J

9-2-10

TOC Solids Prep Log

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

DATE:	8/27/2010
ANALYST:	CDE 17:15

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.0962	0.0000	13.0963	0.1 mg	
RK62 A2		-	13.1310	18.5137	17.2580	76.67%	
RK62 B2		-	13.1052	18.0053	16.8377	76.17%	
RK62 C2		-	13.0309	18.5790	17.1879	74.93%	
RK62 D2		+-	13.0899	18.1006	17.1647	81.32%	
RK62 E2		-	13.2173	18.6022	17.5065	79.65%	
RK62 F2		+-	13.1045	18.0611	17.1094	80.80%	
RK62 G2		+-	13.1673	18.9542	18.0820	84.93%	
RK62 H2		+-	13.2160	18.1357	17.4986	87.05%	
RK62 I 2		-	13.1632	18.7789	17.5577	78.25%	
RK62 J2		-	13.1478	18.5049	17.3913	79.21%	
RK62 K2		+-	13.1360	18.5825	17.5902	81.78%	
RK62 L2		-	13.2016	18.6150	17.2105	74.06%	
RK62 M2		-	13.1485	18.5261	17.0857	73.21%	
RK62 N2		+-	13.2153	18.9234	17.6386	77.49%	
RK62 O2		+-	13.2389	18.6536	17.7984	84.21%	
RK62 O2 dup		+-	12.9892	19.0250	17.9267	81.80%	
RK62 O2 trip		+-	13.1586	18.4598	17.4867	81.64%	
RK62 P2		-	13.0515	18.4208	17.3983	80.96%	
RK21 A4		-	13.1813	18.0172	17.2048	83.20%	
RK21 A4 dup		-	13.0025	18.4043	17.4906	83.09%	
RK21 A4 trip		-	13.1583	18.0622	17.2717	83.88%	
RK21 B4		-	13.1222	18.4873	17.6908	85.15%	

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TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC an alysis
Add general notes regarding samples and preparation and identify the acid used

Analyst CMC Date 8/27/10 17:15 (B)

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			13.0962	Ø	13.0963		
RK62 A_2		-	13.1310	18.5137	17.2580		fine sand in water
B^2		-	13.1052	18.0053	16.8377		
C^2		-	13.0309	18.5790	17.1879		silt & sed. in water
D^2		+ -	13.0899	18.1006	17.1647		fine sand/sed in water
E^2		-	13.2173	18.6022	17.5065		Sand/silt in some water
F^2		+ -	13.1045	18.0611	17.1094		fine Sand & some water
G^2		+ -	13.1673	18.9542	18.0820		Sand -
H^2		+ -	13.2160	18.1357	17.4986		↓
I^2		-	13.1632	18.7789	17.5577		Sand in water
J^2		-	13.1478	18.5049	17.3913		
K^2		+ -	13.1360	18.5825	17.5902		fine Sand in water
L^2		-	13.2016	18.6150	17.2105		Sand/silt in water
M^2		-	13.1485	18.5261	17.0857		↓
N^2		+ -	13.2153	18.9234	17.6386		↓
O^2		+ -	13.2389	18.6536	17.7984		sand & sed.
RO^2		+ -	12.9892	19.0250	17.9267		↓
HO^2		+ -	13.1586	18.4598	17.4867		↓
P^2			13.0515	18.4209	17.3983		↓
RK21 A^4		-	13.1813	18.0172	17.2048		Grey silt/clay
$dP A^4$		-	13.0025	18.4043	17.4906		↓
$rP A^4$		-	13.1583	18.0622	17.2717		↓
B^4		-	13.1222	18.4873	17.6908		↓

8/27/10 am

TOC, Solids Data Analysis

DATE: 9/8/2010

Instrument: Apollo 2 ANALYST: KE 10:10

Mode: NPOC *Inlet:* Boat

Spike Std = **2,500** *ppm C*

Calibration Data

Cal Curve ID: **CAL 090610** *Conc:* 5,000 *ppm*

Calibration Curve Standard: **ARI # 00109 - 2** *Curve Date:* **09/06/10**

CalFact: 2.459E+05 *intercept:* 62421 *r2 :* 0.99946

Curve Range (ppm) 200 *to* 2,500

Curve Range (µgC): **8** *to* **100**

Verification Standard Source: ***ERA# 0513 - 10 - 06*** *Conc:* **5,000** *ppm*

dilution : 10 *mL to* 50 **1,000** *ppm*

Standard Reference Material Source: ***NIST 8704*** *Conc:* **33,510** *ppm*

Silica Blanks

	Replicate determinations						Mean	RSD	condition

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	*comments*
ICV				1.00		40.0	1024	1,024	*102.40%*
Blank				1.00		40.0	12.53	13	*Blank OK*
NIST 8704				1.00		1.8	32320	32,320	*96.45%*
RJ79 B8				1.00		1.5	6378	6,378	*Range OK!*
RJ79 B8 dup				1.00		1.6	6742	6,742	*RPD=5.5%*
RJ79 B8 trp				1.00		1.5	5800	5,800	*RSD=7.5%*
RJ79 B8 ms				1.00	10	1.5	25369	25,369	*Range OK!*
Spike =	*0.025*	*mg C to*	*1.5*	*mg samp=*	*16,667*	*ppm*		*114%*	
RJ79 C8				1.00		1.6	2373	2,373	*Range OK!*
RJ79 D8				1.00		1.9	2661	2,661	*Range OK!*
RJ79 E8				1.00		2.0	3090	3,090	*Range OK!*
RJ79 F8				1.00		2.3	3385	3,385	*Range OK!*
RK91 A7				1.00		1.4	12022	12,022	*Range OK!*
~~CCV~~				~~1.00~~		~~40.0~~	~~5761~~	~~5,761~~	~~*Offscale, dilute*~~
CCV				1.00		40.0	1049	1,049	*104.90%*
Blank				1.00		40.0	56.18	56	*Blank OK*
RJ91 B7				1.00		1.1	22079	22,079	*Range OK!*
RJ91 C7				1.00		1.0	12136	12,136	*Range OK!*
RJ91 D7				1.00		1.7	5046	5,046	*Range OK!*
RJ91 E7				1.00		2.3	4031	4,031	*Range OK!*
RJ91 F7				1.00		2.4	14335	14,335	*Range OK!*
RJ91 G7				1.00		1.6	13250	13,250	*Range OK!*
RJ91 H7				1.00		0.9	98699	98,699	*Range OK!*
RJ91 I 7				1.00		3.2	1310	1,310	*Range OK!*
RJ91 J 7				1.00		2.3	7933	7,933	*Range OK!*
RK21 B4				1.00		1.8	986	986	*Range OK!*
CCV				1.00		40.0	988	988	*98.80%*

RK21 : 00362

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
Blank				1.00		40.0	12.01	12	*Blank OK*
RK21 A4				1.00		2.5	2216	2,216	*Range OK!*
RK21 A4 dup				1.00		2.3	2410	2,410	*RPD=8.4%*
RK21 A4 trp				1.00		2.3	2031	2,031	*RSD=8.5%*
~~RK21 A4 ms~~			~~-~~	~~1.00~~	~~10~~	~~2.6~~	~~2310~~	~~2,310~~	~~*Range OK!*~~
~~*Spike =*~~	~~*0.025*~~	~~*mg C to*~~	~~*2.6*~~	~~*mg samp=*~~	~~*9,615*~~	~~*ppm*~~		~~*1%*~~	
RK21 A4 ms				1.00	10	2.6	13270	13,270	*Range OK!*
Spike =	*0.025*	*mg C to*	*2.6*	*mg samp=*	*9,615*	*ppm*		*115%*	
RK13 A7				1.00		3.2	3455	3,455	*Range OK!*
RK13 B7				1.00		1.6	4217	4,217	*Range OK!*
RK13 C7				1.00		0.9	34205	34,205	*Range OK!*
RK13 D7				1.00		2.2	2054	2,054	*Range OK!*
RK86 A9				1.00		3.3	281	281	*Range OK!*
CCV				1.00		40.0	962	962	*96.20%*
~~Blank~~			~~-~~	~~1.00~~		~~40.0~~	~~-0.08~~	~~0~~	~~*Blank OK*~~
Blank				1.00		40.0	4.84	5	*Blank OK*
RK86 F9				1.00		3.3	383	383	*Range OK!*
RK86 G10				1.00		1.6	11301	11,301	*Range OK!*
RK86 H9				1.00		4.1	1520	1,520	*Range OK!*
RK84 K16				1.00		3.1	3287	3,287	*Range OK!*
RK84 K16 dup				1.00		3.1	3046	3,046	*RPD=7.6%*
RK84 K16 trp				1.00		3.3	3853	3,853	*RSD=12.2%*
RK84 K16 ms				1.00	10	3.3	11583	11,583	*Range OK!*
Spike =	*0.025*	*mg C to*	*3.3*	*mg samp=*	*7,576*	*ppm*		*110%*	
RK84 E6				1.00		1.0	63924	63,924	*Range OK!*
RK84 F6				1.00		1.9	12821	12,821	*Range OK!*
~~NIST 8704~~			~~-~~	~~1.00~~		~~2.5~~	~~18672~~	~~18,672~~	~~*55.72%*~~
NIST 8704				1.00		2.4	29431	29,431	*87.83%*
CCV				1.00		40.0	1026	1,026	*102.60%*
Blank				1.00		40.0	10.98	11	*Blank OK*

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(1) 9-8-10 (W)

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 2

Set-Up Parameters MODE: NPOC (Boat) INLET: Boat Sampler

	Source	Conc (ppm)
Standards:		
Calibration:	ARI 00109-2	5000
Verification:	ERA 0513-10-06	5000 to 1000 for CVS
SRM:	NBS 8704	33570

10:10

Sample Sequence:

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICB			40			
NBS 8704			1.8			
RJ79 B8			1.5			
DUP B8			1.6			
LRB B8			1.5			
MS B8			(1) ~~1.6~~ 1.5	2500	10	
C8			(1) ~~1.9~~ 1.6			
D8			1.9			
E8			2.0			
F8			2.3			
RK91 A7			1.4			
CCV			40			
CCB			40			
RK91 B7			1.1			
C7			1.0			
D7			1.7			
E7			2.3			
F7			2.4			
G7			1.6			
H7			0.9			
I7			3.2			
J7			2.3			
RK21 B4			1.8			
CCV			40			
CCB			40			
RK21 A4			2.5			
DUP A4			2.3			
LRB A4			2.3			
MS A4			*2.6/2.6	2500	10	* No Spike injected
RK13 A7			3.2			
B7			1.6			

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(I) 9-8-10 (W)

TOC Solids Sample Run Log
Apollo 9000

Set-Up Parameters MODE: NPOC (Bead)		INLET: Boat Sampler
Standards:	**Source**	**Conc (ppm)**
Calibration:	ART 00109-2	5000
Verification:	ERA 0573-10-06	5000 to 100 for CUS
SRM:	NBS 8704	33510

10:10

Sample Sequence:

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
RK13 C7			0.9			
↓ D7			2.2			
RK86 A9			3.3			
CCV			40			
CCB			40/40			2 inserts
RK86 F9			3.3			
G10			1.6			
↓ H9			4.1			
RK84 K16			3.1			
2nd K16			3.1			
4th K16			3.3			
MS K16			3.3	2500	10	
E6			1.0			
↓ F6			1.9			
NBS 8704			2.5/2.4			2 inserts
CCV			40			
CCB			40			

9-8-10 (W)

9-8-10 (W)

Detailed Analysis Report Print Date/Time: 2010/09/08 18:26:27

Sample ID:	CVS BOAT 1000	Mode:	TOC
Method:	Boat Sampler	Filename:	09081004
Cal. Curve:	BOAT CAL 090610	Timestamp:	2010/09/08 10:07
Operator ID:	TRINA	Sample Type:	Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1024.0481	40.9619	10135510	19.884	20.881	127

Sample ID:	ICB BOAT	Mode:	TOC
Method:	Boat Sampler	Filename:	09081017
Cal. Curve:	BOAT CAL 090610	Timestamp:	2010/09/08 10:19
Operator ID:	TRINA	Sample Type:	Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12.5319	0.5013	185691	20.246	21.240	59

Sample ID:	NBS 8704	Mode:	TOC
Method:	Boat Sampler	Filename:	09081028
Cal. Curve:	BOAT CAL 090610	Timestamp:	2010/09/08 10:32
Operator ID:	TRINA	Sample Type:	Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	32319.8535	58.1757	14368618	20.413	21.411	210

Sample ID:	RJ79 B8	Mode:	TOC
Method:	Boat Sampler	Filename:	09081039
Cal. Curve:	BOAT CAL 090610	Timestamp:	2010/09/08 10:43
Operator ID:	TRINA	Sample Type:	Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6377.7178	9.5666	2352550	20.851	21.848	144

Sample ID:	RJ79 B8 DP	Mode:	TOC
Method:	Boat Sampler	Filename:	09081048
Cal. Curve:	BOAT CAL 090610	Timestamp:	2010/09/08 10:53
Operator ID:	TRINA	Sample Type:	Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6741.7759	10.7868	2652630	21.105	22.104	159

Sample ID:	RJ79 B8 MP	Mode:	TOC
Method:	Boat Sampler	Filename:	09081055
Cal. Curve:	BOAT CAL 090610	Timestamp:	2010/09/08 10:58
Operator ID:	TRINA	Sample Type:	Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5800.4272	8.7006	2139605	21.236	22.233	128

Sample ID:	RJ79 B8 MS	Mode:	TOC
Method:	Boat Sampler	Filename:	09081103
Cal. Curve:	BOAT CAL 090610	Timestamp:	2010/09/08 11:06
Operator ID:	TRINA	Sample Type:	Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	25369.1348	38.0537	9357919	21.630	22.623	131

Sample ID: RJ79 C8 | Mode: TOC
Method: Boat Sampler | Filename: 09081145
Cal. Curve: BOAT CAL 090610 | Timestamp: 2010/09/08 11:47
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2373.2126	3.7971	933768	21.095	22.094	79

Sample ID: RJ79 D8 | Mode: TOC
Method: Boat Sampler | Filename: 09081152
Cal. Curve: BOAT CAL 090610 | Timestamp: 2010/09/08 11:54
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2660.9246	5.0558	1243279	21.045	22.042	88

Sample ID: RJ79 E8 9-9-10 | Mode: TOC
Method: Boat Sampler | Filename: 09081200
Cal. Curve: BOAT CAL 090610 | Timestamp: 2010/09/08 12:03
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3089.7319	6.1795	1519613	21.178	22.176	94

Sample ID: RJ79 F8 | Mode: TOC
Method: Boat Sampler | Filename: 09081211
Cal. Curve: BOAT CAL 090610 | Timestamp: 2010/09/08 12:14
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3384.7629	7.7850	1914425	21.206	22.205	93

Sample ID: RJ91 A7 | Mode: TOC
Method: Boat Sampler | Filename: 09081219
Cal. Curve: BOAT CAL 090610 | Timestamp: 2010/09/08 12:22
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12022.4697	16.8315	4139082	21.176	22.175	112

Sample ID: CVS BOAT 1000 NA 9-8-10 | Mode: TOC
Method: Boat Sampler | Filename: 09081227
Cal. Curve: BOAT CAL 090610 | Timestamp: 2010/09/08 12:33
Operator ID: TRINA | Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5760.5830	230.4233	56726624	21.508	22.506	287

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000 | Mode: TOC
Method: Boat Sampler | Filename: 09081241
Cal. Curve: BOAT CAL 090610 | Timestamp: 2010/09/08 12:46
Operator ID: TRINA | Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1048.6949	41.9478	10377950	21.660	22.656	137

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081254
Timestamp: 2010/09/08 12:57
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	56.1763	2.2471	615001	21.822	22.822	69

Sample ID: RK91 B7
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081300
Timestamp: 2010/09/08 13:04
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22078.9258	24.2868	5972456	21.704	22.697	126

Sample ID: RK91 C7
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081309
Timestamp: 2010/09/08 13:15
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12136.3311	12.1363	2984488	22.061	23.059	113

Sample ID: RK91 D7
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081319
Timestamp: 2010/09/08 13:22
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5045.5737	8.5775	2109317	22.482	23.480	83

Sample ID: RK91 E7
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081327
Timestamp: 2010/09/08 13:30
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4030.6060	9.2704	2279715	22.588	23.583	88

Sample ID: RK91 F7
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081333
Timestamp: 2010/09/08 13:37
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	14335.3789	34.4049	8460631	22.554	23.553	136

Sample ID: RK91 G7
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081342
Timestamp: 2010/09/08 13:46
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13249.7500	21.1996	5213268	22.461	23.461	133

Sample ID: RK91 H7 Mode: TOC
Method: Boat Sampler Filename: 09081350
Cal. Curve: BOAT CAL 090610 Timestamp: 2010/09/08 13:54
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	98699.1016	88.8292	21844296	22.246	23.243	193

Sample ID: RK91 I7 Mode: TOC
Method: Boat Sampler Filename: 09081432
Cal. Curve: BOAT CAL 090610 Timestamp: 2010/09/08 14:36
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1310.4359	4.1934	1031212	21.056	22.050	84

Sample ID: RK91 J7 Mode: TOC
Method: Boat Sampler Filename: 09081450
Cal. Curve: BOAT CAL 090610 Timestamp: 2010/09/08 15:01
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7932.7837	18.2454	4486790	20.475	21.467	122

Sample ID: RK21 B4 Mode: TOC
Method: Boat Sampler Filename: 09081504
Cal. Curve: BOAT CAL 090610 Timestamp: 2010/09/08 15:06
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	985.7614	1.7744	436342	20.465	21.465	79

Sample ID: CVS BOAT 1000 Mode: TOC
Method: Boat Sampler Filename: 09081508
Cal. Curve: BOAT CAL 090610 Timestamp: 2010/09/08 15:12
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	988.1343	39.5254	9782243	20.482	21.482	131

Sample ID: ICB BOAT Mode: TOC
Method: Boat Sampler Filename: 09081515
Cal. Curve: BOAT CAL 090610 Timestamp: 2010/09/08 15:17
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12.0076	0.4803	180534	20.414	21.399	54

Sample ID: RK21 A4 Mode: TOC
Method: Boat Sampler Filename: 09081520
Cal. Curve: BOAT CAL 090610 Timestamp: 2010/09/08 15:22
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2215.6021	5.5390	1362116	20.389	21.389	106

Sample ID: RK21 A4 DF
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081525
Timestamp: 2010/09/08 15:27
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2410.4937	5.5441	1363378	20.437	21.436	96

Sample ID: RK21 A4 TRIP
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081531
Timestamp: 2010/09/08 15:34
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2031.2329	4.6718	1148867	20.174	21.168	95

Sample ID: RK21 A4 MS
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

NA 9-8-10

Mode: TOC
Filename: 09081538
Timestamp: 2010/09/08 15:41
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2309.9934	6.0060	1476952	20.134	21.128	106

Sample ID: RK21 A4 MS
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081546
Timestamp: 2010/09/08 15:49
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13269.9922	34.5020	8484502	20.300	21.297	140

Sample ID: RK13 A7
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081555
Timestamp: 2010/09/08 15:57
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3455.1980	11.0566	2718975	20.106	21.103	102

Sample ID: RK13 B7
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081559
Timestamp: 2010/09/08 16:02
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4217.0874	6.7473	1659262	19.969	20.964	86

Sample ID: RK13 C7
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081621
Timestamp: 2010/09/08 16:25
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	34205.2305	30.7847	7570375	19.796	20.790	139

Sample ID: RK13 B7 9-8-10 (W)
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081631
Timestamp: 2010/09/08 16:33
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2054.3772	4.5196	1111438	19.494	20.490	83

Sample ID: RK86 A9
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081635
Timestamp: 2010/09/08 16:37
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	281.3146	0.9283	228291	19.536	20.529	66

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081640
Timestamp: 2010/09/08 16:43
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	961.6113	38.4645	9521348	19.616	20.615	132

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

N/A 9-8-10 (W)

Mode: TOC
Filename: 09081647
Timestamp: 2010/09/08 16:49
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-0.0837	-0.0033	61598	19.489	20.486	45

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081650
Timestamp: 2010/09/08 16:52
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.8357	0.1934	109987	19.444	20.443	51

Sample ID: RK86 F9
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081655
Timestamp: 2010/09/08 16:58
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	383.0518	1.2641	310852	19.399	20.392	86

Sample ID: RK86 G10
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081700
Timestamp: 2010/09/08 17:03
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11300.5234	18.0808	4446322	19.454	20.449	119

Sample ID: RK86 H9
Mode: TOC

Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Filename: 09081710
Timestamp: 2010/09/08 17:13
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1519.6534	6.2306	1532183	19.593	20.591	115

Sample ID: RK84 K16
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081718
Timestamp: 2010/09/08 17:21
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3287.4304	10.1910	2506113	20.176	21.176	92

Sample ID: RK84 K16 DP
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081723
Timestamp: 2010/09/08 17:26
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3045.7871	9.4419	2321900	19.596	20.593	106

Sample ID: RK84 K16 10
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081728
Timestamp: 2010/09/08 17:31
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3852.5173	12.7133	3126374	19.613	20.612	115

Sample ID: RK84 K16 MS
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081733
Timestamp: 2010/09/08 17:36
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11582.8057	38.2233	9399615	19.849	20.848	130

Sample ID: RK84 E6
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081739
Timestamp: 2010/09/08 17:43
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	63924.2227	63.9242	15719828	19.359	20.355	157

Sample ID: RK84 F6
Method: Boat Sampler
Cal. Curve: BOAT CAL 090610
Operator ID: TRINA

Mode: TOC
Filename: 09081753
Timestamp: 2010/09/08 17:57
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12820.9111	24.3597	5990386	19.212	20.207	126

Sample ID: NBS 8704
Method: Boat Sampler

Mode: TOC
Filename: 09081800

Cal. Curve: BOAT CAL 090610 Timestamp: 2010/09/08 18:03
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18672.0273	46.6801	11541679	18.993	19.992	171

Last Message: Out of Calibration

Sample ID: NBS 8704 Mode: TOC
Method: Boat Sampler Filename: 09081808
Cal. Curve: BOAT CAL 090610 Timestamp: 2010/09/08 18:12
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	29431.1641	70.6348	17432468	19.051	20.049	195

Sample ID: CVS BOAT 1000 Mode: TOC
Method: Boat Sampler Filename: 09081816
Cal. Curve: BOAT CAL 090610 Timestamp: 2010/09/08 18:19
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1026.1144	41.0446	10155835	18.982	19.981	141

Sample ID: ICB BOAT Mode: TOC
Method: Boat Sampler Filename: 09081821
Cal. Curve: BOAT CAL 090610 Timestamp: 2010/09/08 18:23
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.9756	0.4390	170383	19.178	20.168	58

J
8-31-10

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET DATE: 8/30/2010

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* ANALYST: CDE 17:40

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: N/A

Batch drying time

record times as mm/dd/yy hh:mm

8/30/2010 17:40 date/time in oven CDE

8/31/2010 9:42 date/time out CDE

elapsed hrs = 16.0

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
	Date & Time	8/30/10 16:17	8/30/10 15:41	8/31/10 10:01										
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000										
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*										

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	**TS (%)**	ASH WT 550C (grams) 1	2		Ash Wt (g)	**TVS (mg/kg)**	**(%)**
Blank		0.0000	1.0712	1.0711			0.00							
RK77 A1		6.4626	1.0766	2.8689			1.79	**33.3%**						
RK77 A1 dup		6.0557	1.0857	2.7569			1.67	**33.6%**						
							RPD =	1.04%				RPD =	NA	
RK77 A1 trp		6.1620	1.0965	2.8025			1.71	**33.7%**						
							RSD =	0.65%				RSD =	NA	
RK77 B1		6.4684	1.0760	4.2559			3.18	**59.0%**						
RK77 C1		6.3328	1.0577	3.5539			2.50	**47.3%**						
RK77 D1		6.7710	1.0788	4.0187			2.94	**51.6%**						
RK77 E1		6.2368	1.0795	3.2406			2.16	**41.9%**						
RK83 D9		6.8401	1.0796	5.7432			4.66	**81.0%**						
RK83 M9		6.2826	1.0575	5.4652			4.41	**84.4%**						
RK84 E6		6.4741	1.0924	2.4118			1.32	**24.5%**						
RK84 F6		6.0254	1.0827	4.7433			3.66	**74.1%**						
RK84 K16		6.8215	1.0776	5.6405			4.56	**79.4%**						
RK84 K16 dup		6.3953	1.0945	5.2979			4.20	**79.3%**						
							RPD =	0.18%				RPD =	NA	
RK84 K16 trp		6.7399	1.1265	5.6498			4.52	**80.6%**						
							RSD =	0.88%				RSD =	NA	
RK86 A9		6.5378	1.1039	6.0473			4.94	**91.0%**						
RK86 F9		6.4050	1.1310	5.8796			4.75	**90.0%**						
RK86 G10		6.2340	1.0884	5.2849			4.20	**81.6%**						
RK86 H9		6.9346	1.0714	6.6381			5.57	**94.9%**						
RK89 A4		6.6333	1.0624	5.3894			4.33	**77.7%**						

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

DATE: 8-30-10 17:40

ANALYST: CMC

Batch drying time

record times as mm/dd/yy hh:mm

8-30-10 CMC time in oven 17:40

8-31-10 CMC time out 9:42

elapsed hrs = 0.0 < 12 hr

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:

Final ash wt (g) = (min ash wt - tare wt)

*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*

if ash wt > dry wt, "Chk for Err"

*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

(A)

Cal Weight ID		CV-02	CV-02	CV-02							CV-02	CV-02							
Date & Time		8-30-10 CMC	8-30-10 CMC	8-31-10 CMC															
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000															
record weights to 4 places		16.17	15.41	10.01															

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	TVS (%)
Blank	1	Ø	1.0712	1.0711										
RK77 A1	2	6.4626	1.0766	2.8689										
A1dup	3	6.0557	1.0957	2.7569										
A1TP	4	6.1620	1.0965	2.8025										
B1	5	6.4684	1.0760	4.2559										
C1	6	6.3328	1.0577	3.5539										
D1	7	6.7710	1.0788	4.0187										
E1	8	6.2368	1.0795	3.2406										
RK83 D9	9	6.8401	1.0796	5.7432										
M9	10	6.2926	1.0575	5.4652										
RK84 E6	11	6.4741	1.0924	2.4118										
F6	12	6.0254	~~1.0890~~	4.7433										
K16	13	6.8215	1.0776	5.6405										
K16dup	14	6.8953	1.0945	5.2979										
K16TP	15	6.7399	1.1265	5.6498										
RK86 A9	16	6.5378	1.1039	6.0473										
F9	17	6.4050	1.1310	5.8796										
G10	18	6.2340	1.0884	5.2849										
M9	19	6.9346	1.0714	6.6381										
RK89 A4	20	6.6333	1.0624	5.3094										
				8/30/10 CMC										

RK21 : 009375

ARI 6053 TS/TVS, Soils
Rev : 12/14/2001

① 1.0827 8-30-10 CMC

000492

6053 TS-TVS soil rev1
Date Printed: 5/29/2009

W
9-2-10

TOC Solids Prep Log

DATE:	8/30/2010
ANALYST:	CDE 17:54

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.0561	0.0000	13.0561	0 mg	
RK77 A1		-	13.0783	18.2153	15.0672	38.72%	
RK77 A1 dup		-	13.1145	18.1951	15.0317	37.74%	
RK77 A1 trip		-	13.0487	18.2597	15.0094	37.63%	
RK77 B1		-	12.9908	18.6984	16.6869	64.76%	
RK77 C1		-	13.0934	18.2323	15.8573	53.78%	
RK77 D1		-	13.1231	18.6781	16.3008	57.20%	
RK77 E1		-	12.9973	18.7740	16.0004	51.99%	
RK83 D9		-	13.1074	18.5302	17.6835	84.39%	
RK83 M9		-	13.1200	18.7000	18.1055	89.35%	
RK84 E6		-	13.0443	17.9485	15.7746	55.67%	
RK84 F6		-	13.1028	18.8360	17.4330	75.53%	
RK84 K16		-	13.1173	18.4118	17.5255	83.26%	
RK84 K16 dup		-	13.2594	18.4169	17.6182	84.51%	
RK84 K16 trip		-	12.9340	18.6850	17.7382	83.54%	
RK86 A9		-	13.0309	18.3851	17.9769	92.38%	
RK86 F9		-	13.0348	18.5433	18.1427	92.73%	
RK86 G10		-	13.2118	18.1994	17.4613	85.20%	
RK86 H9		-	13.0905	18.1425	18.0579	98.33%	
RK89 A4		-	13.2019	19.0017	17.9377	81.65%	

(A)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOC Solids Preparation Log

Acid purge to remove IC and drying 70 ℃ for TOC an alysis
Add general notes regarding samples and preparation and identify the acid used

Analyst CMC Date 8-30-10 17:54

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 ℃		
Blank			13.0561	Ø	13.0561		
RK77 A'		-	13.0783	18.2153	15.0672		sed.
A'dp		-	13.1145	18.1951	15.0317		
A'TP		-	13.0487	18.2597	15.0094		
B'		-	12.9908	18.6984	16.6869		
C'		-	13.0934	18.2323	15.8573		
D'		-	13.1231	18.6781	16.3008		
E'		-	12.9973	18.7740	16.0004		
RK83 D9		-	13.1074	18.5302	17.6835		Sand & clay
M9		-	13.1200	19.7000	18.1055		+ Rocks
RK84 E6		-	13.0493	17.9485	15.7746		wood.
F6		-	13.1028	18.4360	17.4330		clay
K6		-	13.1173	18.4118	17.5255		wet sand & silt
K6dp		-	13.2594	18.4169	17.6182		
K6TP		-	12.9340	18.6850	17.7382		
RK86 A9		-	13.0509	18.3851	17.9769		Sand & silt Brown
F9		-	13.0348	18.5483	18.1427		
G10		-	~~13.2480~~	19.1994	17.4613		Grey
H9		-	13.0905	18.1425	18.0579		Brown Sand & Rocks
RK89 A4		-	13.2019	19.0017	17.9377		grey clay

8/30/10 CMC

TOC, Solids Data Analysis

DATE: 8/31/2010

Instrument: Apollo 2 — ANALYST: KE 10:16

Mode: NPOC *Inlet:* Boat

Spike Std = **2,500** *ppm C*

Calibration Data

Cal Curve ID: **CAL 08182010** *Conc:* 5,000 *ppm*

Calibration Curve Standard: **ARI # 00108-7** *Curve Date:* **08/18/10**

CalFact: 2.669E+05 *intercept:* -167370 *r2 :* 0.99946

Curve Range (ppm) 200 *to* 2,500

Curve Range (µgC): **8** *to* **100**

Verification Standard

Source: ***ERA# 0513 - 10 - 06*** *Conc:* **5,000** *ppm*

dilution : 10 *mL to* 50 **1,000** *ppm*

Standard Reference Material

Source: ***NIST 8704*** *Conc:* **33,510** *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition
23.3	22.0	15.8				20.4	19.6%	OK

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
ICV				1.00		40.0	937	937	*93.70%*
Blank				1.00		40.0	21.42	21	*Blank OK*
NIST 8704				1.00		1.8	33122	33,122	*98.84%*
SB 1				1.00		45.1	23.32	23	*Range OK!*
SB 2				1.00		44.7	22.02	22	*Range OK!*
SB 3				1.00		46.5	15.83	16	*Range OK!*
RJ42 A2	11.1	111.8	90.07%	10.07		2.2	15790	158,853	*Range OK!*
RJ42 A2 dup	11.1	111.8	90.07%	10.07		2.2	16242	163,406	*RPD=2.8%*
RJ42 A2 trp	11.1	111.2	90.02%	10.02		2.2	19278	192,943	*RSD=10.8%*
RJ42 A2 ms	11.1	111.8	90.07%	10.07	10	1.7	31437	316,451	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.2*	*mg samp=*	*148,119*	*ppm*		*106%*	
RJ82 A2	11.4	112.7	89.88%	9.89		3.2	6624	65,303	*Range OK!*
RJ82 A2 dup	11.6	111.8	89.62%	9.64		3.0	7013	67,415	*RPD=3.2%*
RJ82 A2 trp	11.4	111.7	89.79%	9.80		3.1	5255	51,310	*RSD=14.3%*
RJ82 A2 ms	11.4	112.7	89.88%	9.89	10	3.3	14074	138,954	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.3*	*mg samp=*	*74,894*	*ppm*		*98%*	
CCV				1.00		40.0	982	982	*98.20%*
Blank				1.00		40.0	21.05	21	*Blank OK*
RK08 A1	14.0	87.3	83.96%	6.24		1.5	21693	135,165	*Range OK!*
RK08 B1	12.1	106.6	88.65%	8.81		2.7	11868	104,397	*Range OK!*
RK08 B1 dup	11.8	106.1	88.88%	8.99		2.4	10433	93,646	*RPD=10.9%*
RK08 B1 trp	11.3	106.4	89.38%	9.42		2.3	9780	91,916	*RSD=7%*
RK08 B1 ms	12.1	106.6	88.65%	8.81	10	2.1	21862	192,443	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.2*	*mg samp=*	*104,880*	*ppm*		*84%*	
~~RJ74 A3~~	~~16.8~~	~~114.4~~	~~85.31%~~	~~6.81~~		~~2.3~~	~~12443~~	~~84,612~~	~~Range OK!~~
RJ74 A3	16.8	114.4	85.31%	6.81		2.3	9635	65,491	*Range OK!*
RJ74 A3 dup	16.1	114.6	85.95%	7.12		2.3	9524	67,667	*RPD=3.3%*

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
RJ74 A3 trp	16.4	115.6	85.81%	7.05		2.3	12080	85,026	*RSD=14.7%*
~~RJ74 A3 ms~~	~~16.8~~	~~114.4~~	~~85.31%~~	~~6.81~~	~~10~~	~~1.7~~	~~30359~~	~~206,612~~	~~*Range OK!*~~
~~*Spike =*~~	~~*0.025*~~	~~*mg C to*~~	~~*0.2*~~	~~*mg samp=*~~	~~*100,140*~~	~~*ppm*~~		~~*141%*~~	
RJ74 A3 ms	16.8	114.4	85.31%	6.81	10	1.7	30129	205,046	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.2*	*mg samp=*	*100,140*	*ppm*		*139%*	
CCV				1.00		40.0	931	931	*93.10%*
~~Blank~~			-	~~1.00~~		~~40.0~~	~~251.76~~	~~252~~	~~*Check Blank*~~
Blank				1.00		40.0	14.95	15	*Blank OK*
RJ74 B3	22	166.4	86.78%	7.56		1.5	9144	69,028	*Range OK!*
RJ74 C3	17.4	148.8	88.31%	8.55		1.5	9361	79,899	*Range OK!*
RJ74 D3	22.2	163.1	86.39%	7.35		2.4	15068	110,573	*Range OK!*
RK32 A3	23.5	160.8	85.39%	6.84		3.0	7995	54,587	*Range OK!*
RK83 D9				1.00		4.0	941	941	*Range OK!*
RK83 M9				1.00		4.7	1414	1,414	*Range OK!*
RK89 A4				1.00		2.1	3920	3,920	*Range OK!*
RK30 A7				1.00		2.1	2046	2,046	*Range OK!*
RK30 C7				1.00		3.1	1055	1,055	*Range OK!*
RK30 D7				1.00		2.0	16684	16,684	*Range OK!*
CCV				1.00		40.0	913	913	*91.30%*
Blank				1.00		40.0	19.94	20	*Blank OK*
~~RK30 E7~~			-	~~1.00~~		~~2.5~~	~~1430~~	~~1,430~~	~~*Range OK!*~~
~~RK30 F7~~			-	~~1.00~~		~~2.1~~	~~1906~~	~~1,906~~	~~*Range OK!*~~
~~NIST 8704~~			-	~~1.00~~		~~2.2~~	~~29343~~	~~29,343~~	~~*87.56%*~~
~~CCV~~			-	~~1.00~~		~~40.0~~	~~1658~~	~~1,658~~	~~*165.80%*~~
~~CCV~~			-	~~1.00~~		~~40.0~~	~~861~~	~~861~~	~~*86.10%*~~
~~CCV~~			-	~~1.00~~		~~40.0~~	~~740~~	~~740~~	~~*74.00%*~~
~~CCV~~			-	~~1.00~~		~~40.0~~	~~894~~	~~894~~	~~*89.40%*~~
~~Blank~~			-	~~1.00~~		~~40.0~~	~~17.87~~	~~18~~	~~*Blank OK*~~

Analytical Resources, Incorporated
Analytical Chemists and Consultants

① 8-31-10 ⓦ

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 2

Set-Up Parameters MODE: NPOC (Boat) INLET: Boat Sampler

Standards:	Source	Conc (ppm)
Calibration:	ARI 00105-11	5000
Verification:	ERA 0573-10-06	5000 to 1000 for CVS
SRM:	NBS 8704	33510

10:16

Sample Sequence:

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICB			40			
NBS 8704			1.8			
SB 1			45.1			
2			44.7			
3			46.5			
RJ42 A3	11.1	111.8	2.2			
DP A3	11.1	111.8	2.2			
MF A3	11.1	111.2	2.2			
MS A3	11.1	111.8	1.7	2500	10	
RJ82 A2	11.4	112.7	3.2			
DP A2	11.6	111.8	3.0			
MF A2	11.4	111.7	3.1			
MS A2	11.4	112.7	3.3	2500	10	
CCV			40			
CCB			40			
RK08 A1	14.0	87.3	1.5			
B1	12.1	106.6	2.7			
DB1	11.8	106.1	2.4			
MFB1	11.3	106.4	2.3			
MSB1	12.1	106.6	2.1	2500	10	
RJ74 A3	~~22.0~~ 16.8	~~166.4~~ 114.4	~~1.5~~ 2.3			was 25 wrong # injected
DP A3	~~17.4~~ 16.1	~~148.8~~ 114.6	~~1.5~~ 2.3			
A3	16.4	115.6	2.3			
MS A3	16.8	114.4	1.7/1.7	2500	10	2 inj. each
CCV			40			
CCB			40/40			2 inj. each
RJ74 B3	22.0	166.4	1.5			
C3	17.4	148.8	1.5			
D3	22.2	163.1	2.4			
RK32 A2	23.5	160.8	3.0			
RK83 D9			4.0			

② - 114.4 - ③ 16.8 ④ 2.3 8-31-10 ⓦ
⑥ 16.1 ⑧ 114.6 ⑦ 2.3

Analytical Resources,Incorporated
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(1) 8-31-10 (2)

TOC Solids Sample Run Log
Apollo 9000

Set-Up Parameters MODE: NPOC **INLET:** Boat Sampler

Standards:	Source	Conc (ppm)
Calibration:		
Verification:		
SRM:		

Cont'd

10:16

Sample Sequence:

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
RK83 M9			4.7			
RK89 A4			2.1			
RK30 A7			2.1			
C7			3.1			
↓ D7			2.1			
CCV			40			
CCB			40			
~~RK30 E7~~			~~2.5~~			
↓ F7			2.1			
NBS 8704			2.2			recoat of cup
CCV			~~40/40/40~~ 40	Rerun 8-31-10 (2)		3 insects
CCB						

8-31-10 (1)

8-31-10 (2)

Detailed Analysis Report Print Date/Time: 2010/08/31 18:31:12

Sample ID: CVS BOAT 1000 | Mode: TOC
Method: Boat Sampler | Filename: 08311019
Cal. Curve: CAL 08182010 | Timestamp: 2010/08/31 10:23
Operator ID: TRINA | Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	937.0071	37.4803	9835227	15.296	16.293	130

Sample ID: ICB BOAT | Mode: TOC
Method: Boat Sampler | Filename: 08311026
Cal. Curve: CAL 08182010 | Timestamp: 2010/08/31 10:27
Operator ID: TRINA | Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21.4214	0.8569	61304	15.311	16.303	48

Sample ID: NBS 8704 | Mode: TOC
Method: Boat Sampler | Filename: 08311030
Cal. Curve: CAL 08182010 | Timestamp: 2010/08/31 10:35
Operator ID: TRINA | Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	33122.1094	59.6198	15743738	15.375	16.370	214

Sample ID: SB 1 | Mode: TOC
Method: Boat Sampler | Filename: 08311048
Cal. Curve: CAL 08182010 | Timestamp: 2010/08/31 10:50
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23.3208	1.0518	280692	15.732	16.723	64

Sample ID: SB 2 | Mode: TOC
Method: Boat Sampler | Filename: 08311058
Cal. Curve: CAL 08182010 | Timestamp: 2010/08/31 11:00
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22.0156	0.9841	262632	16.019	17.016	63

Sample ID: SB 3 | Mode: TOC
Method: Boat Sampler | Filename: 08311131
Cal. Curve: CAL 08182010 | Timestamp: 2010/08/31 11:33
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15.8252	0.7359	196386	15.940	16.929	64

Sample ID: RJ42 A3 | Mode: TOC
Method: Boat Sampler | Filename: 08311140
Cal. Curve: CAL 08182010 | Timestamp: 2010/08/31 11:44
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15790.4033	34.7389	9270984	16.046	17.045	132

Sample ID: RJ42 A3 dup 9-31-10(W)
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311147
Timestamp: 2010/08/31 11:50
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16242.2061	35.7329	9536250	16.040	17.039	130

Sample ID: RJ42 A3 TRP
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311153
Timestamp: 2010/08/31 11:57
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19278.1289	42.4119	11318725	15.916	16.916	142

Sample ID: RJ42 A3 TRIP
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311200
Timestamp: 2010/08/31 12:04
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	31436.9473	53.4428	14262617	15.980	16.972	152

Sample ID: RJ82 A2
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311211
Timestamp: 2010/08/31 12:14
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6624.2612	21.1976	5657146	15.978	16.972	116

Sample ID: RJ82 A2 dup
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311216
Timestamp: 2010/08/31 12:20
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7013.1025	21.0393	5614892	16.028	17.025	111

Sample ID: RJ82 A2 TRIP
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311224
Timestamp: 2010/08/31 12:27
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5255.0918	16.2908	4347624	16.084	17.084	102

Sample ID: RJ82 A2 MS
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311233
Timestamp: 2010/08/31 12:37
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	14074.3906	46.4455	12395198	16.166	17.161	142

Sample ID: CVS BOAT 1000 | Mode: TOC
Method: Boat Sampler | Filename: 08311241
Cal. Curve: CAL 08182010 | Timestamp: 2010/08/31 12:45
Operator ID: TRINA | Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	982.1039	39.2842	10316638	16.158	17.157	136

Sample ID: ICB BOAT | Mode: TOC
Method: Boat Sampler | Filename: 08311248
Cal. Curve: CAL 08182010 | Timestamp: 2010/08/31 12:51
Operator ID: TRINA | Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21.0528	0.8421	57370	16.037	17.037	56

Sample ID: RK08 A1 | Mode: TOC
Method: Boat Sampler | Filename: 08311257
Cal. Curve: CAL 08182010 | Timestamp: 2010/08/31 13:00
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21693.4277	32.5401	8684191	16.016	17.015	148

Sample ID: RK08 B1 | Mode: TOC
Method: Boat Sampler | Filename: 08311307
Cal. Curve: CAL 08182010 | Timestamp: 2010/08/31 13:14
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11868.1143	32.0439	8551758	16.144	17.142	173

Sample ID: RK08 B1 op 8-31-10 (P) | Mode: TOC
Method: Boat Sampler | Filename: 08311320
Cal. Curve: CAL 08182010 | Timestamp: 2010/08/31 13:24
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10433.2822	25.0399	6682549	16.487	17.487	140

Sample ID: RK08 B1 tp 8-31-10 (P) | Mode: TOC
Method: Boat Sampler | Filename: 08311327
Cal. Curve: CAL 08182010 | Timestamp: 2010/08/31 13:31
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9779.8984	22.4938	6003052	16.486	17.485	152

Sample ID: RK08 B1 MS | Mode: TOC
Method: Boat Sampler | Filename: 08311335
Cal. Curve: CAL 08182010 | Timestamp: 2010/08/31 13:42
Operator ID: TRINA | Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21862.1230	45.9105	12252411	16.626	17.624	143

Sample ID: RJ74 A3 — Mode: TOC
Method: Boat Sampler — Filename: 08311348
Cal. Curve: CAL 08182010 — Timestamp: 2010/08/31 13:51
Operator ID: TRINA — Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12443.1445	28.6192	7637794	16.420	17.416	126

Sample ID: RJ74 A3 — Mode: TOC
Method: Boat Sampler — Filename: 08311356
Cal. Curve: CAL 08182010 — Timestamp: 2010/08/31 13:59
Operator ID: TRINA — Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9635.0244	24.0876	6428398	16.293	17.289	119

Sample ID: RJ74 A3 — Mode: TOC
Method: Boat Sampler — Filename: 08311401
Cal. Curve: CAL 08182010 — Timestamp: 2010/08/31 14:05
Operator ID: TRINA — Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9523.9131	21.9050	5845924	16.235	17.235	115

Sample ID: RJ74 A3 TRIP — Mode: TOC
Method: Boat Sampler — Filename: 08311444
Cal. Curve: CAL 08182010 — Timestamp: 2010/08/31 14:52
Operator ID: TRINA — Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12080.2861	27.7847	7415065	15.830	16.827	125

Sample ID: RJ74 A3 ~~TRIP~~ — Mode: TOC
Method: Boat Sampler — Filename: 08311512
Cal. Curve: CAL 08182010 — Timestamp: 2010/08/31 15:15
Operator ID: TRINA — Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	30358.9043	51.6101	13773519	15.970	16.969	152

Sample ID: RJ74 A3 ~~TRIP~~ — Mode: TOC
Method: Boat Sampler — Filename: 08311522
Cal. Curve: CAL 08182010 — Timestamp: 2010/08/31 15:26
Operator ID: TRINA — Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	30129.2305	51.2197	13669319	15.937	16.927	150

Sample ID: CVS BOAT 1000 — Mode: TOC
Method: Boat Sampler — Filename: 08311534
Cal. Curve: CAL 08182010 — Timestamp: 2010/08/31 15:38
Operator ID: TRINA — Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	931.3548	37.2542	9774889	15.836	16.834	139

Sample ID: ICB BOAT — Mode: TOC

Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA
Filename: 08311540
Timestamp: 2010/08/31 15:43
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	251.7620	10.0705	2520202	15.945	16.945	103

Last Message: Out of Calibration

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA
Mode: TOC
Filename: 08311544
Timestamp: 2010/08/31 15:47
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	14.9533	0.5981	-7743	16.036	15.941	120

Last Message: Low Sample Detected

Sample ID: RJ74 B3
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA
Mode: TOC
Filename: 08311551
Timestamp: 2010/08/31 15:54
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9144.2109	13.7163	3660559	15.870	16.867	101

Sample ID: RJ74 C3
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA
Mode: TOC
Filename: 08311558
Timestamp: 2010/08/31 16:01
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9360.6689	14.0410	3747210	15.993	16.990	109

Sample ID: RJ74 D3
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA
Mode: TOC
Filename: 08311605
Timestamp: 2010/08/31 16:09
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15067.5273	36.1621	9650797	16.036	17.033	146

Sample ID: RK32 A3
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA
Mode: TOC
Filename: 08311629
Timestamp: 2010/08/31 16:33
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7995.1831	23.9855	6401173	16.216	17.211	131

Sample ID: RK83 D9
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA
Mode: TOC
Filename: 08311638
Timestamp: 2010/08/31 16:41
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	941.0388	3.7642	1004564	16.373	17.372	103

Sample ID: RK83 M9
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311644
Timestamp: 2010/08/31 16:47
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1414.2288	6.6469	1773893	16.174	17.171	117

Sample ID: RK89 A4
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311652
Timestamp: 2010/08/31 16:55
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3919.6599	8.2313	2196735	16.220	17.215	106

Sample ID: RK30 A7
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311700
Timestamp: 2010/08/31 17:02
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2046.0070	4.2966	1146664	16.013	17.007	82

Sample ID: RK30 C7
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311707
Timestamp: 2010/08/31 17:12
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1054.9513	3.2703	872779	15.909	16.903	76

Sample ID: RK30 D7
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311714
Timestamp: 2010/08/31 17:18
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16683.8574	33.3677	8905051	15.927	16.926	146

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311720
Timestamp: 2010/08/31 17:24
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	913.1290	36.5252	9580327	16.013	17.005	133

Sample ID: ICB BOAT
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311726
Timestamp: 2010/08/31 17:29
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.9430	0.7977	45522	15.907	15.855	120

Last Message: Low Sample Detected

Sample ID: RK30 E7
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311732
Timestamp: 2010/08/31 17:34
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1430.4641	3.5762	954392	15.842	16.841	84

Sample ID: RK30 F7
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311737
Timestamp: 2010/08/31 17:39
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1905.9652	4.0025	1068179	15.863	16.861	85

Sample ID: NBS 8704
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311742
Timestamp: 2010/08/31 17:47
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	29343.2793	64.5552	17060884	15.878	16.877	210

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311758
Timestamp: 2010/08/31 18:02
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1657.8411	66.3136	17530166	16.033	17.032	193

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311806
Timestamp: 2010/08/31 18:09
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	860.9959	34.4398	9023804	16.218	17.216	145

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: CAL 08182010
Operator ID: TRINA

Mode: TOC
Filename: 08311813
Timestamp: 2010/08/31 18:16
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	739.6280	29.5851	7728196	16.203	17.202	161

Last Message: Out of Calibration

Sample ID: CVS BOAT 1000
Method: Boat Sampler
Cal. Curve: CAL 08182010

Mode: TOC
Filename: 08311822
Timestamp: 2010/08/31 18:26

Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	894.1451	35.7658	9377673	16.369	17.369	137

Last Message: Out of Calibration

Sample ID: ICB BOAT Mode: TOC
Method: Boat Sampler Filename: 08311826
Cal. Curve: CAL 08182010 Timestamp: 2010/08/31 18:29
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	17.8692	0.7148	23385	16.618	16.459	120

Last Message: Low Sample Detected

Table of Contents: ARI Job RK57

Client: Floyd-Snider

Project: POS-LLA Lora Lakes RI

Signature

September-17-2010
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

September 17, 2010

Jessi Massingale
Floyd-Snider Inc.
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Lora Lake RI, POS-LLA
ARI Job No: RK57

Dear Ms. Massingale:

Please find enclosed the Chain-of-Custody (COC) record, sample receipt documentation, and the final data package for two samples from the project referenced above.

Sample receipt and detail of these analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Susan D. Dunnihoo
Director, Client Services
sue@arilabs.com
206-695-6207

Enclosures

cc: eFile RK57

SD/co

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: RK57

Chain of Custody Record & Laboratory Analysis Request

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	Turn-around Requested: Standard	Page: 1 of 1	
ARI Client Company: Floyd Snider	Phone: 206-292-2078	Date: 7/28/10	Ice Present? Yes
Client Contact: M. McCullough / J. Massingale		No. of Coolers:	Cooler Temps: 7.5
Client Project Name: Lora Lake RI			
Client Project #: FOS-LLA	Samplers: MM, AM, KA		

Sample ID	Date	Time	Matrix	No. Containers	PAHs (8270)	PCP (8041)	NWTPH-Dx	NWTPH-Gx + BETX (8021)	Arsenic + Lead (6010)	Dioxin (1613)	Select VOCs* (8260C)	TOC (Plumb-181)	Notes/Comments: *See project list for VOCs
PSB12-0-0.5-072810	7/28/10	15:25	S	9	✓	✓	✓	✓	✓	✓	✓	[illegible]	
PSB12-1.5-2.0-072810	↓	15:37	↓	9	✓	✓	✓	✓	✓	✓	✓	[illegible]	
PSB12-2-4-072810		15:43		9	✓	✓	✓	✓	✓	✓	✓	[illegible]	
PSB12-8-10-072810		16:15		9	✓	✓	✓	✓	✓	ARCHIVE	✓	✓	
PSB12-8-10-072810-D		16:20		6	✓	✓	✓	✓	✓	ARCHIVE	✓	✓	
PSB12-14-17-072810		16:00		22	✓	✓	✓	✓	✓	ARCHIVE	✓	✓	Run MS/MSD
PSB12-4-6-072810		15:56		9	✓	✓	✓	✓	✓	ARCHIVE	✓		
PSB12-TB		17:15	W	3				✓			✓		

MB

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: Megan McCullough	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: F/S	Company: ARI	Company:	Company:
	Date & Time: 7/28/10 17:55	Date & Time: 7/28/10 1755	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

RK57 : 00003

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Floyd Snider
Project Name: Lora Lake
COC No(s): NA
Delivered by: Fed-Ex UPS Courier Hand Delivered Other:
Assigned ARI Job No: RK57
Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 7.5 5.1 0.1 2.7 ___ ___

If cooler temperature is out of compliance fill out form 00070F — Temp Gun ID#: 90877952

Cooler Accepted by: JM Date: 7/28/10 Time: 1800

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ...	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	YES	NO
Were all bottles sealed in individual plastic bags?		YES	NO
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Was Sample Split by ARI : NA YES Date/Time: ___ Equipment: ___ Split by: ___

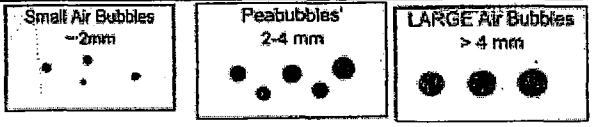
Samples Logged by: MM Date: 7/30/10 Time: 1034

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: RK57

Case Narrative

Client: Floyd Snider
Project: Lora Lake RI, POS-LLA
ARI Job No.: RK57

Sample receipt

Analytical Resources, Inc. (ARI) accepted seven soil samples and a trip blank on July 28, 2010 under ARI job RK57. The cooler temperature measured by IR thermometer following ARI SOP was 7.5°C. For details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

On August 25th it was determined that two samples had not been analyzed for PAH, due to a modification during the login process. Those tests are reported here under ARI Job RK57.

PAHs by SW8270D

The samples were initially screened to determine if a response was present that would require modifications in the extraction process. No modifications were required. The samples and associated laboratory QC were extracted and analyzed within the method recommended holding times for samples stored frozen. The LCS was extracted in duplicate.

Initial and continuing calibrations were within method requirements. Internal standards were within limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limit. The LCS/LCSD percent recoveries and RPD were within control limits.

Data Reporting Qualifiers

Effective 7/10/2009

Inorganic Data

U Indicates that the target analyte was not detected at the reported concentration

* Duplicate RPD is not within established control limits

B Reported value is less than the CRDL but ≥ the Reporting Limit

N Matrix Spike recovery not within established control limits

NA Not Applicable, analyte not spiked

H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible

L Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U Indicates that the target analyte was not detected at the reported concentration

* Flagged value is not within established control limits

B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

J Estimated concentration when the value is less than ARI's established reporting limits

D The spiked compound was not detected due to sample extract dilution

E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses

M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"

Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column

P The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

Geotechnical Data

A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.

F Samples were frozen prior to particle size determination

SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations

SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis

W Weight of sample in some pipette aliquots was below the level required for accurate weighting

SURR SOLUTIONS

LABEL	SOLN ID	TEST	CONC. UG/ML	SOLVENT	EXP.
A	1752-2	ABN	100/150	MEOH	01/22/11
B	1767-2	SIM PNA	15/75	MEOH	10/07/10
C	1705-4	SIM ABN	25/37.5	MEOH	03/08/11
D	1751-1	LOW PCB	0.2	HEXANE	12/29/10
E	1661-2	HERB	62.5	MEOH	10/02/10
F	1683-3	PCP	12.5	ACETONE	12/09/10
G	1758-4	1,4DIOXANE	100	MEOH	02/11/11
H	1723-2	OP-PEST	25	MEOH	04/02/11
I	1767-3	LOW S. PNA	1.5	MEOH	10/07/10
J	1681-2	TBT-PORE	0.125	MECL2	12/01/10
K	1689-1	MED PCB	20	ACETONE	12/29/10
L	1681-1	TBT	2.5	MECL2	12/01/10
M	1767-1	EPH	1500	MECL2	06/02/11
N	1689-3	PCB	2	ACETONE	12/29/10
O	1755-1	TPH	450	MECL2	06/02/11
P	1759-1	HCID	2250	MECL2	05/13/11
Q	1620-2	EDB	1	MEOH	06/22/10
R	1757-3	RESIN ACID	250	ACETONE	08/14/11
S*	1568-5	PBDE	.25	MEOH	01/13/11
T	1674-2	ALKYL PNA	10	MEOH	07/30/10
U	1633-1	CONGENER	2.5	ACETONE	08/11/10
V					
*reverified solution					

LCS SOLUTIONS

9/7/2010

LABL	SOLN ID	TEST	CONC. UG/ML	SOLVENT	EXP.
1	1754-4	PCB 1660	20	ACETONE	03/30/11
2#		BCOC PEST	10	ACETONE	NA
3	1705-3	PEST	02/04/20	ACETONE	03/08/11
4	1744-3	LOW PEST	0.2/0.4/2	ACETONE	03/08/11
5	1677-1	EPH	1500	MECL2	11/12/10
6	1702-2	PCP	12.5/125	ACETONE	02/18/11
7	1765-2	ABN	100	ACETONE	08/30/11
8	1681-4	TBT	2.5	MECL2	12/01/10
9	1682-2	PORE TBT	.125/.25	MECL2	12/01/10
10	1766-1	ABN ACID	100/200	MEOH	02/01/11
11	1730-2	TPHD	15000	ACETONE	04/26/11
12	1766-2	ABN BASE	200	MEOH	01/29/11
13	1716-2	LOW PCB	2	ACETONE	03/30/11
14	1753-3	LOW ABN ACID	10/20	MEOH	01/28/11
15	1726-3	SIM PNA	15/75	MEOH	10/07/10
16	1707-1	DIOXANE	100	MEOH	11/05/10
17	1644-1	1248 PCB	10	ACETONE	09/10/10
18	1726-4	LOW SIM PNA	1.5	ACETONE	10/07/10
19	1746-3	AK103	7500	ACETONE	12/01/10
20	1758-2	PNA	100	ACETONE	03/14/11
21	1725-1	SKY/BHT	100	MEOH	03/18/11
22	1728-1	HERB	12.5/12500	MEOH	10/20/10
23	1753-4	LW ABN BASE	20	MEOH	01/29/11
24	1758-2	LOW ABN	10	ACETONE	01/13/11
25#		DIPHENYL	100	MEOH	NA
26	1723-3	OP-PEST	25	MEOH	11/20/10
27	1668-3	STEROLS	200	MEOH	10/30/10
28#	1750-2	ADD. PEST	4	ACETONE	09/03/10
29#		DECANES	100	MEOH	NA
30	1620-1	EDB/DBCP	0.2	MEOH	06/22/10

LCS SOLUTIONS

9/7/2010

31	1707-3	TERPINEOL	100	MEOH	03/19/11
32	1758-1	GUAIACOL	50-200	ACETONE	01/08/11
33	1639-3	RETENE	100	MEOH	09/03/10
34	1633-1	CONGENERS	2.5	ACETONE	08/11/10
35	1674-3	ALKYL PNA A	10	MEOH	10/28/10
36	1601-3	ALKYL PNA B	10	MEOH	05/13/10
50	1757-4	FULL RESIN	250	ACETONE	08/14/11
51	1696-3	DDTS	2.5	ACETONE	06/03/10
52	1613-5	1232 PCB	20	ACETONE	06/16/10
53	1703-3	DALAPON	50	MEOH	09/11/10
53	1701-2	PBDE	0.5	ACETONE	02/10/11
54	1753-1	T-CHLORDANE	10	ACETONE	07/21/11
55	1753-2	TOXAPHENE	50	ACETONE	07/21/11
#=PROJECT SPECIFIC SOLUTION					
*=REVERIFIED SOLUTION					

Analytical Resources,Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Polycyclic Aromatic Hydrocarbons EPA Method SW-846-8270D [1,2]

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

Sample Matrix	Water		Soil	
Sample Volume / Final Volume	**500 mL to 0.5 mL**		**7.5 g / 0.5 mL**	
LCS Spike Recovery [6]	**Control Limits**	**ME Limits [3]**	**Control Limits**	**ME Limits [3]**
Napthalene	30 - **100**	21 - **100**	37 - **100**	31 - **100**
2-Methylnapthalene	33 - 108	21 - 121	43 - 101	33 - 111
1-Methylnapthalene	34 - **100**	26 - **100**	39 - **100**	32 - **100**
Acenaphthylene	45 - **100**	38 - **100**	44 - **100**	37 - **100**
Acenapthene	40 - **100**	32 - **100**	41 - **100**	35 - **100**
Dibenzofuran	45 - **100**	37 - **100**	44 - **100**	37 - **100**
Fluorene	45 - **100**	37 - 105	49 - **100**	43 - **100**
Phenanthrene	47 - 101	38 - 110	48 - **100**	42 - **100**
Anthracene	47 - **100**	38 - 108	50 - **100**	44 - **100**
Fluoranthene	48 - 110	38 - 120	54 - **100**	47 - 107
Pyrene	48 - 109	38 - 119	41 - 105	30 - 116
Benz(a)anthracene	44 - 105	34 - 115	49 - **100**	42 - 102
Chyrsene	50 - 103	41 - 112	50 - **100**	43 - 101
Benzofluoranthene(s) (Total)	30 - 160[7]	30 - 160[7]	30 - 160[7]	30 - 160[7]
Benzo(a)pyrene	44 - 107	34 - 118	50 - **100**	42 - 105
Indeno(1,2,3-cd)pyrene	30 - 106	17 - 119	33 - 101	22 - 112
Dibenzo(a,h)anthracene	42 - 103	32 - 113	37 - 104	26 - 115
Benzo(g,h,i)Perylene	42 - 102	32 - 112	33 - 107	21 - 119
MB / LCS Surrogate Recovery		-		
d14-p-Terphenyl	52 - 110	(5)	47 - 112	(5)
2-Fluorobiphenyl	36 - **100**	(5)	40 - **100**	(5)
Sample Surrogate Recovery				
d14-p-Terphenyl	23 - 120	(5)	35 - 112	(5)
2-Fluorobiphenyl	38 - **100**	(5)	34 - **100**	(5)

(1) Control limits calculated using all available spike recovery data from 7/1/07 through 2/27/09.
(2) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
(3) **ME** = A marginal exceedance defined in the NELAC Standard (4) as beyond the LCS-CL but still within the ME limits. ME limits are between 3 and 4 standard deviations around the mean. A maximum of one marginal exceedance is acceptable. Two or more marginal exceedances require corrective action.
(4) **2003 NELAC Standard (EPA/600/R-04/003), July 2003**, Chapter 5, pages 251-252.
(5) Marginal Exceedances are not allowed for surrogate standards.
(6) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.
(7) Default limits pending generation of historic limits for total benzofluoranthrenes (7/29/10)

Semivolatile PAH Analysis
Report and Summary QC Forms

ARI Job ID: RK57

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PNAs by 8270D PNA GC/MS
Page 1 of 1

Sample ID: PSB12-8-10-072810
SAMPLE

Lab Sample ID: RK57A
LIMS ID: 10-21438
Matrix: Soil
Data Release Authorized:
Reported: 09/16/10

QC Report No: RK57-Floyd-Snider
Project: Lora Lakes RI
POS-LLA
Date Sampled: 07/28/10
Date Received: 07/28/10

Date Extracted: 08/30/10
Date Analyzed: 09/10/10 07:42
Instrument/Analyst: NT6/JZ
GPC Cleanup: No
Alumina: No
Silica Gel: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 5.6%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	19	< 19 U
218-01-9	Chrysene	19	< 19 U
50-32-8	Benzo(a)pyrene	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	19	< 19 U
TOTBFA	Total Benzofluoranthenes	19	< 19 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	71.6%
2-Fluorobiphenyl	68.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PNAs by 8270D PNA GC/MS
Page 1 of 1

Sample ID: PSB12-4-6-072810
SAMPLE

Lab Sample ID: RK57B
LIMS ID: 10-21439
Matrix: Soil
Data Release Authorized:
Reported: 09/16/10

QC Report No: RK57-Floyd-Snider
Project: Lora Lakes RI
POS-LLA
Date Sampled: 07/28/10
Date Received: 07/28/10

Date Extracted: 08/30/10
Date Analyzed: 09/10/10 08:15
Instrument/Analyst: NT6/JZ
GPC Cleanup: No
Alumina: No
Silica Gel: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 8.4%

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	20	< 20 U
218-01-9	**Chrysene**	**20**	**9.9 J**
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	59.2%
2-Fluorobiphenyl	69.6%

ANALYTICAL RESOURCES INCORPORATED

SW8270 PNA SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: RK57-Floyd-Snider
Project: Lora Lakes RI
POS-LLA

Client ID	TER	FBP	TOT OUT
MB-083010	78.0%	67.2%	0
LCS-083010	84.8%	71.6%	0
LCSD-083010	80.8%	70.8%	0
PSB12-8-10-072810	71.6%	68.8%	0
PSB12-4-6-072810	59.2%	69.6%	0

	LCS/MB LIMITS	QC LIMITS
(TER) = d14-p-Terphenyl	(47-112)	(35-112)
(FBP) = 2-Fluorobiphenyl	(40-100)	(34-100)

Prep Method: SW3550C
Log Number Range: 10-21438 to 10-21439

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PNAs by SW8270D GC/MS
Page 1 of 1

Sample ID: LCS-083010
LCS/LCSD

Lab Sample ID: LCS-083010
LIMS ID: 10-21438
Matrix: Soil
Data Release Authorized:
Reported: 09/16/10

QC Report No: RK57-Floyd-Snider
Project: Lora Lakes RI
POS-LLA
Date Sampled: NA
Date Received: 07/28/10

Date Extracted LCS/LCSD: 08/30/10

Date Analyzed LCS: 09/10/10 06:37
LCSD: 09/10/10 07:10
Instrument/Analyst LCS: NT6/JZ
LCSD: NT6/JZ
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount LCS: 25.0 g
LCSD: 25.0 g
Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Alumina Cleanup: No

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzo(a)anthracene	445	500	89.0%	435	500	87.0%	2.3%
Chrysene	439	500	87.8%	421	500	84.2%	4.2%
Benzo(a)pyrene	366	500	73.2%	368	500	73.6%	0.5%
Indeno(1,2,3-cd)pyrene	430	500	86.0%	415	500	83.0%	3.6%
Dibenz(a,h)anthracene	438	500	87.6%	421	500	84.2%	4.0%
Total Benzofluoranthenes	878	1000	87.8%	856	1000	85.6%	2.5%

Semivolatile Surrogate Recovery

	LCS	LCSD
d14-p-Terphenyl	84.8%	80.8%
2-Fluorobiphenyl	71.6%	70.8%

Results reported in µg/kg
RPD calculated using sample concentrations per SW846.

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

RK57MBS1

Lab Name: ANALYTICAL RESOURCES, INC
Client: FLOYD-SNIDER

ARI Job No: RK57
Project: City of Olympia

Lab File ID: 09101010
Date Extracted: 08/30/10

Instrument ID: NT6
Date Analyzed: 09/10/10

Matrix: SOLID
Time Analyzed: 0605

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	RK57LCSS1	RK57LCSS1	09101011	09/10/10
02	RK57LCSDS1	RK57LCSDS1	09101012	09/10/10
03	PSB12-8-10-07281	RK57A	09101013	09/10/10
04	PSB12-4-6-072810	RK57B	09101014	09/10/10
05	SB15-9.1-081910	RJ73A	09101015	09/10/10
06	SB15-9.3-081910-	RJ73B	09101016	09/10/10
07	SB15-9.1-081910	RJ73A	09151011	09/15/10
08	SB15-9.3-081910-	RJ73B	09151012	09/15/10
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PNAs by 8270D PNA GC/MS

Sample ID: MB-083010
METHOD BLANK

Lab Sample ID: MB-083010
LIMS ID: 10-21438
Matrix: Soil
Data Release Authorized:
Reported: 09/16/10

QC Report No: RK57-Floyd-Snider
Project: Lora Lakes RI
POS-LLA
Date Sampled: NA
Date Received: NA

Date Extracted: 08/30/10
Date Analyzed: 09/10/10 06:05
Instrument/Analyst: NT6/JZ
GPC Cleanup: No
Alumina: No
Silica Gel: No

Sample Amount: 25.0 g
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	20	< 20 U
218-01-9	Chrysene	20	< 20 U
50-32-8	Benzo(a)pyrene	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	20	< 20 U
TOTBFA	Total Benzofluoranthenes	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d14-p-Terphenyl	78.0%
2-Fluorobiphenyl	67.2%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

Instrument ID: NT6 Project: City of Olympia

DFTPP Injection Date: 08/20/10 DFTPP Injection Time: 1040

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	32.7
68	Less than 2.0% of mass 69	0.2 (0.5)1
69	Mass 69 relative abundance	39.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	10.0 - 80.0% of mass 198	49.1
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.2
275	10.0 - 60.0% of mass 198	27.6
365	Greater than 1.0% of mass 198	3.14
441	0.0 - 24.0% of mass 442	12.0 (15.0)2
442	50.0 - 200.0% of mass 198	80.2
443	15.0 - 24.0% of mass 442	15.7 (19.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	IC250820	IC250820	08201001	08/20/10	1040
02	IC010820	IC010820	08201002	08/20/10	1113
03	IC050820	IC050820	08201003	08/20/10	1145
04	IC100820	IC100820	08201004	08/20/10	1218
05	IC400820	IC400820	08201005	08/20/10	1251
06	IC600820	IC600820	08201006	08/20/10	1324
07	IC800820	IC800820	08201007	08/20/10	1356
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FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

Instrument ID: NT6 Project: City of Olympia

DFTPP Injection Date: 09/10/10 DFTPP Injection Time: 0111

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	35.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	38.3
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	10.0 - 80.0% of mass 198	61.3
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	27.1
365	Greater than 1.0% of mass 198	2.98
441	0.0 - 24.0% of mass 442	11.2 (13.7)2
442	50.0 - 200.0% of mass 198	81.5
443	15.0 - 24.0% of mass 442	15.3 (18.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CC0910	CC0910	09101001	09/10/10	0111
02	RK57MBS1	RK57MBS1	09101010	09/10/10	0605
03	RK57LCSS1	RK57LCSS1	09101011	09/10/10	0637
04	RK57LCSDS1	RK57LCSDS1	09101012	09/10/10	0710
05	PSB12-8-10-07281	RK57A	09101013	09/10/10	0742
06	PSB12-4-6-072810	RK57B	09101014	09/10/10	0815
07	SB15-9.1-081910	RJ73A	09101015	09/10/10	0847
08	SB15-9.3-081910-	RJ73B	09101016	09/10/10	0920
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FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

Instrument ID: NT6 Project: City of Olympia

DFTPP Injection Date: 09/15/10 DFTPP Injection Time: 1146

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	42.4
68	Less than 2.0% of mass 69	0.4 (1.0)1
69	Mass 69 relative abundance	40.0
70	Less than 2.0% of mass 69	0.5 (1.4)1
127	10.0 - 80.0% of mass 198	75.8
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.3
275	10.0 - 60.0% of mass 198	26.4
365	Greater than 1.0% of mass 198	3.33
441	0.0 - 24.0% of mass 442	11.9 (15.0)2
442	50.0 - 200.0% of mass 198	79.4
443	15.0 - 24.0% of mass 442	16.2 (20.4)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CC0915	CC0915	09151001	09/15/10	1146
02	SB15-9.1-081910	RJ73A	09151011	09/15/10	1827
03	SB15-9.3-081910-	RJ73B	09151012	09/15/10	1900
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FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

ARI Job No: RK57 Project: City of Olympia

Instrument ID: NT6 Calibration Date: 08/20/10

LAB FILE ID: RRF1 =08201002 RRF5 =08201003 RRF10 =08201004
RRF25 =08201001 RRF40 =08201005 RRF60 =08201006
RRF80 =08201007

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	$\overline{RRF}$	%RSD /R^2
Naphthalene	1.137	1.043	0.954	0.974	0.950	0.910	0.850	0.974	9.5
2-Methylnaphthalene	0.633	0.606	0.561	0.547	0.559	0.528	0.489	0.560	8.5
Acenaphthylene	2.054	1.919	1.743	1.781	1.733	1.692	1.603	1.789	8.4
Acenaphthene	1.207	1.136	1.020	1.046	1.069	1.059	1.001	1.077	6.7
Dibenzofuran	1.678	1.621	1.493	1.453	1.456	1.363	1.325	1.484	8.6
Fluorene	1.448	1.316	1.186	1.205	1.161	1.100	1.107	1.218	10.3
Phenanthrene	1.167	1.061	0.965	0.999	0.978	0.952	0.910	1.004	8.5
Anthracene	1.294	1.144	1.065	1.092	1.074	1.051	0.997	1.102	8.6
Fluoranthene	1.367	1.255	1.147	1.255	1.220	1.210	1.100	1.222	7.0
Pyrene	1.215	1.139	1.038	1.035	0.980	0.932	0.890	1.033	11.0
Benzo(a)anthracene	1.192	1.059	0.991	1.017	1.007	0.993	0.938	1.028	7.9
Chrysene	1.117	1.003	0.926	0.940	0.909	0.872	0.828	0.942	10.0
Benzo(a)pyrene	1.217	1.178	1.080	1.125	1.087	1.034	0.990	1.102	7.2
Indeno(1,2,3-cd)pyrene	1.502	1.500	1.402	1.378	1.362	1.349	1.312	1.401	5.3
Dibenzo(a,h)anthracene	1.142	1.155	1.059	1.051	1.022	1.000	0.964	1.056	6.7
Benzo(g,h,i)perylene	1.445	1.295	1.213	1.178	1.170	1.149	1.121	1.224	9.2
1-methylnaphthalene	0.646	0.601	0.543	0.556	0.554	0.546	0.518	0.566	7.6
Total Benzofluoranthenes	1.288	1.163	1.074	1.100	1.036	0.978	0.931	1.081	11.0
Terphenyl-d14	0.719	0.701	0.656	0.662	0.683	0.635		0.676	4.6
2-Fluorobiphenyl	1.395	1.346	1.239	1.216	1.249	1.176		1.270	6.6

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-1

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

ARI Job No: RK57 Project: City of Olympia

Instrument ID: NT6 Cont. Calib. Date: 09/10/10

Init. Calib. Date: 08/20/10 Cont. Calib. Time: 0111

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Naphthalene	0.974	0.978	0.700	AVRG	0.4
2-Methylnaphthalene	0.560	0.565	0.400	AVRG	0.9
Acenaphthylene	1.789	1.728	0.900	AVRG	-3.4
Acenaphthene	1.077	0.989	0.900	AVRG	-8.2
Dibenzofuran	1.484	1.354	0.800	AVRG	-8.8
Fluorene	1.218	1.138	0.900	AVRG	-6.6
Phenanthrene	1.004	0.946	0.700	AVRG	-5.8
Anthracene	1.102	1.053	0.700	AVRG	-4.4
Fluoranthene	1.222	1.181	0.600	AVRG	-3.4
Pyrene	1.033	0.966	0.600	AVRG	-6.5
Benzo(a)anthracene	1.028	1.020	0.800	AVRG	-0.8
Chrysene	0.942	0.943	0.700	AVRG	0.1
Benzo(a)pyrene	1.102	1.106	0.700	AVRG	0.4
Indeno(1,2,3-cd)pyrene	1.401	1.310	0.500	AVRG	-6.5
Dibenzo(a,h)anthracene	1.056	1.011	0.400	AVRG	-4.3
Benzo(g,h,i)perylene	1.224	1.063	0.500	AVRG	-13.2
1-methylnaphthalene	0.566	0.553	0.010	AVRG	-2.3
Total Benzofluoranthenes	1.081	1.040	0.010	AVRG	-3.8
Terphenyl-d14	0.676	0.561	0.010	AVRG	-17.0
2-Fluorobiphenyl	1.270	1.118	0.010	AVRG	-12.0

<- Exceeds QC limit of 20% D
* RF less than minimum RF

FORM VII SV-1

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

ARI Job No: RK57 Project: City of Olympia

Instrument ID: NT6 Cont. Calib. Date: 09/15/10

Init. Calib. Date: 08/20/10 Cont. Calib. Time: 1146

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Naphthalene	0.974	1.002	0.700	AVRG	2.9
2-Methylnaphthalene	0.560	0.560	0.400	AVRG	0.0
Acenaphthylene	1.789	1.712	0.900	AVRG	-4.3
Acenaphthene	1.077	0.997	0.900	AVRG	-7.4
Dibenzofuran	1.484	1.341	0.800	AVRG	-9.6
Fluorene	1.218	1.141	0.900	AVRG	-6.3
Phenanthrene	1.004	0.942	0.700	AVRG	-6.2
Anthracene	1.102	1.037	0.700	AVRG	-5.9
Fluoranthene	1.222	1.236	0.600	AVRG	1.1
Pyrene	1.033	1.000	0.600	AVRG	-3.2
Benzo(a)anthracene	1.028	1.005	0.800	AVRG	-2.2
Chrysene	0.942	0.920	0.700	AVRG	-2.3
Benzo(a)pyrene	1.102	1.083	0.700	AVRG	-1.7
Indeno(1,2,3-cd)pyrene	1.401	1.381	0.500	AVRG	-1.4
Dibenzo(a,h)anthracene	1.056	1.053	0.400	AVRG	-0.3
Benzo(g,h,i)perylene	1.224	1.189	0.500	AVRG	-2.8
1-methylnaphthalene	0.566	0.534	0.010	AVRG	-5.6
Total Benzofluoranthenes	1.081	1.041	0.010	AVRG	-3.7
Terphenyl-d14	0.676	0.602	0.010	AVRG	-10.9
2-Fluorobiphenyl	1.270	1.096	0.010	AVRG	-13.7

<- Exceeds QC limit of 20% D
* RF less than minimum RF

FORM VII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

ARI Job No: RK57 Project: City of Olympia

Ical Midpoint ID: 08201001 Ical Date: 08/20/10

Instrument ID: NT6 Cont. Cal Date: 09/10/10

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	154425	6.77	490229	8.84	286412	11.66
	UPPER LIMIT	308850		980458		572824	
	LOWER LIMIT	77212		245114		143206	
	CCAL	163642	6.13	509477	8.23	305384	11.04
	UPPER LIMIT		6.63		8.73		11.54
	LOWER LIMIT		5.63		7.73		10.54
01	RK57MBS1			601773	8.22	348129	11.04
02	RK57LCSS1			584685	8.23	331455	11.04
03	RK57LCSDS1			589873	8.22	341250	11.04
04	PSB12-8-10-0			600029	8.23	349096	11.04
05	PSB12-4-6-07			544749	8.23	317609	11.04
06	SB15-9.1-081			521191	8.23	249287	11.08
07	SB15-9.3-081			488470	8.23	238183	11.09
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

ARI Job No: RK57 Project: City of Olympia

Ical Midpoint ID: 08201001 Ical Date: 08/20/10

Instrument ID: NT6 Cont. Cal Date: 09/10/10

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	457816	13.99	560635	18.24	521119	20.36
	UPPER LIMIT	915632		1121270		1042238	
	LOWER LIMIT	228908		280318		260560	
	CCAL	473717	13.34	592204	17.53	617046	19.61
	UPPER LIMIT		13.84		18.03		20.11
	LOWER LIMIT		12.84		17.03		19.11
01	RK57MBS1	552484	13.33	650769	17.52	643499	19.61
02	RK57LCSS1	531991	13.33	620234	17.53	624573	19.61
03	RK57LCSDS1	557047	13.33	622729	17.53	612311	19.61
04	PSB12-8-10-0	556110	13.33	660869	17.52	631366	19.61
05	PSB12-4-6-07	508959	13.33	671539	17.53	665824	19.63
06	SB15-9.1-081	423610	13.38	657856	17.57	649695	19.66
07	SB15-9.3-081	277173	13.43	579268	17.66	644228	19.69
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IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

ARI Job No: RK57 Project: City of Olympia

Ical Midpoint ID: 08201001 Ical Date: 08/20/10

Instrument ID: NT6 Cont. Cal Date: 09/10/10

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	675549	19.51				
	UPPER LIMIT	1351098					
	LOWER LIMIT	337774					
	CCAL	617319	18.87				
	UPPER LIMIT		19.37				
	LOWER LIMIT		18.37				
01	RK57MBS1						
02	RK57LCSS1						
03	RK57LCSDS1						
04	PSB12-8-10-0						
05	PSB12-4-6-07						
06	SB15-9.1-081						
07	SB15-9.3-081						
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IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-3

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

ARI Job No: RK57 Project: City of Olympia

Ical Midpoint ID: 08201001 Ical Date: 08/20/10

Instrument ID: NT6 Cont. Cal Date: 09/15/10

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	154425	6.77	490229	8.84	286412	11.66
	UPPER LIMIT	308850		980458		572824	
	LOWER LIMIT	77212		245114		143206	
	CCAL	164483	5.83	512700	7.96	298021	10.76
	UPPER LIMIT		6.33		8.46		11.26
	LOWER LIMIT		5.33		7.46		10.26
01	SB15-9.1-081			504347	7.96	284368	10.76
02	SB15-9.3-081			525716	7.96	296927	10.76
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

ARI Job No: RK57 Project: City of Olympia

Ical Midpoint ID: 08201001 Ical Date: 08/20/10

Instrument ID: NT6 Cont. Cal Date: 09/15/10

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	ICAL MIDPT	457816		13.99		560635		18.24		521119		20.36	
	UPPER LIMIT	915632				1121270				1042238			
	LOWER LIMIT	228908				280318				260560			
	CCAL	479035		13.04		599832		17.22		600385		19.30	
	UPPER LIMIT			13.54				17.72				19.80	
	LOWER LIMIT			12.54				16.72				18.80	
01	SB15-9.1-081	445519		13.05		605254		17.22		598219		19.30	
02	SB15-9.3-081	467749		13.05		632516		17.22		630554		19.30	
03													
04													
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-2

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

ARI Job No: RK57 Project: City of Olympia

Ical Midpoint ID: 08201001 Ical Date: 08/20/10

Instrument ID: NT6 Cont. Cal Date: 09/15/10

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	675549	19.51				
	UPPER LIMIT	1351098					
	LOWER LIMIT	337774					
	CCAL	696799	18.58				
	UPPER LIMIT		19.08				
	LOWER LIMIT		18.08				
01	SB15-9.1-081						
02	SB15-9.3-081						
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
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14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-3

Total Solids

ARI Job ID: RK57

Extractions Total Solids-extts
Data By: Woo suk Chang
Created: 8/28/10

Worklist: 8814
Analyst: ALR
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	RK57A 10-21438 PSB12-8-10-072810	1.17	11.76	11.17	94.4	NR
2.	RK57B 10-21439 PSB12-4-6-072810	1.17	13.39	12.36	91.6	NR

Extractions Total Solids-extts
Data By: Woo suk Chang
Created: 8/28/10

Worklist: 8814
Analyst: WC
Comments:

Oven ID: 015

Balance ID: 21754520

Samples In: Date: 8/28/10 Time: 14:00 Temp: 102°C Analyst: WC

Samples Out: Date: 08/30/10 Time: 08:58 Temp: 97°C Analyst: AB

	ARI ID / CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	RK57A 10-21438 PSB12-8-10-072810	1.17g	11.76g	11.17		NR
2.	RK57B 10-21439 PSB12-4-6-072810	1.17g	13.39g	12.36		NR

Semivolatile PAH Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: RK57

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8270) PNA-Soil / Sediment
Sonication (3550C) (SOP # 3304S)

PSDD.A (20 ppb)
~~In-House (67ppb)~~

Preparation Test PNA # 1

ARI Job No(s) RK57, RJ73

Batch set up by:__________

Bottle #	Extraction Requirements	Verify Client ID	Volume Extracted (dry wt)	Sonic Horn ID + Check	KD Hex X X 2	TurboVap 1 2 3	(Opt) SilicaGel Clean (1:1) Y / N	TurboVap 1 2 3	Final Effective Volume	Volume to Lab	Comments
	RK57 MBS	Date 08/30/10	~~7.50g~~ 25.00	1	↓			↓	0.5mL	0.5mL	10g Actual
—	SBS	↓	↓	2					↓	↓	↓
—	SBS Dup.	↓	↓	3							
1	A	checked	27.29	4							
1	B		28.04	5							
	RJ73 A		36.04	6							
	B		33.19	7	↓			↓	↓	↓	
—	~~BMS~~		~~33.~~								See Analyst Notes
—	~~BMSD~~		~~33.~~								↓
Analyst/Date	N 8/30/10 Sonicated AR 08/30/10 →				KP/HC 9/2/10	TS 9-8-10	→				

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
BAN Surrogate	A2	125µL	1/22/11	AR	AC
8270 PNA Spike	20	125µL	12/14/10	AR	AC
Extraction Time: 12:25			Balance ID: 24150347		

SPECIAL INSTRUCTIONS: 1. Weigh into ~~100mL~~ 400mL beakers. 2. Extract 2X with 1:1 DCM/Acetone. Plus 1 X DCM only. 3. Collect into ~~100mL beaker~~ with 5-10g sodium sulfate in the bottom + small funnel with pre-rinsed neutral glasswool. NO SODIUM SULFATE. 4. KD (~~Small~~ drying column) to 8mL at 85-90°. 5. Exchange (2 X with 10mL) to Hexane at 100°. 6. TurboVap. 7. Silica Clean-up-Root Beer Color? (All or none) Y / N. 8. TurboVap (if Silica Clean). 9. Vial in DCM.
A. Need Total Solids Y / (N) ~~B. Archive~~/Freeze (Y) / N

3007F

Revision 014
08/11/2010

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: RK57 Client ID: Floyd-Snider

Parameter: 8270 PNA PSDDA Client Project: Lois Lakes RI

Note problems, concerns, corrective actions	Analyst/Date
Screens: (Soil)/Sediment/Solid/Other: soil	WC 8/28/10
☒ No Anomalies (standard soil/sediment) A, B	↓
☐ 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=	
Filtred all samples at vialing	9-8-10 TS

3056F

Revision 007
02/25/10

RK57 : 00037

Semivolatile PAH Raw Data
Initial Calibration

ARI Job ID: RK57

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: CWTWL Client ID: _____

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

Parameter(s): 8270

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

Curve Date: 8/20/10 Analysis Start Date: 8/20/10

DFTPP Tune Meets Criteria?	YES / NO	Internal Standard Meets Criteria?	YES / NO
DDT Breakdown <20%?	YES / NO / NA	Method Blank In Control?	YES / NO / NA
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):

1) Linear curve fit for compounds Benzidine & Hexachlorocyclopentadiene

2) Quadratic curve fit for compound 2,4-Dinitrophenol.

3) ICV: compounds 2,4-Dinitrophenol & Benzidine out of QC limits at high bias
compound 1,2,4,5-Tetrachlorobenzene out of QC limit @ low bias

Additional Details on Reverse: Yes / No

Analyst: _____ **Date:** 08/26/10.

Reviewer: _____ **Date:** 8/26/10

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 20-AUG-2010 10:40
End Cal Date : 20-AUG-2010 13:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt6.i/20100820.b/08201002.D
Level 2: /chem1/nt6.i/20100820.b/08201003.D
Level 3: /chem1/nt6.i/20100820.b/08201004.D
Level 4: /chem1/nt6.i/20100820.b/08201001.D
Level 5: /chem1/nt6.i/20100820.b/08201005.D
Level 6: /chem1/nt6.i/20100820.b/08201006.D
Level 7: /chem1/nt6.i/20100820.b/08201007.D

08/20/10

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7							
186 Carbaryl	0.48178	0.52547	0.48114	0.55088	0.57649	0.58243		
	0.58618						0.54062	8.424
179 n-Decane	1.06116	1.05460	0.99267	0.99193	1.01237	0.98151		
	0.92062						1.00212	4.752
180 n-Octadecane	0.37237	0.34180	0.32674	0.31867	0.32631	0.30165		
	0.28715						0.32496	8.473
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

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Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
177 p-Benzoquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
168 Pentachlorobenzene	0.57794	0.52266	0.47654	0.49608	0.50325	0.47920	0.47728	0.50471	7.216
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
136 2,3,4,5-tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
133 Butylatedhydroxytoluene	1.04132	0.95868	0.83415	0.85945	0.84712	0.75466	0.75142	0.86383	12.163
132 3,6-Dimethylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

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Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
144 alpha-Terpineol	0.23346	0.23784	0.20712	0.22729	0.23655	0.22661	0.22181	0.22724	4.659
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
123 Acetophenone	1.54959	1.49505	1.37395	1.40536	1.40746	1.38615	1.38293	1.42864	4.688
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
143 1,4-Dioxane	0.57619	0.46348	0.45853	0.46517	0.46297	0.46976	0.44794	0.47772	9.201
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
120 2,3,4,6-Tetrachlorophenol	0.36181	0.34326	0.35517	0.36434	0.39060	0.36391	0.37799	0.36530	4.188

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	___ RRF	% RSD
178 2-Benzyl-4-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
118 Triphenyl Phosphate	0.20641	0.19479	0.17135	0.19378	0.20428	0.19909	0.19778	0.19535	5.913
117 Butyl Diphenyl Phosphate	0.18559	0.16650	0.14646	0.15846	0.15535	0.14504	0.14386	0.15732	9.495
116 Dibutyl Phenyl Phosphate	0.63013	0.61733	0.55258	0.63101	0.63863	0.62678	0.59771	0.61345	4.875
115 Tributyl Phosphate	0.95743	0.89121	0.76766	0.83409	0.82698	0.78341	0.80257	0.83762	7.921
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
113 Diphenyl Oxide	0.90167	0.83185	0.78701	0.77720	0.79527	0.78730	0.75307	0.80477	6.059
112 Biphenyl	1.53965	1.40491	1.29544	1.24179	1.25763	1.20948	1.12809	1.29671	10.504

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP RTE
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Cal Date : 20-Aug-2010 15:29 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD
111 Azobenzene (1,2-DP-Hydrazine)	1.44684	1.31793	1.19125	1.21153	1.16290	1.09355	1.08587	1.21570	10.569
110 Tetrachloroguaiacol	0.13830	0.13840	0.13269	0.14767	0.15273	0.15387	0.14973	0.14477	5.692
109 3,4,5-Trichloroguaiacol	0.13268	0.13826	0.13559	0.14215	0.14723	0.14663	0.14357	0.14087	3.935
181 3,4,6-Trichloroguaiacol	0.46081	0.50398	0.48215	0.48680	0.51673	0.49548	0.51476	0.49439	3.996
108 4,5,6-Trichloroguaiacol	0.25481	0.23560	0.22404	0.23467	0.23999	0.23532	0.24191	0.23805	3.913
184 3,4-Dichloroguaiacol	0.41633	0.43538	0.42184	0.43380	0.45312	0.43236	0.44677	0.43423	2.963
107 4,5-Dichloroguaiacol	0.29617	0.28684	0.26941	0.27657	0.28015	0.26596	0.26738	0.27749	4.015
182 4,6-Dichloroguaiacol	0.53381	0.53573	0.49842	0.51295	0.53127	0.49808	0.50969	0.51713	3.167
185 4-Chloroguaiacol	0.41705	0.45973	0.45845	0.47997	0.51840	0.50006	0.51580	0.47850	7.622

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP RTE
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Cal Date : 20-Aug-2010 15:29 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	___ RRF	% RSD
106 Guaiacol	1.01943	1.03797	0.90114	0.99583	1.00779	0.95904	0.98347	0.98638	4.595
105 1-methylnaphthalene	0.64611	0.60138	0.54261	0.55636	0.55388	0.54557	0.51832	0.56632	7.611
151 1,2,4,5-Tetrachlorobenzene	1.55743	1.38446	1.26372	1.25483	1.22720	1.19458	1.13481	1.28815	10.955
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Phenol	1.76338	1.57761	1.54106	1.42963	1.42876	1.29620	1.37069	1.48676	10.425
4 Bis(2-Chloroethyl)ether	1.19101	1.18708	1.07995	1.07015	1.01256	0.96212	1.00629	1.07274	8.285
6 2-Chlorophenol	1.49304	1.30271	1.27064	1.20228	1.24506	1.15338	1.15066	1.25968	9.344
7 1,3-Dichlorobenzene	1.66079	1.55196	1.41511	1.45050	1.43275	1.40465	1.33221	1.46399	7.425
9 1,4-Dichlorobenzene	1.57398	1.53153	1.41591	1.45778	1.44416	1.42904	1.36046	1.45898	4.940
11 Benzyl alcohol	0.73952	0.77484	0.73748	0.73557	0.76174	0.74370	0.73000	0.74612	2.164
12 1,2-Dichlorobenzene	1.54134	1.43617	1.34899	1.36794	1.34582	1.30613	1.32662	1.38186	5.890
13 2-Methylphenol	1.24900	1.11122	1.09969	1.04869	1.11688	1.03776	1.02068	1.09770	6.995

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 20-AUG-2010 10:40
End Cal Date : 20-AUG-2010 13:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD
14 2,2'-oxybis(1-Chloropropane)	1.43720	1.37824	1.27331	1.32647	1.32819	1.30144	1.27919	1.33201	4.379
15 4-Methylphenol	1.28343	1.15116	1.12799	1.08209	1.14492	1.07123	1.06259	1.13192	6.698
16 N-Nitroso-di-n-propylamine	0.85168	0.78542	0.73306	0.74062	0.74051	0.72792	0.73738	0.75951	5.906
17 Hexachloroethane	0.54714	0.54957	0.51388	0.53328	0.53576	0.53067	0.51146	0.53168	2.774
19 Nitrobenzene	0.40892	0.38664	0.35129	0.36405	0.36133	0.35744	0.35517	0.36926	5.666
20 Isophorone	0.63334	0.62054	0.56779	0.59376	0.59949	0.59404	0.58091	0.59855	3.733
21 2-Nitrophenol	0.23555	0.22019	0.22021	0.21735	0.23731	0.22547	0.21756	0.22481	3.734
22 2,4-Dimethylphenol	0.40358	0.35932	0.35232	0.34244	0.36499	0.34542	0.33242	0.35721	6.476
23 Bis(2-Chloroethoxy)methane	0.46771	0.43004	0.39504	0.40425	0.40636	0.40423	0.39003	0.41395	6.486

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD	
24 Benzoic acid	0.13130	0.18663	0.20451	0.22197	0.24775	0.24019	0.24843	0.21154	19.972	
25 2,4-Dichlorophenol	0.36510	0.33693	0.33178	0.32209	0.34505	0.33032	0.31563	0.33527	4.847	
26 1,2,4-Trichlorobenzene	0.42054	0.38163	0.34132	0.35164	0.35000	0.35100	0.33409	0.36146	8.292	
28 Naphthalene	1.13706	1.04261	0.95432	0.97374	0.95048	0.91032	0.85057	0.97416	9.513	
29 4-Chloroaniline	0.45205	0.44853	0.42307	0.40711	0.41339	0.38964	0.36934	0.41473	7.203	
30 Hexachlorobutadiene	0.21814	0.21350	0.19744	0.20690	0.21038	0.21219	0.20137	0.20856	3.451	
31 4-Chloro-3-methylphenol	0.31065	0.30042	0.29265	0.28993	0.31083	0.27448	0.27202	0.29300	5.355	
32 2-Methylnaphthalene	0.63296	0.60585	0.56140	0.54726	0.55929	0.52763	0.48938	0.56054	8.501	
33 Hexachlorocyclopentadiene	+++++	0.21171	0.25762	0.32369	0.34409	0.36270	0.36739	0.31120	20.229	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD
34 2,4,6-Trichlorophenol	0.42967	0.38520	0.38367	0.38708	0.42946	0.43948	0.42598	0.41151	6.041
35 2,4,5-Trichlorophenol	0.44049	0.38700	0.40458	0.39474	0.42555	0.38561	0.39423	0.40460	5.147
37 2-Chloronaphthalene	1.35470	1.20085	1.10537	1.11869	1.10188	1.07665	1.05194	1.14430	9.064
38 2-Nitroaniline	0.29607	0.30516	0.28380	0.28219	0.28262	0.26699	0.27254	0.28419	4.586
39 Dimethylphthalate	1.42920	1.31916	1.19648	1.19127	1.14619	1.07541	1.09088	1.20694	10.524
40 Acenaphthylene	2.05371	1.91885	1.74264	1.78065	1.73292	1.69243	1.60334	1.78922	8.417
41 2,6-Dinitrotoluene	0.31736	0.31215	0.29286	0.30776	0.30713	0.29567	0.30449	0.30534	2.836
43 3-Nitroaniline	0.30284	0.31077	0.29028	0.27542	0.25664	0.22199	0.20132	0.26561	15.558
44 Acenaphthene	1.20729	1.13657	1.01982	1.04626	1.06878	1.05861	1.00091	1.07689	6.668

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 20-AUG-2010 10:40
End Cal Date : 20-AUG-2010 13:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD	
45 2,4-Dinitrophenol	+++++	0.08356	0.11813	0.15923	0.18395	0.18202	0.19240	0.15322	28.343	<-
46 Dibenzofuran	1.67823	1.62093	1.49291	1.45263	1.45595	1.36326	1.32525	1.48417	8.616	
47 4-Nitrophenol	0.07669	0.10858	0.11654	0.11817	0.12632	0.12273	0.13229	0.11447	15.974	
48 2,4-Dinitrotoluene	0.37873	0.39502	0.36452	0.38696	0.37886	0.37388	0.38852	0.38093	2.670	
49 Fluorene	1.44837	1.31634	1.18566	1.20471	1.16082	1.09996	1.10698	1.21755	10.252	
50 Diethylphthalate	1.35483	1.24824	1.11388	1.10616	1.06751	1.00621	1.00850	1.12933	11.394	
51 4-Chlorophenyl-phenylether	0.71035	0.64295	0.58657	0.59723	0.59083	0.56959	0.57352	0.61015	8.249	
52 4-Nitroaniline	0.30177	0.31306	0.27203	0.29700	0.28312	0.27889	0.28373	0.28994	4.983	
53 4,6-Dinitro-2-methylphenol	+++++	0.15035	0.15638	0.16367	0.17782	0.17437	0.17369	0.16605	6.663	

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD
54 N-Nitrosodiphenylamine	0.66562	0.59379	0.54386	0.55583	0.55230	0.53741	0.52683	0.56795	8.445
56 4-Bromophenyl-phenylether	0.29232	0.26330	0.24891	0.26432	0.26555	0.26332	0.26241	0.26573	4.894
57 Hexachlorobenzene	0.33274	0.30210	0.28095	0.29439	0.29513	0.29925	0.29356	0.29973	5.339
58 Pentachlorophenol	+++++	0.11278	0.13106	0.15471	0.18180	0.18391	0.18382	0.15801	19.373
60 Phenanthrene	1.16737	1.06062	0.96517	0.99914	0.97751	0.95155	0.90970	1.00444	8.503
61 Anthracene	1.29368	1.14407	1.06482	1.09165	1.07384	1.05092	0.99684	1.10226	8.643
62 Carbazole	1.95558	1.63064	1.50544	1.53053	1.47760	1.42432	1.34785	1.55314	12.748
63 Di-n-butylphthalate	1.41551	1.32422	1.21971	1.29702	1.26536	1.26023	1.15334	1.27648	6.460
64 Fluoranthene	1.36663	1.25490	1.14742	1.25519	1.22004	1.20995	1.10034	1.22207	6.977

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD
65 Pyrene	1.21544	1.13949	1.03754	1.03515	0.98038	0.93224	0.88980	1.03286	11.045
67 Butylbenzylphthalate	0.48950	0.49373	0.46699	0.49964	0.49213	0.47770	0.45561	0.48219	3.331
68 Benzo(a)anthracene	1.19237	1.05924	0.99134	1.01735	1.00749	0.99305	0.93840	1.02846	7.851
70 3,3'-Dichlorobenzidine	0.42607	0.37455	0.34922	0.34178	0.34655	0.32787	0.29835	0.35206	11.360
71 Chrysene	1.11710	1.00293	0.92567	0.93984	0.90862	0.87158	0.82781	0.94194	10.049
72 bis(2-Ethylhexyl)phthalate	0.57763	0.57212	0.53270	0.56013	0.55236	0.53380	0.51764	0.54948	4.048
73 Di-n-octylphthalate	1.12724	0.98834	0.90145	0.91797	0.89534	0.86241	0.81958	0.93033	10.858
74 Benzo(b)fluoranthene	1.10913	1.18096	1.16071	1.11566	1.12693	1.08318	0.94344	1.10286	7.026
75 Benzo(k)fluoranthene	1.37480	1.27292	1.12419	1.09008	0.94052	0.97759	1.02613	1.11518	14.196

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD	
76 Benzo(a)pyrene	1.21721	1.17816	1.07993	1.12481	1.08739	1.03387	0.98985	1.10160	7.178	
78 Indeno(1,2,3-cd)pyrene	1.50200	1.49954	1.40154	1.37837	1.36246	1.34884	1.31241	1.40074	5.252	
79 Dibenzo(a,h)anthracene	1.14214	1.15464	1.05897	1.05120	1.02231	1.00015	0.96360	1.05614	6.692	
80 Benzo(g,h,i)perylene	1.44511	1.29466	1.21316	1.17767	1.16986	1.14911	1.12083	1.22434	9.152	
90 N-Nitrosodimethylamine	0.72769	0.72977	0.71031	0.72663	0.73433	0.74826	0.70675	0.72625	1.946	
91 Aniline	1.83548	1.84301	1.77751	1.73950	1.76924	1.67354	1.63003	1.75262	4.504	
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
93 Benzidine	0.49537	0.39108	0.32174	0.25231	0.25249	0.25754	0.24427	0.31640	30.120	<-
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
98 Retene	0.39836	0.38646	0.34138	0.37693	0.38056	0.36328	0.36680	0.37340	4.925
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
103 Pyridine	1.22819	1.32175	1.30097	1.35883	1.35791	1.35070	1.31395	1.31890	3.489
187 Total Benzofluoranthenes	1.28766	1.16300	1.07360	1.09964	1.03583	0.97825	0.93099	1.08128	11.003
$ 1 2-Fluorophenol	1.17056	1.23882	1.16983	1.18932	1.28573	1.21625	+++++	1.21175	3.724

Analytical Resources, Inc.

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Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing
Curve Type : Average

Compound	1.000 Level 1 / 80.000 Level 7	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
$ 137 d8-1,4-Dioxane	0.54248 / 0.47449	0.49497	0.47162	0.48088	0.50293	0.49681	0.49488	4.871
$ 2 Phenol-d5	1.42022 / +++++	1.47044	1.37305	1.37463	1.46677	1.27827	1.39723	5.158
$ 5 2-Chlorophenol-d4	1.27853 / +++++	1.31348	1.19076	1.16387	1.17447	1.07536	1.19941	7.135
$ 10 1,2-Dichlorobenzene-d4	0.86591 / +++++	0.89921	0.81853	0.83339	0.87634	0.81717	0.85176	3.962
$ 18 Nitrobenzene-d5	0.36148 / +++++	0.36400	0.33122	0.33908	0.35775	0.33763	0.34853	4.057
$ 36 2-Fluorobiphenyl	1.39543 / +++++	1.34637	1.23869	1.21562	1.24861	1.17653	1.27021	6.558
$ 55 2,4,6-Tribromophenol	0.17712 / +++++	0.19451	0.19080	0.20449	0.21723	0.20766	0.19864	7.129
$ 66 Terphenyl-d14	0.71867 / +++++	0.70131	0.65646	0.66180	0.68267	0.63466	0.67593	4.583
$ 85 p-Cresol-d4	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

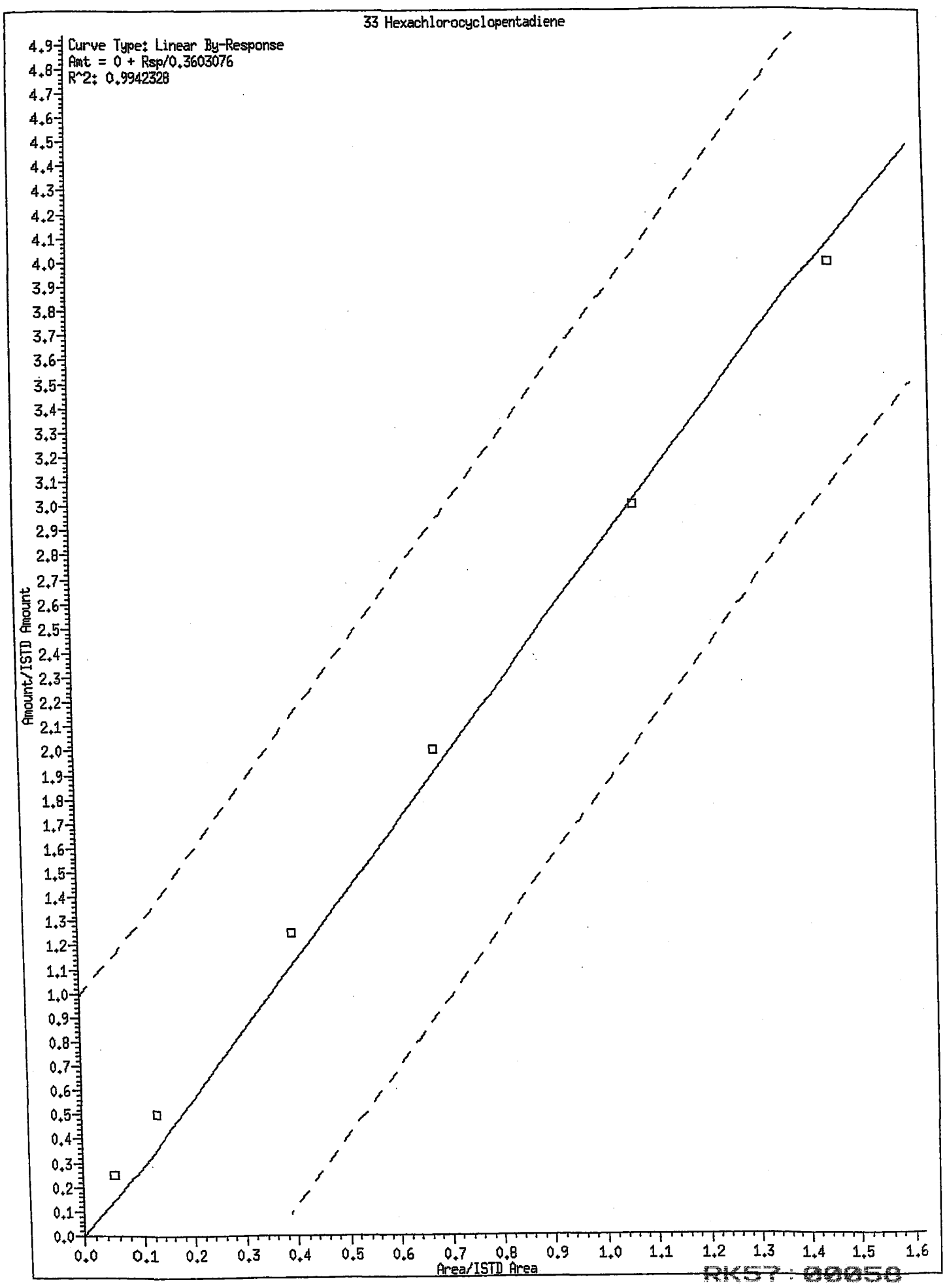
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 20-AUG-2010 10:40
End Cal Date : 20-AUG-2010 13:56
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing

DB 08/20/10

Compound	1 Level 1 / 80 Level 7	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
31 4-Chloro-3-methylphenol	0.31065 0.27202	0.30042	0.29265	0.28993	0.31083	0.27448	AVRG		0.29300		5.35518
32 2-Methylnaphthalene	0.63296 0.48938	0.60585	0.56140	0.54726	0.55929	0.52763	AVRG		0.56054		8.50110
33 Hexachlorocyclopentadiene	+++++ 410889	15057	38634	115887	196708	301675	LINR	0.000e+00	0.36031		0.99423
34 2,4,6-Trichlorophenol	0.42967 0.42598	0.38520	0.38367	0.38708	0.42946	0.43948	AVRG		0.41151		6.04070
35 2,4,5-Trichlorophenol	0.44049 0.39423	0.38700	0.40458	0.39474	0.42555	0.38561	AVRG		0.40460		5.14691
37 2-Chloronaphthalene	1.35470 1.05194	1.20085	1.10537	1.11869	1.10188	1.07665	AVRG		1.14430		9.06367
38 2-Nitroaniline	0.29607 0.27254	0.30516	0.28380	0.28219	0.28262	0.26699	AVRG		0.28419		4.58574


33 Hexachlorocyclopentadiene
Curve Type: Linear By-Response
Amt = 0 + Rsp/0.3603076
R^2: 0.9942328
Amount/ISTD Amount
Area/ISTD Area
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
4.9
4.8
4.7
4.6
4.5
4.4
4.3
4.2
4.1
4.0
3.9
3.8
3.7
3.6
3.5
3.4
3.3
3.2
3.1
3.0
2.9
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
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
RK5T-00058

Report Date : 20-Aug-2010 15:35

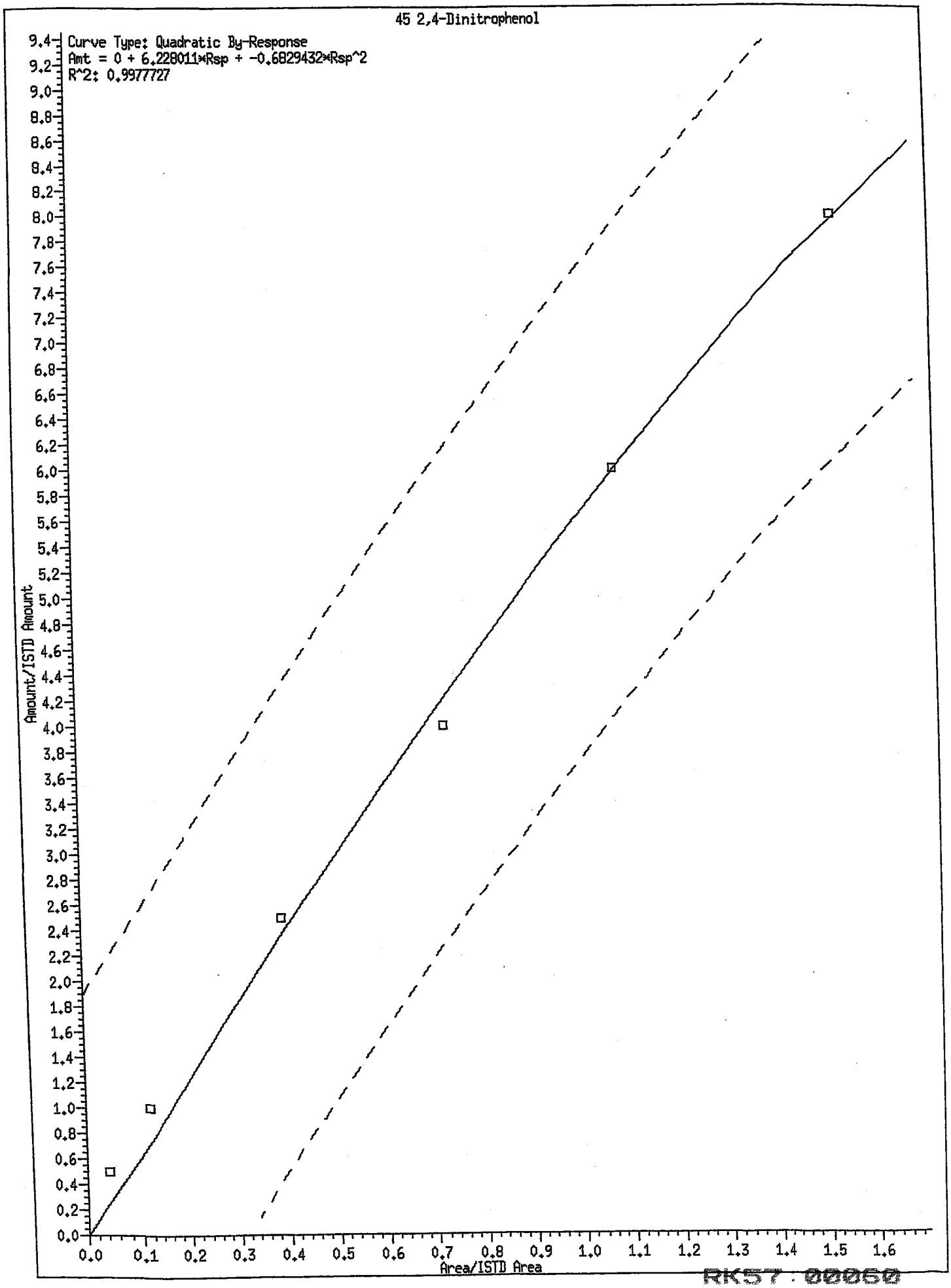
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 20-AUG-2010 10:40
End Cal Date : 20-AUG-2010 13:56
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing

08/20/10

Compound	1 Level 1 / 80 Level 7	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
39 Dimethylphthalate	1.42920 / 1.09088	1.31916	1.19648	1.19127	1.14619	1.07541	AVRG		1.20694		10.52436
40 Acenaphthylene	2.05371 / 1.60334	1.91885	1.74264	1.78065	1.73292	1.69243	AVRG		1.78922		8.41734
41 2,6-Dinitrotoluene	0.31736 / 0.30449	0.31215	0.29286	0.30776	0.30713	0.29567	AVRG		0.30534		2.83584
43 3-Nitroaniline	0.30284 / 0.20132	0.31077	0.29028	0.27542	0.25664	0.22199	AVRG		0.26561		15.55764
44 Acenaphthene	1.20729 / 1.00091	1.13657	1.01982	1.04626	1.06878	1.05861	AVRG		1.07689		6.66769
45 2,4-Dinitrophenol	+++++ / 430361	11886	35429	114014	210328	302798	QUAD	0.000e+00	6.22801	-0.68294	0.99777
46 Dibenzofuran	1.67823 / 1.32525	1.62093	1.49291	1.45263	1.45595	1.36326	AVRG		1.48417		8.61565


45 2,4-Dinitrophenol
Curve Type: Quadratic By-Response
Amt = 0 + 6.228011*Rsp + -0.6829432*Rsp^2
R^2: 0.9977727
Amount/ISTD Amount
Area/ISTD Area
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
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
7.4
7.6
7.8
8.0
8.2
8.4
8.6
8.8
9.0
9.2
9.4

RK57 : 99951

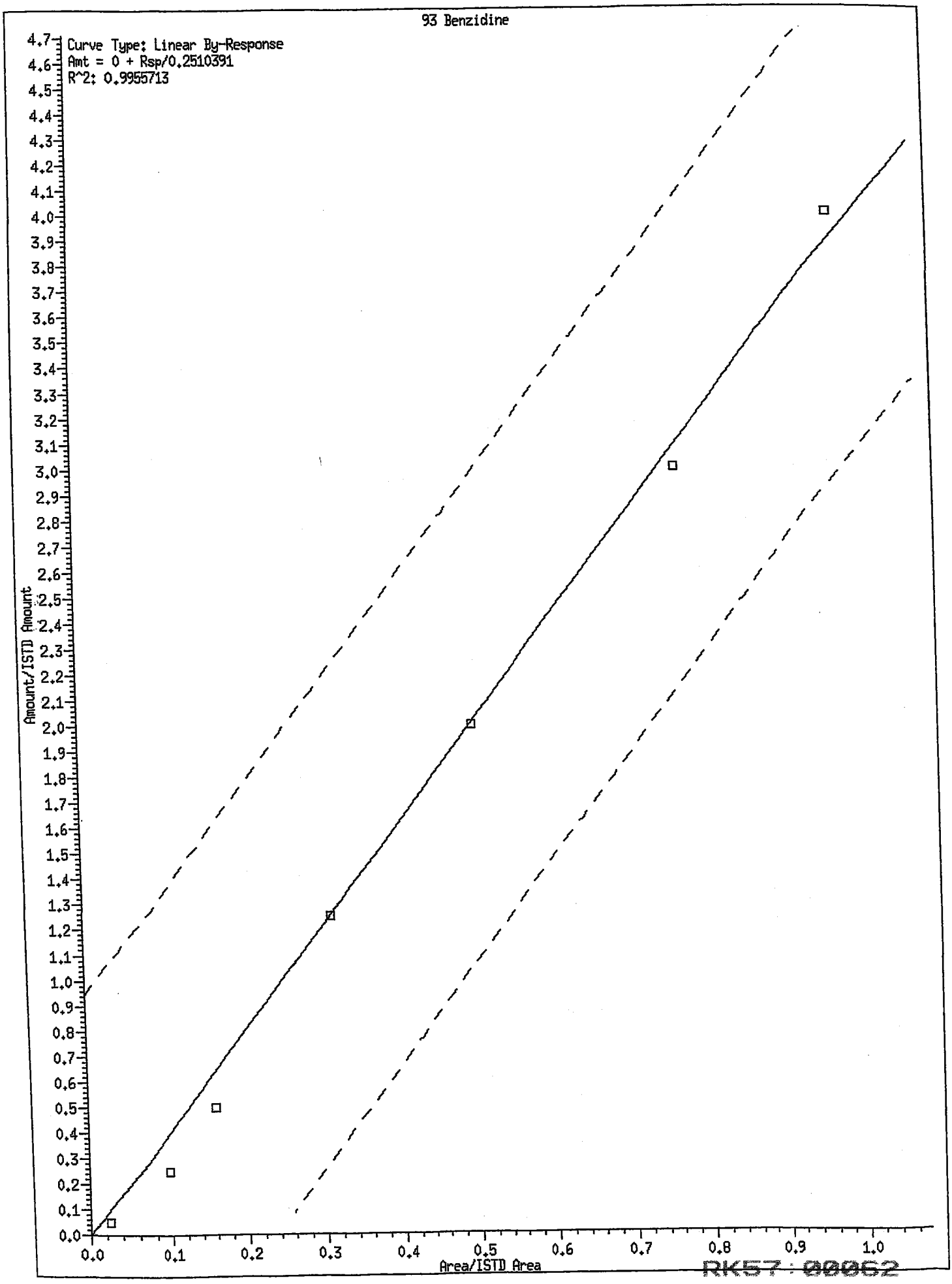
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 20-AUG-2010 10:40
End Cal Date : 20-AUG-2010 13:56
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing

08/20/10

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7										
80 Benzo(g,h,i)perylene	1.44511 1.12083	1.29466	1.21316	1.17767	1.16986	1.14911	AVRG		1.22434		9.15170
90 N-Nitrosodimethylamine	0.72769 0.70675	0.72977	0.71031	0.72663	0.73433	0.74826	AVRG		0.72625		1.94595
91 Aniline	1.83548 1.63003	1.84301	1.77751	1.73950	1.76924	1.67354	AVRG		1.75262		4.50388
92 1,2-Diphenylhydrazine	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
93 Benzidine	14018 522014	51981	88110	176820	279570	428150	LINR	0.000e+00	0.25104		0.99557
96 p-Cymene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
97 Caffeine	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00


93 Benzidine
Curve Type: Linear By-Response
Amt = 0 + Rsp/0.2510391
R^2: 0.9955713
Amount/ISTD Amount
Area/ISTD Area
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
3.0
3.1
3.2
3.3
3.4
3.5
3.6
3.7
3.8
3.9
4.0
4.1
4.2
4.3
4.4
4.5
4.6
4.7

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 20-AUG-2010 10:40
End Cal Date : 20-AUG-2010 13:56
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt6.i/20100820.b/SW846082010.m
Cal Date : 20-Aug-2010 15:29 jianqing

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

RX57:8961

Report Date : 20-Aug-2010 15:30

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Batch File: /chem1/nt6.i/20100820.b
Inst ID: nt6.i

	RT01	RT02	RT03	RT04	RT05	RT06	RT07
ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	08201001	08201002	08201003	08201004	08201005	08201006	08201007
INJ.DATE:	20-AUG-2010	20-AUG-2010	20-AUG-2010	20-AUG-2010	20-AUG-2010	20-AUG-2010	20-AUG-2010
INJ.TIME:	10:40	11:13	11:45	12:18	12:51	13:24	13:56

DB 08/20/10

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	4.694	4.692	4.692	4.689	4.701	4.702	+++++	4.694	1.694-7.694	4.695	0.005
186 Carbaryl	14.847	14.835	14.840	14.837	14.849	14.856	14.867	14.847	11.847-17.847	14.847	0.011
179 n-Decane	6.664	6.658	6.663	6.660	6.666	6.668	6.668	6.664	3.664-9.664	6.664	0.004
180 n-Octadecane	14.046	14.044	14.044	14.041	14.048	14.049	14.050	14.046	11.046-17.046	14.046	0.003
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.531	15.531-21.531	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.634	13.634-19.634	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.609	14.609-20.609	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.863	13.863-19.863	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.605	17.605-23.605	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.015	14.015-20.015	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.609	14.609-20.609	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.562	14.562-20.562	+++++	+++++
177 p-Benzoquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.781	3.781-9.781	+++++	+++++
168 Pentachlorobenzene	12.022	12.015	12.014	12.017	12.023	12.030	12.031	12.022	9.022-15.022	12.022	0.007
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

Reviewer 1 _____ Date: _____
Reviewer 2 _____ Date: 8/20/10

Report Date : 20-Aug-2010 15:30

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Batch File: /chem1/nt6.i/20100820.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.269	36.269-42.269	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	1.462	1.455	1.455	1.453	1.464	1.465	1.461	1.462	0.000-4.462	1.459	0.005
* 134 Di-n-octylphthalate-d4	19.510	19.508	19.508	19.511	19.511	19.513	19.519	19.510	16.510-22.510	19.511	0.004
133 Butylatedhydroxytoluen	11.909	11.902	11.902	11.905	11.911	11.913	11.913	11.909	8.909-14.909	11.908	0.005
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	8.940	8.938	8.938	8.935	8.947	8.948	8.954	8.940	5.940-11.940	8.943	0.007
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

Report Date : 20-Aug-2010 15:30

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Batch File: /chem1/nt6.i/20100820.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	7.514	7.501	7.506	7.504	7.515	7.522	7.523	7.514	4.514-10.514	7.512	0.009
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	1.489	1.482	1.482	1.485	1.491	1.498	1.488	1.489	0.000-4.489	1.488	0.006
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	12.289	12.282	12.281	12.284	12.290	12.292	12.298	12.289	9.289-15.289	12.288	0.006
178 2-Benzyl-4-Chloropheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.128	13.128-19.128	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	17.854	17.852	17.852	17.850	17.856	17.863	17.869	17.854	14.854-20.854	17.856	0.007
117 Butyl Diphenyl Phospha	16.289	16.282	16.282	16.285	16.291	16.292	16.293	16.289	13.289-19.289	16.288	0.005
116 Dibutyl Phenyl Phospha	14.644	14.637	14.637	14.640	14.646	14.647	14.653	14.644	11.644-17.644	14.643	0.006
115 Tributyl Phosphate	12.972	12.949	12.954	12.957	12.974	12.986	12.998	12.972	9.972-15.972	12.970	0.018
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	10.975	10.968	10.973	10.970	10.976	10.978	10.979	10.975	7.975-13.975	10.974	0.004
112 Biphenyl	10.772	10.770	10.770	10.773	10.779	10.780	10.781	10.772	7.772-13.772	10.775	0.005
111 Azobenzene (1,2-DP-Hyd	12.828	12.816	12.821	12.824	12.830	12.837	12.843	12.828	9.828-15.828	12.828	0.009
110 Tetrachloroguaiacol	13.987	13.975	13.980	13.977	13.989	13.996	14.002	13.987	10.987-16.987	13.986	0.010
109 3,4,5-Trichloroguaiaco	12.390	12.388	12.388	12.386	12.397	12.399	12.405	12.390	9.390-15.390	12.393	0.007
181 3,4,6-Trichloroguaiaco	12.497	12.495	12.495	12.493	12.499	12.505	12.511	12.497	9.497-15.497	12.499	0.007
108 4,5,6-Trichloroguaiaco	13.421	13.414	13.414	13.417	13.423	13.429	13.430	13.421	10.421-16.421	13.421	0.007
184 3,4-Dichloroguaiacol	10.868	10.866	10.866	10.863	10.870	10.871	10.877	10.868	7.868-13.868	10.869	0.004
107 4,5-Dichloroguaiacol	11.669	11.667	11.662	11.665	11.676	11.678	11.684	11.669	8.669-14.669	11.671	0.008
182 4,6-Dichloroguaiacol	11.669	11.667	11.662	11.665	11.676	11.678	11.684	11.669	8.669-14.669	11.671	0.008
185 4-Chloroguaiacol	9.810	9.809	9.808	9.806	9.812	9.814	9.820	9.810	6.810-12.810	9.811	0.004

Report Date : 20-Aug-2010 15:30

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Batch File: /chem1/nt6.i/20100820.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
106 Guaiacol	7.797	7.790	7.795	7.792	7.798	7.805	7.811	7.797	4.797-10.797	7.798	0.008
105 1-methylnaphthalene	10.152	10.151	10.150	10.148	10.154	10.155	10.161	10.152	7.152-13.152	10.153	0.004
151 1,2,4,5-Tetrachloroben	10.328	10.321	10.327	10.324	10.330	10.337	10.338	10.328	7.328-13.328	10.329	0.006
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.442	20.442-26.442	+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.968	18.968-24.968	+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.466	20.466-26.466	+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.866	19.866-25.866	+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.413	20.413-26.413	+++++	+++++
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.952	21.952-27.952	+++++	+++++
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.721	18.721-24.721	+++++	+++++
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.159	15.159-21.159	+++++	+++++
161 1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
162 1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
163 1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
164 1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
165 1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
167 2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$ 2 Phenol-d5	6.456	6.449	6.449	6.452	6.463	6.470	0.000	6.456	3.456-9.456	5.534	2.440
3 Phenol	6.472	6.471	6.470	6.468	6.479	6.486	6.487	6.472	3.472-9.472	6.476	0.008
4 Bis(2-Chloroethyl)ethe	6.483	6.481	6.481	6.478	6.485	6.491	6.487	6.483	3.483-9.483	6.484	0.004
$ 5 2-Chlorophenol-d4	6.478	6.471	6.476	6.473	6.479	6.481	+++++	6.478	3.478-9.478	6.476	0.004

RKS7 00057

Report Date : 20-Aug-2010 15:30

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Batch File: /chem1/nt6.i/20100820.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
6	2-Chlorophenol	6.499	6.497	6.497	6.500	6.506	6.507	6.508	6.499	3.499-9.499	6.502	0.005
7	1,3-Dichlorobenzene	6.697	6.695	6.695	6.697	6.698	6.700	6.706	6.697	3.696-9.697	6.698	0.004
* 8	1,4-Dichlorobenzene-d4	6.766	6.764	6.764	6.767	6.773	6.774	6.775	6.766	3.766-9.766	6.769	0.005
9	1,4-Dichlorobenzene	6.793	6.791	6.791	6.794	6.794	6.801	6.802	6.793	3.793-9.793	6.795	0.005
$ 10	1,2-Dichlorobenzene-d4	7.070	7.069	7.068	7.066	7.072	7.074	0.000	7.070	4.070-10.070	6.060	2.672
11	Benzyl alcohol	7.118	7.112	7.111	7.114	7.126	7.127	7.133	7.118	4.118-10.118	7.120	0.009
12	1,2-Dichlorobenzene	7.092	7.090	7.090	7.093	7.093	7.095	7.096	7.092	4.092-10.092	7.093	0.002
13	2-Methylphenol	7.412	7.405	7.410	7.408	7.414	7.421	7.427	7.412	4.412-10.412	7.414	0.008
14	2,2'-oxybis(1-Chloropr	7.386	7.379	7.378	7.381	7.382	7.383	7.384	7.386	4.386-10.386	7.382	0.003
15	4-Methylphenol	7.658	7.651	7.656	7.654	7.665	7.666	7.673	7.658	4.658-10.658	7.660	0.008
16	N-Nitroso-di-n-propyla	7.604	7.592	7.592	7.595	7.612	7.618	7.619	7.604	4.604-10.604	7.605	0.012
17	Hexachloroethane	7.583	7.582	7.581	7.579	7.580	7.581	7.582	7.583	4.583-10.583	7.581	0.001
$ 18	Nitrobenzene-d5	7.738	7.726	7.731	7.728	7.740	7.747	+++++	7.738	4.738-10.738	7.735	0.008
19	Nitrobenzene	7.765	7.758	7.757	7.760	7.766	7.773	7.774	7.765	4.765-10.765	7.765	0.007
20	Isophorone	8.160	8.153	8.153	8.156	8.167	8.174	8.180	8.160	5.160-11.160	8.163	0.011
21	2-Nitrophenol	8.288	8.281	8.281	8.284	8.290	8.291	8.297	8.288	5.288-11.288	8.288	0.006
22	2,4-Dimethylphenol	8.480	8.473	8.473	8.476	8.482	8.489	8.490	8.480	5.480-11.480	8.481	0.007
23	Bis(2-Chloroethoxy)met	8.603	8.596	8.596	8.599	8.605	8.612	8.613	8.603	5.603-11.603	8.603	0.007
24	Benzoic acid	8.790	8.644	8.681	8.722	8.835	8.868	8.912	8.790	5.790-11.790	8.779	0.100
25	2,4-Dichlorophenol	8.694	8.692	8.692	8.690	8.696	8.703	8.709	8.694	5.694-11.694	8.696	0.007
26	1,2,4-Trichlorobenzene	8.790	8.789	8.788	8.791	8.792	8.799	8.799	8.790	5.790-11.790	8.793	0.005
* 27	Naphthalene-d8	8.838	8.831	8.831	8.834	8.840	8.841	8.842	8.838	5.838-11.838	8.837	0.005
28	Naphthalene	8.865	8.858	8.863	8.861	8.867	8.874	8.874	8.865	5.865-11.865	8.866	0.006
29	4-Chloroaniline	9.057	9.050	9.050	9.053	9.059	9.060	9.067	9.057	6.057-12.057	9.057	0.006

RK57.00668

Report Date : 20-Aug-2010 15:30

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Batch File: /chem1/nt6.i/20100820.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	9.207	9.211	9.210	9.208	9.209	9.210	9.211	9.207	6.207-12.207	9.209	0.002
	31 4-Chloro-3-methylpheno	9.928	9.921	9.921	9.923	9.930	9.931	9.937	9.928	6.928-12.928	9.927	0.006
	32 2-Methylnaphthalene	9.987	9.985	9.985	9.988	9.988	9.990	9.996	9.987	6.987-12.987	9.988	0.004
	33 Hexachlorocyclopentadi	10.371	10.370	10.369	10.372	10.373	10.374	10.375	10.371	7.371-13.371	10.372	0.002
	34 2,4,6-Trichlorophenol	10.531	10.530	10.529	10.527	10.533	10.535	10.541	10.531	7.531-13.531	10.532	0.004
	35 2,4,5-Trichlorophenol	10.590	10.589	10.588	10.586	10.592	10.593	10.599	10.590	7.590-13.590	10.591	0.004
$	36 2-Fluorobiphenyl	10.649	10.647	10.647	10.650	10.651	10.657	0.000	10.649	7.649-13.649	9.129	4.025
	37 2-Chloronaphthalene	10.750	10.743	10.743	10.746	10.752	10.754	10.760	10.750	7.750-13.750	10.750	0.006
	38 2-Nitroaniline	11.017	11.010	11.016	11.013	11.024	11.031	11.032	11.017	8.017-14.017	11.021	0.009
	39 Dimethylphthalate	11.418	11.411	11.411	11.414	11.425	11.432	11.438	11.418	8.418-14.418	11.421	0.011
	40 Acenaphthylene	11.413	11.406	11.405	11.408	11.414	11.416	11.417	11.413	8.413-14.413	11.411	0.005
	41 2,6-Dinitrotoluene	11.498	11.491	11.491	11.494	11.500	11.507	11.513	11.498	8.498-14.498	11.499	0.008
*	42 Acenaphthene-d10	11.664	11.662	11.662	11.665	11.665	11.667	11.668	11.664	8.664-14.664	11.665	0.002
	43 3-Nitroaniline	11.701	11.683	11.688	11.691	11.703	11.710	11.716	11.701	8.701-14.701	11.699	0.012
	44 Acenaphthene	11.717	11.710	11.710	11.713	11.719	11.720	11.726	11.717	8.717-14.717	11.716	0.006
	45 2,4-Dinitrophenol	11.867	11.870	11.859	11.862	11.874	11.881	11.887	11.867	8.867-14.867	11.871	0.010
	46 Dibenzofuran	11.979	11.972	11.972	11.974	11.981	11.982	11.988	11.979	8.979-14.979	11.978	0.006
	47 4-Nitrophenol	12.086	12.079	12.078	12.076	12.087	12.094	12.100	12.086	9.086-15.086	12.086	0.009
	48 2,4-Dinitrotoluene	12.112	12.105	12.105	12.108	12.119	12.121	12.132	12.112	9.112-15.112	12.115	0.010
	49 Fluorene	12.524	12.517	12.522	12.519	12.525	12.532	12.538	12.524	9.524-15.524	12.525	0.008
	50 Diethylphthalate	12.566	12.554	12.559	12.562	12.568	12.575	12.581	12.566	9.566-15.566	12.566	0.009
	51 4-Chlorophenyl-phenyle	12.582	12.575	12.580	12.578	12.584	12.586	12.592	12.582	9.582-15.582	12.582	0.005
	52 4-Nitroaniline	12.678	12.661	12.661	12.663	12.686	12.698	12.709	12.678	9.678-15.678	12.679	0.019
	53 4,6-Dinitro-2-methylph	12.759	12.741	12.741	12.744	12.766	12.773	12.784	12.759	9.759-15.759	12.758	0.017

Report Date : 20-Aug-2010 15:30

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Batch File: /chem1/nt6.i/20100820.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
54 N-Nitrosodiphenylamine	12.801	12.789	12.794	12.792	12.803	12.810	12.816	12.801	9.801-15.801	12.801	0.010
$ 55 2,4,6-Tribromophenol	12.946	12.944	12.944	12.941	12.953	12.954	+++++	12.946	9.946-15.946	12.947	0.005
56 4-Bromophenyl-phenylet	13.346	13.345	13.339	13.342	13.348	13.349	13.350	13.346	10.346-16.346	13.346	0.004
57 Hexachlorobenzene	13.533	13.526	13.526	13.529	13.535	13.536	13.542	13.533	10.533-16.533	13.532	0.006
58 Pentachlorophenol	13.854	13.847	13.846	13.849	13.855	13.857	13.863	13.854	10.854-16.854	13.853	0.006
* 59 Phenanthrene-d10	13.992	13.985	13.991	13.993	13.994	13.996	14.002	13.992	10.992-16.992	13.993	0.005
60 Phenanthrene	14.030	14.023	14.023	14.025	14.032	14.038	14.044	14.030	11.030-17.030	14.031	0.008
61 Anthracene	14.105	14.092	14.092	14.095	14.106	14.108	14.114	14.105	11.105-17.105	14.102	0.009
62 Carbazole	14.420	14.407	14.412	14.410	14.421	14.428	14.434	14.420	11.420-17.420	14.419	0.010
63 Di-n-butylphthalate	15.189	15.187	15.187	15.184	15.191	15.197	15.198	15.189	12.189-18.189	15.190	0.005
64 Fluoranthene	15.931	15.924	15.924	15.927	15.933	15.940	15.940	15.931	12.931-18.931	15.931	0.007
65 Pyrene	16.268	16.266	16.266	16.263	16.275	16.276	16.277	16.268	13.268-19.268	16.270	0.006
$ 66 Terphenyl-d14	16.642	16.640	16.640	16.637	16.643	16.645	+++++	16.642	13.642-19.642	16.641	0.003
67 Butylbenzylphthalate	17.560	17.559	17.558	17.556	17.562	17.569	17.570	17.560	14.560-20.560	17.562	0.005
68 Benzo(a)anthracene	18.217	18.210	18.210	18.213	18.219	18.226	18.232	18.217	15.217-21.217	18.218	0.008
* 69 Chrysene-d12	18.244	18.232	18.237	18.234	18.246	18.247	18.253	18.244	15.244-21.244	18.242	0.008
70 3,3'-Dichlorobenzidine	18.276	18.269	18.269	18.266	18.278	18.279	18.280	18.276	15.276-21.276	18.274	0.006
71 Chrysene	18.281	18.269	18.274	18.272	18.283	18.290	18.296	18.281	15.281-21.281	18.281	0.010
72 bis(2-Ethylhexyl)phtha	18.586	18.584	18.584	18.581	18.587	18.589	18.590	18.586	15.586-21.586	18.586	0.003
73 Di-n-octylphthalate	19.520	19.519	19.518	19.516	19.522	19.529	19.530	19.520	16.520-22.520	19.522	0.005
74 Benzo(b)fluoranthene	19.846	19.839	19.839	19.842	19.853	19.865	19.866	19.846	16.846-22.846	19.850	0.012
75 Benzo(k)fluoranthene	19.878	19.866	19.871	19.874	19.891	19.897	19.904	19.878	16.878-22.878	19.883	0.014
76 Benzo(a)pyrene	20.279	20.272	20.272	20.269	20.286	20.293	20.293	20.279	17.279-23.279	20.281	0.010
* 77 Perylene-d12	20.359	20.357	20.357	20.355	20.361	20.362	20.368	20.359	17.359-23.359	20.360	0.004

Report Date : 20-Aug-2010 15:30

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Batch File: /chem1/nt6.i/20100820.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
78 Indeno(1,2,3-cd)pyrene	21.700	21.693	21.692	21.690	21.707	21.719	21.725	21.700	18.700-24.700	21.704	0.014
79 Dibenzo(a,h)anthracene	21.737	21.719	21.724	21.722	21.739	21.751	21.757	21.737	18.737-24.737	21.736	0.015
80 Benzo(g,h,i)perylene	21.988	21.976	21.975	21.978	22.000	22.007	22.019	21.988	18.988-24.988	21.992	0.017
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$ 88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
90 N-Nitrosodimethylamine	1.879	1.867	1.866	1.864	1.886	1.893	1.888	1.879	0.000-4.879	1.877	0.012
91 Aniline	6.333	6.326	6.326	6.329	6.335	6.337	6.337	6.333	3.333-9.333	6.332	0.005
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
93 Benzidine	16.236	16.229	16.228	16.231	16.232	16.239	16.240	16.236	13.236-19.236	16.233	0.005
$ 95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
98 Retene	16.866	16.864	16.864	16.862	16.868	16.869	16.870	16.866	13.866-19.866	16.866	0.003
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.125	28.125-34.125	+++++	+++++
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.717	15.717-21.717	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.964	19.964-25.964	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	79.550	76.550-82.550	+++++	+++++
103 Pyridine	1.857	1.856	1.850	1.848	1.859	1.861	1.856	1.857	0.000-4.857	1.855	0.005
187 Total Benzofluoranthen	19.878	19.839	19.839	19.874	19.891	19.897	19.904	19.878	16.878-22.878	19.875	0.026

Analytical Resources Inc.: Organics Instrument Log

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

Date: 8/20/10 Analysis: 8270 Analyst: AB

GC Program: ABN_MS Column No: 172127 Column Type: ZB-5MS

Instrument Tune (.U or .CT.): 100629 EM Voltage: 1643

Calibration File: 0820100 Curve Date: 8/20/10

IS/SS	Ical/Ccal	LCS/ICV
1752-1	1759-1, 1760-1	~~1761-1~~, 1712-1
	~~1761-1~~, 1762-1	~~1721-2~~, ~~1764-1~~
	~~I.S019~~, 1753-5	~~I.S019~~, 1753-5

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt6.i/20100820.b

	Time	Filename	LabID	ClientId	DF													
1	1040	08201001.D	IC250820	IC250820	1	6.77	154425	8.84	490229	11.66	286412	13.99	457816	18.24	560635	20.36	521119	19.51	675549
2	1113	08201002.D	IC010820	IC010820	1	6.76	167270	8.83	524897	11.66	301484	13.99	473456	18.23	565966	20.36	550160	19.51	653598
3	1145	08201003.D	IC050820	IC050820	1	6.76	152316	8.83	484620	11.66	284483	13.99	459606	18.24	531662	20.36	514177	19.51	625883
4	1218	08201004.D	IC100820	IC100820	1	6.77	162191	8.83	516160	11.66	299926	13.99	479182	18.23	547714	20.35	520996	19.51	645668
5	1251	08201005.D	IC400820	IC400820	1	6.77	152136	8.84	479883	11.67	285842	13.99	451337	18.25	553625	20.36	536901	19.51	663582
6	1324	08201006.D	IC600820	IC600820	1	6.77	149578	8.84	466609	11.67	277253	14.00	432327	18.25	554146	20.36	564071	19.51	674001
7	1356	08201007.D	IC800820	IC800820	1	6.78	147131	8.84	474542	11.67	279600	14.00	445353	18.25	534260	20.37	520994	19.52	632162
8	1429	08201008.D	ICV0820	ICV0820	1	6.77	176494	8.84	559900	11.66	328517	14.00	524617	18.24	589456	20.36	572624	19.51	711514
9	1502	08201009.D	RD57AM E	PEO-121-1	1	6.76	171137	8.83	555350	11.67	318033	14.00	538509	18.27	546954	20.37	556582	19.51	702156
10	1535	08201010.D	RD57AN E	PEO-121-2A	1	6.77	160676	8.83	562598	11.66	320996	13.99	511864	18.23	578599	20.36	538273	19.52	600997
11	1607	08201011.D	RD57AO E	PEO-121-2B	1	6.76	163110	8.83	546981	11.66	324042	13.99	533937	18.23	600103	20.36	559370	19.51	686066
12	1640	08201012.D	RD57AD E	PEO-022	1	6.77	165892	8.84	514747	11.66	328372	14.00	503513	18.23	602678	20.35	577900	19.50	693398
13	1713	08201013.D	RD57AM 5X	PEO-121-1	5	6.76	198195	8.83	643900	11.66	369328	13.99	622496	18.24	569436	20.36	618269	19.51	750416
14	1746	08201014.D	RD57AN 10X E	PEO-121-2A	10	6.77	176634	8.83	571648	11.66	329057	13.99	529307	18.24	600229	20.36	572351	19.51	688961
15	1818	08201015.D	RD57AO 5X	PEO-121-2B	5	6.76	152988	8.83	494213	11.66	273093	13.99	439971	18.23	491673	20.36	479422	19.51	563245
16	1851	08201016.D	RD57AD 5X	PEO-022	5	6.76	101571	8.83	324878	11.66	196080	13.99	306562	18.23	366321	20.35	363403	19.51	423367
17	1924	08201017.D	RD57AN 20X	PEO-121-2A	20	6.76	163417	8.83	528998	11.66	305269	13.99	484307	18.23	548673	20.35	528892	19.51	625695
18	2002	08201018.D	ICV0820	ICV0820	1	6.77	172446	8.83	555013	11.67	331041	13.99	535188	18.24	622127	20.36	597260	19.51	740967
19	2034	08201019.D	RD57MBW2	RD57MBW2	1	6.76	160711	8.83	517898	11.66	303296	13.99	496199	18.23	578785	20.35	537832	19.51	654670
20	2107	08201020.D	RD57LCSW2	RD57LCSW2	1	6.76	151758	8.84	498125	11.67	305094	13.99	519614	18.24	569320	20.36	556416	19.51	674781
21	2140	08201021.D	RD57MBW1	RD57MBW1	1	6.76	186686	8.83	617592	11.66	359740	13.99	569641	18.23	645077	20.36	624273	19.51	729150
22	2212	08201022.D	RD57LCSW1	RD57LCSW1	1	6.77	166503	8.83	512954	11.66	317502	13.99	513949	18.24	588718	20.36	571683	19.51	705782

AB 08/21/10

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

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

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt6.i/20100820.b

ARI Job No.: IC25 Method: SW846082010.m Instrument: nt6.i Date: 20-AUG-2010

AZ 08/24/10

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1040	08201001.D	IC250820	IC250820	1	NO MANUAL INTEGRATION
1113	08201002.D	IC010820	IC010820	1	Benzoic acid, Benzo(k)fluoranthene, Benzidine, 1,2-Dichlorobenzene-d4,
1145	08201003.D	IC050820	IC050820	1	2,4-Dinitrophenol, Total Benzofluoranthenes,
1218	08201004.D	IC100820	IC100820	1	NO MANUAL INTEGRATION
1251	08201005.D	IC400820	IC400820	1	Benzoic acid,
1324	08201006.D	IC600820	IC600820	1	Benzoic acid, Benzo(k)fluoranthene,
1356	08201007.D	IC800820	IC800820	1	Benzoic acid, Benzo(k)fluoranthene,
2002	08201018.D	ICV0820	ICV0820	1	NO MANUAL INTEGRATION

RYS1-00073

Data File: /chem1/nt6.i/20100820.b/tune.b/08201001.D

Date : 20-AUG-2010 10:40

Client ID: DFTPP0820

Instrument: nt6.i

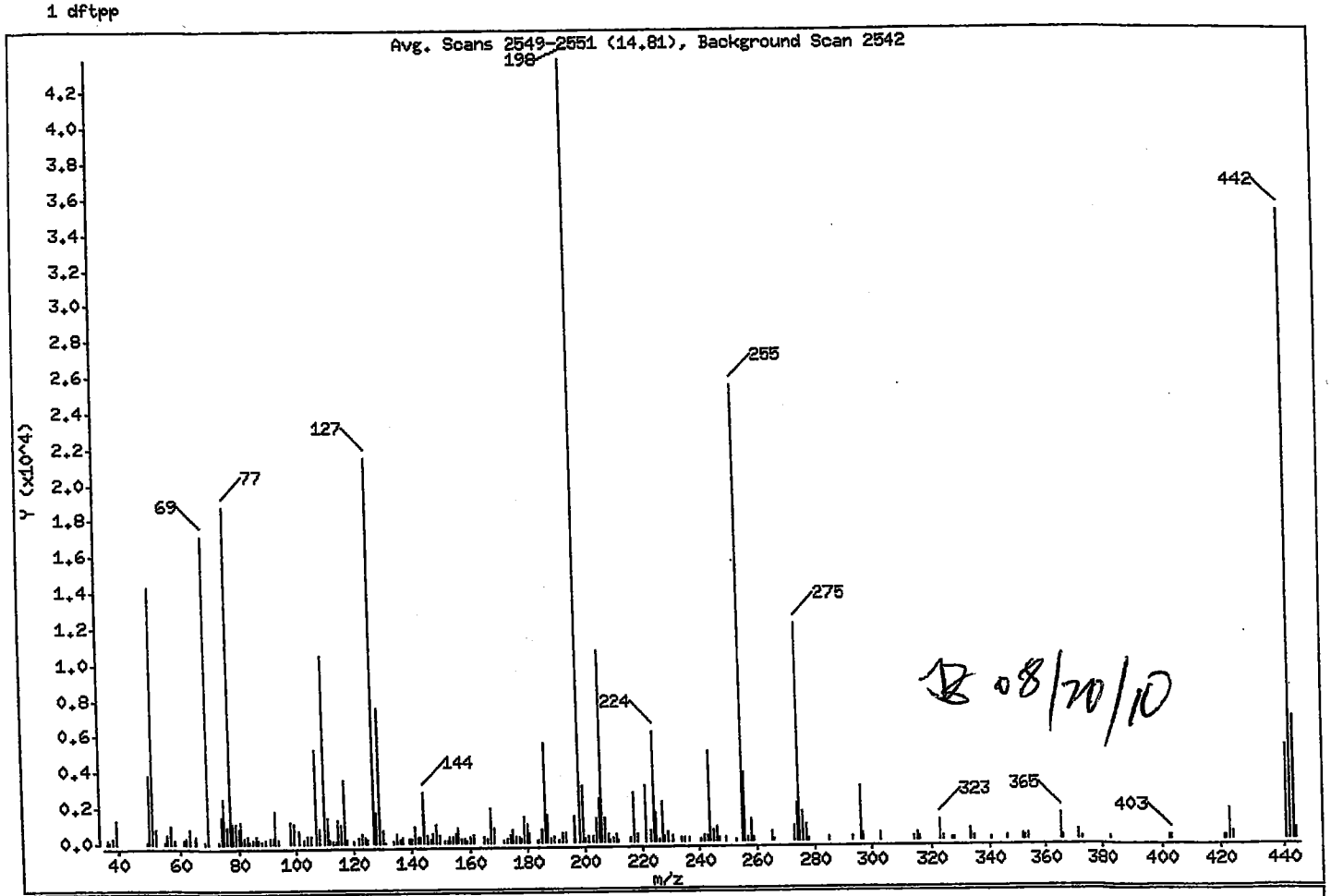
Sample Info: DFTPP0820

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	32.70
68	Less than 2.00% of mass 69	0.18 (0.45)
69	Mass 69 relative abundance	39.08
70	Less than 2.00% of mass 69	0.00 (0.00)
127	10.00 - 80.00% of mass 198	49.06
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	7.18
275	10.00 - 60.00% of mass 198	27.63
365	Greater than 1.00% of mass 198	3.14
441	0.01 - 24.00% of mass 442	12.01 (14.97)
442	50.00 - 200.00% of mass 198	80.23
443	15.00 - 24.00% of mass 442	15.70 (19.57)

Data File: /chem1/nt6.i/20100820.b/tune.b/08201001.D

Date : 20-AUG-2010 10:40

Client ID: DFTPP0820

Instrument: nt6.i

Sample Info: DFTPP0820

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: 08201001.D

Spectrum: Avg. Scans 2549-2551 (14.81), Background Scan 2542

Location of Maximum: 198.00

Number of points: 201

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	243	114.00	62	178.00	172	253.00	52
37.00	54	115.00	1329	179.00	1385	255.00	25376
38.00	298	116.00	1029	180.00	1012	256.00	3782
39.00	1321	117.00	3510	181.00	455	257.00	251
49.00	126	118.00	240	184.00	55	258.00	1228
50.00	3830	120.00	51	185.00	665	259.00	202
51.00	14345	122.00	334	186.00	5526	265.00	509
52.00	794	123.00	534	187.00	1490	266.00	51
55.00	56	124.00	265	188.00	158	273.00	779
56.00	510	125.00	218	189.00	302	274.00	2075
57.00	1022	127.00	21520	191.00	127	275.00	12118
58.00	175	128.00	1700	192.00	471	276.00	1642
61.00	242	129.00	7537	193.00	454	277.00	931
62.00	282	130.00	656	196.00	1427	278.00	70
63.00	773	131.00	50	198.00	43864	285.00	160
65.00	393	134.00	120	199.00	3148	293.00	198
68.00	78	135.00	539	200.00	225	296.00	3011
69.00	17144	136.00	230	201.00	320	297.00	443
73.00	56	137.00	293	203.00	262	303.00	395
74.00	1502	139.00	188	204.00	1319	314.00	177
75.00	2489	140.00	174	205.00	2466	315.00	353
76.00	861	141.00	907	206.00	10668	316.00	208
77.00	18800	142.00	316	207.00	1278	323.00	1112
78.00	1155	143.00	303	208.00	380	324.00	213
79.00	1103	144.00	2849	209.00	53	327.00	121
80.00	809	145.00	436	210.00	213	328.00	53
81.00	1194	146.00	207	211.00	385	334.00	655
82.00	312	147.00	532	212.00	61	335.00	168
83.00	386	148.00	976	216.00	207	341.00	54
84.00	51	149.00	411	217.00	2695	346.00	228
85.00	216	151.00	135	218.00	382	352.00	273
86.00	389	152.00	51	221.00	3128	353.00	237
87.00	243	153.00	318	223.00	650	354.00	352
88.00	66	154.00	275	224.00	6154	365.00	1379
89.00	240	155.00	504	225.00	1583	366.00	182

Data File: /chem1/nt6.i/20100820.b/tune.b/08201001.D

Date : 20-AUG-2010 10:40

Client ID: DFTPP0820

Instrument: nt6.i

Sample Info: DFTPP0820

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: 08201001.D
Spectrum: Avg. Scans 2549-2551 (14.81), Background Scan 2542
Location of Maximum: 198.00
Number of points: 201

m/z	Y	m/z	Y	m/z	Y	m/z	Y
91.00	258	156.00	790	226.00	124	372.00	534
92.00	281	157.00	182	227.00	2212	373.00	72
93.00	1841	158.00	163	228.00	351	383.00	126
94.00	191	159.00	56	229.00	491	402.00	223
98.00	1252	160.00	276	231.00	284	403.00	251
99.00	1088	161.00	377	234.00	160	421.00	238
101.00	725	165.00	343	235.00	181	422.00	209
103.00	247	166.00	215	237.00	215	423.00	1686
104.00	419	167.00	1892	241.00	121	424.00	357
105.00	410	168.00	785	242.00	331	441.00	5268
107.00	5264	172.00	55	243.00	327	442.00	35192
108.00	784	173.00	199	244.00	5042	443.00	6887
110.00	10454	174.00	366	245.00	631	444.00	594
111.00	1432	175.00	751	246.00	855		
112.00	152	176.00	314	247.00	249		
113.00	78	177.00	327	249.00	233		

Data File: /chem1/nt6.i/20100820.b/tune.b/08201001.D

Date : 20-AUG-2010 10:40

Client ID: DFTPP0820

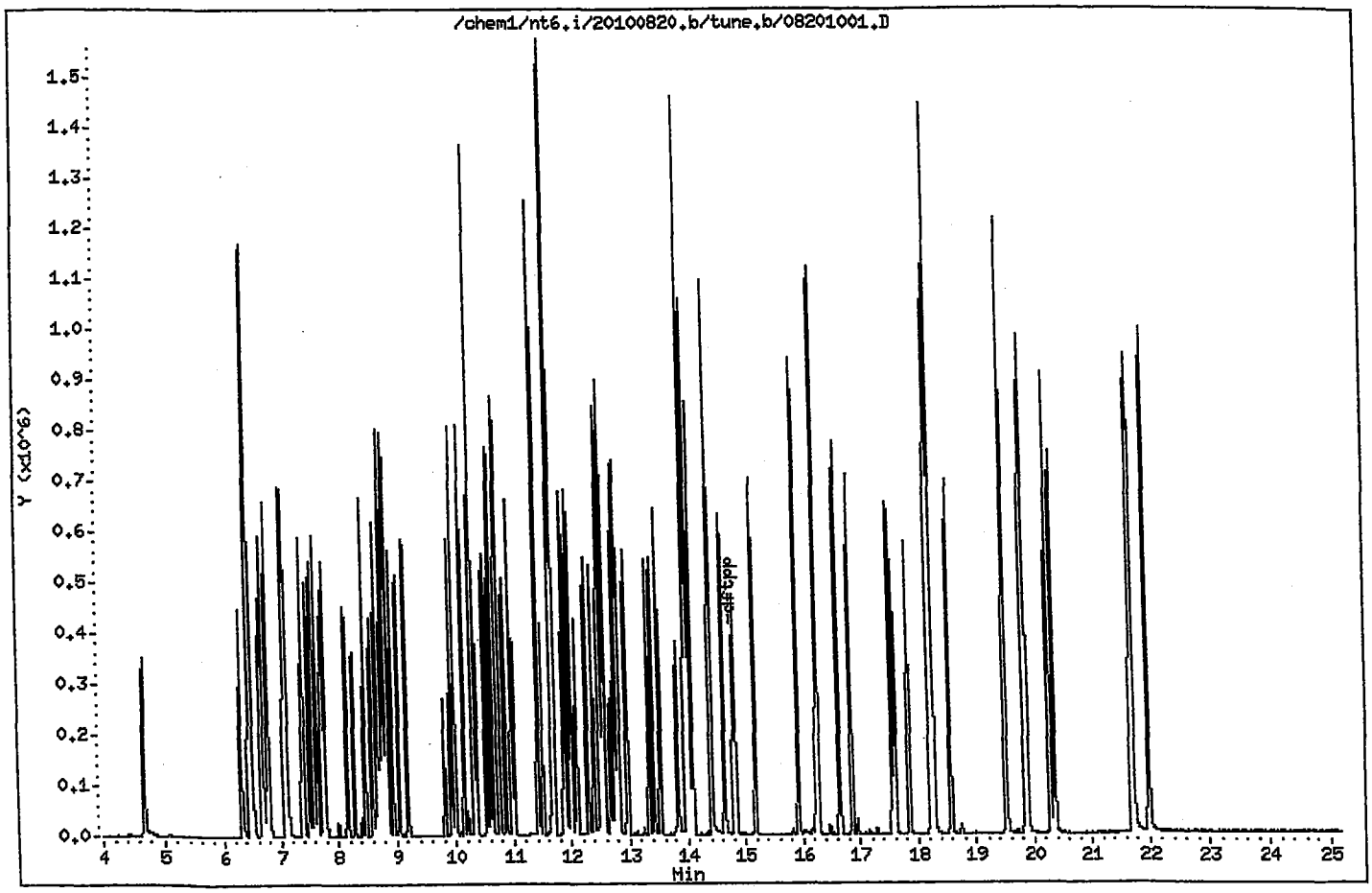
Instrument: nt6.i

Sample Info: DFTPP0820

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25



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

Data file: /chem1/nt6.i/20100820.b/ddt.b/08201001.D
Method: /chem1/nt6.i/20100820.b/ddt.b/sw846ddt.m
Analysis Date: 20-AUG-2010 10:40

ARI ID: IC250820
Misc: 10-
Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	13.854	88536
Benzidine	16.236	172612
4,4'-DDE	----	----
4,4'-DDD	17.154	3629
4,4'-DDT	17.614	213868

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

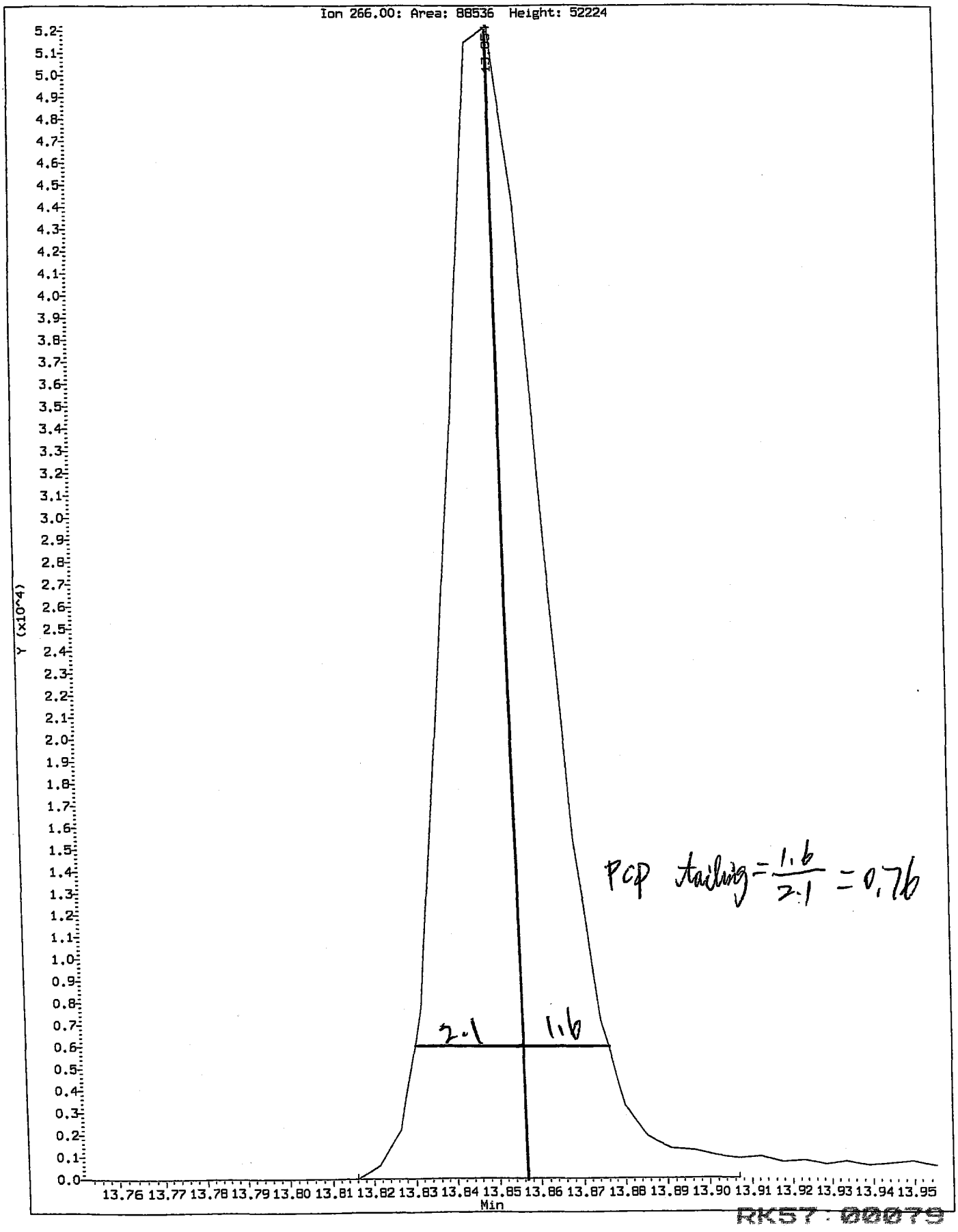
$$\text{DDT Percent Breakdown} = \frac{(0 + 3629) * 100}{(0 + 3629 + 213868)}$$

DDT Percent Breakdown = 1.7 %

08/20/10

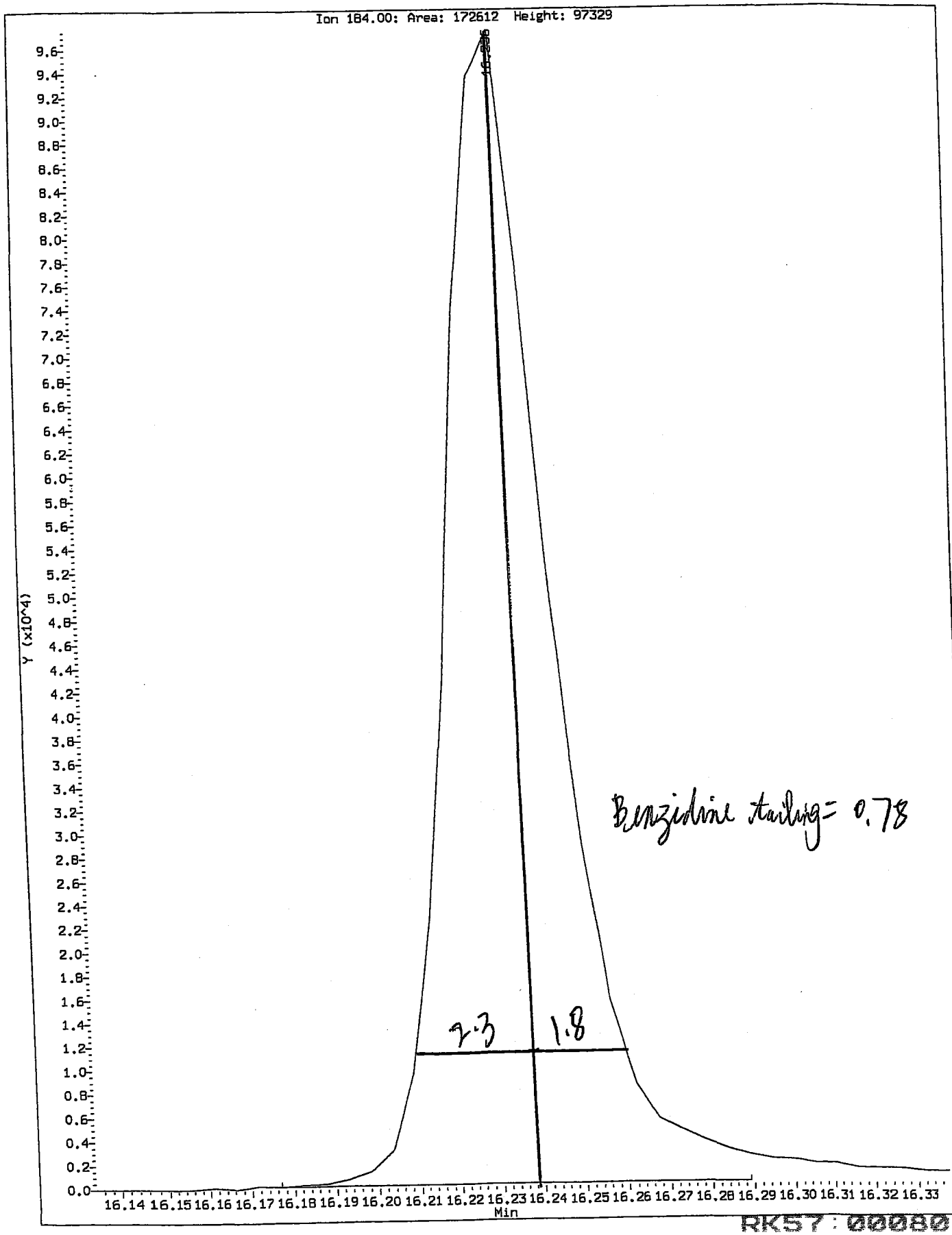
Data File: /chem1/nt6.i/20100820.b/ddt.b/08201001.D
Injection Date: 20-AUG-2010 10:40
Instrument: nt6.i
Client Sample ID: IC250820

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt6.i/20100820.b/ddt.b/08201001.D
Injection Date: 20-AUG-2010 10:40
Instrument: nt6.i
Client Sample ID: IC250820

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100820.b/08201002.D
Lab Smp Id: IC010820 Client Smp ID: IC010820
Inj Date : 20-AUG-2010 11:13
Operator : JZ Inst ID: nt6.i
Smp Info : IC010820,
Misc Info : 10-
Comment : 1ul Injection
Method : /chem1/nt6.i/20100820.b/SW846082010.m
Meth Date : 20-Aug-2010 15:57 jianqing Quant Type: ISTD
Cal Date : 20-AUG-2010 11:13 Cal File: 08201002.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 3.50

JZ 08/20/10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	4.692	4.692	(0.694)	9790	1.00000	0.9660
$	2 Phenol-d5	99	6.449	6.449	(0.953)	11878	1.00000	1.016
	3 Phenol	94	6.471	6.470	(0.957)	14748	1.00000	1.186
$	5 2-Chlorophenol-d4	132	6.471	6.476	(0.957)	10693	1.00000	1.066
	4 Bis(2-Chloroethyl)ether	93	6.481	6.481	(0.958)	9961	1.00000	1.110
	6 2-Chlorophenol	128	6.497	6.497	(0.961)	12487	1.00000	1.185
	7 1,3-Dichlorobenzene	146	6.695	6.695	(0.990)	13890	1.00000	1.134
*	8 1,4-Dichlorobenzene-d4	152	6.764	6.764	(1.000)	167270	20.0000	
	9 1,4-Dichlorobenzene	146	6.791	6.791	(1.004)	13164	1.00000	1.079
$	10 1,2-Dichlorobenzene-d4	152	7.069	7.068	(1.045)	7242	1.00000	1.017(M)
	12 1,2-Dichlorobenzene	146	7.090	7.090	(1.048)	12891	1.00000	1.115
	11 Benzyl alcohol	108	7.112	7.111	(1.051)	6185	1.00000	0.9912
	14 2,2'-oxybis(1-Chloropropane)	45	7.379	7.378	(1.091)	12020	1.00000	1.079
	13 2-Methylphenol	108	7.405	7.410	(1.095)	10446	1.00000	1.138
	17 Hexachloroethane	117	7.582	7.581	(1.121)	4576	1.00000	1.029
	16 N-Nitroso-di-n-propylamine	70	7.592	7.592	(1.122)	7123	1.00000	1.121
	15 4-Methylphenol	108	7.651	7.656	(1.131)	10734	1.00000	1.134
$	18 Nitrobenzene-d5	82	7.726	7.731	(0.875)	9487	1.00000	1.037
	19 Nitrobenzene	77	7.758	7.757	(0.878)	10732	1.00000	1.107
	20 Isophorone	82	8.153	8.153	(0.923)	16622	1.00000	1.058
	21 2-Nitrophenol	139	8.281	8.281	(0.938)	6182	1.00000	1.048
	22 2,4-Dimethylphenol	107	8.473	8.473	(0.959)	10592	1.00000	1.130
	23 Bis(2-Chloroethoxy)methane	93	8.596	8.596	(0.973)	12275	1.00000	1.130
	24 Benzoic acid	105	8.644	8.681	(0.979)	6892	2.00000	1.168(M)
	25 2,4-Dichlorophenol	162	8.692	8.692	(0.984)	9582	1.00000	1.089
	26 1,2,4-Trichlorobenzene	180	8.789	8.788	(0.995)	11037	1.00000	1.163
*	27 Naphthalene-d8	136	8.831	8.831	(1.000)	524897	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	8.858	8.863	(1.003)	29842	1.00000	1.167
	29 4-Chloroaniline	127	9.050	9.050	(1.025)	11864	1.00000	1.090
	30 Hexachlorobutadiene	225	9.211	9.210	(1.043)	5725	1.00000	1.046
	31 4-Chloro-3-methylphenol	107	9.921	9.921	(1.123)	8153	1.00000	1.060
	32 2-Methylnaphthalene	141	9.985	9.985	(1.131)	16612	1.00000	1.129
	33 Hexachlorocyclopentadiene	237	10.370	10.369	(0.889)	1491	1.00000	0.3522
	34 2,4,6-Trichlorophenol	196	10.530	10.529	(0.903)	6477	1.00000	1.044
	35 2,4,5-Trichlorophenol	196	10.589	10.588	(0.908)	6640	1.00000	1.089
$	36 2-Fluorobiphenyl	172	10.647	10.647	(0.913)	21035	1.00000	1.099
	37 2-Chloronaphthalene	162	10.743	10.743	(0.921)	20421	1.00000	1.184
	38 2-Nitroaniline	65	11.010	11.016	(0.944)	4463	1.00000	1.042
	39 Dimethylphthalate	163	11.411	11.411	(0.978)	21544	1.00000	1.184
	40 Acenaphthylene	152	11.406	11.405	(0.978)	30958	1.00000	1.148
	41 2,6-Dinitrotoluene	165	11.491	11.491	(0.985)	4784	1.00000	1.039
*	42 Acenaphthene-d10	164	11.662	11.662	(1.000)	301484	20.0000	
	43 3-Nitroaniline	138	11.683	11.688	(1.002)	4565	1.00000	1.140
	44 Acenaphthene	153	11.710	11.710	(1.004)	18199	1.00000	1.121
	45 2,4-Dinitrophenol	184	11.870	11.859	(1.018)	329	2.00000	0.1424
	46 Dibenzofuran	168	11.972	11.972	(1.027)	25298	1.00000	1.131
	47 4-Nitrophenol	109	12.079	12.078	(1.036)	1156	1.00000	0.6699
	48 2,4-Dinitrotoluene	165	12.105	12.105	(1.038)	5709	1.00000	0.9942
	50 Diethylphthalate	149	12.554	12.559	(1.076)	20423	1.00000	1.200
	49 Fluorene	166	12.517	12.522	(1.073)	21833	1.00000	1.190
	51 4-Chlorophenyl-phenylether	204	12.575	12.580	(1.078)	10708	1.00000	1.164
	52 4-Nitroaniline	138	12.661	12.661	(1.086)	4549	1.00000	1.041
	53 4,6-Dinitro-2-methylphenol	198	12.741	12.741	(0.911)	5456	5.00000	1.388
	54 N-Nitrosodiphenylamine	169	12.789	12.794	(0.914)	15757	1.00000	1.172
$	55 2,4,6-Tribromophenol	330	12.944	12.944	(1.110)	2670	1.00000	0.8917
	56 4-Bromophenyl-phenylether	248	13.345	13.339	(0.954)	6920	1.00000	1.100
	57 Hexachlorobenzene	284	13.526	13.526	(0.967)	7877	1.00000	1.110
	58 Pentachlorophenol	266	13.847	13.846	(0.990)	1922	1.00000	0.5522
*	59 Phenanthrene-d10	188	13.985	13.991	(1.000)	473456	20.0000	
	60 Phenanthrene	178	14.023	14.023	(1.003)	27635	1.00000	1.162
	61 Anthracene	178	14.092	14.092	(1.008)	30625	1.00000	1.174
	62 Carbazole	167	14.407	14.412	(1.030)	46294	1.00000	1.259
	63 Di-n-butylphthalate	149	15.187	15.187	(1.086)	33509	1.00000	1.109
	64 Fluoranthene	202	15.924	15.924	(1.139)	32352	1.00000	1.118
	65 Pyrene	202	16.266	16.266	(0.892)	34395	1.00000	1.177
$	66 Terphenyl-d14	244	16.640	16.640	(0.913)	20337	1.00000	1.063
	67 Butylbenzylphthalate	149	17.559	17.558	(0.963)	13852	1.00000	1.015
	68 Benzo(a)anthracene	228	18.210	18.210	(0.999)	33742	1.00000	1.159
*	69 Chrysene-d12	240	18.232	18.237	(1.000)	565966	20.0000	
	70 3,3'-Dichlorobenzidine	252	18.269	18.269	(1.002)	12057	1.00000	1.210
	71 Chrysene	228	18.269	18.274	(1.002)	31612	1.00000	1.186
	72 bis(2-Ethylhexyl)phthalate	149	18.584	18.584	(0.953)	18877	1.00000	1.051
*	134 Di-n-octylphthalate-d4	153	19.508	19.508	(1.000)	653598	20.0000	
	73 Di-n-octylphthalate	149	19.519	19.518	(1.001)	36838	1.00000	1.212

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	19.839	19.839	(0.975)	30510	1.00000	1.006
75	Benzo(k)fluoranthene	252	19.866	19.871	(0.976)	37818	1.00000	1.233(M)
187	Total Benzofluoranthenes	252	19.839	19.839	(0.975)	70842	2.00000	2.412
76	Benzo(a)pyrene	252	20.272	20.272	(0.996)	33483	1.00000	1.105
* 77	Perylene-d12	264	20.357	20.357	(1.000)	550160	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	21.693	21.692	(1.066)	41317	1.00000	1.072
79	Dibenzo(a,h)anthracene	278	21.719	21.724	(1.067)	31418	1.00000	1.081
80	Benzo(g,h,i)perylene	276	21.976	21.975	(1.079)	39752	1.00000	1.180
90	N-Nitrosodimethylamine	74	1.867	1.866	(0.276)	6086	1.00000	1.002
103	Pyridine	79	1.856	1.850	(0.274)	10272	1.00000	0.9312
91	Aniline	93	6.326	6.326	(0.935)	15351	1.00000	1.047
105	1-methylnaphthalene	141	10.151	10.150	(1.149)	16957	1.00000	1.141
93	Benzidine	184	16.229	16.228	(0.890)	14018	1.00000	1.566(M)
111	Azobenzene (1,2-DP-Hydrazine)	77	12.816	12.821	(1.099)	21810	1.00000	1.190
143	1,4-Dioxane	88	1.482	1.482	(0.219)	4819	1.00000	1.206
$ 137	d8-1,4-Dioxane	96	1.455	1.455	(0.215)	4537	1.00000	1.096
144	alpha-Terpineol	59	8.938	8.938	(1.012)	6127	1.00000	1.027
98	Retene	219	16.864	16.864	(0.925)	11273	1.00000	1.067
133	Butylatedhydroxytoluene	205	11.902	11.902	(1.021)	15697	1.00000	1.205
115	Tributyl Phosphate	99	12.949	12.954	(0.926)	22665	1.00000	1.143
116	Dibutyl Phenyl Phosphate	175	14.637	14.637	(1.047)	14917	1.00000	1.027
117	Butyl Diphenyl Phosphate	94	16.282	16.282	(0.893)	5252	1.00000	1.180
118	Triphenyl Phosphate	326	17.852	17.852	(0.979)	5841	1.00000	1.057
123	Acetophenone	105	7.501	7.506	(1.109)	12960	1.00000	1.085
179	n-Decane	57	6.658	6.663	(0.984)	8875	1.00000	1.059
180	n-Octadecane	57	14.044	14.044	(1.004)	8815	1.00000	1.146
168	Pentachlorobenzene	250	12.015	12.014	(1.030)	8712	1.00000	1.145
113	Diphenyl Oxide	170	10.968	10.973	(0.940)	13592	1.00000	1.120
112	Biphenyl	154	10.770	10.770	(0.924)	23209	1.00000	1.226
120	2,3,4,6-Tetrachlorophenol	232	12.282	12.281	(1.053)	5454	1.00000	0.9905
151	1,2,4,5-Tetrachlorobenzene	216	10.321	10.327	(0.885)	23477	1.00000	1.209
110	Tetrachloroguaiacol	247	13.975	13.980	(0.999)	6548	2.00000	1.897
109	3,4,5-Trichloroguaiacol	213	12.388	12.388	(0.886)	3141	1.00000	0.9328
181	3,4,6-Trichloroguaiacol	211	12.495	12.495	(1.847)	3854	1.00000	0.9217
108	4,5,6-Trichloroguaiacol	213	13.414	13.414	(1.150)	3841	1.00000	1.083
184	3,4-Dichloroguaiacol	192	10.866	10.866	(1.606)	3482	1.00000	0.9522
107	4,5-Dichloroguaiacol	192	11.667	11.662	(1.000)	8929	2.00000	2.159
182	4,6-Dichloroguaiacol	192	11.667	11.662	(1.725)	8929	2.00000	2.076
185	4-Chloroguaiacol	115	9.809	9.808	(1.450)	1744	0.50000	0.4267
186	Carbaryl	144	14.835	14.840	(1.061)	11405	1.00000	0.8911
106	Guaiacol	124	7.790	7.795	(1.152)	8526	1.00000	1.034

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 08201002.D
Lab Smp Id: IC010820
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Misc Info: 10-

Calibration Date: 20-AUG-2010
Calibration Time: 10:40
Client Smp ID: IC010820
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	154425	77212	308850	167270	8.32
27 Naphthalene-d8	490229	245114	980458	524897	7.07
42 Acenaphthene-d10	286412	143206	572824	301484	5.26
59 Phenanthrene-d10	457816	228908	915632	473456	3.42
69 Chrysene-d12	560635	280318	1121270	565966	0.95
134 Di-n-octylphthala	675549	337774	1351098	653598	-3.25
77 Perylene-d12	521119	260560	1042238	550160	5.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	6.77	6.27	7.27	6.76	-0.02
27 Naphthalene-d8	8.84	8.34	9.34	8.83	-0.08
42 Acenaphthene-d10	11.66	11.16	12.16	11.66	-0.01
59 Phenanthrene-d10	13.99	13.49	14.49	13.99	-0.05
69 Chrysene-d12	18.24	17.74	18.74	18.23	-0.07
134 Di-n-octylphthala	19.51	19.01	20.01	19.51	-0.01
77 Perylene-d12	20.36	19.86	20.86	20.36	-0.01

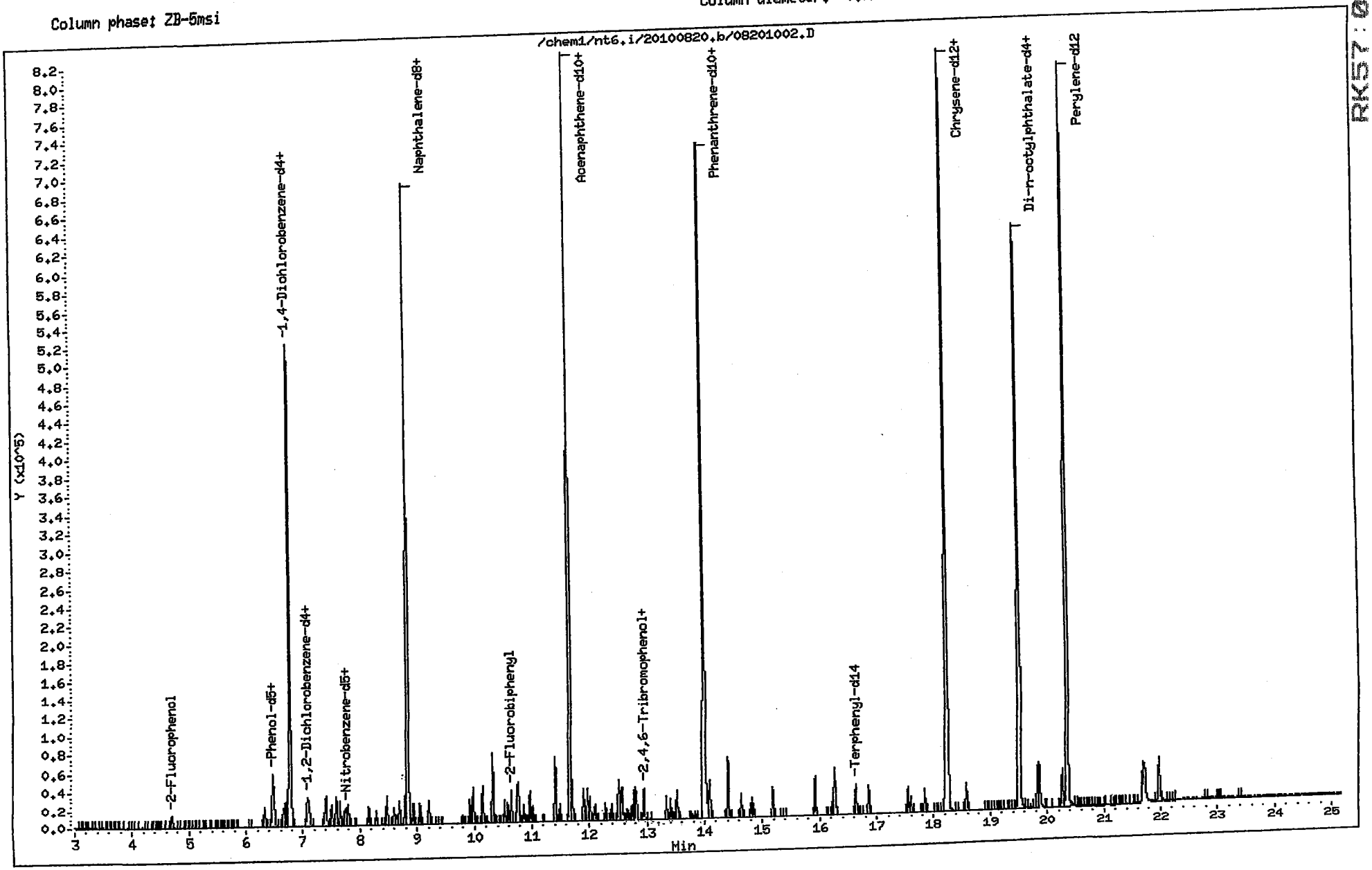
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt6.i/20100820.b/08201002.D
Date : 20-AUG-2010 11:13
Client ID: IC010820
Sample Info: IC010820,

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

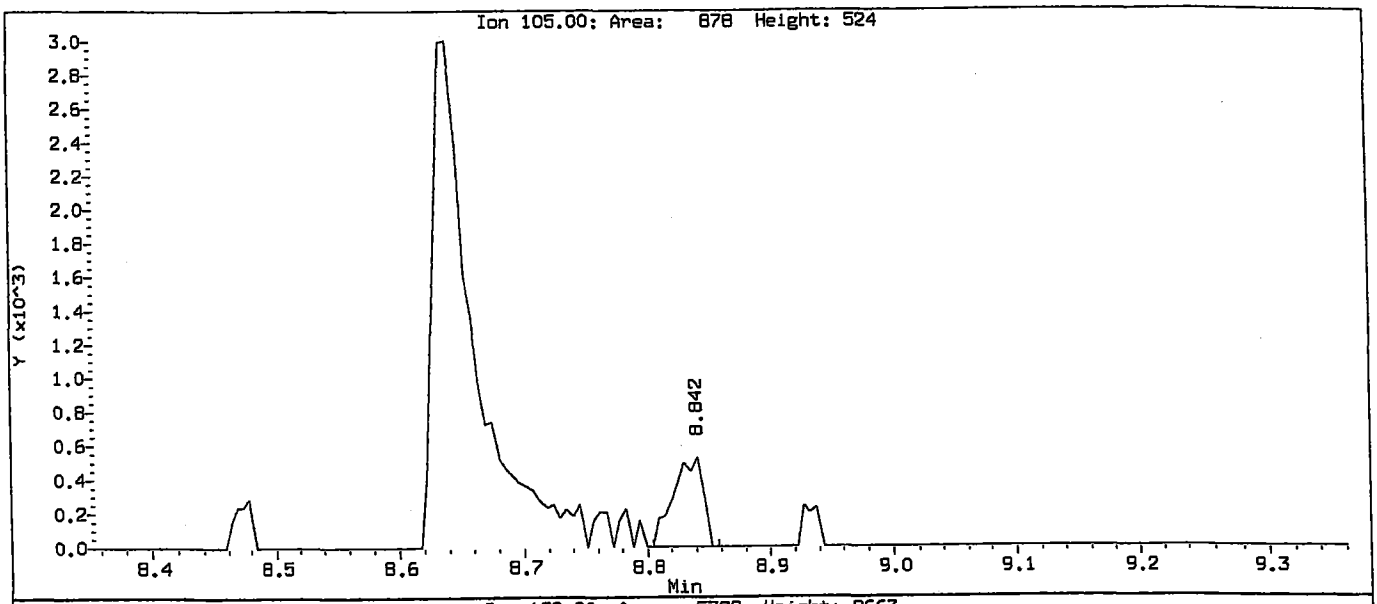
Column phase: ZB-5msi

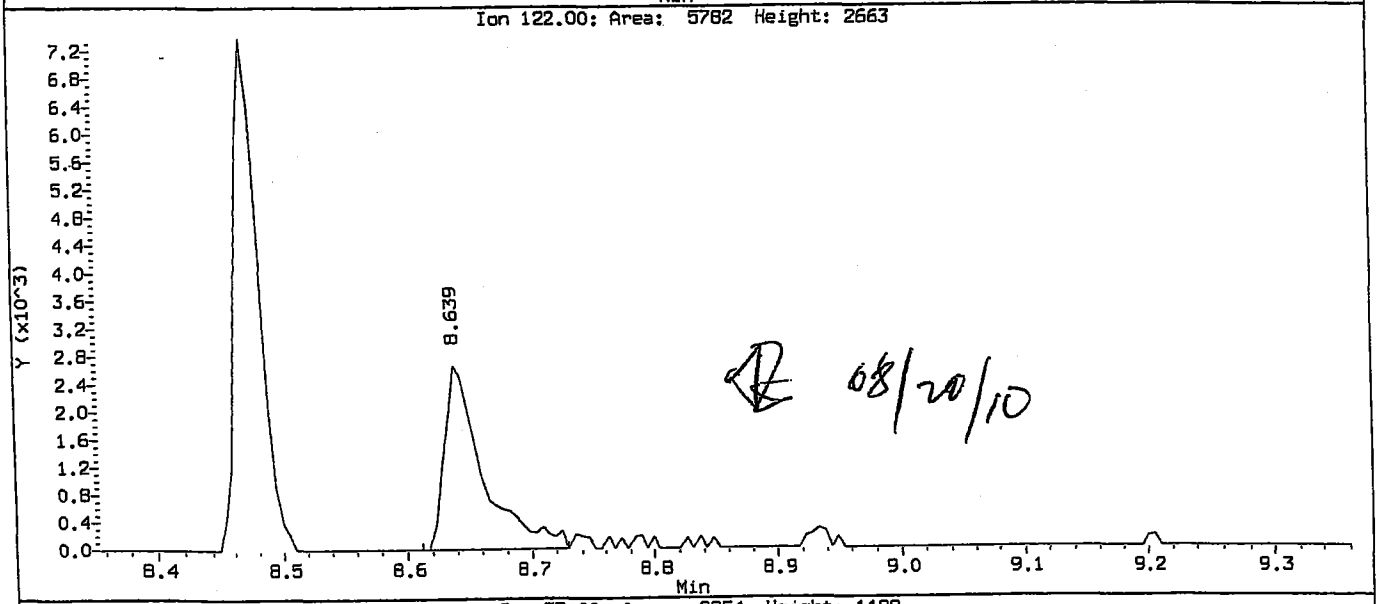


RK57 : 00085

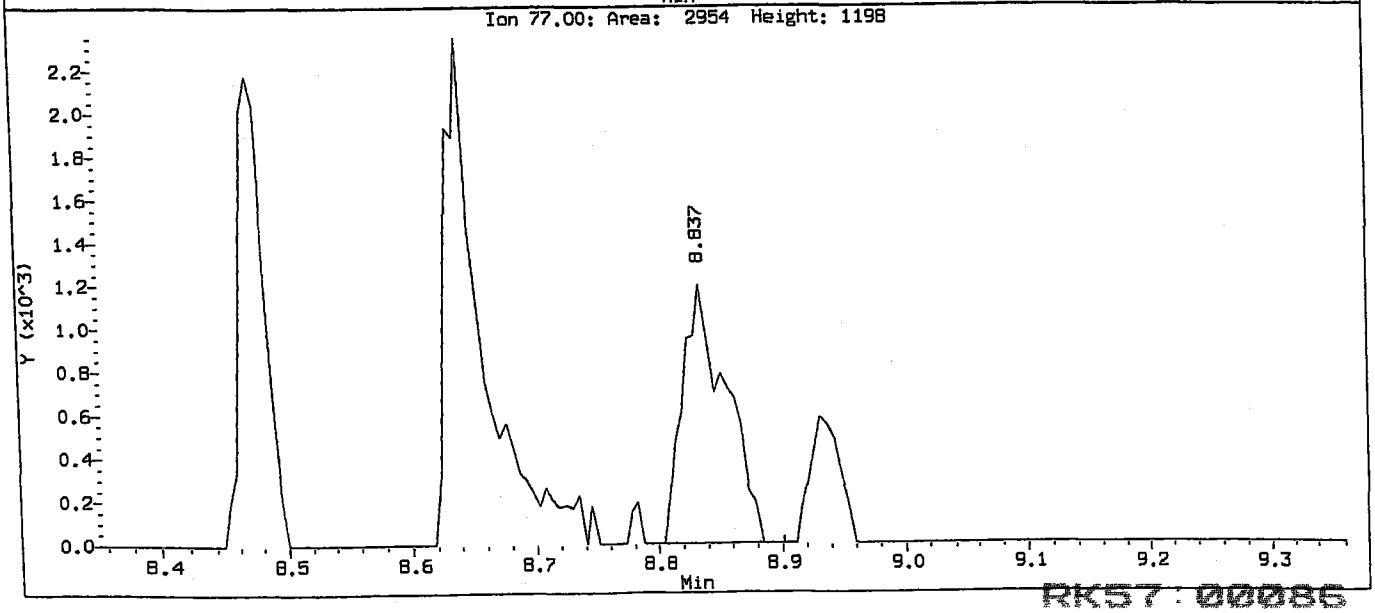
Data File: /chem1/nt6.i/20100820.b/08201002.D
Injection Date: 20-AUG-2010 11:13
Instrument: nt6.i
Client Sample ID: IC010820

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





68/20/10



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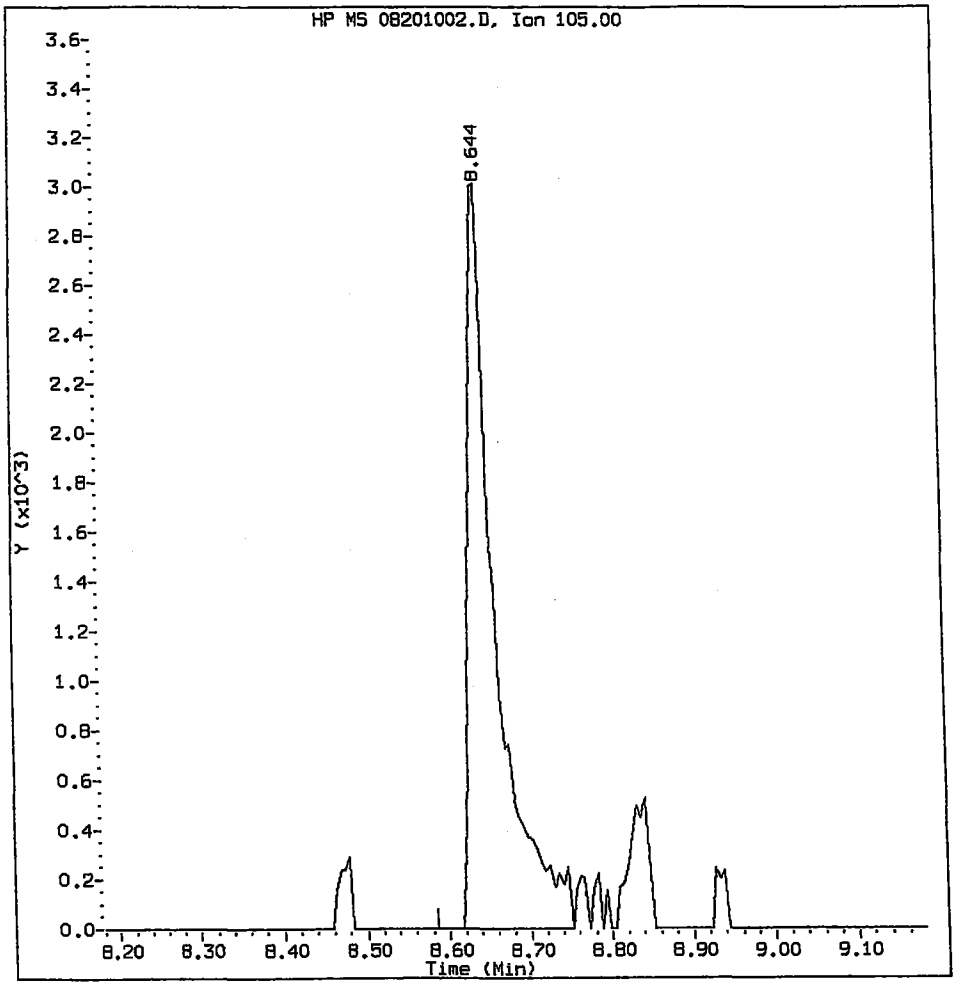
Benzoic acid Amount: 1.17 Area: 6892



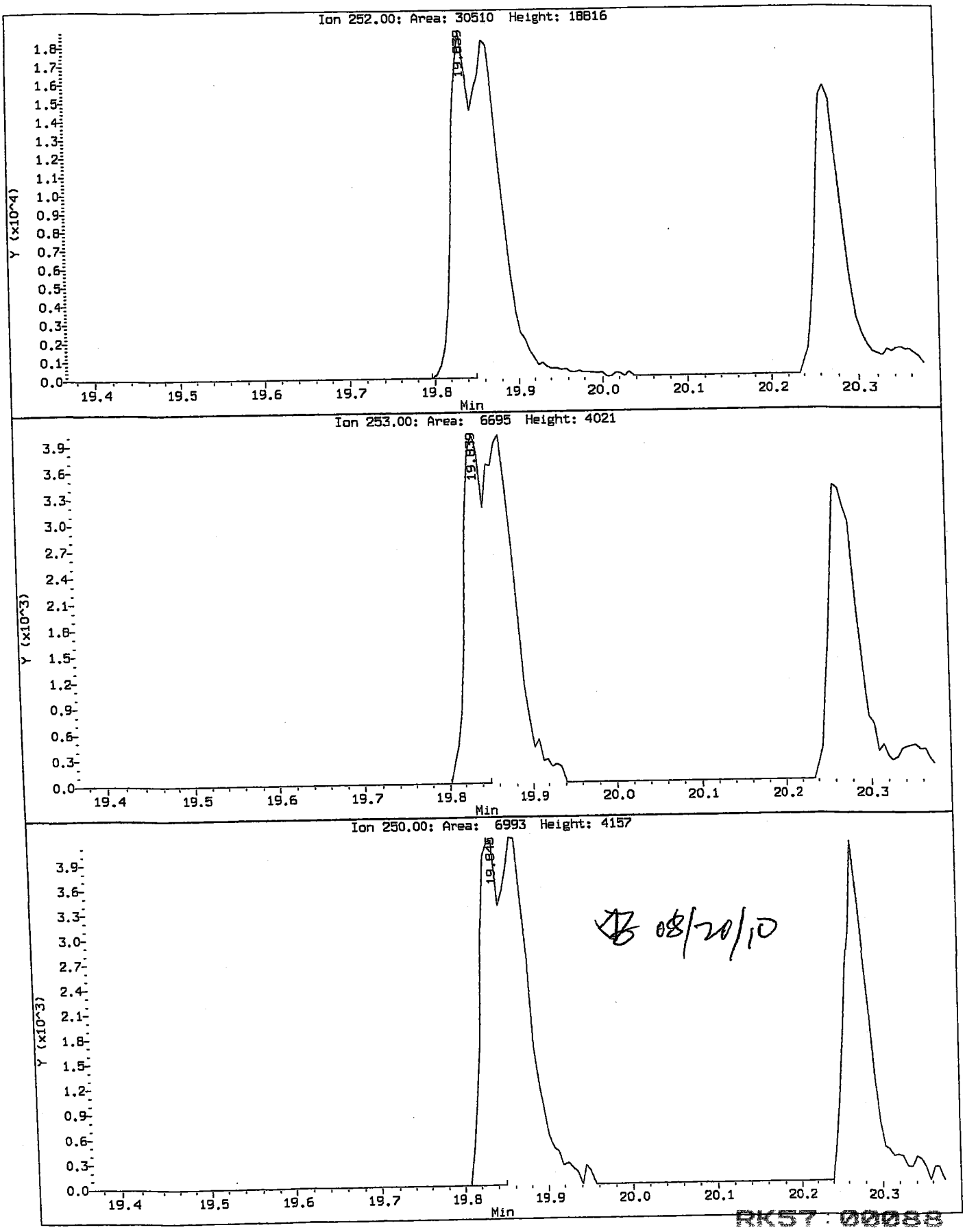
MANUAL INTEGRATION for Benzoic acid

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

Analyst: [signature] Date: 08/20/10

Data File: /chem1/nt6.i/20100820.b/08201002.D
Injection Date: 20-AUG-2010 11:13
Instrument: nt6.i
Client Sample ID: IC010820

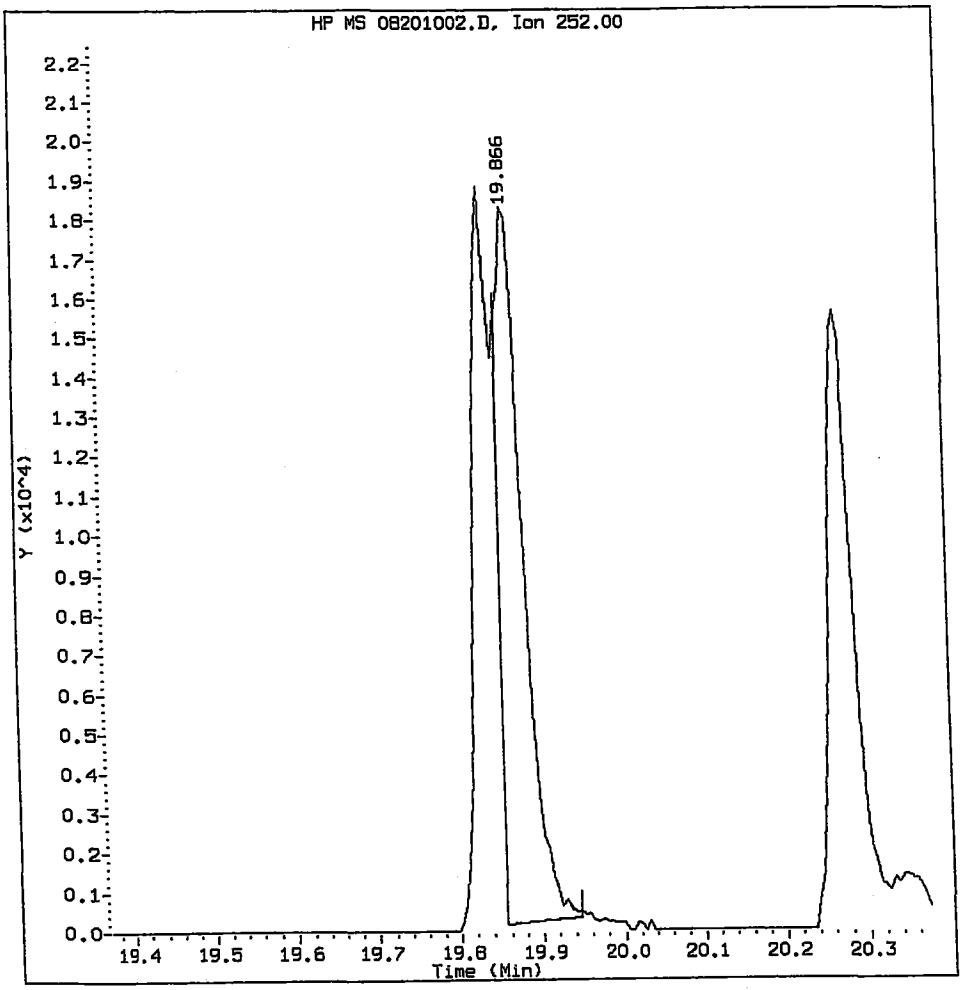
Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9



08/20/10

IC010820, /chem1/nt6.i/20100820.b/08201002.D

Benzo(k)fluoranthene Amount: 1.23 Area: 37818



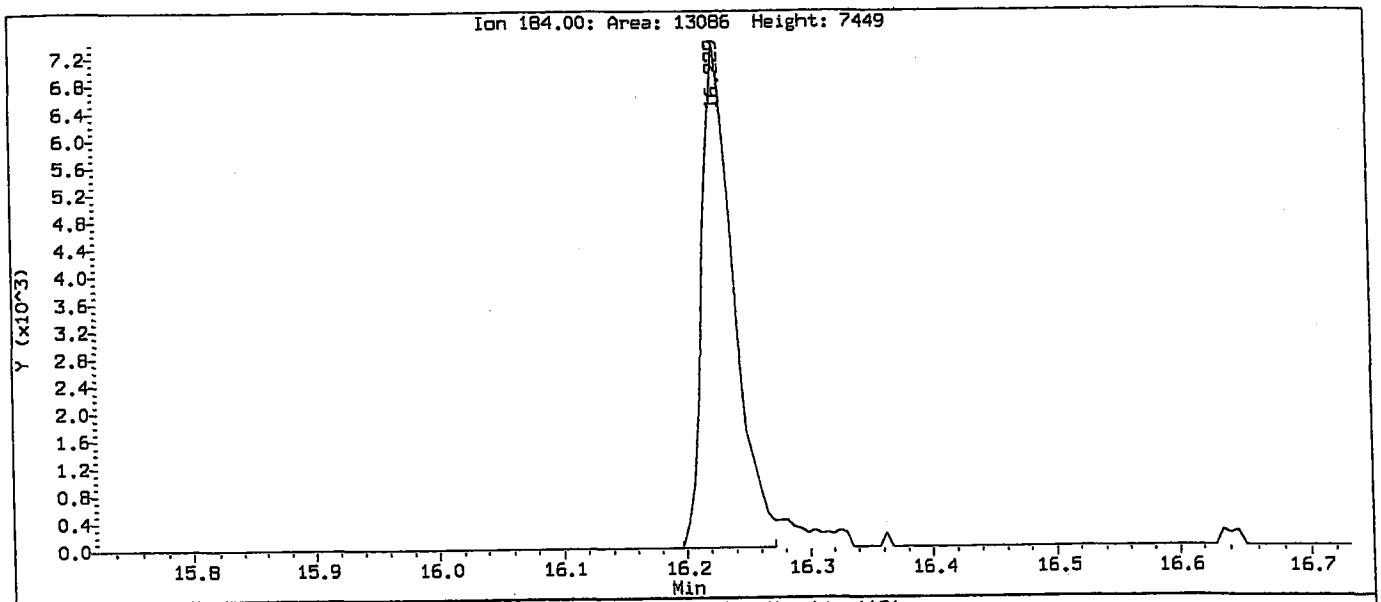
MANUAL INTEGRATION for Benzo(k)fluoranthene

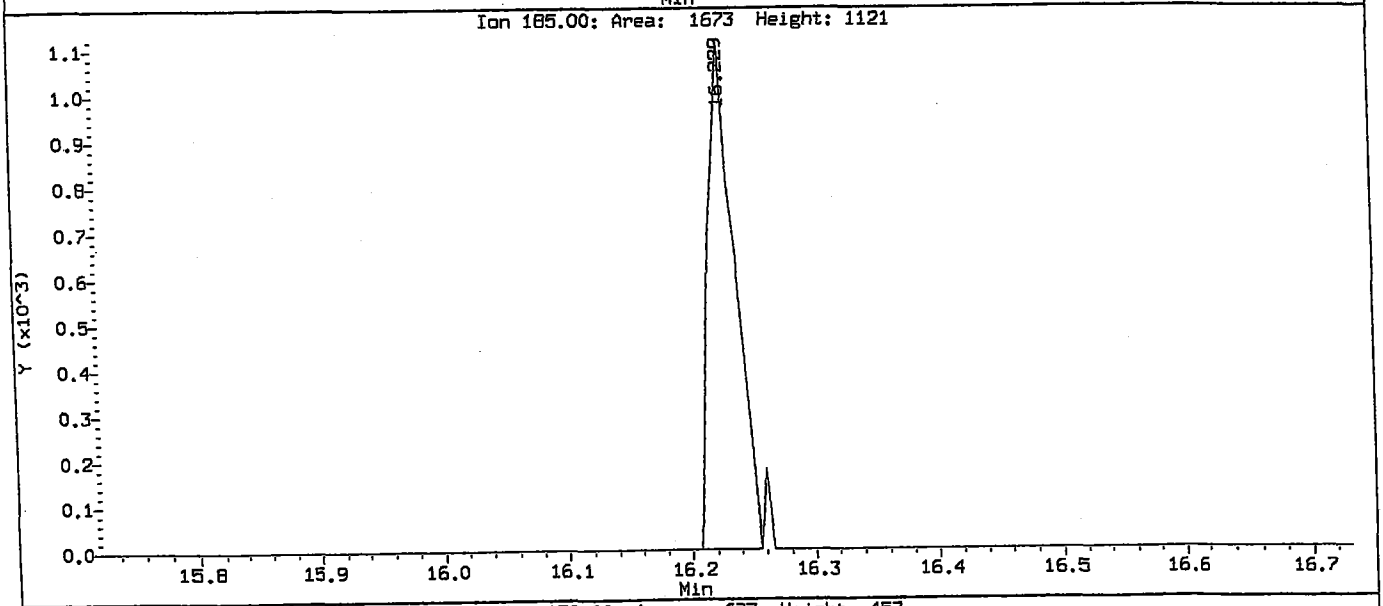
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other RT correction

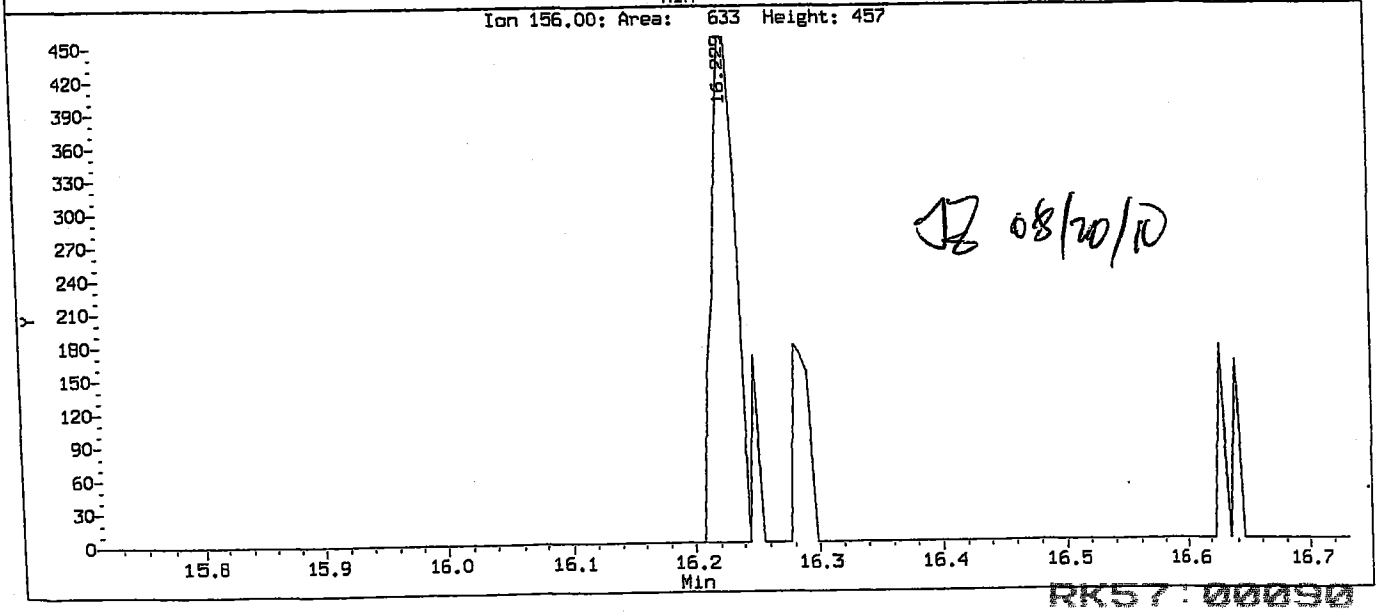
Analyst: [signature] Date: 08/20/10

Data File: /chem1/nt6.i/20100820.b/08201002.D
Injection Date: 20-AUG-2010 11:13
Instrument: nt6.i
Client Sample ID: IC010820

Compound: Benzidine
CAS Number:



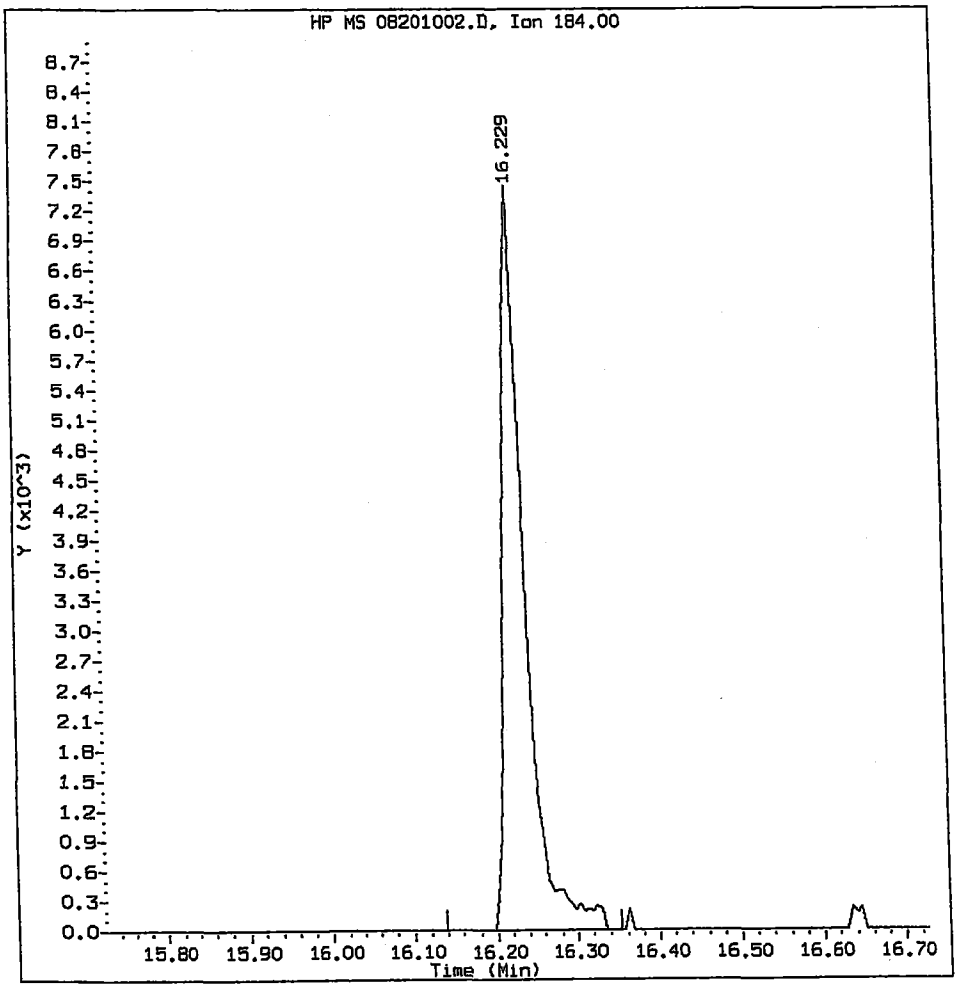




JZ 08/20/10

IC010820, /chem1/nt6.i/20100820.b/08201002.D

Benzidine Amount: 1.57 Area: 14018



MANUAL INTEGRATION for Benzidine

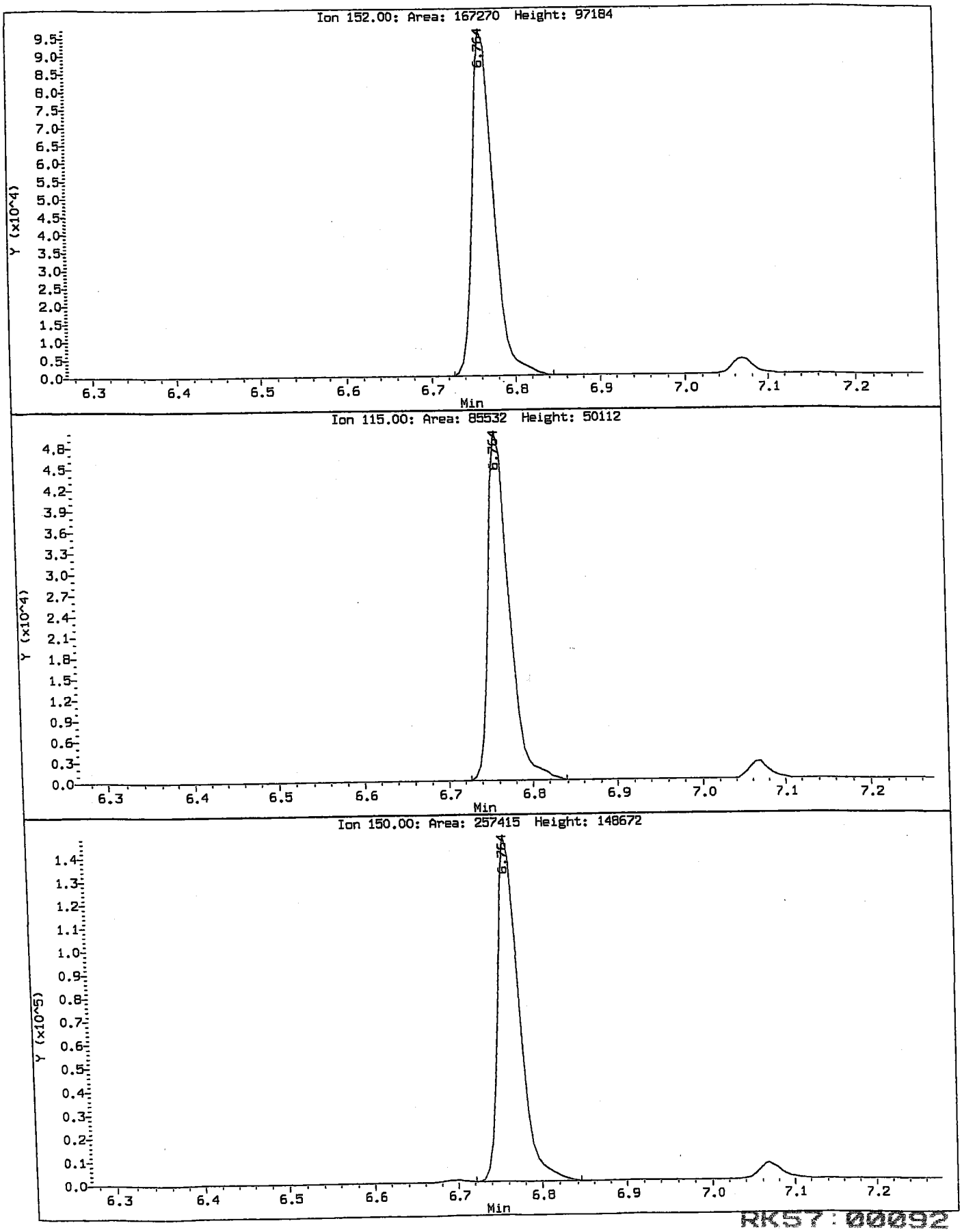
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 08/20/10

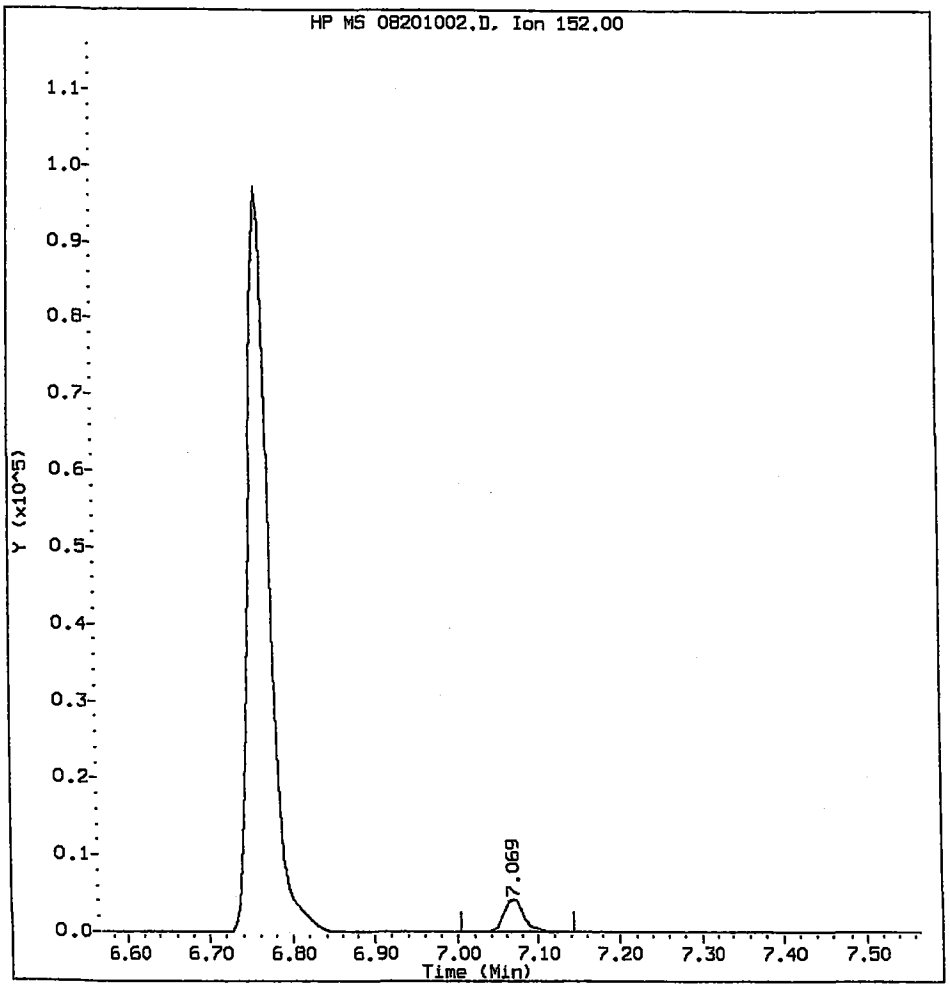
Data File: /chemi/nt6.i/20100820.b/08201002.D
Injection Date: 20-AUG-2010 11:13
Instrument: nt6.i
Client Sample ID: ICO10820

Compound: 1,2-Dichlorobenzene-d4
CAS Number: 2199-69-1



IC010820, /chem1/nt6.i/20100820.b/08201002.D

1,2-Dichlorobenzene-d4 Amount: 1.02 Area: 7242



MANUAL INTEGRATION for 1,2-Dichlorobenzene-d4

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

Analyst: _____ Date: 8/20/10

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100820.b/08201003.D
Lab Smp Id: IC050820 Client Smp ID: IC050820
Inj Date : 20-AUG-2010 11:45
Operator : JZ Inst ID: nt6.i
Smp Info : IC050820,
Misc Info : 10-
Comment : 1ul Injection
Method : /chem1/nt6.i/20100820.b/SW846082010.m
Meth Date : 20-Aug-2010 15:57 jianqing Quant Type: ISTD
Cal Date : 20-AUG-2010 11:45 Cal File: 08201003.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 3.50

JZ 08/10/10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	4.692	4.692	(0.694)	47173	5.00000	5.112
$	2 Phenol-d5	99	6.449	6.449	(0.953)	55993	5.00000	5.262
	3 Phenol	94	6.470	6.470	(0.957)	60074	5.00000	5.306
$	5 2-Chlorophenol-d4	132	6.476	6.476	(0.957)	50016	5.00000	5.476
	4 Bis(2-Chloroethyl)ether	93	6.481	6.481	(0.958)	45203	5.00000	5.533
	6 2-Chlorophenol	128	6.497	6.497	(0.961)	49606	5.00000	5.171
	7 1,3-Dichlorobenzene	146	6.695	6.695	(0.990)	59097	5.00000	5.300
*	8 1,4-Dichlorobenzene-d4	152	6.764	6.764	(1.000)	152316	20.0000	
	9 1,4-Dichlorobenzene	146	6.791	6.791	(1.004)	58319	5.00000	5.249
$	10 1,2-Dichlorobenzene-d4	152	7.068	7.068	(1.045)	34241	5.00000	5.279
	12 1,2-Dichlorobenzene	146	7.090	7.090	(1.048)	54688	5.00000	5.197
	11 Benzyl alcohol	108	7.111	7.111	(1.051)	29505	5.00000	5.192
	14 2,2'-oxybis(1-Chloropropane)	45	7.378	7.378	(1.091)	52482	5.00000	5.174
	13 2-Methylphenol	108	7.410	7.410	(1.096)	42314	5.00000	5.062
	17 Hexachloroethane	117	7.581	7.581	(1.121)	20927	5.00000	5.168
	16 N-Nitroso-di-n-propylamine	70	7.592	7.592	(1.122)	29908	5.00000	5.171
	15 4-Methylphenol	108	7.656	7.656	(1.132)	43835	5.00000	5.085
$	18 Nitrobenzene-d5	82	7.731	7.731	(0.875)	44101	5.00000	5.222
	19 Nitrobenzene	77	7.757	7.757	(0.878)	46843	5.00000	5.235
	20 Isophorone	82	8.153	8.153	(0.923)	75181	5.00000	5.184
	21 2-Nitrophenol	139	8.281	8.281	(0.938)	26677	5.00000	4.897
	22 2,4-Dimethylphenol	107	8.473	8.473	(0.959)	43533	5.00000	5.029
	23 Bis(2-Chloroethoxy)methane	93	8.596	8.596	(0.973)	52102	5.00000	5.194
	24 Benzoic acid	105	8.681	8.681	(0.983)	45223	10.0000	8.298
	25 2,4-Dichlorophenol	162	8.692	8.692	(0.984)	40821	5.00000	5.025
	26 1,2,4-Trichlorobenzene	180	8.788	8.788	(0.995)	46236	5.00000	5.279
*	27 Naphthalene-d8	136	8.831	8.831	(1.000)	484620	20.0000	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28 Naphthalene	128	8.863	8.863	(1.004)	126317	5.00000	5.351
29 4-Chloroaniline	127	9.050	9.050	(1.025)	54342	5.00000	5.408
30 Hexachlorobutadiene	225	9.210	9.210	(1.043)	25867	5.00000	5.118
31 4-Chloro-3-methylphenol	107	9.921	9.921	(1.123)	36397	5.00000	5.127
32 2-Methylnaphthalene	141	9.985	9.985	(1.131)	73402	5.00000	5.404
33 Hexachlorocyclopentadiene	237	10.369	10.369	(0.889)	15057	5.00000	3.769
34 2,4,6-Trichlorophenol	196	10.529	10.529	(0.903)	27396	5.00000	4.680
35 2,4,5-Trichlorophenol	196	10.588	10.588	(0.908)	27524	5.00000	4.783
$ 36 2-Fluorobiphenyl	172	10.647	10.647	(0.913)	95755	5.00000	5.300
37 2-Chloronaphthalene	162	10.743	10.743	(0.921)	85405	5.00000	5.247
38 2-Nitroaniline	65	11.016	11.016	(0.945)	21703	5.00000	5.369
39 Dimethylphthalate	163	11.411	11.411	(0.978)	93820	5.00000	5.465
40 Acenaphthylene	152	11.405	11.405	(0.978)	136470	5.00000	5.362
41 2,6-Dinitrotoluene	165	11.491	11.491	(0.985)	22200	5.00000	5.111
* 42 Acenaphthene-d10	164	11.662	11.662	(1.000)	284483	20.0000	
43 3-Nitroaniline	138	11.688	11.688	(1.002)	22102	5.00000	5.850
44 Acenaphthene	153	11.710	11.710	(1.004)	80834	5.00000	5.277
45 2,4-Dinitrophenol	184	11.859	11.859	(1.017)	11886	10.0000	5.454 (M)
46 Dibenzofuran	168	11.972	11.972	(1.027)	115282	5.00000	5.461
47 4-Nitrophenol	109	12.078	12.078	(1.036)	7722	5.00000	4.742
48 2,4-Dinitrotoluene	165	12.105	12.105	(1.038)	28094	5.00000	5.185
50 Diethylphthalate	149	12.559	12.559	(1.077)	88776	5.00000	5.526
49 Fluorene	166	12.522	12.522	(1.074)	93619	5.00000	5.406
51 4-Chlorophenyl-phenylether	204	12.580	12.580	(1.079)	45727	5.00000	5.269
52 4-Nitroaniline	138	12.661	12.661	(1.086)	22265	5.00000	5.399
53 4,6-Dinitro-2-methylphenol	198	12.741	12.741	(0.911)	34550	10.0000	9.054
54 N-Nitrosodiphenylamine	169	12.794	12.794	(0.914)	68227	5.00000	5.227
$ 55 2,4,6-Tribromophenol	330	12.944	12.944	(1.110)	13834	5.00000	4.896
56 4-Bromophenyl-phenylether	248	13.339	13.339	(0.953)	30253	5.00000	4.954
57 Hexachlorobenzene	284	13.526	13.526	(0.967)	34712	5.00000	5.040
58 Pentachlorophenol	266	13.846	13.846	(0.990)	12959	5.00000	3.835
* 59 Phenanthrene-d10	188	13.991	13.991	(1.000)	459606	20.0000	
60 Phenanthrene	178	14.023	14.023	(1.002)	121867	5.00000	5.280
61 Anthracene	178	14.092	14.092	(1.007)	131455	5.00000	5.190
62 Carbazole	167	14.412	14.412	(1.030)	187363	5.00000	5.250
63 Di-n-butylphthalate	149	15.187	15.187	(1.085)	152155	5.00000	5.187
64 Fluoranthene	202	15.924	15.924	(1.138)	144190	5.00000	5.134
65 Pyrene	202	16.266	16.266	(0.892)	151456	5.00000	5.516
$ 66 Terphenyl-d14	244	16.640	16.640	(0.912)	93215	5.00000	5.188
67 Butylbenzylphthalate	149	17.558	17.558	(0.963)	65625	5.00000	5.120
68 Benzo(a)anthracene	228	18.210	18.210	(0.999)	140789	5.00000	5.150
* 69 Chrysene-d12	240	18.237	18.237	(1.000)	531662	20.0000	
70 3,3'-Dichlorobenzidine	252	18.269	18.269	(1.002)	49783	5.00000	5.319
71 Chrysene	228	18.274	18.274	(1.002)	133305	5.00000	5.324
72 bis(2-Ethylhexyl)phthalate	149	18.584	18.584	(0.953)	89520	5.00000	5.206
* 134 Di-n-octylphthalate-d4	153	19.508	19.508	(1.000)	625883	20.0000	
73 Di-n-octylphthalate	149	19.518	19.518	(1.001)	154647	5.00000	5.312

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	19.839	19.839	(0.975)	151805	5.00000	5.354
75	Benzo(k)fluoranthene	252	19.871	19.871	(0.976)	163627	5.00000	5.707
187	Total Benzofluoranthenes	252	19.839	19.839	(0.975)	298995	10.0000	10.76(M)
76	Benzo(a)pyrene	252	20.272	20.272	(0.996)	151446	5.00000	5.347
* 77	Perylene-d12	264	20.357	20.357	(1.000)	514177	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	21.692	21.692	(1.066)	192757	5.00000	5.353
79	Dibenzo(a,h)anthracene	278	21.724	21.724	(1.067)	148422	5.00000	5.466
80	Benzo(g,h,i)perylene	276	21.975	21.975	(1.079)	166421	5.00000	5.287
90	N-Nitrosodimethylamine	74	1.866	1.866	(0.276)	27789	5.00000	5.024
103	Pyridine	79	1.850	1.850	(0.274)	50331	5.00000	5.011
91	Aniline	93	6.326	6.326	(0.935)	70180	5.00000	5.258
105	1-methylnaphthalene	141	10.150	10.150	(1.149)	72860	5.00000	5.310
93	Benzidine	184	16.228	16.228	(0.890)	51981	5.00000	6.180
111	Azobenzene (1,2-DP-Hydrazine)	77	12.821	12.821	(1.099)	93732	5.00000	5.420
143	1,4-Dioxane	88	1.482	1.482	(0.219)	17649	5.00000	4.851
$ 137	d8-1,4-Dioxane	96	1.455	1.455	(0.215)	18848	5.00000	5.001
144	alpha-Terpineol	59	8.938	8.938	(1.012)	28816	5.00000	5.233
98	Retene	219	16.864	16.864	(0.925)	51367	5.00000	5.175
133	Butylatedhydroxytoluene	205	11.902	11.902	(1.021)	68182	5.00000	5.549
115	Tributyl Phosphate	99	12.954	12.954	(0.926)	102401	5.00000	5.320
116	Dibutyl Phenyl Phosphate	175	14.637	14.637	(1.046)	70932	5.00000	5.032
117	Butyl Diphenyl Phosphate	94	16.282	16.282	(0.893)	22131	5.00000	5.292
118	Triphenyl Phosphate	326	17.852	17.852	(0.979)	25890	5.00000	4.985
123	Acetophenone	105	7.506	7.506	(1.110)	56930	5.00000	5.232
179	n-Decane	57	6.663	6.663	(0.985)	40158	5.00000	5.262
180	n-Octadecane	57	14.044	14.044	(1.004)	39273	5.00000	5.259
168	Pentachlorobenzene	250	12.014	12.014	(1.030)	37172	5.00000	5.178
113	Diphenyl Oxide	170	10.973	10.973	(0.941)	59162	5.00000	5.168
112	Biphenyl	154	10.770	10.770	(0.924)	99918	5.00000	5.592
120	2,3,4,6-Tetrachlorophenol	232	12.281	12.281	(1.053)	24413	5.00000	4.698
151	1,2,4,5-Tetrachlorobenzene	216	10.327	10.327	(0.886)	98464	5.00000	5.374
110	Tetrachloroguaiacol	247	13.980	13.980	(0.999)	31805	10.0000	9.489
109	3,4,5-Trichloroguaiacol	213	12.388	12.388	(0.885)	15886	5.00000	4.860
181	3,4,6-Trichloroguaiacol	211	12.495	12.495	(1.847)	19191	5.00000	5.040
108	4,5,6-Trichloroguaiacol	213	13.414	13.414	(1.150)	16756	5.00000	5.007
184	3,4-Dichloroguaiacol	192	10.866	10.866	(1.606)	16579	5.00000	4.979
107	4,5-Dichloroguaiacol	192	11.662	11.662	(1.000)	40800	10.0000	10.45
182	4,6-Dichloroguaiacol	192	11.662	11.662	(1.724)	40800	10.0000	10.42
185	4-Chloroguaiacol	115	9.808	9.808	(1.450)	8753	2.50000	2.352
186	Carbaryl	144	14.840	14.840	(1.061)	60377	5.00000	4.860
106	Guaiacol	124	7.795	7.795	(1.152)	39525	5.00000	5.262

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 08201003.D
Lab Smp Id: IC050820
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Misc Info: 10-

Calibration Date: 20-AUG-2010
Calibration Time: 10:40
Client Smp ID: IC050820
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	154425	77212	308850	152316	-1.37
27 Naphthalene-d8	490229	245114	980458	484620	-1.14
42 Acenaphthene-d10	286412	143206	572824	284483	-0.67
59 Phenanthrene-d10	457816	228908	915632	459606	0.39
69 Chrysene-d12	560635	280318	1121270	531662	-5.17
134 Di-n-octylphthala	675549	337774	1351098	625883	-7.35
77 Perylene-d12	521119	260560	1042238	514177	-1.33

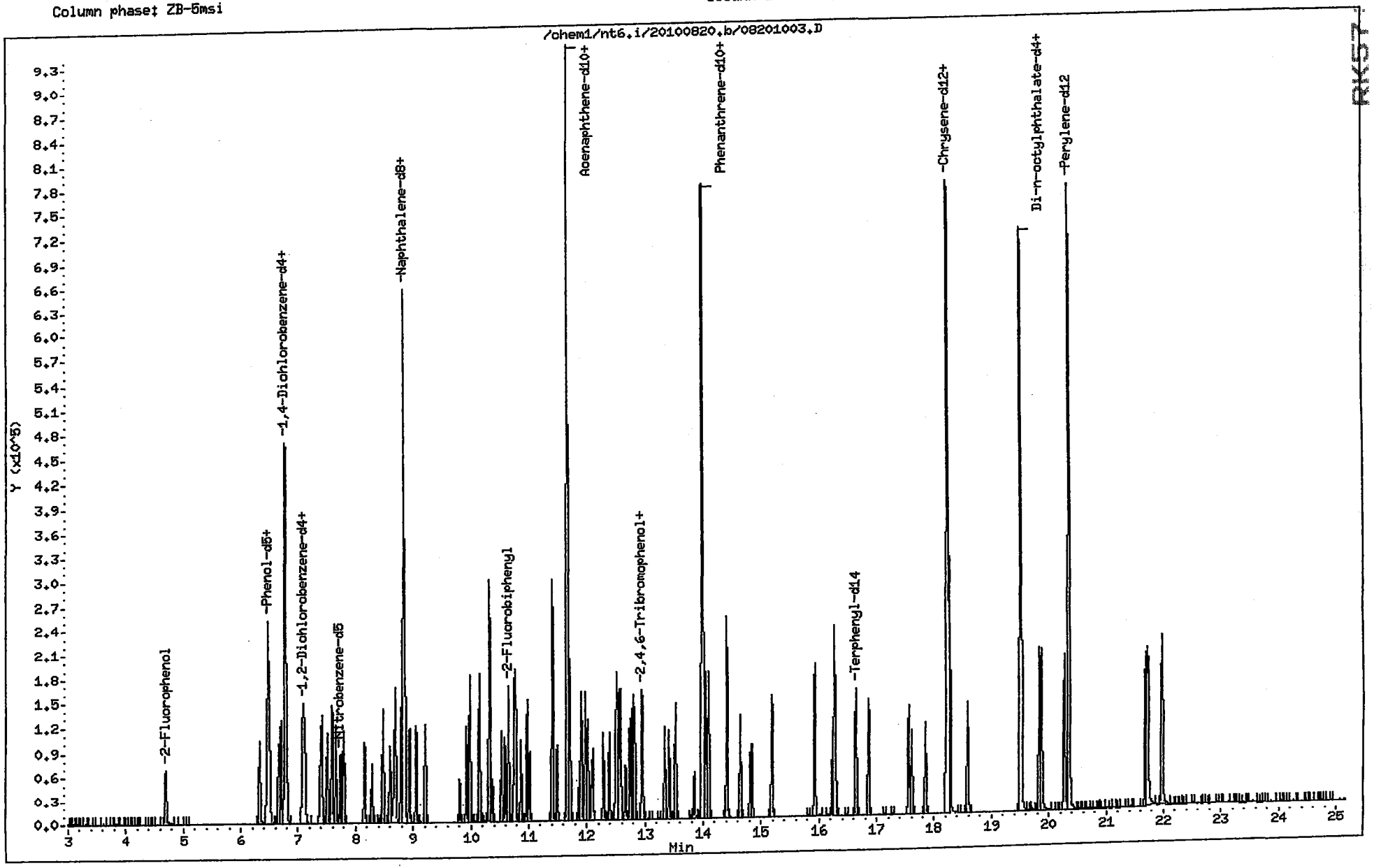
		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	6.77	6.27	7.27	6.76	-0.03
27 Naphthalene-d8	8.84	8.34	9.34	8.83	-0.08
42 Acenaphthene-d10	11.66	11.16	12.16	11.66	-0.02
59 Phenanthrene-d10	13.99	13.49	14.49	13.99	-0.01
69 Chrysene-d12	18.24	17.74	18.74	18.24	-0.04
134 Di-n-octylphthala	19.51	19.01	20.01	19.51	-0.01
77 Perylene-d12	20.36	19.86	20.86	20.36	-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.

Data File: /chem1/nt6.i/20100820.b/08201003.D
Date : 20-AUG-2010 11:45
Client ID: IC050820
Sample Info: IC050820,

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

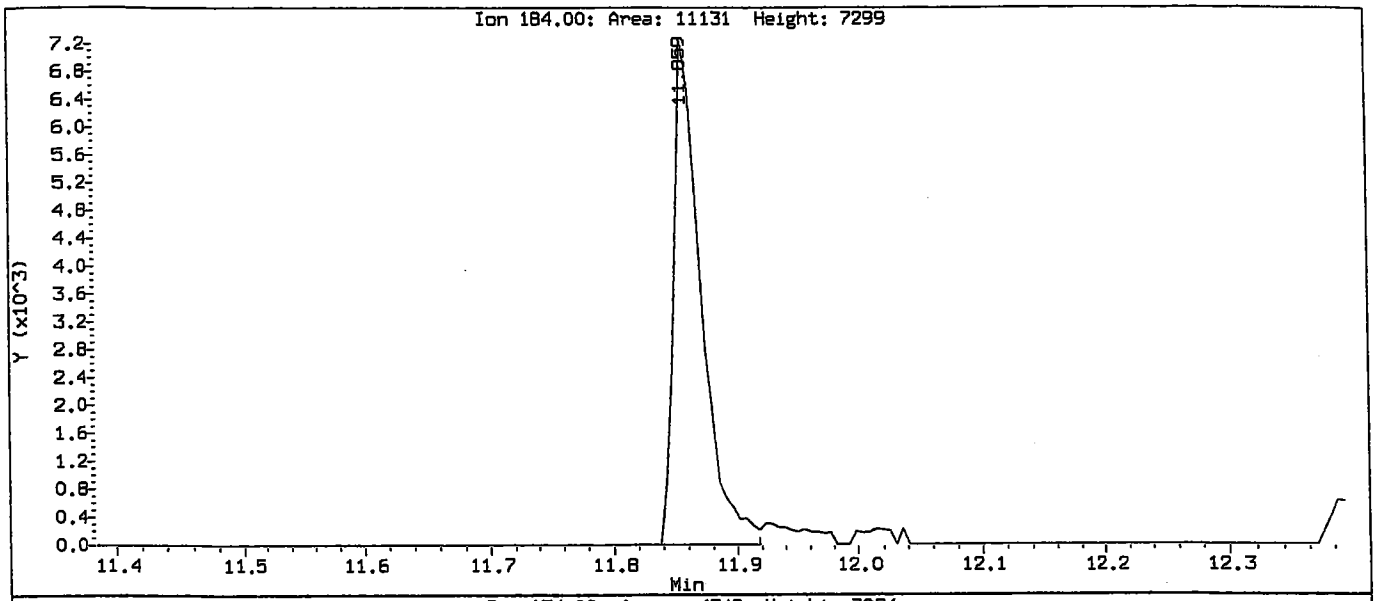
Column phase: ZB-5msi

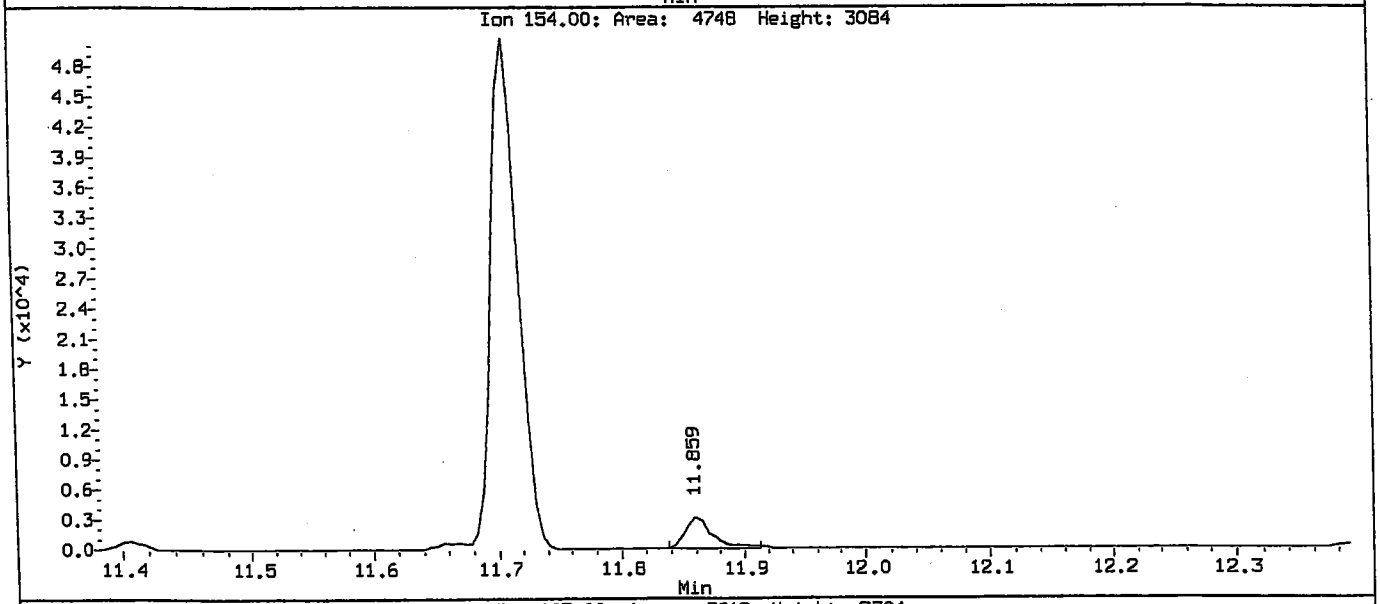


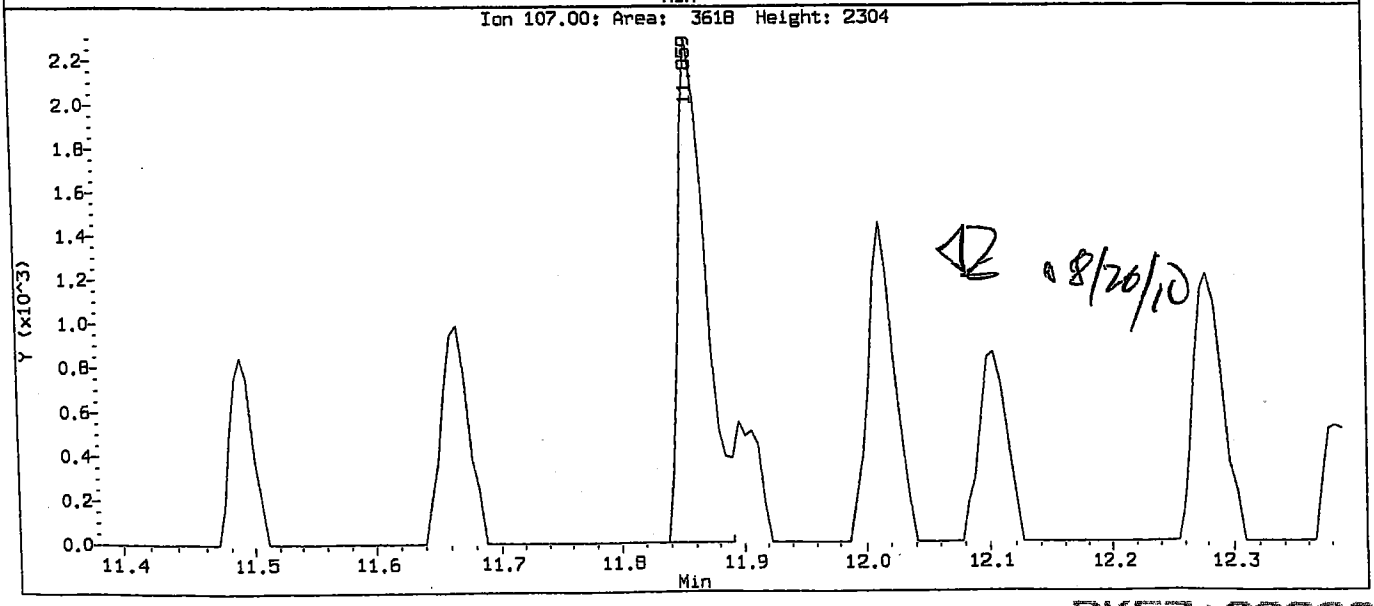
RXST 00098

Data File: /chem1/nt6.i/20100820.b/08201003.D
Injection Date: 20-AUG-2010 11:45
Instrument: nt6.i
Client Sample ID: IC050820

Compound: 2,4-Dinitrophenol
CAS Number: 51-28-5



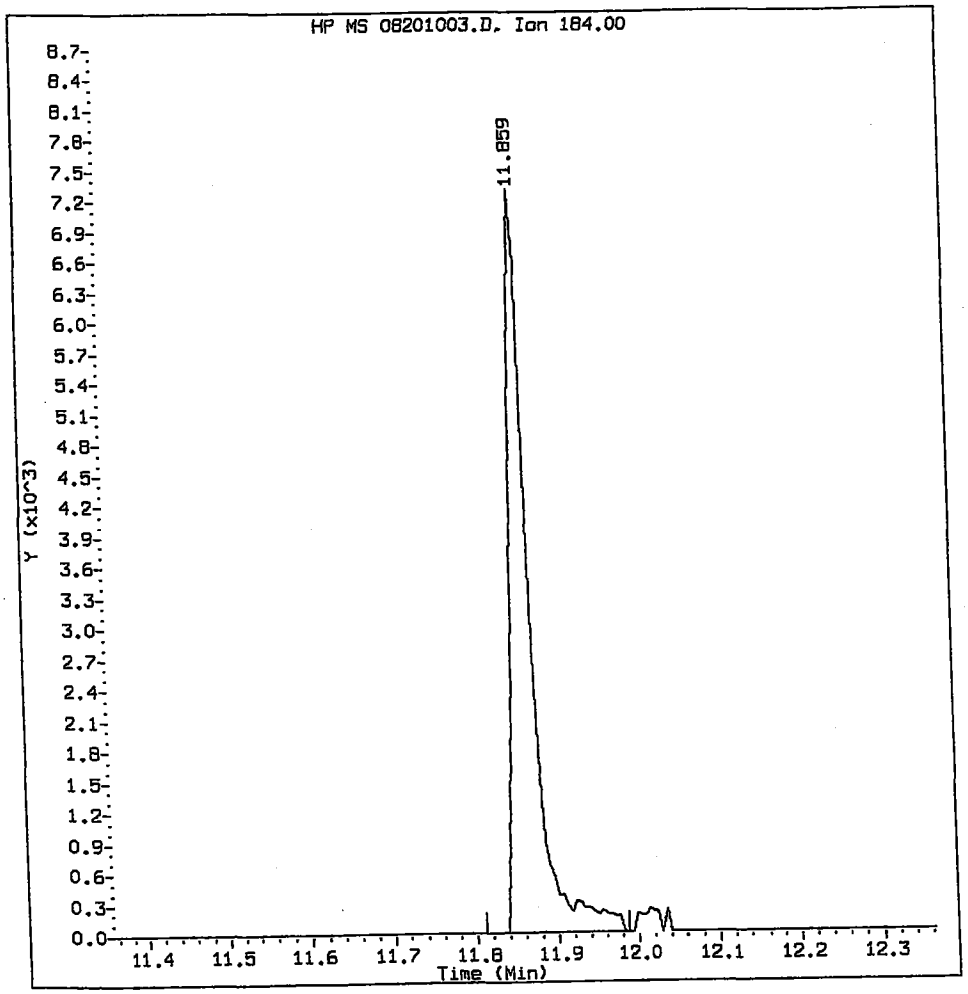




8/20/10

IC050820, /chem1/nt6.i/20100820.b/08201003.D

2,4-Dinitrophenol Amount: 5.45 Area: 11886



MANUAL INTEGRATION for 2,4-Dinitrophenol

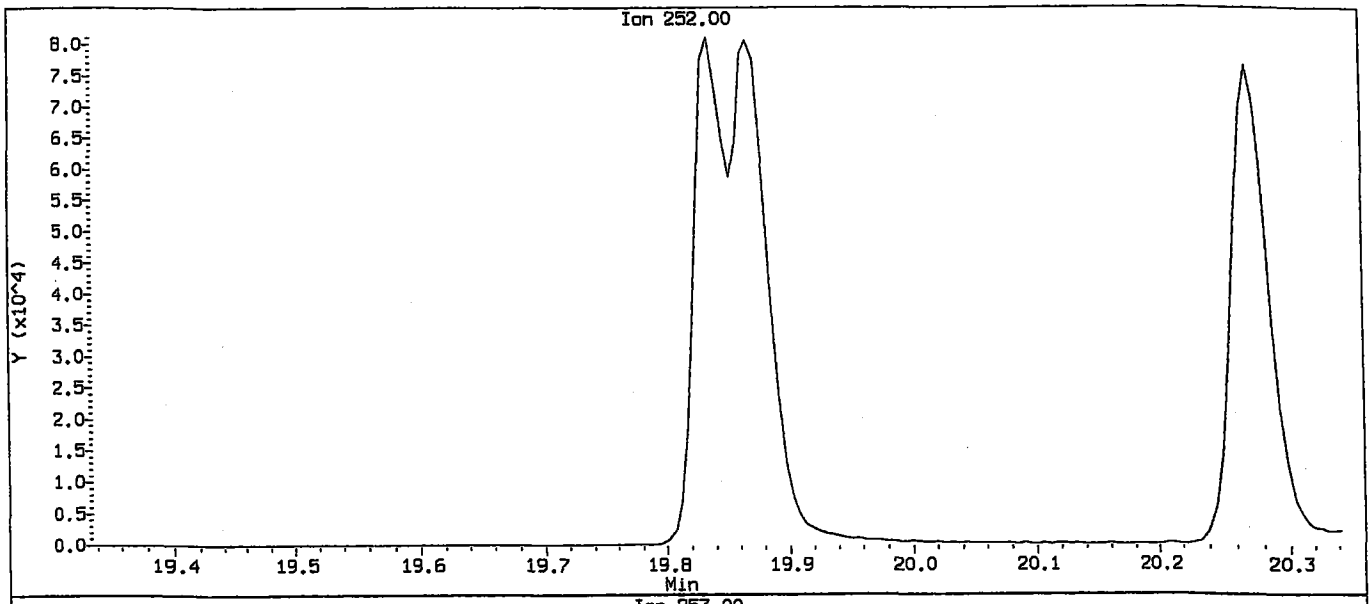
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

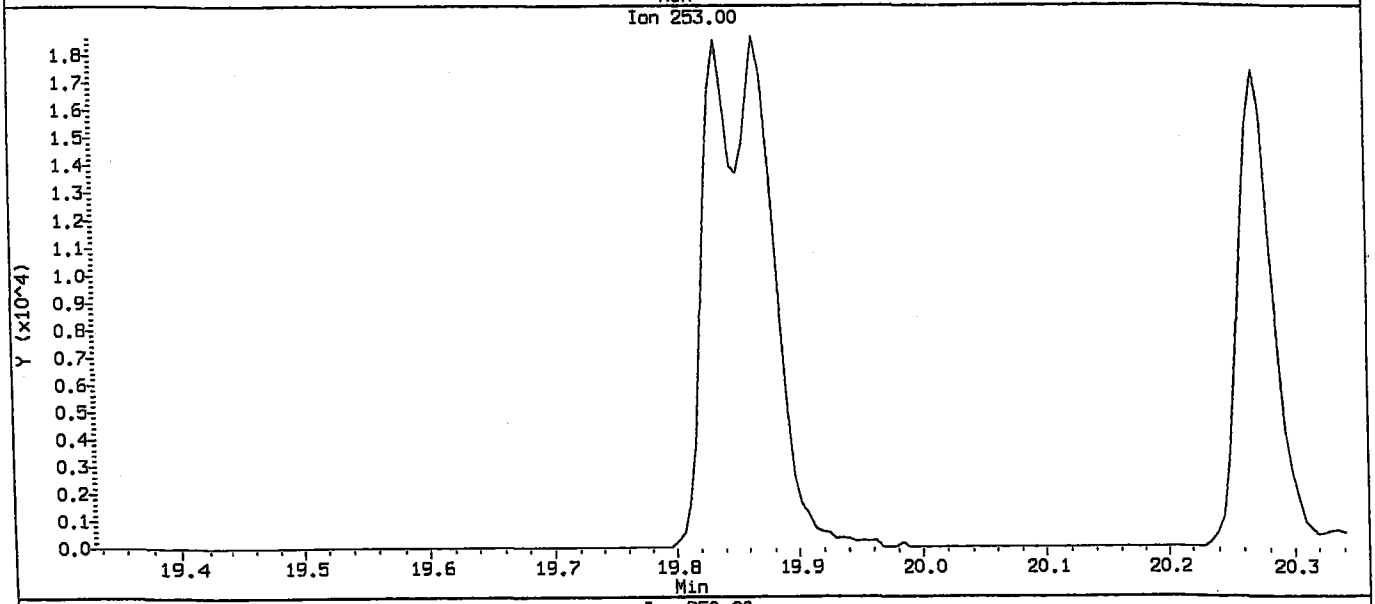
5. Other _____

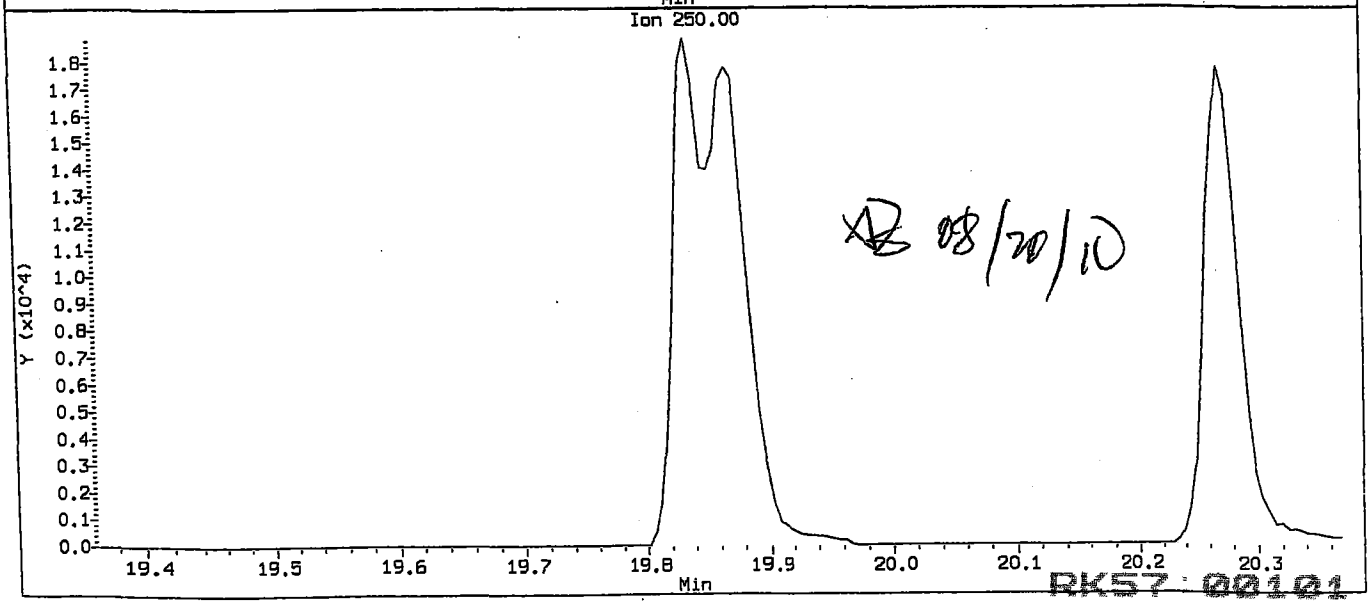
Analyst: _____ Date: 08/20/10

Data File: /chem1/nt6.i/20100820.b/08201003.D
Injection Date: 20-AUG-2010 11:45
Instrument: nt6.i
Client Sample ID: IC050820

Compound: Total Benzofluoranthenes
CAS Number:





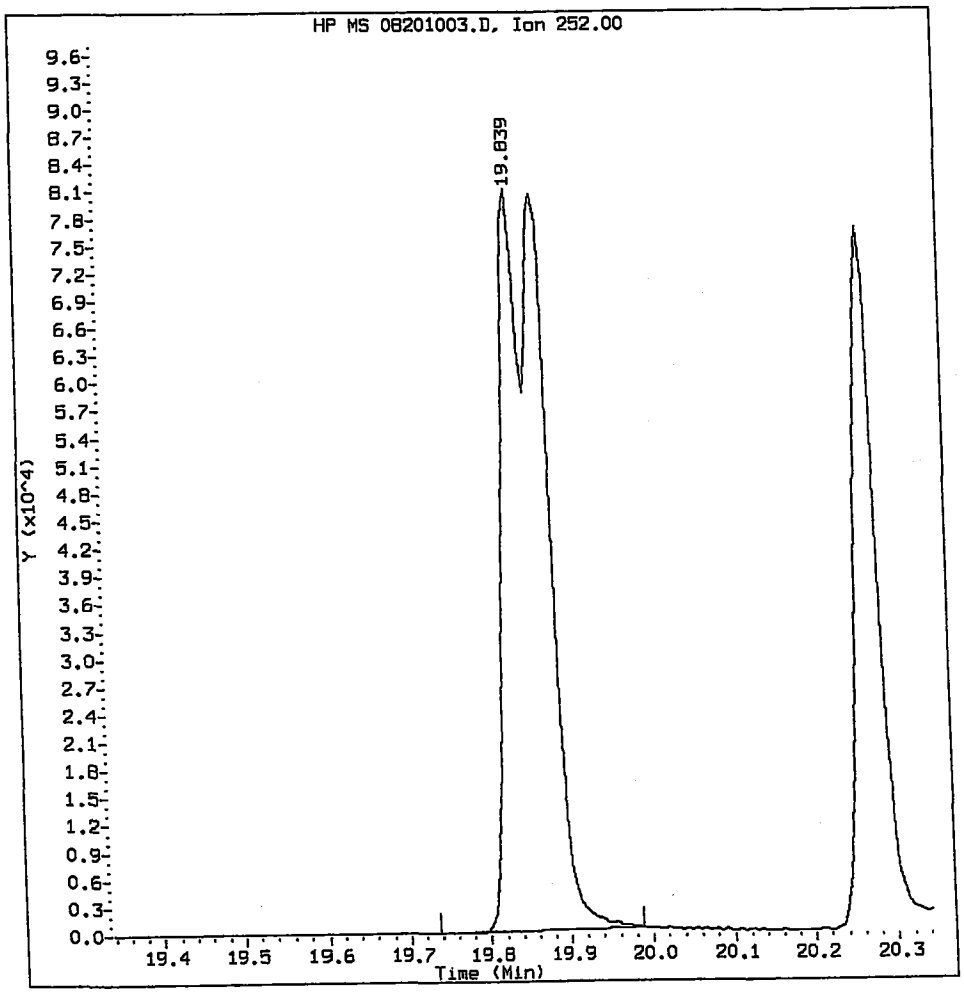


08/20/10

RK57 00101

IC050820, /chem1/nt6.i/20100820.b/08201003.D

Total Benzofluoranthenes Amount: 10.76 Area: 298995



MANUAL INTEGRATION for Total Benzofluoranthenes

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

5. Other _____

Analyst: AB Date: 08/20/10

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100820.b/08201004.D
Lab Smp Id: IC100820 Client Smp ID: IC100820
Inj Date : 20-AUG-2010 12:18
Operator : JZ Inst ID: nt6.i
Smp Info : IC100820,
Misc Info : 10-
Comment : 1ul Injection
Method : /chem1/nt6.i/20100820.b/SW846082010.m
Meth Date : 20-Aug-2010 15:57 jianqing Quant Type: ISTD
Cal Date : 20-AUG-2010 12:18 Cal File: 08201004.D
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 3.50

08/20/10

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	4.689	4.692	(0.693)	94868	10.0000	9.813
$	2 Phenol-d5	99	6.452	6.449	(0.953)	111348	10.0000	9.741
	3 Phenol	94	6.468	6.470	(0.956)	124973	10.0000	9.766
$	5 2-Chlorophenol-d4	132	6.473	6.476	(0.957)	96565	10.0000	9.629
	4 Bis(2-Chloroethyl)ether	93	6.478	6.481	(0.957)	87579	10.0000	9.540
	6 2-Chlorophenol	128	6.500	6.497	(0.961)	103043	10.0000	9.647
	7 1,3-Dichlorobenzene	146	6.697	6.695	(0.990)	114759	10.0000	9.312
*	8 1,4-Dichlorobenzene-d4	152	6.767	6.764	(1.000)	162191	20.0000	
	9 1,4-Dichlorobenzene	146	6.794	6.791	(1.004)	114824	10.0000	9.472
$	10 1,2-Dichlorobenzene-d4	152	7.066	7.068	(1.044)	66379	10.0000	1.452
	12 1,2-Dichlorobenzene	146	7.093	7.090	(1.048)	109397	10.0000	9.476
	11 Benzyl alcohol	108	7.114	7.111	(1.051)	59806	10.0000	9.874
	14 2,2'-oxybis(1-Chloropropane)	45	7.381	7.378	(1.091)	103260	10.0000	9.405
	13 2-Methylphenol	108	7.408	7.410	(1.095)	89180	10.0000	9.756
	17 Hexachloroethane	117	7.579	7.581	(1.120)	41673	10.0000	9.588
	16 N-Nitroso-di-n-propylamine	70	7.595	7.592	(1.122)	59448	10.0000	9.426
	15 4-Methylphenol	108	7.654	7.656	(1.131)	91475	10.0000	9.714
$	18 Nitrobenzene-d5	82	7.728	7.731	(0.875)	85482	10.0000	9.492
	19 Nitrobenzene	77	7.760	7.757	(0.878)	90661	10.0000	9.300
	20 Isophorone	82	8.156	8.153	(0.923)	146534	10.0000	9.403
	21 2-Nitrophenol	139	8.284	8.281	(0.938)	56832	10.0000	9.861
	22 2,4-Dimethylphenol	107	8.476	8.473	(0.959)	90926	10.0000	9.668
	23 Bis(2-Chloroethoxy)methane	93	8.599	8.596	(0.973)	101953	10.0000	9.311
	24 Benzoic acid	105	8.722	8.681	(0.987)	105562	20.0000	20.01
	25 2,4-Dichlorophenol	162	8.690	8.692	(0.984)	85627	10.0000	9.788
	26 1,2,4-Trichlorobenzene	180	8.791	8.788	(0.995)	88087	10.0000	9.131
*	27 Naphthalene-d8	136	8.834	8.831	(1.000)	516160	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	8.861	8.863	(1.003)	246291	10.0000	9.293
	29 4-Chloroaniline	127	9.053	9.050	(1.025)	109186	10.0000	9.778
	30 Hexachlorobutadiene	225	9.208	9.210	(1.042)	50955	10.0000	9.447
	31 4-Chloro-3-methylphenol	107	9.923	9.921	(1.123)	75526	10.0000	9.807
	32 2-Methylnaphthalene	141	9.988	9.985	(1.131)	144887	10.0000	9.566
	33 Hexachlorocyclopentadiene	237	10.372	10.369	(0.889)	38634	10.0000	11.55
	34 2,4,6-Trichlorophenol	196	10.527	10.529	(0.902)	57537	10.0000	9.679
	35 2,4,5-Trichlorophenol	196	10.586	10.588	(0.908)	60672	10.0000	9.948
$	36 2-Fluorobiphenyl	172	10.650	10.647	(0.913)	185757	10.0000	9.535
	37 2-Chloronaphthalene	162	10.746	10.743	(0.921)	165764	10.0000	9.251
	38 2-Nitroaniline	65	11.013	11.016	(0.944)	42560	10.0000	9.726
	39 Dimethylphthalate	163	11.414	11.411	(0.978)	179428	10.0000	9.318
	40 Acenaphthylene	152	11.408	11.405	(0.978)	261332	10.0000	9.299
	41 2,6-Dinitrotoluene	165	11.494	11.491	(0.985)	43918	10.0000	9.523
*	42 Acenaphthene-d10	164	11.665	11.662	(1.000)	299926	20.0000	
	43 3-Nitroaniline	138	11.691	11.688	(1.002)	43531	10.0000	9.846
	44 Acenaphthene	153	11.713	11.710	(1.004)	152936	10.0000	9.250
	45 2,4-Dinitrophenol	184	11.862	11.859	(1.017)	35429	20.0000	19.93
	46 Dibenzofuran	168	11.974	11.972	(1.027)	223882	10.0000	9.563
	47 4-Nitrophenol	109	12.076	12.078	(1.035)	17477	10.0000	11.10
	48 2,4-Dinitrotoluene	165	12.108	12.105	(1.038)	54665	10.0000	9.560
	50 Diethylphthalate	149	12.562	12.559	(1.077)	167041	10.0000	9.238
	49 Fluorene	166	12.519	12.522	(1.073)	177805	10.0000	9.200
	51 4-Chlorophenyl-phenylether	204	12.578	12.580	(1.078)	87964	10.0000	9.248
	52 4-Nitroaniline	138	12.663	12.661	(1.086)	40794	10.0000	9.191
	53 4,6-Dinitro-2-methylphenol	198	12.744	12.741	(0.911)	74936	20.0000	19.95
	54 N-Nitrosodiphenylamine	169	12.792	12.794	(0.914)	130305	10.0000	9.222
$	55 2,4,6-Tribromophenol	330	12.941	12.944	(1.109)	28613	10.0000	9.951
	56 4-Bromophenyl-phenylether	248	13.342	13.339	(0.953)	59636	10.0000	9.315
	57 Hexachlorobenzene	284	13.529	13.526	(0.967)	67312	10.0000	9.286
	58 Pentachlorophenol	266	13.849	13.846	(0.990)	31401	10.0000	10.93
*	59 Phenanthrene-d10	188	13.993	13.991	(1.000)	479182	20.0000	
	60 Phenanthrene	178	14.025	14.023	(1.002)	231246	10.0000	9.209
	61 Anthracene	178	14.095	14.092	(1.007)	255121	10.0000	9.271
	62 Carbazole	167	14.410	14.412	(1.030)	360690	10.0000	9.093
	63 Di-n-butylphthalate	149	15.184	15.187	(1.085)	292231	10.0000	9.282
	64 Fluoranthene	202	15.927	15.924	(1.138)	274912	10.0000	9.135
	65 Pyrene	202	16.263	16.266	(0.892)	284138	10.0000	9.373
$	66 Terphenyl-d14	244	16.637	16.640	(0.912)	179777	10.0000	9.590
	67 Butylbenzylphthalate	149	17.556	17.558	(0.963)	127888	10.0000	9.580
	68 Benzo(a)anthracene	228	18.213	18.210	(0.999)	271485	10.0000	9.308
*	69 Chrysene-d12	240	18.234	18.237	(1.000)	547714	20.0000	
	70 3,3'-Dichlorobenzidine	252	18.266	18.269	(1.002)	95636	10.0000	9.365
	71 Chrysene	228	18.272	18.274	(1.002)	253501	10.0000	9.290
	72 bis(2-Ethylhexyl)phthalate	149	18.581	18.584	(0.952)	171974	10.0000	9.502
*	134 Di-n-octylphthalate-d4	153	19.511	19.508	(1.000)	645668	20.0000	
	73 Di-n-octylphthalate	149	19.516	19.518	(1.000)	291018	10.0000	9.163

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	19.842	19.839	(0.975)	302363	10.0000	10.17
75	Benzo(k)fluoranthene	252	19.874	19.871	(0.976)	292849	10.0000	9.783
187	Total Benzofluoranthenes	252	19.874	19.839	(0.976)	559342	20.0000	18.61
76	Benzo(a)pyrene	252	20.269	20.272	(0.996)	281320	10.0000	9.390
* 77	Perylene-d12	264	20.355	20.357	(1.000)	520996	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	21.690	21.692	(1.066)	365099	10.0000	9.697
79	Dibenzo(a,h)anthracene	278	21.722	21.724	(1.067)	275860	10.0000	9.612
80	Benzo(g,h,i)perylene	276	21.978	21.975	(1.080)	316027	10.0000	9.458
90	N-Nitrosodimethylamine	74	1.864	1.866	(0.275)	57603	10.0000	9.816
103	Pyridine	79	1.848	1.850	(0.273)	105503	10.0000	9.989
91	Aniline	93	6.329	6.326	(0.935)	144148	10.0000	9.881
105	1-methylnaphthalene	141	10.148	10.150	(1.149)	140037	10.0000	9.250
93	Benzidine	184	16.231	16.228	(0.890)	88110	10.0000	9.015
111	Azobenzene (1,2-DP-Hydrazine)	77	12.824	12.821	(1.099)	178643	10.0000	9.221
143	1,4-Dioxane	88	1.485	1.482	(0.219)	37185	10.0000	9.342
$ 137	d8-1,4-Dioxane	96	1.453	1.455	(0.215)	38246	10.0000	9.480
144	alpha-Terpineol	59	8.935	8.938	(1.011)	53454	10.0000	9.147
98	Retene	219	16.862	16.864	(0.925)	93489	10.0000	9.084
133	Butylatedhydroxytoluene	205	11.905	11.902	(1.021)	125091	10.0000	9.033
115	Tributyl Phosphate	99	12.957	12.954	(0.926)	183925	10.0000	8.899
116	Dibutyl Phenyl Phosphate	175	14.640	14.637	(1.046)	132393	10.0000	9.092
117	Butyl Diphenyl Phosphate	94	16.285	16.282	(0.893)	40108	10.0000	8.916
118	Triphenyl Phosphate	326	17.850	17.852	(0.979)	46926	10.0000	8.944
123	Acetophenone	105	7.504	7.506	(1.109)	111421	10.0000	9.437
179	n-Decane	57	6.660	6.663	(0.984)	80501	10.0000	9.684
180	n-Octadecane	57	14.041	14.044	(1.003)	78285	10.0000	9.613
168	Pentachlorobenzene	250	12.017	12.014	(1.030)	71463	10.0000	9.194
113	Diphenyl Oxide	170	10.970	10.973	(0.940)	118022	10.0000	9.546
112	Biphenyl	154	10.773	10.770	(0.924)	194268	10.0000	9.858
120	2,3,4,6-Tetrachlorophenol	232	12.284	12.281	(1.053)	53263	10.0000	9.973
151	1,2,4,5-Tetrachlorobenzene	216	10.324	10.327	(0.885)	189511	10.0000	9.257
110	Tetrachloroguaiacol	247	13.977	13.980	(0.999)	63585	20.0000	19.01
109	3,4,5-Trichloroguaiacol	213	12.386	12.388	(0.885)	32485	10.0000	9.778
181	3,4,6-Trichloroguaiacol	211	12.493	12.495	(1.846)	39100	10.0000	9.820
108	4,5,6-Trichloroguaiacol	213	13.417	13.414	(1.150)	33598	10.0000	9.680
184	3,4-Dichloroguaiacol	192	10.863	10.866	(1.605)	34209	10.0000	9.802
107	4,5-Dichloroguaiacol	192	11.665	11.662	(1.000)	80802	20.0000	19.41
182	4,6-Dichloroguaiacol	192	11.665	11.662	(1.724)	80839	20.0000	19.33
185	4-Chloroguaiacol	115	9.806	9.808	(1.449)	18589	5.00000	4.918
186	Carbaryl	144	14.837	14.840	(1.060)	115278	10.0000	9.438
106	Guaiacol	124	7.792	7.795	(1.152)	73078	10.0000	9.115

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 08201004.D
Lab Smp Id: IC100820
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Misc Info: 10-

Calibration Date: 20-AUG-2010
Calibration Time: 10:40
Client Smp ID: IC100820
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	154425	77212	308850	162191	5.03
27 Naphthalene-d8	490229	245114	980458	516160	5.29
42 Acenaphthene-d10	286412	143206	572824	299926	4.72
59 Phenanthrene-d10	457816	228908	915632	479182	4.67
69 Chrysene-d12	560635	280318	1121270	547714	-2.30
134 Di-n-octylphthala	675549	337774	1351098	645668	-4.42
77 Perylene-d12	521119	260560	1042238	520996	-0.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	6.77	6.27	7.27	6.77	0.01
27 Naphthalene-d8	8.84	8.34	9.34	8.83	-0.05
42 Acenaphthene-d10	11.66	11.16	12.16	11.66	0.01
59 Phenanthrene-d10	13.99	13.49	14.49	13.99	0.01
69 Chrysene-d12	18.24	17.74	18.74	18.23	-0.05
134 Di-n-octylphthala	19.51	19.01	20.01	19.51	0.00
77 Perylene-d12	20.36	19.86	20.86	20.35	-0.02

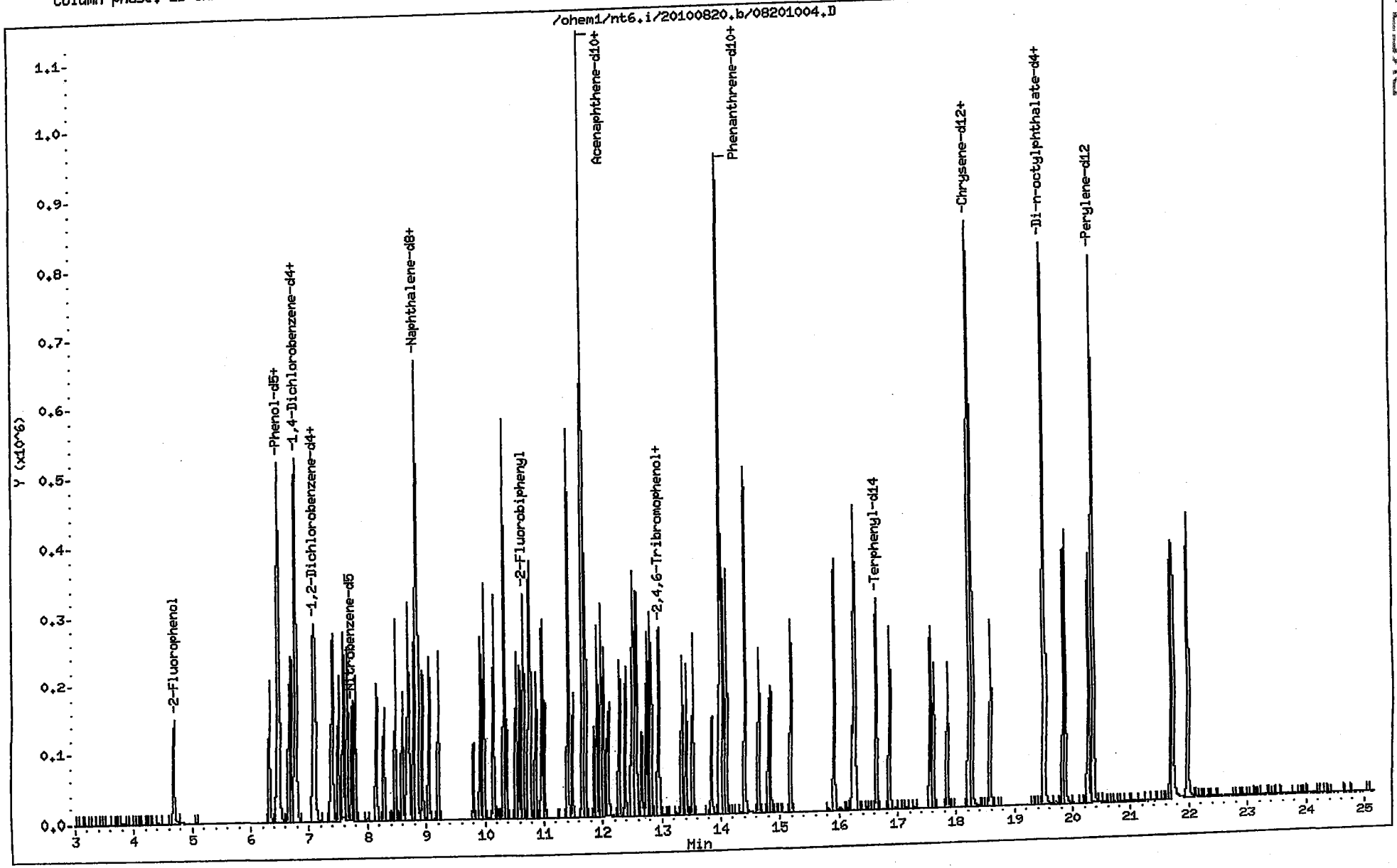
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt6.i/20100820.b/08201004.D
Date : 20-AUG-2010 12:18
Client ID: IC100820
Sample Info: IC100820,

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

Column phase: ZB-5msi

RK57:001107



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100820.b/08201001.D
Lab Smp Id: IC250820 Client Smp ID: IC250820
Inj Date : 20-AUG-2010 10:40
Operator : JZ Inst ID: nt6.i
Smp Info : IC250820
Misc Info : 10-
Comment : 1ul Injection
Method : /chem1/nt6.i/20100820.b/SW846082010.m
Meth Date : 20-Aug-2010 15:57 jianqing Quant Type: ISTD
Cal Date : 20-AUG-2010 10:40 Cal File: 08201001.D
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 3.50

08/20/10

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	4.694	4.692	(0.694)	229575	25.0000	25.00
$	2 Phenol-d5	99	6.456	6.449	(0.954)	265347	25.0000	25.00
	3 Phenol	94	6.472	6.470	(0.957)	275964	25.0000	25.00
$	5 2-Chlorophenol-d4	132	6.478	6.476	(0.957)	224663	25.0000	25.00
	4 Bis(2-Chloroethyl)ether	93	6.483	6.481	(0.958)	206573	25.0000	25.00
	6 2-Chlorophenol	128	6.499	6.497	(0.961)	232078	25.0000	25.00
	7 1,3-Dichlorobenzene	146	6.697	6.695	(0.990)	279991	25.0000	25.00
*	8 1,4-Dichlorobenzene-d4	152	6.766	6.764	(1.000)	154425	20.0000	
	9 1,4-Dichlorobenzene	146	6.793	6.791	(1.004)	281397	25.0000	25.00
$	10 1,2-Dichlorobenzene-d4	152	7.070	7.068	(1.045)	160870	25.0000	25.00
	12 1,2-Dichlorobenzene	146	7.092	7.090	(1.048)	264055	25.0000	25.00
	11 Benzyl alcohol	108	7.118	7.111	(1.052)	141988	25.0000	25.00
	14 2,2'-oxybis(1-Chloropropane)	45	7.386	7.378	(1.092)	256050	25.0000	25.00
	13 2-Methylphenol	108	7.412	7.410	(1.096)	202430	25.0000	25.00
	17 Hexachloroethane	117	7.583	7.581	(1.121)	102939	25.0000	25.00
	16 N-Nitroso-di-n-propylamine	70	7.604	7.592	(1.124)	142963	25.0000	25.00
	15 4-Methylphenol	108	7.658	7.656	(1.132)	208877	25.0000	25.00
$	18 Nitrobenzene-d5	82	7.738	7.731	(0.876)	207785	25.0000	25.00
	19 Nitrobenzene	77	7.765	7.757	(0.879)	223087	25.0000	25.00
	20 Isophorone	82	8.160	8.153	(0.923)	363846	25.0000	25.00
	21 2-Nitrophenol	139	8.288	8.281	(0.938)	133188	25.0000	25.00
	22 2,4-Dimethylphenol	107	8.480	8.473	(0.960)	209841	25.0000	25.00
	23 Bis(2-Chloroethoxy)methane	93	8.603	8.596	(0.973)	247721	25.0000	25.00
	24 Benzoic acid	105	8.790	8.681	(0.995)	272044	50.0000	50.00
	25 2,4-Dichlorophenol	162	8.694	8.692	(0.984)	197374	25.0000	25.00
	26 1,2,4-Trichlorobenzene	180	8.790	8.788	(0.995)	215479	25.0000	25.00
*	27 Naphthalene-d8	136	8.838	8.831	(1.000)	490229	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	8.865	8.863	(1.003)	596696	25.0000	25.00
	29 4-Chloroaniline	127	9.057	9.050	(1.025)	249470	25.0000	25.00
	30 Hexachlorobutadiene	225	9.207	9.210	(1.042)	126787	25.0000	25.00
	31 4-Chloro-3-methylphenol	107	9.928	9.921	(1.123)	177664	25.0000	25.00
	32 2-Methylnaphthalene	141	9.987	9.985	(1.130)	335351	25.0000	25.00
	33 Hexachlorocyclopentadiene	237	10.371	10.369	(0.889)	115887	25.0000	25.00
	34 2,4,6-Trichlorophenol	196	10.531	10.529	(0.903)	138579	25.0000	25.00
	35 2,4,5-Trichlorophenol	196	10.590	10.588	(0.908)	141324	25.0000	25.00
$	36 2-Fluorobiphenyl	172	10.649	10.647	(0.913)	435210	25.0000	25.00
	37 2-Chloronaphthalene	162	10.750	10.743	(0.922)	400508	25.0000	25.00
	38 2-Nitroaniline	65	11.017	11.016	(0.945)	101028	25.0000	25.00
	39 Dimethylphthalate	163	11.418	11.411	(0.979)	426492	25.0000	25.00
	40 Acenaphthylene	152	11.413	11.405	(0.978)	637498	25.0000	25.00
	41 2,6-Dinitrotoluene	165	11.498	11.491	(0.986)	110181	25.0000	25.00
*	42 Acenaphthene-d10	164	11.664	11.662	(1.000)	286412	20.0000	
	43 3-Nitroaniline	138	11.701	11.688	(1.003)	98603	25.0000	25.00
	44 Acenaphthene	153	11.717	11.710	(1.005)	374578	25.0000	25.00
	45 2,4-Dinitrophenol	184	11.867	11.859	(1.017)	114014	50.0000	50.00
	46 Dibenzofuran	168	11.979	11.972	(1.027)	520062	25.0000	25.00
	47 4-Nitrophenol	109	12.086	12.078	(1.036)	42305	25.0000	25.00
	48 2,4-Dinitrotoluene	165	12.112	12.105	(1.038)	138539	25.0000	25.00
	50 Diethylphthalate	149	12.566	12.559	(1.077)	396022	25.0000	25.00
	49 Fluorene	166	12.524	12.522	(1.074)	431304	25.0000	25.00
	51 4-Chlorophenyl-phenylether	204	12.582	12.580	(1.079)	213817	25.0000	25.00
	52 4-Nitroaniline	138	12.678	12.661	(1.087)	106330	25.0000	25.00
	53 4,6-Dinitro-2-methylphenol	198	12.759	12.741	(0.912)	187325	50.0000	50.00
	54 N-Nitrosodiphenylamine	169	12.801	12.794	(0.915)	318085	25.0000	25.00
$	55 2,4,6-Tribromophenol	330	12.946	12.944	(1.110)	73210	25.0000	25.00
	56 4-Bromophenyl-phenylether	248	13.346	13.339	(0.954)	151260	25.0000	25.00
	57 Hexachlorobenzene	284	13.533	13.526	(0.967)	168468	25.0000	25.00
	58 Pentachlorophenol	266	13.854	13.846	(0.990)	88536	25.0000	25.00
*	59 Phenanthrene-d10	188	13.992	13.991	(1.000)	457816	20.0000	
	60 Phenanthrene	178	14.030	14.023	(1.003)	571779	25.0000	25.00
	61 Anthracene	178	14.105	14.092	(1.008)	624717	25.0000	25.00
	62 Carbazole	167	14.420	14.412	(1.031)	875879	25.0000	25.00
	63 Di-n-butylphthalate	149	15.189	15.187	(1.085)	742244	25.0000	25.00
	64 Fluoranthene	202	15.931	15.924	(1.139)	718305	25.0000	25.00
	65 Pyrene	202	16.268	16.266	(0.892)	725430	25.0000	25.00
$	66 Terphenyl-d14	244	16.642	16.640	(0.912)	463783	25.0000	25.00
	67 Butylbenzylphthalate	149	17.560	17.558	(0.963)	350143	25.0000	25.00
	68 Benzo(a)anthracene	228	18.217	18.210	(0.999)	712951	25.0000	25.00
*	69 Chrysene-d12	240	18.244	18.237	(1.000)	560635	20.0000	
	70 3,3'-Dichlorobenzidine	252	18.276	18.269	(1.002)	239515	25.0000	25.00
	71 Chrysene	228	18.281	18.274	(1.002)	658636	25.0000	25.00
	72 bis(2-Ethylhexyl)phthalate	149	18.586	18.584	(0.953)	472991	25.0000	25.00
*	134 Di-n-octylphthalate-d4	153	19.510	19.508	(1.000)	675549	20.0000	
	73 Di-n-octylphthalate	149	19.520	19.518	(1.001)	775163	25.0000	25.00

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	19.846	19.839	(0.975)	726738	25.0000	25.00
75	Benzo(k)fluoranthene	252	19.878	19.871	(0.976)	710077	25.0000	25.00
187	Total Benzofluoranthenes	252	19.878	19.839	(0.976)	1432608	50.0000	50.00
76	Benzo(a)pyrene	252	20.279	20.272	(0.996)	732703	25.0000	25.00
* 77	Perylene-d12	264	20.359	20.357	(1.000)	521119	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	21.700	21.692	(1.066)	897867	25.0000	25.00
79	Dibenzo(a,h)anthracene	278	21.737	21.724	(1.068)	684748	25.0000	25.00
80	Benzo(g,h,i)perylene	276	21.988	21.975	(1.080)	767135	25.0000	25.00
90	N-Nitrosodimethylamine	74	1.879	1.866	(0.278)	140263	25.0000	25.00
103	Pyridine	79	1.857	1.850	(0.275)	262296	25.0000	25.00
91	Aniline	93	6.333	6.326	(0.936)	335778	25.0000	25.00
105	1-methylnaphthalene	141	10.152	10.150	(1.149)	340927	25.0000	25.00
93	Benzidine	184	16.236	16.228	(0.890)	176820	25.0000	25.00
111	Azobenzene (1,2-DP-Hydrazine)	77	12.828	12.821	(1.100)	433747	25.0000	25.00
143	1,4-Dioxane	88	1.489	1.482	(0.220)	89793	25.0000	25.00
$ 137	d8-1,4-Dioxane	96	1.462	1.455	(0.216)	92825	25.0000	25.00
144	alpha-Terpineol	59	8.940	8.938	(1.011)	139278	25.0000	25.00
98	Retene	219	16.866	16.864	(0.924)	264153	25.0000	25.00
133	Butylatedhydroxytoluene	205	11.909	11.902	(1.021)	307695	25.0000	25.00
115	Tributyl Phosphate	99	12.972	12.954	(0.927)	477324	25.0000	25.00
116	Dibutyl Phenyl Phosphate	175	14.644	14.637	(1.047)	361109	25.0000	25.00
117	Butyl Diphenyl Phosphate	94	16.289	16.282	(0.893)	111046	25.0000	25.00
118	Triphenyl Phosphate	326	17.854	17.852	(0.979)	135801	25.0000	25.00
123	Acetophenone	105	7.514	7.506	(1.111)	271279	25.0000	25.00
179	n-Decane	57	6.664	6.663	(0.985)	191474	25.0000	25.00
180	n-Octadecane	57	14.046	14.044	(1.004)	182363	25.0000	25.00
168	Pentachlorobenzene	250	12.022	12.014	(1.031)	177605	25.0000	25.00
113	Diphenyl Oxide	170	10.975	10.973	(0.941)	278249	25.0000	25.00
112	Biphenyl	154	10.772	10.770	(0.924)	444580	25.0000	25.00
120	2,3,4,6-Tetrachlorophenol	232	12.289	12.281	(1.054)	130438	25.0000	25.00
151	1,2,4,5-Tetrachlorobenzene	216	10.328	10.327	(0.886)	449248	25.0000	25.00
110	Tetrachloroguaiacol	247	13.987	13.980	(1.000)	169014	50.0000	50.00
109	3,4,5-Trichloroguaiacol	213	12.390	12.388	(0.885)	81350	25.0000	25.00
181	3,4,6-Trichloroguaiacol	211	12.497	12.495	(1.847)	93968	25.0000	25.00
108	4,5,6-Trichloroguaiacol	213	13.421	13.414	(1.151)	84016	25.0000	25.00
184	3,4-Dichloroguaiacol	192	10.868	10.866	(1.606)	83737	25.0000	25.00
107	4,5-Dichloroguaiacol	192	11.669	11.662	(1.000)	198029	50.0000	50.00
182	4,6-Dichloroguaiacol	192	11.669	11.662	(1.725)	198029	50.0000	50.00
185	4-Chloroguaiacol	115	9.810	9.808	(1.450)	46325	12.5000	12.50
186	Carbaryl	144	14.847	14.840	(1.061)	315251	25.0000	25.00
106	Guaiacol	124	7.797	7.795	(1.152)	192227	25.0000	25.00

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 08201001.D
Lab Smp Id: IC250820
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Misc Info: 10-

Calibration Date: 20-AUG-2010
Calibration Time: 10:40
Client Smp ID: IC250820
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	154425	77212	308850	154425	0.00
27 Naphthalene-d8	490229	245114	980458	490229	0.00
42 Acenaphthene-d10	286412	143206	572824	286412	0.00
59 Phenanthrene-d10	457816	228908	915632	457816	0.00
69 Chrysene-d12	560635	280318	1121270	560635	0.00
134 Di-n-octylphthala	675549	337774	1351098	675549	0.00
77 Perylene-d12	521119	260560	1042238	521119	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	6.77	6.27	7.27	6.77	0.00
27 Naphthalene-d8	8.84	8.34	9.34	8.84	0.00
42 Acenaphthene-d10	11.66	11.16	12.16	11.66	0.00
59 Phenanthrene-d10	13.99	13.49	14.49	13.99	0.00
69 Chrysene-d12	18.24	17.74	18.74	18.24	0.00
134 Di-n-octylphthala	19.51	19.01	20.01	19.51	0.00
77 Perylene-d12	20.36	19.86	20.86	20.36	0.00

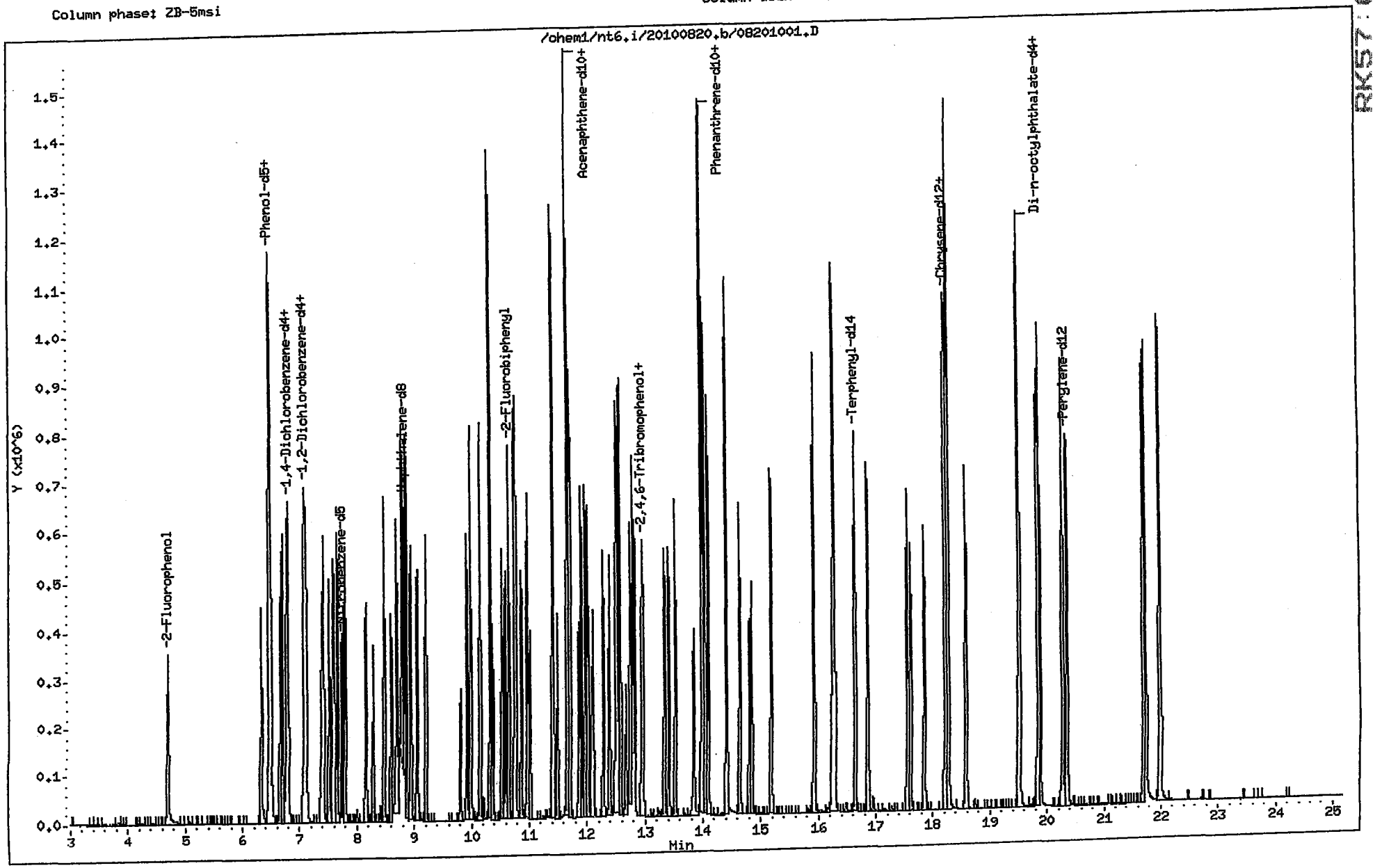
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt6.i/20100820.b/08201001.D
Date : 20-AUG-2010 10:40
Client ID: IC250820
Sample Info: IC250820

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

Column phase: ZB-5msi

RK57:00112



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100820.b/08201005.D
Lab Smp Id: IC400820 Client Smp ID: IC400820
Inj Date : 20-AUG-2010 12:51
Operator : JZ Inst ID: nt6.i
Smp Info : IC400820,
Misc Info : 10-
Comment : 1ul Injection
Method : /chem1/nt6.i/20100820.b/SW846082010.m
Meth Date : 20-Aug-2010 15:57 jianqing Quant Type: ISTD
Cal Date : 20-AUG-2010 12:51 Cal File: 08201005.D
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 3.50

JZ 08/20/10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1 2-Fluorophenol	112	4.701	4.692	(0.694)	391212	40.0000	42.44
$ 2 Phenol-d5	99	6.463	6.449	(0.954)	446296	40.0000	41.99
3 Phenol	94	6.479	6.470	(0.957)	434732	40.0000	38.44
$ 5 2-Chlorophenol-d4	132	6.479	6.476	(0.957)	357357	40.0000	39.17
4 Bis(2-Chloroethyl)ether	93	6.485	6.481	(0.957)	308093	40.0000	37.76
6 2-Chlorophenol	128	6.506	6.497	(0.961)	378837	40.0000	39.54
7 1,3-Dichlorobenzene	146	6.698	6.695	(0.989)	435947	40.0000	39.15
* 8 1,4-Dichlorobenzene-d4	152	6.773	6.764	(1.000)	152136	20.0000	
9 1,4-Dichlorobenzene	146	6.794	6.791	(1.003)	439418	40.0000	39.59
$ 10 1,2-Dichlorobenzene-d4	152	7.072	7.068	(1.044)	266647	40.0000	8.675
12 1,2-Dichlorobenzene	146	7.093	7.090	(1.047)	409494	40.0000	38.96
11 Benzyl alcohol	108	7.126	7.111	(1.052)	231777	40.0000	40.84
14 2,2'-oxybis(1-Chloropropane)	45	7.382	7.378	(1.090)	404130	40.0000	39.89
13 2-Methylphenol	108	7.414	7.410	(1.095)	339836	40.0000	40.70
17 Hexachloroethane	117	7.580	7.581	(1.119)	163017	40.0000	40.31
16 N-Nitroso-di-n-propylamine	70	7.612	7.592	(1.124)	225316	40.0000	39.00
15 4-Methylphenol	108	7.665	7.656	(1.132)	348366	40.0000	40.46
$ 18 Nitrobenzene-d5	82	7.740	7.731	(0.876)	343360	40.0000	41.06
19 Nitrobenzene	77	7.766	7.757	(0.879)	346788	40.0000	39.14
20 Isophorone	82	8.167	8.153	(0.924)	575367	40.0000	40.06
21 2-Nitrophenol	139	8.290	8.281	(0.938)	227763	40.0000	42.23
22 2,4-Dimethylphenol	107	8.482	8.473	(0.960)	350307	40.0000	40.87
23 Bis(2-Chloroethoxy)methane	93	8.605	8.596	(0.973)	390008	40.0000	39.27
24 Benzoic acid	105	8.835	8.681	(0.999)	475565	80.0000	105.7(M)
25 2,4-Dichlorophenol	162	8.696	8.692	(0.984)	331168	40.0000	41.17
26 1,2,4-Trichlorobenzene	180	8.792	8.788	(0.995)	335914	40.0000	38.73
* 27 Naphthalene-d8	136	8.840	8.831	(1.000)	479883	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	8.867	8.863	(1.003)	912238	40.0000	39.03
	29 4-Chloroaniline	127	9.059	9.050	(1.025)	396754	40.0000	39.87
	30 Hexachlorobutadiene	225	9.209	9.210	(1.042)	201917	40.0000	40.35
	31 4-Chloro-3-methylphenol	107	9.930	9.921	(1.123)	298321	40.0000	42.43
	32 2-Methylnaphthalene	141	9.988	9.985	(1.130)	536791	40.0000	39.91
	33 Hexachlorocyclopentadiene	237	10.373	10.369	(0.889)	196708	40.0000	49.00
	34 2,4,6-Trichlorophenol	196	10.533	10.529	(0.903)	245513	40.0000	41.74
	35 2,4,5-Trichlorophenol	196	10.592	10.588	(0.908)	243279	40.0000	42.07
$	36 2-Fluorobiphenyl	172	10.651	10.647	(0.913)	713812	40.0000	39.32
	37 2-Chloronaphthalene	162	10.752	10.743	(0.922)	629930	40.0000	38.52
	38 2-Nitroaniline	65	11.024	11.016	(0.945)	161568	40.0000	39.78
	39 Dimethylphthalate	163	11.425	11.411	(0.979)	655259	40.0000	37.99
	40 Acenaphthylene	152	11.414	11.405	(0.978)	990683	40.0000	38.74
	41 2,6-Dinitrotoluene	165	11.500	11.491	(0.986)	175579	40.0000	40.23
*	42 Acenaphthene-d10	164	11.665	11.662	(1.000)	285842	20.0000	
	43 3-Nitroaniline	138	11.703	11.688	(1.003)	146718	40.0000	38.65
	44 Acenaphthene	153	11.719	11.710	(1.005)	611004	40.0000	39.70
	45 2,4-Dinitrophenol	184	11.874	11.859	(1.018)	210328	80.0000	96.61
	46 Dibenzofuran	168	11.981	11.972	(1.027)	832342	40.0000	39.24
	47 4-Nitrophenol	109	12.087	12.078	(1.036)	72214	40.0000	44.14
	48 2,4-Dinitrotoluene	165	12.119	12.105	(1.039)	216587	40.0000	39.78
	50 Diethylphthalate	149	12.568	12.559	(1.077)	610281	40.0000	37.81
	49 Fluorene	166	12.525	12.522	(1.074)	663622	40.0000	38.14
	51 4-Chlorophenyl-phenylether	204	12.584	12.580	(1.079)	337766	40.0000	38.73
	52 4-Nitroaniline	138	12.686	12.661	(1.087)	161855	40.0000	39.06
	53 4,6-Dinitro-2-methylphenol	198	12.766	12.741	(0.912)	321031	80.0000	85.67
	54 N-Nitrosodiphenylamine	169	12.803	12.794	(0.915)	498551	40.0000	38.90
$	55 2,4,6-Tribromophenol	330	12.953	12.944	(1.110)	124189	40.0000	43.74
	56 4-Bromophenyl-phenylether	248	13.348	13.339	(0.954)	239704	40.0000	39.97
	57 Hexachlorobenzene	284	13.535	13.526	(0.967)	266410	40.0000	39.39
	58 Pentachlorophenol	266	13.855	13.846	(0.990)	164103	40.0000	49.46
*	59 Phenanthrene-d10	188	13.994	13.991	(1.000)	451337	20.0000	
	60 Phenanthrene	178	14.032	14.023	(1.003)	882373	40.0000	38.93
	61 Anthracene	178	14.106	14.092	(1.008)	969331	40.0000	38.97
	62 Carbazole	167	14.421	14.412	(1.031)	1333790	40.0000	38.05
	63 Di-n-butylphthalate	149	15.191	15.187	(1.085)	1142210	40.0000	39.65
	64 Fluoranthene	202	15.933	15.924	(1.139)	1101298	40.0000	39.93
	65 Pyrene	202	16.275	16.266	(0.892)	1085522	40.0000	37.97
$	66 Terphenyl-d14	244	16.643	16.640	(0.912)	755881	40.0000	40.40
	67 Butylbenzylphthalate	149	17.562	17.558	(0.963)	544909	40.0000	40.82
	68 Benzo(a)anthracene	228	18.219	18.210	(0.999)	1115544	40.0000	39.18
*	69 Chrysene-d12	240	18.246	18.237	(1.000)	553625	20.0000	
	70 3,3'-Dichlorobenzidine	252	18.278	18.269	(1.002)	383721	40.0000	39.37
	71 Chrysene	228	18.283	18.274	(1.002)	1006074	40.0000	38.59
	72 bis(2-Ethylhexyl)phthalate	149	18.587	18.584	(0.953)	733075	40.0000	40.21
*	134 Di-n-octylphthalate-d4	153	19.511	19.508	(1.000)	663582	20.0000	
	73 Di-n-octylphthalate	149	19.522	19.518	(1.001)	1188268	40.0000	38.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	19.853	19.839	(0.975)	1210096	40.0000	40.87
75	Benzo(k)fluoranthene	252	19.891	19.871	(0.977)	1009934	40.0000	34.82
187	Total Benzofluoranthenes	252	19.891	19.839	(0.977)	2224563	80.0000	77.62
76	Benzo(a)pyrene	252	20.286	20.272	(0.996)	1167642	40.0000	39.48
* 77	Perylene-d12	264	20.361	20.357	(1.000)	536901	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	21.707	21.692	(1.066)	1463008	40.0000	38.91
79	Dibenzo(a,h)anthracene	278	21.739	21.724	(1.068)	1097756	40.0000	38.72
80	Benzo(g,h,i)perylene	276	22.000	21.975	(1.081)	1256196	40.0000	38.22
90	N-Nitrosodimethylamine	74	1.886	1.866	(0.278)	223435	40.0000	40.44
103	Pyridine	79	1.859	1.850	(0.274)	413173	40.0000	41.18
91	Aniline	93	6.335	6.326	(0.935)	538331	40.0000	40.38
105	1-methylnaphthalene	141	10.154	10.150	(1.149)	531591	40.0000	39.12
93	Benzidine	184	16.232	16.228	(0.890)	279570	40.0000	32.40
111	Azobenzene (1,2-DP-Hydrazine)	77	12.830	12.821	(1.100)	664811	40.0000	38.26
143	1,4-Dioxane	88	1.491	1.482	(0.220)	140869	40.0000	38.76
$ 137	d8-1,4-Dioxane	96	1.464	1.455	(0.216)	153027	40.0000	40.65
144	alpha-Terpineol	59	8.947	8.938	(1.012)	227037	40.0000	41.64
98	Retene	219	16.868	16.864	(0.924)	421370	40.0000	40.77
133	Butylatedhydroxytoluene	205	11.911	11.902	(1.021)	484286	40.0000	39.23
115	Tributyl Phosphate	99	12.974	12.954	(0.927)	746496	40.0000	39.49
116	Dibutyl Phenyl Phosphate	175	14.646	14.637	(1.047)	576472	40.0000	41.64
117	Butyl Diphenyl Phosphate	94	16.291	16.282	(0.893)	172009	40.0000	39.50
118	Triphenyl Phosphate	326	17.856	17.852	(0.979)	226188	40.0000	41.83
123	Acetophenone	105	7.515	7.506	(1.110)	428252	40.0000	39.41
179	n-Decane	57	6.666	6.663	(0.984)	308035	40.0000	40.41
180	n-Octadecane	57	14.048	14.044	(1.004)	294549	40.0000	40.17
168	Pentachlorobenzene	250	12.023	12.014	(1.031)	287700	40.0000	39.88
113	Diphenyl Oxide	170	10.976	10.973	(0.941)	454642	40.0000	39.53
112	Biphenyl	154	10.779	10.770	(0.924)	718968	40.0000	40.04
120	2,3,4,6-Tetrachlorophenol	232	12.290	12.281	(1.054)	223302	40.0000	42.77
151	1,2,4,5-Tetrachlorobenzene	216	10.330	10.327	(0.886)	701568	40.0000	38.11
110	Tetrachloroguaiacol	247	13.989	13.980	(1.000)	275726	80.0000	83.77
109	3,4,5-Trichloroguaiacol	213	12.397	12.388	(0.886)	132900	40.0000	41.40
181	3,4,6-Trichloroguaiacol	211	12.499	12.495	(1.845)	157225	40.0000	41.34
108	4,5,6-Trichloroguaiacol	213	13.423	13.414	(1.151)	137201	40.0000	40.81
184	3,4-Dichloroguaiacol	192	10.870	10.866	(1.605)	137873	40.0000	41.46
107	4,5-Dichloroguaiacol	192	11.676	11.662	(1.001)	320309	80.0000	81.68
182	4,6-Dichloroguaiacol	192	11.676	11.662	(1.724)	323299	80.0000	82.63
185	4-Chloroguaiacol	115	9.812	9.808	(1.449)	78868	20.0000	21.21
186	Carbaryl	144	14.849	14.840	(1.061)	520387	40.0000	42.65
106	Guaiacol	124	7.798	7.795	(1.151)	306642	40.0000	40.87

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 08201005.D
Lab Smp Id: IC400820
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Misc Info: 10-

Calibration Date: 20-AUG-2010
Calibration Time: 10:40
Client Smp ID: IC400820
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	154425	77212	308850	152136	-1.48
27 Naphthalene-d8	490229	245114	980458	479883	-2.11
42 Acenaphthene-d10	286412	143206	572824	285842	-0.20
59 Phenanthrene-d10	457816	228908	915632	451337	-1.42
69 Chrysene-d12	560635	280318	1121270	553625	-1.25
134 Di-n-octylphthala	675549	337774	1351098	663582	-1.77
77 Perylene-d12	521119	260560	1042238	536901	3.03

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	6.77	6.27	7.27	6.77	0.10
27 Naphthalene-d8	8.84	8.34	9.34	8.84	0.02
42 Acenaphthene-d10	11.66	11.16	12.16	11.67	0.01
59 Phenanthrene-d10	13.99	13.49	14.49	13.99	0.01
69 Chrysene-d12	18.24	17.74	18.74	18.25	0.01
134 Di-n-octylphthala	19.51	19.01	20.01	19.51	0.01
77 Perylene-d12	20.36	19.86	20.86	20.36	0.01

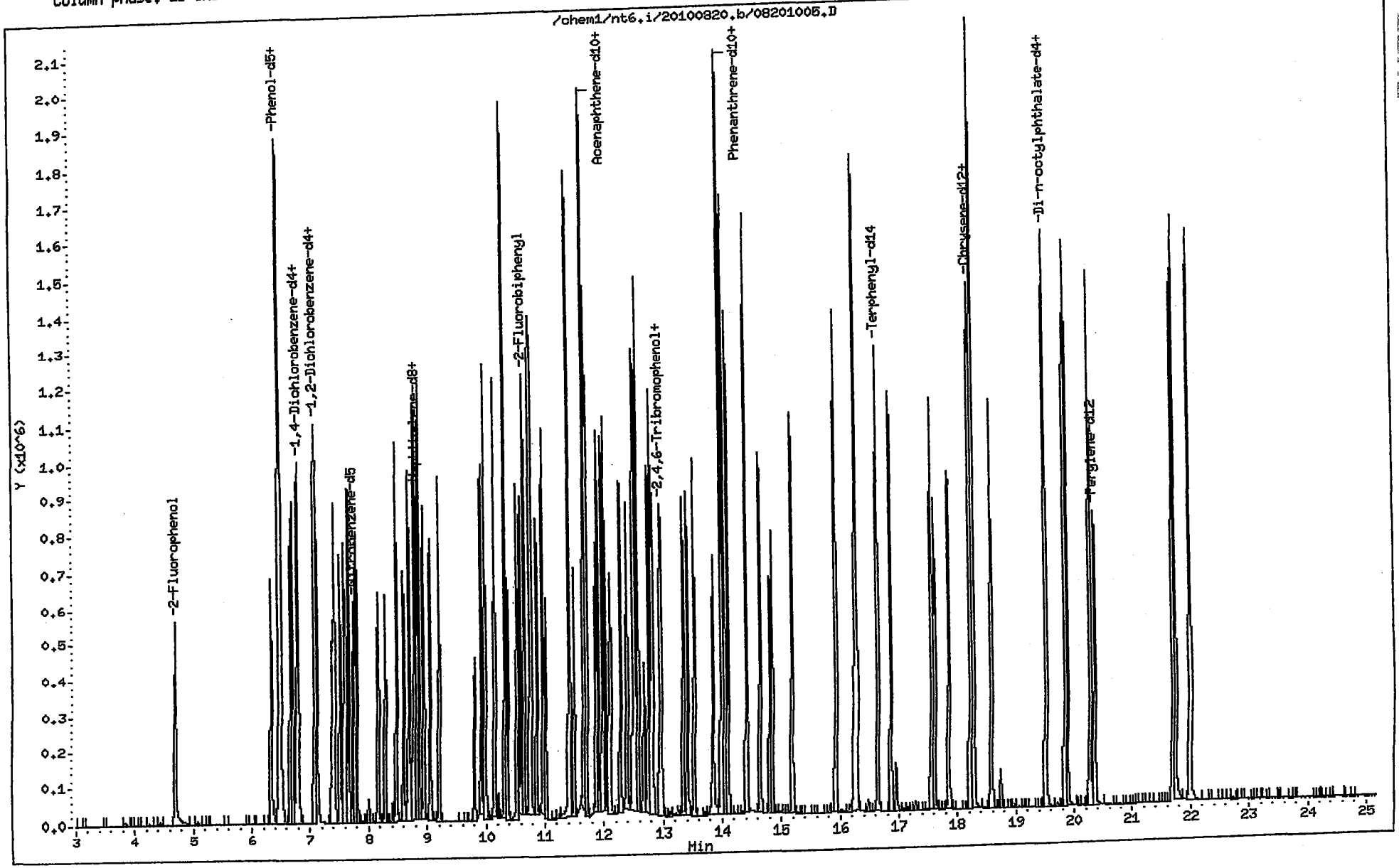
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt6.i/20100820.b/08201005.D
Date : 20-AUG-2010 12:51
Client ID: IC400820
Sample Info: IC400820,

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

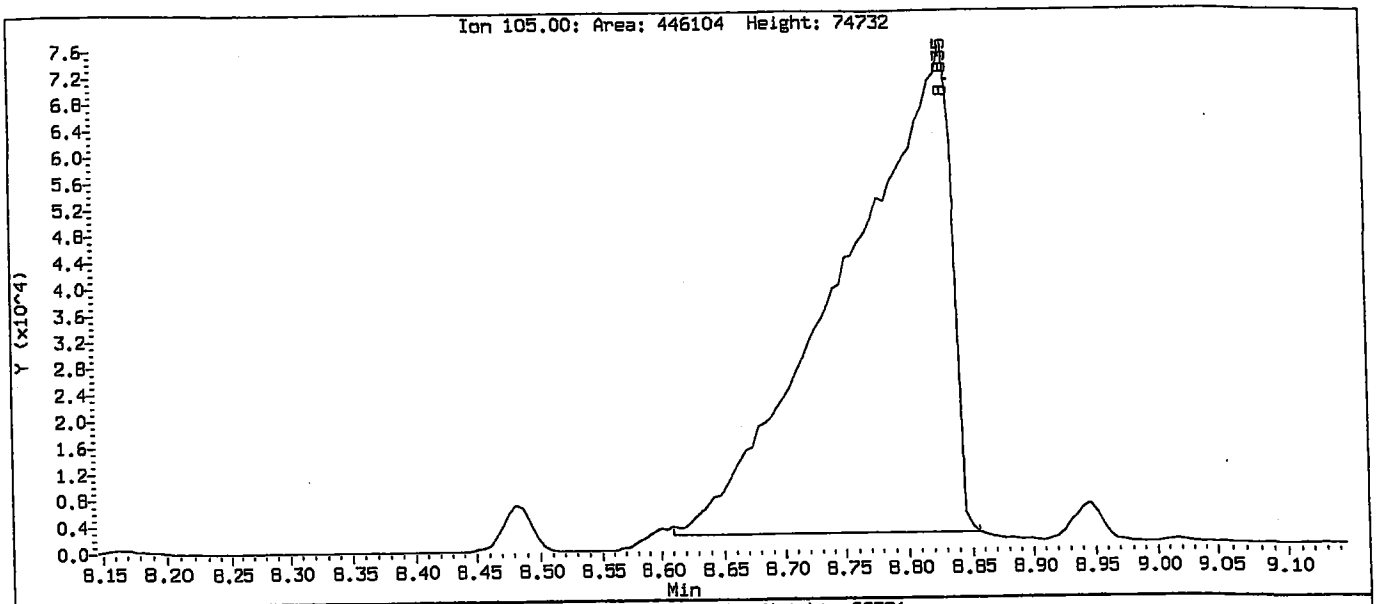
Column phase: ZB-5msi

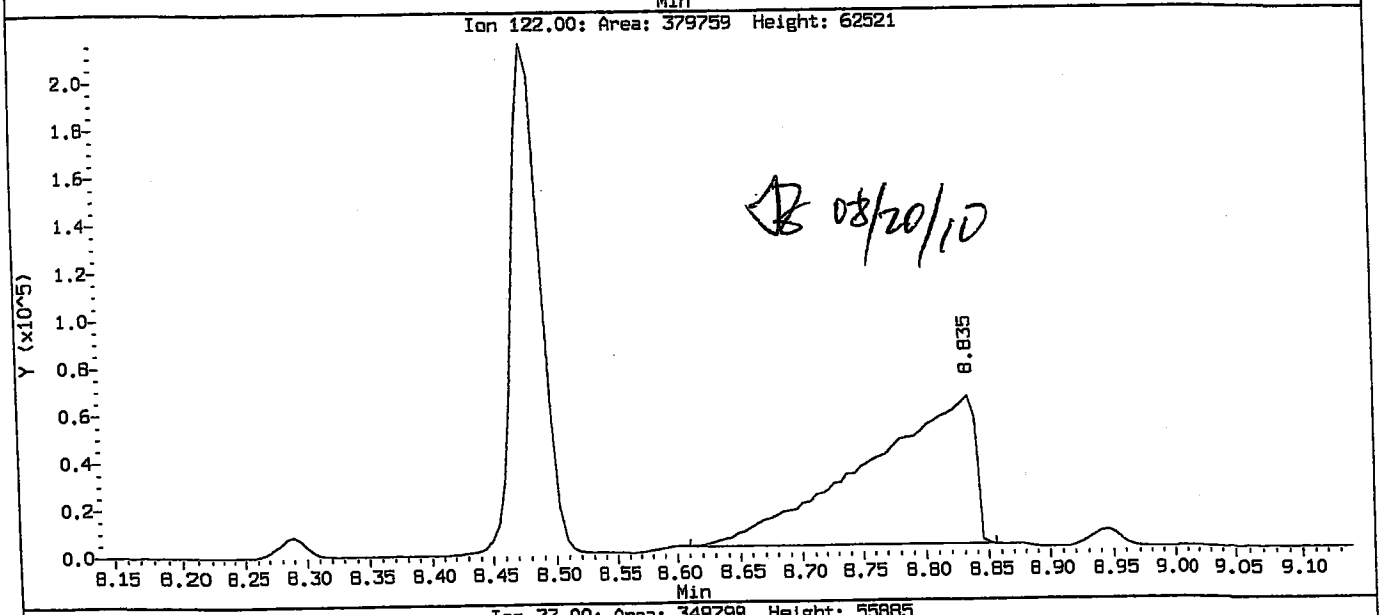
RK57:00117



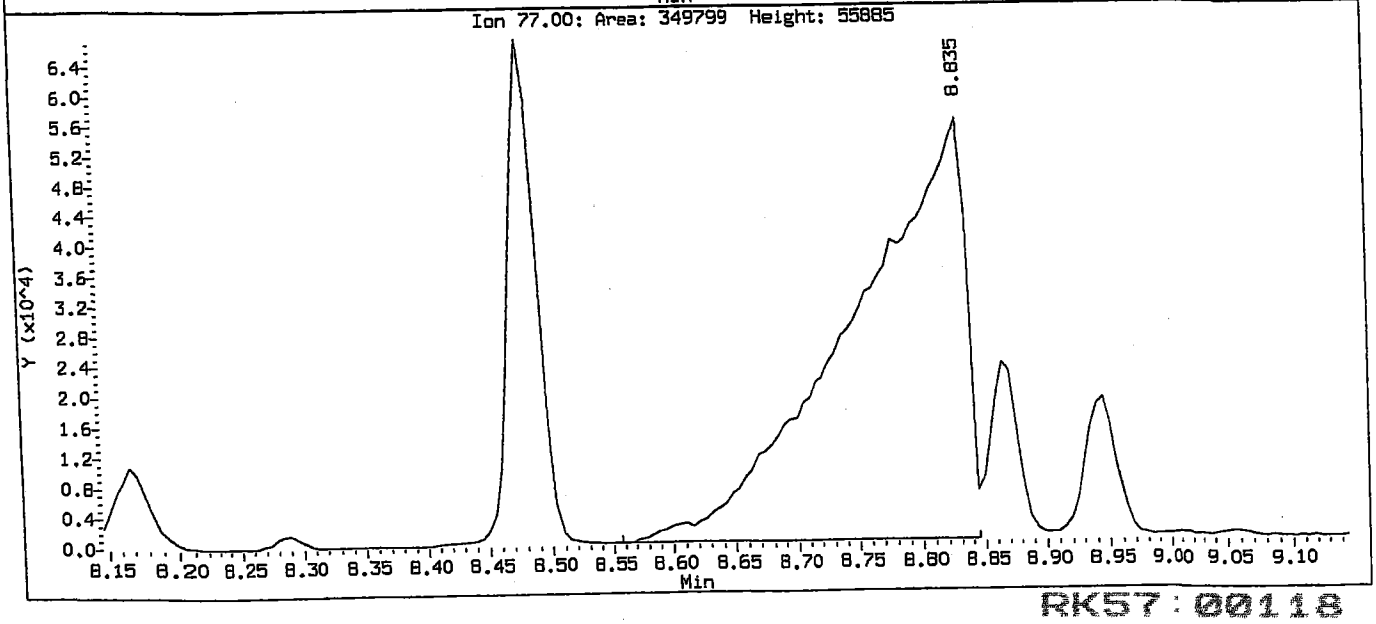
Data File: /chem1/nt6.i/20100820.b/08201005.D
Injection Date: 20-AUG-2010 12:51
Instrument: nt6.i
Client Sample ID: IC400820

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



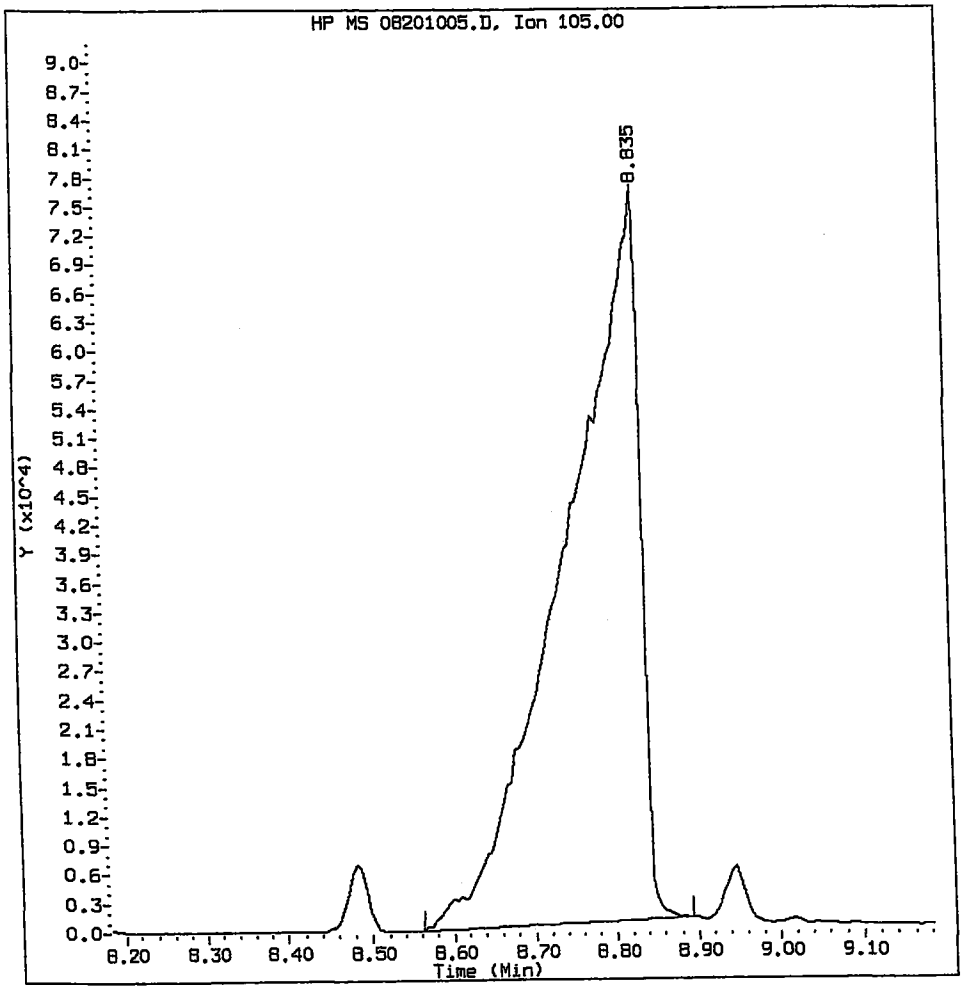


B 08/20/10



IC400820, /chem1/nt6.i/20100820.b/08201005.D

Benzoic acid Amount: 105.73 Area: 475565



MANUAL INTEGRATION for Benzoic acid

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

5. Other _____

Analyst: _____ Date: 08/20/10

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100820.b/08201006.D
Lab Smp Id: IC600820 Client Smp ID: IC600820
Inj Date : 20-AUG-2010 13:24
Operator : JZ Inst ID: nt6.i
Smp Info : IC600820,
Misc Info : 10-
Comment : 1ul Injection
Method : /chem1/nt6.i/20100820.b/SW846082010.m
Meth Date : 20-Aug-2010 15:57 jianqing Quant Type: ISTD
Cal Date : 20-AUG-2010 13:24 Cal File: 08201006.D
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 3.50

08/30/10

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	4.702	4.692	(0.694)	545772	60.0000	60.22
$	2 Phenol-d5	99	6.470	6.449	(0.955)	573601	60.0000	54.89
	3 Phenol	94	6.486	6.470	(0.957)	581651	60.0000	52.31
$	5 2-Chlorophenol-d4	132	6.481	6.476	(0.957)	482550	60.0000	53.79
	4 Bis(2-Chloroethyl)ether	93	6.491	6.481	(0.958)	431734	60.0000	53.81
	6 2-Chlorophenol	128	6.507	6.497	(0.961)	517561	60.0000	54.94
	7 1,3-Dichlorobenzene	146	6.700	6.695	(0.989)	630314	60.0000	57.57
*	8 1,4-Dichlorobenzene-d4	152	6.774	6.764	(1.000)	149578	20.0000	
	9 1,4-Dichlorobenzene	146	6.801	6.791	(1.004)	641257	60.0000	58.77
$	10 1,2-Dichlorobenzene-d4	152	7.074	7.068	(1.044)	366690	60.0000	57.56
	12 1,2-Dichlorobenzene	146	7.095	7.090	(1.047)	586105	60.0000	56.71
	11 Benzyl alcohol	108	7.127	7.111	(1.052)	333722	60.0000	59.81
	14 2,2'-oxybis(1-Chloropropane)	45	7.383	7.378	(1.090)	583999	60.0000	58.62
	13 2-Methylphenol	108	7.421	7.410	(1.095)	465676	60.0000	56.72
	17 Hexachloroethane	117	7.581	7.581	(1.119)	238128	60.0000	59.89
	16 N-Nitroso-di-n-propylamine	70	7.618	7.592	(1.125)	326644	60.0000	57.50
	15 4-Methylphenol	108	7.666	7.656	(1.132)	480697	60.0000	56.78
$	18 Nitrobenzene-d5	82	7.747	7.731	(0.876)	472630	60.0000	58.12
	19 Nitrobenzene	77	7.773	7.757	(0.879)	500349	60.0000	58.08
	20 Isophorone	82	8.174	8.153	(0.924)	831552	60.0000	59.55
	21 2-Nitrophenol	139	8.291	8.281	(0.938)	315624	60.0000	60.18
	22 2,4-Dimethylphenol	107	8.489	8.473	(0.960)	483532	60.0000	58.02
	23 Bis(2-Chloroethoxy)methane	93	8.612	8.596	(0.974)	565854	60.0000	58.59
	24 Benzoic acid	105	8.868	8.681	(1.003)	672460	120.000	128.2(M)
	25 2,4-Dichlorophenol	162	8.703	8.692	(0.984)	462384	60.0000	59.11
	26 1,2,4-Trichlorobenzene	180	8.799	8.788	(0.995)	491334	60.0000	58.26
*	27 Naphthalene-d8	136	8.841	8.831	(1.000)	466609	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	8.874	8.863	(1.004)	1274295	60.0000	56.07
	29 4-Chloroaniline	127	9.060	9.050	(1.025)	545428	60.0000	56.37
	30 Hexachlorobutadiene	225	9.210	9.210	(1.042)	297026	60.0000	61.04
	31 4-Chloro-3-methylphenol	107	9.931	9.921	(1.123)	384219	60.0000	56.21
	32 2-Methylnaphthalene	141	9.990	9.985	(1.130)	738590	60.0000	56.48
	33 Hexachlorocyclopentadiene	237	10.374	10.369	(0.889)	301675	60.0000	77.48
	34 2,4,6-Trichlorophenol	196	10.535	10.529	(0.903)	365542	60.0000	64.08
	35 2,4,5-Trichlorophenol	196	10.593	10.588	(0.908)	320731	60.0000	57.18
$	36 2-Fluorobiphenyl	172	10.657	10.647	(0.913)	978588	60.0000	55.57
	37 2-Chloronaphthalene	162	10.754	10.743	(0.922)	895516	60.0000	56.45
	38 2-Nitroaniline	65	11.031	11.016	(0.946)	222070	60.0000	56.37
	39 Dimethylphthalate	163	11.432	11.411	(0.980)	894481	60.0000	53.46
	40 Acenaphthylene	152	11.416	11.405	(0.978)	1407691	60.0000	56.75
	41 2,6-Dinitrotoluene	165	11.507	11.491	(0.986)	245927	60.0000	58.10
*	42 Acenaphthene-d10	164	11.667	11.662	(1.000)	277253	20.0000	
	43 3-Nitroaniline	138	11.710	11.688	(1.004)	184646	60.0000	50.15
	44 Acenaphthene	153	11.720	11.710	(1.005)	880511	60.0000	58.98
	45 2,4-Dinitrophenol	184	11.881	11.859	(1.018)	302798	120.000	142.6
	46 Dibenzofuran	168	11.982	11.972	(1.027)	1133906	60.0000	55.11
	47 4-Nitrophenol	109	12.094	12.078	(1.037)	102078	60.0000	64.33
	48 2,4-Dinitrotoluene	165	12.121	12.105	(1.039)	310979	60.0000	58.89
	50 Diethylphthalate	149	12.575	12.559	(1.078)	836925	60.0000	53.46
	49 Fluorene	166	12.532	12.522	(1.074)	914900	60.0000	54.21
	51 4-Chlorophenyl-phenylether	204	12.586	12.580	(1.079)	473765	60.0000	56.01
	52 4-Nitroaniline	138	12.698	12.661	(1.088)	231971	60.0000	57.71
	53 4,6-Dinitro-2-methylphenol	198	12.773	12.741	(0.913)	452321	120.000	126.0
	54 N-Nitrosodiphenylamine	169	12.810	12.794	(0.915)	697009	60.0000	56.77
$	55 2,4,6-Tribromophenol	330	12.954	12.944	(1.110)	172726	60.0000	62.73
	56 4-Bromophenyl-phenylether	248	13.349	13.339	(0.954)	341525	60.0000	59.46
	57 Hexachlorobenzene	284	13.536	13.526	(0.967)	388123	60.0000	59.90
	58 Pentachlorophenol	266	13.857	13.846	(0.990)	238527	60.0000	75.05
*	59 Phenanthrene-d10	188	13.996	13.991	(1.000)	432327	20.0000	
	60 Phenanthrene	178	14.038	14.023	(1.003)	1234143	60.0000	56.84
	61 Anthracene	178	14.108	14.092	(1.008)	1363025	60.0000	57.21
	62 Carbazole	167	14.428	14.412	(1.031)	1847315	60.0000	55.02
	63 Di-n-butylphthalate	149	15.197	15.187	(1.086)	1634490	60.0000	59.24
	64 Fluoranthene	202	15.940	15.924	(1.139)	1569281	60.0000	59.41
	65 Pyrene	202	16.276	16.266	(0.892)	1549791	60.0000	54.15
$	66 Terphenyl-d14	244	16.645	16.640	(0.912)	1055079	60.0000	56.34
	67 Butylbenzylphthalate	149	17.569	17.558	(0.963)	794142	60.0000	59.44
	68 Benzo(a)anthracene	228	18.226	18.210	(0.999)	1650877	60.0000	57.93
*	69 Chrysene-d12	240	18.247	18.237	(1.000)	554146	20.0000	
	70 3,3'-Dichlorobenzidine	252	18.279	18.269	(1.002)	545068	60.0000	55.88
	71 Chrysene	228	18.290	18.274	(1.002)	1448940	60.0000	55.52
	72 bis(2-Ethylhexyl)phthalate	149	18.589	18.584	(0.953)	1079351	60.0000	58.29
*	134 Di-n-octylphthalate-d4	153	19.513	19.508	(1.000)	674001	20.0000	
	73 Di-n-octylphthalate	149	19.529	19.518	(1.001)	1743792	60.0000	55.62

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	19.865	19.839	(0.976)	1832970	60.0000	58.93
75 Benzo(k)fluoranthene	252	19.897	19.871	(0.977)	1654290	60.0000	52.00(M)
187 Total Benzofluoranthenes	252	19.897	19.839	(0.977)	3310823	120.000	110.0
76 Benzo(a)pyrene	252	20.293	20.272	(0.997)	1749523	60.0000	56.31
* 77 Perylene-d12	264	20.362	20.357	(1.000)	564071	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	21.719	21.692	(1.067)	2282519	60.0000	57.78
79 Dibenzo(a,h)anthracene	278	21.751	21.724	(1.068)	1692464	60.0000	56.82
80 Benzo(g,h,i)perylene	276	22.007	21.975	(1.081)	1944536	60.0000	56.31
90 N-Nitrosodimethylamine	74	1.893	1.866	(0.279)	335769	60.0000	61.82
103 Pyridine	79	1.861	1.850	(0.275)	606104	60.0000	61.45
91 Aniline	93	6.337	6.326	(0.935)	750975	60.0000	57.29
105 1-methylnaphthalene	141	10.155	10.150	(1.149)	763709	60.0000	57.80
93 Benzidine	184	16.239	16.228	(0.890)	428150	60.0000	49.58
111 Azobenzene (1,2-DP-Hydrazine)	77	12.837	12.821	(1.100)	909574	60.0000	53.97
143 1,4-Dioxane	88	1.498	1.482	(0.221)	210798	60.0000	59.00
$ 137 d8-1,4-Dioxane	96	1.465	1.455	(0.216)	222936	60.0000	60.23
144 alpha-Terpineol	59	8.948	8.938	(1.012)	317213	60.0000	59.83
98 Retene	219	16.869	16.864	(0.924)	603936	60.0000	58.37
133 Butylatedhydroxytoluene	205	11.913	11.902	(1.021)	627696	60.0000	52.42
115 Tributyl Phosphate	99	12.986	12.954	(0.928)	1016070	60.0000	56.12
116 Dibutyl Phenyl Phosphate	175	14.647	14.637	(1.047)	812920	60.0000	61.30
117 Butyl Diphenyl Phosphate	94	16.292	16.282	(0.893)	241124	60.0000	55.32
118 Triphenyl Phosphate	326	17.863	17.852	(0.979)	330979	60.0000	61.15
123 Acetophenone	105	7.522	7.506	(1.110)	622013	60.0000	58.22
179 n-Decane	57	6.668	6.663	(0.984)	440435	60.0000	58.77
180 n-Octadecane	57	14.049	14.044	(1.004)	391235	60.0000	55.70
168 Pentachlorobenzene	250	12.030	12.014	(1.031)	398577	60.0000	56.97
113 Diphenyl Oxide	170	10.978	10.973	(0.941)	654847	60.0000	58.70
112 Biphenyl	154	10.780	10.770	(0.924)	1005998	60.0000	57.77
120 2,3,4,6-Tetrachlorophenol	232	12.292	12.281	(1.054)	302683	60.0000	59.77
151 1,2,4,5-Tetrachlorobenzene	216	10.337	10.327	(0.886)	993601	60.0000	55.64
110 Tetrachloroguaiacol	247	13.996	13.980	(1.000)	399135	120.000	126.6
109 3,4,5-Trichloroguaiacol	213	12.399	12.388	(0.886)	190181	60.0000	61.85
181 3,4,6-Trichloroguaiacol	211	12.505	12.495	(1.846)	222340	60.0000	59.46
108 4,5,6-Trichloroguaiacol	213	13.429	13.414	(1.151)	195730	60.0000	60.02
184 3,4-Dichloroguaiacol	192	10.871	10.866	(1.605)	194013	60.0000	59.33
107 4,5-Dichloroguaiacol	192	11.678	11.662	(1.001)	442432	120.000	116.3
182 4,6-Dichloroguaiacol	192	11.678	11.662	(1.724)	447011	120.000	116.2
185 4-Chloroguaiacol	115	9.814	9.808	(1.449)	112198	30.0000	30.70
186 Carbaryl	144	14.856	14.840	(1.061)	755398	60.0000	64.64
106 Guaiacol	124	7.805	7.795	(1.152)	430356	60.0000	58.34

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 08201006.D
Lab Smp Id: IC600820
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Misc Info: 10-

Calibration Date: 20-AUG-2010
Calibration Time: 10:40
Client Smp ID: IC600820
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	154425	77212	308850	149578	-3.14
27 Naphthalene-d8	490229	245114	980458	466609	-4.82
42 Acenaphthene-d10	286412	143206	572824	277253	-3.20
59 Phenanthrene-d10	457816	228908	915632	432327	-5.57
69 Chrysene-d12	560635	280318	1121270	554146	-1.16
134 Di-n-octylphthala	675549	337774	1351098	674001	-0.23
77 Perylene-d12	521119	260560	1042238	564071	8.24

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	6.77	6.27	7.27	6.77	0.13
27 Naphthalene-d8	8.84	8.34	9.34	8.84	0.04
42 Acenaphthene-d10	11.66	11.16	12.16	11.67	0.03
59 Phenanthrene-d10	13.99	13.49	14.49	14.00	0.02
69 Chrysene-d12	18.24	17.74	18.74	18.25	0.02
134 Di-n-octylphthala	19.51	19.01	20.01	19.51	0.02
77 Perylene-d12	20.36	19.86	20.86	20.36	0.02

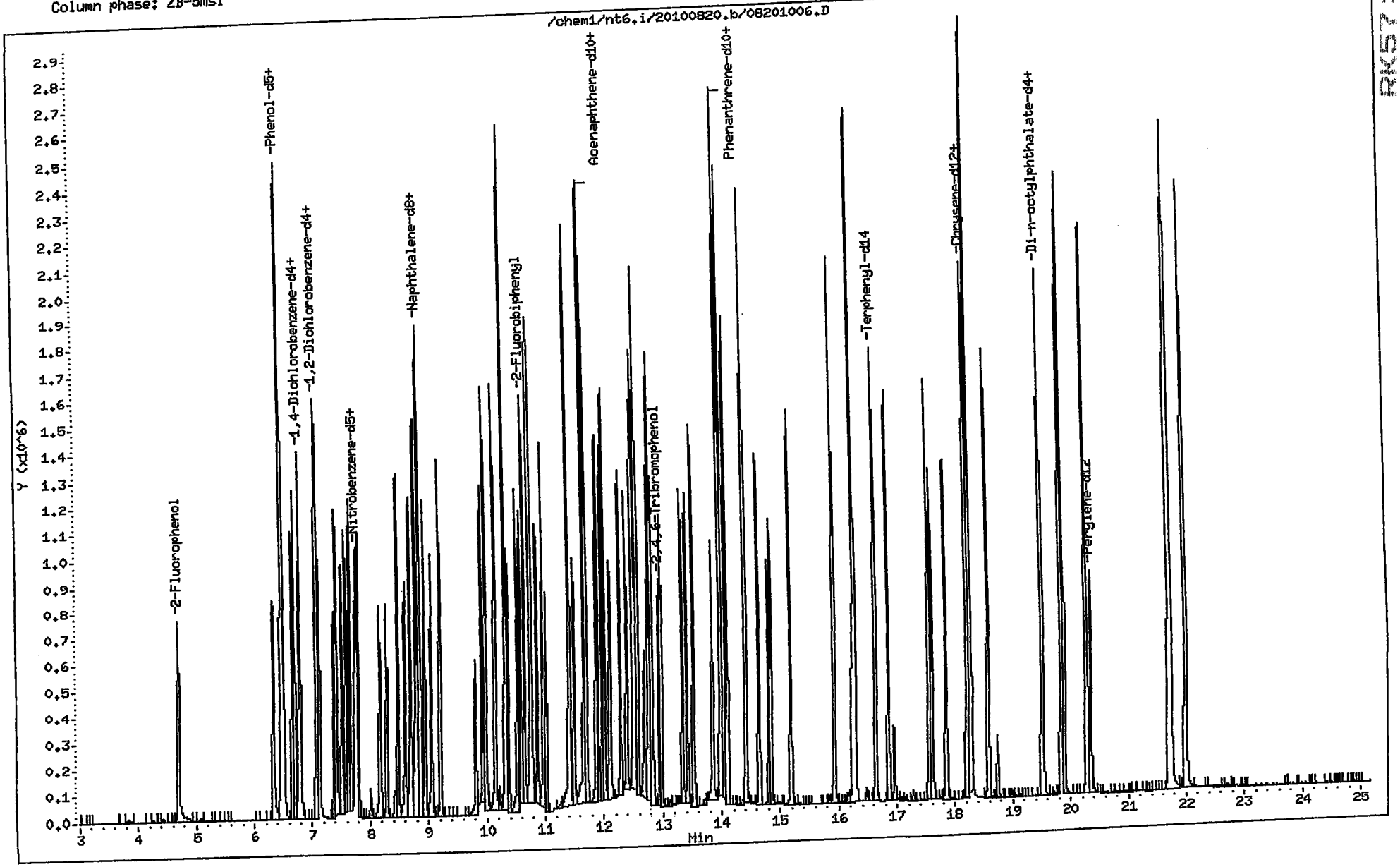
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt6.i/20100820.b/08201006.D
Date : 20-AUG-2010 13:24
Client ID: IC600820
Sample Info: IC600820,

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

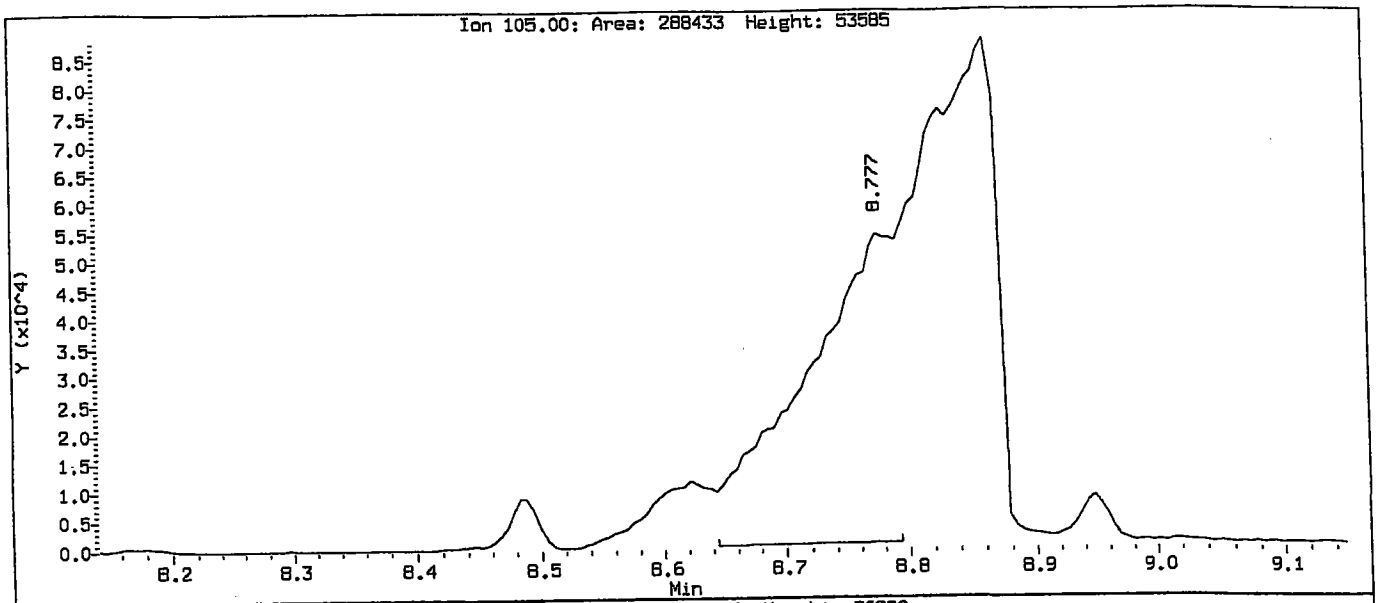
Column phase: ZB-5msi

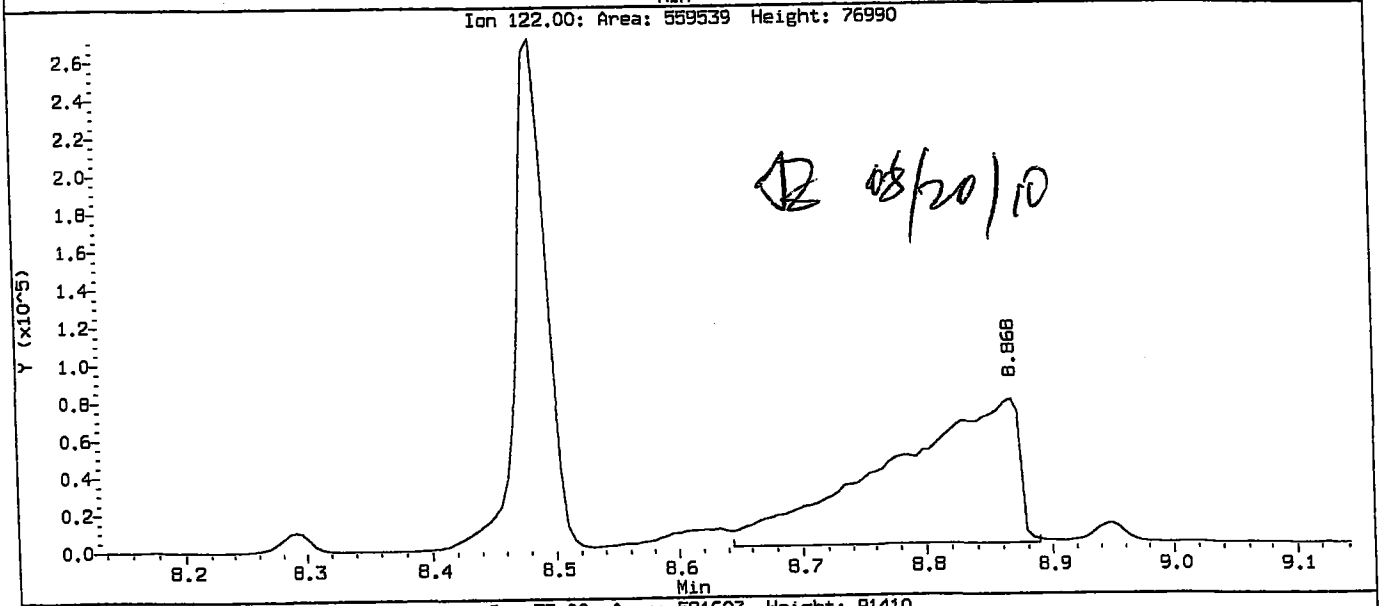
RX57-08121



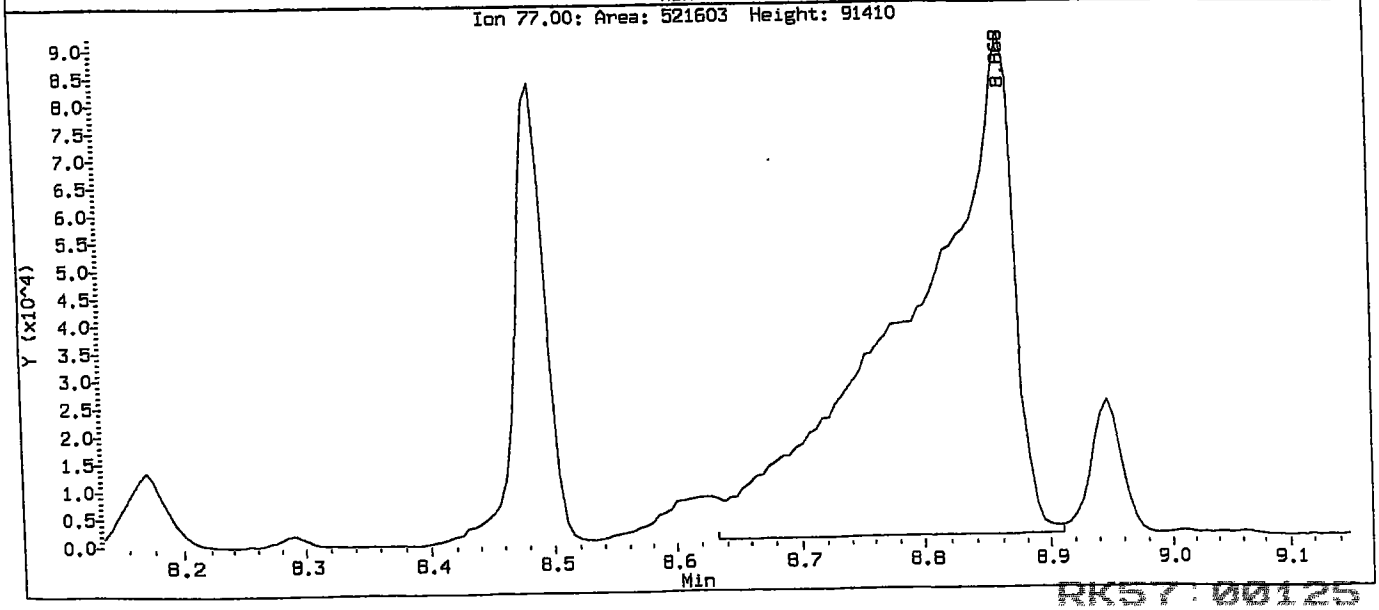
Data File: /chem1/nt6.i/20100820.b/08201006.D
Injection Date: 20-AUG-2010 13:24
Instrument: nt6.i
Client Sample ID: IC600820

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





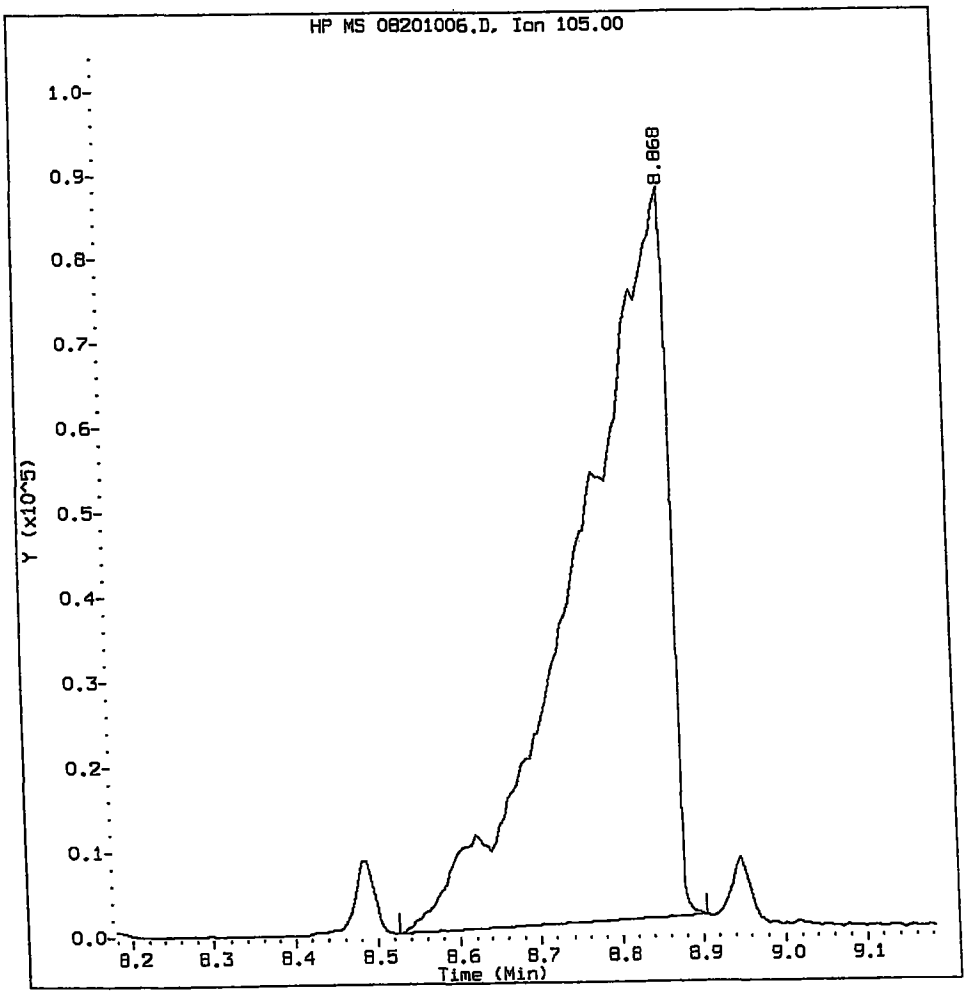
DB 08/20/10



RKS7:00125

IC600820, /chem1/nt6.i/20100820.b/08201006.D

Benzoic acid Amount: 128.15 Area: 672460



MANUAL INTEGRATION for Benzoic acid

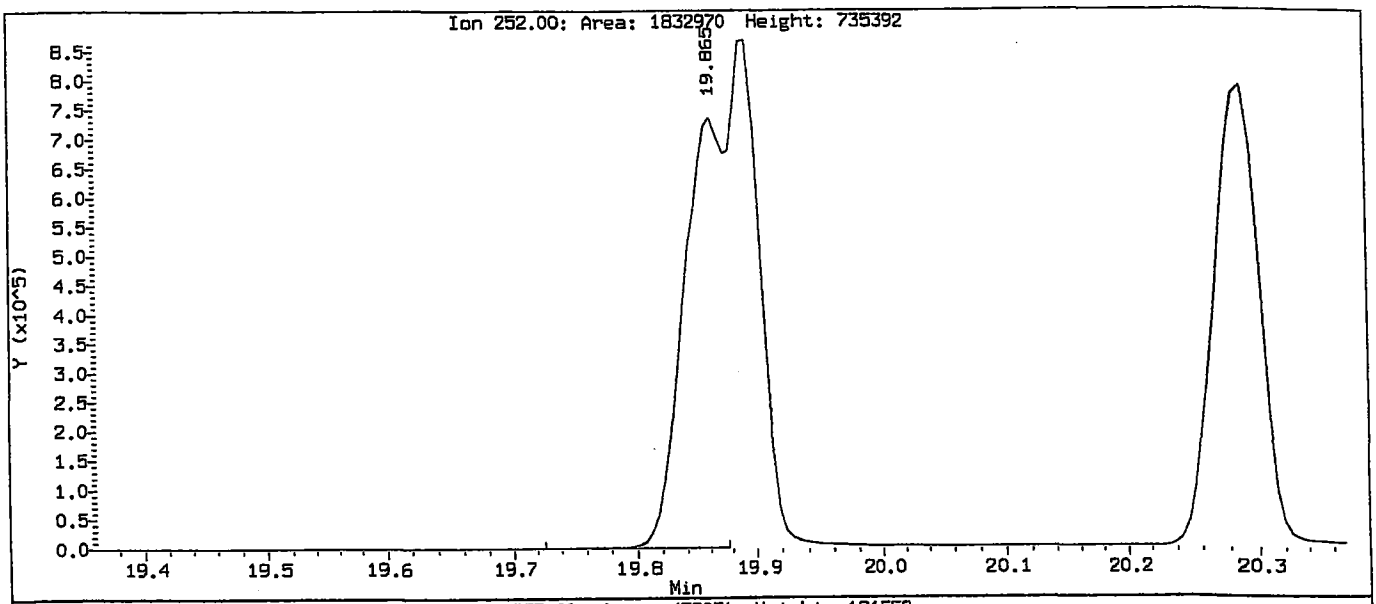
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

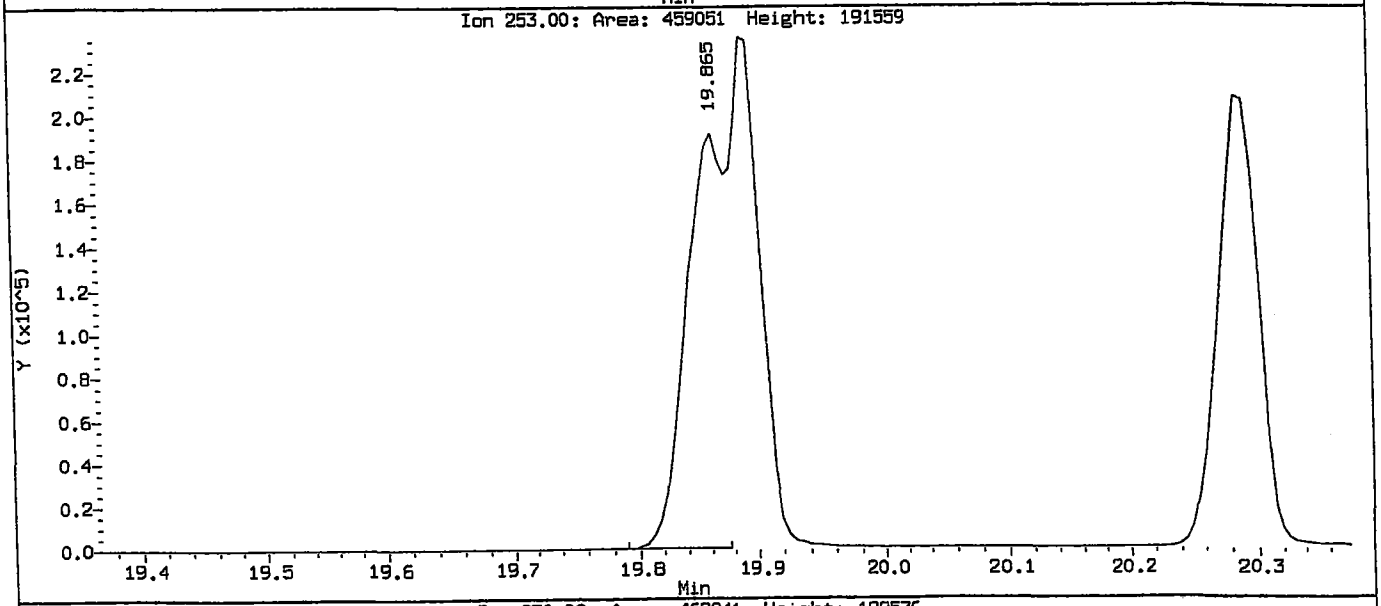
5. Other _____

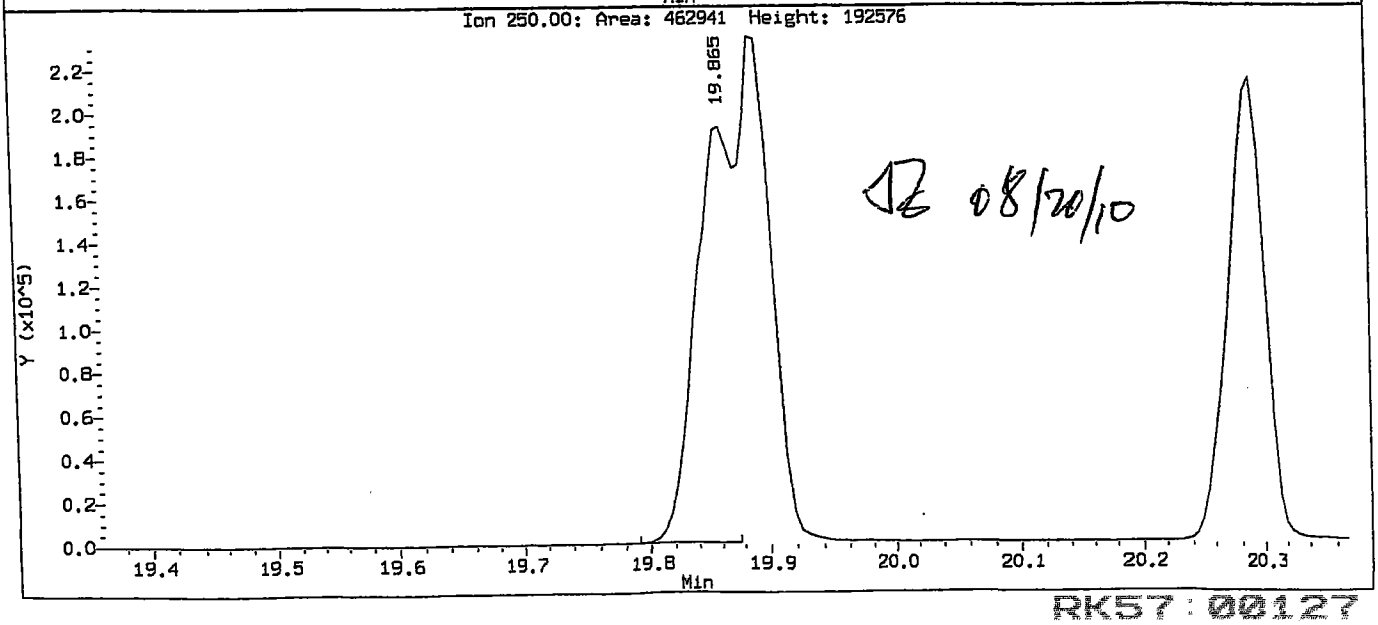
Analyst: _____ Date: 08/20/10

Data File: /chem1/nt6.i/20100820.b/08201006.D
Injection Date: 20-AUG-2010 13:24
Instrument: nt6.i
Client Sample ID: IC600820

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9





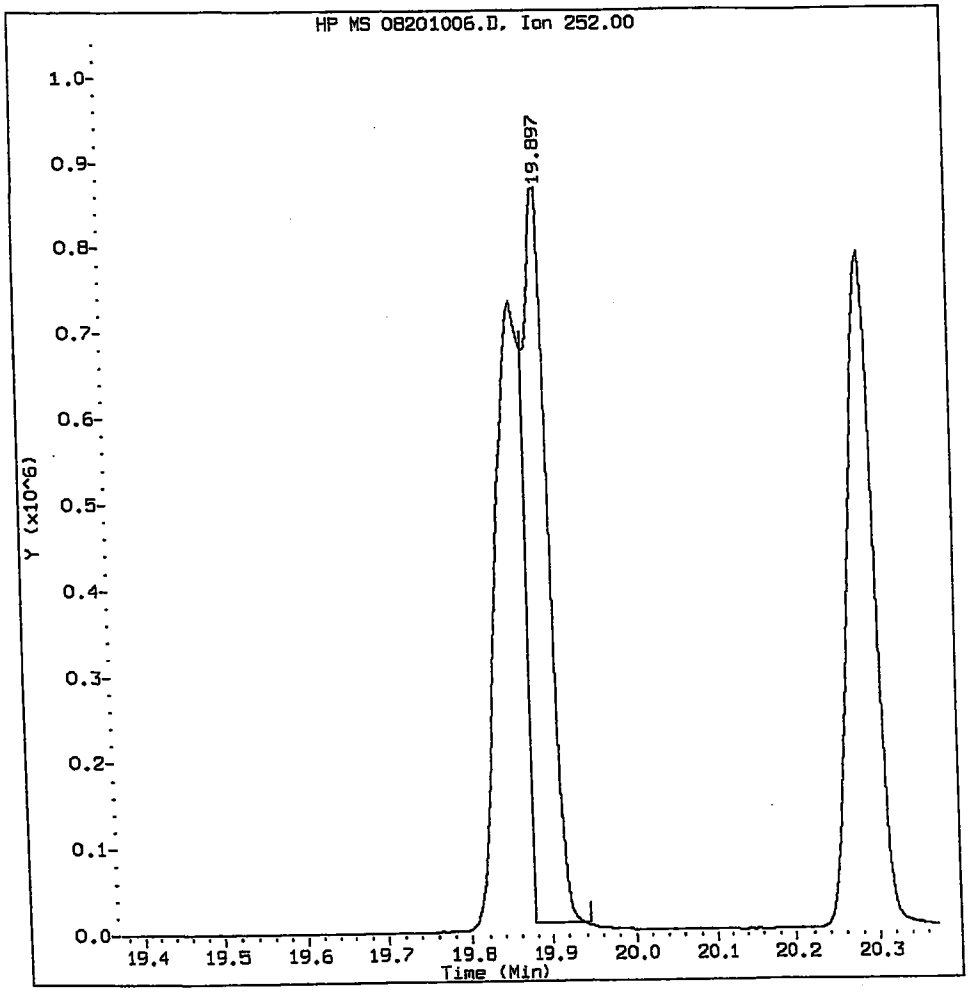


DE 08/20/10

RK57:00127

IC600820, /chem1/nt6.i/20100820.b/08201006.D

Benzo(k)fluoranthene Amount: 52.00 Area: 1654290



MANUAL INTEGRATION for Benzo(k)fluoranthene

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

Analyst: [signature] Date: 08/20/10

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100820.b/08201007.D
Lab Smp Id: IC800820 Client Smp ID: IC800820
Inj Date : 20-AUG-2010 13:56
Operator : JZ Inst ID: nt6.i
Smp Info : IC800820,
Misc Info : 10-
Comment : 1ul Injection
Method : /chem1/nt6.i/20100820.b/SW846082010.m
Meth Date : 20-Aug-2010 15:57 jianqing Quant Type: ISTD
Cal Date : 20-AUG-2010 13:56 Cal File: 08201007.D
Als bottle: 7 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 3.50

08/20/10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	Compound Not Detected.					
$	2 Phenol-d5	99	Compound Not Detected.					
	3 Phenol	94	6.487	6.470	(0.957)	806686	80.0000	73.75
$	5 2-Chlorophenol-d4	132	Compound Not Detected.					
	4 Bis(2-Chloroethyl)ether	93	6.487	6.481	(0.957)	592228	80.0000	75.04
	6 2-Chlorophenol	128	6.508	6.497	(0.961)	677189	80.0000	73.08
	7 1,3-Dichlorobenzene	146	6.706	6.695	(0.990)	784037	80.0000	72.80
*	8 1,4-Dichlorobenzene-d4	152	6.775	6.764	(1.000)	147131	20.0000	
	9 1,4-Dichlorobenzene	146	6.802	6.791	(1.004)	800665	80.0000	74.60
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	7.096	7.090	(1.047)	780745	80.0000	76.80
	11 Benzyl alcohol	108	7.133	7.111	(1.053)	429621	80.0000	78.27
	14 2,2'-oxybis(1-Chloropropane)	45	7.384	7.378	(1.090)	752835	80.0000	76.83
	13 2-Methylphenol	108	7.427	7.410	(1.096)	600692	80.0000	74.39
	17 Hexachloroethane	117	7.582	7.581	(1.119)	301007	80.0000	76.96
	16 N-Nitroso-di-n-propylamine	70	7.619	7.592	(1.125)	433965	80.0000	77.67
	15 4-Methylphenol	108	7.673	7.656	(1.132)	625359	80.0000	75.10
$	18 Nitrobenzene-d5	82	Compound Not Detected.					
	19 Nitrobenzene	77	7.774	7.757	(0.879)	674169	80.0000	76.95
	20 Isophorone	82	8.180	8.153	(0.925)	1102660	80.0000	77.64
	21 2-Nitrophenol	139	8.297	8.281	(0.938)	412960	80.0000	77.42
	22 2,4-Dimethylphenol	107	8.490	8.473	(0.960)	630991	80.0000	74.45
	23 Bis(2-Chloroethoxy)methane	93	8.613	8.596	(0.974)	740344	80.0000	75.38
	24 Benzoic acid	105	8.912	8.681	(1.008)	943113	160.000	176.7(M)
	25 2,4-Dichlorophenol	162	8.709	8.692	(0.985)	599124	80.0000	75.31
	26 1,2,4-Trichlorobenzene	180	8.799	8.788	(0.995)	634154	80.0000	73.94
*	27 Naphthalene-d8	136	8.842	8.831	(1.000)	474542	20.0000	

Data File: /chem1/nt6.i/20100820.b/08201007.D
Report Date: 20-Aug-2010 15:57

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28 Naphthalene	128	8.874	8.863	(1.004)	1614519	80.0000	69.85
29 4-Chloroaniline	127	9.067	9.050	(1.025)	701061	80.0000	71.24
30 Hexachlorobutadiene	225	9.211	9.210	(1.042)	382238	80.0000	77.24
31 4-Chloro-3-methylphenol	107	9.937	9.921	(1.124)	516344	80.0000	74.27
32 2-Methylnaphthalene	141	9.996	9.985	(1.130)	928919	80.0000	69.84
33 Hexachlorocyclopentadiene	237	10.375	10.369	(0.889)	410889	80.0000	104.6
34 2,4,6-Trichlorophenol	196	10.541	10.529	(0.903)	476412	80.0000	82.81
35 2,4,5-Trichlorophenol	196	10.599	10.588	(0.908)	440903	80.0000	77.95
$ 36 2-Fluorobiphenyl	172	Compound Not Detected.					
37 2-Chloronaphthalene	162	10.760	10.743	(0.922)	1176495	80.0000	73.54
38 2-Nitroaniline	65	11.032	11.016	(0.946)	304804	80.0000	76.72
39 Dimethylphthalate	163	11.438	11.411	(0.980)	1220038	80.0000	72.31
40 Acenaphthylene	152	11.417	11.405	(0.978)	1793175	80.0000	71.69
41 2,6-Dinitrotoluene	165	11.513	11.491	(0.987)	340547	80.0000	79.78
* 42 Acenaphthene-d10	164	11.668	11.662	(1.000)	279600	20.0000	
43 3-Nitroaniline	138	11.716	11.688	(1.004)	225159	80.0000	60.64
44 Acenaphthene	153	11.726	11.710	(1.005)	1119417	80.0000	74.36
45 2,4-Dinitrophenol	184	11.887	11.859	(1.019)	430361	160.000	200.9
46 Dibenzofuran	168	11.988	11.972	(1.027)	1482163	80.0000	71.43
47 4-Nitrophenol	109	12.100	12.078	(1.037)	147949	80.0000	92.45
48 2,4-Dinitrotoluene	165	12.132	12.105	(1.040)	434525	80.0000	81.60
50 Diethylphthalate	149	12.581	12.559	(1.078)	1127908	80.0000	71.44
49 Fluorene	166	12.538	12.522	(1.075)	1238041	80.0000	72.73
51 4-Chlorophenyl-phenylether	204	12.592	12.580	(1.079)	641425	80.0000	75.20
52 4-Nitroaniline	138	12.709	12.661	(1.089)	317321	80.0000	78.29
53 4,6-Dinitro-2-methylphenol	198	12.784	12.741	(0.913)	618836	160.000	167.4
54 N-Nitrosodiphenylamine	169	12.816	12.794	(0.915)	938501	80.0000	74.21
$ 55 2,4,6-Tribromophenol	330	Compound Not Detected.					
56 4-Bromophenyl-phenylether	248	13.350	13.339	(0.953)	467456	80.0000	79.00
57 Hexachlorobenzene	284	13.542	13.526	(0.967)	522955	80.0000	78.35
58 Pentachlorophenol	266	13.863	13.846	(0.990)	327462	80.0000	100.0
* 59 Phenanthrene-d10	188	14.002	13.991	(1.000)	445353	20.0000	
60 Phenanthrene	178	14.044	14.023	(1.003)	1620557	80.0000	72.45
61 Anthracene	178	14.114	14.092	(1.008)	1775783	80.0000	72.35
62 Carbazole	167	14.434	14.412	(1.031)	2401082	80.0000	69.43
63 Di-n-butylphthalate	149	15.198	15.187	(1.085)	2054580	80.0000	72.28
64 Fluoranthene	202	15.940	15.924	(1.138)	1960158	80.0000	72.03
65 Pyrene	202	16.277	16.266	(0.892)	1901545	80.0000	68.92
$ 66 Terphenyl-d14	244	Compound Not Detected.					
67 Butylbenzylphthalate	149	17.570	17.558	(0.963)	973661	80.0000	75.59
68 Benzo(a)anthracene	228	18.232	18.210	(0.999)	2005390	80.0000	72.99
* 69 Chrysene-d12	240	18.253	18.237	(1.000)	534260	20.0000	
70 3,3'-Dichlorobenzidine	252	18.280	18.269	(1.001)	637592	80.0000	67.80
71 Chrysene	228	18.296	18.274	(1.002)	1769055	80.0000	70.31
72 bis(2-Ethylhexyl)phthalate	149	18.590	18.584	(0.952)	1308917	80.0000	75.36
* 134 Di-n-octylphthalate-d4	153	19.519	19.508	(1.000)	632162	20.0000	
73 Di-n-octylphthalate	149	19.530	19.518	(1.001)	2072424	80.0000	70.48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	19.866	19.839	(0.975)	1966106	80.0000	68.44
75 Benzo(k)fluoranthene	252	19.904	19.871	(0.977)	2138435	80.0000	72.02(M)
187 Total Benzofluoranthenes	252	19.904	19.839	(0.977)	3880331	160.000	139.5
76 Benzo(a)pyrene	252	20.293	20.272	(0.996)	2062818	80.0000	71.88
* 77 Perylene-d12	264	20.368	20.357	(1.000)	520994	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	21.725	21.692	(1.067)	2735032	80.0000	74.96
79 Dibenzo(a,h)anthracene	278	21.757	21.724	(1.068)	2008126	80.0000	72.99
80 Benzo(g,h,i)perylene	276	22.019	21.975	(1.081)	2335774	80.0000	73.24
90 N-Nitrosodimethylamine	74	1.888	1.866	(0.279)	415942	80.0000	77.85
103 Pyridine	79	1.856	1.850	(0.274)	773289	80.0000	79.70
91 Aniline	93	6.337	6.326	(0.935)	959312	80.0000	74.40
105 1-methylnaphthalene	141	10.161	10.150	(1.149)	983851	80.0000	73.22
93 Benzidine	184	16.240	16.228	(0.890)	522014	80.0000	62.69
111 Azobenzene (1,2-DP-Hydrazine)	77	12.843	12.821	(1.101)	1214439	80.0000	71.46
143 1,4-Dioxane	88	1.488	1.482	(0.220)	263625	80.0000	75.01
$ 137 d8-1,4-Dioxane	96	1.461	1.455	(0.216)	279247	80.0000	76.70
144 alpha-Terpineol	59	8.954	8.938	(1.013)	421041	80.0000	78.09
98 Retene	219	16.870	16.864	(0.924)	783859	80.0000	78.59
133 Butylatedhydroxytoluene	205	11.913	11.902	(1.021)	840391	80.0000	69.59
115 Tributyl Phosphate	99	12.998	12.954	(0.928)	1429713	80.0000	76.65
116 Dibutyl Phenyl Phosphate	175	14.653	14.637	(1.047)	1064759	80.0000	77.95
117 Butyl Diphenyl Phosphate	94	16.293	16.282	(0.893)	307441	80.0000	73.16
118 Triphenyl Phosphate	326	17.869	17.852	(0.979)	422655	80.0000	80.99
123 Acetophenone	105	7.523	7.506	(1.110)	813888	80.0000	77.44
179 n-Decane	57	6.668	6.663	(0.984)	541809	80.0000	73.49
180 n-Octadecane	57	14.050	14.044	(1.003)	511541	80.0000	70.69
168 Pentachlorobenzene	250	12.031	12.014	(1.031)	533792	80.0000	75.65
113 Diphenyl Oxide	170	10.979	10.973	(0.941)	842239	80.0000	74.86
112 Biphenyl	154	10.781	10.770	(0.924)	1261659	80.0000	71.84
120 2,3,4,6-Tetrachlorophenol	232	12.298	12.281	(1.054)	422744	80.0000	82.78
151 1,2,4,5-Tetrachlorobenzene	216	10.338	10.327	(0.886)	1269172	80.0000	70.48
110 Tetrachloroguaiacol	247	14.002	13.980	(1.000)	533472	160.000	164.3
109 3,4,5-Trichloroguaiacol	213	12.405	12.388	(0.886)	255756	80.0000	80.75
181 3,4,6-Trichloroguaiacol	211	12.511	12.495	(1.847)	302949	80.0000	82.36
108 4,5,6-Trichloroguaiacol	213	13.430	13.414	(1.151)	270549	80.0000	82.26
184 3,4-Dichloroguaiacol	192	10.877	10.866	(1.605)	262937	80.0000	81.75
107 4,5-Dichloroguaiacol	192	11.684	11.662	(1.001)	598070	160.000	155.9
182 4,6-Dichloroguaiacol	192	11.684	11.662	(1.724)	599925	160.000	158.5
185 4-Chloroguaiacol	115	9.820	9.808	(1.449)	151780	40.0000	42.21
186 Carbaryl	144	14.867	14.840	(1.062)	1044226	80.0000	86.74
106 Guaiacol	124	7.811	7.795	(1.153)	578796	80.0000	79.76

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 08201007.D
Lab Smp Id: IC800820
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Misc Info: 10-

Calibration Date: 20-AUG-2010
Calibration Time: 10:40
Client Smp ID: IC800820
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	154425	77212	308850	147131	-4.72
27 Naphthalene-d8	490229	245114	980458	474542	-3.20
42 Acenaphthene-d10	286412	143206	572824	279600	-2.38
59 Phenanthrene-d10	457816	228908	915632	445353	-2.72
69 Chrysene-d12	560635	280318	1121270	534260	-4.70
134 Di-n-octylphthala	675549	337774	1351098	632162	-6.42
77 Perylene-d12	521119	260560	1042238	520994	-0.02

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	6.77	6.27	7.27	6.78	0.14
27 Naphthalene-d8	8.84	8.34	9.34	8.84	0.04
42 Acenaphthene-d10	11.66	11.16	12.16	11.67	0.03
59 Phenanthrene-d10	13.99	13.49	14.49	14.00	0.07
69 Chrysene-d12	18.24	17.74	18.74	18.25	0.05
134 Di-n-octylphthala	19.51	19.01	20.01	19.52	0.05
77 Perylene-d12	20.36	19.86	20.86	20.37	0.05

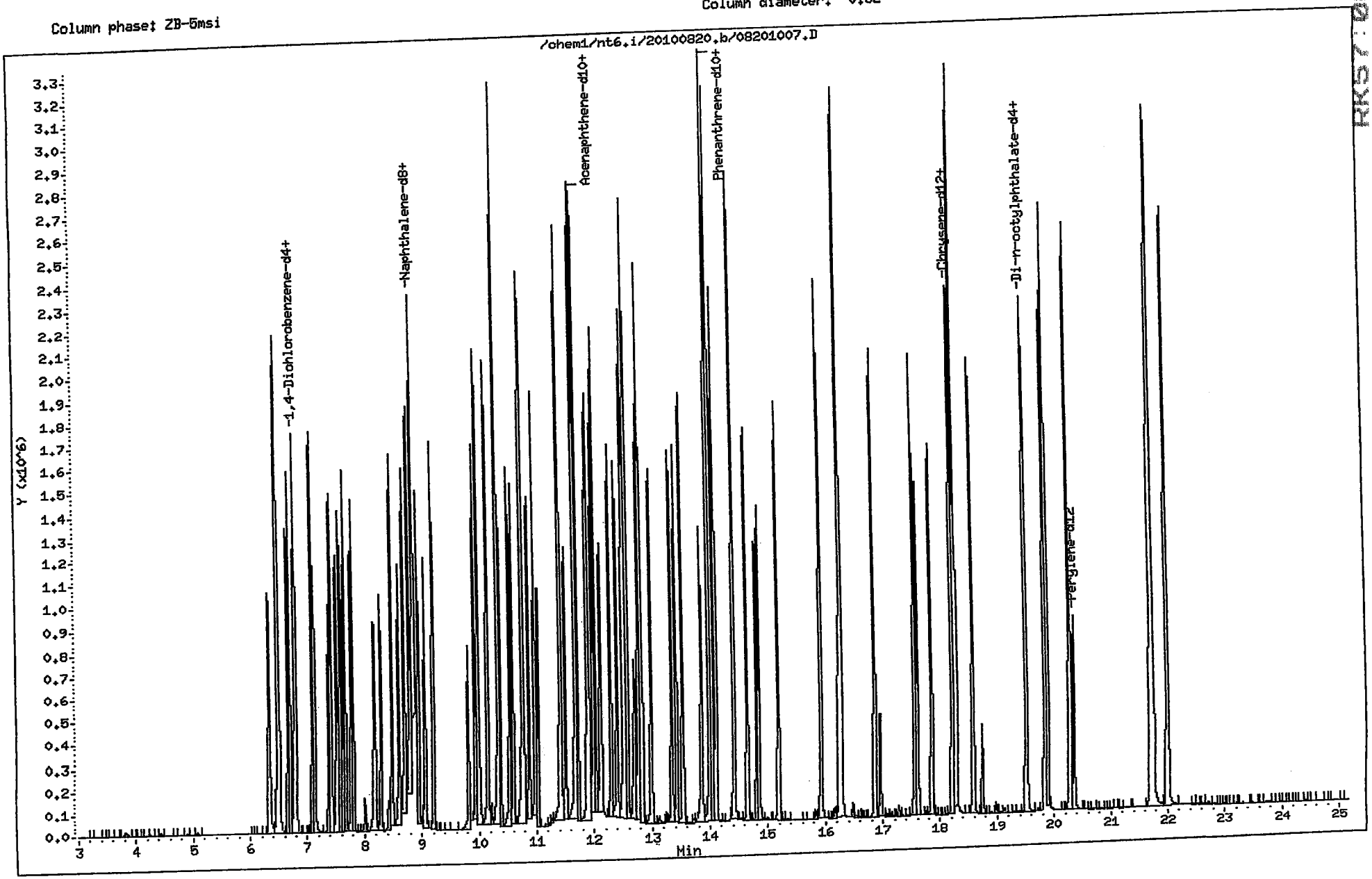
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt6.i/20100820.b/08201007.D
Date : 20-AUG-2010 13:56
Client ID: IC800820
Sample Info: IC800820,

Instrument: nt6.i

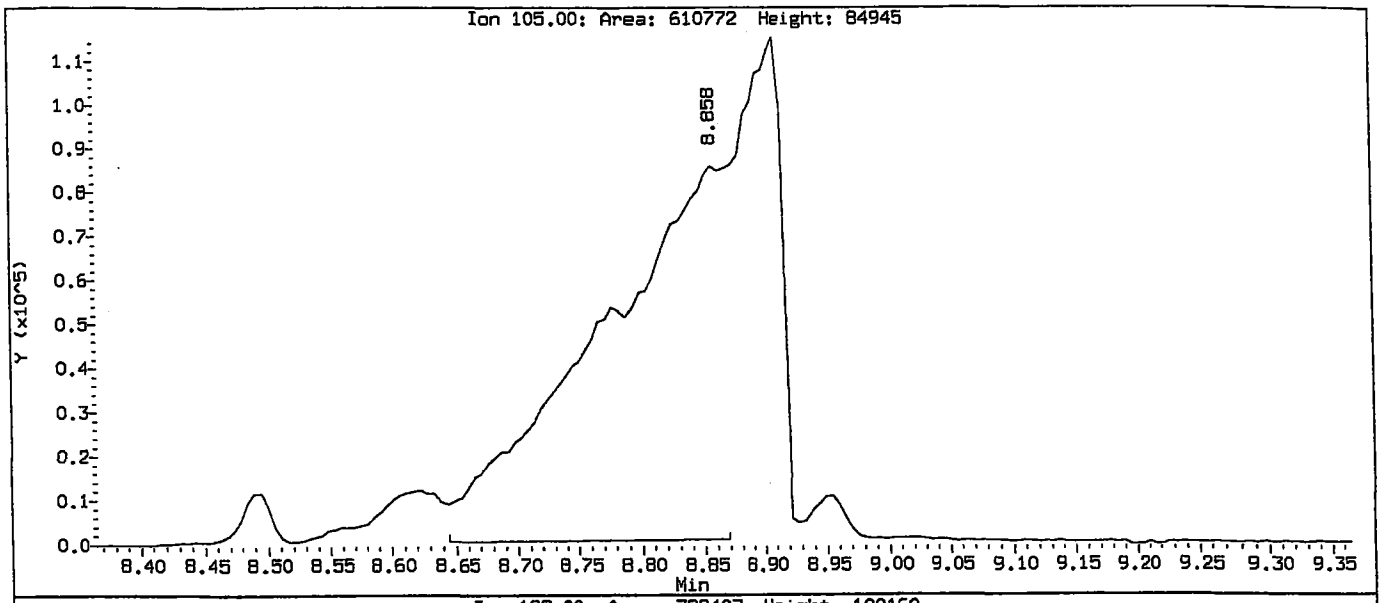
Operator: JZ
Column diameter: 0.32

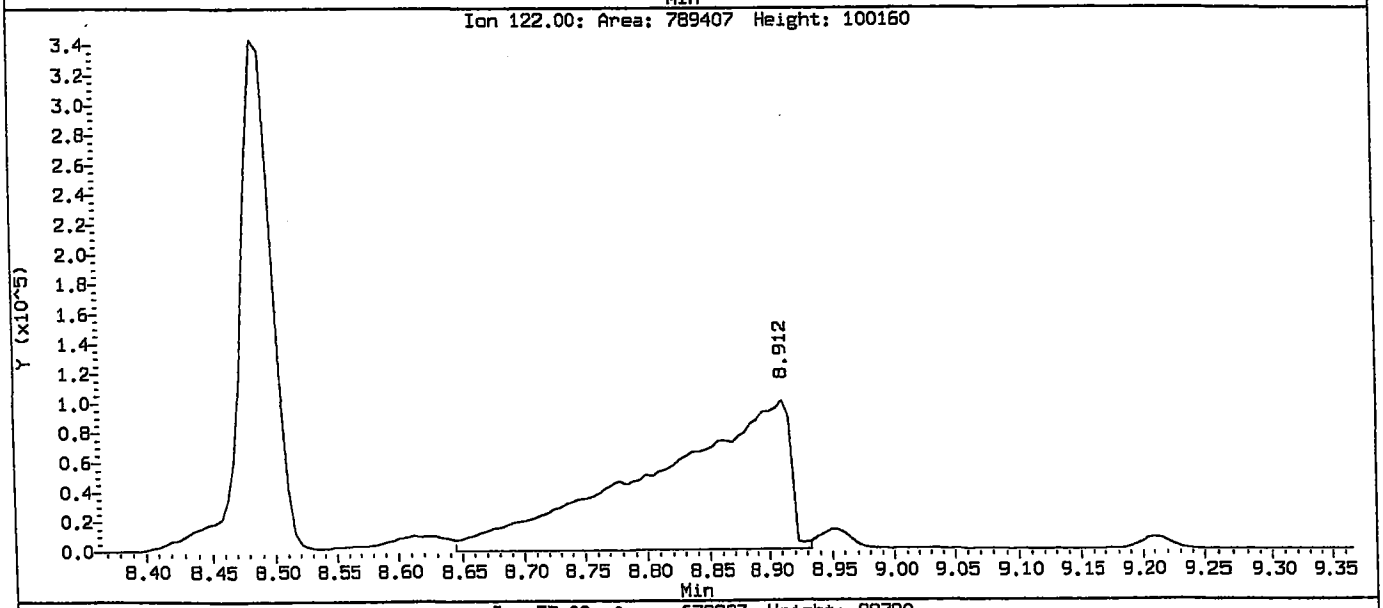
Column phase: ZB-5msi

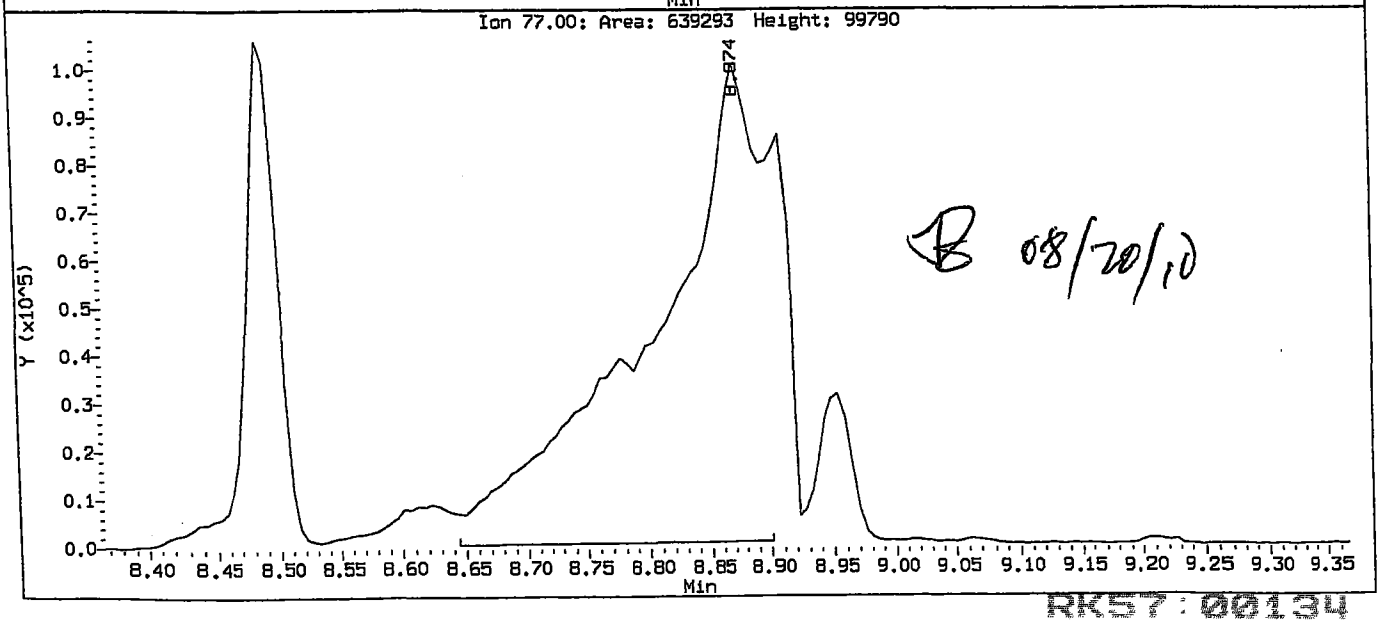


Data File: /chem1/nt6.i/20100820.b/08201007.D
Injection Date: 20-AUG-2010 13:56
Instrument: nt6.i
Client Sample ID: IC800820

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



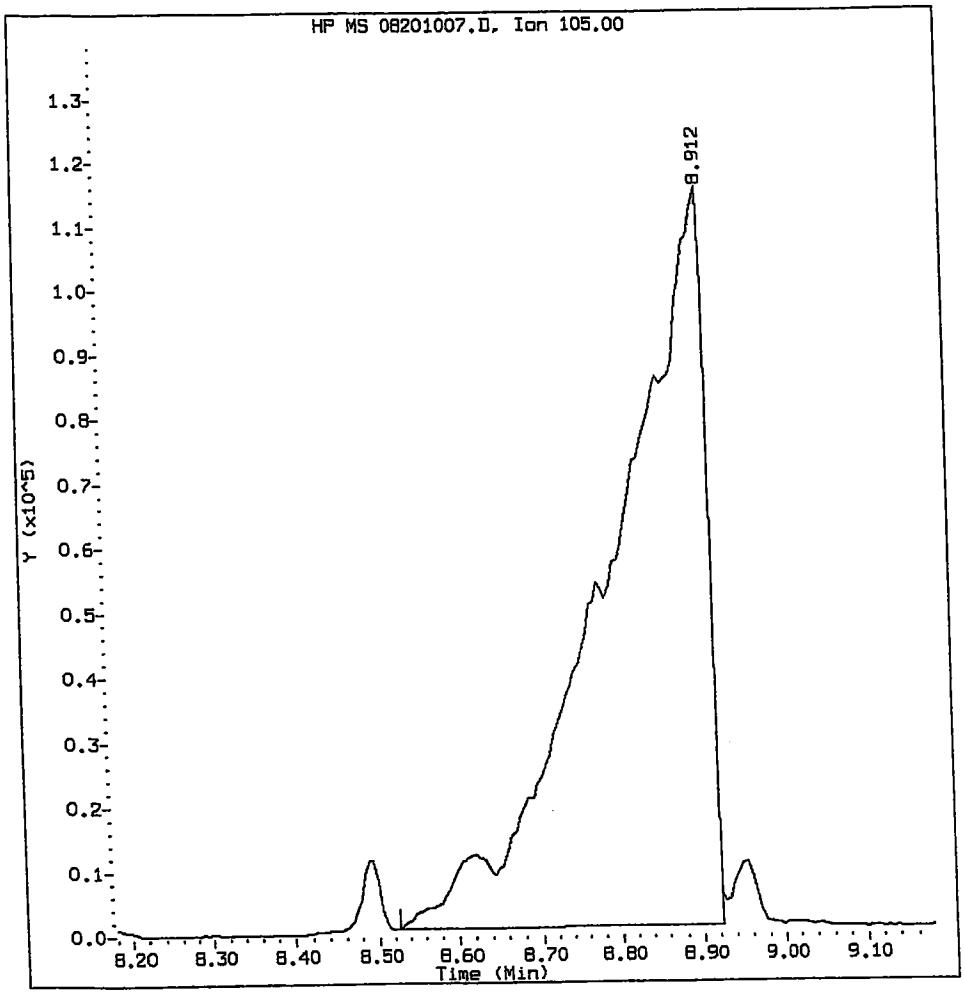




B 08/20/10

IC800820, /chem1/nt6.i/20100820.b/08201007.D

Benzoic acid Amount: 176.73 Area: 943113



MANUAL INTEGRATION for Benzoic acid

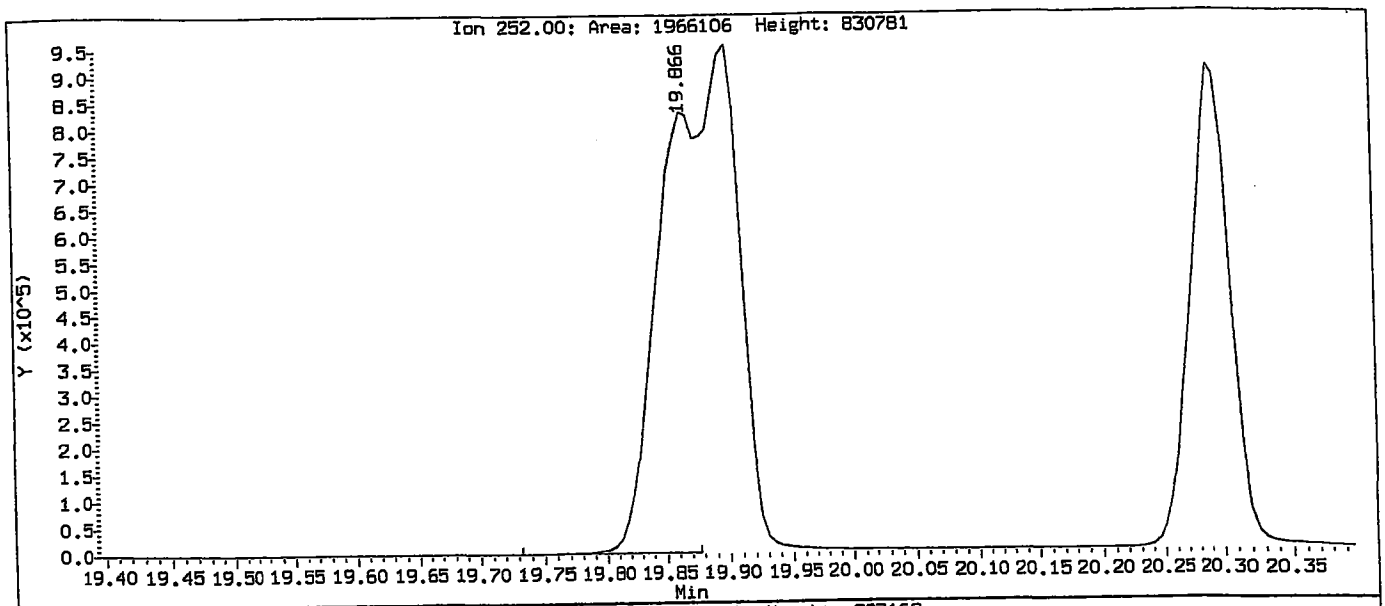
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

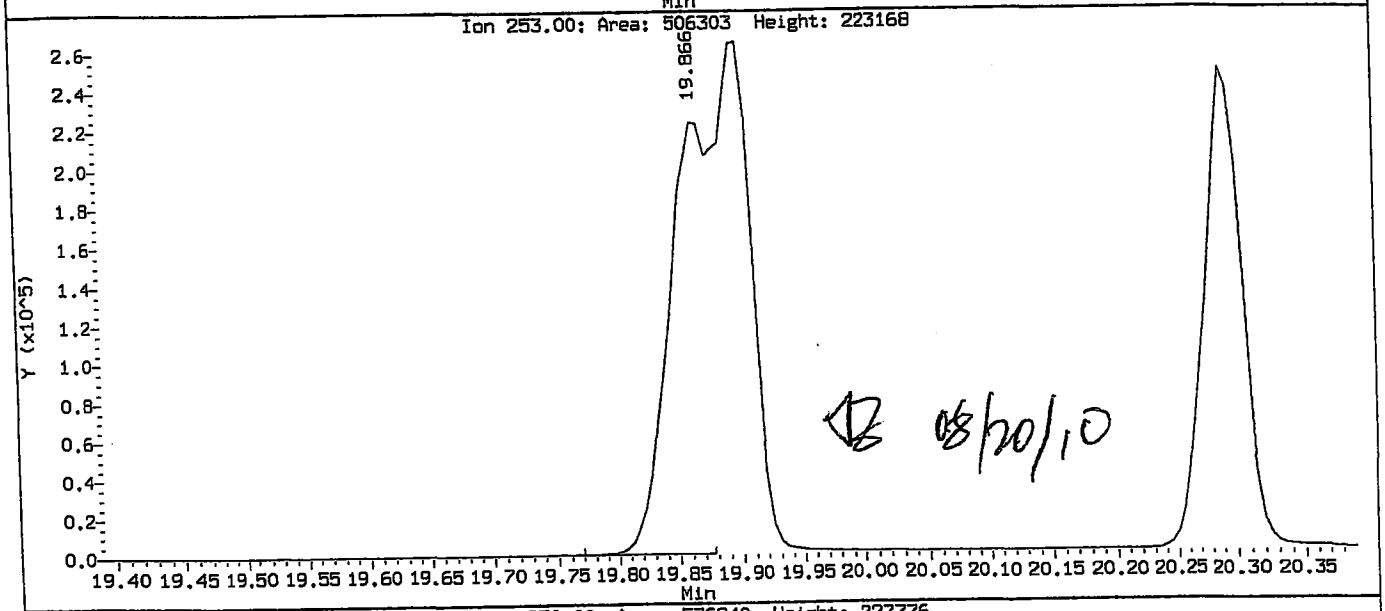
5. Other _____

Analyst: _____ Date: 08/20/10

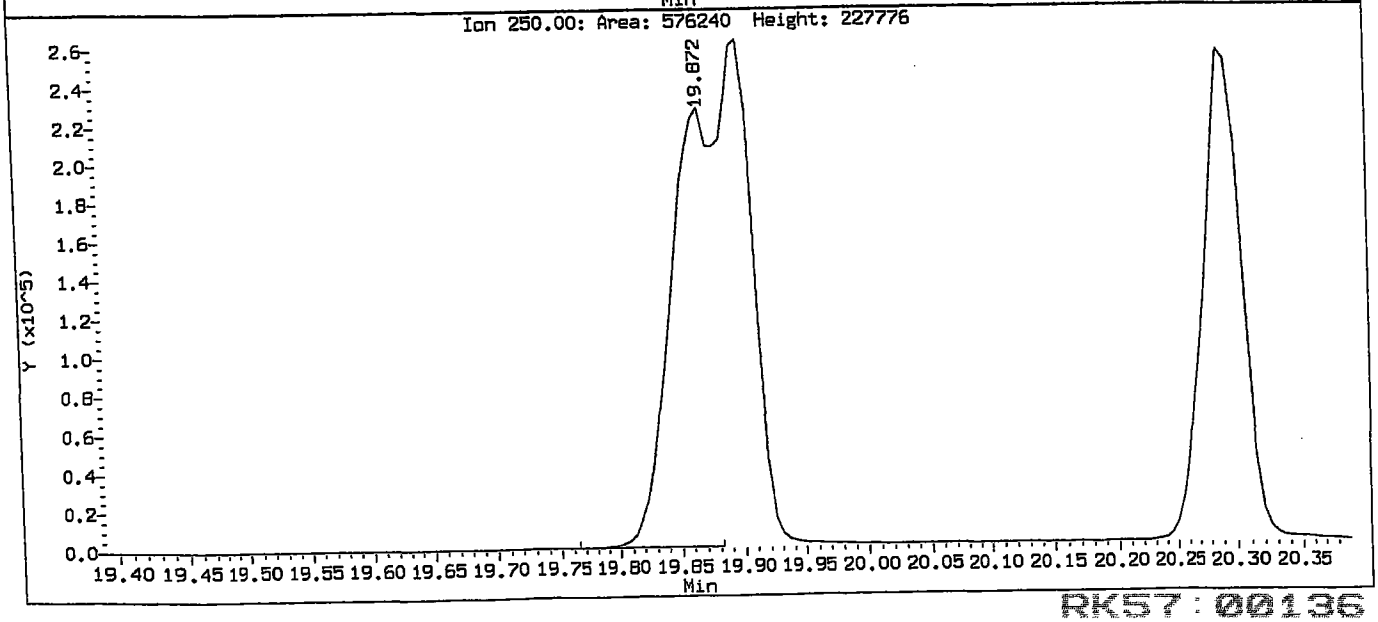
Data File: /chem1/nt6.i/20100820.b/08201007.D
Injection Date: 20-AUG-2010 13:56
Instrument: nt6.i
Client Sample ID: IC800820

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9



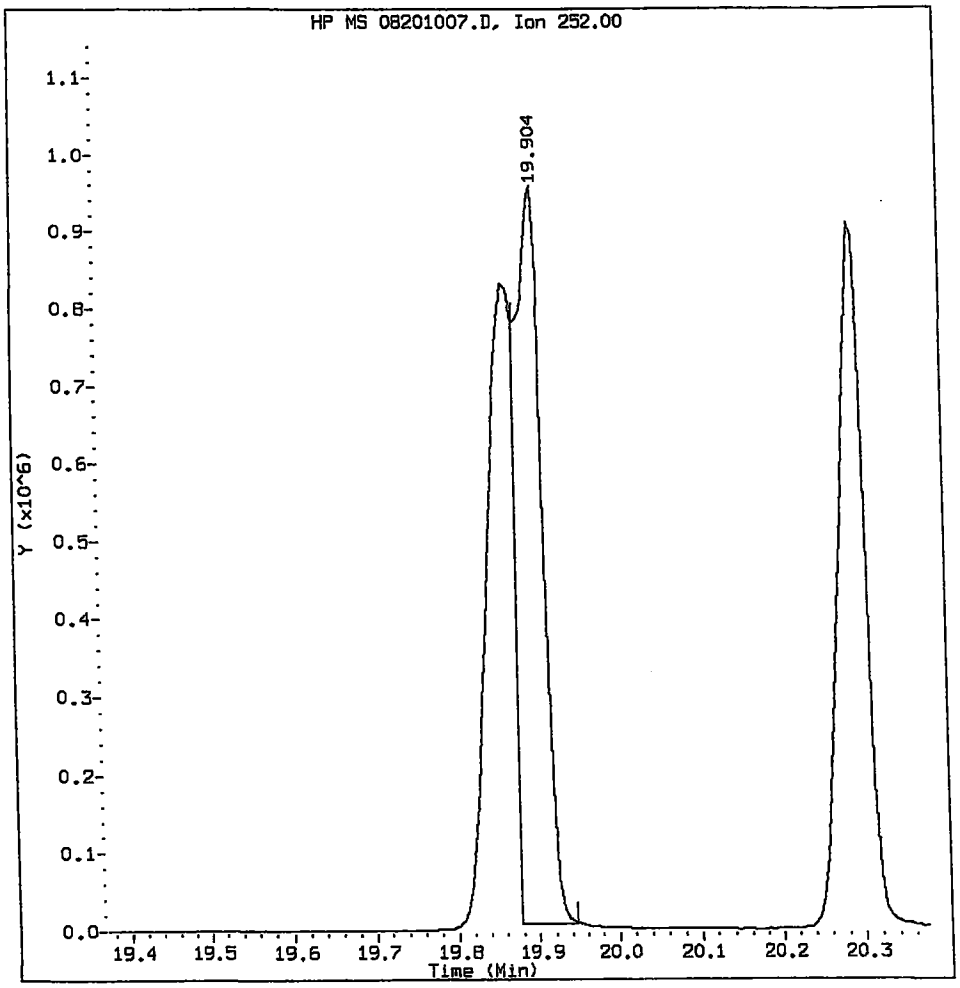


D 08/20/10



IC800820, /chem1/nt6.i/20100820.b/08201007.D

Benzo(k)fluoranthene Amount: 72.02 Area: 2138435



MANUAL INTEGRATION for Benzo(k)fluoranthene

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

Analyst: _____ Date: 08/20/10

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100820.b/08201018.D
Lab Smp Id: ICV0820 Client Smp ID: ICV0820
Inj Date : 20-AUG-2010 20:02
Operator : JZ Inst ID: nt6.i
Smp Info : ICV0820
Misc Info : 10-
Comment : 1ul Injection
Method : /chem1/nt6.i/20100820.b/SW846082010.m
Meth Date : 20-Aug-2010 21:48 jianqing Quant Type: ISTD
Cal Date : 20-AUG-2010 11:45 Cal File: 08201003.D
Als bottle: 18 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 3.50

08/20/10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	4.685	4.694	(0.692)	261284	25.0078	25.01(R)
$	2 Phenol-d5	99	6.453	6.456	(0.953)	295401	24.5200	24.52(R)
	3 Phenol	94	6.469	6.472	(0.956)	300074	23.4079	23.41
$	5 2-Chlorophenol-d4	132	6.474	6.478	(0.957)	248496	24.0286	24.03(R)
	4 Bis(2-Chloroethyl)ether	93	6.479	6.483	(0.957)	249499	26.9744	26.97
	6 2-Chlorophenol	128	6.501	6.499	(0.961)	252120	23.2126	23.21
	7 1,3-Dichlorobenzene	146	6.698	6.697	(0.990)	326952	25.9012	25.90
*	8 1,4-Dichlorobenzene-d4	152	6.768	6.766	(1.000)	172446	20.0000	
	9 1,4-Dichlorobenzene	146	6.794	6.793	(1.004)	326281	25.9369	25.94
$	10 1,2-Dichlorobenzene-d4	152	7.072	7.070	(1.045)	179303	24.4146	24.41(R)
	12 1,2-Dichlorobenzene	146	7.088	7.092	(1.047)	311559	26.1489	26.15
	11 Benzyl alcohol	108	7.115	7.118	(1.051)	180901	28.1196	28.12
	14 2,2'-oxybis(1-Chloropropane)	45	7.382	7.386	(1.091)	307436	26.7686	26.77
	13 2-Methylphenol	108	7.414	7.412	(1.095)	226917	23.9751	23.98
	17 Hexachloroethane	117	7.580	7.583	(1.120)	122599	26.7433	26.74
	16 N-Nitroso-di-n-propylamine	70	7.601	7.604	(1.123)	177100	27.0433	27.04
	15 4-Methylphenol	108	7.654	7.658	(1.131)	234927	24.0710	24.07
$	18 Nitrobenzene-d5	82	7.734	7.738	(0.875)	235018	24.2990	24.30(R)
	19 Nitrobenzene	77	7.761	7.765	(0.878)	272014	26.5451	26.55
	20 Isophorone	82	8.156	8.160	(0.923)	481245	28.9729	28.97
	21 2-Nitrophenol	139	8.285	8.288	(0.938)	146681	23.5123	23.51
	22 2,4-Dimethylphenol	107	8.477	8.480	(0.959)	232136	23.4176	23.42
	23 Bis(2-Chloroethoxy)methane	93	8.600	8.603	(0.973)	297541	25.9014	25.90
	24 Benzoic acid	105	8.797	8.790	(0.996)	322312	54.9044	54.90
	25 2,4-Dichlorophenol	162	8.696	8.694	(0.984)	212710	22.8621	22.86
	26 1,2,4-Trichlorobenzene	180	8.792	8.790	(0.995)	258451	25.7660	25.77
*	27 Naphthalene-d8	136	8.835	8.838	(1.000)	555013	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
	28 Naphthalene	128	8.867	8.865	(1.004)	737228	27.2709	27.27
	29 4-Chloroaniline	127	9.054	9.057	(1.025)	330797	28.7423	28.74
	30 Hexachlorobutadiene	225	9.209	9.207	(1.042)	155397	26.8497	26.85
	31 4-Chloro-3-methylphenol	107	9.924	9.928	(1.123)	196476	24.1645	24.16
	32 2-Methylnaphthalene	141	9.988	9.987	(1.131)	425087	27.3274	27.33
	33 Hexachlorocyclopentadiene	237	10.373	10.371	(0.889)	138909	23.2920	23.29
	34 2,4,6-Trichlorophenol	196	10.533	10.531	(0.903)	149726	21.9821	21.98
	35 2,4,5-Trichlorophenol	196	10.587	10.590	(0.908)	160820	24.0139	24.01
$	36 2-Fluorobiphenyl	172	10.651	10.649	(0.913)	491898	23.3963	23.40(R)
	37 2-Chloronaphthalene	162	10.747	10.750	(0.921)	483543	25.5296	25.53
	38 2-Nitroaniline	65	11.019	11.017	(0.945)	126966	26.9910	26.99
	39 Dimethylphthalate	163	11.420	11.418	(0.979)	524400	26.2497	26.25
	40 Acenaphthylene	152	11.409	11.413	(0.978)	766021	25.8657	25.87
	41 2,6-Dinitrotoluene	165	11.500	11.498	(0.986)	132416	26.1998	26.20
*	42 Acenaphthene-d10	164	11.665	11.664	(1.000)	331041	20.0000	
	43 3-Nitroaniline	138	11.698	11.701	(1.003)	133319	30.3249	30.32
	44 Acenaphthene	153	11.714	11.717	(1.004)	463300	25.9918	25.99
	45 2,4-Dinitrophenol	184	11.868	11.867	(1.017)	187015	66.0088	66.01(R)
	46 Dibenzofuran	168	11.981	11.979	(1.027)	678231	27.6085	27.61
	47 4-Nitrophenol	109	12.082	12.086	(1.036)	46564	24.5756	24.58
	48 2,4-Dinitrotoluene	165	12.109	12.112	(1.038)	173907	27.5817	27.58
	50 Diethylphthalate	149	12.568	12.566	(1.077)	501725	26.8405	26.84
	49 Fluorene	166	12.525	12.524	(1.074)	546889	27.1370	27.14
	51 4-Chlorophenyl-phenylether	204	12.584	12.582	(1.079)	265972	26.3359	26.34
	52 4-Nitroaniline	138	12.680	12.678	(1.087)	139047	28.9733	28.97
	53 4,6-Dinitro-2-methylphenol	198	12.755	12.759	(0.911)	216016	48.6158	48.62
	54 N-Nitrosodiphenylamine	169	12.798	12.801	(0.914)	388543	25.5655	25.57
$	55 2,4,6-Tribromophenol	330	12.947	12.946	(1.110)	83023	25.2515	25.25(R)
	56 4-Bromophenyl-phenylether	248	13.343	13.346	(0.953)	187560	26.3769	26.38
	57 Hexachlorobenzene	284	13.530	13.533	(0.967)	207670	25.8919	25.89
	58 Pentachlorophenol	266	13.855	13.854	(0.990)	95742	22.6430	22.64
*	59 Phenanthrene-d10	188	13.994	13.992	(1.000)	535188	20.0000	
	60 Phenanthrene	178	14.032	14.030	(1.003)	754104	28.0564	28.06
	61 Anthracene	178	14.101	14.105	(1.008)	781085	26.4812	26.48
	62 Carbazole	167	14.416	14.420	(1.030)	819868	19.7268	19.73
	63 Di-n-butylphthalate	149	15.191	15.189	(1.085)	893150	26.1476	26.15
	64 Fluoranthene	202	15.933	15.931	(1.139)	904014	27.6442	27.64
	65 Pyrene	202	16.269	16.268	(0.892)	877609	27.3155	27.32
$	66 Terphenyl-d14	244	16.643	16.642	(0.912)	515527	24.5190	24.52(R)
	67 Butylbenzylphthalate	149	17.562	17.560	(0.963)	414150	27.6118	27.61
	68 Benzo(a)anthracene	228	18.219	18.217	(0.999)	869121	27.1671	27.17
*	69 Chrysene-d12	240	18.240	18.244	(1.000)	622127	20.0000	
	70 3,3'-Dichlorobenzidine	252	18.272	18.276	(1.002)	311777	28.4698	28.47
	71 Chrysene	228	18.278	18.281	(1.002)	770981	26.3132	26.31
	72 bis(2-Ethylhexyl)phthalate	149	18.582	18.586	(0.952)	557125	27.3671	27.37
*	134 Di-n-octylphthalate-d4	153	19.512	19.510	(1.000)	740967	20.0000	
	73 Di-n-octylphthalate	149	19.522	19.520	(1.001)	884249	25.6547	25.65

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
74	Benzo(b)fluoranthene	252	19.848	19.846	(0.975)	915497	27.7974	27.80
75	Benzo(k)fluoranthene	252	19.880	19.878	(0.976)	839358	25.2040	25.20
187	Total Benzofluoranthenes	252	19.880	19.878	(0.976)	1752951	54.2870	54.29
76	Benzo(a)pyrene	252	20.281	20.279	(0.996)	811912	24.6803	24.68
* 77	Perylene-d12	264	20.361	20.359	(1.000)	597260	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	21.701	21.700	(1.066)	1161180	27.7594	27.76
79	Dibenzo(a,h)anthracene	278	21.733	21.737	(1.067)	881297	27.9425	27.94
80	Benzo(g,h,i)perylene	276	21.990	21.988	(1.080)	983537	26.9001	26.90
90	N-Nitrosodimethylamine	74	1.865	1.879	(0.276)	175305	27.9953	28.00
103	Pyridine	79	1.838	1.857	(0.272)	306505	26.9527	26.95
91	Aniline	93	6.330	6.333	(0.935)	450160	29.7890	29.79
105	1-methylnaphthalene	141	10.154	10.152	(1.149)	416074	26.4751	26.48
93	Benzidine	184	16.232	16.236	(0.890)	316215	40.4942	40.49(R)
111	Azobenzene (1,2-DP-Hydrazine)	77	12.830	12.828	(1.100)	514849	25.5860	25.59
143	1,4-Dioxane	88	1.475	1.489	(0.218)	107105	26.0023	26.00
$ 137	d8-1,4-Dioxane	96	1.448	1.462	(0.214)	102381	23.9937	23.99(R)
144	alpha-Terpineol	59	8.942	8.940	(1.012)	154512	24.5021	24.50
98	Retene	219	16.868	16.866	(0.925)	303713	26.1483	26.15
133	Butylatedhydroxytoluene	205	11.906	11.909	(1.021)	355548	24.8668	24.87
115	Tributyl Phosphate	99	12.969	12.972	(0.927)	548750	24.4822	24.48
116	Dibutyl Phenyl Phosphate	175	14.646	14.644	(1.047)	413952	25.2170	25.22
117	Butyl Diphenyl Phosphate	94	16.291	16.289	(0.893)	120113	24.5442	24.54
118	Triphenyl Phosphate	326	17.856	17.854	(0.979)	161774	26.6219	26.62
123	Acetophenone	105	7.510	7.514	(1.110)	355908	28.8929	28.89
179	n-Decane	57	6.661	6.664	(0.984)	231393	26.7797	26.78
180	n-Octadecane	57	14.048	14.046	(1.004)	247197	28.4278	28.43
168	Pentachlorobenzene	250	12.023	12.022	(1.031)	231942	27.7643	27.76
113	Diphenyl Oxide	170	10.971	10.975	(0.940)	333789	25.0581	25.06
112	Biphenyl	154	10.774	10.772	(0.924)	574174	26.7514	26.75
120	2,3,4,6-Tetrachlorophenol	232	12.285	12.289	(1.053)	147382	24.3752	24.38
151	1,2,4,5-Tetrachlorobenzene	216	10.325	10.328	(0.885)	307231	14.4095	14.41(R)
110	Tetrachloroguaiacol	247	13.983	13.987	(0.999)	193268	49.8887	49.89
109	3,4,5-Trichloroguaiacol	213	12.392	12.390	(0.886)	96084	25.4887	25.49
181	3,4,6-Trichloroguaiacol	211	12.499	12.497	(1.847)	115947	27.2000	27.20
108	4,5,6-Trichloroguaiacol	213	13.423	13.421	(1.151)	99602	25.2784	25.28
184	3,4-Dichloroguaiacol	192	10.864	10.868	(1.605)	99508	26.5776	26.58
107	4,5-Dichloroguaiacol	192	11.671	11.669	(1.000)	228116	49.6650	49.66
182	4,6-Dichloroguaiacol	192	11.671	11.669	(1.724)	228063	51.1481	51.15
185	4-Chloroguaiacol	115	9.812	9.810	(1.450)	55678	13.4953	13.50
186	Carbaryl	144	14.849	14.847	(1.061)	365685	25.2776	25.28
106	Guaiacol	124	7.799	7.797	(1.152)	215950	25.3912	25.39

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 08201018.D
Lab Smp Id: ICV0820
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Misc Info: 10-

Calibration Date: 20-AUG-2010
Calibration Time: 10:40
Client Smp ID: ICV0820
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	154425	77212	308850	172446	11.67
27 Naphthalene-d8	490229	245114	980458	555013	13.22
42 Acenaphthene-d10	286412	143206	572824	331041	15.58
59 Phenanthrene-d10	457816	228908	915632	535188	16.90
69 Chrysene-d12	560635	280318	1121270	622127	10.97
134 Di-n-octylphthala	675549	337774	1351098	740967	9.68
77 Perylene-d12	521119	260560	1042238	597260	14.61

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	6.77	6.27	7.27	6.77	0.03
27 Naphthalene-d8	8.84	8.34	9.34	8.83	-0.04
42 Acenaphthene-d10	11.66	11.16	12.16	11.67	0.02
59 Phenanthrene-d10	13.99	13.49	14.49	13.99	0.01
69 Chrysene-d12	18.24	17.74	18.74	18.24	-0.02
134 Di-n-octylphthala	19.51	19.01	20.01	19.51	0.01
77 Perylene-d12	20.36	19.86	20.86	20.36	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.

Data File: /chem1/nt6.i/20100820.b/08201018.D
Report Date: 20-Aug-2010 21:48

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: NONE
Lab Smp Id: ICV0820
Level:
Data Type: MS DATA
SpikeList File: ICV.spk
Sublist File: ICAL.sub
Method File: /chem1/nt6.i/20100820.b/SW846082010.m
Misc Info: 10-

Client SDG: 20100820
Fraction: SV
Client Smp ID: ICV0820
Operator: JZ
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
3 Phenol	25.00	23.41	93.63	
4 Bis(2-Chloroethyl)	25.00	26.97	107.90	
6 2-Chlorophenol	25.00	23.21	92.85	
7 1,3-Dichlorobenzen	25.00	25.90	103.60	
9 1,4-Dichlorobenzen	25.00	25.94	103.75	
11 Benzyl alcohol	25.00	28.12	112.48	
12 1,2-Dichlorobenzen	25.00	26.15	104.60	
13 2-Methylphenol	25.00	23.98	95.90	
14 2,2'-oxybis(1-Chlo	25.00	26.77	107.07	
15 4-Methylphenol	25.00	24.07	96.28	
16 N-Nitroso-di-n-pro	25.00	27.04	108.17	
17 Hexachloroethane	25.00	26.74	106.97	
19 Nitrobenzene	25.00	26.55	106.18	
20 Isophorone	25.00	28.97	115.89	
21 2-Nitrophenol	25.00	23.51	94.05	
22 2,4-Dimethylphenol	25.00	23.42	93.67	
23 Bis(2-Chloroethoxy	25.00	25.90	103.61	
24 Benzoic acid	50.00	54.90	109.81	
25 2,4-Dichlorophenol	25.00	22.86	91.45	
26 1,2,4-Trichloroben	25.00	25.77	103.06	
28 Naphthalene	25.00	27.27	109.08	
29 4-Chloroaniline	25.00	28.74	114.97	
30 Hexachlorobutadien	25.00	26.85	107.40	
31 4-Chloro-3-methylp	25.00	24.16	96.66	
32 2-Methylnaphthalen	25.00	27.33	109.31	
33 Hexachlorocyclopen	25.00	23.29	93.17	
34 2,4,6-Trichlorophe	25.00	21.98	87.93	
35 2,4,5-Trichlorophe	25.00	24.01	96.06	
37 2-Chloronaphthalen	25.00	25.53	102.12	
38 2-Nitroaniline	25.00	26.99	107.96	
39 Dimethylphthalate	25.00	26.25	105.00	
40 Acenaphthylene	25.00	25.87	103.46	
41 2,6-Dinitrotoluene	25.00	26.20	104.80	

SPIKE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
43 3-Nitroaniline	25.00	30.32	121.30	
44 Acenaphthene	25.00	25.99	103.97	
45 2,4-Dinitrophenol	50.00	66.01	132.02*	
46 Dibenzofuran	25.00	27.61	110.43	
47 4-Nitrophenol	25.00	24.58	98.30	
48 2,4-Dinitrotoluene	25.00	27.58	110.33	
49 Fluorene	25.00	27.14	108.55	
50 Diethylphthalate	25.00	26.84	107.36	
51 4-Chlorophenyl-phe	25.00	26.34	105.34	
52 4-Nitroaniline	25.00	28.97	115.89	
53 4,6-Dinitro-2-meth	50.00	48.62	97.23	
54 N-Nitrosodiphenyla	25.00	25.57	102.26	
56 4-Bromophenyl-phen	25.00	26.38	105.51	
57 Hexachlorobenzene	25.00	25.89	103.57	
58 Pentachlorophenol	25.00	22.64	90.57	
60 Phenanthrene	25.00	28.06	112.23	
61 Anthracene	25.00	26.48	105.92	
62 Carbazole	25.00	19.73	78.91	
63 Di-n-butylphthalat	25.00	26.15	104.59	
64 Fluoranthene	25.00	27.64	110.58	
65 Pyrene	25.00	27.32	109.26	
67 Butylbenzylphthala	25.00	27.61	110.45	
68 Benzo(a)anthracene	25.00	27.17	108.67	
70 3,3'-Dichlorobenzi	25.00	28.47	113.88	
71 Chrysene	25.00	26.31	105.25	
72 bis(2-Ethylhexyl)p	25.00	27.37	109.47	
73 Di-n-octylphthalat	25.00	25.65	102.62	
74 Benzo(b)fluoranthe	25.00	27.80	111.19	
75 Benzo(k)fluoranthe	25.00	25.20	100.82	
76 Benzo(a)pyrene	25.00	24.68	98.72	
78 Indeno(1,2,3-cd)py	25.00	27.76	111.04	
79 Dibenzo(a,h)anthra	25.00	27.94	111.77	
80 Benzo(g,h,i)peryle	25.00	26.90	107.60	
90 N-Nitrosodimethyla	25.00	28.00	111.98	
103 Pyridine	25.00	26.95	107.81	
91 Aniline	25.00	29.79	119.16	
105 1-methylnaphthalen	25.00	26.48	105.90	
93 Benzidine	25.00	40.49	161.98*	
111 Azobenzene (1,2-DP	25.00	25.59	102.34	
143 1,4-Dioxane	25.00	26.00	104.01	
144 alpha-Terpineol	25.00	24.50	98.01	
98 Retene	25.00	26.15	104.59	
133 Butylatedhydroxyto	25.00	24.87	99.47	
115 Tributyl Phosphate	25.00	24.48	97.93	
116 Dibutyl Phenyl Pho	25.00	25.22	100.87	
117 Butyl Diphenyl Pho	25.00	24.54	98.18	
118 Triphenyl Phosphat	25.00	26.62	106.49	

SPIKE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
123 Acetophenone	25.00	28.89	115.57	
179 n-Decane	25.00	26.78	107.12	
180 n-Octadecane	25.00	28.43	113.71	
168 Pentachlorobenzene	25.00	27.76	111.06	
113 Diphenyl Oxide	25.00	25.06	100.23	
112 Biphenyl	25.00	26.75	107.01	
120 2,3,4,6-Tetrachlor	25.00	24.38	97.50	
151 1,2,4,5-Tetrachlor	25.00	14.41	57.64*	
110 Tetrachloroguaiaco	50.00	49.89	99.78	
109 3,4,5-Trichlorogua	25.00	25.49	101.95	
181 3,4,6-Trichlorogua	25.00	27.20	108.80	
108 4,5,6-Trichlorogua	25.00	25.28	101.11	
184 3,4-Dichloroguaiac	25.00	26.58	106.31	
107 4,5-Dichloroguaiac	50.00	49.66	99.33	
182 4,6-Dichloroguaiac	50.00	51.15	102.30	
185 4-Chloroguaiacol	12.50	13.50	107.96	
106 Guaiacol	25.00	25.39	101.56	
186 Carbaryl	25.00	25.28	101.11	

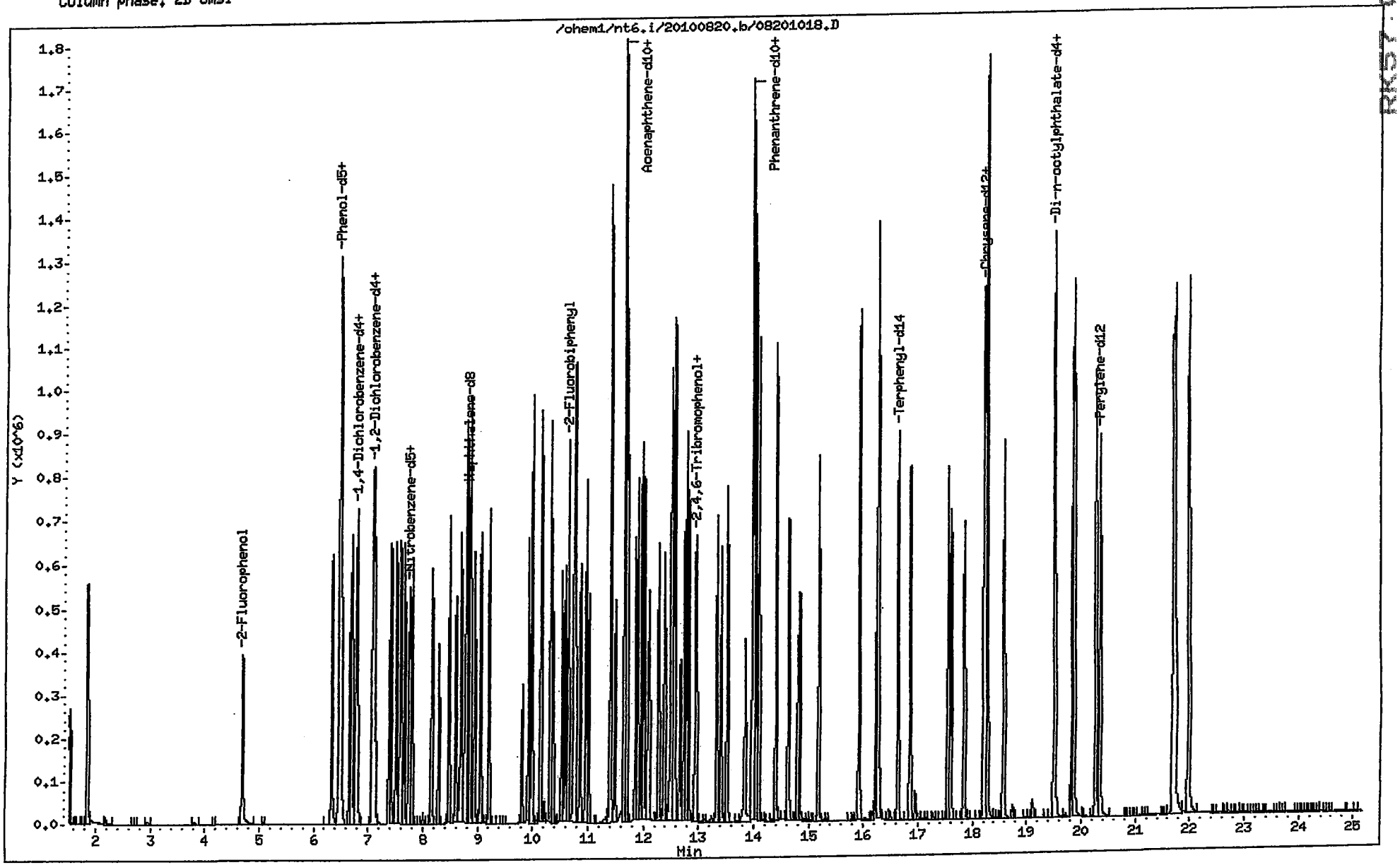
SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	25.00	25.01	100.03	
$ 2 Phenol-d5	25.00	24.52	98.08	
$ 5 2-Chlorophenol-d4	25.00	24.03	96.11	
$ 10 1,2-Dichlorobenzen	25.00	24.41	97.66	
$ 18 Nitrobenzene-d5	25.00	24.30	97.20	
$ 36 2-Fluorobiphenyl	25.00	23.40	93.59	
$ 55 2,4,6-Tribromophen	25.00	25.25	101.01	
$ 66 Terphenyl-d14	25.00	24.52	98.08	
$ 137 d8-1,4-Dioxane	25.00	23.99	95.97	

Data File: /ohem1/nt6.i/20100820.b/08201018.D
Date : 20-AUG-2010 20:02
Client ID: ICV0820
Sample Info: ICV0820

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



RK5T 08.15

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

ARI Job ID: RK57

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: RKF3, RJT3 Client ID: Floyd - Snider

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

Parameter(s): 8270

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

Curve Date: 8/20/10 Analysis Start Date: 9/10 ; 9/15/10

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):

9/10 MB/LCS/LCSD + RKF7A&B + RJT3A&B

9/15: Dilution for Sample RJT3A&B

Forms included

Additional Details on Reverse: Yes / No

Analyst: _____ **Date:** 09/16/10

Reviewer: _____ **Date:** 9/16/10

Analytical Resources Inc.: Organics Instrument Log

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

Date: 9/10/10 Analysis: 8270 Analyst: SB

GC Program: ~~8270/1/rl~~ Column No: 17217 Column Type: ZB-5MS

Instrument Tune (.U or .CT.): 100629 EM Voltage: 1553

Calibration File: 09100001 Curve Date: 8/20/10

IS/SS	Ical/Ccal	LCS/ICV
1752-1	~~1759-1~~, ~~1760-1~~	
	~~1761-1~~, ~~1762-1~~	
	~~1763-1~~, ~~1753-5~~	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt6.i/20100910.b

	Time	Filename	LabID	ClientId	DF											
1	0111	09101001.D	CC0910	CC0910	1	6.13	163642	8.23	509477	11.04	305384	13.34	473717	17.53	592204	19.61	617046	18.87	617319
2	0143	09101002.D	RK79MBS1	RK79MBS1	1	6.12	164681	8.23	529799	11.04	294641	13.33	463150	17.52	590678	18.86	576104	19.61	582622
3	0216	09101003.D	RK79LCSS1	RK79LCSS1	1	6.13	157267	8.23	490551	11.04	285627	13.33	458886	17.53	556716	18.87	578185	19.61	576103
4	0249	09101004.D	RK79LCSDS1	RK79LCSDS1	1	6.13	153809	8.23	479530	11.04	283042	13.33	455415	17.53	557912	18.86	580250	19.61	573101
5	0321	09101005.D	RK79B	MGP-HS-38-26	1	6.13	167878	8.23	527625	11.04	292731	13.33	458101	17.52	596627	18.86	582913	19.61	588681
6	0354	09101006.D	RK79BMS	MGP-HS-38-26	1	6.13	159182	8.23	501870	11.04	289292	13.33	463366	17.53	557944	18.86	584277	19.61	580200
7	0426	09101007.D	RK79BMSD	MGP-HS-38-26	1	6.13	154954	8.23	485060	11.04	278171	13.33	445017	17.53	554215	18.87	581244	19.61	580171
8	0459	09101008.D	RK79C	MGP-HS-38-25	1	6.13	166212	8.23	527846	11.04	289327	13.33	459719	17.52	583797	18.86	592954	19.61	610356
9	0532	09101009.D	RK79F	MGP-HS-40-34	1	6.13	162600	8.23	518021	11.04	285330	13.33	449021	17.53	588955	18.87	673805	19.63	618930
10	0605	09101010.D	RK57MBS1	RK57MBS1	1	8.22	601773	11.04	348129	13.33	552484	17.52	650769	19.61	643499				
11	0637	09101011.D	RK57LCSS1	RK57LCSS1	1	8.23	584685	11.04	331455	13.33	531991	17.53	620234	19.61	624573				
12	0710	09101012.D	RK57LCSDS1	RK57LCSDS1	1	8.22	589873	11.04	341250	13.33	557047	17.53	622729	19.61	612311				
13	0742	09101013.D	RK57A	PSB12-8-10-0	1	8.23	600029	11.04	349096	13.33	556110	17.52	660869	19.61	631366				
14	0815	09101014.D	RK57B	PSB12-4-6-07	1	8.23	544749	11.04	317609	13.33	508959	17.53	671539	19.63	665824				
15	0847	09101015.D	RJ73A C	SB15-9.1-081	1	8.23	521191	11.08	249287	13.38	423610	17.57	657856	19.66	649695				
16	0920	09101016.D	RJ73B C	SB15-9.3-081	1	8.23	488470	11.08	125242	13.43	110339	17.66	579268	19.69	644228				
17	0953	09101017.D	RK11MBS1	RK11MBS1	1	NO ISTDS FOUND													
18	1025	09101018.D	RK11MBS1	RK11MBS1	1	6.13	151417	8.23	484880	11.04	272335	13.33	447070	17.53	628418	18.86	697095	19.62	599488
19	1058	09101019.D	RK11LCSS1	RK11LCSS1	1	6.13	147703	8.23	463152	11.04	269131	13.34	454413	17.53	626031	18.87	702958	19.62	617280
20	1131	09101020.D	RK11C	MGP-HS-31-10	1	6.13	151637	8.24	448288	11.05	270571	13.35	431554	17.55	634731	18.87	712117	19.64	646147
21	1203	09101021.D	RK11E	MGP-HS-34-10	1	6.13	142222	8.23	447129	11.04	245008	13.33	396940	17.53	583441	18.86	630320	19.62	564839
22	1236	09101022.D	RK11EMS	MGP-HS-34-10	1	6.13	149310	8.23	463699	11.04	264636	13.34	444456	17.54	614254	18.87	686549	19.63	619050
23	1309	09101023.D	RK11EMSD	MGP-HS-34-10	1	6.13	156409	8.23	496766	11.04	283074	13.34	467897	17.53	647258	18.87	728864	19.63	658050

Auto-sampler lost vial

SB 09/15/10

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

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

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt6.i/20100910.b

ARI Job No.: RK57 Method: SW846082010.m Instrument: nt6.i Date: 10-SEP-2010

JZ 09/15/10

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0605	09101010.D	RK57MBS1	RK57MBS1	1	NO MANUAL INTEGRATION
0637	09101011.D	RK57LCSS1	RK57LCSS1	1	NO MANUAL INTEGRATION
0710	09101012.D	RK57LCSDS1	RK57LCSDS1	1	NO MANUAL INTEGRATION
0742	09101013.D	RK57A	PSB12-8-10	1	NO MANUAL INTEGRATION
0815	09101014.D	RK57B	PSB12-4-6-	1	NO MANUAL INTEGRATION
0847	09101015.D	RJ73A	SB15-9.1-0	1	Anthracene,
0920	09101016.D	RJ73B	SB15-9.3-0	1	2-Methylnaphthalene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Acenaphthene-d10, Phenanthrene-d10,

RK57 09101S

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt6.i/20100910.b

Instrument: nt6.i Date: 10-SEP-2010 Method: SW846082010.m

INITIAL CAL: 20-AUG-2010

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 10-SEP-2010

Compound	%D
NO Q-FLAGS	

09/14/10

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i
Lab File ID: 09101001.D
Analysis Type:
Lab Sample ID: CC0910
Method: /chem1/nt6.i/20100910.b/SW846082010.m

Injection Date: 10-SEP-2010 01:11
Init. Cal. Date(s): 20-AUG-2010 20-AUG-2010
Init. Cal. Times: 10:40 13:56
Quant Type: ISTD

DB 09/16/10

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 2-Fluorophenol	1.21175	1.17795	1.17795	0.010	-2.78930	20.00000	Averaged
$ 2 Phenol-d5	1.39723	1.31401	1.31401	0.010	-5.95601	20.00000	Averaged
3 Phenol	1.48676	1.45992	1.45992	0.010	-1.80526	20.00000	Averaged
$ 5 2-Chlorophenol-d4	1.19941	1.18748	1.18748	0.010	-0.99426	20.00000	Averaged
4 Bis(2-Chloroethyl)ether	1.07274	1.09861	1.09861	0.010	2.41163	20.00000	Averaged
6 2-Chlorophenol	1.25968	1.26578	1.26578	0.010	0.48440	20.00000	Averaged
7 1,3-Dichlorobenzene	1.46399	1.46253	1.46253	0.010	-0.10011	20.00000	Averaged
9 1,4-Dichlorobenzene	1.45898	1.50118	1.50118	0.010	2.89273	20.00000	Averaged
$ 10 1,2-Dichlorobenzene-d4	0.85176	0.80512	0.80512	0.010	-5.47499	20.00000	Averaged
12 1,2-Dichlorobenzene	1.38186	1.39665	1.39665	0.010	1.07075	20.00000	Averaged
11 Benzyl alcohol	0.74612	0.68798	0.68798	0.010	-7.79238	20.00000	Averaged
14 2,2'-oxybis(1-Chloropropane	1.33201	1.35652	1.35652	0.010	1.84062	20.00000	Averaged
13 2-Methylphenol	1.09770	1.08254	1.08254	0.010	-1.38086	20.00000	Averaged
17 Hexachloroethane	0.53168	0.54391	0.54391	0.010	2.30047	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	0.75951	0.74654	0.74654	0.005	-1.70845	20.00000	Averaged
15 4-Methylphenol	1.13192	1.10303	1.10303	0.010	-2.55214	20.00000	Averaged
$ 18 Nitrobenzene-d5	0.34853	0.32192	0.32192	0.010	-7.63557	20.00000	Averaged
19 Nitrobenzene	0.36926	0.36799	0.36799	0.010	-0.34388	20.00000	Averaged
20 Isophorone	0.59855	0.58864	0.58864	0.010	-1.65529	20.00000	Averaged
21 2-Nitrophenol	0.22481	0.22379	0.22379	0.010	-0.45383	20.00000	Averaged
22 2,4-Dimethylphenol	0.35721	0.35022	0.35022	0.010	-1.95734	20.00000	Averaged
23 Bis(2-Chloroethoxy)methane	0.41395	0.41665	0.41665	0.010	0.65262	20.00000	Averaged
24 Benzoic acid	0.21154	0.23378	0.23378	0.010	10.51466	20.00000	Averaged
25 2,4-Dichlorophenol	0.33527	0.32941	0.32941	0.010	-1.74979	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.36146	0.35823	0.35823	0.010	-0.89303	20.00000	Averaged
28 Naphthalene	0.97416	0.97772	0.97772	0.010	0.36616	20.00000	Averaged
29 4-Chloroaniline	0.41473	0.39828	0.39828	0.010	-3.96729	20.00000	Averaged
30 Hexachlorobutadiene	0.20856	0.21136	0.21136	0.010	1.34165	20.00000	Averaged
31 4-Chloro-3-methylphenol	0.29300	0.27605	0.27605	0.010	-5.78370	20.00000	Averaged
32 2-Methylnaphthalene	0.56054	0.56476	0.56476	0.010	0.75349	20.00000	Averaged
33 Hexachlorocyclopentadiene	20.28425	25.00000	0.29234	0.010	-18.86301	20.00000	Linear
34 2,4,6-Trichlorophenol	0.41151	0.38222	0.38222	0.010	-7.11796	20.00000	Averaged
35 2,4,5-Trichlorophenol	0.40460	0.38882	0.38882	0.010	-3.90079	20.00000	Averaged
$ 36 2-Fluorobiphenyl	1.27021	1.11788	1.11788	0.010	-11.99265	20.00000	Averaged
37 2-Chloronaphthalene	1.14430	1.08626	1.08626	0.010	-5.07213	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i Injection Date: 10-SEP-2010 01:11
Lab File ID: 09101001.D Init. Cal. Date(s): 20-AUG-2010 20-AUG-2010
Analysis Type: Init. Cal. Times: 10:40 13:56
Lab Sample ID: CC0910 Quant Type: ISTD
Method: /chem1/nt6.i/20100910.b/SW846082010.m

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
38 2-Nitroaniline	0.28419	0.26061	0.26061	0.010	-8.29927	20.00000	Averaged
39 Dimethylphthalate	1.20694	1.11938	1.11938	0.010	-7.25502	20.00000	Averaged
40 Acenaphthylene	1.78922	1.72782	1.72782	0.010	-3.43186	20.00000	Averaged
41 2,6-Dinitrotoluene	0.30534	0.28033	0.28033	0.010	-8.19353	20.00000	Averaged
43 3-Nitroaniline	0.26561	0.25278	0.25278	0.010	-4.82837	20.00000	Averaged
44 Acenaphthene	1.07689	0.98917	0.98917	0.010	-8.14575	20.00000	Averaged
45 2,4-Dinitrophenol	45.00001	50.00000	0.15074	0.010	-9.99998	20.00000	Quadratic
46 Dibenzofuran	1.48417	1.35459	1.35459	0.010	-8.73092	20.00000	Averaged
47 4-Nitrophenol	0.11447	0.11415	0.11415	0.010	-0.28425	20.00000	Averaged
48 2,4-Dinitrotoluene	0.38093	0.35799	0.35799	0.010	-6.02194	20.00000	Averaged
50 Diethylphthalate	1.12933	1.01145	1.01145	0.010	-10.43861	20.00000	Averaged
49 Fluorene	1.21755	1.13837	1.13837	0.010	-6.50299	20.00000	Averaged
51 4-Chlorophenyl-phenylether	0.61015	0.57677	0.57677	0.010	-5.47037	20.00000	Averaged
52 4-Nitroaniline	0.28994	0.27223	0.27223	0.010	-6.10843	20.00000	Averaged
53 4,6-Dinitro-2-methylphenol	0.16605	0.14932	0.14932	0.010	-10.07541	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.56795	0.54299	0.54299	0.010	-4.39468	20.00000	Averaged
$ 55 2,4,6-Tribromophenol	0.19864	0.18509	0.18509	0.010	-6.82069	20.00000	Averaged
56 4-Bromophenyl-phenylether	0.26573	0.25289	0.25289	0.010	-4.83158	20.00000	Averaged
57 Hexachlorobenzene	0.29973	0.27976	0.27976	0.010	-6.66269	20.00000	Averaged
58 Pentachlorophenol	0.15801	0.15871	0.15871	0.010	0.44330	20.00000	Averaged
60 Phenanthrene	1.00444	0.94630	0.94630	0.010	-5.78852	20.00000	Averaged
61 Anthracene	1.10226	1.05334	1.05334	0.010	-4.43848	20.00000	Averaged
62 Carbazole	1.55314	1.32353	1.32353	0.010	-14.78329	20.00000	Averaged
63 Di-n-butylphthalate	1.27648	1.14692	1.14692	0.010	-10.14983	20.00000	Averaged
64 Fluoranthene	1.22207	1.18064	1.18064	0.010	-3.38984	20.00000	Averaged
65 Pyrene	1.03286	0.96641	0.96641	0.010	-6.43423	20.00000	Averaged
$ 66 Terphenyl-d14	0.67593	0.56112	0.56112	0.010	-16.98501	20.00000	Averaged
67 Butylbenzylphthalate	0.48219	0.43118	0.43118	0.010	-10.57884	20.00000	Averaged
68 Benzo(a)anthracene	1.02846	1.01970	1.01970	0.010	-0.85195	20.00000	Averaged
70 3,3'-Dichlorobenzidine	0.35206	0.37277	0.37277	0.010	5.88508	20.00000	Averaged
71 Chrysene	0.94194	0.94312	0.94312	0.010	0.12573	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.54948	0.53200	0.53200	0.010	-3.18197	20.00000	Averaged
73 Di-n-octylphthalate	0.93033	0.91293	0.91293	0.010	-1.87042	20.00000	Averaged
74 Benzo(b)fluoranthene	1.10286	1.02302	1.02302	0.010	-7.23879	20.00000	Averaged
75 Benzo(k)fluoranthene	1.11518	1.16438	1.16438	0.010	4.41203	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i Injection Date: 10-SEP-2010 01:11
Lab File ID: 09101001.D Init. Cal. Date(s): 20-AUG-2010 20-AUG-2010
Analysis Type: Init. Cal. Times: 10:40 13:56
Lab Sample ID: CC0910 Quant Type: ISTD
Method: /chem1/nt6.i/20100910.b/SW846082010.m

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
187 Total Benzofluoranthenes	1.08128	1.03975	1.03975	0.010	-3.84102	20.00000	Averaged
76 Benzo(a)pyrene	1.10160	1.10632	1.10632	0.010	0.42842	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.40074	1.31007	1.31007	0.010	-6.47262	20.00000	Averaged
79 Dibenzo(a,h)anthracene	1.05614	1.01091	1.01091	0.010	-4.28333	20.00000	Averaged
80 Benzo(g,h,i)perylene	1.22434	1.06314	1.06314	0.010	-13.16654	20.00000	Averaged
90 N-Nitrosodimethylamine	0.72625	0.77088	0.77088	0.010	6.14582	20.00000	Averaged
103 Pyridine	1.31890	1.44859	1.44859	0.010	9.83298	20.00000	Averaged
91 Aniline	1.75262	1.70674	1.70674	0.010	-2.61754	20.00000	Averaged
105 1-methylnaphthalene	0.56632	0.55261	0.55261	0.010	-2.42052	20.00000	Averaged

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100910.b/09101001.D
Lab Smp Id: CC0910 Client Smp ID: CC0910
Inj Date : 10-SEP-2010 01:11
Operator : JZ Inst ID: nt6.i
Smp Info : CC0910
Misc Info : 10-
Comment : 1ul Injection
Method : /chem1/nt6.i/20100910.b/SW846082010.m
Meth Date : 15-Sep-2010 17:10 jianqing Quant Type: ISTD
Cal Date : 20-AUG-2010 11:45 Cal File: 08201003.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

09/15/10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	3.858	3.858	(0.630)	240953	25.0000	24.30
$	2 Phenol-d5	99	5.882	5.882	(0.960)	268784	25.0000	23.51
	3 Phenol	94	5.898	5.898	(0.963)	298631	25.0000	24.55
$	5 2-Chlorophenol-d4	132	5.839	5.839	(0.953)	242903	25.0000	24.75
	4 Bis(2-Chloroethyl)ether	93	5.861	5.861	(0.956)	224723	25.0000	25.60
	6 2-Chlorophenol	128	5.866	5.866	(0.957)	258919	25.0000	25.12
	7 1,3-Dichlorobenzene	146	6.048	6.048	(0.987)	299164	25.0000	24.97
*	8 1,4-Dichlorobenzene-d4	152	6.128	6.128	(1.000)	163642	20.0000	
	9 1,4-Dichlorobenzene	146	6.154	6.154	(1.004)	307071	25.0000	25.72
$	10 1,2-Dichlorobenzene-d4	152	6.437	6.437	(1.051)	164690	25.0000	23.63
	12 1,2-Dichlorobenzene	146	6.459	6.459	(1.054)	285689	25.0000	25.27
	11 Benzyl alcohol	108	6.528	6.528	(1.065)	140728	25.0000	23.05
	14 2,2'-oxybis(1-Chloropropane)	45	6.795	6.795	(1.109)	277480	25.0000	25.46
	13 2-Methylphenol	108	6.859	6.859	(1.119)	221437	25.0000	24.65
	17 Hexachloroethane	117	6.956	6.956	(1.135)	111258	25.0000	25.58
	16 N-Nitroso-di-n-propylamine	70	7.025	7.025	(1.146)	152706	25.0000	24.57
	15 4-Methylphenol	108	7.116	7.116	(1.161)	225627	25.0000	24.36
$	18 Nitrobenzene-d5	82	7.132	7.132	(0.866)	205012	25.0000	23.09
	19 Nitrobenzene	77	7.164	7.164	(0.870)	234354	25.0000	24.91
	20 Isophorone	82	7.575	7.575	(0.920)	374875	25.0000	24.59
	21 2-Nitrophenol	139	7.693	7.693	(0.934)	142517	25.0000	24.89
	22 2,4-Dimethylphenol	107	7.933	7.933	(0.964)	223037	25.0000	24.51
	23 Bis(2-Chloroethoxy)methane	93	8.040	8.040	(0.977)	265345	25.0000	25.16
	24 Benzoic acid	105	8.291	8.291	(1.007)	297770	50.0000	55.26
	25 2,4-Dichlorophenol	162	8.120	8.120	(0.986)	209781	25.0000	24.56
	26 1,2,4-Trichlorobenzene	180	8.189	8.189	(0.995)	228137	25.0000	24.78
*	27 Naphthalene-d8	136	8.232	8.232	(1.000)	509477	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	8.259	8.259	(1.003)	622660	25.0000	25.09
	29 4-Chloroaniline	127	8.478	8.478	(1.030)	253642	25.0000	24.01
	30 Hexachlorobutadiene	225	8.622	8.622	(1.047)	134603	25.0000	25.34
	31 4-Chloro-3-methylphenol	107	9.380	9.380	(1.139)	175801	25.0000	23.55
	32 2-Methylnaphthalene	141	9.380	9.380	(1.139)	359667	25.0000	25.19
	33 Hexachlorocyclopentadiene	237	9.776	9.776	(0.886)	111596	25.0000	20.28
	34 2,4,6-Trichlorophenol	196	9.941	9.941	(0.901)	145903	25.0000	23.22
	35 2,4,5-Trichlorophenol	196	10.011	10.011	(0.907)	148423	25.0000	24.02
$	36 2-Fluorobiphenyl	172	10.059	10.059	(0.911)	426727	25.0000	22.00
	37 2-Chloronaphthalene	162	10.133	10.133	(0.918)	414657	25.0000	23.73
	38 2-Nitroaniline	65	10.427	10.427	(0.945)	99482	25.0000	22.93
	39 Dimethylphthalate	163	10.838	10.838	(0.982)	427300	25.0000	23.19
	40 Acenaphthylene	152	10.785	10.785	(0.977)	659559	25.0000	24.14
	41 2,6-Dinitrotoluene	165	10.908	10.908	(0.988)	107009	25.0000	22.95
*	42 Acenaphthene-d10	164	11.036	11.036	(1.000)	305384	20.0000	
	43 3-Nitroaniline	138	11.106	11.106	(1.006)	96495	25.0000	23.79
	44 Acenaphthene	153	11.084	11.084	(1.004)	377597	25.0000	22.96
	45 2,4-Dinitrophenol	184	11.266	11.266	(1.021)	115082	50.0000	45.00
	46 Dibenzofuran	168	11.351	11.351	(1.029)	517086	25.0000	22.82
	47 4-Nitrophenol	109	11.544	11.544	(1.046)	43573	25.0000	24.93
	48 2,4-Dinitrotoluene	165	11.511	11.511	(1.043)	136655	25.0000	23.49
	50 Diethylphthalate	149	11.976	11.976	(1.085)	386100	25.0000	22.39
	49 Fluorene	166	11.885	11.885	(1.077)	434550	25.0000	23.37
	51 4-Chlorophenyl-phenylether	204	11.965	11.965	(1.084)	220171	25.0000	23.63
	52 4-Nitroaniline	138	12.078	12.078	(1.094)	103919	25.0000	23.47
	53 4,6-Dinitro-2-methylphenol	198	12.142	12.142	(0.910)	176836	50.0000	44.96
	54 N-Nitrosodiphenylamine	169	12.184	12.184	(0.914)	321529	25.0000	23.90
$	55 2,4,6-Tribromophenol	330	12.313	12.313	(1.116)	70654	25.0000	23.29
	56 4-Bromophenyl-phenylether	248	12.713	12.713	(0.953)	149749	25.0000	23.79
	57 Hexachlorobenzene	284	12.879	12.879	(0.966)	165660	25.0000	23.33
	58 Pentachlorophenol	266	13.215	13.215	(0.991)	93982	25.0000	25.11
*	59 Phenanthrene-d10	188	13.338	13.338	(1.000)	473717	20.0000	
	60 Phenanthrene	178	13.370	13.370	(1.002)	560346	25.0000	23.55
	61 Anthracene	178	13.440	13.440	(1.008)	623729	25.0000	23.89
	62 Carbazole	167	13.771	13.771	(1.032)	783725	25.0000	21.30
	63 Di-n-butylphthalate	149	14.577	14.577	(1.093)	679146	25.0000	22.46
	64 Fluoranthene	202	15.245	15.245	(1.143)	699112	25.0000	24.15
	65 Pyrene	202	15.571	15.571	(0.888)	715388	25.0000	23.39
$	66 Terphenyl-d14	244	15.977	15.977	(0.911)	415372	25.0000	20.75
	67 Butylbenzylphthalate	149	16.911	16.911	(0.965)	319180	25.0000	22.36
	68 Benzo(a)anthracene	228	17.504	17.504	(0.998)	754837	25.0000	24.79
*	69 Chrysene-d12	240	17.531	17.531	(1.000)	592204	20.0000	
	70 3,3'-Dichlorobenzidine	252	17.590	17.590	(1.003)	275948	25.0000	26.47
	71 Chrysene	228	17.563	17.563	(1.002)	698149	25.0000	25.03
	72 bis(2-Ethylhexyl)phthalate	149	17.942	17.942	(0.951)	410516	25.0000	24.20
*	134 Di-n-octylphthalate-d4	153	18.866	18.866	(1.000)	617319	20.0000	
	73 Di-n-octylphthalate	149	18.877	18.877	(1.001)	704462	25.0000	24.53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	19.117	19.117	(0.975)	789066	25.0000	23.19
75	Benzo(k)fluoranthene	252	19.149	19.149	(0.976)	898093	25.0000	26.10(M)
187	Total Benzofluoranthenes	252	19.149	19.149	(0.976)	1603937	50.0000	48.08
76	Benzo(a)pyrene	252	19.534	19.534	(0.996)	853315	25.0000	25.11
* 77	Perylene-d12	264	19.614	19.614	(1.000)	617046	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	20.938	20.938	(1.068)	1010468	25.0000	23.38
79	Dibenzo(a,h)anthracene	278	20.981	20.981	(1.070)	779719	25.0000	23.93
80	Benzo(g,h,i)perylene	276	21.222	21.222	(1.082)	820007	25.0000	21.71
90	N-Nitrosodimethylamine	74	1.369	1.369	(0.223)	157686	25.0000	26.54
103	Pyridine	79	1.353	1.353	(0.221)	296312	25.0000	27.46
91	Aniline	93	5.690	5.690	(0.929)	349118	25.0000	24.35
105	1-methylnaphthalene	141	9.546	9.546	(1.160)	351927	25.0000	24.39

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 09101001.D
Lab Smp Id: CC0910
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem1/nt6.i/20100910.b/SW846082010.m
Misc Info: 10-

Calibration Date: 10-SEP-2010
Calibration Time: 01:11
Client Smp ID: CC0910
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	154425	77212	308850	163642	5.97
27 Naphthalene-d8	490229	245114	980458	509477	3.93
42 Acenaphthene-d10	286412	143206	572824	305384	6.62
59 Phenanthrene-d10	457816	228908	915632	473717	3.47
69 Chrysene-d12	560635	280318	1121270	592204	5.63
134 Di-n-octylphthala	675549	337774	1351098	617319	-8.62
77 Perylene-d12	521119	260560	1042238	617046	18.41

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	6.13	5.63	6.63	6.13	0.00
27 Naphthalene-d8	8.23	7.73	8.73	8.23	0.00
42 Acenaphthene-d10	11.04	10.54	11.54	11.04	0.00
59 Phenanthrene-d10	13.34	12.84	13.84	13.34	0.00
69 Chrysene-d12	17.53	17.03	18.03	17.53	0.00
134 Di-n-octylphthala	18.87	18.37	19.37	18.87	0.00
77 Perylene-d12	19.61	19.11	20.11	19.61	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.

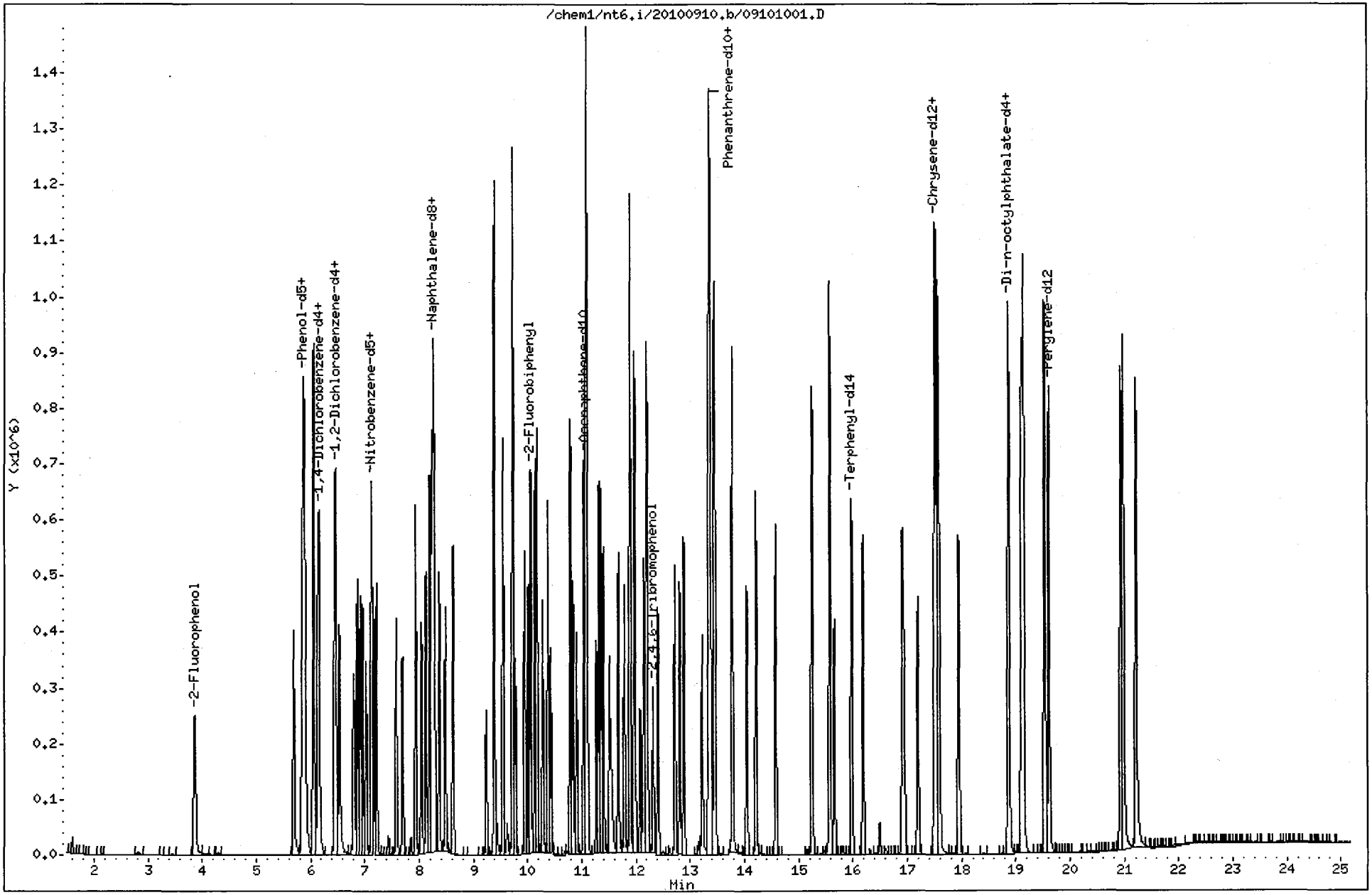
Data File: /chem1/nt6.i/20100910.b/09101001.D
Date : 10-SEP-2010 01:11
Client ID: CC0910
Sample Info: CC0910

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

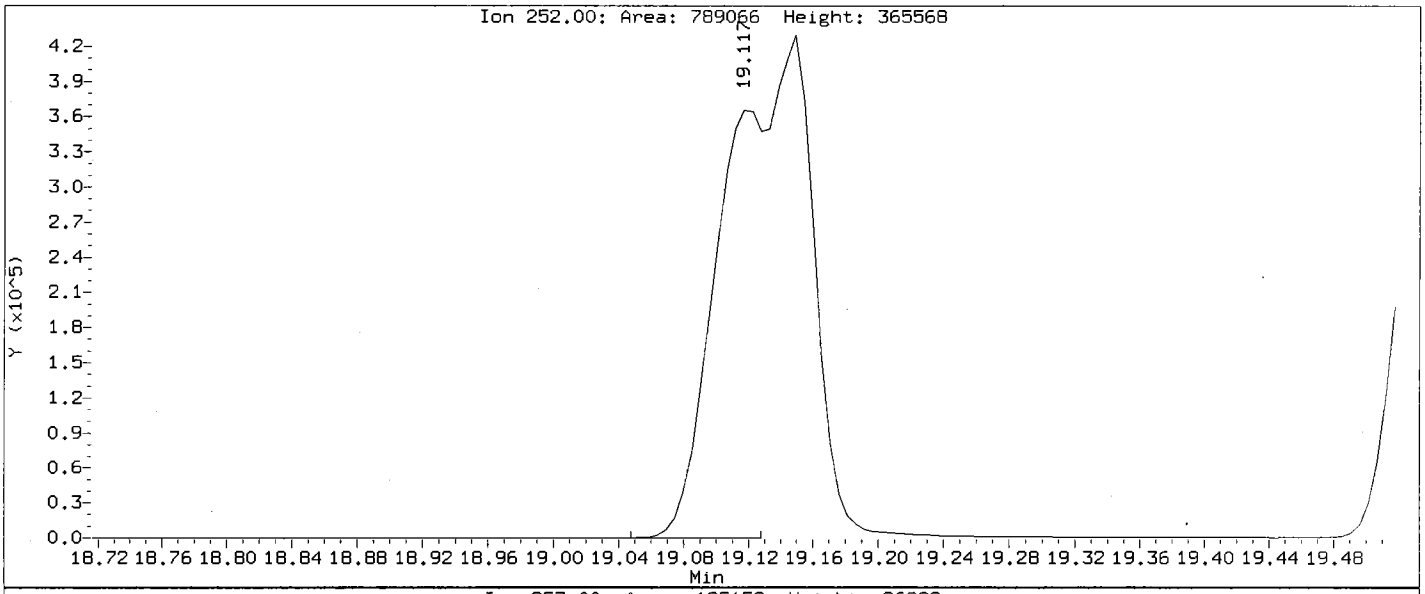
Column phase: ZB-5msi

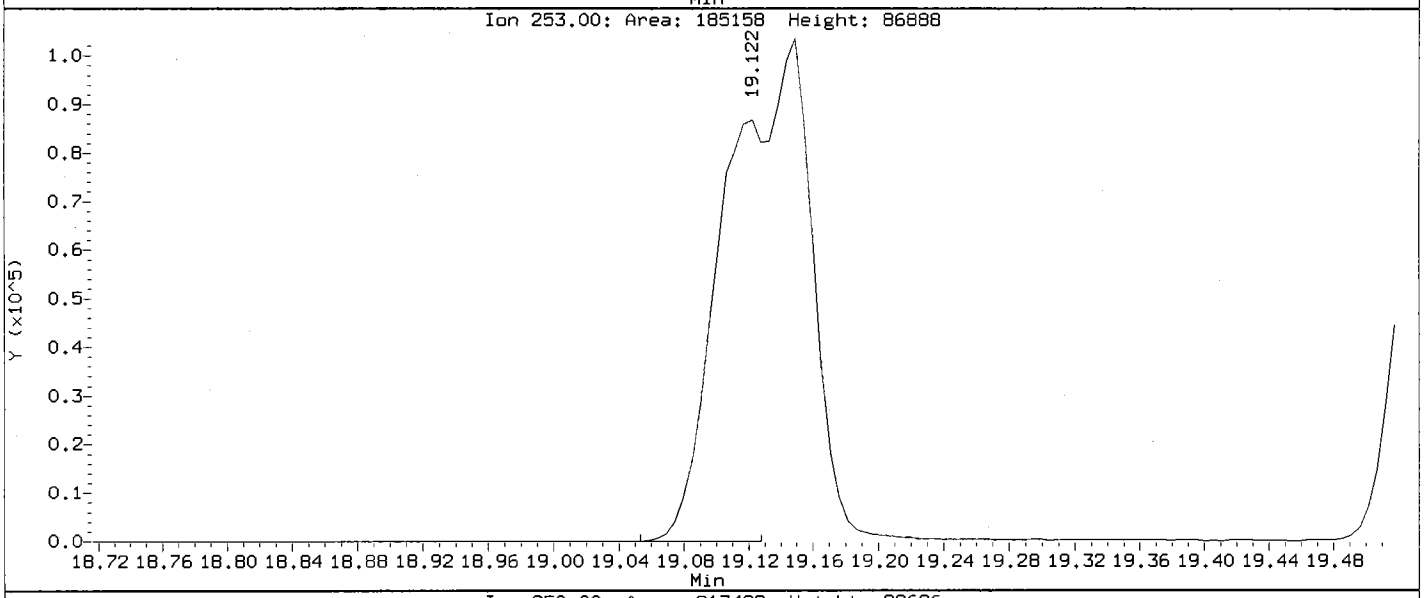
RK57:00158

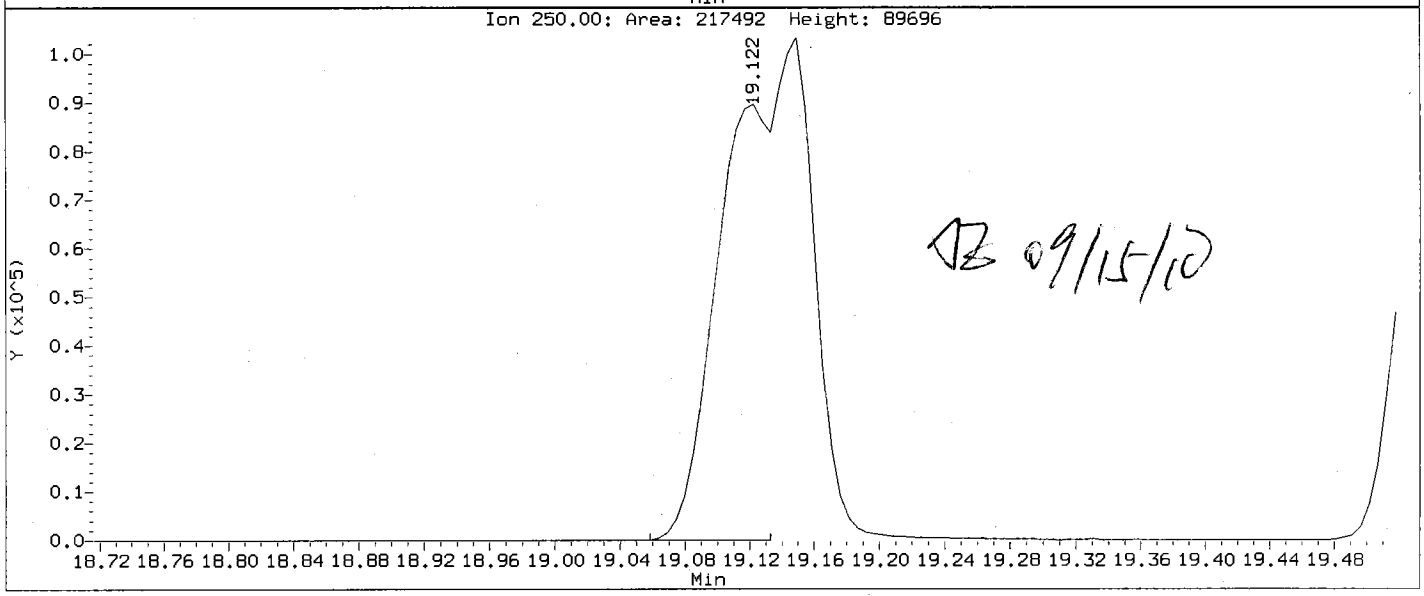


Data File: /chem1/nt6.i/20100910.b/09101001.D
Injection Date: 10-SEP-2010 01:11
Instrument: nt6.i
Client Sample ID: CC0910

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9



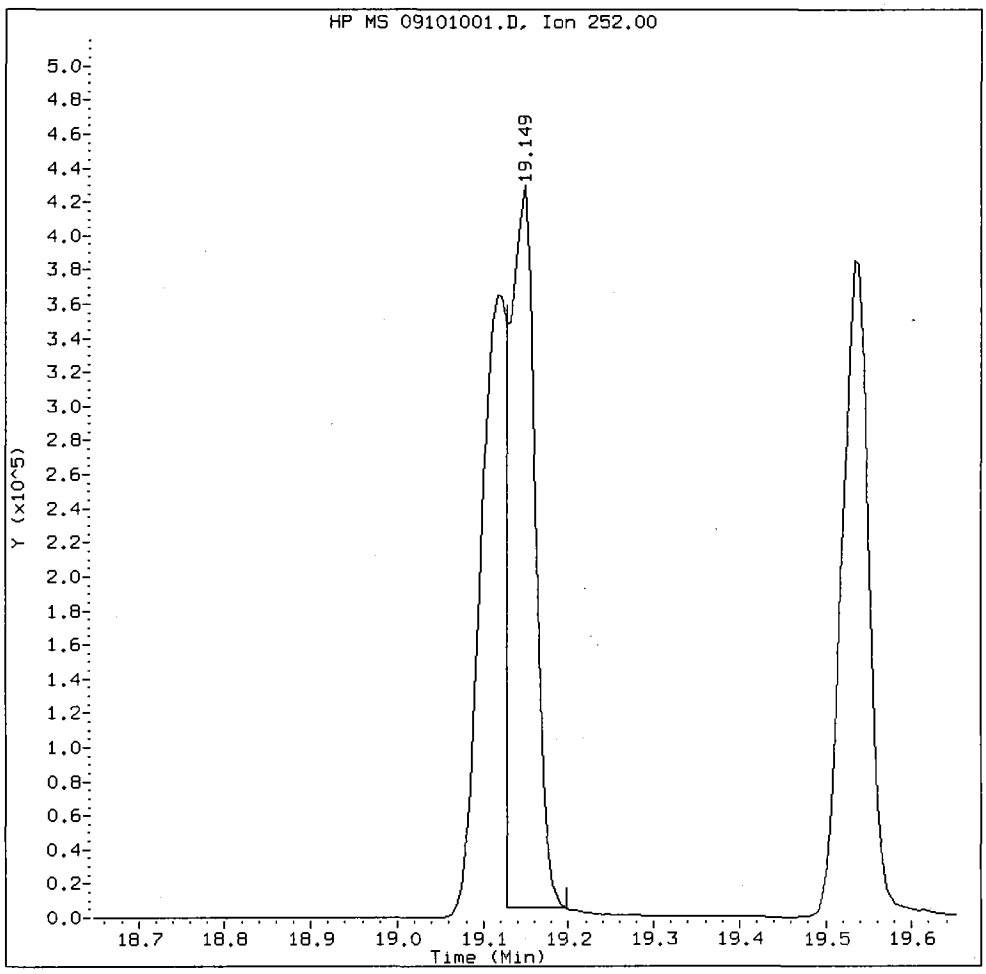




DB 09/15/10

CC0910, /chem1/nt6.i/20100910.b/09101001.D

Benzo(k)fluoranthene Amount: 26.10 Area: 898093



MANUAL INTEGRATION for Benzo(k)fluoranthene

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

Analyst: [signature] Date: 09/15/10

Data File: /chem1/nt6.i/20100910.b/tune.b/09101001.D

Date : 10-SEP-2010 01:11

Client ID: DFTPP0910

Instrument: nt6.i

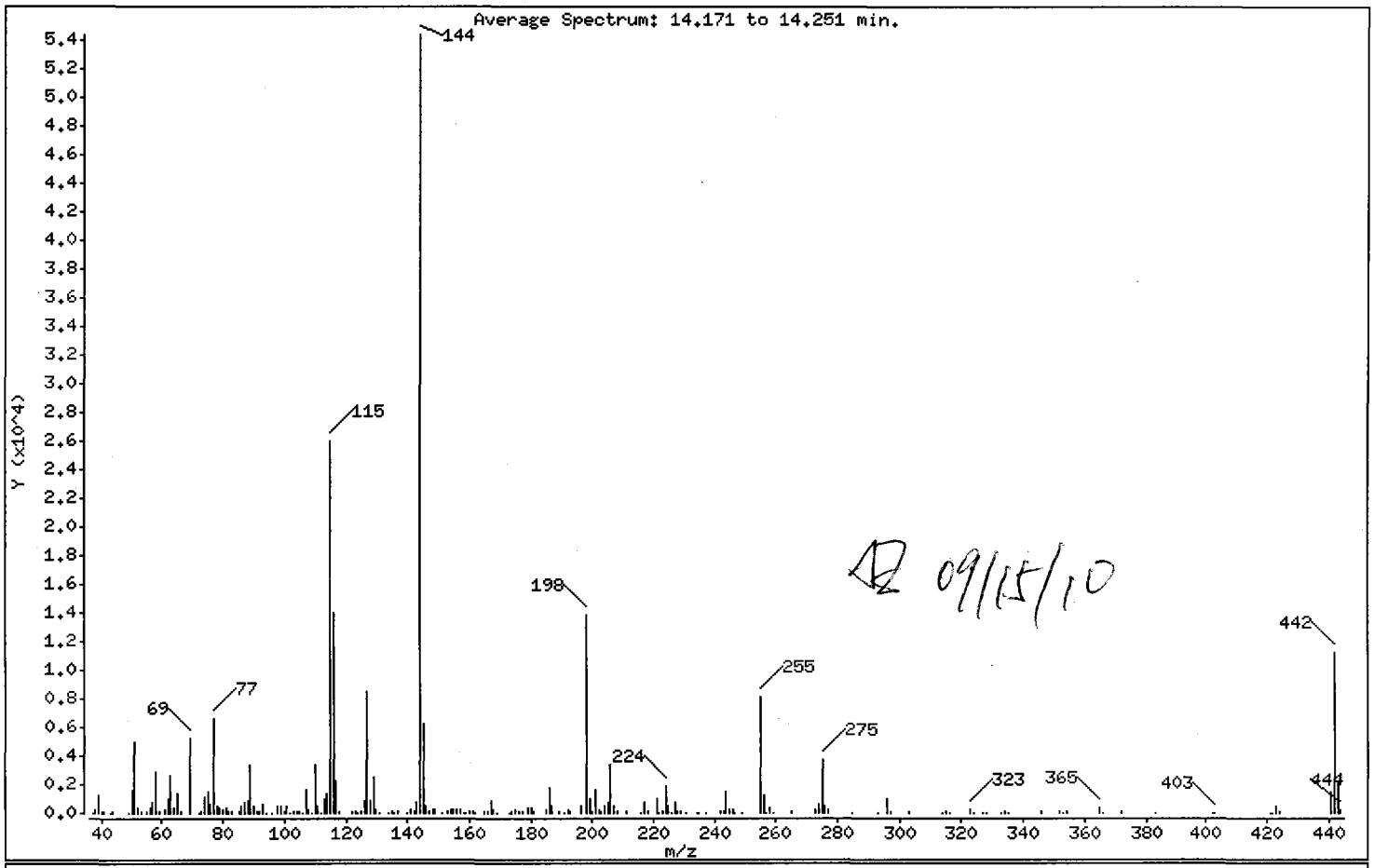
Sample Info: DFTPP0910

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



09/15/10

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	35.78
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	38.34
70	Less than 2.00% of mass 69	0.00 (0.00)
127	10.00 - 80.00% of mass 198	61.32
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.89
275	10.00 - 60.00% of mass 198	27.11
365	Greater than 1.00% of mass 198	2.98
441	0.01 - 24.00% of mass 442	11.15 (13.69)
442	50.00 - 200.00% of mass 198	81.47
443	15.00 - 24.00% of mass 442	15.34 (18.83)

Data File: /chem1/nt6.i/20100910.b/tune.b/09101001.D

Date : 10-SEP-2010 01:11

Client ID: DFTPP0910 Instrument: nt6.i

Sample Info: DFTPP0910

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: 09101001.D
Spectrum: Average Spectrum: 14.171 to 14.251 min.
Location of Maximum: 144.00
Number of points: 203

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	29	102.00	61	162.00	10	243.00	81
38.00	249	103.00	68	165.00	75	244.00	1514
39.00	1273	104.00	112	166.00	97	245.00	193
40.00	67	105.00	153	167.00	865	246.00	246
41.00	108	106.00	14	168.00	306	247.00	23
43.00	32	107.00	1647	169.00	29	249.00	23
44.00	66	108.00	243	173.00	32	255.00	8103
49.00	25	109.00	23	174.00	100	256.00	1223
50.00	1654	110.00	3350	175.00	251	257.00	56
51.00	4948	111.00	512	176.00	63	258.00	394
52.00	343	112.00	25	177.00	95	259.00	10
53.00	102	113.00	1013	179.00	416	265.00	142
55.00	67	114.00	1328	180.00	353	273.00	260
56.00	321	115.00	26000	181.00	124	274.00	665
57.00	688	116.00	14028	185.00	212	275.00	3749
58.00	2837	117.00	2299	186.00	1760	276.00	470
59.00	70	118.00	164	187.00	487	277.00	270
61.00	207	122.00	106	189.00	69	285.00	9
62.00	971	123.00	145	191.00	49	293.00	41
63.00	2623	124.00	42	192.00	227	296.00	981
64.00	398	125.00	87	193.00	158	297.00	92
65.00	1396	126.00	862	196.00	515	303.00	91
66.00	111	127.00	8479	198.00	13828	314.00	12
69.00	5302	128.00	906	199.00	953	315.00	100
72.00	51	129.00	2509	200.00	84	316.00	33
73.00	73	130.00	221	201.00	1653	323.00	302
74.00	1082	131.00	20	202.00	222	324.00	12
75.00	1521	134.00	23	203.00	81	327.00	12
76.00	663	135.00	173	204.00	447	328.00	9
77.00	6608	136.00	44	205.00	810	333.00	11
78.00	519	137.00	69	206.00	3351	334.00	173
79.00	362	140.00	9	207.00	449	335.00	10
80.00	254	141.00	311	208.00	67	346.00	65
81.00	377	142.00	111	211.00	142	352.00	75
82.00	73	143.00	790	216.00	36	353.00	25

Data File: /chem1/nt6.i/20100910.b/tune.b/09101001.D

Date : 10-SEP-2010 01:11

Client ID: DFTPP0910 Instrument: nt6.i

Sample Info: DFTPP0910

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: 09101001.D
Spectrum: Average Spectrum: 14.171 to 14.251 min.
Location of Maximum: 144.00
Number of points: 203

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	100	144.00	54392	217.00	799	354.00	90
85.00	152	145.00	6215	218.00	114	365.00	412
86.00	543	146.00	442	221.00	973	366.00	9
87.00	695	147.00	127	222.00	15	372.00	157
88.00	908	148.00	301	223.00	177	383.00	20
89.00	3426	149.00	256	224.00	1920	402.00	25
90.00	444	151.00	11	225.00	493	403.00	39
91.00	135	153.00	67	226.00	26	421.00	39
92.00	91	154.00	266	227.00	698	422.00	34
93.00	580	155.00	211	228.00	66	423.00	503
94.00	21	156.00	245	229.00	163	424.00	96
96.00	9	157.00	230	231.00	38	441.00	1542
98.00	532	158.00	33	234.00	13	442.00	11265
99.00	439	159.00	11	235.00	31	443.00	2121
100.00	137	160.00	67	237.00	20	444.00	191
101.00	535	161.00	141	242.00	80		

Data File: /chem1/nt6.i/20100910.b/tune.b/09101001.D

Date : 10-SEP-2010 01:11

Client ID: DFTPP0910

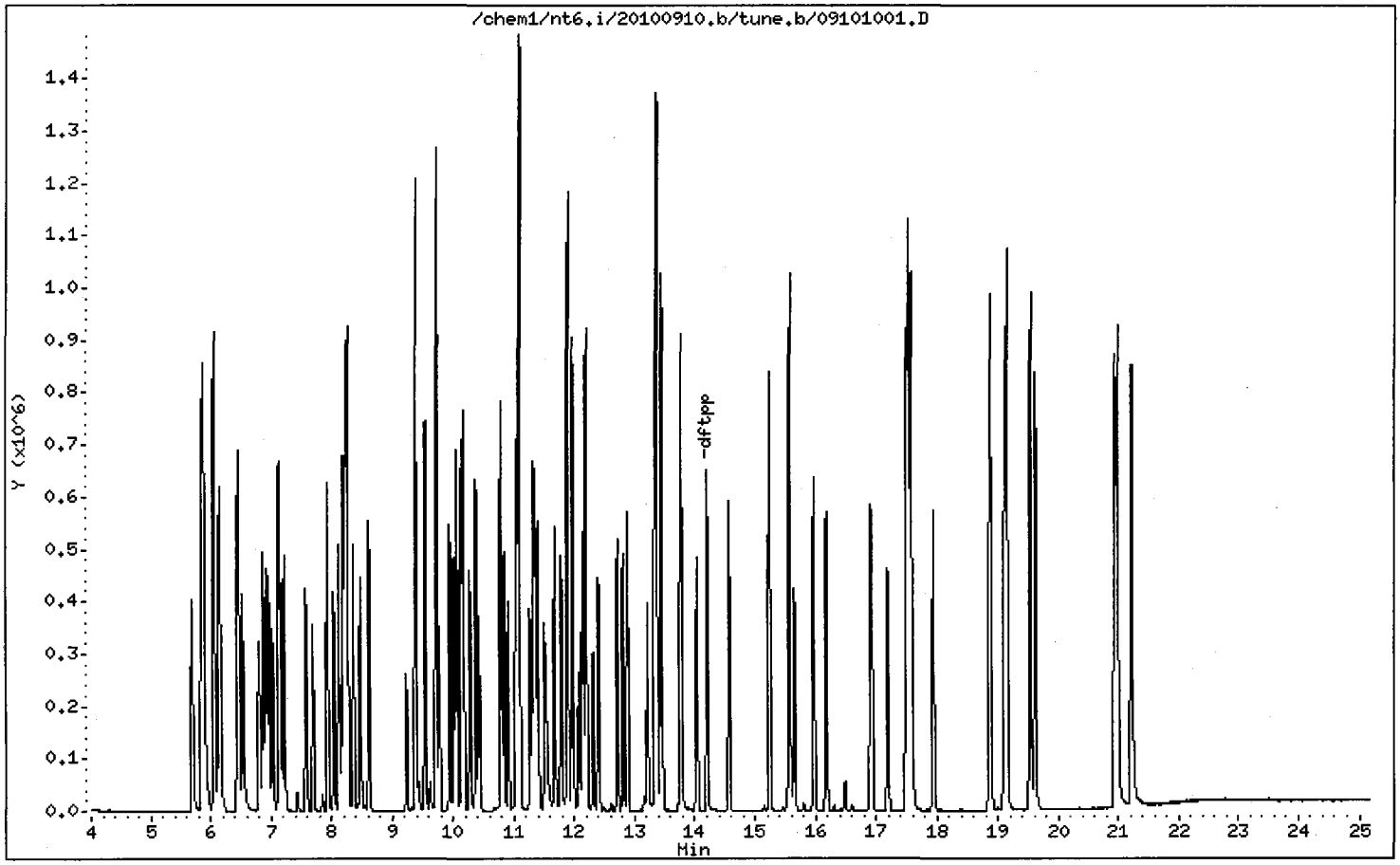
Instrument: nt6.i

Sample Info: DFTPP0910

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25



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

Data file: /chem1/nt6.i/20100910.b/ddt.b/09101001.D ARI ID: CC0910
Method: /chem1/nt6.i/20100910.b/ddt.b/sw846ddt.m Misc: 10-
Analysis Date: 10-SEP-2010 01:11 Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	13.215	93555
Benzidine	15.581	171485
4,4'-DDE	----	----
4,4'-DDD	16.489	25173
4,4'-DDT	16.943	155450

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

$$\text{DDT Percent Breakdown} = \frac{(0 + 25173) * 100}{(0 + 25173 + 155450)}$$

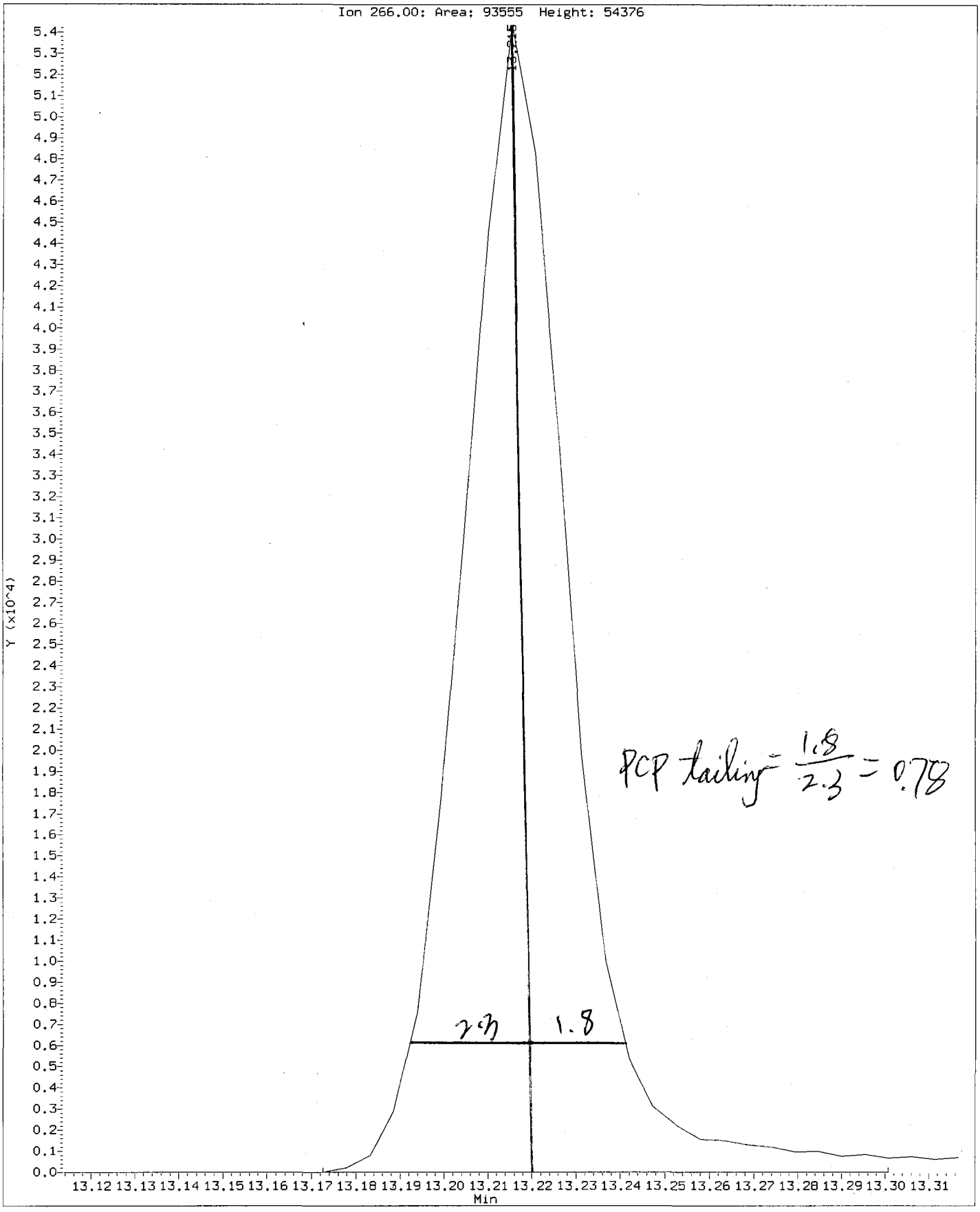
DDT Percent Breakdown = 13.9 %

ok

JZ 09/15/10

Data File: /chem1/nt6.i/20100910.b/ddt.b/09101001.D
Injection Date: 10-SEP-2010 01:11
Instrument: nt6.i
Client Sample ID: CC0910

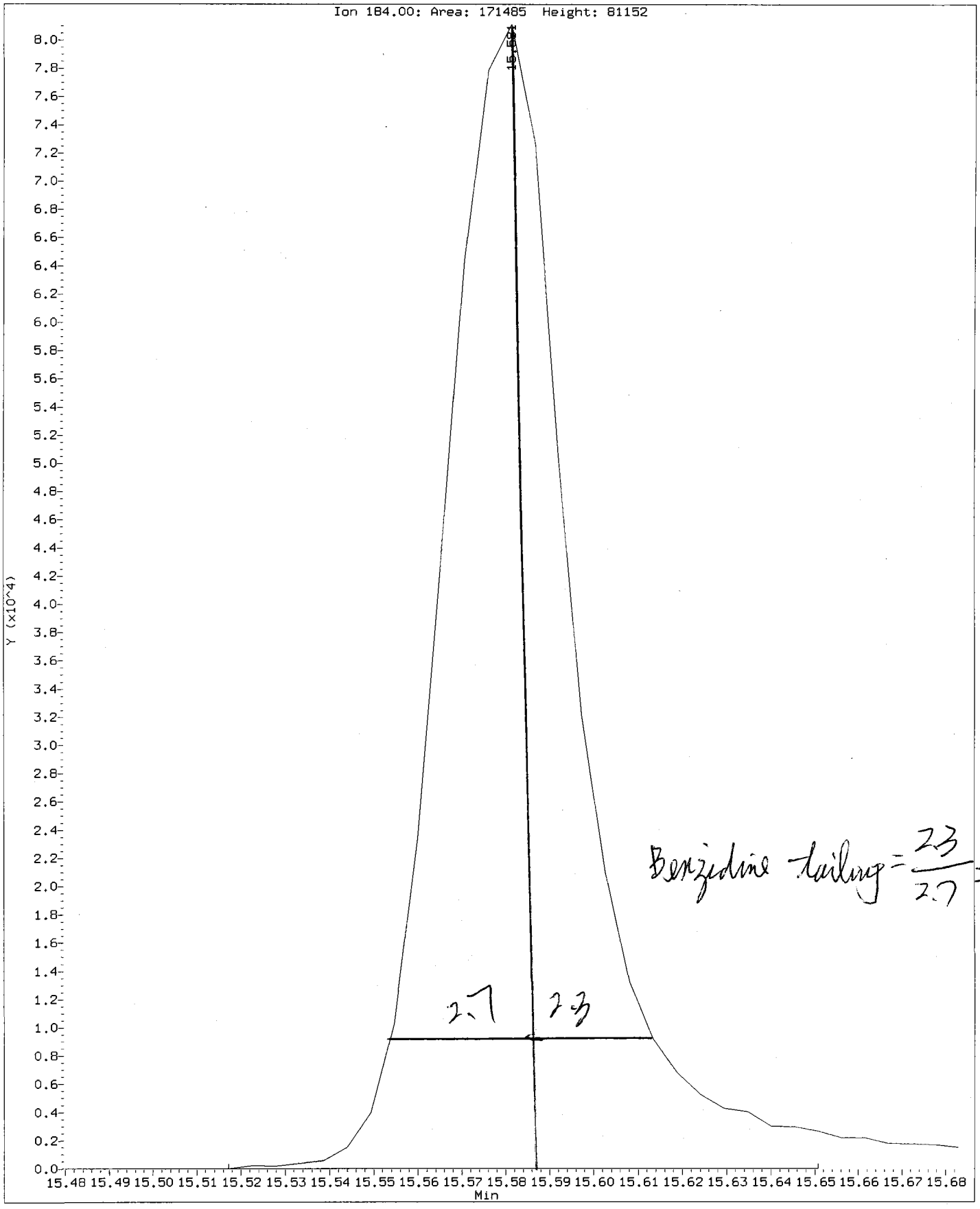
Compound: Pentachlorophenol
CAS Number: 87-86-5



RK57 : 00166

Data File: /chem1/nt6.i/20100910.b/ddt.b/09101001.D
Injection Date: 10-SEP-2010 01:11
Instrument: nt6.i
Client Sample ID: CC0910

Compound: Benzidine
CAS Number:



RK57:00167

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100910.b/09101010.D
Lab Smp Id: RK57MBS1 Client Smp ID: RK57MBS1
Inj Date : 10-SEP-2010 06:05
Operator : JZ Inst ID: nt6.i
Smp Info : RK57MBS1,
Misc Info : 10-21438
Comment : 1ul Injection
Method : /chem1/nt6.i/20100910.b/SW846082010.m
Meth Date : 15-Sep-2010 19:04 jianqing Quant Type: ISTD
Cal Date : 20-AUG-2010 11:45 Cal File: 08201003.D
Als bottle: 10 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnas.sub
Target Version: 3.50

JZ 09/15/10

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

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

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 27 Naphthalene-d8	136	8.222	8.232	(1.000)	601773	20.0000	
28 Naphthalene	128	Compound Not Detected.					
32 2-Methylnaphthalene	141	Compound Not Detected.					
105 1-methylnaphthalene	141	Compound Not Detected.					
$ 36 2-Fluorobiphenyl	172	10.054	10.059	(0.911)	372244	16.8361	336.7
40 Acenaphthylene	152	Compound Not Detected.					
* 42 Acenaphthene-d10	164	11.037	11.036	(1.000)	348129	20.0000	
44 Acenaphthene	153	Compound Not Detected.					
46 Dibenzofuran	168	Compound Not Detected.					
49 Fluorene	166	Compound Not Detected.					
* 59 Phenanthrene-d10	188	13.334	13.338	(1.000)	552484	20.0000	
60 Phenanthrene	178	Compound Not Detected.					
61 Anthracene	178	Compound Not Detected.					
64 Fluoranthene	202	Compound Not Detected.					
65 Pyrene	202	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	66 Terphenyl-d14	244	15.977	15.977	(0.912)	428706	19.4923	389.8
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	17.521	17.531	(1.000)	650769	20.0000	
	71 Chrysene	228	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	19.615	19.614	(1.000)	643499	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 09101010.D
Lab Smp Id: RK57MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem1/nt6.i/20100910.b/SW846082010.m
Misc Info: 10-21438

Calibration Date: 10-SEP-2010
Calibration Time: 01:11
Client Smp ID: RK57MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 Naphthalene-d8	490229	245114	980458	601773	22.75
42 Acenaphthene-d10	286412	143206	572824	348129	21.55
59 Phenanthrene-d10	457816	228908	915632	552484	20.68
69 Chrysene-d12	560635	280318	1121270	650769	16.08
77 Perylene-d12	521119	260560	1042238	643499	23.48

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 Naphthalene-d8	8.23	7.73	8.73	8.22	-0.12
42 Acenaphthene-d10	11.04	10.54	11.54	11.04	0.01
59 Phenanthrene-d10	13.34	12.84	13.84	13.33	-0.03
69 Chrysene-d12	17.53	17.03	18.03	17.52	-0.06
77 Perylene-d12	19.61	19.11	20.11	19.61	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

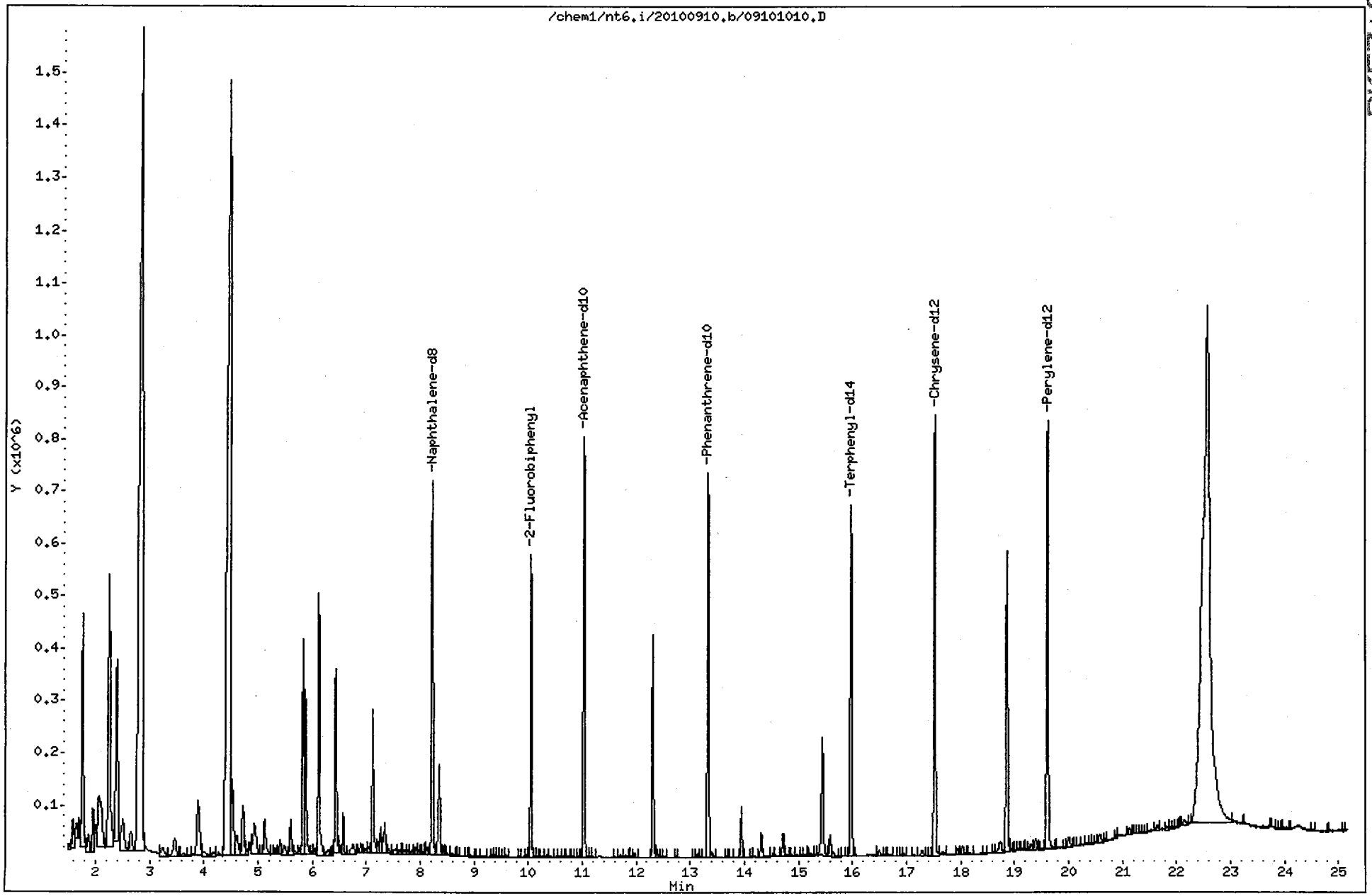
Client Name: Floyd-Snider
Sample Matrix: SOLID
Lab Smp Id: RK57MBS1
Level: LOW
Data Type: MS DATA
SpikeList File: pnaslcss.spk
Sublist File: pnas.sub
Method File: /chem1/nt6.i/20100910.b/SW846082010.m
Misc Info: 10-21438

Client SDG: RK57
Fraction: SV
Client Smp ID: RK57MBS1
Operator: JZ
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 36 2-Fluorobiphenyl	500.0	336.7	67.34	34-100
$ 66 Terphenyl-d14	500.0	389.8	77.97	35-112

Data File: /chem1/nt6.i/20100910.b/09101010.D
Date : 10-SEP-2010 06:05
Client ID: RK57MBS1
Sample Info: RK57MBS1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

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



RK57MBS1 72

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100910.b/09101011.D
Lab Smp Id: RK57LCSS1 Client Smp ID: RK57LCSS1
Inj Date : 10-SEP-2010 06:37
Operator : JZ Inst ID: nt6.i
Smp Info : RK57LCSS1,
Misc Info : 10-21438
Comment : 1ul Injection
Method : /chem1/nt6.i/20100910.b/SW846082010.m
Meth Date : 15-Sep-2010 19:04 jianqing Quant Type: ISTD
Cal Date : 20-AUG-2010 11:45 Cal File: 08201003.D
Als bottle: 11 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnas.sub
Target Version: 3.50

JZ 09/15/10

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

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

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
* 27 Naphthalene-d8	136	8.227	8.232	(1.000)	584685	20.0000	
28 Naphthalene	128	8.254	8.259	(1.003)	474177	16.6502	333.0
32 2-Methylnaphthalene	141	9.381	9.380	(1.140)	275723	16.8258	336.5
105 1-methylnaphthalene	141	9.541	9.546	(1.160)	278231	16.8056	336.1
$ 36 2-Fluorobiphenyl	172	10.054	10.059	(0.911)	376621	17.8910	357.8
40 Acenaphthylene	152	10.786	10.785	(0.977)	522008	17.6043	352.1
* 42 Acenaphthene-d10	164	11.037	11.036	(1.000)	331455	20.0000	
44 Acenaphthene	153	11.085	11.084	(1.004)	313428	17.5619	351.2
46 Dibenzofuran	168	11.347	11.351	(1.028)	479972	19.5137	390.3
49 Fluorene	166	11.886	11.885	(1.077)	395279	19.5895	391.8
* 59 Phenanthrene-d10	188	13.334	13.338	(1.000)	531991	20.0000	
60 Phenanthrene	178	13.366	13.370	(1.002)	562680	21.0603	421.2
61 Anthracene	178	13.435	13.440	(1.008)	541954	18.4844	369.7
64 Fluoranthene	202	15.246	15.245	(1.143)	686152	21.1082	422.2
65 Pyrene	202	15.571	15.571	(0.888)	688015	21.4797	429.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 66 Terphenyl-d14	244	15.972	15.977	(0.911)	443413	21.1536	423.1
68 Benzo(a)anthracene	228	17.505	17.504	(0.999)	709568	22.2475	444.9
* 69 Chrysene-d12	240	17.526	17.531	(1.000)	620234	20.0000	
71 Chrysene	228	17.564	17.563	(1.002)	641736	21.9690	439.4
187 Total Benzofluoranthenes	252	19.145	19.149	(0.976)	1482410	43.9010	878.0
76 Benzo(a)pyrene	252	19.535	19.534	(0.996)	630318	18.3223	366.4
* 77 Perylene-d12	264	19.615	19.614	(1.000)	624573	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	20.939	20.938	(1.068)	941563	21.5248	430.5
79 Dibenzo(a,h)anthracene	278	20.982	20.981	(1.070)	721730	21.8826	437.7
80 Benzo(g,h,i)perylene	276	21.217	21.222	(1.082)	781566	20.4413	408.8

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 09101011.D
Lab Smp Id: RK57LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem1/nt6.i/20100910.b/SW846082010.m
Misc Info: 10-21438

Calibration Date: 10-SEP-2010
Calibration Time: 01:11
Client Smp ID: RK57LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 Naphthalene-d8	490229	245114	980458	584685	19.27
42 Acenaphthene-d10	286412	143206	572824	331455	15.73
59 Phenanthrene-d10	457816	228908	915632	531991	16.20
69 Chrysene-d12	560635	280318	1121270	620234	10.63
77 Perylene-d12	521119	260560	1042238	624573	19.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 Naphthalene-d8	8.23	7.73	8.73	8.23	-0.06
42 Acenaphthene-d10	11.04	10.54	11.54	11.04	0.01
59 Phenanthrene-d10	13.34	12.84	13.84	13.33	-0.03
69 Chrysene-d12	17.53	17.03	18.03	17.53	-0.03
77 Perylene-d12	19.61	19.11	20.11	19.61	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: SOLID
Lab Smp Id: RK57LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: pnaslcss.spk
Sublist File: pnas.sub
Method File: /chem1/nt6.i/20100910.b/SW846082010.m
Misc Info: 10-21438

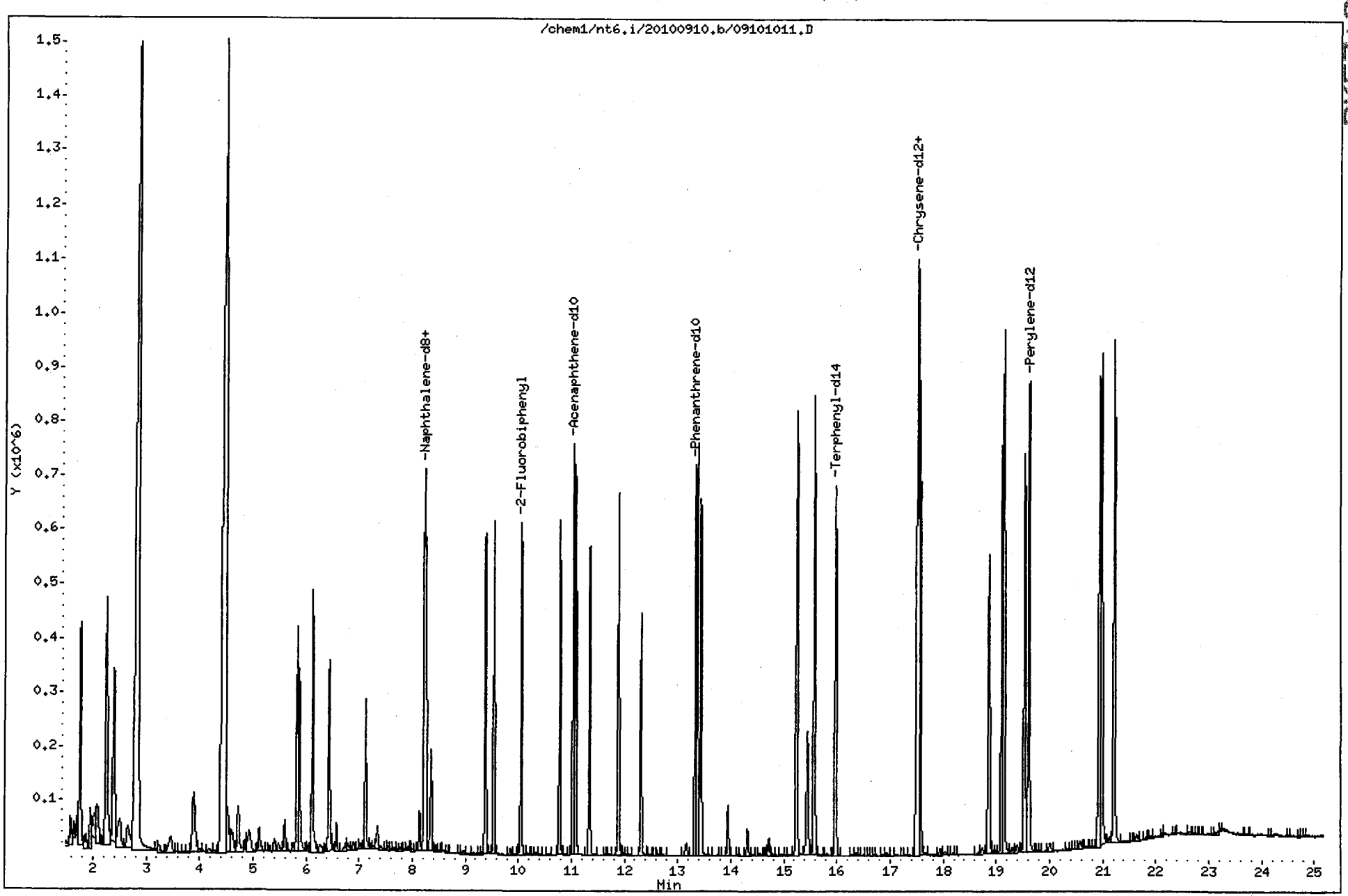
Client SDG: RK57
Fraction: SV
Client Smp ID: RK57LCSS1
Operator: JZ
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
28 Naphthalene	500.0	333.0	66.60	37-100
32 2-Methylnaphthalen	500.0	336.5	67.30	43-101
105 1-methylnaphthalen	500.0	336.1	67.22	39-100
40 Acenaphthylene	500.0	352.1	70.42	44-100
44 Acenaphthene	500.0	351.2	70.25	41-100
46 Dibenzofuran	500.0	390.3	78.05	44-100
49 Fluorene	500.0	391.8	78.36	49-100
60 Phenanthrene	500.0	421.2	84.24	48-100
61 Anthracene	500.0	369.7	73.94	50-100
64 Fluoranthene	500.0	422.2	84.43	54-100
65 Pyrene	500.0	429.6	85.92	41-105
68 Benzo(a)anthracene	500.0	444.9	88.99	49-100
71 Chrysene	500.0	439.4	87.88	50-100
187 Total Benzofluoran	1000	878.0	87.80	30-160
76 Benzo(a)pyrene	500.0	366.4	73.29	50-100
78 Indeno(1,2,3-cd)py	500.0	430.5	86.10	33-101
79 Dibenzo(a,h)anthra	500.0	437.7	87.53	37-104
80 Benzo(g,h,i)peryle	500.0	408.8	81.77	33-107

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 36 2-Fluorobiphenyl	500.0	357.8	71.56	34-100
$ 66 Terphenyl-d14	500.0	423.1	84.61	35-112

Data File: /chem1/nt6.i/20100910.b/09101011.D
Date : 10-SEP-2010 06:37
Client ID: RK57LCSS1
Sample Info: RK57LCSS1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

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



RK57:09177

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100910.b/09101012.D
Lab Smp Id: RK57LCSDS1 Client Smp ID: RK57LCSDS1
Inj Date : 10-SEP-2010 07:10
Operator : JZ Inst ID: nt6.i
Smp Info : RK57LCSDS1,
Misc Info : 10-21438
Comment : 1ul Injection
Method : /chem1/nt6.i/20100910.b/SW846082010.m
Meth Date : 15-Sep-2010 19:04 jianqing Quant Type: ISTD
Cal Date : 20-AUG-2010 11:45 Cal File: 08201003.D
Als bottle: 12 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnas.sub
Target Version: 3.50

JZ 09/14/10

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

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

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 27 Naphthalene-d8	136	8.222	8.232	(1.000)	589873	20.0000	
28 Naphthalene	128	8.254	8.259	(1.004)	494039	17.1950	343.9
32 2-Methylnaphthalene	141	9.381	9.380	(1.141)	290789	17.5891	351.8
105 1-methylnaphthalene	141	9.541	9.546	(1.160)	290165	17.3723	347.4
$ 36 2-Fluorobiphenyl	172	10.054	10.059	(0.911)	384222	17.7282	354.6
40 Acenaphthylene	152	10.780	10.785	(0.977)	551037	18.0499	361.0
* 42 Acenaphthene-d10	164	11.037	11.036	(1.000)	341250	20.0000	
44 Acenaphthene	153	11.085	11.084	(1.004)	319981	17.4144	348.3
46 Dibenzofuran	168	11.341	11.351	(1.028)	496005	19.5867	391.7
49 Fluorene	166	11.886	11.885	(1.077)	400873	19.2965	385.9
* 59 Phenanthrene-d10	188	13.333	13.338	(1.000)	557047	20.0000	
60 Phenanthrene	178	13.365	13.370	(1.002)	568676	20.3273	406.5
61 Anthracene	178	13.435	13.440	(1.008)	547910	17.8469	356.9
64 Fluoranthene	202	15.240	15.245	(1.143)	683696	20.0866	401.7
65 Pyrene	202	15.571	15.571	(0.888)	678491	21.0975	422.0

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 66 Terphenyl-d14	244	15.972	15.977	(0.911)	425838	20.2337	404.7
68 Benzo(a)anthracene	228	17.505	17.504	(0.999)	696337	21.7452	434.9
* 69 Chrysene-d12	240	17.526	17.531	(1.000)	622729	20.0000	
71 Chrysene	228	17.563	17.563	(1.002)	617729	21.0624	421.2
187 Total Benzofluoranthenes	252	19.144	19.149	(0.976)	1416837	42.7994	856.0
76 Benzo(a)pyrene	252	19.529	19.534	(0.996)	620157	18.3880	367.8
* 77 Perylene-d12	264	19.614	19.614	(1.000)	612311	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	20.939	20.938	(1.068)	889690	20.7463	414.9
79 Dibenzo(a,h)anthracene	278	20.976	20.981	(1.069)	680922	21.0587	421.2
80 Benzo(g,h,i)perylene	276	21.217	21.222	(1.082)	745335	19.8841	397.7

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 09101012.D
Lab Smp Id: RK57LCSDS1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem1/nt6.i/20100910.b/SW846082010.m
Misc Info: 10-21438

Calibration Date: 10-SEP-2010
Calibration Time: 01:11
Client Smp ID: RK57LCSDS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 Naphthalene-d8	490229	245114	980458	589873	20.33
42 Acenaphthene-d10	286412	143206	572824	341250	19.15
59 Phenanthrene-d10	457816	228908	915632	557047	21.67
69 Chrysene-d12	560635	280318	1121270	622729	11.08
77 Perylene-d12	521119	260560	1042238	612311	17.50

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 Naphthalene-d8	8.23	7.73	8.73	8.22	-0.12
42 Acenaphthene-d10	11.04	10.54	11.54	11.04	0.00
59 Phenanthrene-d10	13.34	12.84	13.84	13.33	-0.04
69 Chrysene-d12	17.53	17.03	18.03	17.53	-0.03
77 Perylene-d12	19.61	19.11	20.11	19.61	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: SOLID
Lab Smp Id: RK57LCSDS1
Level: LOW
Data Type: MS DATA
SpikeList File: pnaslcss.spk
Sublist File: pnas.sub
Method File: /chem1/nt6.i/20100910.b/SW846082010.m
Misc Info: 10-21438

Client SDG: RK57
Fraction: SV
Client Smp ID: RK57LCSDS1
Operator: JZ
SampleType: LCSD
Quant Type: ISTD

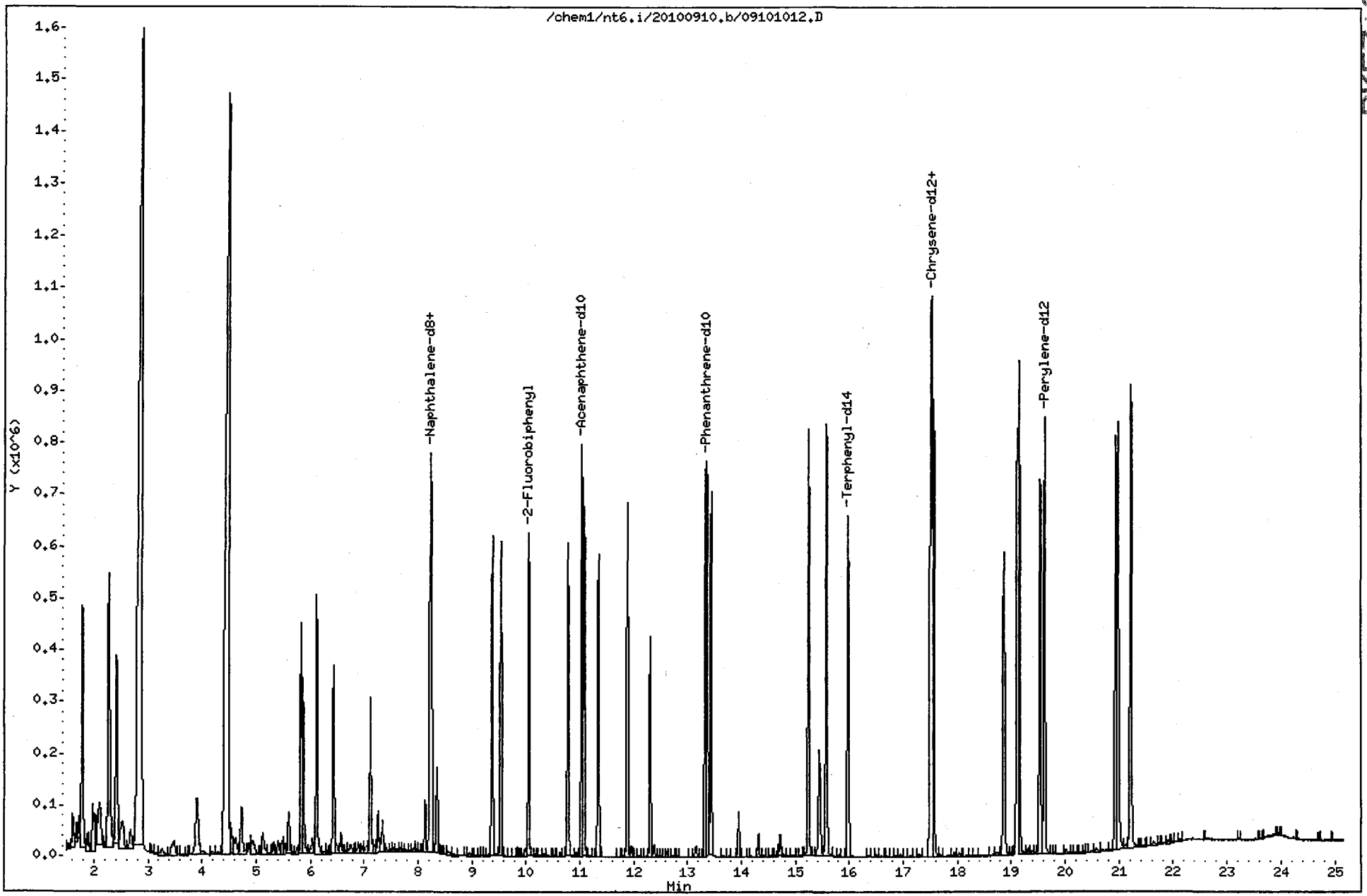
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
28 Naphthalene	500.0	343.9	68.78	37-100
32 2-Methylnaphthalen	500.0	351.8	70.36	43-101
105 1-methylnaphthalen	500.0	347.4	69.49	39-100
40 Acenaphthylene	500.0	361.0	72.20	44-100
44 Acenaphthene	500.0	348.3	69.66	41-100
46 Dibenzofuran	500.0	391.7	78.35	44-100
49 Fluorene	500.0	385.9	77.19	49-100
60 Phenanthrene	500.0	406.5	81.31	48-100
61 Anthracene	500.0	356.9	71.39	50-100
64 Fluoranthene	500.0	401.7	80.35	54-100
65 Pyrene	500.0	422.0	84.39	41-105
68 Benzo(a)anthracene	500.0	434.9	86.98	49-100
71 Chrysene	500.0	421.2	84.25	50-100
187 Total Benzofluoran	1000	856.0	85.60	30-160
76 Benzo(a)pyrene	500.0	367.8	73.55	50-100
78 Indeno(1,2,3-cd)py	500.0	414.9	82.99	33-101
79 Dibenzo(a,h)anthra	500.0	421.2	84.23	37-104
80 Benzo(g,h,i)peryle	500.0	397.7	79.54	33-107

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 36 2-Fluorobiphenyl	500.0	354.6	70.91	34-100
$ 66 Terphenyl-d14	500.0	404.7	80.93	35-112

Data File: /chem1/nt6.i/20100910.b/09101012.D
Date : 10-SEP-2010 07:10
Client ID: RK57LCSDS1
Sample Info: RK57LCSDS1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

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

RK57-091182



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100910.b/09101013.D
Lab Smp Id: RK57A Client Smp ID: PSB12-8-10-072810
Inj Date : 10-SEP-2010 07:42
Operator : JZ Inst ID: nt6.i
Smp Info : RK57A
Misc Info : 10-21438
Comment : 1ul Injection
Method : /chem1/nt6.i/20100910.b/SW846082010.m
Meth Date : 15-Sep-2010 19:04 jianqing Quant Type: ISTD
Cal Date : 20-AUG-2010 11:45 Cal File: 08201003.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnas.sub
Target Version: 3.50

AB 09/15/10

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	27.30000	Weight of sample extracted (g)
M	5.60000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
* 27 Naphthalene-d8	136	8.227	8.232	(1.000)	600029	20.0000	
28 Naphthalene	128	Compound Not Detected.					
32 2-Methylnaphthalene	141	Compound Not Detected.					
105 1-methylnaphthalene	141	Compound Not Detected.					
$ 36 2-Fluorobiphenyl	172	10.054	10.059	(0.911)	382261	17.2413	334.5
40 Acenaphthylene	152	Compound Not Detected.					
* 42 Acenaphthene-d10	164	11.036	11.036	(1.000)	349096	20.0000	
44 Acenaphthene	153	Compound Not Detected.					
46 Dibenzofuran	168	Compound Not Detected.					
49 Fluorene	166	Compound Not Detected.					
* 59 Phenanthrene-d10	188	13.333	13.338	(1.000)	556110	20.0000	
60 Phenanthrene	178	Compound Not Detected.					
61 Anthracene	178	Compound Not Detected.					
64 Fluoranthene	202	Compound Not Detected.					
65 Pyrene	202	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 66 Terphenyl-d14	244	15.972	15.977	(0.912)	399078	17.8679	346.7
68 Benzo(a)anthracene	228	Compound Not Detected.					
* 69 Chrysene-d12	240	17.521	17.531	(1.000)	660869	20.0000	
71 Chrysene	228	Compound Not Detected.					
187 Total Benzofluoranthenes	252	Compound Not Detected.					
76 Benzo(a)pyrene	252	Compound Not Detected.					
* 77 Perylene-d12	264	19.609	19.614	(1.000)	631366	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80 Benzo(g,h,i)perylene	276	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 09101013.D
Lab Smp Id: RK57A
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem1/nt6.i/20100910.b/SW846082010.m
Misc Info: 10-21438

Calibration Date: 10-SEP-2010
Calibration Time: 01:11
Client Smp ID: PSB12-8-10-07281
Level: LOW
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 Naphthalene-d8	490229	245114	980458	600029	22.40
42 Acenaphthene-d10	286412	143206	572824	349096	21.89
59 Phenanthrene-d10	457816	228908	915632	556110	21.47
69 Chrysene-d12	560635	280318	1121270	660869	17.88
77 Perylene-d12	521119	260560	1042238	631366	21.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 Naphthalene-d8	8.23	7.73	8.73	8.23	-0.06
42 Acenaphthene-d10	11.04	10.54	11.54	11.04	0.00
59 Phenanthrene-d10	13.34	12.84	13.84	13.33	-0.04
69 Chrysene-d12	17.53	17.03	18.03	17.52	-0.06
77 Perylene-d12	19.61	19.11	20.11	19.61	-0.03

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd-Snider
Sample Matrix: SOLID
Lab Smp Id: RK57A
Level: LOW
Data Type: MS DATA
SpikeList File: pnaslcss.spk
Sublist File: pnas.sub
Method File: /chem1/nt6.i/20100910.b/SW846082010.m
Misc Info: 10-21438

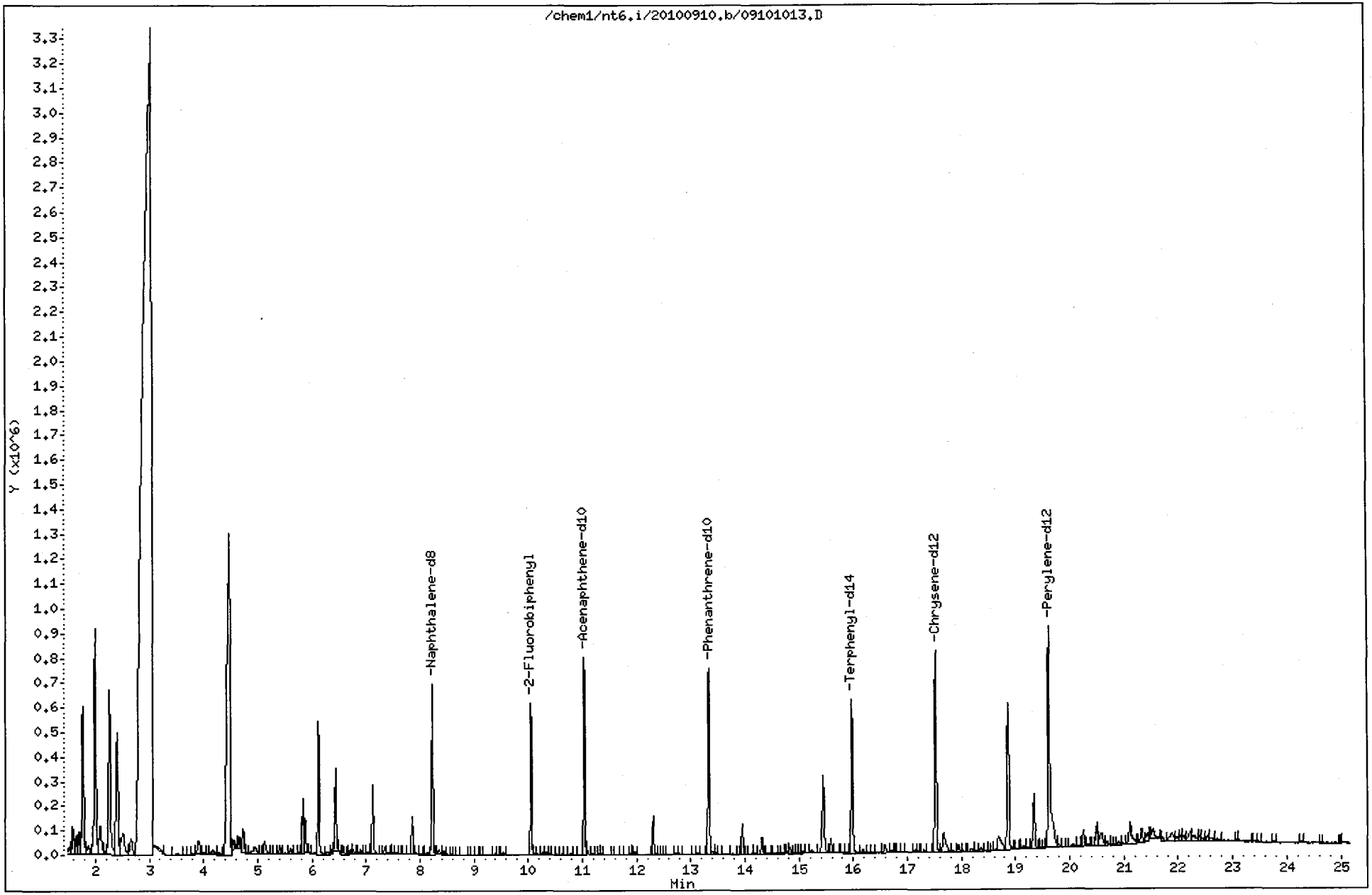
Client SDG: RK57
Fraction: SV
Client Smp ID: PSB12-8-10-072810
Operator: JZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 36 2-Fluorobiphenyl	485.0	334.5	68.97	34-100
$ 66 Terphenyl-d14	485.0	346.7	71.47	35-112

Data File: /chem1/nt6.i/20100910.b/09101013.D
Date : 10-SEP-2010 07:42
Client ID: PSB12-8-10-072810
Sample Info: RK57A
Volume Injected (uL): 1.0
Column phase: ZB-5msi

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

RK57-09187



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt6.i/20100910.b/09101014.D
Lab Smp Id: RK57B Client Smp ID: PSB12-4-6-072810
Inj Date : 10-SEP-2010 08:15
Operator : JZ Inst ID: nt6.i
Smp Info : RK57B
Misc Info : 10-21439
Comment : 1ul Injection
Method : /chem1/nt6.i/20100910.b/SW846082010.m
Meth Date : 15-Sep-2010 19:04 jianqing Quant Type: ISTD
Cal Date : 20-AUG-2010 11:45 Cal File: 08201003.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnas.sub
Target Version: 3.50

D 09/17/10

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	28.10000	Weight of sample extracted (g)
M	8.40000	% Moisture

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
* 27 Naphthalene-d8	136	8.227	8.232	(1.000)	544749	20.0000	
28 Naphthalene	128	Compound Not Detected.					
32 2-Methylnaphthalene	141	Compound Not Detected.					
105 1-methylnaphthalene	141	9.541	9.546	(1.160)	11951	0.77478	15.05
$ 36 2-Fluorobiphenyl	172	10.054	10.059	(0.911)	350341	17.3681	337.4
40 Acenaphthylene	152	Compound Not Detected.					
* 42 Acenaphthene-d10	164	11.037	11.036	(1.000)	317609	20.0000	
44 Acenaphthene	153	11.085	11.084	(1.004)	21963	1.28427	24.95
46 Dibenzofuran	168	Compound Not Detected.					
49 Fluorene	166	11.881	11.885	(1.076)	10346	0.53509	10.39
* 59 Phenanthrene-d10	188	13.333	13.338	(1.000)	508959	20.0000	
60 Phenanthrene	178	13.365	13.370	(1.002)	16310	0.63808	12.39
61 Anthracene	178	Compound Not Detected.					
64 Fluoranthene	202	Compound Not Detected.					
65 Pyrene	202	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	66 Terphenyl-d14	244	15.977	15.977	(0.911)	335446	14.7803	287.1
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	17.531	17.531	(1.000)	671539	20.0000	
	71 Chrysene	228	17.563	17.563	(1.002)	16231	0.51320	9.969
	187 Total Benzofluoranthenes	252	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	19.630	19.614	(1.000)	665824	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 09101014.D
Lab Smp Id: RK57B
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem1/nt6.i/20100910.b/SW846082010.m
Misc Info: 10-21439

Calibration Date: 10-SEP-2010
Calibration Time: 01:11
Client Smp ID: PSB12-4-6-072810
Level: LOW
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
27 Naphthalene-d8	490229	245114	980458	544749	11.12
42 Acenaphthene-d10	286412	143206	572824	317609	10.89
59 Phenanthrene-d10	457816	228908	915632	508959	11.17
69 Chrysene-d12	560635	280318	1121270	671539	19.78
77 Perylene-d12	521119	260560	1042238	665824	27.77

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
27 Naphthalene-d8	8.23	7.73	8.73	8.23	-0.06
42 Acenaphthene-d10	11.04	10.54	11.54	11.04	0.01
59 Phenanthrene-d10	13.34	12.84	13.84	13.33	-0.04
69 Chrysene-d12	17.53	17.03	18.03	17.53	0.00
77 Perylene-d12	19.61	19.11	20.11	19.63	0.08

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

Analytical Resources, Inc.

RECOVERY REPORT

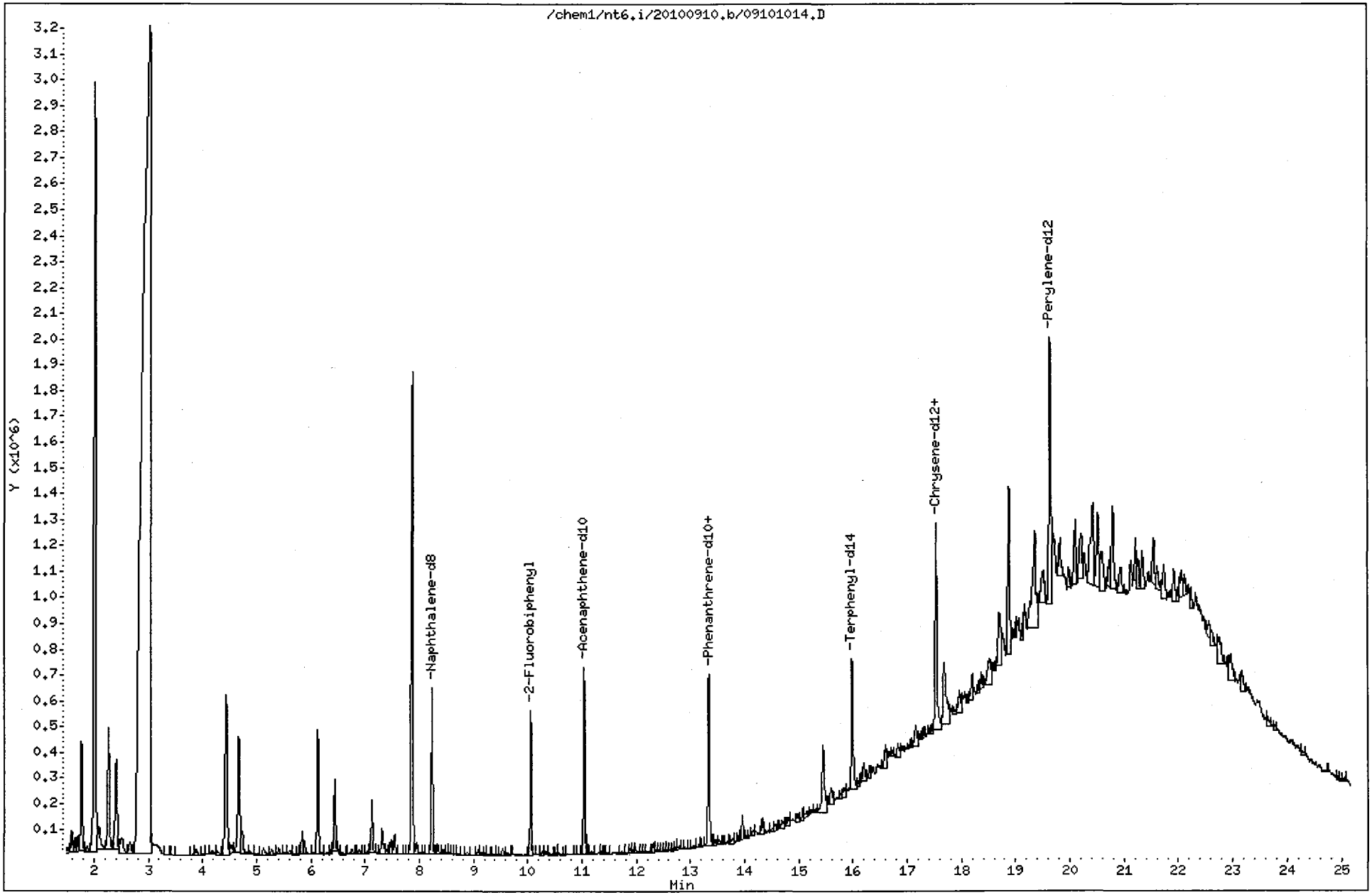
Client Name: Floyd-Snider
Client SDG: RK57
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: RK57B
Client Smp ID: PSB12-4-6-072810
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: pnaslcss.spk
Quant Type: ISTD
Sublist File: pnas.sub
Method File: /chem1/nt6.i/20100910.b/SW846082010.m
Misc Info: 10-21439

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 36 2-Fluorobiphenyl	485.6	337.4	69.47	34-100
$ 66 Terphenyl-d14	485.6	287.1	59.12	35-112

Data File: /chem1/nt6.i/20100910.b/09101014.D
Date : 10-SEP-2010 08:15
Client ID: PSB12-4-6-072810
Sample Info: RK57B
Volume Injected (uL): 1.0
Column phase: ZB-5msi

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

RK57 09102



Data File: /chem1/nt6.i/20100910.b/09101014.D

Date : 10-SEP-2010 08:15

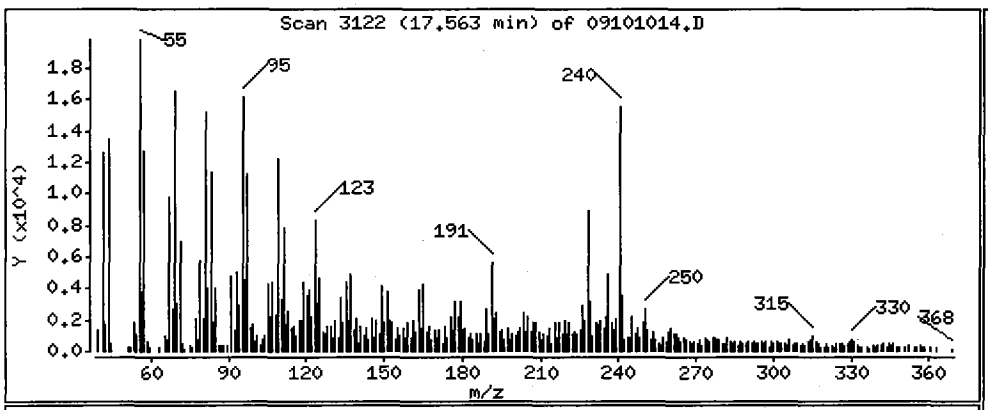
Client ID: PSB12-4-6-072810 Instrument: nt6.i

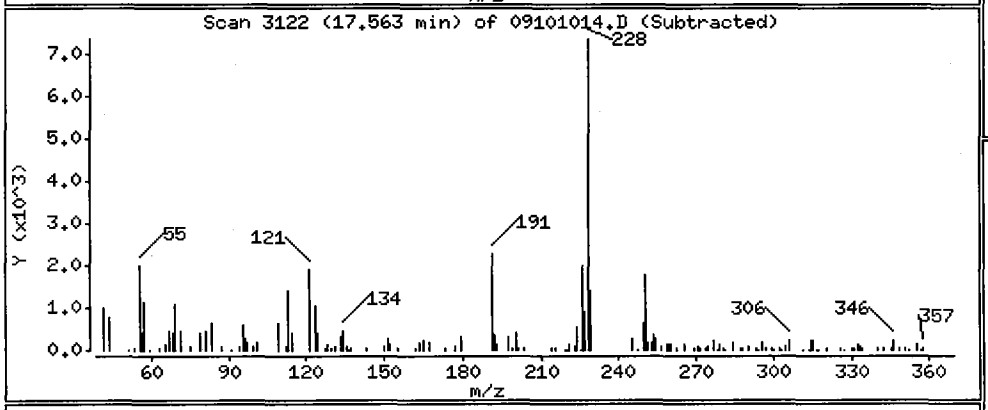
Sample Info: RK57B

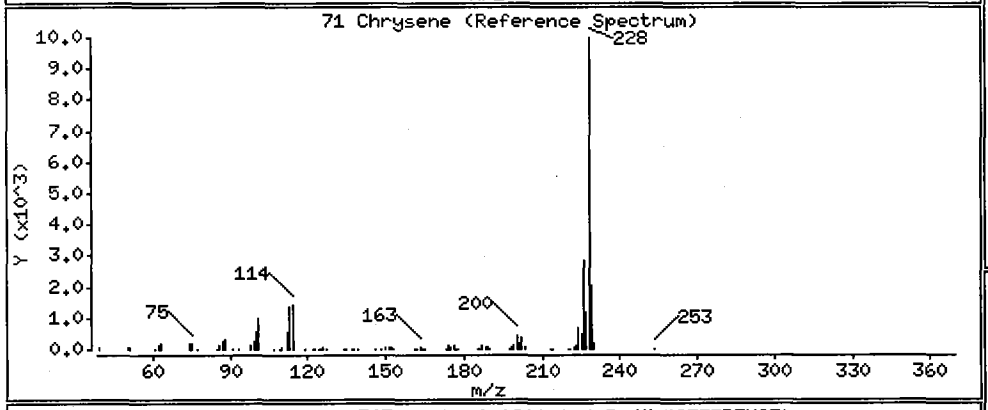
Volume Injected (uL): 1.0 Operator: JZ

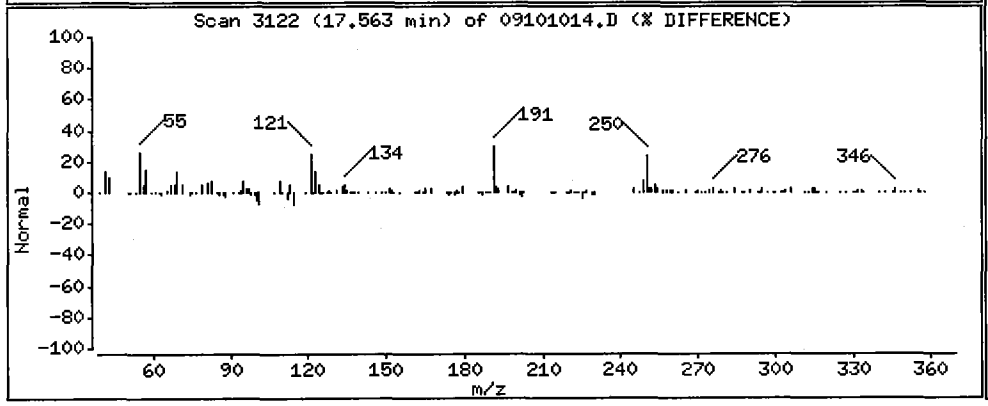
Column phase: ZB-5msi Column diameter: 0.32

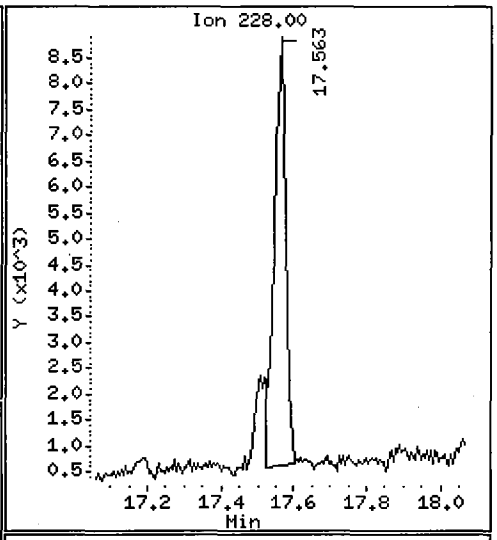
71 Chrysene Concentration: 9.969 ug/kg

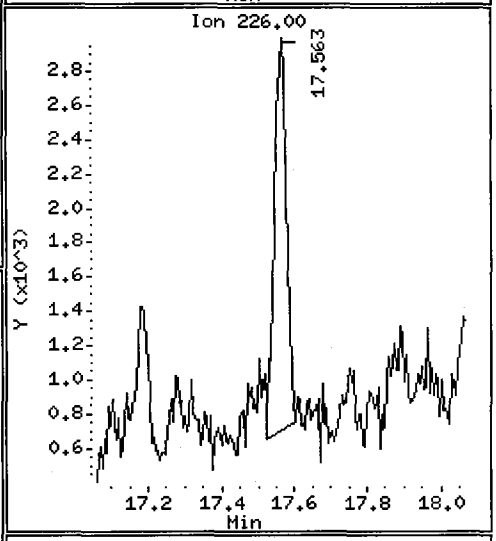












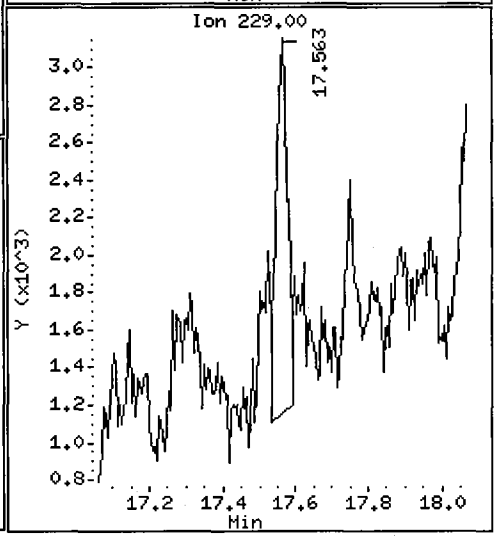


Table of Contents: ARI Job RK76

Client: Floyd-Snider

Project: POS-LLA Lora Lakes Apts.

CJ
Signature

September-17-2010
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

September 17, 2010

Jessi Massingale
Floyd-Snider Inc.
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Lora Lake RI, POS-LLA
ARI Job No: RK76

Dear Ms. Massingale:

Please find enclosed the original Chain-of-Custody (COC) record, sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and detail of these analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Susan D. Dunnihoo
Director, Client Services
sue@arilabs.com
206-695-6207

Enclosures

cc: eFile RK76

SD/sdrd

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: RK76

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: KK76	Turn-around Requested: Standard	Page: 1 of 2	
ARI Client Company: Floyd Snider	Phone: 206-292-2678	Date: 8/26/10	Ice Present?
Client Contact: J. Masrigian / M. McCullough		No. of Coolers:	Cooler Temps:
Client Project Name: Lora Lake Apts.			
Client Project #: 705-LLA	Samplers: MM, AM, KA		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: NWTPH-Dx	As + Pb (6010)	Archive						Notes/Comments
PSB25-1-2-082510	8/25/10	15:35	S	2		✓							
PSB25-0-1-082510		15:30		2		✓							
PSB25-2-4-082510		15:40		2		✓							
PSB25-4-6-082510		15:25		2			✓						
PSB25-14-15-082510		15:45		2	✓								
PSB25-18-20-082510		15:15		2	✓								
PSB25-18-20-082510-D		15:26		2	✓								
PSB26-0-2-082510		16:45		2		✓							
PSB26-2-4-082510		16:35		2		✓							
PSB26-5-10-082510		16:25		2			✓						

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Megan McCullough	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: Floyd Snider	Company: ARI	Company:	Company:
	Date & Time: 8/26/10 15:45	Date & Time: 8/26/10 1545	Date & Time:	Date & Time:

RK, G : 00003

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: RK76	Turn-around Requested: Standard	Page: 2 of 2	
ARI Client Company: Floyd Snider	Phone: 206 292-2078	Date: 8/26/10	Ice Present?
Client Contact: M. McCullough / J. Massingale		No. of Coolers:	Cooler Temps:
Client Project Name: Lora Lake Apts.			
Client Project #: 205-LLA	Samplers: MM, AM, KA, MM, TS		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: NWTPH-Dx	Analysis Requested: As + Pb (6010)	Analysis Requested: Archive	Notes/Comments
PSB26-14-15-082510	08/25/10	16:20	S	4	✓			MS/MSD
PSB26-16-18-082510		16:40		2	✓			
PSB26-19-20-082510		16:30		2			✓	
PSB27-0-0.5-082610	8/26/10	11:10		2		✓		
PSB27-1.5-2-082610		11:17		2		✓		
PSB27-2-4-082610		11:15		2		✓		
PSB27-4-6-082610		11:20		2			✓	
PSB27-10-12-082610		11:12		2	✓			
PSB27-8-10-082610		11:05		2	✓			
PSB27-13-15-082610		11:07		2			✓	

Comments/Special Instructions

	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Printed Name:	Megan McCullough	A. Volgardsen		
Company:	Floyd Snider	ARI		
Date & Time:	8/26/10 15:45	8/26/10 1545		

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Floyd Snider
Project Name: Lora Lakes RI
COC No(s): (NA)
Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other:
Assigned ARI Job No: RK76
Tracking No: (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry): 4.9 3.4 2.3 1.6 1.7 2.3 4.4 1.8
If cooler temperature is out of compliance fill out form 00070F
Temp Gun ID#: 90941619

Cooler Accepted by: AV Date: 8/26/10 Time: 1545

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs (Baggies) Foam Block Paper Other:			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	(NA)	YES	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI : (NA) YES Date/Time: Equipment: Split by:

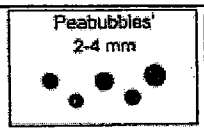
Samples Logged by: Bob Compton Date: 8/27/10 Time: 1206

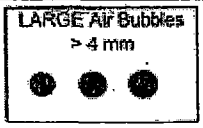
***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:





Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

RK76 : 00005

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: RK76

Case Narrative

Client: Floyd Snider
Project: Lora Lake RI, POS-LLA
ARI Job No.: RK76

Sample receipt

Analytical Resources, Inc. (ARI) accepted twenty soil samples on August 26, 2010 under ARI job RK76. The cooler temperatures measured by IR thermometer following ARI SOP were between 1.6 and 4.9°C. For details regarding sample receipt, please refer to the enclosed Cooler Receipt Form. Selected samples were placed on hold in frozen archive.

Acid/Silica Cleaned NWTPH-Dx

The samples and associated laboratory QC were extracted and analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits. The LCS percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries were within advisory control limits.

Total Metals by 6010

The samples and associated laboratory QC were digested and analyzed within the method recommended holding time.

The method blank was clean at the reporting limits. The LCS percent recoveries were within control limits.

The SRM had recoveries within limits.

The matrix spike percent recoveries were within control limits. The duplicate analysis showed a high RPD for lead. The digest was rerun to confirm. No further action was taken.

Data Reporting Qualifiers

Effective 7/10/2009

Inorganic Data

U Indicates that the target analyte was not detected at the reported concentration

* Duplicate RPD is not within established control limits

B Reported value is less than the CRDL but ≥ the Reporting Limit

N Matrix Spike recovery not within established control limits

NA Not Applicable, analyte not spiked

H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible

L Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U Indicates that the target analyte was not detected at the reported concentration

* Flagged value is not within established control limits

B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

J Estimated concentration when the value is less than ARI's established reporting limits

D The spiked compound was not detected due to sample extract dilution

E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses

M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"

Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column

P The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

Geotechnical Data

A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.

F Samples were frozen prior to particle size determination

SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations

SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis

W Weight of sample in some pipette aliquots was below the level required for accurate weighting

SURR SOLUTIONS

LABEL	SOLN ID	TEST	CONC. UG/ML	SOLVENT	EXP.
A	1752-2	ABN	100/150	MEOH	01/22/11
B	1767-2	SIM PNA	15/75	MEOH	10/07/10
C	1705-4	SIM ABN	25/37.5	MEOH	03/08/11
D	1751-1	LOW PCB	0.2	HEXANE	12/29/10
E	1661-2	HERB	62.5	MEOH	10/02/10
F	1683-3	PCP	12.5	ACETONE	12/09/10
G	1758-4	1,4DIOXANE	100	MEOH	02/11/11
H	1723-2	OP-PEST	25	MEOH	04/02/11
I	1767-3	LOW S. PNA	1.5	MEOH	10/07/10
J	1681-2	TBT-PORE	0.125	MECL2	12/01/10
K	1689-1	MED PCB	20	ACETONE	12/29/10
L	1681-1	TBT	2.5	MECL2	12/01/10
M	1767-1	EPH	1500	MECL2	06/02/11
N	1689-3	PCB	2	ACETONE	12/29/10
O	1755-1	TPH	450	MECL2	06/02/11
P	1759-1	HCID	2250	MECL2	05/13/11
Q	1620-2	EDB	1	MEOH	06/22/10
R	1757-3	RESIN ACID	250	ACETONE	08/14/11
S*	1568-5	PBDE	.25	MEOH	01/13/11
T	1674-2	ALKYL PNA	10	MEOH	07/30/10
U	1633-1	CONGENER	2.5	ACETONE	08/11/10
V					
*reverified solution					

LCS SOLUTIONS

9/7/2010

LABL	SOLN ID	TEST	CONC. UG/ML	SOLVENT	EXP.
1	1754-4	PCB 1660	20	ACETONE	03/30/11
2#		BCOC PEST	10	ACETONE	NA
3	1705-3	PEST	02/04/20	ACETONE	03/08/11
4	1744-3	LOW PEST	0.2/0.4/2	ACETONE	03/08/11
5	1677-1	EPH	1500	MECL2	11/12/10
6	1702-2	PCP	12.5/125	ACETONE	02/18/11
7	1765-2	ABN	100	ACETONE	08/30/11
8	1681-4	TBT	2.5	MECL2	12/01/10
9	1682-2	PORE TBT	.125/.25	MECL2	12/01/10
10	1766-1	ABN ACID	100/200	MEOH	02/01/11
11	1730-2	TPHD	15000	ACETONE	04/26/11
12	1766-2	ABN BASE	200	MEOH	01/29/11
13	1716-2	LOW PCB	2	ACETONE	03/30/11
14	1753-3	LOW ABN ACID	10/20	MEOH	01/28/11
15	1726-3	SIM PNA	15/75	MEOH	10/07/10
16	1707-1	DIOXANE	100	MEOH	11/05/10
17	1644-1	1248 PCB	10	ACETONE	09/10/10
18	1726-4	LOW SIM PNA	1.5	ACETONE	10/07/10
19	1746-3	AK103	7500	ACETONE	12/01/10
20	1758-2	PNA	100	ACETONE	03/14/11
21	1725-1	SKY/BHT	100	MEOH	03/18/11
22	1728-1	HERB	12.5/12500	MEOH	10/20/10
23	1753-4	LW ABN BASE	20	MEOH	01/29/11
24	1758-2	LOW ABN	10	ACETONE	01/13/11
25#		DIPHENYL	100	MEOH	NA
26	1723-3	OP-PEST	25	MEOH	11/20/10
27	1668-3	STEROLS	200	MEOH	10/30/10
28#	1750-2	ADD. PEST	4	ACETONE	09/03/10
29#		DECANES	100	MEOH	NA
30	1620-1	EDB/DBCP	0.2	MEOH	06/22/10

LCS SOLUTIONS

9/7/2010

31	1707-3	TERPINEOL	100	MEOH	03/19/11
32	1758-1	GUAIACOL	50-200	ACETONE	01/08/11
33	1639-3	RETENE	100	MEOH	09/03/10
34	1633-1	CONGENERS	2.5	ACETONE	08/11/10
35	1674-3	ALKYL PNA A	10	MEOH	10/28/10
36	1601-3	ALKYL PNA B	10	MEOH	05/13/10
50	1757-4	FULL RESIN	250	ACETONE	08/14/11
51	1696-3	DDTS	2.5	ACETONE	06/03/10
52	1613-5	1232 PCB	20	ACETONE	06/16/10
53	1703-3	DALAPON	50	MEOH	09/11/10
53	1701-2	PBDE	0.5	ACETONE	02/10/11
54	1753-1	T-CHLORDANE	10	ACETONE	07/21/11
55	1753-2	TOXAPHENE	50	ACETONE	07/21/11
#=PROJECT SPECIFIC SOLUTION					
*=REVERIFIED SOLUTION					

Analytical Resources,Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits Hydrocarbon Identification (NWTPH-HCID) and Diesel Range Petroleum Hydrocarbons (NWTPH-D & AK-102) [1]

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

Method:	NWTPH-HCID [2]	NWTPH-D		AK102 [2]
Sample Matrix:	Water& Soil	Water	Soil	Water & Soil
Preparation:	500 to 1 mL	500 to 1 mL	10g to 1 mL	500 to 1 mL or 10g to 1 mL
LCS Spike Recovery [3]				
Diesel	-- - --	56 - 103	55 - 104	75 - 125
Diesel with Acid & Silica Clean-up	-- - --	43 - 100	54 - 96	(4)
Diesel with Silica Clean-up	-- --	43 - 100	54 - 96	75 - 125
Method Blank/LCS Surrogate Recovery				
o-Terphenyl	-- - --	57 - 120	58 - 121	60 - 120
o-Terphenyl with Acid & Silica Clean-up	-- - --	51 - 120	63 - 115	(4)
o-Terphenyl Silica Clean-up		51 - 120	63 - 115	60 - 120
Sample Surrogate Recovery				
o-Terphenyl	50 - 150	35 - 131	53 - 118	50 - 150
o-Terphenyl with Acid & Silica Clean-up	-- - --	41 - 121	49 - 120	(4)
o-Terphenyl with Silica Clean-up		41 - 121	49 - 120	50 - 150

1. Control Limits calculated using all data generated 1/1/08 through 12/31/08
2. Method specified, non-prescriptive limits. The NWTPH-HCID Method does not include LCS or MS analyses.
3. Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.
4. Alaska State UST Methods do not allow acid cleanup of sample extracts.

Summary of Laboratory Control Limits Metals Analyses (All Methods & Sample Matrices)

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

Element	Matrix Spike Recovery	LCS Recovery	Replicate RPD
Aluminum	75 - 125	80 - 120	≤ 20%
Antimony	75 - 125	80 - 120	≤ 20%
Arsenic	75 - 125	80 - 120	≤ 20%
Barium	75 - 125	80 - 120	≤ 20%
Beryllium	75 - 125	80 - 120	≤ 20%
Boron	75 - 125	80 - 120	≤ 20%
Cadmium	75 - 125	80 - 120	≤ 20%
Calcium	75 - 125	80 - 120	≤ 20%
Chromium	75 - 125	80 - 120	≤ 20%
Cobalt	75 - 125	80 - 120	≤ 20%
Copper	75 - 125	80 - 120	≤ 20%
Iron	75 - 125	80 - 120	≤ 20%
Lead	75 - 125	80 - 120	≤ 20%
Magnesium	75 - 125	80 - 120	≤ 20%
Manganese	75 - 125	80 - 120	≤ 20%
Mercury	75 - 125	80 - 120	≤ 20%
Nickel	75 - 125	80 - 120	≤ 20%
Potassium	75 - 125	80 - 120	≤ 20%
Selenium	75 - 125	80 - 120	≤ 20%
Silica	75 - 125	80 - 120	≤ 20%
Silver	75 - 125	80 - 120	≤ 20%
Sodium	75 - 125	80 - 120	≤ 20%
Strontium	75 - 125	80 - 120	≤ 20%
Thallium	75 - 125	80 - 120	≤ 20%
Vanadium	75 - 125	80 - 120	≤ 20%
Zinc	75 - 125	80 - 120	≤ 20%

TPHD Analysis
Report and Summary QC Forms

ARI Job ID: RK76

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID-Silica and Acid Cleaned
Page 1 of 1
Matrix: Soil

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA

Data Release Authorized:
Reported: 09/16/10

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
RK76E	PSB25-14-15-082510	09/06/10	09/09/10	1.00	Diesel	5.4	< 5.4 U
10-21629	HC ID: ---		FID3B	1.0	Motor Oil	11	< 11 U
					o-Terphenyl		99.1%
RK76F	PSB25-18-20-082510	09/06/10	09/09/10	1.00	Diesel	5.7	< 5.7 U
10-21630	HC ID: ---		FID3B	1.0	Motor Oil	12	< 12 U
					o-Terphenyl		101%
RK76G	PSB25-18-20-082510-D	09/06/10	09/09/10	1.00	Diesel	5.7	< 5.7 U
10-21631	HC ID: ---		FID3B	1.0	Motor Oil	11	< 11 U
					o-Terphenyl		102%
MB-090610	Method Blank	09/06/10	09/09/10	1.00	Diesel	5.0	< 5.0 U
10-21635	HC ID: ---		FID3B	1.0	Motor Oil	10	< 10 U
					o-Terphenyl		98.2%
RK76K	PSB26-14-15-082510	09/06/10	09/09/10	1.00	Diesel	5.3	< 5.3 U
10-21635	HC ID: ---		FID3B	1.0	Motor Oil	11	< 11 U
					o-Terphenyl		91.7%
RK76L	PSB26-16-18-082510	09/06/10	09/10/10	1.00	Diesel	5.9	< 5.9 U
10-21636	HC ID: ---		FID3B	1.0	Motor Oil	12	< 12 U
					o-Terphenyl		95.6%
RK76R	PSB27-10-12-082610	09/06/10	09/10/10	1.00	Diesel	5.9	< 5.9 U
10-21642	HC ID: ---		FID3B	1.0	Motor Oil	12	< 12 U
					o-Terphenyl		95.9%
RK76S	PSB27-8-10-082610	09/06/10	09/10/10	1.00	**Diesel**	**5.9**	**19**
10-21643	HC ID: **DIESEL/MOTOR OIL**		FID3B	1.0	**Motor Oil**	**12**	**38**
					o-Terphenyl		87.1%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

ANALYTICAL RESOURCES INCORPORATED

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA

Client ID		OTER	TOT OUT
PSB25-14-15-082510		99.1%	0
PSB25-18-20-082510		101%	0
PSB25-18-20-082510		102%	0
MB-090610		98.2%	0
LCS-090610		86.7%	0
PSB26-14-15-082510		91.7%	0
PSB26-14-15-082510	MS	90.9%	0
PSB26-14-15-082510	MSD	92.4%	0
PSB26-16-18-082510		95.6%	0
PSB27-10-12-082610		95.9%	0
PSB27-8-10-082610		87.1%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(63-115)	(49-120)

Prep Method: SW3546
Log Number Range: 10-21629 to 10-21643

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: PSB26-14-15-082510**
Page 1 of 1 **MS/MSD**

Lab Sample ID: RK76K
LIMS ID: 10-21635
Matrix: Soil
Data Release Authorized:
Reported: 09/16/10

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA
Date Sampled: 08/25/10
Date Received: 08/26/10

Date Extracted MS/MSD: 09/06/10

Date Analyzed MS: 09/09/10 23:39
MSD: 09/09/10 23:58
Instrument/Analyst MS: FID/MS
MSD: FID/MS

Sample Amount MS: 9.34 g-dry-wt
MSD: 9.38 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 1.0
MSD: 1.0
Percent Moisture: 6.9%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	< 5.3	129	161	80.1%	130	160	81.2%	0.8%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	90.9%	92.4%

Results reported in mg/kg
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: LCS-090610**
Page 1 of 1 **LAB CONTROL**

Lab Sample ID: LCS-090610
LIMS ID: 10-21635
Matrix: Soil
Data Release Authorized:
Reported: 09/16/10

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA
Date Sampled: 08/25/10
Date Received: 08/26/10

Date Extracted: 09/06/10
Date Analyzed: 09/09/10 22:04
Instrument/Analyst: FID/MS

Sample Amount: 10.0 g
Final Extract Volume: 1.0 mL
Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	114	150	76.0%

TPHD Surrogate Recovery

o-Terphenyl	86.7%

Results reported in mg/kg

FORM III

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: RK76
Matrix: Soil Project: Lora Lakes Apts.
Date Received: 08/26/10 POS-LLA

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
10-21629-RK76E	PSB25-14-15-082510	9.31 g	1.00 mL	D	09/06/10
10-21630-RK76F	PSB25-18-20-082510	8.71 g	1.00 mL	D	09/06/10
10-21631-RK76G	PSB25-18-20-082510-8	8.74 g	1.00 mL	D	09/06/10
10-21635-090610MB1	Method Blank	10.0 g	1.00 mL	-	09/06/10
10-21635-090610LCS1	Lab Control	10.0 g	1.00 mL	-	09/06/10
10-21635-RK76K	PSB26-14-15-082510	9.45 g	1.00 mL	D	09/06/10
10-21635-RK76KMS	PSB26-14-15-082510	9.34 g	1.00 mL	D	09/06/10
10-21635-RK76KMSD	PSB26-14-15-082510	9.38 g	1.00 mL	D	09/06/10
10-21636-RK76L	PSB26-16-18-082510	8.45 g	1.00 mL	D	09/06/10
10-21642-RK76R	PSB27-10-12-082610	8.49 g	1.00 mL	D	09/06/10
10-21643-RK76S	PSB27-8-10-082610	8.46 g	1.00 mL	D	09/06/10

Basis: D=Dry Weight W=As Received

TPH METHOD BLANK SUMMARY

BLANK NO.

RK76MBS1

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

SDG No.: RK83,RK76 Project No.: LORA LAKE RI

Date Extracted: 09/06/10 Matrix: SOLID

Date Analyzed : 09/09/10 Instrument ID : FID3B

Time Analyzed : 2145

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	RK76LCSS1	RK76LCSS1	09/09/10
02	PSB25-14-15-	RK76E	09/09/10
03	PSB25-18-20-	RK76F	09/09/10
04	PSB25-18-20-	RK76G	09/09/10
05	PSB26-14-15-	RK76K	09/09/10
06	PSB26-14-15-	RK76KMS	09/09/10
07	PSB26-14-15-	RK76KMSD	09/09/10
08	PSB26-16-18-	RK76L	09/10/10
09	PSB27-10-12-	RK76R	09/10/10
10	PSB27-8-10-0	RK76S	09/10/10
11			
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FORM IV TPH

6a

NW DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: FLOYD/SNIDER

Instrument: FID3B.I Project: LORA LAKES

Calibration Date: 30-JUL-2010 SDG No.: RK83,RK76

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

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

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

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

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: FLOYD/SNIDER

Instrument: FID3B.I Project: LORA LAKES

Calibration Date: 31-JUL-2010 SDG No.: RK83,RK76

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

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

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

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010
Project: LORA LAKES

CCal Date: 09-SEP-2010
SDG No.: RK83,RK76

Analysis Time: 13:33
Lab ID: DIESEL#1

Instrument: FID3B.I
Lab File Name: 0909b004.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	5292972	247.4	250	-1.1
AK102 (C10-C25)	5955778	247.1	250	-1.2
Terphenyl	872707	43.8	45	-2.7

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA Diesel C12-C24
AK Diesel C10-C25

FORM VII-Diesel

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010 Project: LORA LAKES

CCal Date: 09-SEP-2010 SDG No.: RK83,RK76

Analysis Time: 13:52 Lab ID: MOIL#1

Instrument: FID3B.I Lab File Name: 0909b005.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	5735699	474.8	500	-5.0
AK103 (C25-C36)	5028590	563.0	500	12.6
n-Triacontane	772361	46.2	45	2.6

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA M.Oil C24-C38
AK M.Oil C25-C36

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010 Project: LORA LAKES

CCal Date: 09-SEP-2010 SDG No.: RK83,RK76

Analysis Time: 18:17 Lab ID: DIESEL#2

Instrument: FID3B.I Lab File Name: 0909b019.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	5357679	250.4	250	0.2
AK102 (C10-C25)	6019614	249.7	250	-0.1
Terphenyl	866100	43.4	45	-3.4

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA Diesel C12-C24
AK Diesel C10-C25

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010 Project: LORA LAKES

CCal Date: 09-SEP-2010 SDG No.: RK83,RK76

Analysis Time: 18:37 Lab ID: MOIL#2

Instrument: FID3B.I Lab File Name: 0909b020.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	5899080	488.3	500	-2.3
AK103 (C25-C36)	5185628	580.5	500	16.1
n-Triacontane	780972	46.7	45	3.8

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA M.Oil C24-C38
AK M.Oil C25-C36

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010 Project: LORA LAKES

CCal Date: 09-SEP-2010 SDG No.: RK83,RK76

Analysis Time: 21:08 Lab ID: DIESEL#3

Instrument: FID3B.I Lab File Name: 0909b028.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	5422697	253.4	250	1.4
AK102 (C10-C25)	6063633	251.6	250	0.6
Terphenyl	874673	43.9	45	-2.5

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA Diesel C12-C24
AK Diesel C10-C25

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010 Project: LORA LAKES

CCal Date: 09-SEP-2010 SDG No.: RK83,RK76

Analysis Time: 21:27 Lab ID: MOIL#3

Instrument: FID3B.I Lab File Name: 0909b029.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	5896727	488.1	500	-2.4
AK103 (C25-C36)	5171843	579.0	500	15.8
n-Triacontane	791707	47.3	45	5.2

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA M.Oil C24-C38
AK M.Oil C25-C36

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010 Project: LORA LAKES

CCal Date: 10-SEP-2010 SDG No.: RK83,RK76

Analysis Time: 00:55 Lab ID: DIESEL#4

Instrument: FID3B.I Lab File Name: 0909b040.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	5450446	254.7	250	1.9
AK102 (C10-C25)	6138490	254.7	250	1.9
Terphenyl	897575	45.0	45	0.1

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA Diesel C12-C24
AK Diesel C10-C25

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010 Project: LORA LAKES

CCal Date: 10-SEP-2010 SDG No.: RK83,RK76

Analysis Time: 01:14 Lab ID: MOIL#4

Instrument: FID3B.I Lab File Name: 0909b041.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	6019436	498.2	500	-0.4
AK103 (C25-C36)	5289032	592.1	500	18.4
n-Triacontane	806468	48.2	45	7.1

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA M.Oil C24-C38
AK M.Oil C25-C36

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010 Project: LORA LAKES

CCal Date: 10-SEP-2010 SDG No.: RK83,RK76

Analysis Time: 04:04 Lab ID: DIESEL#5

Instrument: FID3B.I Lab File Name: 0909b050.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	5508355	257.4	250	3.0
AK102 (C10-C25)	6170693	256.0	250	2.4
Terphenyl	899099	45.1	45	0.2

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA Diesel C12-C24
AK Diesel C10-C25

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: FLOYD/SNIDER

ICal Date: 30-JUL-2010 Project: LORA LAKES

CCal Date: 10-SEP-2010 SDG No.: RK83,RK76

Analysis Time: 04:23 Lab ID: MOIL#5

Instrument: FID3B.I Lab File Name: 0909b051.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	6103671	505.2	500	1.0
AK103 (C25-C36)	5323461	596.0	500	19.2
n-Triacontane	821650	49.1	45	9.2

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA M.Oil C24-C38
AK M.Oil C25-C36

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

SDG No.: RK83,RK76 Project: LORA LAKES

Instrument ID: FID3B GC Column: RTX-1

Run Date: 07/31/10

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.76 TRIAC: 6.56

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RT	07/30/10	1944	4.76	6.56
02		IB	07/30/10	2004	4.76	6.56
03		DIESEL 50	07/30/10	2023	4.76	6.56
04		DIESEL 100	07/30/10	2042	4.76	6.56
05		DIESEL 250	07/30/10	2101	4.76	6.55
06		DIESEL 500	07/30/10	2120	4.77	6.56
07		DIESEL 1000	07/30/10	2139	4.77	6.56
08		DIESEL 2500	07/30/10	2158	4.79	6.56
09		DIESEL ICV	07/30/10	2217	4.76	6.56
10		MOIL 100	07/30/10	2236	4.77	6.56
11		MOIL 250	07/30/10	2255	4.76	6.56
12		MOIL 500	07/30/10	2314	4.76	6.56
13		MOIL 1000	07/30/10	2332	4.76	6.57
14		RINSE	07/30/10	2351	4.76	6.56
15		MOIL 2500	07/31/10	0010	4.76	6.58
16		RINSE	07/31/10	0028	4.76	6.56
17		MOIL 5000	07/31/10	0047	4.76	6.60
18		RINSE	07/31/10	0106	4.76	6.56
19		MOIL ICV	07/31/10	0125	4.76	6.56

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

SDG No.: RK83,RK76 Project: LORA LAKE RI

Instrument ID: FID3B GC Column: ZB-1HT

Run Date: 09/09/10

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.75 TRIAC: 6.55

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	09/09/10	1237	4.76	6.55
02	RT	RT	09/09/10	1256	4.75	6.55
03	IB	IB	09/09/10	1315	4.75	6.55
04	LORA LAKES	DIESEL#1	09/09/10	1333	4.75	6.55
05	LORA LAKES	MOIL#1	09/09/10	1352	4.76	6.55
06	ZZZZZ	ZZZZZ	09/09/10	1411	4.75	6.54
07	ZZZZZ	ZZZZZ	09/09/10	1430	4.75	6.54
08	ZZZZZ	ZZZZZ	09/09/10	1449	4.75	6.55
09	PSB16-1-2-08	RK83J	09/09/10	1508	4.75	
10	PSB20-2-4-08	RK83B	09/09/10	1527	4.75	6.55
11	PSB20-11.5-1	RK83D	09/09/10	1546	4.75	6.55
12	PSB20-0-0.5-	RK83A	09/09/10	1605	4.75	6.55
13	PSB20-1.5-2-	RK83C	09/09/10	1624	4.75	6.55
14	PSB20-4-6-08	RK83E	09/09/10	1643	4.75	6.55
15	PSB20-2-4-08	RK83F	09/09/10	1702	4.75	6.55
16	PSB20-2-4-08	RK83FMS	09/09/10	1721	4.76	6.55
17	PSB20-2-4-08	RK83FMSD	09/09/10	1740	4.76	6.55
18	ZZZZZ	ZZZZZ	09/09/10	1759	4.75	6.54
19	LORA LAKES	DIESEL#2	09/09/10	1817	4.75	6.54
20	LORA LAKES	MOIL#2	09/09/10	1837	4.75	6.55
21	PSB16-2-4-08	RK83H	09/09/10	1856	4.75	6.55
22	PSB16-0-0.5-	RK83I	09/09/10	1914	4.75	6.55
23	PSB16-9.5-10	RK83K	09/09/10	1933	4.76	6.55
24	PSB16-4-6-08	RK83L	09/09/10	1952	4.75	6.55
25	PSB16-13-15-	RK83M	09/09/10	2011	4.75	6.55
26	RK83LCSS1	RK83LCSS1	09/09/10	2030	4.76	6.55
27	RK83MBS1	RK83MBS1	09/09/10	2049	4.75	6.55
28	LORA LAKES	DIESEL#3	09/09/10	2108	4.75	6.55
29	LORA LAKES	MOIL#3	09/09/10	2127	4.75	6.55
30	RK76MBS1	RK76MBS1	09/09/10	2145	4.75	6.55
31	RK76LCSS1	RK76LCSS1	09/09/10	2204	4.76	6.55
32	PSB25-14-15-	RK76E	09/09/10	2223	4.75	6.55

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC Client: FLOYD/SNIDER

SDG No.: RK83,RK76 Project: LORA LAKE RI

Instrument ID: FID3B GC Column: ZB-1HT

Run Date: 09/09/10

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.75 TRIAC: 6.55

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	PSB25-18-20-	RK76F	09/09/10	2242	4.75	6.55
02	PSB25-18-20-	RK76G	09/09/10	2301	4.75	6.55
03	PSB26-14-15-	RK76K	09/09/10	2320	4.75	6.55
04	PSB26-14-15-	RK76KMS	09/09/10	2339	4.76	6.55
05	PSB26-14-15-	RK76KMSD	09/09/10	2358	4.76	6.55
06	PSB26-16-18-	RK76L	09/10/10	0017	4.75	6.55
07	PSB27-10-12-	RK76R	09/10/10	0036	4.75	6.55
08	LORA LAKES	DIESEL#4	09/10/10	0055	4.76	6.55
09	LORA LAKES	MOIL#4	09/10/10	0114	4.75	6.55
10	PSB27-8-10-0	RK76S	09/10/10	0133	4.75	6.55
11	ZZZZZ	ZZZZZ	09/10/10	0152	4.75	6.55
12	ZZZZZ	ZZZZZ	09/10/10	0211	4.75	6.55
13	ZZZZZ	ZZZZZ	09/10/10	0230	4.75	6.55
14	ZZZZZ	ZZZZZ	09/10/10	0248	4.75	6.55
15	ZZZZZ	ZZZZZ	09/10/10	0308	4.75	6.55
16	ZZZZZ	ZZZZZ	09/10/10	0326	4.75	6.55
17	ZZZZZ	ZZZZZ	09/10/10	0346	4.75	6.55
18	LORA LAKES	DIESEL#5	09/10/10	0404	4.75	6.56
19	LORA LAKES	MOIL#5	09/10/10	0423	4.75	6.55
20	ZZZZZ	ZZZZZ	09/10/10	0442	4.76	6.56

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

Metals Analysis
Report and Summary QC Forms

ARI Job ID: RK76

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Floyd-Snider

PROJECT: Lora Lakes Apts.

SDG: RK76

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
PSB25-1-2-082510	RK76A	10-21625	
PSB25-1-2-082510D	RK76ADUP	10-21625	
PSB25-1-2-082510S	RK76ASPK	10-21625	
PSB25-0-1-082510	RK76B	10-21626	
PBS	RK76MB1	10-21626	
LCSS	RK76MB1SPK	10-21626	
LCSS	RK76REF1	10-21626	
PSB25-2-4-082510	RK76C	10-21627	
PSB26-0-2-082510	RK76H	10-21632	
PSB26-2-4-082510	RK76I	10-21633	
PSB27-0-0.5-082610	RK76N	10-21638	
PSB27-1.5-2-082610	RK76O	10-21639	
PSB27-2-4-082610	RK76P	10-21640	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 9/3/10 Title: Inorganic Manager

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: PSB25-1-2-082510
SAMPLE

Lab Sample ID: RK76A
LIMS ID: 10-21625
Matrix: Soil
Data Release Authorized:
Reported: 09/03/10

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA
Date Sampled: 08/25/10
Date Received: 08/26/10

Percent Total Solids: 93.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/01/10	6010B	09/02/10	7440-38-2	Arsenic	5	5	U
3050B	09/01/10	6010B	09/02/10	**7439-92-1**	**Lead**	2	**36**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: PSB25-1-2-082510
DUPLICATE

Lab Sample ID: RK76A
LIMS ID: 10-21625
Matrix: Soil
Data Release Authorized:
Reported: 09/03/10

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA
Date Sampled: 08/25/10
Date Received: 08/26/10

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010B	5 U	5 U	0.0%	+/- 5	L
Lead	6010B	36	56	43.5%	+/- 20%	*

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: PSB25-1-2-082510
MATRIX SPIKE

Lab Sample ID: RK76A
LIMS ID: 10-21625
Matrix: Soil
Data Release Authorized:
Reported: 09/03/10

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA
Date Sampled: 08/25/10
Date Received: 08/26/10

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010B	5 U	210	208	101%	
Lead	6010B	36	237	208	96.6%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: PSB25-0-1-082510
SAMPLE

Lab Sample ID: RK76B
LIMS ID: 10-21626
Matrix: Soil
Data Release Authorized:
Reported: 09/03/10

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA
Date Sampled: 08/25/10
Date Received: 08/26/10

Percent Total Solids: 95.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/01/10	6010B	09/02/10	7440-38-2	Arsenic	5	5	U
3050B	09/01/10	6010B	09/02/10	**7439-92-1**	**Lead**	2	**37**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: PSB25-2-4-082510
SAMPLE

Lab Sample ID: RK76C
LIMS ID: 10-21627
Matrix: Soil
Data Release Authorized:
Reported: 09/03/10

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA
Date Sampled: 08/25/10
Date Received: 08/26/10

Percent Total Solids: 94.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/01/10	6010B	09/02/10	7440-38-2	Arsenic	5	5	U
3050B	09/01/10	6010B	09/02/10	**7439-92-1**	**Lead**	2	**48**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: PSB26-0-2-082510
SAMPLE

Lab Sample ID: RK76H
LIMS ID: 10-21632
Matrix: Soil
Data Release Authorized:
Reported: 09/03/10

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA
Date Sampled: 08/25/10
Date Received: 08/26/10

Percent Total Solids: 96.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/01/10	6010B	09/02/10	7440-38-2	Arsenic	5	5	U
3050B	09/01/10	6010B	09/02/10	**7439-92-1**	**Lead**	2	**123**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: PSB26-2-4-082510
SAMPLE

Lab Sample ID: RK76I
LIMS ID: 10-21633
Matrix: Soil
Data Release Authorized:
Reported: 09/03/10

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA
Date Sampled: 08/25/10
Date Received: 08/26/10

Percent Total Solids: 97.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/01/10	6010B	09/02/10	7440-38-2	Arsenic	5	5	U
3050B	09/01/10	6010B	09/02/10	7439-92-1	Lead	2	2	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: PSB27-0-0.5-082610
SAMPLE

Lab Sample ID: RK76N
LIMS ID: 10-21638
Matrix: Soil
Data Release Authorized:
Reported: 09/03/10

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA
Date Sampled: 08/26/10
Date Received: 08/26/10

Percent Total Solids: 95.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/01/10	6010B	09/02/10	7440-38-2	Arsenic	5	5	U
3050B	09/01/10	6010B	09/02/10	**7439-92-1**	**Lead**	2	**39**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: PSB27-1.5-2-082610
SAMPLE

Lab Sample ID: RK76O
LIMS ID: 10-21639
Matrix: Soil
Data Release Authorized:
Reported: 09/03/10

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA
Date Sampled: 08/26/10
Date Received: 08/26/10

Percent Total Solids: 93.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/01/10	6010B	09/02/10	7440-38-2	Arsenic	5	5	U
3050B	09/01/10	6010B	09/02/10	**7439-92-1**	**Lead**	2	**152**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: PSB27-2-4-082610
SAMPLE

Lab Sample ID: RK76P
LIMS ID: 10-21640
Matrix: Soil
Data Release Authorized:
Reported: 09/03/10

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA
Date Sampled: 08/26/10
Date Received: 08/26/10

Percent Total Solids: 94.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/01/10	6010B	09/02/10	7440-38-2	Arsenic	10	10	U
3050B	09/01/10	6010B	09/02/10	**7439-92-1**	**Lead**	5	**131**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: RK76MB
LIMS ID: 10-21626
Matrix: Soil
Data Release Authorized:
Reported: 09/03/10

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	09/01/10	6010B	09/02/10	7440-38-2	Arsenic	5	5	U
3050B	09/01/10	6010B	09/02/10	7439-92-1	Lead	2	2	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: RK76LCS
LIMS ID: 10-21626
Matrix: Soil
Data Release Authorized:
Reported: 09/03/10

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	210	200	105%	
Lead	6010B	203	200	102%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: STD REFERENCE
ERA D053540

Lab Sample ID: RK76SRM
LIMS ID: 10-21626
Matrix: Soil
Data Release Authorized:
Reported: 09/03/10

QC Report No: RK76-Floyd-Snider
Project: Lora Lakes Apts.
POS-LLA
Date Sampled: NA
Date Received: NA

Analyte	Analysis Method	Analysis Date	mg/kg-dry	Certified Value	Advisory Range
Arsenic	6010B	09/02/10	133	132	106-157
Lead	6010B	09/02/10	128	130	106-154

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Floyd-Snider

PROJECT: Lora Lakes Apts.

UNITS: ug/L

SDG: RK76

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Arsenic	AS	ICP	IP090271	2000.0	1993.39	99.7	2000.0	2019.46	101.0	1959.46	98.0	2055.73	102.8	2037.95	101.9		
Lead	PB	ICP	IP090271	2000.0	2004.20	100.2	2000.0	2025.61	101.3	1960.80	98.0	2051.75	102.6	2037.58	101.9		

RK76 09052

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Floyd-Snider

PROJECT: Lora Lakes Apts.

UNITS: ug/L

SDG: RK76

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Arsenic	AS	ICP	IP090271	50.0	52.74	**105.5**										
Lead	PB	ICP	IP090271	20.0	21.20	**106.0**										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Floyd-Snider

PROJECT: Lora Lakes Apts.

UNITS: ug/L

SDG: RK76

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Arsenic	AS	ICP	IP090271	10.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U		
Lead	PB	ICP	IP090271	3.0	20.0	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U		

RK76 : 9005

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Floyd-Snider

ICS SOURCE: I.V.

PROJECT: Lora Lakes Apts.

RUNID: IP090271

SDG: RK76

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	201957.9	204766.9	**102.4**						
Antimony		1000	18.5	1052.5	**105.3**						
Arsenic		1000	2.1	1009.6	**101.0**						
Barium		1000	1.1	1015.4	**101.5**						
Beryllium		1000	0.0	1019.9	**102.0**						
Boron			0.4	3.0							
Cadmium		1000	2.0	993.7	**99.4**						
Calcium	100000	100000	101054.2	102340.4	**102.3**						
Chromium		1000	-0.6	1028.3	**102.8**						
Cobalt		1000	1.7	958.1	**95.8**						
Copper		1000	0.9	1007.3	**100.7**						
Iron	200000	200000	198784.2	199765.3	**99.9**						
Lead		1000	-10.1	960.7	**96.1**						
Magnesium	100000	100000	102693.1	101655.3	**101.7**						
Manganese		1000	-0.9	966.1	**96.6**						
Molybdenum			4.2	4.1							
Nickel		1000	0.5	982.3	**98.2**						
Potassium			-63.6	503.9							
Selenium		1000	25.3	1038.2	**103.8**						
Silicon			-22.1	-19.6							
Silver		1000	-0.7	1018.5	**101.9**						
Sodium			21.3	19.9							
Strontium			3.7	3.8							
Thallium		1000	11.8	965.6	**96.6**						
Tin			-7.7	-8.2							
Titanium			2.8	2.0							
Vanadium		1000	-0.2	981.2	**98.1**						
Zinc		1000	-1.1	976.4	**97.6**						

RK76 00055

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Floyd-Snider

PROJECT: Lora Lakes Apts.

SDG: RK76 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Arsenic	AS	ICP	OPTIMA ICP 2	197.20		10	50.0	4/1/2010	30000.0	8/19/2010
Lead	PB	ICP	OPTIMA ICP 2	220.35		3	20.0	4/1/2010	300000.0	8/19/2010

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Floyd-Snider

PROJECT: Lora Lakes Apts.

IEC DATE: 8/19/2010

SDG: RK76

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	11.6742000	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.0420641	0.0000000	-0.9258910	1.1101800	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1326170	0.0000000	0.0000000	0.0653003
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	4.4459100	0.0000000	0.0000000	0.0000000	0.0000000	0.1210290	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.5246150	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0180128	0.0000000	0.0000000	0.0000000	0.0000000	-0.0360386
Cobalt	228.62	0.0000000	0.0000000	0.1811860	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.2152060	-0.0402265	0.0000000	-0.0636245
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.8017710	0.0000000	0.0000000
Lead	220.35	-0.1812210	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-2.1894700	0.9499100	0.0670545
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.1053490	0.0000000	-1.4628600	-0.9844250	0.0000000	0.6287640
Manganese	257.61	0.0067309	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0121068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0636833	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.7139000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	2.1296000	0.3233330	0.0000000	-0.1319610
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.0485000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0546091	0.0000000	0.0000000	0.1713940	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-4.5175100	0.0000000	0.1068370
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

RK76 8955.7

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Floyd-Snider

PROJECT: Lora Lakes Apts.

IEC DATE: 8/19/2010

SDG: RK76

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	14.4767000	0.0000000	0.0000000	0.0000000	2.3944800	0.0000000	17.1420000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	-0.3982890	0.0000000	0.0000000	-0.9978010	0.0000000	-3.2897100	0.0000000
Arsenic	188.98	0.0000000	0.0000000	1.9165200	0.0000000	0.0000000	0.0000000	-9.6063400	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0704219	0.0000000	0.0000000	0.0000000	0.0000000	0.5112150	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0103794	0.0000000	0.3957210	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	-0.7324540	0.0000000	0.0000000	0.0000000	0.0000000	0.0412924	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0823671	0.0000000	0.1285980	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.3072420	0.0000000
Cobalt	228.62	0.0000000	0.0000000	-0.1758380	0.1555810	0.0000000	0.0000000	1.6559300	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0051457	0.0000000	0.2014530	0.0000000	0.0000000	0.0000000	0.2418940	0.0000000	0.0000000	0.0000000
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	6.0837800	0.0000000
Lead	220.35	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	-3.4255700	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0047163	0.0000000	0.0000000	0.0000000	-0.2515330	0.0000000	0.0000000	0.0000000	-0.0263632	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.6970480	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.1890780	0.1551430	0.0000000	0.0000000	0.0000000	-0.0314085	0.0000000	-0.2334190	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	269.6940000	0.0000000	0.0000000	269.1330000
Thallium	190.80	0.0000000	-0.9987530	-2.7669200	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	1.4398700	0.0000000
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.6186930	-0.3194610	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	1.2223400	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1526990	-0.7306910	0.0000000	0.0000000	0.0000000	0.5941400	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2231460	0.0000000	-0.0608440	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

RK76 : 000538

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Floyd-Snider

PROJECT: Lora Lakes Apts.

SDG: RK76

ANALYSIS METHOD: ICP

ARI PREP CODE: SWC

PREPDATE: 9/1/2010

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
PSB25-1-2-082510	RK76A	1.032	0.0	50.0
PSB25-1-2-082510D	RK76ADUP	1.029	0.0	50.0
PSB25-1-2-082510S	RK76ASPK	1.031	0.0	50.0
PSB25-0-1-082510	RK76B	1.011	0.0	50.0
PSB25-2-4-082510	RK76C	1.006	0.0	50.0
PSB26-0-2-082510	RK76H	1.019	0.0	50.0
PSB26-2-4-082510	RK76I	1.033	0.0	50.0
PBS	RK76MB1	1.000	0.0	50.0
LCSS	RK76MB1SPK	1.000	0.0	50.0
PSB27-0-0.5-082610	RK76N	1.047	0.0	50.0
PSB27-1.5-2-082610	RK76O	1.038	0.0	50.0
PSB27-2-4-082610	RK76P	1.083	0.0	50.0
LCSS	RK76REF1	1.001	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Floyd-Snider

PROJECT: Lora Lakes Apts. INSTRUMENT ID: OPTIMA ICP 2 START DATE: 9/2/2010

SDG: RK76 RUNID: IP090271 METHOD: ICP END DATE: 9/2/2010

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08164				X																	X									
S2	S2	1.00	08203																														
S3	S3	1.00	08221				X																	X									
S4	S4	1.00	08243																														
S5	S5	1.00	08264																														
ICV	ICV	1.00	08314				X																	X									
ICB	ICB	1.00	08344				X																	X									
CRI	CRII	1.00	08383				X																	X									
ICSA	ICSAI	1.00	08423				X																	X									
ICSAB	ICSABI	1.00	08464				X																	X									
CCV	CCV1	1.00	08503				X																	X									
CCB	CCB1	1.00	08533				X																	X									
ZZZZZZ	RI81MB1	1.00	08572																														
ZZZZZZ	RJ52MB1	1.00	09012																														
ZZZZZZ	RK32MB1	2.00	09052																														
ZZZZZZ	RK32A	2.00	09091																														
PSB25-0-1-082510	RK76B	2.00	09125				X																	X									
PSB25-1-2-082510D	RK76ADUP	2.00	09165				X																	X									
PSB25-1-2-082510	RK76A	2.00	09203				X																	X									
PSB25-1-2-082510S	RK76ASPK	2.00	09241				X																	X									
ZZZZZZ	RK32MB1SPK	2.00	09263																														
ZZZZZZ	RK32MB1SPD	2.00	09302																														
CCV	CCV2	1.00	09342				X																	X									
CCB	CCB2	1.00	09372				X																	X									
PBS	RK76MB1	2.00	09412				X																	X									
PSB25-2-4-082510	RK76C	2.00	09451				X																	X									
PSB26-0-2-082510	RK76H	2.00	09491				X																	X									
PSB26-2-4-082510	RK76I	2.00	09525				X																	X									
PSB27-0-0.5-082610	RK76N	2.00	09565				X																	X									
PSB27-1.5-2-082610	RK76O	2.00	10003				X																	X									
PSB27-2-4-082610	RK76P	2.00	10042																														
LCSS	RK76REF1	2.00	10071				X																	X									
LCSS	RK76MB1SPK	2.00	10101				X																	X									
CCV	CCV3	1.00	10141				X																	X									
CCB	CCB3	1.00	10171				X																	X									

FORM XIV

RK76 : 00096

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Floyd-Snider

PROJECT: Lora Lakes Apts. INSTRUMENT ID: OPTIMA ICP 2 START DATE: 9/2/2010

SDG: RK76 RUNID: IP090271 METHOD: ICP END DATE: 9/2/2010

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
PSB25-1-2-082510	RK76A	2.00	10210																														
PSB25-1-2-082510D	RK76ADUP	2.00	10245																														
PSB27-2-4-082610	RK76P	5.00	10283				X																	X									
CCV	CCV4	1.00	10323				X																	X									
CCB	CCB4	1.00	10352				X																	X									

RK76 00091

Total Solids

ARI Job ID: RK76

Extractions Total Solids-extts
Data By: Jim Hawk
Created: 9/ 6/10

Worklist: 1673
Analyst: RVR
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	RK76E 10-21629 PSB25-14-15-082510	1.17	11.40	10.53	91.5	NR
2.	RK76F 10-21630 PSB25-18-20-082510	1.18	11.26	9.89	86.4	NR
3.	RK76G 10-21631 PSB25-18-20-082510-D	1.19	12.52	10.95	86.1	NR
4.	RK76K 10-21635 PSB26-14-15-082510	1.17	12.48	11.70	93.1	NR
5.	RK76L 10-21636 PSB26-16-18-082510	1.17	11.20	9.53	83.3	NR
6.	RK76R 10-21642 PSB27-10-12-082610	1.19	13.74	11.68	83.6	NR
7.	RK76S 10-21643 PSB27-8-10-082610	1.16	11.44	9.81	84.1	NR

Extractions Total Solids-extts
Data By: Jim Hawk
Created: 9/ 6/10

Worklist: 1673
Analyst: JBH
Comments:

Oven ID: Ø15

Balance ID: 3564ØØ92

Samples In: Date: 9/6/10 Time: 1135 Temp: 10Ø Analyst: NL

Samples Out: Date: 9/7/1Ø Time: ØG:3Ø Temp: 99° Analyst: RR

	ARI ID / CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	RK76E 10-21629 PSB25-14-15-082510	1.17	11.4Ø	1Ø.53		NR
2.	RK76F 10-21630 PSB25-18-20-082510	1.18	11.26	9.89		NR
3.	RK76G 10-21631 PSB25-18-20-082510-D	1.19	12.52	1Ø.95		NR
4.	RK76K 10-21635 PSB26-14-15-082510	1.17	12.48	11.7Ø		NR
5.	RK76L 10-21636 PSB26-16-18-082510	1.17	11.2Ø	9.53		NR
6.	RK76R 10-21642 PSB27-10-12-082610	1.19	13.74	11.68		NR
7.	RK76S 10-21643 PSB27-8-10-082610	1.16	11.44	9.81		NR

Solids Data Entry Report Checked by: MH Date: 9/03/10
Date: 09/02/10 Data Analyst: KM

Solids Determination performed on 09/01/10 by MH

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
RK76	A	PSB25-1-2-082510	0.980	10.215	9.589	93.22
RK76	B	PSB25-0-1-082510	0.976	10.443	10.033	95.67
RK76	C	PSB25-2-4-082510	0.988	10.493	9.983	94.63
RK76	H	PSB26-0-2-082510	0.960	10.509	10.171	96.46
RK76	I	PSB26-2-4-082510	0.959	10.443	10.189	97.32
RK76	N	PSB27-0-0.5-082610	0.973	10.100	9.669	95.28
RK76	O	PSB27-1.5-2-082610	0.978	10.461	9.881	93.88
RK76	P	PSB27-2-4-082610	0.942	10.536	9.958	93.98

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section Metals

Oven Identification: 07 **Balance ID:** 068755

Samples in Oven: Date: 9/01/10 Time: 1345 Temp: 103° C Analyst: MH

Removed from Oven: Date: 9/02/10 Time: 0715 Temp: 101°C Analyst: MH

Source of Total Solids Data If From A Different Lab: —

ARI Sample ID		Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
RK76	A	0.980	10.215	9.589	—	✓
"	B	0.976	10.443	10.033	—	✓
"	C	0.988	10.493	9.983	—	✓
"	H	0.960	10.509	10.171	—	✓
"	I	0.959	10.443	10.189	—	✓
"	N	0.973	10.100	9.669	—	✓
"	O	0.978	10.461	9.881	—	✓
"	P	0.942	10.536	9.958	—	✓
RK92	A	0.995	10.565	8.264	—	✓
"	B	1.020	10.430	7.961	—	✓
"	C	1.003	10.196	7.722	—	✓

MH 9/01/10

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104℃ < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

TPHD Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: RK76

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

NWTPHD-Soil /Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test TPHD # 3
ARI Job No(s) RK76, RK77

In-House (5ppm)
Batch set up by: JH

Bottle #	Extraction Requirements	Verify Client ID	Volume Extracted (wet wt)	Transfer to Turbo Tube	TurboVap (1 2 3)	Acid/Silica Clean (1:1) (Y) N	TurboVap 1 2 3	Final Effective Volume	Volume to Lab	Comments
	RK76 MBS	Date 9/6/10	10.00g	NL 9/6/10				1mL	1mL	
	SBS	check	↓							
	~~SBS Dup.~~		↓							
1	RK76 E		10.10							
	F		10.05							
	G		10.15							
	K		10.15							
	Kms		10.03							
	Kmsd		10.08							
	L		10.15							
	R		10.16							
	S		10.06							
1	RK77 A		10.15							
	Ams		10.14							
	Amsd		10.16							
	B		10.06							
	C		10.04							
	D		10.04							
	E		10.05							
Analyst/Date:			NL 9/6/10		TH 9/7/10	SP 9/8/10	MW 9/9/10			

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	**O1**	**100µL**	6/22/11	NL	AC
Spike	**11**	**100µL**	4/26/11	NL	AC
Extraction Time: 12:13			**Balance ID:** 38040052		

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

~~A. Need Total Solids~~ Y/N RK76 only

~~B. Archive~~/Freeze Y/N RK76 only

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: RK76 Client ID: Floyd-Snider

Parameter: TPHD w/Acid Client Project: Lora Lakes Apts.

Note problems, concerns, corrective actions	Analyst/Date
Screens: Soil/Sediment/Solid/Other:	
☑ **No Anomalies (standard soil/sediment)** E-G, K, L, R, S	
☐ **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=**	

TPHD Raw Data
Initial Calibration

ARI Job ID: RK76

Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: Diesel #2, 30wt Mo | Client ID: ARI
oTerph, n-Triac CURVE

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, oTerphenyl, AK102, 30wt MOil, n-Triacontane

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

Dates: Curve: 7/30/10 Analysis Start: 7/30/10

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		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):

Diesel ICV quants (310/250) = 124%.
MS 8/3/10

Additional Details on Reverse: Yes / (No)

Analyst: MO **Date:** 8/3/10

Reviewer: [signature] **Date:** 8/19/10

6a

NW DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20100730

Instrument: FID3B.I

Project:

Calibration Date: 30-JUL-2010

SDG No.: 20100730

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

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

Quant Ranges :

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

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

FORM VI-Diesel

Report Date : 03-Aug-2010 19:42

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

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

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0730b018	0730b019	0730b020	0730b021	0730b022	0730b023
INJ.DATE:	30-JUL-2010	30-JUL-2010	30-JUL-2010	30-JUL-2010	30-JUL-2010	30-JUL-2010
INJ.TIME:	20:23	20:42	21:01	21:20	21:39	21:58

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	1.033	0.933-1.133	+++++	+++++
	2 C8	+++++	+++++	+++++	+++++	+++++	+++++	1.329	1.229-1.429	+++++	+++++
	3 C10	2.859	2.858	2.857	2.859	2.859	2.863	2.858	2.808-2.908	2.859	0.002
	4 C12	3.468	3.467	3.467	3.467	3.468	3.470	3.468	3.418-3.518	3.468	0.001
	5 C14	3.925	3.924	3.925	3.925	3.926	3.929	3.927	3.877-3.977	3.926	0.002
	6 C16	4.321	4.320	4.321	4.321	4.323	4.326	4.321	4.271-4.371	4.322	0.002
	7 C18	4.674	4.674	4.675	4.676	4.678	4.683	4.675	4.625-4.725	4.677	0.003
$	8 o-terph	4.759	4.761	4.763	4.766	4.774	4.787	4.762	4.712-4.812	4.768	0.011
	9 C20	4.998	4.997	4.996	4.998	4.998	5.002	4.998	4.948-5.048	4.998	0.002
	10 C22	5.299	5.295	5.293	5.294	5.295	5.298	5.296	5.246-5.346	5.296	0.002
	11 C24	5.597	5.601	5.604	5.603	5.602	5.604	5.603	5.553-5.653	5.602	0.003
	12 C25	5.760	5.767	5.766	5.764	5.763	5.764	5.764	5.714-5.814	5.764	0.002
	13 C26	5.922	5.926	5.921	5.928	5.926	5.924	5.926	5.876-5.976	5.925	0.002
	14 C28	6.242	6.242	6.242	6.244	6.246	6.241	6.244	6.194-6.294	6.243	0.002
$	15 Triacon Surr	6.558	6.562	6.553	6.562	6.558	6.558	6.559	6.509-6.609	6.559	0.003
	16 C32	6.842	6.845	6.846	6.866	6.846	6.847	6.856	6.806-6.906	6.849	0.008
	17 C34	7.141	7.140	7.139	7.138	7.142	7.140	7.141	7.091-7.191	7.140	0.002

Reviewer 1 MO Date: 8/3/10
Reviewer 2 [signature] Date: 8/4/10

RK76 : 000172

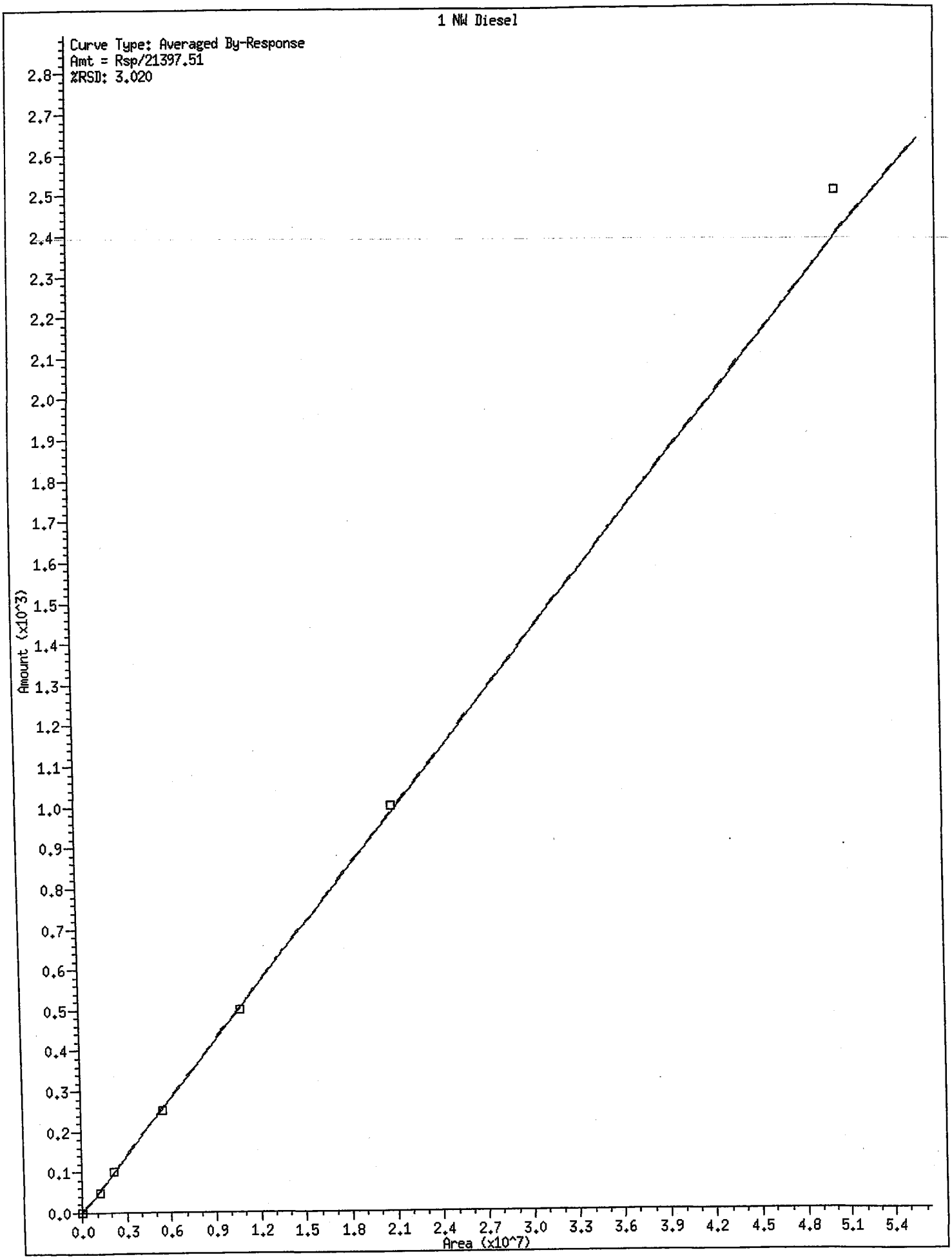
Report Date : 03-Aug-2010 19:42

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

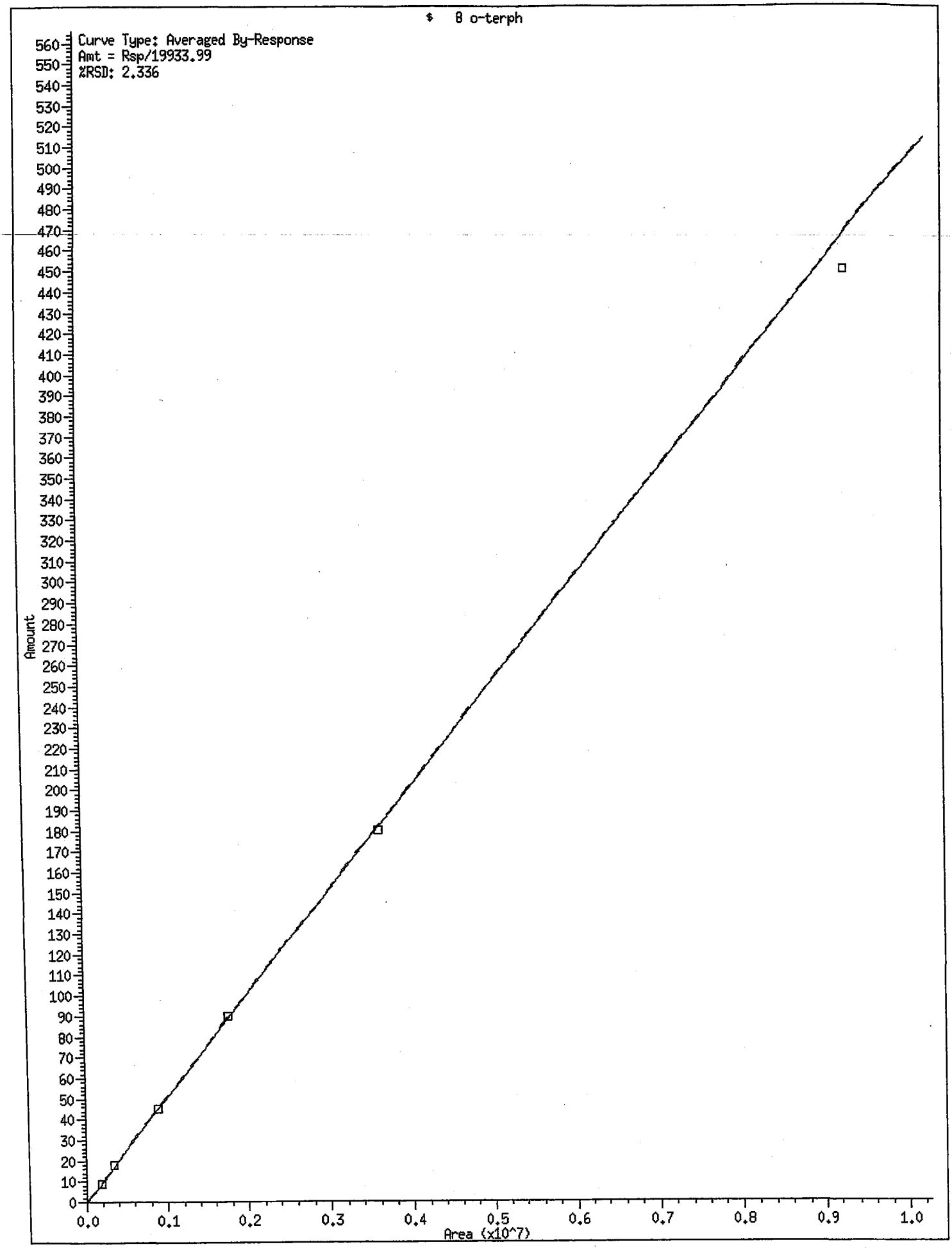
Method File: /chem3/fid3b.i/20100730.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20100730.b
Inst ID: fid3b.i

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

RK TG : 9997.4


1 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/21397.51
%RSD: 3.020
Amount (x10^3)
Area (x10^7)
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
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

RK76:00075


$ 8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/19933.99
%RSD: 2.336
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

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: 20100730

Instrument: FID3B.I
Project:

Calibration Date: 31-JUL-2010
SDG No.: 20100730

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

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

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

FORM VI-M.Oil

Report Date : 03-Aug-2010 19:42

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

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

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

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

Reviewer 1 _____ Date: 8/3/10
Reviewer 2 _____ Date: 8/4/10

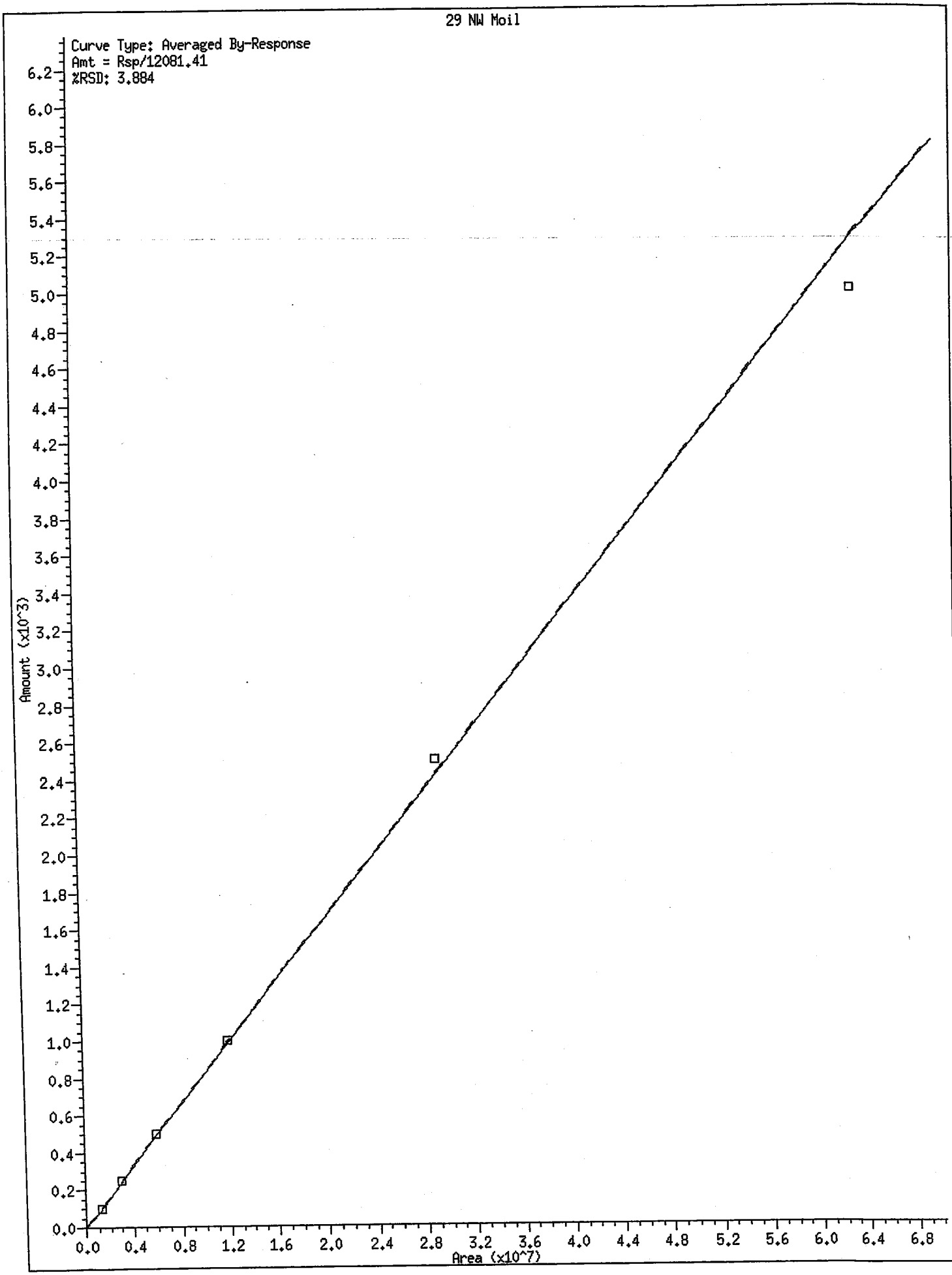
RKJ 8/3/10 0907

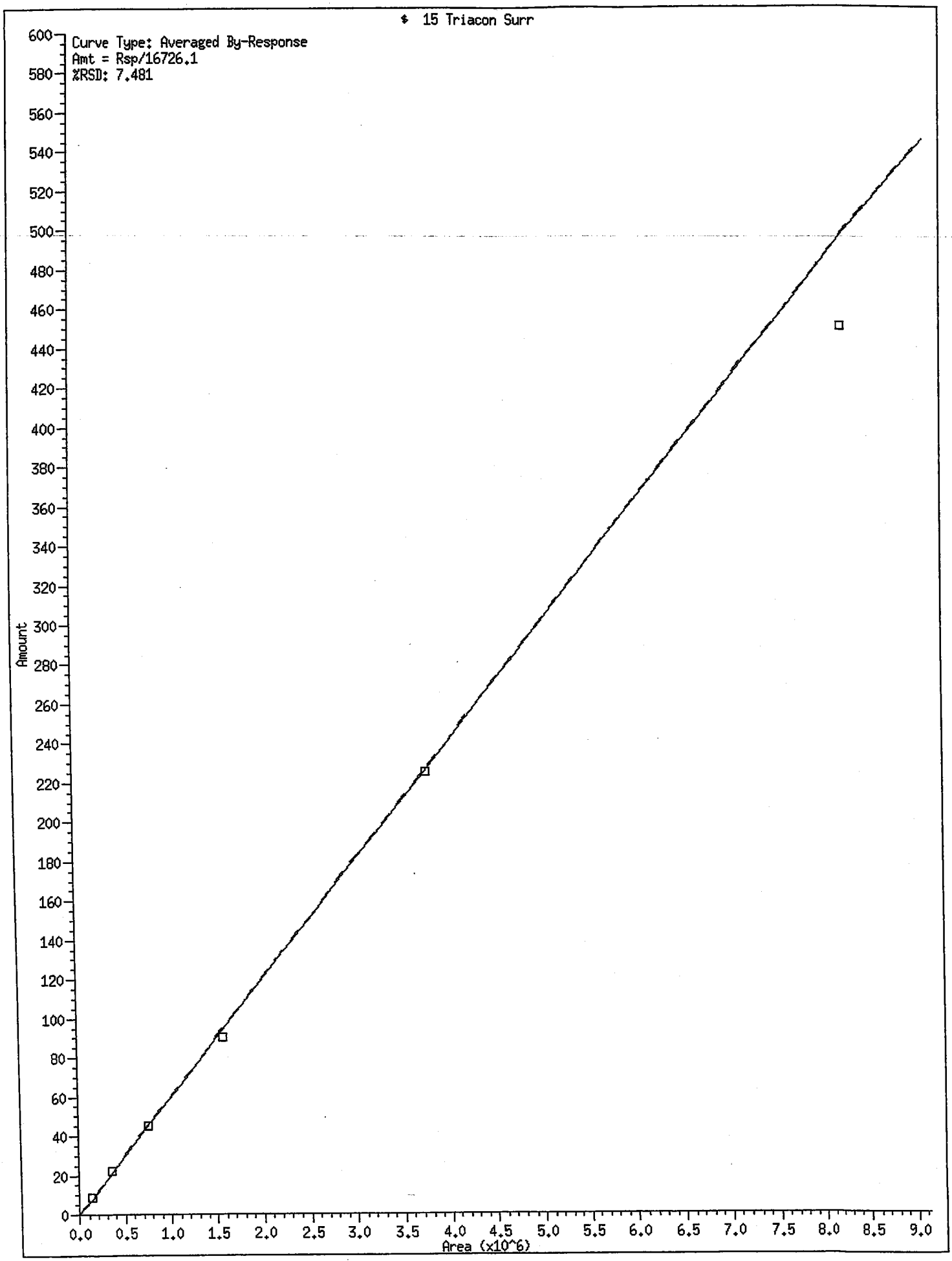
Report Date : 03-Aug-2010 19:42

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

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

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


29 NW Moil
Curve Type: Averaged By-Response
Amt = Rsp/12081.41
%RSD: 3.884
Amount (x10^3)
Area (x10^7)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
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


$ 15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/16726.1
%RSD: 7.481
Amount
Area (x10^6)
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
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0

RK76:00081

Analytical Resources Inc.: Organics Instrument Log

FID-3B Serial No.: US00003232

Date: 7/30/10 Analysis: NWTPHD Analyst: MM

GC Program: TPHHT Column No: 162178 Column Type: ZB1HT

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

Calibration File: Curve Date: 7/30/10

IS/SS	Ical/Ccal	LCS/ICV
	1700-1	
	1680-3	
	1730-7	
	1737-3	

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

MM

8/3/10

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

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

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

Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

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

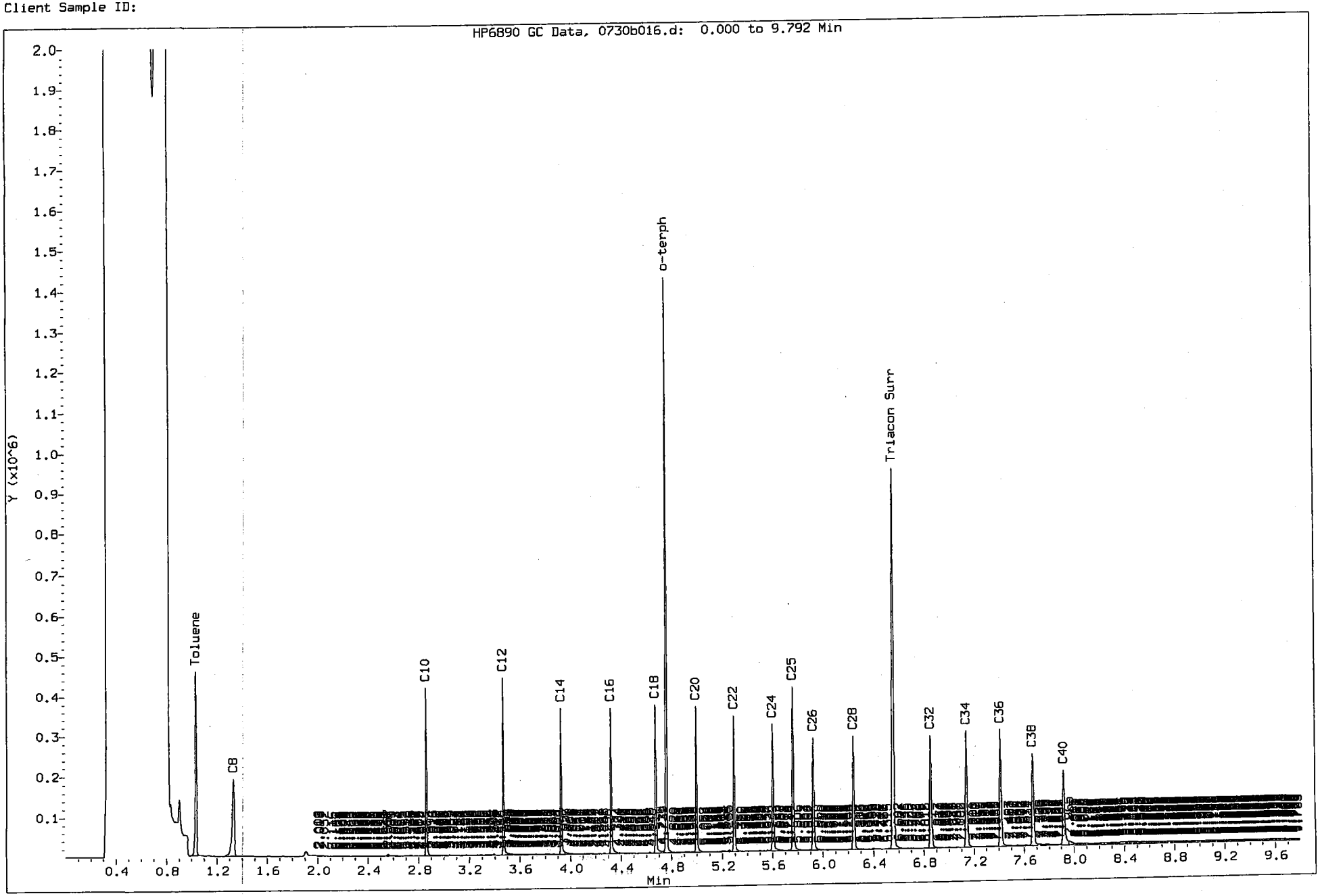
Range Times: NW Diesel(3.518 - 5.653) NW Gas(0.983 - 3.518) NW M.Oil(5.653 - 7.720)
AK102(2.808 - 5.714) AK103(5.714 - 7.463) Jet A(2.808 - 4.725)

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

MS 8/31/10

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

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



RK75-00081

Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

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

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

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

8/3/10

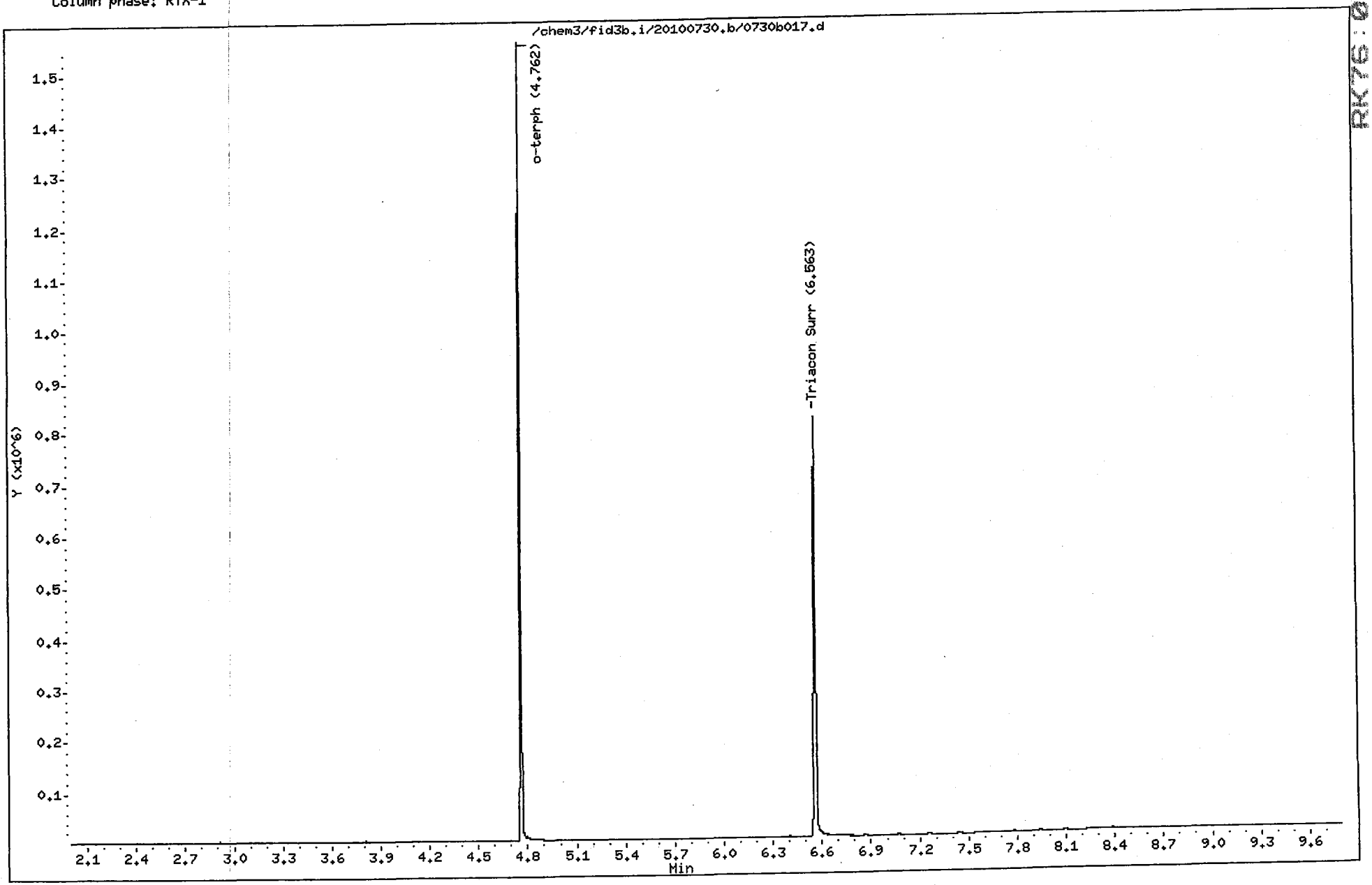
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	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

Data File: /chem3/fid3b.i/20100730.b/0730b017.d
Date : 30-JUL-2010 20:04
Client ID:
Sample Info: IB

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1



RX7G:66086

Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

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

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

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

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

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

Analyst _____ Date 8/3/10

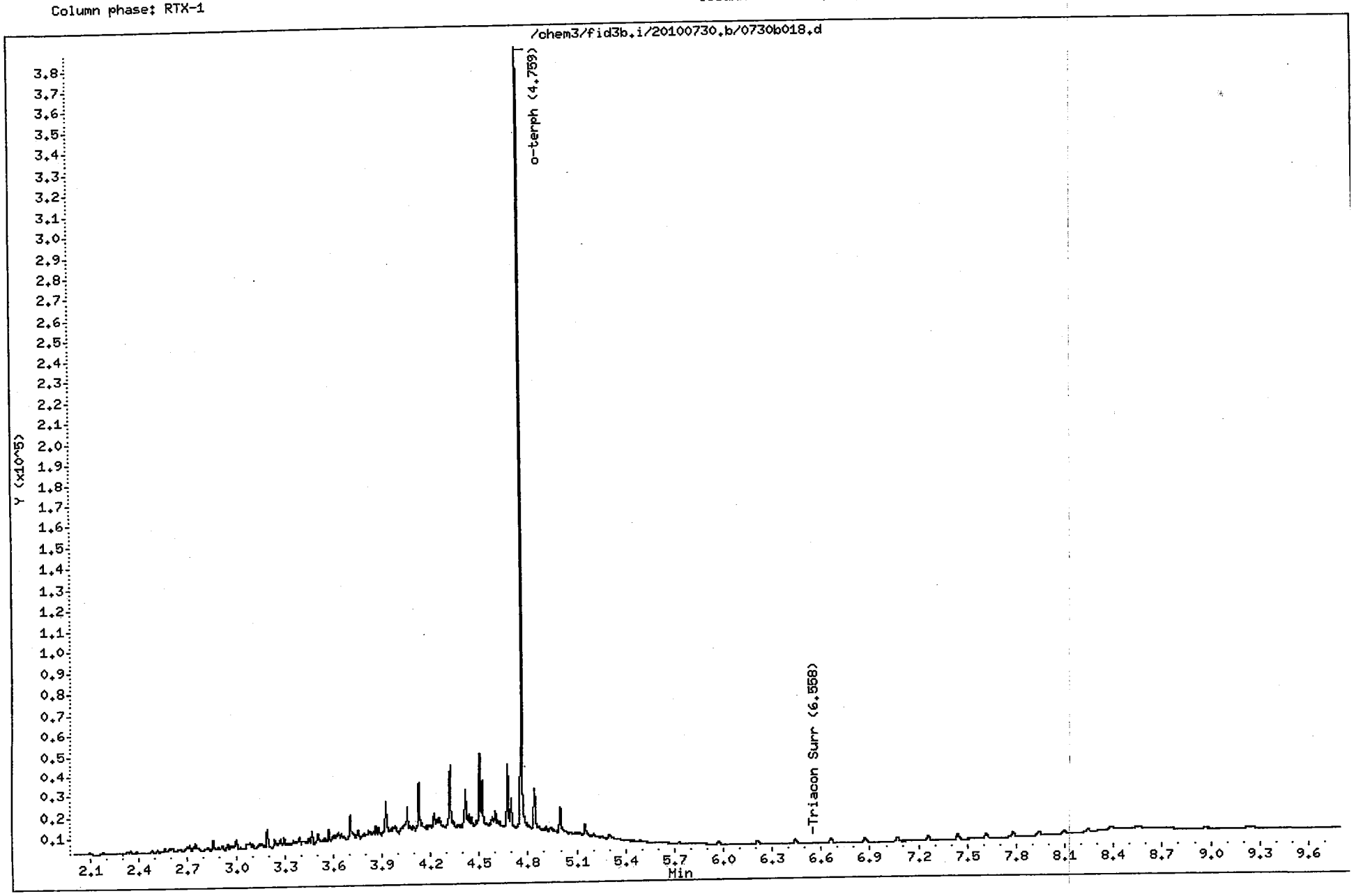
RK76:00087

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

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1



RTX-5 : 60088

Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

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

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

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

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

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

Analyst _____ Date 8/3/10

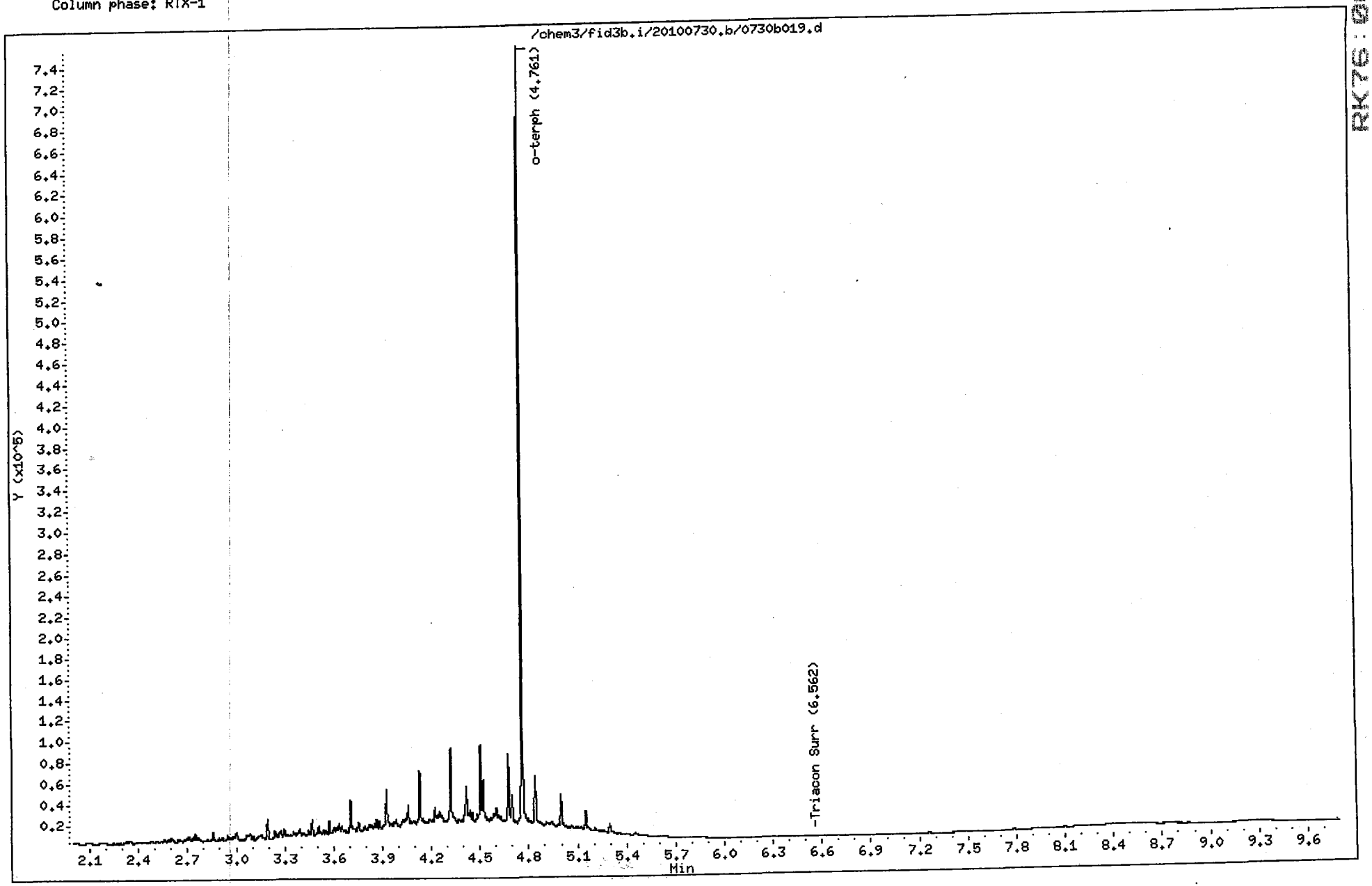
Data File: /chem3/fid3b.i/20100730.b/0730b019.d
Date : 30-JUL-2010 20:42
Client ID:
Sample Info: DIESEL 100

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1

RK75-00000



Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

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

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

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

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

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

Analyst MS Date 8/3/10

RK76 : 00091

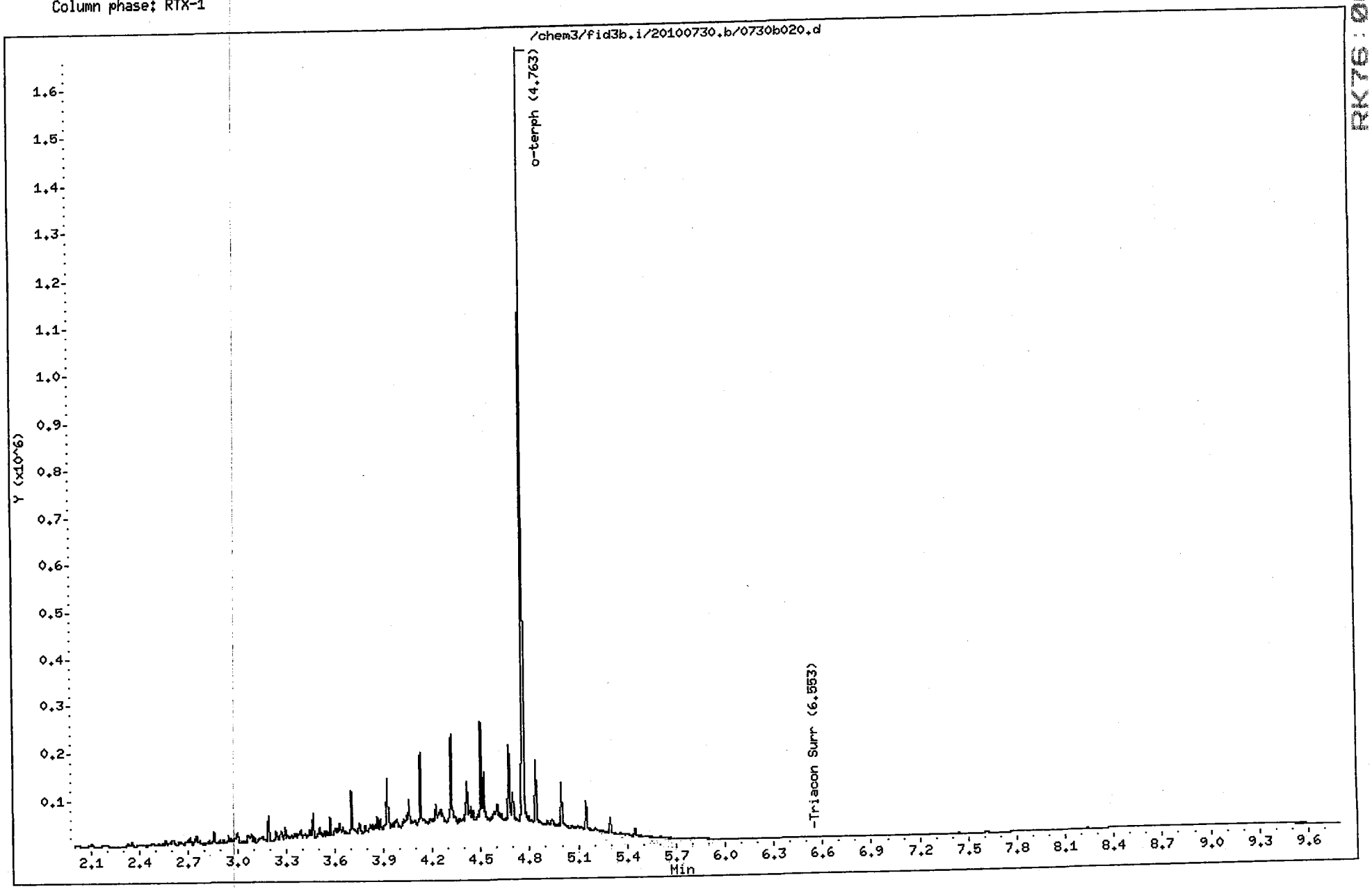
Data File: /chem3/fid3b.i/20100730.b/0730b020.d
Date : 30-JUL-2010 21:01
Client ID:
Sample Info: DIESEL 250

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1

RK76-00092



Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

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

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

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

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

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

Analyst _____ Date 8/3/10

RK76 : 00093

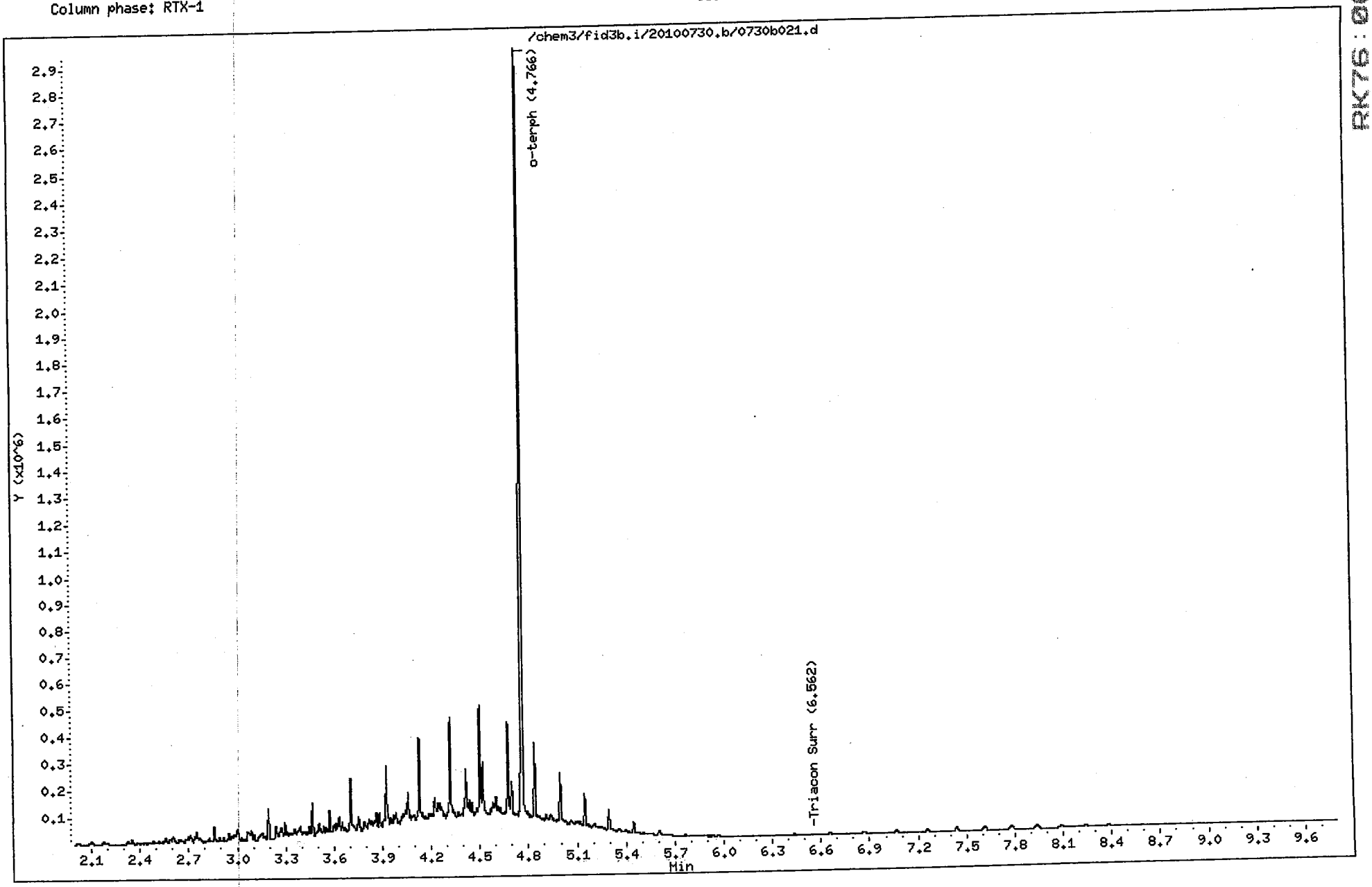
Data File: /chem3/fid3b.i/20100730.b/0730b021.d
Date : 30-JUL-2010 21:20
Client ID:
Sample Info: DIESEL 500

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1

RX76:66091



Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

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

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

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

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

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

Analyst _____ Date 8/3/10

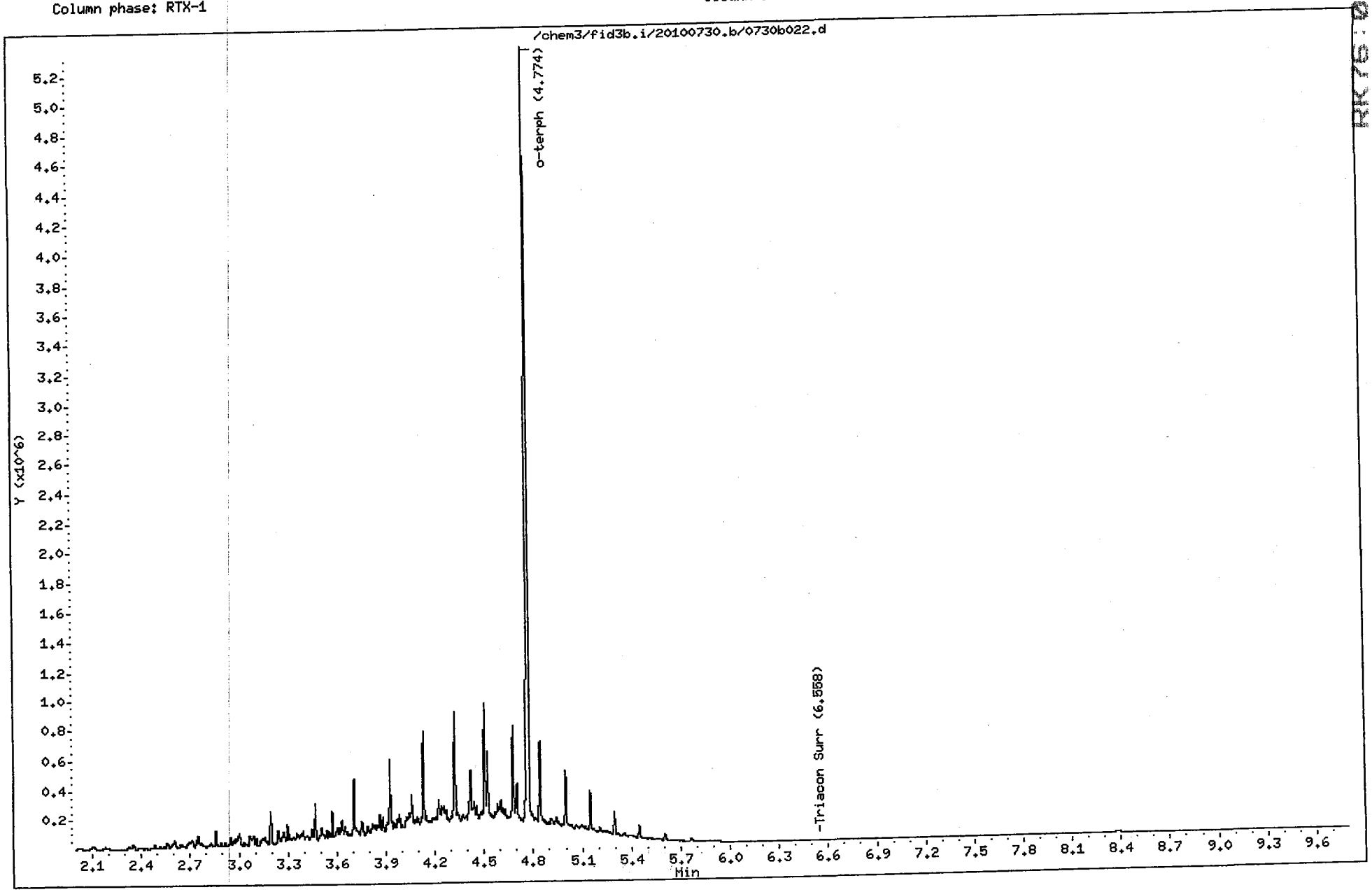
RK76 : 00095

Data File: /chem3/fid3b.i/20100730.b/0730b022.d
Date : 30-JUL-2010 21:39
Client ID:
Sample Info: DIESEL 1000

Column phase: RTX-1

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00



Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

Compound	RT	Shift	Height	Area
Toluene	0.000	-1.033	0	0
C8	----			
C10	2.863	0.005	285421	198918
C12	3.470	0.002	694665	522755
C14	3.929	0.002	1273547	1199224
C16	4.326	0.004	2112542	1828650
C18	4.683	0.007	1755535	1805295
C20	5.002	0.005	1242586	994726
C22	5.298	0.002	554784	489931
C24	5.604	0.001	157104	182807
C25	5.764	0.000	68790	96490
C26	5.924	-0.001	24943	35913
C28	6.241	-0.003	2845	707
C32	6.847	-0.009	103	17
C34	7.140	-0.001	80	25
Filter Peak	----			
C36	7.414	0.001	258	70
o-terph	4.787	0.025	8993833	9320882
Triacon Surr	6.558	-0.002	576	210

Range	Total Area	Conc
GAS (Tol-C12)	7659234	280
DIESEL (C12-C24)	51163096	2391
M.OIL (C24-C38)	572344	47
AK-102 (C10-C25)	57436252	2383
AK-103 (C25-C36)	425535	48
OR.DIES (C10-C28)	57835068	2742
OR.MOIL (C28-C40)	53128	5
STODDARD (C8-C12)	7659234	277
CREOSOT (C8-C22)	57023201	8915
BUNKERC (C10-C38)	57869869	6695
JET-A (C10-C18)	42325036	2671
IT.MOIL (C24-C40)	590881	27

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

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

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

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

Analyst _____ Date 8/3/10

RK76 : 00097

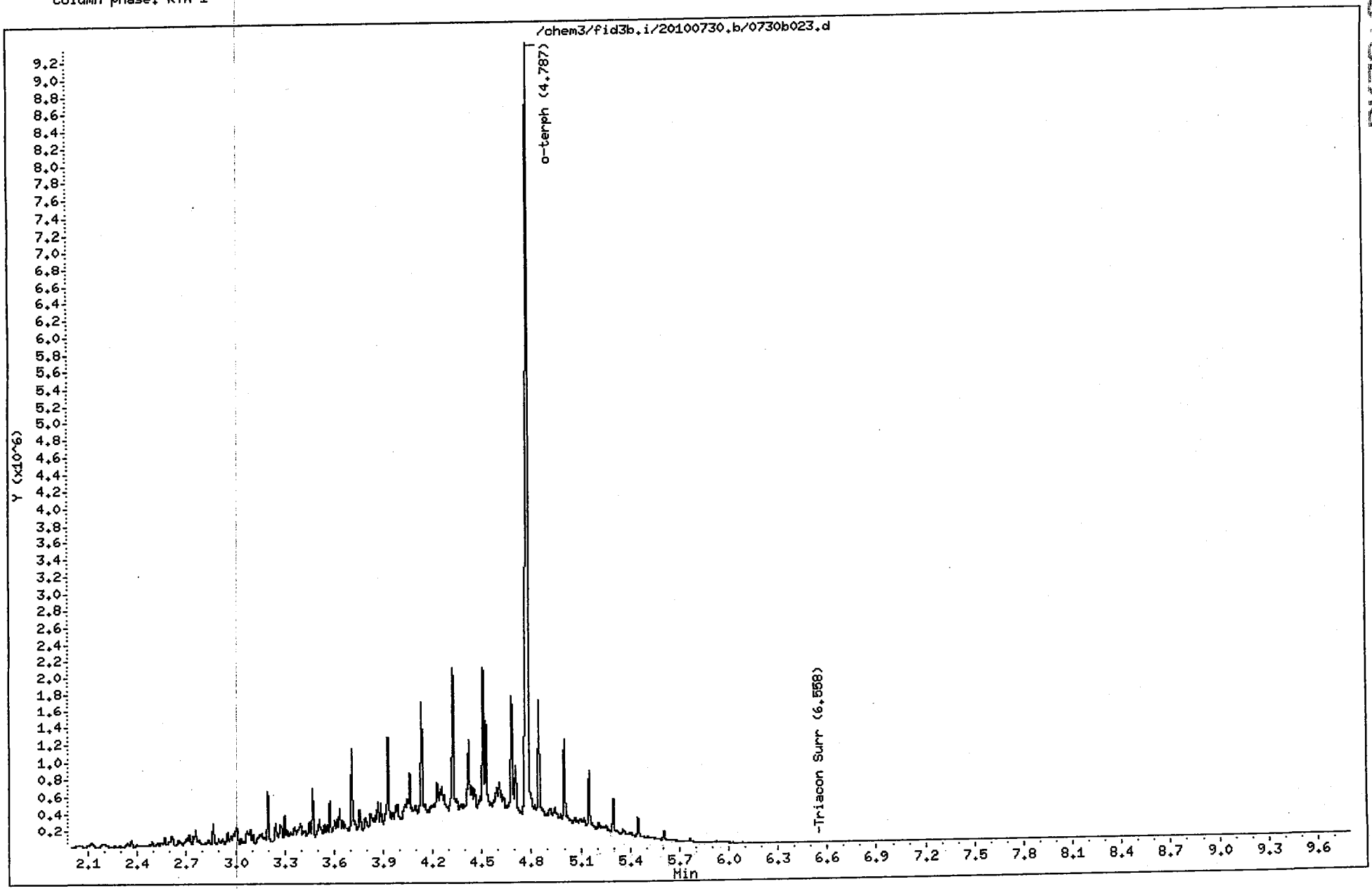
Data File: /chem3/fid3b.i/20100730.b/0730b023.d
Date : 30-JUL-2010 21:58
Client ID:
Sample Info: DIESEL 2500

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1

RK76:66698



Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

Compound	RT	Shift	Height	Area
Toluene	----			
C8	----			
C10	2.859	0.001	35248	24957
C12	3.467	0.000	86410	59948
C14	3.926	-0.001	173324	148864
C16	4.320	-0.001	296816	249967
C18	4.676	0.000	273795	228555
C20	4.997	-0.001	155638	143379
C22	5.294	-0.002	60394	56049
C24	5.605	0.002	13282	16336
C25	5.765	0.001	4054	633
C26	5.927	0.001	1441	1201
C28	6.248	0.004	261	48
C32	6.870	0.014	5168	4822
C34	7.140	-0.001	246	62
Filter Peak	----			
C36	7.410	-0.003	515	121
o-terph	4.764	0.002	2022776	1079874
Triacon Surr	6.562	0.003	18	7

Range		Total Area	Conc
GAS	(Tol-C12)	1033627	38
DIESEL	(C12-C24)	6633491	310
M.OIL	(C24-C38)	127459	11
AK-102	(C10-C25)	7469067	310
AK-103	(C25-C36)	93021	10
OR.DIES	(C10-C28)	7515320	356
OR.MOIL	(C28-C40)	99093	9
STODDARD	(C8-C12)	1033627	37
CREOSOT	(C8-C22)	7455713	1166
BUNKERC	(C10-C38)	7579454	877
JET-A	(C10-C18)	5495826	347
IT.MOIL	(C24-C40)	162424	8

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

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

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

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

Analyst _____ Date 8/2/10

RK76:00099

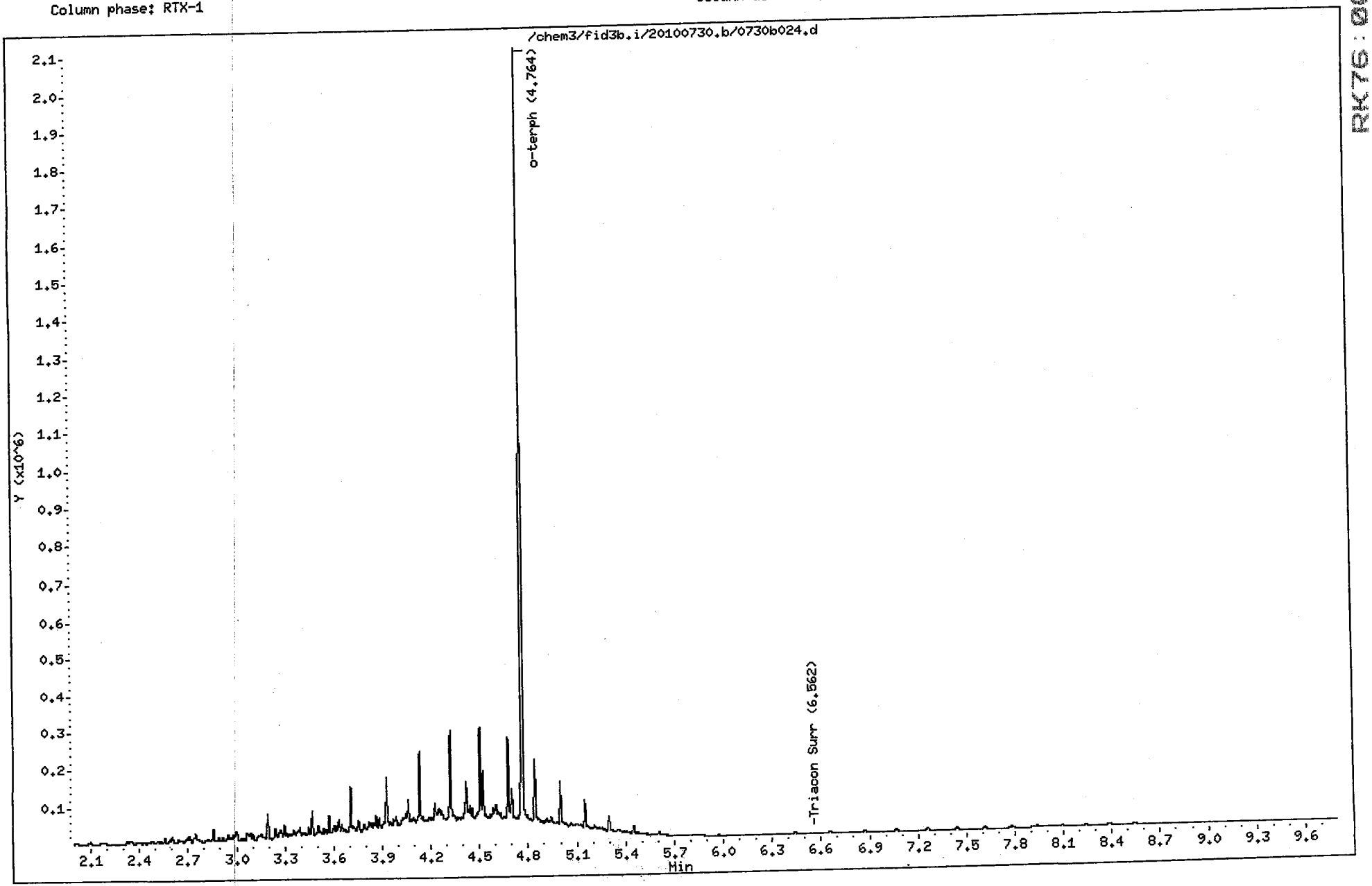
Data File: /chem3/fid3b.i/20100730.b/0730b024.d
Date : 30-JUL-2010 22:17
Client ID:
Sample Info: DIESEL ICV

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1

RK76-99199



Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

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

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

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

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

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

Analyst _____ Date 8/3/10

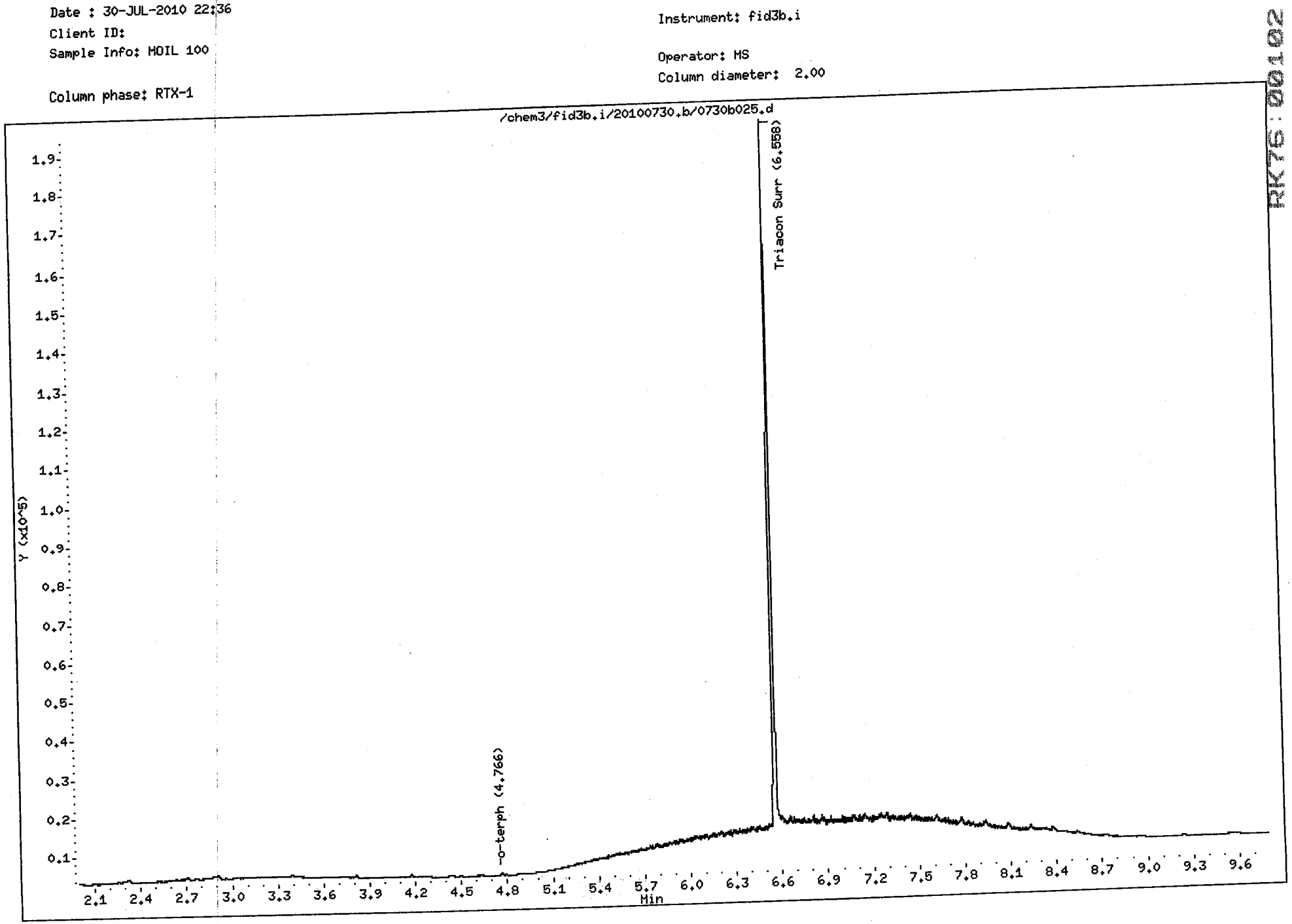
RK76 : 00101

Data File: /chem3/fid3b.i/20100730.b/0730b025.d
Date : 30-JUL-2010 22:36
Client ID:
Sample Info: MOIL 100

Column phase: RTX-1

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00



RK76-99192

Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

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

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

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

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

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

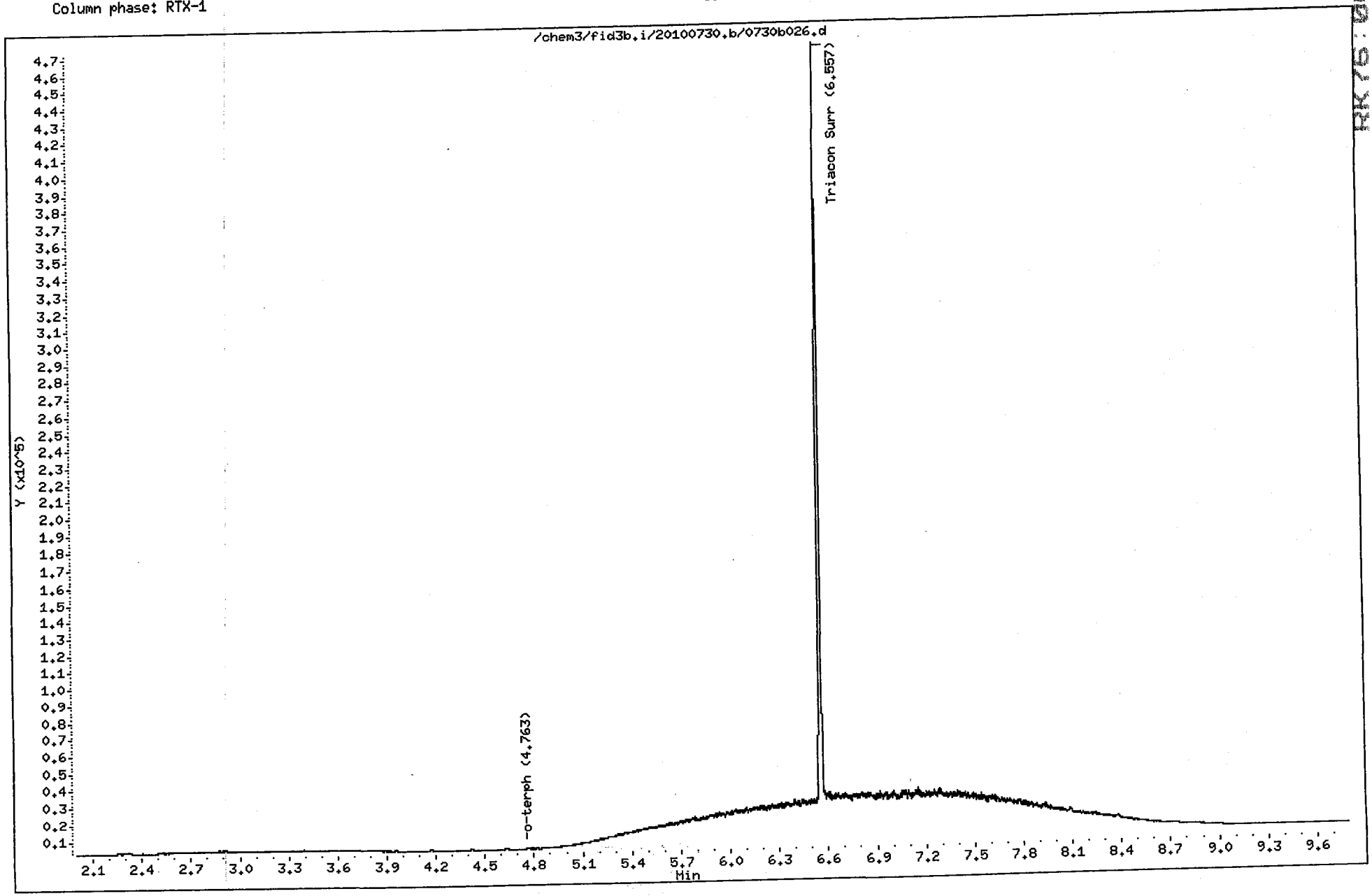
Analyst _____ Date 8/3/10

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

Column phase: RTX-1

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00



Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

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

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

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

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

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

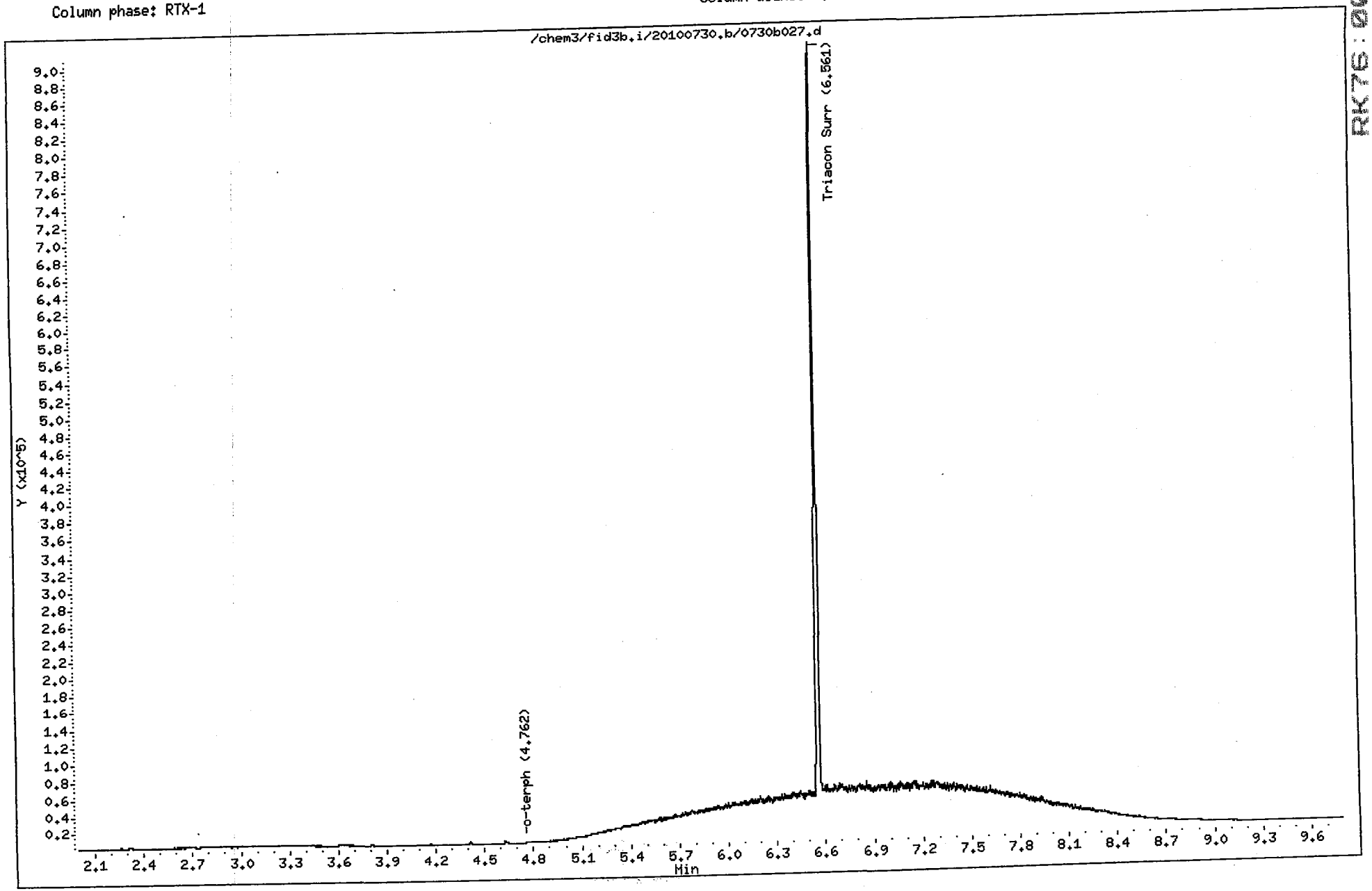
Analyst _____ Date 8/3/11

Data File: /chem3/fid3b.i/20100730.b/0730b027.d
Date : 30-JUL-2010 23:14
Client ID:
Sample Info: MOIL 500

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1



Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

Compound	RT	Shift	Height	Area
Toluene	0.000	-1.033	0	0
C8	----			
C10	2.858	0.001	1897	1836
C12	3.470	0.002	1037	577
C14	3.925	-0.001	834	432
C16	4.322	0.001	584	148
C18	4.677	0.002	1434	588
C20	5.000	0.003	8627	6697
C22	5.298	0.003	30407	15588
C24	5.601	-0.002	56341	40257
C25	5.767	0.003	70210	55090
C26	5.924	-0.001	76118	32730
C28	6.246	0.002	93898	37136
C32	6.854	-0.002	121094	45621
C34	7.141	0.000	119577	41572
Filter Peak	----			
C36	7.409	-0.004	114138	61669
o-terph	4.758	-0.003	2740	1977
Triacon Surr	6.568	0.009	1661068	1573813

Range	Total Area	Conc
GAS (Tol-C12)	72637	3
DIESEL (C12-C24)	1386989	65
M.OIL (C24-C38)	11886809	984
AK-102 (C10-C25)	1637290	68
AK-103 (C25-C36)	10178714	1140
OR.DIES (C10-C28)	4288810	203
OR.MOIL (C28-C40)	10179667	903
STODDARD (C8-C12)	72637	3
CREOSOT (C8-C22)	609564	95
BUNKERC (C10-C38)	13321155	1541
JET-A (C10-C18)	111596	7
IT.MOIL (C24-C40)	14607944	680

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

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

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

MANUAL ADJUSTMENTS

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

Analyst _____ Date 8/3/10

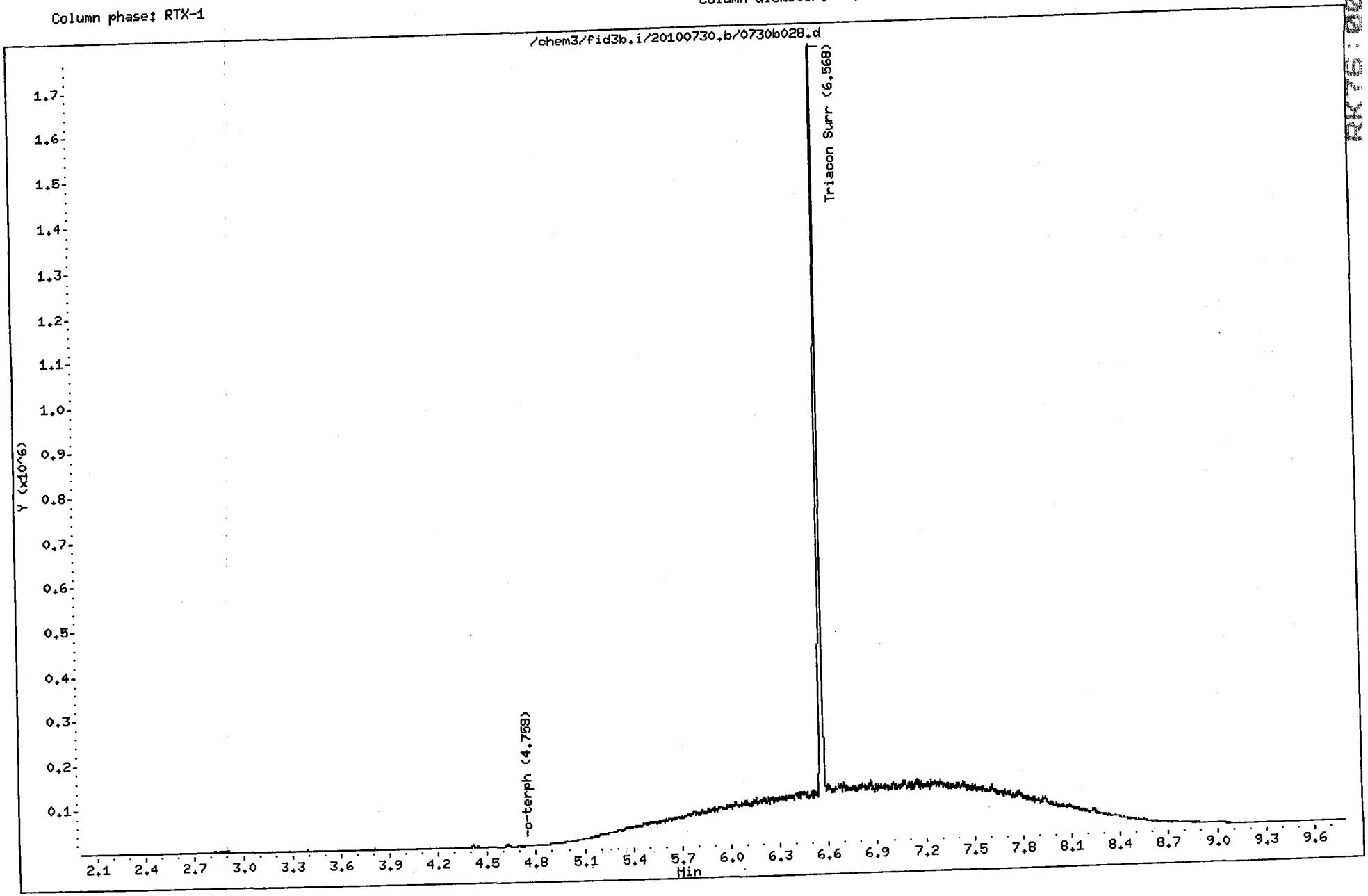
RK76:00107

Data File: /chem3/fid3b.i/20100730.b/0730b028.d
Date : 30-JUL-2010 23:32
Client ID:
Sample Info: MOIL 1000

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1



RK16:08:08

Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

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

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

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

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

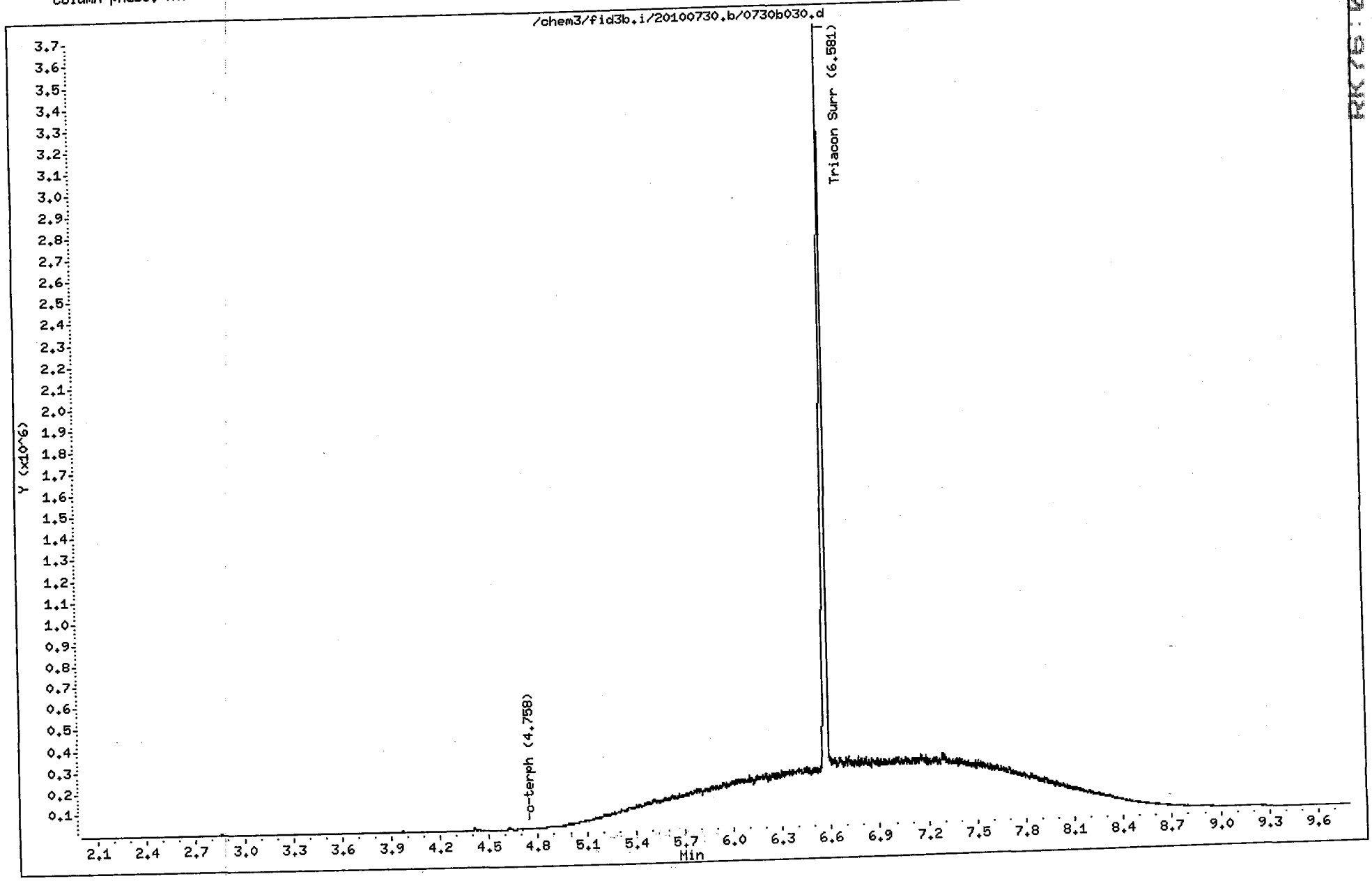
MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst _____ Date 8/3/10

Data File: /chem3/fid3b.i/20100730.b/0730b030.d
Date : 31-JUL-2010 00:10
Client ID:
Sample Info: MOIL 2500

Column phase: RTX-1

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00



Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

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

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

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

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

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

Analyst _____ Date _____

RK76:00111

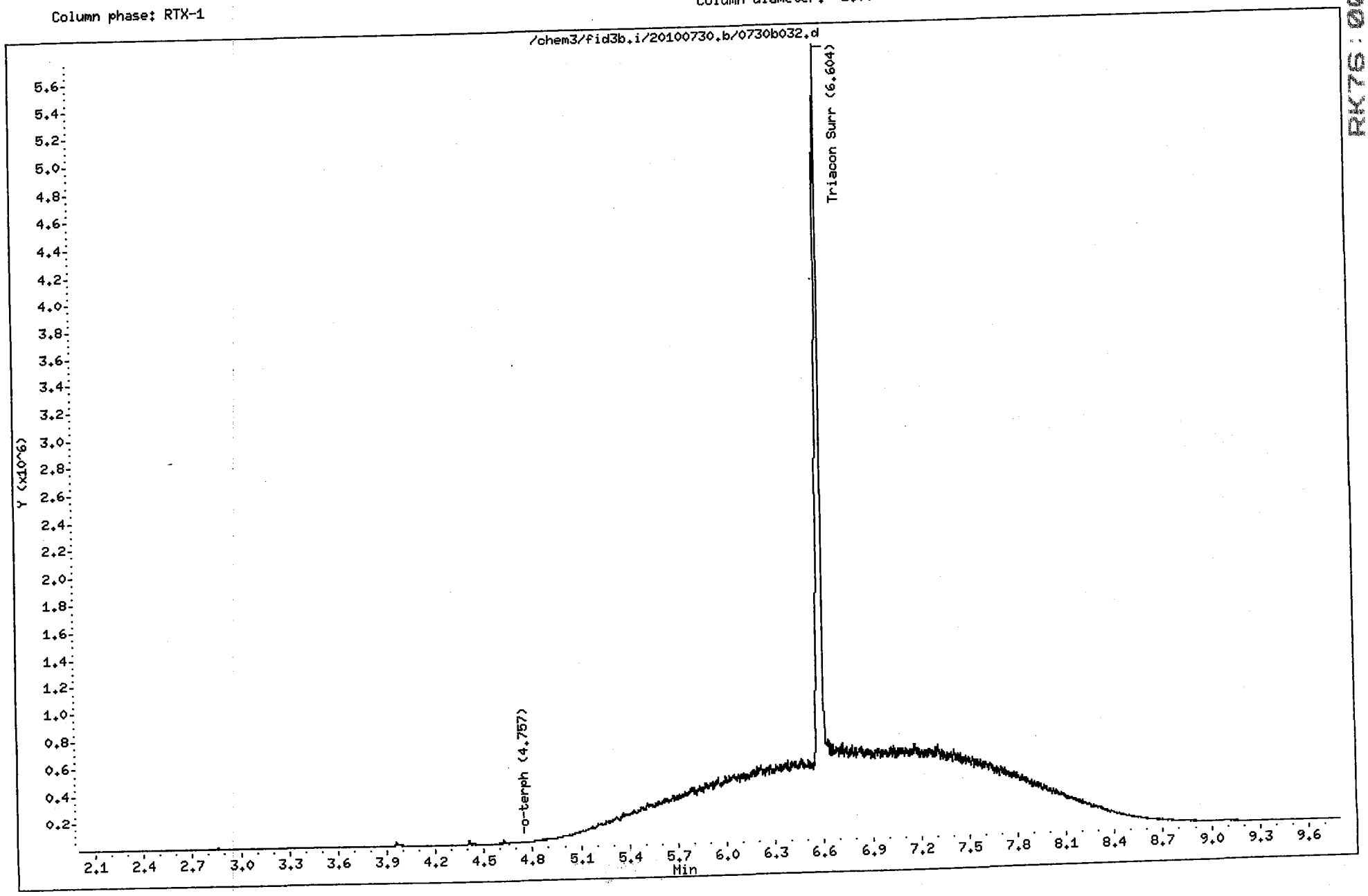
Data File: /chem3/fid3b.i/20100730.b/0730b032.d
Date : 31-JUL-2010 00:47
Client ID:
Sample Info: MOIL 5000

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1

RK76:69112



Analytical Resources Inc.
407S TPH Quantitation Report

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

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

FID:3B RESULTS

Compound	RT	Shift	Height	Area
Toluene	----			
C8	----			
C10	2.860	0.002	1401	800
C12	3.466	-0.002	844	283
C14	3.928	0.001	611	154
C16	4.325	0.004	330	255
C18	4.676	0.001	610	174
C20	4.999	0.002	3728	881
C22	5.295	-0.001	14759	8671
C24	5.604	0.001	26635	20138
C25	5.767	0.003	34354	20126
C26	5.925	-0.001	38360	10923
C28	6.242	-0.003	45237	26594
C32	6.858	0.003	58973	16709
C34	7.142	0.000	60409	28174
Filter Peak	----			
C36	7.410	-0.003	54496	40370
o-terph	4.761	-0.001	1177	942
Triacon Surr	6.561	0.002	862303	736311

Range	Total Area	Conc
GAS (Tol-C12)	69710	3
DIESEL (C12-C24)	654549	31
M.OIL (C24-C38)	5780310	478
AK-102 (C10-C25)	785151	33
AK-103 (C25-C36)	4978956	557
OR.DIES (C10-C28)	2137357	101
OR.MOIL (C28-C40)	4899131	435
STODDARD (C8-C12)	69710	3
CREOSOT (C8-C22)	326198	51
BUNKERC (C10-C38)	6478679	750
JET-A (C10-C18)	83224	5
IT.MOIL (C24-C40)	7074431	329

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

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

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

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

Analyst _____ Date 8/3/10

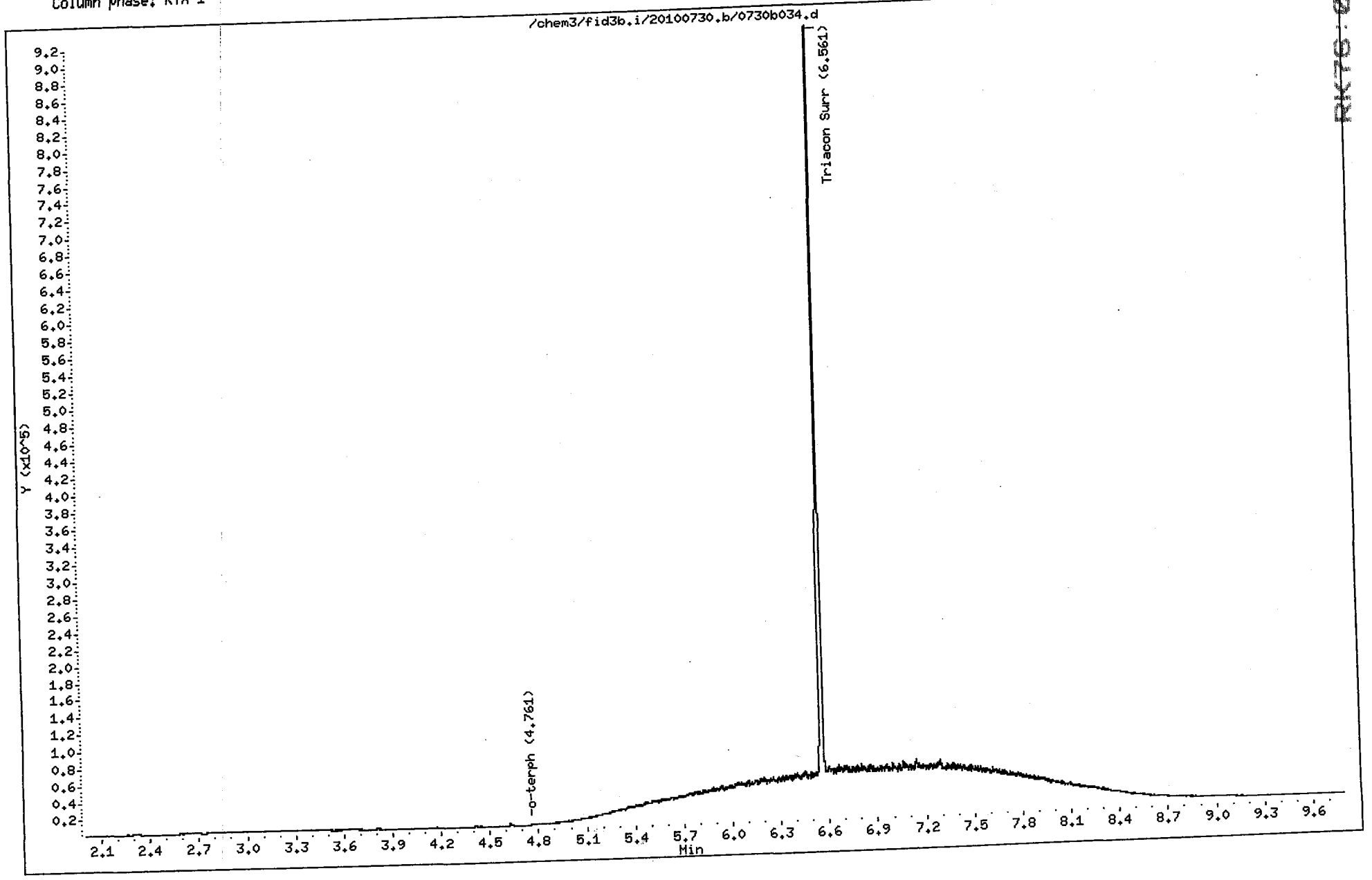
RK76:00113

Data File: /chem3/fid3b.i/20100730.b/0730b034.d
Date : 31-JUL-2010 01:25
Client ID:
Sample Info: MOIL ICV

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1



ANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20100730.b

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

me	Filename	LabID	ClientId	DF	Manually Integrated Compounds
23	0730b018.d	DIESEL 50		1	o-terph,
42	0730b019.d	DIESEL 100		1	o-terph,
01	0730b020.d	DIESEL 250		1	o-terph,
120	0730b021.d	DIESEL 500		1	o-terph,
139	0730b022.d	DIESEL 1000		1	o-terph,
158	0730b023.d	DIESEL 2500		1	o-terph,
217	0730b024.d	DIESEL ICV		1	o-terph,
2236	0730b025.d	MOIL 100		1	Triacon Surr,
2255	0730b026.d	MOIL 250		1	Triacon Surr,
2314	0730b027.d	MOIL 500		1	Triacon Surr,
2332	0730b028.d	MOIL 1000		1	Triacon Surr,
2351	0730b029.d	RINSE		1	NO MANUAL INTEGRATION
0010	0730b030.d	MOIL 2500		1	Triacon Surr,
0028	0730b031.d	RINSE		1	NO MANUAL INTEGRATION
0047	0730b032.d	MOIL 5000		1	Triacon Surr,
0106	0730b033.d	RINSE		1	NO MANUAL INTEGRATION
0125	0730b034.d	MOIL ICV		1	Triacon Surr,

RXTS 6815

Analytical Resources Inc.
407S TPH Quantitation Report

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

FID:3B RESULTS

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

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

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

8/3/10

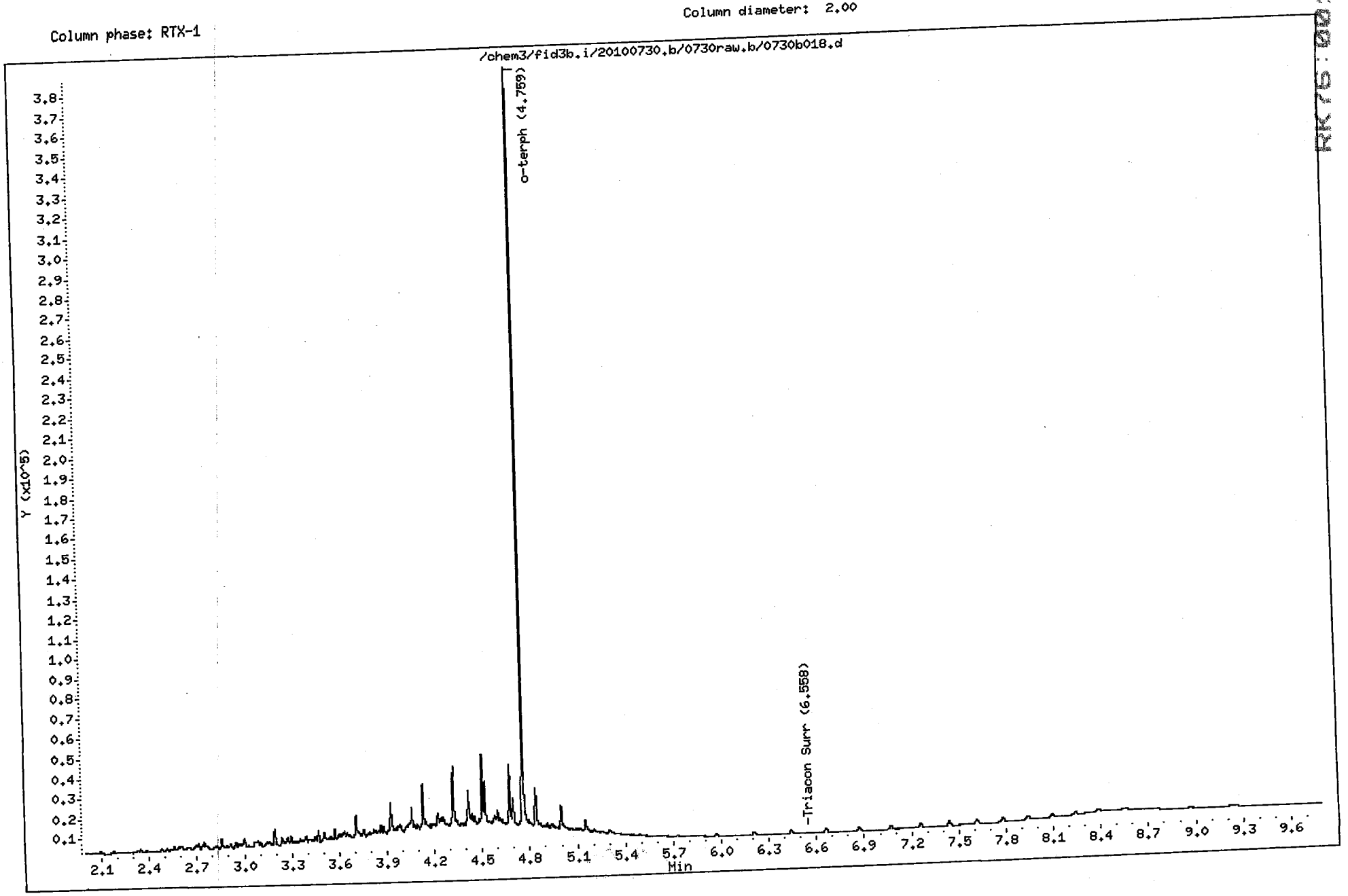
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	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

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

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1



Analytical Resources Inc.
407S TPH Quantitation Report

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

FID:3B RESULTS

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

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

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

8/3/10

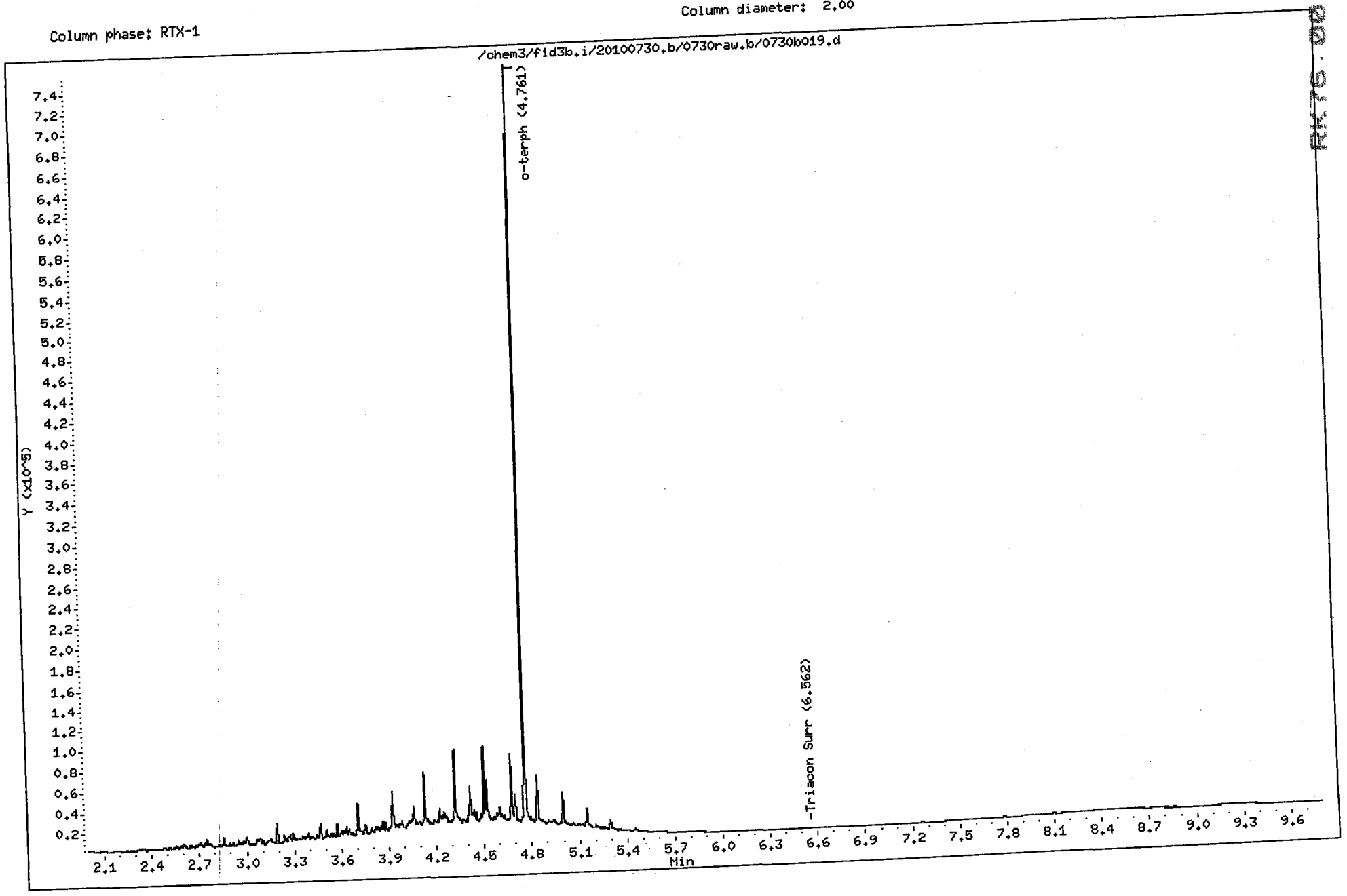
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	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

Data File: /chem3/fid3b.i/20100730.b/0730raw.b/0730b019.d
Date : 30-JUL-2010 20:42
Client ID:
Sample Info: DIESEL 100

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1



Analytical Resources Inc.
407S TPH Quantitation Report

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

FID:3B RESULTS

Compound	RT	Shift	Height	Area
Toluene	----			
C8	----			
C10	2.857	-0.001	26815	24142
C12	3.467	-0.001	68591	49107
C14	3.925	-0.002	140104	127189
C16	4.321	0.000	232770	207768
C18	4.675	0.000	208305	168485
C20	4.996	-0.001	126032	107297
C22	5.293	-0.003	50635	46451
C24	5.604	0.001	9772	11489
C25	5.766	0.003	3129	1191
C26	5.921	-0.004	1314	959
C28	6.242	-0.002	220	92
C32	6.846	-0.010	82	35
C34	7.139	-0.002	240	125
Filter Peak	----			
C36	7.415	0.002	533	105
o-terph	4.763	0.001	1673183	1006880
Triacon Surr	6.553	-0.006	23	12

Range	Total Area	Conc
GAS (Tol-C12)	832540	30
DIESEL (C12-C24)	5381486	252
M.OIL (C24-C38)	83893	7
AK-102 (C10-C25)	6048334	251
AK-103 (C25-C36)	56030	6
OR.DIES (C10-C28)	6088325	289
OR.MOIL (C28-C40)	57280	5
STODDARD (C8-C12)	832540	30
CREOSOT (C8-C22)	6035967	944
BUNKERC (C10-C38)	6119266	708
JET-A (C10-C18)	4563495	288
IT.MOIL (C24-C40)	110245	5

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

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

8/3/10

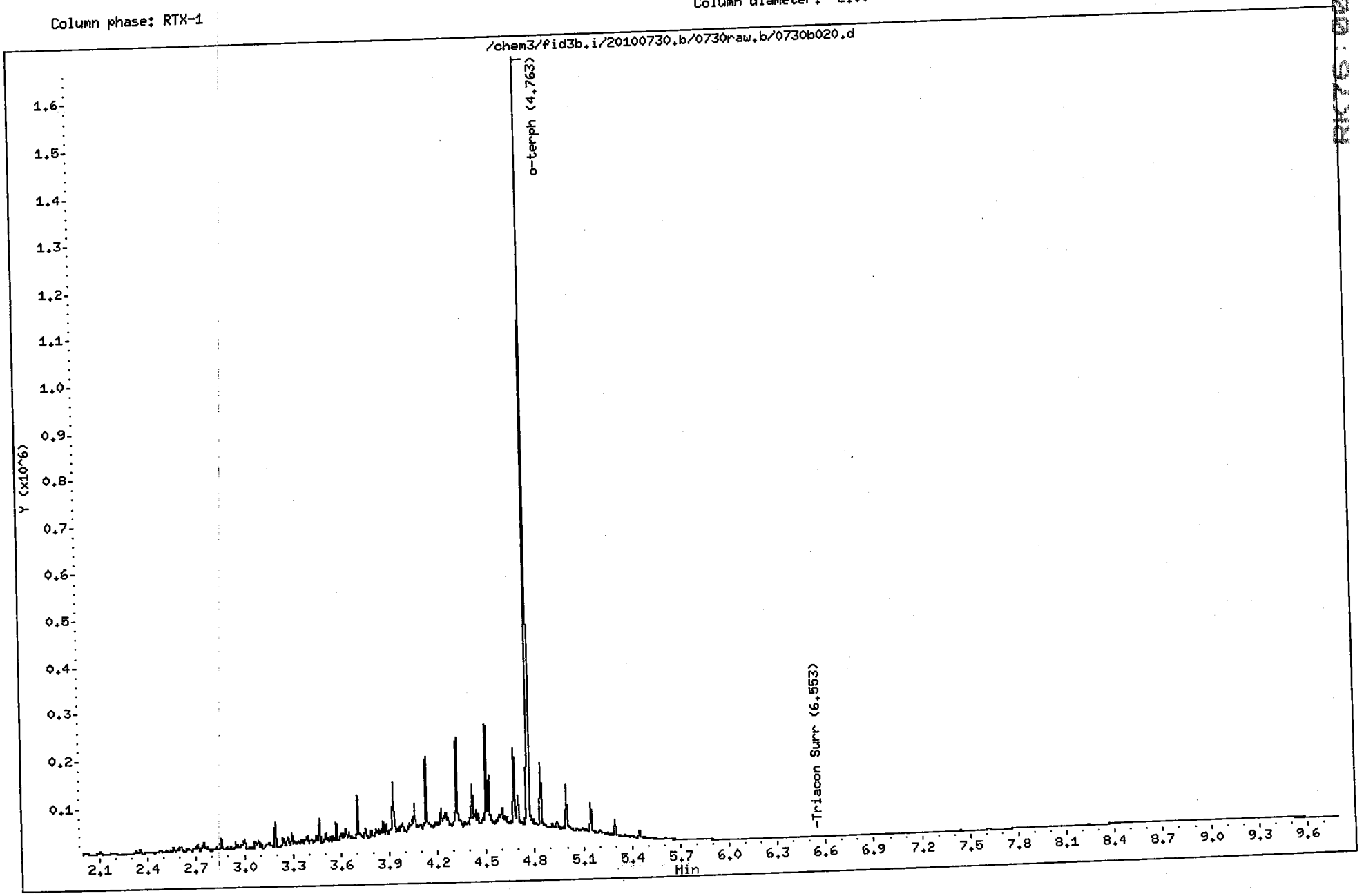
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	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

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

Column phase: RTX-1

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00



RK.FS.080121

Analytical Resources Inc.
407S TPH Quantitation Report

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

FID:3B RESULTS

Compound	RT	Shift	Height	Area
Toluene	----			
C8	----			
C10	2.859	0.001	57423	40767
C12	3.467	-0.001	150148	107232
C14	3.925	-0.002	281705	192683
C16	4.321	0.000	459275	397727
C18	4.676	0.001	438078	346941
C20	4.998	0.000	247680	229025
C22	5.294	-0.002	107189	91506
C24	5.603	-0.001	25044	36788
C25	5.764	0.000	8933	11255
C26	5.928	0.002	2767	880
C28	6.244	0.000	417	209
C32	6.866	0.010	6270	6679
C34	7.138	-0.003	199	114
Filter Peak	----			
C36	7.404	-0.009	435	170
o-terph	4.766	0.004	2949322	2085108
Triacon Surr	6.562	0.003	37	8

Range	Total Area	Conc
GAS (Tol-C12)	1605957	59
DIESEL (C12-C24)	10474813	490
M.OIL (C24-C38)	193569	16
AK-102 (C10-C25)	11772614	488
AK-103 (C25-C36)	138842	16
OR.DIES (C10-C28)	11850728	562
OR.MOIL (C28-C40)	138643	12
STODDARD (C8-C12)	1605957	58
CREOSOT (C8-C22)	11718131	1832
BUNKERC (C10-C38)	11939585	1381
JET-A (C10-C18)	8975857	566
IT.MOIL (C24-C40)	243363	11

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

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

MS 8/3/10

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

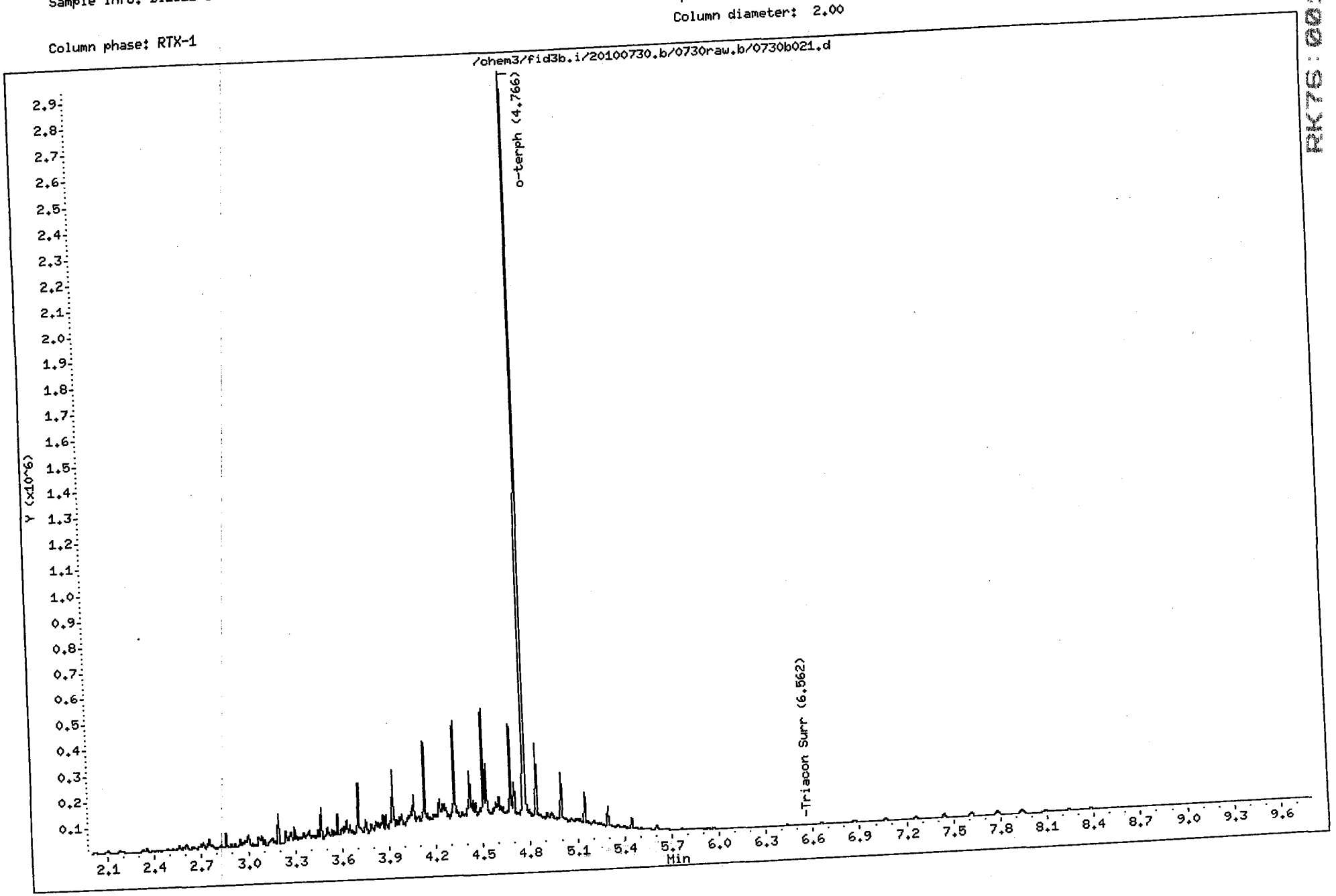
Data File: /chem3/fid3b.i/20100730.b/0730raw.b/0730b021.d
Date : 30-JUL-2010 21:20
Client ID:
Sample Info: DIESEL 500

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1

RK76:00123



Analytical Resources Inc.
407S TPH Quantitation Report

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

FID:3B RESULTS

Compound	RT	Shift	Height	Area
Toluene	----			
C8	----			
C10	2.859	0.001	116245	79992
C12	3.468	0.000	303568	209857
C14	3.926	-0.001	587854	482277
C16	4.323	0.002	905598	796869
C18	4.678	0.002	807496	638826
C20	4.998	0.000	504752	389992
C22	5.295	-0.001	227321	199991
C24	5.602	-0.001	59793	78521
C25	5.763	-0.001	23276	31928
C26	5.926	0.000	7146	5485
C28	6.246	0.002	980	756
C32	6.846	-0.010	31	8
C34	7.142	0.001	155	78
Filter Peak	----			
C36	7.412	-0.001	462	183
o-terph	4.774	0.012	5344672	4166432
Triacon Surr	6.558	-0.001	143	74

Range	Total Area	Conc
GAS (Tol-C12)	3183656	116
DIESEL (C12-C24)	20461552	956
M.OIL (C24-C38)	246197	20
AK-102 (C10-C25)	23076848	957
AK-103 (C25-C36)	175618	20
OR.DIES (C10-C28)	23235650	1102
OR.MOIL (C28-C40)	50889	5
STODDARD (C8-C12)	3183656	115
CREOSOT (C8-C22)	22952325	3589
BUNKERC (C10-C38)	23265390	2692
JET-A (C10-C18)	17422692	1099
IT.MOIL (C24-C40)	267420	12

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

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

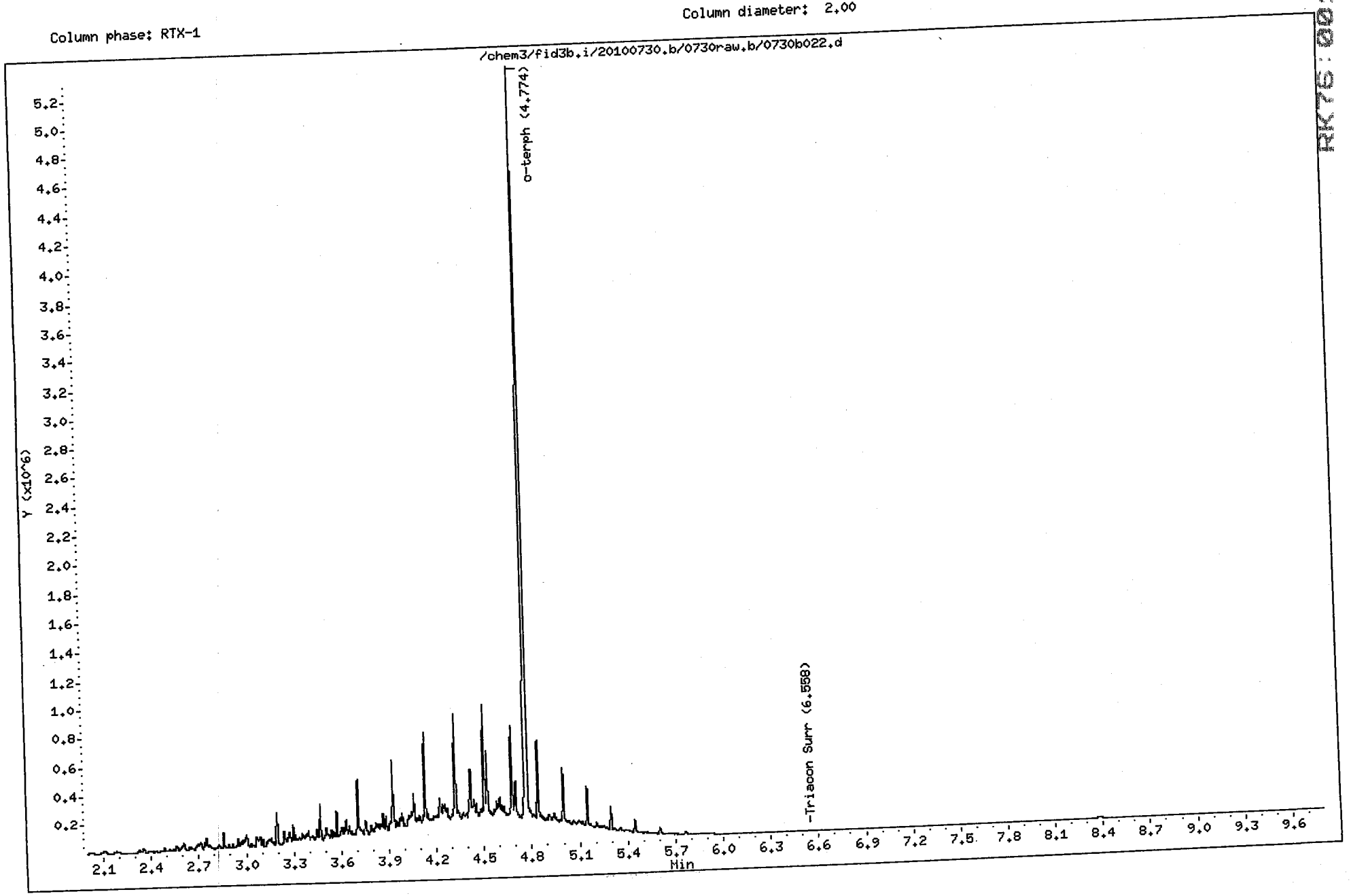
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	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

Data File: /chem3/fid3b.i/20100730.b/0730raw.b/0730b022.d
Date : 30-JUL-2010 21:39
Client ID:
Sample Info: DIESEL 1000

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1



Analytical Resources Inc.
407S TPH Quantitation Report

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

FID:3B RESULTS

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

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

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

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

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

Date : 30-JUL-2010 21:58

Client ID:

Sample Info: DIESEL 2500

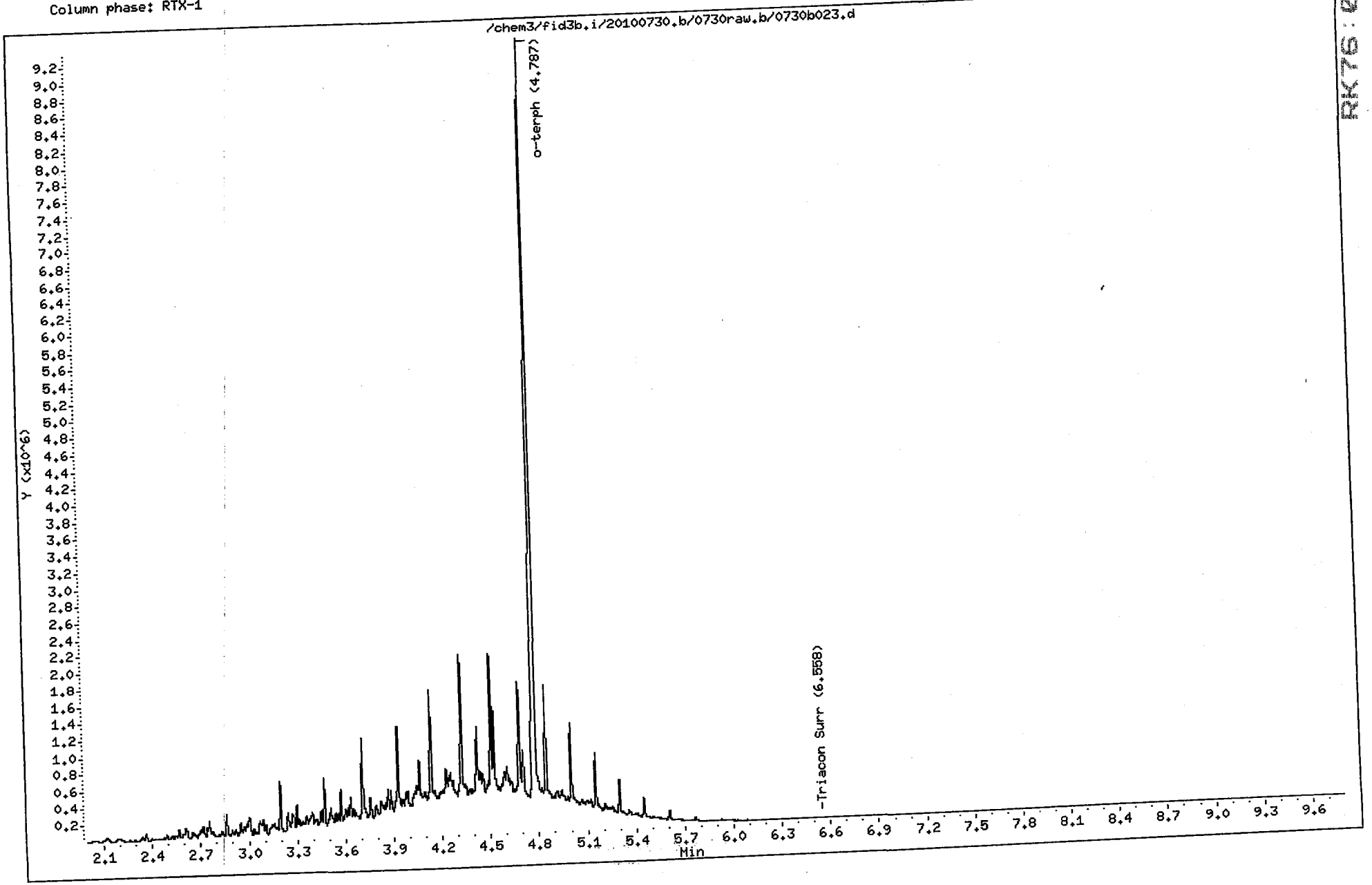
Column phase: RTX-1

Instrument: fid3b.i

Operator: MS

Column diameter: 2.00

RTX-1 99127



Analytical Resources Inc.
407S TPH Quantitation Report

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

FID:3B RESULTS

Compound	RT	Shift	Height	Area
Toluene	----			
C8	----			
C10	2.859	0.001	35248	24957
C12	3.467	0.000	86410	59948
C14	3.926	-0.001	173324	148864
C16	4.320	-0.001	296816	249967
C18	4.676	0.000	273795	228555
C20	4.997	-0.001	155638	143379
C22	5.294	-0.002	60394	56049
C24	5.605	0.002	13282	16336
C25	5.765	0.001	4054	633
C26	5.927	0.001	1441	1201
C28	6.248	0.004	261	48
C32	6.870	0.014	5168	4822
C34	7.140	-0.001	246	62
Filter Peak	----			
C36	7.410	-0.003	515	121
o-terph	4.764	0.002	2104321	1321409
Triacon Surr	6.562	0.003	18	7

Range	Total Area	Conc
GAS (Tol-C12)	1033627	38
DIESEL (C12-C24)	6390782	299
M.OIL (C24-C38)	127459	11
AK-102 (C10-C25)	7226358	300
AK-103 (C25-C36)	93021	10
OR.DIES (C10-C28)	7272611	345
OR.MOIL (C28-C40)	99093	9
STODDARD (C8-C12)	1033627	37
CREOSOT (C8-C22)	7213004	1128
BUNKERC (C10-C38)	7336745	849
JET-A (C10-C18)	5495826	347
IT.MOIL (C24-C40)	162424	8

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

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

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

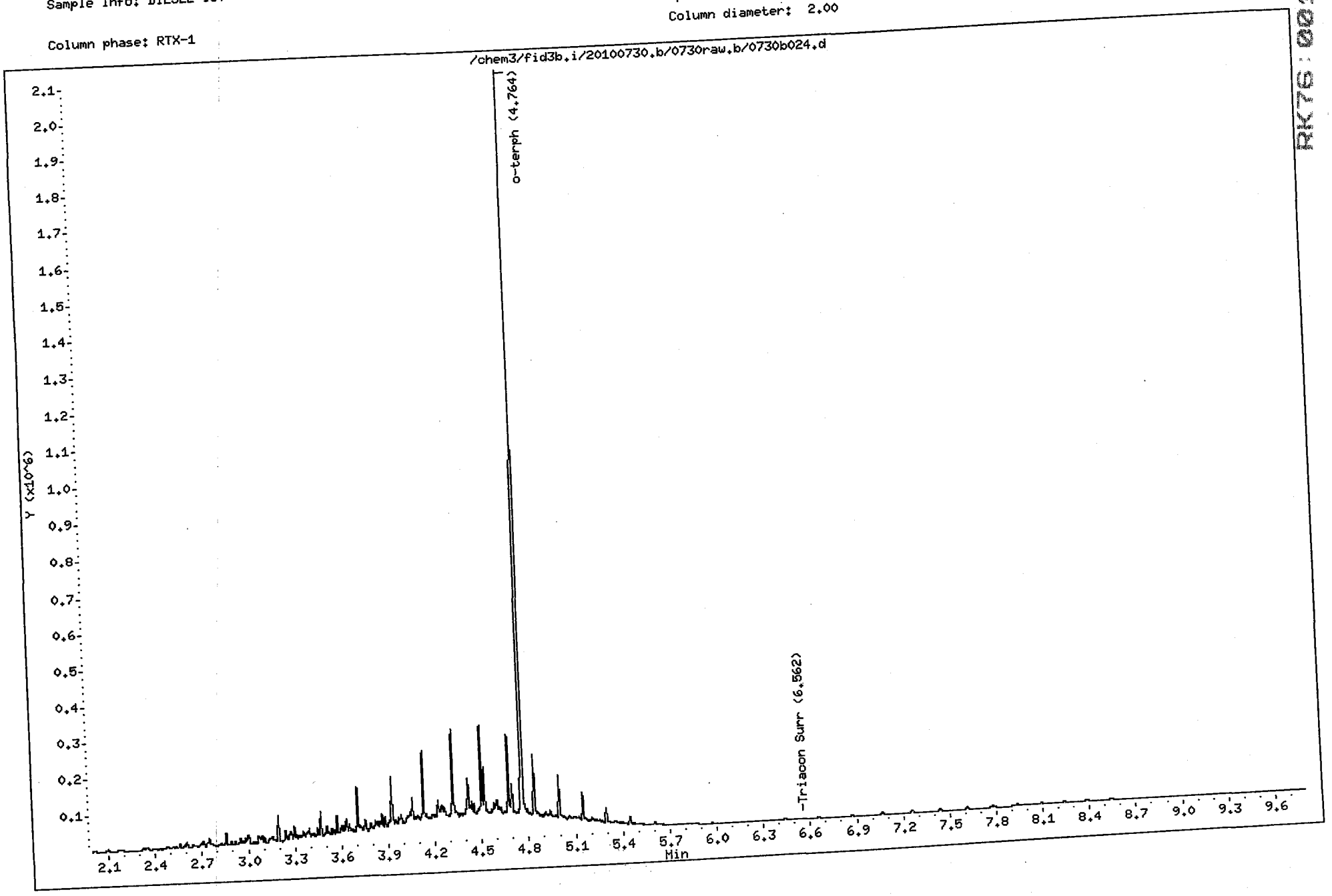
Data File: /chem3/fid3b.i/20100730.b/0730raw.b/0730b024.d
Date : 30-JUL-2010 22:17
Client ID:
Sample Info: DIESEL ICV

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1

RXTG:00129



Analytical Resources Inc.
407S TPH Quantitation Report

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

FID:3B RESULTS

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

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

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

8/3/10

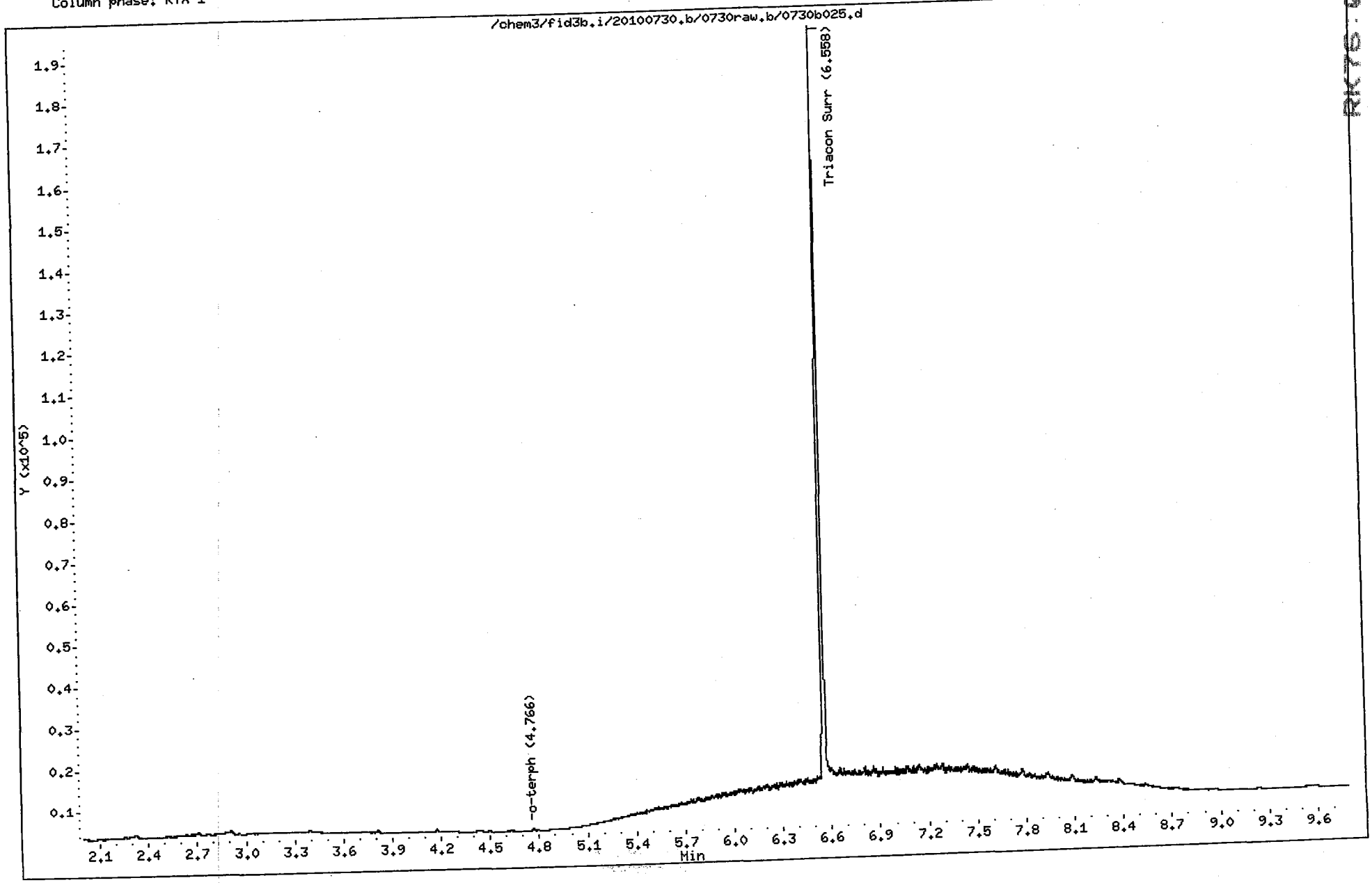
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	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

Data File: /chem3/fid3b.i/20100730.b/0730raw.b/0730b025.d
Date : 30-JUL-2010 22:36
Client ID:
Sample Info: MOIL 100

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1



Analytical Resources Inc.
407S TPH Quantitation Report

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

FID:3B RESULTS

Compound	RT	Shift	Height	Area
Toluene	----			
C8	----			
C10	2.860	0.002	1106	911
C12	3.466	-0.001	692	284
C14	3.923	-0.003	393	183
C16	4.322	0.001	138	66
C18	4.673	-0.002	150	79
C20	4.999	0.002	1661	707
C22	5.293	-0.003	6646	2620
C24	5.603	0.000	12926	3044
C25	5.760	-0.003	15791	3992
C26	5.923	-0.002	18737	5063
C28	6.240	-0.004	22766	17103
C32	6.855	0.000	29395	10185
C34	7.138	-0.003	29817	13225
Filter Peak	----			
C36	7.411	-0.002	26300	7168
o-terph	4.763	0.002	758	732
Triacon Surr	6.557	-0.002	469017	430625

Range	Total Area	Conc
GAS (Tol-C12)	54421	2
DIESEL (C12-C24)	322420	15
M.OIL (C24-C38)	2867075	237
AK-102 (C10-C25)	405267	17
AK-103 (C25-C36)	2449011	274
OR.DIES (C10-C28)	1063179	50
OR.MOIL (C28-C40)	2456323	218
STODDARD (C8-C12)	54421	2
CREOSOT (C8-C22)	176037	28
BUNKERC (C10-C38)	3224498	373
JET-A (C10-C18)	56598	4
IT.MOIL (C24-C40)	3592703	167

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

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

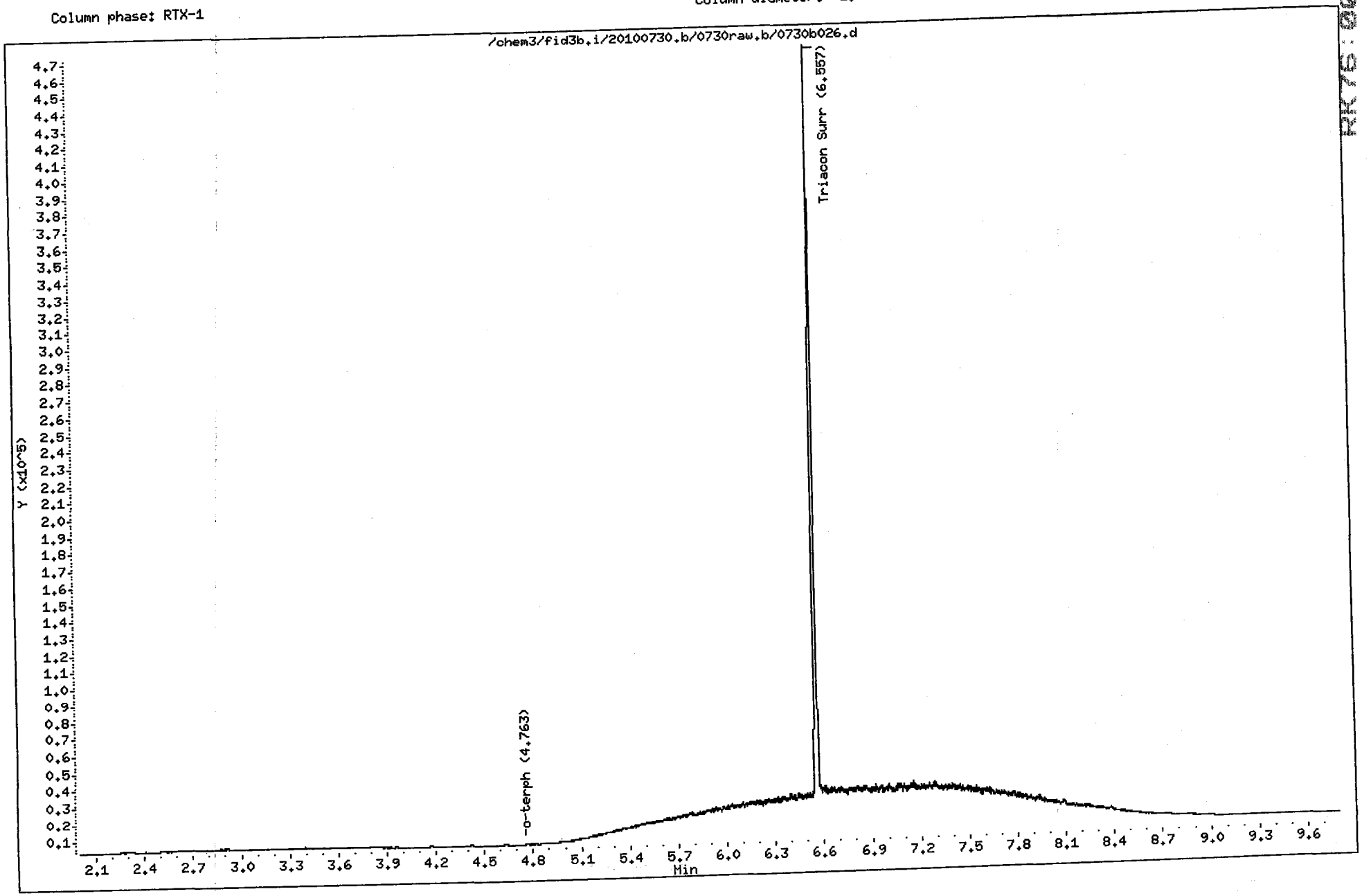
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	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

Data File: /chem3/fid3b.i/20100730.b/0730raw.b/0730b026.d
Date : 30-JUL-2010 22:55
Client ID:
Sample Info: MOIL 250

Column phase: RTX-1

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00



Analytical Resources Inc.
407S TPH Quantitation Report

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

FID:3B RESULTS

Compound	RT	Shift	Height	Area
Toluene	----			
C8	----			
C10	2.856	-0.002	1273	310
C12	3.467	-0.001	772	289
C14	3.922	-0.005	525	176
C16	4.319	-0.002	278	113
C18	4.674	-0.001	552	196
C20	4.998	0.000	3647	716
C22	5.292	-0.004	14044	4392
C24	5.604	0.000	27326	15789
C25	5.766	0.002	33190	10855
C26	5.924	-0.002	38046	12688
C28	6.245	0.000	48533	19176
C32	6.858	0.002	63236	21003
C34	7.139	-0.002	59785	13961
Filter Peak	----			
C36	7.414	0.000	57110	39334
o-terph	4.762	0.000	1198	1526
Triacon Surr	6.561	0.001	910045	900916

Range	Total Area	Conc
GAS (Tol-C12)	61429	2
DIESEL (C12-C24)	661397	31
M.OIL (C24-C38)	5757000	477
AK-102 (C10-C25)	796757	33
AK-103 (C25-C36)	4958432	555
OR.DIES (C10-C28)	2129868	101
OR.MOIL (C28-C40)	4884926	433
STODDARD (C8-C12)	61429	2
CREOSOT (C8-C22)	311324	49
BUNKERC (C10-C38)	6457090	747
JET-A (C10-C18)	73818	5
IT.MOIL (C24-C40)	7215620	336

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

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

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

Data File: /chem3/fid3b.i/20100730.b/0730raw.b/0730b027.d
Date : 30-JUL-2010 23:14
Client ID:
Sample Info: MOIL 500

Column phase: RTX-1

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

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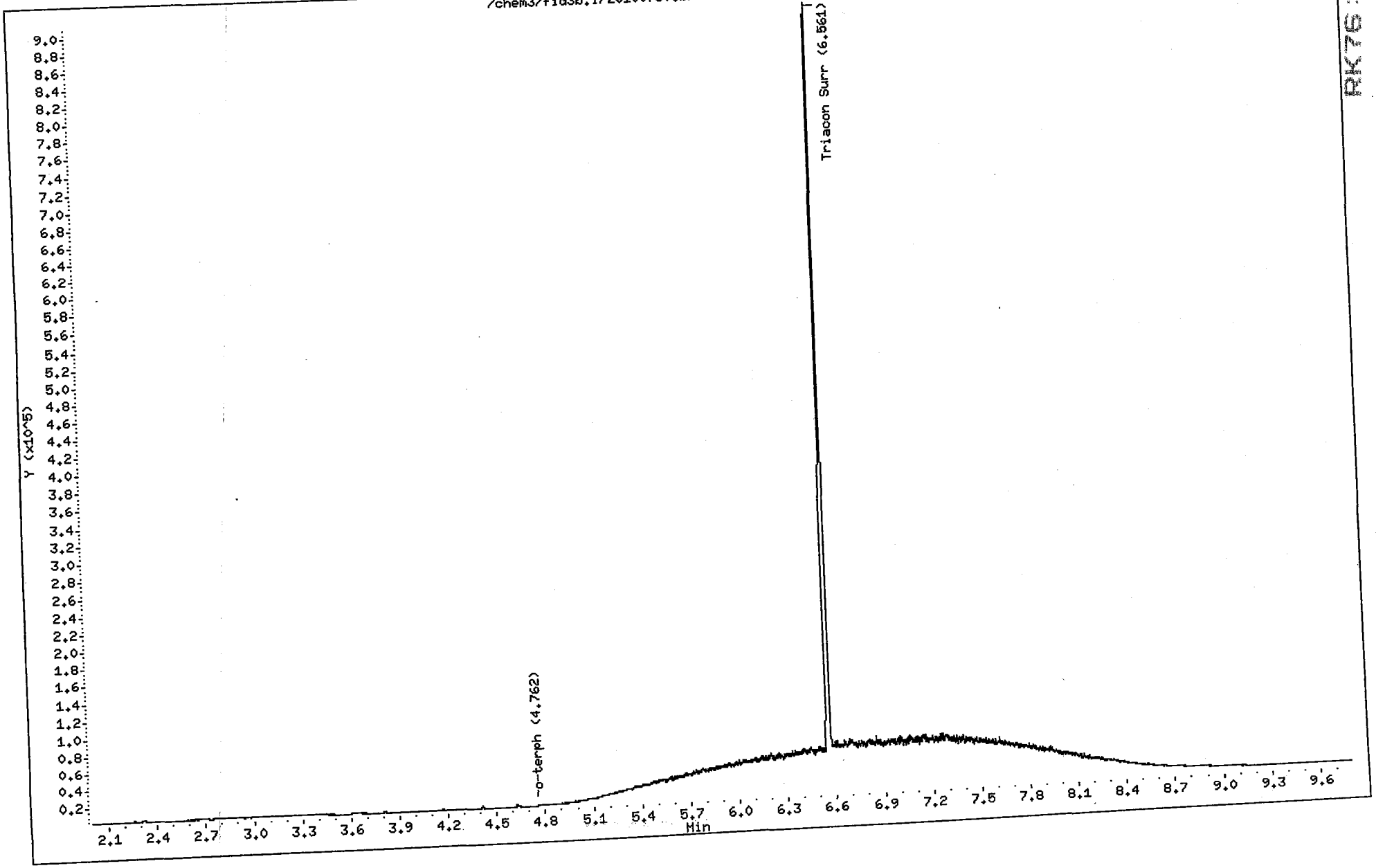


Analytical Resources Inc.
407S TPH Quantitation Report

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

FID:3B RESULTS

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

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

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

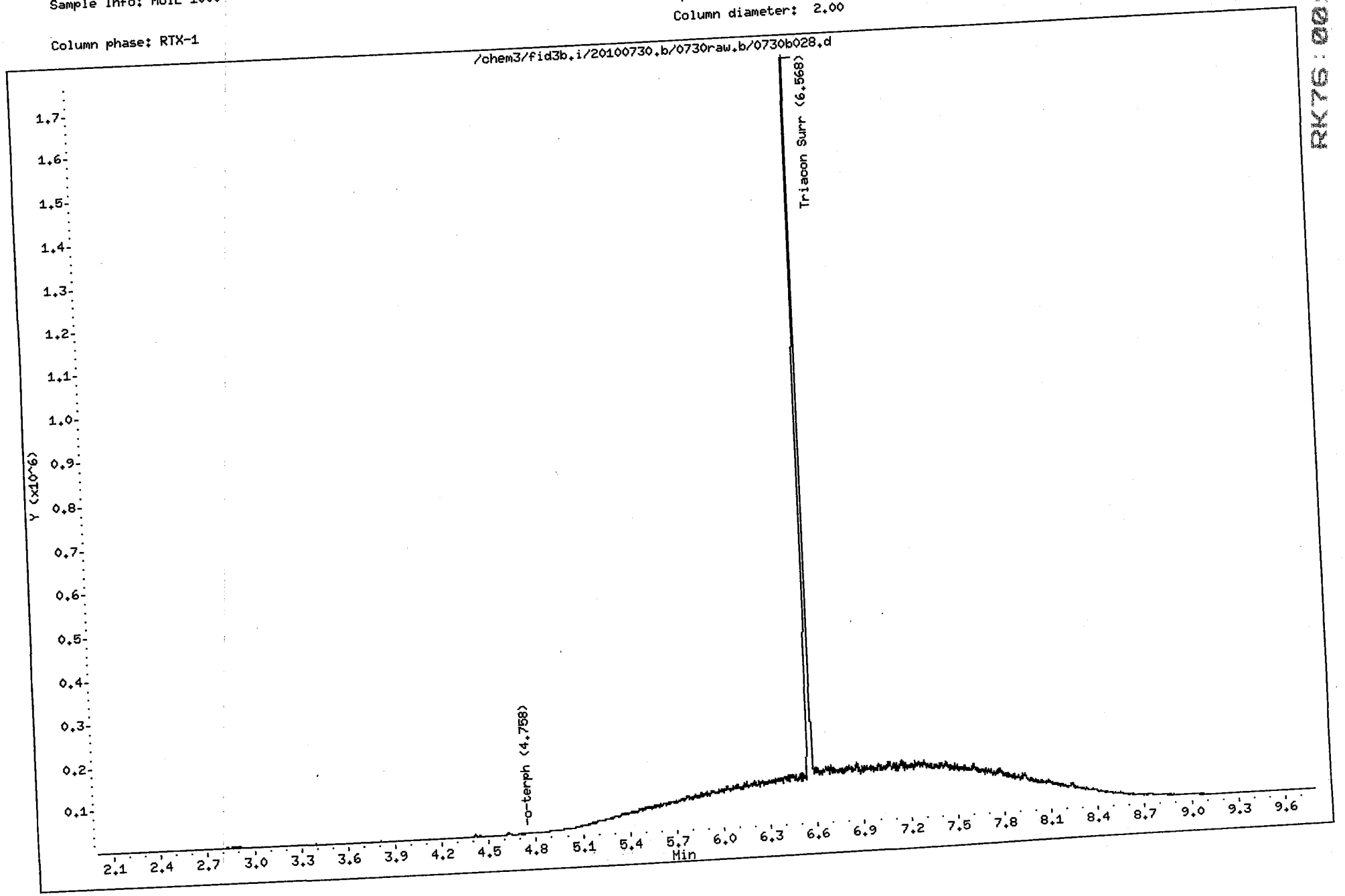
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	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

Data File: /chem3/fid3b.i/20100730.b/0730raw.b/0730b028.d
Date : 30-JUL-2010 23:32
Client ID:
Sample Info: MOIL 1000

Column phase: RTX-1

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00



RTX-1 0017

Analytical Resources Inc.
407S TPH Quantitation Report

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

FID:3B RESULTS

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

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

8/3/10

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

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

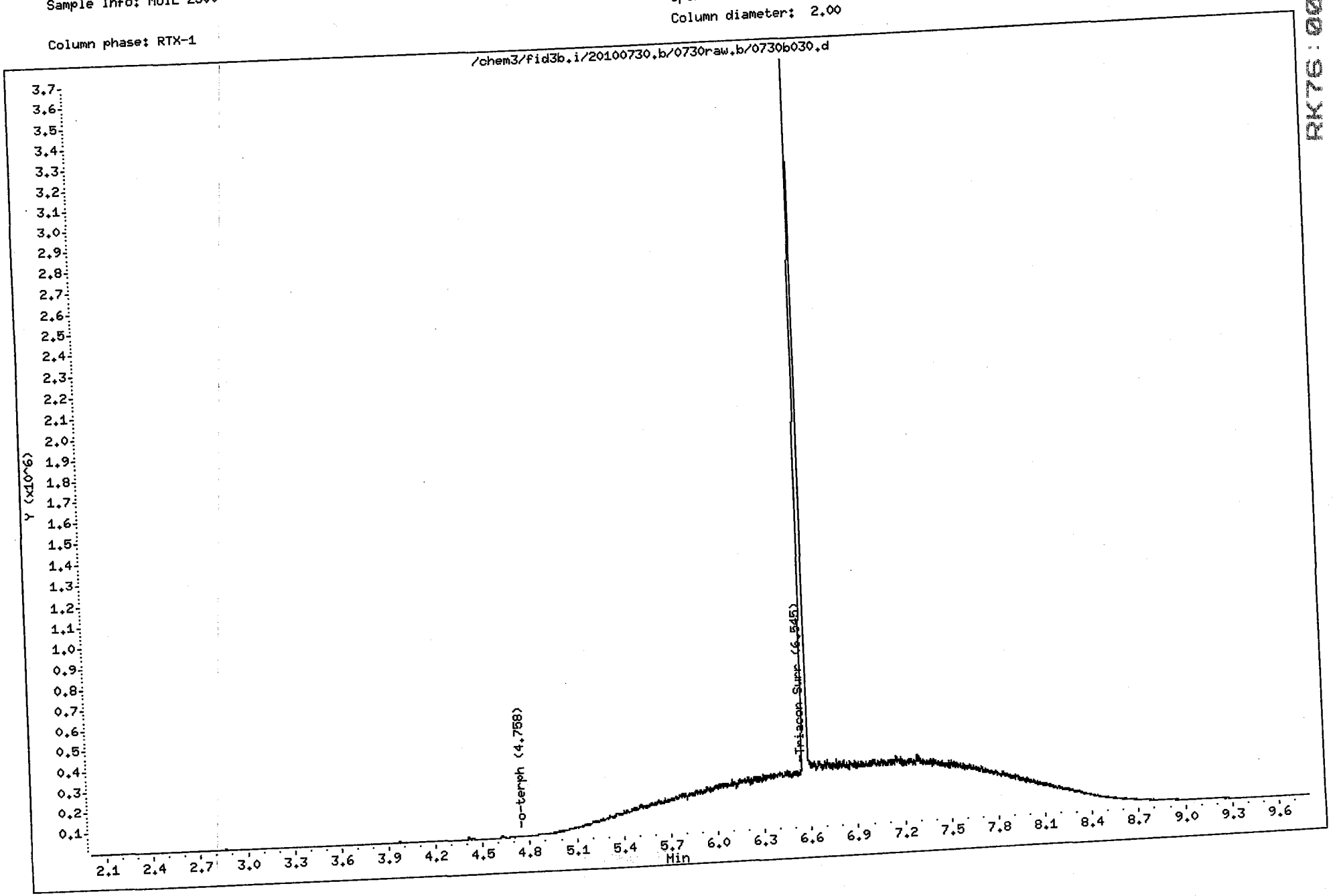
Data File: /chem3/fid3b.i/20100730.b/0730raw.b/0730b030.d
Date : 31-JUL-2010 00:10
Client ID:
Sample Info: MOIL 2500

Column phase: RTX-1

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

RK76-99139



Analytical Resources Inc.
407S TPH Quantitation Report

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

FID:3B RESULTS

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

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

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

8/3/10

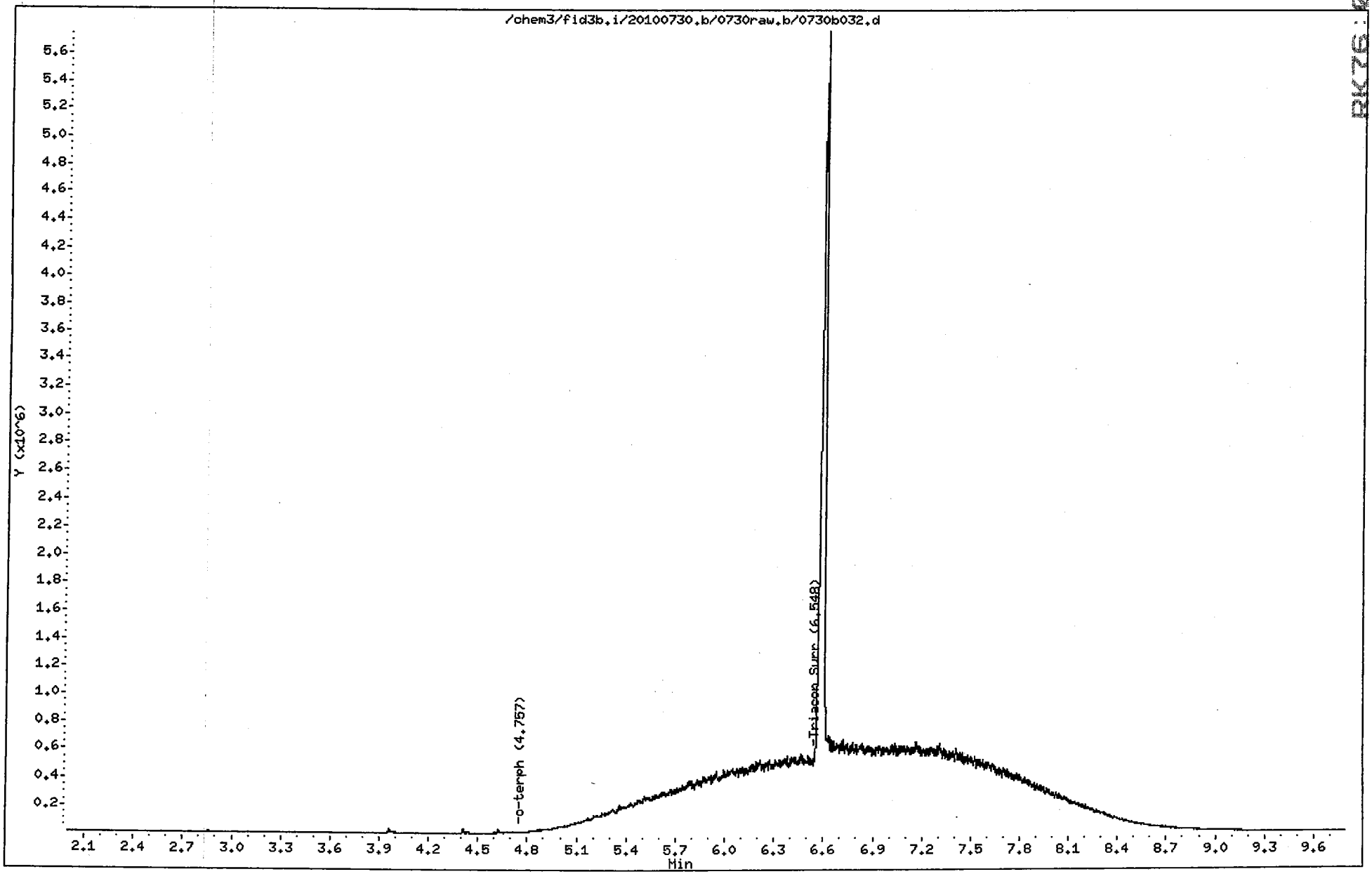
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	27357.0	16-MAR-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	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

Data File: /chem3/fid3b.i/20100730.b/0730raw.b/0730b032.d
Date : 31-JUL-2010 00:47
Client ID:
Sample Info: MOIL 5000

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

Column phase: RTX-1



Analytical Resources Inc.
407S TPH Quantitation Report

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

FID:3B RESULTS

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

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

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

8/3/10

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

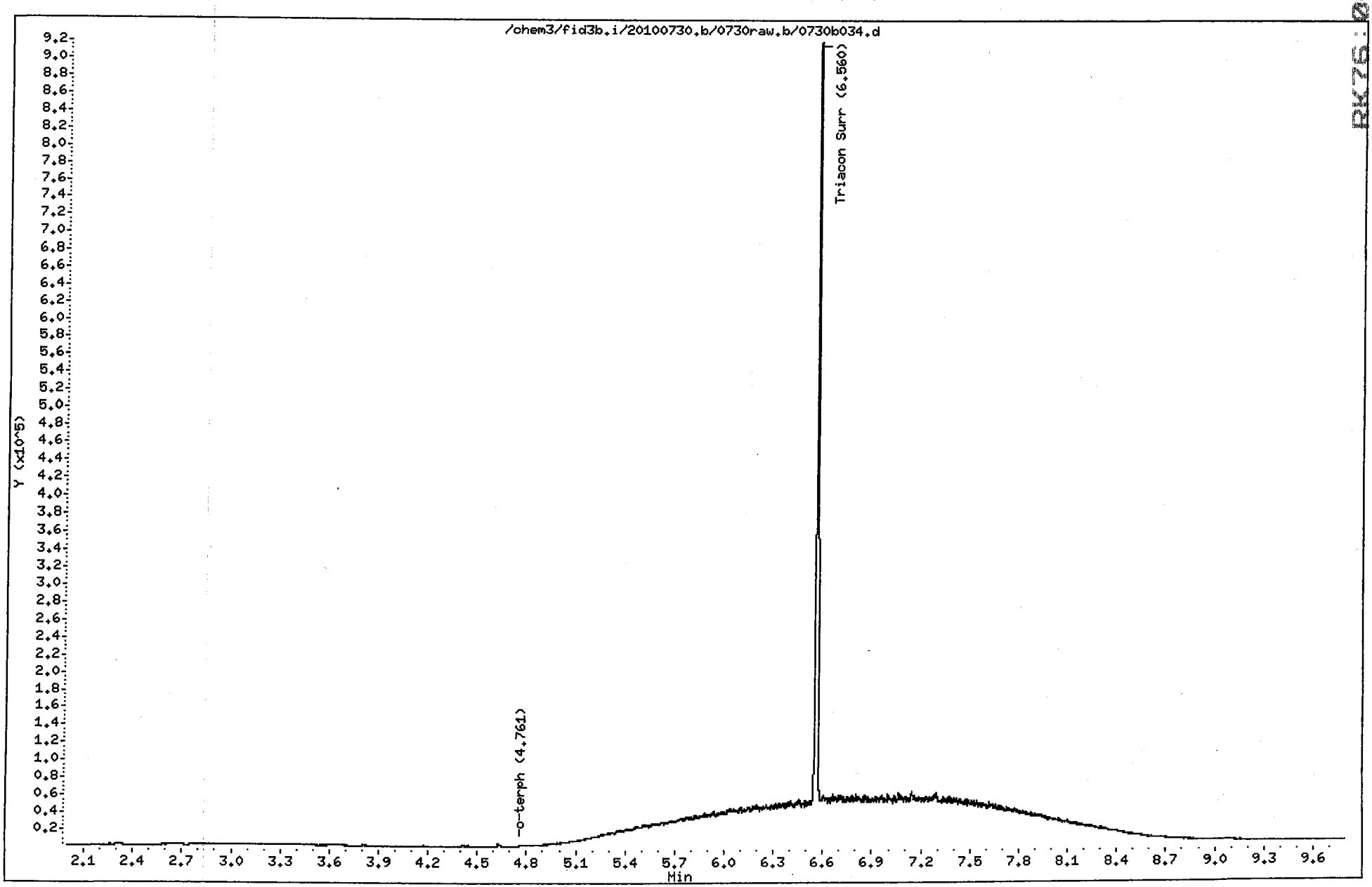
Data File: /chem3/fid3b.i/20100730.b/0730raw.b/0730b034.d
Date : 31-JUL-2010 01:25
Client ID:
Sample Info: MOIL ICV

Column phase: RTX-1

Instrument: fid3b.i

Operator: MS
Column diameter: 2.00

RX75:80113



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

ARI Job ID: RK76

Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: RK83, RK76 Client ID: Floyd/Snider - Lora Lake

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, Motor Oil

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: 9/30/10 Analysis Start: 9/9/10

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

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

Additional Details on Reverse: Yes / No

Analyst: _____ **Date:** 9/16/10

Reviewer: _____ **Date:** 9/16/10

Analytical Resources Inc.: Organics Instrument Log

FID-3B Serial No.: US00003232

Date: 9/9/10 Analysis: NWTPH Analyst: MY

GC Program: TPHHL Column No: 162178 Column Type: ZB1 HT

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

Calibration File: _____ Curve Date: 7/30/10

IS/SS **Ical/Ccal** **LCS/ICV**

17007
17072
17302
17552

Time	Filename	LabID	ClientId	DF
1237	0909b001.d	RINSE		1
1256	0909b002.d	RT		1
1315	0909b003.d	IB		1
1333	0909b004.d	DIESEL#1		1
1352	0909b005.d	MOIL#1		1
1411	0909b006.d	RK83A		10
1430	0909b007.d	RK83C		5
1449	0909b008.d	RK83I		2
1508	0909b009.d	RK83J		10
1527	0909b010.d	RK83B		1
1546	0909b011.d	RK83D		1
1605	0909b012.d	RK83A		1
1624	0909b013.d	RK83C		1
1643	0909b014.d	RK83E		1
1702	0909b015.d	RK83F		1
1721	0909b016.d	RK83FMS		1
1740	0909b017.d	RK83FMSD		1
1759	0909b018.d	RL23C		1
1817	0909b019.d	DIESEL#2		1
1837	0909b020.d	MOIL#2		1
1856	0909b021.d	RK83H		1
1914	0909b022.d	RK83I		1

	Time	Filename	LabID	ClientId	DF
3	1933	0909b023.d	RK83K		1
4	1952	0909b024.d	RK83L		1
5	2011	0909b025.d	RK83M		1
26	2030	0909b026.d	RK83LCSS1		1
27	2049	0909b027.d	RK83MBS1		1
28	2108	0909b028.d	DIESEL#3		1
29	2127	0909b029.d	MOIL#3		1
30	2145	0909b030.d	RK76MBS1		1
31	2204	0909b031.d	RK76LCSS1		1
32	2223	0909b032.d	RK76E		1
33	2242	0909b033.d	RK76F		1
34	2301	0909b034.d	RK76G		1
35	2320	0909b035.d	RK76K		1
36	2339	0909b036.d	RK76KMS		1
37	2358	0909b037.d	RK76KMSD		1
38	0017	0909b038.d	RK76L		1
39	0036	0909b039.d	RK76R		1
40	0055	0909b040.d	DIESEL#4		1
41	0114	0909b041.d	MOIL#4		1
42	0133	0909b042.d	RK76S		1
43	0152	0909b043.d	RK77A		2
44	0211	0909b044.d	RK77AMS		2
45	0230	0909b045.d	RK77AMSD		2

Time	Filename	LabID	ClientId	DF
6 0248	0909b046.d	RK77B		2
7 0308	0909b047.d	RK77C		2
8 0326	0909b048.d	RK77D		1
9 0346	0909b049.d	RK77E		2
50 0404	0909b050.d	DIESEL#5		1
51 0423	0909b051.d	MOIL#5		1
52 0442	0909b052.d	RINSE		1

MY

9/10/10

Maintenance / Comments None

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

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

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b002.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/16/2010
Macro: FID:3B083010

ARI ID: RT
Client ID:
Injection: 09-SEP-2010 12:56
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.020	0.000	431092	388505	GAS (Tol-C12)	1531257	34
C8	1.306	0.000	118035	161865	DIESEL (C12-C24)	3188735	149
C10	2.848	0.000	681066	396995	M.OIL (C24-C38)	3825188	317
C12	3.459	0.000	814858	401479	AK-102 (C10-C25)	4084121	169
C14	3.917	0.000	733851	411876	AK-103 (C25-C36)	3406952	381
C16	4.312	0.000	719238	424073	OR.DIES (C10-C28)	5765596	273
C18	4.667	0.000	707169	452576	OR.MOIL (C28-C40)	2425039	215
C20	4.988	0.000	711200	414684			
C22	5.285	0.000	621376	420123	STODDARD (C8-C12)	1096060	40
C24	5.593	0.000	593049	439375			
C25	5.753	0.000	792779	614761			
C26	5.913	0.000	554993	455224			
C28	6.231	0.000	563104	467647			
C32	6.842	0.000	539326	513076			
C34	7.129	0.000	525209	497164	CREOSOT (C8-C22)	2620641	410
Filter Peak	----						
C36	7.400	0.000	456845	236515	BUNKERC (C10-C38)	7889454	913
o-terph	4.755	0.000	2374530	1550440	JET-A (C10-C18)	2375867	150
Triacon Surr	6.553	0.000	1793585	1672907	IT.MOIL (C24-C40)	5799276	270

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1550440	77.8	172.8
Triacontane	1672907	100.0	222.3

9/16/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

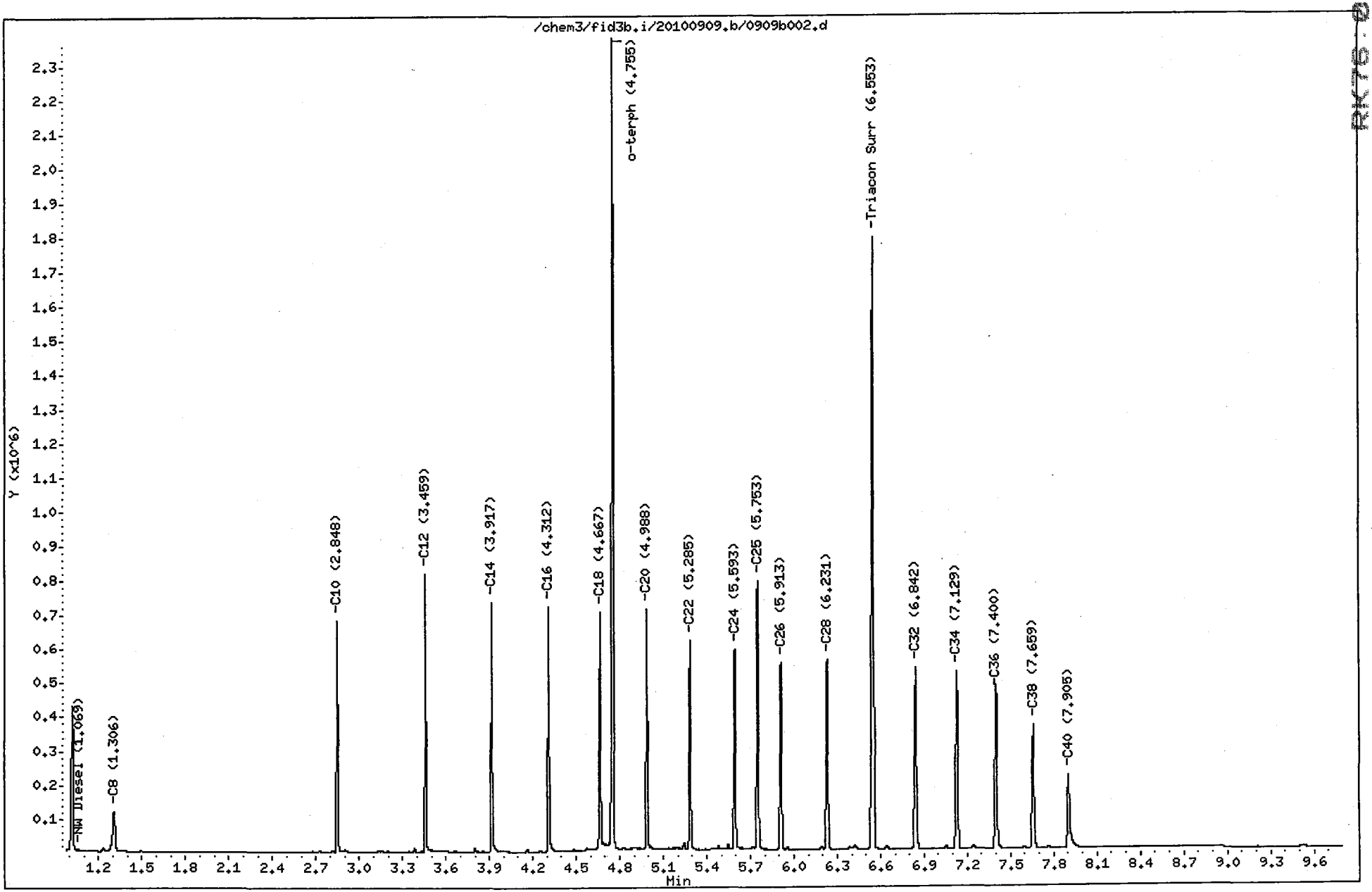
Data File: /chem3/fid3b.i/20100909.b/0909b002.d
Date : 09-SEP-2010 12:56
Client ID:
Sample Info: RT

Column phase: ZB-1HT

Instrument: fid3b.i

Operator: MS
Column diameter: 0.25

RKTB-00118



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b003.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/16/2010
Macro: FID:3B083010

ARI ID: IB
Client ID:
Injection: 09-SEP-2010 13:15
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.019	-0.001	7442	12795	GAS (Tol-C12)	145827	3
C8	1.308	0.002	2198	3641	DIESEL (C12-C24)	123131	6
C10	2.850	0.002	2322	2821	M.OIL (C24-C38)	127617	11
C12	3.461	0.002	1556	1664	AK-102 (C10-C25)	178610	7
C14	3.912	-0.004	946	573	AK-103 (C25-C36)	112302	13
C16	4.322	0.010	839	1255	OR.DIES (C10-C28)	199249	9
C18	4.667	0.000	719	693	OR.MOIL (C28-C40)	126589	11
C20	4.983	-0.004	1124	1309			
C22	5.284	-0.001	2191	2447	STODDARD (C8-C12)	100382	4
C24	5.613	0.021	3122	3152			
C25	5.765	0.012	4190	4134			
C26	5.920	0.007	3492	2904			
C28	6.235	0.004	4021	3558			
C32	6.859	0.017	4468	6520			
C34	7.126	-0.003	620	388	CREOSOT (C8-C22)	113629	18
Filter Peak	----						
C36	7.397	-0.003	680	690	BUNKERC (C10-C38)	306019	35
o-terph	4.754	-0.001	2006896	1196372	JET-A (C10-C18)	121394	8
Triacon Surr	6.549	-0.004	1075286	998864	IT.MOIL (C24-C40)	1146300	53

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1196372	60.0	133.4
Triacontane	998864	59.7	132.7

9/16/10

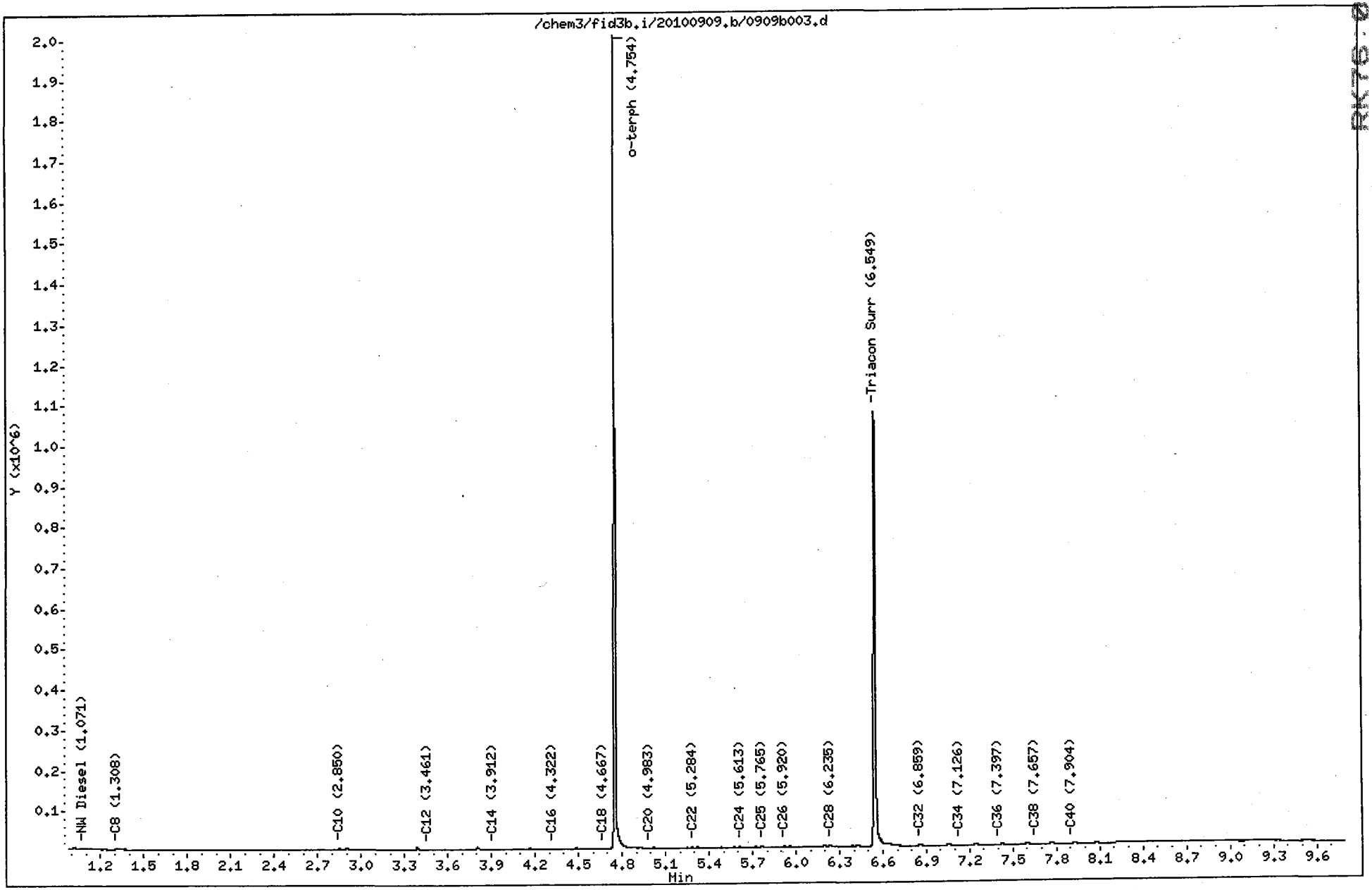
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b003.d
Date : 09-SEP-2010 13:15
Client ID:
Sample Info: IB

Instrument: fid3b.i

Operator: MS
Column diameter: 0.25

Column phase: ZB-1HT



RKT16.00159

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b004.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/16/2010
Macro: FID:3B083010

ARI ID: DIESEL#1
Client ID:
Injection: 09-SEP-2010 13:33
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.026	0.007	8559	15706	GAS (Tol-C12)	894055	20	
C8	1.302	-0.004	2668	3112	DIESEL (C12-C24)	5292972	247	
C10	2.849	0.001	25532	19504	M.OIL (C24-C38)	102097	8	
C12	3.459	0.001	64490	46196	AK-102 (C10-C25)	5955778	247	M
C14	3.916	-0.001	124579	108685	AK-103 (C25-C36)	84430	9	
C16	4.312	0.001	216583	188254	OR.DIES (C10-C28)	6008565	285	M
C18	4.666	-0.001	211465	159249	OR.MOIL (C28-C40)	42954	4	
C20	4.988	0.000	116291	98393				
C22	5.286	0.001	39738	54394	STODDARD (C8-C12)	844481	31	
C24	5.591	-0.002	5942	2052				
C25	5.748	-0.005	3167	2015				
C26	5.910	-0.002	1570	1544				
C28	6.229	-0.002	351	61				
C32	6.830	-0.012	142	44				
C34	7.124	-0.004	34	19	CREOSOT (C8-C22)	5128895	802	
Filter Peak	----							
C36	7.402	0.002	58	11	BUNKERC (C10-C38)	6043951	699	
o-terph	4.754	-0.001	1604105	872707	JET-A (C10-C18)	4390720	277	
Triacon Surr	6.550	-0.003	130	76	IT.MOIL (C24-C40)	109742	5	

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	872707	43.8	97.3
Triacontane	76	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

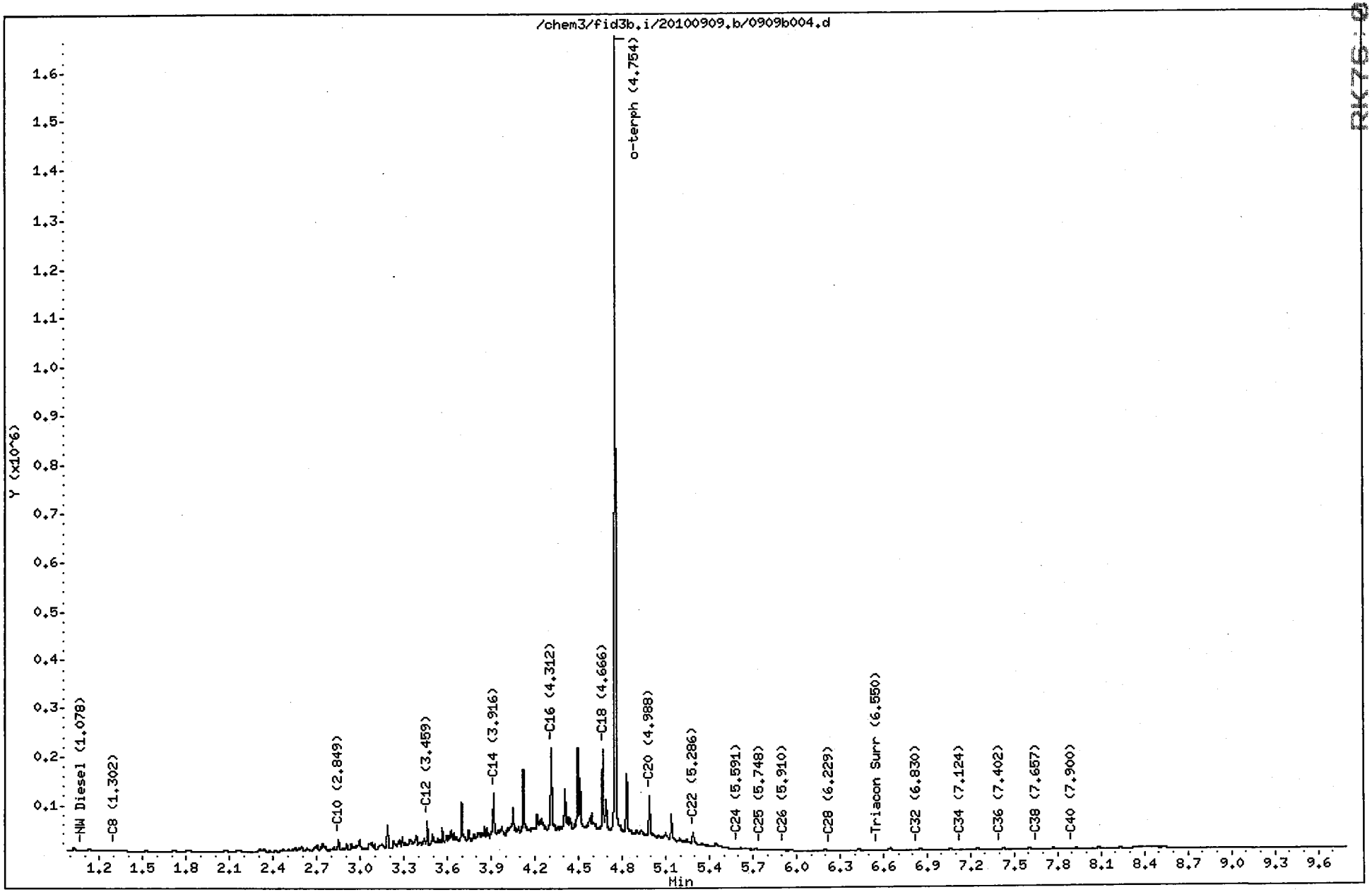
Data File: /chem3/fid3b.i/20100909.b/0909b004.d
Date : 09-SEP-2010 13:33
Client ID:
Sample Info: DIESEL#1

Instrument: fid3b.i

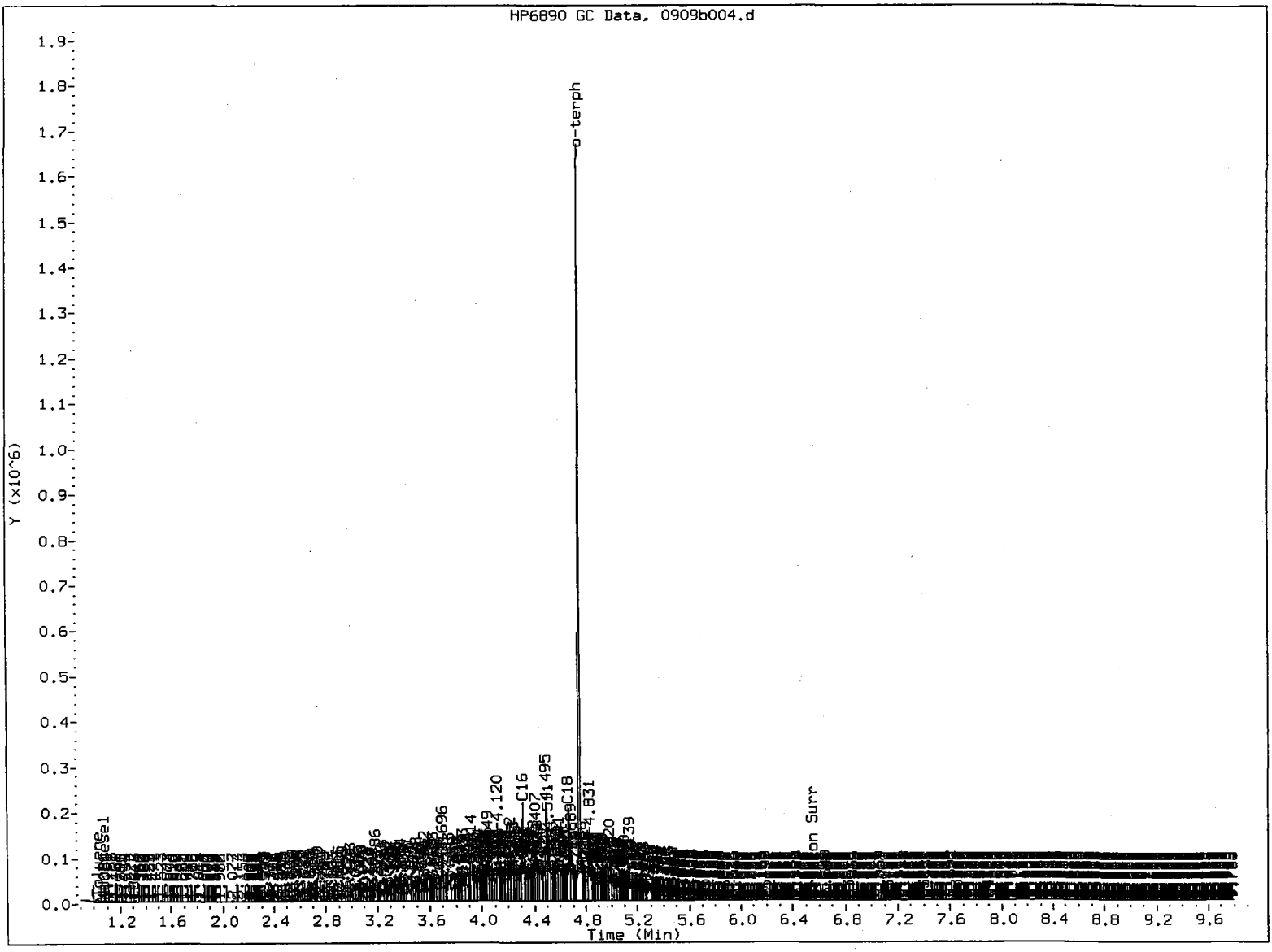
Operator: MS
Column diameter: 0.25

Column phase: ZB-1HT

RK75-00152



FID:3B-2C/RTX-1 DIESEL#1 FID:3B SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 9/14/10

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b005.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/16/2010
Macro: FID:3B083010

ARI ID: MOIL#1
Client ID:
Injection: 09-SEP-2010 13:52
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.021	0.001	5315	5383	GAS (Tol-C12)	145692	3	
C8	1.313	0.007	1696	1456	DIESEL (C12-C24)	811334	38	
C10	2.850	0.002	1241	1540	M.OIL (C24-C38)	5735699	475	
C12	3.462	0.004	2166	1067	AK-102 (C10-C25)	982537	41	
C14	3.919	0.003	1357	636	AK-103 (C25-C36)	5028590	563	M
C16	4.312	0.000	1183	413	OR.DIES (C10-C28)	2378869	113	
C18	4.668	0.001	1652	352	OR.MOIL (C28-C40)	4610973	409	M
C20	4.991	0.003	5027	2093				
C22	5.287	0.002	15598	6679	STODDARD (C8-C12)	100539	4	
C24	5.594	0.001	27522	9188				
C25	5.753	0.000	34138	25154				
C26	5.914	0.001	38908	10654				
C28	6.231	0.000	46933	17276				
C32	6.838	-0.004	57996	38453				
C34	7.129	0.000	54133	10660	CREOSOT (C8-C22)	376567	59	
Filter Peak	----							
C36	7.399	-0.001	49182	25441	BUNKERC (C10-C38)	6606214	764	
o-terph	4.756	0.001	12364	14153	JET-A (C10-C18)	173025	11	
Triacon Surr	6.551	-0.003	865016	772361	IT.MOIL (C24-C40)	6891688	321	

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	14153	0.7	1.6
Triacontane	772361	46.2	102.6

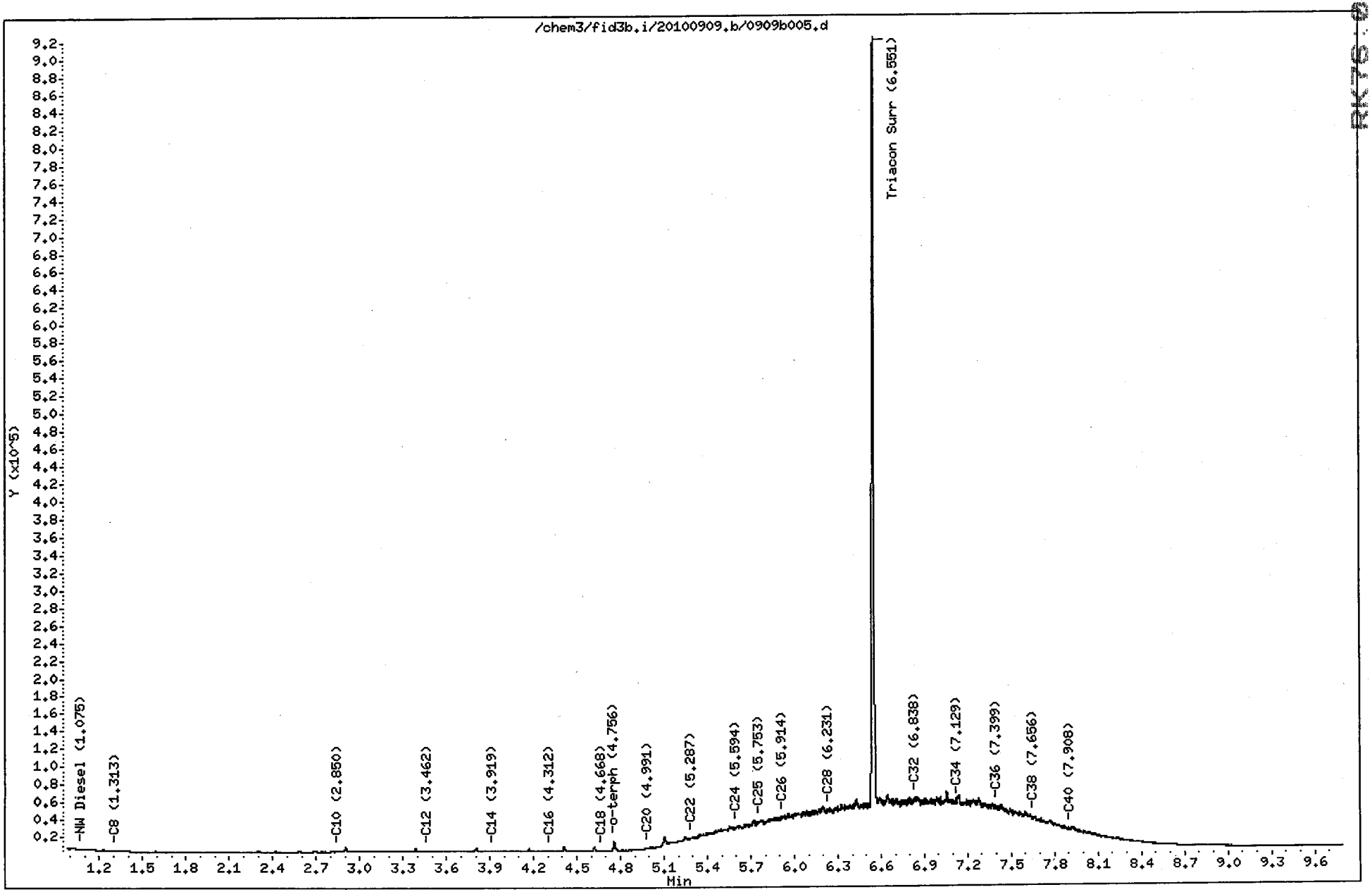
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b005.d
Date : 09-SEP-2010 13:52
Client ID:
Sample Info: MOIL#1

Column phase: ZB-1HT

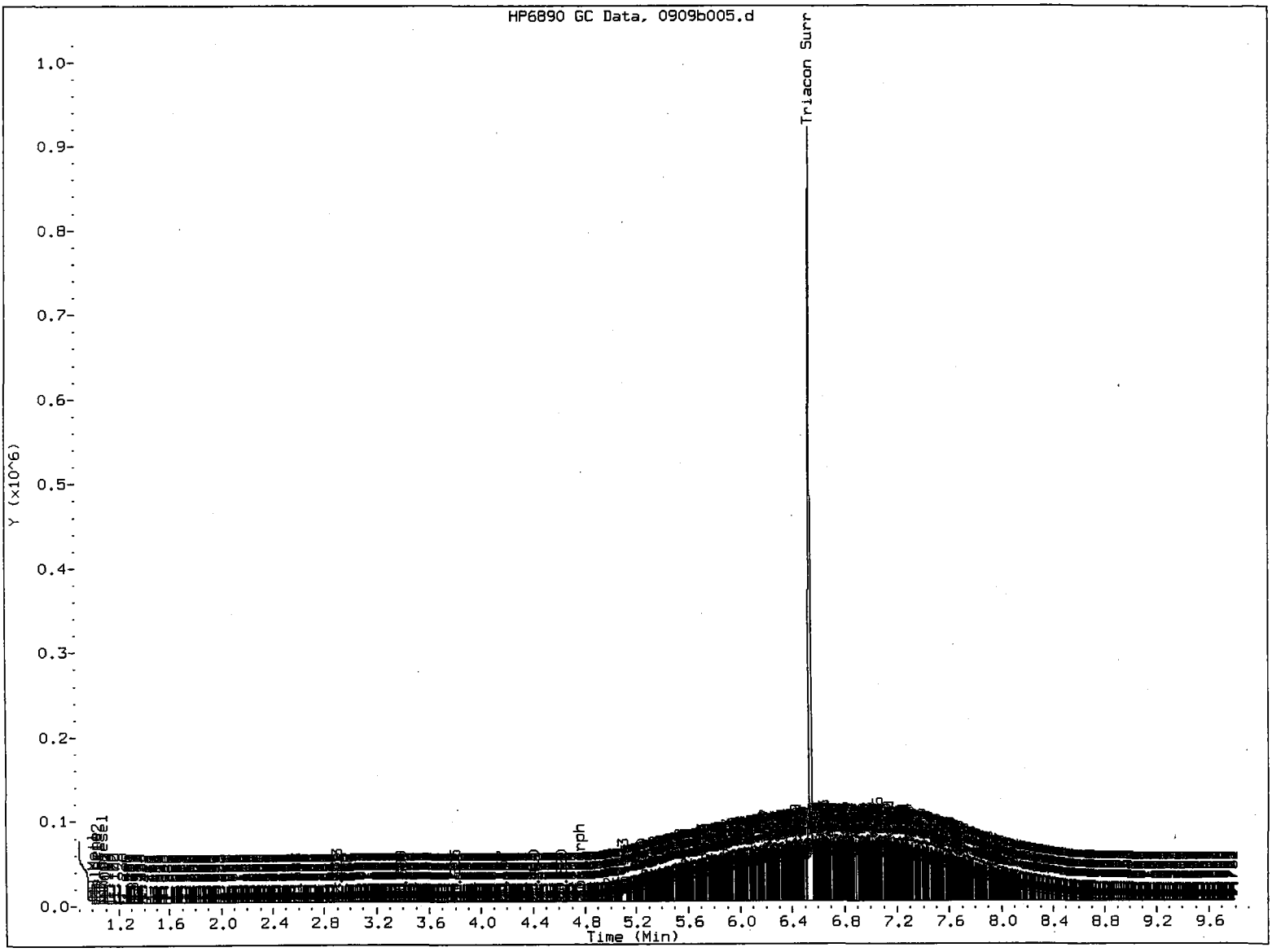
Instrument: fid3b.i

Operator: MS
Column diameter: 0.25



RK16.09155

FID:3B-2C/RTX-1 MOIL#1 FID:3B SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 9/16/10

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b019.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/16/2010
Macro: FID:3B083010

ARI ID: DIESEL#2
Client ID:
Injection: 09-SEP-2010 18:17
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.025	0.005	8003	15462	GAS (Tol-C12)	881562	20	
C8	1.309	0.003	2780	6003	DIESEL (C12-C24)	5357679	250	
C10	2.850	0.001	26947	19013	M.OIL (C24-C38)	183872	15	
C12	3.460	0.001	65997	48127	AK-102 (C10-C25)	6019614	250	M
C14	3.917	0.000	132916	127538	AK-103 (C25-C36)	150207	17	
C16	4.312	0.001	225482	189804	OR.DIES (C10-C28)	6092169	289	M
C18	4.666	-0.001	198099	173432	OR.MOIL (C28-C40)	118342	10	
C20	4.989	0.001	117355	97032				
C22	5.287	0.002	48412	53273	STODDARD (C8-C12)	834154	30	
C24	5.587	-0.006	7003	1907				
C25	5.755	0.002	3727	1015				
C26	5.914	0.001	1985	1016				
C28	6.228	-0.003	978	454				
C32	6.829	-0.013	799	394				
C34	7.130	0.001	800	423	CREOSOT (C8-C22)	5163826	807	
Filter Peak	----							
C36	7.399	-0.001	919	164	BUNKERC (C10-C38)	6186985	716	
o-terph	4.755	0.000	1691855	866100	JET-A (C10-C18)	4380847	276	
Triacon Surr	6.543	-0.011	775	226	IT.MOIL (C24-C40)	207624	10	

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	866100	43.4	96.6
Triacontane	226	0.0	0.0

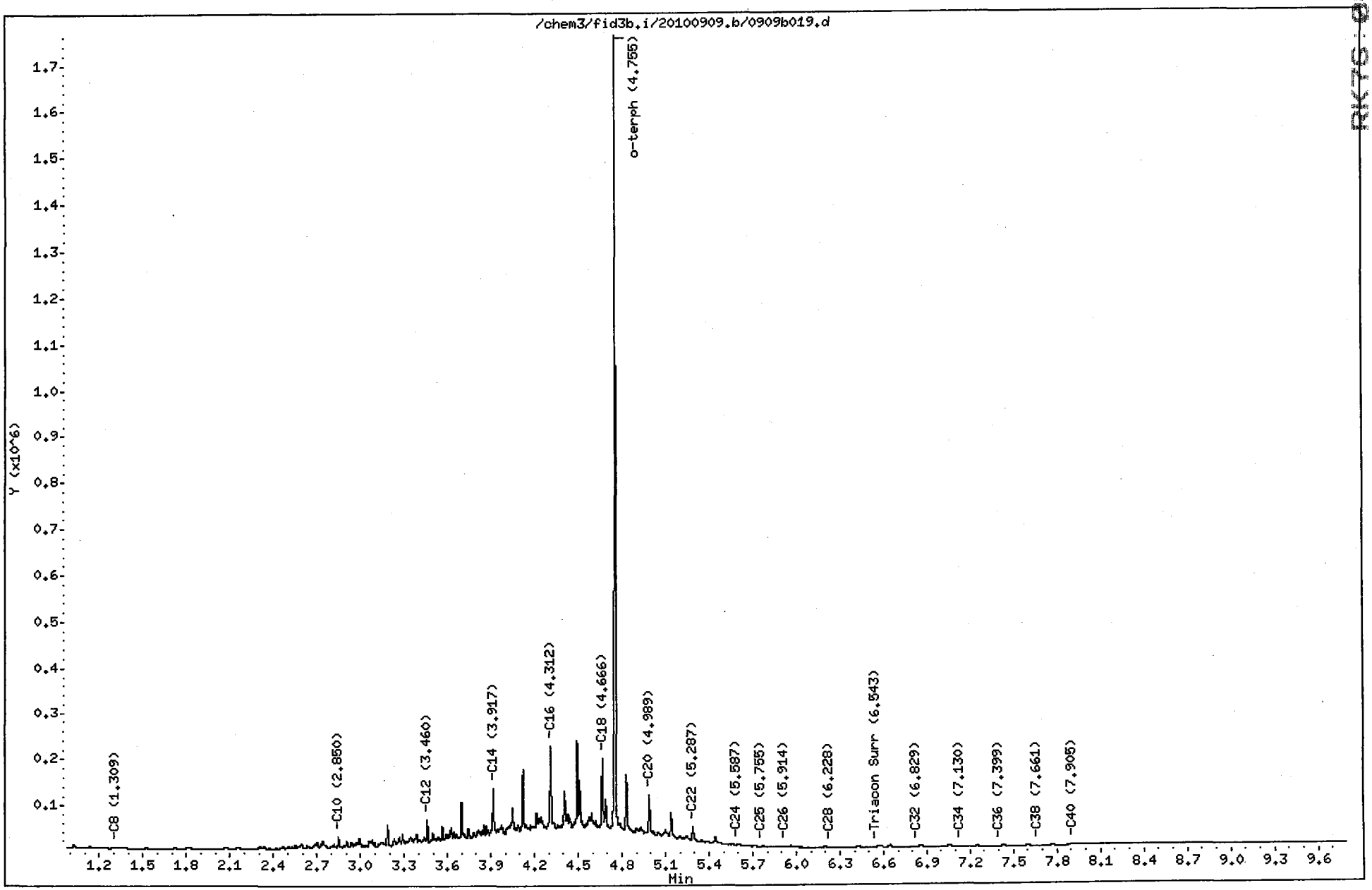
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b019.d
Date : 09-SEP-2010 18:17
Client ID:
Sample Info: DIESEL#2

Instrument: fid3b.i

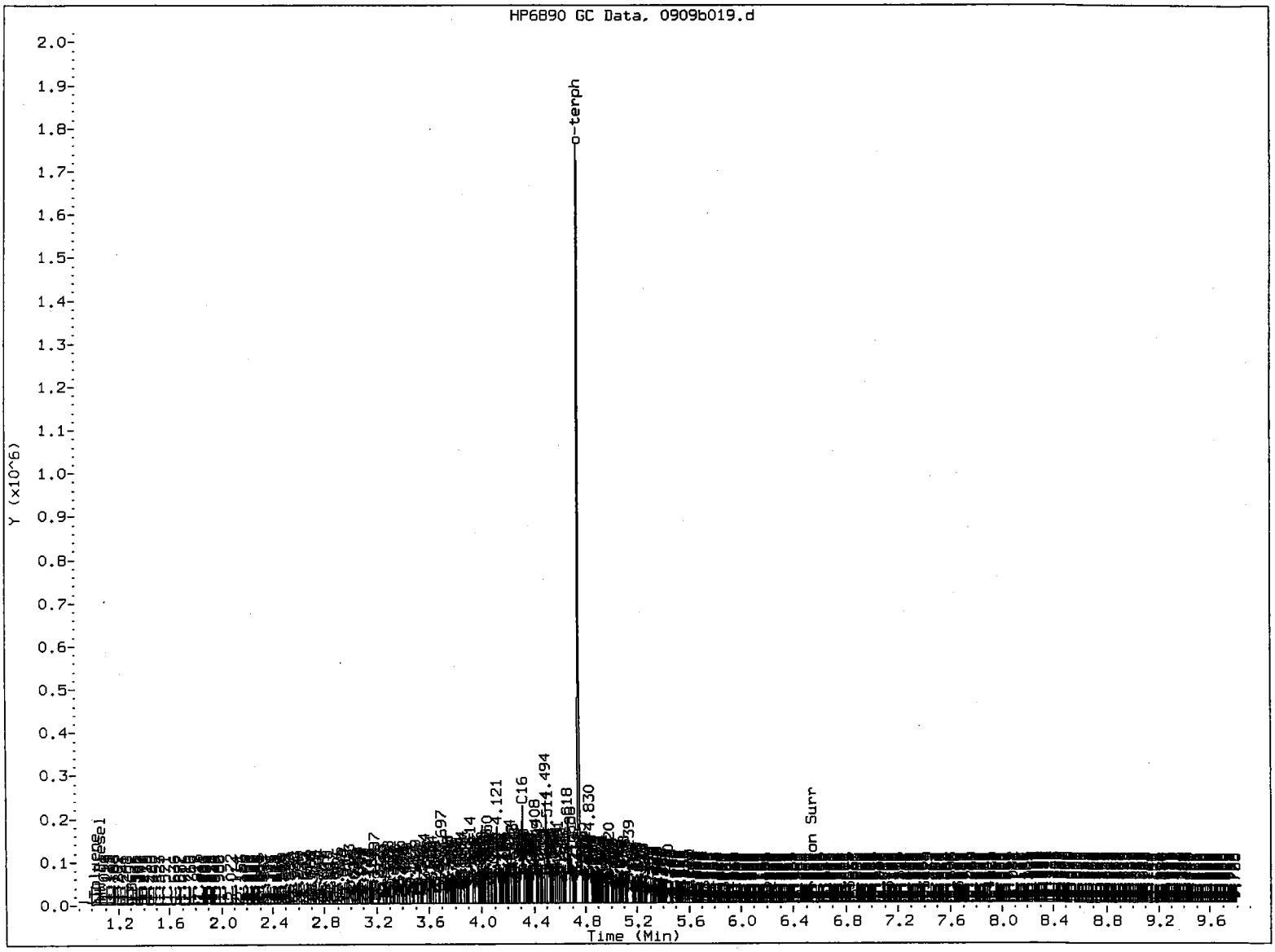
Operator: MS
Column diameter: 0.25

Column phase: ZB-1HT



RKTS-09158

FID:3B-2C/RTX-1 DIESEL#2 FID:3B SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 9/16/11

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b020.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/16/2010
Macro: FID:3B083010

ARI ID: MOIL#2
Client ID:
Injection: 09-SEP-2010 18:37
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.020	0.000	5087	5457	GAS (Tol-C12)	147665	3	
C8	1.310	0.004	1668	1317	DIESEL (C12-C24)	834543	39	
C10	2.852	0.004	1278	1534	M.OIL (C24-C38)	5899080	488	
C12	3.455	-0.004	2199	1156	AK-102 (C10-C25)	1003615	42	
C14	3.914	-0.003	1405	805	AK-103 (C25-C36)	5185628	581	M
C16	4.308	-0.004	1313	711	OR.DIES (C10-C28)	2416375	115	
C18	4.665	-0.002	1746	444	OR.MOIL (C28-C40)	4774239	423	M
C20	4.990	0.003	5426	3027				
C22	5.288	0.003	15967	5019	STODDARD (C8-C12)	101871	4	
C24	5.593	0.000	28911	11161				
C25	5.753	0.000	34946	11611				
C26	5.913	0.001	39963	11706				
C28	6.235	0.004	47818	16863				
C32	6.838	-0.004	61050	17583				
C34	7.129	0.000	57621	9091	CREOSOT (C8-C22)	393207	61	
Filter Peak	----							
C36	7.402	0.002	49473	10710	BUNKERC (C10-C38)	6792591	786	
o-terph	4.754	-0.001	14146	15370	JET-A (C10-C18)	179478	11	
Triacon Surr	6.550	-0.003	855442	780972	IT.MOIL (C24-C40)	7078076	329	

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	15370	0.8	1.7
Triacontane	780972	46.7	103.8

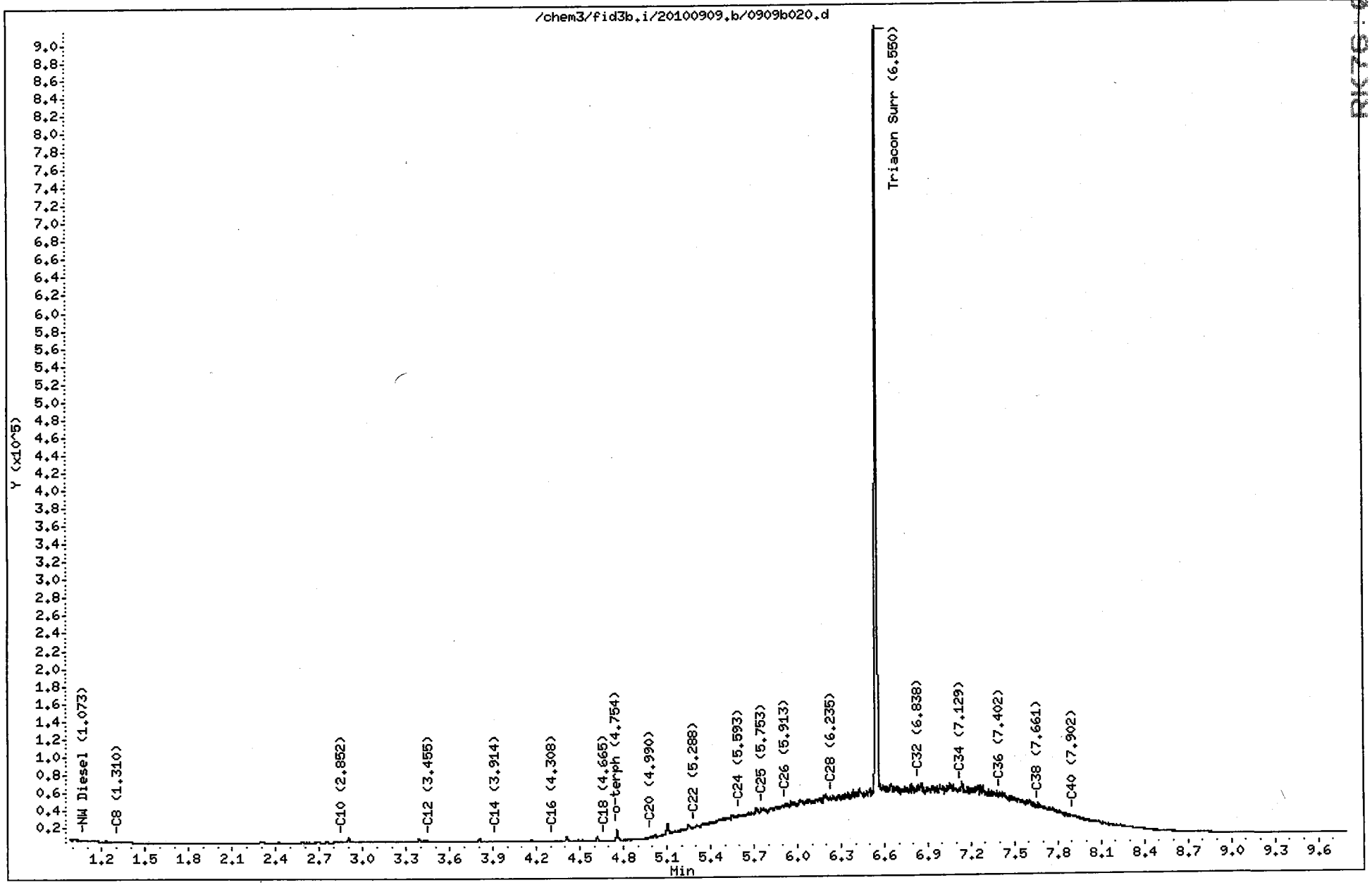
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b020.d
Date : 09-SEP-2010 18:37
Client ID:
Sample Info: MOIL#2

Column phase: ZB-1HT

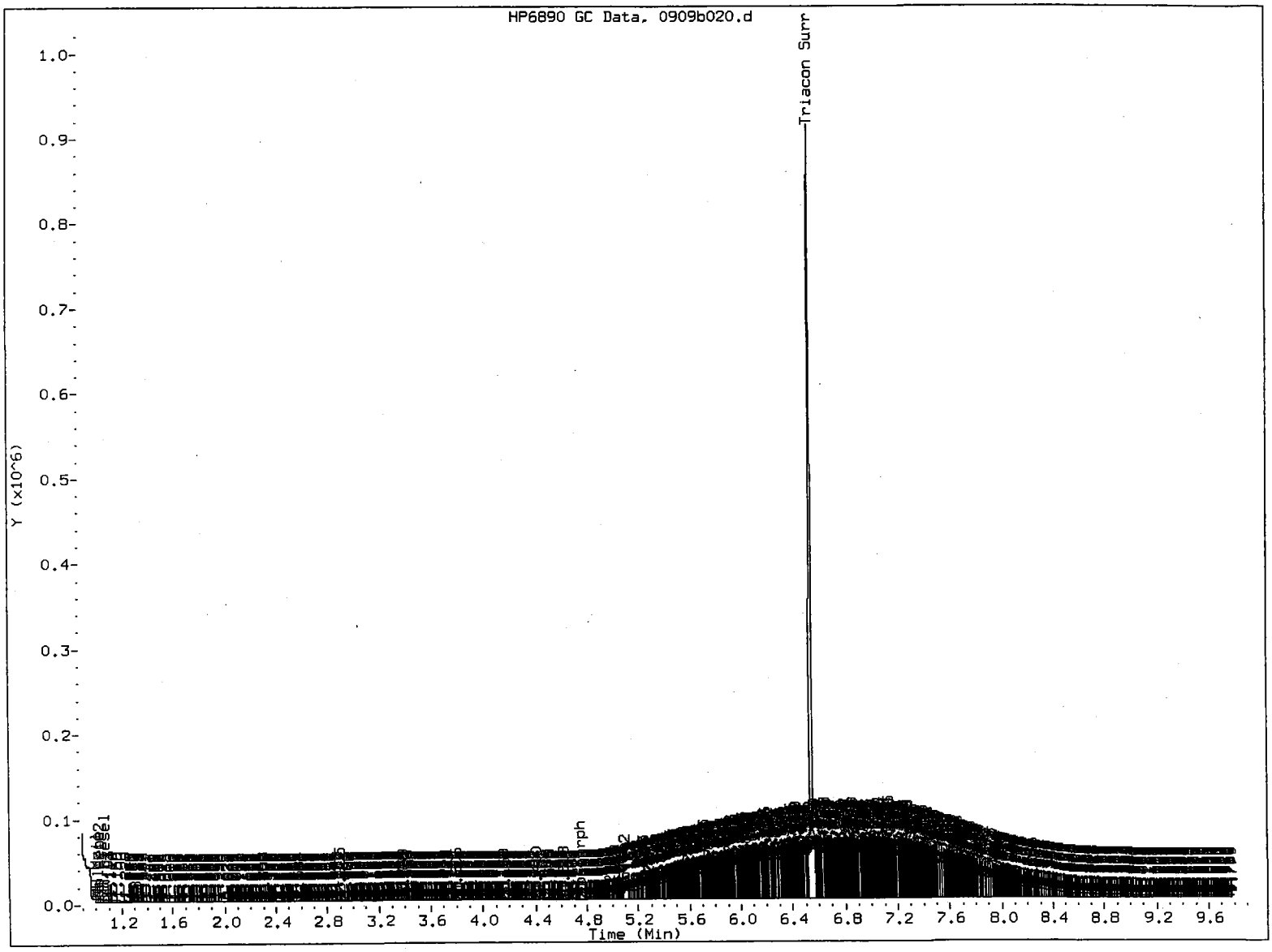
Instrument: fid3b.i

Operator: MS
Column diameter: 0.25



R476-00161

FID:3B-2C/RTX-1 MOIL#2 FID:3B SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: MS Date: 9/10/10

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b028.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/16/2010
Macro: FID:3B083010

ARI ID: DIESEL#3
Client ID:
Injection: 09-SEP-2010 21:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.023	0.004	8213	14206	GAS (Tol-C12)	883911	20	
C8	1.310	0.005	3035	4702	DIESEL (C12-C24)	5422697	253	
C10	2.850	0.002	25406	19626	M.OIL (C24-C38)	109519	9	
C12	3.459	0.001	63541	47027	AK-102 (C10-C25)	6063633	252	M
C14	3.917	0.000	128860	134802	AK-103 (C25-C36)	92665	10	
C16	4.313	0.001	234912	193097	OR.DIES (C10-C28)	6120242	290	M
C18	4.666	0.000	197550	169796	OR.MOIL (C28-C40)	52501	5	
C20	4.988	0.001	128439	118098				
C22	5.287	0.003	43571	49162	STODDARD (C8-C12)	831266	30	
C24	5.588	-0.005	6464	2375				
C25	5.750	-0.003	3111	2018				
C26	5.917	0.005	1451	531				
C28	6.228	-0.003	345	141				
C32	6.834	-0.008	115	38				
C34	7.126	-0.003	64	32	CREOSOT (C8-C22)	5232540	818	
Filter Peak	----							
C36	7.399	-0.001	106	21	BUNKERC (C10-C38)	6161711	713	
o-terph	4.754	-0.001	1718490	874673	JET-A (C10-C18)	4429213	279	
Triacon Surr	6.551	-0.002	134	101	IT.MOIL (C24-C40)	120653	6	

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	874673	43.9	97.5
Triacontane	101	0.0	0.0

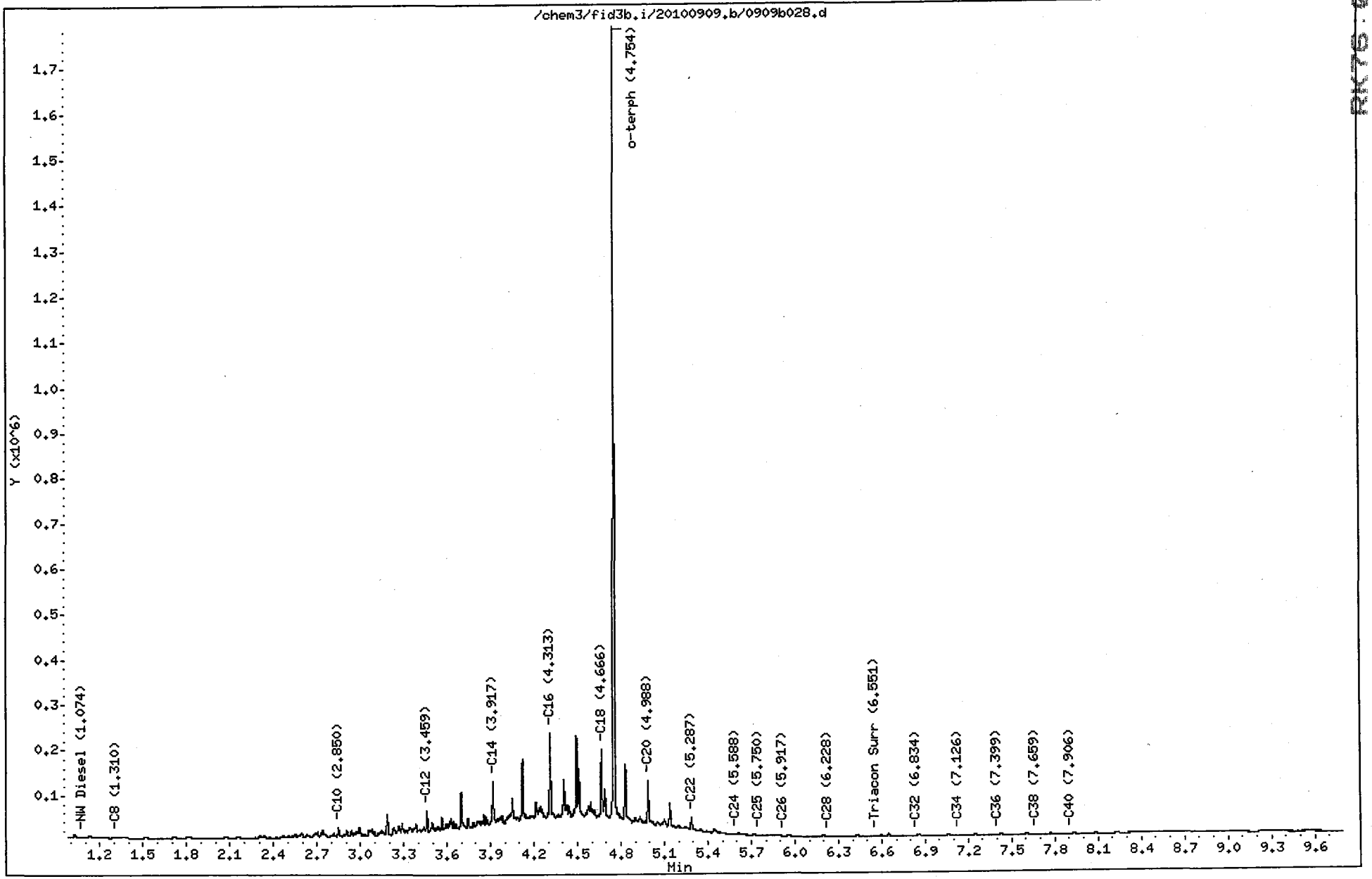
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b028.d
Date : 09-SEP-2010 21:08
Client ID:
Sample Info: DIESEL#3

Instrument: fid3b.i

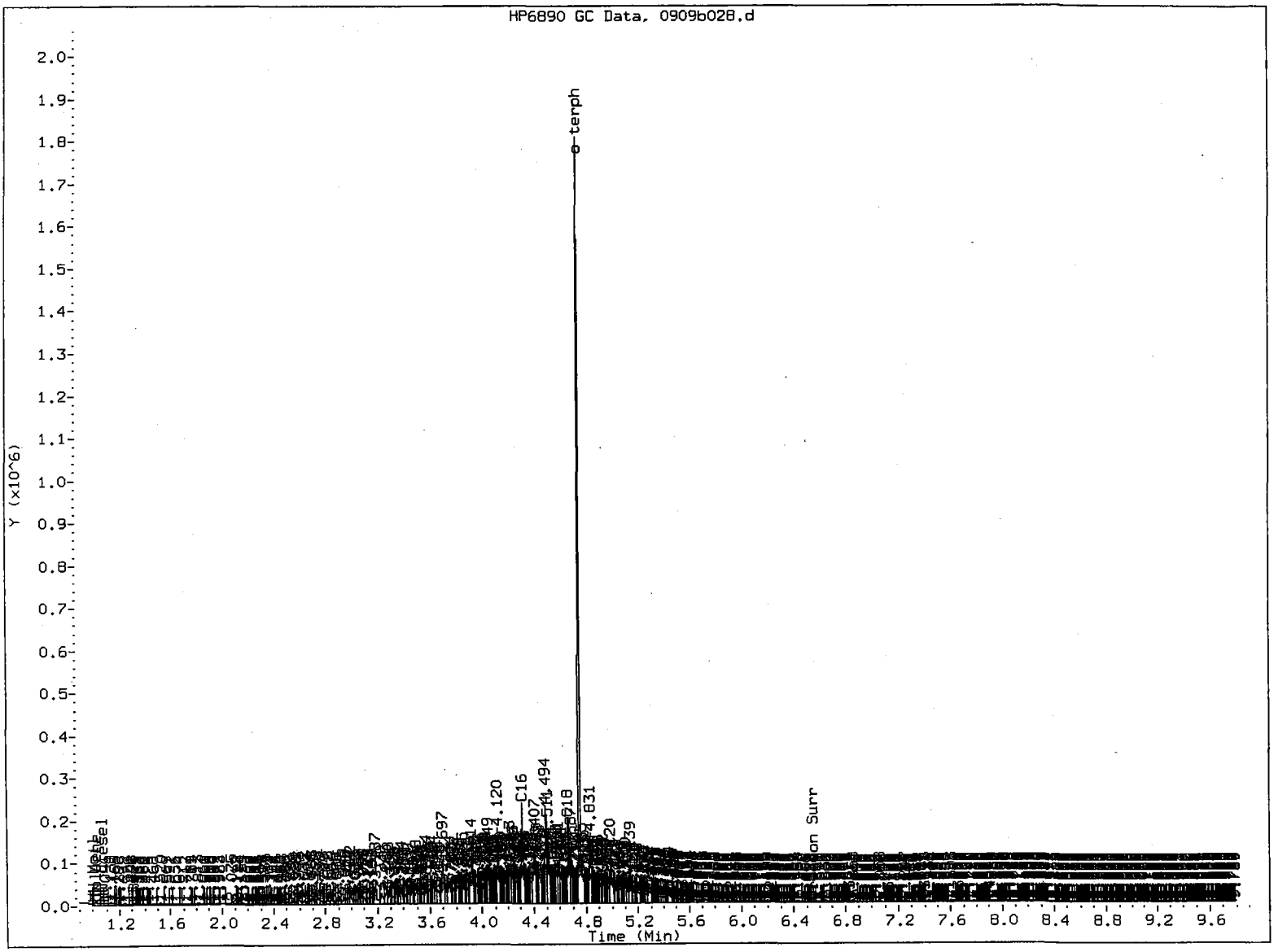
Operator: MS
Column diameter: 0.25

Column phase: ZB-1HT



RK76-09161

FID:3B-2C/RTX-1 DIESEL#3 FID:3B SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 9/16/10

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b029.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/16/2010
Macro: FID:3B083010

ARI ID: MOIL#3
Client ID:
Injection: 09-SEP-2010 21:27
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.020	0.000	5158	7678	GAS (Tol-C12)	146239	3	
C8	1.299	-0.007	1565	907	DIESEL (C12-C24)	844457	39	
C10	2.854	0.006	1230	1369	M.OIL (C24-C38)	5896727	488	
C12	3.455	-0.004	2373	1873	AK-102 (C10-C25)	1003112	42	
C14	3.919	0.003	1420	338	AK-103 (C25-C36)	5171843	579	M
C16	4.312	0.000	1276	373	OR.DIES (C10-C28)	2413112	114	
C18	4.661	-0.006	1614	317	OR.MOIL (C28-C40)	4803777	426	M
C20	4.993	0.005	5632	2922				
C22	5.283	-0.002	16178	6002	STODDARD (C8-C12)	109432	4	
C24	5.593	0.001	28690	11064				
C25	5.752	-0.001	33983	8031				
C26	5.915	0.002	39849	11647				
C28	6.231	0.000	47483	8424				
C32	6.841	-0.001	59745	11689				
C34	7.130	0.002	60538	15151	CREOSOT (C8-C22)	400566	63	
Filter Peak	----							
C36	7.401	0.001	51218	8031	BUNKERC (C10-C38)	6803017	787	
o-terph	4.755	0.000	14422	16014	JET-A (C10-C18)	183079	12	
Triacon Surr	6.548	-0.005	909049	791707	IT.MOIL (C24-C40)	7102307	331	

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	16014	0.8	1.8
Triacontane	791707	47.3	105.2

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

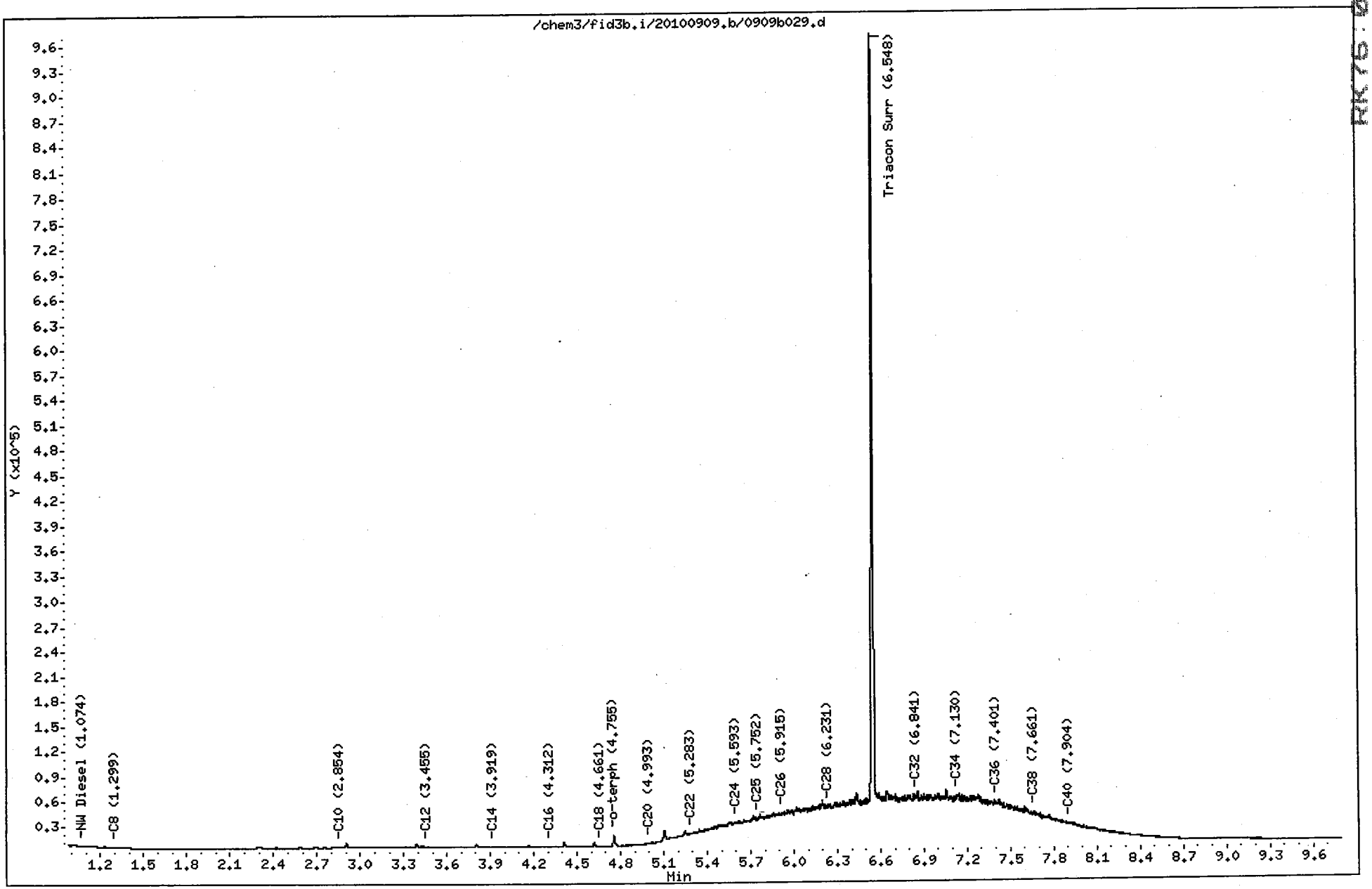
Data File: /chem3/fid3b.i/20100909.b/0909b029.d
Date : 09-SEP-2010 21:27
Client ID:
Sample Info: MOIL#3

Column phase: ZB-1HT

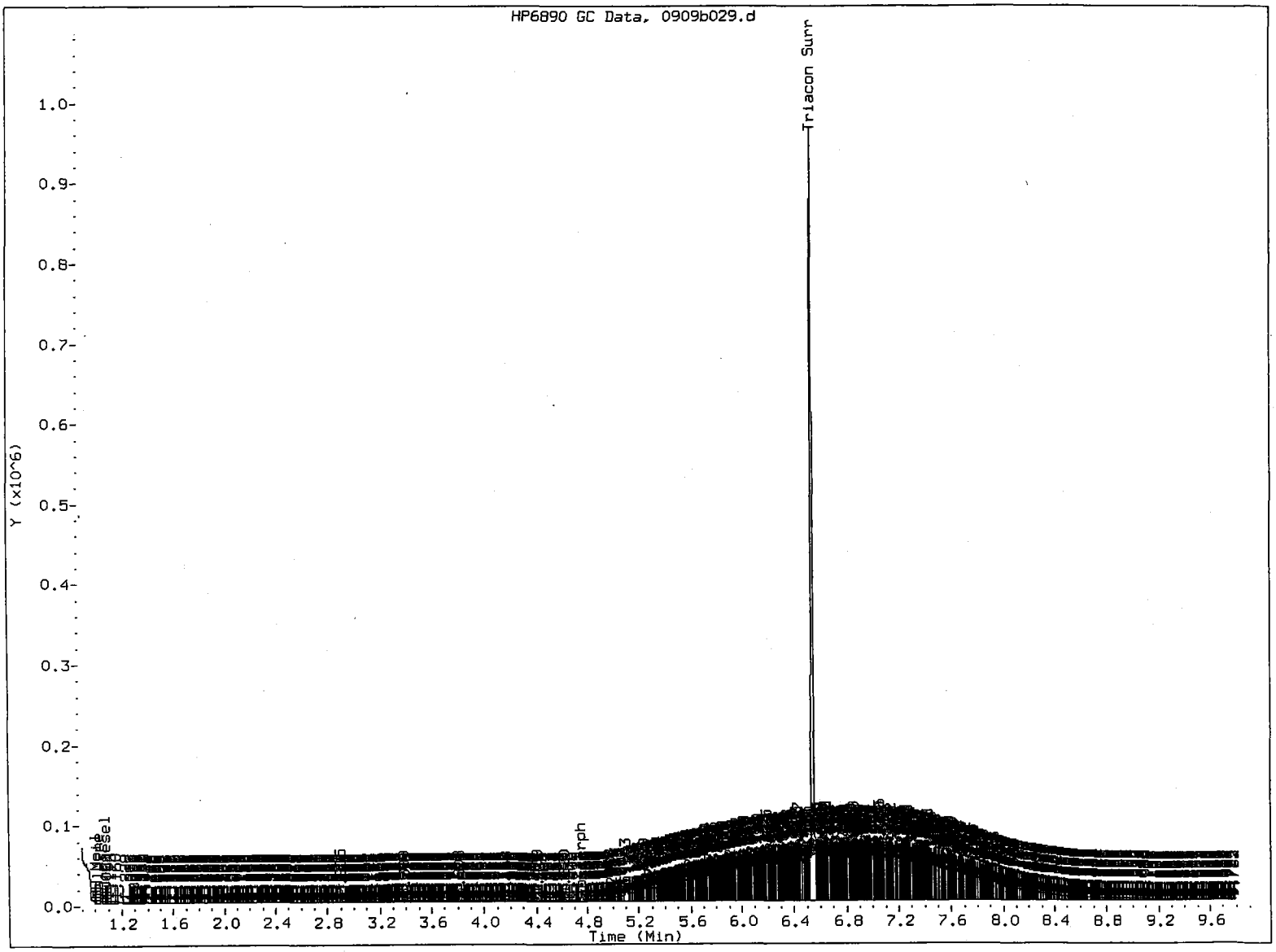
Instrument: fid3b.i

Operator: MS
Column diameter: 0.25

RK7G-99197



FID:3B-2C/RTX-1 MOIL#3 FID:3B SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 9/16/[illegible]

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b030.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/15/2010
Macro: FID:3B083010

ARI ID: RK76MBS1
Client ID: RK76MBS1
Injection: 09-SEP-2010 21:45
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.020	0.000	5647	9223	GAS (Tol-C12)	366531	8
C8	1.314	0.008	2377	2656	DIESEL (C12-C24)	279667	13
C10	2.853	0.005	4102	3747	M.OIL (C24-C38)	84314	7
C12	3.451	-0.008	3011	3062	AK-102 (C10-C25)	400963	17
C14	3.918	0.001	2496	3099	AK-103 (C25-C36)	71326	8
C16	4.319	0.008	2851	2363	OR.DIES (C10-C28)	412856	20
C18	4.665	-0.001	1759	413	OR.MOIL (C28-C40)	86323	8
C20	4.983	-0.004	1888	1104			
C22	5.285	0.000	1148	543	STODDARD (C8-C12)	325122	12
C24	5.588	-0.005	480	117			
C25	5.753	0.000	380	136			
C26	5.913	0.000	368	91			
C28	6.232	0.001	761	1027			
C32	6.841	-0.002	811	265			
C34	7.128	0.000	893	657	CREOSOT (C8-C22)	267986	42
Filter Peak	----						
C36	7.405	0.005	744	175	BUNKERC (C10-C38)	484087	56
o-terph	4.754	-0.001	1559375	881163	JET-A (C10-C18)	324574	20
Triacon Surr	6.547	-0.006	787932	750204	IT.MOIL (C24-C40)	849611	40

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	881163	44.2	98.2
Triacontane	750204	44.9	99.7

9/16/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b030.d

Date : 09-SEP-2010 21:45

Client ID: RK76MBS1

Sample Info: RK76MBS1

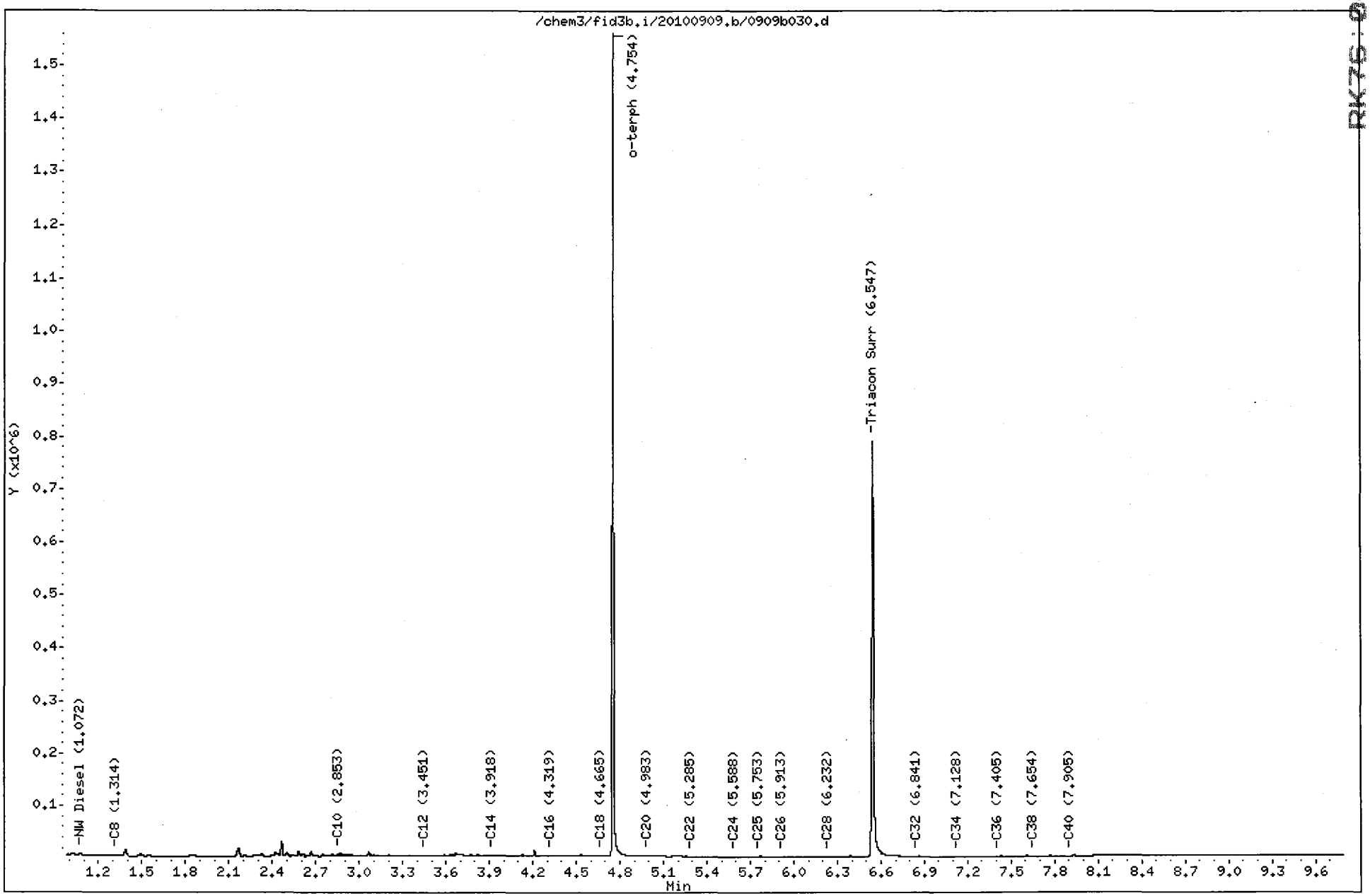
Column phase: ZB-1HT

Instrument: fid3b.i

Operator: MS

Column diameter: 0.25

RK76-001 78



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b031.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/15/2010
Macro: FID:3B083010

ARI ID: RK76LCSS1
Client ID: RK76LCSS1
Injection: 09-SEP-2010 22:04
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.022	0.003	17190	21961	GAS (Tol-C12)	3321268	74
C8	1.310	0.005	5031	7598	DIESEL (C12-C24)	24506021	1145
C10	2.850	0.002	109738	79121	M.OIL (C24-C38)	309307	26
C12	3.459	0.001	325767	229583	AK-102 (C10-C25)	27159815	1127 M
C14	3.918	0.001	639474	429895	AK-103 (C25-C36)	237208	27
C16	4.314	0.003	1150025	926251	OR.DIES (C10-C28)	27346169	1297 M
C18	4.670	0.004	948185	839957	OR.MOIL (C28-C40)	58714	5
C20	4.989	0.002	639195	581326			
C22	5.286	0.001	265153	230334	STODDARD (C8-C12)	3256184	118
C24	5.593	0.001	71422	82454			
C25	5.753	0.000	28566	31674			
C26	5.917	0.005	12135	17140			
C28	6.233	0.002	2678	2725			
C32	6.841	-0.001	330	67			
C34	7.130	0.001	697	857	CREOSOT (C8-C22)	23673670	3701
Filter Peak	----						
C36	7.408	0.008	103	33	BUNKERC (C10-C38)	27399791	3170
o-terph	4.755	0.001	1442493	777953	JET-A (C10-C18)	19702678	1243
Triacon Surr	6.547	-0.006	685493	660317	IT.MOIL (C24-C40)	974716	45

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	777953	39.0	86.7
Triacontane	660317	39.5	87.7

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b031.d

Date : 09-SEP-2010 22:04

Client ID: RK76LCSS1

Sample Info: RK76LCSS1

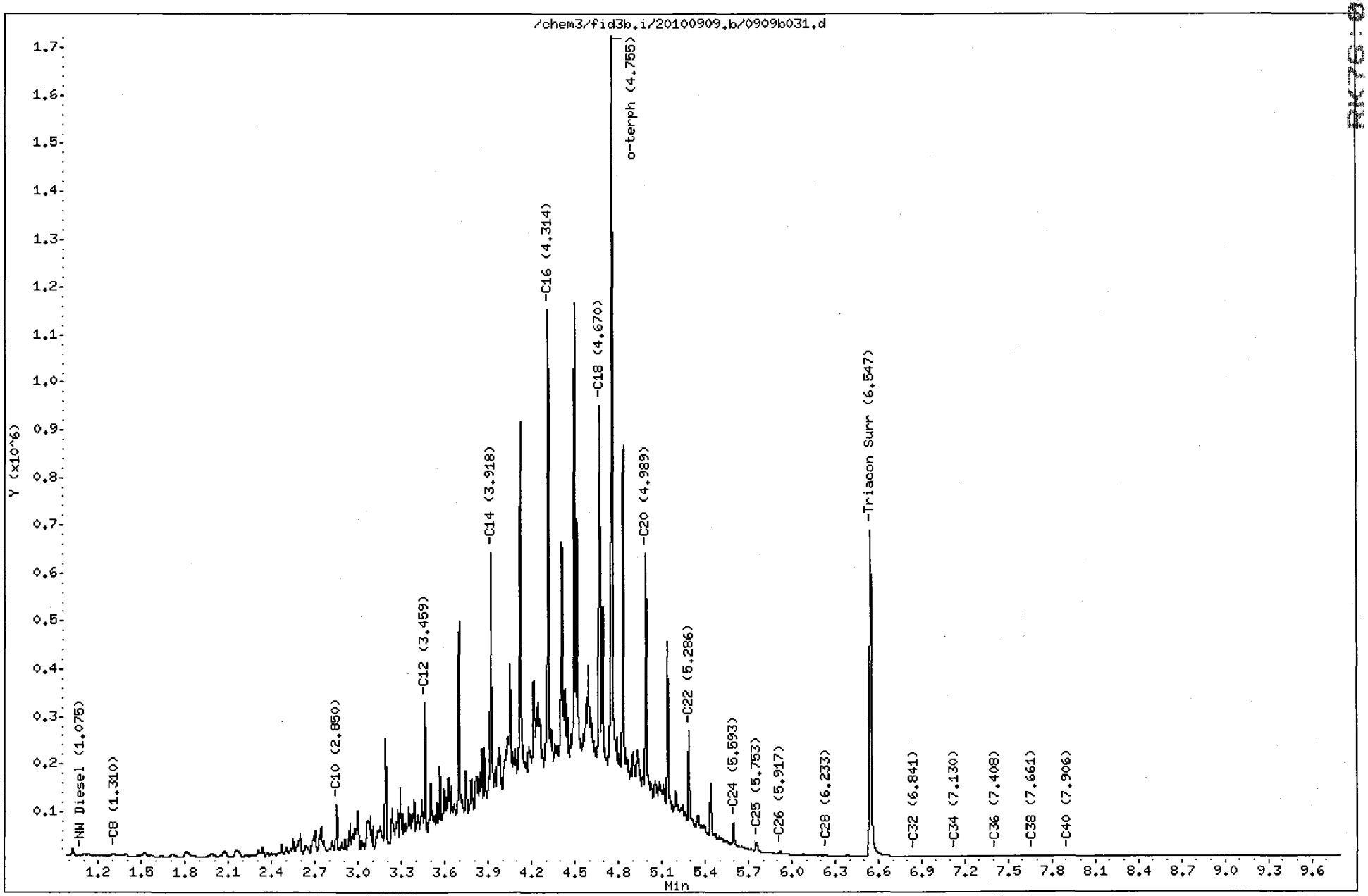
Column phase: ZB-1HT

Instrument: fid3b.i

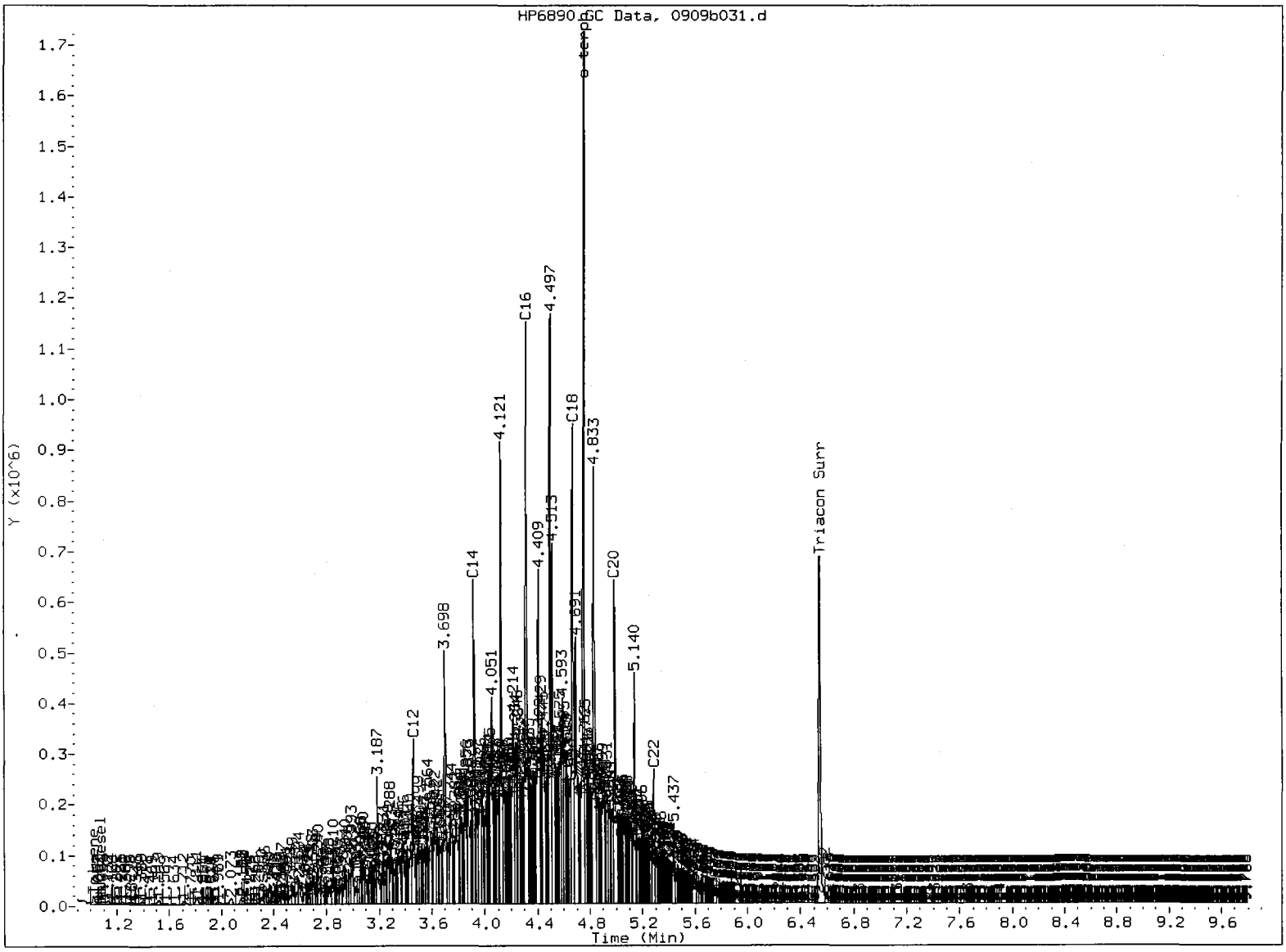
Operator: MS

Column diameter: 0.25

RK76-001172



FID:3B-2C/RTX-1 RK76LCSS1 FID:3B SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 9/16/10

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b032.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/15/2010
Macro: FID:3B083010

ARI ID: RK76E
Client ID: PSB25-14-15-082510
Injection: 09-SEP-2010 22:23
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.024	0.005	8816	16658	GAS (Tol-C12)	332014	7
C8	1.294	-0.012	2329	3823	DIESEL (C12-C24)	333203	16
C10	2.853	0.005	3926	3504	M.OIL (C24-C38)	204902	17
C12	3.453	-0.005	2997	3517	AK-102 (C10-C25)	456549	19
C14	3.919	0.002	2281	1719	AK-103 (C25-C36)	182083	20
C16	4.309	-0.002	2206	694	OR.DIES (C10-C28)	512280	24
C18	4.666	0.000	3457	2573	OR.MOIL (C28-C40)	158172	14
C20	4.984	-0.003	2552	1708			
C22	5.286	0.001	1865	624	STODDARD (C8-C12)	280958	10
C24	5.588	-0.004	1519	234			
C25	5.754	0.001	1701	1029			
C26	5.905	-0.007	1557	597			
C28	6.234	0.003	2768	3819			
C32	6.847	0.005	1640	856			
C34	7.130	0.001	1237	287	CREOSOT (C8-C22)	303396	47
Filter Peak	----						
C36	7.399	-0.001	1141	331	BUNKERC (C10-C38)	655847	76
o-terph	4.753	-0.001	1507520	888873	JET-A (C10-C18)	332896	21
Triacon Surr	6.550	-0.003	793433	725890	IT.MOIL (C24-C40)	945396	44

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	888873	44.6	99.1
Triacontane	725890	43.4	96.4

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b032.d

Date : 09-SEP-2010 22:23

Client ID: PSB25-14-15-082510

Sample Info: RK76E

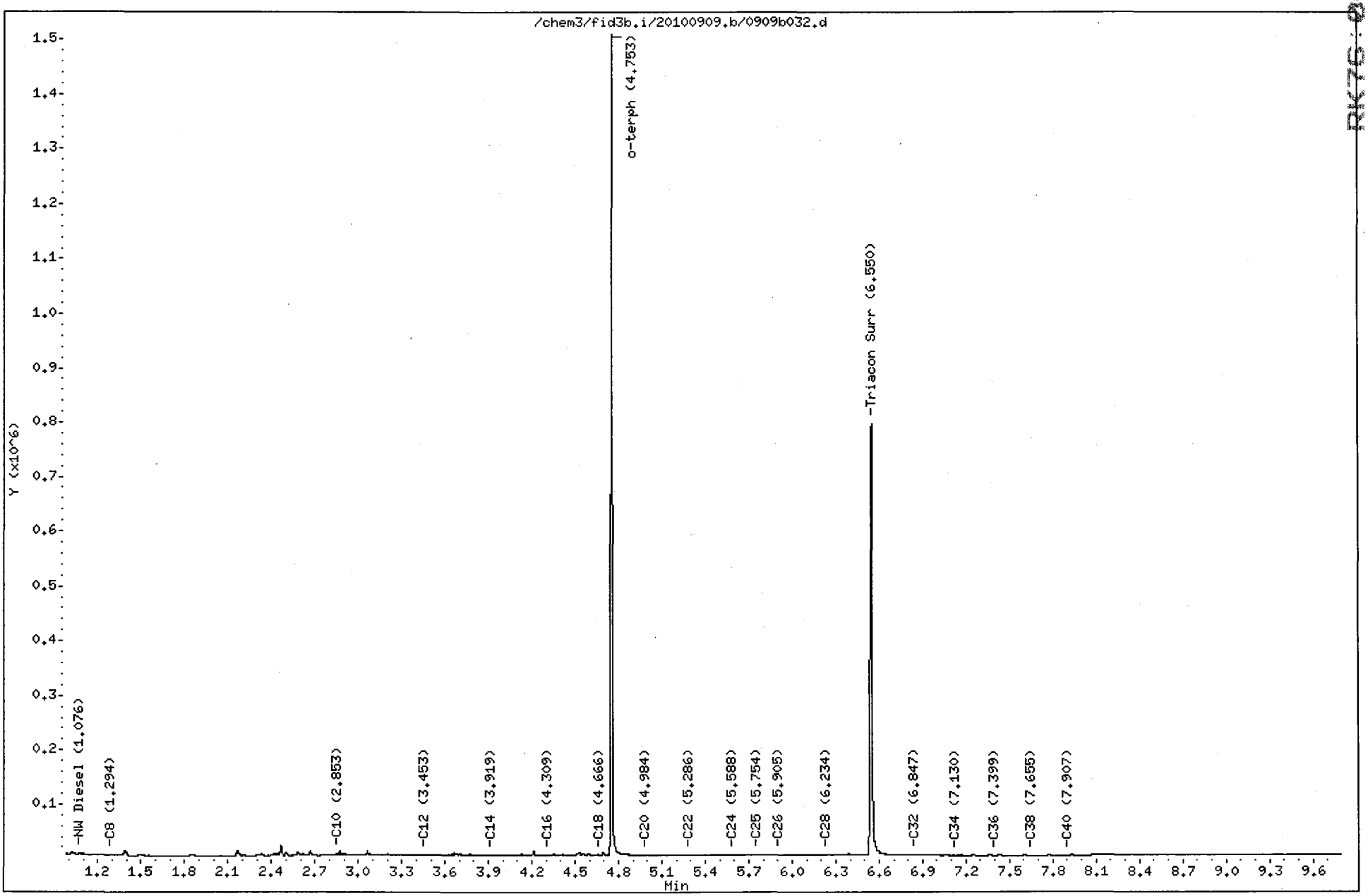
Column phase: ZB-1HT

Instrument: fid3b.i

Operator: MS

Column diameter: 0.25

RK76-091675



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b033.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/15/2010
Macro: FID:3B083010

ARI ID: RK76F
Client ID: PSB25-18-20-082510
Injection: 09-SEP-2010 22:42
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.025	0.005	6875	7545	GAS (Tol-C12)	237748	5
C8	1.315	0.009	1930	1147	DIESEL (C12-C24)	372473	17
C10	2.853	0.005	2709	3501	M.OIL (C24-C38)	144955	12
C12	3.454	-0.005	2987	1876	AK-102 (C10-C25)	477850	20
C14	3.911	-0.005	2843	3298	AK-103 (C25-C36)	127230	14
C16	4.317	0.006	4510	3703	OR.DIES (C10-C28)	514132	24
C18	4.667	0.000	2591	607	OR.MOIL (C28-C40)	119750	11
C20	4.985	-0.002	2375	1932			
C22	5.281	-0.004	1699	1302	STODDARD (C8-C12)	195008	7
C24	5.595	0.002	1231	441			
C25	5.755	0.002	1425	815			
C26	5.910	-0.003	1124	587			
C28	6.234	0.003	1822	1214			
C32	6.848	0.006	1275	620			
C34	7.129	0.001	1092	597	CREOSOT (C8-C22)	350223	55
Filter Peak	----						
C36	7.402	0.002	934	341	BUNKERC (C10-C38)	619317	72
o-terph	4.753	-0.002	1578793	907914	JET-A (C10-C18)	372625	24
Triacon Surr	6.549	-0.005	816633	748039	IT.MOIL (C24-C40)	907559	42

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	907914	45.5	101.2
Triacontane	748039	44.7	99.4

9/14/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b033.d

Date : 09-SEP-2010 22:42

Client ID: PSB25-18-20-082510

Sample Info: RK76F

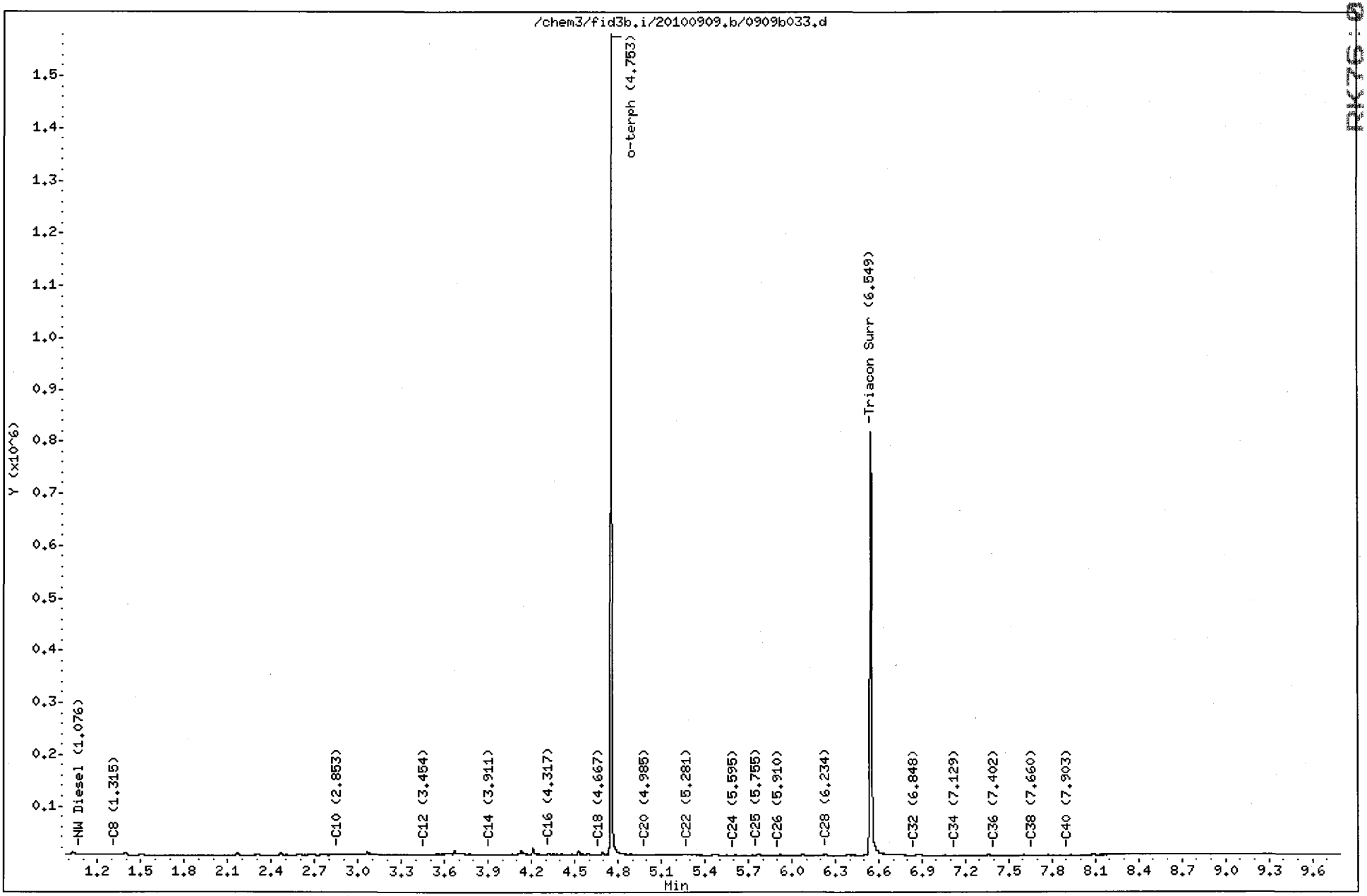
Column phase: ZB-1HT

Instrument: fid3b.i

Operator: MS

Column diameter: 0.25

RK76-090177



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b034.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/15/2010
Macro: FID:3B083010

ARI ID: RK76G
Client ID: PSB25-18-20-082510-
Injection: 09-SEP-2010 23:01
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.025	0.005	12561	19762	GAS (Tol-C12)	324657	7
C8	1.295	-0.011	2147	3027	DIESEL (C12-C24)	341586	16
C10	2.851	0.003	3514	3697	M.OIL (C24-C38)	172687	14
C12	3.452	-0.007	3690	4282	AK-102 (C10-C25)	468175	19
C14	3.913	-0.003	2514	1064	AK-103 (C25-C36)	153921	17
C16	4.316	0.004	2268	609	OR.DIES (C10-C28)	517630	25
C18	4.665	-0.002	2947	1316	OR.MOIL (C28-C40)	133531	12
C20	4.987	0.000	2654	1147			
C22	5.287	0.002	1824	677	STODDARD (C8-C12)	277729	10
C24	5.593	0.001	1404	374			
C25	5.751	-0.002	1705	334			
C26	5.913	0.000	1402	739			
C28	6.231	0.000	2070	601			
C32	6.845	0.002	1411	251			
C34	7.131	0.002	1017	685	CREOSOT (C8-C22)	313238	49
Filter Peak	----						
C36	7.402	0.002	979	671	BUNKERC (C10-C38)	636061	74
o-terph	4.754	-0.001	1566887	913203	JET-A (C10-C18)	348723	22
Triacon Surr	6.547	-0.006	812659	749704	IT.MOIL (C24-C40)	937491	44

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	913203	45.8	101.8
Triacontane	749704	44.8	99.6

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

9/16/10

Data File: /chem3/fid3b.i/20100909.b/0909b034.d

Date : 09-SEP-2010 23:01

Client ID: PSB25-18-20-082510-

Sample Info: RK76G

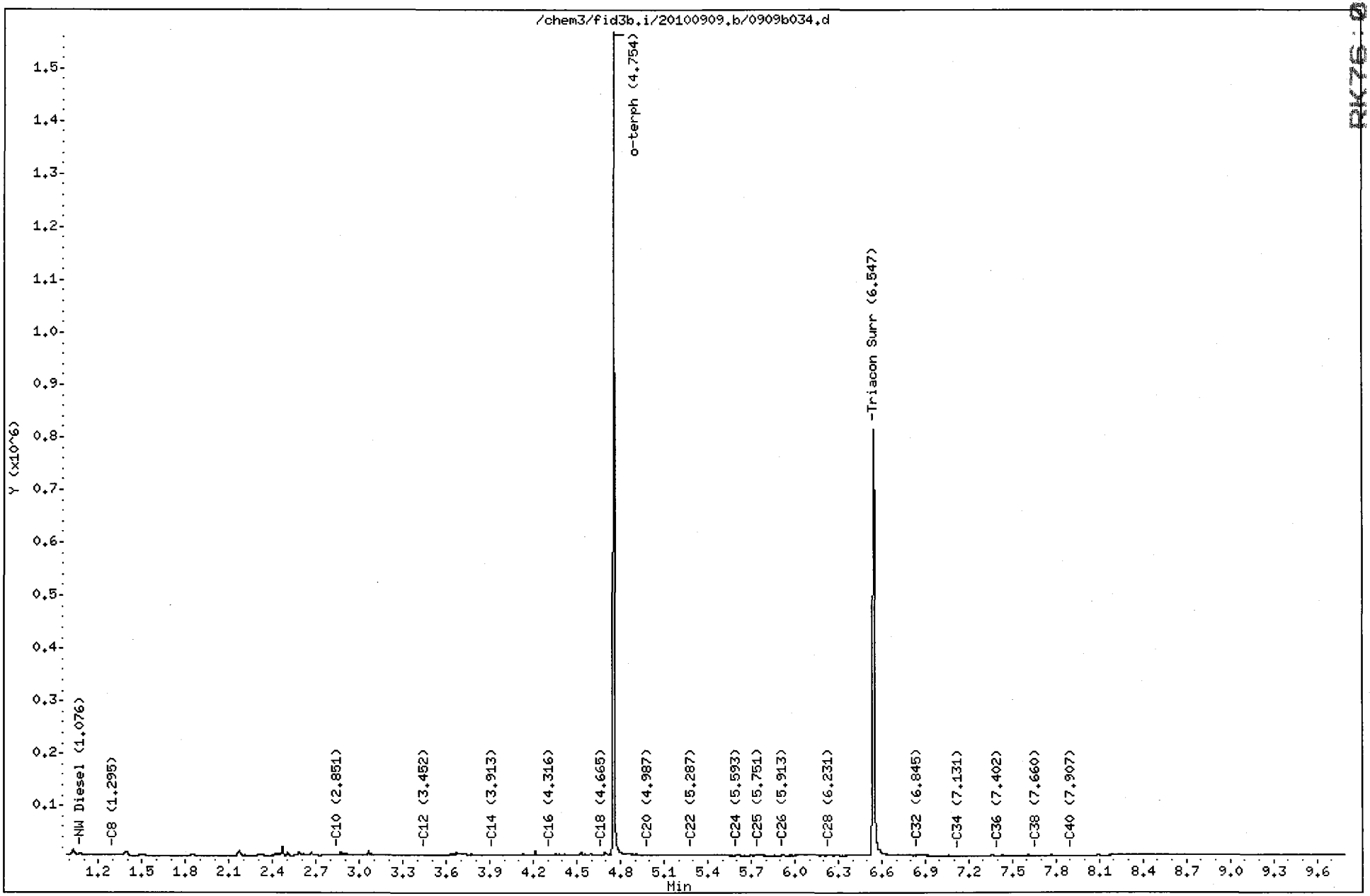
Column phase: ZB-1HT

Instrument: fid3b.i

Operator: MS

Column diameter: 0.25

RK76-091179



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b035.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/15/2010
Macro: FID:3B083010

ARI ID: RK76K
Client ID: PSB26-14-15-082510
Injection: 09-SEP-2010 23:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.025	0.005	9543	18295	GAS (Tol-C12)	341112	8
C8	1.294	-0.012	2349	4010	DIESEL (C12-C24)	236007	11
C10	2.843	-0.005	2239	1563	M.OIL (C24-C38)	100588	8
C12	3.454	-0.005	2655	1815	AK-102 (C10-C25)	347711	14
C14	3.914	-0.003	1773	528	AK-103 (C25-C36)	90298	10
C16	4.304	-0.008	1461	634	OR.DIES (C10-C28)	363244	17
C18	4.664	-0.003	1163	138	OR.MOIL (C28-C40)	94515	8
C20	4.991	0.004	1558	1256			
C22	5.284	-0.001	916	1051	STODDARD (C8-C12)	291894	11
C24	5.595	0.002	552	127			
C25	5.752	-0.001	383	67			
C26	5.913	0.000	512	312			
C28	6.230	-0.001	929	644			
C32	6.840	-0.002	876	451			
C34	7.132	0.004	1206	2171	CREOSOT (C8-C22)	226027	35
Filter Peak	----						
C36	7.402	0.002	577	248	BUNKERC (C10-C38)	447334	52
o-terph	4.753	-0.002	1391850	822260	JET-A (C10-C18)	282546	18
Triacon Surr	6.547	-0.006	724350	579798	IT.MOIL (C24-C40)	690812	32

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	822260	41.2	91.7
Triacontane	579798	34.7	77.0

9/16/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b035.d

Date : 09-SEP-2010 23:20

Client ID: PSB26-14-15-082510

Sample Info: RK76K

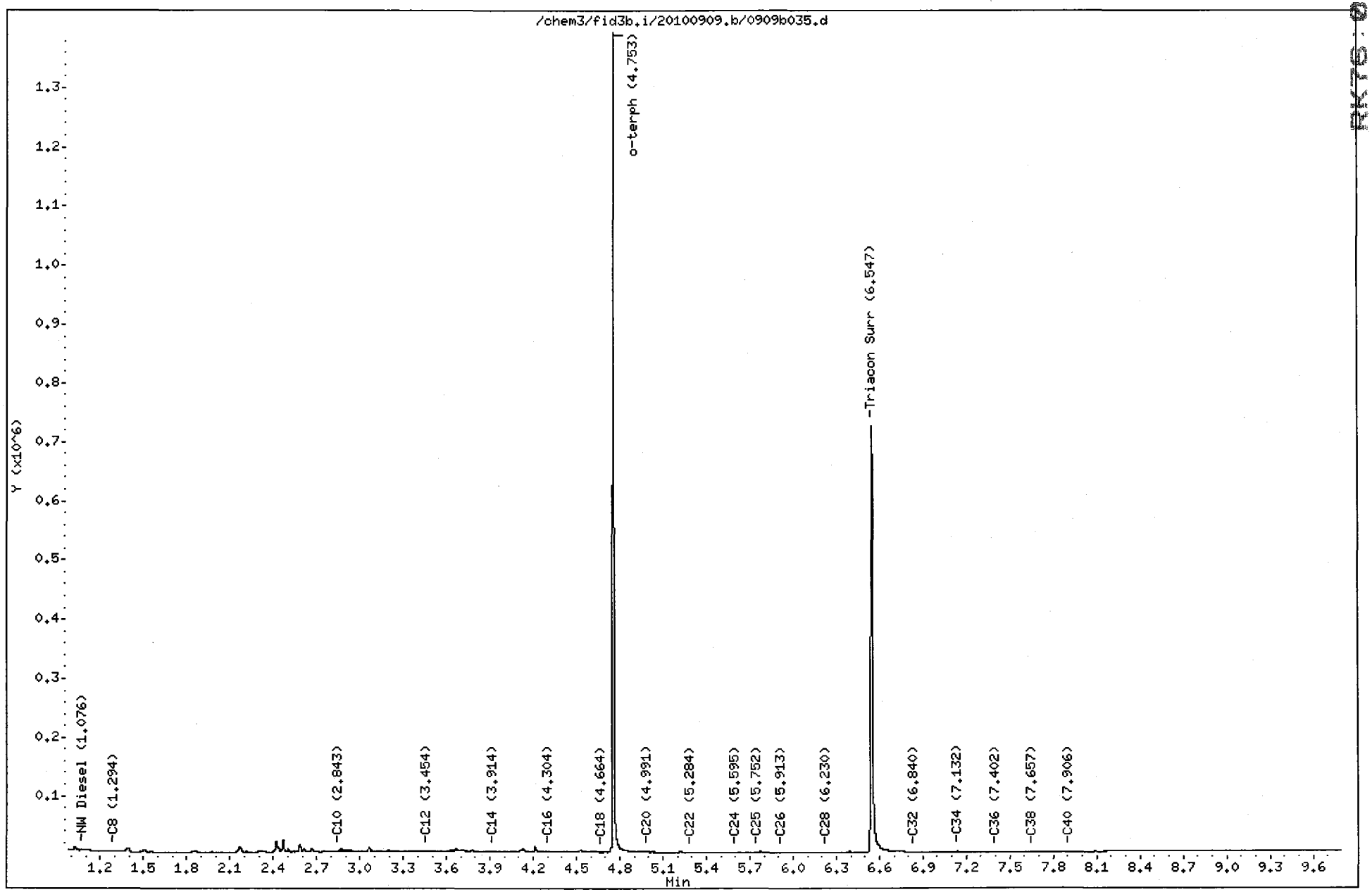
Column phase: ZB-1HT

Instrument: fid3b.i

Operator: MS

Column diameter: 0.25

RK76-00181



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b036.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/15/2010
Macro: FID:3B083010

ARI ID: RK76KMS
Client ID: PSB26-14-15-082 MS
Injection: 09-SEP-2010 23:39
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.023	0.003	20020	26327	GAS (Tol-C12)	3745589	83
C8	1.303	-0.003	5633	14283	DIESEL (C12-C24)	25741436	1203
C10	2.849	0.001	122434	89649	M.OIL (C24-C38)	321141	27
C12	3.460	0.001	355307	244832	AK-102 (C10-C25)	28717362	1191 M
C14	3.918	0.001	661196	563961	AK-103 (C25-C36)	252103	28
C16	4.315	0.003	1229723	951403	OR.DIES (C10-C28)	28916618	1371 M
C18	4.669	0.003	1030495	864295	OR.MOIL (C28-C40)	57205	5
C20	4.989	0.002	671442	563786			
C22	5.287	0.002	284176	260861	STODDARD (C8-C12)	3679916	133
C24	5.594	0.002	76341	87955			
C25	5.753	0.000	29063	29202			
C26	5.916	0.004	13049	12888			
C28	6.231	0.000	3066	3585			
C32	6.843	0.001	421	119			
C34	7.130	0.002	418	338	CREOSOT (C8-C22)	24820277	3881
Filter Peak	----						
C36	7.399	-0.001	68	25	BUNKERC (C10-C38)	28970916	3352
o-terph	4.756	0.001	1535421	815510	JET-A (C10-C18)	20966071	1323
Triacon Surr	6.547	-0.006	767361	695317	IT.MOIL (C24-C40)	1019365	47

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	815510	40.9	90.9
Triacontane	695317	41.6	92.4

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b036.d

Date : 09-SEP-2010 23:39

Client ID: PSB26-14-15-082 MS

Sample Info: RK76KMS

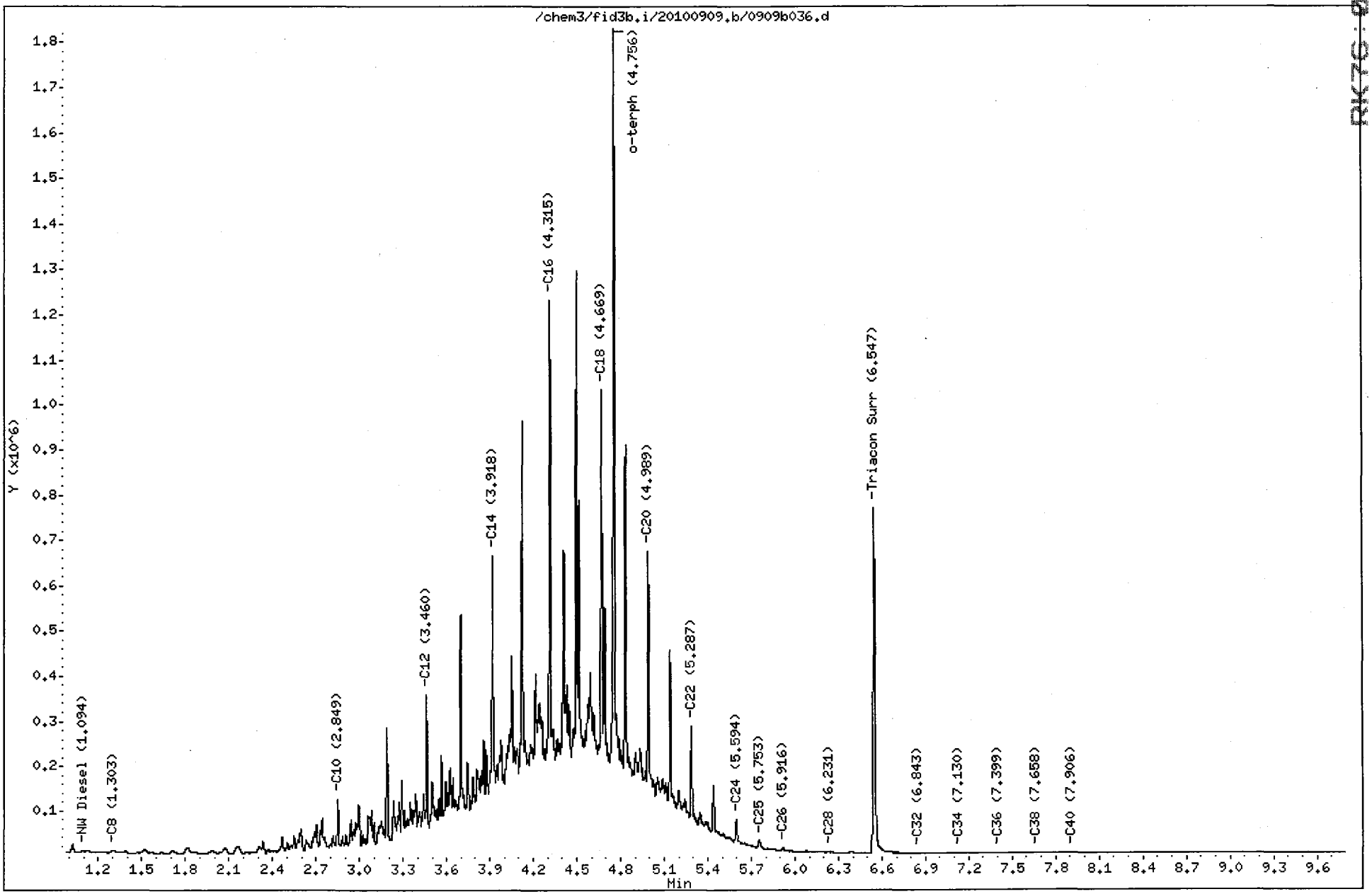
Column phase: ZB-1HT

Instrument: fid3b.i

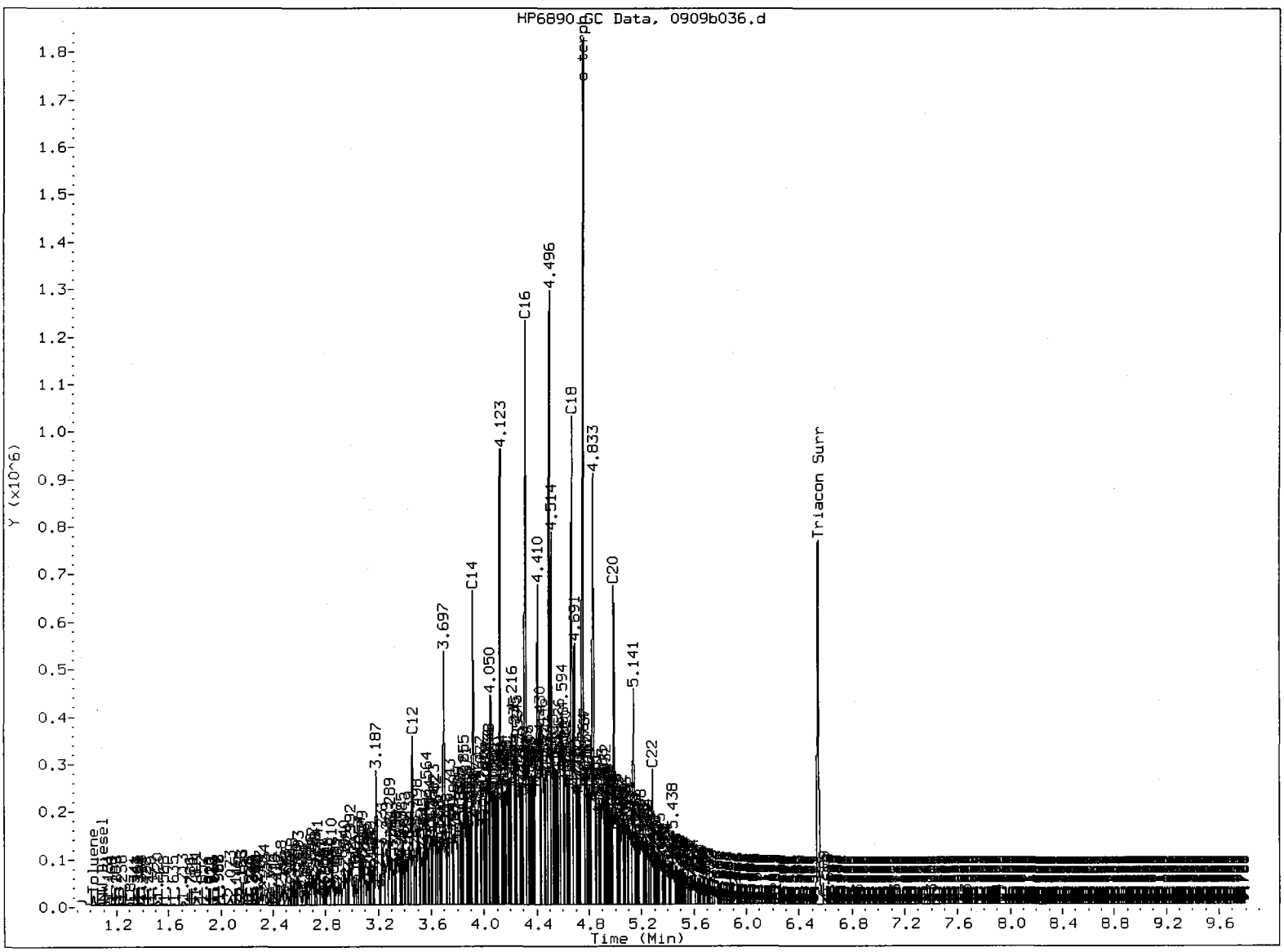
Operator: MS

Column diameter: 0.25

RK76-00183



FID:3B-2C/RTX-1 RK76KMS FID:3B SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 9/16/10

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b037.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/15/2010
Macro: FID:3B083010

ARI ID: RK76KMSD
Client ID: PSB26-14-15-082 MSD
Injection: 09-SEP-2010 23:58
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.020	0.001	27155	29623	GAS (Tol-C12)	3729588	83	
C8	1.307	0.001	5617	4073	DIESEL (C12-C24)	26005016	1215	
C10	2.849	0.001	121847	88203	M.OIL (C24-C38)	351174	29	
C12	3.460	0.001	371805	249506	AK-102 (C10-C25)	28991622	1203	M
C14	3.918	0.002	634904	572305	AK-103 (C25-C36)	284590	32	
C16	4.313	0.002	1243075	987972	OR.DIES (C10-C28)	29214335	1385	M
C18	4.669	0.002	1058752	834534	OR.MOIL (C28-C40)	69292	6	
C20	4.990	0.002	685159	641301				
C22	5.286	0.001	297630	244665	STODDARD (C8-C12)	3657041	132	
C24	5.591	-0.001	73642	91385				
C25	5.753	0.000	31121	54694				
C26	5.914	0.002	13400	15795				
C28	6.230	0.000	3148	3872				
C32	6.846	0.004	588	243				
C34	7.130	0.001	412	192	CREOSOT (C8-C22)	25065855	3919	
Filter Peak	----							
C36	7.397	-0.003	129	53	BUNKERC (C10-C38)	29278970	3388	
o-terph	4.756	0.001	1581202	828668	JET-A (C10-C18)	21077843	1330	
Triacon Surr	6.546	-0.007	704348	623677	IT.MOIL (C24-C40)	979509	46	

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

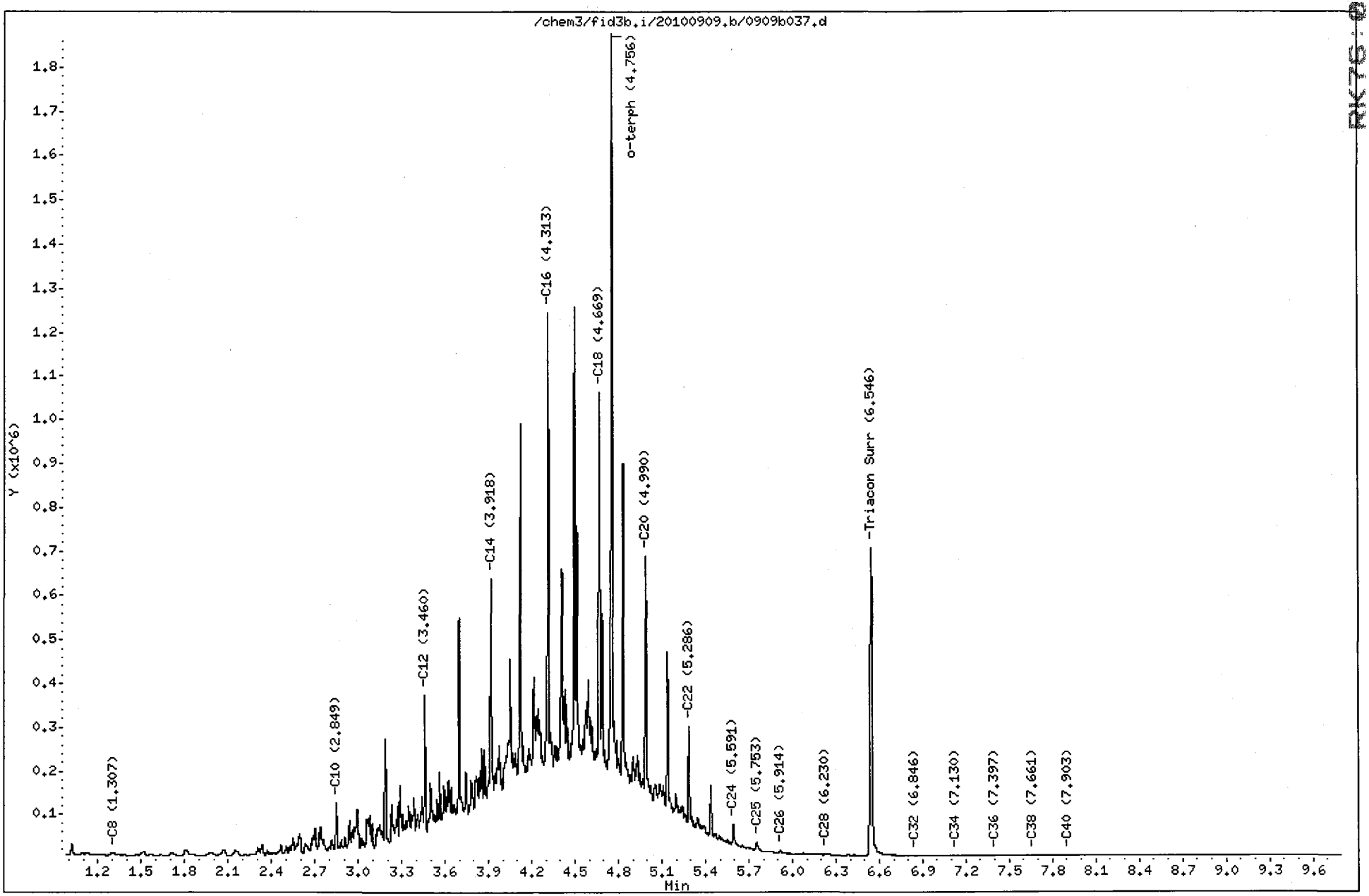
Surrogate	Area	Amount	%Rec
o-Terphenyl	828668	41.6	92.4
Triacontane	623677	37.3	82.9

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

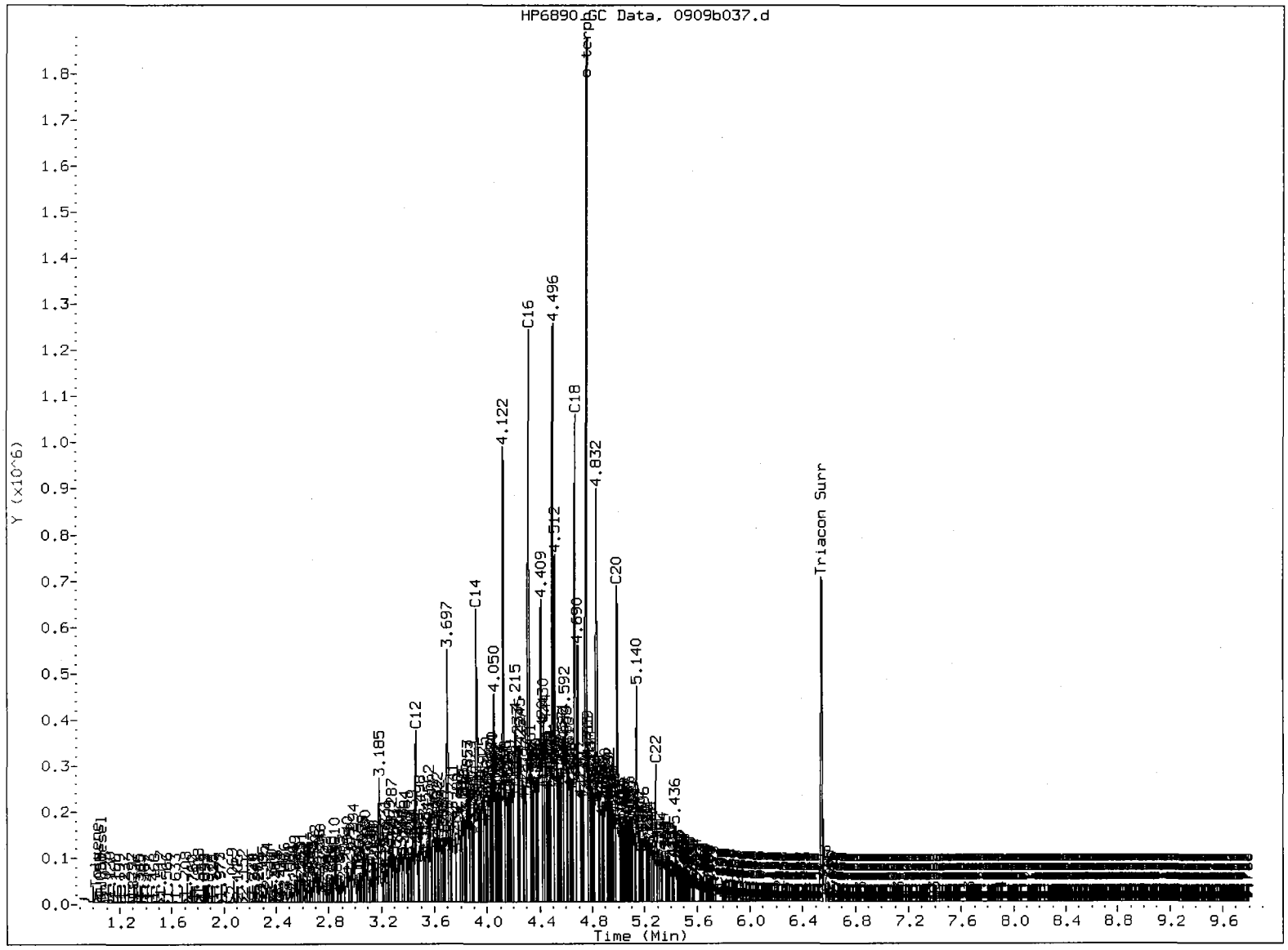
Data File: /chem3/fid3b.i/20100909.b/0909b037.d
Date : 09-SEP-2010 23:58
Client ID: PSB26-14-15-082 MSD
Sample Info: RK76KMSD

Instrument: fid3b.i
Operator: MS
Column phase: ZB-1HT
Column diameter: 0.25

RK76-00186



FID:3B-2C/RTX-1 RK76KMSD FID:3B SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: JM Date: 9/16/10

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b038.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/15/2010
Macro: FID:3B083010

ARI ID: RK76L
Client ID: PSB26-16-18-082510
Injection: 10-SEP-2010 00:17
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.021	0.002	10053	17446	GAS (Tol-C12)	248319	6
C8	1.312	0.007	2088	2349	DIESEL (C12-C24)	240661	11
C10	2.851	0.003	2518	3364	M.OIL (C24-C38)	66292	5
C12	3.453	-0.005	2118	1364	AK-102 (C10-C25)	330592	14
C14	3.917	0.000	1720	575	AK-103 (C25-C36)	58219	7
C16	4.322	0.011	2094	2761	OR.DIES (C10-C28)	335916	16
C18	4.666	-0.001	2048	870	OR.MOIL (C28-C40)	70301	6
C20	4.981	-0.007	1967	2339			
C22	5.285	0.000	820	556	STODDARD (C8-C12)	196671	7
C24	5.592	0.000	286	103			
C25	5.749	-0.004	183	105			
C26	5.912	-0.001	247	121			
C28	6.229	-0.002	540	498			
C32	6.839	-0.003	674	305			
C34	7.127	-0.001	564	232	CREOSOT (C8-C22)	233889	37
Filter Peak	----						
C36	7.402	0.002	445	113	BUNKERC (C10-C38)	396350	46
o-terph	4.753	-0.002	1463509	857741	JET-A (C10-C18)	264101	17
Triacon Surr	6.546	-0.007	670543	704979	IT.MOIL (C24-C40)	781139	36

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	857741	43.0	95.6
Triacontane	704979	42.1	93.7

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b038.d

Date : 10-SEP-2010 00:17

Client ID: PSB26-16-18-082510

Sample Info: RK76L

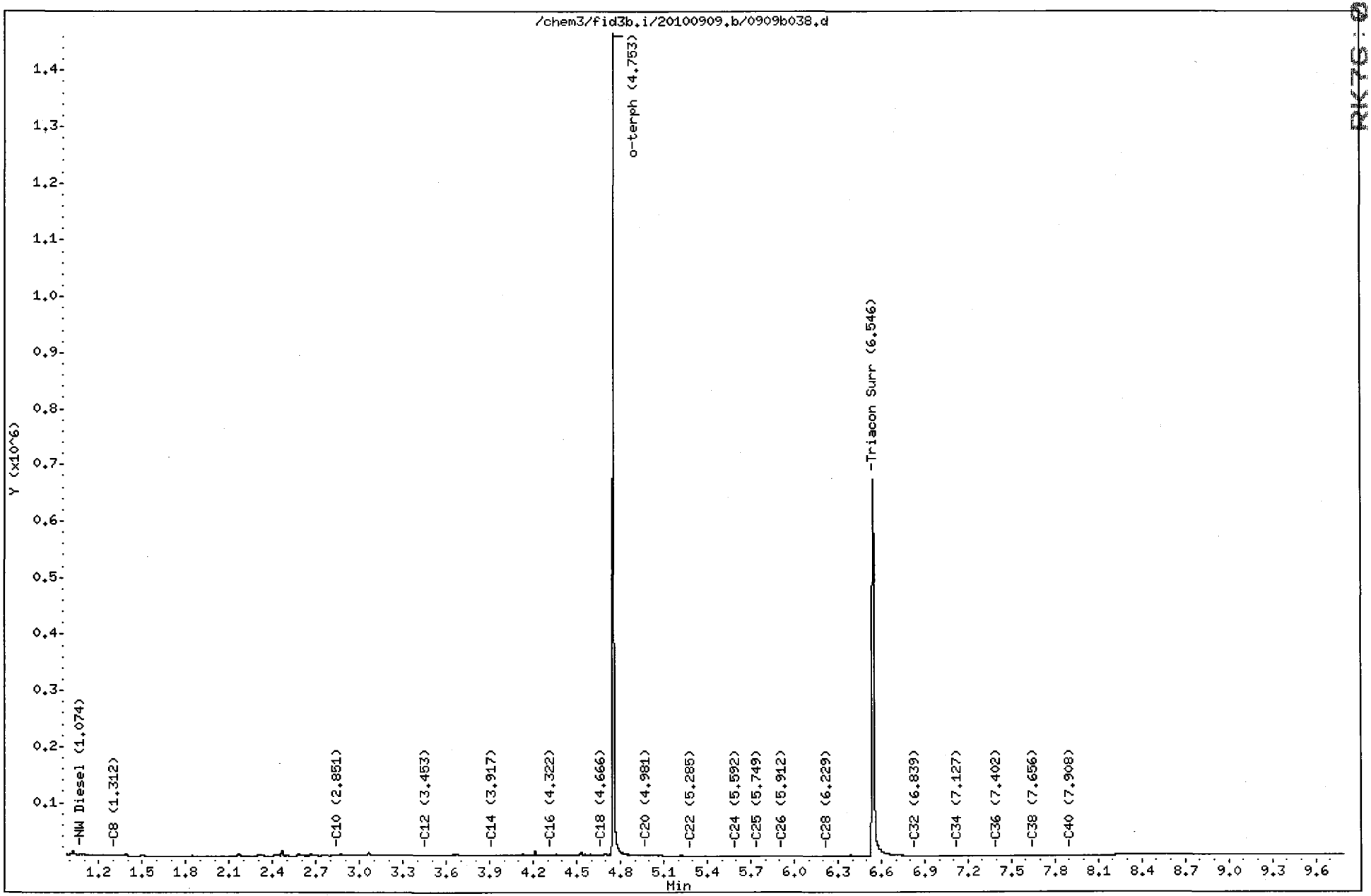
Column phase: ZB-1HT

Instrument: fid3b.i

Operator: MS

Column diameter: 0.25

RK76-00189



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b039.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/16/2010
Macro: FID:3B083010

ARI ID: RK76R
Client ID: PSB27-10-12-082610
Injection: 10-SEP-2010 00:36
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.022	0.002	10221	18903	GAS (Tol-C12)	579536	13	
C8	1.316	0.010	2225	2904	DIESEL (C12-C24)	1018325	48	
C10	2.849	0.001	16444	16646	M.OIL (C24-C38)	1013071	84	
C12	3.466	0.008	4515	1776	AK-102 (C10-C25)	1394369	58	M
C14	3.911	-0.006	3926	1082	AK-103 (C25-C36)	919684	103	M
C16	4.315	0.003	7049	6114	OR.DIES (C10-C28)	1740767	83	M
C18	4.667	0.000	12159	10972	OR.MOIL (C28-C40)	681178	60	M
C20	4.977	-0.011	134814	94151				
C22	5.286	0.001	15608	16962	STODDARD (C8-C12)	532270	19	
C24	5.595	0.003	19364	23146				
C25	5.753	0.000	21709	31627				
C26	5.915	0.003	18855	21458				
C28	6.233	0.002	19475	21751				
C32	6.844	0.001	11607	12037				
C34	7.127	-0.002	7519	4480	CREOSOT (C8-C22)	839446	131	
Filter Peak	----							
C36	7.403	0.003	5577	4580	BUNKERC (C10-C38)	2378249	275	
o-terph	4.753	-0.002	1534080	860437	JET-A (C10-C18)	773136	49	
Triacon Surr	6.548	-0.005	835772	723450	IT.MOIL (C24-C40)	1780216	83	

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	860437	43.2	95.9
Triacontane	723450	43.3	96.1

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

9/16/10

Data File: /chem3/fid3b.i/20100909.b/0909b039.d

Date : 10-SEP-2010 00:36

Client ID: PSB27-10-12-082610

Sample Info: RK76R

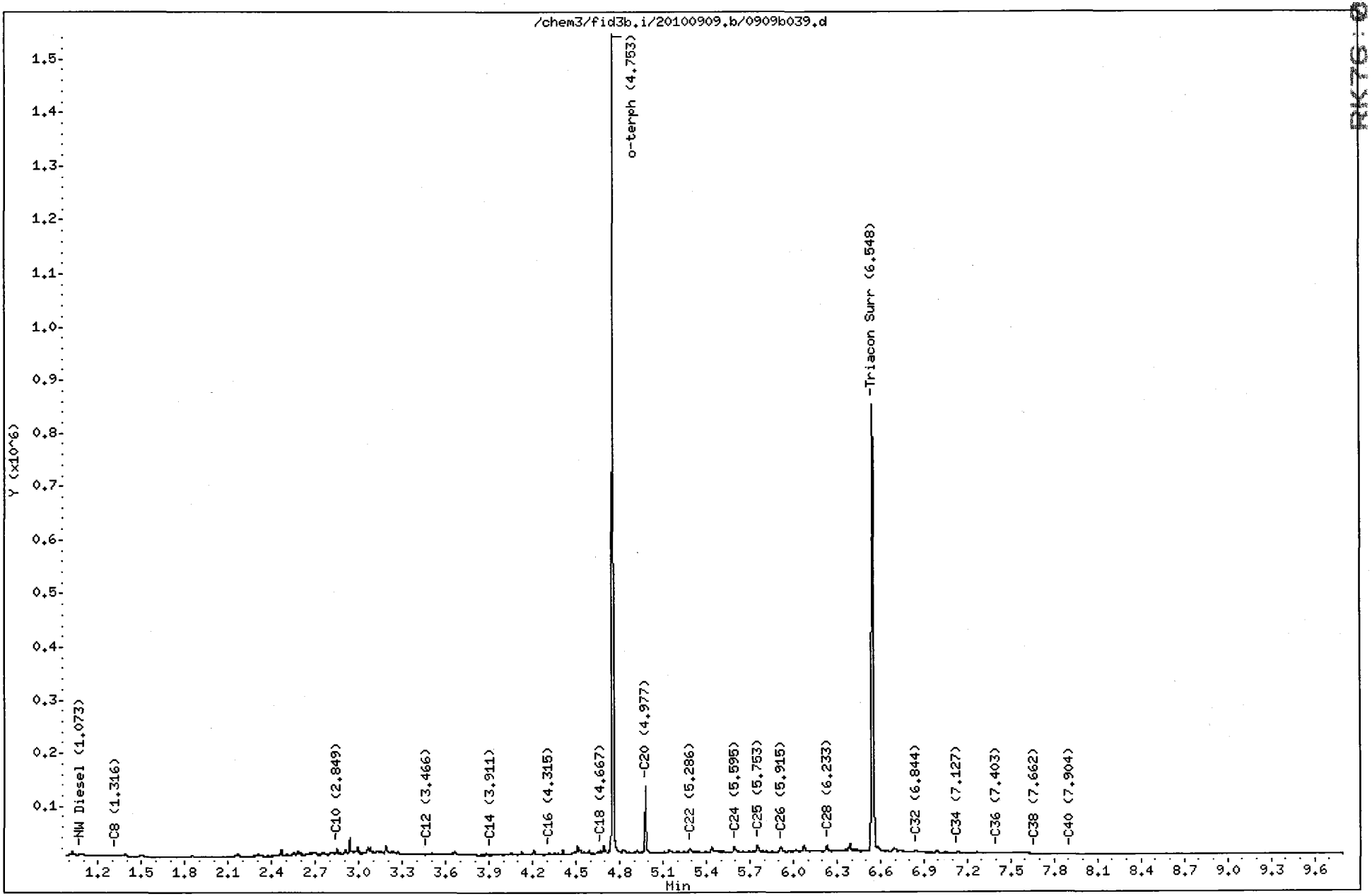
Instrument: fid3b.i

Operator: MS

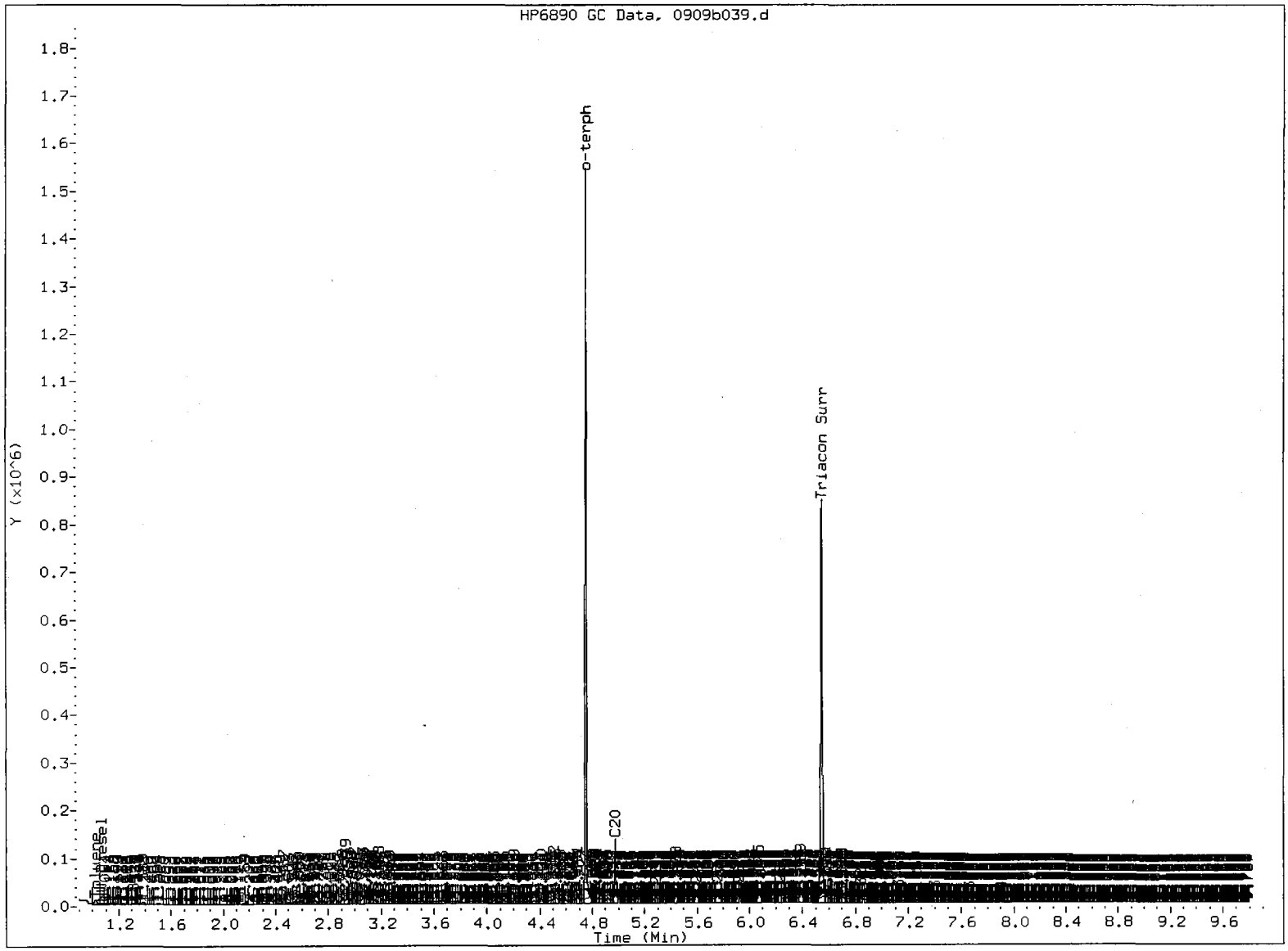
Column phase: ZB-1HT

Column diameter: 0.25

RK76-091



FID:3B-2C/RTX-1 RK76R FID:3B SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 9/16/10

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b040.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/16/2010
Macro: FID:3B083010

ARI ID: DIESEL#4
Client ID:
Injection: 10-SEP-2010 00:55
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.026	0.007	8788	16413	GAS (Tol-C12)	936252	21	
C8	1.304	-0.002	2963	3840	DIESEL (C12-C24)	5450446	255	
C10	2.848	0.000	25995	18925	M.OIL (C24-C38)	112547	9	
C12	3.458	-0.001	63832	47066	AK-102 (C10-C25)	6138490	255	M
C14	3.916	-0.001	123956	116873	AK-103 (C25-C36)	92667	10	
C16	4.312	0.000	238630	227218	OR.DIES (C10-C28)	6194902	294	M
C18	4.666	0.000	204360	166642	OR.MOIL (C28-C40)	49029	4	
C20	4.989	0.002	113974	97614				
C22	5.287	0.002	42889	52846	STODDARD (C8-C12)	882317	32	
C24	5.588	-0.005	6482	3618				
C25	5.753	0.000	3101	1630				
C26	5.914	0.002	1638	1343				
C28	6.231	0.000	385	120				
C32	6.831	-0.011	150	50				
C34	7.131	0.003	53	28	CREOSOT (C8-C22)	5271363	824	
Filter Peak	----							
C36	7.403	0.004	51	6	BUNKERC (C10-C38)	6235492	721	
o-terph	4.755	0.001	1508736	897575	JET-A (C10-C18)	4505757	284	
Triacon Surr	6.551	-0.002	172	75	IT.MOIL (C24-C40)	121061	6	

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	897575	45.0	100.1
Triacontane	75	0.0	0.0

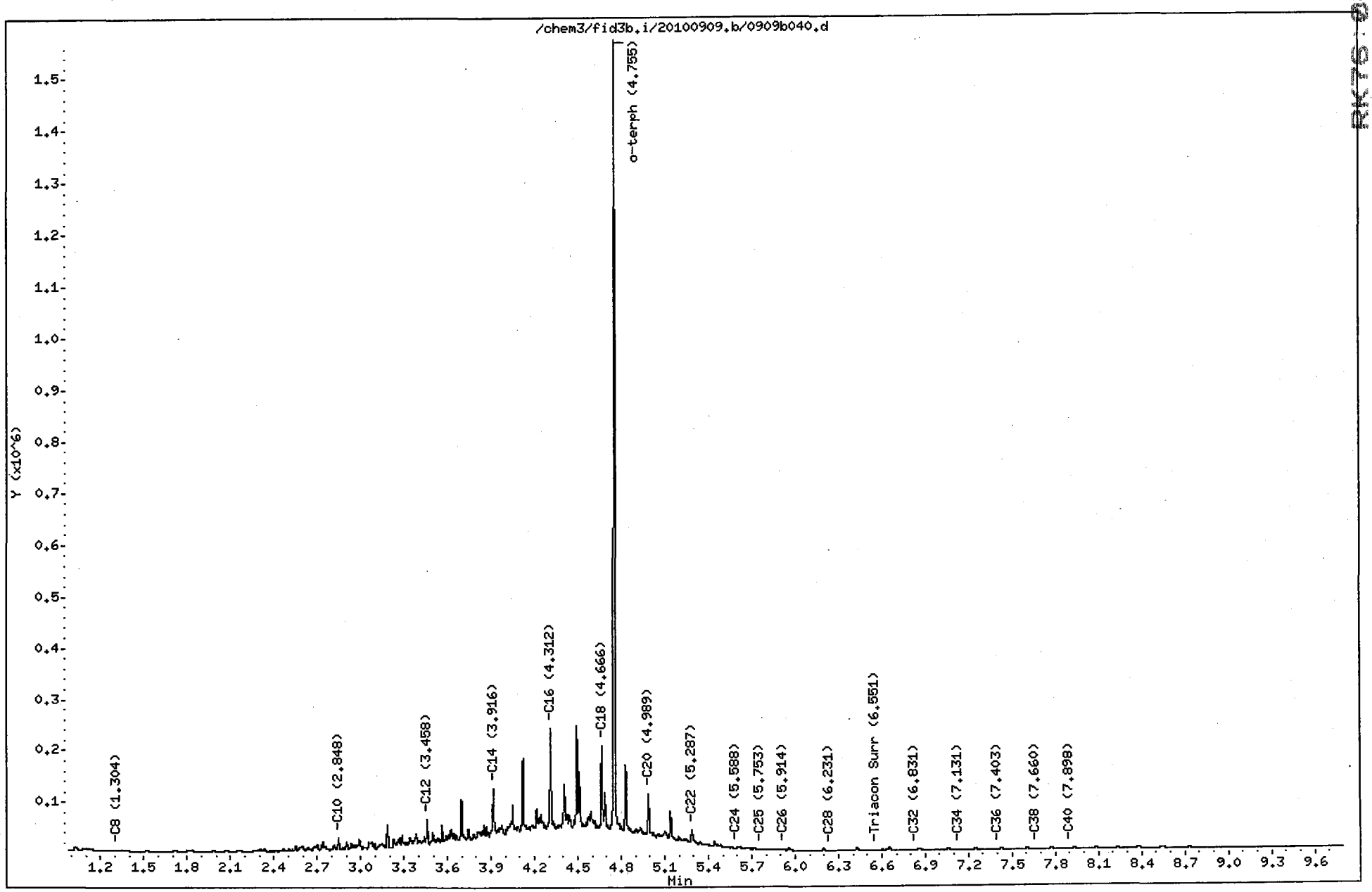
Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b040.d
Date : 10-SEP-2010 00:55
Client ID:
Sample Info: DIESEL#4

Column phase: ZB-1HT

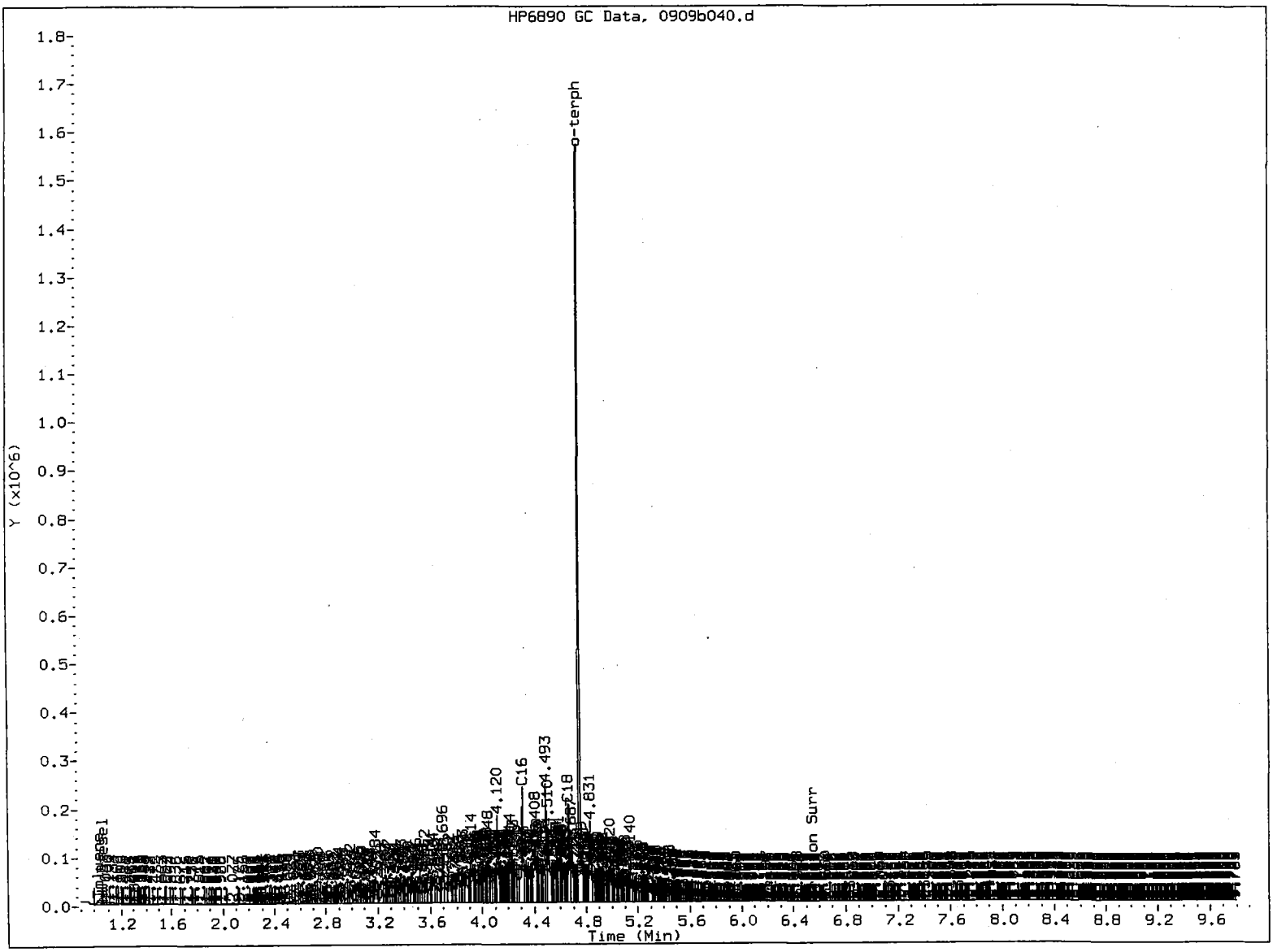
Instrument: fid3b.i

Operator: MS
Column diameter: 0.25



RK76-001314

FID:3B-2C/RTX-1 DIESEL#4 FID:3B SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 9/16/11.

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b041.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/16/2010
Macro: FID:3B083010

ARI ID: MOIL#4
Client ID:
Injection: 10-SEP-2010 01:14
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.020	0.000	5605	5836	GAS (Tol-C12)	148090	3	
C8	1.310	0.004	1823	1661	DIESEL (C12-C24)	849813	40	
C10	2.851	0.002	1261	2322	M.OIL (C24-C38)	6019436	498	
C12	3.462	0.004	2165	1102	AK-102 (C10-C25)	1012719	42	
C14	3.911	-0.005	1458	571	AK-103 (C25-C36)	5289032	592	M
C16	4.315	0.003	1344	500	OR.DIES (C10-C28)	2436769	116	
C18	4.663	-0.003	1702	1069	OR.MOIL (C28-C40)	4879206	433	M
C20	4.988	0.001	5499	2860				
C22	5.278	-0.007	16124	8859	STODDARD (C8-C12)	109413	4	
C24	5.592	-0.001	28975	13321				
C25	5.753	0.000	36752	7761				
C26	5.913	0.000	39479	11494				
C28	6.230	-0.001	48792	19986				
C32	6.837	-0.005	59202	46456				
C34	7.132	0.004	64194	72460	CREOSOT (C8-C22)	401337	63	
Filter Peak	----							
C36	7.402	0.002	51045	38902	BUNKERC (C10-C38)	6931270	802	
o-terph	4.753	-0.002	16287	17306	JET-A (C10-C18)	184694	12	
Triacon Surr	6.549	-0.005	897884	806468	IT.MOIL (C24-C40)	7210609	336	

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

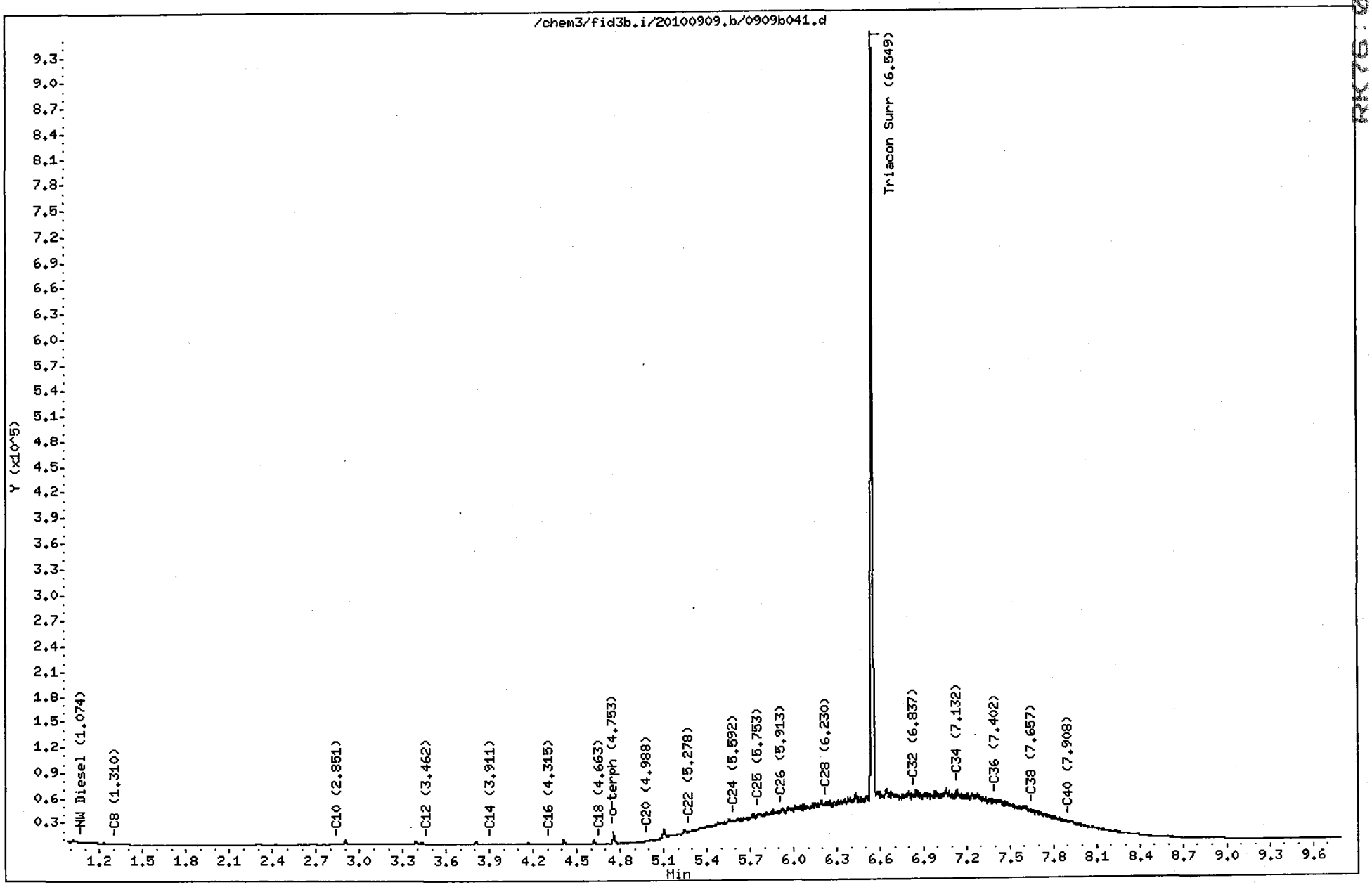
Surrogate	Area	Amount	%Rec
o-Terphenyl	17306	0.9	1.9
Triacontane	806468	48.2	107.1

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b041.d
Date : 10-SEP-2010 01:14
Client ID:
Sample Info: MOIL#4

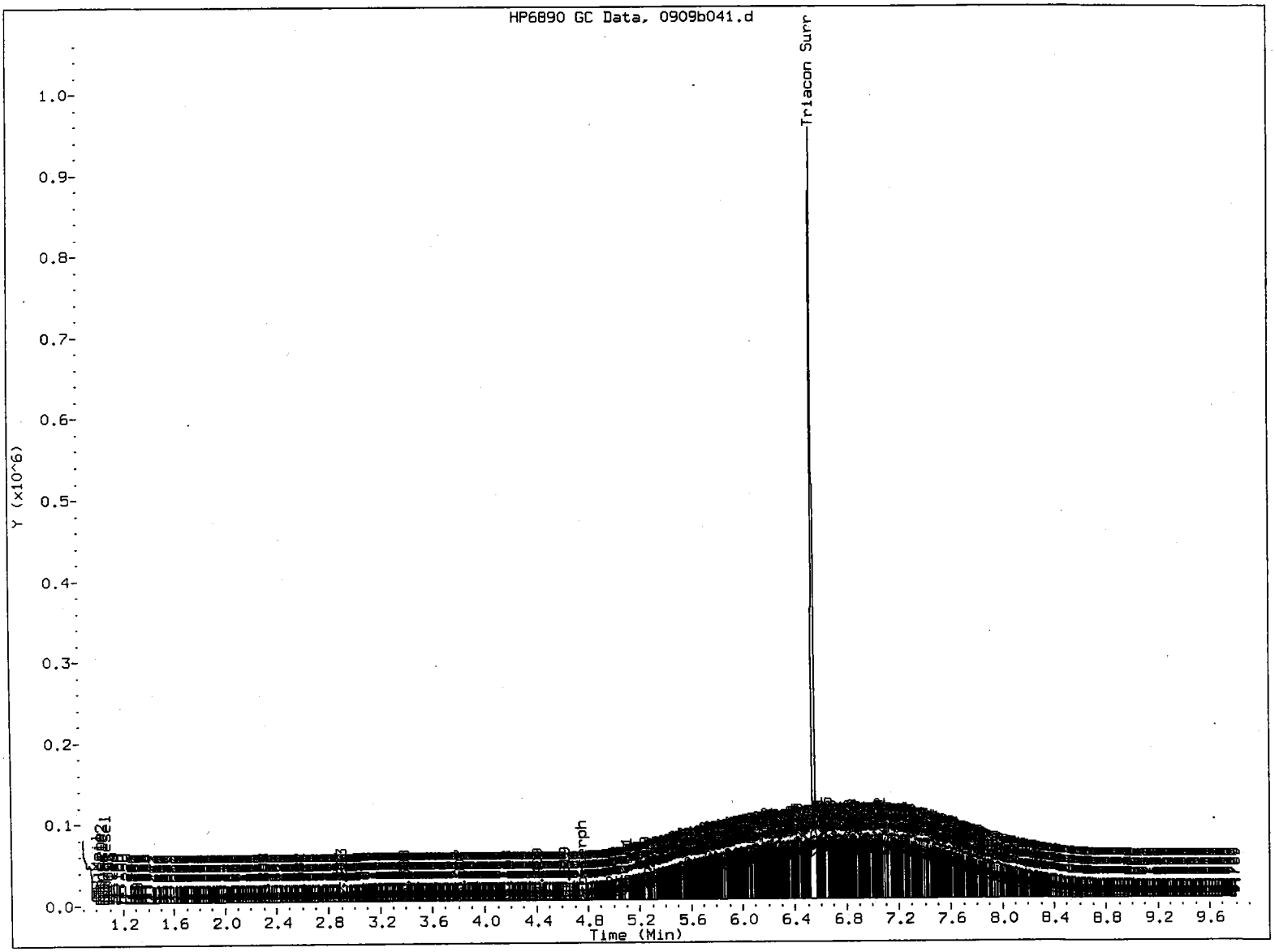
Instrument: fid3b.i
Operator: MS
Column diameter: 0.25

Column phase: ZB-1HT



FID:3B-2C/RTX-1 MOIL#4

FID:3B SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: MS Date: 9/16/16

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b042.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/16/2010
Macro: FID:3B083010

ARI ID: RK76S
Client ID: PSB27-8-10-082610
Injection: 10-SEP-2010 01:33
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.028	0.008	7107	14210	GAS (Tol-C12)	1890470	42
C8	1.298	-0.008	2417	3931	DIESEL (C12-C24)	3457829	162
C10	2.849	0.001	103367	89361	M.OIL (C24-C38)	3889889	322
C12	3.458	0.000	48640	36363	AK-102 (C10-C25)	5014554	208 M
C14	3.918	0.001	41498	49312	AK-103 (C25-C36)	3543029	397 M
C16	4.312	0.000	57303	45593	OR.DIES (C10-C28)	6355510	301 M
C18	4.666	-0.001	62247	56274	OR.MOIL (C28-C40)	2592520	230 M
C20	4.989	0.002	58987	55596			
C22	5.286	0.001	75918	76808	STODDARD (C8-C12)	1838454	66
C24	5.596	0.004	89944	110103			
C25	5.754	0.001	90178	126952			
C26	5.914	0.001	84553	109447			
C28	6.232	0.001	81589	80105			
C32	6.843	0.000	48975	48102			
C34	7.130	0.002	33183	20329	CREOSOT (C8-C22)	2824381	442
Filter Peak	----						
C36	7.400	0.000	23037	23727	BUNKERC (C10-C38)	8796953	1018
o-terph	4.753	-0.002	1407311	781265	JET-A (C10-C18)	3006657	190
Triacon Surr	6.550	-0.003	788627	703124	IT.MOIL (C24-C40)	4744089	221

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	781265	39.2	87.1
Triacontane	703124	42.0	93.4

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b042.d

Date : 10-SEP-2010 01:33

Client ID: PSB27-8-10-082610

Sample Info: RK76S

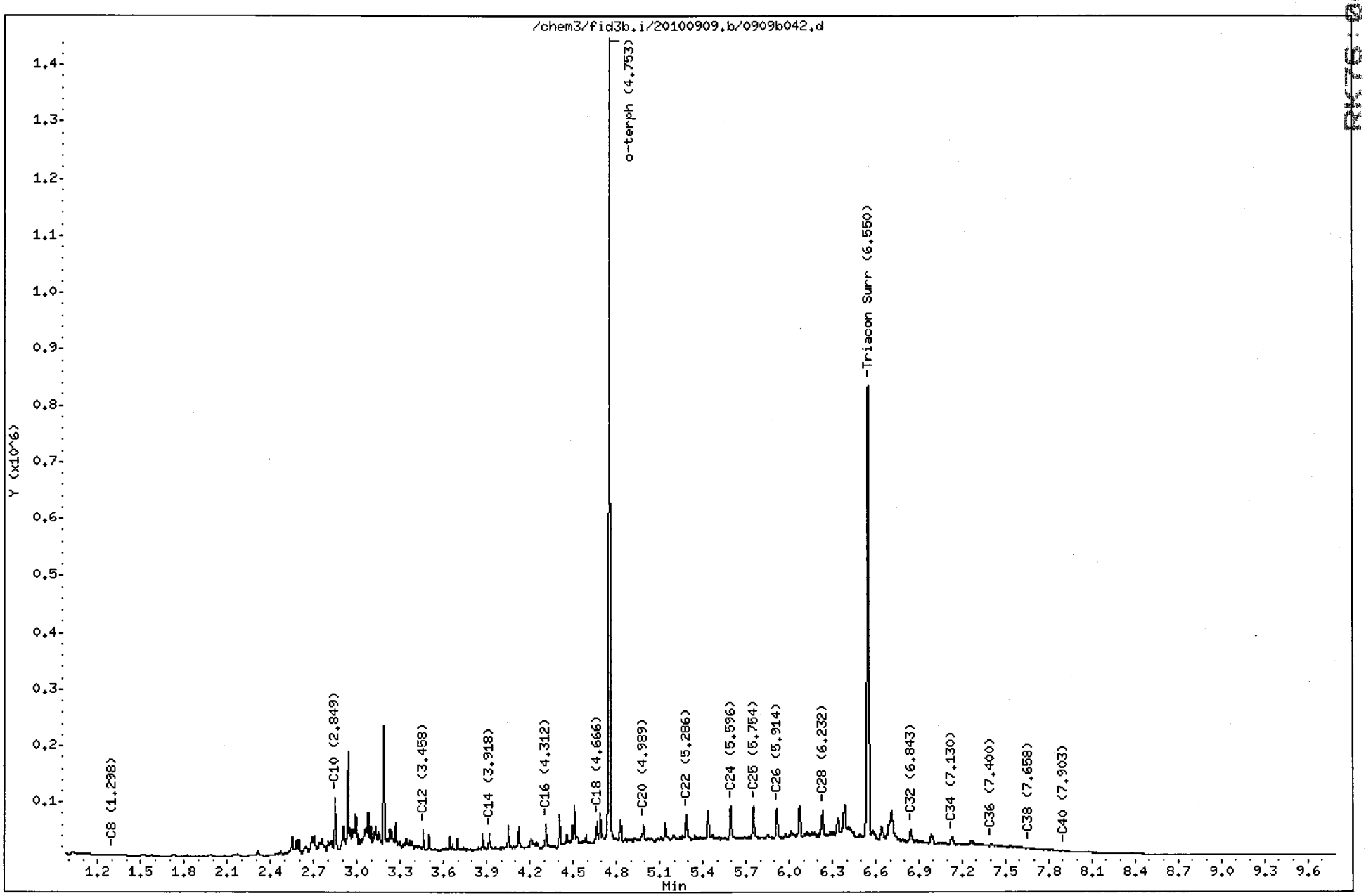
Instrument: fid3b.i

Operator: MS

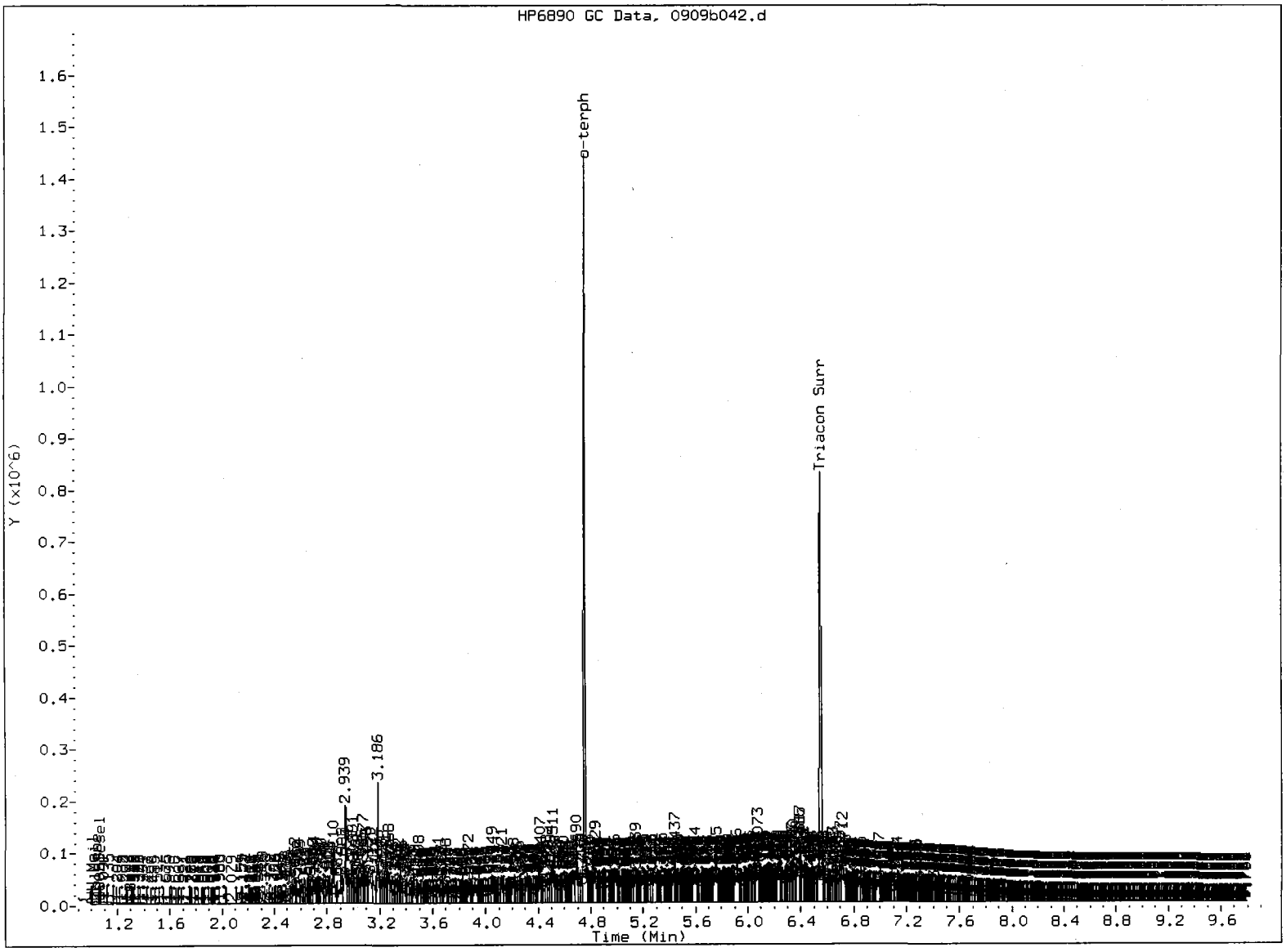
Column phase: ZB-1HT

Column diameter: 0.25

RK76-082610



FID:3B-2C/RTX-1 RK76S FID:3B SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 9/16/16

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b050.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/16/2010
Macro: FID:3B083010

ARI ID: DIESEL#5
Client ID:
Injection: 10-SEP-2010 04:04
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.028	0.009	8254	13812	GAS (Tol-C12)	889081	20	
C8	1.306	0.000	2642	3924	DIESEL (C12-C24)	5508355	257	
C10	2.847	-0.001	26951	19275	M.OIL (C24-C38)	149050	12	
C12	3.457	-0.001	67525	53623	AK-102 (C10-C25)	6170693	256	M
C14	3.916	-0.001	132669	110438	AK-103 (C25-C36)	122126	14	
C16	4.312	0.000	231078	211729	OR.DIES (C10-C28)	6233371	296	M
C18	4.666	0.000	209777	174195	OR.MOIL (C28-C40)	90985	8	
C20	4.989	0.002	118405	116246				
C22	5.287	0.003	45600	48631	STODDARD (C8-C12)	842918	30	
C24	5.590	-0.002	6841	2712				
C25	5.751	-0.002	3529	1990				
C26	5.912	0.000	1809	605				
C28	6.232	0.002	710	402				
C32	6.831	-0.011	498	276				
C34	7.127	-0.002	490	239	CREOSOT (C8-C22)	5322036	832	
Filter Peak	----							
C36	7.396	-0.003	544	355	BUNKERC (C10-C38)	6305101	729	
o-terph	4.755	0.000	1694828	899099	JET-A (C10-C18)	4566601	288	
Triacon Surr	6.561	0.008	495	132	IT.MOIL (C24-C40)	168437	8	

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	899099	45.1	100.2
Triacontane	132	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

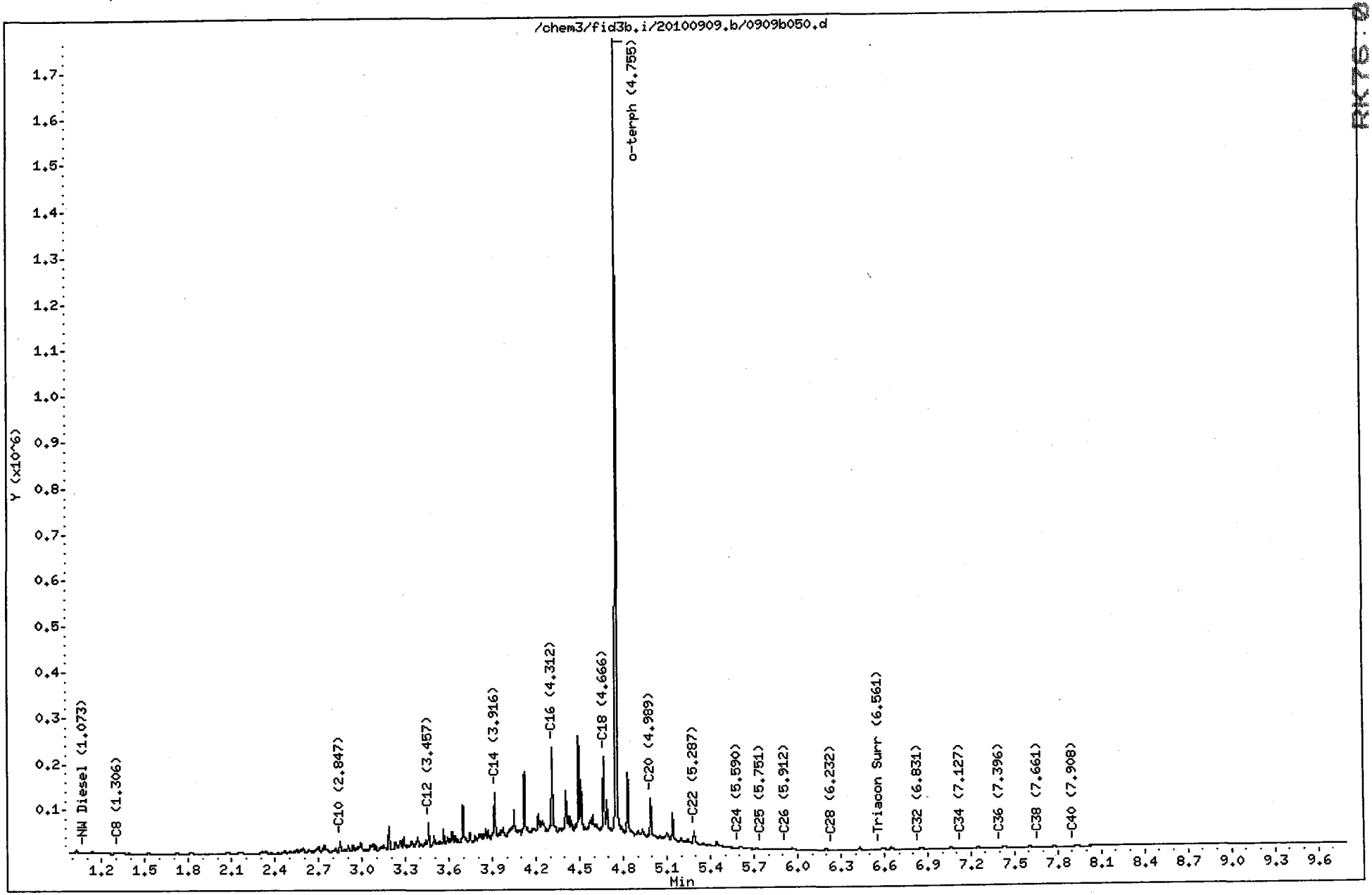
Data File: /chem3/fid3b.i/20100909.b/0909b050.d
Date : 10-SEP-2010 04:04
Client ID:
Sample Info: DIESEL#5

Column phase: ZB-1HT

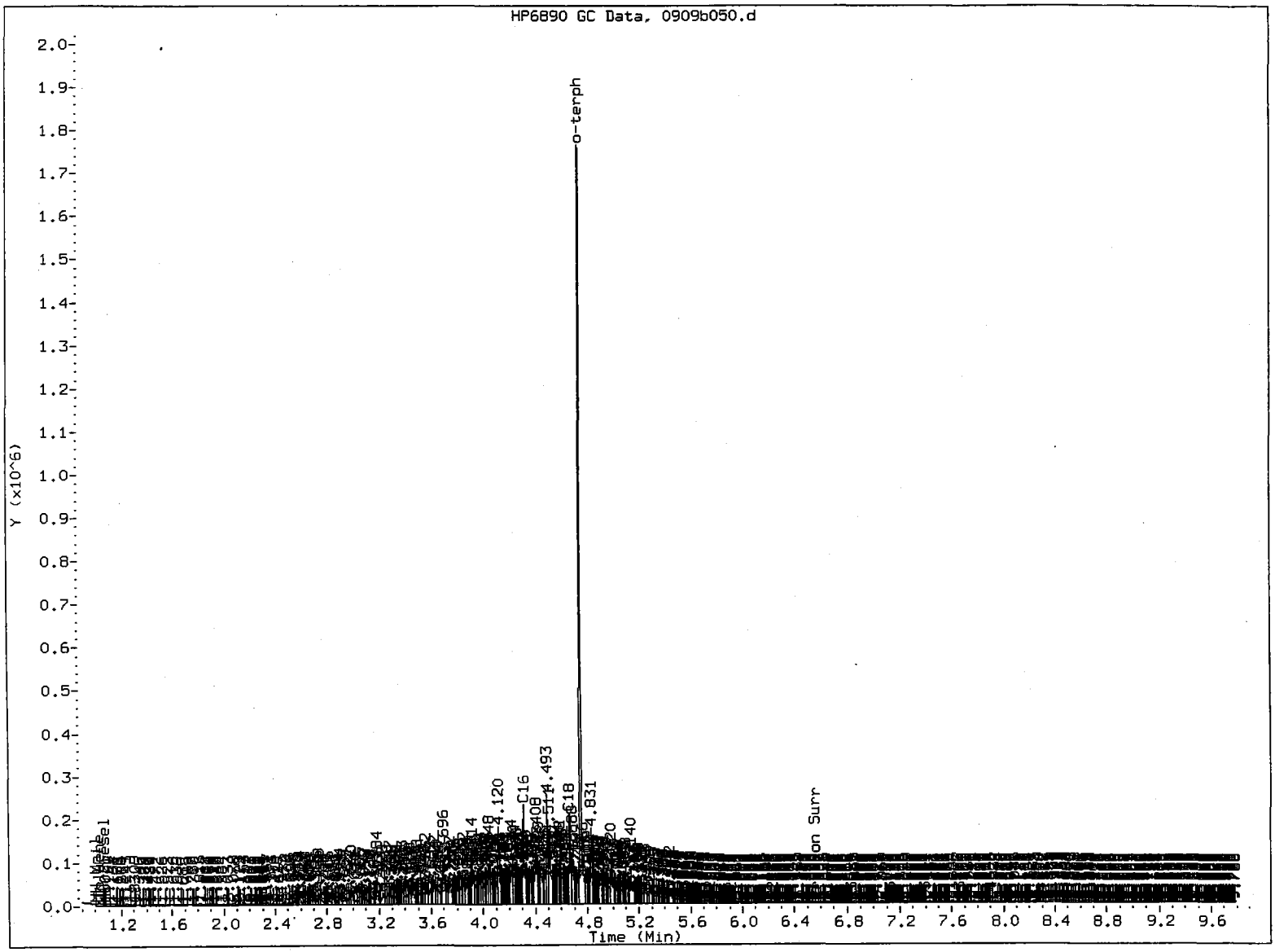
Instrument: fid3b.i

Operator: MS
Column diameter: 0.25

RKTG-00209



FID:3B-2C/RTX-1 DIESEL#5 FID:3B SIGNAL



MANUAL INTEGRATION

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

5. Other _____

Analyst: MS Date: 9/16/10

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b051.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/16/2010
Macro: FID:3B083010

ARI ID: MOIL#5
Client ID:
Injection: 10-SEP-2010 04:23
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc	
Toluene	1.019	-0.001	4732	6991	GAS (Tol-C12)	132110	3	
C8	1.307	0.002	1547	1498	DIESEL (C12-C24)	857539	40	
C10	2.851	0.003	1128	1610	M.OIL (C24-C38)	6103671	505	
C12	3.452	-0.006	2316	1653	AK-102 (C10-C25)	1033293	43	
C14	3.912	-0.004	1452	809	AK-103 (C25-C36)	5323461	596	M
C16	4.311	0.000	1354	267	OR.DIES (C10-C28)	2468668	117	
C18	4.663	-0.004	1824	829	OR.MOIL (C28-C40)	4963047	440	M
C20	4.987	0.000	5669	991				
C22	5.283	-0.002	16550	6802	STODDARD (C8-C12)	99622	4	
C24	5.591	-0.001	28805	5677				
C25	5.750	-0.002	36666	19550				
C26	5.914	0.001	41238	25422				
C28	6.235	0.005	49023	11552				
C32	6.841	-0.001	63257	16919				
C34	7.129	0.001	60760	27508	CREOSOT (C8-C22)	409385	64	
Filter Peak	----							
C36	7.398	-0.002	52094	26483	BUNKERC (C10-C38)	7018441	812	
o-terph	4.754	0.000	16157	16875	JET-A (C10-C18)	182081	11	
Triacon Surr	6.550	-0.003	883776	821650	IT.MOIL (C24-C40)	7338594	342	

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	16875	0.8	1.9
Triacontane	821650	49.1	109.2

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

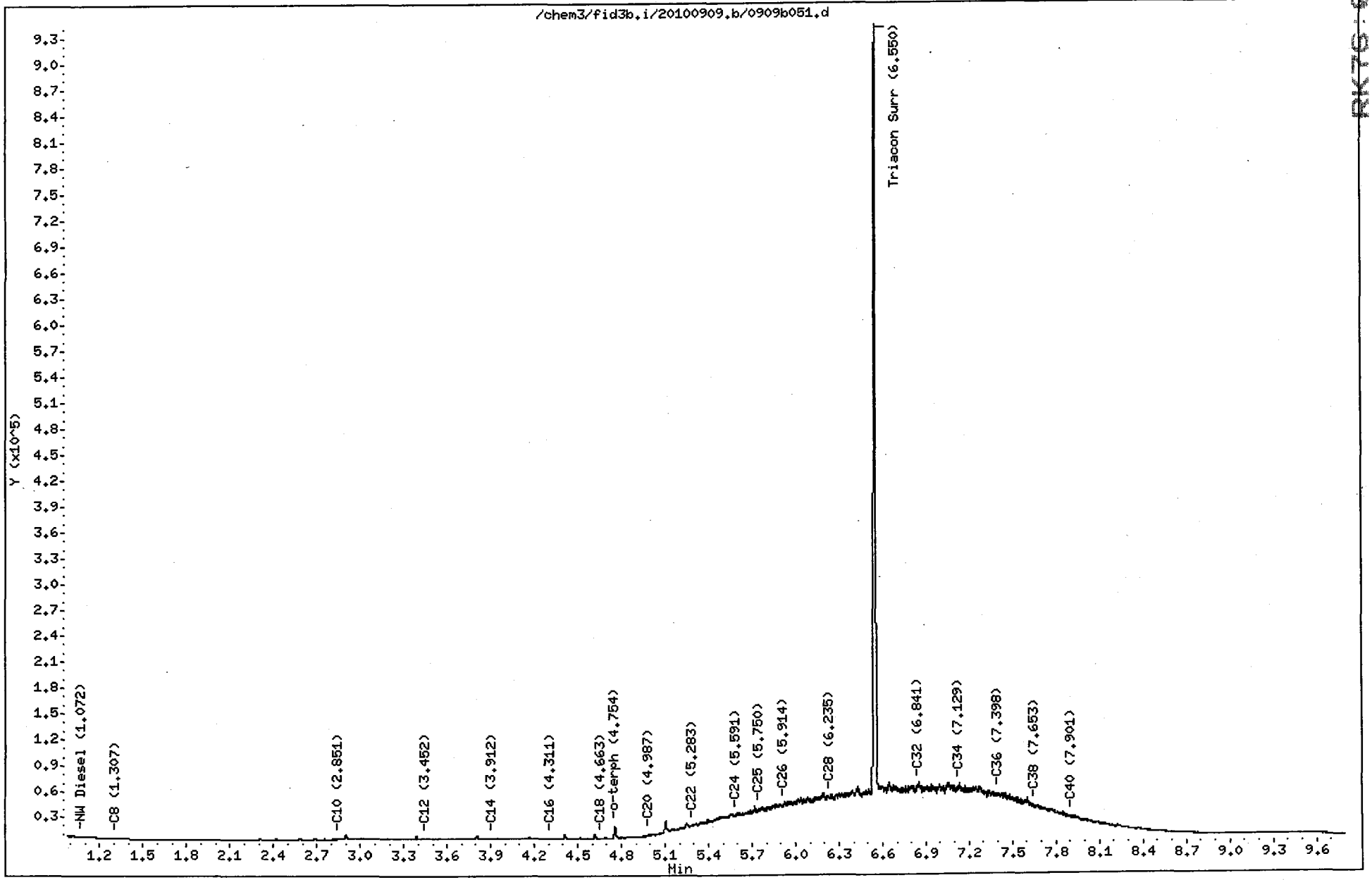
Data File: /chem3/fid3b.i/20100909.b/0909b051.d
Date : 10-SEP-2010 04:23
Client ID:
Sample Info: MOIL#5

Instrument: fid3b.i

Operator: MS
Column diameter: 0.25

Column phase: ZB-1HT

RKTS-00265



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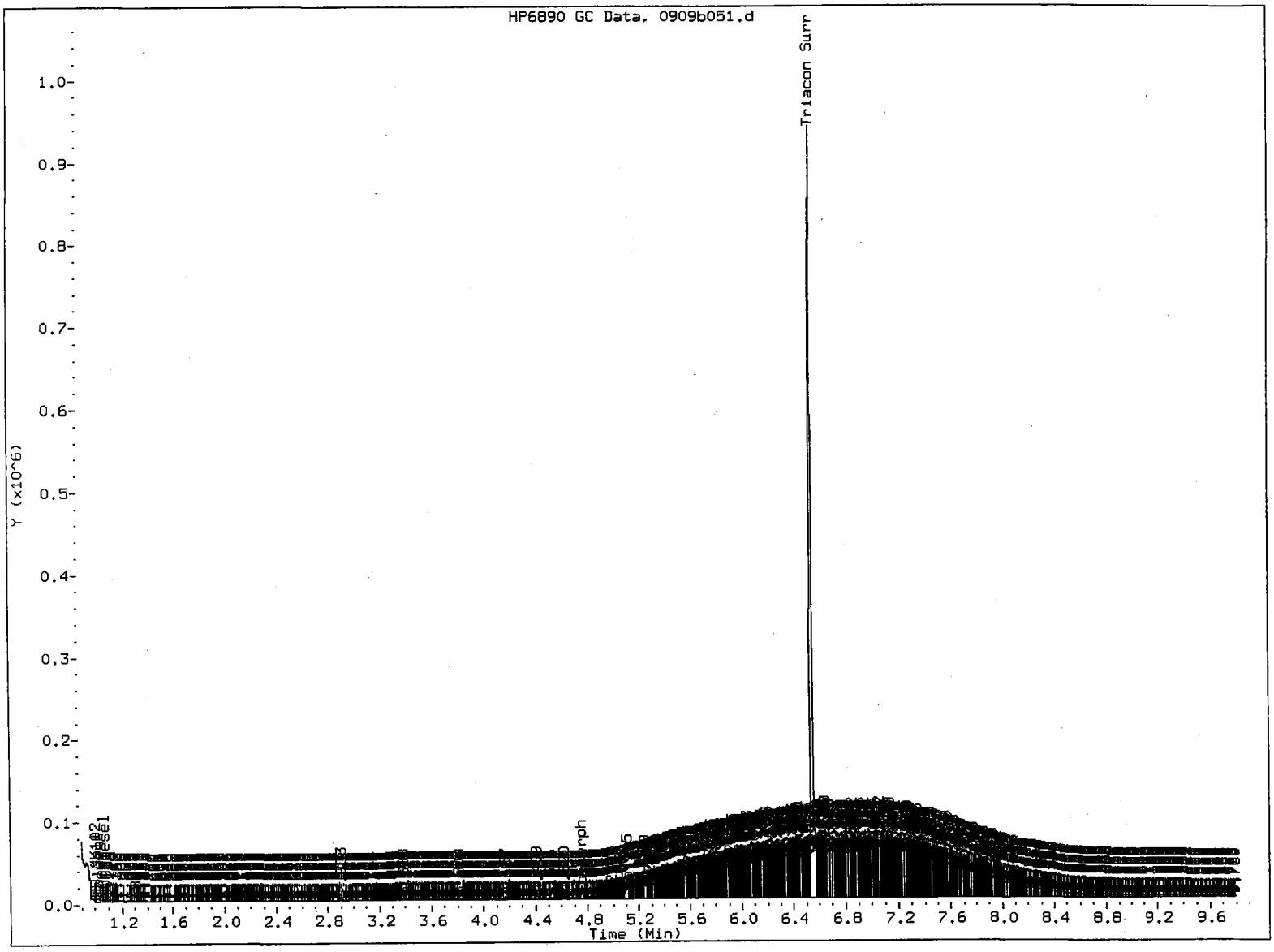


MANUAL INTEGRATION

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

5. Other _____

Analyst: MM Date: 9/16/10

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20100909.b

ARI Job No.: DIES Method: i/20100909.b/ftphfid3b.m Instrument: fid3b.i Date: 09-SEP-2010

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2108	0909b028.d	DIESEL#3		1	o-terph,
2127	0909b029.d	MOIL#3		1	Triacon Surr,
2145	0909b030.d	RK76MBS1	RK76MBS1	1	NO MANUAL INTEGRATION
2204	0909b031.d	RK76LCSS1	RK76LCSS1	1	o-terph,
2223	0909b032.d	RK76E	PSB25-14-1	1	NO MANUAL INTEGRATION
2242	0909b033.d	RK76F	PSB25-18-2	1	NO MANUAL INTEGRATION
2301	0909b034.d	RK76G	PSB25-18-2	1	NO MANUAL INTEGRATION
2320	0909b035.d	RK76K	PSB26-14-1	1	NO MANUAL INTEGRATION
2339	0909b036.d	RK76KMS	PSB26-14-1	1	o-terph,
2358	0909b037.d	RK76KMSD	PSB26-14-1	1	o-terph,
0017	0909b038.d	RK76L	PSB26-16-1	1	NO MANUAL INTEGRATION
0036	0909b039.d	RK76R	PSB27-10-1	1	o-terph, Triacon Surr,
0055	0909b040.d	DIESEL#4		1	o-terph,
0114	0909b041.d	MOIL#4		1	Triacon Surr,
0133	0909b042.d	RK76S	PSB27-8-10	1	o-terph, Triacon Surr,
0152	0909b043.d	RK77A		2	NO MANUAL INTEGRATION
0211	0909b044.d	RK77AMS		2	NO MANUAL INTEGRATION
0230	0909b045.d	RK77AMSD		2	NO MANUAL INTEGRATION
0248	0909b046.d	RK77B		2	NO MANUAL INTEGRATION
0308	0909b047.d	RK77C		2	NO MANUAL INTEGRATION
0326	0909b048.d	RK77D		1	NO MANUAL INTEGRATION
0346	0909b049.d	RK77E		2	NO MANUAL INTEGRATION

RK76 09/29/10

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20100909.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0404	0909b050.d	DIESEL#5		1	o-terph,
0423	0909b051.d	MOIL#5		1	Triacon Surr,

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909braw.b/0909b028.d ARI ID: DIESEL#3
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m Client ID:
Instrument: fid3b.i Injection: 09-SEP-2010 21:08
Operator: MS Dilution Factor: 1
Report Date: 09/16/2010
Macro: FID:3B083010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.023	0.004	8213	14206	GAS (Tol-C12)	883911	20
C8	1.310	0.005	3035	4702	DIESEL (C12-C24)	5234960	245
C10	2.850	0.002	25406	19626	M.OIL (C24-C38)	109519	9
C12	3.459	0.001	63541	47027	AK-102 (C10-C25)	5875896	244
C14	3.917	0.000	128860	134802	AK-103 (C25-C36)	92665	10
C16	4.313	0.001	234912	193097	OR.DIES (C10-C28)	5932506	281
C18	4.666	0.000	197550	169796	OR.MOIL (C28-C40)	52501	5
C20	4.988	0.001	128439	118098			
C22	5.287	0.003	43571	49162	STODDARD (C8-C12)	831266	30
C24	5.588	-0.005	6464	2375			
C25	5.750	-0.003	3111	2018			
C26	5.917	0.005	1451	531			
C28	6.228	-0.003	345	141			
C32	6.834	-0.008	115	38			
C34	7.126	-0.003	64	32	CREOSOT (C8-C22)	5044803	789
Filter Peak	----						
C36	7.399	-0.001	106	21	BUNKERC (C10-C38)	5973974	691
o-terph	4.754	-0.001	1786847	1061377	JET-A (C10-C18)	4429213	279
Triacon Surr	6.551	-0.002	134	101	IT.MOIL (C24-C40)	120653	6

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1061377	53.2	118.3
Triacontane	101	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909braw.b/0909b028.d

Page 1

Date : 09-SEP-2010 21:08

Client ID:

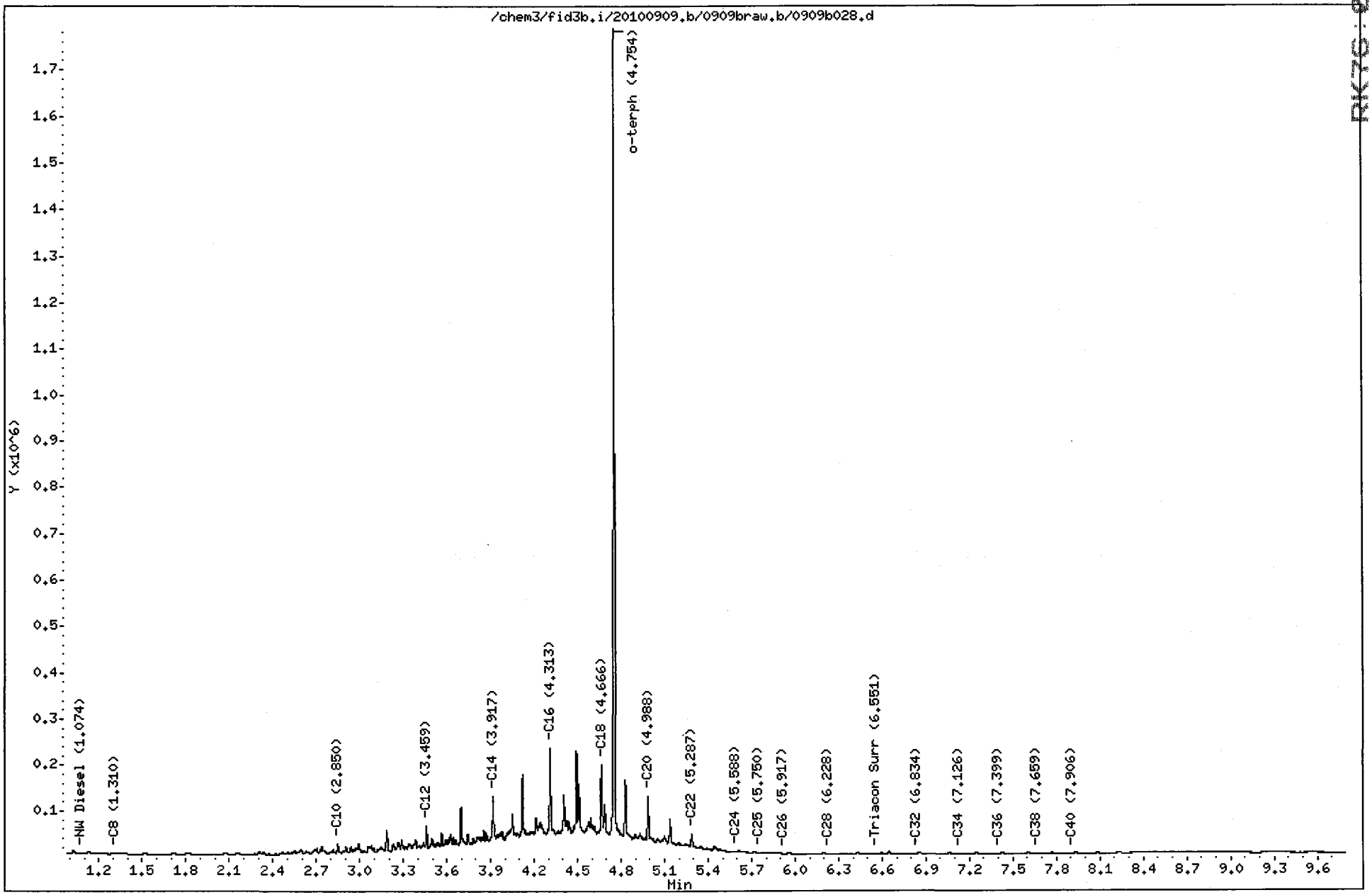
Instrument: fid3b.i

Sample Info: DIESEL#3

Operator: MS

Column phase: ZB-1HT

Column diameter: 0.25



RK70-00211

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909braw.b/0909b029.d ARI ID: MOIL#3
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m Client ID:
Instrument: fid3b.i Injection: 09-SEP-2010 21:27
Operator: MS Dilution Factor: 1
Report Date: 09/16/2010
Macro: FID:3B083010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.020	0.000	5158	7678	GAS (Tol-C12)	146239	3
C8	1.299	-0.007	1565	907	DIESEL (C12-C24)	844457	39
C10	2.854	0.006	1230	1369	M.OIL (C24-C38)	5725242	474
C12	3.455	-0.004	2373	1873	AK-102 (C10-C25)	1003112	42
C14	3.919	0.003	1420	338	AK-103 (C25-C36)	5000358	560
C16	4.312	0.000	1276	373	OR.DIES (C10-C28)	2413112	114
C18	4.661	-0.006	1614	317	OR.MOIL (C28-C40)	4632292	411
C20	4.993	0.005	5632	2922			
C22	5.283	-0.002	16178	6002	STODDARD (C8-C12)	109432	4
C24	5.593	0.001	28690	11064			
C25	5.752	-0.001	33983	8031			
C26	5.915	0.002	39849	11647			
C28	6.231	0.000	47483	8424			
C32	6.841	-0.001	59745	11689			
C34	7.130	0.002	60538	15151	CREOSOT (C8-C22)	400566	63
Filter Peak	----						
C36	7.401	0.001	51218	8031	BUNKERC (C10-C38)	6631532	767
o-terph	4.755	0.000	14422	16014	JET-A (C10-C18)	183079	12
Triacon Surr	6.548	-0.005	966817	962061	IT.MOIL (C24-C40)	7101175	330

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	16014	0.8	1.8
Triacontane	962061	57.5	127.8

9/16/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909braw.b/0909b029.d

Page 1

Date : 09-SEP-2010 21:27

Client ID:

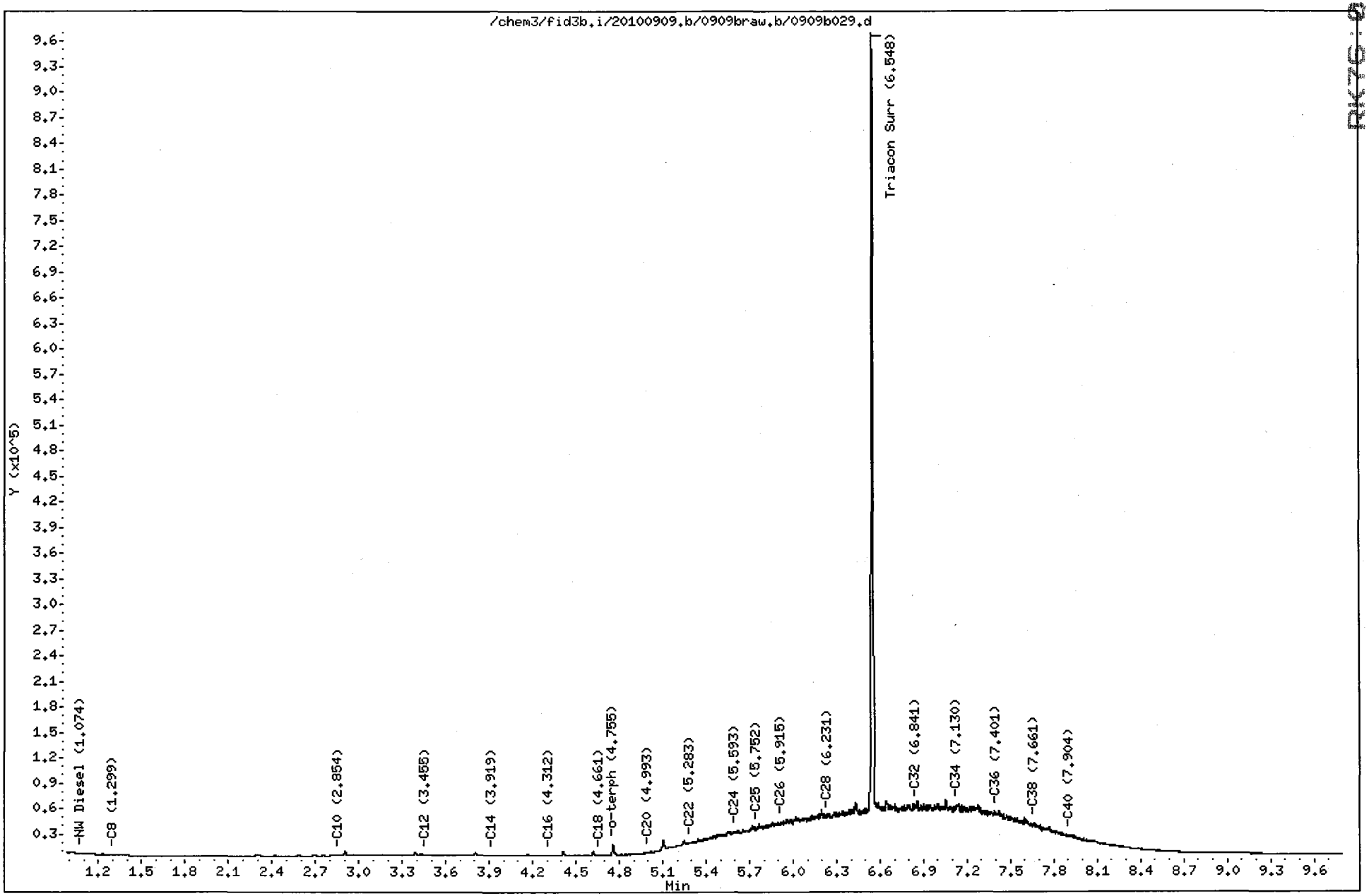
Instrument: fid3b.i

Sample Info: MOIL#3

Operator: MS

Column phase: ZB-1HT

Column diameter: 0.25



RK76-00213

Befores

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b031.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/15/2010
Macro: FID:3B083010

ARI ID: RK76LCSS1
Client ID: RK76LCSS1
Injection: 09-SEP-2010 22:04
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.022	0.003	17190	21961	GAS (Tol-C12)	3321268	74
C8	1.310	0.005	5031	7598	DIESEL (C12-C24)	23955331	1120
C10	2.850	0.002	109738	79121	M.OIL (C24-C38)	309307	26
C12	3.459	0.001	325767	229583	AK-102 (C10-C25)	26609125	1104
C14	3.918	0.001	639474	429895	AK-103 (C25-C36)	237208	27
C16	4.314	0.003	1150025	926251	OR.DIES (C10-C28)	26795479	1271
C18	4.670	0.004	948185	839957	OR.MOIL (C28-C40)	58714	5
C20	4.989	0.002	639195	581326			
C22	5.286	0.001	265153	230334	STODDARD (C8-C12)	3256184	118
C24	5.593	0.001	71422	82454			
C25	5.753	0.000	28566	31674			
C26	5.917	0.005	12135	17140			
C28	6.233	0.002	2678	2725			
C32	6.841	-0.001	330	67			
C34	7.130	0.001	697	857	CREOSOT (C8-C22)	23122981	3615
Filter Peak	----						
C36	7.408	0.008	103	33	BUNKERC (C10-C38)	26849101	3106
o-terph	4.755	0.001	1722868	1323652	JET-A (C10-C18)	19702678	1243
Triacon Surr	6.547	-0.006	685493	660317	IT.MOIL (C24-C40)	974716	45

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1323652	66.4	147.6
Triacontane	660317	39.5	87.7

9/16/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b031.d

Date : 09-SEP-2010 22:04

Client ID: RK76LCSS1

Sample Info: RK76LCSS1

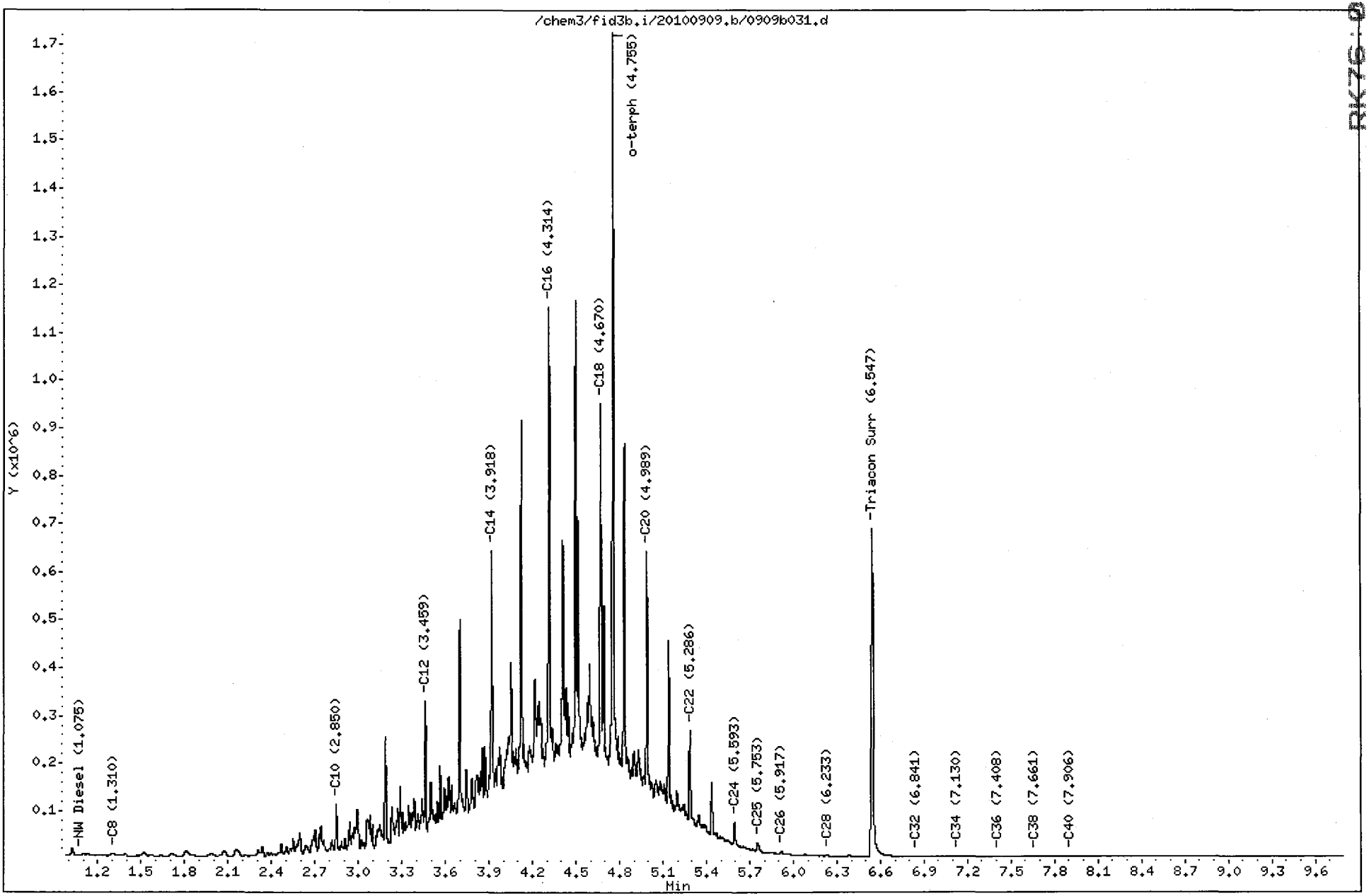
Column phase: ZB-1HT

Instrument: fid3b.i

Operator: MS

Column diameter: 0.25

RK76-090215



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b036.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/15/2010
Macro: FID:3B083010

ARI ID: RK76KMS
Client ID: PSB26-14-15-082 MS
Injection: 09-SEP-2010 23:39
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.023	0.003	20020	26327	GAS (Tol-C12)	3745589	83
C8	1.303	-0.003	5633	14283	DIESEL (C12-C24)	25230522	1179
C10	2.849	0.001	122434	89649	M.OIL (C24-C38)	321141	27
C12	3.460	0.001	355307	244832	AK-102 (C10-C25)	28206449	1170
C14	3.918	0.001	661196	563961	AK-103 (C25-C36)	252103	28
C16	4.315	0.003	1229723	951403	OR.DIES (C10-C28)	28405704	1347
C18	4.669	0.003	1030495	864295	OR.MOIL (C28-C40)	57205	5
C20	4.989	0.002	671442	563786			
C22	5.287	0.002	284176	260861	STODDARD (C8-C12)	3679916	133
C24	5.594	0.002	76341	87955			
C25	5.753	0.000	29063	29202			
C26	5.916	0.004	13049	12888			
C28	6.231	0.000	3066	3585			
C32	6.843	0.001	421	119			
C34	7.130	0.002	418	338	CREOSOT (C8-C22)	24309363	3801
Filter Peak	----						
C36	7.399	-0.001	68	25	BUNKERC (C10-C38)	28460002	3293
o-terph	4.756	0.001	1827997	1320947	JET-A (C10-C18)	20966071	1323
Triacon Surr	6.547	-0.006	767361	695317	IT.MOIL (C24-C40)	1019365	47

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

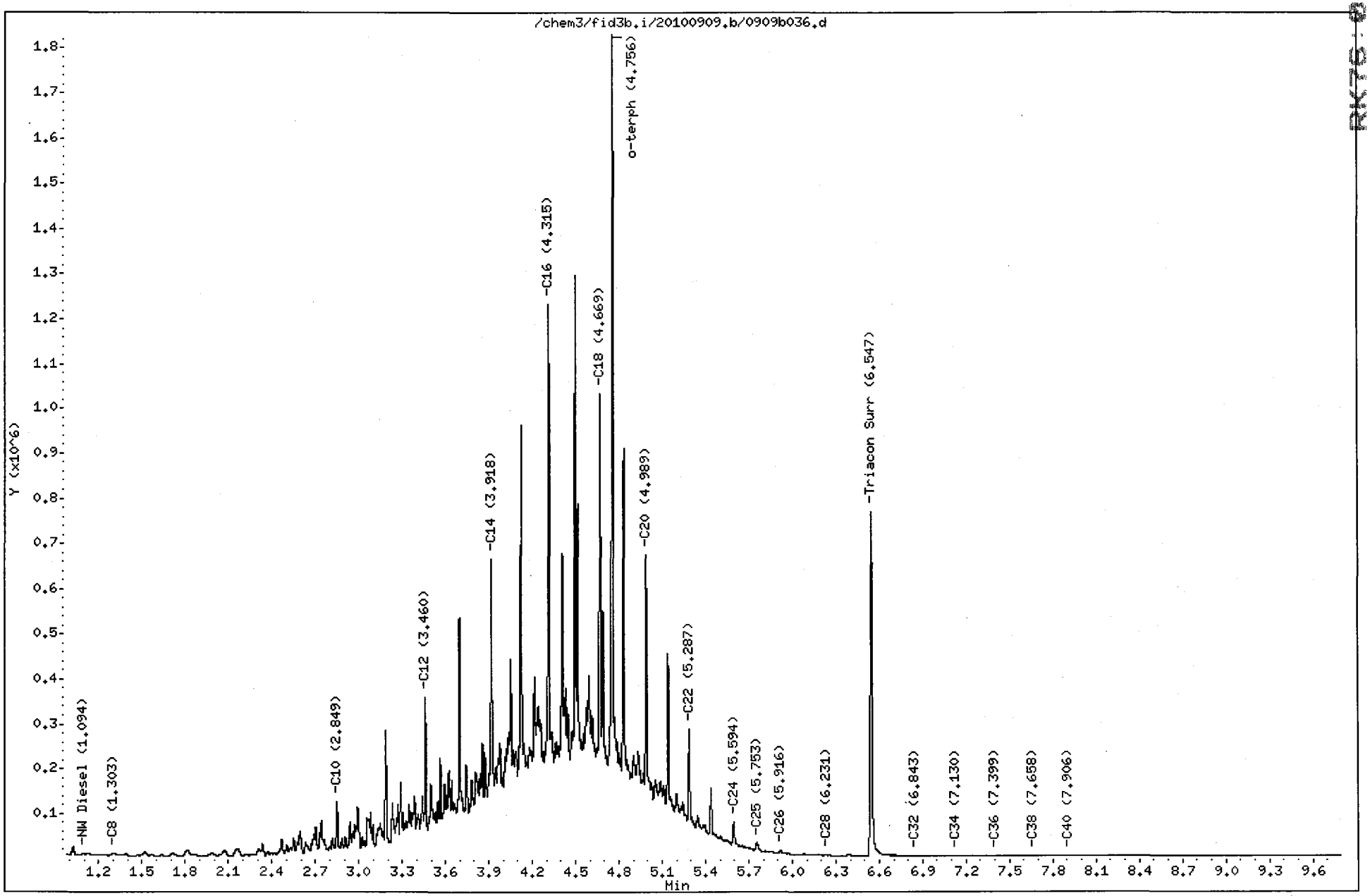
Surrogate	Area	Amount	%Rec
o-Terphenyl	1320947	66.3	147.3
Triacontane	695317	41.6	92.4

9/16/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b036.d
Date : 09-SEP-2010 23:39
Client ID: PSB26-14-15-082 MS
Sample Info: RK76KMS

Instrument: fid3b.i
Operator: MS
Column phase: ZB-1HT
Column diameter: 0.25



RK76-00217

Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b037.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/15/2010
Macro: FID:3B083010

ARI ID: RK76KMSD
Client ID: PSB26-14-15-082 MSD
Injection: 09-SEP-2010 23:58
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.020	0.001	27155	29623	GAS (Tol-C12)	3729588	83
C8	1.307	0.001	5617	4073	DIESEL (C12-C24)	25473157	1190
C10	2.849	0.001	121847	88203	M.OIL (C24-C38)	351174	29
C12	3.460	0.001	371805	249506	AK-102 (C10-C25)	28459763	1181
C14	3.918	0.002	634904	572305	AK-103 (C25-C36)	284590	32
C16	4.313	0.002	1243075	987972	OR.DIES (C10-C28)	28682476	1360
C18	4.669	0.002	1058752	834534	OR.MOIL (C28-C40)	69292	6
C20	4.990	0.002	685159	641301			
C22	5.286	0.001	297630	244665	STODDARD (C8-C12)	3657041	132
C24	5.591	-0.001	73642	91385			
C25	5.753	0.000	31121	54694			
C26	5.914	0.002	13400	15795			
C28	6.230	0.000	3148	3872			
C32	6.846	0.004	588	243			
C34	7.130	0.001	412	192	CREOSOT (C8-C22)	24533996	3836
Filter Peak	----						
C36	7.397	-0.003	129	53	BUNKERC (C10-C38)	28747110	3326
o-terph	4.756	0.001	1873897	1355158	JET-A (C10-C18)	21077843	1330
Triacon Surr	6.546	-0.007	704348	623677	IT.MOIL (C24-C40)	979509	46

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1355158	68.0	151.1
Triacontane	623677	37.3	82.9

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b037.d

Date : 09-SEP-2010 23:58

Client ID: PSB26-14-15-082 MSD

Sample Info: RK76KMSD

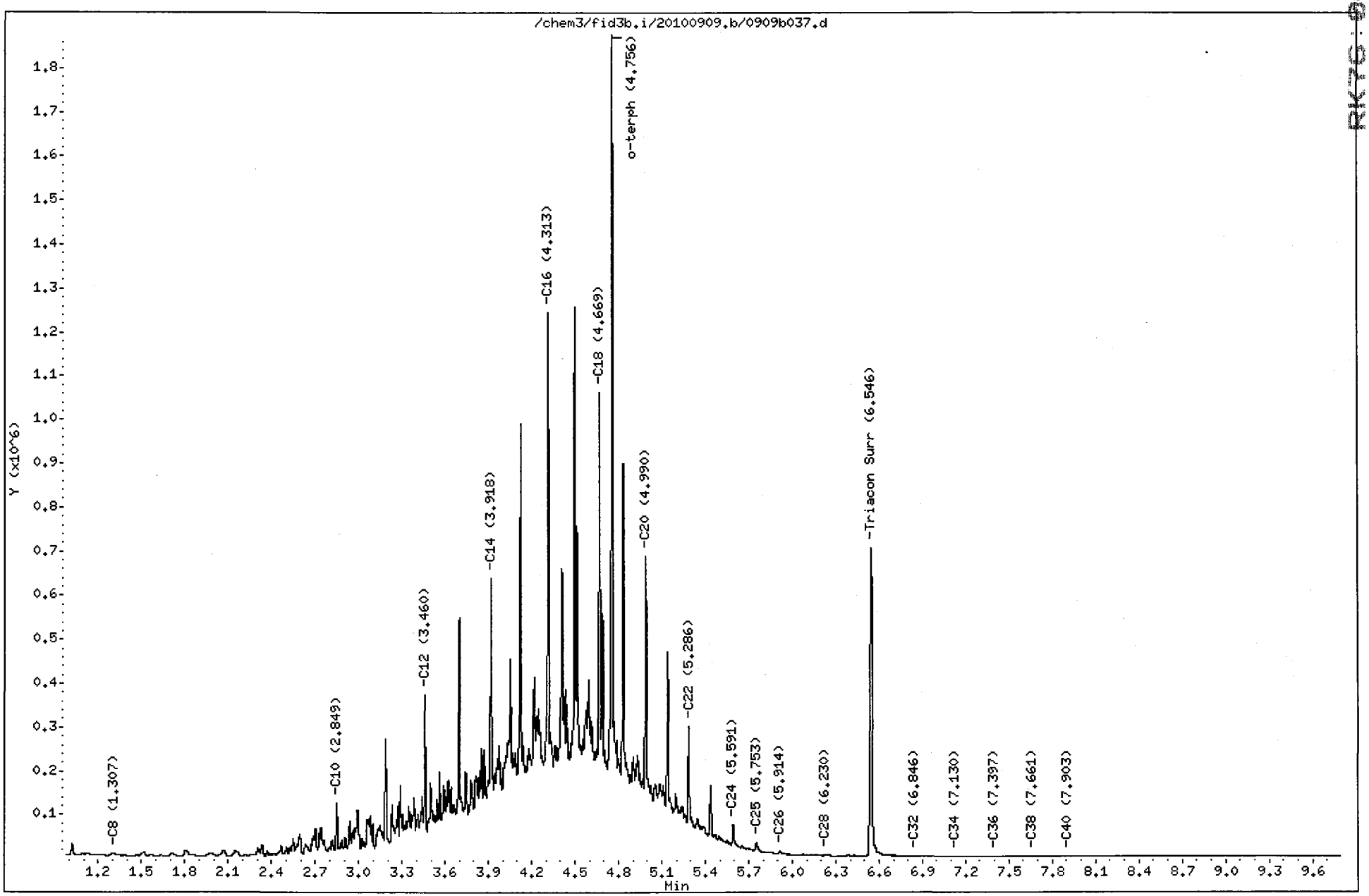
Column phase: ZB-1HT

Instrument: fid3b.i

Operator: MS

Column diameter: 0.25

RK76-00219



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b039.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/15/2010
Macro: FID:3B083010

ARI ID: RK76R
Client ID: PSB27-10-12-082610
Injection: 10-SEP-2010 00:36
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.022	0.002	10221	18903	GAS (Tol-C12)	579536	13
C8	1.316	0.010	2225	2904	DIESEL (C12-C24)	976207	46
C10	2.849	0.001	16444	16646	M.OIL (C24-C38)	971993	80
C12	3.466	0.008	4515	1776	AK-102 (C10-C25)	1352251	56
C14	3.911	-0.006	3926	1082	AK-103 (C25-C36)	878606	98
C16	4.315	0.003	7049	6114	OR.DIES (C10-C28)	1698649	81
C18	4.667	0.000	12159	10972	OR.MOIL (C28-C40)	640100	57
C20	4.977	-0.011	134814	94151			
C22	5.286	0.001	15608	16962	STODDARD (C8-C12)	532270	19
C24	5.595	0.003	19364	23146			
C25	5.753	0.000	21709	31627			
C26	5.915	0.003	18855	21458			
C28	6.233	0.002	19475	21751			
C32	6.844	0.001	11607	12037			
C34	7.127	-0.002	7519	4480	CREOSOT (C8-C22)	797328	125
Filter Peak	----						
C36	7.403	0.003	5577	4580	BUNKERC (C10-C38)	2295054	266
o-terph	4.753	-0.002	1544927	902350	JET-A (C10-C18)	773136	49
Triacon Surr	6.548	-0.005	849776	764016	IT.MOIL (C24-C40)	1779705	83

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	902350	45.3	100.6
Triacontane	764016	45.7	101.5

9/16/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b039.d

Date : 10-SEP-2010 00:36

Client ID: PSB27-10-12-082610

Sample Info: RK76R

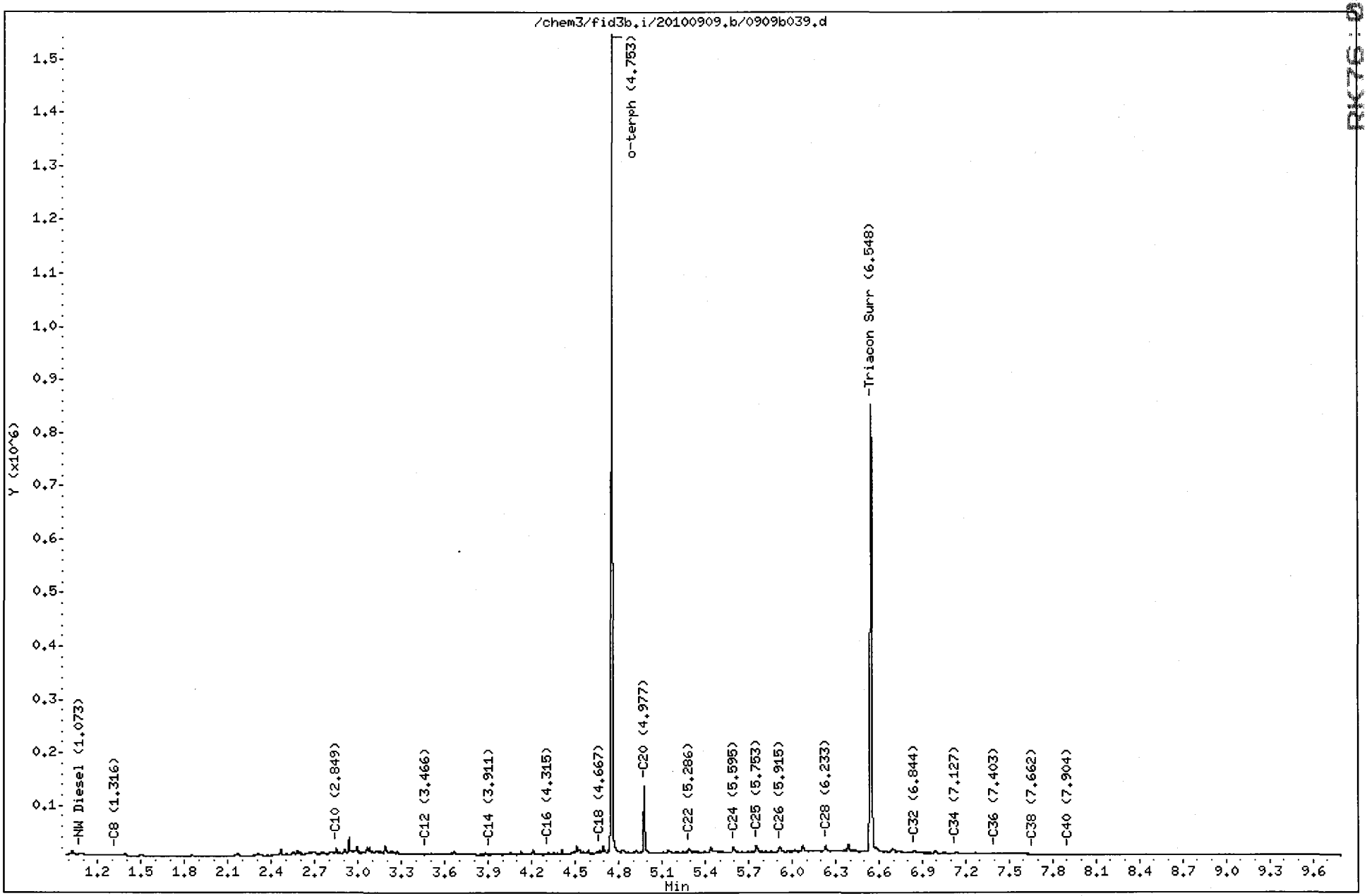
Column phase: ZB-1HT

Instrument: fid3b.i

Operator: MS

Column diameter: 0.25

RK76-00221



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909braw.b/0909b040.d ARI ID: DIESEL#4
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m Client ID:
Instrument: fid3b.i Injection: 10-SEP-2010 00:55
Operator: MS Dilution Factor: 1
Report Date: 09/16/2010
Macro: FID:3B083010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.026	0.007	8788	16413	GAS (Tol-C12)	936252	21
C8	1.304	-0.002	2963	3840	DIESEL (C12-C24)	5279591	247
C10	2.848	0.000	25995	18925	M.OIL (C24-C38)	112547	9
C12	3.458	-0.001	63832	47066	AK-102 (C10-C25)	5967635	248
C14	3.916	-0.001	123956	116873	AK-103 (C25-C36)	92667	10
C16	4.312	0.000	238630	227218	OR.DIES (C10-C28)	6024047	286
C18	4.666	0.000	204360	166642	OR.MOIL (C28-C40)	49029	4
C20	4.989	0.002	113974	97614			
C22	5.287	0.002	42889	52846	STODDARD (C8-C12)	882317	32
C24	5.588	-0.005	6482	3618			
C25	5.753	0.000	3101	1630			
C26	5.914	0.002	1638	1343			
C28	6.231	0.000	385	120			
C32	6.831	-0.011	150	50			
C34	7.131	0.003	53	28	CREOSOT (C8-C22)	5100508	797
Filter Peak	----						
C36	7.403	0.004	51	6	BUNKERC (C10-C38)	6064637	702
o-terph	4.755	0.001	1571185	1067378	JET-A (C10-C18)	4505757	284
Triacon Surr	6.551	-0.002	172	75	IT.MOIL (C24-C40)	121061	6

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1067378	53.5	119.0
Triacontane	75	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909braw.b/0909b040.d

Date : 10-SEP-2010 00:55

Client ID:

Sample Info: DIESEL#4

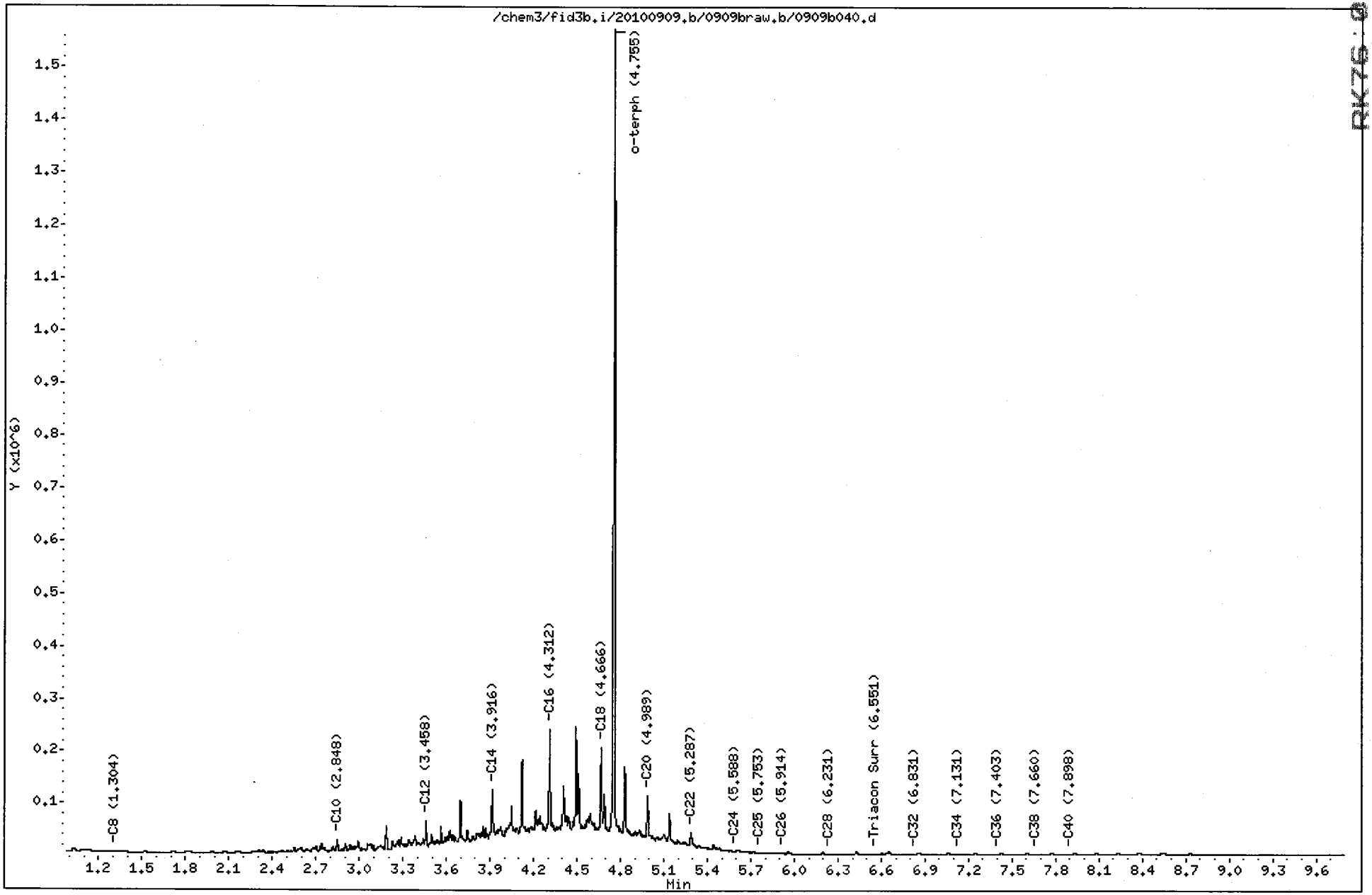
Column phase: ZB-1HT

Instrument: fid3b.i

Operator: MS

Column diameter: 0.25

RK75-90223



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909braw.b/0909b041.d ARI ID: MOIL#4
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m Client ID:
Instrument: fid3b.i Injection: 10-SEP-2010 01:14
Operator: MS Dilution Factor: 1
Report Date: 09/16/2010
Macro: FID:3B083010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.020	0.000	5605	5836	GAS (Tol-C12)	148090	3
C8	1.310	0.004	1823	1661	DIESEL (C12-C24)	849813	40
C10	2.851	0.002	1261	2322	M.OIL (C24-C38)	5858833	485
C12	3.462	0.004	2165	1102	AK-102 (C10-C25)	1012719	42
C14	3.911	-0.005	1458	571	AK-103 (C25-C36)	5128429	574
C16	4.315	0.003	1344	500	OR.DIES (C10-C28)	2436769	116
C18	4.663	-0.003	1702	1069	OR.MOIL (C28-C40)	4718603	419
C20	4.988	0.001	5499	2860			
C22	5.278	-0.007	16124	8859	STODDARD (C8-C12)	109413	4
C24	5.592	-0.001	28975	13321			
C25	5.753	0.000	36752	7761			
C26	5.913	0.000	39479	11494			
C28	6.230	-0.001	48792	19986			
C32	6.837	-0.005	59202	46456			
C34	7.132	0.004	64194	72460	CREOSOT (C8-C22)	401337	63
Filter Peak	----						
C36	7.402	0.002	51045	38902	BUNKERC (C10-C38)	6770667	783
o-terph	4.753	-0.002	16287	17306	JET-A (C10-C18)	184694	12
Triacon Surr	6.549	-0.005	953245	965976	IT.MOIL (C24-C40)	7209514	336

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	17306	0.9	1.9
Triacontane	965976	57.8	128.3

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909braw.b/0909b041.d

Date : 10-SEP-2010 01:14

Client ID:

Sample Info: MOIL#4

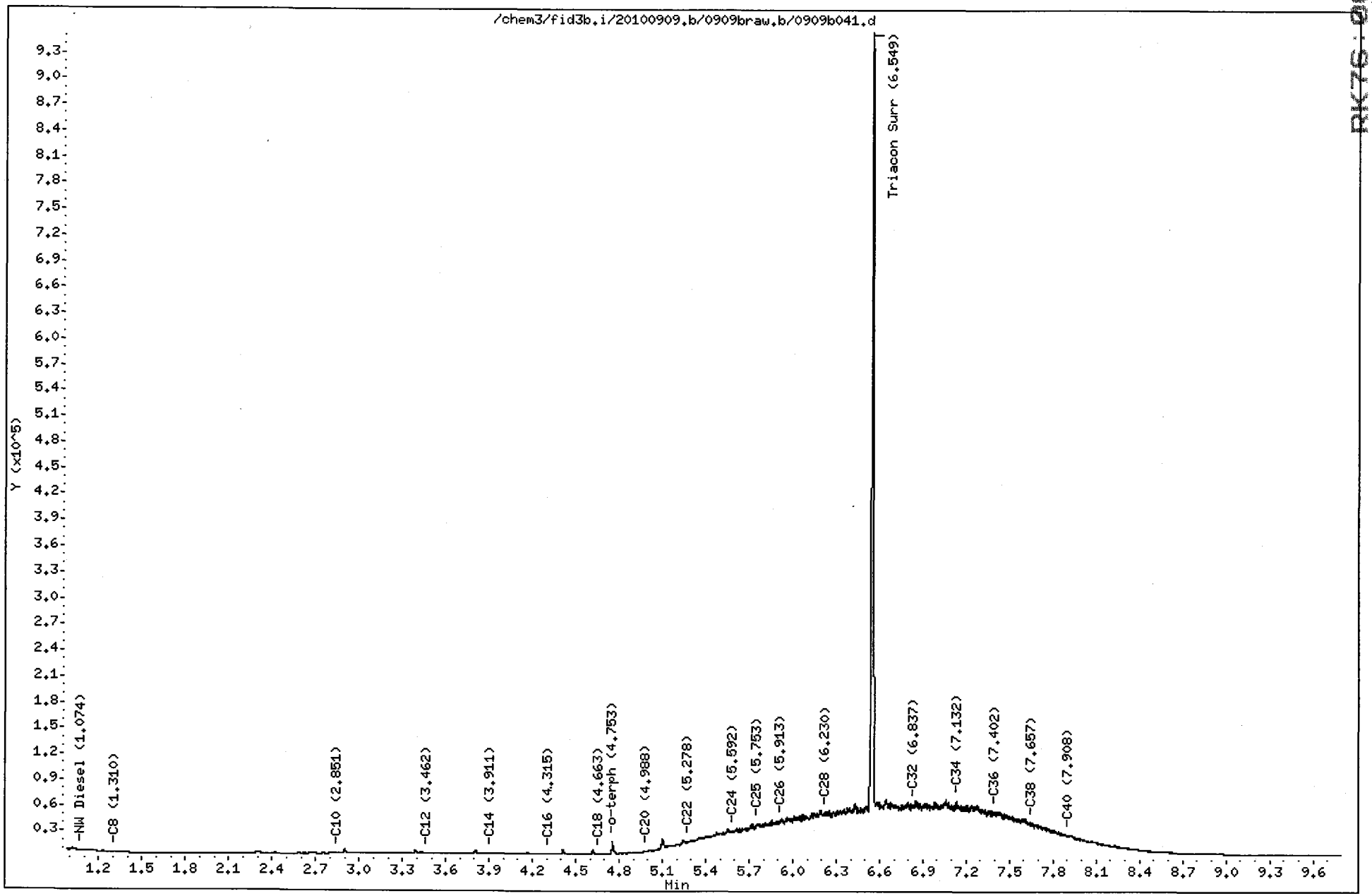
Column phase: ZB-1HT

Instrument: fid3b.i

Operator: MS

Column diameter: 0.25

RKTS-00225



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909b042.d
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m
Instrument: fid3b.i
Operator: MS
Report Date: 09/15/2010
Macro: FID:3B083010

ARI ID: RK76S
Client ID: PSB27-8-10-082610
Injection: 10-SEP-2010 01:33
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.028	0.008	7107	14210	GAS (Tol-C12)	1890470	42
C8	1.298	-0.008	2417	3931	DIESEL (C12-C24)	3360129	157
C10	2.849	0.001	103367	89361	M.OIL (C24-C38)	3786049	313
C12	3.458	0.000	48640	36363	AK-102 (C10-C25)	4916854	204
C14	3.918	0.001	41498	49312	AK-103 (C25-C36)	3439190	385
C16	4.312	0.000	57303	45593	OR.DIES (C10-C28)	6257810	297
C18	4.666	-0.001	62247	56274	OR.MOIL (C28-C40)	2488680	221
C20	4.989	0.002	58987	55596			
C22	5.286	0.001	75918	76808	STODDARD (C8-C12)	1838454	66
C24	5.596	0.004	89944	110103			
C25	5.754	0.001	90178	126952			
C26	5.914	0.001	84553	109447			
C28	6.232	0.001	81589	80105			
C32	6.843	0.000	48975	48102			
C34	7.130	0.002	33183	20329	CREOSOT (C8-C22)	2726681	426
Filter Peak	----						
C36	7.400	0.000	23037	23727	BUNKERC (C10-C38)	8595414	994
o-terph	4.753	-0.002	1445534	878224	JET-A (C10-C18)	3006657	190
Triacon Surr	6.550	-0.003	831230	806137	IT.MOIL (C24-C40)	4743263	221

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	878224	44.1	97.9
Triacontane	806137	48.2	107.1

9/16/10

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909b042.d

Date : 10-SEP-2010 01:33

Client ID: PSB27-8-10-082610

Sample Info: RK76S

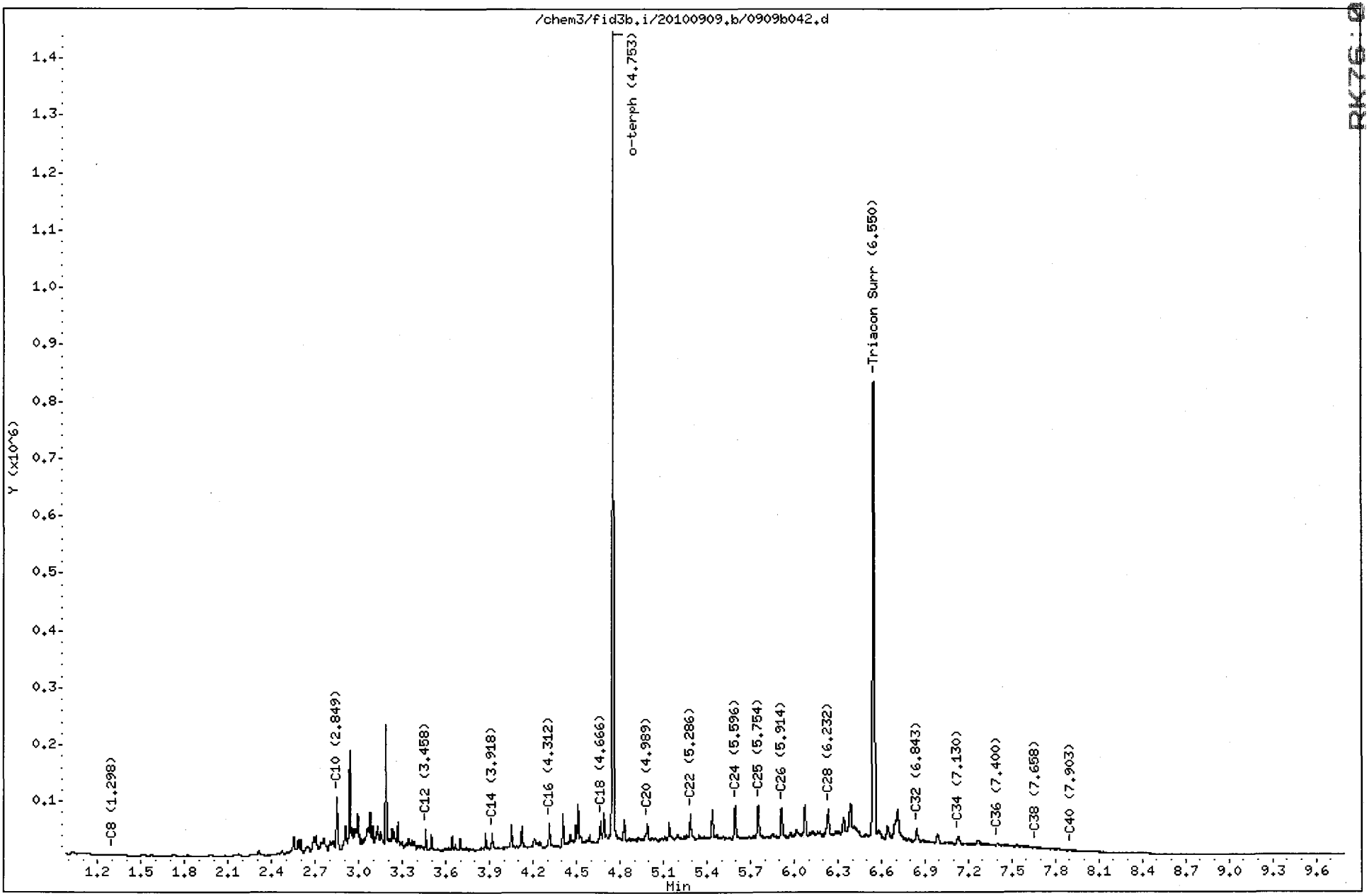
Column phase: ZB-1HT

Instrument: fid3b.i

Operator: MS

Column diameter: 0.25

RK76-080227



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909braw.b/0909b050.d ARI ID: DIESEL#5
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m Client ID:
Instrument: fid3b.i Injection: 10-SEP-2010 04:04
Operator: MS Dilution Factor: 1
Report Date: 09/16/2010
Macro: FID:3B083010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.028	0.009	8254	13812	GAS (Tol-C12)	889081	20
C8	1.306	0.000	2642	3924	DIESEL (C12-C24)	5320950	249
C10	2.847	-0.001	26951	19275	M.OIL (C24-C38)	149050	12
C12	3.457	-0.001	67525	53623	AK-102 (C10-C25)	5983288	248
C14	3.916	-0.001	132669	110438	AK-103 (C25-C36)	122126	14
C16	4.312	0.000	231078	211729	OR.DIES (C10-C28)	6045966	287
C18	4.666	0.000	209777	174195	OR.MOIL (C28-C40)	90985	8
C20	4.989	0.002	118405	116246			
C22	5.287	0.003	45600	48631	STODDARD (C8-C12)	842918	30
C24	5.590	-0.002	6841	2712			
C25	5.751	-0.002	3529	1990			
C26	5.912	0.000	1809	605			
C28	6.232	0.002	710	402			
C32	6.831	-0.011	498	276			
C34	7.127	-0.002	490	239	CREOSOT (C8-C22)	5134631	803
Filter Peak	----						
C36	7.396	-0.003	544	355	BUNKERC (C10-C38)	6117696	708
o-terph	4.755	0.000	1763826	1085451	JET-A (C10-C18)	4566601	288
Triacon Surr	6.561	0.008	495	132	IT.MOIL (C24-C40)	168437	8

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1085451	54.5	121.0
Triacontane	132	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

9/16/10

Data File: /chem3/fid3b.i/20100909.b/0909braw.b/0909b050.d

Date : 10-SEP-2010 04:04

Client ID:

Sample Info: DIESEL#5

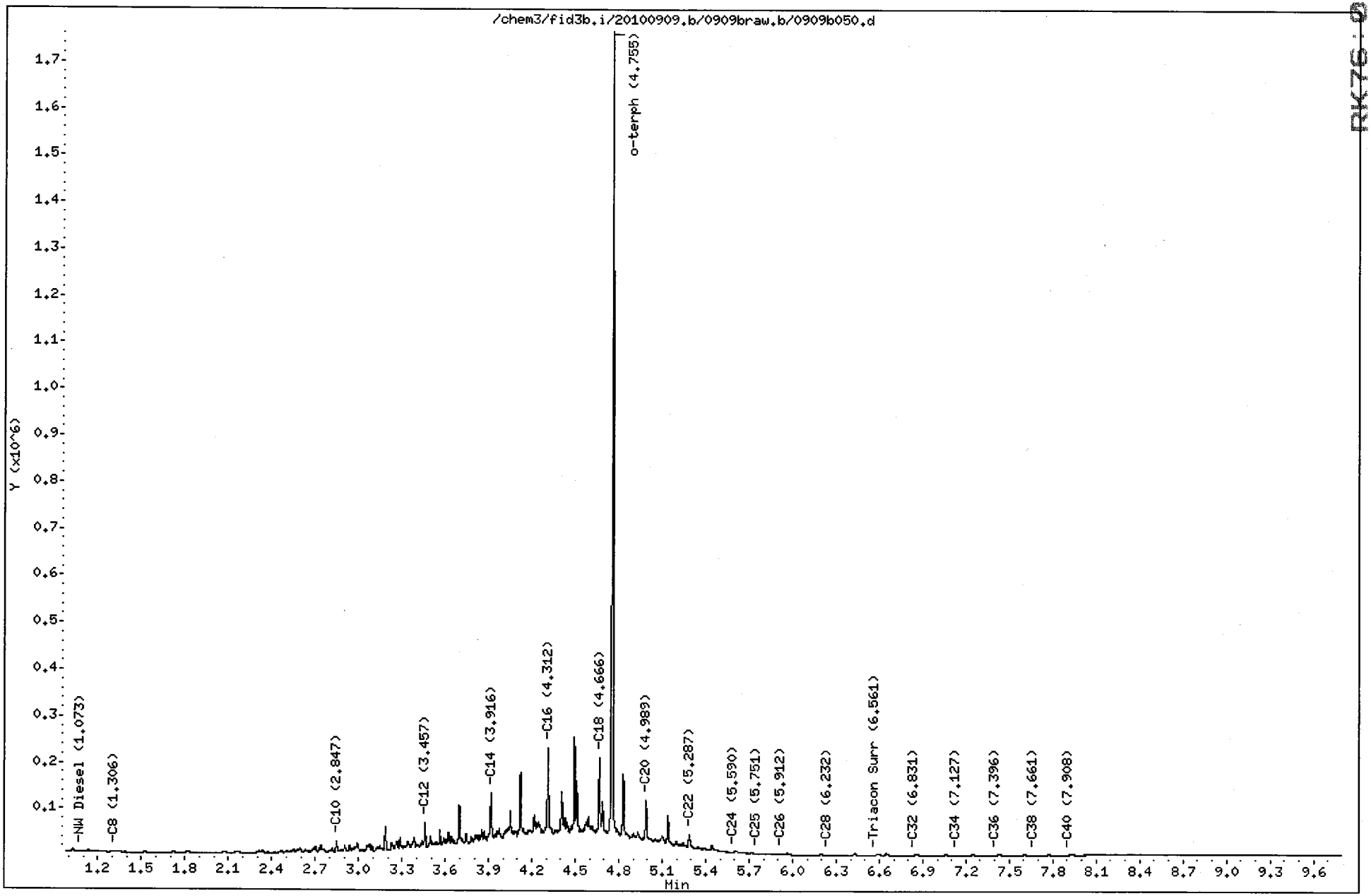
Column phase: ZB-1HT

Instrument: fid3b.i

Operator: MS

Column diameter: 0.25

RK75-00229



Analytical Resources Inc.
407S TPH Quantitation Report

Data file: /chem3/fid3b.i/20100909.b/0909braw.b/0909b051.d ARI ID: MOIL#5
Method: /chem3/fid3b.i/20100909.b/ftphfid3b.m Client ID:
Instrument: fid3b.i Injection: 10-SEP-2010 04:23
Operator: MS Dilution Factor: 1
Report Date: 09/16/2010
Macro: FID:3B083010

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.019	-0.001	4732	6991	GAS (Tol-C12)	132110	3
C8	1.307	0.002	1547	1498	DIESEL (C12-C24)	857539	40
C10	2.851	0.003	1128	1610	M.OIL (C24-C38)	5941723	492
C12	3.452	-0.006	2316	1653	AK-102 (C10-C25)	1033293	43
C14	3.912	-0.004	1452	809	AK-103 (C25-C36)	5161513	578
C16	4.311	0.000	1354	267	OR.DIES (C10-C28)	2468668	117
C18	4.663	-0.004	1824	829	OR.MOIL (C28-C40)	4801098	426
C20	4.987	0.000	5669	991			
C22	5.283	-0.002	16550	6802	STODDARD (C8-C12)	99622	4
C24	5.591	-0.001	28805	5677			
C25	5.750	-0.002	36666	19550			
C26	5.914	0.001	41238	25422			
C28	6.235	0.005	49023	11552			
C32	6.841	-0.001	63257	16919			
C34	7.129	0.001	60760	27508	CREOSOT (C8-C22)	409385	64
Filter Peak	----						
C36	7.398	-0.002	52094	26483	BUNKERC (C10-C38)	6856493	793
o-terph	4.754	0.000	16157	16875	JET-A (C10-C18)	182081	11
Triacon Surr	6.550	-0.003	940574	982470	IT.MOIL (C24-C40)	7337466	341

Range Times: NW Diesel(3.509 - 5.643) NW Gas(0.970 - 3.509) NW M.Oil(5.643 - 7.709)
AK102(2.798 - 5.703) AK103(5.703 - 7.450) Jet A(2.798 - 4.717)

Surrogate	Area	Amount	%Rec
o-Terphenyl	16875	0.8	1.9
Triacontane	982470	58.7	130.5

Analyte	RF	Curve Date
o-Terph Surr	19934.0	30-JUL-2010
Triacon Surr	16726.1	30-JUL-2010
Gas	45071.5	30-AUG-2010
Diesel	21397.5	30-JUL-2010
Motor Oil	12081.4	30-JUL-2010
AK102	24104.0	30-JUL-2010
AK103	8932.5	01-SEPT-2009
JetA	15848.0	27-JAN-2009
OR Diesel	21090.0	
OR M.Oil	11274.0	
IT M.Oil	21488.2	
Bunker C	8643.2	15-SEP-2009
Creosote	6396.0	17-JAN-2009

Data File: /chem3/fid3b.i/20100909.b/0909braw.b/0909b051.d

Page 1

Date : 10-SEP-2010 04:23

Client ID:

Instrument: fid3b.i

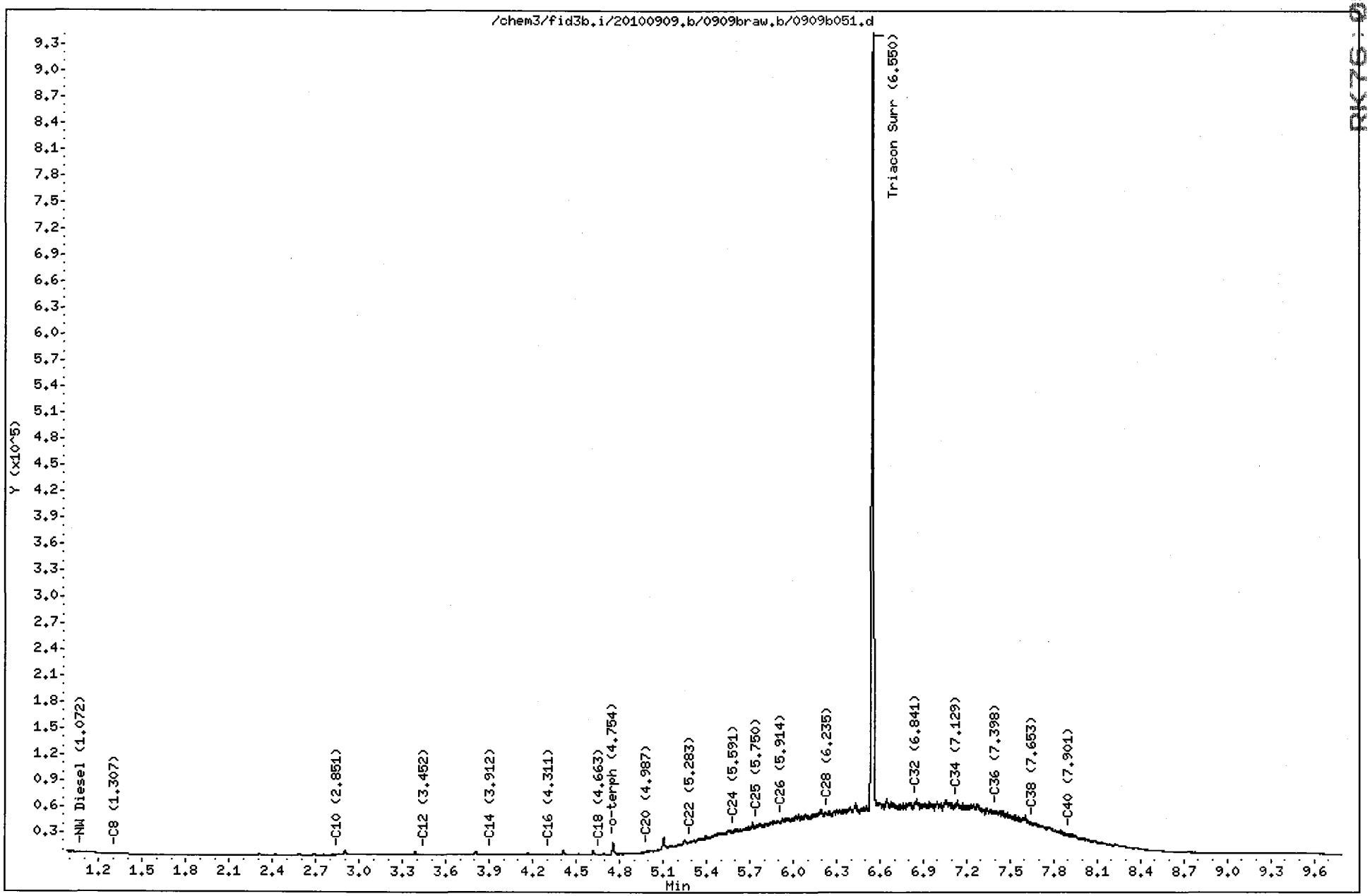
Sample Info: MOIL#5

Operator: MS

Column phase: ZB-1HT

Column diameter: 0.25

RK76-00231



Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: RK76

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: MH

Date: 9/01

Final Volume 50

Final Volume (Hg): _____

Sample ID RK76 ASPK, MBSPK

Prepcode:		SWC		
Spike Solution:		ICP Routine	ICP No GFA	GFA
Standard No.:		2752-2		
Vol Added (mL):		1.0		
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200 ✓		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200 ✓		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
Ag	25		
Al			500
As	25		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg		CVA	1.0		
Hg MBSPK		CVA	1.0		
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

RK76 : 002323

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:

Unacceptable Blank: ☐

Unacceptable Duplicate: ☑

Unacceptable Spike: ☐

Unacceptable Reference: ☐

ARI Job No.: RK76

Date of Event: 9-2-10

Client ID: Floyd Snider

Method/Element: ICP

Prep Code: Soil

Details of Problem/Recommended Corrective Action:

43% RPD for Pb in RK76 ~~Aspk~~ M9-2 A, ADup

A 0.3486 ppm Pb
ADup 0.5358 " D

Run twice

Samples Affected:

Corrective Action Taken:

Spiked

Analyst Initials: [illegible]

Date: 9-2-10

Supervisor: [signature]

Date: 9.3.10

5049F

Revision 007
6/11/10

RK76 : 00234

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: RK76

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 8-19-10 Analysis Date: 9-2-10 Analyst: H

LR Date: 8-19-10 Page: 1 of 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			275809
		2			275707
		3			-8
		4			-9
		5			-10
		ICV			275409
		ICB			
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
		R181 MB1	SWC		
		RJ52 MB1			
		RK32 MB1		2	
		A			
		RK76 B			
		ADup			Pb 43% RPD
		A			CAF
		Aspk		✓	
		RK32 MB1spk		✓	
		MB1SPD		✓	
		CCV2			
		CCB2			

RK76 : 00236

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — **Analysis Date:** 9-2-10 **Analyst:** MJ

LR Date: — **Page:** 2 of 5

All corrections made by analyst unless otherwise noted. MJ 9-2-10

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		RK76 MB1	SwC	2	
		C			
		H			
		I			
		N			
		O			
	✓	P			RR's (Fe)
		Ref1		✓	
		MB1Spk		✓	
		CCV3			
		CCB3			
	✓	RK76 A	SwC	2	CONFIRMS PREVIOUS
	↓	ADup		↓	↓
		P		5	
		CCV4			
		CCB4			cond pkg
		RK08 MB	SwC	2	
		RK03 MB			
		A			
		RK08 A			
		BDup		✓	
		B			CAF
		BSpk		✓	Zn 147% R
		MBSpk		✓	

9/3/10

RK76 : 00237

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 9-2-10

OPT II	Analyst AA 9-3	Peer JWG 9.3.10	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See Log
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	See Log
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	RK08
Matrix Duplicates	✓	✓	RK76
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	CAF RK08 RK76

Analysis Begun

Start Time: 9/2/2010 8:16:40 AM
Plasma On Time: 9/2/2010 7:17:39 AM
Logged In Analyst: metals
Technique: ICP Continuous
Spectrometer Model: Optima 7300 DV, S/N 077C8121202Autosampler Model: AS-93plus

Sample Information File: C:\pe\metals\Sample Information\CRISET2.sif
Batch ID:
Results Data Set: I2100902
Results Library: C:\pe\metals\Results\Results.mdb

Method Loaded
Method Name: 7300bcESI2FAST
Method Last Saved: 8/19/2010 9:59:24 AM
IEC File: IEC6.iec
MSF File:
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

Sequence No.: 1
Autosampler Location: 1
Sample ID: Calib Blank 1
Date Collected: 9/2/2010 8:16:41 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	182.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1867489.2	9938.00	0.53%	100.0	%
ScR 361.383	295778.5	2366.70	0.80%	100.0	%
Ag 328.068†	-14.9	2.27	15.23%	[0.00]	mg/L
Al 308.215†	-51.0	6.22	12.20%	[0.00]	mg/L
As 188.979†	-20.5	2.67	13.02%	[0.00]	mg/L

B 249.677†	-71.4	6.29	8.81%	[0.00] mg/L
Ba 233.527†	7.5	2.57	34.08%	[0.00] mg/L
Be 313.042†	1436.8	31.77	2.21%	[0.00] mg/L
Ca 317.933†	371.5	16.28	4.38%	[0.00] mg/L
Cd 228.802†	192.8	2.06	1.07%	[0.00] mg/L
Co 228.616†	-116.6	2.13	1.82%	[0.00] mg/L
Cr 267.716†	-81.9	4.93	6.02%	[0.00] mg/L
Cu 324.752†	537.9	20.60	3.83%	[0.00] mg/L
Fe 273.955†	13.9	1.18	8.50%	[0.00] mg/L
K 766.490†	-308.3	51.36	16.66%	[0.00] mg/L
Mg 279.077†	79.0	2.93	3.71%	[0.00] mg/L
Mn 257.610†	63.6	4.65	7.30%	[0.00] mg/L
Mo 202.031†	119.8	8.03	6.71%	[0.00] mg/L
Na 589.592†	603.7	48.89	8.10%	[0.00] mg/L
Na 330.237†	-116.7	9.35	8.01%	[0.00] mg/L
Ni 231.604†	32.6	3.15	9.68%	[0.00] mg/L
Pb 220.353†	-136.9	5.17	3.78%	[0.00] mg/L
Sb 206.836†	87.4	5.13	5.86%	[0.00] mg/L
Se 196.026†	-91.6	4.32	4.71%	[0.00] mg/L
Si 288.158†	112.9	8.26	7.32%	[0.00] mg/L
Sn 189.927†	-7.6	6.03	79.61%	[0.00] mg/L
Sr 421.552†	-719.0	24.80	3.45%	[0.00] mg/L
Ti 334.903†	-284.4	15.11	5.31%	[0.00] mg/L
Tl 190.801†	-45.7	0.93	2.04%	[0.00] mg/L
V 292.402†	373.7	38.82	10.39%	[0.00] mg/L
Zn 206.200†	-36.8	2.50	6.78%	[0.00] mg/L

Sequence No.: 2
Sample ID: STD2

Autosampler Location: 2
Date Collected: 9/2/2010 8:20:37 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	182.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1870651.0	5444.08	0.29%	100.2	%
ScR 361.383	294578.7	777.21	0.26%	99.59	%
Ba 233.527†	74075.3	159.77	0.22%	[10]	mg/L
Cd 228.802†	235483.9	1157.58	0.49%	[10]	mg/L
Co 228.616†	324448.7	1172.98	0.36%	[10]	mg/L
Cr 267.716†	75336.2	175.71	0.23%	[10]	mg/L
Cu 324.752†	1767783.4	2230.28	0.13%	[10]	mg/L
Mn 257.610†	435944.9	1604.78	0.37%	[10]	mg/L
V 292.402†	934706.4	2695.09	0.29%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 9/2/2010 8:22:18 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	182.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1874018.5	9708.32	0.52%	100.3	%
ScR 361.383	292534.6	3330.78	1.14%	98.90	%
Ag 328.068†	171214.5	508.34	0.30%	[1.0]	mg/L
As 188.979†	16719.5	35.36	0.21%	[10]	mg/L
B 249.677†	59081.6	923.67	1.56%	[10]	mg/L
Be 313.042†	3353557.3	33238.83	0.99%	[5.0]	mg/L
Na 589.592†	478476.4	4967.12	1.04%	[50]	mg/L
Ni 231.604†	42088.0	481.27	1.14%	[10]	mg/L
Pb 220.353†	84854.7	338.77	0.40%	[10]	mg/L
Se 196.026†	15722.2	33.40	0.21%	[10]	mg/L
Sr 421.552†	3711480.4	46509.65	1.25%	[5]	mg/L
Tl 190.801†	20907.8	48.50	0.23%	[10]	mg/L
Zn 206.200†	43201.3	570.84	1.32%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 9/2/2010 8:24:31 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	182.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1925497.5	9087.78	0.47%	103.1	%
ScR 361.383	302022.7	1815.47	0.60%	102.1	%
Mo 202.031†	211751.4	1932.50	0.91%	[10]	mg/L
Sb 206.836†	29844.6	243.99	0.82%	[10]	mg/L
Si 288.158†	14348.8	39.72	0.28%	[10]	mg/L
Sn 189.927†	54396.3	553.42	1.02%	[10]	mg/L
Ti 334.903†	226732.4	863.05	0.38%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 9/2/2010 8:26:41 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	182.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	1812344.0	7882.90	0.43%	97.05	%
ScR 361.383	300252.4	977.45	0.33%	101.5	%
Al 308.215†	33427.6	138.78	0.42%	[30]	mg/L
Ca 317.933†	427413.4	1140.61	0.27%	[30]	mg/L
Fe 273.955†	129771.6	624.01	0.48%	[100]	mg/L
K 766.490†	162658.6	259.79	0.16%	[100]	mg/L
Mg 279.077†	30162.0	163.55	0.54%	[30]	mg/L
Na 330.237†	2662.2	27.15	1.02%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	171200	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1114	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1672	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	5908	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	7408	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	670700	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	14250	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	23550	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	32440	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	7534	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	176800	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1298	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1627	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1005	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	43590	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	21180	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	9570	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	26.62	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	4209	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	8485	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2984	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1572	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1435	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	5440	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	742300	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	22670	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2091	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	93470	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	4320	0.00000	1.000000	

Analysis Begun

Start Time: 9/2/2010 8:31:43 AM
Logged In Analyst: metals
Spectrometer Model: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 9/2/2010 7:17:39 AM
Technique: ICP Continuous
Autosampler Model: AS-93plus

Sample Information File: C:\pe\metals\Sample Information\CRISET2.sif
Batch ID:
Results Data Set: I2100902
Results Library: C:\pe\metals\Results\Results.mdb

Sequence No.: 1
Sample ID: 1 CV
Autosampler Location: 7
Date Collected: 9/2/2010 8:31:44 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1895722.0	101.5	%	1.52				1.50%
ScR 361.383	303959.8	102.8	%	0.74				0.72%
Ag 328.068†	166952.0	0.9750	mg/L	0.01783	0.9750	mg/L	0.01783	1.83%
Al 308.215†	2278.0	2.011	mg/L	0.0070	2.011	mg/L	0.0070	0.35%
As 188.979†	3321.0	1.993	mg/L	0.0285	1.993	mg/L	0.0285	1.43%
B 249.677†	5761.1	0.9739	mg/L	0.00494	0.9739	mg/L	0.00494	0.51%
Ba 233.527†	7265.1	0.9802	mg/L	0.00628	0.9802	mg/L	0.00628	0.64%
Be 313.042†	655669.6	0.9772	mg/L	0.00722	0.9772	mg/L	0.00722	0.74%
Ca 317.933†	29916.7	2.099	mg/L	0.0124	2.099	mg/L	0.0124	0.59%
Cd 228.802†	23611.7	0.9944	mg/L	0.01627	0.9944	mg/L	0.01627	1.64%
Co 228.616†	31566.3	0.9712	mg/L	0.01616	0.9712	mg/L	0.01616	1.66%
Cr 267.716†	7443.6	0.9875	mg/L	0.00845	0.9875	mg/L	0.00845	0.86%
Cu 324.752†	171147.9	0.9681	mg/L	0.01462	0.9681	mg/L	0.01462	1.51%
Fe 273.955†	2508.4	1.928	mg/L	0.0123	1.928	mg/L	0.0123	0.64%
K 766.490†	32209.1	19.80	mg/L	0.068	19.80	mg/L	0.068	0.34%
Mg 279.077†	1951.9	1.946	mg/L	0.0130	1.946	mg/L	0.0130	0.67%
Mn 257.610†	42513.3	0.9757	mg/L	0.00500	0.9757	mg/L	0.00500	0.51%
Mo 202.031†	21323.4	1.007	mg/L	0.0152	1.007	mg/L	0.0152	1.51%
Na 589.592†	460579.0	48.13	mg/L	0.648	48.13	mg/L	0.648	1.35%
Na 330.237†	1339.3	50.31	mg/L	0.440	50.31	mg/L	0.440	0.88%
Ni 231.604†	4132.0	0.9832	mg/L	0.00858	0.9832	mg/L	0.00858	0.87%
Pb 220.353†	16994.0	2.004	mg/L	0.0317	2.004	mg/L	0.0317	1.58%
Sb 206.836†	6071.8	2.040	mg/L	0.0327	2.040	mg/L	0.0327	1.60%
Se 196.026†	3150.8	2.004	mg/L	0.0273	2.004	mg/L	0.0273	1.36%
Si 288.158†	2908.4	2.031	mg/L	0.0063	2.031	mg/L	0.0063	0.31%
Sn 189.927†	5417.4	0.9976	mg/L	0.01649	0.9976	mg/L	0.01649	1.65%
Sr 421.552†	726921.7	0.9793	mg/L	0.00630	0.9793	mg/L	0.00630	0.64%
Ti 334.903†	21948.7	0.9665	mg/L	0.00588	0.9665	mg/L	0.00588	0.61%
Tl 190.801†	4159.7	1.990	mg/L	0.0325	1.990	mg/L	0.0325	1.63%
V 292.402†	90257.3	0.9702	mg/L	0.01375	0.9702	mg/L	0.01375	1.42%
Zn 206.200†	4194.2	0.9707	mg/L	0.00951	0.9707	mg/L	0.00951	0.98%

Sequence No.: 2
Sample ID: CB

Autosampler Location: 1
Date Collected: 9/2/2010 8:34:43 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	182.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1894043.5	101.4	%	0.71				0.70%
ScR 361.383	299826.9	101.4	%	1.15				1.13%
Ag 328.068†	3.2	0.00002	mg/L	0.000076	0.00002	mg/L	0.000076	412.68%
Al 308.215†	-5.6	-0.00509	mg/L	0.008217	-0.00509	mg/L	0.008217	161.31%
As 188.979†	-0.5	-0.00031	mg/L	0.001161	-0.00031	mg/L	0.001161	372.90%
B 249.677†	34.5	0.00585	mg/L	0.000870	0.00585	mg/L	0.000870	14.88%
Ba 233.527†	-3.0	-0.00040	mg/L	0.000338	-0.00040	mg/L	0.000338	84.86%
Be 313.042†	12.8	0.00002	mg/L	0.000019	0.00002	mg/L	0.000019	100.83%
Ca 317.933†	-12.8	-0.00090	mg/L	0.000943	-0.00090	mg/L	0.000943	104.57%
Cd 228.802†	4.4	0.00019	mg/L	0.000086	0.00019	mg/L	0.000086	45.76%
Co 228.616†	4.3	0.00013	mg/L	0.000134	0.00013	mg/L	0.000134	99.62%
Cr 267.716†	-2.4	-0.00032	mg/L	0.000318	-0.00032	mg/L	0.000318	100.70%
Cu 324.752†	60.9	0.00034	mg/L	0.000105	0.00034	mg/L	0.000105	30.41%
Fe 273.955†	1.0	0.00079	mg/L	0.000212	0.00079	mg/L	0.000212	26.81%
K 766.490†	79.7	0.04901	mg/L	0.028251	0.04901	mg/L	0.028251	57.65%
Mg 279.077†	-1.5	-0.00144	mg/L	0.007840	-0.00144	mg/L	0.007840	543.92%
Mn 257.610†	-1.4	-0.00003	mg/L	0.000144	-0.00003	mg/L	0.000144	453.70%
Mo 202.031†	61.4	0.00290	mg/L	0.001513	0.00290	mg/L	0.001513	52.15%
Na 589.592†	57.2	0.00597	mg/L	0.007008	0.00597	mg/L	0.007008	117.31%
Na 330.237†	-5.7	-0.2156	mg/L	0.49709	-0.2156	mg/L	0.49709	230.51%
Ni 231.604†	-5.5	-0.00131	mg/L	0.001041	-0.00131	mg/L	0.001041	79.23%
Pb 220.353†	-2.4	-0.00028	mg/L	0.000318	-0.00028	mg/L	0.000318	112.00%
Sb 206.836†	12.4	0.00416	mg/L	0.000730	0.00416	mg/L	0.000730	17.53%
Se 196.026†	1.8	0.00111	mg/L	0.005946	0.00111	mg/L	0.005946	534.18%
Si 288.158†	-8.7	-0.00609	mg/L	0.002085	-0.00609	mg/L	0.002085	34.23%
Sn 189.927†	3.1	0.00058	mg/L	0.000559	0.00058	mg/L	0.000559	96.40%
Sr 421.552†	74.6	0.00010	mg/L	0.000048	0.00010	mg/L	0.000048	47.76%
Ti 334.903†	3.6	0.00015	mg/L	0.000838	0.00015	mg/L	0.000838	542.40%
Tl 190.801†	8.7	0.00418	mg/L	0.002245	0.00418	mg/L	0.002245	53.72%
V 292.402†	-2.4	-0.00002	mg/L	0.000127	-0.00002	mg/L	0.000127	512.60%
Zn 206.200†	2.3	0.00053	mg/L	0.000442	0.00053	mg/L	0.000442	82.87%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 9/2/2010 8:38:39 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1904665.5	102.0	%	1.00				0.98%
ScR 361.383	310315.2	104.9	%	1.30				1.24%
Ag 328.068†	477.5	0.00279	mg/L	0.000331	0.00279	mg/L	0.000331	11.86%
Al 308.215†	56.9	0.05094	mg/L	0.008951	0.05094	mg/L	0.008951	17.57%
As 188.979†	88.1	0.05274	mg/L	0.005032	0.05274	mg/L	0.005032	9.54%
B 249.677†	148.5	0.02513	mg/L	0.000686	0.02513	mg/L	0.000686	2.73%
Ba 233.527†	27.0	0.00363	mg/L	0.000762	0.00363	mg/L	0.000762	20.97%
Be 313.042†	585.4	0.00087	mg/L	0.000048	0.00087	mg/L	0.000048	5.50%
Ca 317.933†	644.2	0.04521	mg/L	0.000372	0.04521	mg/L	0.000372	0.82%
Cd 228.802†	59.7	0.00231	mg/L	0.000100	0.00231	mg/L	0.000100	4.35%
Co 228.616†	110.9	0.00341	mg/L	0.000041	0.00341	mg/L	0.000041	1.19%
Cr 267.716†	40.0	0.00530	mg/L	0.000567	0.00530	mg/L	0.000567	10.70%
Cu 324.752†	373.2	0.00211	mg/L	0.000130	0.00211	mg/L	0.000130	6.13%
Fe 273.955†	67.1	0.05168	mg/L	0.005028	0.05168	mg/L	0.005028	9.73%
K 766.490†	857.2	0.5270	mg/L	0.02835	0.5270	mg/L	0.02835	5.38%
Mg 279.077†	51.6	0.05131	mg/L	0.004130	0.05131	mg/L	0.004130	8.05%
Mn 257.610†	51.9	0.00120	mg/L	0.000428	0.00120	mg/L	0.000428	35.77%
Mo 202.031†	108.6	0.00513	mg/L	0.000091	0.00513	mg/L	0.000091	1.78%
Na 589.592†	4572.9	0.4779	mg/L	0.00588	0.4779	mg/L	0.00588	1.23%
Na 330.237†	5.0	0.1852	mg/L	0.36181	0.1852	mg/L	0.36181	195.31%
Ni 231.604†	37.0	0.00882	mg/L	0.000344	0.00882	mg/L	0.000344	3.90%
Pb 220.353†	179.8	0.02120	mg/L	0.000070	0.02120	mg/L	0.000070	0.33%
Sb 206.836†	156.8	0.05260	mg/L	0.001468	0.05260	mg/L	0.001468	2.79%
Se 196.026†	91.1	0.05791	mg/L	0.002629	0.05791	mg/L	0.002629	4.54%
Si 288.158†	72.7	0.05070	mg/L	0.007018	0.05070	mg/L	0.007018	13.84%
Sn 189.927†	54.2	0.00999	mg/L	0.000496	0.00999	mg/L	0.000496	4.96%
Sr 421.552†	767.6	0.00103	mg/L	0.000037	0.00103	mg/L	0.000037	3.58%
Ti 334.903†	95.8	0.00422	mg/L	0.000995	0.00422	mg/L	0.000995	23.60%
Tl 190.801†	114.4	0.05472	mg/L	0.003398	0.05472	mg/L	0.003398	6.21%
V 292.402†	278.3	0.00300	mg/L	0.000304	0.00300	mg/L	0.000304	10.16%
Zn 206.200†	47.6	0.01101	mg/L	0.000787	0.01101	mg/L	0.000787	7.15%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 9/2/2010 8:42:36 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1870915.6	100.2	%	1.51				1.51%
ScR 361.383	301020.1	101.8	%	0.81				0.79%
Ag 328.068†	-119.3	-0.00069	mg/L	0.000174	-0.00069	mg/L	0.000174	25.12%
Al 308.215†	225032.7	202.0	mg/L	2.96	202.0	mg/L	2.96	1.47%
As 188.979†	10.5	0.00211	mg/L	0.002290	0.00211	mg/L	0.002290	108.51%
B 249.677†	2.4	0.00041	mg/L	0.003479	0.00041	mg/L	0.003479	857.19%
Ba 233.527†	104.5	0.00112	mg/L	0.000156	0.00112	mg/L	0.000156	14.01%
Be 313.042†	38.5	0.00005	mg/L	0.000013	0.00005	mg/L	0.000013	26.79%
Ca 317.933†	1439731.2	101.1	mg/L	1.88	101.1	mg/L	1.88	1.86%
Cd 228.802†	47.0	0.00197	mg/L	0.000234	0.00197	mg/L	0.000234	11.89%
Co 228.616†	56.0	0.00171	mg/L	0.000140	0.00171	mg/L	0.000140	8.17%
Cr 267.716†	18.7	-0.00065	mg/L	0.000948	-0.00065	mg/L	0.000948	146.37%
Cu 324.752†	-1986.8	0.00088	mg/L	0.000021	0.00088	mg/L	0.000021	2.44%
Fe 273.955†	257965.6	198.8	mg/L	2.77	198.8	mg/L	2.77	1.39%
K 766.490†	-103.4	-0.06357	mg/L	0.014815	-0.06357	mg/L	0.014815	23.30%
Mg 279.077†	103383.8	102.7	mg/L	2.53	102.7	mg/L	2.53	2.46%
Mn 257.610†	42.5	-0.00088	mg/L	0.000235	-0.00088	mg/L	0.000235	26.82%
Mo 202.031†	115.8	0.00424	mg/L	0.000144	0.00424	mg/L	0.000144	3.40%
Na 589.592†	204.0	0.02131	mg/L	0.004424	0.02131	mg/L	0.004424	20.75%
Na 330.237†	-1.6	-0.05793	mg/L	0.315939	-0.05793	mg/L	0.315939	545.36%
Ni 231.604†	2.1	0.00050	mg/L	0.000828	0.00050	mg/L	0.000828	164.44%
Pb 220.353†	-283.2	-0.01009	mg/L	0.002472	-0.01009	mg/L	0.002472	24.48%
Sb 206.836†	55.6	0.01853	mg/L	0.001644	0.01853	mg/L	0.001644	8.87%
Se 196.026†	49.8	0.02526	mg/L	0.005389	0.02526	mg/L	0.005389	21.34%
Si 288.158†	-31.8	-0.02214	mg/L	0.005830	-0.02214	mg/L	0.005830	26.33%
Sn 189.927†	-68.6	-0.00770	mg/L	0.002031	-0.00770	mg/L	0.002031	26.38%
Sr 421.552†	2774.4	0.00374	mg/L	0.000119	0.00374	mg/L	0.000119	3.18%
Ti 334.903†	189.6	0.00284	mg/L	0.000390	0.00284	mg/L	0.000390	13.73%
Tl 190.801†	-30.2	0.01177	mg/L	0.002901	0.01177	mg/L	0.002901	24.64%
V 292.402†	1965.5	-0.00020	mg/L	0.000190	-0.00020	mg/L	0.000190	95.88%
Zn 206.200†	-4.8	-0.00112	mg/L	0.000334	-0.00112	mg/L	0.000334	29.83%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 9/2/2010 8:46:47 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1884384.3	100.9	%	0.29				0.29%
ScR 361.383	296823.1	100.4	%	0.92				0.92%
Ag 328.068†	174365.1	1.018	mg/L	0.0061	1.018	mg/L	0.0061	0.60%
Al 308.215†	228181.3	204.8	mg/L	1.42	204.8	mg/L	1.42	0.69%
As 188.979†	1695.6	1.010	mg/L	0.0076	1.010	mg/L	0.0076	0.76%
B 249.677†	29.7	0.00300	mg/L	0.000511	0.00300	mg/L	0.000511	17.07%
Ba 233.527†	7621.8	1.015	mg/L	0.0126	1.015	mg/L	0.0126	1.24%
Be 313.042†	684311.9	1.020	mg/L	0.0106	1.020	mg/L	0.0106	1.04%
Ca 317.933†	1458063.5	102.3	mg/L	0.96	102.3	mg/L	0.96	0.94%
Cd 228.802†	23494.2	0.9937	mg/L	0.00224	0.9937	mg/L	0.00224	0.23%
Co 228.616†	31096.5	0.9581	mg/L	0.00465	0.9581	mg/L	0.00465	0.49%
Cr 267.716†	7771.7	1.028	mg/L	0.0101	1.028	mg/L	0.0101	0.98%
Cu 324.752†	175879.1	1.007	mg/L	0.0039	1.007	mg/L	0.0039	0.39%
Fe 273.955†	259245.4	199.8	mg/L	1.30	199.8	mg/L	1.30	0.65%
K 766.490†	819.7	0.5039	mg/L	0.01272	0.5039	mg/L	0.01272	2.53%
Mg 279.077†	102338.8	101.7	mg/L	0.49	101.7	mg/L	0.49	0.49%
Mn 257.610†	42185.8	0.9661	mg/L	0.00756	0.9661	mg/L	0.00756	0.78%
Mo 202.031†	112.5	0.00407	mg/L	0.000292	0.00407	mg/L	0.000292	7.18%
Na 589.592†	190.9	0.01995	mg/L	0.004288	0.01995	mg/L	0.004288	21.50%
Na 330.237†	-2.5	-0.3544	mg/L	0.12335	-0.3544	mg/L	0.12335	34.81%
Ni 231.604†	4131.1	0.9823	mg/L	0.01320	0.9823	mg/L	0.01320	1.34%
Pb 220.353†	7939.5	0.9607	mg/L	0.00441	0.9607	mg/L	0.00441	0.46%
Sb 206.836†	3166.6	1.053	mg/L	0.0090	1.053	mg/L	0.0090	0.85%
Se 196.026†	1642.6	1.038	mg/L	0.0054	1.038	mg/L	0.0054	0.52%
Si 288.158†	-33.4	-0.01960	mg/L	0.002546	-0.01960	mg/L	0.002546	12.99%
Sn 189.927†	-75.4	-0.00825	mg/L	0.001577	-0.00825	mg/L	0.001577	19.13%
Sr 421.552†	2791.0	0.00376	mg/L	0.000025	0.00376	mg/L	0.000025	0.67%
Ti 334.903†	176.2	0.00200	mg/L	0.000313	0.00200	mg/L	0.000313	15.68%
Tl 190.801†	1969.6	0.9656	mg/L	0.00429	0.9656	mg/L	0.00429	0.44%
V 292.402†	93259.9	0.9812	mg/L	0.00405	0.9812	mg/L	0.00405	0.41%
Zn 206.200†	4217.8	0.9764	mg/L	0.01008	0.9764	mg/L	0.01008	1.03%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 9/2/2010 8:50:32 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1929261.9	103.3	%	1.16				1.13%
ScR 361.383	306819.3	103.7	%	0.57				0.55%
Ag 328.068†	167907.5	0.9806	mg/L	0.00813	0.9806	mg/L	0.00813	0.83%
Al 308.215†	2325.6	2.053	mg/L	0.0314	2.053	mg/L	0.0314	1.53%
As 188.979†	3364.5	2.019	mg/L	0.0257	2.019	mg/L	0.0257	1.27%
B 249.677†	5830.7	0.9857	mg/L	0.00767	0.9857	mg/L	0.00767	0.78%
Ba 233.527†	7367.0	0.9940	mg/L	0.00844	0.9940	mg/L	0.00844	0.85%
Be 313.042†	662508.4	0.9874	mg/L	0.00518	0.9874	mg/L	0.00518	0.52%
Ca 317.933†	30439.8	2.136	mg/L	0.0196	2.136	mg/L	0.0196	0.92%
Cd 228.802†	23852.1	1.005	mg/L	0.0117	1.005	mg/L	0.0117	1.16%
Co 228.616†	32100.3	0.9876	mg/L	0.00951	0.9876	mg/L	0.00951	0.96%
Cr 267.716†	7586.8	1.006	mg/L	0.0071	1.006	mg/L	0.0071	0.70%
Cu 324.752†	172291.8	0.9745	mg/L	0.01104	0.9745	mg/L	0.01104	1.13%
Fe 273.955†	2578.9	1.982	mg/L	0.0201	1.982	mg/L	0.0201	1.01%
K 766.490†	32394.1	19.92	mg/L	0.053	19.92	mg/L	0.053	0.27%
Mg 279.077†	2007.8	2.001	mg/L	0.0014	2.001	mg/L	0.0014	0.07%
Mn 257.610†	43091.3	0.9890	mg/L	0.00742	0.9890	mg/L	0.00742	0.75%
Mo 202.031†	21470.0	1.014	mg/L	0.0114	1.014	mg/L	0.0114	1.12%
Na 589.592†	456996.8	47.76	mg/L	0.218	47.76	mg/L	0.218	0.46%
Na 330.237†	1367.9	51.38	mg/L	0.877	51.38	mg/L	0.877	1.71%
Ni 231.604†	4203.5	1.000	mg/L	0.0046	1.000	mg/L	0.0046	0.46%
Pb 220.353†	17175.3	2.026	mg/L	0.0246	2.026	mg/L	0.0246	1.22%
Sb 206.836†	6123.2	2.057	mg/L	0.0272	2.057	mg/L	0.0272	1.32%
Se 196.026†	3184.8	2.026	mg/L	0.0210	2.026	mg/L	0.0210	1.04%
Si 288.158†	2949.6	2.059	mg/L	0.0348	2.059	mg/L	0.0348	1.69%
Sn 189.927†	5475.1	1.008	mg/L	0.0127	1.008	mg/L	0.0127	1.25%
Sr 421.552†	730980.1	0.9848	mg/L	0.00389	0.9848	mg/L	0.00389	0.39%
Ti 334.903†	22124.3	0.9743	mg/L	0.00257	0.9743	mg/L	0.00257	0.26%
Tl 190.801†	4196.7	2.007	mg/L	0.0257	2.007	mg/L	0.0257	1.28%
V 292.402†	91112.1	0.9794	mg/L	0.01411	0.9794	mg/L	0.01411	1.44%
Zn 206.200†	4293.3	0.9937	mg/L	0.00172	0.9937	mg/L	0.00172	0.17%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 9/2/2010 8:53:31 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
A11	183.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1905095.1	102.0	%	0.68				0.67%
ScR 361.383	305247.2	103.2	%	0.63				0.61%
Ag 328.068†	41.4	0.00024	mg/L	0.000225	0.00024	mg/L	0.000225	93.25%
Al 308.215†	11.7	0.01045	mg/L	0.004191	0.01045	mg/L	0.004191	40.10%
As 188.979†	1.7	0.00102	mg/L	0.001109	0.00102	mg/L	0.001109	108.87%
B 249.677†	18.9	0.00320	mg/L	0.002151	0.00320	mg/L	0.002151	67.16%
Ba 233.527†	-3.3	-0.00044	mg/L	0.000214	-0.00044	mg/L	0.000214	48.23%
Be 313.042†	9.4	0.00001	mg/L	0.000049	0.00001	mg/L	0.000049	349.87%
Ca 317.933†	67.0	0.00470	mg/L	0.000837	0.00470	mg/L	0.000837	17.81%
Cd 228.802†	8.8	0.00037	mg/L	0.000264	0.00037	mg/L	0.000264	71.43%
Co 228.616†	0.5	0.00002	mg/L	0.000265	0.00002	mg/L	0.000265	>999.9%
Cr 267.716†	2.1	0.00028	mg/L	0.000886	0.00028	mg/L	0.000886	316.18%
Cu 324.752†	65.7	0.00037	mg/L	0.000100	0.00037	mg/L	0.000100	26.90%
Fe 273.955†	13.0	0.01005	mg/L	0.001493	0.01005	mg/L	0.001493	14.86%
K 766.490†	12.9	0.00795	mg/L	0.010279	0.00795	mg/L	0.010279	129.26%
Mg 279.077†	10.1	0.01007	mg/L	0.001442	0.01007	mg/L	0.001442	14.32%
Mn 257.610†	8.2	0.00019	mg/L	0.000204	0.00019	mg/L	0.000204	108.50%
Mo 202.031†	54.5	0.00257	mg/L	0.000612	0.00257	mg/L	0.000612	23.76%
Na 589.592†	46.0	0.00481	mg/L	0.002812	0.00481	mg/L	0.002812	58.51%
Na 330.237†	11.3	0.4249	mg/L	0.86445	0.4249	mg/L	0.86445	203.43%
Ni 231.604†	-2.3	-0.00055	mg/L	0.000864	-0.00055	mg/L	0.000864	155.91%
Pb 220.353†	-1.2	-0.00014	mg/L	0.000349	-0.00014	mg/L	0.000349	257.37%
Sb 206.836†	14.0	0.00470	mg/L	0.001425	0.00470	mg/L	0.001425	30.33%
Se 196.026†	5.1	0.00323	mg/L	0.001653	0.00323	mg/L	0.001653	51.21%
Si 288.158†	-1.4	-0.00098	mg/L	0.001451	-0.00098	mg/L	0.001451	148.40%
Sn 189.927†	1.1	0.00020	mg/L	0.000601	0.00020	mg/L	0.000601	299.43%
Sr 421.552†	63.5	0.00009	mg/L	0.000030	0.00009	mg/L	0.000030	35.14%
Ti 334.903†	-6.3	-0.00028	mg/L	0.000506	-0.00028	mg/L	0.000506	178.65%
Tl 190.801†	5.2	0.00249	mg/L	0.001905	0.00249	mg/L	0.001905	76.66%
V 292.402†	19.4	0.00021	mg/L	0.000180	0.00021	mg/L	0.000180	85.59%
Zn 206.200†	4.6	0.00106	mg/L	0.000452	0.00106	mg/L	0.000452	42.51%

Sequence No.: 8
Sample ID: RI81 MB1 SWC

Autosampler Location: 304
Date Collected: 9/2/2010 8:57:27 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: RI81 MB1 SWC

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: RI81 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1960515.2	105.0	%	0.31				0.29%
ScR 361.383	314391.2	106.3	%	0.31				0.30%
Ag 328.068†	-38.1	-0.00022	mg/L	0.000115	-0.00022	mg/L	0.000115	51.47%
Al 308.215†	47.7	0.04283	mg/L	0.001617	0.04283	mg/L	0.001617	3.77%
As 188.979†	3.7	0.00222	mg/L	0.000706	0.00222	mg/L	0.000706	31.81%
B 249.677†	27.3	0.00462	mg/L	0.001090	0.00462	mg/L	0.001090	23.56%
Ba 233.527†	2.6	0.00034	mg/L	0.000889	0.00034	mg/L	0.000889	258.35%
Be 313.042†	-7.6	-0.00001	mg/L	0.000041	-0.00001	mg/L	0.000041	357.24%
Ca 317.933†	344.2	0.02416	mg/L	0.000389	0.02416	mg/L	0.000389	1.61%
Cd 228.802†	6.3	0.00026	mg/L	0.000280	0.00026	mg/L	0.000280	109.62%
Co 228.616†	10.7	0.00033	mg/L	0.000138	0.00033	mg/L	0.000138	42.15%
Cr 267.716†	5.8	0.00077	mg/L	0.000229	0.00077	mg/L	0.000229	29.77%
Cu 324.752†	89.3	0.00051	mg/L	0.000056	0.00051	mg/L	0.000056	10.94%
Fe 273.955†	59.5	0.04584	mg/L	0.002608	0.04584	mg/L	0.002608	5.69%
K 766.490†	60.4	0.03715	mg/L	0.016601	0.03715	mg/L	0.016601	44.69%
Mg 279.077†	12.9	0.01282	mg/L	0.006084	0.01282	mg/L	0.006084	47.44%
Mn 257.610†	63.1	0.00145	mg/L	0.000039	0.00145	mg/L	0.000039	2.72%
Mo 202.031†	-0.7	-0.00003	mg/L	0.000221	-0.00003	mg/L	0.000221	634.32%
Na 589.592†	144.7	0.01513	mg/L	0.005280	0.01513	mg/L	0.005280	34.91%
Na 330.237†	11.5	0.4306	mg/L	0.50639	0.4306	mg/L	0.50639	117.59%
Ni 231.604†	-2.0	-0.00049	mg/L	0.000858	-0.00049	mg/L	0.000858	176.03%
Pb 220.353†	7.7	0.00092	mg/L	0.000231	0.00092	mg/L	0.000231	25.22%
Sb 206.836†	-4.8	-0.00162	mg/L	0.001848	-0.00162	mg/L	0.001848	113.88%
Se 196.026†	9.2	0.00584	mg/L	0.000922	0.00584	mg/L	0.000922	15.80%
Si 288.158†	9.1	0.00634	mg/L	0.006523	0.00634	mg/L	0.006523	102.90%
Sn 189.927†	1.5	0.00028	mg/L	0.000407	0.00028	mg/L	0.000407	144.72%
Sr 421.552†	195.0	0.00026	mg/L	0.000025	0.00026	mg/L	0.000025	9.63%
Ti 334.903†	32.9	0.00145	mg/L	0.001472	0.00145	mg/L	0.001472	101.48%
Tl 190.801†	7.0	0.00333	mg/L	0.000592	0.00333	mg/L	0.000592	17.77%
V 292.402†	23.1	0.00025	mg/L	0.000225	0.00025	mg/L	0.000225	91.93%
Zn 206.200†	9.3	0.00215	mg/L	0.000814	0.00215	mg/L	0.000814	37.75%

Sequence No.: 9
Sample ID: RJ52 MB1 SWC

Autosampler Location: 305
Date Collected: 9/2/2010 9:01:24 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: RJ52 MB1 SWC

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: RJ52 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1981824.3	106.1	%	0.90				0.85%
ScR 361.383	312556.7	105.7	%	1.35				1.28%
Ag 328.068†	11.2	0.00006	mg/L	0.000208	0.00006	mg/L	0.000208	319.40%
Al 308.215†	70.7	0.06347	mg/L	0.010655	0.06347	mg/L	0.010655	16.79%
As 188.979†	2.2	0.00135	mg/L	0.000810	0.00135	mg/L	0.000810	60.04%
B 249.677†	18.5	0.00313	mg/L	0.002717	0.00313	mg/L	0.002717	86.84%
Ba 233.527†	4.6	0.00062	mg/L	0.000169	0.00062	mg/L	0.000169	27.31%
Be 313.042†	292.1	0.00044	mg/L	0.000739	0.00044	mg/L	0.000739	169.77%
Ca 317.933†	870.0	0.06107	mg/L	0.063272	0.06107	mg/L	0.063272	103.61%
Cd 228.802†	8.5	0.00036	mg/L	0.000050	0.00036	mg/L	0.000050	14.03%
Co 228.616†	13.0	0.00040	mg/L	0.000112	0.00040	mg/L	0.000112	28.40%
Cr 267.716†	6.3	0.00084	mg/L	0.000543	0.00084	mg/L	0.000543	64.50%
Cu 324.752†	116.8	0.00066	mg/L	0.000147	0.00066	mg/L	0.000147	22.09%
Fe 273.955†	88.5	0.06820	mg/L	0.007375	0.06820	mg/L	0.007375	10.81%
K 766.490†	73.5	0.04521	mg/L	0.008922	0.04521	mg/L	0.008922	19.74%
Mg 279.077†	10.4	0.01026	mg/L	0.015333	0.01026	mg/L	0.015333	149.51%
Mn 257.610†	82.8	0.00190	mg/L	0.000071	0.00190	mg/L	0.000071	3.76%
Mo 202.031†	-6.6	-0.00031	mg/L	0.000249	-0.00031	mg/L	0.000249	79.93%
Na 589.592†	297.0	0.03104	mg/L	0.016241	0.03104	mg/L	0.016241	52.33%
Na 330.237†	8.2	0.3070	mg/L	0.18085	0.3070	mg/L	0.18085	58.92%
Ni 231.604†	-1.9	-0.00046	mg/L	0.001243	-0.00046	mg/L	0.001243	272.72%
Pb 220.353†	10.2	0.00121	mg/L	0.000405	0.00121	mg/L	0.000405	33.48%
Sb 206.836†	-4.4	-0.00148	mg/L	0.000956	-0.00148	mg/L	0.000956	64.77%
Se 196.026†	8.2	0.00521	mg/L	0.001497	0.00521	mg/L	0.001497	28.72%
Si 288.158†	10.3	0.00719	mg/L	0.000786	0.00719	mg/L	0.000786	10.92%
Sn 189.927†	0.4	0.00008	mg/L	0.000749	0.00008	mg/L	0.000749	898.14%
Sr 421.552†	401.7	0.00054	mg/L	0.000440	0.00054	mg/L	0.000440	81.24%
Ti 334.903†	51.3	0.00226	mg/L	0.000603	0.00226	mg/L	0.000603	26.65%
Tl 190.801†	9.3	0.00447	mg/L	0.000414	0.00447	mg/L	0.000414	9.26%
V 292.402†	6.8	0.00007	mg/L	0.000317	0.00007	mg/L	0.000317	468.50%
Zn 206.200†	5.7	0.00131	mg/L	0.000449	0.00131	mg/L	0.000449	34.29%

Sequence No.: 10
Sample ID: RK32 MB1 SWC

Autosampler Location: 306
Date Collected: 9/2/2010 9:05:20 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK32 MB1 SWC

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: RK32 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1989424.3	106.5	%	0.62				0.58%
ScR 361.383	314496.9	106.3	%	1.01				0.95%
Ag 328.068†	-19.8	-0.00012	mg/L	0.000093	-0.00023	mg/L	0.000186	80.39%
Al 308.215†	11.2	0.01004	mg/L	0.003091	0.02009	mg/L	0.006182	30.78%
As 188.979†	2.3	0.00137	mg/L	0.000272	0.00274	mg/L	0.000543	19.81%
B 249.677†	11.3	0.00191	mg/L	0.001055	0.00382	mg/L	0.002110	55.26%
Ba 233.527†	-1.1	-0.00015	mg/L	0.000655	-0.00030	mg/L	0.001310	436.36%
Be 313.042†	-41.5	-0.00006	mg/L	0.000011	-0.00012	mg/L	0.000023	18.41%
Ca 317.933†	91.7	0.00644	mg/L	0.001367	0.01287	mg/L	0.002734	21.23%
Cd 228.802†	5.2	0.00021	mg/L	0.000018	0.00043	mg/L	0.000037	8.61%
Co 228.616†	6.6	0.00020	mg/L	0.000178	0.00041	mg/L	0.000356	87.31%
Cr 267.716†	5.5	0.00073	mg/L	0.000849	0.00145	mg/L	0.001698	116.89%
Cu 324.752†	80.2	0.00045	mg/L	0.000119	0.00091	mg/L	0.000238	26.21%
Fe 273.955†	2.2	0.00173	mg/L	0.000114	0.00345	mg/L	0.000228	6.61%
K 766.490†	47.0	0.02888	mg/L	0.025790	0.05776	mg/L	0.051580	89.30%
Mg 279.077†	-4.3	-0.00430	mg/L	0.008025	-0.00860	mg/L	0.016051	186.67%
Mn 257.610†	0.4	0.00001	mg/L	0.000138	0.00002	mg/L	0.000276	>999.9%
Mo 202.031†	-8.0	-0.00038	mg/L	0.000184	-0.00075	mg/L	0.000368	48.98%
Na 589.592†	3.7	0.00039	mg/L	0.002248	0.00078	mg/L	0.004497	576.50%
Na 330.237†	11.7	0.4398	mg/L	0.82634	0.8796	mg/L	1.65267	187.88%
Ni 231.604†	-5.4	-0.00128	mg/L	0.001630	-0.00257	mg/L	0.003259	126.88%
Pb 220.353†	5.0	0.00059	mg/L	0.000033	0.00117	mg/L	0.000065	5.55%
Sb 206.836†	-4.1	-0.00138	mg/L	0.000978	-0.00277	mg/L	0.001957	70.75%
Se 196.026†	7.9	0.00500	mg/L	0.001124	0.01000	mg/L	0.002248	22.49%
Si 288.158†	-3.9	-0.00274	mg/L	0.003351	-0.00548	mg/L	0.006702	122.36%
Sn 189.927†	-1.7	-0.00031	mg/L	0.000415	-0.00062	mg/L	0.000830	133.81%
Sr 421.552†	50.4	0.00007	mg/L	0.000018	0.00014	mg/L	0.000036	26.73%
Ti 334.903†	-6.0	-0.00026	mg/L	0.000221	-0.00053	mg/L	0.000443	84.31%
Tl 190.801†	5.5	0.00261	mg/L	0.001200	0.00521	mg/L	0.002399	46.03%
V 292.402†	-23.4	-0.00025	mg/L	0.000230	-0.00049	mg/L	0.000459	92.81%
Zn 206.200†	1.9	0.00044	mg/L	0.000282	0.00087	mg/L	0.000564	64.45%

Sequence No.: 11
Sample ID: RK32 A SWC

Autosampler Location: 307
Date Collected: 9/2/2010 9:09:16 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK32 A SWC

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: RK32 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2028721.1	108.6	%	0.78				0.72%
ScR 361.383	324597.4	109.7	%	1.61				1.47%
Ag 328.068†	85.0	0.00036	mg/L	0.000235	0.00072	mg/L	0.000471	65.59%
Al 308.215†	120745.4	108.3	mg/L	0.12	216.7	mg/L	0.24	0.11%
As 188.979†	-18.6	0.05015	mg/L	0.001290	0.1003	mg/L	0.00258	2.57%
B 249.677†	104.5	0.01755	mg/L	0.000821	0.03510	mg/L	0.001643	4.68%
Ba 233.527†	5227.1	0.6908	mg/L	0.00588	1.382	mg/L	0.0118	0.85%
Be 313.042†	983.6	0.00120	mg/L	0.000113	0.00239	mg/L	0.000226	9.45%
Ca 317.933†	1058411.2	74.29	mg/L	0.193	148.6	mg/L	0.39	0.26%
Cd 228.802†	202.3	0.00884	mg/L	0.000255	0.01768	mg/L	0.000511	2.89%
Co 228.616†	3045.0	0.08251	mg/L	0.000760	0.1650	mg/L	0.00152	0.92%
Cr 267.716†	2415.8	0.3230	mg/L	0.00303	0.6461	mg/L	0.00607	0.94%
Cu 324.752†	133447.2	0.7672	mg/L	0.00263	1.534	mg/L	0.0053	0.34%
Fe 273.955†	289758.2	223.3	mg/L	0.61	446.6	mg/L	1.22	0.27%
K 766.490†	20535.6	12.62	mg/L	0.036	25.25	mg/L	0.073	0.29%
Mg 279.077†	50938.5	50.52	mg/L	0.185	101.0	mg/L	0.37	0.37%
Mn 257.610†	105298.3	2.415	mg/L	0.0033	4.829	mg/L	0.0065	0.14%
Mo 202.031†	1480.2	0.06900	mg/L	0.000407	0.1380	mg/L	0.00081	0.59%
Na 589.592†	121814.1	12.73	mg/L	0.068	25.46	mg/L	0.137	0.54%
Na 330.237†	331.3	13.53	mg/L	0.107	27.07	mg/L	0.213	0.79%
Ni 231.604†	1330.7	0.3162	mg/L	0.00343	0.6323	mg/L	0.00687	1.09%
Pb 220.353†	3084.2	0.3681	mg/L	0.00184	0.7362	mg/L	0.00368	0.50%
Sb 206.836†	47.9	0.02114	mg/L	0.000128	0.04228	mg/L	0.000255	0.60%
Se 196.026†	33.7	0.01672	mg/L	0.005142	0.03344	mg/L	0.010285	30.76%
Si 288.158†	2034.6	1.418	mg/L	0.0242	2.836	mg/L	0.0485	1.71%
Sn 189.927†	136.1	0.03079	mg/L	0.000081	0.06159	mg/L	0.000162	0.26%
Sr 421.552†	252161.8	0.3397	mg/L	0.00036	0.6794	mg/L	0.00072	0.11%
Ti 334.903†	152995.9	6.744	mg/L	0.0021	13.49	mg/L	0.004	0.03%
Tl 190.801†	-42.1	0.01090	mg/L	0.001744	0.02180	mg/L	0.003489	16.00%
V 292.402†	47324.2	0.4803	mg/L	0.00161	0.9606	mg/L	0.00321	0.33%
Zn 206.200†	11728.5	2.715	mg/L	0.0167	5.430	mg/L	0.0334	0.61%

Sequence No.: 12
Sample ID: RK76 B SWC

Autosampler Location: 308
Date Collected: 9/2/2010 9:12:59 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK76 B SWC

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: RK76 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2028392.6	108.6	%	2.17				2.00%
ScR 361.383	330400.6	111.7	%	1.03				0.92%
Ag 328.068†	-48.4	-0.00053	mg/L	0.000156	-0.00106	mg/L	0.000312	29.37%
Al 308.215†	148883.1	133.6	mg/L	1.13	267.2	mg/L	2.25	0.84%
As 188.979†	-37.3	0.03794	mg/L	0.001336	0.07589	mg/L	0.002673	3.52%
B 249.677†	187.8	0.03162	mg/L	0.000716	0.06323	mg/L	0.001432	2.26%
Ba 233.527†	5406.0	0.7198	mg/L	0.00737	1.440	mg/L	0.0147	1.02%
Be 313.042†	1502.4	0.00202	mg/L	0.000039	0.00405	mg/L	0.000077	1.90%
Ca 317.933†	605430.3	42.49	mg/L	0.522	84.99	mg/L	1.044	1.23%
Cd 228.802†	102.9	0.00467	mg/L	0.000165	0.00935	mg/L	0.000330	3.53%
Co 228.616†	2597.8	0.06915	mg/L	0.001222	0.1383	mg/L	0.00244	1.77%
Cr 267.716†	2002.3	0.2668	mg/L	0.00222	0.5337	mg/L	0.00444	0.83%
Cu 324.752†	30926.8	0.1828	mg/L	0.00511	0.3656	mg/L	0.01022	2.80%
Fe 273.955†	195669.7	150.8	mg/L	1.77	301.6	mg/L	3.53	1.17%
K 766.490†	7656.4	4.707	mg/L	0.0287	9.414	mg/L	0.0574	0.61%
Mg 279.077†	42597.9	42.27	mg/L	0.428	84.54	mg/L	0.856	1.01%
Mn 257.610†	124162.3	2.847	mg/L	0.0358	5.694	mg/L	0.0715	1.26%
Mo 202.031†	153.3	0.00672	mg/L	0.000214	0.01345	mg/L	0.000428	3.18%
Na 589.592†	13736.9	1.435	mg/L	0.0134	2.871	mg/L	0.0268	0.93%
Na 330.237†	-3.2	1.415	mg/L	0.1140	2.831	mg/L	0.2280	8.05%
Ni 231.604†	1328.8	0.3157	mg/L	0.00214	0.6315	mg/L	0.00428	0.68%
Pb 220.353†	2919.8	0.3586	mg/L	0.00710	0.7172	mg/L	0.01421	1.98%
Sb 206.836†	20.0	0.01141	mg/L	0.001445	0.02282	mg/L	0.002889	12.66%
Se 196.026†	35.5	0.01989	mg/L	0.002398	0.03977	mg/L	0.004796	12.06%
Si 288.158†	2408.7	1.679	mg/L	0.0233	3.357	mg/L	0.0466	1.39%
Sn 189.927†	-1.8	0.00381	mg/L	0.000930	0.00762	mg/L	0.001860	24.41%
Sr 421.552†	173557.1	0.2338	mg/L	0.00228	0.4676	mg/L	0.00455	0.97%
Ti 334.903†	147045.2	6.483	mg/L	0.0653	12.97	mg/L	0.131	1.01%
Tl 190.801†	-28.8	0.00819	mg/L	0.003293	0.01638	mg/L	0.006586	40.21%
V 292.402†	35106.8	0.3573	mg/L	0.00998	0.7145	mg/L	0.01996	2.79%
Zn 206.200†	3417.7	0.7911	mg/L	0.00632	1.582	mg/L	0.0126	0.80%

Sequence No.: 13
Sample ID: RK76 ADUP SWC

Autosampler Location: 309
Date Collected: 9/2/2010 9:16:55 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK76 ADUP SWC

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: RK76 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2037474.4	109.1	%	0.60				0.55%
ScR 361.383	330082.1	111.6	%	0.24				0.22%
Ag 328.068†	-52.0	-0.00055	mg/L	0.000342	-0.00109	mg/L	0.000685	62.60%
Al 308.215†	166251.4	149.2	mg/L	0.62	298.4	mg/L	1.23	0.41%
As 188.979†	-60.5	0.03285	mg/L	0.002331	0.06571	mg/L	0.004662	7.09%
B 249.677†	77.1	0.01287	mg/L	0.001200	0.02573	mg/L	0.002400	9.33%
Ba 233.527†	6102.6	0.8121	mg/L	0.00139	1.624	mg/L	0.0028	0.17%
Be 313.042†	1659.3	0.00224	mg/L	0.000016	0.00448	mg/L	0.000031	0.70%
Ca 317.933†	465166.7	32.65	mg/L	0.170	65.30	mg/L	0.341	0.52%
Cd 228.802†	108.5	0.00497	mg/L	0.000194	0.00995	mg/L	0.000387	3.89%
Co 228.616†	2933.9	0.07805	mg/L	0.000493	0.1561	mg/L	0.00099	0.63%
Cr 267.716†	2377.1	0.3170	mg/L	0.00091	0.6341	mg/L	0.00182	0.29%
Cu 324.752†	28701.6	0.1716	mg/L	0.00164	0.3431	mg/L	0.00328	0.96%
Fe 273.955†	228558.1	176.1	mg/L	0.47	352.2	mg/L	0.95	0.27%
K 766.490†	11544.5	7.097	mg/L	0.0420	14.19	mg/L	0.084	0.59%
Mg 279.077†	50397.5	50.01	mg/L	0.182	100.0	mg/L	0.36	0.36%
Mn 257.610†	130755.8	2.998	mg/L	0.0081	5.997	mg/L	0.0162	0.27%
Mo 202.031†	157.6	0.00705	mg/L	0.000483	0.01410	mg/L	0.000965	6.85%
Na 589.592†	16147.9	1.687	mg/L	0.0038	3.375	mg/L	0.0076	0.23%
Na 330.237†	5.1	1.870	mg/L	0.1800	3.741	mg/L	0.3600	9.62%
Ni 231.604†	1352.3	0.3213	mg/L	0.00205	0.6426	mg/L	0.00410	0.64%
Pb 220.353†	4412.4	0.5358	mg/L	0.00335	1.072	mg/L	0.0067	0.63%
Sb 206.836†	22.6	0.01417	mg/L	0.000890	0.02834	mg/L	0.001780	6.28%
Se 196.026†	27.7	0.01555	mg/L	0.002754	0.03110	mg/L	0.005508	17.71%
Si 288.158†	3155.0	2.199	mg/L	0.0146	4.398	mg/L	0.0293	0.67%
Sn 189.927†	667.2	0.1266	mg/L	0.00221	0.2532	mg/L	0.00441	1.74%
Sr 421.552†	126405.0	0.1703	mg/L	0.00052	0.3406	mg/L	0.00104	0.30%
Ti 334.903†	166815.6	7.356	mg/L	0.0252	14.71	mg/L	0.050	0.34%
Tl 190.801†	-36.1	0.00813	mg/L	0.001012	0.01626	mg/L	0.002025	12.45%
V 292.402†	37595.3	0.3809	mg/L	0.00509	0.7618	mg/L	0.01019	1.34%
Zn 206.200†	4917.6	1.138	mg/L	0.0045	2.277	mg/L	0.0090	0.40%

436 RM

Sequence No.: 14
Sample ID: RK76 A SWC

Autosampler Location: 310
Date Collected: 9/2/2010 9:20:37 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK76 A SWC

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: RK76 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2032838.1	108.9	%	0.67				0.61%
ScR 361.383	329504.6	111.4	%	0.39				0.35%
Ag 328.068†	-3.8	-0.00027	mg/L	0.000113	-0.00054	mg/L	0.000226	41.47%
Al 308.215†	167515.7	150.3	mg/L	0.46	300.6	mg/L	0.92	0.31%
As 188.979†	-54.6	0.03179	mg/L	0.002277	0.06357	mg/L	0.004554	7.16%
B 249.677†	75.7	0.01265	mg/L	0.001382	0.02530	mg/L	0.002764	10.92%
Ba 233.527†	5879.7	0.7824	mg/L	0.00154	1.565	mg/L	0.0031	0.20%
Be 313.042†	1539.4	0.00207	mg/L	0.000046	0.00413	mg/L	0.000093	2.24%
Ca 317.933†	445656.0	31.28	mg/L	0.176	62.56	mg/L	0.351	0.56%
Cd 228.802†	100.8	0.00463	mg/L	0.000242	0.00926	mg/L	0.000484	5.23%
Co 228.616†	2812.0	0.07509	mg/L	0.000832	0.1502	mg/L	0.00166	1.11%
Cr 267.716†	2597.1	0.3462	mg/L	0.00190	0.6924	mg/L	0.00380	0.55%
Cu 324.752†	27117.6	0.1624	mg/L	0.00140	0.3247	mg/L	0.00279	0.86%
Fe 273.955†	221343.4	170.6	mg/L	0.85	341.1	mg/L	1.70	0.50%
K 766.490†	12062.5	7.416	mg/L	0.0589	14.83	mg/L	0.118	0.79%
Mg 279.077†	48463.6	48.09	mg/L	0.225	96.19	mg/L	0.449	0.47%
Mn 257.610†	128248.8	2.941	mg/L	0.0172	5.881	mg/L	0.0345	0.59%
Mo 202.031†	358.1	0.01653	mg/L	0.000689	0.03306	mg/L	0.001379	4.17%
Na 589.592†	17148.5	1.792	mg/L	0.0071	3.584	mg/L	0.0142	0.40%
Na 330.237†	13.2	2.071	mg/L	0.3127	4.142	mg/L	0.6253	15.10%
Ni 231.604†	1330.5	0.3161	mg/L	0.00205	0.6322	mg/L	0.00411	0.65%
Pb 220.353†	2818.4	0.3486	mg/L	0.00315	0.6971	mg/L	0.00631	0.90%
Sb 206.836†	21.7	0.01201	mg/L	0.002085	0.02403	mg/L	0.004170	17.36%
Se 196.026†	32.9	0.01894	mg/L	0.002208	0.03788	mg/L	0.004417	11.66%
Si 288.158†	3270.3	2.279	mg/L	0.0114	4.558	mg/L	0.0229	0.50%
Sn 189.927†	215.9	0.04341	mg/L	0.001394	0.08681	mg/L	0.002789	3.21%
Sr 421.552†	130014.5	0.1752	mg/L	0.00062	0.3503	mg/L	0.00125	0.36%
Ti 334.903†	155963.3	6.877	mg/L	0.0278	13.75	mg/L	0.056	0.40%
Tl 190.801†	-39.5	0.00575	mg/L	0.001809	0.01151	mg/L	0.003619	31.44%
V 292.402†	37203.1	0.3777	mg/L	0.00544	0.7555	mg/L	0.01087	1.44%
Zn 206.200†	4492.6	1.040	mg/L	0.0046	2.080	mg/L	0.0091	0.44%

Sequence No.: 15
Sample ID: RK76 ASPK SWC

Autosampler Location: 311
Date Collected: 9/2/2010 9:24:19 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK76 ASPK SWC

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: RK76 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2019815.1	108.2	%	1.20				1.11%
ScR 361.383	324586.8	109.7	%	1.55				1.41%
Ag 328.068†	82328.6	0.4805	mg/L	0.00546	0.9609	mg/L	0.01092	1.14%
Al 308.215†	186421.6	167.3	mg/L	2.88	334.5	mg/L	5.77	1.72%
As 188.979†	3270.9	2.023	mg/L	0.0230	4.046	mg/L	0.0461	1.14%
B 249.677†	94.4	0.01473	mg/L	0.001941	0.02945	mg/L	0.003881	13.18%
Ba 233.527†	21066.4	2.829	mg/L	0.0282	5.658	mg/L	0.0564	1.00%
Be 313.042†	333946.2	0.4975	mg/L	0.00634	0.9949	mg/L	0.01267	1.27%
Ca 317.933†	606341.7	42.56	mg/L	0.616	85.12	mg/L	1.231	1.45%
Cd 228.802†	12214.9	0.5105	mg/L	0.00631	1.021	mg/L	0.0126	1.24%
Co 228.616†	19253.2	0.5809	mg/L	0.00689	1.162	mg/L	0.0138	1.19%
Cr 267.716†	5861.4	0.7796	mg/L	0.00764	1.559	mg/L	0.0153	0.98%
Cu 324.752†	115994.8	0.6682	mg/L	0.00581	1.336	mg/L	0.0116	0.87%
Fe 273.955†	284658.7	219.3	mg/L	3.42	438.7	mg/L	6.84	1.56%
K 766.490†	29626.0	18.21	mg/L	0.290	36.43	mg/L	0.580	1.59%
Mg 279.077†	64187.8	63.70	mg/L	0.897	127.4	mg/L	1.79	1.41%
Mn 257.610†	189196.5	4.339	mg/L	0.0603	8.678	mg/L	0.1205	1.39%
Mo 202.031†	220.7	0.00991	mg/L	0.000444	0.01981	mg/L	0.000888	4.48%
Na 589.592†	108282.4	11.32	mg/L	0.201	22.63	mg/L	0.401	1.77%
Na 330.237†	281.4	12.08	mg/L	0.292	24.17	mg/L	0.584	2.42%
Ni 231.604†	3447.6	0.8192	mg/L	0.00704	1.638	mg/L	0.0141	0.86%
Pb 220.353†	19214.7	2.281	mg/L	0.0308	4.562	mg/L	0.0616	1.35%
Sb 206.836†	51.9	0.01993	mg/L	0.003322	0.03987	mg/L	0.006644	16.67%
Se 196.026†	3154.8	2.004	mg/L	0.0247	4.008	mg/L	0.0494	1.23%
Si 288.158†	3148.1	2.196	mg/L	0.0702	4.392	mg/L	0.1404	3.20%
Sn 189.927†	474.1	0.09151	mg/L	0.001007	0.1830	mg/L	0.00201	1.10%
Sr 421.552†	507260.7	0.6834	mg/L	0.00991	1.367	mg/L	0.0198	1.45%
Ti 334.903†	161996.6	7.142	mg/L	0.1127	14.28	mg/L	0.225	1.58%
Tl 190.801†	3954.4	1.922	mg/L	0.0361	3.844	mg/L	0.0722	1.88%
V 292.402†	87987.7	0.9178	mg/L	0.01149	1.836	mg/L	0.0230	1.25%
Zn 206.200†	6618.5	1.532	mg/L	0.0160	3.064	mg/L	0.0320	1.04%

Sequence No.: 16
Sample ID: RK32 MB1SPK SWC

Autosampler Location: 312
Date Collected: 9/2/2010 9:26:32 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK32 MB1SPK SWC

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: RK32 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2018183.0	108.1	%	0.67				0.62%
ScR 361.383	317282.1	107.3	%	1.20				1.12%
Ag 328.068†	86039.9	0.5026	mg/L	0.00420	1.005	mg/L	0.0084	0.84%
Al 308.215†	2328.5	2.081	mg/L	0.0276	4.162	mg/L	0.0551	1.32%
As 188.979†	3399.2	2.033	mg/L	0.0262	4.065	mg/L	0.0525	1.29%
B 249.677†	26.3	0.00340	mg/L	0.000571	0.00679	mg/L	0.001141	16.80%
Ba 233.527†	15006.9	2.026	mg/L	0.0202	4.051	mg/L	0.0403	1.00%
Be 313.042†	338604.5	0.5046	mg/L	0.00923	1.009	mg/L	0.0185	1.83%
Ca 317.933†	144177.9	10.12	mg/L	0.171	20.24	mg/L	0.342	1.69%
Cd 228.802†	11885.7	0.4960	mg/L	0.00541	0.9920	mg/L	0.01081	1.09%
Co 228.616†	16134.4	0.4968	mg/L	0.00458	0.9937	mg/L	0.00916	0.92%
Cr 267.716†	3855.1	0.5106	mg/L	0.00645	1.021	mg/L	0.0129	1.26%
Cu 324.752†	87190.4	0.4934	mg/L	0.00545	0.9868	mg/L	0.01090	1.10%
Fe 273.955†	2670.6	2.055	mg/L	0.0177	4.111	mg/L	0.0354	0.86%
K 766.490†	16264.2	9.999	mg/L	0.1737	20.00	mg/L	0.347	1.74%
Mg 279.077†	10526.4	10.47	mg/L	0.103	20.94	mg/L	0.205	0.98%
Mn 257.610†	21522.3	0.4941	mg/L	0.00471	0.9883	mg/L	0.00943	0.95%
Mo 202.031†	15.9	0.00063	mg/L	0.000264	0.00125	mg/L	0.000528	42.13%
Na 589.592†	89960.8	9.401	mg/L	0.1735	18.80	mg/L	0.347	1.85%
Na 330.237†	283.0	10.50	mg/L	0.182	20.99	mg/L	0.363	1.73%
Ni 231.604†	2100.4	0.4991	mg/L	0.00468	0.9981	mg/L	0.00936	0.94%
Pb 220.353†	16848.0	1.986	mg/L	0.0193	3.973	mg/L	0.0386	0.97%
Sb 206.836†	6.8	-0.00186	mg/L	0.001670	-0.00372	mg/L	0.003341	89.72%
Se 196.026†	3200.1	2.035	mg/L	0.0234	4.070	mg/L	0.0468	1.15%
Si 288.158†	-6.7	-0.00282	mg/L	0.000836	-0.00565	mg/L	0.001671	29.59%
Sn 189.927†	-12.5	-0.00181	mg/L	0.000165	-0.00362	mg/L	0.000330	9.13%
Sr 421.552†	370978.3	0.4998	mg/L	0.00968	0.9995	mg/L	0.01935	1.94%
Ti 334.903†	53.0	0.00170	mg/L	0.000906	0.00340	mg/L	0.001812	53.34%
Tl 190.801†	4227.1	2.021	mg/L	0.0231	4.041	mg/L	0.0461	1.14%
V 292.402†	46818.9	0.5031	mg/L	0.00525	1.006	mg/L	0.0105	1.04%
Zn 206.200†	2153.6	0.4986	mg/L	0.00342	0.9972	mg/L	0.00684	0.69%

Sequence No.: 17
Sample ID: RK32 MB1SPD SWC

Autosampler Location: 313
Date Collected: 9/2/2010 9:30:28 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK32 MB1SPD SWC

Analyte	Back Pressure	Flow
All	184.0 kPa	0.75 L/min

Mean Data: RK32 MB1SPD SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	1959079.5	104.9	%	2.02				1.92%
ScR 361.383	315847.5	106.8	%	1.56				1.46%
Ag 328.068†	91536.6	0.5347	mg/L	0.01308	1.069	mg/L	0.0262	2.45%
Al 308.215†	2393.3	2.139	mg/L	0.0330	4.278	mg/L	0.0659	1.54%
As 188.979†	3594.4	2.149	mg/L	0.0367	4.299	mg/L	0.0733	1.71%
B 249.677†	22.6	0.00270	mg/L	0.001370	0.00541	mg/L	0.002740	50.67%
Ba 233.527†	15429.1	2.083	mg/L	0.0318	4.165	mg/L	0.0637	1.53%
Be 313.042†	348164.4	0.5189	mg/L	0.01182	1.038	mg/L	0.0236	2.28%
Ca 317.933†	147933.9	10.38	mg/L	0.238	20.77	mg/L	0.476	2.29%
Cd 228.802†	12550.8	0.5237	mg/L	0.01206	1.047	mg/L	0.0241	2.30%
Co 228.616†	17028.1	0.5244	mg/L	0.01165	1.049	mg/L	0.0233	2.22%
Cr 267.716†	3963.8	0.5250	mg/L	0.00897	1.050	mg/L	0.0179	1.71%
Cu 324.752†	92063.2	0.5210	mg/L	0.01170	1.042	mg/L	0.0234	2.25%
Fe 273.955†	2715.6	2.090	mg/L	0.0304	4.180	mg/L	0.0609	1.46%
K 766.490†	16815.2	10.34	mg/L	0.199	20.68	mg/L	0.397	1.92%
Mg 279.077†	10841.5	10.78	mg/L	0.180	21.56	mg/L	0.360	1.67%
Mn 257.610†	22122.0	0.5079	mg/L	0.00679	1.016	mg/L	0.0136	1.34%
Mo 202.031†	19.1	0.00077	mg/L	0.000083	0.00155	mg/L	0.000167	10.75%
Na 589.592†	92945.2	9.713	mg/L	0.1660	19.43	mg/L	0.332	1.71%
Na 330.237†	287.7	10.67	mg/L	0.173	21.34	mg/L	0.345	1.62%
Ni 231.604†	2165.8	0.5146	mg/L	0.00577	1.029	mg/L	0.0115	1.12%
Pb 220.353†	17841.7	2.104	mg/L	0.0453	4.207	mg/L	0.0906	2.15%
Sb 206.836†	10.4	-0.00075	mg/L	0.000942	-0.00150	mg/L	0.001884	125.18%
Se 196.026†	3408.4	2.167	mg/L	0.0303	4.334	mg/L	0.0605	1.40%
Si 288.158†	-6.7	-0.00271	mg/L	0.001396	-0.00542	mg/L	0.002791	51.47%
Sn 189.927†	-14.2	-0.00210	mg/L	0.000410	-0.00420	mg/L	0.000819	19.49%
Sr 421.552†	381312.8	0.5137	mg/L	0.01055	1.027	mg/L	0.0211	2.05%
Ti 334.903†	30.3	0.00068	mg/L	0.000290	0.00136	mg/L	0.000580	42.68%
Tl 190.801†	4466.7	2.135	mg/L	0.0346	4.270	mg/L	0.0692	1.62%
V 292.402†	49383.5	0.5306	mg/L	0.01202	1.061	mg/L	0.0240	2.27%
Zn 206.200†	2225.3	0.5152	mg/L	0.00773	1.030	mg/L	0.0155	1.50%

Sequence No.: 18
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 9/2/2010 9:34:24 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2024331.1	108.4	%	0.34				0.31%
ScR 361.383	311123.1	105.2	%	0.87				0.82%
Ag 328.068†	159905.9	0.9339	mg/L	0.00142	0.9339	mg/L	0.00142	0.15%
Al 308.215†	2337.5	2.065	mg/L	0.0310	2.065	mg/L	0.0310	1.50%
As 188.979†	3263.9	1.959	mg/L	0.0063	1.959	mg/L	0.0063	0.32%
B 249.677†	5904.0	0.9981	mg/L	0.01487	0.9981	mg/L	0.01487	1.49%
Ba 233.527†	7412.5	1.000	mg/L	0.0174	1.000	mg/L	0.0174	1.74%
Be 313.042†	672405.5	1.002	mg/L	0.0182	1.002	mg/L	0.0182	1.81%
Ca 317.933†	30690.2	2.154	mg/L	0.0436	2.154	mg/L	0.0436	2.03%
Cd 228.802†	23021.7	0.9695	mg/L	0.00050	0.9695	mg/L	0.00050	0.05%
Co 228.616†	31128.1	0.9576	mg/L	0.00278	0.9576	mg/L	0.00278	0.29%
Cr 267.716†	7705.0	1.022	mg/L	0.0159	1.022	mg/L	0.0159	1.56%
Cu 324.752†	167411.7	0.9469	mg/L	0.00151	0.9469	mg/L	0.00151	0.16%
Fe 273.955†	2596.2	1.996	mg/L	0.0318	1.996	mg/L	0.0318	1.59%
K 766.490†	33210.3	20.42	mg/L	0.385	20.42	mg/L	0.385	1.89%
Mg 279.077†	2034.2	2.028	mg/L	0.0462	2.028	mg/L	0.0462	2.28%
Mn 257.610†	43314.1	0.9941	mg/L	0.01567	0.9941	mg/L	0.01567	1.58%
Mo 202.031†	20729.8	0.9789	mg/L	0.00179	0.9789	mg/L	0.00179	0.18%
Na 589.592†	453975.9	47.44	mg/L	0.677	47.44	mg/L	0.677	1.43%
Na 330.237†	1378.0	51.76	mg/L	0.984	51.76	mg/L	0.984	1.90%
Ni 231.604†	4236.1	1.008	mg/L	0.0172	1.008	mg/L	0.0172	1.70%
Pb 220.353†	16624.9	1.961	mg/L	0.0036	1.961	mg/L	0.0036	0.18%
Sb 206.836†	5908.4	1.984	mg/L	0.0041	1.984	mg/L	0.0041	0.21%
Se 196.026†	3083.3	1.961	mg/L	0.0099	1.961	mg/L	0.0099	0.51%
Si 288.158†	2985.2	2.084	mg/L	0.0462	2.084	mg/L	0.0462	2.22%
Sn 189.927†	5276.7	0.9717	mg/L	0.00353	0.9717	mg/L	0.00353	0.36%
Sr 421.552†	745272.5	1.004	mg/L	0.0175	1.004	mg/L	0.0175	1.74%
Ti 334.903†	22536.0	0.9925	mg/L	0.01777	0.9925	mg/L	0.01777	1.79%
Tl 190.801†	4053.6	1.939	mg/L	0.0075	1.939	mg/L	0.0075	0.38%
V 292.402†	88855.2	0.9553	mg/L	0.00207	0.9553	mg/L	0.00207	0.22%
Zn 206.200†	4327.3	1.002	mg/L	0.0223	1.002	mg/L	0.0223	2.23%

Sequence No.: 19
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 9/2/2010 9:37:23 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	184.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	1978161.9	105.9	%	2.42				2.28%
ScR 361.383	317238.1	107.3	%	2.04				1.90%
Ag 328.068†	25.0	0.00015	mg/L	0.000031	0.00015	mg/L	0.000031	21.16%
Al 308.215†	20.4	0.01829	mg/L	0.026972	0.01829	mg/L	0.026972	147.46%
As 188.979†	2.7	0.00164	mg/L	0.000478	0.00164	mg/L	0.000478	29.08%
B 249.677†	25.6	0.00434	mg/L	0.001558	0.00434	mg/L	0.001558	35.94%
Ba 233.527†	5.7	0.00077	mg/L	0.001513	0.00077	mg/L	0.001513	196.45%
Be 313.042†	41.2	0.00006	mg/L	0.000043	0.00006	mg/L	0.000043	69.98%
Ca 317.933†	-5.4	-0.00038	mg/L	0.000574	-0.00038	mg/L	0.000574	150.50%
Cd 228.802†	-1.4	-0.00007	mg/L	0.000178	-0.00007	mg/L	0.000178	262.76%
Co 228.616†	3.1	0.00009	mg/L	0.000170	0.00009	mg/L	0.000170	179.42%
Cr 267.716†	3.6	0.00048	mg/L	0.000173	0.00048	mg/L	0.000173	35.98%
Cu 324.752†	94.4	0.00053	mg/L	0.000141	0.00053	mg/L	0.000141	26.40%
Fe 273.955†	21.7	0.01674	mg/L	0.027284	0.01674	mg/L	0.027284	162.98%
K 766.490†	83.1	0.05106	mg/L	0.017344	0.05106	mg/L	0.017344	33.97%
Mg 279.077†	4.1	0.00405	mg/L	0.021648	0.00405	mg/L	0.021648	534.06%
Mn 257.610†	24.0	0.00055	mg/L	0.000799	0.00055	mg/L	0.000799	145.40%
Mo 202.031†	47.4	0.00224	mg/L	0.000899	0.00224	mg/L	0.000899	40.19%
Na 589.592†	94.0	0.00983	mg/L	0.005491	0.00983	mg/L	0.005491	55.89%
Na 330.237†	14.7	0.5504	mg/L	0.32066	0.5504	mg/L	0.32066	58.26%
Ni 231.604†	2.0	0.00047	mg/L	0.000642	0.00047	mg/L	0.000642	136.05%
Pb 220.353†	6.7	0.00079	mg/L	0.001093	0.00079	mg/L	0.001093	137.94%
Sb 206.836†	10.5	0.00352	mg/L	0.002491	0.00352	mg/L	0.002491	70.79%
Se 196.026†	6.6	0.00423	mg/L	0.007212	0.00423	mg/L	0.007212	170.64%
Si 288.158†	1.0	0.00068	mg/L	0.001771	0.00068	mg/L	0.001771	258.92%
Sn 189.927†	3.7	0.00068	mg/L	0.000889	0.00068	mg/L	0.000889	130.70%
Sr 421.552†	65.4	0.00009	mg/L	0.000069	0.00009	mg/L	0.000069	78.06%
Ti 334.903†	17.0	0.00075	mg/L	0.000937	0.00075	mg/L	0.000937	125.76%
Tl 190.801†	6.6	0.00315	mg/L	0.002853	0.00315	mg/L	0.002853	90.68%
V 292.402†	-10.1	-0.00011	mg/L	0.000439	-0.00011	mg/L	0.000439	411.79%
Zn 206.200†	3.6	0.00083	mg/L	0.000822	0.00083	mg/L	0.000822	99.15%

Sequence No.: 20
Sample ID: RK76 MB1 SWC

Autosampler Location: 314
Date Collected: 9/2/2010 9:41:20 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK76 MB1 SWC

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: RK76 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2028376.9	108.6	%	1.55				1.43%
ScR 361.383	319192.8	107.9	%	1.03				0.96%
Ag 328.068†	-31.6	-0.00018	mg/L	0.000183	-0.00037	mg/L	0.000367	99.46%
Al 308.215†	16.0	0.01437	mg/L	0.000019	0.02875	mg/L	0.000037	0.13%
As 188.979†	0.1	0.00004	mg/L	0.002387	0.00007	mg/L	0.004774	>999.9%
B 249.677†	11.4	0.00192	mg/L	0.001389	0.00384	mg/L	0.002778	72.32%
Ba 233.527†	-0.1	-0.00002	mg/L	0.000698	-0.00003	mg/L	0.001396	>999.9%
Be 313.042†	-38.5	-0.00006	mg/L	0.000014	-0.00011	mg/L	0.000028	24.58%
Ca 317.933†	62.5	0.00438	mg/L	0.001347	0.00877	mg/L	0.002694	30.72%
Cd 228.802†	0.9	0.00004	mg/L	0.000038	0.00008	mg/L	0.000077	102.33%
Co 228.616†	4.9	0.00015	mg/L	0.000080	0.00030	mg/L	0.000161	53.42%
Cr 267.716†	0.7	0.00009	mg/L	0.000567	0.00018	mg/L	0.001134	623.41%
Cu 324.752†	77.0	0.00044	mg/L	0.000126	0.00087	mg/L	0.000252	28.98%
Fe 273.955†	-0.1	-0.00009	mg/L	0.003873	-0.00018	mg/L	0.007746	>999.9%
K 766.490†	44.2	0.02715	mg/L	0.009497	0.05431	mg/L	0.018993	34.97%
Mg 279.077†	-0.5	-0.00053	mg/L	0.008509	-0.00107	mg/L	0.017018	>999.9%
Mn 257.610†	1.8	0.00004	mg/L	0.000104	0.00008	mg/L	0.000207	253.57%
Mo 202.031†	-0.3	-0.00001	mg/L	0.000068	-0.00003	mg/L	0.000136	524.67%
Na 589.592†	53.5	0.00559	mg/L	0.001304	0.01117	mg/L	0.002608	23.34%
Na 330.237†	5.4	0.2040	mg/L	0.13367	0.4079	mg/L	0.26733	65.53%
Ni 231.604†	-7.8	-0.00186	mg/L	0.000916	-0.00372	mg/L	0.001832	49.23%
Pb 220.353†	5.7	0.00067	mg/L	0.001233	0.00134	mg/L	0.002467	183.98%
Sb 206.836†	-6.0	-0.00202	mg/L	0.001695	-0.00403	mg/L	0.003390	84.07%
Se 196.026†	7.3	0.00464	mg/L	0.003424	0.00928	mg/L	0.006847	73.78%
Si 288.158†	-1.2	-0.00083	mg/L	0.006832	-0.00167	mg/L	0.013664	818.94%
Sn 189.927†	-2.5	-0.00046	mg/L	0.000417	-0.00091	mg/L	0.000833	91.39%
Sr 421.552†	70.8	0.00010	mg/L	0.000044	0.00019	mg/L	0.000088	46.00%
Ti 334.903†	2.5	0.00011	mg/L	0.000496	0.00022	mg/L	0.000993	442.36%
Tl 190.801†	6.6	0.00315	mg/L	0.000762	0.00631	mg/L	0.001523	24.14%
V 292.402†	-23.8	-0.00025	mg/L	0.000094	-0.00051	mg/L	0.000189	37.24%
Zn 206.200†	0.1	0.00003	mg/L	0.000151	0.00005	mg/L	0.000303	585.95%

Sequence No.: 21
Sample ID: RK76 C SWC

Autosampler Location: 315
Date Collected: 9/2/2010 9:45:17 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK76 C SWC

Analyte	Back Pressure	Flow
All	183.0 kPa	0.75 L/min

Mean Data: RK76 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2030606.3	108.7	%	1.01				0.93%
ScR 361.383	327868.8	110.8	%	0.23				0.21%
Ag 328.068†	-47.9	-0.00051	mg/L	0.000149	-0.00101	mg/L	0.000298	29.35%
Al 308.215†	136978.4	122.9	mg/L	0.18	245.8	mg/L	0.36	0.15%
As 188.979†	-47.3	0.02422	mg/L	0.001520	0.04844	mg/L	0.003039	6.28%
B 249.677†	52.6	0.00876	mg/L	0.000564	0.01752	mg/L	0.001129	6.44%
Ba 233.527†	4424.8	0.5883	mg/L	0.00214	1.177	mg/L	0.0043	0.36%
Be 313.042†	1391.6	0.00189	mg/L	0.000019	0.00378	mg/L	0.000038	1.02%
Ca 317.933†	437020.4	30.67	mg/L	0.038	61.35	mg/L	0.077	0.13%
Cd 228.802†	69.6	0.00326	mg/L	0.000173	0.00652	mg/L	0.000347	5.32%
Co 228.616†	2373.1	0.06369	mg/L	0.000813	0.1274	mg/L	0.00163	1.28%
Cr 267.716†	1804.0	0.2403	mg/L	0.00086	0.4807	mg/L	0.00172	0.36%
Cu 324.752†	25189.6	0.1496	mg/L	0.00165	0.2991	mg/L	0.00329	1.10%
Fe 273.955†	175616.8	135.3	mg/L	0.49	270.7	mg/L	0.97	0.36%
K 766.490†	8919.9	5.484	mg/L	0.0241	10.97	mg/L	0.048	0.44%
Mg 279.077†	40877.7	40.57	mg/L	0.048	81.14	mg/L	0.096	0.12%
Mn 257.610†	110070.4	2.524	mg/L	0.0051	5.048	mg/L	0.0102	0.20%
Mo 202.031†	117.3	0.00517	mg/L	0.000195	0.01033	mg/L	0.000391	3.78%
Na 589.592†	13994.9	1.462	mg/L	0.0049	2.925	mg/L	0.0098	0.34%
Na 330.237†	0.4	1.407	mg/L	0.0538	2.813	mg/L	0.1077	3.83%
Ni 231.604†	1156.7	0.2748	mg/L	0.00043	0.5497	mg/L	0.00085	0.16%
Pb 220.353†	3775.6	0.4585	mg/L	0.00437	0.9171	mg/L	0.00874	0.95%
Sb 206.836†	2.7	0.01001	mg/L	0.002508	0.02001	mg/L	0.005016	25.06%
Se 196.026†	25.1	0.01402	mg/L	0.003511	0.02803	mg/L	0.007022	25.05%
Si 288.158†	3687.7	2.570	mg/L	0.0006	5.140	mg/L	0.0013	0.02%
Sn 189.927†	2288.3	0.4240	mg/L	0.00515	0.8479	mg/L	0.01029	1.21%
Sr 421.552†	147075.6	0.1981	mg/L	0.00022	0.3963	mg/L	0.00044	0.11%
Ti 334.903†	127408.9	5.618	mg/L	0.0033	11.24	mg/L	0.007	0.06%
Tl 190.801†	-28.1	0.00627	mg/L	0.005370	0.01253	mg/L	0.010739	85.68%
V 292.402†	29980.2	0.3044	mg/L	0.00366	0.6088	mg/L	0.00731	1.20%
Zn 206.200†	1994.8	0.4618	mg/L	0.00184	0.9236	mg/L	0.00368	0.40%

Sequence No.: 22
Sample ID: RK76 H SWC

Autosampler Location: 316
Date Collected: 9/2/2010 9:49:13 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK76 H SWC

Analyte	Back Pressure	Flow
All	184.0 kPa	0.75 L/min

Mean Data: RK76 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2026796.1	108.5	%	1.87				1.73%
ScR 361.383	328158.1	110.9	%	0.78				0.70%
Ag 328.068†	-86.6	-0.00072	mg/L	0.000118	-0.00144	mg/L	0.000235	16.37%
Al 308.215†	141841.0	127.3	mg/L	0.56	254.5	mg/L	1.12	0.44%
As 188.979†	-69.6	0.02479	mg/L	0.001243	0.04958	mg/L	0.002485	5.01%
B 249.677†	81.0	0.01353	mg/L	0.000643	0.02705	mg/L	0.001286	4.75%
Ba 233.527†	6397.9	0.8531	mg/L	0.00805	1.706	mg/L	0.0161	0.94%
Be 313.042†	1585.1	0.00214	mg/L	0.000024	0.00428	mg/L	0.000047	1.10%
Ca 317.933†	919073.2	64.51	mg/L	0.388	129.0	mg/L	0.78	0.60%
Cd 228.802†	105.6	0.00485	mg/L	0.000263	0.00969	mg/L	0.000527	5.44%
Co 228.616†	2832.7	0.07514	mg/L	0.001638	0.1503	mg/L	0.00328	2.18%
Cr 267.716†	2308.9	0.3068	mg/L	0.00228	0.6137	mg/L	0.00457	0.74%
Cu 324.752†	33433.1	0.1973	mg/L	0.00285	0.3946	mg/L	0.00569	1.44%
Fe 273.955†	207024.9	159.5	mg/L	1.00	319.1	mg/L	2.00	0.63%
K 766.490†	12896.0	7.928	mg/L	0.0320	15.86	mg/L	0.064	0.40%
Mg 279.077†	50193.9	49.82	mg/L	0.270	99.64	mg/L	0.541	0.54%
Mn 257.610†	121200.0	2.779	mg/L	0.0126	5.559	mg/L	0.0252	0.45%
Mo 202.031†	154.6	0.00652	mg/L	0.000581	0.01304	mg/L	0.001161	8.91%
Na 589.592†	32123.5	3.357	mg/L	0.0127	6.714	mg/L	0.0254	0.38%
Na 330.237†	55.0	3.670	mg/L	0.0967	7.341	mg/L	0.1934	2.63%
Ni 231.604†	1182.2	0.2809	mg/L	0.00179	0.5618	mg/L	0.00358	0.64%
Pb 220.353†	10142.5	1.208	mg/L	0.0221	2.416	mg/L	0.0442	1.83%
Sb 206.836†	30.9	0.01541	mg/L	0.000444	0.03081	mg/L	0.000888	2.88%
Se 196.026†	42.8	0.02310	mg/L	0.002826	0.04619	mg/L	0.005651	12.23%
Si 288.158†	1539.9	1.073	mg/L	0.0067	2.146	mg/L	0.0134	0.62%
Sn 189.927†	26.0	0.01023	mg/L	0.001034	0.02046	mg/L	0.002067	10.10%
Sr 421.552†	206302.0	0.2779	mg/L	0.00078	0.5558	mg/L	0.00156	0.28%
Ti 334.903†	163827.0	7.222	mg/L	0.0302	14.44	mg/L	0.060	0.42%
Tl 190.801†	-22.9	0.01205	mg/L	0.001982	0.02410	mg/L	0.003964	16.45%
V 292.402†	35269.6	0.3578	mg/L	0.00624	0.7156	mg/L	0.01248	1.74%
Zn 206.200†	5528.9	1.280	mg/L	0.0096	2.560	mg/L	0.0191	0.75%

Sequence No.: 23
Sample ID: RK76 I SWC

Autosampler Location: 317
Date Collected: 9/2/2010 9:52:59 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK76 I SWC

Analyte	Back Pressure	Flow
All	184.0 kPa	0.75 L/min

Mean Data: RK76 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2036188.8	109.0	%	1.08				0.99%
ScR 361.383	328517.9	111.1	%	0.72				0.65%
Ag 328.068†	-85.1	-0.00065	mg/L	0.000080	-0.00129	mg/L	0.000160	12.36%
Al 308.215†	145429.5	130.5	mg/L	1.27	261.0	mg/L	2.53	0.97%
As 188.979†	-90.5	0.01505	mg/L	0.000685	0.03010	mg/L	0.001371	4.55%
B 249.677†	69.4	0.01157	mg/L	0.000179	0.02314	mg/L	0.000357	1.54%
Ba 233.527†	3771.2	0.4990	mg/L	0.00474	0.9979	mg/L	0.00948	0.95%
Be 313.042†	1273.6	0.00167	mg/L	0.000043	0.00334	mg/L	0.000086	2.57%
Ca 317.933†	620268.5	43.54	mg/L	0.375	87.07	mg/L	0.749	0.86%
Cd 228.802†	41.8	0.00222	mg/L	0.000058	0.00445	mg/L	0.000115	2.59%
Co 228.616†	2627.4	0.06857	mg/L	0.000624	0.1371	mg/L	0.00125	0.91%
Cr 267.716†	1830.6	0.2434	mg/L	0.00270	0.4867	mg/L	0.00540	1.11%
Cu 324.752†	23091.4	0.1383	mg/L	0.00162	0.2765	mg/L	0.00325	1.17%
Fe 273.955†	197374.1	152.1	mg/L	1.72	304.2	mg/L	3.44	1.13%
K 766.490†	13290.7	8.171	mg/L	0.0714	16.34	mg/L	0.143	0.87%
Mg 279.077†	51331.5	50.96	mg/L	0.391	101.9	mg/L	0.78	0.77%
Mn 257.610†	108927.4	2.498	mg/L	0.0235	4.995	mg/L	0.0470	0.94%
Mo 202.031†	96.2	0.00402	mg/L	0.000574	0.00803	mg/L	0.001147	14.28%
Na 589.592†	23652.4	2.472	mg/L	0.0142	4.943	mg/L	0.0284	0.57%
Na 330.237†	17.5	2.585	mg/L	0.0437	5.170	mg/L	0.0875	1.69%
Ni 231.604†	1346.2	0.3198	mg/L	0.00211	0.6397	mg/L	0.00422	0.66%
Pb 220.353†	13.5	0.01545	mg/L	0.000669	0.03090	mg/L	0.001338	4.33%
Sb 206.836†	10.8	0.00947	mg/L	0.001878	0.01894	mg/L	0.003756	19.83%
Se 196.026†	29.4	0.01590	mg/L	0.003362	0.03180	mg/L	0.006725	21.15%
Si 288.158†	2358.1	1.643	mg/L	0.0189	3.287	mg/L	0.0377	1.15%
Sn 189.927†	-46.4	-0.00404	mg/L	0.000906	-0.00808	mg/L	0.001813	22.43%
Sr 421.552†	144232.2	0.1943	mg/L	0.00158	0.3886	mg/L	0.00316	0.81%
Ti 334.903†	168070.6	7.410	mg/L	0.0658	14.82	mg/L	0.132	0.89%
Tl 190.801†	-34.1	0.00546	mg/L	0.002778	0.01091	mg/L	0.005557	50.93%
V 292.402†	36383.4	0.3701	mg/L	0.00510	0.7402	mg/L	0.01020	1.38%
Zn 206.200†	1126.8	0.2608	mg/L	0.00208	0.5217	mg/L	0.00415	0.80%

Sequence No.: 24
Sample ID: RK76 N SWC

Autosampler Location: 318
Date Collected: 9/2/2010 9:56:55 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK76 N SWC

Analyte	Back Pressure	Flow
All	184.0 kPa	0.75 L/min

Mean Data: RK76 N SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2058410.5	110.2	%	0.95				0.86%
ScR 361.383	333231.3	112.7	%	0.54				0.48%
Ag 328.068†	-46.2	-0.00055	mg/L	0.000379	-0.00111	mg/L	0.000758	68.37%
Al 308.215†	158530.9	142.3	mg/L	0.90	284.5	mg/L	1.81	0.63%
As 188.979†	-23.0	0.04632	mg/L	0.001738	0.09265	mg/L	0.003476	3.75%
B 249.677†	54.3	0.00903	mg/L	0.001178	0.01805	mg/L	0.002356	13.05%
Ba 233.527†	5171.0	0.6876	mg/L	0.00369	1.375	mg/L	0.0074	0.54%
Be 313.042†	1612.2	0.00218	mg/L	0.000030	0.00436	mg/L	0.000060	1.39%
Ca 317.933†	530835.1	37.26	mg/L	0.364	74.52	mg/L	0.727	0.98%
Cd 228.802†	85.4	0.00391	mg/L	0.000086	0.00782	mg/L	0.000172	2.20%
Co 228.616†	2684.3	0.07188	mg/L	0.001037	0.1438	mg/L	0.00207	1.44%
Cr 267.716†	2083.5	0.2777	mg/L	0.00195	0.5553	mg/L	0.00389	0.70%
Cu 324.752†	32745.0	0.1935	mg/L	0.00117	0.3870	mg/L	0.00235	0.61%
Fe 273.955†	204556.9	157.6	mg/L	1.02	315.3	mg/L	2.05	0.65%
K 766.490†	8697.1	5.347	mg/L	0.0210	10.69	mg/L	0.042	0.39%
Mg 279.077†	46235.8	45.88	mg/L	0.340	91.77	mg/L	0.679	0.74%
Mn 257.610†	133268.2	3.056	mg/L	0.0189	6.112	mg/L	0.0377	0.62%
Mo 202.031†	114.8	0.00497	mg/L	0.000379	0.00994	mg/L	0.000758	7.62%
Na 589.592†	12976.3	1.356	mg/L	0.0037	2.712	mg/L	0.0074	0.27%
Na 330.237†	-11.4	1.134	mg/L	0.1886	2.268	mg/L	0.3772	16.63%
Ni 231.604†	1430.8	0.3400	mg/L	0.00355	0.6799	mg/L	0.00710	1.04%
Pb 220.353†	3136.0	0.3852	mg/L	0.00482	0.7704	mg/L	0.00964	1.25%
Sb 206.836†	23.2	0.01242	mg/L	0.002882	0.02484	mg/L	0.005765	23.21%
Se 196.026†	25.3	0.01369	mg/L	0.006097	0.02738	mg/L	0.012194	44.54%
Si 288.158†	3581.6	2.496	mg/L	0.0358	4.992	mg/L	0.0716	1.43%
Sn 189.927†	9.0	0.00553	mg/L	0.001026	0.01107	mg/L	0.002051	18.53%
Sr 421.552†	152873.0	0.2059	mg/L	0.00119	0.4119	mg/L	0.00239	0.58%
Ti 334.903†	146118.8	6.442	mg/L	0.0440	12.88	mg/L	0.088	0.68%
Tl 190.801†	-33.7	0.00693	mg/L	0.003249	0.01386	mg/L	0.006498	46.88%
V 292.402†	36810.5	0.3749	mg/L	0.00333	0.7497	mg/L	0.00667	0.89%
Zn 206.200†	2835.9	0.6565	mg/L	0.00624	1.313	mg/L	0.0125	0.95%

Sequence No.: 25
Sample ID: RK76 O SWC

Autosampler Location: 319
Date Collected: 9/2/2010 10:00:37 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK76 O SWC

Analyte	Back Pressure	Flow
All	184.0 kPa	0.75 L/min

Mean Data: RK76 O SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2041835.2	109.3	%	0.42				0.39%
ScR 361.383	327746.6	110.8	%	0.36				0.32%
Ag 328.068†	25.4	-0.00027	mg/L	0.000074	-0.00053	mg/L	0.000149	27.96%
Al 308.215†	169492.7	152.1	mg/L	0.57	304.2	mg/L	1.13	0.37%
As 188.979†	-27.4	0.04862	mg/L	0.005664	0.09724	mg/L	0.011328	11.65%
B 249.677†	76.3	0.01269	mg/L	0.000533	0.02537	mg/L	0.001066	4.20%
Ba 233.527†	10116.8	1.353	mg/L	0.0112	2.707	mg/L	0.0224	0.83%
Be 313.042†	1687.4	0.00227	mg/L	0.000040	0.00455	mg/L	0.000079	1.74%
Ca 317.933†	697000.8	48.92	mg/L	0.200	97.84	mg/L	0.399	0.41%
Cd 228.802†	202.1	0.00888	mg/L	0.000124	0.01777	mg/L	0.000248	1.40%
Co 228.616†	3479.6	0.09533	mg/L	0.000187	0.1907	mg/L	0.00037	0.20%
Cr 267.716†	2671.8	0.3558	mg/L	0.00235	0.7116	mg/L	0.00470	0.66%
Cu 324.752†	56932.0	0.3319	mg/L	0.00035	0.6637	mg/L	0.00071	0.11%
Fe 273.955†	239545.2	184.6	mg/L	0.91	369.2	mg/L	1.81	0.49%
K 766.490†	8292.2	5.098	mg/L	0.0222	10.20	mg/L	0.044	0.44%
Mg 279.077†	54574.3	54.16	mg/L	0.188	108.3	mg/L	0.38	0.35%
Mn 257.610†	169216.5	3.881	mg/L	0.0219	7.761	mg/L	0.0438	0.56%
Mo 202.031†	154.7	0.00671	mg/L	0.000527	0.01343	mg/L	0.001053	7.84%
Na 589.592†	24499.1	2.560	mg/L	0.0065	5.120	mg/L	0.0130	0.25%
Na 330.237†	35.0	2.804	mg/L	0.1978	5.608	mg/L	0.3956	7.05%
Ni 231.604†	1488.0	0.3535	mg/L	0.00332	0.7071	mg/L	0.00664	0.94%
Pb 220.353†	12448.0	1.483	mg/L	0.0040	2.965	mg/L	0.0079	0.27%
Sb 206.836†	33.5	0.01571	mg/L	0.002131	0.03143	mg/L	0.004262	13.56%
Se 196.026†	38.0	0.02105	mg/L	0.004522	0.04211	mg/L	0.009044	21.48%
Si 288.158†	3131.9	2.183	mg/L	0.0072	4.365	mg/L	0.0144	0.33%
Sn 189.927†	37.2	0.01147	mg/L	0.000486	0.02293	mg/L	0.000973	4.24%
Sr 421.552†	198390.2	0.2673	mg/L	0.00150	0.5345	mg/L	0.00300	0.56%
Ti 334.903†	159056.5	7.012	mg/L	0.0325	14.02	mg/L	0.065	0.46%
Tl 190.801†	-43.3	0.00660	mg/L	0.003095	0.01320	mg/L	0.006190	46.89%
V 292.402†	40159.0	0.4080	mg/L	0.00093	0.8159	mg/L	0.00186	0.23%
Zn 206.200†	6483.6	1.501	mg/L	0.0102	3.002	mg/L	0.0204	0.68%

Sequence No.: 26
Sample ID: RK76 P SWC

Dilution: 2X

RR'15

Autosampler Location: 320
Date Collected: 9/2/2010 10:04:20 AM
Data Type: Original

Nebulizer Parameters: RK76 P SWC

Analyte	Back Pressure	Flow
All	184.0 kPa	0.75 L/min

Mean Data: RK76 P SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2047670.4	109.6	%	0.36				0.33%
ScR 361.383	329520.3	111.4	%	0.52				0.47%
Ag 328.068†	-94.5	-0.00102	mg/L	0.000212	-0.00205	mg/L	0.000424	20.68%
Al 308.215†	168363.2	151.1	mg/L	0.59	302.2	mg/L	1.17	0.39%
As 188.979†	-59.8	0.03148	mg/L	0.000917	0.06296	mg/L	0.001833	2.91%
B 249.677†	56.4	0.00935	mg/L	0.003443	0.01871	mg/L	0.006886	36.81%
Ba 233.527†	9382.1	1.249	mg/L	0.0070	2.498	mg/L	0.0140	0.56%
Be 313.042†	1734.8	0.00236	mg/L	0.000065	0.00472	mg/L	0.000130	2.75%
Ca 317.933†	610288.9	42.84	mg/L	0.376	85.67	mg/L	0.752	0.88%
Cd 228.802†	130.9	0.00598	mg/L	0.000219	0.01195	mg/L	0.000438	3.66%
Co 228.616†	2911.3	0.07747	mg/L	0.000223	0.1549	mg/L	0.00045	0.29%
Cr 267.716†	3062.9	0.4110	mg/L	0.00305	0.8220	mg/L	0.00611	0.74%
Cu 324.752†	45363.5	0.2717	mg/L	0.00063	0.5435	mg/L	0.00126	0.23%
Fe 273.955†	349229.5	269.1	mg/L	1.47	538.2	mg/L	2.95	0.55%
K 766.490†	8669.0	5.330	mg/L	0.0329	10.66	mg/L	0.066	0.62%
Mg 279.077†	53429.7	52.97	mg/L	0.308	105.9	mg/L	0.62	0.58%
Mn 257.610†	182041.7	4.175	mg/L	0.0225	8.350	mg/L	0.0450	0.54%
Mo 202.031†	133.6	0.00579	mg/L	0.000264	0.01158	mg/L	0.000527	4.55%
Na 589.592†	12191.2	1.274	mg/L	0.0147	2.548	mg/L	0.0294	1.15%
Na 330.237†	-2.8	1.519	mg/L	0.5333	3.038	mg/L	1.0665	35.10%
Ni 231.604†	1650.6	0.3922	mg/L	0.00297	0.7844	mg/L	0.00594	0.76%
Pb 220.353†	11076.4	1.315	mg/L	0.0049	2.631	mg/L	0.0097	0.37%
Sb 206.836†	54.3	0.02231	mg/L	0.002199	0.04461	mg/L	0.004398	9.86%
Se 196.026†	26.2	0.01391	mg/L	0.005332	0.02782	mg/L	0.010664	38.33%
Si 288.158†	2502.3	1.744	mg/L	0.0135	3.488	mg/L	0.0270	0.78%
Sn 189.927†	102.0	0.02316	mg/L	0.000762	0.04631	mg/L	0.001523	3.29%
Sr 421.552†	148845.5	0.2005	mg/L	0.00110	0.4010	mg/L	0.00221	0.55%
Ti 334.903†	163925.7	7.228	mg/L	0.0363	14.46	mg/L	0.073	0.50%
Tl 190.801†	-64.1	0.00816	mg/L	0.002519	0.01633	mg/L	0.005038	30.86%
V 292.402†	36269.3	0.3575	mg/L	0.00131	0.7149	mg/L	0.00263	0.37%
Zn 206.200†	5201.5	1.204	mg/L	0.0058	2.408	mg/L	0.0116	0.48%

Sequence No.: 27
Sample ID: RK76 REF1 SWC

Autosampler Location: 321
Date Collected: 9/2/2010 10:07:18 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK76 REF1 SWC

Analyte	Back Pressure	Flow
All	184.0 kPa	0.75 L/min

Mean Data: RK76 REF1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2053723.4	110.0	%	0.58				0.52%
ScR 361.383	331867.0	112.2	%	0.65				0.58%
Ag 328.068†	171839.9	1.003	mg/L	0.0064	2.006	mg/L	0.0128	0.64%
Al 308.215†	102603.9	92.06	mg/L	0.355	184.1	mg/L	0.71	0.39%
As 188.979†	2193.5	1.329	mg/L	0.0081	2.658	mg/L	0.0163	0.61%
B 249.677†	6374.2	1.078	mg/L	0.0075	2.155	mg/L	0.0150	0.70%
Ba 233.527†	23822.5	3.206	mg/L	0.0088	6.413	mg/L	0.0177	0.28%
Be 313.042†	600654.0	0.8952	mg/L	0.00280	1.790	mg/L	0.0056	0.31%
Ca 317.933†	579898.7	40.70	mg/L	0.122	81.41	mg/L	0.243	0.30%
Cd 228.802†	16608.1	0.6997	mg/L	0.00275	1.399	mg/L	0.0055	0.39%
Co 228.616†	24587.9	0.7539	mg/L	0.00213	1.508	mg/L	0.0043	0.28%
Cr 267.716†	5505.6	0.7326	mg/L	0.00415	1.465	mg/L	0.0083	0.57%
Cu 324.752†	116428.0	0.6672	mg/L	0.00288	1.334	mg/L	0.0058	0.43%
Fe 273.955†	185489.4	142.9	mg/L	0.70	285.9	mg/L	1.39	0.49%
K 766.490†	58202.4	35.78	mg/L	0.167	71.56	mg/L	0.335	0.47%
Mg 279.077†	28410.5	28.17	mg/L	0.093	56.33	mg/L	0.187	0.33%
Mn 257.610†	190979.3	4.380	mg/L	0.0152	8.761	mg/L	0.0303	0.35%
Mo 202.031†	9673.3	0.4563	mg/L	0.00191	0.9127	mg/L	0.00382	0.42%
Na 589.592†	49666.4	5.190	mg/L	0.0391	10.38	mg/L	0.078	0.75%
Na 330.237†	141.3	5.382	mg/L	0.2775	10.76	mg/L	0.555	5.16%
Ni 231.604†	2325.4	0.5528	mg/L	0.00096	1.106	mg/L	0.0019	0.17%
Pb 220.353†	10835.7	1.285	mg/L	0.0055	2.570	mg/L	0.0110	0.43%
Sb 206.836†	1387.9	0.4818	mg/L	0.00239	0.9635	mg/L	0.00479	0.50%
Se 196.026†	2641.5	1.678	mg/L	0.0042	3.355	mg/L	0.0084	0.25%
Si 288.158†	3839.2	2.678	mg/L	0.0251	5.356	mg/L	0.0501	0.94%
Sn 189.927†	9063.3	1.669	mg/L	0.0067	3.338	mg/L	0.0134	0.40%
Sr 421.552†	413006.1	0.5564	mg/L	0.00173	1.113	mg/L	0.0035	0.31%
Ti 334.903†	46242.5	2.037	mg/L	0.0049	4.073	mg/L	0.0097	0.24%
Tl 190.801†	2756.8	1.340	mg/L	0.0060	2.680	mg/L	0.0121	0.45%
V 292.402†	76496.8	0.8062	mg/L	0.00454	1.612	mg/L	0.0091	0.56%
Zn 206.200†	7631.5	1.766	mg/L	0.0043	3.533	mg/L	0.0086	0.24%

Sequence No.: 28
Sample ID: RK76 MB1SPK SWC

Autosampler Location: 322
Date Collected: 9/2/2010 10:10:16 AM
Data Type: Original

Dilution: 2X

Nebulizer Parameters: RK76 MB1SPK SWC

Analyte	Back Pressure	Flow
All	185.0 kPa	0.75 L/min

Mean Data: RK76 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2039943.1	109.2	%	0.08				0.08%
ScR 361.383	328835.6	111.2	%	0.31				0.28%
Ag 328.068†	87712.7	0.5123	mg/L	0.00036	1.025	mg/L	0.0007	0.07%
Al 308.215†	2336.4	2.088	mg/L	0.0293	4.176	mg/L	0.0585	1.40%
As 188.979†	3507.7	2.097	mg/L	0.0113	4.195	mg/L	0.0226	0.54%
B 249.677†	38.6	0.00546	mg/L	0.001085	0.01092	mg/L	0.002170	19.87%
Ba 233.527†	15041.9	2.030	mg/L	0.0047	4.061	mg/L	0.0094	0.23%
Be 313.042†	340042.6	0.5068	mg/L	0.00339	1.014	mg/L	0.0068	0.67%
Ca 317.933†	144815.8	10.16	mg/L	0.053	20.33	mg/L	0.106	0.52%
Cd 228.802†	12169.3	0.5077	mg/L	0.00239	1.015	mg/L	0.0048	0.47%
Co 228.616†	16505.6	0.5083	mg/L	0.00095	1.017	mg/L	0.0019	0.19%
Cr 267.716†	3869.0	0.5124	mg/L	0.00261	1.025	mg/L	0.0052	0.51%
Cu 324.752†	88431.1	0.5004	mg/L	0.00049	1.001	mg/L	0.0010	0.10%
Fe 273.955†	2680.3	2.063	mg/L	0.0374	4.125	mg/L	0.0748	1.81%
K 766.490†	16388.0	10.08	mg/L	0.035	20.15	mg/L	0.071	0.35%
Mg 279.077†	10587.6	10.53	mg/L	0.026	21.06	mg/L	0.052	0.24%
Mn 257.610†	21555.3	0.4949	mg/L	0.00081	0.9898	mg/L	0.00162	0.16%
Mo 202.031†	33.9	0.00148	mg/L	0.000302	0.00296	mg/L	0.000604	20.43%
Na 589.592†	88446.4	9.242	mg/L	0.0358	18.48	mg/L	0.072	0.39%
Na 330.237†	283.4	10.51	mg/L	0.205	21.02	mg/L	0.409	1.95%
Ni 231.604†	2110.9	0.5016	mg/L	0.00037	1.003	mg/L	0.0007	0.07%
Pb 220.353†	17245.0	2.033	mg/L	0.0010	4.066	mg/L	0.0020	0.05%
Sb 206.836†	13.6	0.00042	mg/L	0.000982	0.00084	mg/L	0.001964	233.80%
Se 196.026†	3340.8	2.124	mg/L	0.0081	4.248	mg/L	0.0161	0.38%
Si 288.158†	-5.2	-0.00167	mg/L	0.004120	-0.00334	mg/L	0.008240	246.60%
Sn 189.927†	-8.3	-0.00102	mg/L	0.000932	-0.00205	mg/L	0.001864	91.15%
Sr 421.552†	370312.2	0.4989	mg/L	0.00163	0.9977	mg/L	0.00327	0.33%
Ti 334.903†	62.4	0.00211	mg/L	0.001665	0.00422	mg/L	0.003329	78.96%
Tl 190.801†	4349.3	2.079	mg/L	0.0079	4.158	mg/L	0.0158	0.38%
V 292.402†	47657.3	0.5120	mg/L	0.00121	1.024	mg/L	0.0024	0.24%
Zn 206.200†	2192.4	0.5076	mg/L	0.00103	1.015	mg/L	0.0021	0.20%

Sequence No.: 29
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 9/2/2010 10:14:12 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	184.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2018674.1	108.1	%	0.60				0.55%
ScR 361.383	321417.5	108.7	%	0.19				0.17%
Ag 328.068†	167119.8	0.9760	mg/L	0.00429	0.9760	mg/L	0.00429	0.44%
Al 308.215†	2352.0	2.077	mg/L	0.0281	2.077	mg/L	0.0281	1.35%
As 188.979†	3425.0	2.056	mg/L	0.0097	2.056	mg/L	0.0097	0.47%
B 249.677†	5858.6	0.9904	mg/L	0.00859	0.9904	mg/L	0.00859	0.87%
Ba 233.527†	7456.4	1.006	mg/L	0.0033	1.006	mg/L	0.0033	0.33%
Be 313.042†	670538.2	0.9993	mg/L	0.00295	0.9993	mg/L	0.00295	0.29%
Ca 317.933†	30858.3	2.165	mg/L	0.0015	2.165	mg/L	0.0015	0.07%
Cd 228.802†	23914.6	1.007	mg/L	0.0051	1.007	mg/L	0.0051	0.51%
Co 228.616†	32495.5	0.9998	mg/L	0.00283	0.9998	mg/L	0.00283	0.28%
Cr 267.716†	7723.7	1.025	mg/L	0.0048	1.025	mg/L	0.0048	0.46%
Cu 324.752†	173376.5	0.9807	mg/L	0.00276	0.9807	mg/L	0.00276	0.28%
Fe 273.955†	2604.0	2.001	mg/L	0.0241	2.001	mg/L	0.0241	1.20%
K 766.490†	32875.4	20.21	mg/L	0.082	20.21	mg/L	0.082	0.41%
Mg 279.077†	2030.5	2.024	mg/L	0.0195	2.024	mg/L	0.0195	0.96%
Mn 257.610†	43361.9	0.9952	mg/L	0.00434	0.9952	mg/L	0.00434	0.44%
Mo 202.031†	21663.1	1.023	mg/L	0.0042	1.023	mg/L	0.0042	0.41%
Na 589.592†	439987.9	45.98	mg/L	0.376	45.98	mg/L	0.376	0.82%
Na 330.237†	1370.6	51.48	mg/L	0.197	51.48	mg/L	0.197	0.38%
Ni 231.604†	4241.6	1.009	mg/L	0.0032	1.009	mg/L	0.0032	0.32%
Pb 220.353†	17396.8	2.052	mg/L	0.0062	2.052	mg/L	0.0062	0.30%
Sb 206.836†	6180.3	2.076	mg/L	0.0074	2.076	mg/L	0.0074	0.36%
Se 196.026†	3244.7	2.064	mg/L	0.0063	2.064	mg/L	0.0063	0.31%
Si 288.158†	2971.7	2.075	mg/L	0.0125	2.075	mg/L	0.0125	0.60%
Sn 189.927†	5550.0	1.022	mg/L	0.0051	1.022	mg/L	0.0051	0.50%
Sr 421.552†	736939.3	0.9928	mg/L	0.00108	0.9928	mg/L	0.00108	0.11%
Ti 334.903†	22422.7	0.9874	mg/L	0.00248	0.9874	mg/L	0.00248	0.25%
Tl 190.801†	4235.7	2.026	mg/L	0.0047	2.026	mg/L	0.0047	0.23%
V 292.402†	92046.4	0.9895	mg/L	0.00791	0.9895	mg/L	0.00791	0.80%
Zn 206.200†	4367.1	1.011	mg/L	0.0008	1.011	mg/L	0.0008	0.08%

Sequence No.: 30
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 9/2/2010 10:17:11 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	185.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2008615.9	107.6	%	0.47				0.44%
ScR 361.383	320303.2	108.3	%	0.52				0.48%
Ag 328.068†	-1.8	-0.00001	mg/L	0.000142	-0.00001	mg/L	0.000142	>999.9%
Al 308.215†	27.7	0.02484	mg/L	0.004624	0.02484	mg/L	0.004624	18.62%
As 188.979†	2.3	0.00140	mg/L	0.001618	0.00140	mg/L	0.001618	115.42%
B 249.677†	28.4	0.00480	mg/L	0.000683	0.00480	mg/L	0.000683	14.23%
Ba 233.527†	-1.7	-0.00023	mg/L	0.000918	-0.00023	mg/L	0.000918	395.96%
Be 313.042†	26.2	0.00004	mg/L	0.000093	0.00004	mg/L	0.000093	237.84%
Ca 317.933†	9.7	0.00068	mg/L	0.001363	0.00068	mg/L	0.001363	199.70%
Cd 228.802†	7.8	0.00033	mg/L	0.000536	0.00033	mg/L	0.000536	164.67%
Co 228.616†	15.2	0.00047	mg/L	0.000367	0.00047	mg/L	0.000367	78.26%
Cr 267.716†	1.5	0.00020	mg/L	0.000465	0.00020	mg/L	0.000465	229.28%
Cu 324.752†	97.4	0.00055	mg/L	0.000188	0.00055	mg/L	0.000188	34.15%
Fe 273.955†	15.0	0.01159	mg/L	0.001956	0.01159	mg/L	0.001956	16.88%
K 766.490†	63.1	0.03877	mg/L	0.019615	0.03877	mg/L	0.019615	50.59%
Mg 279.077†	9.8	0.00979	mg/L	0.009180	0.00979	mg/L	0.009180	93.76%
Mn 257.610†	14.1	0.00032	mg/L	0.000148	0.00032	mg/L	0.000148	45.85%
Mo 202.031†	43.8	0.00207	mg/L	0.000684	0.00207	mg/L	0.000684	33.10%
Na 589.592†	93.8	0.00980	mg/L	0.003836	0.00980	mg/L	0.003836	39.15%
Na 330.237†	-4.1	-0.1527	mg/L	0.72292	-0.1527	mg/L	0.72292	473.56%
Ni 231.604†	-2.5	-0.00058	mg/L	0.000336	-0.00058	mg/L	0.000336	57.88%
Pb 220.353†	6.3	0.00075	mg/L	0.002278	0.00075	mg/L	0.002278	305.44%
Sb 206.836†	7.3	0.00245	mg/L	0.001965	0.00245	mg/L	0.001965	80.13%
Se 196.026†	9.2	0.00584	mg/L	0.003635	0.00584	mg/L	0.003635	62.20%
Si 288.158†	-8.3	-0.00582	mg/L	0.001665	-0.00582	mg/L	0.001665	28.62%
Sn 189.927†	2.5	0.00046	mg/L	0.000537	0.00046	mg/L	0.000537	117.33%
Sr 421.552†	123.3	0.00017	mg/L	0.000068	0.00017	mg/L	0.000068	40.97%
Ti 334.903†	11.6	0.00051	mg/L	0.000447	0.00051	mg/L	0.000447	87.54%
Tl 190.801†	6.7	0.00319	mg/L	0.002553	0.00319	mg/L	0.002553	80.04%
V 292.402†	-39.1	-0.00042	mg/L	0.000135	-0.00042	mg/L	0.000135	32.38%
Zn 206.200†	1.5	0.00034	mg/L	0.001188	0.00034	mg/L	0.001188	346.27%

Sequence No.: 31
Sample ID: RK76 A SWC

Autosampler Location: 323
Date Collected: 9/2/2010 10:21:08 AM
Data Type: Original

Dilution: 2X

Del

Nebulizer Parameters: RK76 A SWC

Analyte	Back Pressure	Flow
All	184.0 kPa	0.75 L/min

Mean Data: RK76 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2077886.0	111.3	%	0.69				0.62%
ScR 361.383	335011.4	113.3	%	1.37				1.21%
Ag 328.068†	-33.4	-0.00045	mg/L	0.000198	-0.00091	mg/L	0.000396	43.55%
Al 308.215†	169596.9	152.2	mg/L	2.03	304.4	mg/L	4.06	1.33%
As 188.979†	-54.2	0.03290	mg/L	0.003208	0.06580	mg/L	0.006416	9.75%
B 249.677†	80.0	0.01337	mg/L	0.000869	0.02674	mg/L	0.001737	6.50%
Ba 233.527†	5994.4	0.7977	mg/L	0.01369	1.595	mg/L	0.0274	1.72%
Be 313.042†	1557.6	0.00210	mg/L	0.000063	0.00419	mg/L	0.000126	3.01%
Ca 317.933†	453624.8	31.84	mg/L	0.444	63.68	mg/L	0.887	1.39%
Cd 228.802†	100.0	0.00460	mg/L	0.000041	0.00920	mg/L	0.000082	0.90%
Co 228.616†	2757.9	0.07326	mg/L	0.000430	0.1465	mg/L	0.00086	0.59%
Cr 267.716†	2650.0	0.3532	mg/L	0.00654	0.7065	mg/L	0.01308	1.85%
Cu 324.752†	26387.4	0.1584	mg/L	0.00113	0.3168	mg/L	0.00225	0.71%
Fe 273.955†	225097.0	173.5	mg/L	2.31	346.9	mg/L	4.61	1.33%
K 766.490†	12233.4	7.521	mg/L	0.1175	15.04	mg/L	0.235	1.56%
Mg 279.077†	49732.6	49.35	mg/L	0.530	98.71	mg/L	1.060	1.07%
Mn 257.610†	130628.4	2.995	mg/L	0.0403	5.991	mg/L	0.0806	1.35%
Mo 202.031†	343.1	0.01582	mg/L	0.000310	0.03163	mg/L	0.000619	1.96%
Na 589.592†	16601.4	1.735	mg/L	0.0364	3.470	mg/L	0.0728	2.10%
Na 330.237†	3.5	1.725	mg/L	0.0827	3.450	mg/L	0.1654	4.79%
Ni 231.604†	1362.2	0.3237	mg/L	0.00663	0.6473	mg/L	0.01325	2.05%
Pb 220.353†	2757.7	0.3416	mg/L	0.00200	0.6831	mg/L	0.00400	0.59%
Sb 206.836†	25.5	0.01325	mg/L	0.001380	0.02649	mg/L	0.002760	10.42%
Se 196.026†	37.1	0.02154	mg/L	0.002338	0.04308	mg/L	0.004677	10.86%
Si 288.158†	3138.0	2.187	mg/L	0.0605	4.374	mg/L	0.1209	2.76%
Sn 189.927†	203.2	0.04113	mg/L	0.000924	0.08226	mg/L	0.001848	2.25%
Sr 421.552†	130813.1	0.1762	mg/L	0.00258	0.3525	mg/L	0.00515	1.46%
Ti 334.903†	158135.1	6.973	mg/L	0.0912	13.95	mg/L	0.182	1.31%
Tl 190.801†	-41.5	0.00522	mg/L	0.000531	0.01045	mg/L	0.001063	10.17%
V 292.402†	36383.3	0.3686	mg/L	0.00117	0.7373	mg/L	0.00233	0.32%
Zn 206.200†	4632.5	1.072	mg/L	0.0155	2.145	mg/L	0.0310	1.44%

Sequence No.: 32
Sample ID: RK76 ADUP SWC

Autosampler Location: 324
Date Collected: 9/2/2010 10:24:52 AM
Data Type: Original

Dilution: 2X

Del

Nebulizer Parameters: RK76 ADUP SWC

Analyte	Back Pressure	Flow
All	184.0 kPa	0.75 L/min

Mean Data: RK76 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2054494.7	110.0	%	0.91				0.83%
ScR 361.383	336680.3	113.8	%	0.87				0.76%
Ag 328.068†	-12.1	-0.00032	mg/L	0.000216	-0.00064	mg/L	0.000432	67.51%
Al 308.215†	167130.3	150.0	mg/L	0.93	299.9	mg/L	1.87	0.62%
As 188.979†	-62.4	0.03224	mg/L	0.003439	0.06449	mg/L	0.006877	10.66%
B 249.677†	72.2	0.01204	mg/L	0.000211	0.02409	mg/L	0.000422	1.75%
Ba 233.527†	6156.3	0.8192	mg/L	0.01021	1.638	mg/L	0.0204	1.25%
Be 313.042†	1649.8	0.00223	mg/L	0.000050	0.00445	mg/L	0.000100	2.25%
Ca 317.933†	470166.7	33.00	mg/L	0.204	66.00	mg/L	0.407	0.62%
Cd 228.802†	110.8	0.00508	mg/L	0.000087	0.01016	mg/L	0.000175	1.72%
Co 228.616†	2867.4	0.07590	mg/L	0.001730	0.1518	mg/L	0.00346	2.28%
Cr 267.716†	2408.3	0.3212	mg/L	0.00414	0.6424	mg/L	0.00829	1.29%
Cu 324.752†	27972.9	0.1675	mg/L	0.00320	0.3351	mg/L	0.00640	1.91%
Fe 273.955†	231253.1	178.2	mg/L	1.14	356.4	mg/L	2.29	0.64%
K 766.490†	11666.5	7.172	mg/L	0.0455	14.34	mg/L	0.091	0.63%
Mg 279.077†	51327.2	50.94	mg/L	0.311	101.9	mg/L	0.62	0.61%
Mn 257.610†	132184.2	3.031	mg/L	0.0267	6.062	mg/L	0.0535	0.88%
Mo 202.031†	160.4	0.00718	mg/L	0.000501	0.01435	mg/L	0.001003	6.99%
Na 589.592†	15535.5	1.623	mg/L	0.0161	3.247	mg/L	0.0322	0.99%
Na 330.237†	6.3	1.925	mg/L	0.1878	3.850	mg/L	0.3755	9.75%
Ni 231.604†	1370.9	0.3257	mg/L	0.00349	0.6515	mg/L	0.00697	1.07%
Pb 220.353†	4297.5	0.5222	mg/L	0.00935	1.044	mg/L	0.0187	1.79%
Sb 206.836†	17.7	0.01248	mg/L	0.002080	0.02495	mg/L	0.004160	16.67%
Se 196.026†	32.4	0.01853	mg/L	0.000611	0.03706	mg/L	0.001222	3.30%
Si 288.158†	3098.9	2.160	mg/L	0.0264	4.319	mg/L	0.0527	1.22%
Sn 189.927†	651.4	0.1237	mg/L	0.00195	0.2474	mg/L	0.00390	1.57%
Sr 421.552†	126192.6	0.1700	mg/L	0.00116	0.3400	mg/L	0.00233	0.69%
Ti 334.903†	168094.9	7.412	mg/L	0.0525	14.82	mg/L	0.105	0.71%
Tl 190.801†	-39.4	0.00687	mg/L	0.002809	0.01375	mg/L	0.005618	40.86%
V 292.402†	36824.7	0.3724	mg/L	0.00722	0.7449	mg/L	0.01444	1.94%
Zn 206.200†	5019.4	1.162	mg/L	0.0125	2.324	mg/L	0.0250	1.07%

Sequence No.: 33
Sample ID: RK76 P SWC

Autosampler Location: 325
Date Collected: 9/2/2010 10:28:34 AM
Data Type: Original

Dilution: 5X

Nebulizer Parameters: RK76 P SWC

Analyte	Back Pressure	Flow
All	185.0 kPa	0.75 L/min

Mean Data: RK76 P SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2093317.2	112.1	%	0.59				0.53%
ScR 361.383	336371.0	113.7	%	0.21				0.19%
Ag 328.068†	-16.7	-0.00029	mg/L	0.000046	-0.00143	mg/L	0.000228	15.91%
Al 308.215†	66450.4	59.63	mg/L	0.126	298.1	mg/L	0.63	0.21%
As 188.979†	-27.4	0.01037	mg/L	0.001618	0.05187	mg/L	0.008089	15.60%
B 249.677†	42.5	0.00711	mg/L	0.001097	0.03556	mg/L	0.005486	15.42%
Ba 233.527†	3758.9	0.5003	mg/L	0.00034	2.501	mg/L	0.0017	0.07%
Be 313.042†	676.5	0.00092	mg/L	0.000015	0.00458	mg/L	0.000076	1.66%
Ca 317.933†	243836.5	17.11	mg/L	0.028	85.57	mg/L	0.140	0.16%
Cd 228.802†	55.1	0.00252	mg/L	0.000102	0.01258	mg/L	0.000512	4.07%
Co 228.616†	1209.4	0.03239	mg/L	0.000163	0.1620	mg/L	0.00081	0.50%
Cr 267.716†	1244.4	0.1670	mg/L	0.00115	0.8348	mg/L	0.00574	0.69%
Cu 324.752†	18368.6	0.1100	mg/L	0.00031	0.5500	mg/L	0.00154	0.28%
Fe 273.955†	140275.1	108.1	mg/L	0.27	540.5	mg/L	1.35	0.25%
K 766.490†	3535.8	2.174	mg/L	0.0140	10.87	mg/L	0.070	0.64%
Mg 279.077†	21461.3	21.28	mg/L	0.047	106.4	mg/L	0.24	0.22%
Mn 257.610†	72868.5	1.671	mg/L	0.0024	8.356	mg/L	0.0120	0.14%
Mo 202.031†	60.2	0.00264	mg/L	0.000328	0.01318	mg/L	0.001640	12.44%
Na 589.592†	4728.7	0.4941	mg/L	0.00317	2.471	mg/L	0.0159	0.64%
Na 330.237†	-2.8	0.5407	mg/L	0.15682	2.703	mg/L	0.7841	29.00%
Ni 231.604†	665.8	0.1582	mg/L	0.00017	0.7910	mg/L	0.00084	0.11%
Pb 220.353†	4492.7	0.5333	mg/L	0.00227	2.666	mg/L	0.0113	0.42%
Sb 206.836†	15.6	0.00683	mg/L	0.000752	0.03415	mg/L	0.003761	11.01%
Se 196.026†	21.3	0.01243	mg/L	0.002093	0.06215	mg/L	0.010465	16.84%
Si 288.158†	958.8	0.6682	mg/L	0.01624	3.341	mg/L	0.0812	2.43%
Sn 189.927†	35.0	0.00820	mg/L	0.001146	0.04098	mg/L	0.005730	13.98%
Sr 421.552†	58862.5	0.07930	mg/L	0.000200	0.3965	mg/L	0.00100	0.25%
Ti 334.903†	65237.0	2.876	mg/L	0.0076	14.38	mg/L	0.038	0.26%
Tl 190.801†	-16.8	0.00755	mg/L	0.002216	0.03774	mg/L	0.011079	29.36%
V 292.402†	14701.4	0.1450	mg/L	0.00069	0.7251	mg/L	0.00345	0.48%
Zn 206.200†	2111.7	0.4888	mg/L	0.00129	2.444	mg/L	0.0064	0.26%

Sequence No.: 34
Sample ID: CV 4

Autosampler Location: 7
Date Collected: 9/2/2010 10:32:30 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	184.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2050213.9	109.8	%	0.78				0.71%
ScR 361.383	325779.9	110.1	%	0.44				0.40%
Ag 328.068†	164244.0	0.9592	mg/L	0.00181	0.9592	mg/L	0.00181	0.19%
Al 308.215†	2324.5	2.052	mg/L	0.0026	2.052	mg/L	0.0026	0.12%
As 188.979†	3395.3	2.038	mg/L	0.0211	2.038	mg/L	0.0211	1.04%
B 249.677†	5876.7	0.9934	mg/L	0.00351	0.9934	mg/L	0.00351	0.35%
Ba 233.527†	7397.8	0.9981	mg/L	0.00664	0.9981	mg/L	0.00664	0.67%
Be 313.042†	668787.0	0.9967	mg/L	0.00653	0.9967	mg/L	0.00653	0.66%
Ca 317.933†	30879.3	2.167	mg/L	0.0062	2.167	mg/L	0.0062	0.29%
Cd 228.802†	23807.7	1.003	mg/L	0.0018	1.003	mg/L	0.0018	0.18%
Co 228.616†	32406.6	0.9970	mg/L	0.00266	0.9970	mg/L	0.00266	0.27%
Cr 267.716†	7714.3	1.023	mg/L	0.0046	1.023	mg/L	0.0046	0.45%
Cu 324.752†	172109.7	0.9735	mg/L	0.00175	0.9735	mg/L	0.00175	0.18%
Fe 273.955†	2595.5	1.995	mg/L	0.0091	1.995	mg/L	0.0091	0.46%
K 766.490†	32765.6	20.14	mg/L	0.031	20.14	mg/L	0.031	0.15%
Mg 279.077†	2046.9	2.040	mg/L	0.0241	2.040	mg/L	0.0241	1.18%
Mn 257.610†	43244.8	0.9925	mg/L	0.00488	0.9925	mg/L	0.00488	0.49%
Mo 202.031†	21444.0	1.013	mg/L	0.0109	1.013	mg/L	0.0109	1.08%
Na 589.592†	433131.0	45.26	mg/L	0.193	45.26	mg/L	0.193	0.43%
Na 330.237†	1358.0	51.00	mg/L	0.665	51.00	mg/L	0.665	1.30%
Ni 231.604†	4236.6	1.008	mg/L	0.0013	1.008	mg/L	0.0013	0.13%
Pb 220.353†	17276.5	2.038	mg/L	0.0204	2.038	mg/L	0.0204	1.00%
Sb 206.836†	6116.2	2.054	mg/L	0.0231	2.054	mg/L	0.0231	1.12%
Se 196.026†	3218.4	2.047	mg/L	0.0180	2.047	mg/L	0.0180	0.88%
Si 288.158†	2949.4	2.059	mg/L	0.0130	2.059	mg/L	0.0130	0.63%
Sn 189.927†	5490.0	1.011	mg/L	0.0107	1.011	mg/L	0.0107	1.06%
Sr 421.552†	732217.4	0.9864	mg/L	0.00367	0.9864	mg/L	0.00367	0.37%
Ti 334.903†	22295.6	0.9818	mg/L	0.00332	0.9818	mg/L	0.00332	0.34%
Tl 190.801†	4184.6	2.002	mg/L	0.0181	2.002	mg/L	0.0181	0.90%
V 292.402†	91976.7	0.9887	mg/L	0.00463	0.9887	mg/L	0.00463	0.47%
Zn 206.200†	4390.0	1.016	mg/L	0.0037	1.016	mg/L	0.0037	0.37%

Sequence No.: 35
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 9/2/2010 10:35:29 AM
Data Type: Original

Dilution: 1X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	185.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2042537.4	109.4	%	0.67				0.61%
ScR 361.383	329216.0	111.3	%	0.64				0.57%
Ag 328.068†	64.6	0.00038	mg/L	0.000928	0.00038	mg/L	0.000928	246.31%
Al 308.215†	22.7	0.02029	mg/L	0.008551	0.02029	mg/L	0.008551	42.14%
As 188.979†	2.5	0.00151	mg/L	0.003204	0.00151	mg/L	0.003204	212.18%
B 249.677†	34.3	0.00581	mg/L	0.001569	0.00581	mg/L	0.001569	27.00%
Ba 233.527†	-0.7	-0.00009	mg/L	0.000169	-0.00009	mg/L	0.000169	188.30%
Be 313.042†	-19.7	-0.00003	mg/L	0.000017	-0.00003	mg/L	0.000017	57.05%
Ca 317.933†	-28.2	-0.00198	mg/L	0.000597	-0.00198	mg/L	0.000597	30.19%
Cd 228.802†	7.8	0.00032	mg/L	0.000201	0.00032	mg/L	0.000201	61.98%
Co 228.616†	11.4	0.00035	mg/L	0.000334	0.00035	mg/L	0.000334	95.76%
Cr 267.716†	5.0	0.00066	mg/L	0.001049	0.00066	mg/L	0.001049	158.37%
Cu 324.752†	150.0	0.00085	mg/L	0.000566	0.00085	mg/L	0.000566	66.83%
Fe 273.955†	-1.0	-0.00076	mg/L	0.001177	-0.00076	mg/L	0.001177	155.01%
K 766.490†	82.1	0.05047	mg/L	0.010214	0.05047	mg/L	0.010214	20.24%
Mg 279.077†	0.1	0.00012	mg/L	0.011878	0.00012	mg/L	0.011878	>999.9%
Mn 257.610†	-2.0	-0.00005	mg/L	0.000116	-0.00005	mg/L	0.000116	249.22%
Mo 202.031†	46.5	0.00219	mg/L	0.000608	0.00219	mg/L	0.000608	27.69%
Na 589.592†	22.5	0.00235	mg/L	0.006279	0.00235	mg/L	0.006279	267.41%
Na 330.237†	7.7	0.2908	mg/L	0.37854	0.2908	mg/L	0.37854	130.19%
Ni 231.604†	-4.3	-0.00102	mg/L	0.001551	-0.00102	mg/L	0.001551	152.60%
Pb 220.353†	4.5	0.00053	mg/L	0.000484	0.00053	mg/L	0.000484	91.34%
Sb 206.836†	3.2	0.00109	mg/L	0.000957	0.00109	mg/L	0.000957	88.03%
Se 196.026†	9.0	0.00572	mg/L	0.002201	0.00572	mg/L	0.002201	38.47%
Si 288.158†	-0.6	-0.00041	mg/L	0.001242	-0.00041	mg/L	0.001242	306.31%
Sn 189.927†	3.3	0.00061	mg/L	0.000956	0.00061	mg/L	0.000956	155.62%
Sr 421.552†	88.5	0.00012	mg/L	0.000062	0.00012	mg/L	0.000062	51.97%
Ti 334.903†	23.5	0.00103	mg/L	0.000708	0.00103	mg/L	0.000708	68.43%
Tl 190.801†	8.4	0.00402	mg/L	0.001843	0.00402	mg/L	0.001843	45.80%
V 292.402†	21.0	0.00023	mg/L	0.000756	0.00023	mg/L	0.000756	330.27%
Zn 206.200†	2.3	0.00052	mg/L	0.000130	0.00052	mg/L	0.000130	24.84%

FRONTIER
ANALYTICAL LABORATORY

August 12, 2010

Ms. Sue Dunnihoo
Analytical Resources Incorporated
4611 South 134th Place
Tukwila, WA 98168-3240

Dear Ms. Dunnihoo,

Enclosed are the results for Frontier Analytical Laboratory project **6277**. This corresponds to your **POS-LLA** project under ARI project number **RG94**. Six soil samples were received on 8/4/2010 in good condition. These samples were extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. The 2005 World Health Organizations toxic equivalency factors (TEFs) were used to calculate the toxic equivalents (TEQ) on your report. Analytical Resources Incorporated requested a Level IV data package and a turnaround time of fifteen business days for project **6277**.

The following Level IV report consists of an Analytical Data section, a Sample Receipt section, a Laboratory Raw Data section, and an Instrument Raw Data section. The Analytical Data section contains our project-sample tracking log and the analytical results. The Sample Receipt section contains your chain of custody, our sample login form and the sample photo. The Laboratory Raw Data section contains our project request sheet, a percent solids sheet, an extraction bench sheet and the cleanup bench sheet. The instrument raw data section contains three sub-sections; the sample results section, the initial calibration section and the continuing/ending calibration section. The sample results sub-section consists of the quantitation summary forms with chromatograms for all samples and QC. The initial calibration sub-section consists of the individual quantitation summary forms and chromatograms for each point of the initial calibration curve as well as an overall quantitation summary form of the initial calibration curve. The continuing/ending calibration sub-section consists of the quantitation summary forms and chromatograms for all beginning and ending calibration injections associated with the samples and QC. You also requested Electronic Data Deliverables (EDD) for this project. The EDD and Level I summary have been sent to you via email. The Level IV report has been sent to you on compact disk. A hardcopy of the data package will not be forwarded unless specifically requested. The attached results are specifically for the samples referenced in this report only. These results meet all NELAC requirements and shall not be reproduced except in full.

If you have any questions regarding project **6277**, please feel free to contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Bradley B. Silverbush
Director of Operations

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: 6277

Received on: **08/04/2010** Project Due: **08/26/2010** Storage: **R1**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
6277-001-SA	0	RG94	MW14-0-0.5-080210	EPA 1613 D/F	Soil	08/02/2010	08:35 am	08/02/2011
6277-002-SA	0	RG94	MW14-1.5-2-080210	EPA 1613 D/F	Soil	08/02/2010	08:42 am	08/02/2011
6277-003-SA	0	RG94	MW13-0-0.5-080210	EPA 1613 D/F	Soil	08/02/2010	11:40 am	08/02/2011
6277-004-SA	0	RG94	MW13-1.5-2-080210	EPA 1613 D/F	Soil	08/02/2010	11:50 am	08/02/2011
6277-005-SA	0	RG94	MW12-0-0.5-080210	EPA 1613 D/F	Soil	08/02/2010	02:05 pm	08/02/2011
6277-006-SA	0	RG94	MW12-1.5-2-080210	EPA 1613 D/F	Soil	08/02/2010	02:08 pm	08/02/2011

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6277-001-MB
Client ID: Method Blank
Matrix: Soil
Batch No: X2077

Date Extracted: 08-10-2010
Date Received: NA
Amount: 2.00 g

ICal: PCDDFAL3-5-12-10
GC Column: DB5
Units: pg/g

Acquired: 08-12-2010
2005 WHO TEQ: 0.00

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.512		-	0.0262				
1,2,3,7,8-PeCDD	ND	0.715		-	0.0442				
1,2,3,4,7,8-HxCDD	ND	0.912		-	0.0486				
1,2,3,6,7,8-HxCDD	ND	0.976		-	0.0586	Total TCDD	ND	0.512	
1,2,3,7,8,9-HxCDD	ND	0.974		-	0.0529	Total PeCDD	ND	0.715	
1,2,3,4,6,7,8-HpCDD	ND	1.30		-	0.0954	Total HxCDD	ND	0.976	
OCDD	ND	4.98		-	0.154	Total HpCDD	ND	1.30	
2,3,7,8-TCDF	ND	0.250		-	0.0205				
1,2,3,7,8-PeCDF	ND	0.581		-	0.0298				
2,3,4,7,8-PeCDF	ND	0.563		-	0.0313				
1,2,3,4,7,8-HxCDF	ND	0.510		-	0.0308				
1,2,3,6,7,8-HxCDF	ND	0.527		-	0.0317				
2,3,4,6,7,8-HxCDF	ND	0.551		-	0.0341				
1,2,3,7,8,9-HxCDF	ND	0.664		-	0.0387	Total TCDF	ND	0.250	
1,2,3,4,6,7,8-HpCDF	ND	0.705		-	0.0418	Total PeCDF	ND	0.581	
1,2,3,4,7,8,9-HpCDF	ND	0.739		-	0.0429	Total HxCDF	ND	0.664	
OCDF	ND	1.36		-	0.105	Total HpCDF	ND	0.739	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	86.1	25.0 - 164	
13C-1,2,3,7,8-PeCDD	92.9	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	88.0	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	83.8	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	101	23.0 - 140	
13C-OCDD	82.2	17.0 - 157	
13C-2,3,7,8-TCDF	87.0	24.0 - 169	
13C-1,2,3,7,8-PeCDF	82.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	83.8	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	122	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	115	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	116	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	123	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	107	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	128	26.0 - 138	
13C-OCDF	101	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	91.8	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 8/12/10

Reviewed By: _____
Date: 8/12/10

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6277-001-OPR
Client ID: OPR
Matrix: Soil
Batch No: X2077

Date Extracted: 08-10-2010
Date Received: NA
Amount: 2.00 g

ICal: PCDDFAL3-5-12-10
GC Column: DB5
Units: ng/ml

Acquired: 08-12-2010
2005 WHO TEQ: NA

Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	10.2	6.70 - 15.8	
1,2,3,7,8-PeCDD	50.4	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	55.6	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	57.2	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	56.4	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	54.9	35.0 - 70.0	
OCDD	116	78.0 - 144	
2,3,7,8-TCDF	10.3	7.50 - 15.8	
1,2,3,7,8-PeCDF	52.6	40.0 - 67.0	
2,3,4,7,8-PeCDF	51.5	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	47.0	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	48.6	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	48.0	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	48.8	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	49.8	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	50.3	39.0 - 69.0	
OCDF	93.3	63.0 - 170	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	92.1	20.0 - 175	
13C-1,2,3,7,8-PeCDD	99.4	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	95.9	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	86.5	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	106	26.0 - 166	
13C-OCDD	84.8	13.0 - 198	
13C-2,3,7,8-TCDF	94.8	22.0 - 152	
13C-1,2,3,7,8-PeCDF	91.5	21.0 - 192	
13C-2,3,4,7,8-PeCDF	93.6	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	127	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	114	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	115	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	130	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	109	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	133	20.0 - 186	
13C-OCDF	105	13.0 - 198	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	96.6	31.0 - 191	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 8/12/10

Reviewed By: _____
Date: 8/12/10

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6277-001-SA
Client ID: MW14-0-0.5-080210
Matrix: Soil
Batch No: X2077

Date Extracted: 08-10-2010
Date Received: 08-04-2010
Amount: 2.01 g
% Solids: 91.75

ICal: PCDDFAL3-5-12-10
GC Column: DB5
Units: pg/g

Acquired: 08-12-2010
2005 WHO TEQ: 0.611

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.640		-	0.0262				
1,2,3,7,8-PeCDD	ND	0.710		-	0.0442				
1,2,3,4,7,8-HxCDD	ND	1.08		-	0.0486				
1,2,3,6,7,8-HxCDD	ND	1.23		-	0.0586	Total TCDD	ND	0.640	
1,2,3,7,8,9-HxCDD	ND	1.19		-	0.0529	Total PeCDD	ND	0.711	
1,2,3,4,6,7,8-HpCDD	37.4	-*		0.374	0.0954	Total HxCDD	8.81	-	J
OCDD	482	-		0.145	0.154	Total HpCDD	69.4	-	
2,3,7,8-TCDF	ND	0.383		-	0.0205				
1,2,3,7,8-PeCDF	ND	0.619		-	0.0298				
2,3,4,7,8-PeCDF	ND	0.599		-	0.0313				
1,2,3,4,7,8-HxCDF	ND	0.627		-	0.0308				
1,2,3,6,7,8-HxCDF	ND	0.671		-	0.0317				
2,3,4,6,7,8-HxCDF	ND	0.665		-	0.0341				
1,2,3,7,8,9-HxCDF	ND	0.746		-	0.0387	Total TCDF	ND	0.547	
1,2,3,4,6,7,8-HpCDF	8.57	-	J	0.0857	0.0418	Total PeCDF	2.51	-	J
1,2,3,4,7,8,9-HpCDF	ND	0.565		-	0.0429	Total HxCDF	8.58	-	J
OCDF	22.4	-	J	0.00672	0.105	Total HpCDF	24.1	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	104	25.0 - 164	
13C-1,2,3,7,8-PeCDD	114	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	91.7	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	83.2	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	108	23.0 - 140	
13C-OCDD	94.6	17.0 - 157	
13C-2,3,7,8-TCDF	104	24.0 - 169	
13C-1,2,3,7,8-PeCDF	97.4	24.0 - 185	
13C-2,3,4,7,8-PeCDF	104	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	124	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	113	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	116	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	131	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	108	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	131	26.0 - 138	
13C-OCDF	110	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	107	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: DNJ
Date: 8/12/10

Reviewed By:
Date: 8/12/10

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6277-002-SA
Client ID: MW14-1.5-2-080210
Matrix: Soil
Batch No: X2077

Date Extracted: 08-10-2010
Date Received: 08-04-2010
Amount: 2.01 g
% Solids: 91.33

ICal: PCDDFAL3-5-12-10
GC Column: DB5
Units: pg/g

Acquired: 08-11-2010
2005 WHO TEQ: 0.149

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.437		-	0.0262				
1,2,3,7,8-PeCDD	ND	0.644		-	0.0442				
1,2,3,4,7,8-HxCDD	ND	0.848		-	0.0486				
1,2,3,6,7,8-HxCDD	ND	0.993		-	0.0586	Total TCDD	ND	0.437	
1,2,3,7,8,9-HxCDD	ND	0.947		-	0.0529	Total PeCDD	ND	0.644	
1,2,3,4,6,7,8-HpCDD	10.2	-	J	0.102	0.0954	Total HxCDD	ND	0.993	
OCDD	64.7	-		0.0194	0.154	Total HpCDD	20.0	-	
2,3,7,8-TCDF	ND	0.217		-	0.0205				
1,2,3,7,8-PeCDF	ND	0.494		-	0.0298				
2,3,4,7,8-PeCDF	ND	0.476		-	0.0313				
1,2,3,4,7,8-HxCDF	ND	0.481		-	0.0308				
1,2,3,6,7,8-HxCDF	ND	0.514		-	0.0317				
2,3,4,6,7,8-HxCDF	ND	0.538		-	0.0341				
1,2,3,7,8,9-HxCDF	ND	0.625		-	0.0387	Total TCDF	ND	0.217	
1,2,3,4,6,7,8-HpCDF	2.59	-	J	0.0259	0.0418	Total PeCDF	ND	0.494	
1,2,3,4,7,8,9-HpCDF	ND	0.833		-	0.0429	Total HxCDF	ND	0.748	
OCDF	6.11	-	J	0.00183	0.105	Total HpCDF	6.23	-	J

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	87.5	25.0 - 164	
13C-1,2,3,7,8-PeCDD	95.2	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	90.0	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	79.9	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	95.0	23.0 - 140	
13C-OCDD	83.7	17.0 - 157	
13C-2,3,7,8-TCDF	91.0	24.0 - 169	
13C-1,2,3,7,8-PeCDF	83.7	24.0 - 185	
13C-2,3,4,7,8-PeCDF	89.3	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	107	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	99.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	102	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	108	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	93.9	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	106	26.0 - 138	
13C-OCDF	87.8	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	86.7	35.0 - 197

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 8/12/10

Reviewed By: _____
Date: 8/12/10

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6277-003-SA
Client ID: MW13-0-0.5-080210
Matrix: Soil
Batch No: X2077

Date Extracted: 08-10-2010
Date Received: 08-04-2010
Amount: 2.06 g
% Solids: 90.73

ICal: PCDDFAL3-5-12-10
GC Column: DB5
Units: pg/g

Acquired: 08-12-2010
2005 WHO TEQ: 26.1

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	2.62	-		2.62	0.0262				
1,2,3,7,8-PeCDD	2.99	-	J	2.99	0.0442				
1,2,3,4,7,8-HxCDD	4.62	-	J	0.462	0.0486				
1,2,3,6,7,8-HxCDD	25.9	-		2.59	0.0586	Total TCDD	9.76	-	
1,2,3,7,8,9-HxCDD	12.0	-	J	1.20	0.0529	Total PeCDD	20.8	-	
1,2,3,4,6,7,8-HpCDD	885	-		8.85	0.0954	Total HxCDD	181	-	
OCDD	8440	-		2.53	0.154	Total HpCDD	1640	-	
2,3,7,8-TCDF	1.27	-	J	0.127	0.0205				
1,2,3,7,8-PeCDF	ND	0.522		-	0.0298				
2,3,4,7,8-PeCDF	2.11	-	J	0.633	0.0313				
1,2,3,4,7,8-HxCDF	7.50	-	J	0.750	0.0308				
1,2,3,6,7,8-HxCDF	3.78	-	J	0.378	0.0317				
2,3,4,6,7,8-HxCDF	4.76	-	J	0.476	0.0341				
1,2,3,7,8,9-HxCDF	ND	0.967		-	0.0387	Total TCDF	20.3	-	
1,2,3,4,6,7,8-HpCDF	218	-		2.18	0.0418	Total PeCDF	33.0	-	
1,2,3,4,7,8,9-HpCDF	8.48	-	J	0.0848	0.0429	Total HxCDF	161	-	
OCDF	899	-		0.270	0.105	Total HpCDF	739	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	96.3	25.0 - 164	
13C-1,2,3,7,8-PeCDD	104	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	81.9	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	75.1	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	102	23.0 - 140	
13C-OCDD	94.3	17.0 - 157	
13C-2,3,7,8-TCDF	97.2	24.0 - 169	
13C-1,2,3,7,8-PeCDF	91.0	24.0 - 185	
13C-2,3,4,7,8-PeCDF	92.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	117	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	108	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	107	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	120	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	104	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	131	26.0 - 138	
13C-OCDF	106	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	103	35.0 - 197

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 8/12/10

Reviewed By: _____
Date: 8/12/10

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6277-004-SA
Client ID: MW13-1.5-2-080210
Matrix: Soil
Batch No: X2077

Date Extracted: 08-10-2010
Date Received: 08-04-2010
Amount: 2.07 g
% Solids: 92.20

ICal: PCDDFAL3-5-12-10
GC Column: DB5
Units: pg/g

Acquired: 08-11-2010
2005 WHO TEQ: 24.8

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	2.20	-	J	2.20	0.0262				
1,2,3,7,8-PeCDD	2.79	-	J	2.79	0.0442				
1,2,3,4,7,8-HxCDD	5.03	-	J	0.503	0.0486				
1,2,3,6,7,8-HxCDD	26.3	-		2.63	0.0586	Total TCDD	9.90	-	
1,2,3,7,8,9-HxCDD	12.5	-		1.25	0.0529	Total PeCDD	25.0	-	
1,2,3,4,6,7,8-HpCDD	821	-		8.21	0.0954	Total HxCDD	170	-	
OCDD	8090	-		2.43	0.154	Total HpCDD	1540	-	
2,3,7,8-TCDF	1.19	-	J	0.119	0.0205				
1,2,3,7,8-PeCDF	ND	0.486		-	0.0298				
2,3,4,7,8-PeCDF	1.40	-	J	0.420	0.0313				
1,2,3,4,7,8-HxCDF	7.22	-	J	0.722	0.0308				
1,2,3,6,7,8-HxCDF	3.57	-	J	0.357	0.0317				
2,3,4,6,7,8-HxCDF	5.16	-	J	0.516	0.0341				
1,2,3,7,8,9-HxCDF	1.13	-	J	0.113	0.0387	Total TCDF	18.5	-	
1,2,3,4,6,7,8-HpCDF	216	-		2.16	0.0418	Total PeCDF	32.1	-	
1,2,3,4,7,8,9-HpCDF	8.28	-	J	0.0828	0.0429	Total HxCDF	164	-	
OCDF	925	-		0.278	0.105	Total HpCDF	738	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	93.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	102	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	89.3	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	83.9	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	99.7	23.0 - 140	
13C-OCDD	88.8	17.0 - 157	
13C-2,3,7,8-TCDF	94.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	89.4	24.0 - 185	
13C-2,3,4,7,8-PeCDF	93.6	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	109	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	101	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	102	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	112	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	98.9	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	111	26.0 - 138	
13C-OCDF	92.5	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	98.9	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
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C	Chemical Interference
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