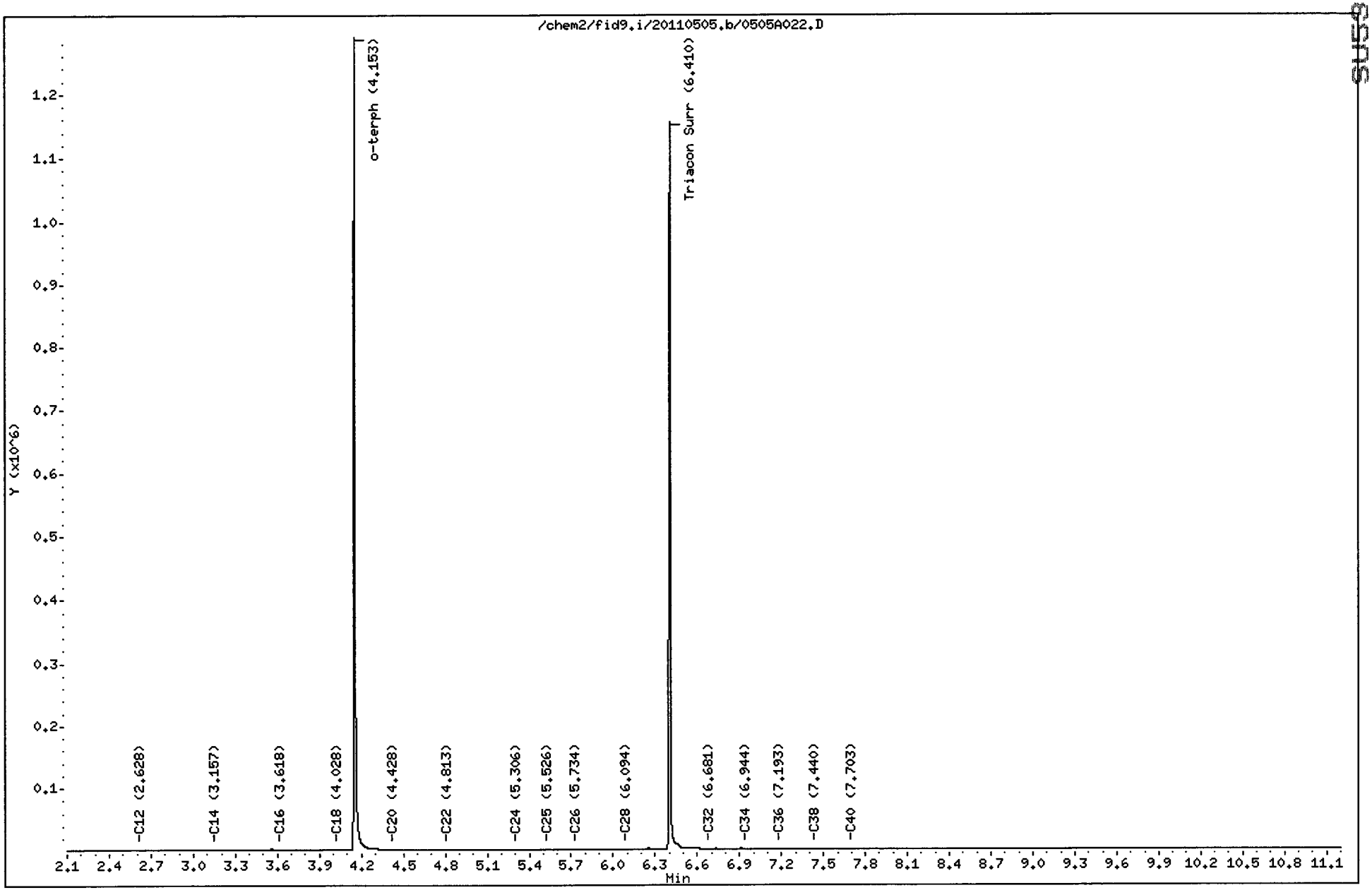
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SU53 : 01515



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A023.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: SU53D
Client ID: MW17042811
Injection: 05-MAY-2011 20:09
Dilution Factor: 1
Macro: 15-FEB-2011

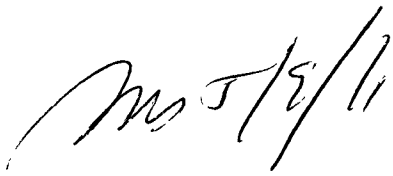
FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.593	-0.007	869	153	GAS (Tol-C12)	25401	1.21
C8	----				DIESEL (C12-C24)	28787	1.27
C10	1.981	0.007	1091	1034	M.OIL (C24-C38)	117275	8.84
C12	2.624	0.004	269	495	AK-102 (C10-C25)	42119	1.65
C14	3.160	0.003	103	92	AK-103 (C25-C36)	107058	12.60
C16	3.619	-0.001	254	239			
C18	4.029	-0.006	271	191			
C20	4.417	-0.007	213	126			
C22	4.812	0.000	300	162			
C24	5.301	-0.007	357	301			
C25	5.527	-0.005	623	539			
C26	5.730	-0.003	620	234			
C28	6.095	0.007	2699	2958			
C32	6.676	-0.003	999	877	JP-4 (Tol-C14)	28228	1.72
C34	6.944	0.003	701	289	BUNKERC (C10-C38)	156831	21.07
Filter Peak	----						
C36	7.200	0.009	565	100			
C38	7.417	-0.014	937	1350			
C40	7.695	-0.004	373	264			
o-terph	4.155	0.004	1167925	789512	JET-A (C10-C18)	19961	1.44
Triacon Surr	6.409	0.004	1058419	729516	JP8 (Tol-C16)	31965	1.82

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	789512	36.9	81.9
Triacontane	729516	41.4	92.0

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010



Data File: /chem2/fid9.i/20110505.b/0505A023.D

Date : 05-MAY-2011 20:09

Client ID: MW17042811

Sample Info: SU53D

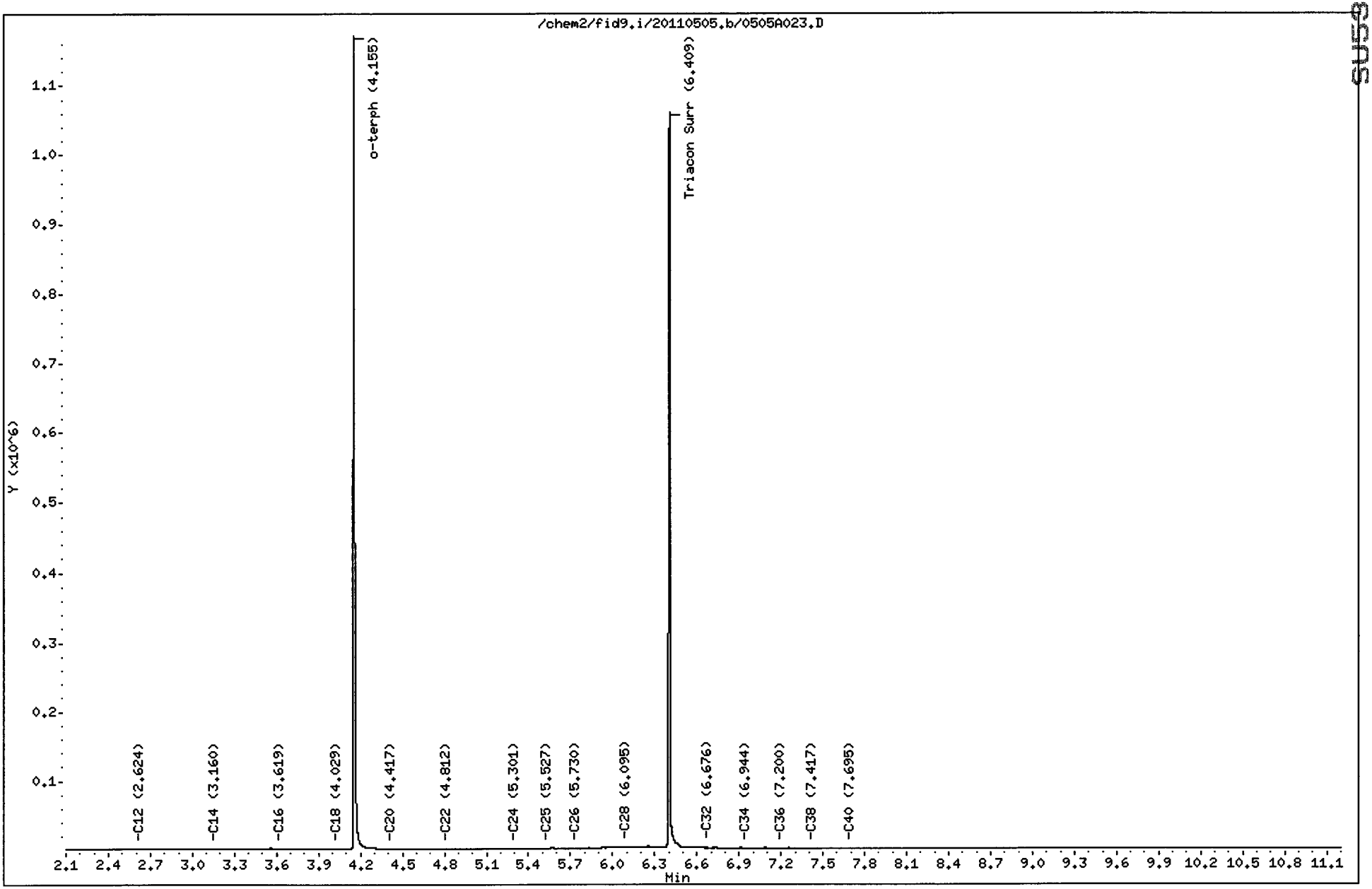
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SU53 : 010447



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A024.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: SU53E
Client ID: MW14042811
Injection: 05-MAY-2011 20:30
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.598	-0.002	1251	693	GAS (Tol-C12)	43939	2.09
C8	----				DIESEL (C12-C24)	46637	2.06
C10	1.981	0.006	1316	1490	M.OIL (C24-C38)	49607	3.74
C12	2.614	-0.006	974	2058	AK-102 (C10-C25)	68194	2.67
C14	3.157	-0.001	320	321	AK-103 (C25-C36)	44572	5.24
C16	3.618	-0.003	394	244			
C18	4.038	0.003	146	59			
C20	4.437	0.013	271	159			
C22	4.813	0.000	187	238			
C24	5.309	0.001	177	65			
C25	5.528	-0.004	211	162			
C26	5.732	-0.002	27	5			
C28	6.080	-0.008	80	46			
C32	6.681	0.001	738	724	JP-4 (Tol-C14)	52907	3.23
C34	6.952	0.010	371	226	BUNKERC (C10-C38)	117569	15.79
Filter Peak	----						
C36	7.191	0.000	281	200			
C38	7.430	-0.001	770	979			
C40	7.695	-0.005	379	267			
o-terph	4.154	0.003	1341313	869014	JET-A (C10-C18)	43816	3.17
Triacon Surr	6.413	0.007	1141457	811789	JP8 (Tol-C16)	61560	3.50

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	869014	40.6	90.2
Triacontane	811789	46.1	102.3

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

5/9/11

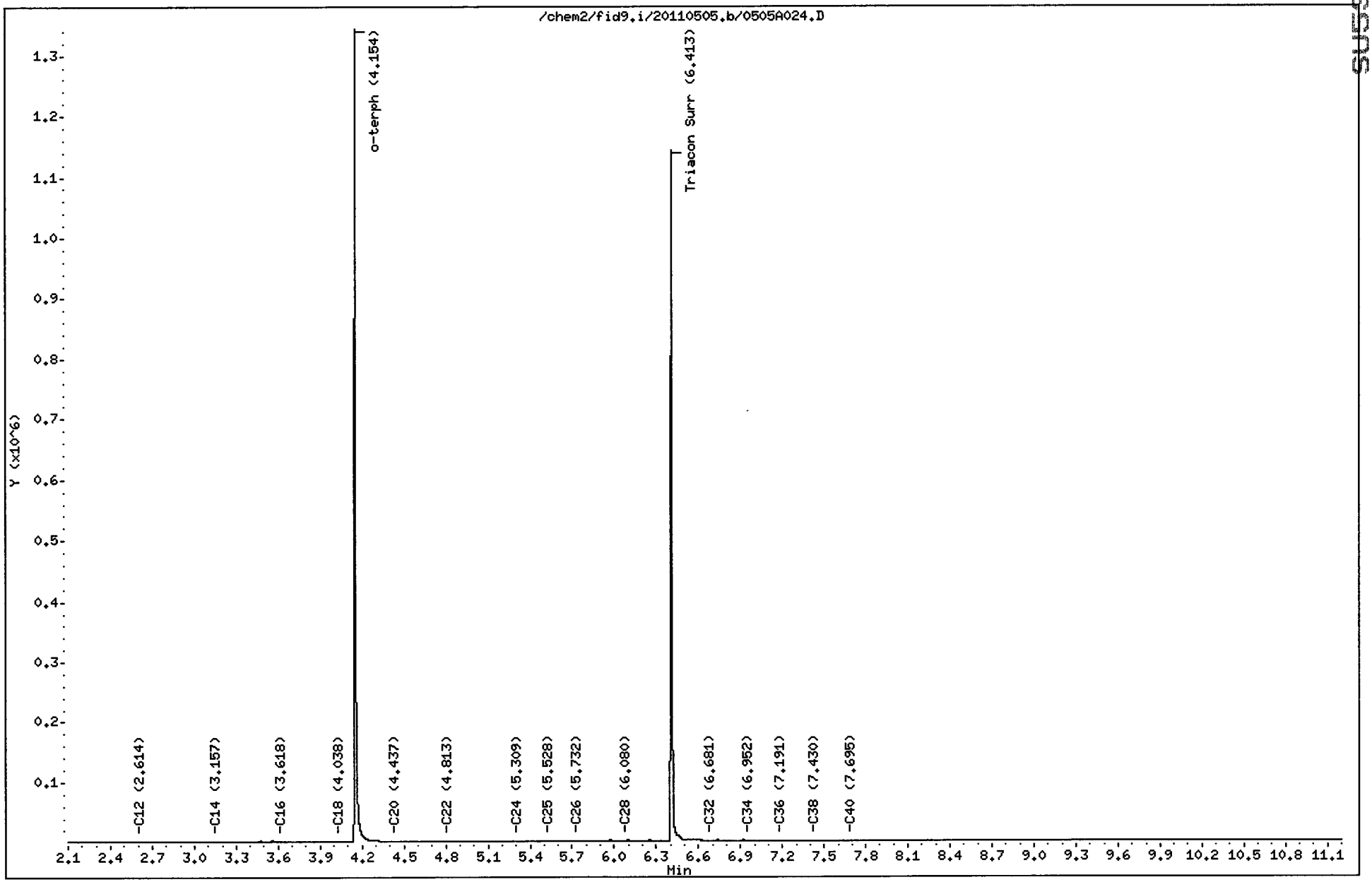
Data File: /chem2/fid9.i/20110505.b/0505A024.D
Date : 05-MAY-2011 20:30
Client ID: MW14042811
Sample Info: SU53E

Instrument: fid9.i

Operator: MS
Column diameter: 0.25

Column phase: RTX-1

SU53 : 61049



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A025.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: SU53F
Client ID: MW16042811
Injection: 05-MAY-2011 20:52
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.612	0.012	614	1083	GAS (Tol-C12)	21954	1.04
C8	1.358	0.087	5246	3096	DIESEL (C12-C24)	36679	1.62
C10	1.984	0.009	1003	877	M.OIL (C24-C38)	177742	13.40
C12	2.619	-0.001	485	877	AK-102 (C10-C25)	51722	2.03
C14	3.157	0.000	103	76	AK-103 (C25-C36)	162502	19.12
C16	3.618	-0.002	269	153			
C18	4.029	-0.006	155	113			
C20	4.428	0.004	323	155			
C22	4.812	0.000	435	477			
C24	5.305	-0.003	631	191			
C25	5.529	-0.003	1080	995			
C26	5.734	0.001	1227	564			
C28	6.094	0.006	3031	4131			
C32	6.673	-0.006	1563	1385	JP-4 (Tol-C14)	24063	1.47
C34	6.939	-0.002	1076	595	BUNKERC (C10-C38)	224514	30.16
Filter Peak	----						
C36	7.189	-0.002	841	649			
C38	7.446	0.016	581	624			
C40	7.696	-0.003	445	304			
o-terph	4.156	0.005	1347528	915882	JET-A (C10-C18)	18794	1.36
Triacon Surr	6.411	0.005	1185059	848015	JP8 (Tol-C16)	27884	1.58

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	915882	42.8	95.0
Triacontane	848015	48.1	106.9

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

5/9/11

Data File: /chem2/fid9.i/20110505.b/0505A025.D

Date : 05-MAY-2011 20:52

Client ID: MW16042811

Sample Info: SU53F

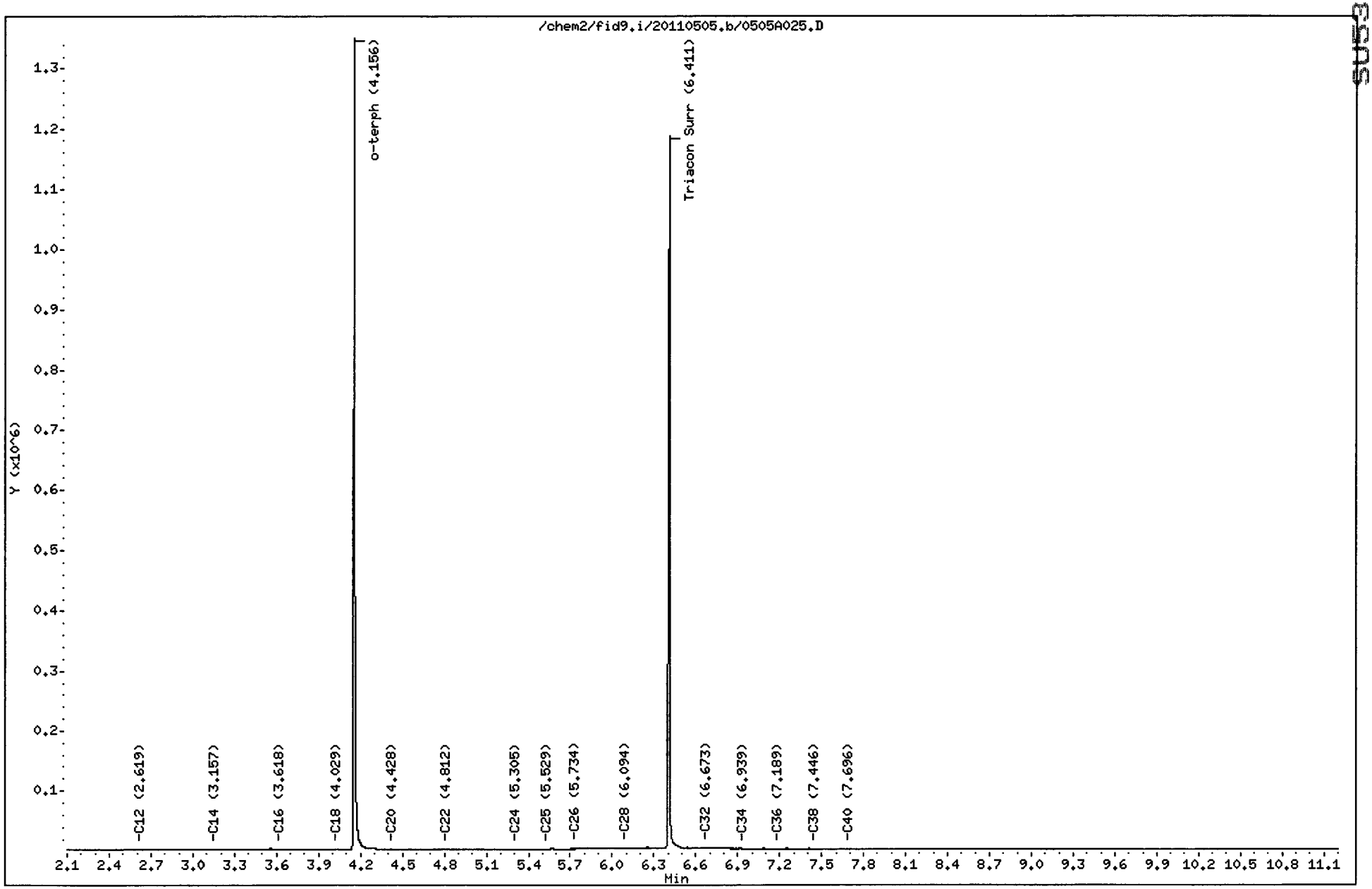
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SU53-01051



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A026.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: DIESEL#3
Client ID: LORA LAKES APT. RI
Injection: 05-MAY-2011 21:14
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.619	0.019	11638	10820	GAS (Tol-C12)	815117	38.80	
C8	1.333	0.062	2600	1733	DIESEL (C12-C24)	5858139	258.60	
C10	1.980	0.005	30158	26357	M.OIL (C24-C38)	191305	14.42	
C12	2.621	0.000	69826	52952	AK-102 (C10-C25)	6529881	255.81	M
C14	3.151	-0.007	144379	109782	AK-103 (C25-C36)	159768	18.80	
C16	3.617	-0.004	289626	168056				
C18	4.037	0.002	260237	175821				
C20	4.424	0.000	154400	113091				
C22	4.814	0.002	56796	58371				
C24	5.315	0.007	11794	22351				
C25	5.530	-0.003	14353	13466				
C26	5.732	-0.001	1216	215				
C28	6.087	-0.001	22017	16879				
C32	6.681	0.002	136	120	JP-4 (Tol-C14)	1790737	109.21	
C34	6.953	0.012	51	13	BUNKERC (C10-C38)	6699454	899.93	M
Filter Peak	----							
C36	7.193	0.002	26	10				
C38	7.447	0.016	65	40				
C40	7.698	-0.002	80	57				
o-terph	4.158	0.006	1625443	995507	JET-A (C10-C18)	4737983	342.86	
Triacon Surr	6.409	0.003	160	122	JP8 (Tol-C16)	3285268	186.73	

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	995507	46.5	103.3
Triacontane	122	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110505.b/0505A026.D

Date : 05-MAY-2011 21:14

Client ID: LORA LAKES APT. RI

Sample Info: DIESEL#3

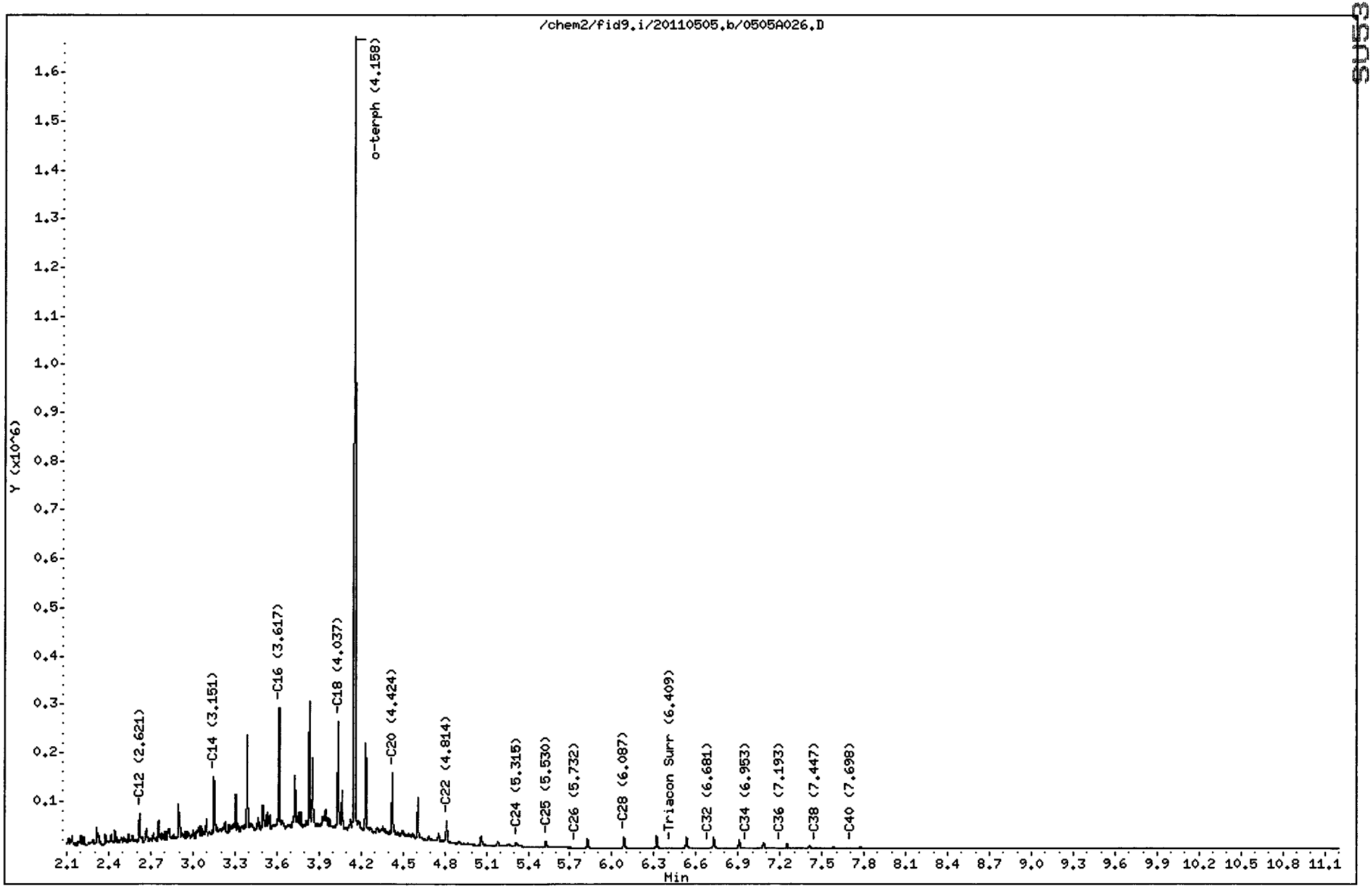
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SDG: 01653



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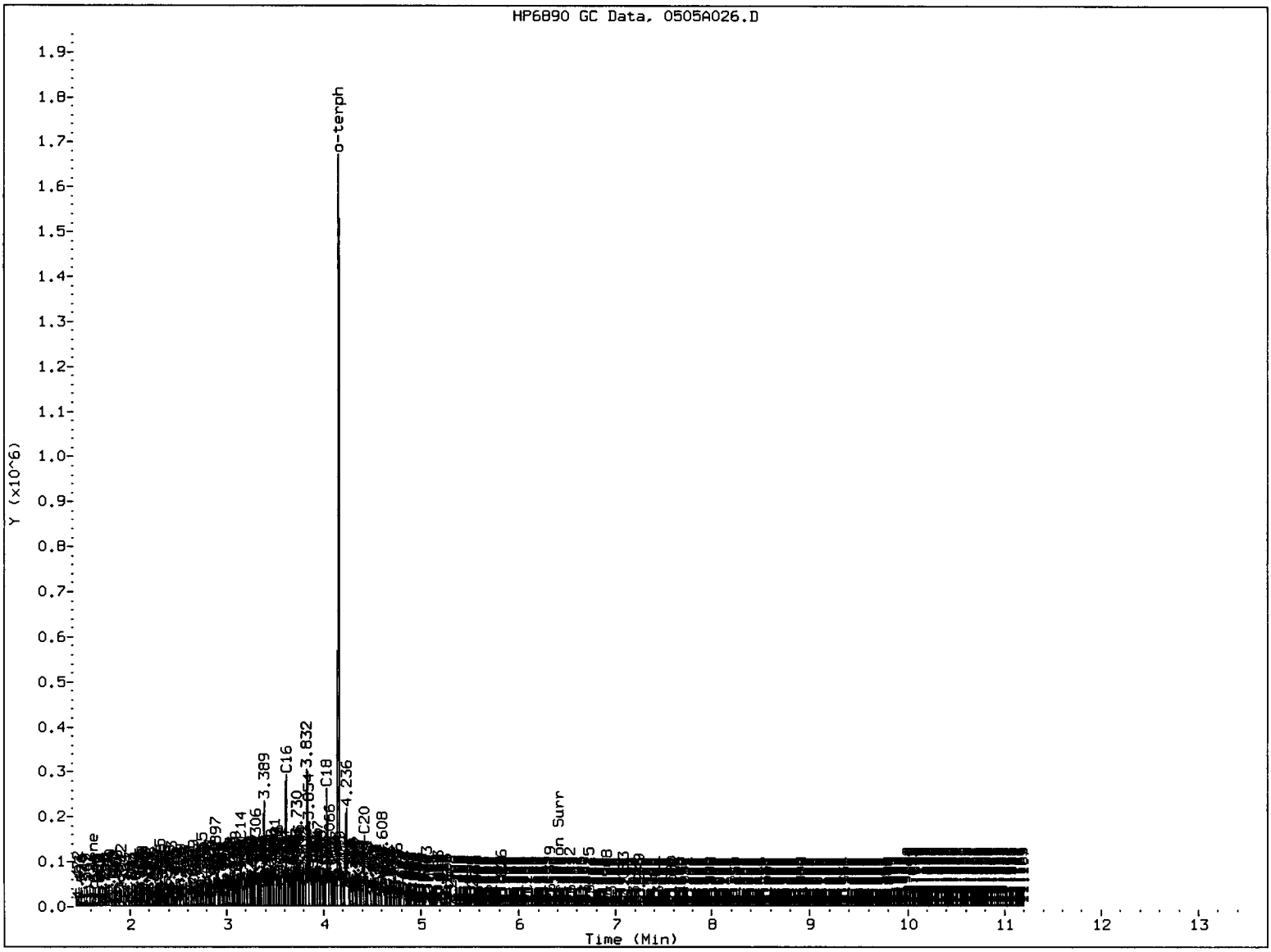


MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/9/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110505.b/0505A027.D
Method: /chem2/fid9.i/20110505.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/09/2011

ARI ID: MOIL#3
Client ID: LORA LAKES APT. RI
Injection: 05-MAY-2011 21:35
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.606	0.006	527	83	GAS (Tol-C12)	16941	0.81	
C8	1.346	0.075	1706	881	DIESEL (C12-C24)	897549	39.62	
C10	1.983	0.009	1002	909	M.OIL (C24-C38)	6640060	500.62	
C12	2.601	-0.020	2039	2505	AK-102 (C10-C25)	1105072	43.29	
C14	3.161	0.003	93	64	AK-103 (C25-C36)	6035987	710.27	M
C16	3.611	-0.010	219	253				
C18	4.063	0.027	658	680				
C20	4.426	0.002	5111	4761				
C22	4.809	-0.004	13121	4426				
C24	5.307	-0.001	26629	18303				
C25	5.538	0.006	35552	24085				
C26	5.733	0.000	44559	24612				
C28	6.083	-0.005	74502	92201				
C32	6.678	-0.001	74850	24847	JP-4 (Tol-C14)	23686	1.44	
C34	6.936	-0.005	62254	17081	BUNKERC (C10-C38)	7544738	1013.48	M
Filter Peak	----							
C36	7.192	0.001	44232	16273				
C38	7.443	0.012	22101	9041				
C40	7.695	-0.004	8623	8728				
o-terph	4.145	-0.006	802	858	JET-A (C10-C18)	46131	3.34	
Triacon Surr	6.416	0.010	1418649	1018277	JP8 (Tol-C16)	29181	1.66	

M Indicates manual integration within range.
Range Times: NW Diesel(2.620 - 5.308) AK102(1.97 - 5.53) Jet A(1.97 - 4.04)
NW M.Oil(5.31 - 7.43) AK103(5.53 - 7.19) OR Diesel(1.97 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	858	0.0	0.1
Triacontane	1018277	57.8	128.4

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110505.b/0505A027.D

Date : 05-MAY-2011 21:35

Client ID: LORA LAKES APT. RI

Sample Info: MOIL#3

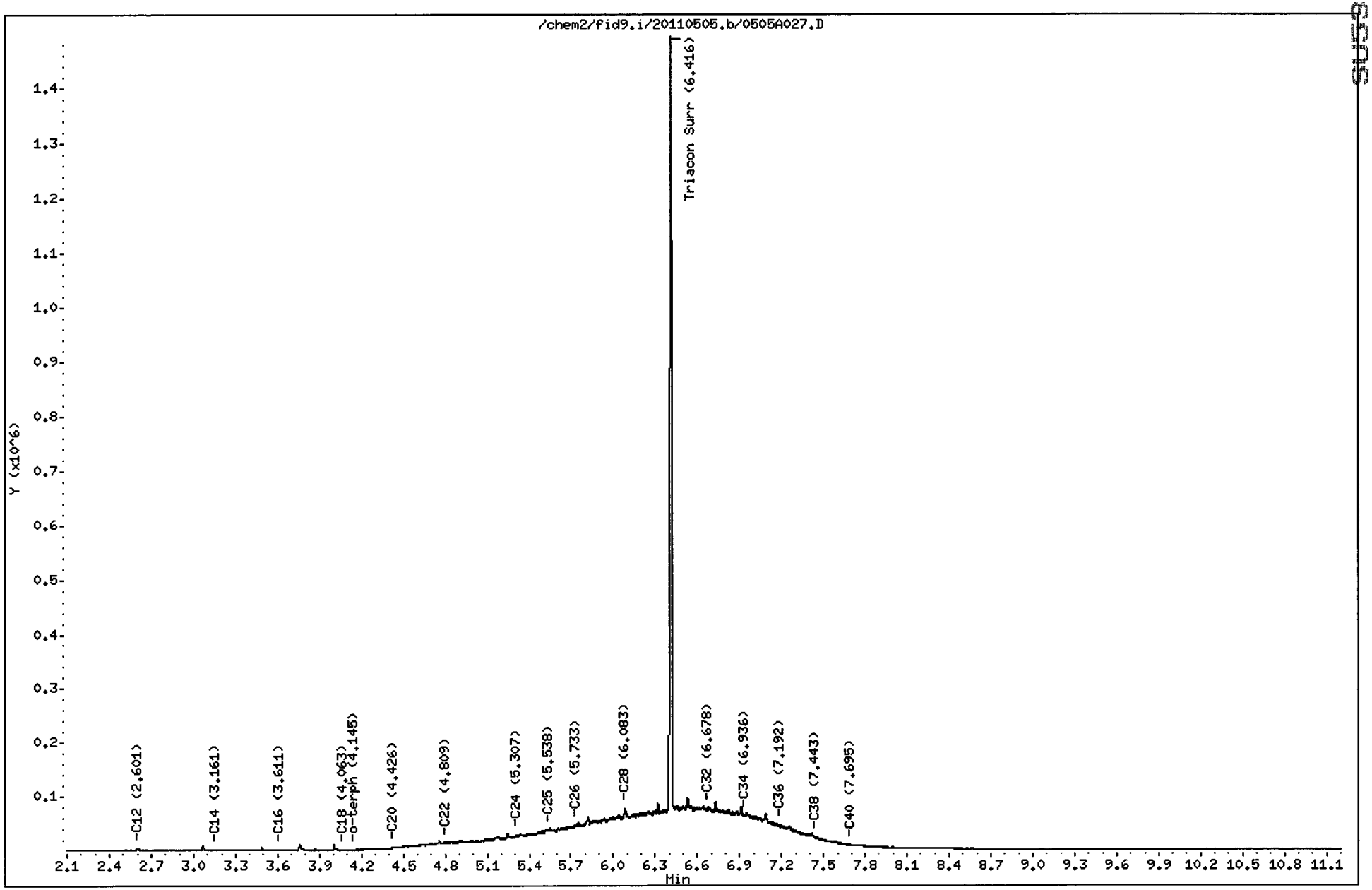
Column phase: RTX-1

Instrument: fid9.i

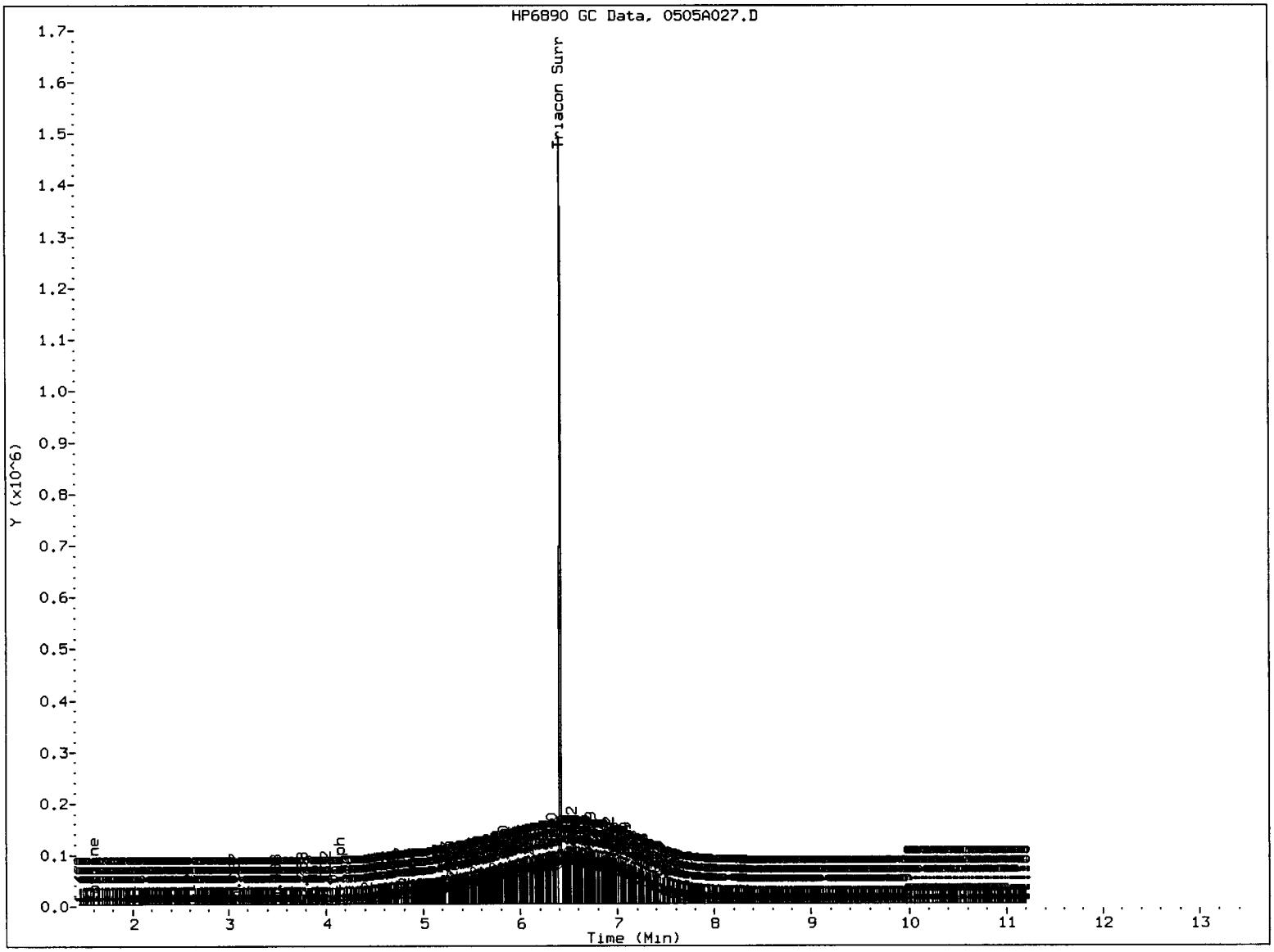
Operator: MS

Column diameter: 0.25

SUSS : 01056



FID:9A-2C/RTX-1 MOIL#3 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/19/11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: SU74, SU73 Client ID: FLOYD-SNIDER-LORA LAKES

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, M.Oil, o-Terph.

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

Dates: Curve: 1/20/11 Analysis Start: 5/10/11

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

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

Sample SU74A's o-Terpheny/ surrogate recovery is 50.1%, the lower limit is 49%. Sample SU74A is cleanup and its surrogate passes q.c. by 1%.

MB 5/12/11

Additional Details on Reverse: Yes / No

Analyst: MB **Date:** 5/12/11

Reviewer: [illegible] **Date:** 5/12/11

Analytical Resources Inc.: Organics Instrument Log

FID-9 Agilent 6850 - Serial No.: US10404004

Date: 5/10/11 Analysis: NWTPHD Analyst: MR

GC Program: TPH Column No: 977444 Column Type: rtx-1

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

Calibration File: _____ Curve Date: 1/20/11

IS/SS

Ical/Ccal

1786-1 RL
1860-1 LB
1777-3 Diesel
1796-2 MOil

LCS/ICV

	Time	Filename	LabID	ClientId	DF
1	1005	0510A001 D	RINSE		1
2	1026	0510A002 D	RT		1
3	1048	0510A003 D	IB		1
4	1110	0510A004 D	DIESEL#1		1
5	1131	0510A005 D	MOIL#1		1
6	1153	0510A006 D	BUNKERC#1		1
7	1219	0510A007 D	ST69MBS1	ST69MBS1	1
8	1241	0510A008 D	DIESEL#2		1
9	1303	0510A009 D	MOIL#2		1
10	1325	0510A010 D	BUNKERC#2		1
11	1347	0510A011 D	ST97MBW1	ST97MBW1	1
12	1408	0510A012 D	ST97LCSW1	ST97LCSW1	1
13	1430	0510A013 D	ST97LCSDW1	ST97LCSDW1	1
14	1452	0510A014 D	ST97C	IT-DRUM1-WAT	1
15	1514	0510A015 D	SU00A	SDS3/5042611	1
16	1536	0510A016 D	DIESEL#3		1
17	1558	0510A017 D	MOIL#3		1
18	1620	0510A018 D	ST97QLS		1
19	1642	0510A019 D	BUNKERC#3		1
20	1809	0510A020 D	IB		1
21	1830	0510A021 D	SU73MBW1		1
22	1852	0510A022 D	SU73LCSW1		1

	Time	Filename	LabID	ClientId	DF
23	1914	0510A023 D	SU73QLS		1
24	1936	0510A024 D	SU73A		1
25	1958	0510A025 D	SU73AMS		1
26	2020	0510A026.D	SU73AMSD		1
27	2041	0510A027 D	SU73B		1
28	2103	0510A028 D	SU74A	SU74 A	1
29	2125	0510A029 D	SU74B	SU74 B	1
30	2147	0510A030 D	SU74C	SU74 C	1
31	2209	0510A031 D	DIESEL#3		1
32	2230	0510A032 D	MOIL#3		1

MR

MR 5/11/11

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/20110510.b

ARI Job No.: SU73 Method: ftphfid9a.m Instrument: fid9.i Date: 10-MAY-2011

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1830	0510A021.D	SU73MBW1	SU73MBW1	1	NO MANUAL INTEGRATION
1852	0510A022.D	SU73LCSW1	SU73LCSW1	1	o-terph,
1936	0510A024.D	SU73A	MW-01-0429	1	o-terph, Triacon Surr,
1958	0510A025.D	SU73AMS	MW-01-0429	1	o-terph, Triacon Surr,
2020	0510A026.D	SU73AMSD	MW-01-0429	1	o-terph, Triacon Surr,
2041	0510A027.D	SU73B	MW-01-0429	1	o-terph, Triacon Surr,
2103	0510A028.D	SU74A	B312-04291	1	NO MANUAL INTEGRATION
2125	0510A029.D	SU74B	B310-04291	1	NO MANUAL INTEGRATION
2147	0510A030.D	SU74C	B311-04291	1	NO MANUAL INTEGRATION

SU53:01060

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A002.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: RT
Client ID: RT
Injection: 10-MAY-2011 10:26
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.599	0.000	1392	1349	GAS (Tol-C12)	571971	27.22
C8	1.271	0.000	247732	247230	DIESEL (C12-C24)	1808262	79.82
C10	1.975	0.000	490978	280302	M.OIL (C24-C38)	1762867	132.91
C12	2.618	0.000	276943	244079	AK-102 (C10-C25)	2356770	92.33
C14	3.156	0.000	317011	260609	AK-103 (C25-C36)	1686590	198.47
C16	3.621	0.000	390089	280334			
C18	4.039	0.000	556106	287832			
C20	4.428	0.000	555782	298524			
C22	4.816	0.000	451269	305741			
C24	5.310	0.000	463868	314389			
C25	5.535	0.000	626474	434817			
C26	5.738	0.000	502192	320358			
C28	6.094	0.000	560198	318648			
C32	6.686	0.000	419309	258046	JP-4 (Tol-C14)	865179	52.77
C34	6.948	0.000	320352	192860	BUNKERC (C10-C38)	4118547	553.24
Filter Peak	----						
C36	7.197	0.000	192732	122211			
C38	7.435	0.000	69188	63263			
C40	7.723	0.000	11090	14373			
o-terph	4.157	0.000	1601590	972475	JET-A (C10-C18)	1424651	103.09
Triacon Surr	6.415	0.000	1291580	925610	JP8 (Tol-C16)	1154682	65.63

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	972475	45.4	100.9
Triacontane	925610	52.5	116.7

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

5/10/11

Data File: /chem2/fid9.i/20110510.b/0510A002.D

Date : 10-MAY-2011 10:26

Client ID: RT

Sample Info: RT

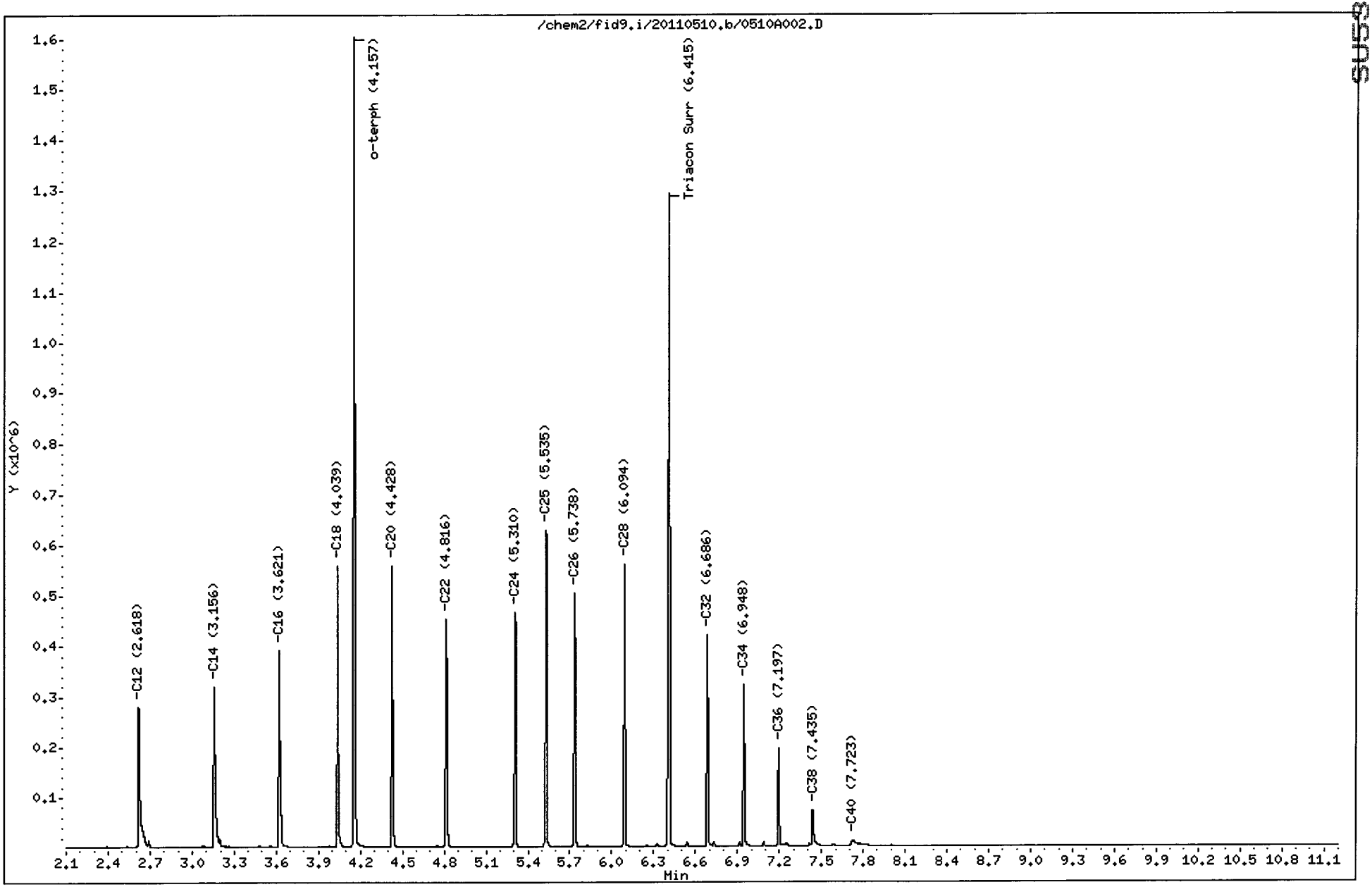
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SUSS-91952



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A003.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: IB
Client ID: IB
Injection: 10-MAY-2011 10:48
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.606	0.006	902	641	GAS (Tol-C12)	33171	1.58
C8	1.353	0.082	2576	1989	DIESEL (C12-C24)	48448	2.14
C10	1.982	0.006	1428	1797	M.OIL (C24-C38)	57761	4.35
C12	2.624	0.006	482	1067	AK-102 (C10-C25)	66124	2.59
C14	3.158	0.002	378	444	AK-103 (C25-C36)	50202	5.91
C16	3.625	0.003	263	60			
C18	4.035	-0.004	270	103			
C20	4.422	-0.006	336	360			
C22	4.819	0.003	215	264			
C24	5.311	0.000	114	36			
C25	5.532	-0.003	522	342			
C26	5.738	0.000	27	9			
C28	6.096	0.002	2002	1387			
C32	6.692	0.006	660	1104	JP-4 (Tol-C14)	42053	2.56
C34	6.946	-0.002	393	352	BUNKERC (C10-C38)	123605	16.60
Filter Peak	----						
C36	7.198	0.001	323	75			
C38	7.437	0.002	397	257			
C40	7.725	0.001	475	176			
o-terph	4.157	0.000	1425815	954726	JET-A (C10-C18)	39437	2.85
Triacon Surr	6.412	-0.003	1278492	898607	JP8 (Tol-C16)	49221	2.80

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	954726	44.6	99.1
Triacontane	898607	51.0	113.3

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

5/12/11

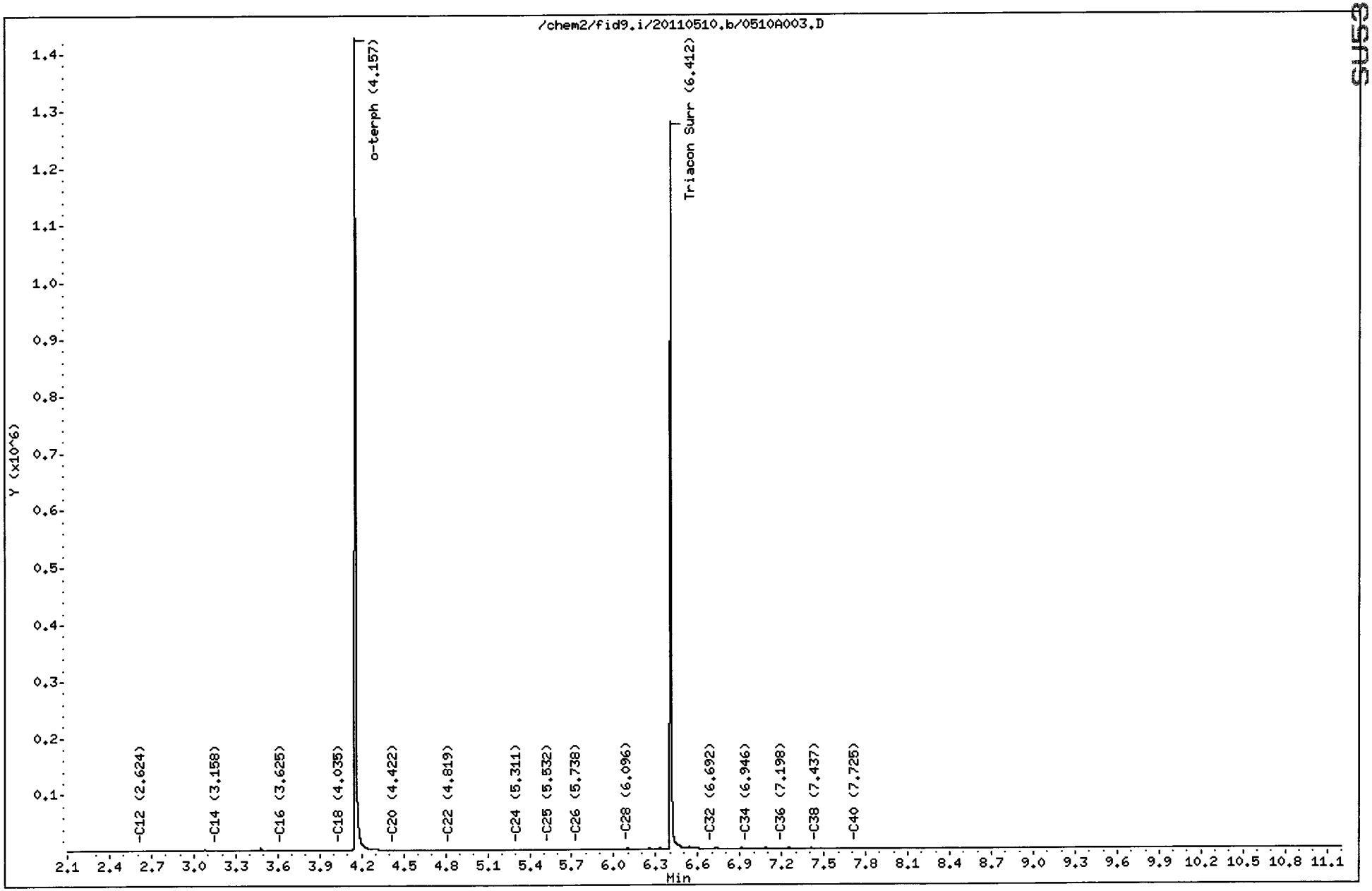
Data File: /chem2/fid9.i/20110510.b/0510A003.D
Date : 10-MAY-2011 10:48
Client ID: IB
Sample Info: IB

Column phase: RTX-1

Instrument: fid9.i

Operator: MS
Column diameter: 0.25

SUS3 : 01064



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A016.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: DIESEL#3
Client ID: LORA LAKES
Injection: 10-MAY-2011 15:36
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.620	0.021	9561	14446	GAS (Tol-C12)	735151	34.99
C8	1.336	0.065	2071	2235	DIESEL (C12-C24)	5657168	249.73
C10	1.979	0.004	26090	24720	M.OIL (C24-C38)	86783	6.54
C12	2.622	0.004	64793	50937	AK-102 (C10-C25)	6255450	245.06 M
C14	3.151	-0.004	140280	104672	AK-103 (C25-C36)	59887	7.05
C16	3.617	-0.004	286332	161437			
C18	4.037	-0.001	247860	178113			
C20	4.425	-0.003	159657	108282			
C22	4.815	-0.001	57075	50445			
C24	5.316	0.005	11184	13873			
C25	5.529	-0.006	2158	1214			
C26	5.742	0.004	1081	627			
C28	6.097	0.003	1985	1766			
C32	6.684	-0.001	47	18	JP-4 (Tol-C14)	1697927	103.55
C34	6.959	0.012	40	10	BUNKERC (C10-C38)	6319997	848.96 M
Filter Peak	----						
C36	7.198	0.002	62	49			
C38	7.438	0.002	144	129			
C40	7.725	0.002	183	162			
o-terph	4.157	0.000	1656515	971292	JET-A (C10-C18)	4510951	326.43
Triacon Surr	6.417	0.002	101	46	JP8 (Tol-C16)	3111985	176.88

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	971292	45.4	100.8
Triacontane	46	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

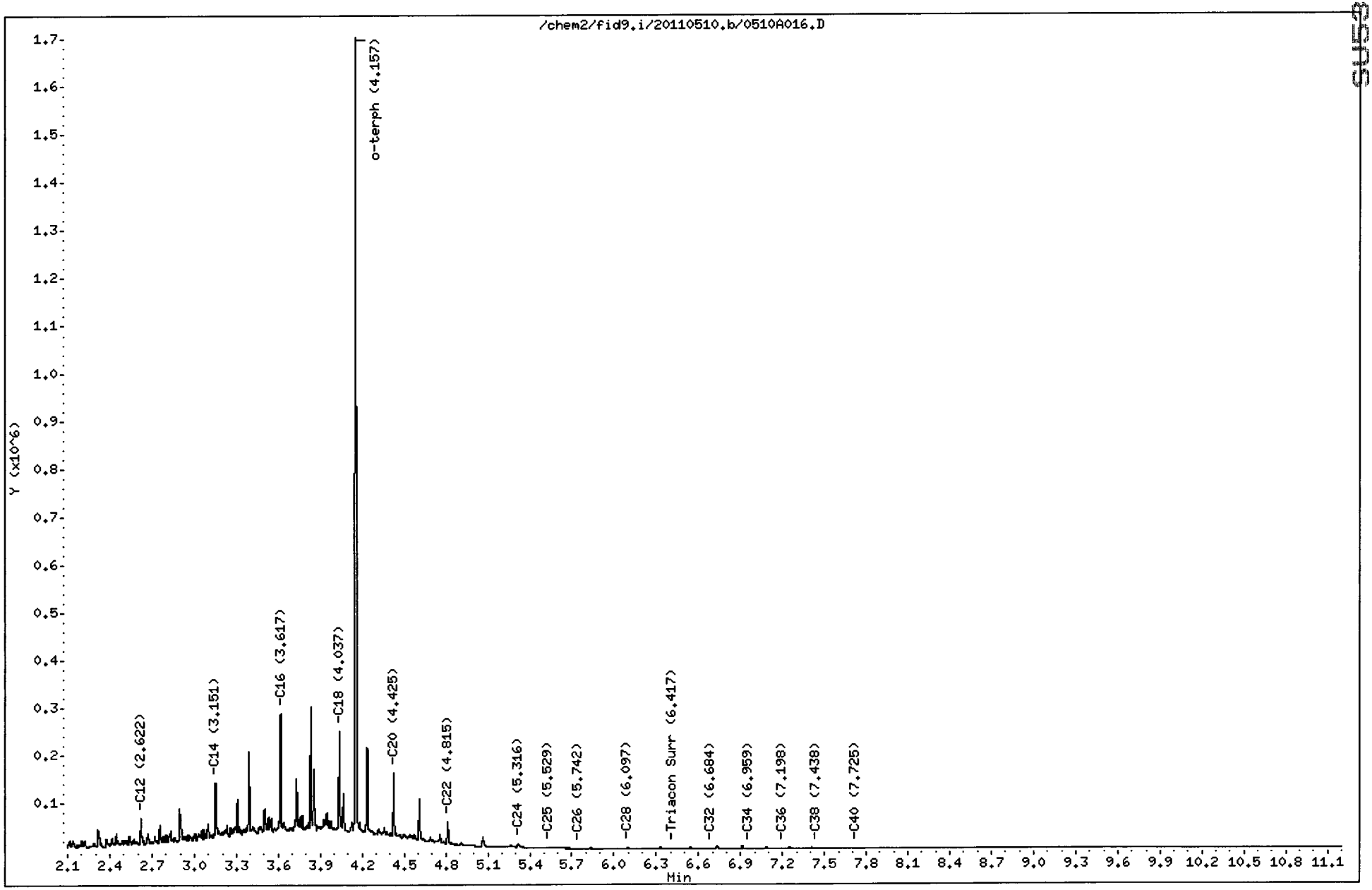
Data File: /chem2/fid9.i/20110510.b/0510A016.D
Date : 10-MAY-2011 15:36
Client ID: LORA LAKES
Sample Info: DIESEL#3

Column phase: RTX-1

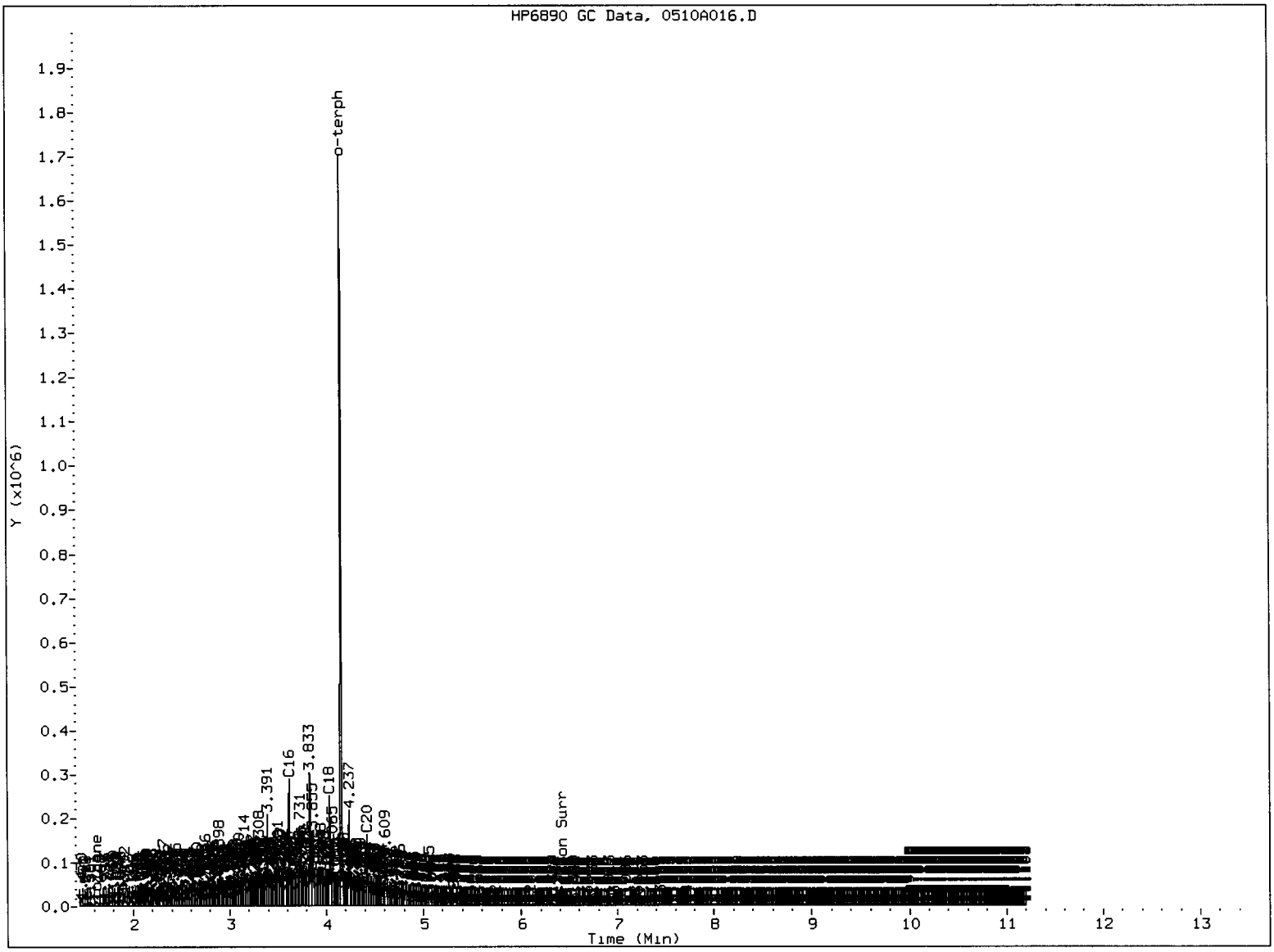
Instrument: fid9.i

Operator: MS
Column diameter: 0.25

SUSS-01066



FID:9A-2C/RTX-1 DIESEL#3 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/12/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A017.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: MOIL#3
Client ID: LORA LAKES
Injection: 10-MAY-2011 15:58
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.610	0.011	860	1339	GAS (Tol-C12)	18672	0.89
C8	1.354	0.083	2436	1858	DIESEL (C12-C24)	900146	39.74
C10	1.980	0.005	864	1027	M.OIL (C24-C38)	6184273	466.26
C12	2.603	-0.015	1483	1904	AK-102 (C10-C25)	1106335	43.34
C14	3.151	-0.004	89	30	AK-103 (C25-C36)	5660369	666.07 M
C16	3.629	0.007	40	9			
C18	4.051	0.012	444	87			
C20	4.428	0.000	5291	5581			
C22	4.817	0.001	13666	6179			
C24	5.311	0.001	26624	23441			
C25	5.542	0.007	36847	21321			
C26	5.740	0.002	44293	17892			
C28	6.088	-0.006	73005	114722			
C32	6.685	-0.001	68850	67676	JP-4 (Tol-C14)	24737	1.51
C34	6.949	0.001	55639	16088	BUNKERC (C10-C38)	7091766	952.63 M
Filter Peak	----						
C36	7.199	0.002	35282	24564			
C38	7.434	-0.001	22404	17249			
C40	7.723	-0.001	7776	5517			
o-terph	4.169	0.012	1311	1849	JET-A (C10-C18)	41421	3.00
Triacon Surr	6.417	0.002	1316830	979156	JP8 (Tol-C16)	28484	1.62

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1849	0.1	0.2
Triacontane	979156	55.6	123.4

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110510.b/0510A017.D

Date : 10-MAY-2011 15:58

Client ID: LORA LAKES

Sample Info: MOIL#3

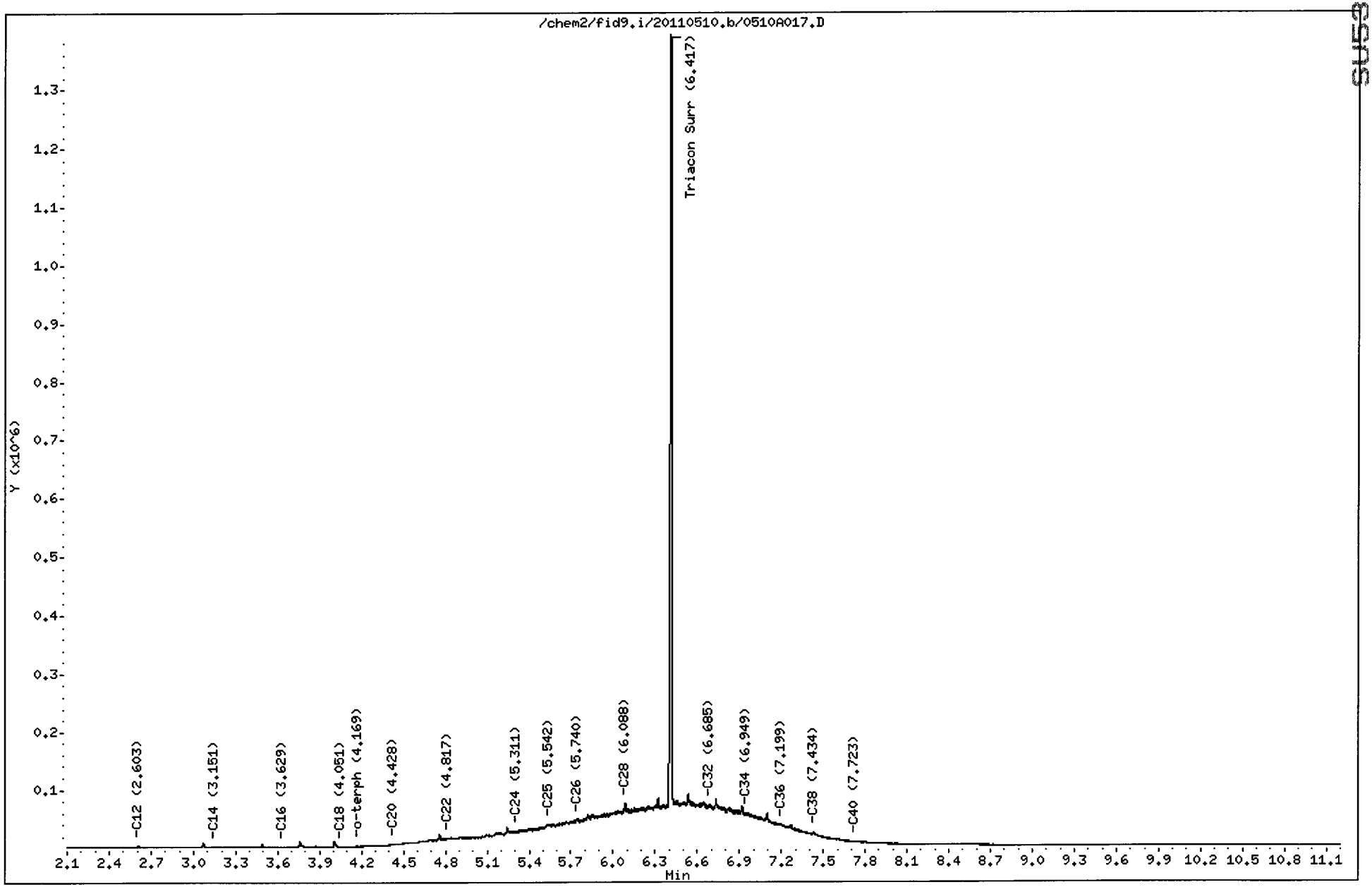
Column phase: RTX-1

Instrument: fid9.i

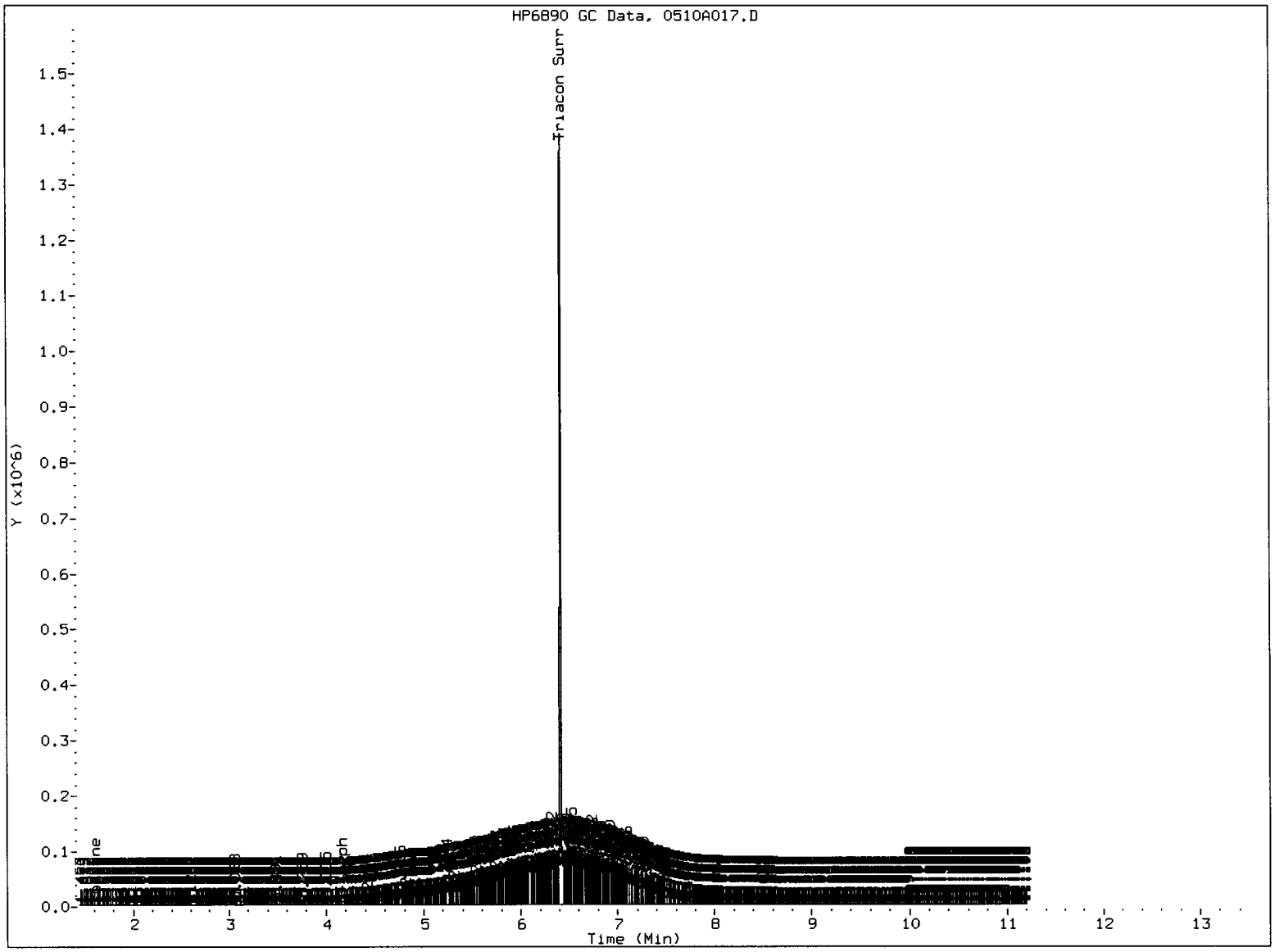
Operator: MS

Column diameter: 0.25

SUS3 : 01069



FID:9A-2C/RTX-1 MOIL#3 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/12/11

SU53:01070

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A021.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: SU73MBW1
Client ID: SU73MBW1
Injection: 10-MAY-2011 18:30
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.595	-0.004	723	242	GAS (Tol-C12)	25428	1.21
C8	1.342	0.071	2272	1293	DIESEL (C12-C24)	68373	3.02
C10	1.981	0.006	833	938	M.OIL (C24-C38)	100256	7.56
C12	2.613	-0.005	126	75	AK-102 (C10-C25)	82300	3.22
C14	3.160	0.004	300	180	AK-103 (C25-C36)	82408	9.70
C16	3.620	-0.002	784	497			
C18	4.046	0.008	737	557			
C20	4.432	0.004	581	625			
C22	4.819	0.002	423	431			
C24	5.317	0.007	147	103			
C25	5.533	-0.002	281	235			
C26	5.737	-0.001	100	72			
C28	6.096	0.002	1271	888			
C32	6.694	0.009	1089	1525	JP-4 (Tol-C14)	35121	2.14
C34	6.948	0.000	189	28	BUNKERC (C10-C38)	181593	24.39
Filter Peak	----						
C36	7.201	0.004	8046	1734			
C38	7.423	-0.013	975	1536			
C40	7.727	0.004	339	223			
o-terph	4.156	-0.001	1115840	762873	JET-A (C10-C18)	57758	4.18
Triacon Surr	6.410	-0.005	1040173	711846	JP8 (Tol-C16)	51200	2.91

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	762873	35.6	79.2
Triacontane	711846	40.4	89.7

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

MS 5/12/11

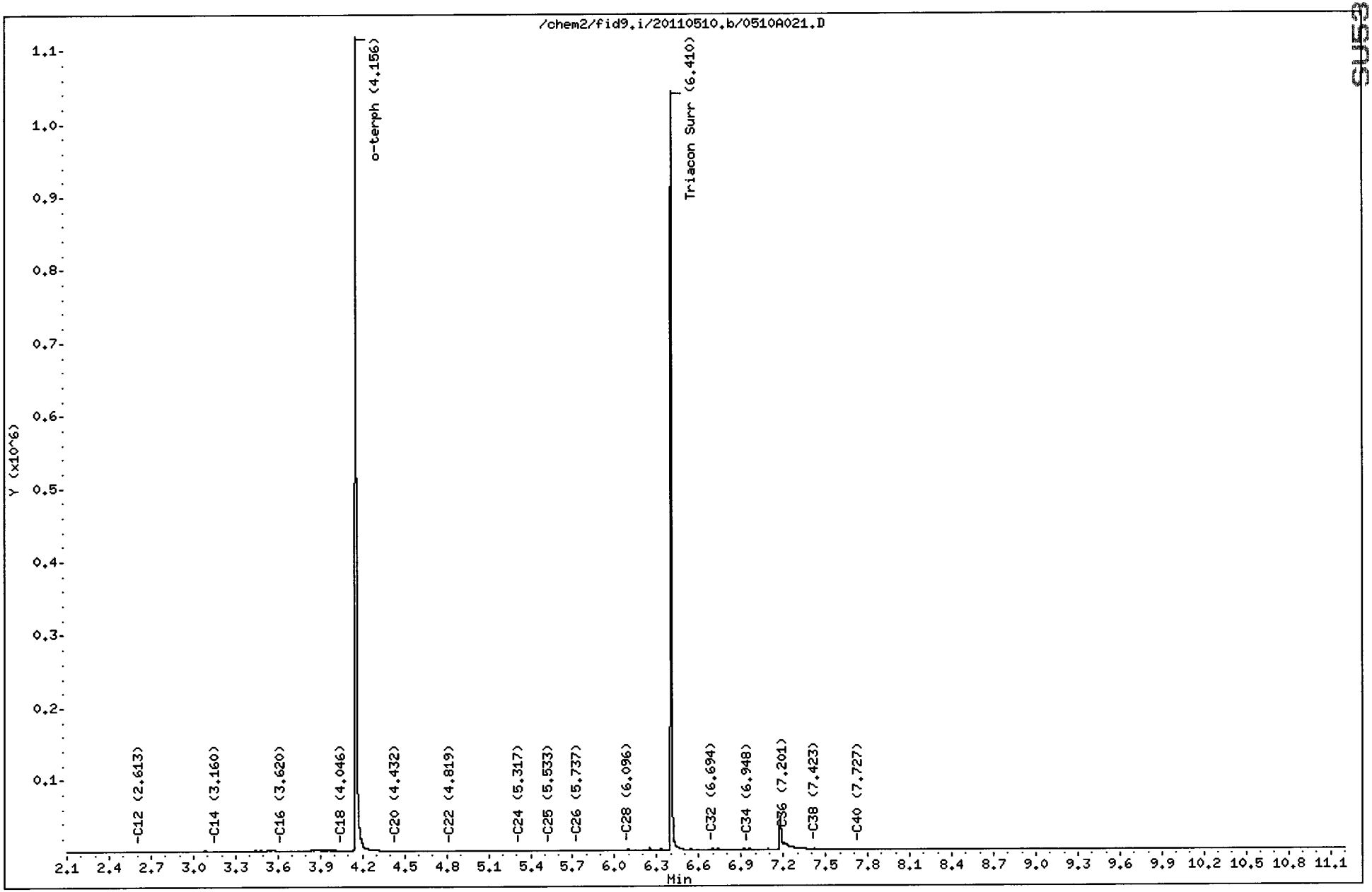
Data File: /chem2/fid9.i/20110510.b/0510A021.D
Date : 10-MAY-2011 18:30
Client ID: SU73MBW1
Sample Info: SU73MBW1

Instrument: fid9.i

Operator: MS
Column diameter: 0.25

Column phase: RTX-1

SU53 : 01072



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A022.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: SU73LCSW1
Client ID: SU73LCSW1
Injection: 10-MAY-2011 18:52
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.612	0.013	41347	28134	GAS (Tol-C12)	2890875	137.60
C8	1.330	0.059	3188	2662	DIESEL (C12-C24)	24781147	1093.94
C10	1.975	0.000	104008	93950	M.OIL (C24-C38)	356943	26.91
C12	2.614	-0.004	267849	213405	AK-102 (C10-C25)	27249063	1067.50
C14	3.148	-0.008	615372	463120	AK-103 (C25-C36)	252118	29.67
C16	3.621	0.000	1150437	786335			
C18	4.047	0.008	1025563	838211			
C20	4.430	0.003	756203	540038			
C22	4.817	0.001	285094	236345			
C24	5.309	-0.001	84881	72297			
C25	5.534	-0.001	35954	34586			
C26	5.738	0.000	15178	18530			
C28	6.095	0.001	4265	4502			
C32	6.683	-0.002	344	255	JP-4 (Tol-C14)	6676458	407.19
C34	6.945	-0.003	87	19	BUNKERC (C10-C38)	27512643	3695.75
Filter Peak	----						
C36	7.199	0.002	5858	2851			
C38	7.414	-0.021	847	999			
C40	7.723	-0.001	103	55			
o-terph	4.160	0.003	1608353	1190504	JET-A (C10-C18)	19564961	1415.79
Triacon Surr	6.410	-0.005	1011398	688946	JP8 (Tol-C16)	12983274	737.94

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1190504	55.6	123.5
Triacontane	688946	39.1	86.9

MS 5/12/11

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110510.b/0510A022.D

Date : 10-MAY-2011 18:52

Client ID: SU73LCSW1

Sample Info: SU73LCSW1

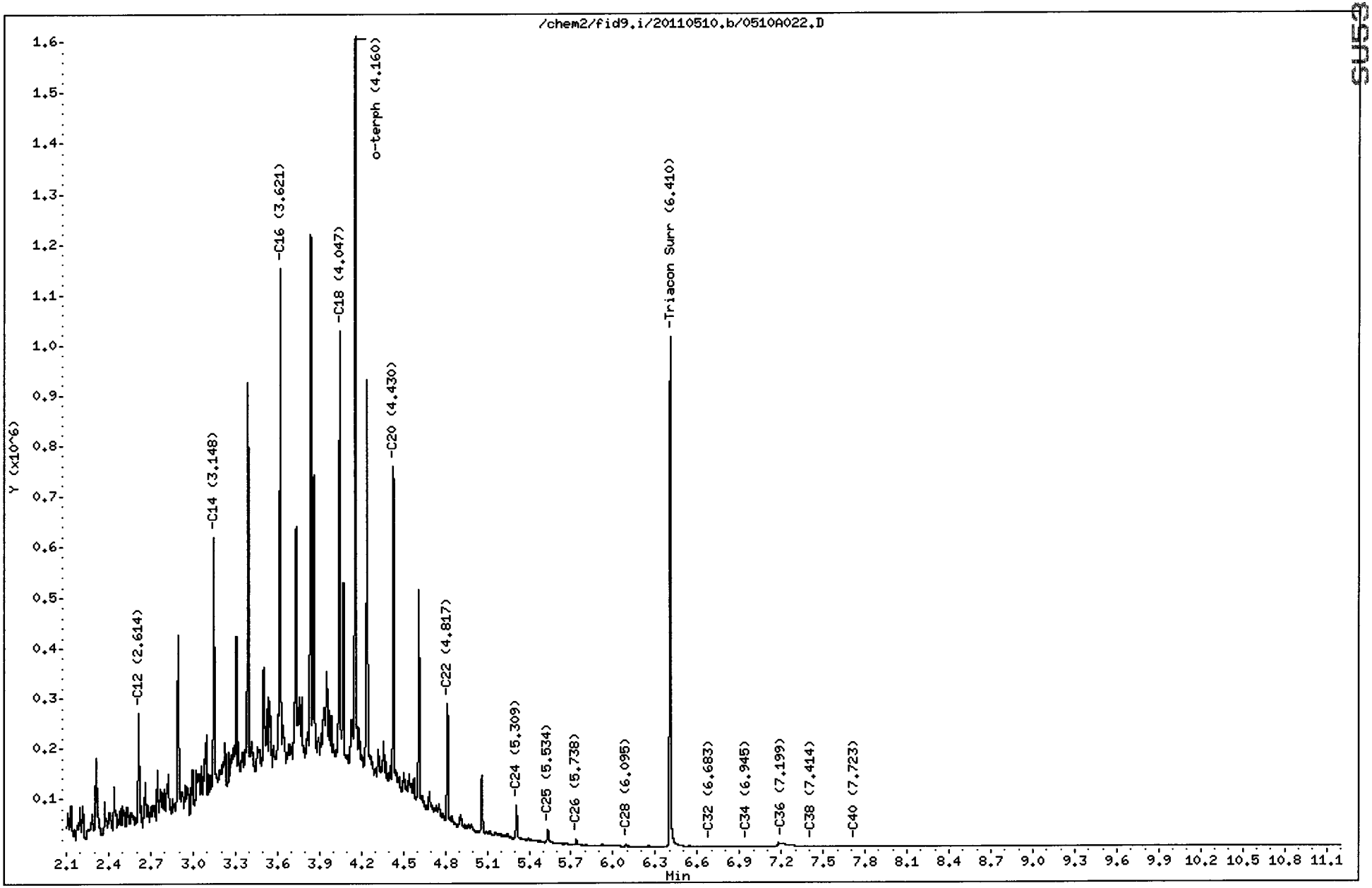
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SU53 : 01074



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A022.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: SU73LCSW1
Client ID: SU73LCSW1
Injection: 10-MAY-2011 18:52
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.612	0.013	41347	28134	GAS (Tol-C12)	2890875	137.60	
C8	1.330	0.059	3188	2662	DIESEL (C12-C24)	25243454	1114.35	
C10	1.975	0.000	104008	93950	M.OIL (C24-C38)	356943	26.91	
C12	2.614	-0.004	267849	213405	AK-102 (C10-C25)	27711369	1085.62	M
C14	3.148	-0.008	615372	463120	AK-103 (C25-C36)	252118	29.67	
C16	3.621	0.000	1150437	786335				
C18	4.047	0.008	1025563	838211				
C20	4.430	0.003	756203	540038				
C22	4.817	0.001	285094	236345				
C24	5.309	-0.001	84881	72297				
C25	5.534	-0.001	35954	34586				
C26	5.738	0.000	15178	18530				
C28	6.095	0.001	4265	4502				
C32	6.683	-0.002	344	255	JP-4 (Tol-C14)	6676458	407.19	
C34	6.945	-0.003	87	19	BUNKERC (C10-C38)	27974949	3757.85	M
Filter Peak	----							
C36	7.199	0.002	5858	2851				
C38	7.414	-0.021	847	999				
C40	7.723	-0.001	103	55				
o-terph	4.160	0.003	1377748	732284	JET-A (C10-C18)	19564961	1415.79	
Triacon Surr	6.410	-0.005	1011398	688946	JP8 (Tol-C16)	12983274	737.94	

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	732284	34.2	76.0
Triacontane	688946	39.1	86.9

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

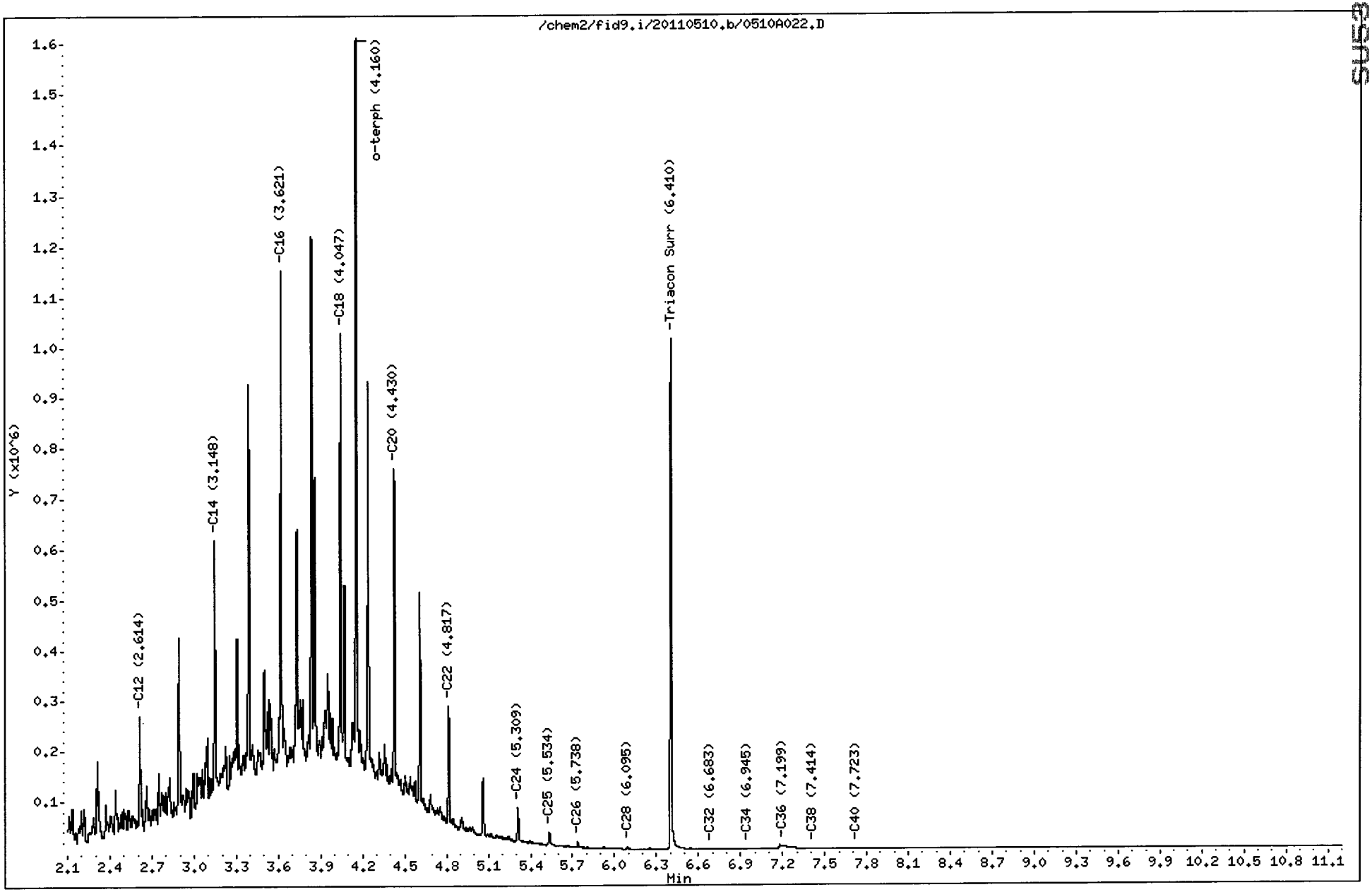
Data File: /chem2/fid9.i/20110510.b/0510A022.D
Date : 10-MAY-2011 18:52
Client ID: SU73LCSW1
Sample Info: SU73LCSW1

Column phase: RTX-1

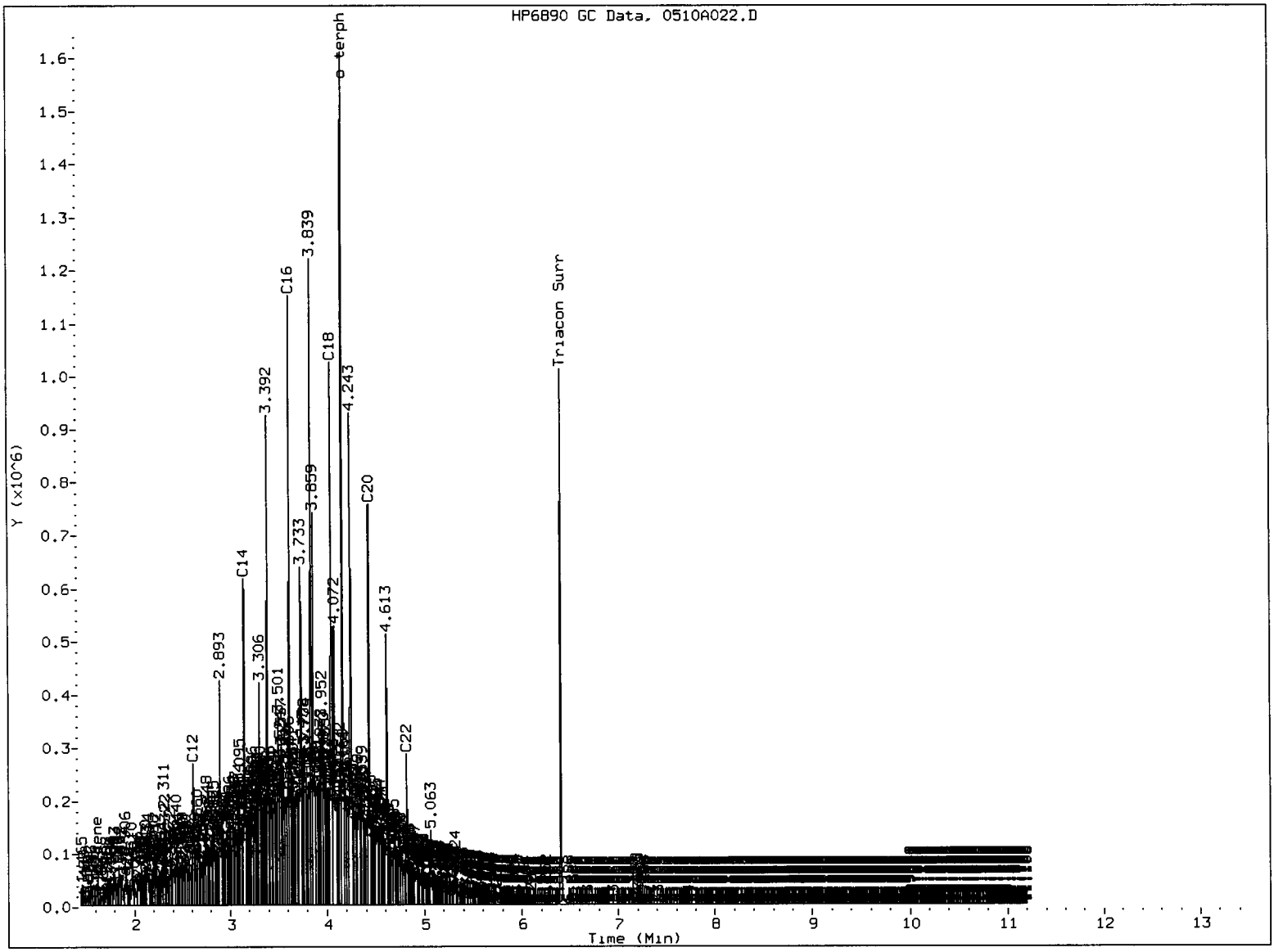
Instrument: fid9.i

Operator: MS
Column diameter: 0.25

SU53-01076



FID:9A-2C/RTX-1 SU73LCSW1 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/12/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A024.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: SU73A
Client ID: MW-01-042911
Injection: 10-MAY-2011 19:36
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.608	0.009	1158	1487	GAS (Tol-C12)	337103	16.04
C8	1.354	0.083	2242	2727	DIESEL (C12-C24)	481065	21.24
C10	1.972	-0.003	12778	7777	M.OIL (C24-C38)	503574	37.97
C12	2.607	-0.011	3432	3547	AK-102 (C10-C25)	772524	30.26
C14	3.165	0.009	2685	3878	AK-103 (C25-C36)	458368	53.94
C16	3.620	-0.002	2994	2180			
C18	4.039	0.001	3612	994			
C20	4.426	-0.002	4545	4234			
C22	4.822	0.005	3469	1325			
C24	5.307	-0.003	3218	1147			
C25	5.535	0.000	3731	2017			
C26	5.736	-0.002	4398	2611			
C28	6.092	-0.002	7871	7395			
C32	6.687	0.002	4751	3996	JP-4 (Tol-C14)	400301	24.41
C34	6.950	0.002	2992	3387	BUNKERC (C10-C38)	1252629	168.26
Filter Peak	----						
C36	7.200	0.003	6367	8466			
C38	7.439	0.004	1014	785			
C40	7.718	-0.005	450	357			
o-terph	4.156	-0.001	1278190	794056	JET-A (C10-C18)	513769	37.18
Triacon Surr	6.411	-0.004	1089448	723510	JP8 (Tol-C16)	483621	27.49

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	794056	37.1	82.4
Triacontane	723510	41.0	91.2

5/12/11

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110510.b/0510A024.D

Date : 10-MAY-2011 19:36

Client ID: MW-01-042911

Sample Info: SU73A

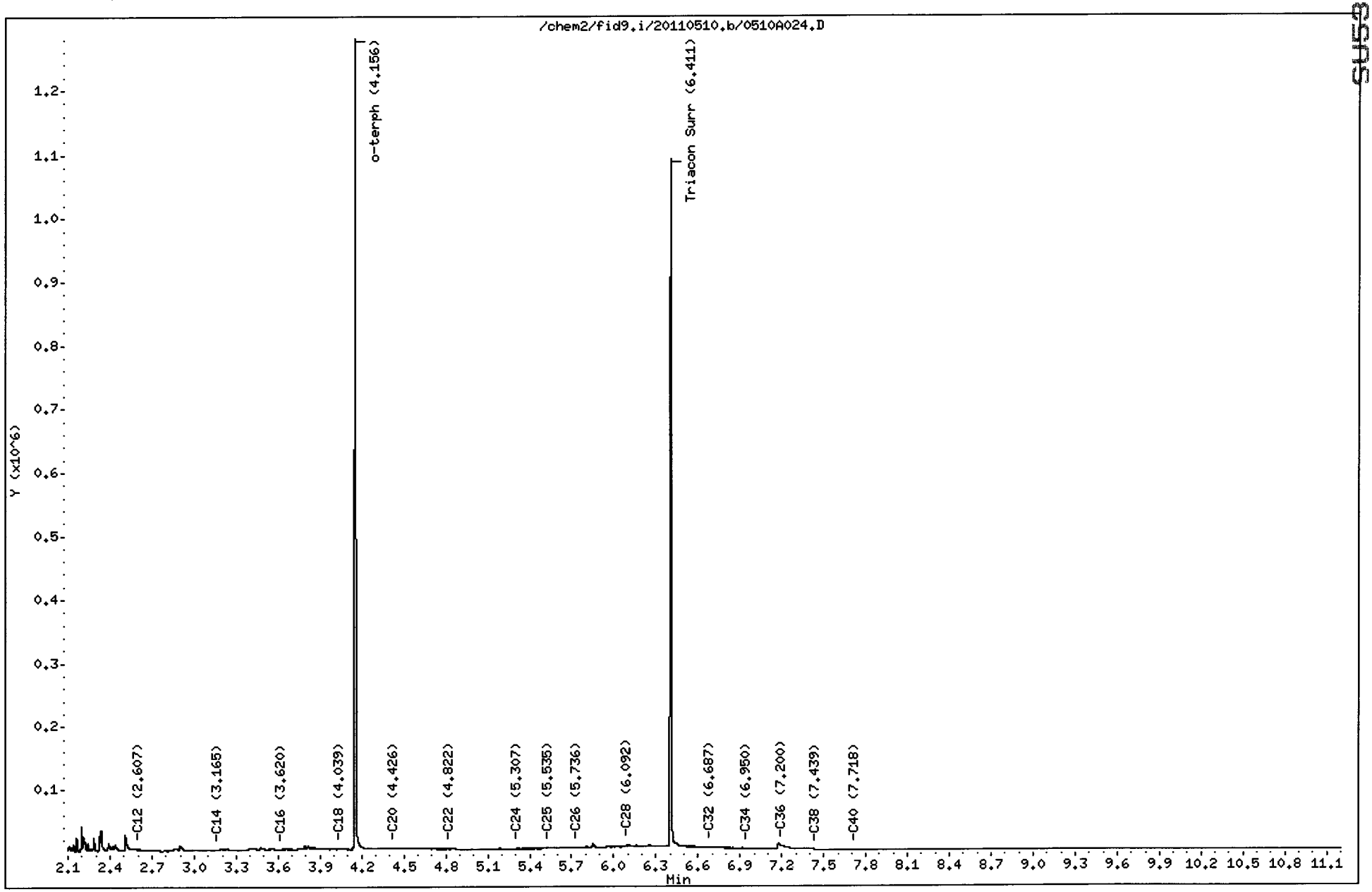
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SU53 : 01079



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A024.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: SU73A
Client ID: MW-01-042911
Injection: 10-MAY-2011 19:36
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.608	0.009	1158	1487	GAS (Tol-C12)	337103	16.04
C8	1.354	0.083	2242	2727	DIESEL (C12-C24)	499496	22.05
C10	1.972	-0.003	12778	7777	M.OIL (C24-C38)	532705	40.16
C12	2.607	-0.011	3432	3547	AK-102 (C10-C25)	790954	30.99 M
C14	3.165	0.009	2685	3878	AK-103 (C25-C36)	487498	57.37 M
C16	3.620	-0.002	2994	2180			
C18	4.039	0.001	3612	994			
C20	4.426	-0.002	4545	4234			
C22	4.822	0.005	3469	1325			
C24	5.307	-0.003	3218	1147			
C25	5.535	0.000	3731	2017			
C26	5.736	-0.002	4398	2611			
C28	6.092	-0.002	7871	7395			
C32	6.687	0.002	4751	3996	JP-4 (Tol-C14)	400301	24.41
C34	6.950	0.002	2992	3387	BUNKERC (C10-C38)	1300190	174.65 M
Filter Peak	----						
C36	7.200	0.003	6367	8466			
C38	7.439	0.004	1014	785			
C40	7.718	-0.005	450	357			
o-terph	4.156	-0.001	1274506	775708	JET-A (C10-C18)	513769	37.18
Triacon Surr	6.411	-0.004	1080976	694538	JP8 (Tol-C16)	483621	27.49

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	775708	36.2	80.5
Triacontane	694538	39.4	87.6

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110510.b/0510A024.D

Date : 10-MAY-2011 19:36

Client ID: MW-01-042911

Sample Info: SU73A

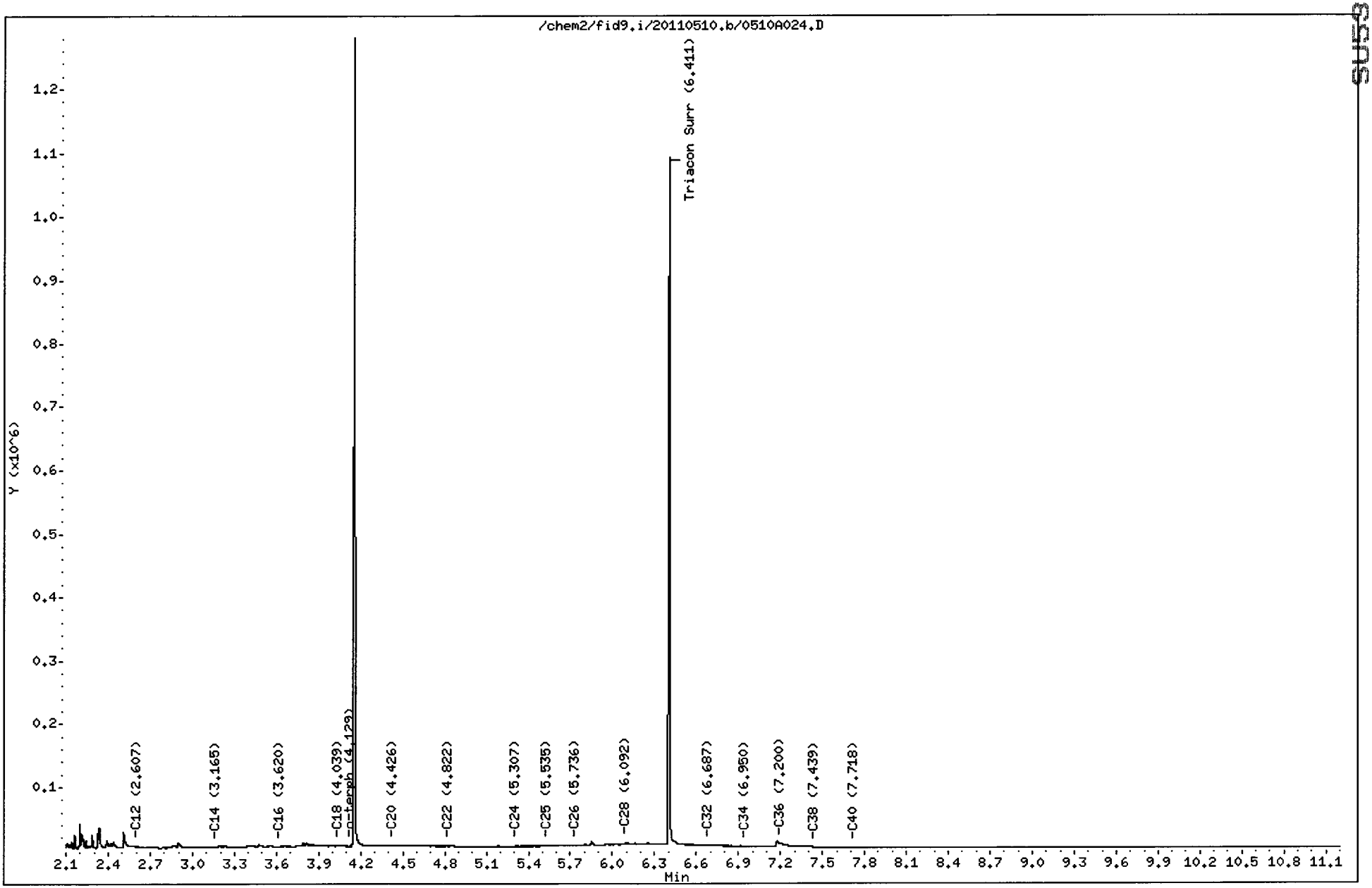
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SU59 : 01081



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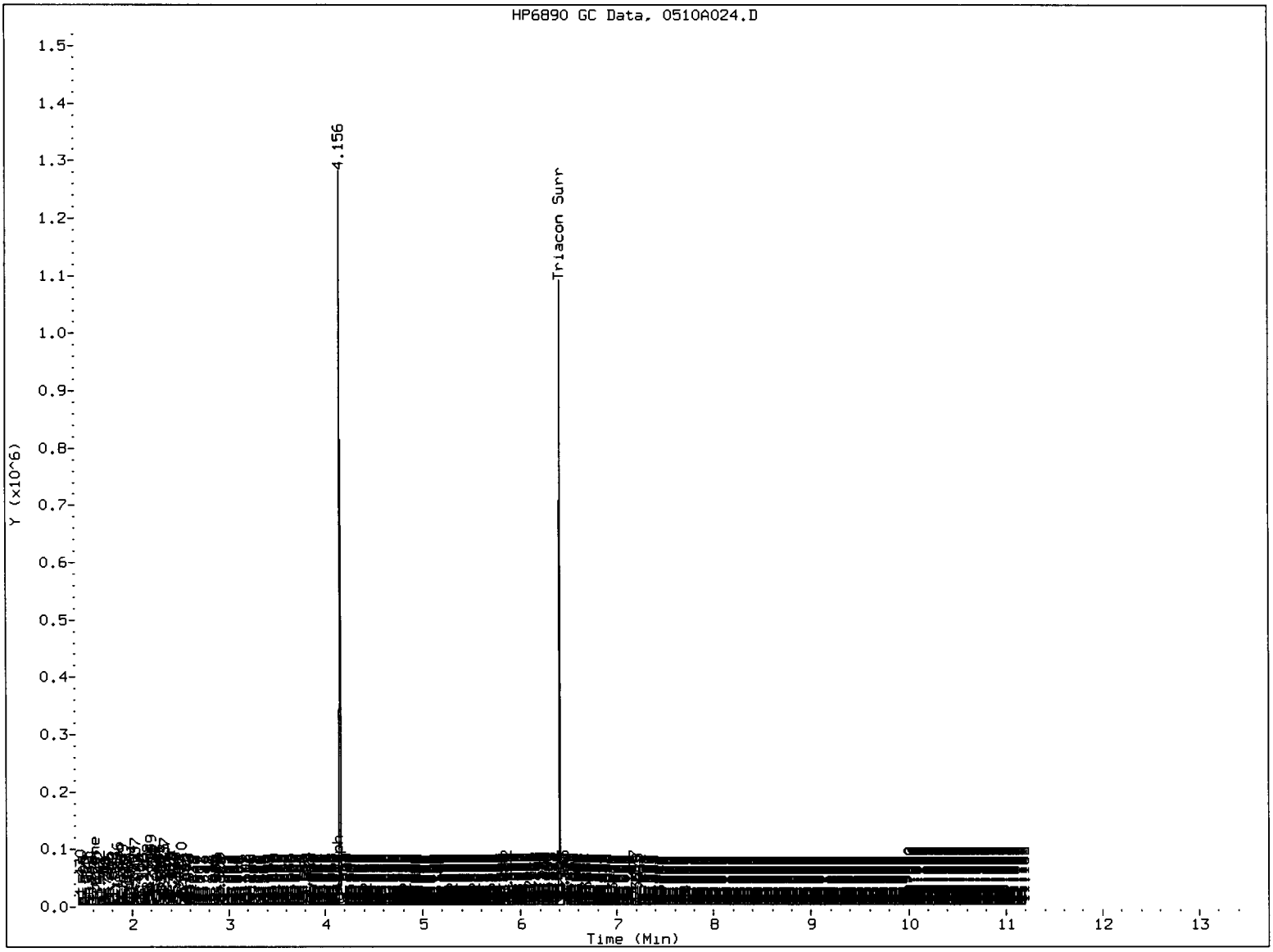


MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/12/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A025.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: SU73AMS
Client ID: MW-01-042911 MS
Injection: 10-MAY-2011 19:58
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.615	0.015	37580	41143	GAS (Tol-C12)	3441502	163.80
C8	1.328	0.056	3196	2501	DIESEL (C12-C24)	26665027	1177.10
C10	1.975	0.000	106734	104816	M.OIL (C24-C38)	938386	70.75
C12	2.613	-0.005	285519	236746	AK-102 (C10-C25)	29629089	1160.74
C14	3.163	0.008	174457	121677	AK-103 (C25-C36)	783278	92.17
C16	3.621	-0.001	1158880	1058059			
C18	4.046	0.008	1021716	930638			
C20	4.430	0.002	738978	552817			
C22	4.817	0.001	299510	269176			
C24	5.310	0.000	85784	81492			
C25	5.533	-0.002	43776	46928			
C26	5.736	-0.002	22866	24456			
C28	6.093	-0.001	12122	12489			
C32	6.685	-0.001	5957	5355	JP-4 (Tol-C14)	7750733	472.71
C34	6.949	0.002	3708	2129	BUNKERC (C10-C38)	30435884	4088.43
Filter Peak	----						
C36	7.197	0.001	6402	5911			
C38	7.441	0.006	1197	1037			
C40	7.721	-0.003	553	371			
o-terph	4.160	0.003	1657980	1221735	JET-A (C10-C18)	21500227	1555.84
Triacon Surr	6.412	-0.003	1163710	769942	JP8 (Tol-C16)	14547804	826.86

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1221735	57.0	126.8
Triacontane	769942	43.7	97.1

MS 5/12/11

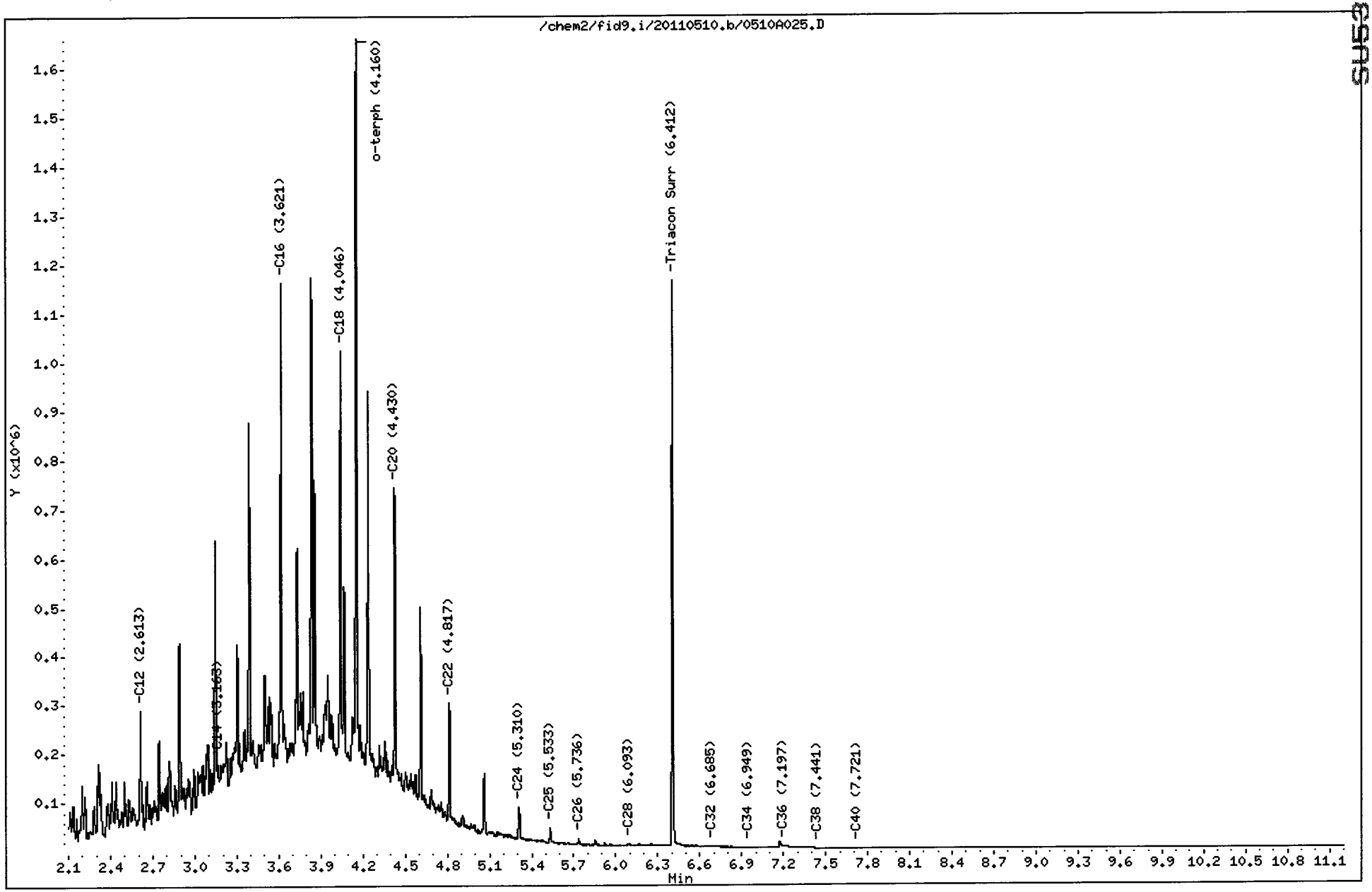
Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110510.b/0510A025.D
Date : 10-MAY-2011 19:58
Client ID: MW-01-042911 MS
Sample Info: SU73AMS

Column phase: RTX-1

Instrument: fid9.i

Operator: MS
Column diameter: 0.25



SU53 : 01084

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A025.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: SU73AMS
Client ID: MW-01-042911 MS
Injection: 10-MAY-2011 19:58
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.615	0.015	37580	41143	GAS (Tol-C12)	3441502	163.80	
C8	1.328	0.056	3196	2501	DIESEL (C12-C24)	27094286	1196.05	
C10	1.975	0.000	106734	104816	M.OIL (C24-C38)	972237	73.30	
C12	2.613	-0.005	285519	236746	AK-102 (C10-C25)	30058348	1177.56	M
C14	3.163	0.008	174457	121677	AK-103 (C25-C36)	817129	96.15	M
C16	3.621	-0.001	1158880	1058059				
C18	4.046	0.008	1021716	930638				
C20	4.430	0.002	738978	552817				
C22	4.817	0.001	299510	269176				
C24	5.310	0.000	85784	81492				
C25	5.533	-0.002	43776	46928				
C26	5.736	-0.002	22866	24456				
C28	6.093	-0.001	12122	12489				
C32	6.685	-0.001	5957	5355	JP-4 (Tol-C14)	7750733	472.71	
C34	6.949	0.002	3708	2129	BUNKERC (C10-C38)	30898994	4150.64	M
Filter Peak	----							
C36	7.197	0.001	6402	5911				
C38	7.441	0.006	1197	1037				
C40	7.721	-0.003	553	371				
o-terph	4.160	0.003	1411355	797352	JET-A (C10-C18)	21500227	1555.84	
Triacon Surr	6.412	-0.003	1154106	736272	JP8 (Tol-C16)	14547804	826.86	

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	797352	37.2	82.7
Triacontane	736272	41.8	92.8

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110510.b/0510A025.D

Date : 10-MAY-2011 19:58

Client ID: MW-01-042911 MS

Sample Info: SU73AMS

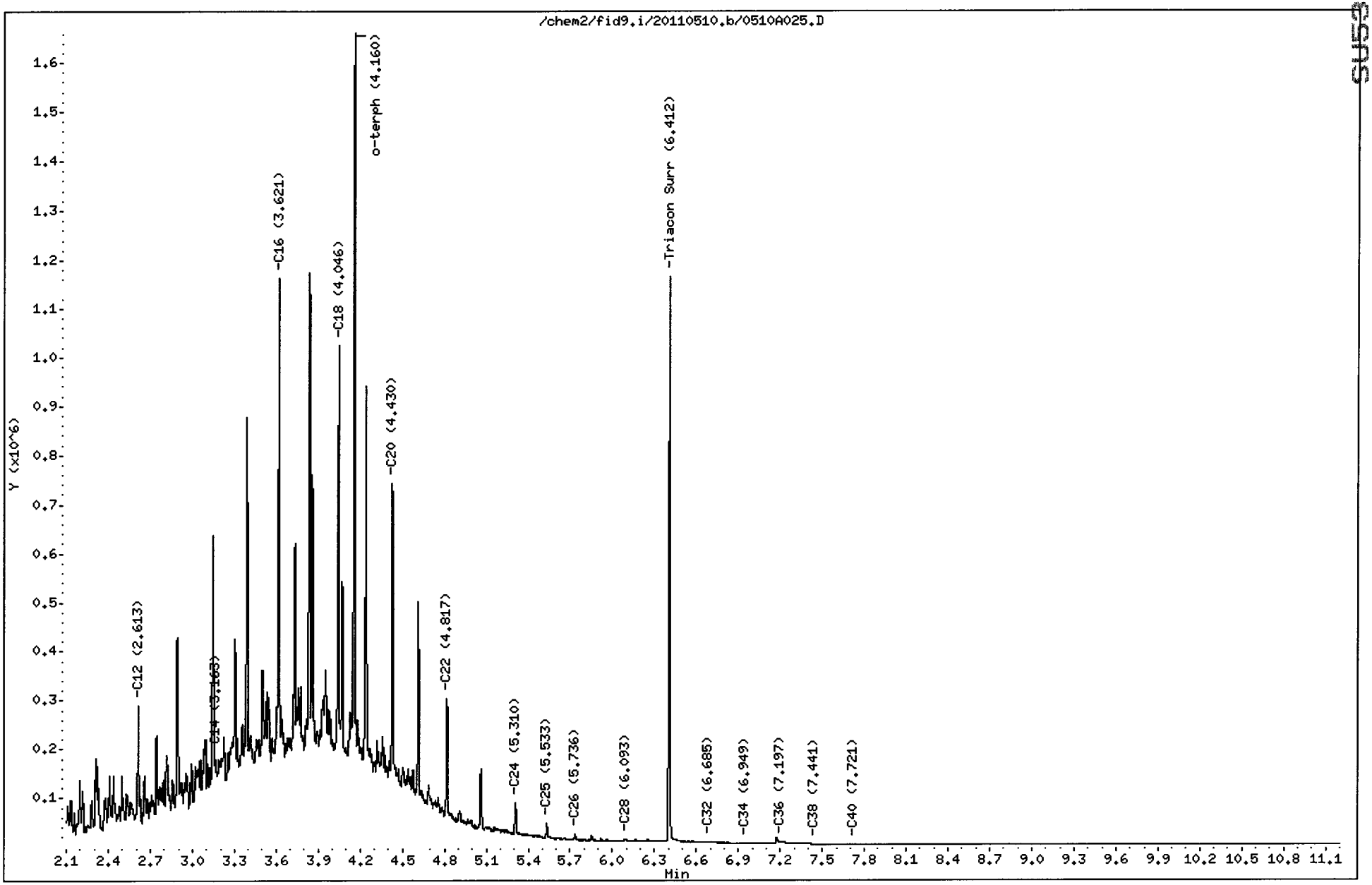
Column phase: RTX-1

Instrument: fid9.i

Operator: MS

Column diameter: 0.25

SU53 : 01086



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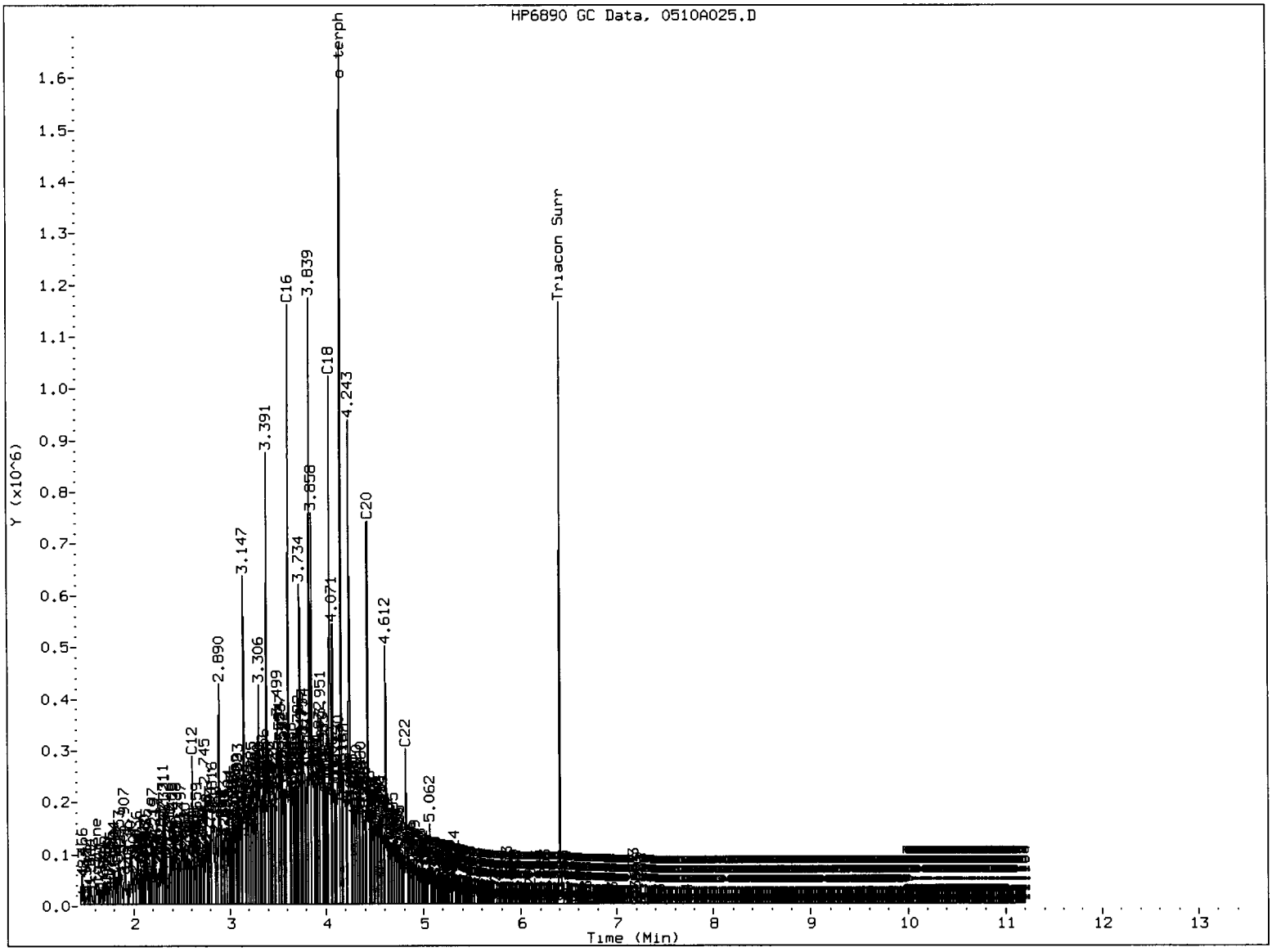


MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/12/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A026.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: SU73AMSD
Client ID: MW-01-042911 MSD
Injection: 10-MAY-2011 20:20
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.612	0.013	34668	44569	GAS (Tol-C12)	3294122	156.79
C8	1.327	0.056	3200	2395	DIESEL (C12-C24)	25677705	1133.52
C10	1.972	-0.003	105373	98068	M.OIL (C24-C38)	920056	69.37
C12	2.612	-0.006	274459	227934	AK-102 (C10-C25)	28518932	1117.25
C14	3.163	0.007	163268	61098	AK-103 (C25-C36)	772364	90.89
C16	3.623	0.001	1179472	1053657			
C18	4.047	0.009	1015447	895223			
C20	4.430	0.003	729787	571626			
C22	4.817	0.001	295618	267027			
C24	5.309	-0.001	88997	74326			
C25	5.532	-0.003	42613	39995			
C26	5.735	-0.003	22388	25143			
C28	6.092	-0.002	11799	12172			
C32	6.690	0.005	5886	7216	JP-4 (Tol-C14)	7228573	440.86
C34	6.945	-0.002	3331	1101	BUNKERC (C10-C38)	29312041	3937.47
Filter Peak	----						
C36	7.202	0.005	5903	2193			
C38	7.429	-0.006	1383	1789			
C40	7.718	-0.006	480	402			
o-terph	4.160	0.003	1549379	1228671	JET-A (C10-C18)	20441501	1479.22
Triacon Surr	6.414	-0.001	1009514	696584	JP8 (Tol-C16)	13722509	779.95

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1228671	57.4	127.5
Triacontane	696584	39.5	87.8

MS 5/12/11

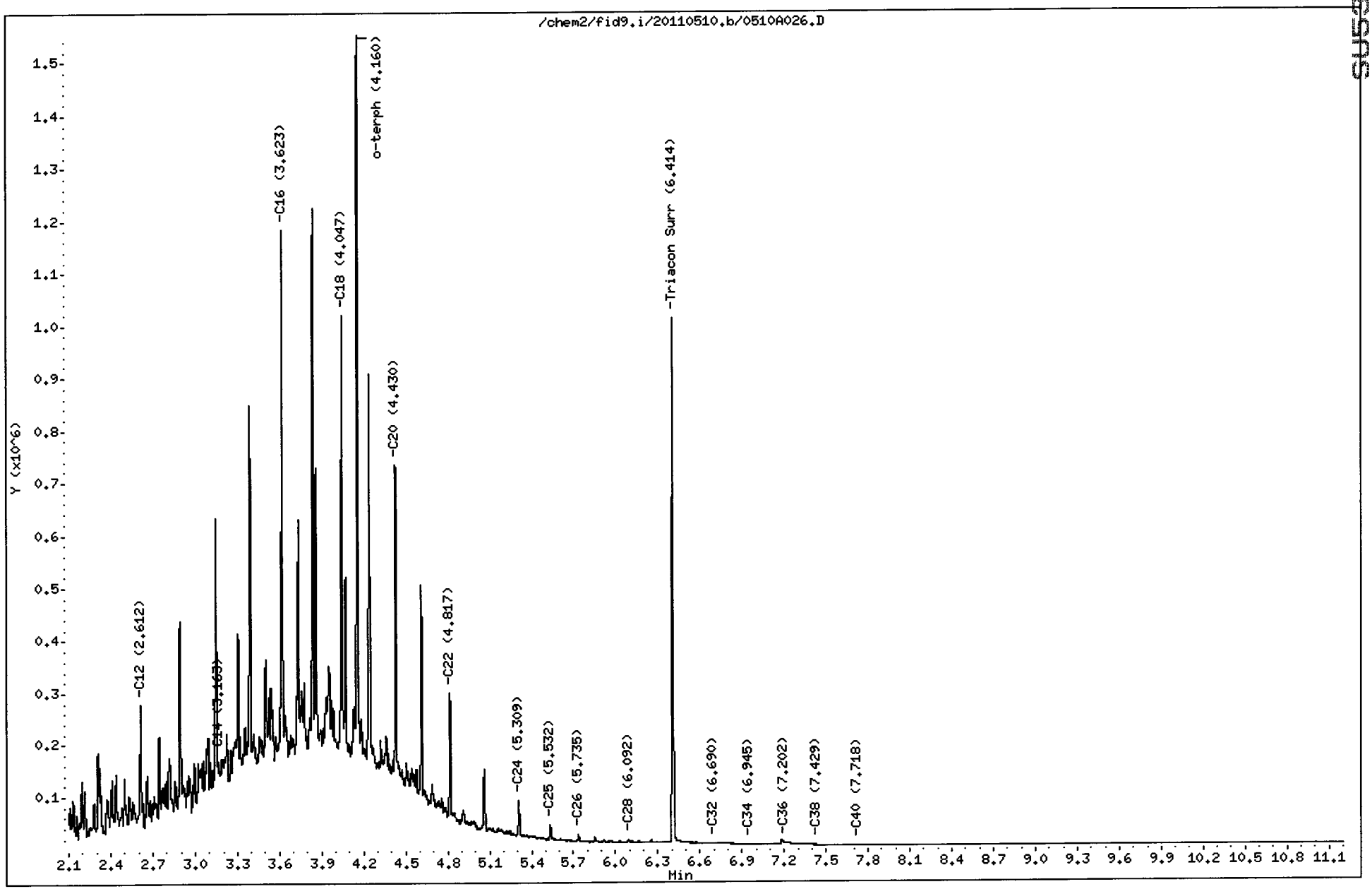
Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110510.b/0510A026.D
Date : 10-MAY-2011 20:20
Client ID: MW-01-042911 MSD
Sample Info: SU73AMSD

Column phase: RTX-1

Instrument: fid9.i

Operator: MS
Column diameter: 0.25



SU53 : 01089

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A026.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: SU73AMSD
Client ID: MW-01-042911 MSD
Injection: 10-MAY-2011 20:20
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.612	0.013	34668	44569	GAS (Tol-C12)	3294122	156.79
C8	1.327	0.056	3200	2395	DIESEL (C12-C24)	26196030	1156.40
C10	1.972	-0.003	105373	98068	M.OIL (C24-C38)	952017	71.78
C12	2.612	-0.006	274459	227934	AK-102 (C10-C25)	29037256	1137.56 M
C14	3.163	0.007	163268	61098	AK-103 (C25-C36)	804325	94.65 M
C16	3.623	0.001	1179472	1053657			
C18	4.047	0.009	1015447	895223			
C20	4.430	0.003	729787	571626			
C22	4.817	0.001	295618	267027			
C24	5.309	-0.001	88997	74326			
C25	5.532	-0.003	42613	39995			
C26	5.735	-0.003	22388	25143			
C28	6.092	-0.002	11799	12172			
C32	6.690	0.005	5886	7216	JP-4 (Tol-C14)	7228573	440.86
C34	6.945	-0.002	3331	1101	BUNKERC (C10-C38)	29862326	4011.38 M
Filter Peak	----						
C36	7.202	0.005	5903	2193			
C38	7.429	-0.006	1383	1789			
C40	7.718	-0.006	480	402			
o-terph	4.160	0.003	1309252	714633	JET-A (C10-C18)	20441501	1479.22
Triacon Surr	6.414	-0.001	1000193	664806	JP8 (Tol-C16)	13722509	779.95

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	714633	33.4	74.1
Triacontane	664806	37.7	83.8

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

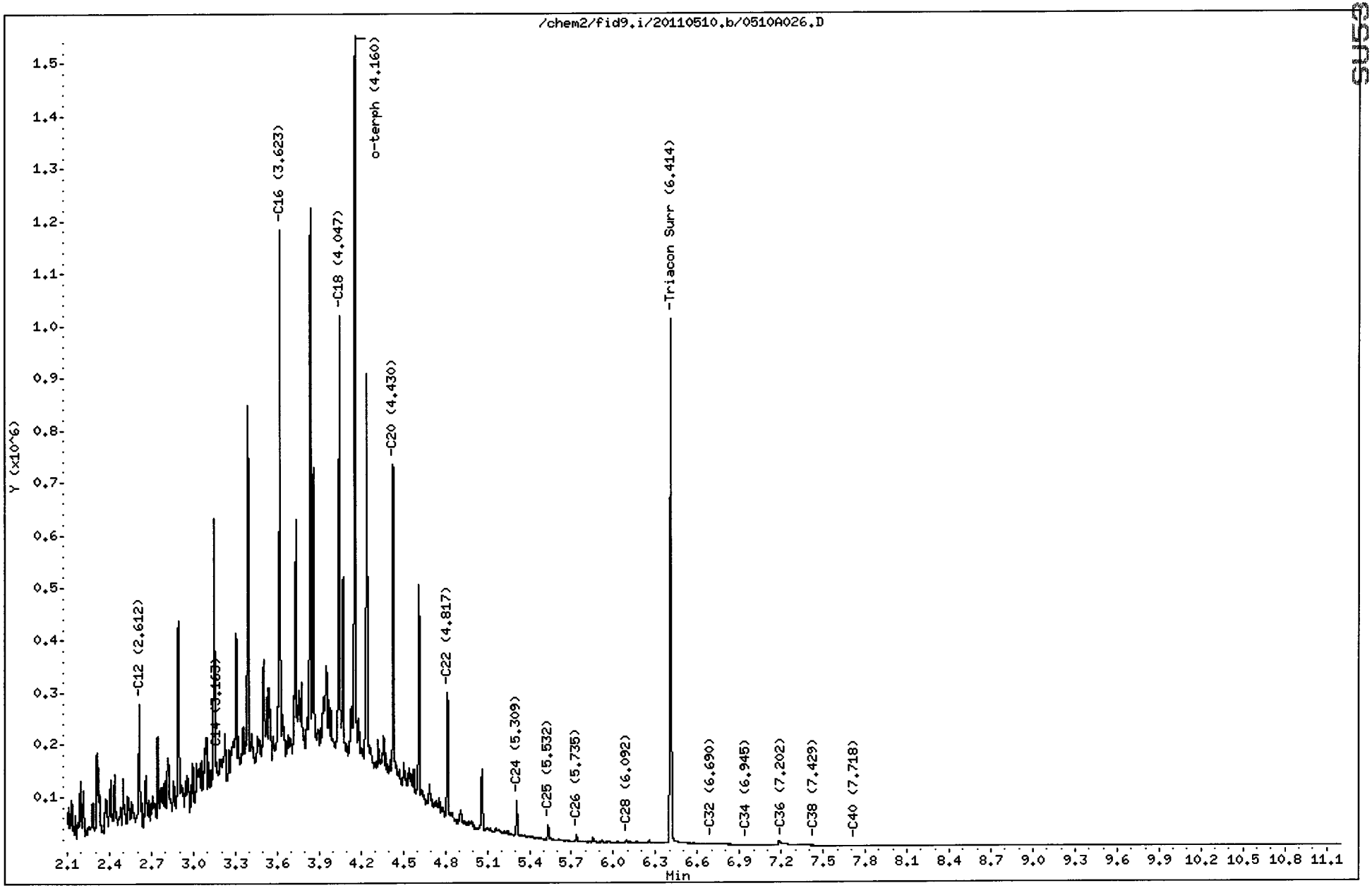
Data File: /chem2/fid9.i/20110510.b/0510A026.D
Date : 10-MAY-2011 20:20
Client ID: MW-01-042911 MSD
Sample Info: SU73AMSD

Column phase: RTX-1

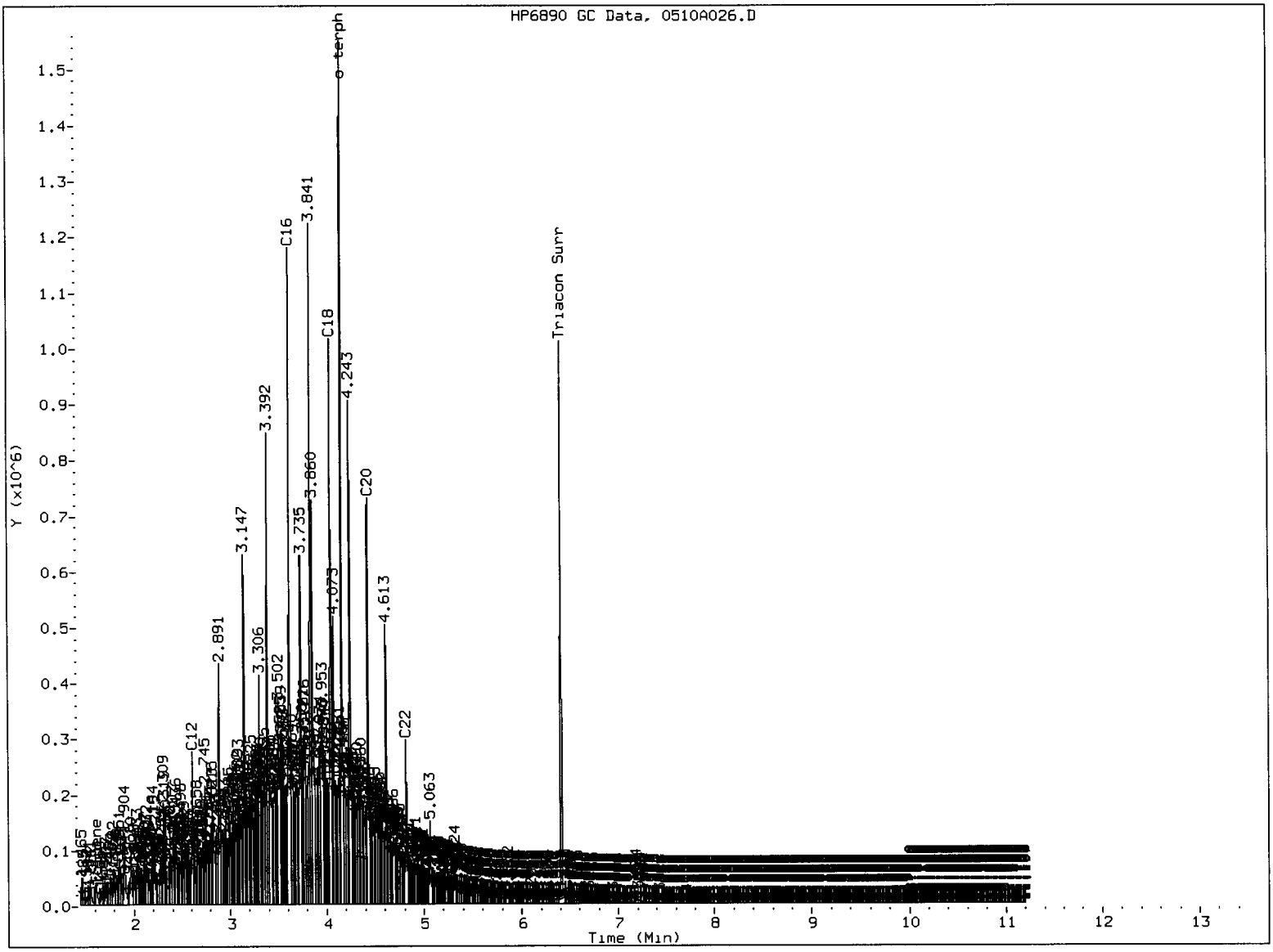
Instrument: fid9.i

Operator: MS
Column diameter: 0.25

SU53-01691



FID:9A-2C/RTX-1 SU73AMSD FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: MC Date: 5/12/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A027.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: SU73B
Client ID: MW-01-042911-D
Injection: 10-MAY-2011 20:41
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.610	0.010	1164	1512	GAS (Tol-C12)	345959	16.47
C8	1.352	0.081	2154	2408	DIESEL (C12-C24)	497773	21.97
C10	1.972	-0.003	14131	8882	M.OIL (C24-C38)	499423	37.65
C12	2.605	-0.013	3567	3806	AK-102 (C10-C25)	793776	31.10
C14	3.164	0.008	2672	3893	AK-103 (C25-C36)	453414	53.35
C16	3.622	0.001	3256	2349			
C18	4.040	0.002	4495	3902			
C20	4.430	0.002	4801	6674			
C22	4.813	-0.003	3623	3434			
C24	5.309	-0.002	2972	1253			
C25	5.531	-0.004	4631	3912			
C26	5.738	0.000	4191	2205			
C28	6.092	-0.002	9778	9914			
C32	6.688	0.002	4513	3035	JP-4 (Tol-C14)	419542	25.59
C34	6.946	-0.002	2705	475	BUNKERC (C10-C38)	1270626	170.68
Filter Peak	----						
C36	7.203	0.007	5954	1499			
C38	7.442	0.006	1124	1179			
C40	7.726	0.002	450	201			
o-terph	4.157	0.000	1279128	752418	JET-A (C10-C18)	542344	39.25
Triacon Surr	6.412	-0.003	995457	703144	JP8 (Tol-C16)	505522	28.73

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	752418	35.1	78.1
Triacontane	703144	39.9	88.6

ms 5/12/11

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

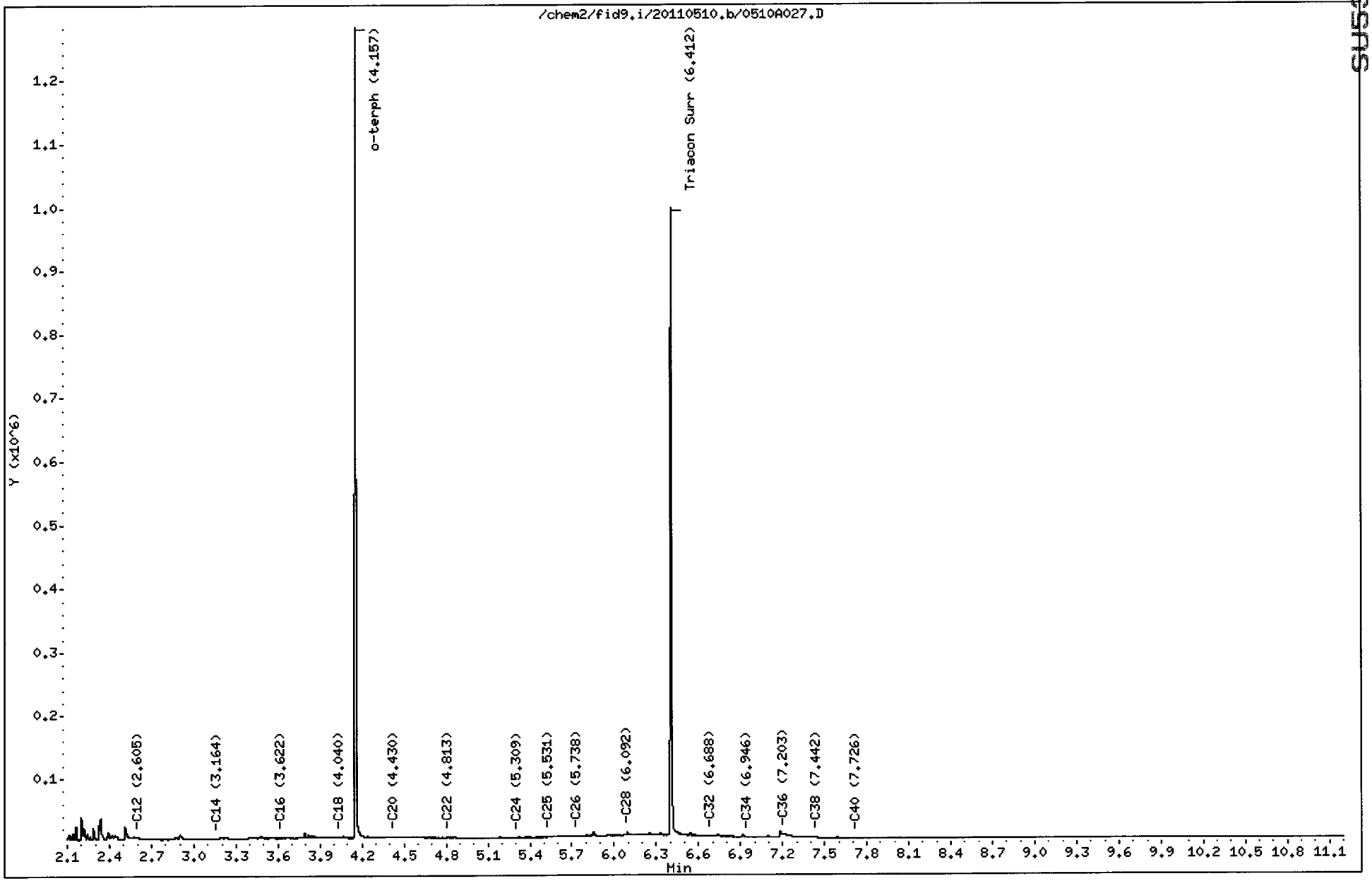
Data File: /chem2/fid9.i/20110510.b/0510A027.D
Date : 10-MAY-2011 20:41
Client ID: MW-01-042911-D
Sample Info: SU73B

Column phase: RTX-1

Instrument: fid9.i

Operator: MS
Column diameter: 0.25

SU73 : 01691



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A027.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: SU73B
Client ID: MW-01-042911-D
Injection: 10-MAY-2011 20:41
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.610	0.010	1164	1512	GAS (Tol-C12)	345959	16.47
C8	1.352	0.081	2154	2408	DIESEL (C12-C24)	518793	22.90
C10	1.972	-0.003	14131	8882	M.OIL (C24-C38)	531880	40.10
C12	2.605	-0.013	3567	3806	AK-102 (C10-C25)	814796	31.92 M
C14	3.164	0.008	2672	3893	AK-103 (C25-C36)	485870	57.17 M
C16	3.622	0.001	3256	2349			
C18	4.040	0.002	4495	3902			
C20	4.430	0.002	4801	6674			
C22	4.813	-0.003	3623	3434			
C24	5.309	-0.002	2972	1253			
C25	5.531	-0.004	4631	3912			
C26	5.738	0.000	4191	2205			
C28	6.092	-0.002	9778	9914			
C32	6.688	0.002	4513	3035	JP-4 (Tol-C14)	419542	25.59
C34	6.946	-0.002	2705	475	BUNKERC (C10-C38)	1324102	177.87 M
Filter Peak	----						
C36	7.203	0.007	5954	1499			
C38	7.442	0.006	1124	1179			
C40	7.726	0.002	450	201			
o-terph	4.157	0.000	1275636	731477	JET-A (C10-C18)	542344	39.25
Triacon Surr	6.412	-0.003	987568	670837	JP8 (Tol-C16)	505522	28.73

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	731477	34.2	75.9
Triacontane	670837	38.1	84.6

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

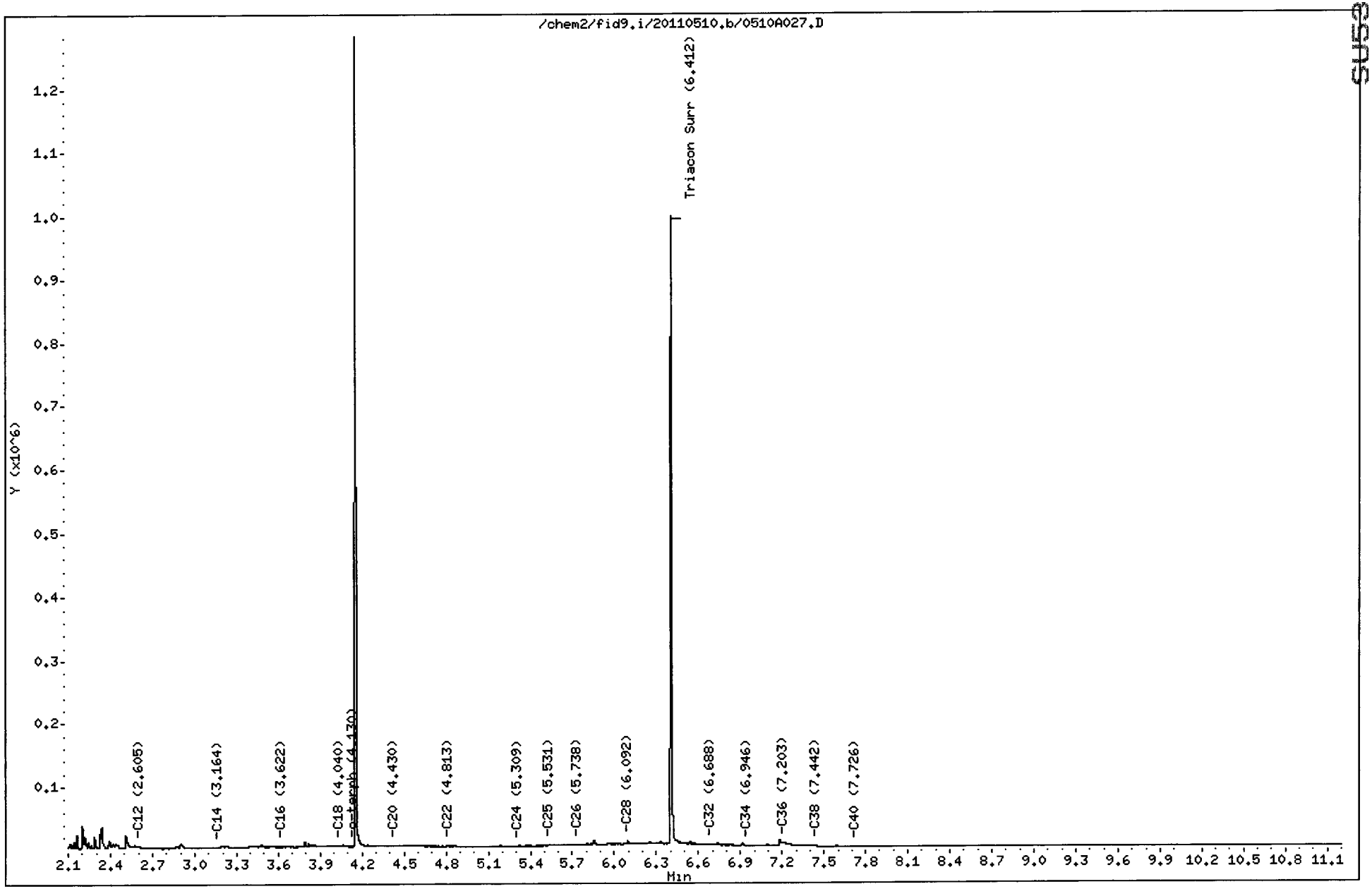
Data File: /chem2/fid9.i/20110510.b/0510A027.D
Date : 10-MAY-2011 20:41
Client ID: MW-01-042911-D
Sample Info: SU73B

Column phase: RTX-1

Instrument: fid9.i

Operator: MS
Column diameter: 0.25

SU73 01096



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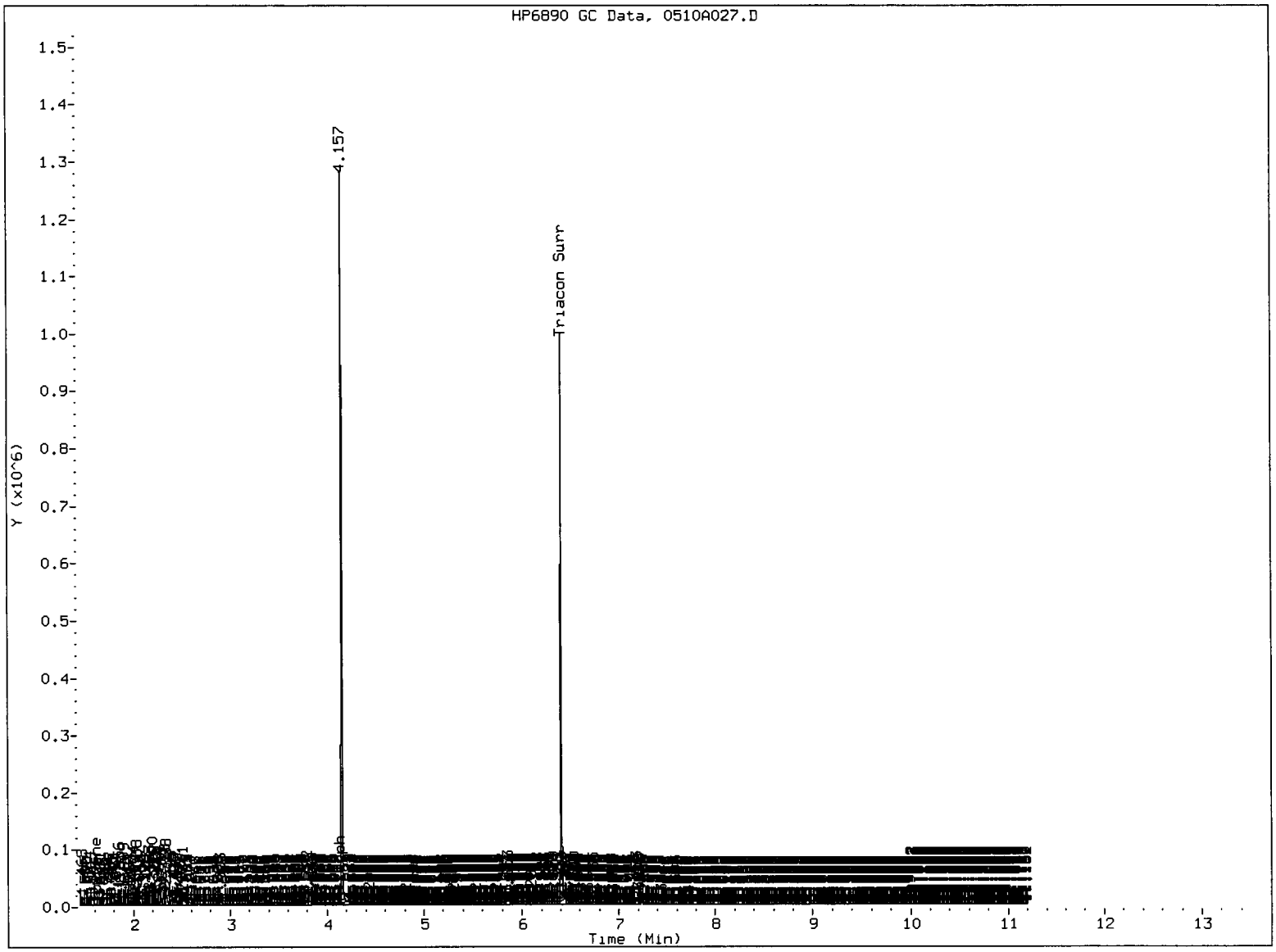


MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/12/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A028.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: SU74A
Client ID: B312-042911
Injection: 10-MAY-2011 21:03
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.605	0.006	1265	2407	GAS (Tol-C12)	172734	8.22
C8	1.353	0.082	269708	139599	DIESEL (C12-C24)	268052	11.83
C10	1.981	0.006	513	437	M.OIL (C24-C38)	285900	21.56
C12	2.580	-0.038	16763	23426	AK-102 (C10-C25)	429284	16.82
C14	3.155	0.000	536	408	AK-103 (C25-C36)	235781	27.75
C16	3.623	0.002	1312	1510			
C18	4.046	0.008	2242	1044			
C20	4.435	0.008	2234	2771			
C22	4.812	-0.004	2028	1786			
C24	5.308	-0.002	1309	1284			
C25	5.535	0.000	1706	1866			
C26	5.739	0.001	1736	2486			
C28	6.093	-0.001	3093	2891			
C32	6.692	0.007	3791	5252	JP-4 (Tol-C14)	223193	13.61
C34	6.957	0.009	3813	5462	BUNKERC (C10-C38)	707092	94.98
Filter Peak	----						
C36	7.205	0.008	8019	12442			
C38	7.443	0.008	2976	3007			
C40	7.726	0.002	2267	2541			
o-terph	4.154	-0.003	685792	482482	JET-A (C10-C18)	297143	21.50
Triacon Surr	6.407	-0.008	722948	457961	JP8 (Tol-C16)	261682	14.87

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	482482	22.5	50.1
Triacontane	457961	26.0	57.7

>49% ok ✓

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

MS 5/12/11

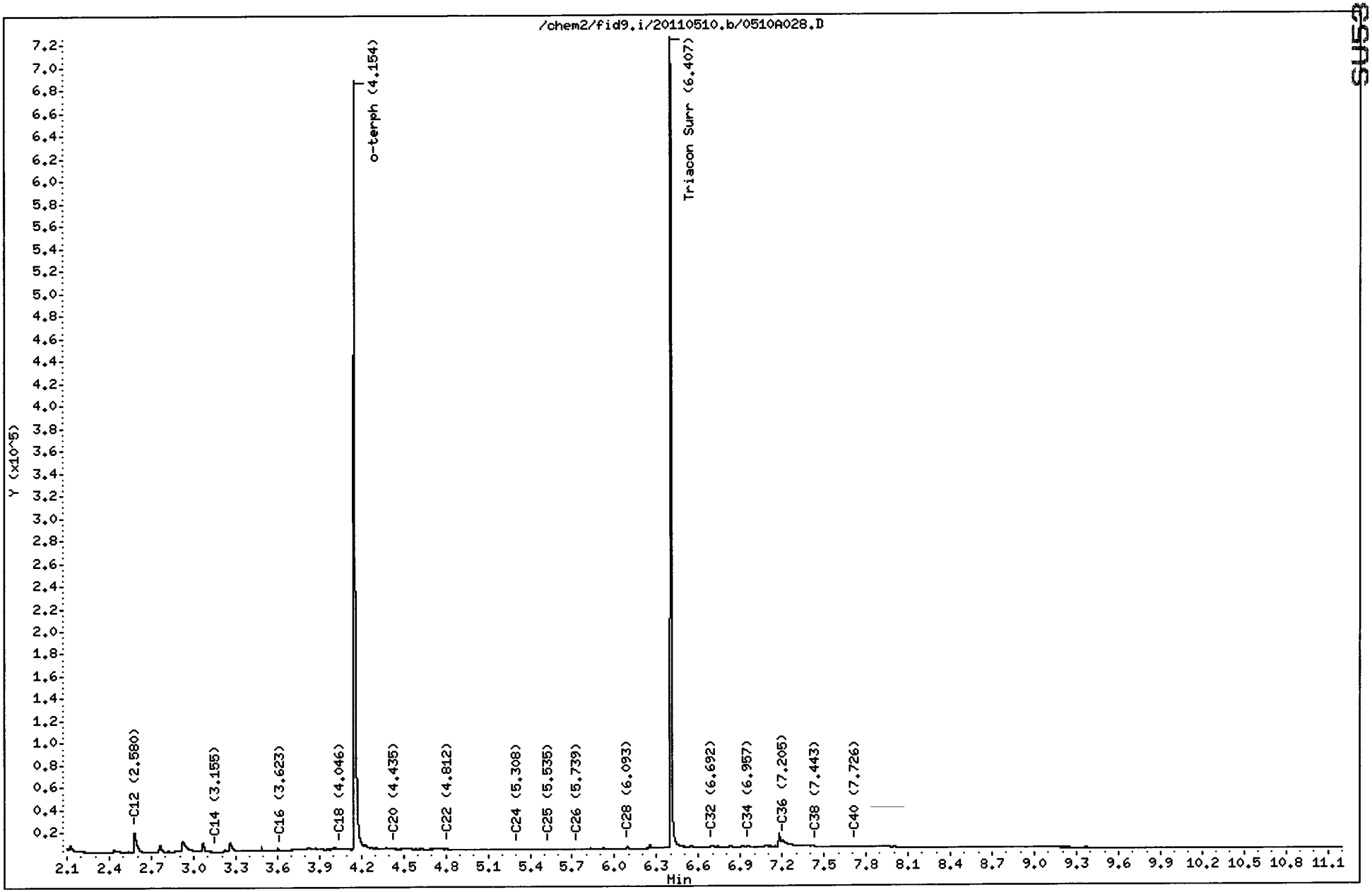
Data File: /chem2/fid9.i/20110510.b/0510A028.D
Date : 10-MAY-2011 21:03
Client ID: B312-042911
Sample Info: SU74A

Instrument: fid9.i

Operator: MS
Column diameter: 0.25

Column phase: RTX-1

SU53:01099



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A029.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: SU74B
Client ID: B310-042911
Injection: 10-MAY-2011 21:25
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.595	-0.005	692	247	GAS (Tol-C12)	25292	1.20
C8	1.341	0.070	2007	714	DIESEL (C12-C24)	44667	1.97
C10	1.975	0.000	651	347	M.OIL (C24-C38)	60332	4.55
C12	2.616	-0.002	179	76	AK-102 (C10-C25)	57412	2.25
C14	3.159	0.003	208	140	AK-103 (C25-C36)	46367	5.46
C16	3.622	0.001	455	354			
C18	4.031	-0.007	586	478			
C20	4.418	-0.010	445	501			
C22	4.818	0.002	279	246			
C24	5.316	0.006	164	118			
C25	5.533	-0.002	100	89			
C26	5.738	0.000	56	11			
C28	6.098	0.004	675	473			
C32	6.688	0.003	361	490	JP-4 (Tol-C14)	31606	1.93
C34	6.942	-0.005	294	161	BUNKERC (C10-C38)	117266	15.75
Filter Peak	----						
C36	7.204	0.007	5223	5233			
C38	7.425	-0.011	949	1638			
C40	7.725	0.002	476	406			
o-terph	4.156	-0.001	1070102	723384	JET-A (C10-C18)	37731	2.73
Triacon Surr	6.412	-0.003	1005150	683497	JP8 (Tol-C16)	39772	2.26

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	723384	33.8	75.1
Triacontane	683497	38.8	86.2

MS 5/12/11

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

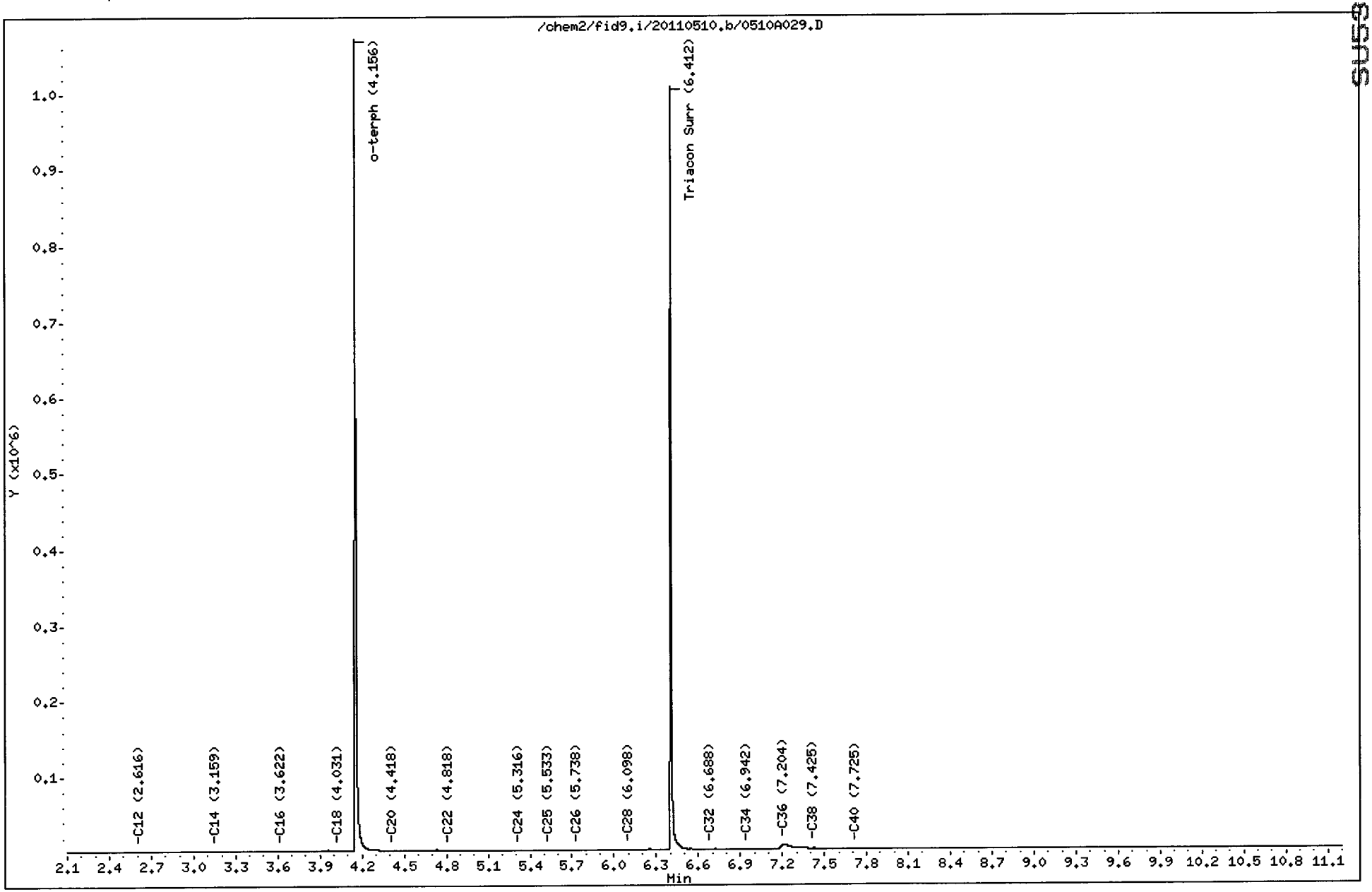
Data File: /chem2/fid9.i/20110510.b/0510A029.D
Date : 10-MAY-2011 21:25
Client ID: B310-042911
Sample Info: SU74B

Instrument: fid9.i

Operator: MS
Column diameter: 0.25

Column phase: RTX-1

SU59-01101



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A030.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: SU74C
Client ID: B311-042911
Injection: 10-MAY-2011 21:47
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.609	0.010	927	1106	GAS (Tol-C12)	28032	1.33
C8	1.340	0.069	2343	420	DIESEL (C12-C24)	43530	1.92
C10	1.977	0.002	676	825	M.OIL (C24-C38)	59986	4.52
C12	2.618	0.000	147	48	AK-102 (C10-C25)	56940	2.23
C14	3.160	0.004	195	156	AK-103 (C25-C36)	45171	5.32
C16	3.620	-0.001	504	336			
C18	4.046	0.007	601	718			
C20	4.433	0.006	411	175			
C22	4.814	-0.003	263	49			
C24	5.315	0.005	115	80			
C25	5.532	-0.003	119	84			
C26	5.735	-0.003	55	11			
C28	6.098	0.004	905	678			
C32	6.690	0.005	358	91	JP-4 (Tol-C14)	33849	2.06
C34	6.942	-0.006	262	223	BUNKERC (C10-C38)	116455	15.64
Filter Peak	----						
C36	7.206	0.009	6357	5498			
C38	7.433	-0.003	641	522			
C40	7.724	0.001	386	354			
o-terph	4.155	-0.002	1114288	761505	JET-A (C10-C18)	39391	2.85
Triacon Surr	6.412	-0.003	1020947	713192	JP8 (Tol-C16)	42211	2.40

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	761505	35.6	79.0
Triacontane	713192	40.5	89.9

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

5/12/11

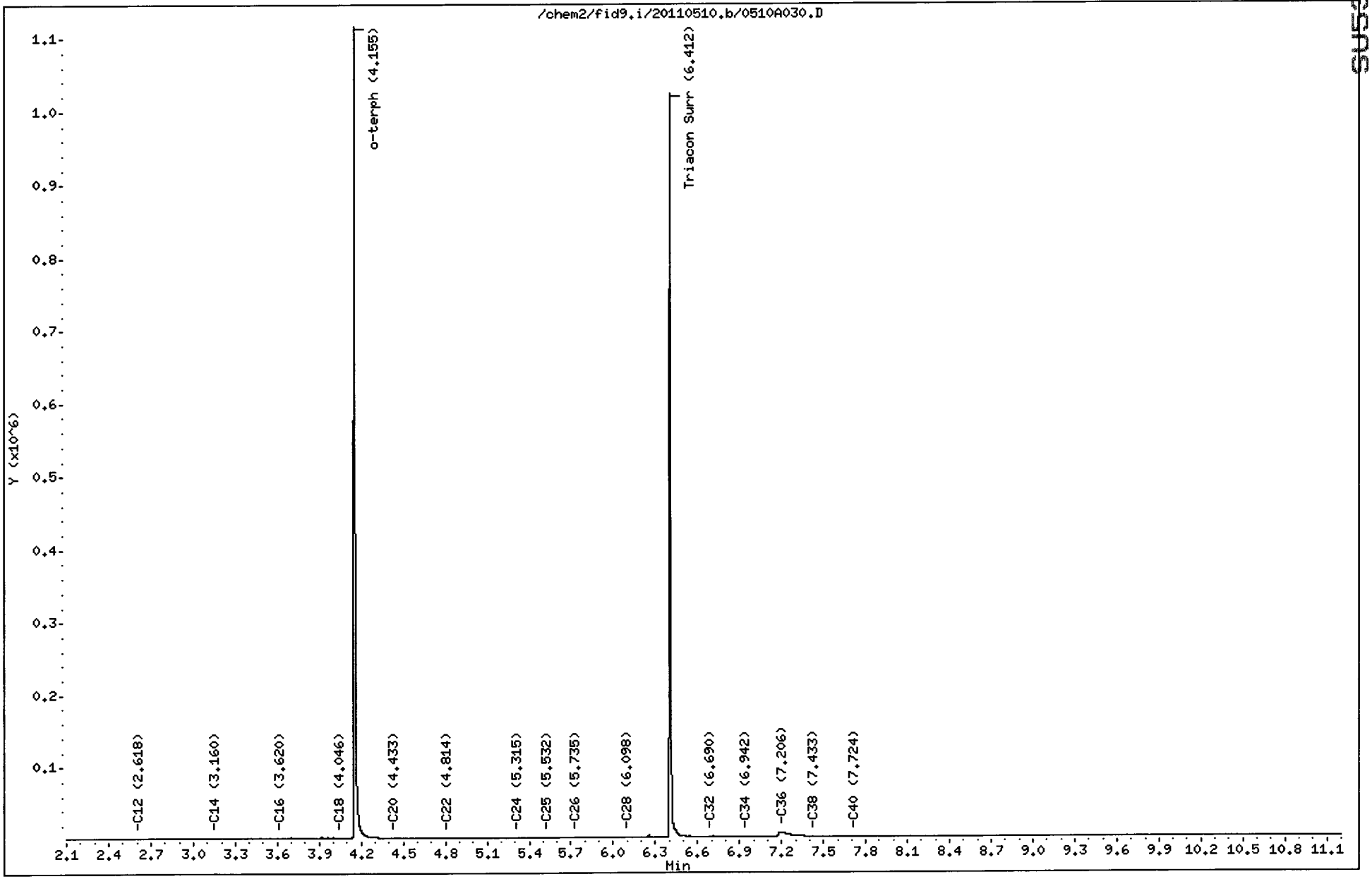
Data File: /chem2/fid9.i/20110510.b/0510A030.D
Date : 10-MAY-2011 21:47
Client ID: B311-042911
Sample Info: SU74C

Instrument: fid9.i

Operator: MS
Column diameter: 0.25

Column phase: RTX-1

SHS3 01103



Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A031.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: DIESEL#3
Client ID: LORA LAKES
Injection: 10-MAY-2011 22:09
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.614	0.015	10277	15333	GAS (Tol-C12)	755154	35.94	
C8	1.327	0.055	2339	1434	DIESEL (C12-C24)	5681320	250.80	
C10	1.978	0.003	26656	25753	M.OIL (C24-C38)	89371	6.74	
C12	2.623	0.005	63780	52688	AK-102 (C10-C25)	6289982	246.42	M
C14	3.154	-0.002	141173	107282	AK-103 (C25-C36)	65499	7.71	
C16	3.620	-0.001	280933	168246				
C18	4.040	0.001	266544	170523				
C20	4.428	0.000	158359	106774				
C22	4.818	0.002	53448	49137				
C24	5.304	-0.006	4547	895				
C25	5.539	0.004	2722	2219				
C26	5.733	-0.005	1207	449				
C28	6.097	0.003	2551	2219				
C32	6.688	0.003	117	31	JP-4 (Tol-C14)	1755906	107.09	
C34	6.949	0.001	44	12	BUNKERC (C10-C38)	6360220	854.36	M
Filter Peak	----							
C36	7.191	-0.006	37	22				
C38	7.419	-0.017	2389	1830				
C40	7.721	-0.002	128	87				
o-terph	4.160	0.003	1671709	972029	JET-A (C10-C18)	4568729	330.61	
Triacon Surr	6.419	0.004	121	99	JP8 (Tol-C16)	3166847	180.00	

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	972029	45.4	100.9
Triacontane	99	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110510.b/0510A031.D

Date : 10-MAY-2011 22:09

Client ID: LORA LAKES

Sample Info: DIESEL#3

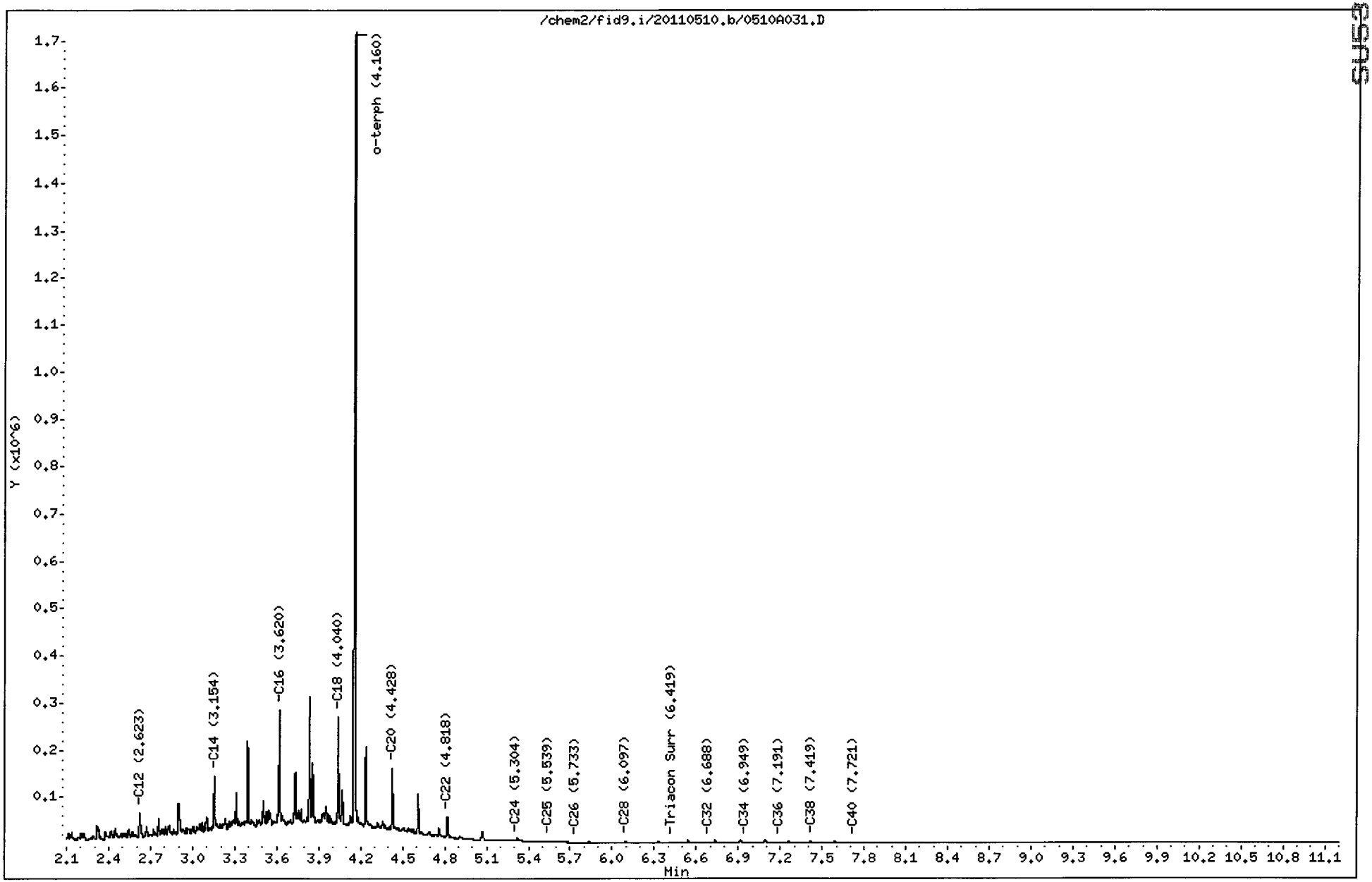
Column phase: RTX-1

Instrument: fid9.i

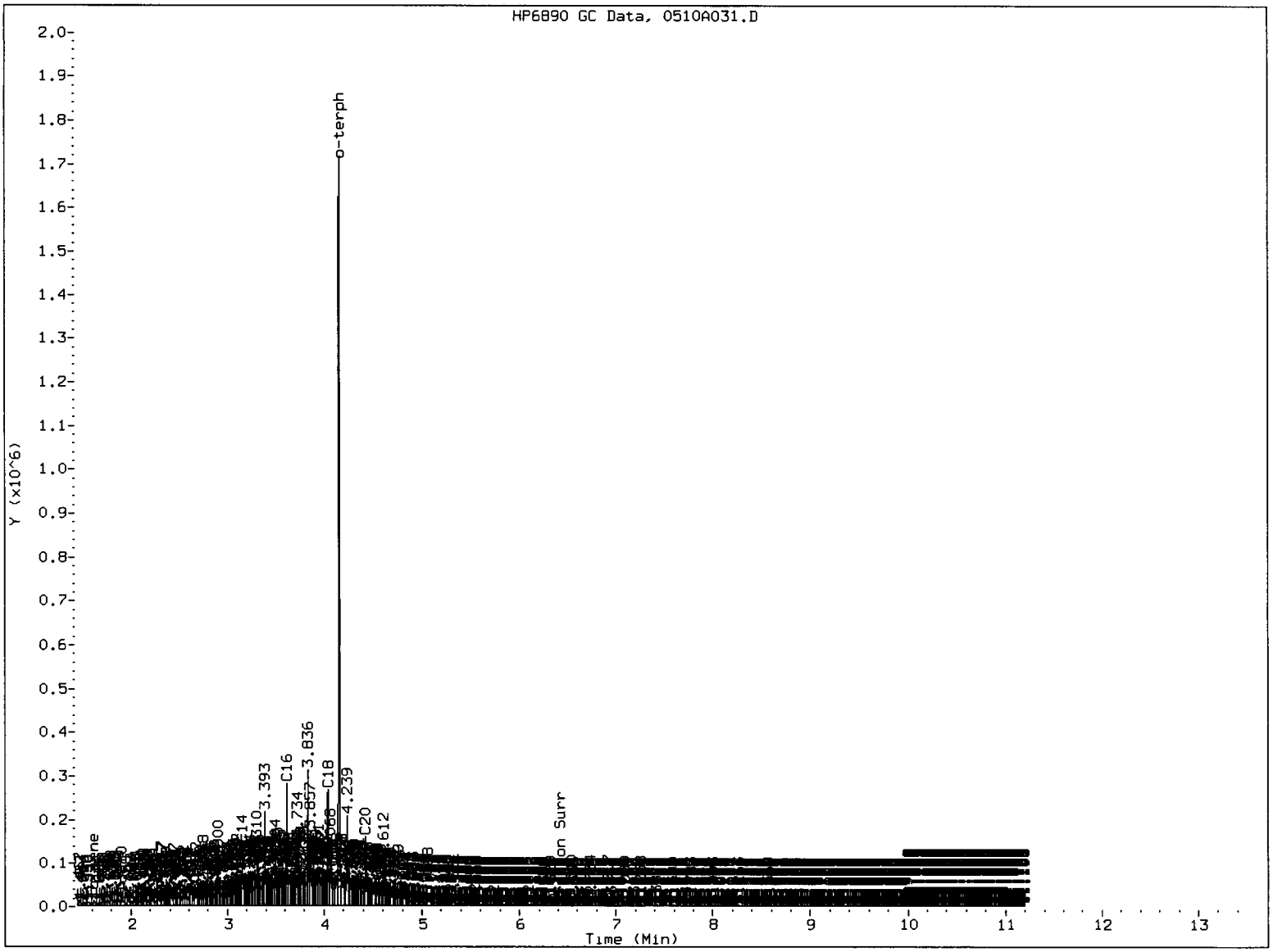
Operator: MS

Column diameter: 0.25

SU53 01105



FID:9A-2C/RTX-1 DIESEL#3 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/12/11

Analytical Resources Inc.
NWTPH Quantitation Report

Data file: /chem2/fid9.i/20110510.b/0510A032.D
Method: /chem2/fid9.i/20110510.b/ftphfid9a.m
Instrument: fid9.i
Operator: MS
Report Date: 05/12/2011

ARI ID: MOIL#3
Client ID: LORA LAKES
Injection: 10-MAY-2011 22:30
Dilution Factor: 1
Macro: 15-FEB-2011

FID:9 RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.593	-0.007	978	913	GAS (Tol-C12)	24339	1.16
C8	----				DIESEL (C12-C24)	911418	40.23
C10	1.976	0.001	852	979	M.OIL (C24-C38)	6494116	489.62
C12	2.600	-0.018	1933	2398	AK-102 (C10-C25)	1122328	43.97
C14	3.160	0.005	87	53	AK-103 (C25-C36)	5907935	695.20 M
C16	3.628	0.006	91	26			
C18	4.048	0.009	549	203			
C20	4.427	-0.001	5666	6322			
C22	4.817	0.001	13749	2707			
C24	5.308	-0.003	25716	20778			
C25	5.539	0.004	35746	23782			
C26	5.739	0.001	44697	19641			
C28	6.100	0.006	61502	29016			
C32	6.682	-0.003	74496	72551	JP-4 (Tol-C14)	30754	1.88
C34	6.944	-0.004	61930	50334	BUNKERC (C10-C38)	7414991	996.05 M
Filter Peak	----						
C36	7.196	-0.001	40629	14143			
C38	7.439	0.004	21741	6607			
C40	7.723	0.000	7691	5794			
o-terph	4.147	-0.010	879	703	JET-A (C10-C18)	48276	3.49
Triacon Surr	6.418	0.003	1345553	992098	JP8 (Tol-C16)	34924	1.99

M Indicates manual integration within range.
Range Times: NW Diesel(2.618 - 5.310) AK102(1.98 - 5.54) Jet A(1.98 - 4.04)
NW M.Oil(5.31 - 7.44) AK103(5.54 - 7.20) OR Diesel(1.98 - 6.09)

Surrogate	Area	Amount	%Rec
o-Terphenyl	703	0.0	0.1
Triacontane	992098	56.3	125.1

Analyte	RF	Curve Date
o-Terph Surr	21417.1	20-JAN-2011
Triacon Surr	17626.4	20-JAN-2011
Gas	21009.8	15-JUN-2010
Diesel	22653.1	20-JAN-2011
Motor Oil	13263.6	20-JAN-2011
AK102	25525.9	20-JAN-2011
AK103	8498.1	07-SEP-2010
JP4	16396.5	09-JUN-2010
JetA	13819.1	11-JUN-2010
Bunker C	7444.4	15-FEB-2011
JP-8	17594.0	25-MAY-2010

Data File: /chem2/fid9.i/20110510.b/0510A032.D

Date : 10-MAY-2011 22:30

Client ID: LORA LAKES

Sample Info: MOIL#3

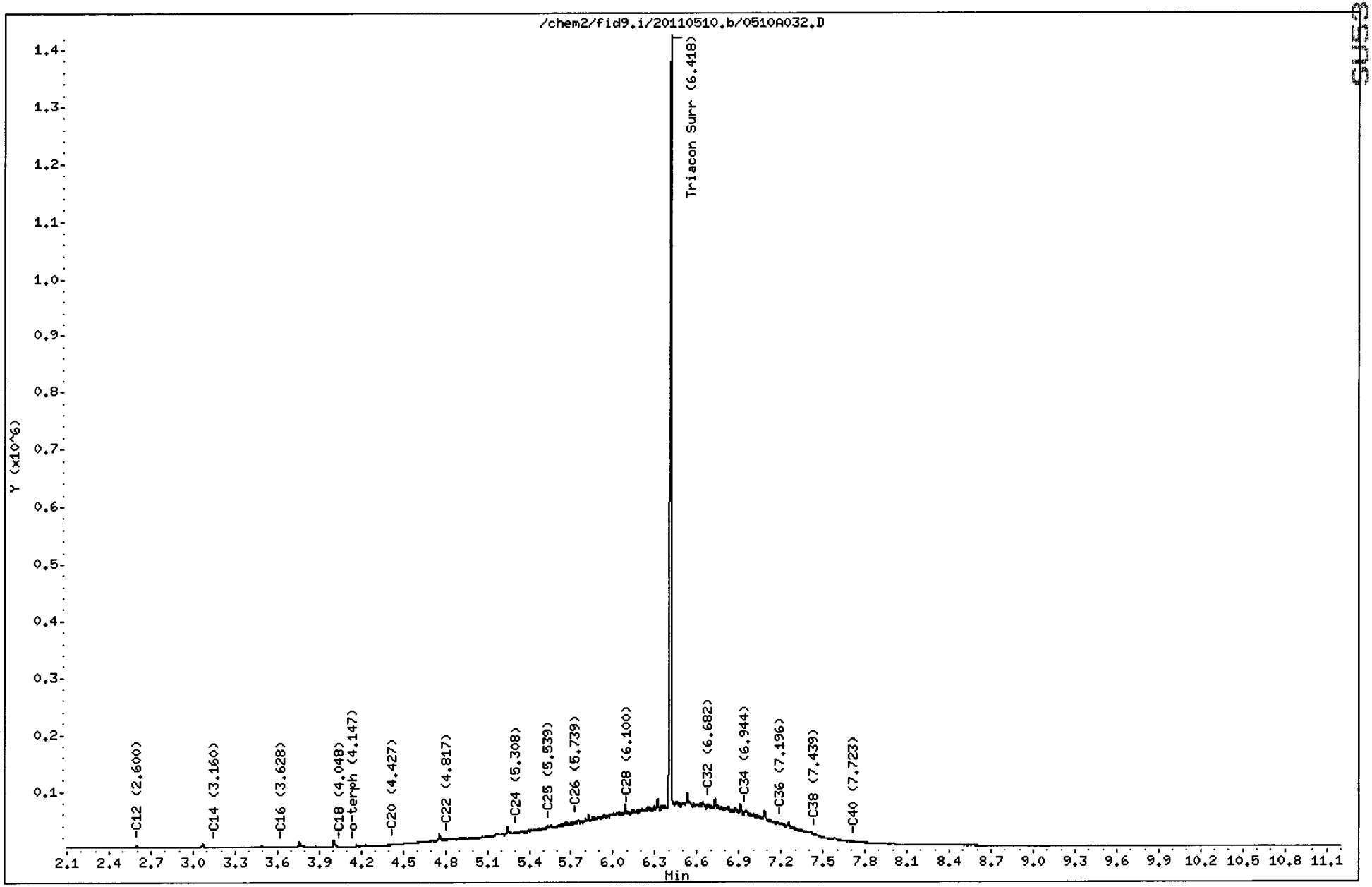
Column phase: RTX-1

Instrument: fid9.i

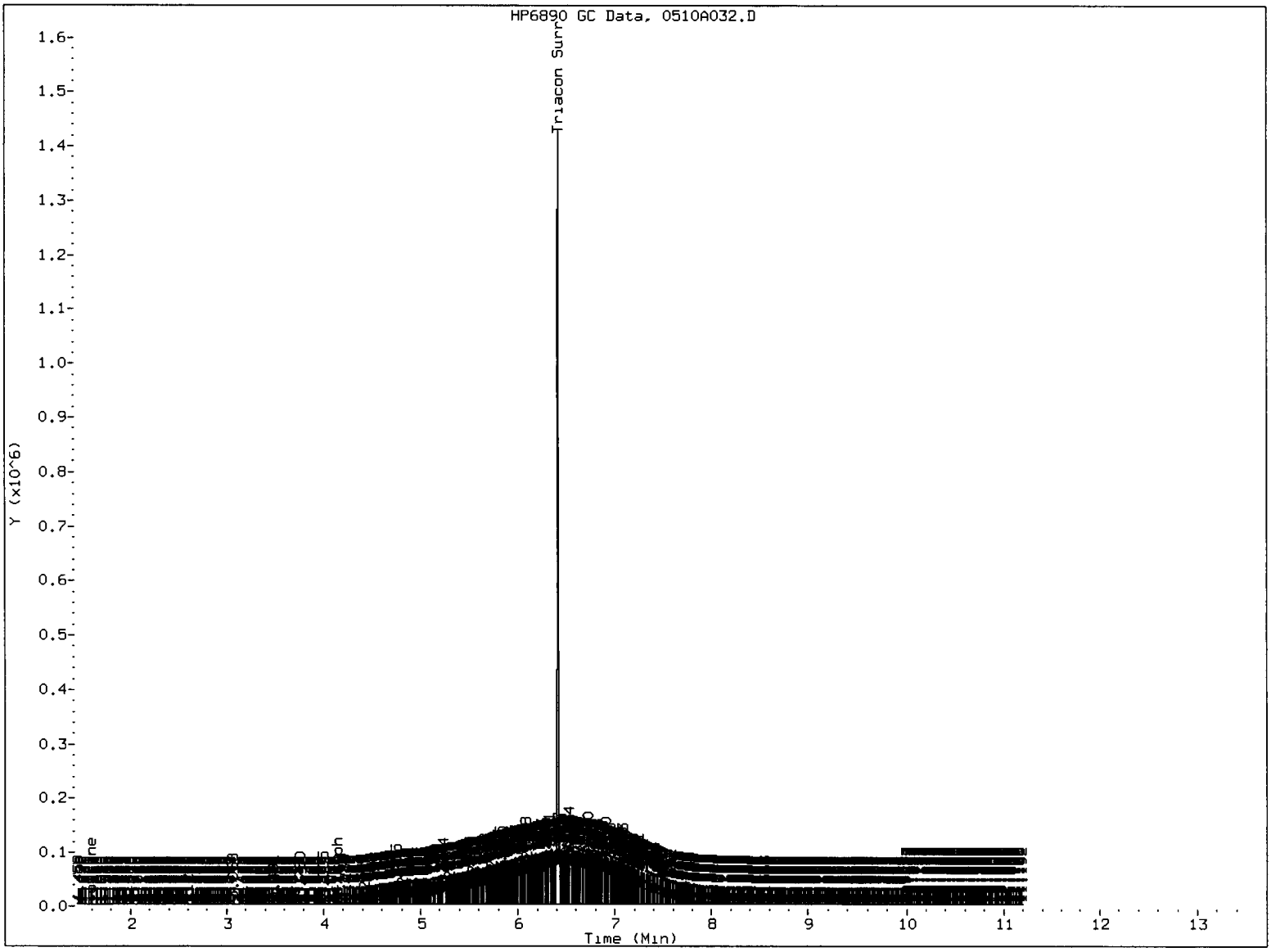
Operator: MS

Column diameter: 0.25

SUS3:01109



FID:9A-2C/RTX-1 MOIL#3 FID:9A SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/12/11

TPHG/BETX Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: SU53, SU73, SU74

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Analyst Notes / Corrective Action Log

ARI Project ID: GAS/BETX Curve Client ID: _____

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

Parameter(s): GAS / 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: 5/5/11 Analysis Start Date: 5/5/11

pH ≤ 2.0	YES / NO (NA)	Method Blank In Control?	YES / NO
BFB Tune Meets Criteria?	YES / NO (NA)	LCS / LCSD Recovery In Control?	YES / NO
Internal Standard Meets Criteria?	YES / NO (NA)	Surrogate Recovery In Control?	YES / NO
ICal acceptable?	(YES) / NO	CCal acceptable?	(YES) / NO
Q flag applied?	YES / NO (NA)	Q flag applied?	YES / NO (NA)
Manual Integrations for ICal?	(YES) / NO	Manual Integrations for Samples?	Yes /NO
Special Analysis Criteria Met?	YES / NO (NA)		

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm) LG (> 4mm ●) Head Space

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

GAS ICV Targed 0.25

BETX ICV Targed 25

Additional Details on Reverse: Yes / No

Analyst: _____ **Date:** 5/9/11

Reviewer: _____ **Date:** 5/9/11

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 5/5/11 Analysis: NWTPHG/BETX Analyst: MH

GC Program: BETX Column No: 821726 Column Type: RTX502-2

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

Calibration File: — Curve Date: 5/5/11

IS/SS	Ical/Ccal	LCS/ICV
VW683-2	VW666-1	VW687-3
	VW683-3	
	VW687-3	

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0517	0505a001.d	RINSE				1
2	0546	0505a002 d	RT+BCAL 1				1
3	0901	0505a003.d	GCAL 1				1
4	1139	0505a004 d	RINSE				1
5	1209	0505a005.d	BETX .25				1
6	1238	0505a006.d	BETX .5				1
7	1307	0505a007 d	BETX 5				1
8	1336	0505a008 d	BETX 25				1
9	1405	0505a009.d	BETX 50				1
10	1434	0505a010.d	BETX 100				1
11	1504	0505a011.d	BETX 200				1
12	1533	0505a012 d	BETX ICV				1
13	1602	0505a013.d	RINSE				1
14	1631	0505a014 d	GAS 1				1
15	1700	0505a015.d	GAS .25				1
16	1730	0505a016 d	GAS 1				1
17	1759	0505a017.d	GAS 2.5				1
18	1828	0505a018 d	GAS 5				1
19	1857	0505a019 d	GAS 20				1
20	1927	0505a020 d	RINSE				1
21	1956	0505a021.d	GAS ICV				1

MH
5/9/11

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.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2011 12:09
End Cal Date : 05-MAY-2011 15:04
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/vpcc0505-2.b/PIDB.m
Cal Date : 06-May-2011 05:29 monicah
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/vpcc0505-2.b/0505a005.d/0505a005.cdf
Level 2: /chem3/pid1.i/vpcc0505-2.b/0505a006.d/0505a006.cdf
Level 3: /chem3/pid1.i/vpcc0505-2.b/0505a007.d
Level 4: /chem3/pid1.i/vpcc0505-2.b/0505a008.d
Level 5: /chem3/pid1.i/vpcc0505-2.b/0505a009.d
Level 6: /chem3/pid1.i/vpcc0505-2.b/0505a010.d
Level 7: /chem3/pid1.i/vpcc0505-2.b/0505a011.d

Compound	0.25000 Level 1 / 200.000 Level 7	0.50000 Level 2	5.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
1 MTBE	124	114	121	110	114	111			
	113						115	4.576	
2 Benzene	432	400	403	349	344	337			
	340						372	10.372	
4 Toluene	396	342	346	321	326	324			
	326						340	7.781	
15 Chlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++						+++++	+++++	<-
5 Ethylbenzene	284	272	311	287	295	291			
	294						291	4.130	
6 M/P-Xylene	358	311	330	308	318	317			
	315						322	5.309	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2011 12:09
End Cal Date : 05-MAY-2011 15:04
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/vpcc0505-2.b/PIDB.m
Cal Date : 06-May-2011 05:29 monicah
Curve Type : Average

Compound	0.25000 Level 1	0.50000 Level 2	5.000 Level 3	25.000 Level 4	50.000 Level 5	100.000 Level 6	200.000 Level 7	RRF	% RSD	
7 O-Xylene	240	242	270	246	255	254	258	252	4.165	
13 1,3,5 Trimethyl Benzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
14 1,2,4 Trimethyl Benzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
16 1,3 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
17 1,4 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
18 1,2 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 3 TFT(Surr)	60.54545	56.15909	54.10448	54.63000	55.97744	55.27528	55.18500	55.98239	3.813	
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 8 BB(Surr)	123	117	115	117	120	120	121	119	2.225	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2011 12:09
End Cal Date : 05-MAY-2011 15:04
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/vpcc0505-1.b/FID.m
Cal Date : 06-May-2011 05:36 monicah
Curve Type : Average

Compound	0.000e+00 Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	0.000e+00 Level 7	RRF	% RSD	
14 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 4 TFT(Surr)	28.77273	26.50000	25.56716	25.53000	25.92481	25.32022	25.11500	26.10428	4.826	
$ 22 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 9 BB(Surr)	20.36364	19.04545	18.50746	18.56000	18.72180	18.53933	18.39500	18.87610	3.649	

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Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0505-1.b/0505a002.d
Data file 2: /chem3/pid1.i/vpcc0505-2.b/0505a002.d
Method: /chem3/pid1.i/vpcc0505-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 05-MAY-2011
BETX Ical Date: 05-MAY-2011

ARI ID: RT+BCAL 1
Client ID:
Injection Date: 05-MAY-2011 05:46
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.904	-0.002	2694	36421	103.2	TFT(Surr)
15.447	-0.001	1909	15987	101.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.85 to 17.96)	319505	456964	1.430
8015B 2MP-TMB	(4.17 to 16.26)	652210	517504	0.793
AK101 nC6-nC10	(4.67 to 15.16)	527526	369517	0.700
NWTPHG Tol-Nap	(9.85 to 18.98)	340084	509066	1.497

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
7.902	-0.002	5860	104.7	TFT(Surr)
15.447	-0.001	12143	102.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.062	-0.004	9443	25.37	Benzene
9.945	-0.005	8851	26.03	Toluene
12.848	-0.007	7942	27.32	Ethylbenzene
13.010	-0.012	17038	52.83	M/P-Xylene
13.968	-0.007	6851	27.16	O-Xylene
4.538	-0.001	2895	25.11	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0505-1.b/0505a002.d

Date : 05-MAY-2011 05:46

Client ID:

Sample Info: RT+BCAL 1

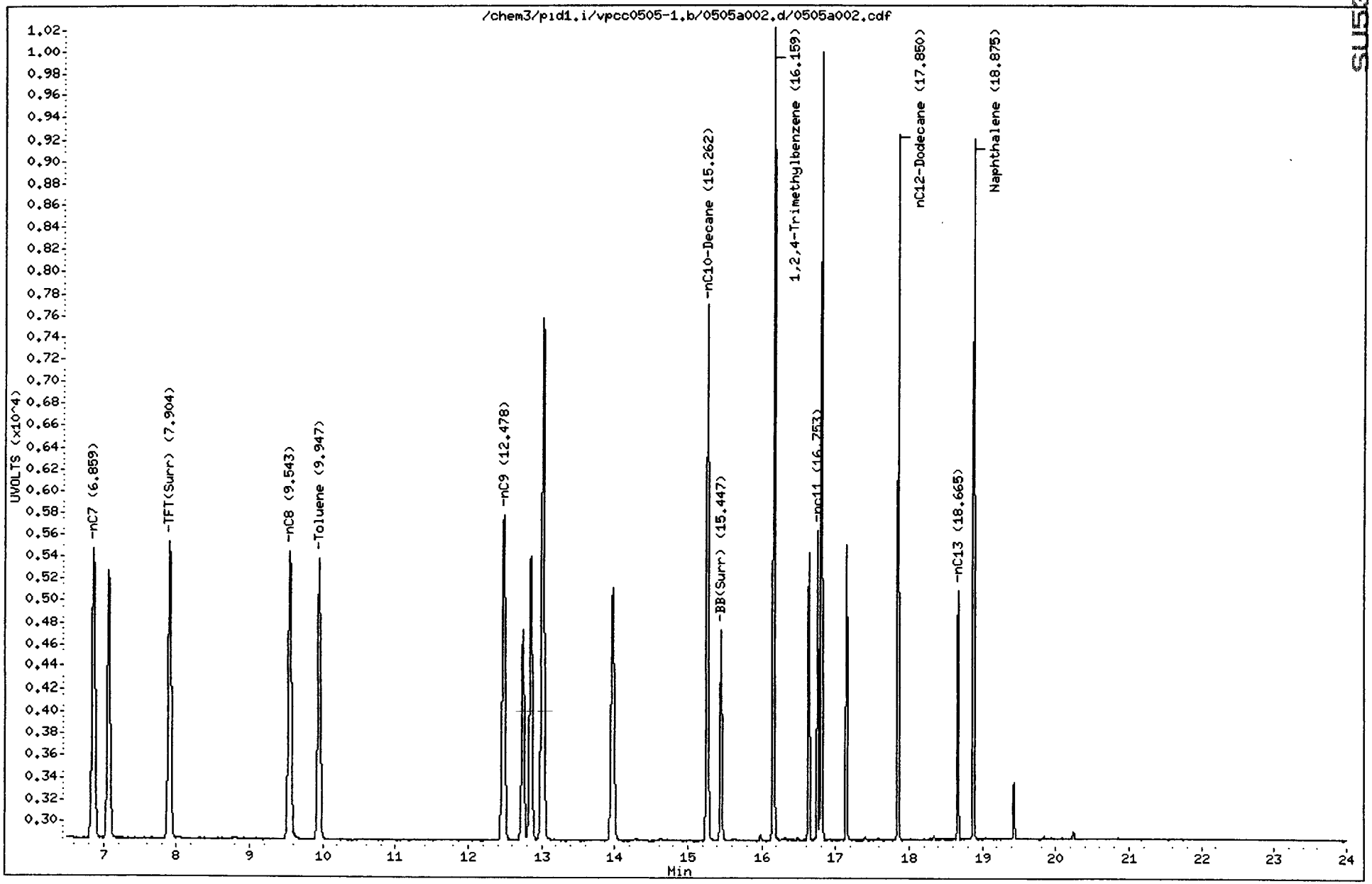
Instrument: pid1.i

Operator: MH

Column phase: RTX 502-2 FID

Column diameter: 0.18

SUSB-01117



Data File: /chem3/pid1.i/vpcc0505-2.b/0505a002.d

Date : 05-MAY-2011 05:46

Client ID:

Sample Info: RT+BCAL 1

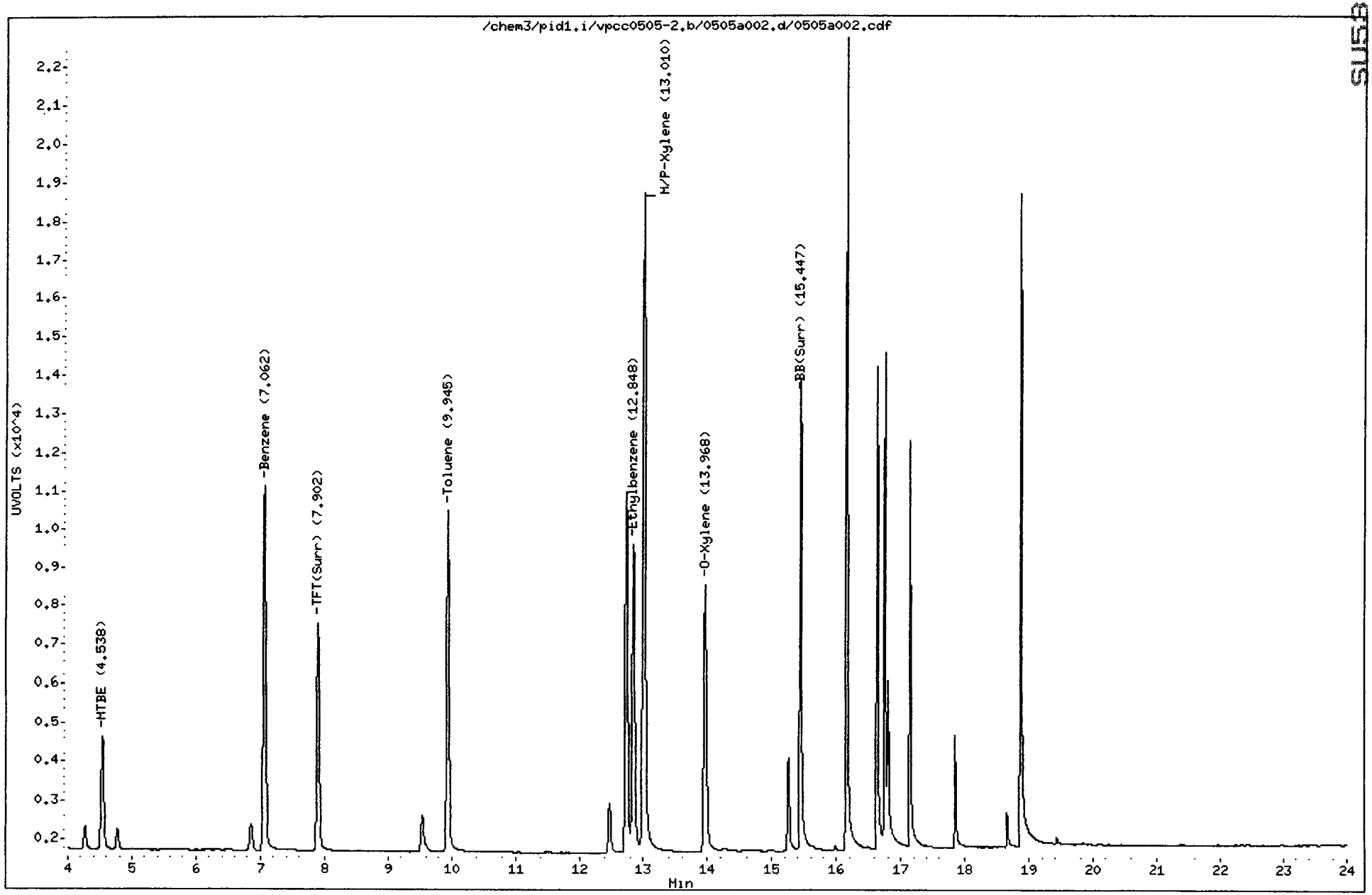
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SUSB-01118



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Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0505-1.b/0505a005.d
Data file 2: /chem3/pid1.i/vpcc0505-2.b/0505a005.d
Method: /chem3/pid1.i/vpcc0505-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 05-MAY-2011
BETX Ical Date: 05-MAY-2011

ARI ID: BETX .25
Client ID:
Injection Date: 05-MAY-2011 12:09
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.905	-0.001	633	8568	24.2	TFT(Surr)
15.449	0.001	448	3718	23.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.85 to 17.96)	319505	4488	0.014
8015B 2MP-TMB	(4.17 to 16.26)	652210	2674	0.004
AK101 nC6-nC10	(4.67 to 15.16)	527526	2305	0.004
NWTPHG Tol-Nap	(9.85 to 18.98)	340084	5368	0.016

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.903	-0.001	1332	23.8	TFT(Surr)
15.450	0.002	2699	22.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.053	-0.013	108	0.29N	Benzene
9.947	-0.003	99	0.29N	Toluene
12.847	-0.009	71	0.24N	Ethylbenzene
13.013	-0.009	179	0.56N	M/P-Xylene
13.973	-0.001	60	0.24N	O-Xylene
4.537	-0.002	31	0.27N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0505-1.b/0505a005.d

Date : 05-MAY-2011 12:09

Client ID:

Sample Info: BETX .25

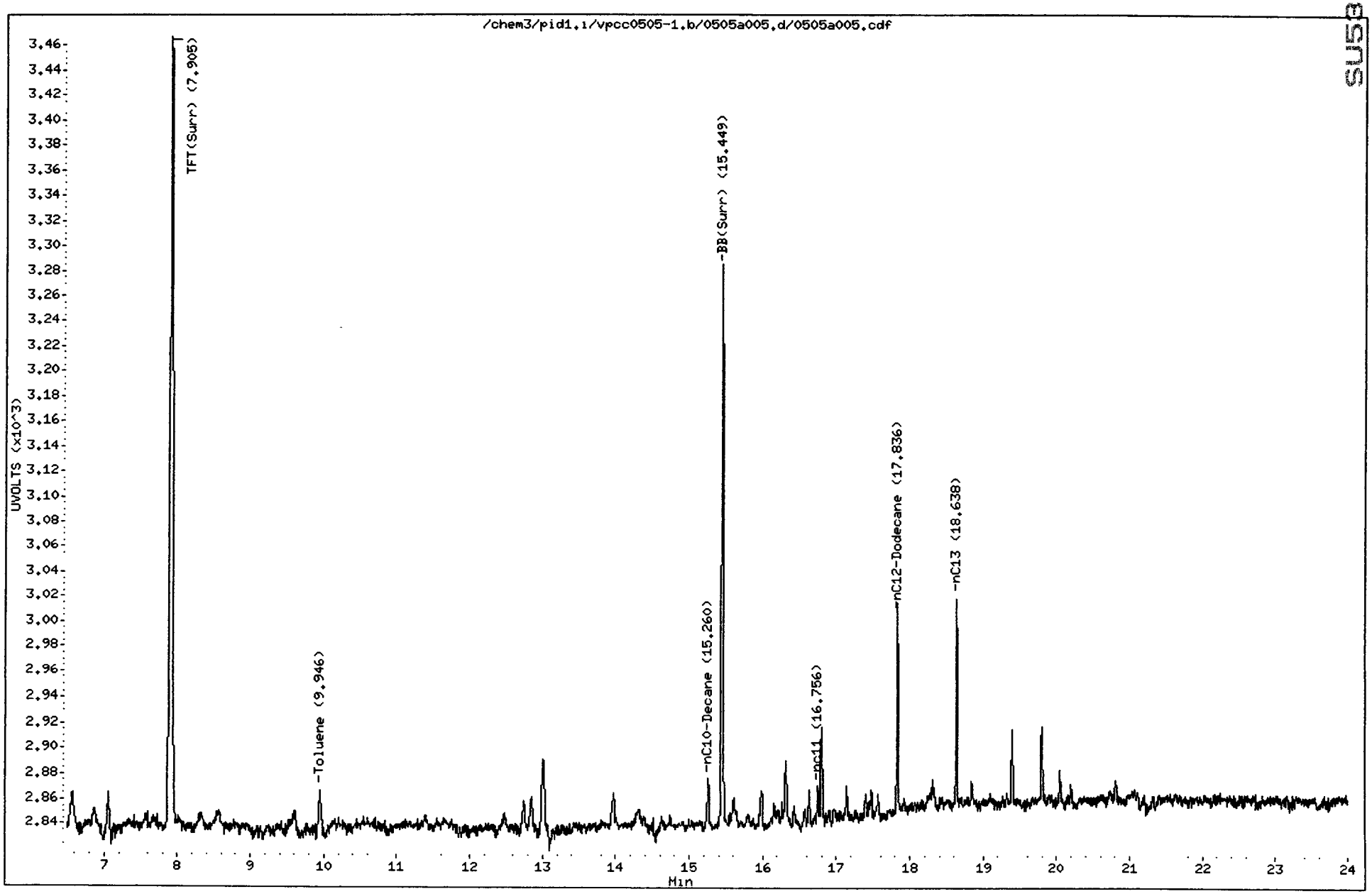
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SUS8-01120



Data File: /chem3/pid1.i/vpcc0505-2.b/0505a005.d
Date : 05-MAY-2011 12:09
Client ID:
Sample Info: BETX .25

Instrument: pid1.i

Operator: MH
Column diameter: 0.18

Column phase: RTX 502-2 PID

SUB3:01121

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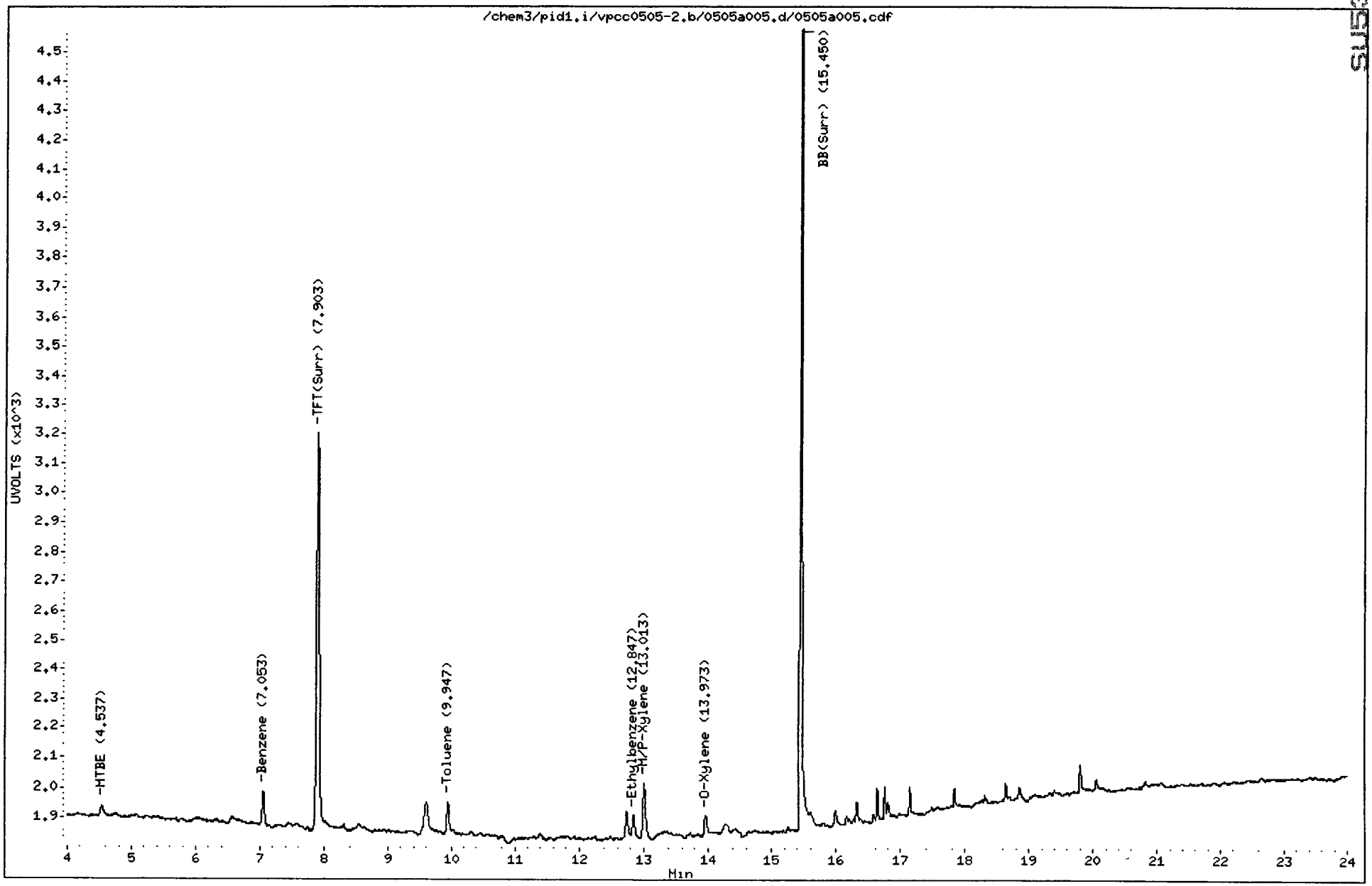

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Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0505-1.b/0505a006.d
Data file 2: /chem3/pid1.i/vpcc0505-2.b/0505a006.d
Method: /chem3/pid1.i/vpcc0505-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 05-MAY-2011
BETX Ical Date: 05-MAY-2011

ARI ID: BETX .5
Client ID:
Injection Date: 05-MAY-2011 12:38
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.904	-0.002	1166	15840	44.7	TFT(Surr)
15.448	0.000	838	6989	44.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.85 to 17.96)	319505	6148	0.019
8015B 2MP-TMB	(4.17 to 16.26)	652210	4649	0.007
AK101 nC6-nC10	(4.67 to 15.16)	527526	4648	0.009
NWTPHG Tol-Nap	(9.85 to 18.98)	340084	7297	0.021

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
7.902	-0.003	2471	44.1	TFT(Surr)
15.447	-0.001	5144	43.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.053	-0.013	200	0.54N	Benzene
9.947	-0.003	171	0.50N	Toluene
12.850	-0.005	136	0.47N	Ethylbenzene
13.011	-0.012	311	0.96	M/P-Xylene
13.967	-0.008	121	0.48N	O-Xylene
4.533	-0.005	57	0.49N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0505-1.b/0505a006.d
Date : 05-MAY-2011 12:38
Client ID:
Sample Info: BETX .5

Instrument: pid1.i

Operator: MH
Column diameter: 0.18

Column phase: RTX 502-2 FID

SUSB:01123

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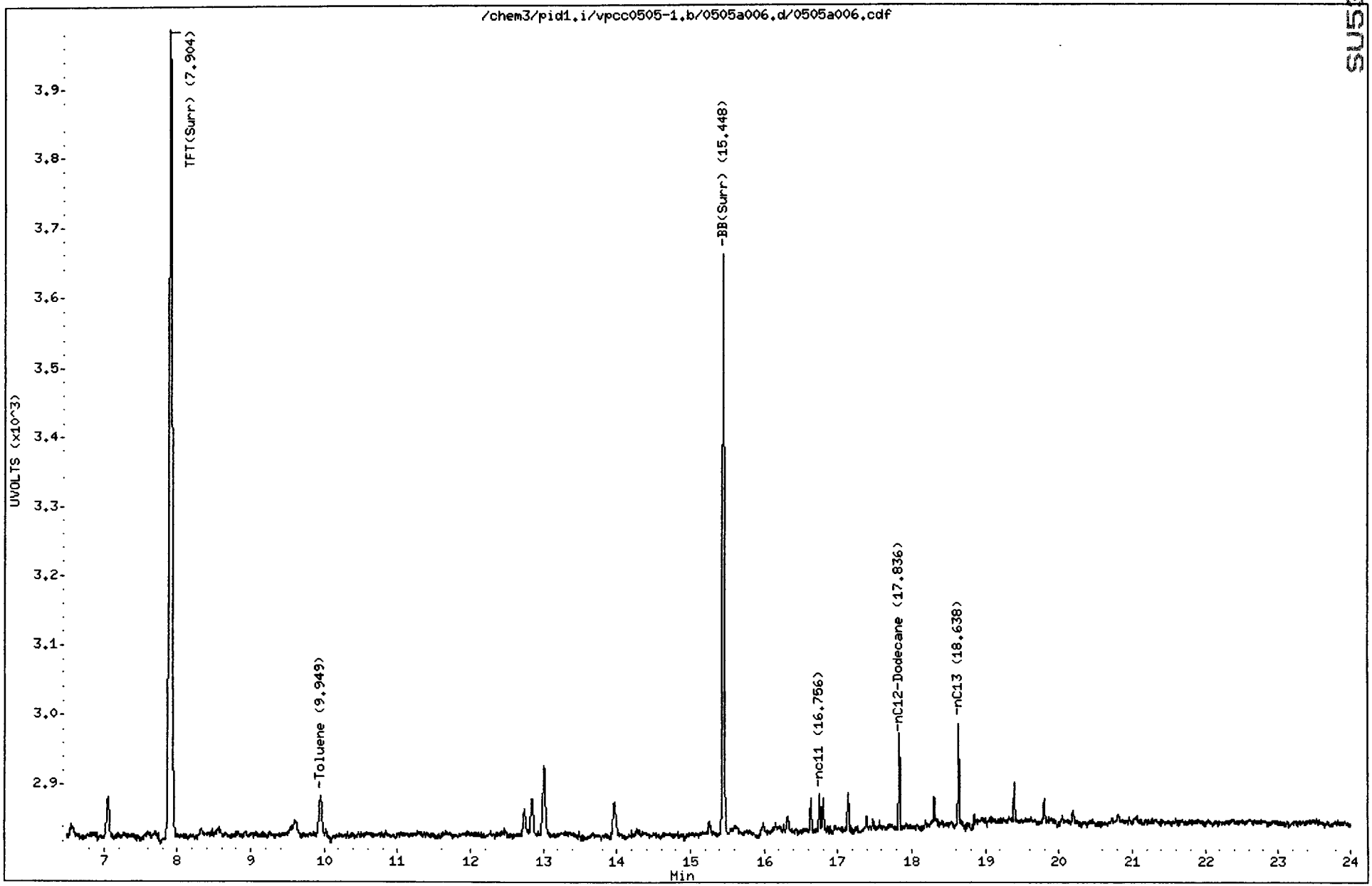

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Date : 05-MAY-2011 12:38

Client ID:

Sample Info: BETX .5

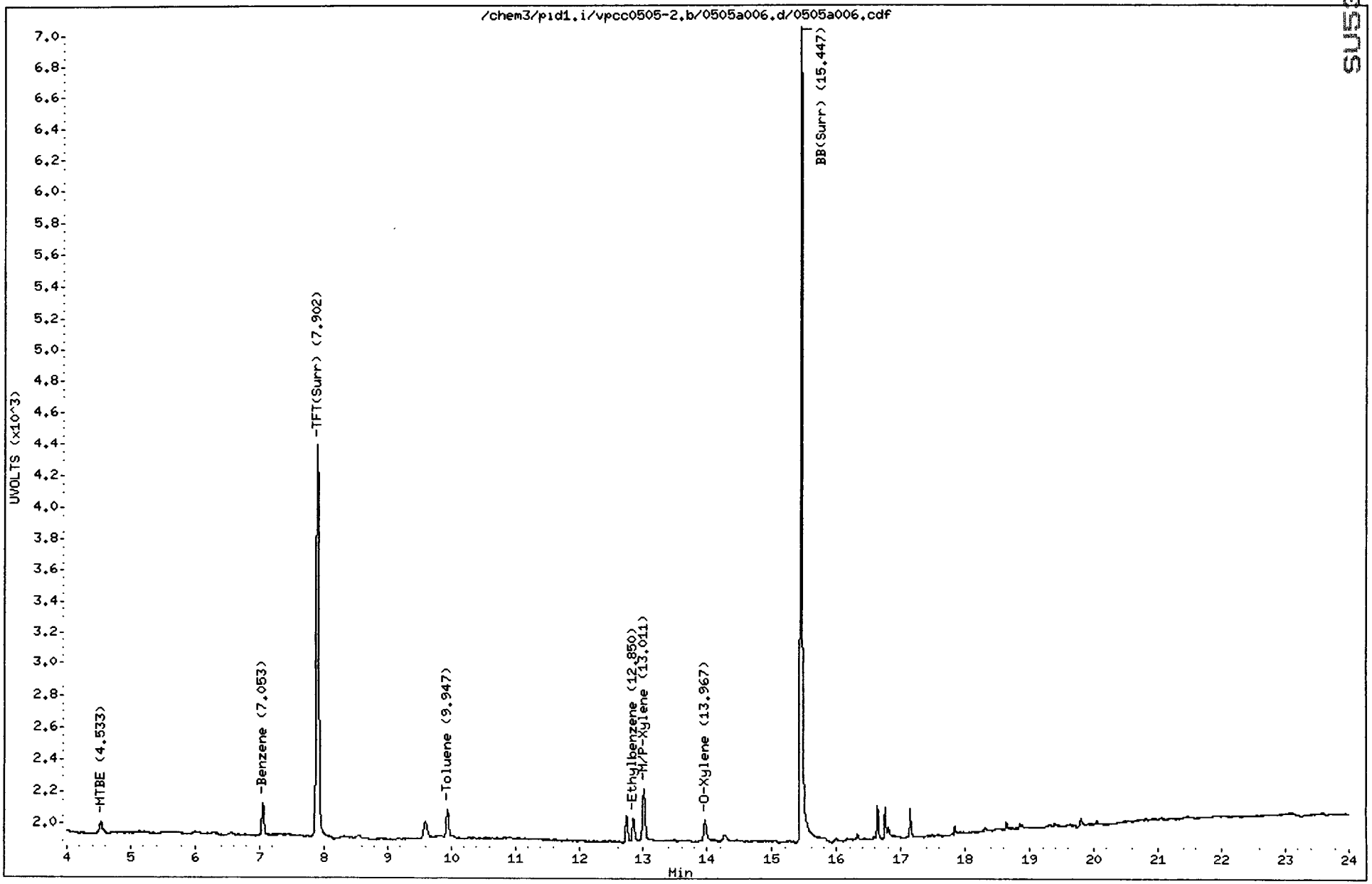
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SUSS:01124



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Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0505-1.b/0505a007.d
Data file 2: /chem3/pid1.i/vpcc0505-2.b/0505a007.d
Method: /chem3/pid1.i/vpcc0505-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 05-MAY-2011
BETX Ical Date: 05-MAY-2011

ARI ID: BETX 5
Client ID:
Injection Date: 05-MAY-2011 13:07
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.905	-0.001	1713	23242	65.6	TFT(Surr)
15.449	0.000	1240	10442	65.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.85 to 17.96)	319505	49311	0.154
8015B 2MP-TMB	(4.17 to 16.26)	652210	47516	0.073
AK101 nC6-nC10	(4.67 to 15.16)	527526	44551	0.084
NWTPHG Tol-Nap	(9.85 to 18.98)	340084	50121	0.147

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
7.903	-0.001	3625	64.8	TFT(Surr)
15.448	0.000	7732	65.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.054	-0.012	2016	5.42	Benzene
9.946	-0.004	1729	5.08	Toluene
12.849	-0.006	1557	5.36	Ethylbenzene
13.010	-0.012	3299	10.23	M/P-Xylene
13.969	-0.005	1351	5.35	O-Xylene
4.534	-0.005	606	5.26	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0505-1.b/0505a007.d

Date : 05-MAY-2011 13:07

Client ID:

Sample Info: BETX 5

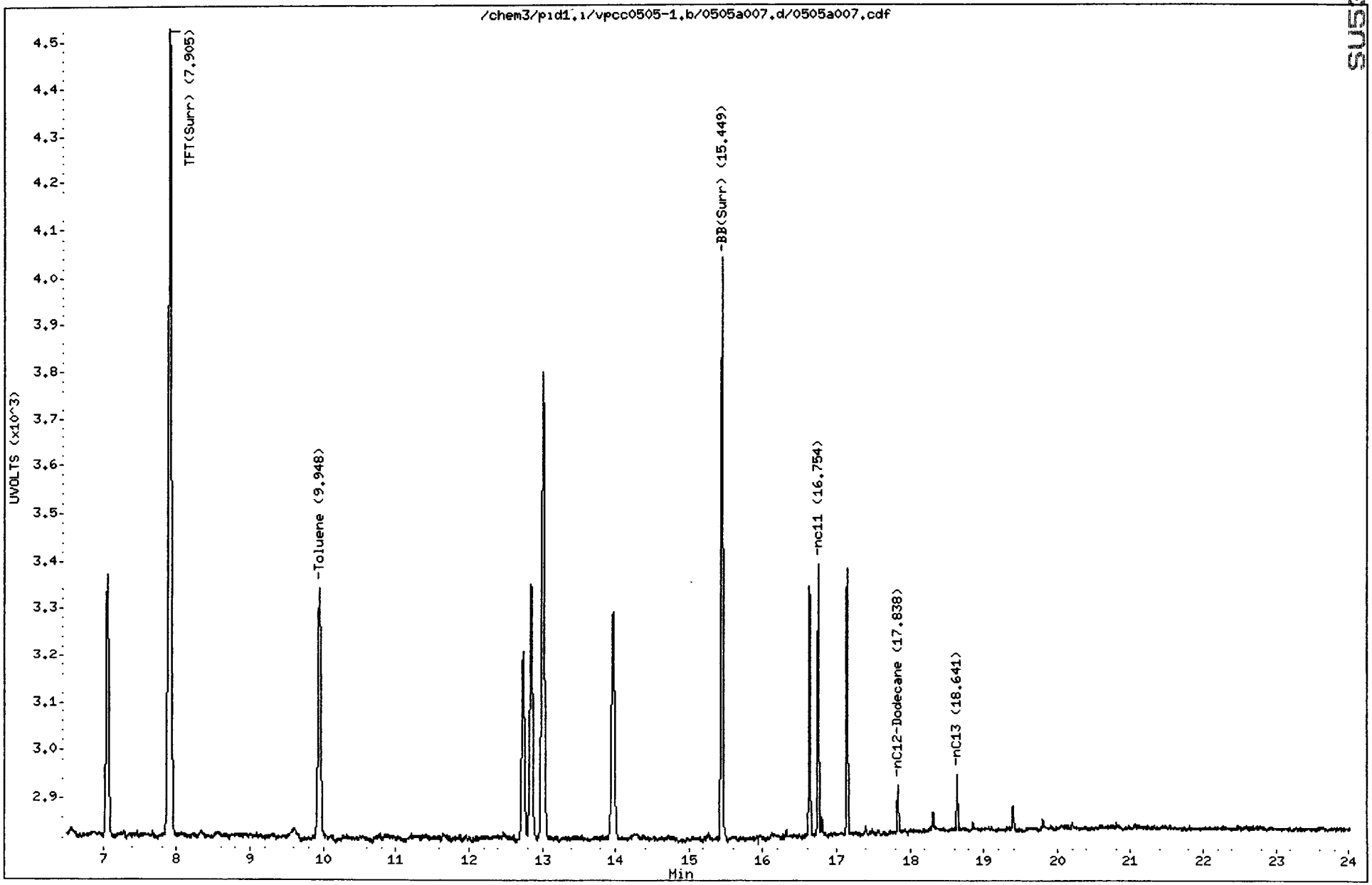
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SUB: 01126



Data File: /chem3/pid1.i/vpcc0505-2.b/0505a007.d

Date : 05-MAY-2011 13:07

Client ID:

Sample Info: BETX 5

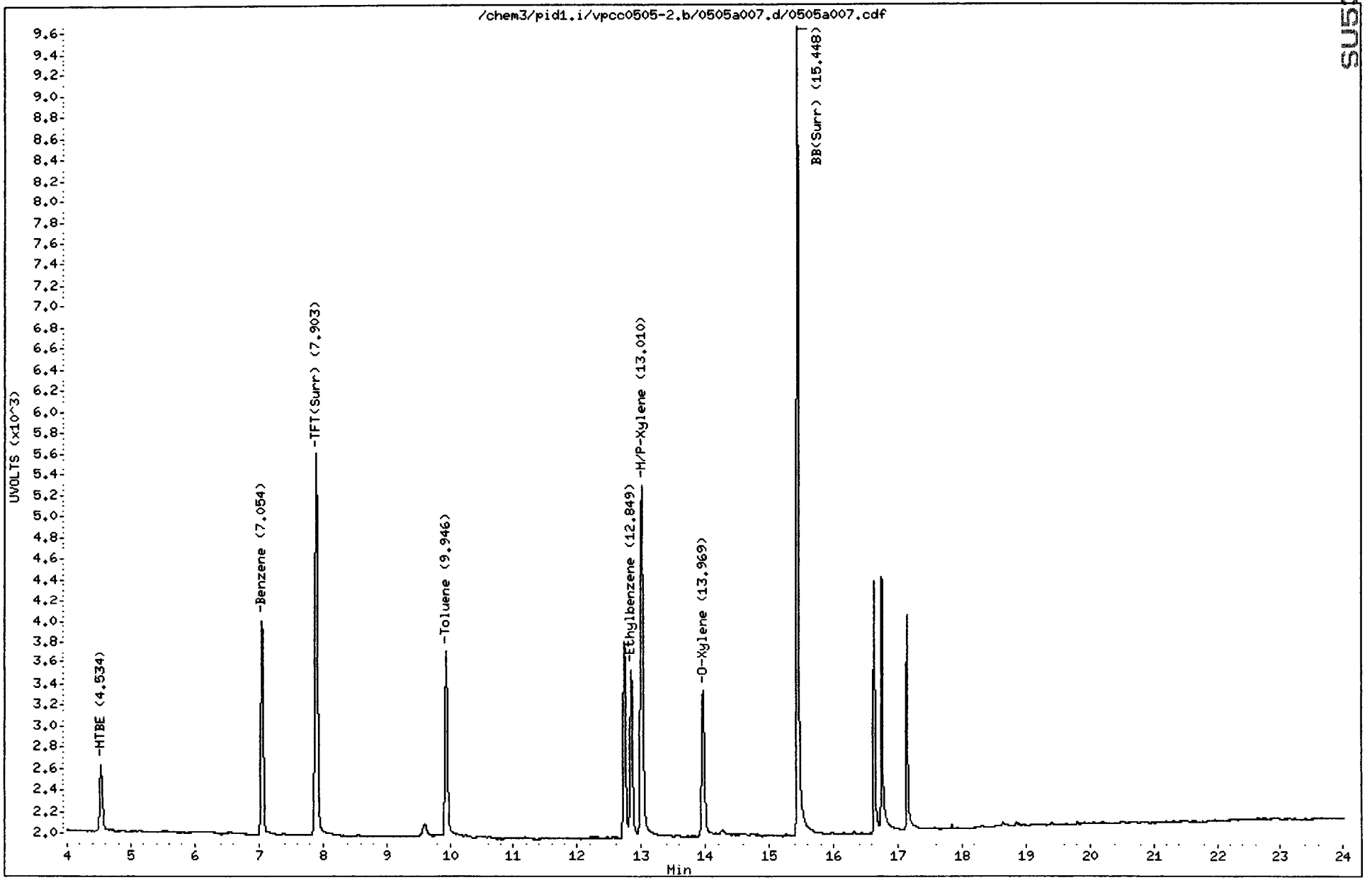
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SUSB 01127



MH 5/9/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0505-1.b/0505a008.d
Data file 2: /chem3/pid1.i/vpcc0505-2.b/0505a008.d
Method: /chem3/pid1.i/vpcc0505-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 05-MAY-2011
BETX Ical Date: 05-MAY-2011

ARI ID: BETX 25
Client ID:
Injection Date: 05-MAY-2011 13:36
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.906	-0.001	2553	34707	97.8	TFT(Surr)
15.449	0.001	1856	15512	98.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.85 to 17.96)	319505	213583	0.668
8015B 2MP-TMB	(4.17 to 16.26)	652210	208113	0.319
AK101 nC6-nC10	(4.67 to 15.16)	527526	195796	0.371
NWTPHG Tol-Nap	(9.85 to 18.98)	340084	214356	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
7.904	-0.001	5463	97.6	TFT(Surr)
15.449	0.001	11655	98.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.058	-0.008	8734	23.47	Benzene
9.947	-0.003	8029	23.61	Toluene
12.850	-0.005	7183	24.71	Ethylbenzene
13.012	-0.010	15396	47.74	M/P-Xylene
13.969	-0.005	6153	24.39	O-Xylene
4.536	-0.003	2742	23.78	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.1/vpcc0505-1.b/0505a008.d

Date : 05-MAY-2011 13:36

Client ID:

Sample Info: BETX 25

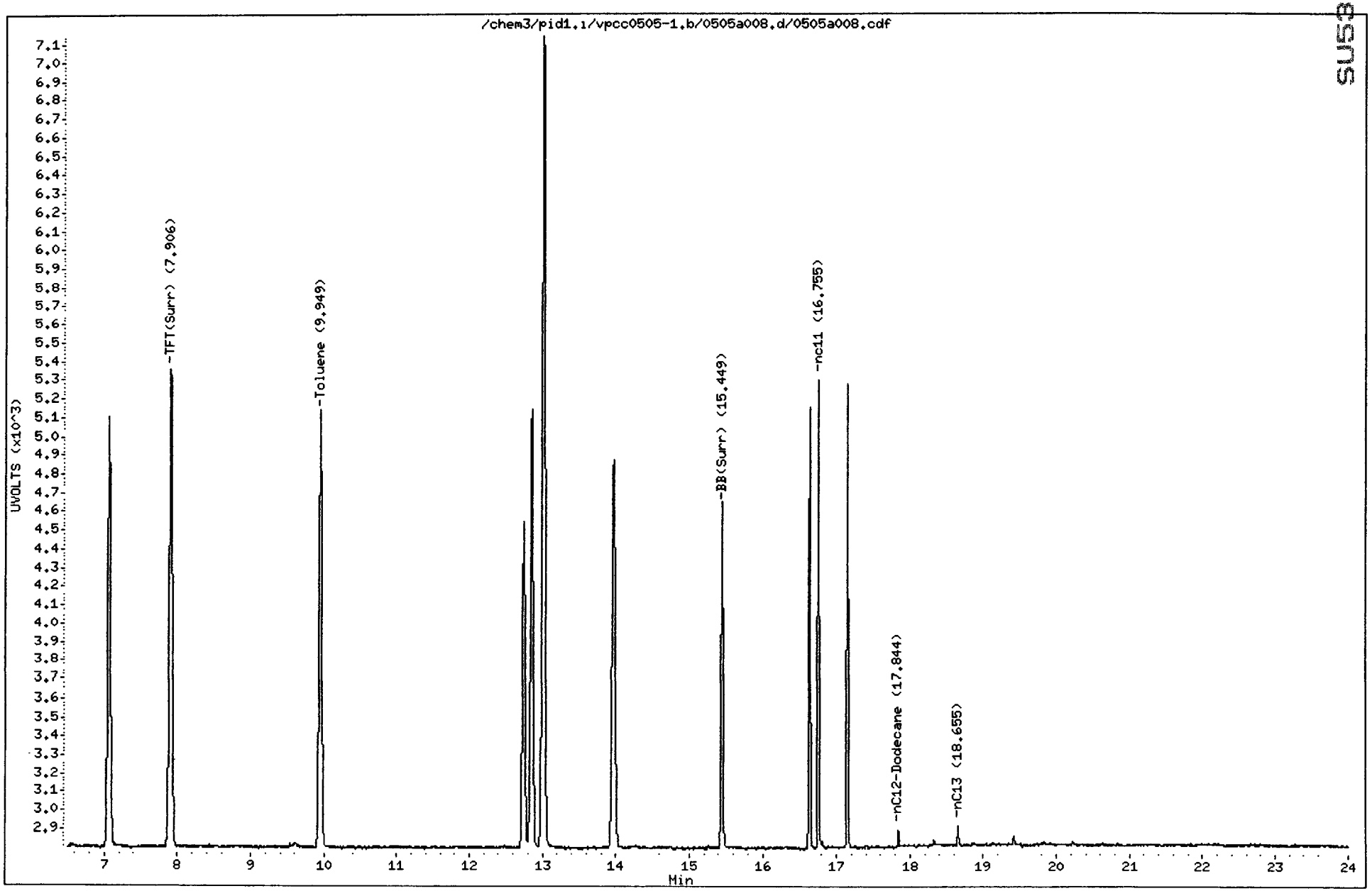
Column phase: RTX 502-2 FID

Instrument: pid1.1

Operator: MH

Column diameter: 0.18

SU58:01129



Data File: /chem3/pid1.i/vpcc0505-2.b/0505a008.d

Date : 05-MAY-2011 13:36

Client ID:

Sample Info: BETX 25

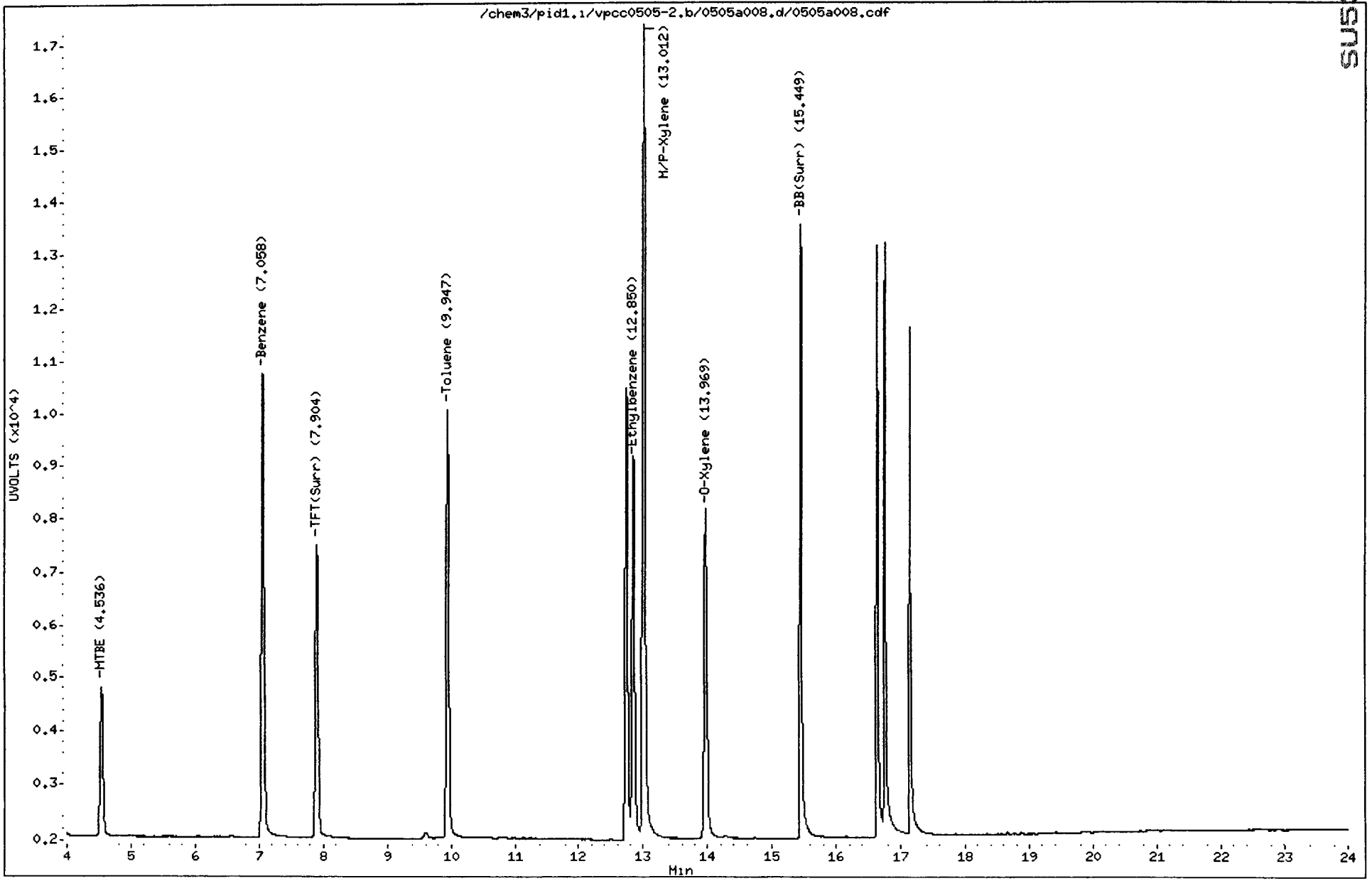
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SUSS:01136



MH 5/9/11

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0505-1.b/0505a009.d
Data file 2: /chem3/pid1.i/vpcc0505-2.b/0505a009.d
Method: /chem3/pid1.i/vpcc0505-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 05-MAY-2011
BETX Ical Date: 05-MAY-2011

ARI ID: BETX 50
Client ID:
Injection Date: 05-MAY-2011 14:05
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.908	0.002	3448	46899	132.1	TFT(Surr)
15.450	0.001	2490	20749	131.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.85 to 17.96)	319505	427894	1.339
8015B 2MP-TMB	(4.17 to 16.26)	652210	418865	0.642
AK101 nC6-nC10	(4.67 to 15.16)	527526	393029	0.745
NWTPHG Tol-Nap	(9.85 to 18.98)	340084	428397	1.260

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
7.906	0.002	7445	133.0	TFT(Surr)
15.449	0.001	15947	134.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.063	-0.003	17208	46.24	Benzene
9.949	-0.001	16279	47.88	Toluene
12.852	-0.003	14766	50.79	Ethylbenzene
13.015	-0.008	31808	98.63	M/P-Xylene
13.972	-0.003	12759	50.57	O-Xylene
4.538	-0.001	5691	49.35	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0505-1.b/0505a009.d

Date : 05-MAY-2011 14:05

Client ID:

Sample Info: BETX 50

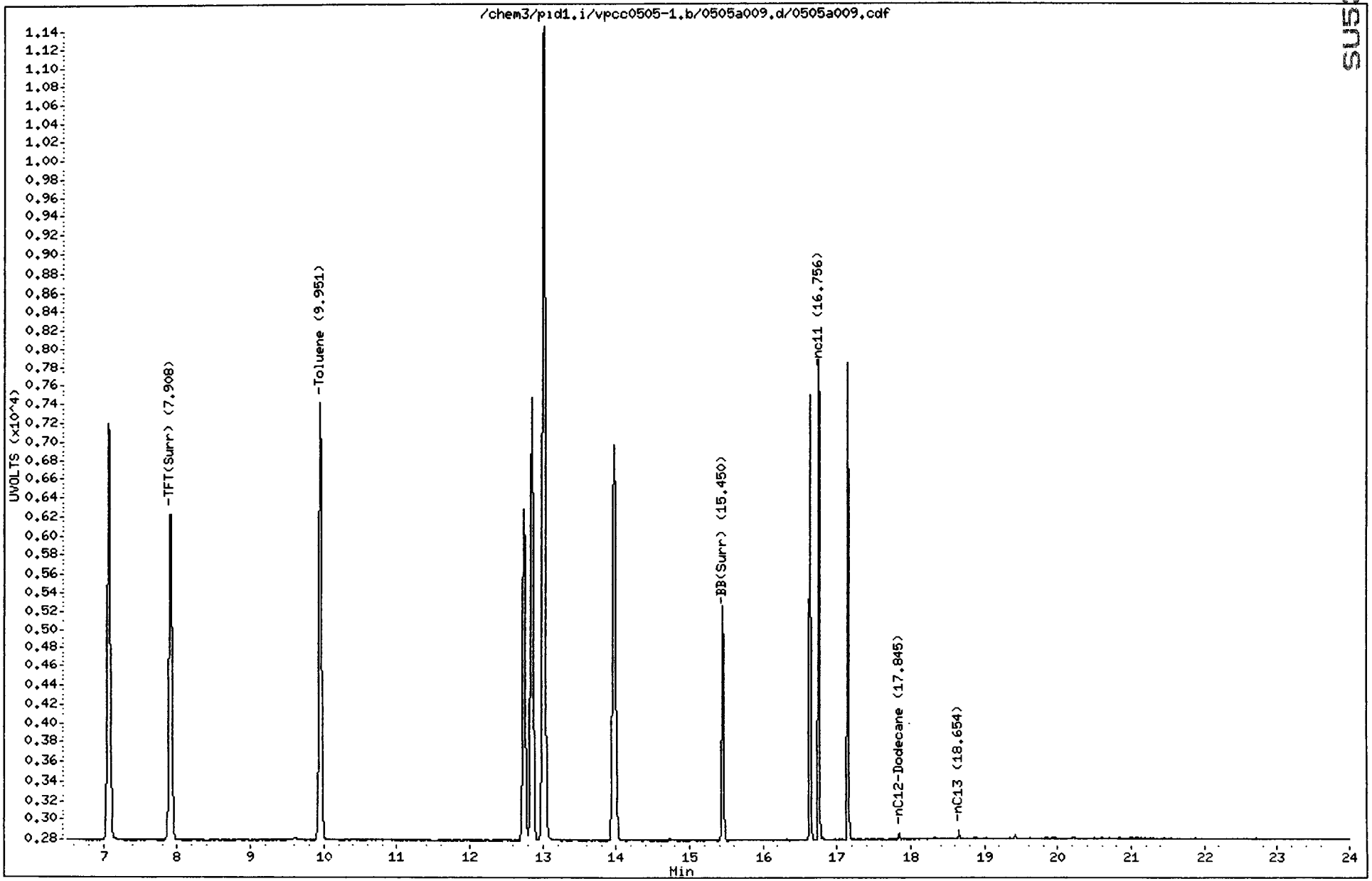
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SU58-01192



Data File: /chem3/pid1.i/vpcc0505-2.b/0505a009.d

Date : 05-MAY-2011 14:05

Client ID:

Sample Info: BETX 50

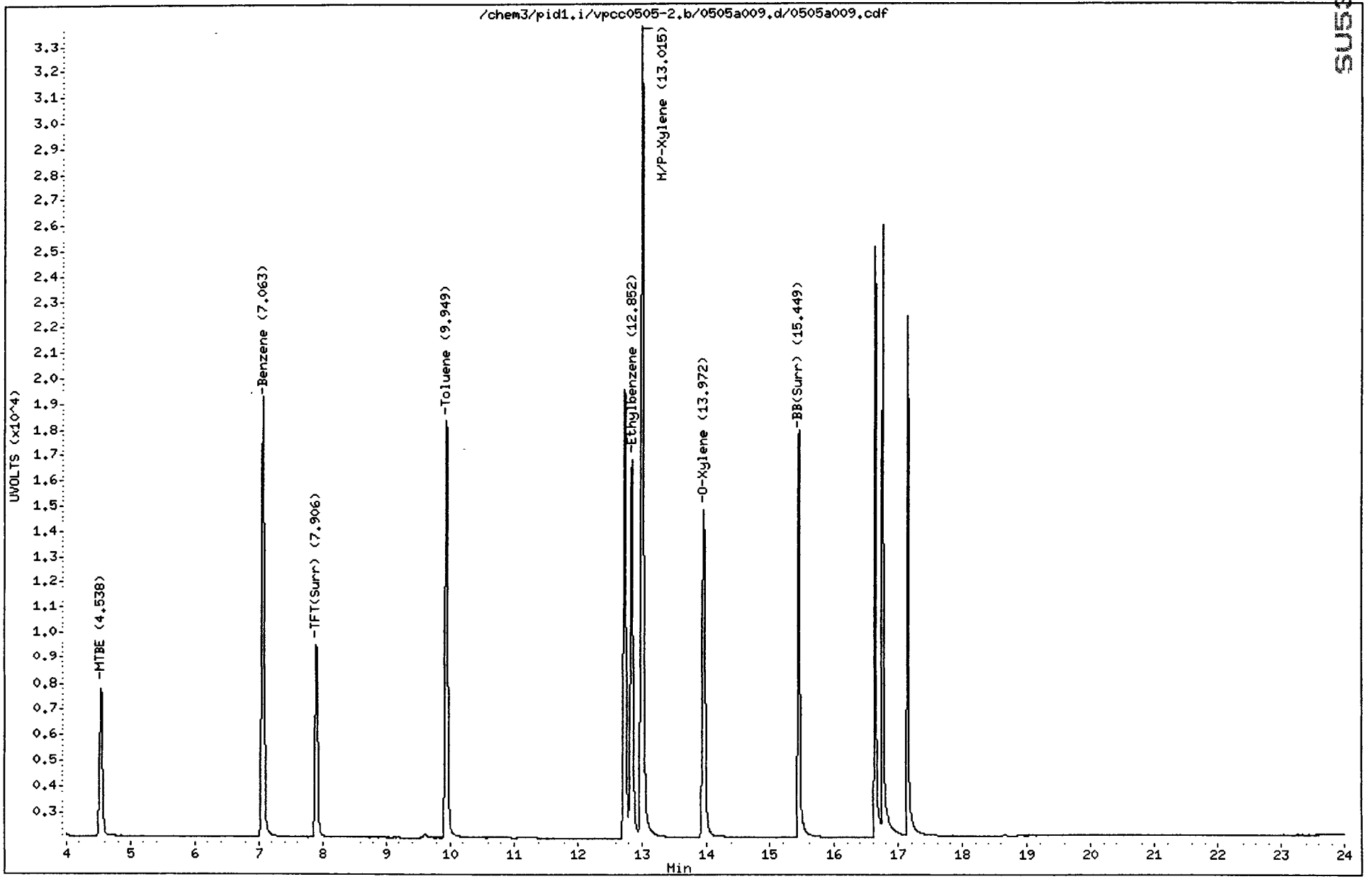
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SU58:91133



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Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0505-1.b/0505a010.d
Data file 2: /chem3/pid1.i/vpcc0505-2.b/0505a010.d
Method: /chem3/pid1.i/vpcc0505-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 05-MAY-2011
BETX Ical Date: 05-MAY-2011

ARI ID: BETX 100
Client ID:
Injection Date: 05-MAY-2011 14:34
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.907	0.001	4507	60824	172.7	TFT(Surr)
15.450	0.002	3300	27406	174.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.85 to 17.96)	319505	819951	2.566
8015B 2MP-TMB	(4.17 to 16.26)	652210	803865	1.233
AK101 nC6-nC10	(4.67 to 15.16)	527526	754184	1.430
NWTPHG Tol-Nap	(9.85 to 18.98)	340084	820643	2.413

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
7.905	0.001	9839	175.8	TFT(Surr)
15.450	0.002	21394	179.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.064	-0.002	33669	90.47	Benzene
9.949	-0.001	32365	95.18	Toluene
12.853	-0.002	29127	100.19	Ethylbenzene
13.017	-0.005	63418	196.65	M/P-Xylene
13.973	-0.001	25443	100.85	O-Xylene
4.537	-0.001	11113	96.37	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0505-1.b/0505a010.d

Date : 05-MAY-2011 14:34

Client ID:

Sample Info: BETX 100

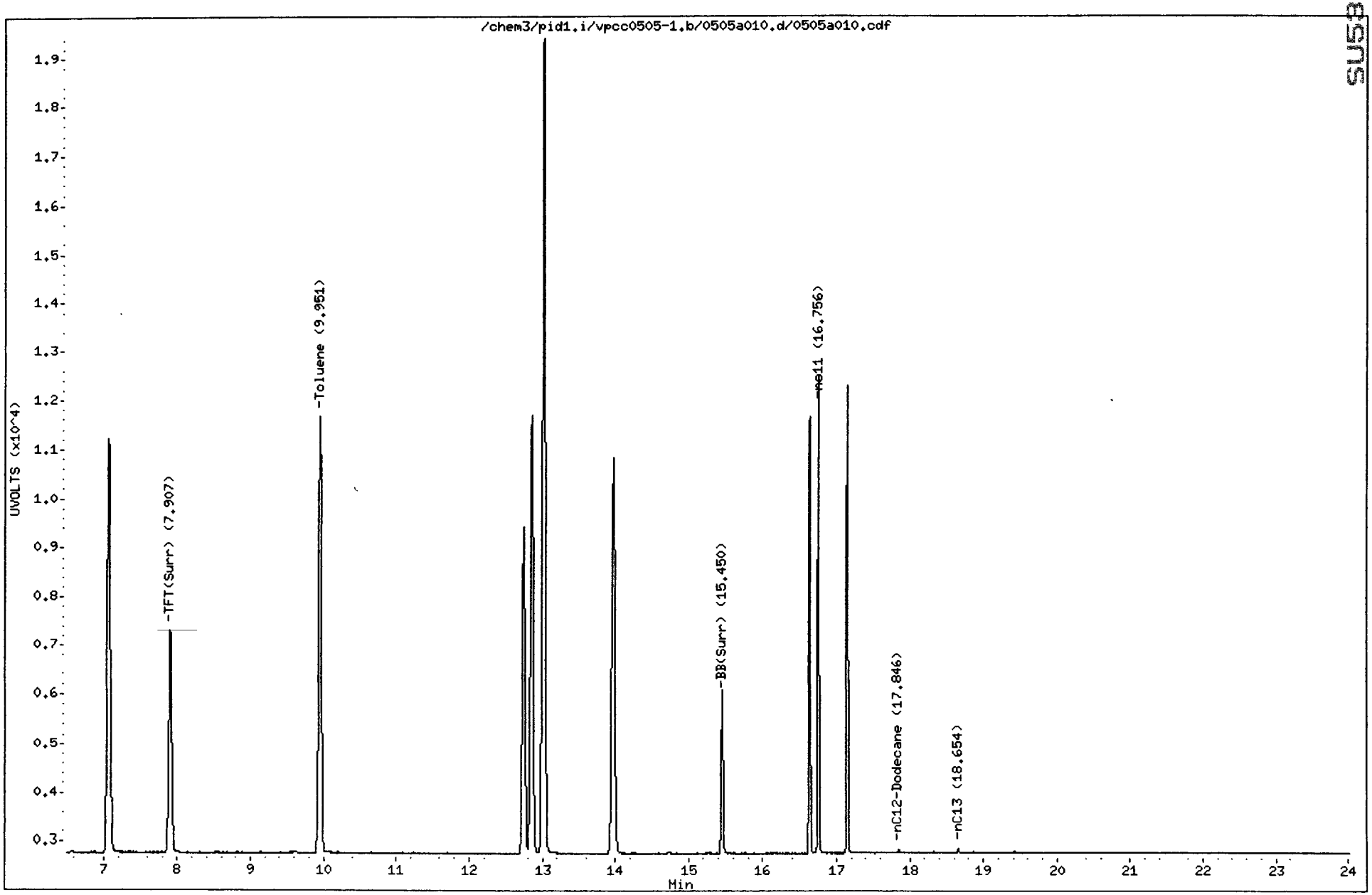
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SUSB:01135



Data File: /chem3/pid1.i/vpcc0505-2.b/0505a010.d

Date : 05-MAY-2011 14:34

Client ID:

Sample Info: BETX 100

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SU53:01136

/chem3/pid1.i/vpcc0505-2.b/0505a010.d/0505a010.cdf

UVOLTS (x10^4)

-MTBE (4.537)

-Benzene (7.064)

-TFT(Surr) (7.905)

-Toluene (9.949)

-Ethylbenzene (12.853)

-M/P-Xylene (13.017)

-O-Xylene (13.973)

-BB(Surr) (15.450)

Min

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Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0505-1.b/0505a011.d
Data file 2: /chem3/pid1.i/vpcc0505-2.b/0505a011.d
Method: /chem3/pid1.i/vpcc0505-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 05-MAY-2011
BETX Ical Date: 05-MAY-2011

ARI ID: BETX 200
Client ID:
Injection Date: 05-MAY-2011 15:04
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.906	0.000	5023	68038	192.4	TFT(Surr)
15.448	0.000	3679	30529	194.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.85 to 17.96)	319505	1629344	5.100
8015B 2MP-TMB	(4.17 to 16.26)	652210	1596899	2.448
AK101 nC6-nC10	(4.67 to 15.16)	527526	1497960	2.840
NWTPHG Tol-Nap	(9.85 to 18.98)	340084	1629964	4.793

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
7.904	0.000	11037	197.2	TFT(Surr)
15.448	0.000	24144	203.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.066	0.000	67927	182.53	Benzene
9.950	0.000	65202	191.75	Toluene
12.855	0.000	58728	202.02	Ethylbenzene
13.022	0.000	126175	391.25	M/P-Xylene
13.974	0.000	51620	204.61	O-Xylene
4.539	0.000	22675	196.64	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0505-1.b/0505a011.d

Date : 05-MAY-2011 15:04

Client ID:

Sample Info: BETX 200

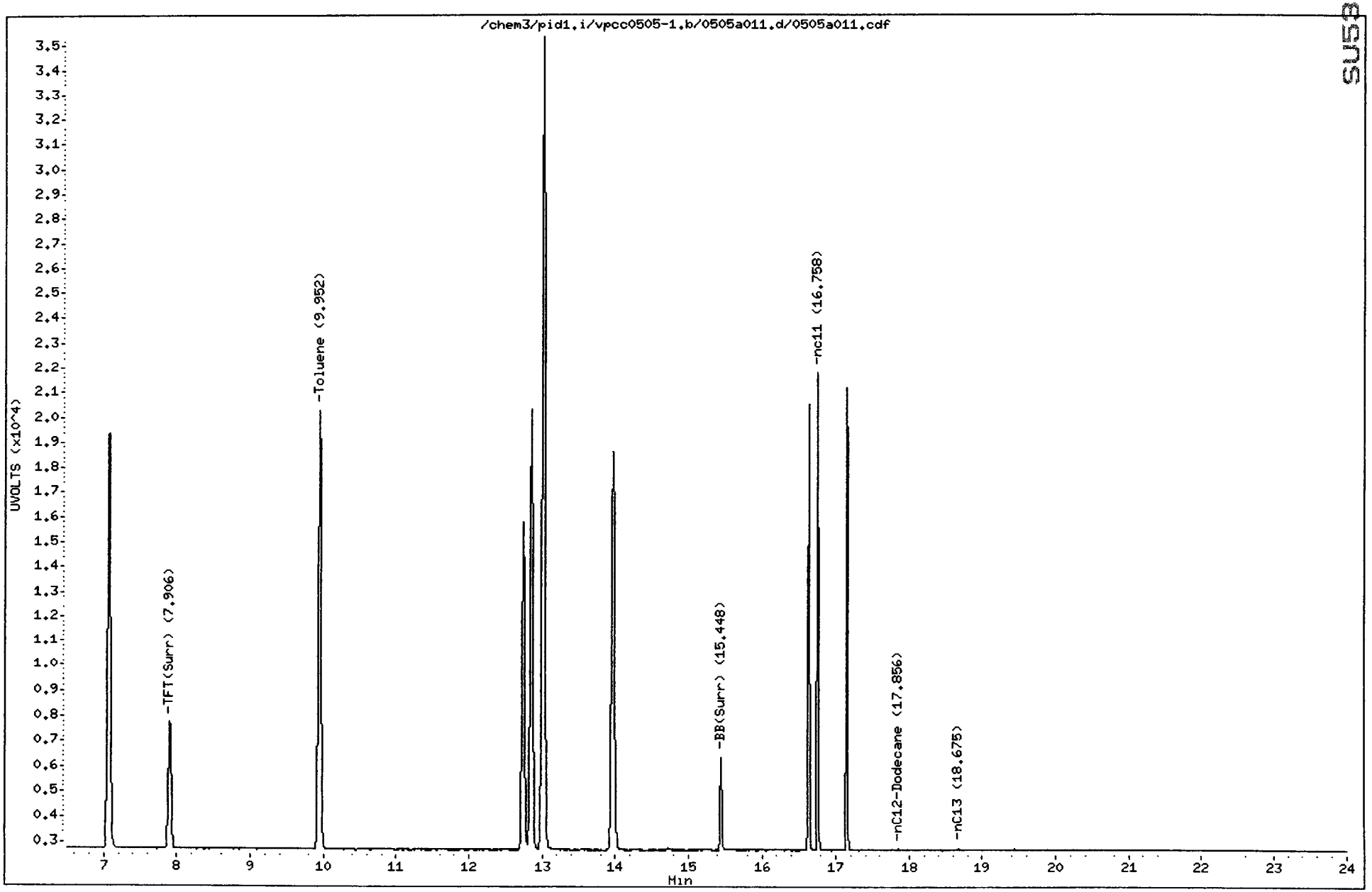
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

SUSP:01138



Data File: /chem3/pid1.i/vpcc0505-2.b/0505a011.d

Date : 05-MAY-2011 15:04

Client ID:

Sample Info: BETX 200

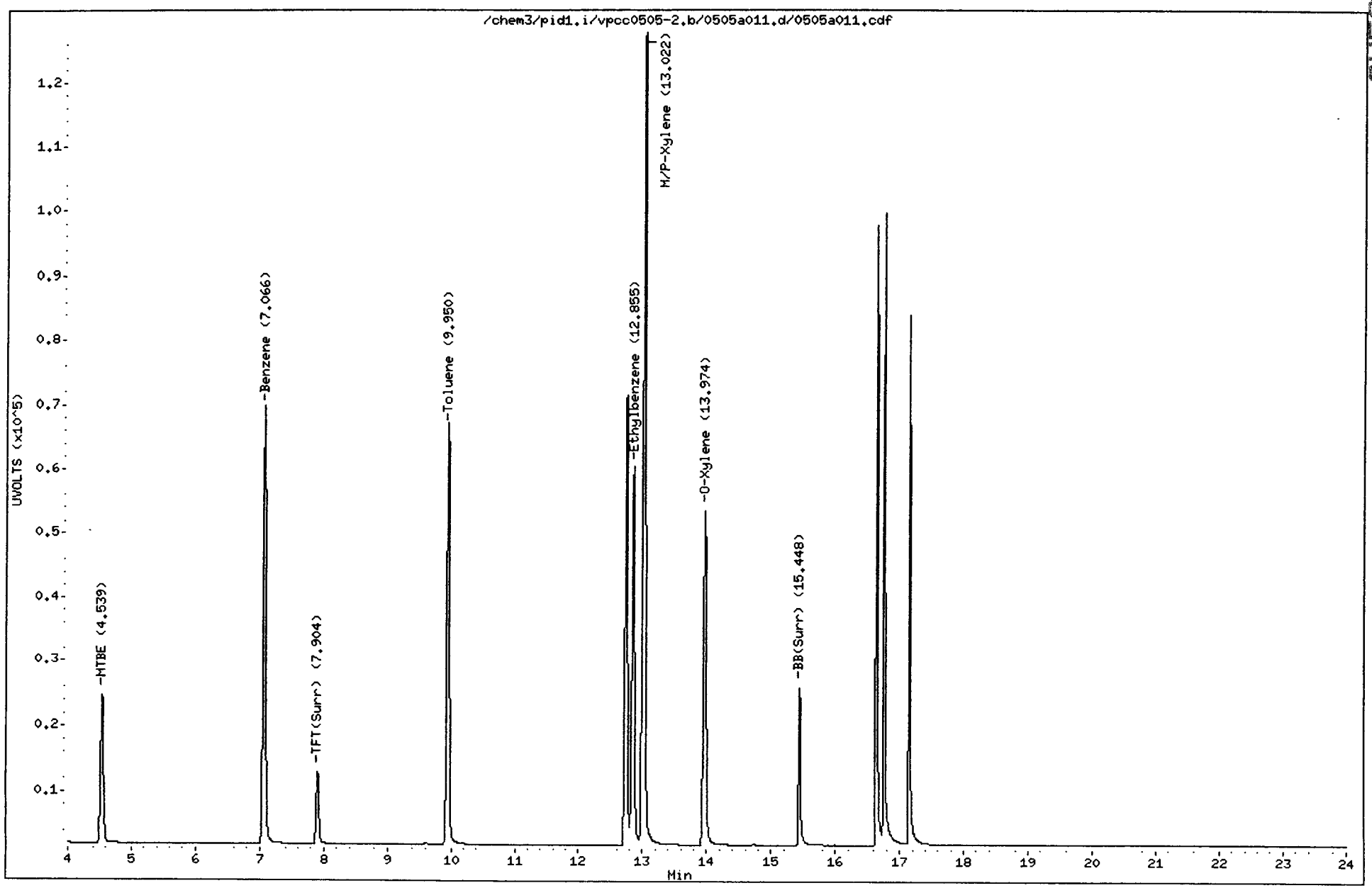
Instrument: pid1.i

Operator: MH

Column phase: RTX 502-2 PID

Column diameter: 0.18

SI53:01139



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Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0505-1.b/0505a012.d
Data file 2: /chem3/pid1.i/vpcc0505-2.b/0505a012.d
Method: /chem3/pid1.i/vpcc0505-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 05-MAY-2011
BETX Ical Date: 05-MAY-2011

ARI ID: BETX ICV
Client ID:
Injection Date: 05-MAY-2011 15:33
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.907	0.000	2508	33725	96.1	TFT(Surr)
15.449	0.001	1879	15537	99.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.85 to 17.96)	319505	226315	0.708
8015B 2MP-TMB	(4.17 to 16.26)	652210	219810	0.337
AK101 nC6-nC10	(4.67 to 15.16)	527526	205657	0.390
NWTPHG Tol-Nap	(9.85 to 18.98)	340084	226943	0.667

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
7.904	0.000	5373	96.0	TFT(Surr)
15.448	0.001	11815	99.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.059	-0.007	9096	24.44	Benzene
9.948	-0.002	8417	24.75	Toluene
12.850	-0.005	7584	26.09	Ethylbenzene
13.012	-0.010	16238	50.35	M/P-Xylene
13.970	-0.004	6546	25.95	O-Xylene
4.537	-0.002	3123	27.08	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak peak was manually integrated