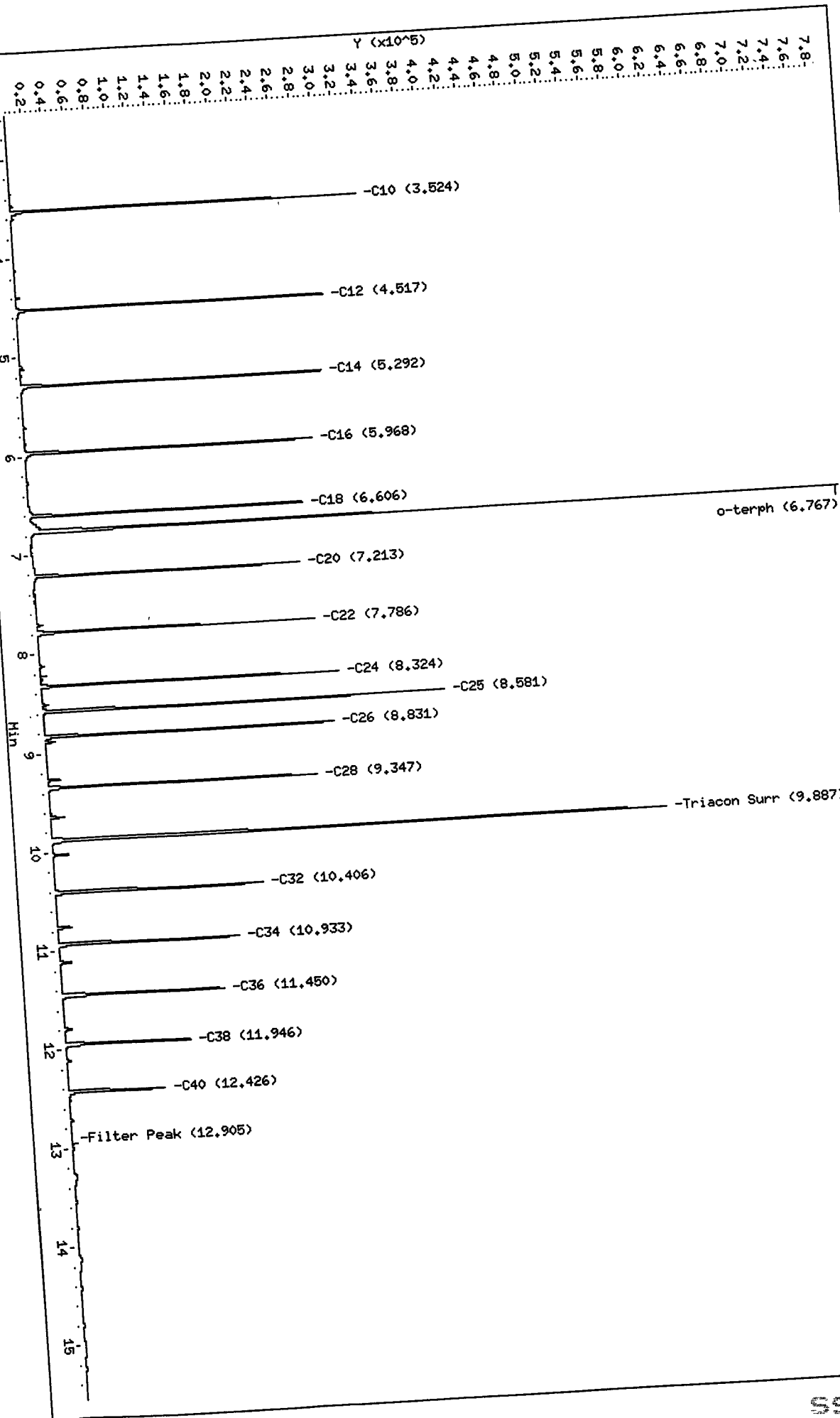


Data File: /chem3/fid4a.i/20110321.b/0321a002.d  
Date : 21-MAR-2011 14:55  
Client ID: RT  
Sample Info: RT

Column phases: RTX-1  
/chem3/fid4a.i/20110321.b/0321a002.d

Instrument: fid4a.i  
Operator: HS  
Column diameter: 0.25



0071 : 01240

Analytical Resources Inc.  
407S TPH Quantitation Report

ARI ID: IB  
Client ID: IB  
Injection: 21-MAR-2011 15:19  
Dilution Factor: 1

Sample file: /chem3/fid4a.i/20110321.b/0321a003.d  
Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Instrument: fid4a.i  
Detector: MS  
Report Date: 04/01/2011  
Sample: 21-MAR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.542	0.007	1526	2291	GAS (Tol-C12)	49091	2.48
X8	1.905	0.006	451	706	DIESEL (C12-C24)	92735	4.67
X10	3.526	0.002	650	817	M.OIL (C24-C38)	188942	16.58
X12	4.523	0.005	167	217	AK-102 (C10-C25)	115368	5.21
X14	5.298	0.006	200	179	AK-103 (C25-C36)	152032	22.03
X16	5.968	-0.001	357	818	CRUDE (Tol-C40)	365957	48.45
X18	6.603	-0.003	666	991	MIN.OIL (C24-C38)	188942	14.09
C20	7.220	0.007	710	1448			
C22	7.793	0.007	637	1362			
C24	8.326	0.002	728	2055			
C25	8.326	0.002	742	2860			
C26	8.582	0.001	715	1411			
C28	8.832	0.001	715	1555			
C32	9.345	-0.003	1021	1555			
C34	9.345	-0.003	7043	13069	CREOSOT (C12-C22)	74269	26.50
Filter Peak	10.393	-0.014	746	2682			
C36	10.948	0.014	1693	10510			
C38	10.948	0.014	7673	11661			
C40	11.457	0.008	837	1933			
o-terph	11.955	0.009	4711	8930	JET-A (C10-C18)	43700	3.41
Triacon Surr	12.420	-0.006	1026523	889744			
	6.770	0.003	689335	773682			
	9.888	0.001					

M Indicates manual integration within range.  
Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

Surrogate	Area	Amount	%Rec
o-Terphenyl	889744	51.2	113.8
Triacontane	773682	45.5	101.2

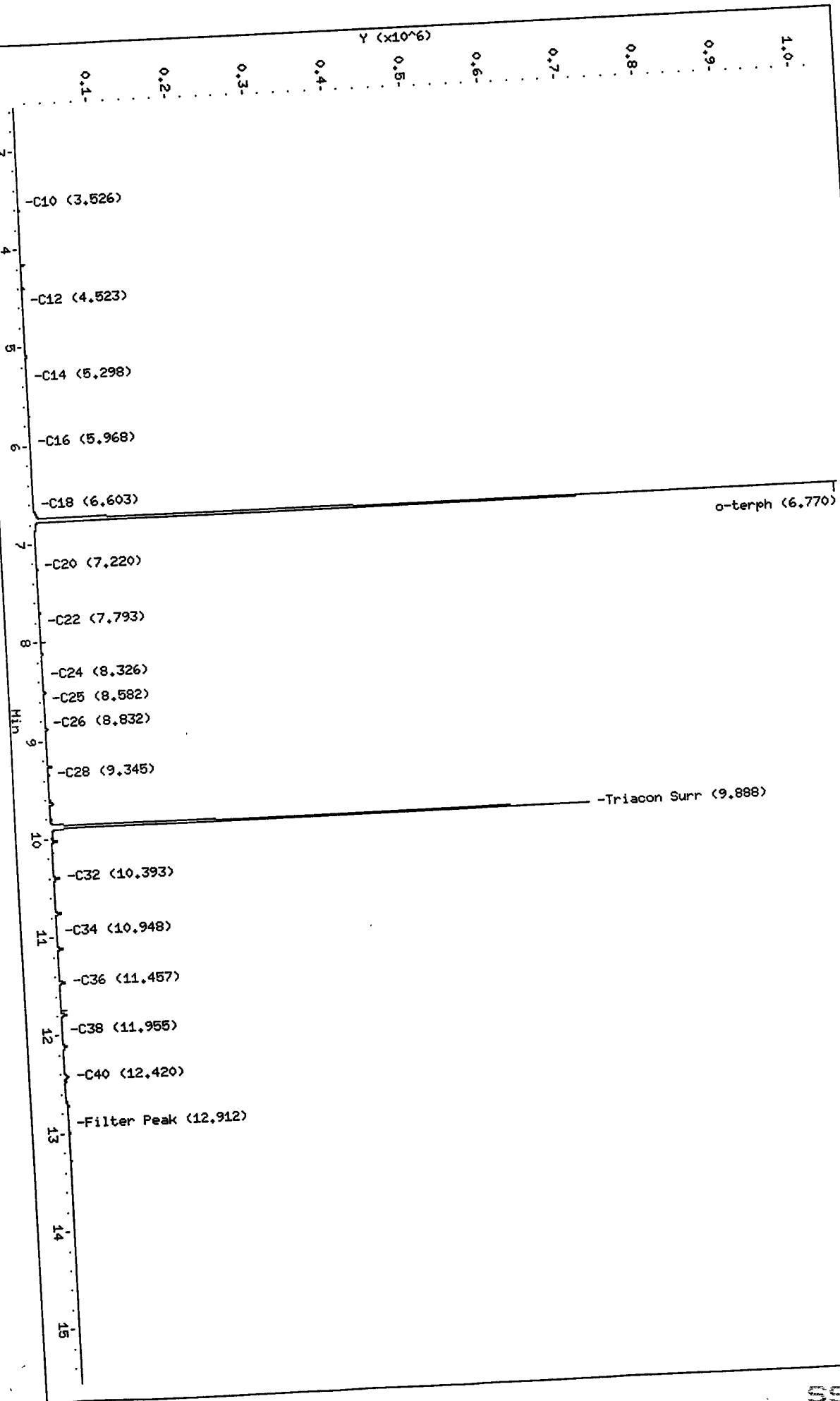
*Mu 2/11/11*

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010

Data File: /chem3/fid4a.i/20110321.b/0321a003.d  
Date : 21-MAR-2011 15:19  
Client ID: IB  
Sample Info: IB

Column phase: RTX-1  
/chem3/fid4a.i/20110321.b/0321a003.d

Instrument: fid4a.i  
Operator: HS  
Column diameter: 0.25



071101248

Analytical Resources Inc.  
407S TPH Quantitation Report

ARI ID: DIESEL 50  
Client ID: DIESEL 50  
Injection: 21-MAR-2011 15:42  
Dilution Factor: 1

ata file: /chem3/fid4a.i/20110321.b/0321a004.d  
ethod: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
nstrument: fid4a.i  
perator: MS  
eport Date: 04/01/2011  
acros: 21-MAR-2011  
alibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

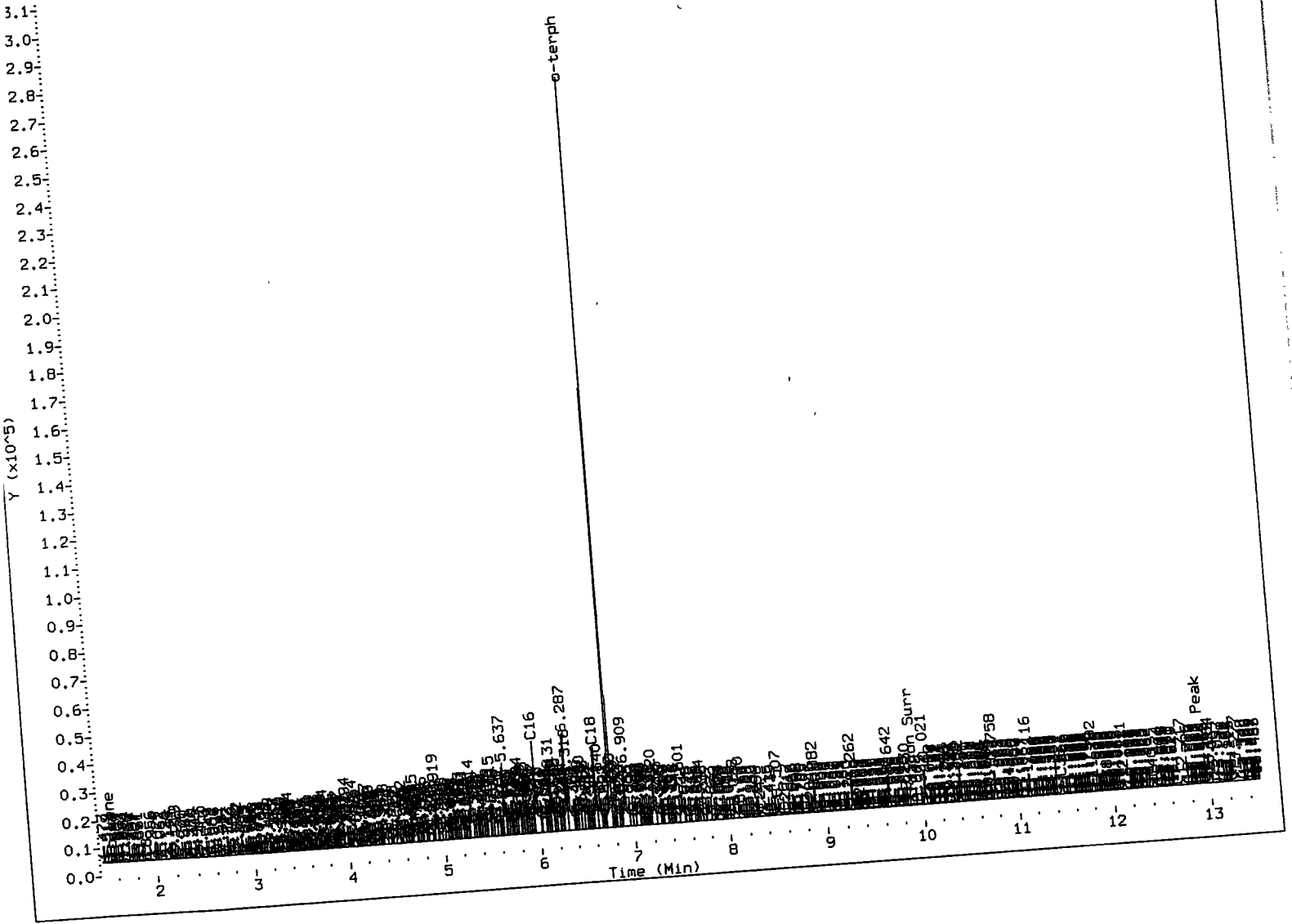
FID:4A RESULTS					Range	Total Area	Conc
Compound	RT	Shift	Height	Area			
Toluene	1.548	0.012	1303	1811	GAS (Tol-C12)	163102	8.24
C8	1.908	0.010	698	1433	DIESEL (C12-C24)	1050151	52.92
C10	3.527	0.003	3988	2388	M.OIL (C24-C38)	165190	14.50
C12	4.518	0.000	8839	8768	AK-102 (C10-C25)	1172600	53.00 M
C14	5.290	-0.002	17524	22113	AK-103 (C25-C36)	137630	19.94
C16	5.966	-0.003	32875	37909	CRUDE (Tol-C40)	1400170	185.39 M
C18	6.601	-0.005	29522	32264	MIN.OIL (C24-C38)	165190	12.32
C20	7.208	-0.004	16132	20445			
C22	7.784	-0.002	6884	10771			
C24	8.324	0.000	1897	7260			
C25	8.585	0.004	952	2436			
C26	8.838	0.006	554	426			
C28	9.346	-0.001	371	263			
C32	10.394	-0.012	11448	12997	CREOSOT (C12-C22)	1002640	357.74 M
C34	10.917	-0.017	364	599			
Filter Peak	12.899	-0.006	875	830			
C36	11.459	0.009	5761	8592			
C38	11.943	-0.003	445	587			
C40	12.419	-0.006	3106	5976			
o-terph	6.758	-0.009	261483	161945	JET-A (C10-C18)	818304	63.88
Triacon Surr	9.894	0.007	727	1672			

M Indicates manual integration within range.  
Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

Surrogate	Area	Amount	%Rec
o-Terphenyl	161945	9.3	20.7
Triacotane	1672	0.1	0.2

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010





MANUAL INTEGRATION

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

Analyst: Ma

Date: 4/16/10

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110321.b/0321a005.d  
Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/01/2011  
Macro: 21-MAR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: DIESEL 100  
Client ID: DIESEL 100  
Injection: 21-MAR-2011 16:06  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.548	0.013	2020	2649	GAS (Tol-C12)	294057	14.86
C8	1.905	0.006	1136	2095	DIESEL (C12-C24)	1952619	98.40
C10	3.525	0.001	7935	4662	M.OIL (C24-C38)	99318	8.72
C12	4.517	0.000	18280	15899	AK-102 (C10-C25)	2169134	98.04 M
C14	5.289	-0.002	35618	41859	AK-103 (C25-C36)	77939	11.29
C16	5.966	-0.003	67392	68131	CRUDE (Tol-C40)	2363758	312.97 M
C18	6.602	-0.005	57486	57882	MIN.OIL (C24-C38)	99318	7.41
C20	7.209	-0.004	33666	37324			
C22	7.783	-0.003	14346	17976			
C24	8.323	-0.001	3673	9056			
C25	8.581	0.000	1537	5686			
C26	8.836	0.005	702	1508			
C28	9.357	0.010	318	179			
C32	10.395	-0.011	3827	5036	CREOSOT (C12-C22)	1878323	670.19 M
C34	10.943	0.010	228	143			
Filter Peak	12.904	-0.001	678	1041			
C36	11.461	0.012	3500	5211			
C38	11.946	0.000	351	224			
C40	12.423	-0.002	2644	4908			
o-terph	6.761	-0.005	481404	314953	JET-A (C10-C18)	1556228	121.49
Triacon Surr	9.896	0.009	313	707			

M Indicates manual integration within range.

Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

Surrogate	Area	Amount	%Rec
o-Terphenyl	314953	18.1	40.3
Triacotane	707	0.0	0.1

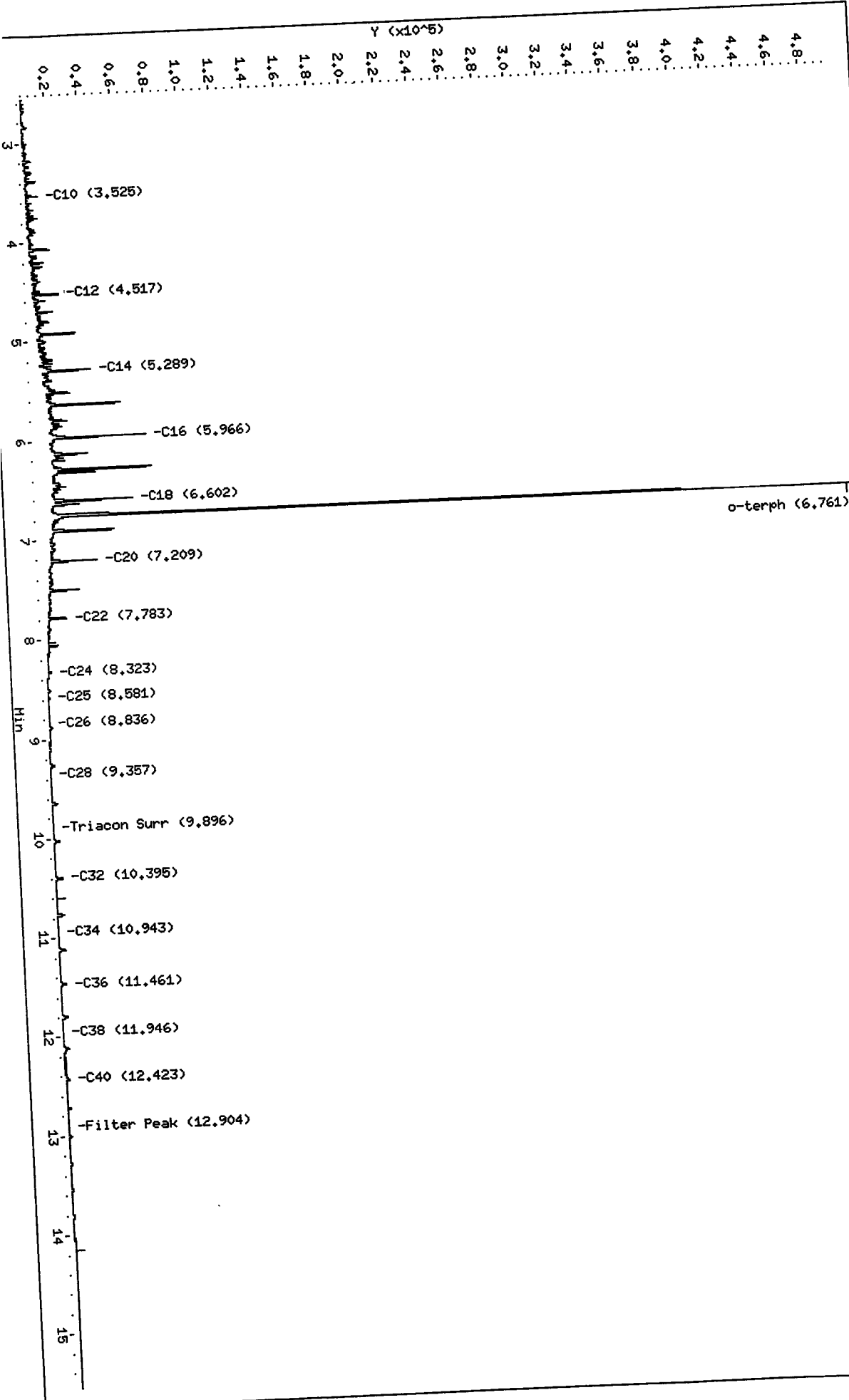
Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010

Data File: /chem3/fid4a.i/20110321.b/0321a005.d  
Date: 21-MAR-2011 16:06  
Client ID: DIESEL 100  
Sample Info: DIESEL 100

Column phase: RTX-1

Instrument: fid4a.i  
Operator: HS  
Column diameter: 0.25

/chem3/fid4a.i/20110321.b/0321a005.d







Analytical Resources Inc.  
407S TPH Quantitation Report

File: /chem3/fid4a.i/20110321.b/0321a006.d  
 Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
 Instrument: fid4a.i  
 Detector: MS  
 Report Date: 04/01/2011  
 Sample: 21-MAR-2011  
 Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: DIESEL 250  
 Client ID: DIESEL 250  
 Injection: 21-MAR-2011 16:30  
 Dilution Factor: 1

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
toluene	1.524	-0.012	573	579	GAS (Tol-C12)	744515	37.62
8	1.909	0.011	2638	4540	DIESEL (C12-C24)	4860494	244.94
10	3.527	0.002	22150	12633	M.OIL (C24-C38)	162326	14.25
12	4.518	0.000	48222	41887	AK-102 (C10-C25)	5428276	245.35 M
14	5.291	-0.001	88490	107285	AK-103 (C25-C36)	124829	18.09
16	5.968	-0.001	167719	174162	CRUDE (Tol-C40)	5781470	765.48 M
18	6.606	0.000	131622	142640	MIN.OIL (C24-C38)	162326	12.11
C20	7.210	-0.003	86518	93094			
C22	7.783	-0.003	39224	44241			
C24	8.321	-0.004	11397	17695			
C25	8.578	-0.004	4692	11797			
C26	8.831	0.000	1768	3845			
C28	9.353	0.006	464	433			
C32	10.397	-0.010	7742	9143	CREOSOT (C12-C22)	4687091	1672.35 M
C34	10.942	0.008	212	134			
Filter Peak	12.900	-0.005	612	613			
C36	11.462	0.012	3377	4922			
C38	11.954	0.008	335	422			
C40	12.424	-0.002	2055	3942			
o-terph	6.769	0.002	943315	785946	JET-A (C10-C18)	3935905	307.25
Triacon Surr	9.895	0.008	521	1221			

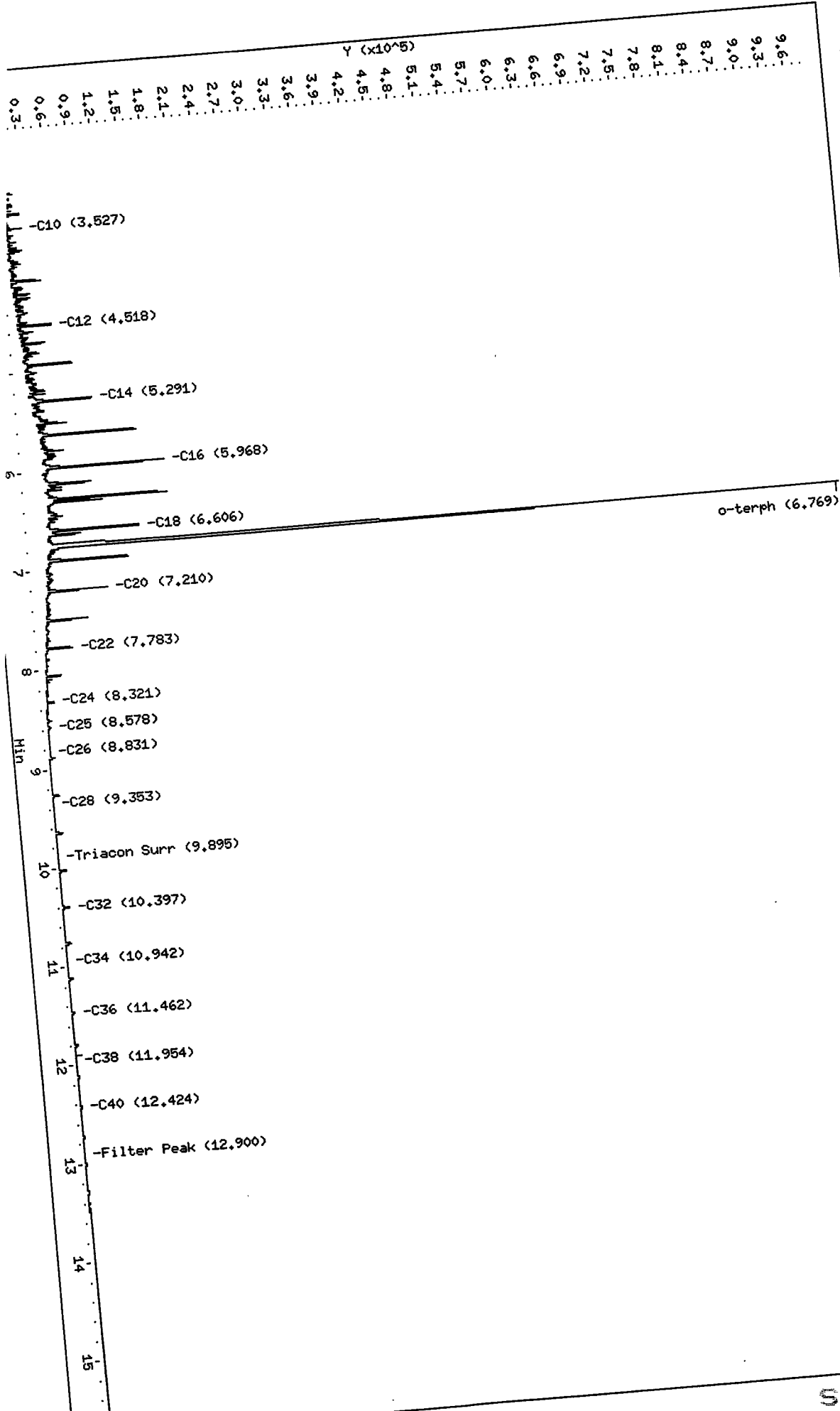
M Indicates manual integration within range.  
 Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
 NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

Surrogate	Area	Amount	%Rec
o-Terphenyl	785946	45.2	100.5
Triacotane	1221	0.1	0.2

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010

Data File: /chem3/fid4a.i/20110321.b/0321a006.d  
Date: 21-MAR-2011 16:30  
Client ID: DIESEL 250  
Sample Info: DIESEL 250  
Column phase: RTX-1

Instrument: fid4a.i  
Operator: HS  
Column diameter: 0.25  
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Analytical Resources Inc.  
407S TPH Quantitation Report

ARI ID: DIESEL 500  
Client ID: DIESEL 500  
Injection: 21-MAR-2011 16:54

Dilution Factor: 1

Sample file: /chem3/fid4a.i/20110321.b/0321a007.d  
Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Instrument: fid4a.i  
Detector: MS  
Report Date: 04/01/2011  
Sample: 21-MAR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

Compound	RT	Shift	FID:4A RESULTS		Range	Total Area	Conc
			Height	Area			
Chlorobenzene	1.533	-0.003	589	589	GAS (Tol-C12)	1476663	74.61
8	1.915	0.017	5180	8340	DIESEL (C12-C24)	9851554	496.45
10	3.526	0.002	46342	26117	M.OIL (C24-C38)	228774	20.08
12	4.518	0.000	100066	86896	AK-102 (C10-C25)	10985753	496.53 M
14	5.292	0.001	176091	187363	AK-103 (C25-C36)	168908	24.47
16	5.970	0.002	329589	348959	CRUDE (Tol-C40)	11571930	1532.15 M
18	6.608	0.002	264722	301237	MIN.OIL (C24-C38)	228774	17.07
C20	7.212	-0.001	176992	162584			
C22	7.784	-0.002	81891	84627			
C24	8.320	-0.004	24726	30245			
C25	8.575	-0.006	10586	17649			
C26	8.829	-0.002	3679	6862			
C28	9.352	0.005	706	1141			
C32	10.397	-0.010	8347	10129	CREOSOT (C12-C22)	9501915	3390.28 M
C34	10.938	0.004	231	52			
Filter Peak	12.898	-0.007	587	1043			
C36	11.461	0.012	4994	7146			
C38	11.948	0.002	315	277			
C40	12.422	-0.004	2110	3675	JET-A (C10-C18)	7991771	623.87
o-terph	6.778	0.012	1524828	1619635			
Triacon Surr	9.895	0.008	522	1714			

M Indicates manual integration within range.

Range Times: NW Diesel(4.517 - 8.324)  
NW M.Oil(8.32 - 11.95)

AK102(3.52 - 8.58)  
AK103(8.58 - 11.45)

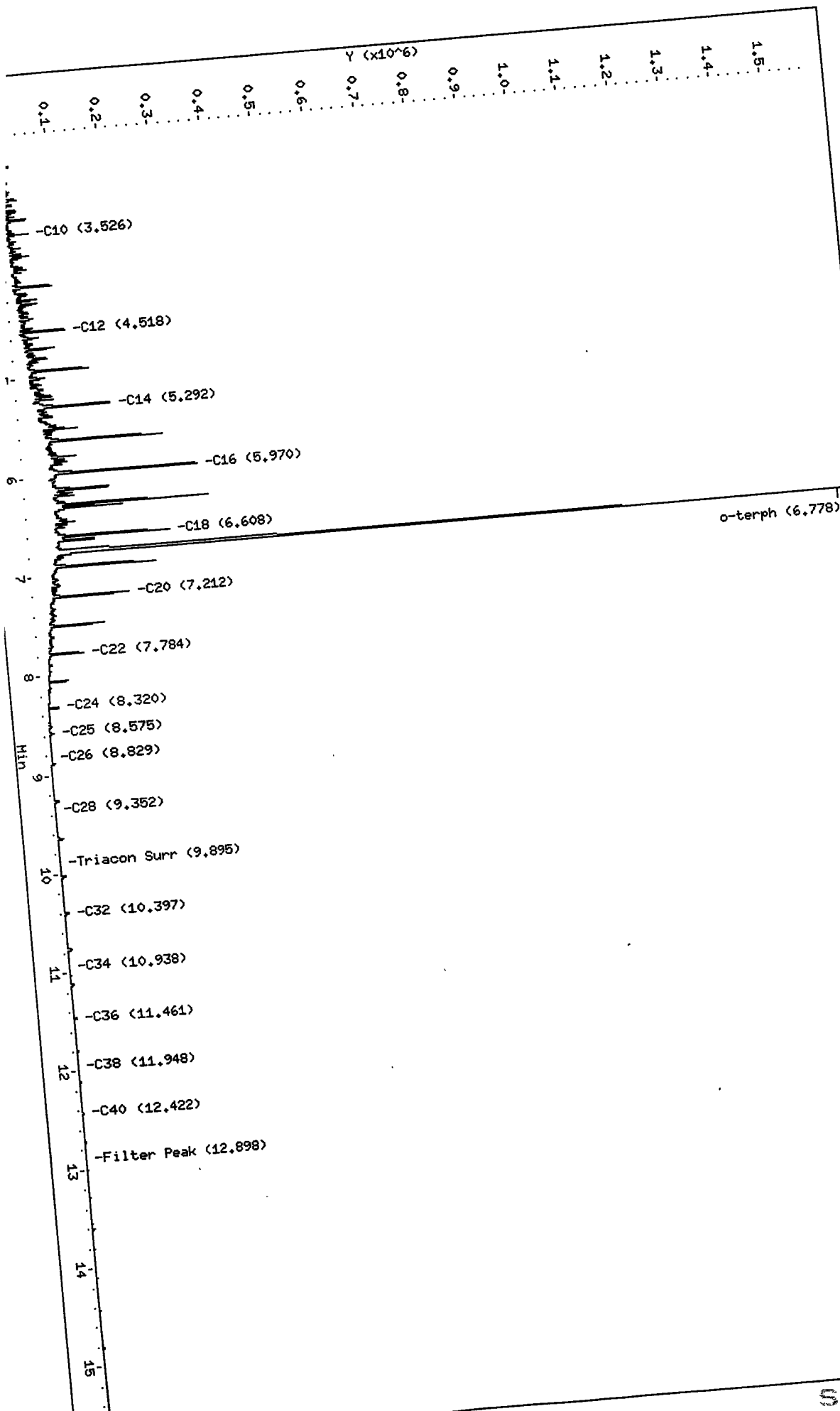
Jet A(3.52 - 6.61)  
OR Diesel(3.52 - 9.35)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1619635	93.2	207.1
Triacantane	1714	0.1	0.2

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010

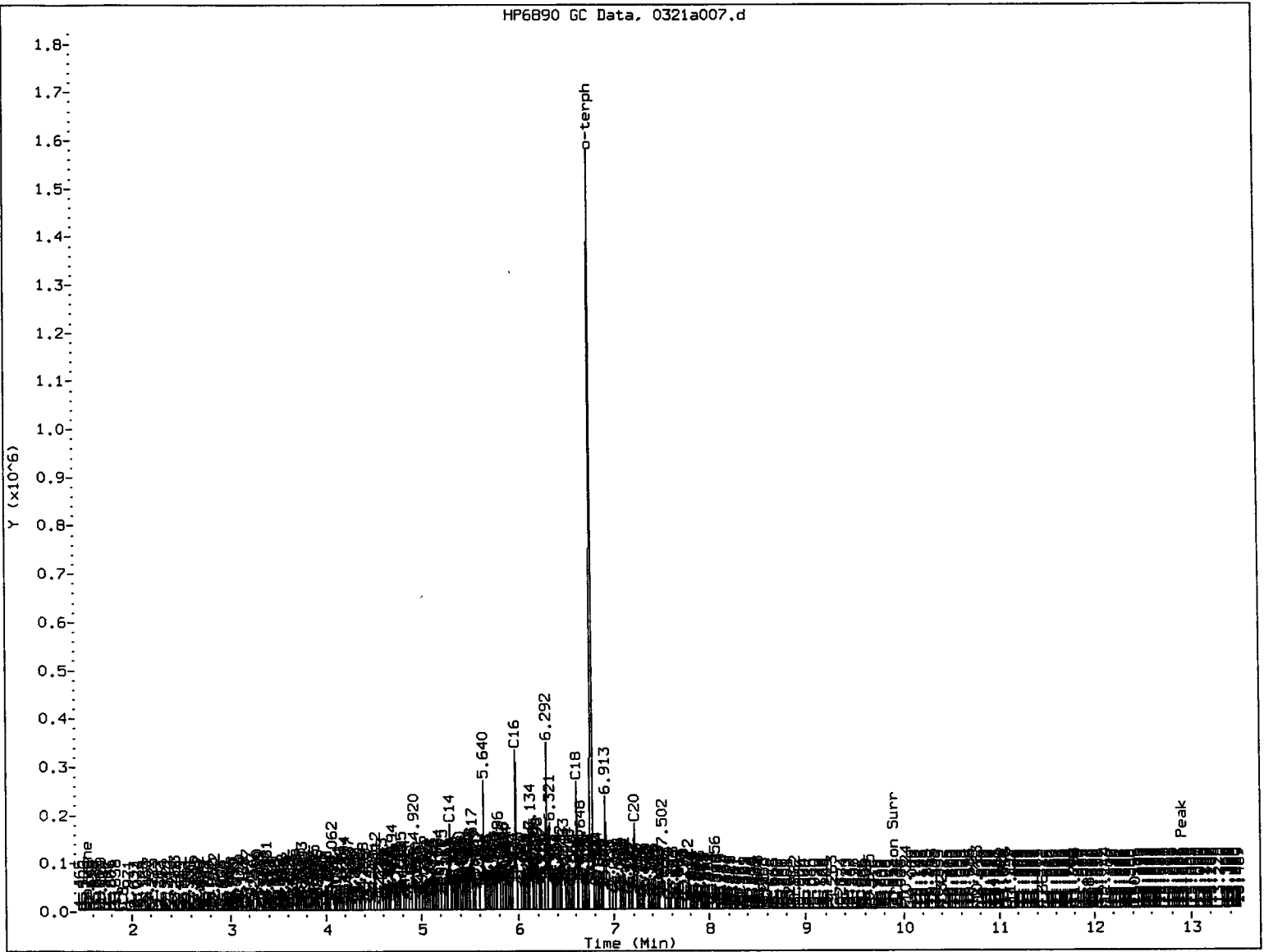
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Date: 21-MAR-2011 16:54  
Client ID: DIESEL 500  
Sample Info: DIESEL 500  
Column phase: RTX-1

Instrument: fid4a.i  
Operator: HS  
Column diameter: 0.25  
/chem3/fid4a.i/20110321.b/0321a007.d



00211703

HP6890 GC Data, 0321a007.d



MANUAL INTEGRATION

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

Analyst: *Mu* Date: *4/6/14*

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110321.b/0321a008.d  
Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/01/2011  
Macro: 21-MAR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: DIESEL 1000  
Client ID: DIESEL 1000  
Injection: 21-MAR-2011 17:17  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.546	0.011	843	1155	GAS (Tol-C12)	3061157	154.67
C8	1.919	0.020	8203	5577	DIESEL (C12-C24)	20026067	1009.17
C10	3.528	0.004	100709	55572	M.OIL (C24-C38)	518309	45.49
C12	4.519	0.002	192173	182550	AK-102 (C10-C25)	22362157	1010.72 M
C14	5.295	0.003	327747	445532	AK-103 (C25-C36)	402700	58.34
C16	5.974	0.006	582099	704429			
C18	6.614	0.008	444713	647677	CRUDE (Tol-C40)	23668570	3133.77 M
C20	7.215	0.003	332711	380799	MIN.OIL (C24-C38)	518309	38.66
C22	7.786	0.000	157933	173386			
C24	8.321	-0.003	51386	67169			
C25	8.575	-0.006	22859	40290			
C26	8.827	-0.004	8501	13464			
C28	9.348	0.000	1218	1949			
C32	10.396	-0.010	40475	44033			
C34	10.945	0.011	330	178	CREOSOT (C12-C22)	19304689	6887.91 M
Filter Peak	12.910	0.005	612	1307			
C36	11.462	0.013	27882	33856			
C38	11.932	-0.014	500	1000			
C40	12.422	-0.003	20647	26424			
o-terph	6.790	0.024	2216294	3227262	JET-A (C10-C18)	16448169	1284.02
Triacon Surr	9.895	0.008	956	2425			

M Indicates manual integration within range.  
Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

Surrogate	Area	Amount	%Rec
o-Terphenyl	3227262	185.7	412.6
Triacontane	2425	0.1	0.3

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010

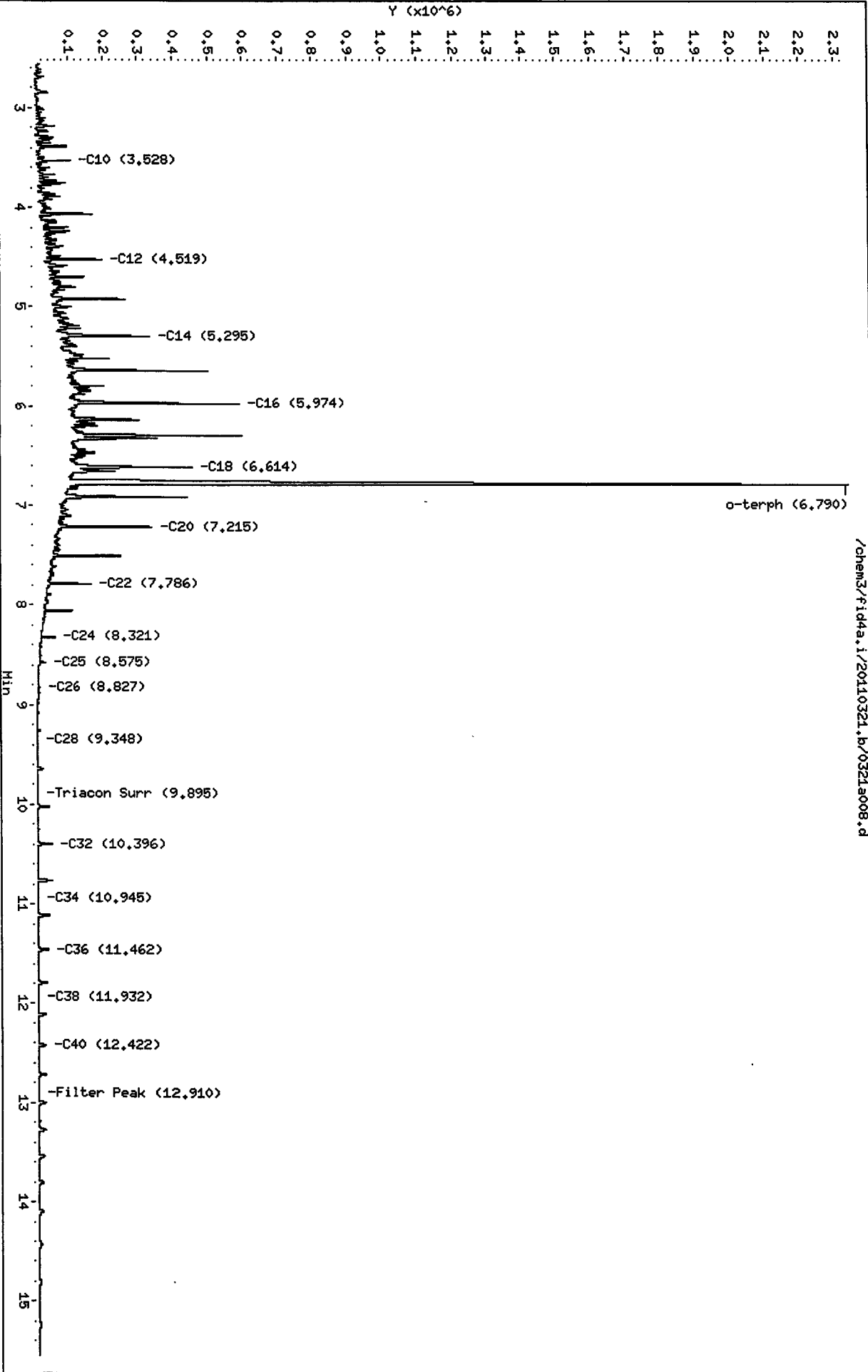


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Date: 21-MAR-2011 17:17  
Client ID: DIESEL 1000  
Sample Info: DIESEL 1000

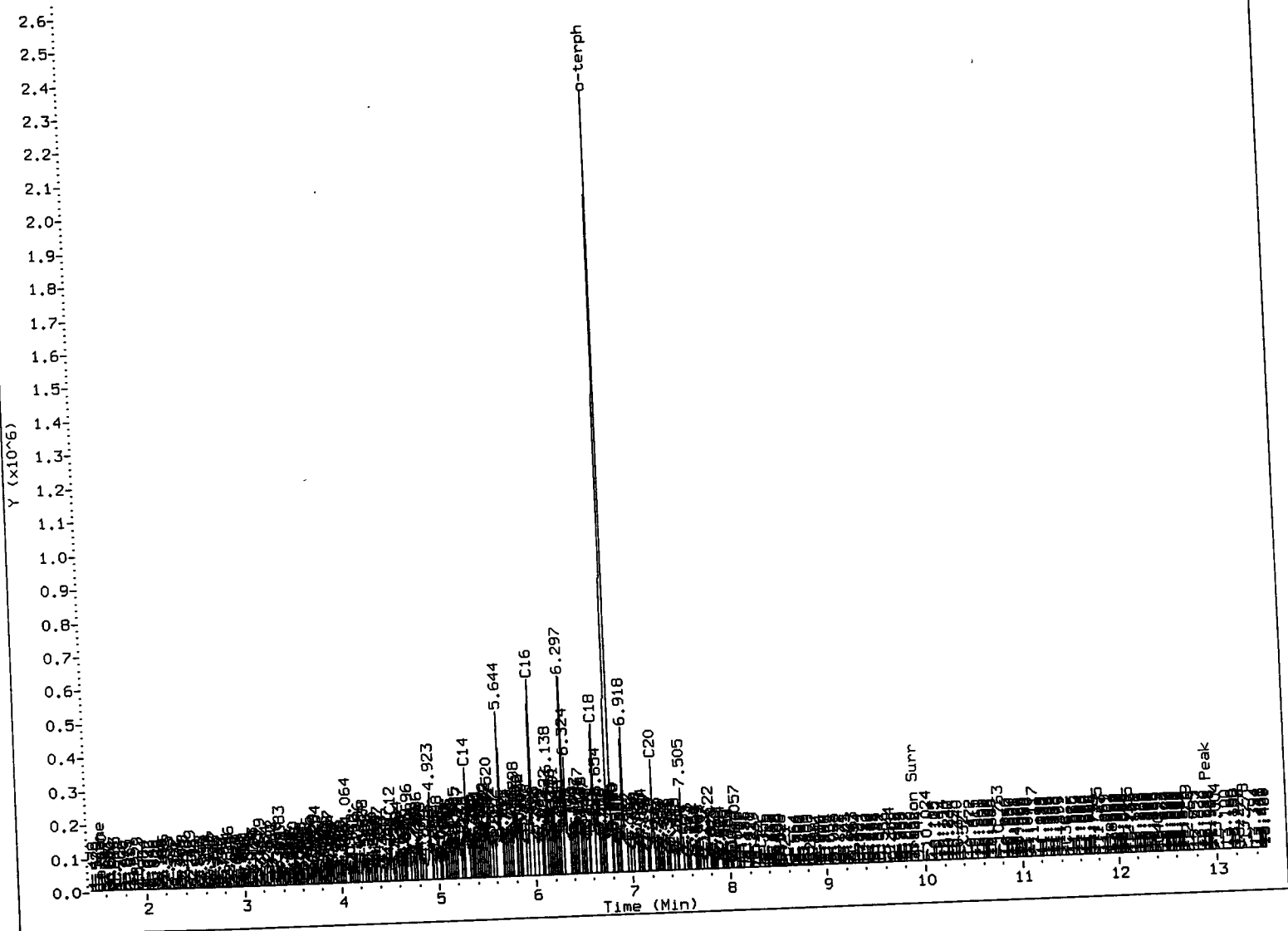
Column phase: RTX-1

Instrument: fid4a.i  
Operator: HS  
Column diameter: 0.25

/chem3/fid4a.i/20110321.b/0321a008.d



20110321



MANUAL INTEGRATION

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

Analyst: Me

Date: 7/4/11

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110321.b/0321a009.d  
Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/01/2011  
Macro: 21-MAR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: DIESEL 2500  
Client ID: DIESEL 2500  
Injection: 21-MAR-2011 17:41  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.517	-0.019	2302	4104	GAS (Tol-C12)	7152361	361.38
C8	1.887	-0.011	12738	13455	DIESEL (C12-C24)	48408123	2439.43
C10	3.515	-0.009	26840	16391	M.OIL (C24-C38)	634665	55.70
C12	4.524	0.007	373231	440602	AK-102 (C10-C25)	53895935	2435.97 M
C14	5.284	-0.008	357526	571327	AK-103 (C25-C36)	433531	62.81
C16	5.961	-0.008	498100	490835			
C18	6.597	-0.009	378716	536751	CRUDE (Tol-C40)	56213393	7442.77 M
C20	7.225	0.012	733606	726099	MIN.OIL (C24-C38)	634665	47.34
C22	7.792	0.006	380578	341935			
C24	8.323	-0.001	130502	119725			
C25	8.576	-0.006	59431	83708			
C26	8.826	-0.005	22270	33017			
C28	9.343	-0.005	2821	4149			
C32	10.395	-0.011	9588	11664			
C34	10.938	0.004	353	796	CREOSOT (C12-C22)	46709679	16666.02 M
Filter Peak	12.912	0.007	565	491			
C36	11.459	0.010	7798	10507			
C38	11.959	0.012	311	340			
C40	12.420	-0.006	3356	5074			
o-terph	6.815	0.048	3774114	6929645	JET-A (C10-C18)	38288623	2988.98
Triacon Surr	9.891	0.004	849	1609			

M Indicates manual integration within range.

Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

Surrogate	Area	Amount	%Rec
o-Terphenyl	6929645	398.7	886.0
Triacontane	1609	0.1	0.2

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010

Data File: /chem3/fid4a.i/20110321.b/0321a009.d

Date : 21-MAR-2011 17:41

Client ID: DIESEL 2500

Sample Info: DIESEL 2500

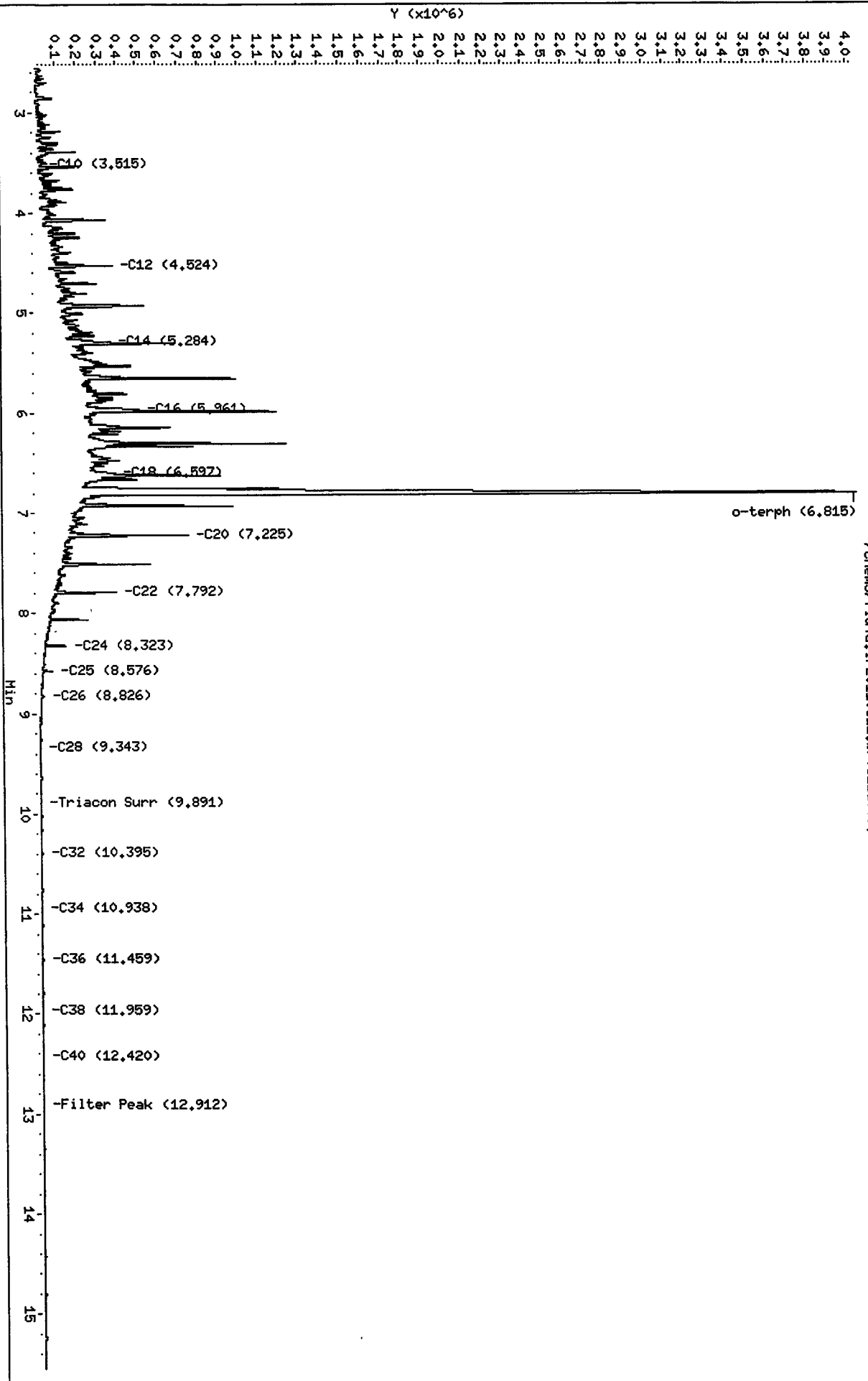
Column phase: RTX-1

Instrument: fid4a.i

Operator: HS

Column diameter: 0.25

/chem3/fid4a.i/20110321.b/0321a009.d





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110321.b/0321a010.d  
Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/01/2011  
Macro: 21-MAR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: DIESEL ICV  
Client ID:  
Injection: 21-MAR-2011 18:05  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.523	-0.013	680	689	GAS (Tol-C12)	723614	36.56
C8	1.909	0.011	2664	4629	DIESEL (C12-C24)	4753126	239.52
C10	3.525	0.001	21564	12274	M.OIL (C24-C38)	133224	11.69
C12	4.517	-0.001	46005	41089	AK-102 (C10-C25)	5297471	239.43 M
C14	5.289	-0.002	85196	104612	AK-103 (C25-C36)	97298	14.10
C16	5.966	-0.002	159945	161739			
C18	6.604	-0.002	129170	141895	CRUDE (Tol-C40)	5624394	744.68 M
C20	7.209	-0.004	83788	90298	MIN.OIL (C24-C38)	133224	9.94
C22	7.781	-0.005	38471	42295			
C24	8.319	-0.005	10373	21609			
C25	8.575	-0.006	4274	11115			
C26	8.830	-0.002	1505	3314			
C28	9.356	0.009	304	409			
C32	10.394	-0.012	6486	7290			
C34	10.941	0.008	86	64	CREOSOT (C12-C22)	4575440	1632.52 M
Filter Peak	12.902	-0.003	496	372			
C36	11.460	0.010	5775	7473			
C38	11.954	0.008	211	75			
C40	12.422	-0.004	2674	4169			
o-terph	6.768	0.002	915949	764215	JET-A (C10-C18)	3852690	300.76
Triacon Surr	9.893	0.006	305	696			

M Indicates manual integration within range.

Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

Surrogate	Area	Amount	%Rec
o-Terphenyl	764215	44.0	97.7
Triacotane	696	0.0	0.1

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010

Data File: /chem3/fid4a.i/20110321.b/0321a010.d

Date: 21-MAR-2011 18:05

Client ID:

Sample Info: DIESEL ICV

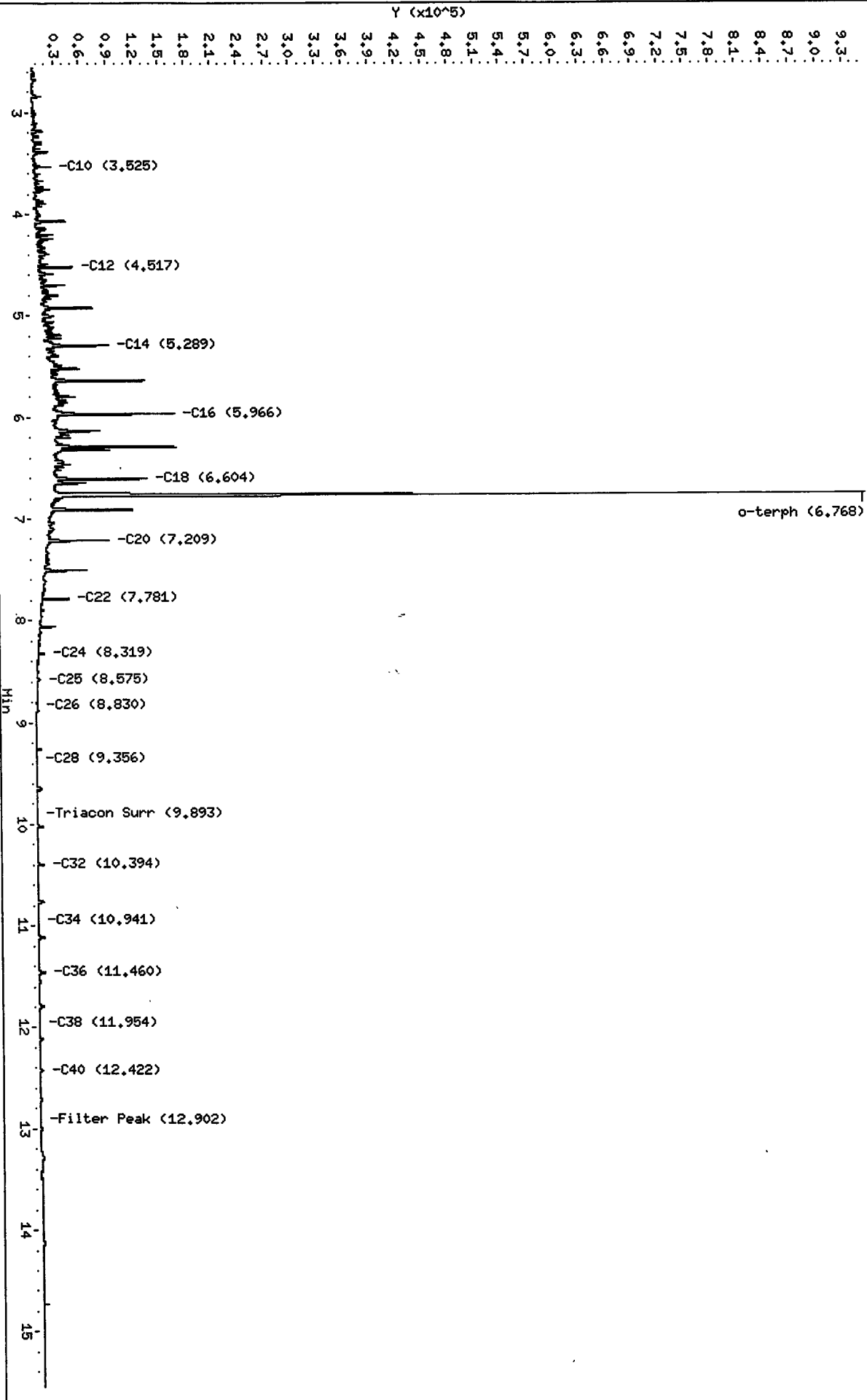
Column phase: RTX-1

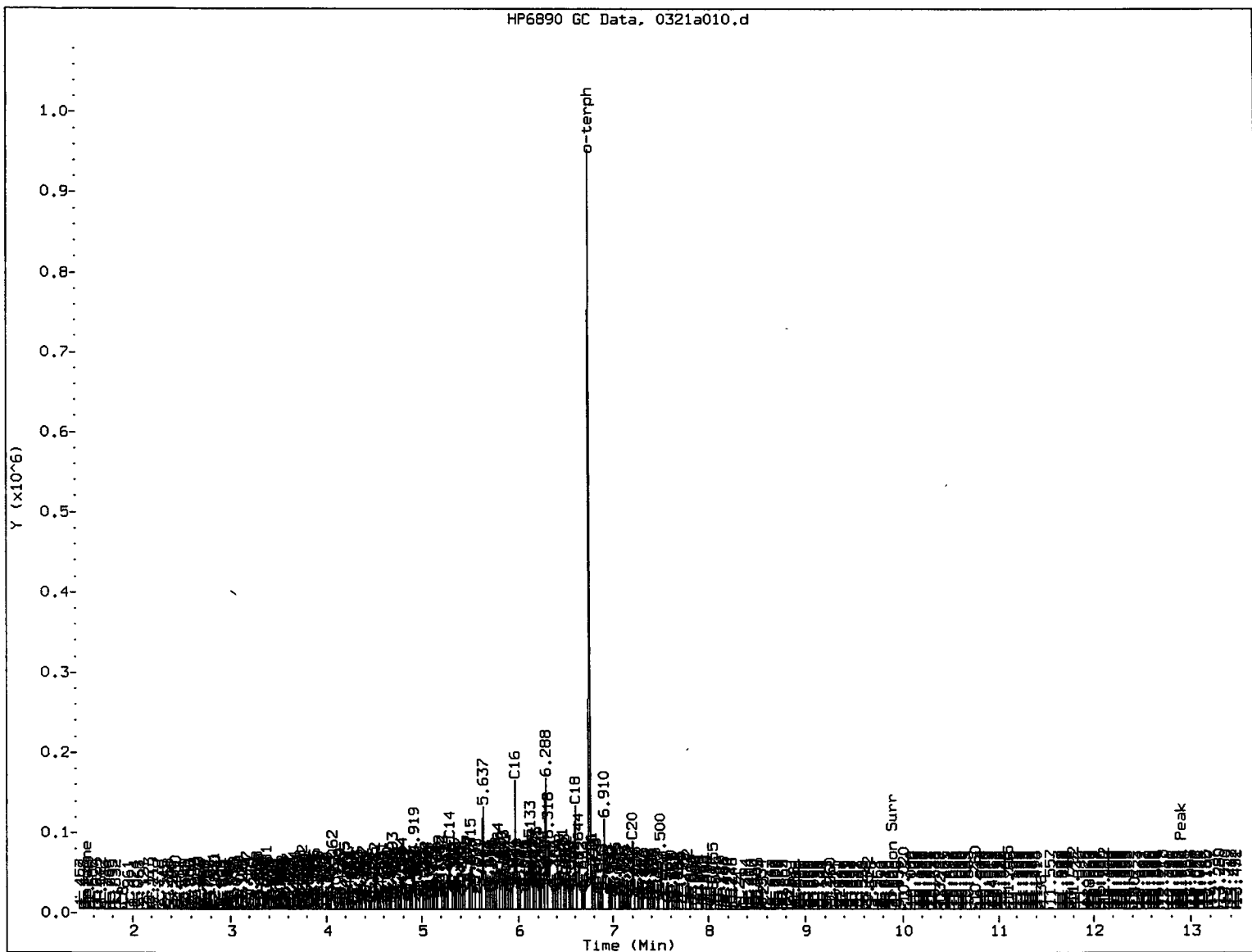
Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

/chem3/fid4a.i/20110321.b/0321a010.d





MANUAL INTEGRATION

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

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

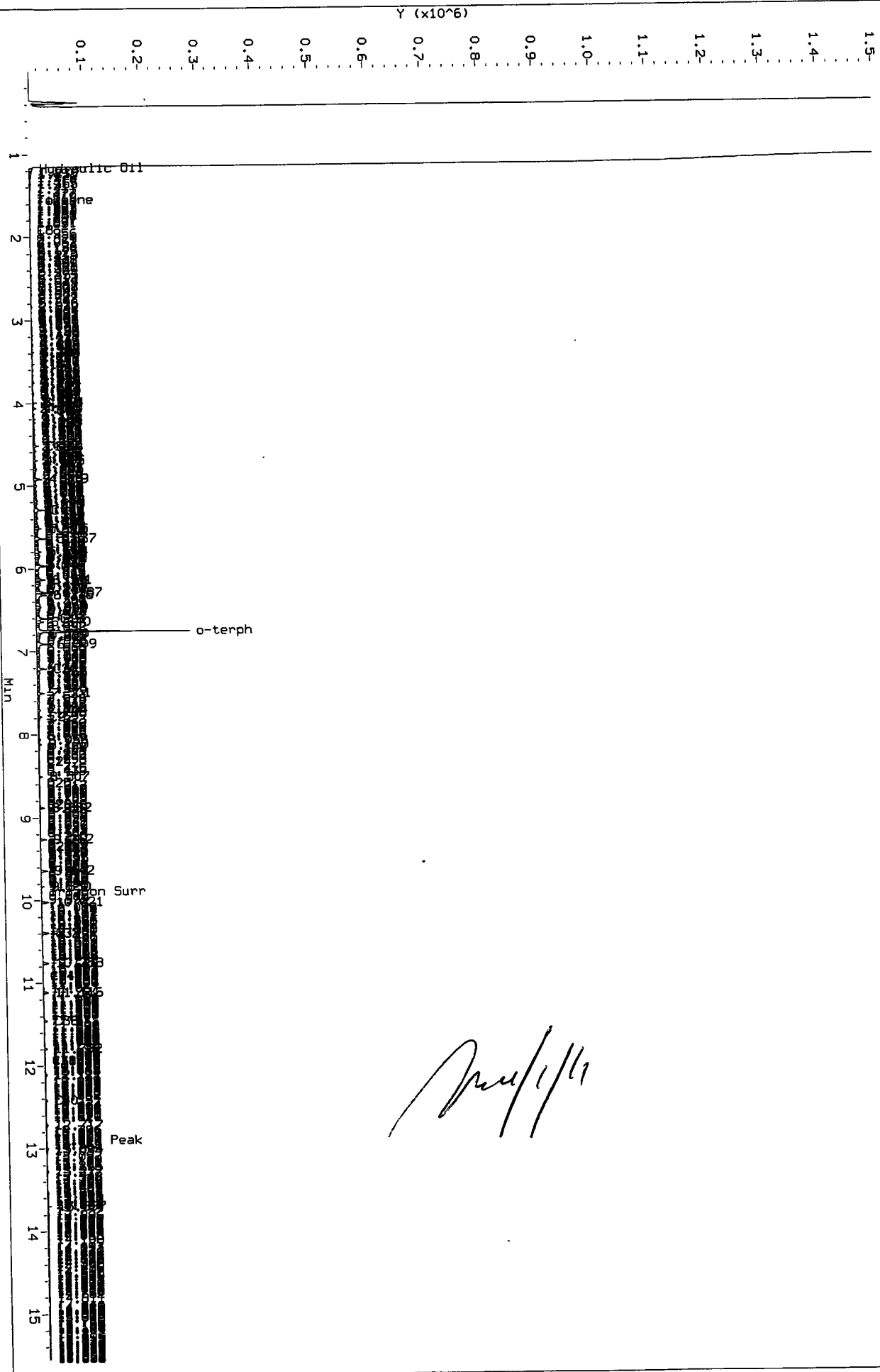
Analyst: *[Signature]*

Date: *4/1/11*



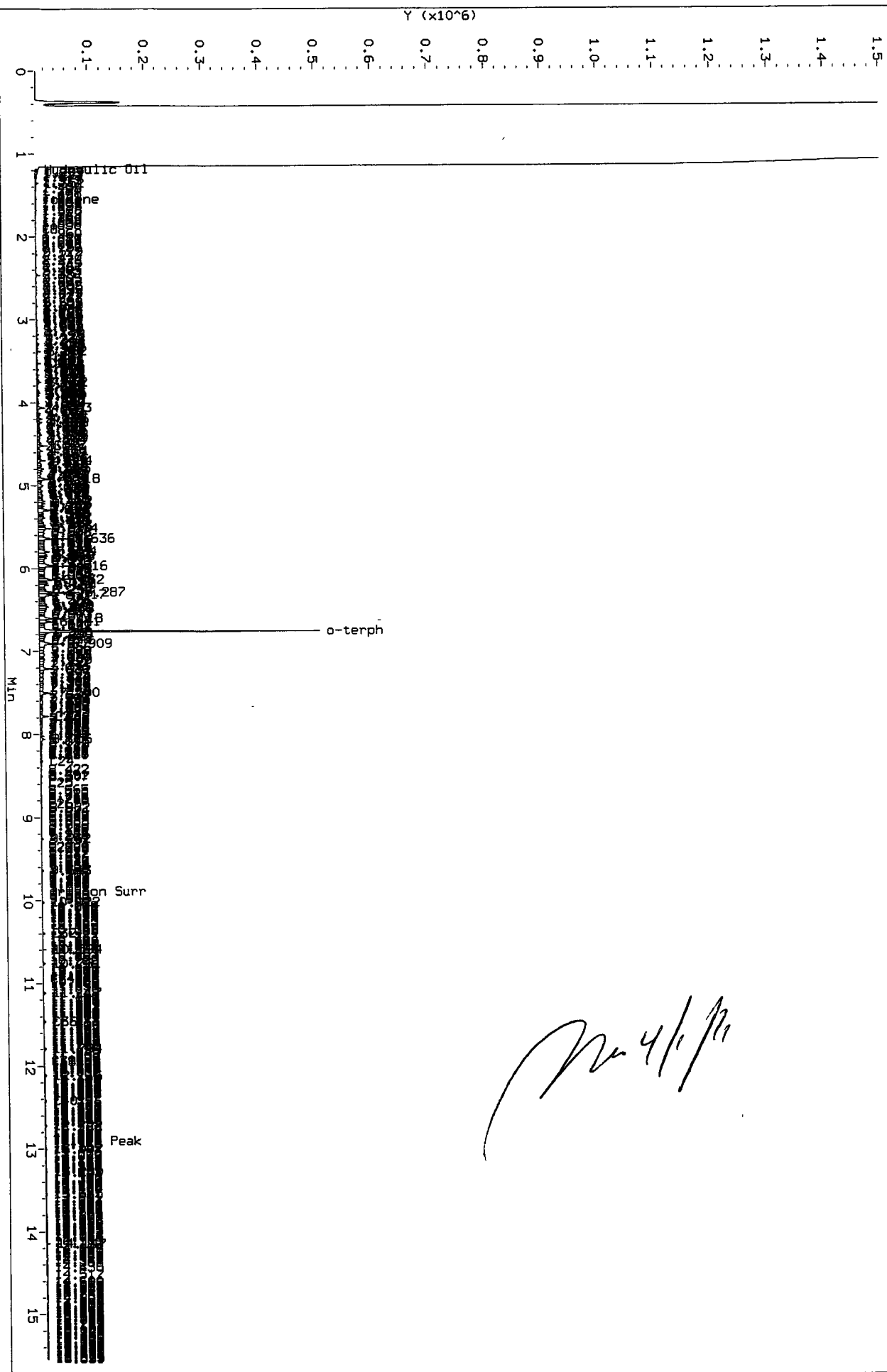
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Injection Date: 21-MAR-2011 15:42  
Instrument: fid4a.1  
Client Sample ID: DIESEL 50

HP6890 GC Data, 0321a004.d: 0.000 to 15.548 Min



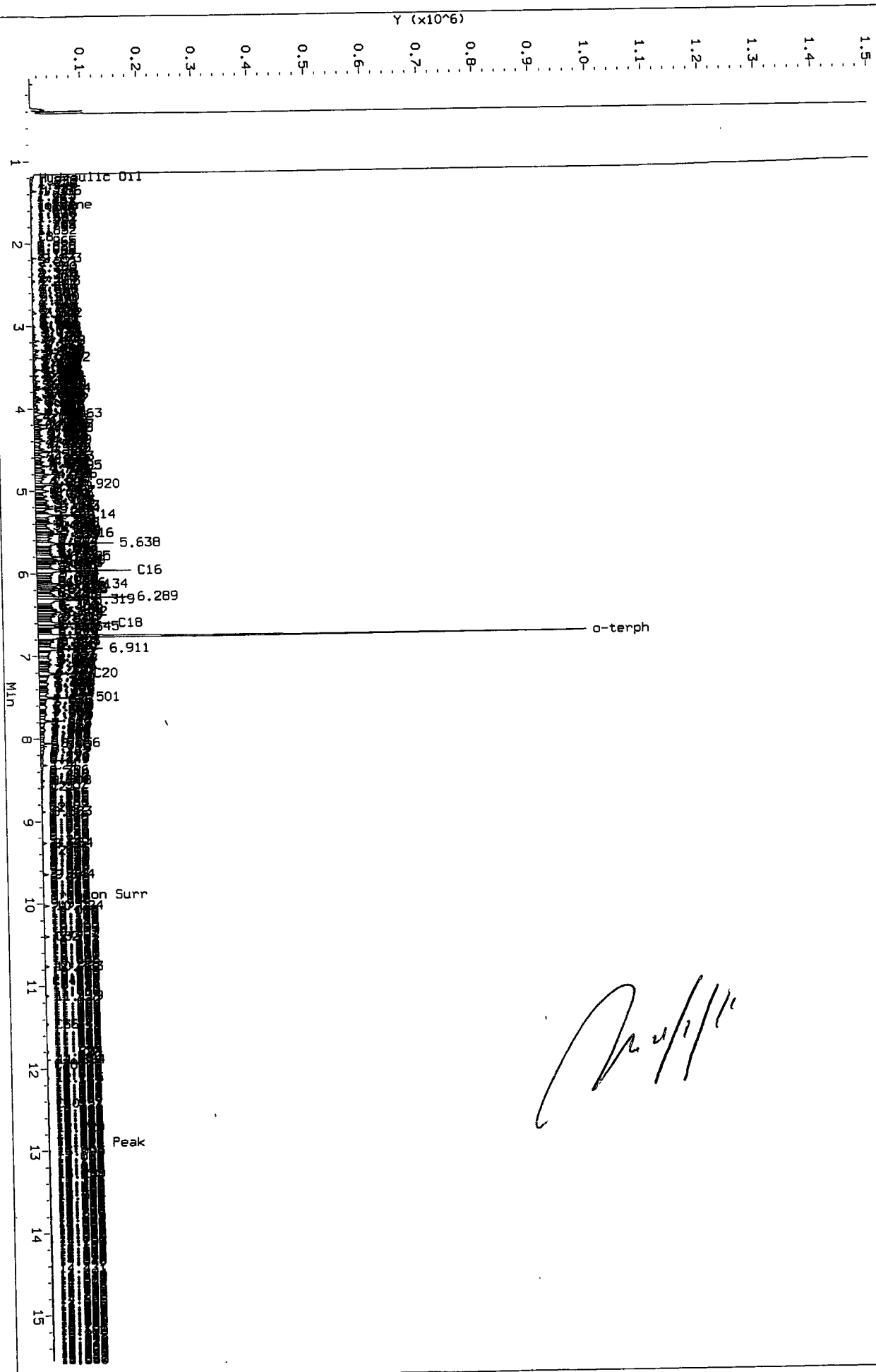
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Injection Date: 21-MAR-2011 16:06  
Instrument: fid4a.1  
Client Sample ID: DIESEL 100

HP6890 GC Data, 0321a005.d: 0.000 to 15.548 Min



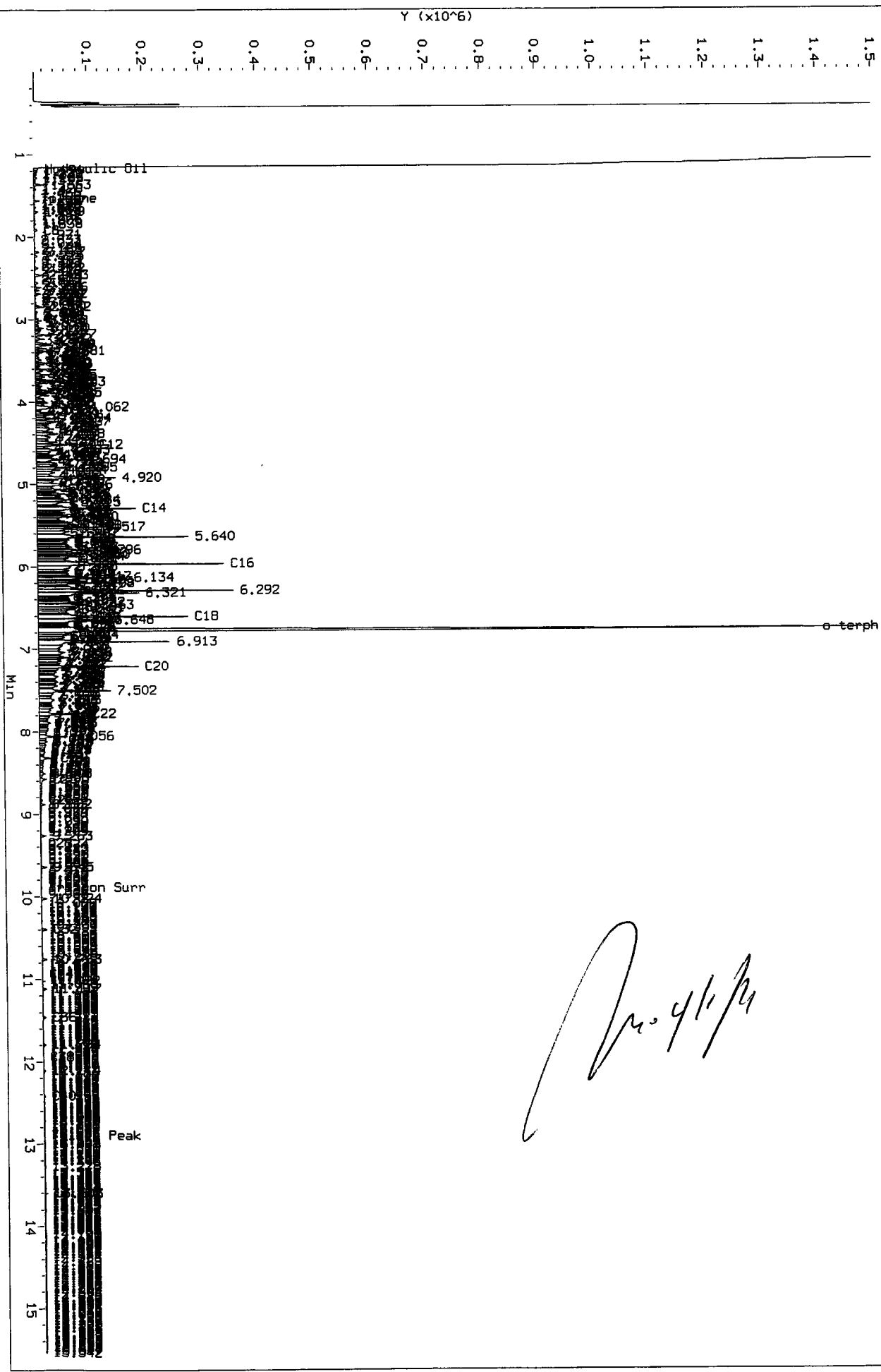
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Injection Date: 21-MAR-2011 16:30  
Instrument: fid4a.1  
Client Sample ID: DIESEL 250

HP6890 GC Data, 0321a006.d: 0.000 to 15.548 Min



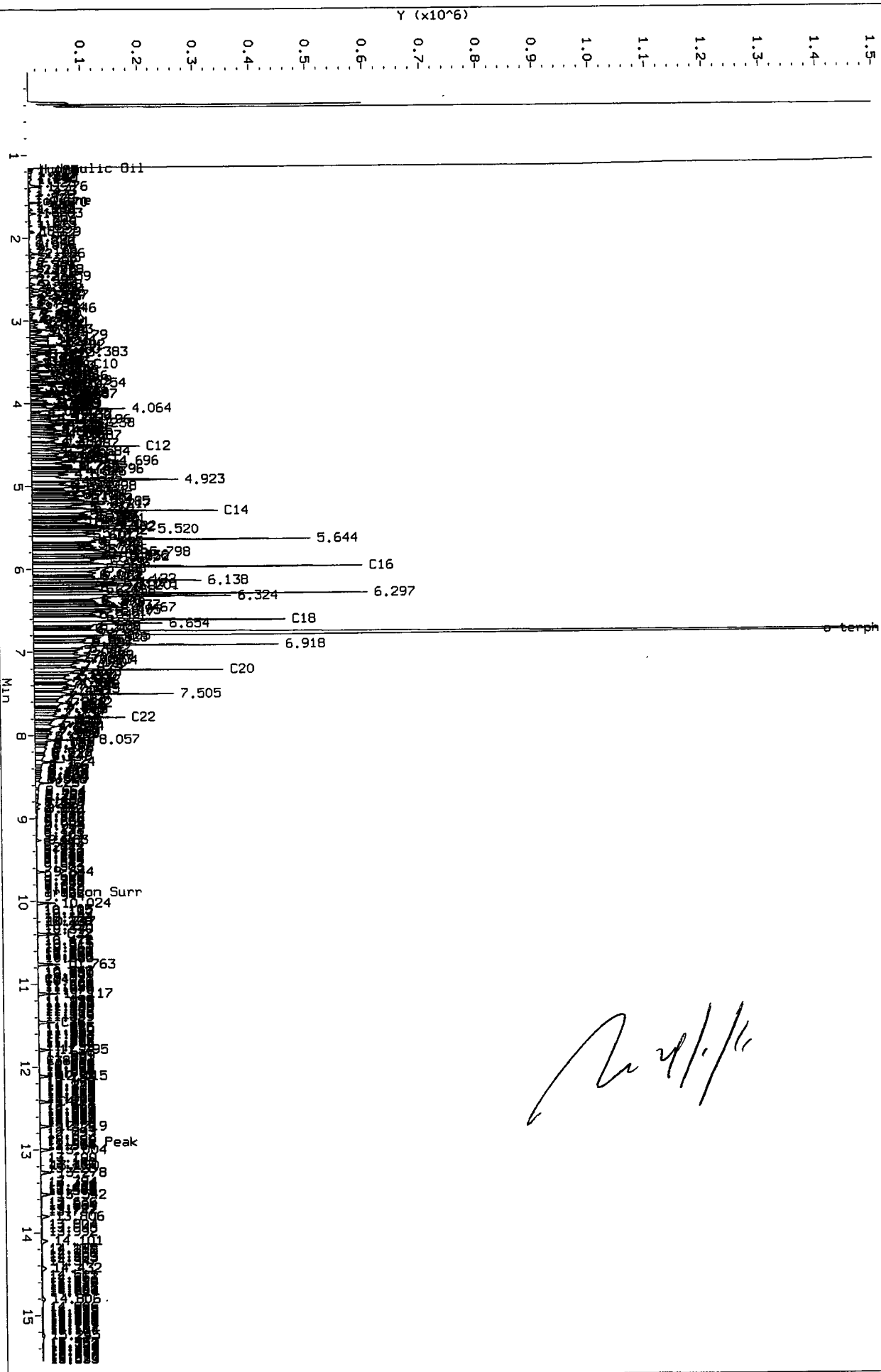
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Instrument: fid4a.1  
Client Sample ID: DIESEL 500

HP6890 GC Data, 0321a007.d: 0.000 to 15.548 Min



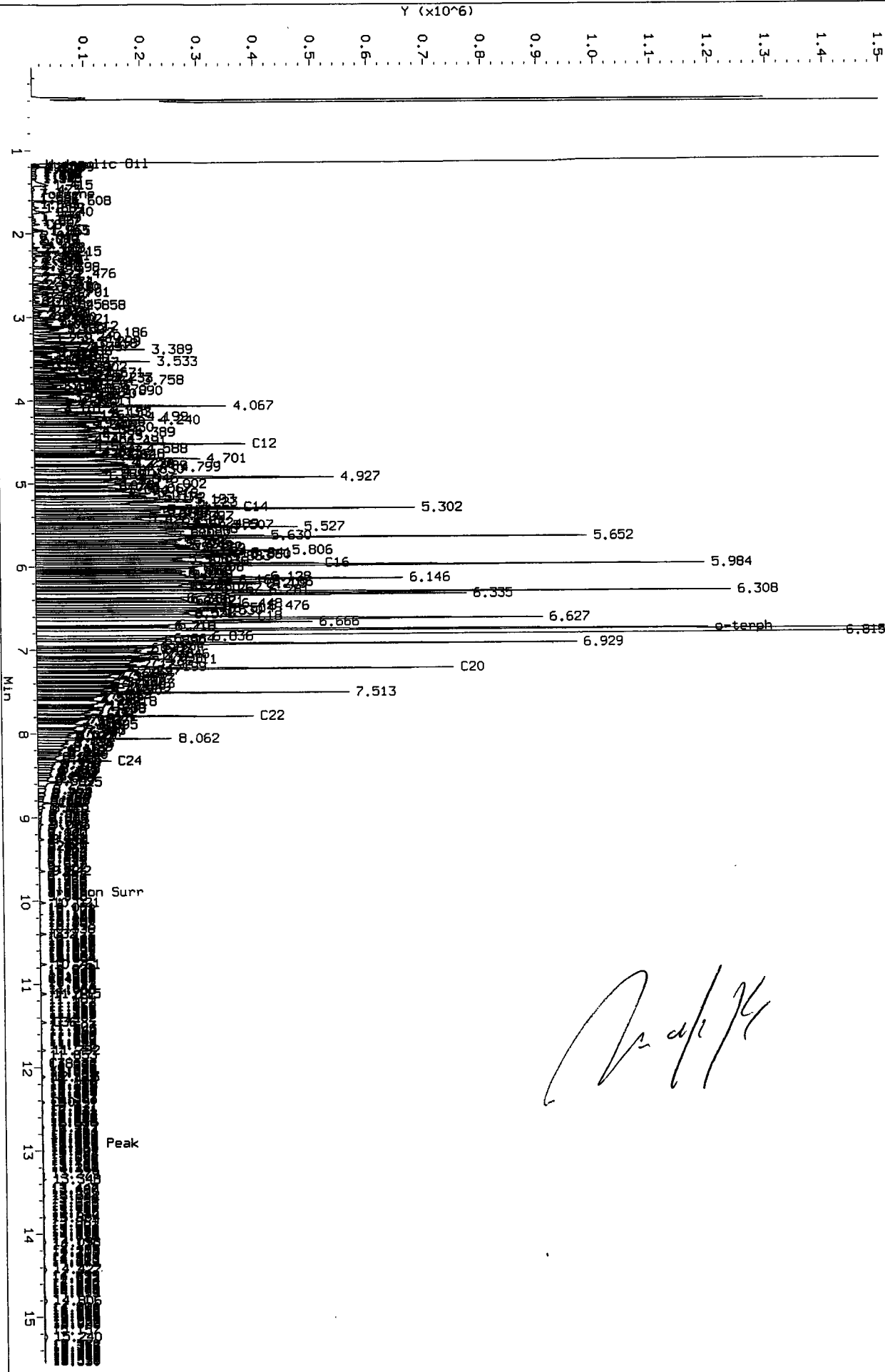
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Injection Date: 21-MAR-2011 17:17  
Instrument: fid4s.1  
Client Sample ID: DIESEL 1000

HP6890 GC Data, 0321a008.d: 0.000 to 15.548 Min



Data File: /chem3/fid4a.1/20110321.b/0321a009.d  
Injection Date: 21-MAR-2011 17:41  
Instrument: fid4a.1  
Client Sample ID: DIESEL 2500

HP6890 GC Data, 0321a009.d: 0.000 to 15.548 Min





**GC Analyst Notes / Corrective Action Log**

ARI Project ID: 30wt MOI CURVE Client ID: ARI

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

Parameter(s): 30wt. Motor Oil, n-Triacontane

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

Dates: Curve: 3/21/11 Analysis Start: 3/21/11

Endrin/DDT Breakdown <15%? YES / NO NA Method Blank In Control? YES / NO NA  
 ICal Meets RF & %RSD Criteria? YES / NO LCS/LCSD Recovery In Control? YES / NO LL  
 CCal Meets RF & %RSD Criteria? YES / NO NA 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: ms Date: 4/1/11

Reviewer: VB Date: 4.1.11





MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20110321.b  
 ARI Job No.: RT Method: ftphfid4a.m Instrument: fid4a.i Date: 21-MAR-2011

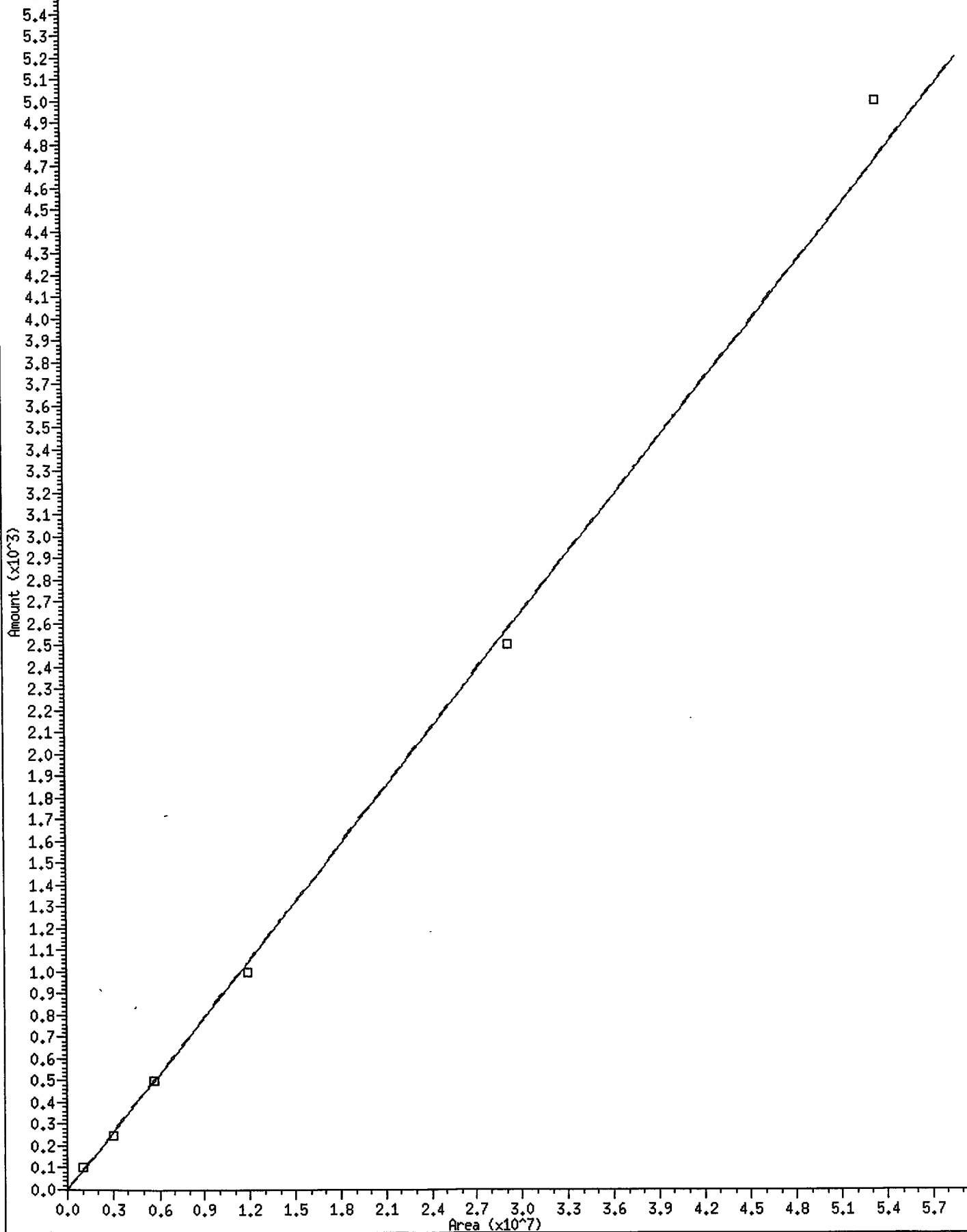
Time	Filename	LabID	ClientID	DF	Manually Integrated Compounds
1455	0321a002.d	RT	RT	1	NO MANUAL INTEGRATION
1519	0321a003.d	IB	IB	1	NO MANUAL INTEGRATION
1542	0321a004.d	DIESEL 50	DIESEL 50	1	o-terph,
1606	0321a005.d	DIESEL 100	DIESEL 100	1	o-terph,
1630	0321a006.d	DIESEL 250	DIESEL 250	1	o-terph,
1654	0321a007.d	DIESEL 500	DIESEL 500	1	o-terph,
1717	0321a008.d	DIESEL 1000	DIESEL 100	1	o-terph,
1741	0321a009.d	DIESEL 2500	DIESEL 250	1	o-terph,
1805	0321a010.d	DIESEL ICV	DIESEL ICV	1	o-terph,
1828	0321a011.d	MOIL 100	MOIL 100	1	Triacon Surr,
1852	0321a012.d	MOIL 250	MOIL 250	1	Triacon Surr,
1916	0321a013.d	MOIL 500	MOIL 500	1	Triacon Surr,
1939	0321a014.d	MOIL 1000	MOIL 1000	1	Triacon Surr,
2003	0321a015.d	MOIL 2500	MOIL 2500	1	Triacon Surr,
2027	0321a016.d	MOIL 5000	MOIL 5000	1	Triacon Surr,
2050	0321a017.d	MOIL ICV	MOIL ICV	1	Triacon Surr,

0571 : 01278

Curve Type: Averaged By-Response

Amt = Rsp/11395.43

%RSD: 4.962

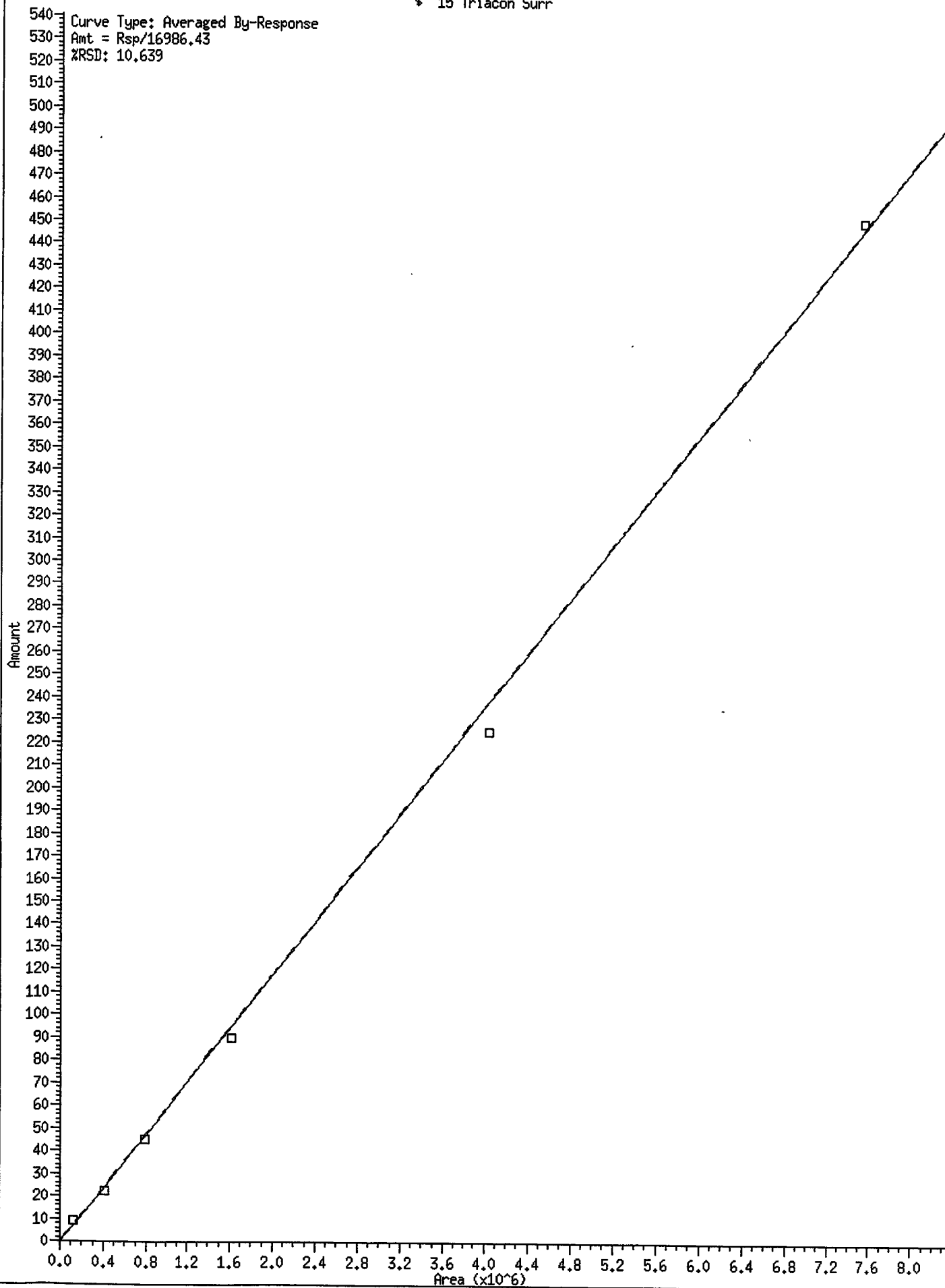


\* 15 Triacon Surr

Curve Type: Averaged By-Response

Amt = Rsp/16986.43

%RSD: 10.639



5571.01280

Report Date : 01-Apr-2011 15:36

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Batch File: /chem3/fid4a.i/20110321.b  
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	1.546	1.541	1.532	1.530	1.529	1.540	1.536	1.436-1.636	1.536	0.007
40 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
39 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.546	0.496-0.596	+++++	+++++
36 Jeta	+++++	+++++	+++++	+++++	+++++	+++++	0.787	0.737-0.837	+++++	+++++
37 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.718	0.668-0.768	+++++	+++++
38 Hydraulic Oil	1.173	1.170	1.172	1.172	1.186	1.166	1.167	1.117-1.217	1.173	0.007
2 C8	1.886	1.896	1.909	1.909	1.913	1.919	1.898	1.798-1.998	1.905	0.012
3 C10	3.529	3.528	3.526	3.526	3.526	3.525	3.524	3.474-3.574	3.527	0.002
4 C12	4.512	4.513	4.524	4.519	4.517	4.517	4.517	4.467-4.567	4.517	0.004
5 C14	5.293	5.292	5.293	5.291	5.290	5.290	5.292	5.242-5.342	5.291	0.001
6 C16	5.968	5.968	5.967	5.965	5.965	5.965	5.968	5.918-6.018	5.966	0.002
7 C18	6.606	6.602	6.603	6.600	6.601	6.601	6.606	6.556-6.656	6.602	0.002
8 o-terph	6.757	6.756	6.756	6.779	6.755	6.755	6.767	6.717-6.817	6.760	0.009
9 C20	7.223	7.209	7.208	7.207	7.209	7.210	7.213	7.163-7.263	7.211	0.006
10 C22	7.787	7.784	7.783	7.791	7.791	7.784	7.786	7.736-7.836	7.787	0.004
11 C24	8.321	8.319	8.320	8.322	8.328	8.316	8.324	8.274-8.374	8.321	0.004
12 C25	8.578	8.591	8.576	8.585	8.580	8.585	8.581	8.531-8.631	8.583	0.006

Reviewer 1 MC Date: 4/1/11  
 Reviewer 2 VP Date: 4/1/11

Report Date : 01-Apr-2011 15:36

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Batch File: /chem3/fid4a.i/20110321.b  
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 C26	8.828	8.826	8.831	8.841	8.830	8.824	8.831	8.781-8.881	8.830	0.006
14 C28	9.358	9.342	9.355	9.363	9.341	9.352	9.347	9.297-9.397	9.352	0.009
15 Triacon Surr	9.874	9.884	9.894	9.908	9.942	9.976	9.887	9.837-9.937	9.913	0.039
16 C32	10.397	10.398	10.396	10.406	10.411	10.405	10.406	10.356-10.456	10.402	0.006
17 C34	10.936	10.938	10.939	10.932	10.930	10.942	10.933	10.883-10.983	10.936	0.004
18 Filter Peak	12.898	12.897	12.897	12.898	12.899	12.902	12.905	12.805-13.005	12.898	0.002
19 C36	11.456	11.462	11.441	11.454	11.450	11.460	11.450	11.400-11.500	11.454	0.008
20 C38	11.947	11.940	11.945	11.938	11.949	11.952	11.946	11.896-11.996	11.945	0.006
21 C40	12.422	12.422	12.423	12.424	12.416	12.430	12.426	12.376-12.476	12.423	0.004
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.687	0.637-0.737	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.660	0.610-0.710	+++++	+++++
30 NW MOIL	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MOIL 103	+++++	+++++	+++++	+++++	+++++	+++++	0.612	0.562-0.662	+++++	+++++

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110321.b/0321a002.d  
Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/01/2011  
Macro: 21-MAR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: RT  
Client ID: RT  
Injection: 21-MAR-2011 14:55  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.536	0.000	347561	225139	GAS (Tol-C12)	753250	38.06
C8	1.898	0.000	130261	113758	DIESEL (C12-C24)	1252682	63.13
C10	3.524	0.000	333401	188669	M.OIL (C24-C38)	1632103	143.23
C12	4.517	0.000	296398	188861	AK-102 (C10-C25)	1656243	74.86
C14	5.292	0.000	289088	186547	AK-103 (C25-C36)	1449626	210.03
C16	5.968	0.000	276840	181503			
C18	6.606	0.000	263027	182255	CRUDE (Tol-C40)	3768551	498.96
C20	7.213	0.000	257207	176600	MIN.OIL (C24-C38)	1632103	121.74
C22	7.786	0.000	266969	186777			
C24	8.324	0.000	286483	199020			
C25	8.581	0.000	387505	279670			
C26	8.831	0.000	279277	208726			
C28	9.347	0.000	259393	215407			
C32	10.406	0.000	200459	212786			
C34	10.933	0.000	174720	178286	CREOSOT (C12-C22)	1028455	366.95
Filter Peak	12.905	0.000	1105	1269			
C36	11.450	0.000	155558	172930			
C38	11.946	0.000	119393	133846			
C40	12.426	0.000	91586	109084			
o-terph	6.767	0.000	780297	602418	JET-A (C10-C18)	971097	75.81
Triacon Surr	9.887	0.000	594261	650331			

M Indicates manual integration within range.

Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

Surrogate	Area	Amount	%Rec
o-Terphenyl	602418	34.7	77.0
Triacontane	650331	38.3	85.1

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010

Data File: /chem3/fid4a.i/20110321.b/0321a002.d

Date: 21-MAR-2011 14:55

Client ID: RT

Sample Info: RT

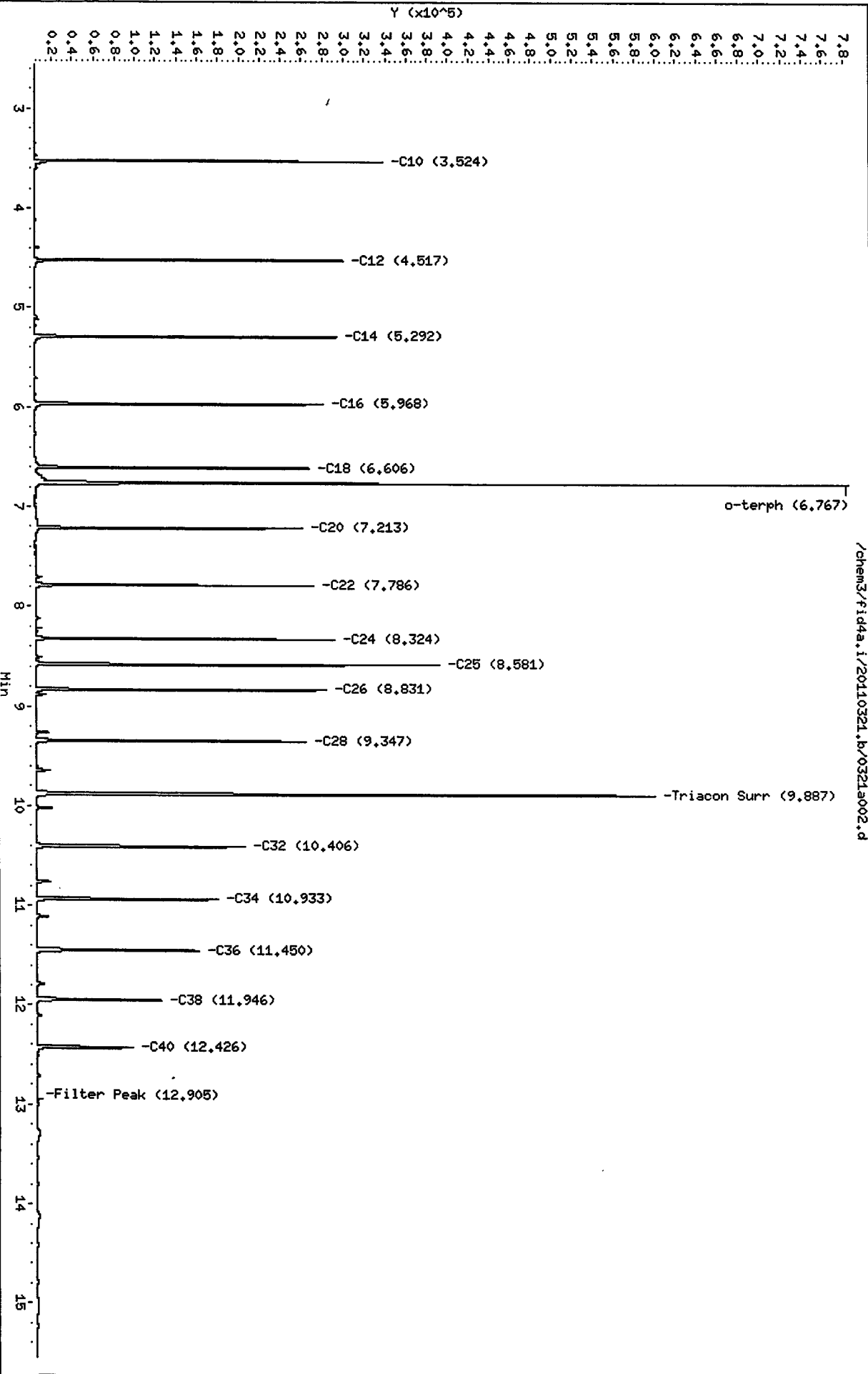
Instrument: fid4a.i

Operator: HS

Column diameter: 0.25

Column phase: RTX-1

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Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110321.b/0321a003.d  
Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/01/2011  
Macro: 21-MAR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: IB  
Client ID: IB  
Injection: 21-MAR-2011 15:19  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.542	0.007	1526	2291	GAS (Tol-C12)	49091	2.48
C8	1.905	0.006	451	706	DIESEL (C12-C24)	92735	4.67
C10	3.526	0.002	650	817	M.OIL (C24-C38)	188942	16.58
C12	4.523	0.005	167	217	AK-102 (C10-C25)	115368	5.21
C14	5.298	0.006	200	179	AK-103 (C25-C36)	152032	22.03
C16	5.968	-0.001	357	818			
C18	6.603	-0.003	666	991	CRUDE (Tol-C40)	365957	48.45
C20	7.220	0.007	710	1448	MIN.OIL (C24-C38)	188942	14.09
C22	7.793	0.007	637	1362			
C24	8.326	0.002	728	2055			
C25	8.582	0.001	742	2860			
C26	8.832	0.001	715	1411			
C28	9.345	-0.003	1021	1555			
C32	10.393	-0.014	7043	13069			
C34	10.948	0.014	746	2682	CREOSOT (C12-C22)	74269	26.50
Filter Peak	12.912	0.007	1693	10510			
C36	11.457	0.008	7673	11661			
C38	11.955	0.009	837	1933			
C40	12.420	-0.006	4711	8930			
o-terph	6.770	0.003	1026523	889744	JET-A (C10-C18)	43700	3.41
Triacon Surr	9.888	0.001	689335	773682			

M Indicates manual integration within range.

Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

Surrogate	Area	Amount	%Rec
o-Terphenyl	889744	51.2	113.8
Triacotane	773682	45.5	101.2

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010

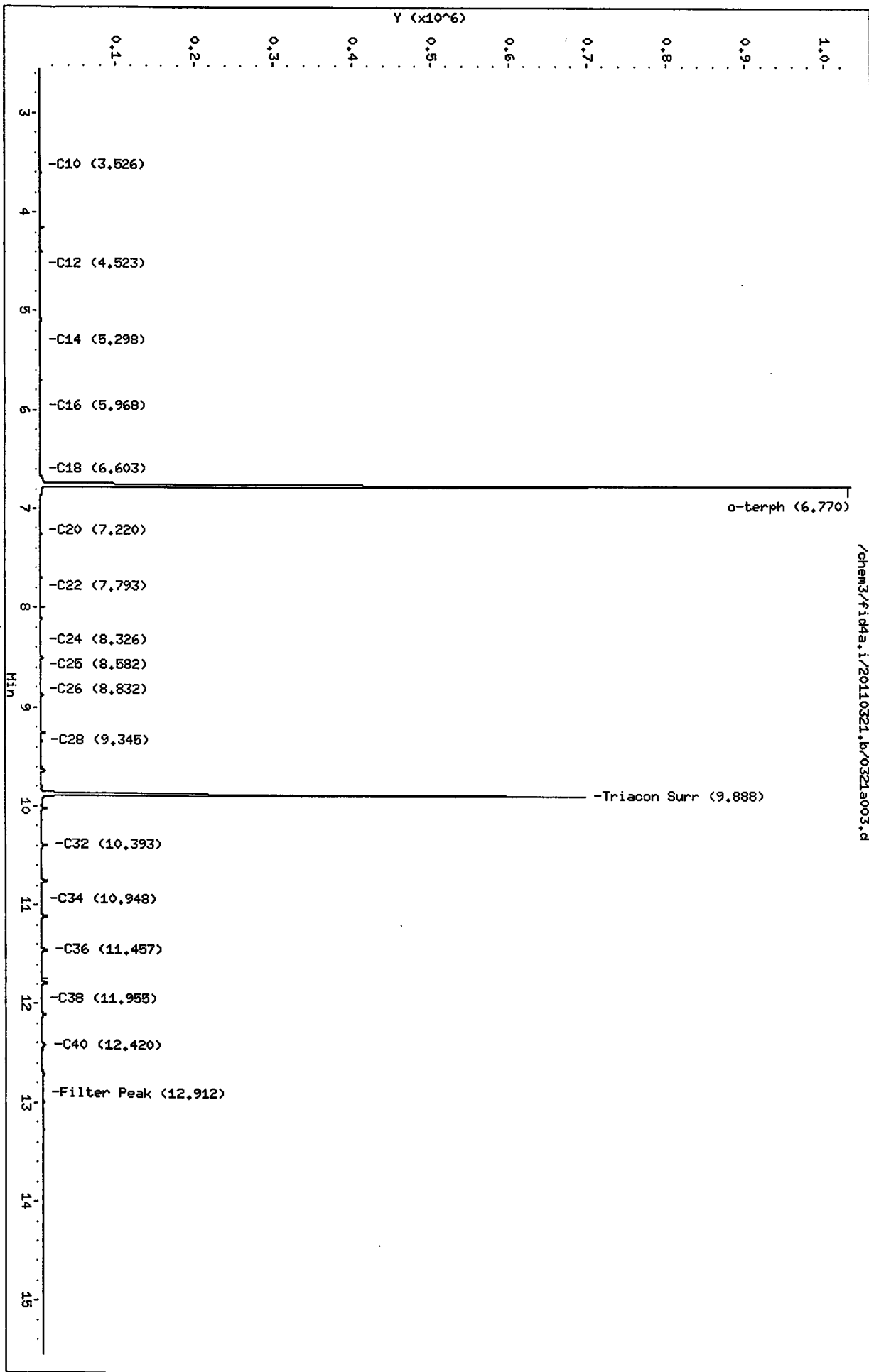


Data File: /chem3/fid4a.i/20110321.b/0321a003.d  
Date: 21-MAR-2011 15:19  
Client ID: IB  
Sample Info: IB

Column phase: RTX-1

/chem3/fid4a.i/20110321.b/0321a003.d

Instrument: fid4a.i  
Operator: MS  
Column diameter: 0.25



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110321.b/0321a011.d  
Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/01/2011  
Macro: 21-MAR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: MOIL 100  
Client ID: MOIL 100  
Injection: 21-MAR-2011 18:28  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.546	0.010	930	1503	GAS (Tol-C12)	43639	2.20
C8	1.886	-0.013	396	176	DIESEL (C12-C24)	175191	8.83
C10	3.529	0.005	194	224	M.OIL (C24-C38)	1064870	93.45
C12	4.512	-0.005	53	40	AK-102 (C10-C25)	219710	9.93
C14	5.293	0.001	89	81	AK-103 (C25-C36)	908025	131.56 M
C16	5.968	0.000	125	77			
C18	6.606	0.000	292	338	CRUDE (Tol-C40)	1375822	182.16 M
C20	7.223	0.010	892	1536	MIN.OIL (C24-C38)	1064870	79.43 M
C22	7.787	0.001	1791	2608			
C24	8.321	-0.003	3311	5421			
C25	8.578	-0.003	4057	3542			
C26	8.828	-0.004	4521	2307			
C28	9.358	0.011	5234	6849			
C32	10.397	-0.010	12733	25049			
C34	10.936	0.002	5380	8692	CREOSOT (C12-C22)	92018	32.83
Filter Peak	12.898	-0.007	2277	2823			
C36	11.456	0.007	8344	20781			
C38	11.947	0.001	3626	1211			
C40	12.422	-0.004	4734	11245			
o-terph	6.757	-0.010	645	865	JET-A (C10-C18)	29051	2.27
Triacon Surr	9.874	-0.013	140140	120996			

M Indicates manual integration within range.

Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

Surrogate	Area	Amount	%Rec
o-Terphenyl	865	0.0	0.1
Triacontane	120996	7.1	15.8

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010

Data File: /chem3/fid4a.i/20110321.b/0321a011.d

Date: 21-MAR-2011 18:28

Client ID: MOIL 100

Sample Info: MOIL 100

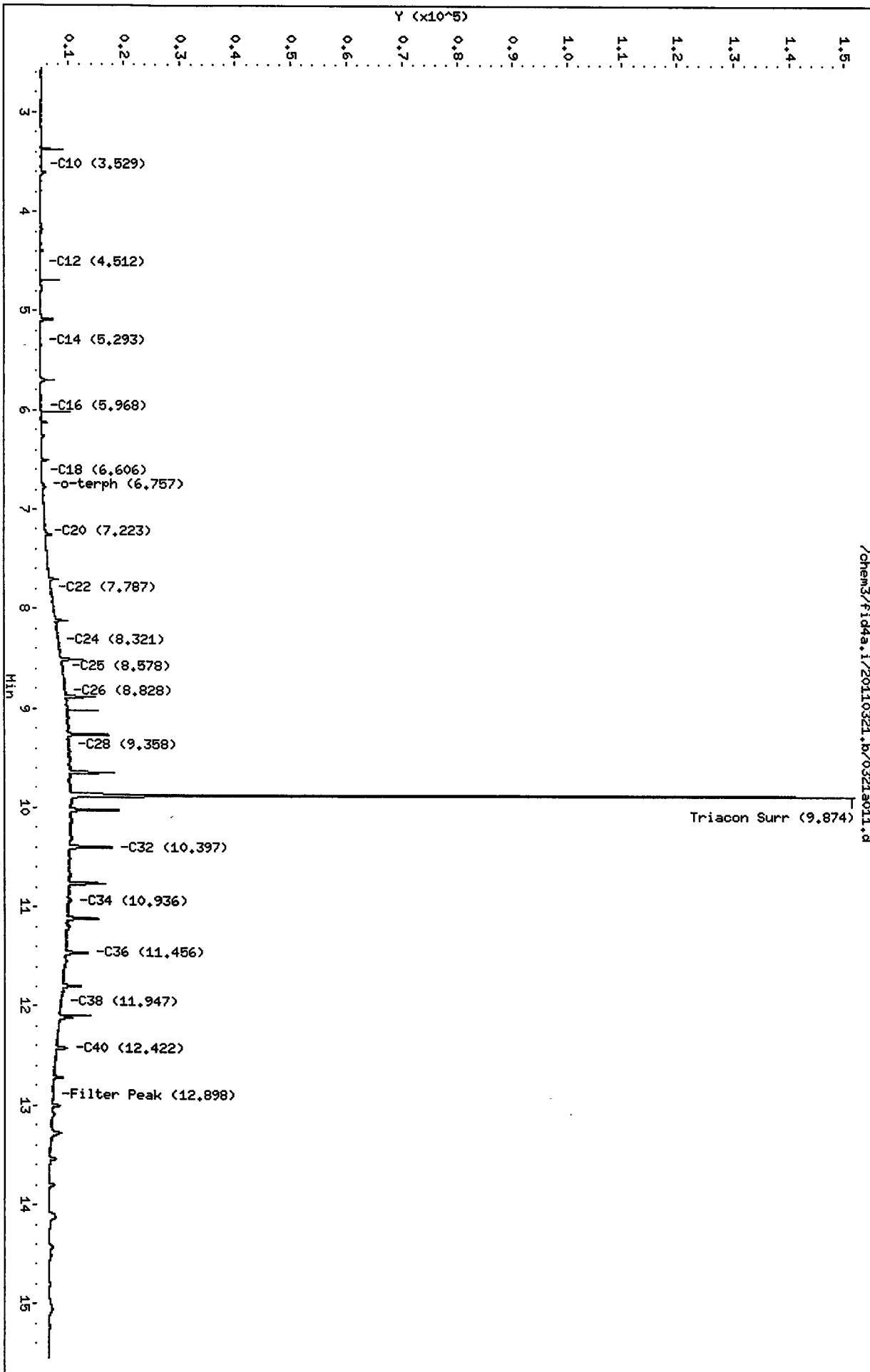
Column phase: RTX-1

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

/chem3/fid4a.i/20110321.b/0321a011.d





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110321.b/0321a012.d  
Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/01/2011  
Macro: 21-MAR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: MOIL 250  
Client ID: MOIL 250  
Injection: 21-MAR-2011 18:52  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.541	0.006	916	2019	GAS (Tol-C12)	43436	2.19
C8	1.896	-0.003	426	260	DIESEL (C12-C24)	432813	21.81
C10	3.528	0.004	301	385	M.OIL (C24-C38)	2996575	262.97
C12	4.513	-0.004	54	20	AK-102 (C10-C25)	535527	24.20
C14	5.292	0.001	100	69	AK-103 (C25-C36)	2570394	372.41 M
C16	5.968	-0.001	127	134			
C18	6.602	-0.004	427	888	CRUDE (Tol-C40)	3715763	491.97 M
C20	7.209	-0.003	1698	2020	MIN.OIL (C24-C38)	2996575	223.53 M
C22	7.784	-0.002	4913	3454			
C24	8.319	-0.005	9733	11082			
C25	8.591	0.010	15892	40762			
C26	8.826	-0.006	13770	3269			
C28	9.342	-0.005	15957	8484			
C32	10.398	-0.008	21162	59385			
C34	10.938	0.005	16567	8173	CREOSOT (C12-C22)	177083	63.18
Filter Peak	12.897	-0.008	4822	9773			
C36	11.462	0.012	16869	52934			
C38	11.940	-0.007	10738	13375			
C40	12.422	-0.003	8751	23261			
o-terph	6.756	-0.011	884	941	JET-A (C10-C18)	34830	2.72
Triacon Surr	9.884	-0.003	424442	410839			

M Indicates manual integration within range.

Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

Surrogate	Area	Amount	%Rec
o-Terphenyl	941	0.1	0.1
Triacotane	410839	24.2	53.7

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010

Data File: /chem3/fid4a.i/20110321.b/0321a012.d

Date: 21-MAR-2011 18:52

Client ID: MOIL 250

Sample Info: MOIL 250

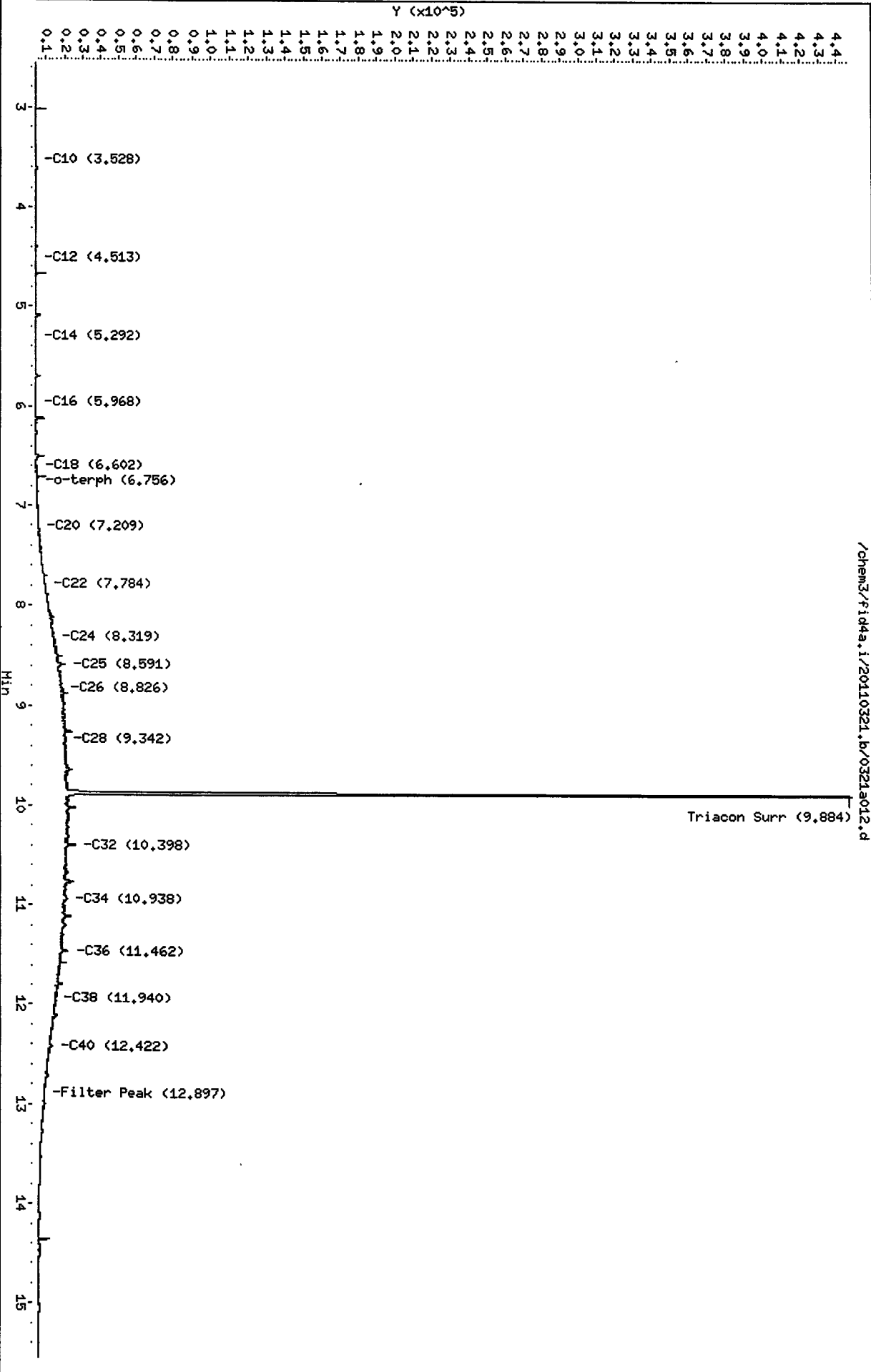
Column phase: RTX-1

Instrument: fid4a.i

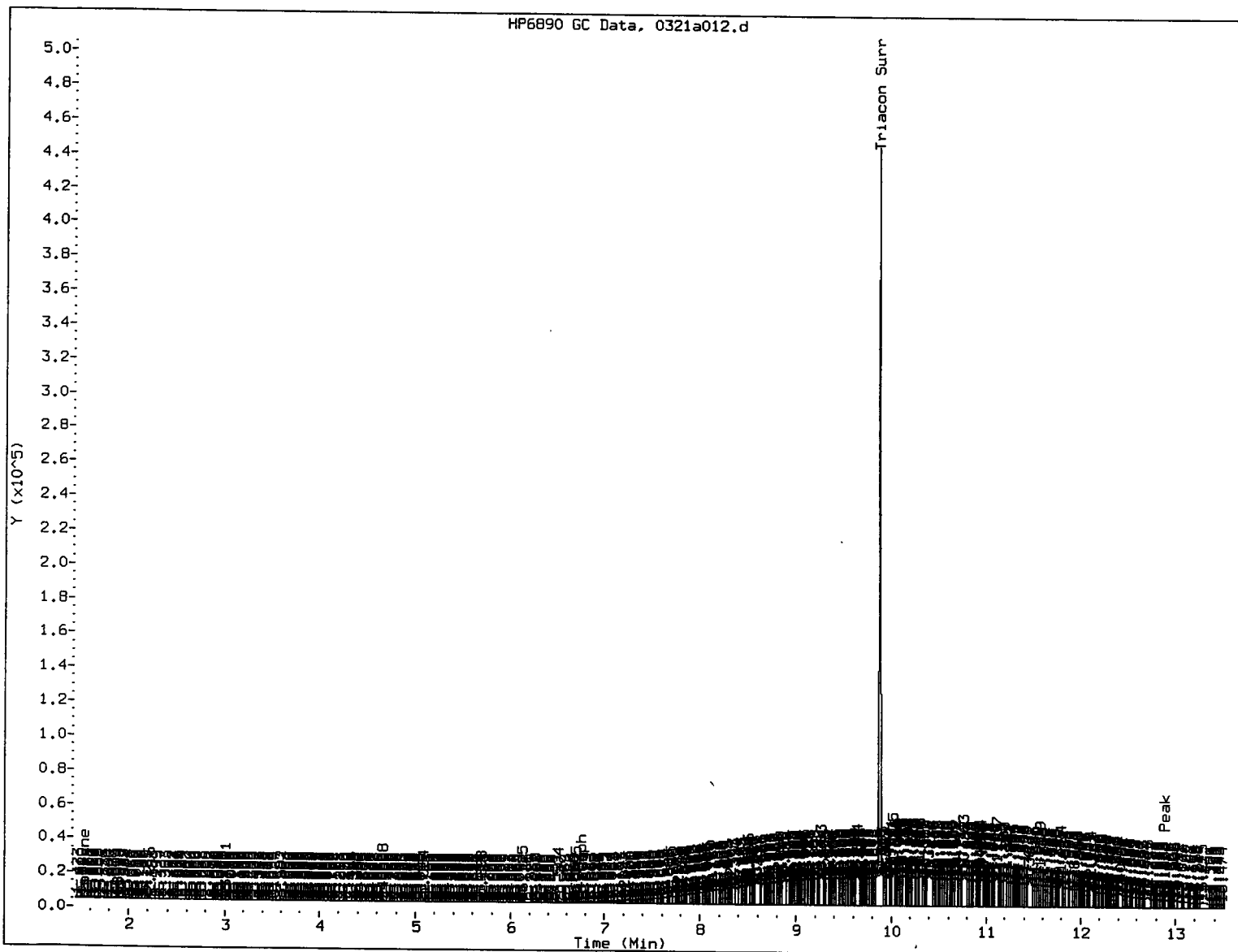
Operator: HS

Column diameter: 0.25

/chem3/fid4a.i/20110321.b/0321a012.d



HP6890 GC Data, 0321a012.d



MANUAL INTEGRATION

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

Analyst: Mus

Date: 4/1/11

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110321.b/0321a013.d  
Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/01/2011  
Macro: 21-MAR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: MOIL 500  
Client ID: MOIL 500  
Injection: 21-MAR-2011 19:16  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.532	-0.004	1118	1003	GAS (Tol-C12)	49313	2.49
C8	1.909	0.011	563	934	DIESEL (C12-C24)	760405	38.32
C10	3.526	0.002	466	558	M.OIL (C24-C38)	5701654	500.36
C12	4.524	0.006	88	89	AK-102 (C10-C25)	941080	42.53
C14	5.293	0.001	132	92	AK-103 (C25-C36)	4949427	717.09 M
C16	5.967	-0.001	160	281			
C18	6.603	-0.004	618	886	CRUDE (Tol-C40)	6907591	914.58 M
C20	7.208	-0.004	2904	3456	MIN.OIL (C24-C38)	5701654	425.31 M
C22	7.783	-0.004	9091	7137			
C24	8.320	-0.004	18319	29414			
C25	8.576	-0.005	23418	18752			
C26	8.831	-0.001	26717	9492			
C28	9.355	0.007	30544	10215			
C32	10.396	-0.010	37300	69639			
C34	10.939	0.005	30429	56193	CREOSOT (C12-C22)	298133	106.37
Filter Peak	12.897	-0.008	6580	9650			
C36	11.441	-0.008	24391	13906			
C38	11.945	-0.001	18760	35494			
C40	12.423	-0.003	14109	40645			
o-terph	6.756	-0.011	1110	1275	JET-A (C10-C18)	44565	3.48
Triacon Surr	9.894	0.007	699520	782646			

M Indicates manual integration within range.

Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1275	0.1	0.2
Triacotane	782646	46.1	102.4

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010



Data File: /chem3/fid4a.i/20110321.b/0321a013.d

Date : 21-MAR-2011 19:16

Client ID: MOIL 500

Sample Info: MOIL 500

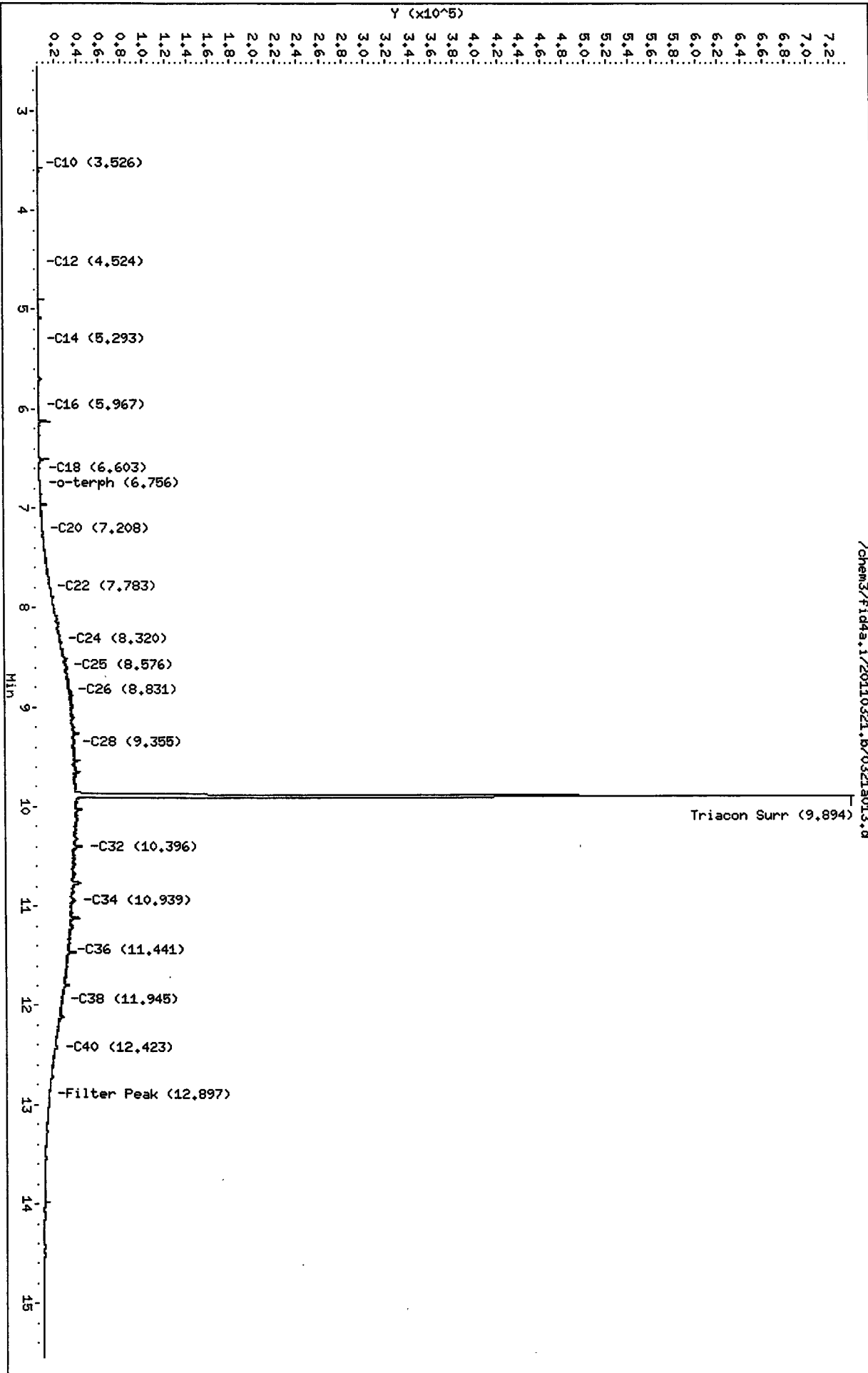
Column phase: RTX-1

Instrument: fid4a.i

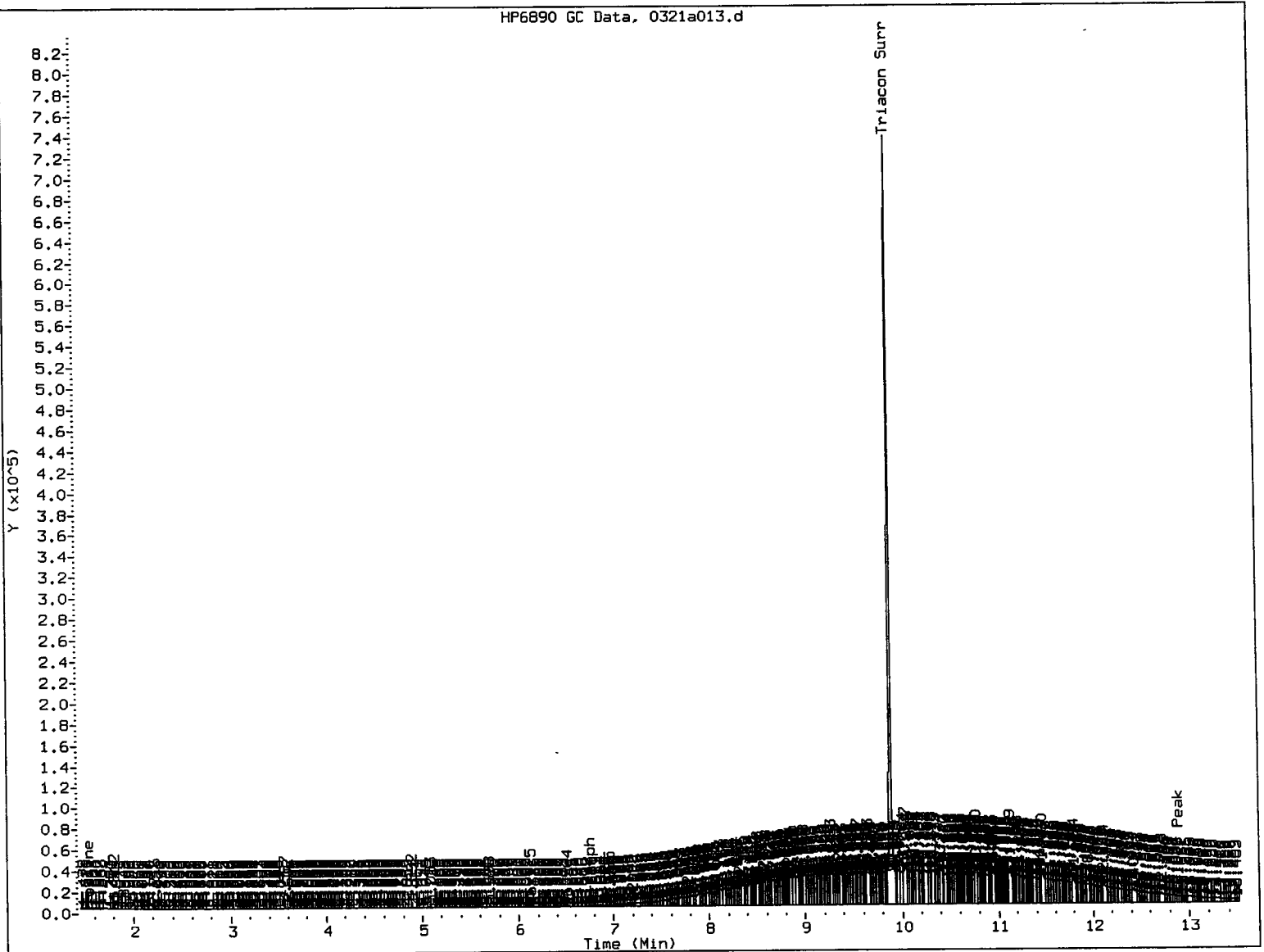
Operator: MS

Column diameter: 0.25

/chem3/fid4a.i/20110321.b/0321a013.d



HP6890 GC Data. 0321a013.d



MANUAL INTEGRATION

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

Analyst: MM

Date: 4/1/14

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110321.b/0321a014.d  
Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/01/2011  
Macro: 21-MAR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: MOIL 1000  
Client ID: MOIL 1000  
Injection: 21-MAR-2011 19:39  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.530	-0.006	1194	1228	GAS (Tol-C12)	39620	2.00
C8	1.909	0.010	430	729	DIESEL (C12-C24)	1462886	73.72
C10	3.526	0.002	869	710	M.OIL (C24-C38)	11849567	1039.89
C12	4.519	0.002	193	226	AK-102 (C10-C25)	1904567	86.08
C14	5.291	-0.001	231	299	AK-103 (C25-C36)	10138568	1468.91 M
C16	5.965	-0.004	279	330			
C18	6.600	-0.006	1071	2146	CRUDE (Tol-C40)	14128968	1870.70 M
C20	7.207	-0.006	5439	11204	MIN.OIL (C24-C38)	11849567	883.91 M
C22	7.791	0.005	18620	26270			
C24	8.322	-0.002	36828	28772			
C25	8.585	0.003	48336	34219			
C26	8.841	0.009	56795	61805			
C28	9.363	0.015	64163	121303			
C32	10.406	-0.001	69016	72045			
C34	10.932	-0.002	62748	80079	CREOSOT (C12-C22)	552494	197.13
Filter Peak	12.898	-0.008	13230	31146			
C36	11.454	0.004	53609	65248			
C38	11.938	-0.009	38452	63984			
C40	12.424	-0.002	27213	53913			
o-terph	6.779	0.012	1550	1830	JET-A (C10-C18)	64979	5.07
Triacon Surr	9.908	0.021	1094929	1619070			

M Indicates manual integration within range.

Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

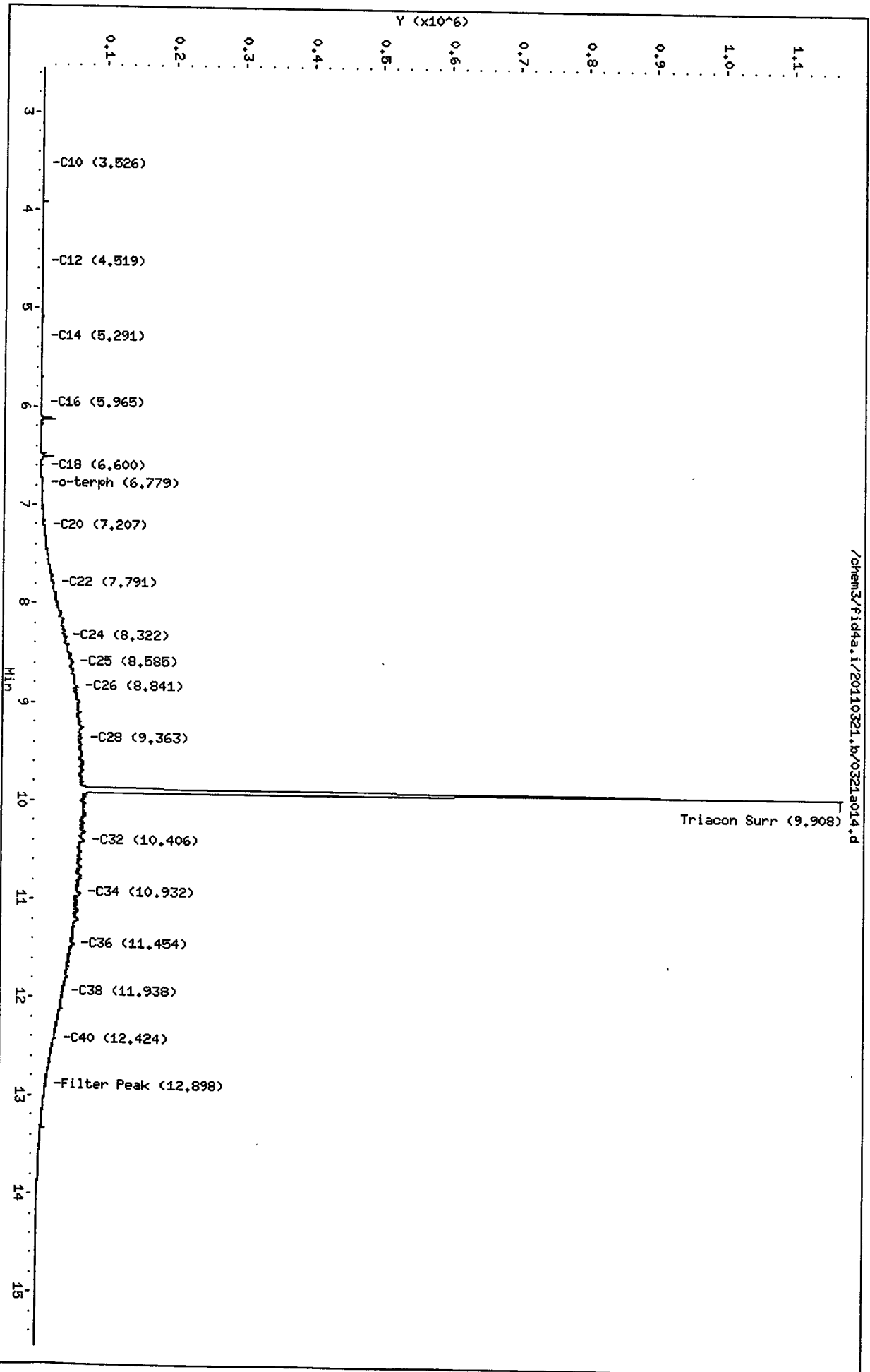
Surrogate	Area	Amount	%Rec
o-Terphenyl	1830	0.1	0.2
Triacontane	1619070	95.3	211.8

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010

Data File: /chem3/fid4a.i/20110321.b/0321a014.d  
Date: 21-MAR-2011 19:39  
Client ID: MOIL 1000  
Sample Info: MOIL 1000

Column phase: RTX-1

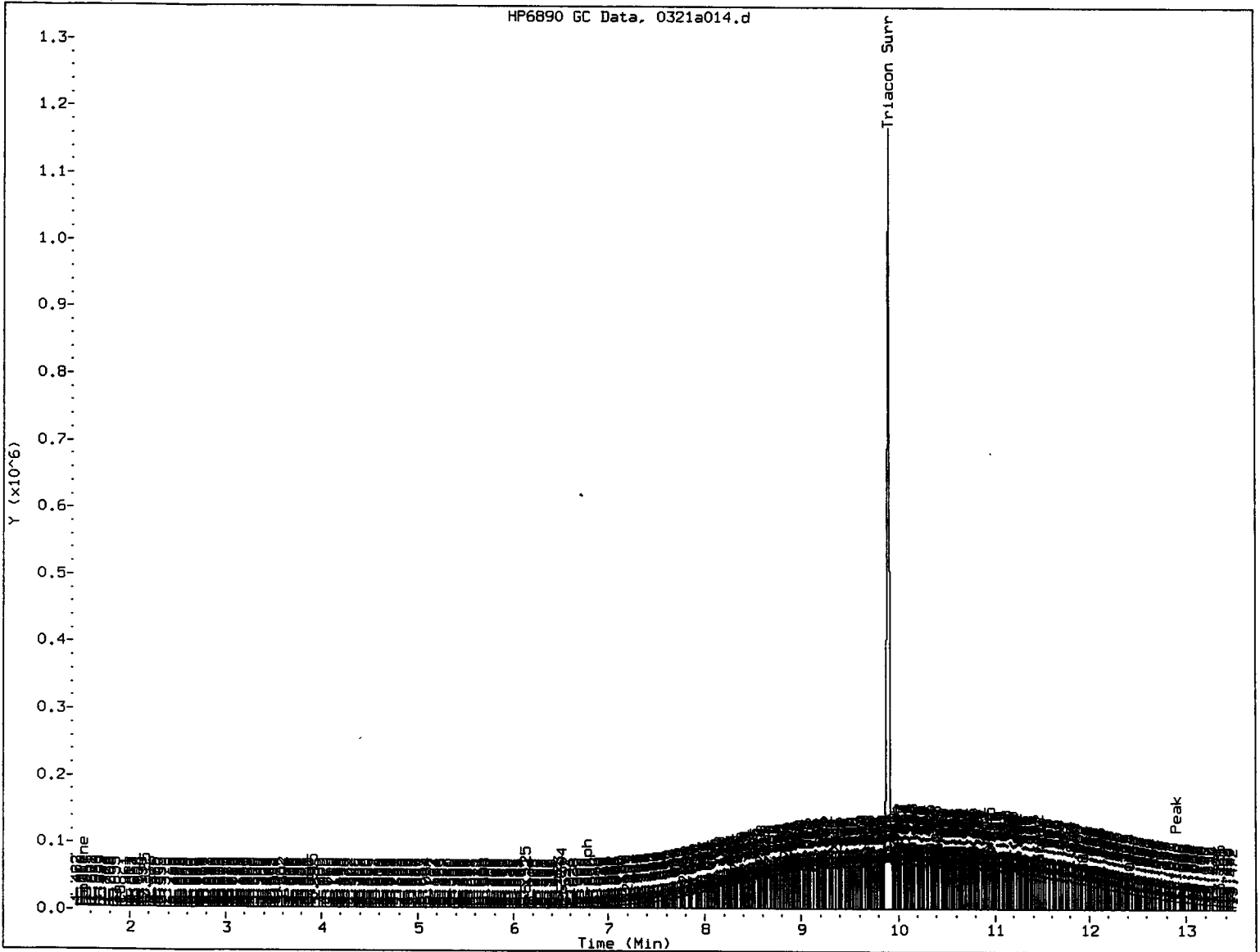
Instrument: fid4a.i  
Operator: HS  
Column diameter: 0.25



/chem3/fid4a.i/20110321.b/0321a014.d

01207 0571

HP6890 GC Data, 0321a014.d



MANUAL INTEGRATION

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

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

Analyst: AM

Date: 4/1/11

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110321.b/0321a015.d  
Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/01/2011  
Macro: 21-MAR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: MOIL 2500  
Client ID: MOIL 2500  
Injection: 21-MAR-2011 20:03  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.529	-0.006	1948	1922	GAS (Tol-C12)	48140	2.43
C8	1.913	0.015	448	1190	DIESEL (C12-C24)	3626494	182.75
C10	3.526	0.002	2110	1521	M.OIL (C24-C38)	29276943	2569.28
C12	4.517	-0.001	792	877	AK-102 (C10-C25)	4691901	212.06
C14	5.290	-0.002	791	572	AK-103 (C25-C36)	25383690	3677.69 M
C16	5.966	-0.003	705	775			
C18	6.601	-0.005	2449	2641	CRUDE (Tol-C40)	34608439	4582.23 M
C20	7.209	-0.004	13221	16443	MIN.OIL (C24-C38)	29276943	2183.88 M
C22	7.791	0.005	46028	62839			
C24	8.328	0.004	93082	125024			
C25	8.580	-0.001	119963	72455			
C26	8.830	-0.002	134816	73781			
C28	9.341	-0.006	158526	165413			
C32	10.411	0.005	165122	45582			
C34	10.930	-0.003	146655	117837	CREOSOT (C12-C22)	1369980	488.81
Filter Peak	12.899	-0.006	22143	23636			
C36	11.450	0.001	123788	110812			
C38	11.949	0.003	87259	187338			
C40	12.416	-0.010	51423	58312			
o-terph	6.755	-0.012	3461	5225	JET-A (C10-C18)	136534	10.66
Triacon Surr	9.942	0.055	1851875	4043811			

M Indicates manual integration within range.

Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

Surrogate	Area	Amount	%Rec
o-Terphenyl	5225	0.3	0.7
Triacontane	4043811	238.1	529.0

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010

Data File: /chem3/fid4a.i/20110321.b/0321a015.d

Date: 21-MAR-2011 20:03

Client ID: H01L 2500

Sample Info: H01L 2500

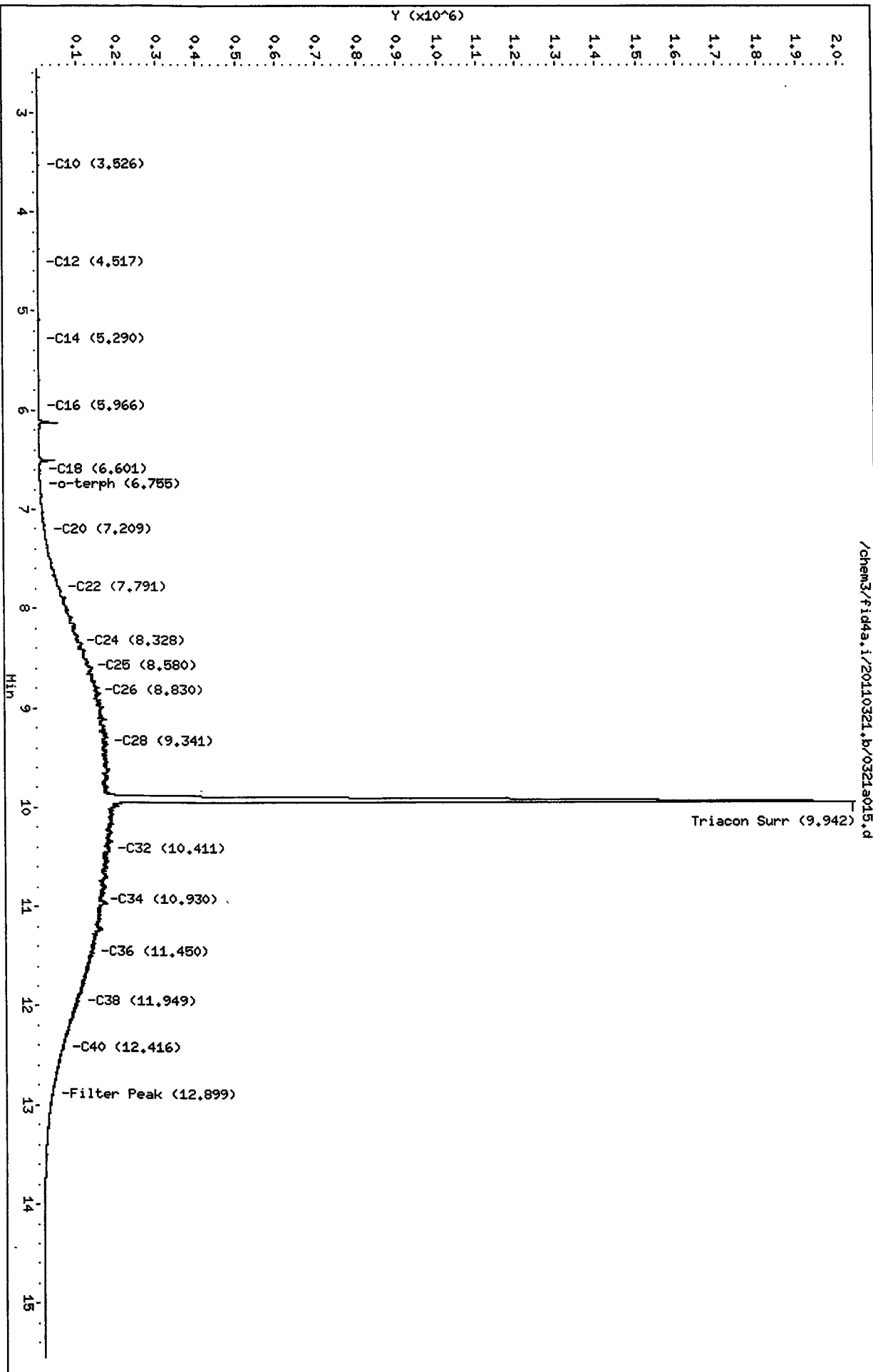
Column phase: RTX-1

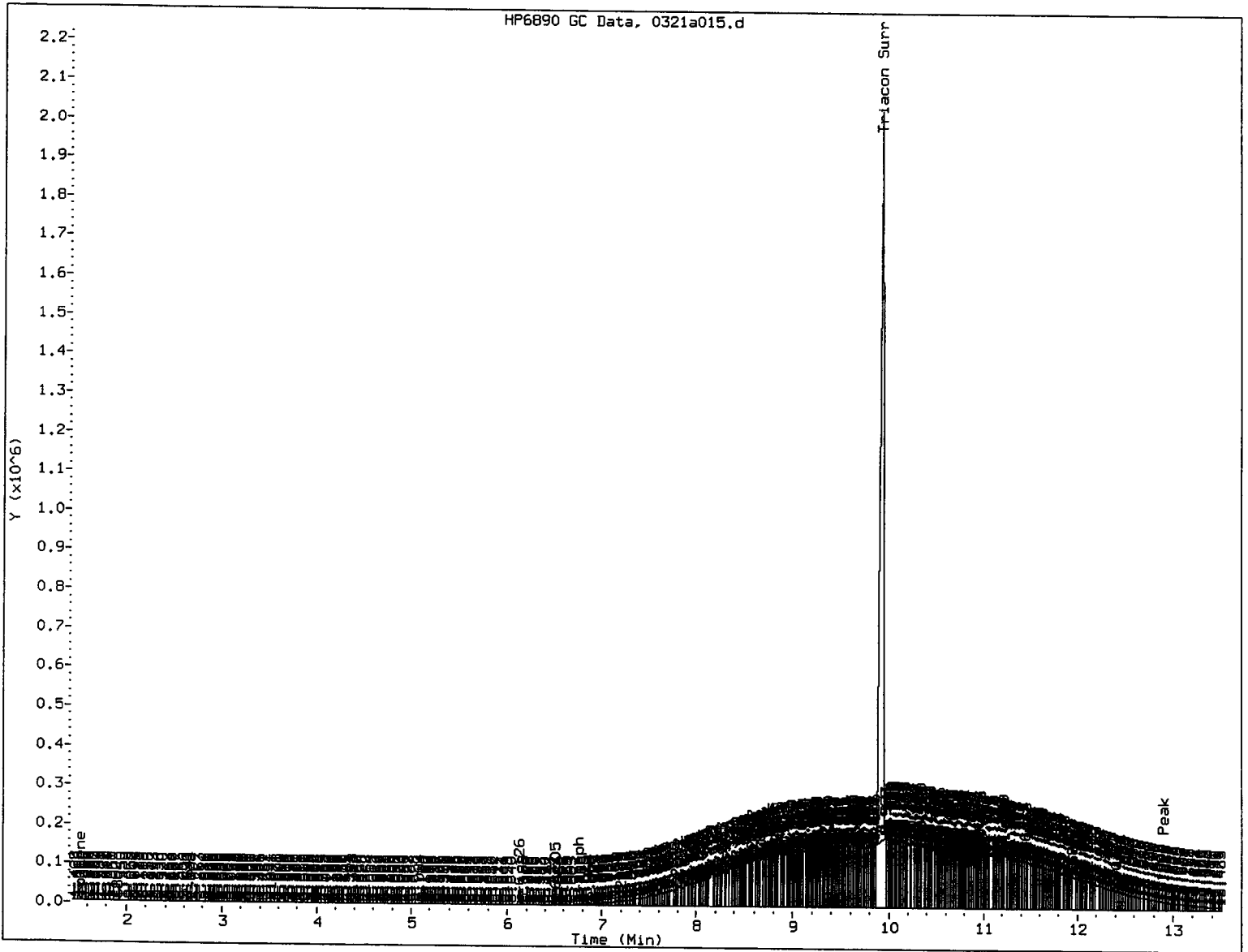
Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

/chem3/fid4a.i/20110321.b/0321a015.d





MANUAL INTEGRATION

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

Analyst:                     

Date:



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110321.b/0321a016.d  
Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/01/2011  
Macro: 21-MAR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: MOIL 5000  
Client ID: MOIL 5000  
Injection: 21-MAR-2011 20:27  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.540	0.005	3368	2972	GAS (Tol-C12)	66886	3.38
C8	1.919	0.021	531	1395	DIESEL (C12-C24)	7567830	381.37
C10	3.525	0.001	4314	2905	M.OIL (C24-C38)	53869616	4727.48
C12	4.517	0.000	2113	2634	AK-102 (C10-C25)	9530836	430.77
C14	5.290	-0.002	1970	1707	AK-103 (C25-C36)	48109167	6970.24 M
C16	5.965	-0.004	1730	2035			
C18	6.601	-0.005	5338	5072	CRUDE (Tol-C40)	63373123	8390.73 M
C20	7.210	-0.003	28030	33082	MIN.OIL (C24-C38)	53869616	4018.35 M
C22	7.784	-0.003	89174	66437			
C24	8.316	-0.008	184066	166356			
C25	8.585	0.004	244122	230741			
C26	8.824	-0.007	274420	290298			
C28	9.352	0.004	314168	307678			
C32	10.405	-0.001	307093	298434			
C34	10.942	0.008	255188	175558	CREOSOT (C12-C22)	2776165	990.54
Filter Peak	12.902	-0.003	20315	11964			
C36	11.460	0.011	191400	166230			
C38	11.952	0.006	112466	137463			
C40	12.430	0.004	50949	69622			
o-terph	6.755	-0.012	7105	9613	JET-A (C10-C18)	278840	21.77
Triacon Surr	9.976	0.089	2630602	7587358			

M Indicates manual integration within range.

Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

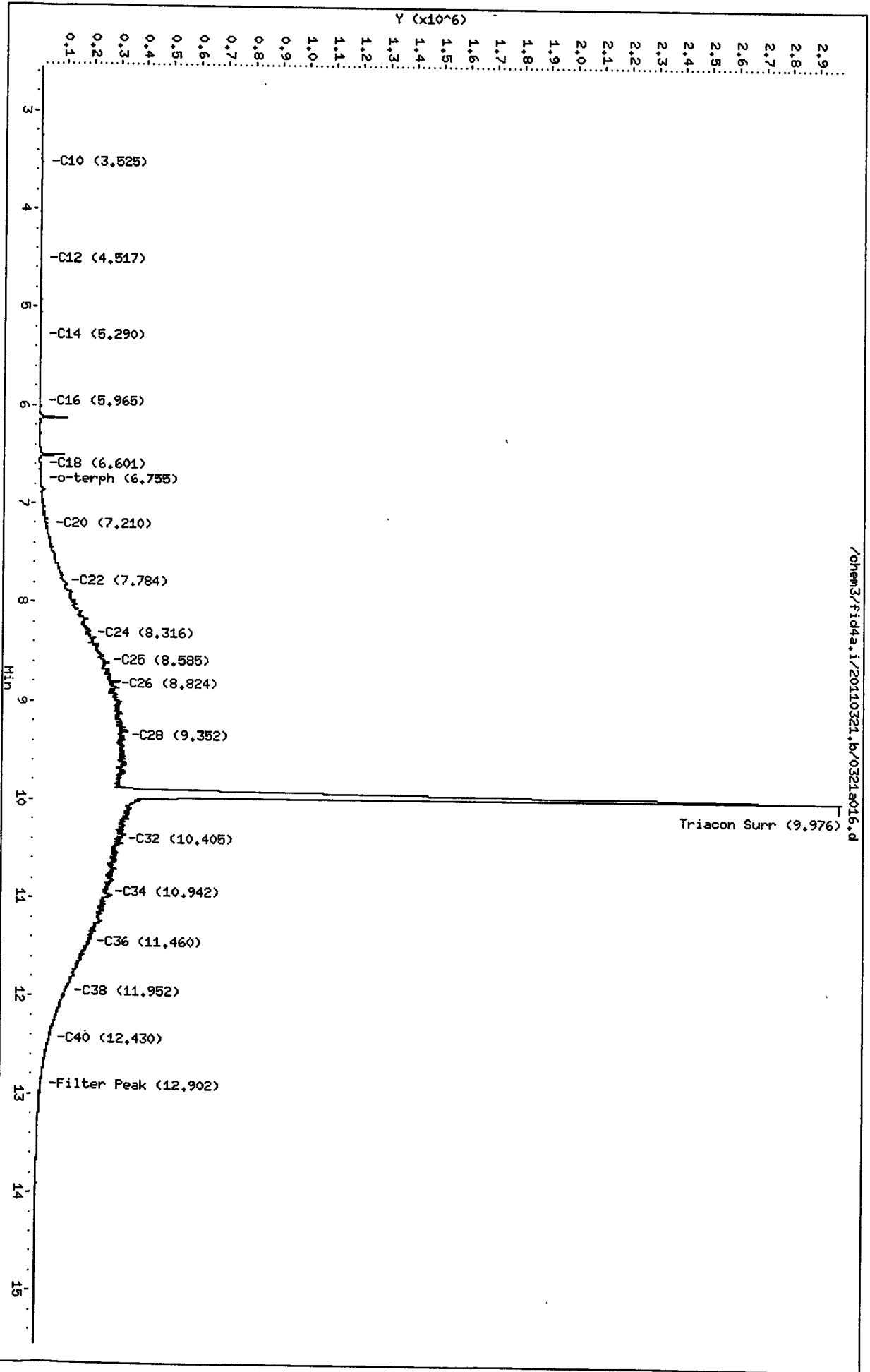
Surrogate	Area	Amount	%Rec
o-Terphenyl	9613	0.6	1.2
Triacontane	7587358	446.7	992.6

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010

Data File: /chem3/fid4a.i/20110321.b/0321a016.d  
Date: 21-MAR-2011 20:27  
Client ID: MOIL 5000  
Sample Info: MOIL 5000

Column phase: RTX-1

Instrument: fid4a.i  
Operator: HS  
Column diameter: 0.25



00010001 5571



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110321.b/0321a017.d  
Method: /chem3/fid4a.i/20110321.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/01/2011  
Macro: 21-MAR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: MOIL ICV  
Client ID:  
Injection: 21-MAR-2011 20:50  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.531	-0.004	824	673	GAS (Tol-C12)	34935	1.77
C8	1.908	0.010	408	735	DIESEL (C12-C24)	818020	41.22
C10	3.527	0.003	444	446	M.OIL (C24-C38)	6382995	560.16
C12	4.523	0.006	61	60	AK-102 (C10-C25)	1038052	46.92
C14	5.295	0.004	94	106	AK-103 (C25-C36)	5523573	800.28 M
C16	5.965	-0.003	163	189			
C18	6.601	-0.005	636	875	CRUDE (Tol-C40)	7736532	1024.33 M
C20	7.208	-0.005	3025	4049	MIN.OIL (C24-C38)	6382995	476.13 M
C22	7.791	0.004	9522	13859			
C24	8.322	-0.002	19319	25462			
C25	8.584	0.003	25141	15761			
C26	8.834	0.003	28472	12736			
C28	9.347	-0.001	31435	8701			
C32	10.394	-0.013	58685	114695			
C34	10.939	0.006	33836	26557	CREOSOT (C12-C22)	310457	110.77
Filter Peak	12.910	0.005	7931	6796			
C36	11.461	0.011	44462	102907			
C38	11.953	0.007	20786	19760			
C40	12.421	-0.005	19499	45488			
o-terph	6.756	-0.011	1095	1177	JET-A (C10-C18)	41076	3.21
Triacon Surr	9.893	0.006	715319	843657			

M Indicates manual integration within range.

Range Times: NW Diesel(4.517 - 8.324) AK102(3.52 - 8.58) Jet A(3.52 - 6.61)  
NW M.Oil(8.32 - 11.95) AK103(8.58 - 11.45) OR Diesel(3.52 - 9.35)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1177	0.1	0.2
Triacontane	843657	49.7	110.4

Analyte	RF	Curve Date
o-Terph Surr	17380.2	21-MAR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	12809.9	11-FEB-2011
Min Oil	13405.9	18-JAN-2011
CRUDE	7552.8	22-MAY-2010
Bunker C	7401.6	22-DEC-2010
Creosote	2802.7	21-JAN-2010

Data File: /chem3/fid4a.i/20110321.b/0321a017.d  
Date: 21-MAR-2011 20:50

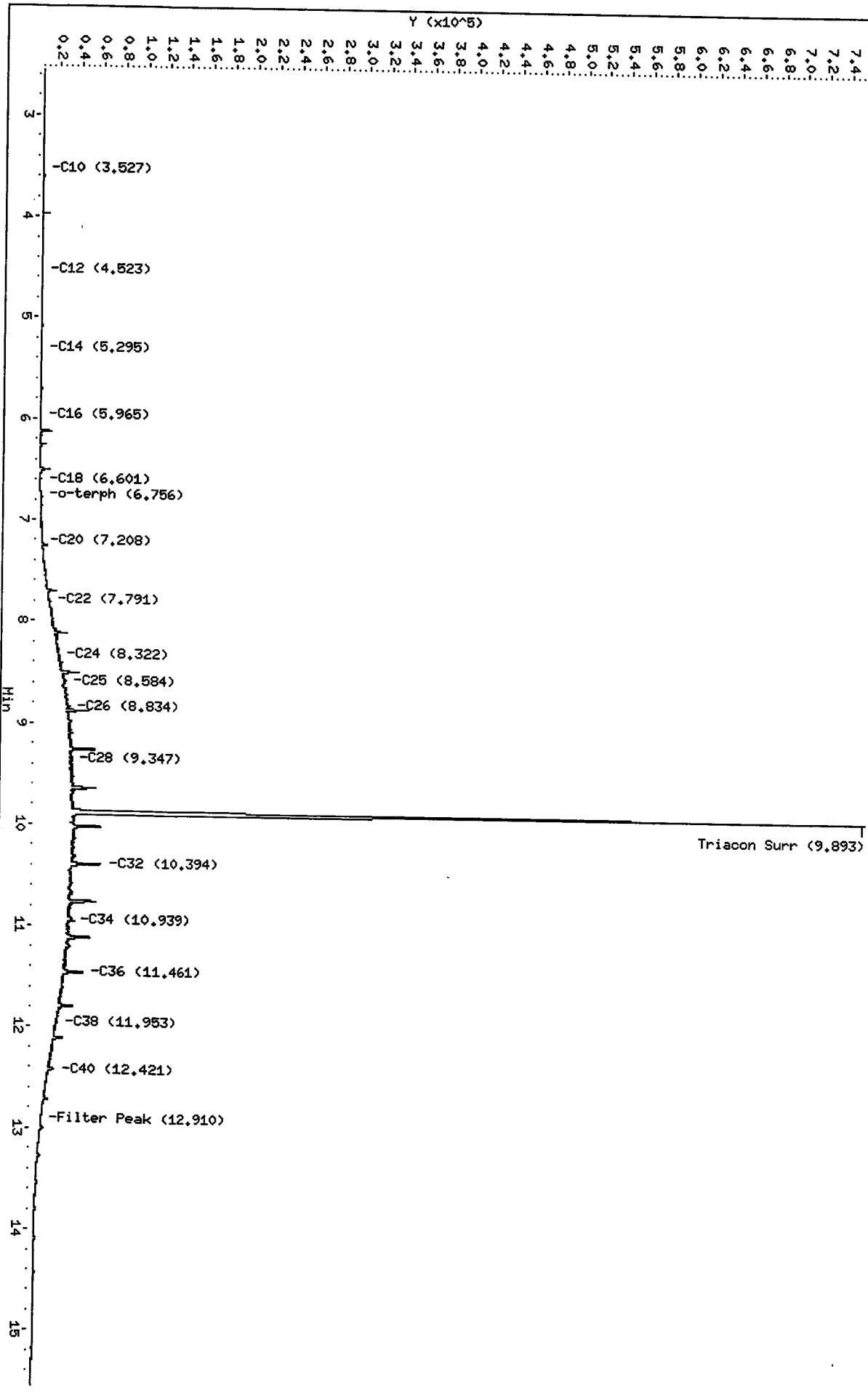
Client ID:  
Sample Info: HDIL ICV

Column phase: RTX-1

Instrument: fid4a.i

Operator: HS  
Column diameter: 0.25

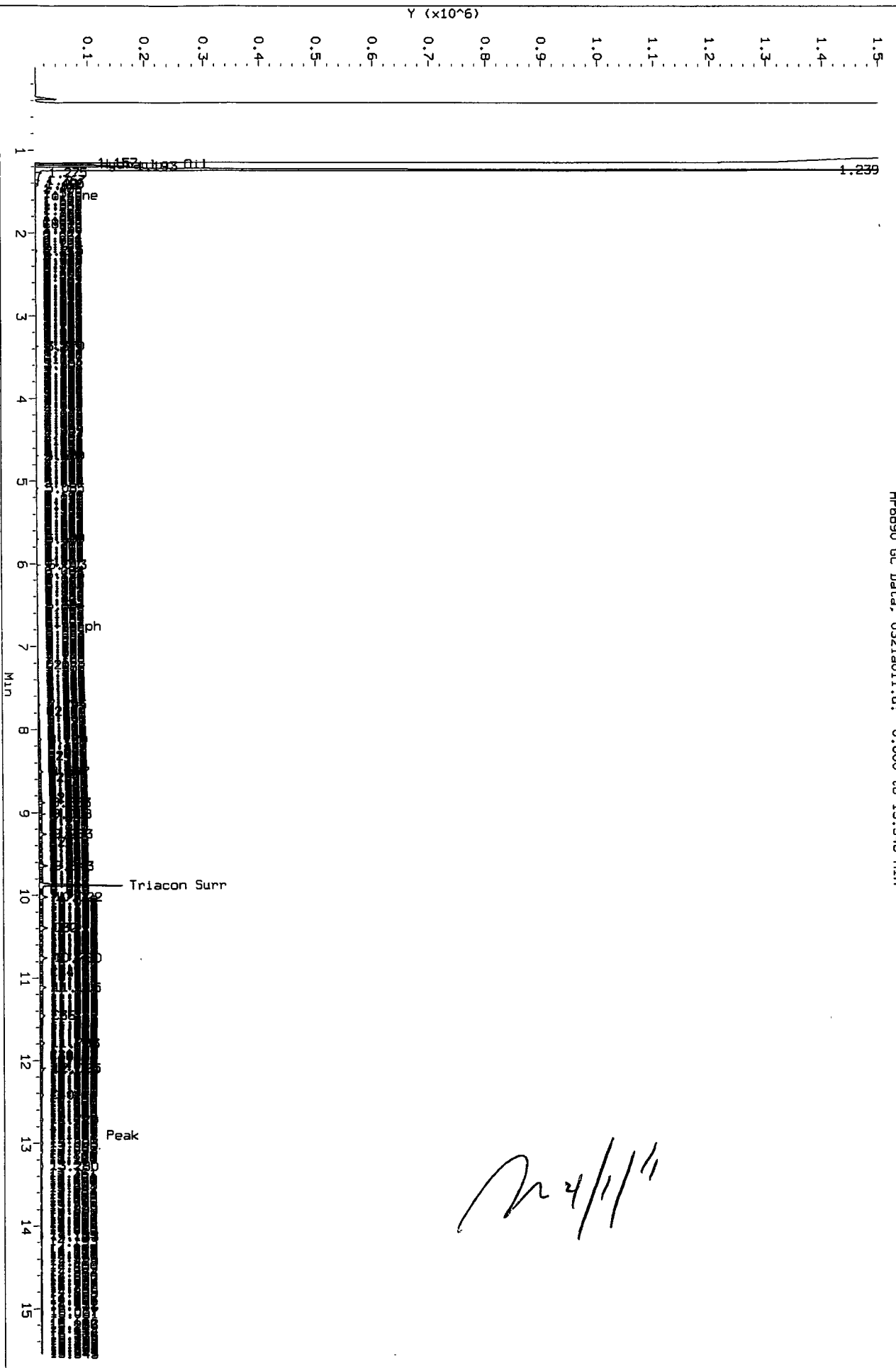
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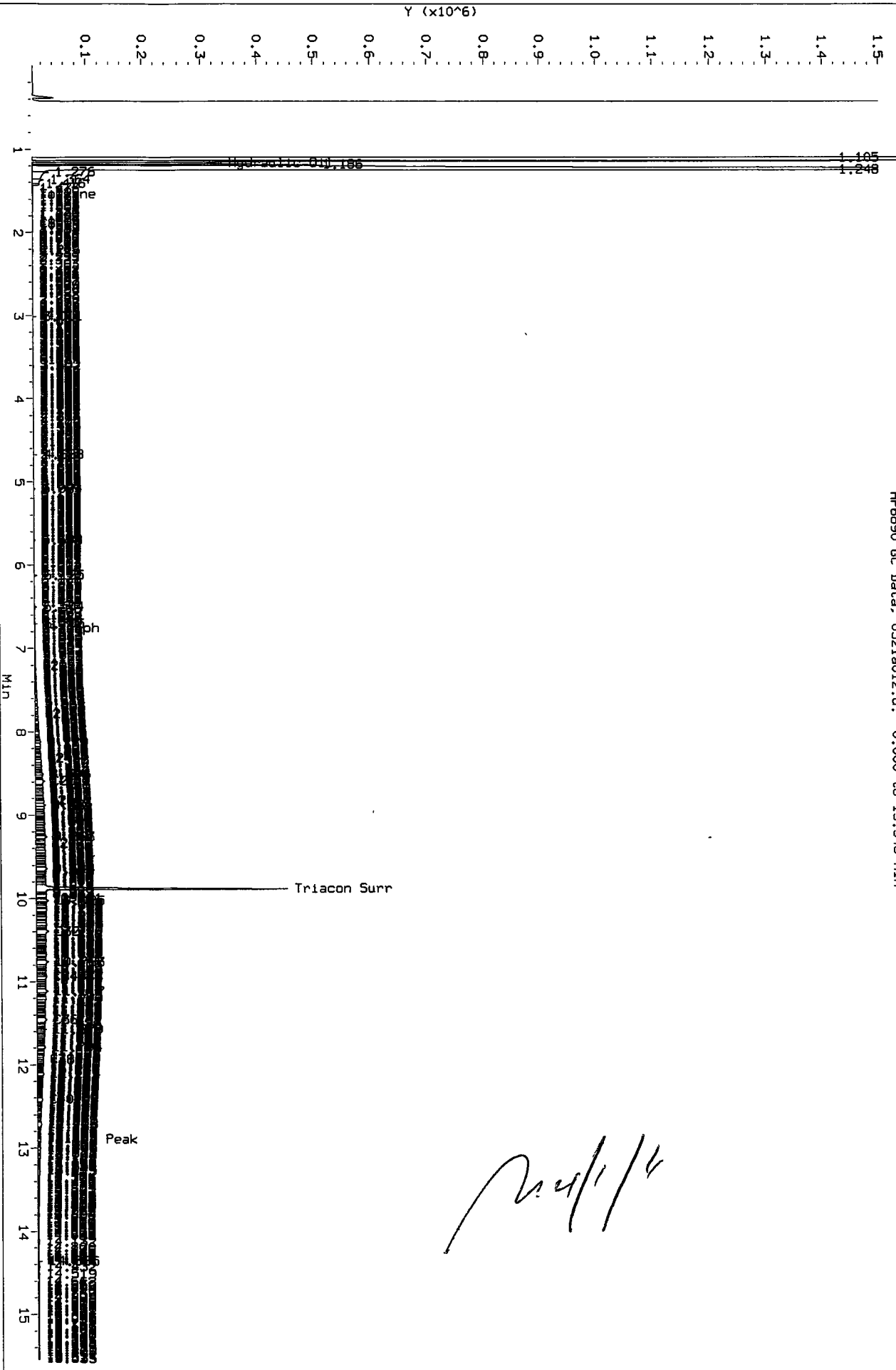
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Injection Date: 21-MAR-2011 18:28  
Instrument: fid4a.1  
Client Sample ID: M01L 100

HP6890 GC Data, 0321a011.d: 0.000 to 15.548 Min



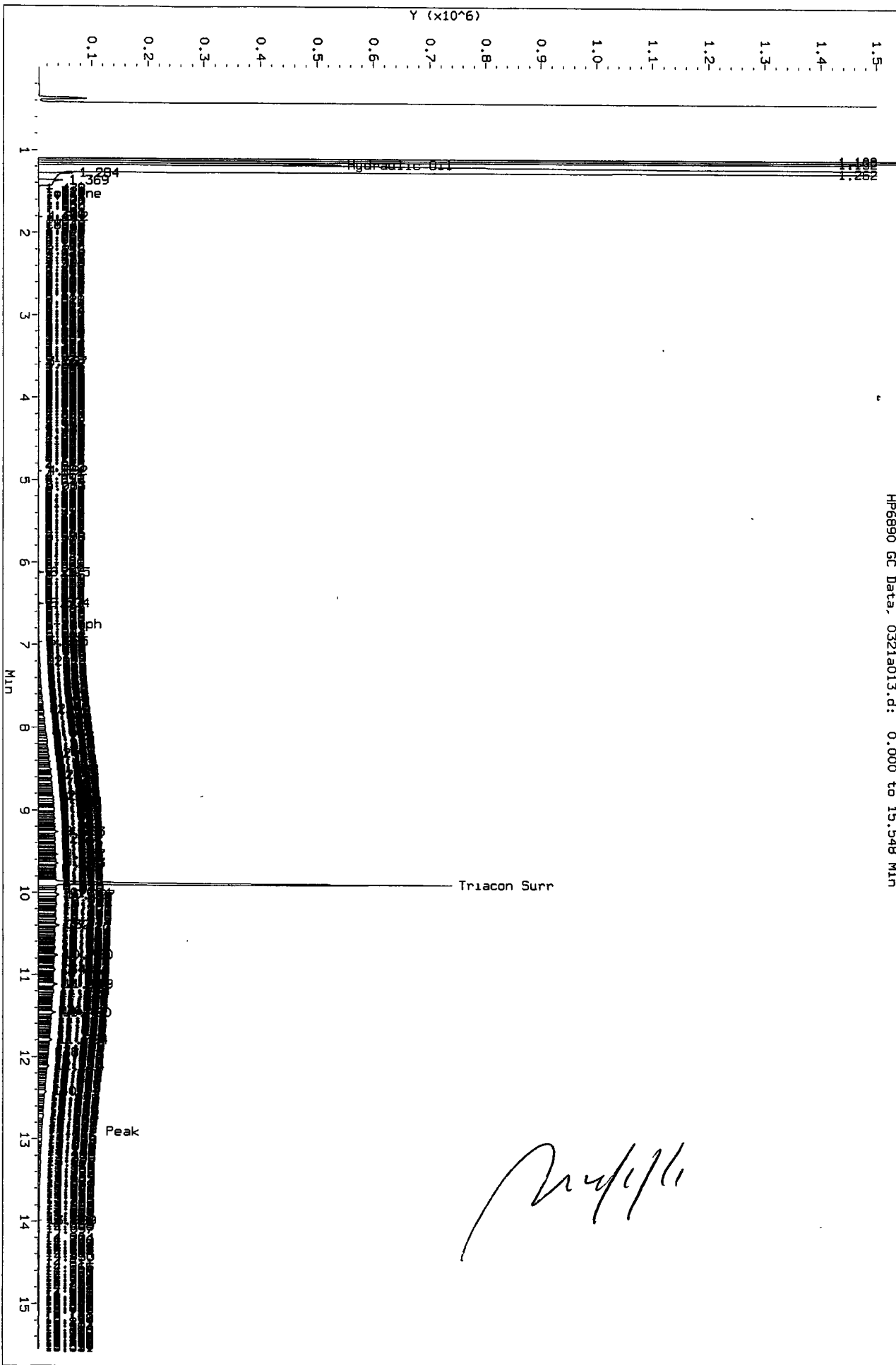
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Injection Date: 21-MAR-2011 18:52  
Instrument: fid4a.1  
Client Sample ID: M01L 250

HP6890 GC Data, 0321a012.d: 0.000 to 15.548 Min





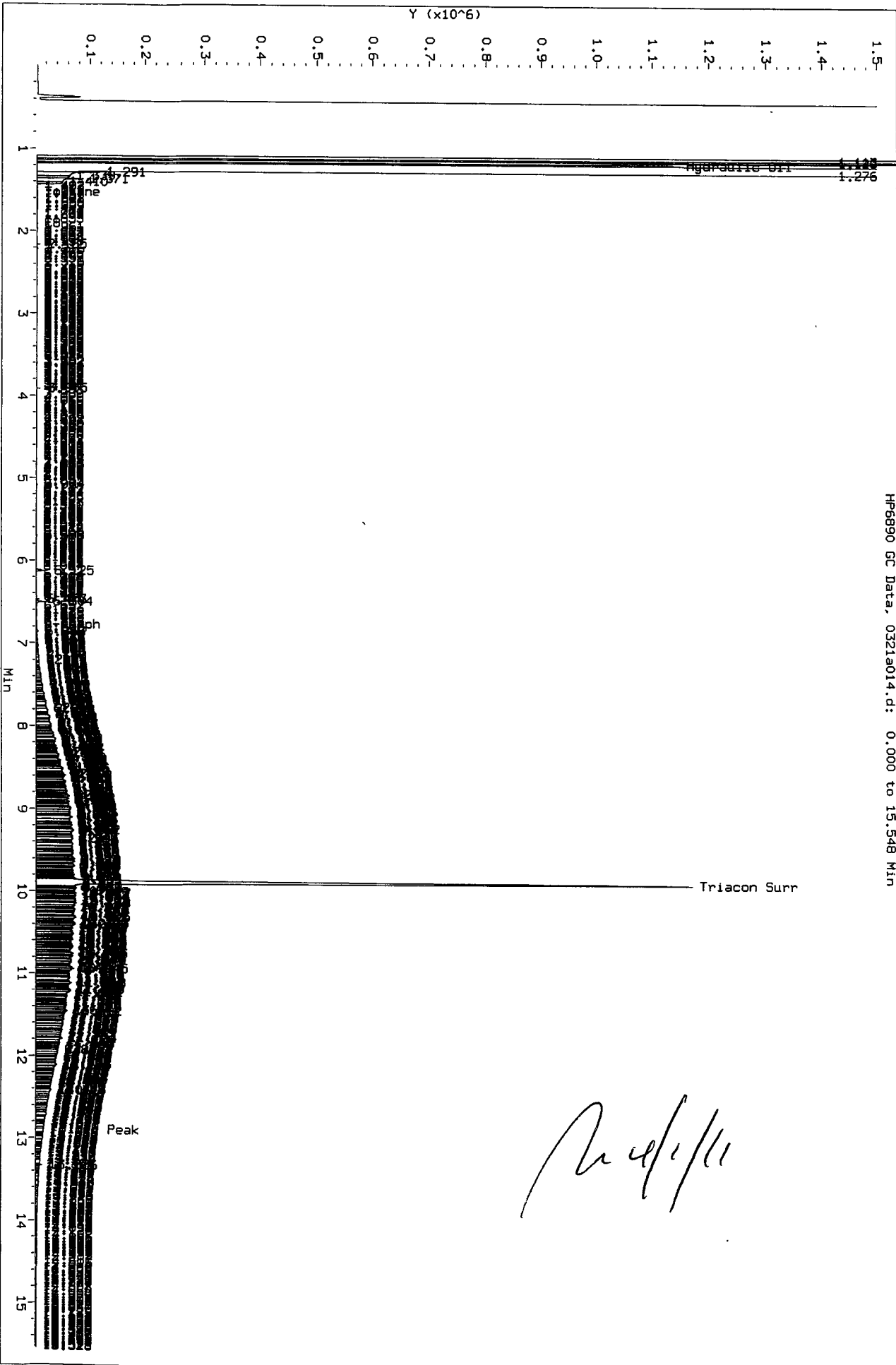
Data File: /chem3/fid4a.1/20110321.b/0321a013.d  
Injection Date: 21-MAR-2011 19:16  
Instrument: fid4a.1  
Client Sample ID: M01L 500



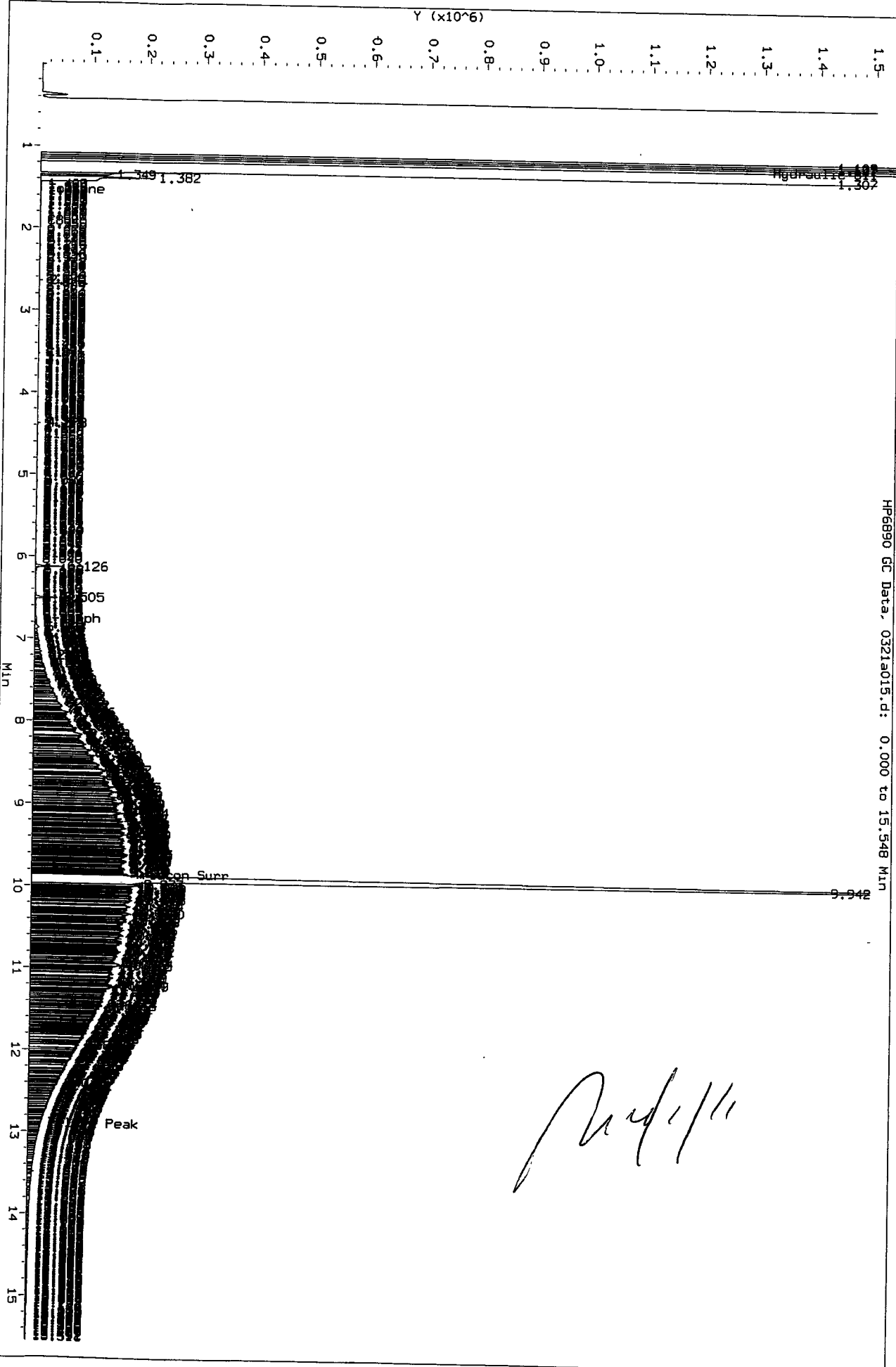
HP6890 GC Data, 0321a013.d: 0.000 to 15.548 Min

Data File: /chem3/fid4a.1/20110321.b/0321a014.d  
Injection Date: 21-MAR-2011 19:39  
Instrument: fid4a.1  
Client Sample ID: MOIL 1000

HP6890 GC Data, 0321a014.d: 0.000 to 15.548 Min



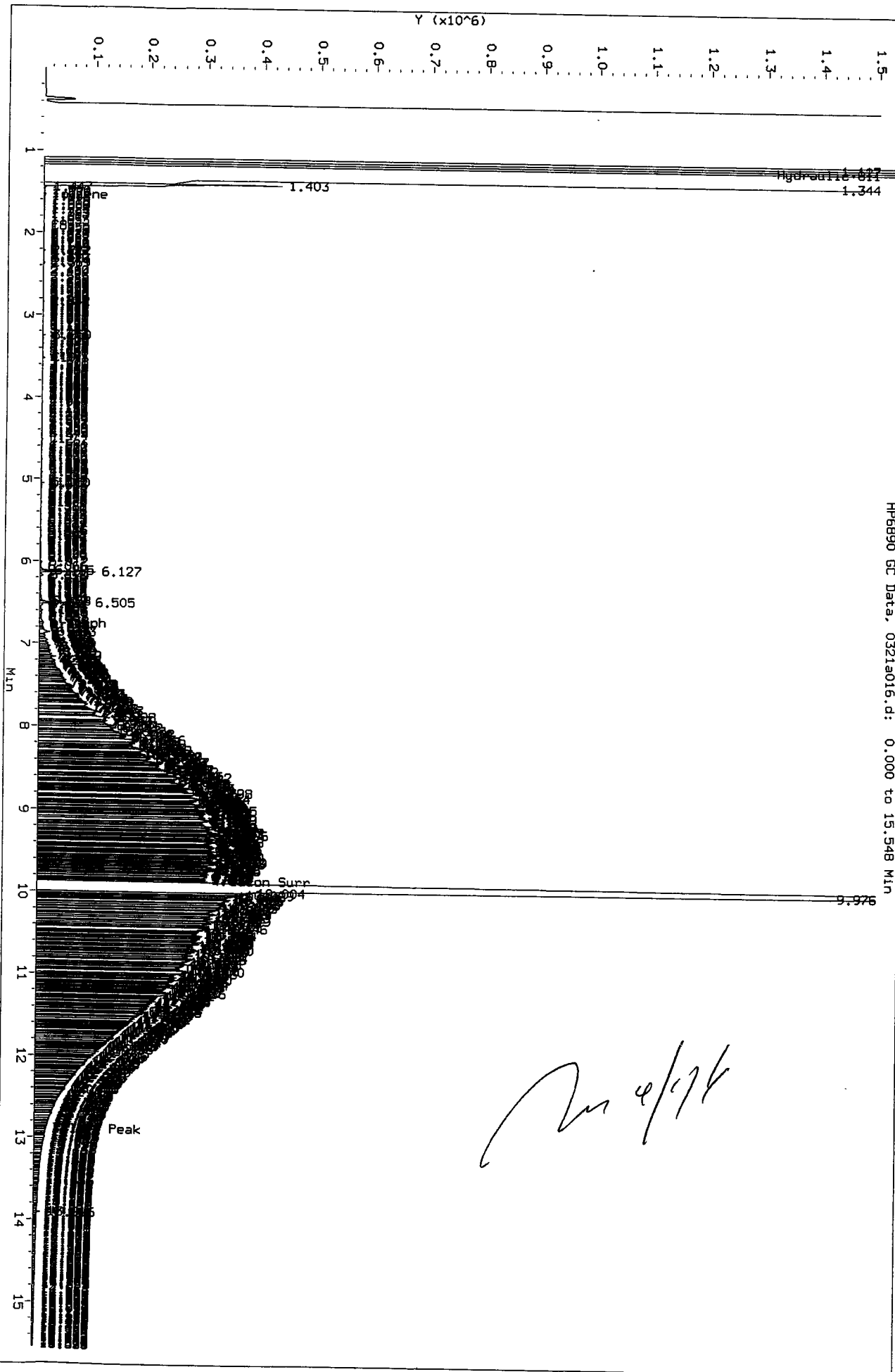
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Injection Date: 21-MAR-2011 20:03  
Instrument: fid4a.1  
Client Sample ID: M01L 2500



HP6890 GC Data, 0321a015.d: 0.000 to 15.548 Min

*Handwritten signature*

Data File: /chem3/fid4a.1/20110321.b/0321a016.d  
Injection Date: 21-MAR-2011 20:27  
Instrument: fid4a.1  
Client Sample ID: M01L 5000



HP6890 GC Data, 0321a016.d: 0.000 to 15.548 Min

*Handwritten signature*



**GC Analyst Notes / Corrective Action Log**

ARI Project ID: Jet-A, o-Terph. CURVE Client ID: ARI.

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

Parameter(s): Jet-A, o-Terphenyl

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

Dates: Curve: 4/13/11 Analysis Start: 4/13/11

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

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

*o-Terphenyl was curved from the Jet-A curve mix.  
m 4/21/11*

Additional Details on Reverse: Yes / No

Analyst: m for m.a./d.r. Date: 4/21/11

Reviewer: [Signature] Date: 4/21/11

# Analytical Resources Inc.: Organics Instrument Log

FID-4A Serial No.: US0003247

Date: 4/13/11 Analysis: NWTPHD Analyst: MH  
 GC Program: TPH Column No: 977444 Column Type: RTX-1  
 Instrument Tune (.U or .CT.): \_\_\_\_\_ EM Voltage: \_\_\_\_\_  
 Calibration File: \_\_\_\_\_ Curve Date: 3/21/11

IS/SS	Ical/Ccal	LCS/ICV
<del>_____</del>	<u>1786-1</u>	<del>_____</del>
<del>_____</del>	<u>1751-2</u>	<del>_____</del>
<del>_____</del>	<u>1777-3</u>	<del>_____</del>
<del>_____</del>	<u>1775-2</u>	<del>_____</del>
<del>_____</del>	<u>MH 4/11</u>	<del>_____</del>

Inject	Date/Time	Filename	DF	LabID
1	13-APR-2011 04:39	0413a001.d	1	RINSE
2	13-APR-2011 05:26	0413a003.d	1	RINSE
3	13-APR-2011 05:49	0413a004.d	1	RT
4	13-APR-2011 06:12	0413a005.d	1	IB
5	13-APR-2011 06:35	0413a006.d	1	RINSE
6	13-APR-2011 06:59	0413a007.d	1	JET 50
7	13-APR-2011 07:22	0413a008.d	1	JET 100
8	13-APR-2011 07:46	0413a009.d	1	JET 250
9	13-APR-2011 08:09	0413a010.d	1	JET 500
10	13-APR-2011 08:33	0413a011.d	1	JET 1000
11	13-APR-2011 08:56	0413a012.d	1	JET 2500
12	13-APR-2011 09:20	0413a013.d	1	JETA 1695-1
13	13-APR-2011 09:43	0413a014.d	1	DIESEL#1
14	13-APR-2011 10:07	0413a015.d	1	MOIL#1
15	13-APR-2011 10:31	0413a016.d	1	JETA#1
16	13-APR-2011 10:54	0413a017.d	1	SQ44MBW1
17	13-APR-2011 11:18	0413a018.d	1	DIESEL#2
18	13-APR-2011 11:41	0413a019.d	1	MOIL#2
19	13-APR-2011 12:05	0413a020.d	1	JETA#2
20	13-APR-2011 12:28	0413a021.d	1	I6279
21	13-APR-2011 12:52	0413a022.d	1	SQ44MBW1
22	13-APR-2011 13:16	0413a023.d	1	SQ44LCSW1
23	13-APR-2011 13:40	0413a024.d	1	SQ44LCSW1
24	13-APR-2011 14:04	0413a025.d	1	SQ66A
25	13-APR-2011 14:28	0413a026.d	1	SQ66B
26	13-APR-2011 14:51	0413a027.d	1	SQ66C
27	13-APR-2011 15:15	0413a028.d	1	DIESEL#3
28	13-APR-2011 15:39	0413a029.d	1	MOIL#3
29	13-APR-2011 16:03	0413a030.d	1	JETA#3
30	13-APR-2011 16:26	0413a031.d	1	SQ440
31	13-APR-2011 16:50	0413a032.d	1	SQ62G
32	13-APR-2011 17:14	0413a033.d	1	SQ54A
33	13-APR-2011 17:38	0413a034.d	1	DIESEL#4
34	13-APR-2011 18:01	0413a035.d	1	MOIL#4
35	13-APR-2011 18:25	0413a036.d	1	SQ00MBS1
36	13-APR-2011 18:48	0413a037.d	1	SQ00LCSS1
37	13-APR-2011 19:12	0413a038.d	1	SQ00LCSDS1
38	13-APR-2011 19:35	0413a039.d	1	SQ00QLS
39	13-APR-2011 19:59	0413a040.d	1	SQ00A
40	13-APR-2011 20:23	0413a041.d	1	SQ00B
41	13-APR-2011 20:46	0413a042.d	1	SQ00C
42	13-APR-2011 21:10	0413a043.d	1	SQ00D
43	13-APR-2011 21:34	0413a044.d	1	SQ00E
44	13-APR-2011 21:58	0413a045.d	1	SQ00F
45	13-APR-2011 22:21	0413a046.d	1	DIESEL#5
46	13-APR-2011 22:45	0413a047.d	1	MOIL#5
47	14-APR-2011 23:09	0413a048.d	1	SQ53MBS1
48	14-APR-2011 23:33	0413a049.d	1	SQ53LCSS1
49	14-APR-2011 23:56	0413a050.d	1	SQ53QLS
50	14-APR-2011 00:20	0413a051.d	1	SQ53A
<b>Maintenance 1</b>	51	14-APR-2011 00:44	1	DIESEL#6
	52	14-APR-2011 01:07	1	MOIL#6

*[Large handwritten scribble covering the right side of the table]*

MH  
4/14/11

Diesel #3 Surv low by 0.1% Samples re-run from Diesel #2 to MOIL #4.

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

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20110413.b

ARI Job No.: RT Method: ftphfid4a.m Instrument: fid4a.i Date: 13-APR-2011

Time Filename LabID ClientId DF Manually Integrated Compounds

0549 0413a004.d RT 1 C28,

0612 0413a005.d IB 1 NO MANUAL INTEGRATION

0659 0413a007.d JET 50 1 NO MANUAL INTEGRATION

0722 0413a008.d JET 100 1 NO MANUAL INTEGRATION

0746 0413a009.d JET 250 1 NO MANUAL INTEGRATION

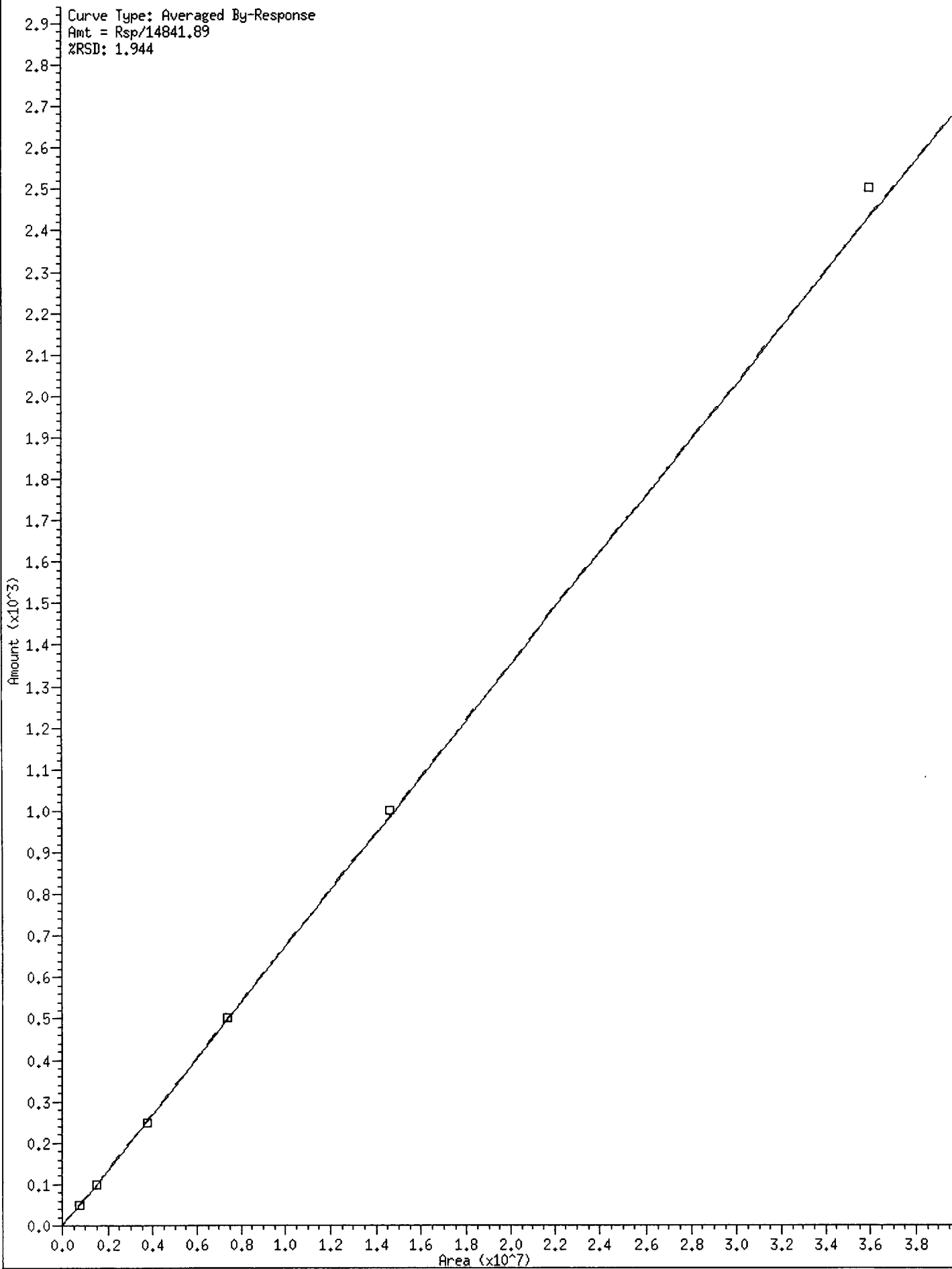
0809 0413a010.d JET 500 1 NO MANUAL INTEGRATION

0833 0413a011.d JET 1000 1 NO MANUAL INTEGRATION

0856 0413a012.d JET 2500 1 NO MANUAL INTEGRATION

36 JetA

Curve Type: Averaged By-Response  
Amt = Rsp/14841.89  
%RSD: 1.944

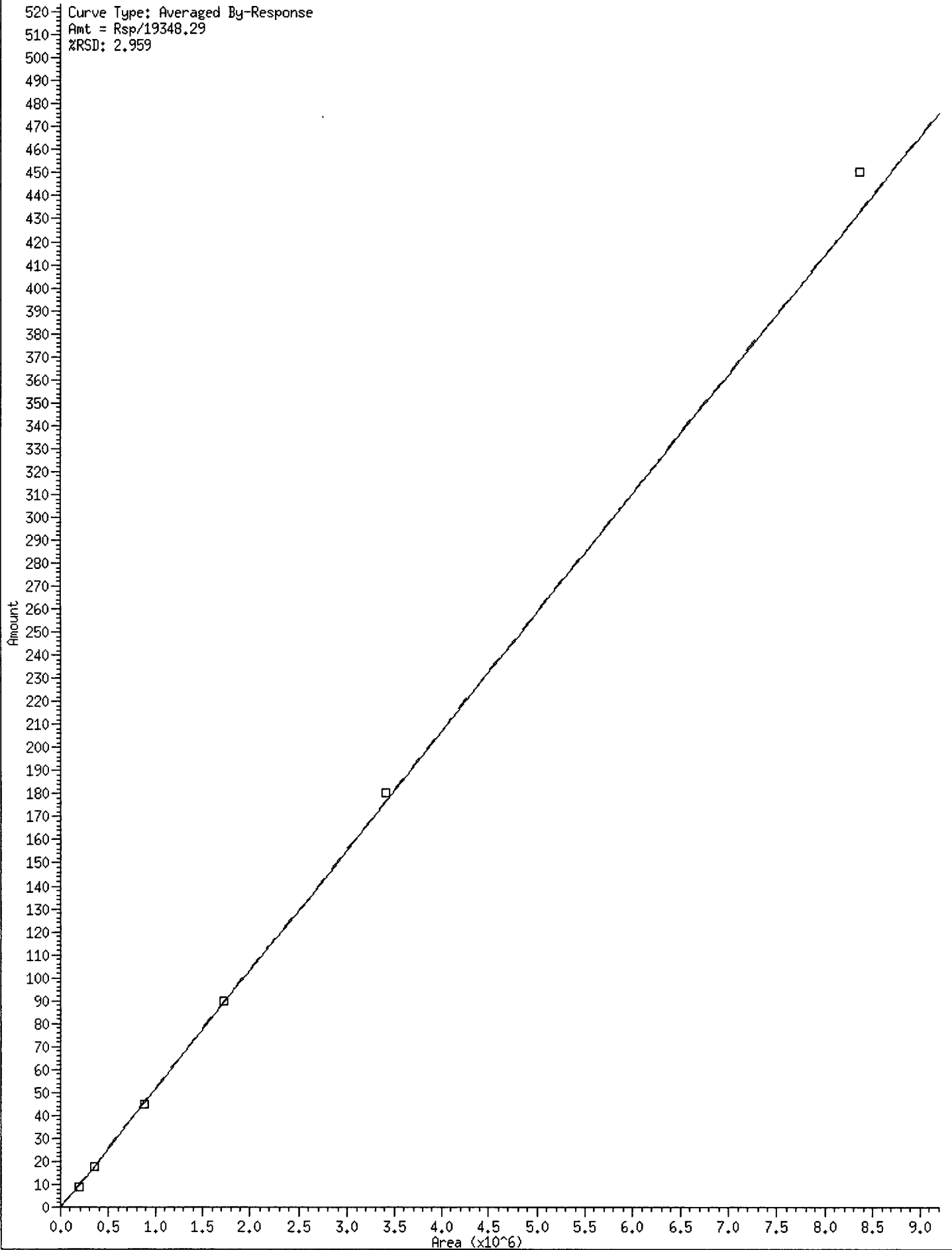


S571 . 01317



\* 8 o-terph

Curve Type: Averaged By-Response  
Amt = Rsp/19348.29  
%RSD: 2.959





Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20110413.b/ftphfid4a.m  
Batch File: /chem3/fid4a.i/20110413.b  
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 C26	8.829	8.830	8.823	8.831	8.821	8.822	8.824	8.774-8.874	8.826	0.005
14 C28	9.315	9.297	9.289	9.308	9.315	9.305	9.339	9.289-9.389	9.305	0.010
15 Triacon Surr	9.883	9.882	9.882	9.877	9.881	9.880	9.882	9.832-9.932	9.881	0.002
16 C32	10.381	10.382	10.381	10.382	10.384	10.381	10.400	10.350-10.450	10.382	0.001
17 C34	10.920	10.923	10.926	10.921	10.924	10.925	10.929	10.879-10.979	10.923	0.002
18 Filter Peak	12.853	12.863	12.866	12.858	12.867	12.865	12.863	12.763-12.963	12.862	0.006
19 C36	11.445	11.448	11.446	11.445	11.449	11.444	11.444	11.394-11.494	11.446	0.002
20 C38	11.951	11.933	11.937	11.941	11.950	11.937	11.942	11.892-11.992	11.941	0.007
21 C40	12.405	12.406	12.407	12.405	12.409	12.405	12.421	12.371-12.471	12.406	0.002
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.687	0.637-0.737	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.660	0.610-0.710	+++++	+++++
30 NW MO1	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MO1 103	+++++	+++++	+++++	+++++	+++++	+++++	0.612	0.562-0.662	+++++	+++++

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110413.b/0413a004.d  
Method: /chem3/fid4a.i/20110413.b/ftphfid4a.m  
Instrument: fid4a.i

ARI ID: RT  
Client ID:  
Injection: 13-APR-2011 05:49

Operator: MH  
Report Date: 04/21/2011  
Macro: 13-APR-2011

Dilution Factor: 1

Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.523	0.000	510172	367936	GAS (Tol-C12)	1206909	60.98
C8	1.885	0.000	221798	220364	DIESEL (C12-C24)	1774402	89.42
C10	3.522	0.000	449616	268154	M.OIL (C24-C38)	2348340	206.09
C12	4.514	0.000	406909	273093	AK-102 (C10-C25)	2354117	106.40
C14	5.288	0.000	387267	270892	AK-103 (C25-C36)	2039398	295.48
C16	5.964	0.000	369186	267918			
C18	6.601	0.000	337013	260658			
C20	7.208	0.000	337353	254959			
C22	7.781	0.000	343471	260514	MSPIRIT (Tol-C12)	1206909	65.69
C24	8.318	0.000	379641	279024			
C25	8.574	0.000	499860	393174			
C26	8.824	0.000	362156	291195			
C28	9.339	0.000	341468	300117			
C32	10.400	0.000	302727	316223			
C34	10.929	0.000	277944	307774	CREOSOT (C12-C22)	1467104	360.36
Filter Peak	12.863	0.000	937	899			
C36	11.444	0.000	283915	321666			
C38	11.942	0.000	250494	272238			
C40	12.421	0.000	194977	236034			
o-terph	6.763	0.000	965106	860474	JET-A (C10-C18)	1405360	94.69
Triacon Surr	9.882	0.000	756487	933997			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.318) AK102(3.52 - 8.57) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.57 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	860474	44.5	98.8
Triacontane	933997	55.0	122.2

*MW 4/21/11*

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

Data File: /chem3/fid4a.i/20110413.b/0413a004.d

Date: 13-APR-2011 05:49

Client ID:

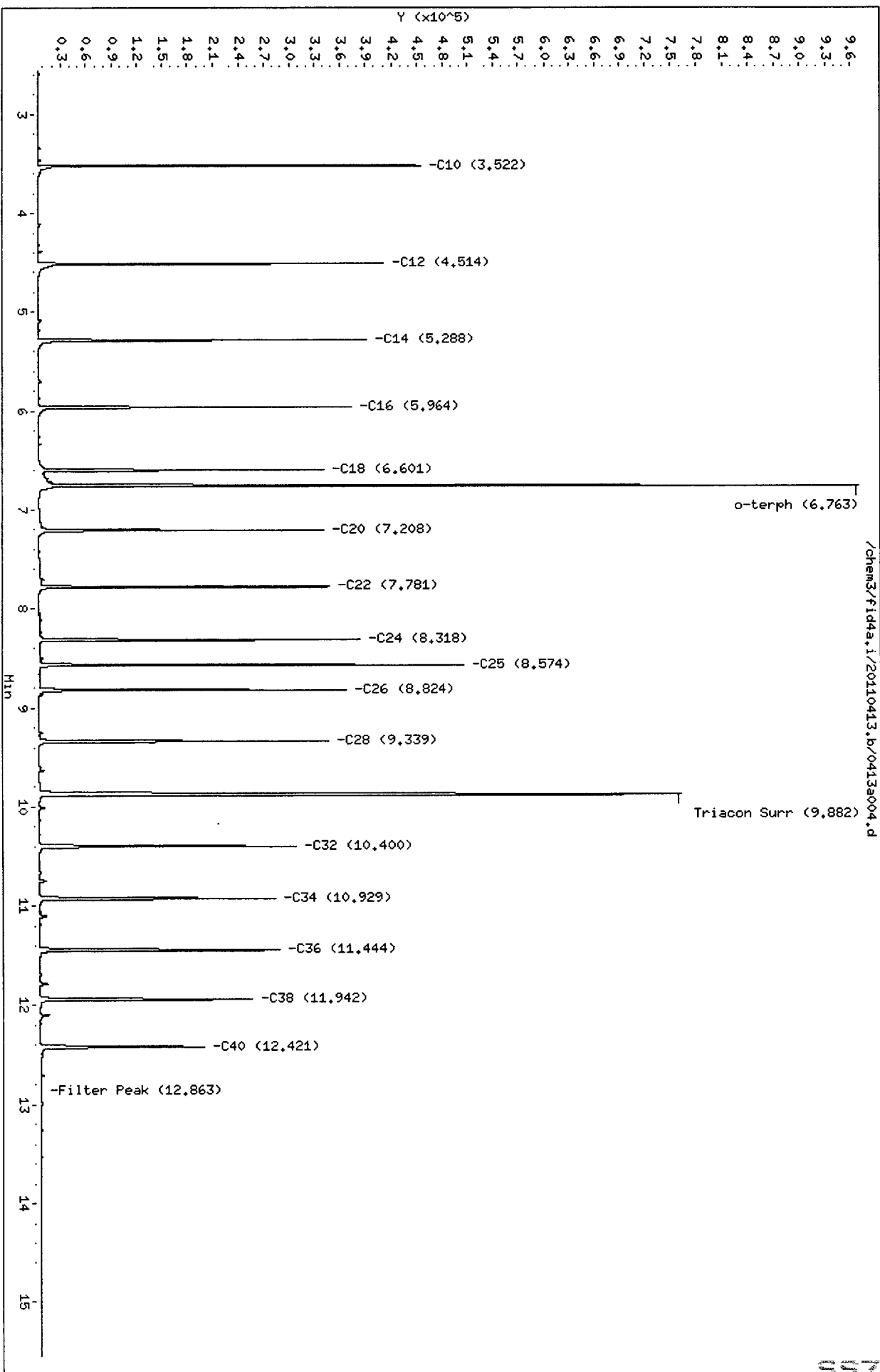
Sample Info: RT

Column phase: RTX-1

Instrument: fid4a.i

Operator: HH

Column diameter: 0.25



0571 : 01022

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110413.b/0413a005.d  
Method: /chem3/fid4a.i/20110413.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MH  
Report Date: 04/21/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: IB  
Client ID:  
Injection: 13-APR-2011 06:12  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.518	-0.005	910	500	GAS (Tol-C12)	58159	2.94
C8	1.896	0.011	412	605	DIESEL (C12-C24)	56374	2.84
C10	3.526	0.004	471	661	M.OIL (C24-C38)	93746	8.23
C12	4.524	0.010	275	504	AK-102 (C10-C25)	82473	3.73
C14	5.291	0.003	209	193	AK-103 (C25-C36)	75040	10.87
C16	5.972	0.008	95	179			
C18	6.598	-0.003	109	81			
C20	7.209	0.001	287	149			
C22	7.789	0.008	313	204	MSPiRiT (Tol-C12)	58159	3.17
C24	8.310	-0.008	447	1357			
C25	8.584	0.010	263	230			
C26	8.813	-0.011	246	241			
C28	9.285	-0.054	273	320			
C32	10.383	-0.017	2929	4215			
C34	10.930	0.001	330	264	CREOSOT (C12-C22)	47274	11.61
Filter Peak	12.866	0.003	786	450			
C36	11.446	0.002	3446	5815			
C38	11.939	-0.003	471	1085			
C40	12.405	-0.015	3030	5476			
o-terph	6.762	-0.001	977202	849993	JET-A (C10-C18)	43787	2.95
Triacon Surr	9.878	-0.004	666911	755442			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.318) AK102(3.52 - 8.57) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.57 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	849993	43.9	97.6
Triacontane	755442	44.5	98.8

*MH 4/20/11*

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

Data File: /chem3/fid4a.i/20110413.b/0413a005.d

Date: 13-APR-2011 06:12

Client ID:

Sample Info: IB

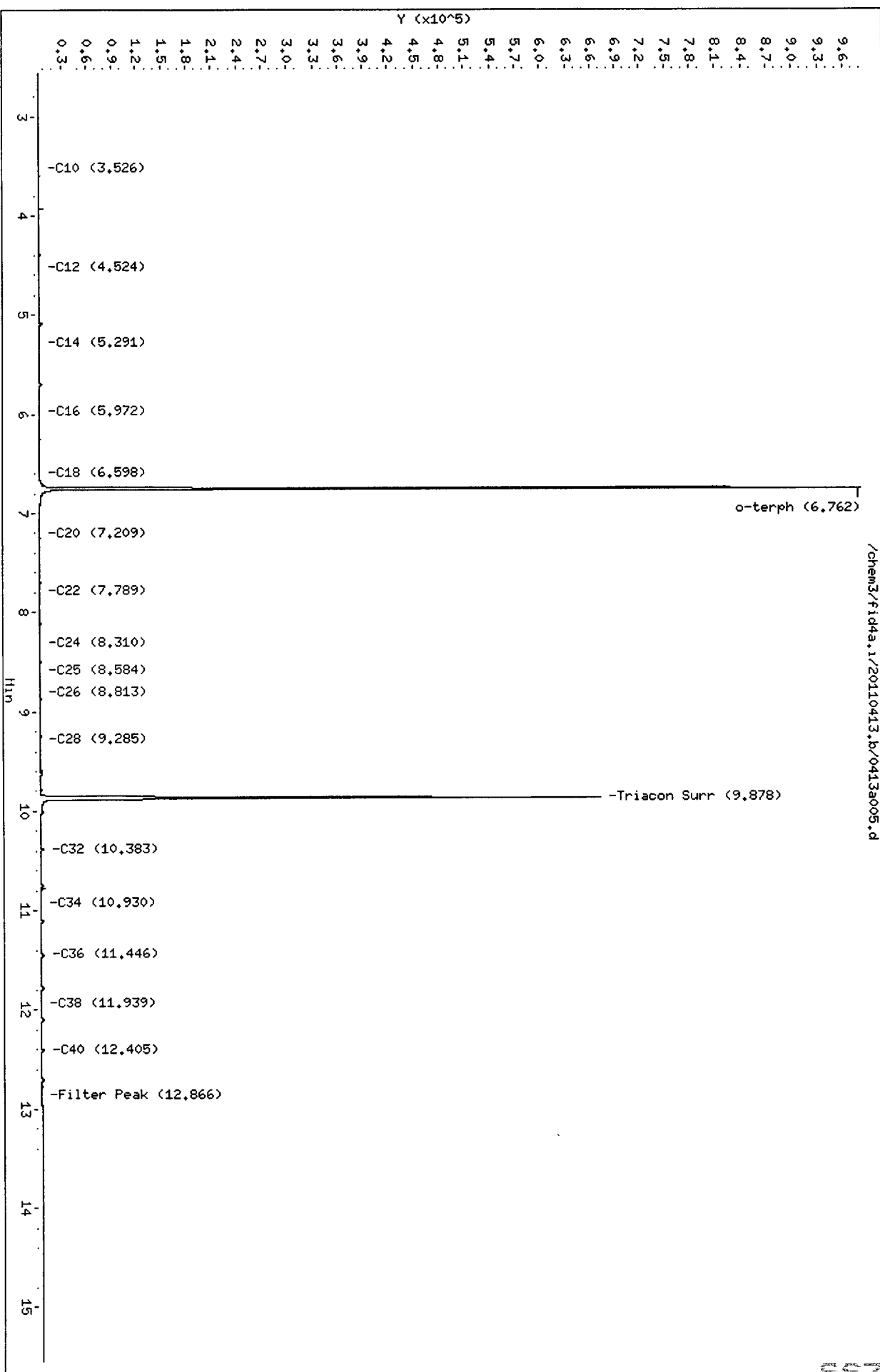
Instrument: fid4a.i

Operator: MH

Column diameter: 0.25

Column phase: RTX-1

/chem3/fid4a.i/20110413.b/0413a005.d



5571 : 01324

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110413.b/0413a007.d

ARI ID: JET 50

Method: /chem3/fid4a.i/20110413.b/ftp4a.m

Client ID:

Instrument: fid4a.i

Injection: 13-APR-2011 06:59

Operator: MH

Dilution Factor: 1

Report Date: 04/21/2011

Macro: 13-APR-2011

Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.537	0.013	2287	2813	GAS (Tol-C12)	535672	27.07
C8	1.896	0.011	3096	4660	DIESEL (C12-C24)	402945	20.31
C10	3.522	0.000	34763	20369	M.OIL (C24-C38)	32224	2.83
C12	4.514	0.000	39099	34910	AK-102 (C10-C25)	776285	35.09
C14	5.289	0.001	15641	25205	AK-103 (C25-C36)	24140	3.50
C16	5.973	0.009	1865	6372			
C18	6.595	-0.006	154	204			
C20	7.204	-0.003	150	98			
C22	7.777	-0.004	167	183	MSPIRIT (Tol-C12)	535672	29.16
C24	8.304	-0.014	139	205			
C25	8.569	-0.005	91	115			
C26	8.829	0.005	80	84			
C28	9.315	0.029	56	62			
C32	10.381	-0.019	2142	2307			
C34	10.920	-0.008	37	14	CREOSOT (C12-C22)	399098	98.03
Filter Peak	12.853	-0.011	472	374			
C36	11.445	0.001	2475	3370			
C38	11.951	0.009	170	242			
C40	12.405	-0.016	2244	3480			
o-terph	6.752	-0.011	250251	182007	JET-A (C10-C18)	759270	51.16
Triacon Surr	9.883	0.001	127	180			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.318) AK102(3.52 - 8.57) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.57 - 11.44) OR Diesel(3.52 - 9.29)

Surrogate	Area	Amount	%Rec
o-Terphenyl	182007	9.4	20.9
Triacontane	180	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011



Data File: /chem3/fid4a.i/20110413.b/0413a007.d  
Date : 13-APR-2011 06:59

Client ID:

Sample Info: JET 50

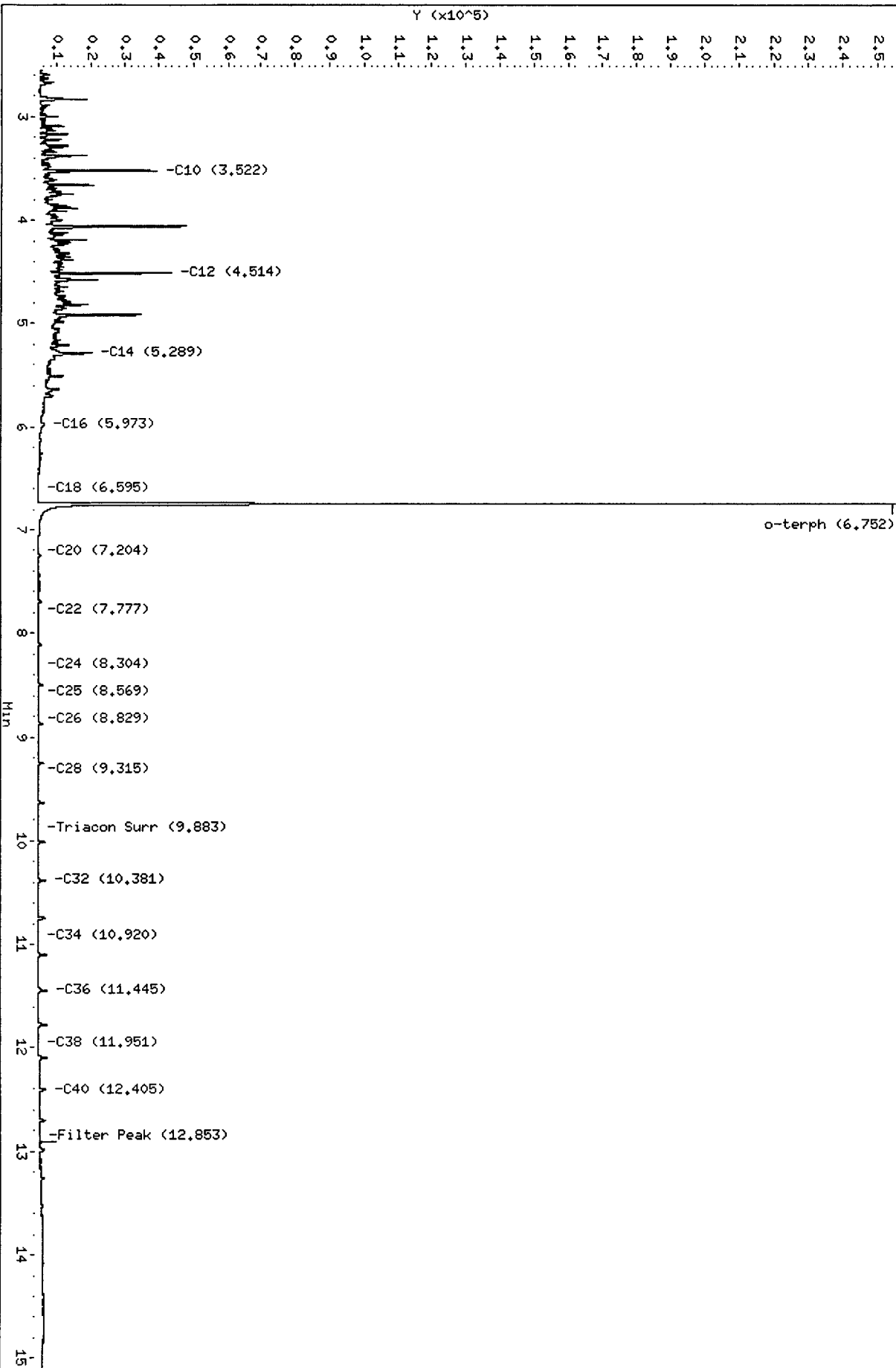
Column phase: RTX-1

Instrument: fid4a.1

Operator: MH

Column diameter: 0.25

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01026

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110413.b/0413a008.d

ARI ID: JET 100

Method: /chem3/fid4a.i/20110413.b/ftphfid4a.m

Client ID:

Instrument: fid4a.i

Injection: 13-APR-2011 07:22

Operator: MH

Report Date: 04/21/2011

Dilution Factor: 1

Macro: 13-APR-2011

Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.532	0.009	4421	4146	GAS (Tol-C12)	1032606	52.17
C8	1.891	0.006	6658	7484	DIESEL (C12-C24)	783332	39.47
C10	3.521	-0.001	75617	42269	M.OIL (C24-C38)	36671	3.22
C12	4.513	-0.001	87721	72413	AK-102 (C10-C25)	1523225	68.85
C14	5.287	-0.001	38516	49257	AK-103 (C25-C36)	27788	4.03
C16	5.967	0.004	4876	13297			
C18	6.596	-0.004	684	806			
C20	7.206	-0.002	215	170			
C22	7.774	-0.007	190	198	MSPIRIT (Tol-C12)	1032606	56.20
C24	8.308	-0.009	139	347			
C25	8.586	0.012	88	74			
C26	8.830	0.007	80	45			
C28	9.297	0.011	58	42			
C32	10.382	-0.018	2475	2780			
C34	10.923	-0.006	43	35	CREOSOT (C12-C22)	779009	191.35
Filter Peak	12.863	0.000	464	153			
C36	11.448	0.004	2948	3973			
C38	11.933	-0.009	170	236			
C40	12.406	-0.014	2386	3952			
o-terph	6.755	-0.007	463738	351227	JET-A (C10-C18)	1503979	101.33
Triacon Surr	9.882	0.001	150	213			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.318) AK102(3.52 - 8.57) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.57 - 11.44) OR Diesel(3.52 - 9.29)

Surrogate	Area	Amount	%Rec
o-Terphenyl	351227	18.2	40.3
Triacontane	213	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

*MH 4/21/11*



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110413.b/0413a009.d  
Method: /chem3/fid4a.i/20110413.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MH  
Report Date: 04/21/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: JET 250  
Client ID:  
Injection: 13-APR-2011 07:46  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.530	0.007	9598	7739	GAS (Tol-C12)	2544426	128.56
C8	1.889	0.004	15637	17948	DIESEL (C12-C24)	1945331	98.03
C10	3.521	-0.001	200418	108870	M.OIL (C24-C38)	27167	2.38
C12	4.514	0.000	232396	183312	AK-102 (C10-C25)	3782528	170.96
C14	5.286	-0.001	113999	124303	AK-103 (C25-C36)	19807	2.87
C16	5.962	-0.002	17620	31308			
C18	6.596	-0.005	2704	3036			
C20	7.205	-0.003	408	388			
C22	7.774	-0.007	250	369	MSPiRIT (Tol-C12)	2544426	138.49
C24	8.328	0.011	141	104			
C25	8.573	-0.001	127	66			
C26	8.823	-0.001	104	76			
C28	9.289	0.003	72	83			
C32	10.381	-0.019	1467	1675			
C34	10.926	-0.002	35	25	CREOSOT (C12-C22)	1939815	476.47
Filter Peak	12.866	0.003	4961	1959			
C36	11.446	0.003	1582	2244			
C38	11.937	-0.005	153	168			
C40	12.407	-0.013	1489	2451			
o-terph	6.761	-0.001	989928	883883	JET-A (C10-C18)	3749062	252.60
Triacon Surr	9.882	0.000	86	139			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.318) AK102(3.52 - 8.57) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.57 - 11.44) OR Diesel(3.52 - 9.29)

Surrogate	Area	Amount	%Rec
o-Terphenyl	883883	45.7	101.5
Triacontane	139	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

*MH* 4/21/11

Data File: /chem3/fid4a.1/20110413.b/0413a009.d

Date: 13-APR-2011 07:46

Client ID:

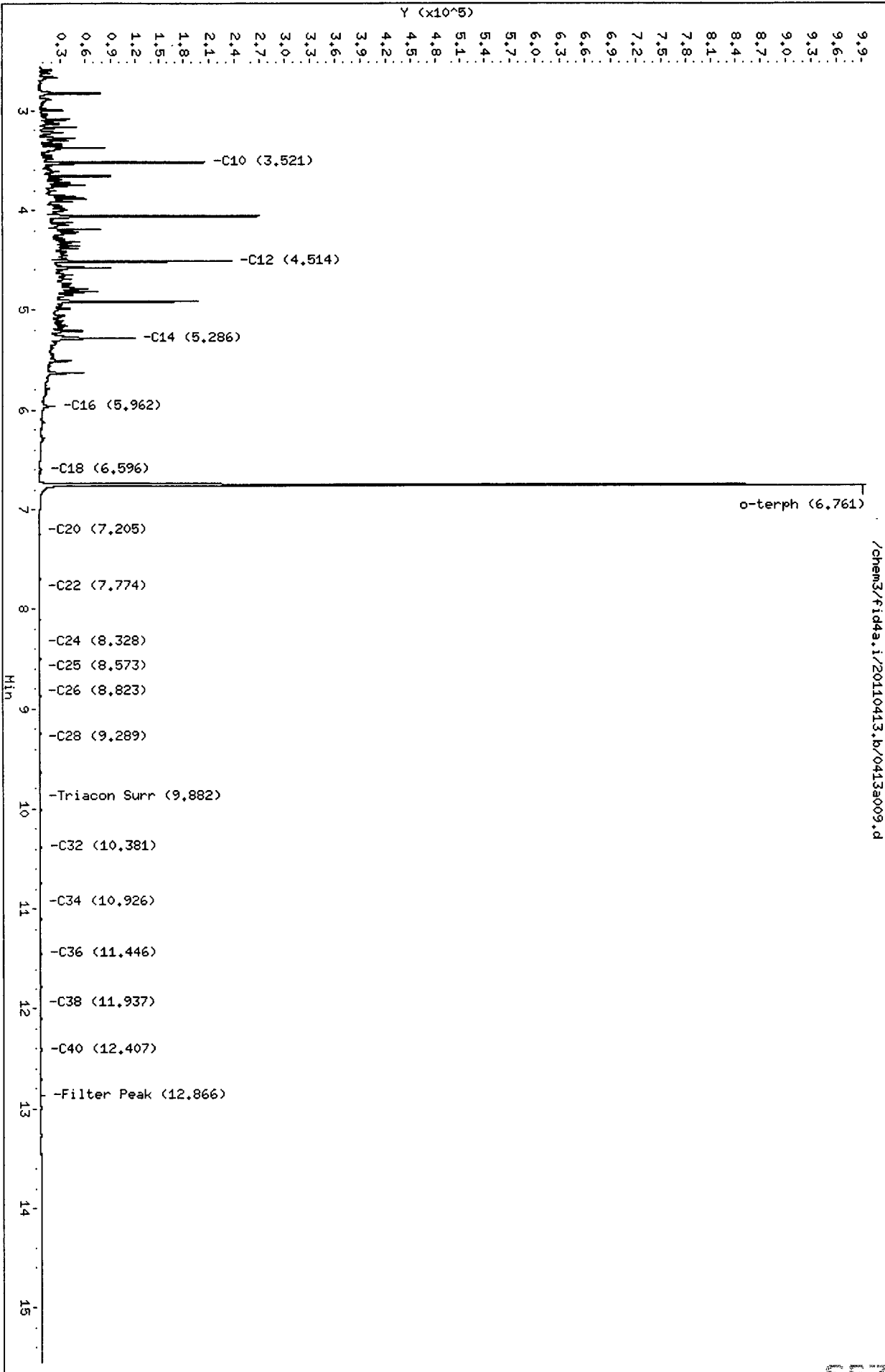
Sample Info: JET 250

Column phase: RTX-1

Instrument: fid4a.i

Operator: MH

Column diameter: 0.25



00013 . 01000

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110413.b/0413a010.d  
Method: /chem3/fid4a.i/20110413.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MH  
Report Date: 04/21/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: JET 500  
Client ID:  
Injection: 13-APR-2011 08:09  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.532	0.008	14558	13403	GAS (Tol-C12)	5007346	253.00
C8	1.889	0.004	26750	34363	DIESEL (C12-C24)	3818660	192.43
C10	3.522	0.001	392168	275204	M.OIL (C24-C38)	25286	2.22
C12	4.516	0.001	446714	348888	AK-102 (C10-C25)	7455706	336.98
C14	5.287	0.000	235172	214976	AK-103 (C25-C36)	19192	2.78
C16	5.962	-0.002	41356	68959			
C18	6.597	-0.004	5805	9122			
C20	7.210	0.002	616	182			
C22	7.789	0.008	308	258	MSPIRIT (Tol-C12)	5007346	272.54
C24	8.309	-0.008	195	444			
C25	8.562	-0.012	143	207			
C26	8.831	0.007	114	141			
C28	9.308	0.022	75	61			
C32	10.382	-0.018	1238	1450			
C34	10.921	-0.007	34	46	CREOSOT (C12-C22)	3812583	936.48
Filter Peak	12.858	-0.005	448	326			
C36	11.445	0.001	1317	1850			
C38	11.941	-0.001	150	147			
C40	12.405	-0.016	1260	2130			
o-terph	6.770	0.007	1553390	1725857	JET-A (C10-C18)	7404521	498.89
Triacon Surr	9.877	-0.004	87	94			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.318) AK102(3.52 - 8.57) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.57 - 11.44) OR Diesel(3.52 - 9.29)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1725857	89.2	198.2
Triacotane	94	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

*MH 4/20/11*

Data File: /chem3/fid4a.i/20110413.b/0413a010.d

Date: 13-APR-2011 08:09

Client ID:

Sample Info: JET 500

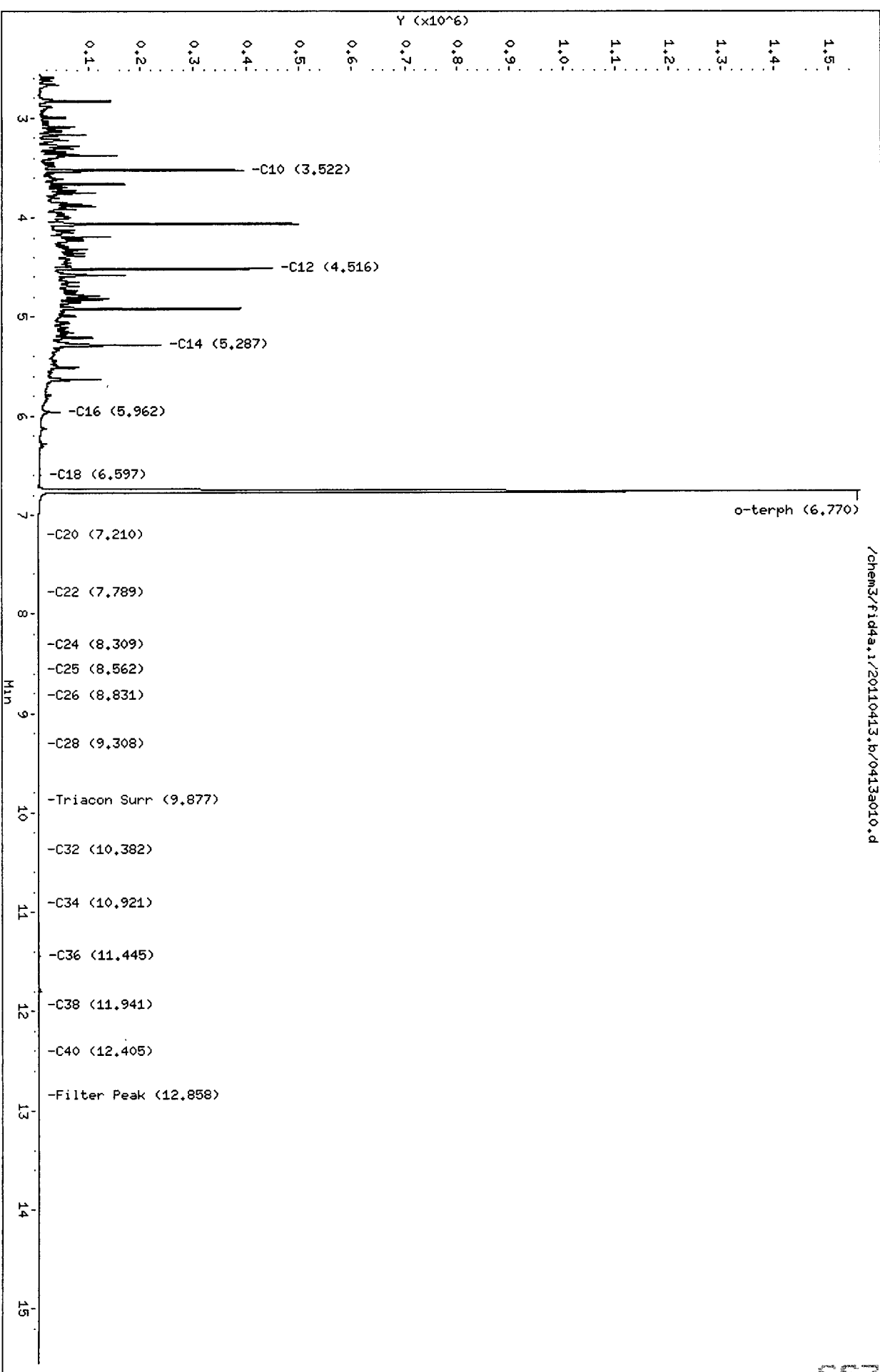
Column phase: RTX-1

Instrument: fid4a.1

Operator: MH

Column diameter: 0.25

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0010 : 01002

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110413.b/0413a011.d

ARI ID: JET 1000

Method: /chem3/fid4a.i/20110413.b/ftphfid4a.m

Client ID:

Instrument: fid4a.i

Injection: 13-APR-2011 08:33

Operator: MH

Report Date: 04/21/2011

Dilution Factor: 1

Macro: 13-APR-2011

Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.528	0.005	32482	24315	GAS (Tol-C12)	9796190	494.96
C8	1.886	0.001	56553	65133	DIESEL (C12-C24)	7580342	382.00
C10	3.526	0.004	735311	542360	M.OIL (C24-C38)	53689	4.71
C12	4.520	0.006	799045	696522	AK-102 (C10-C25)	14696428	664.25
C14	5.290	0.002	454871	430459	AK-103 (C25-C36)	41706	6.04
C16	5.962	-0.002	90713	141548			
C18	6.599	-0.002	15730	31899			
C20	7.213	0.005	1051	887			
C22	7.783	0.002	412	493	MSPiRiT (Tol-C12)	9796190	533.18
C24	8.307	-0.010	282	907			
C25	8.581	0.007	173	151			
C26	8.821	-0.003	147	162			
C28	9.315	0.028	87	150			
C32	10.384	-0.016	3885	4245			
C34	10.924	-0.005	34	21	CREOSOT (C12-C22)	7571339	1859.73
Filter Peak	12.867	0.003	470	474			
C36	11.449	0.005	4661	6062			
C38	11.950	0.008	160	60			
C40	12.409	-0.012	2957	4341			
o-terph	6.781	0.019	2285190	3408689	JET-A (C10-C18)	14595836	983.41
Triacon Surr	9.881	-0.001	223	388			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.318) AK102(3.52 - 8.57) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.57 - 11.44) OR Diesel(3.52 - 9.29)

Surrogate	Area	Amount	%Rec
o-Terphenyl	3408689	176.2	391.5
Triacontane	388	0.0	0.1

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

*MH 4/21/11*



Data File: /chem3/fid4a.i/20110413.b/0413a011.d

Date: 13-APR-2011 08:33

Client ID:

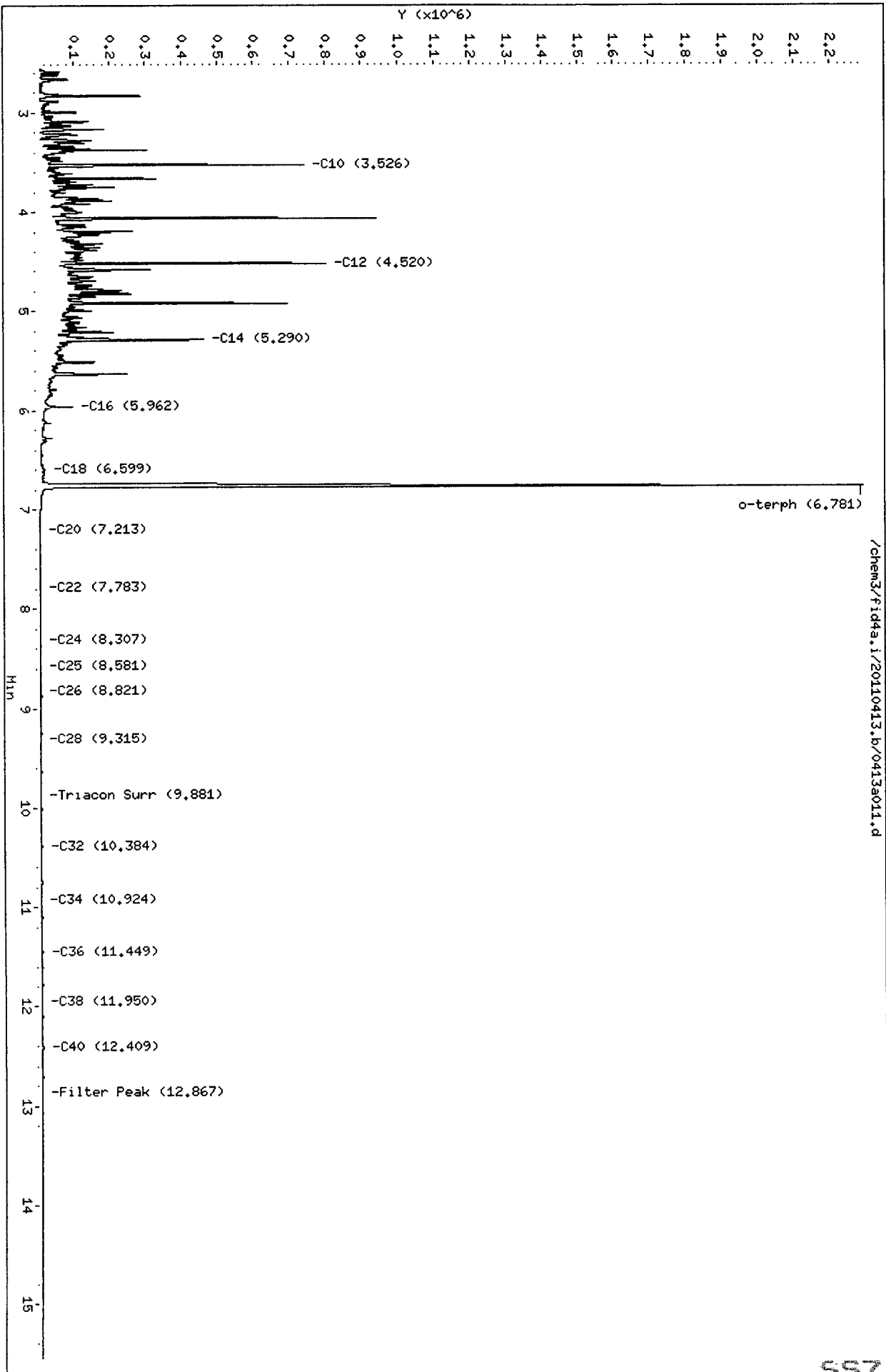
Sample Info: JET 1000

Column phase: RTX-1

Instrument: fid4a.1

Operator: MH

Column diameter: 0.25



13 09 10 11 12 13 14 15

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110413.b/0413a012.d  
Method: /chem3/fid4a.i/20110413.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MH  
Report Date: 04/21/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: JET 2500  
Client ID:  
Injection: 13-APR-2011 08:56  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.526	0.003	76075	57741	GAS (Tol-C12)	24289641	1227.24
C8	1.885	0.000	128739	160997	DIESEL (C12-C24)	18596541	937.14
C10	3.535	0.013	1648337	1350149	M.OIL (C24-C38)	43582	3.82
C12	4.531	0.016	1623655	1749046	AK-102 (C10-C25)	36237392	1637.85
C14	5.298	0.010	980412	1068951	AK-103 (C25-C36)	33205	4.81
C16	5.964	0.000	238253	312560			
C18	6.600	-0.001	43532	75142			
C20	7.214	0.006	2755	5247			
C22	7.785	0.004	650	631	MSPIRIT (Tol-C12)	24289641	1322.02
C24	8.311	-0.006	352	671			
C25	8.579	0.005	222	259			
C26	8.822	-0.002	188	145			
C28	9.305	0.019	112	146			
C32	10.381	-0.019	2612	2892			
C34	10.925	-0.004	28	10	CREOSOT (C12-C22)	18584269	4564.81
Filter Peak	12.865	0.001	428	231			
C36	11.444	0.000	3170	4115			
C38	11.937	-0.005	144	217			
C40	12.405	-0.016	2610	3597			
o-terph	6.802	0.040	3735058	8369514	JET-A (C10-C18)	36062523	2429.76
Triacon Surr	9.880	-0.002	161	253			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.318) AK102(3.52 - 8.57) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.57 - 11.44) OR Diesel(3.52 - 9.29)

Surrogate	Area	Amount	%Rec
o-Terphenyl	8369514	432.6	961.3
Triacontane	253	0.0	0.0

*M 4/21/11*

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

Data File: /chem3/fid4a.i/20110413.b/0413s012.d  
Date: 13-APR-2011 08:56

Client ID:

Sample Info: JET 2500

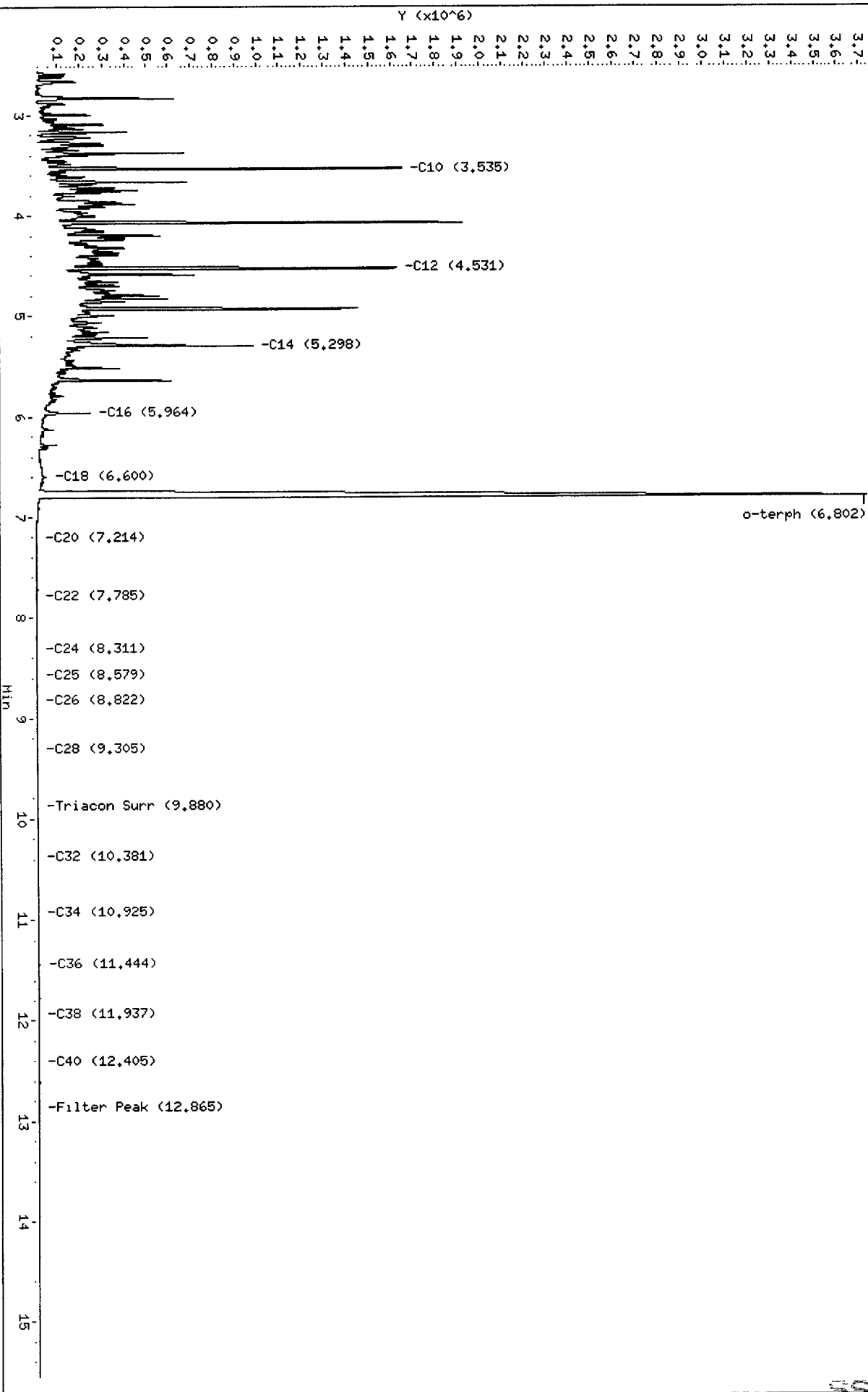
Column phase: RTX-1

Instrument: fid4a.1

Operator: MH

Column diameter: 0.25

/chem3/fid4a.1/20110413.b/0413s012.d



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

**ARI Job ID: SS71**



### GC Analyst Notes / Corrective Action Log

ARI Project ID: 5571 Client ID: Floyd-Snyder

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

Parameter(s): 10g/1mL FV

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: ~~4/14/2011~~ 4/13/2011 & 3/21/2011 Analysis Start: 4/25/2011

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

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

*Samples appear to contain a heavy product, an oil, may not be 30W or the same 30W that we curve with.*

*\*LCS 90.2%R ; MS/MSD 79.6 & 84.9%R*

*Closing ccal's pending - Ccal's done & forms completed.  
4/26/11 @ 18:00hrs  
msy/26/11*

Additional Details on Reverse: Yes / No

Analyst: [Signature] Date: 4/26/2011

Reviewer: [Signature] Date: 4/26/11



**GC Analyst Notes / Corrective Action Log**

ARI Project ID: SS71, SS83 Client ID: FLOYD SNIDER

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

Parameter(s): Diesel, MOI, 0 Turb

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

Dates: Curve: 4/13/11, 3/20/11 Analysis Start: 4/25/11

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

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

Additional Details on Reverse: Yes / No

Analyst: [Signature] Date: 4/26/11

Reviewer: [Signature] Date: 4/26/11

# Analytical Resources Inc.: Organics Instrument Log

FID-4A Serial No.: US00003247

Date: 4/25/11 Analysis: NUTRIL Analyst: Am  
 GC Program: TDA Column No: 999447 Column Type: AXI  
 Instrument Tune (.U or .CT.): \_\_\_\_\_ EM Voltage: \_\_\_\_\_  
 Calibration File: \_\_\_\_\_ Curve Date: 4/13/11, 3/21/11

IS/SS	Ical/Ccal	LCS/ICV
/	1286-1 1771-2 1777-3 1777-2	/

Inject Date/Time	Filename	DF	LabID	Inject Date/Time	Filename	DF	LabID
1	25-APR-2011 14:49	0425a001.d	1 RINSE	51	26-APR-2011 10:33	0425a051.d	1 SS71S
2	25-APR-2011 15:12	0425a002.d	1 RT	52	26-APR-2011 10:57	0425a052.d	1 SS71MBW1
3	25-APR-2011 15:36	0425a003.d	1 IB	53	26-APR-2011 11:21	0425a053.d	1 SS71LCSW1
4	25-APR-2011 16:00	0425a004.d	1 DIESEL#1	54	26-APR-2011 11:45	0425a054.d	1 SS71LCSW1
5	25-APR-2011 16:24	0425a005.d	1 MOIL#1	55	26-APR-2011 12:09	0425a055.d	1 SS71QLS1
6	25-APR-2011 16:48	0425a006.d	1 SS71MBS1	56	26-APR-2011 12:33	0425a056.d	1 SS71T
7	25-APR-2011 17:12	0425a007.d	1 SS71LCSS1	57	26-APR-2011 12:57	0425a057.d	1 SS83P
8	25-APR-2011 17:36	0425a008.d	1 SS71QLS	58	26-APR-2011 13:21	0425a058.d	1 DIESEL#6
9	25-APR-2011 17:59	0425a009.d	1 SS71A	59	26-APR-2011 13:45	0425a059.d	1 MOIL#6
10	25-APR-2011 18:23	0425a010.d	1 SS71B	60	26-APR-2011 14:09	0425a060.d	1 BUNKER#1
11	25-APR-2011 18:47	0425a011.d	1 SS71C				
12	25-APR-2011 19:11	0425a012.d	1 SS71D				
13	25-APR-2011 19:35	0425a013.d	1 SS71E				
14	25-APR-2011 19:58	0425a014.d	1 SS71F				
15	25-APR-2011 20:22	0425a015.d	1 SS71G				
16	25-APR-2011 20:46	0425a016.d	1 DIESEL#2				
17	25-APR-2011 21:09	0425a017.d	1 MOIL#2				
18	25-APR-2011 21:33	0425a018.d	1 ST61A				
19	25-APR-2011 21:57	0425a019.d	1 ST61B				
20	25-APR-2011 22:20	0425a020.d	1 ST61C				
21	25-APR-2011 22:44	0425a021.d	1 ST61D				
22	26-APR-2011 23:08	0425a022.d	50 ST61E				
23	26-APR-2011 23:31	0425a023.d	1 ST61F				
24	26-APR-2011 23:55	0425a024.d	1 ST61G				
25	26-APR-2011 00:18	0425a025.d	1 ST61H				
26	26-APR-2011 00:42	0425a026.d	1 ST61I				
27	26-APR-2011 01:06	0425a027.d	1 ST61J				
28	26-APR-2011 01:30	0425a028.d	1 ST61LCSS1				
29	26-APR-2011 01:53	0425a029.d	1 ST61LCSDS1				
30	26-APR-2011 02:17	0425a030.d	1 ST61MBS1				
31	26-APR-2011 02:40	0425a031.d	1 DIESEL#3				
32	26-APR-2011 03:04	0425a032.d	1 MOIL#3				
33	26-APR-2011 03:27	0425a033.d	1 SS71H				
34	26-APR-2011 03:51	0425a034.d	1 SS71I				
35	26-APR-2011 04:15	0425a035.d	1 SS71IMS				
36	26-APR-2011 04:38	0425a036.d	1 SS71MSD				
37	26-APR-2011 05:02	0425a037.d	1 SS71J				
38	26-APR-2011 05:26	0425a038.d	1 SS71K				
39	26-APR-2011 05:49	0425a039.d	1 SS71L				
40	26-APR-2011 06:13	0425a040.d	1 SS71M				
41	26-APR-2011 06:37	0425a041.d	1 SS71N				
42	26-APR-2011 07:00	0425a042.d	1 SS71O				
43	26-APR-2011 07:24	0425a043.d	1 DIESEL#4				
44	26-APR-2011 07:48	0425a044.d	1 MOIL#4				
45	26-APR-2011 08:11	0425a045.d	20 ST61E				
46	26-APR-2011 08:35	0425a046.d	1 DIESEL#5				
47	26-APR-2011 08:59	0425a047.d	1 MOIL#5				
48	26-APR-2011 09:22	0425a048.d	1 SS71P				
49	26-APR-2011 09:46	0425a049.d	1 SS71Q				
50	26-APR-2011 10:10	0425a050.d	1 SS71R				

*[Large handwritten scribbles and signatures covering the right side of the table]*

**Maintenance / Comments**

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

# Analytical Resources Inc.: Organics Instrument Log

FID-4A Serial No.: US00003247

Date: 4/25/11 Analysis: NWTRH Analyst: Mr

GC Program: TRU Column No: 977447 Column Type: AXI

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

Calibration File: \_\_\_\_\_ Curve Date: 4/13/11, 3/21/11

IS/SS	Ical/Ccal	LCS/ICV
<del>_____</del>	<u>1786-1</u>	<del>_____</del>
<del>_____</del>	<u>1771-2</u>	<del>_____</del>
<del>_____</del>	<u>1777-3</u>	<del>_____</del>
<del>_____</del>	<u>1777-2</u>	<del>_____</del>

Inject Date/Time	Filename	DF	LabID	Inject Date/Time	Filename	DF	LabID
1 25-APR-2011 14:49	0425a001.d	1	RINSE	51 26-APR-2011 10:33	0425a051.d	1	SS71S
2 25-APR-2011 15:12	0425a002.d	1	RT	52 26-APR-2011 10:57	0425a052.d	1	SS71MBW1
3 25-APR-2011 15:36	0425a003.d	1	IB	53 26-APR-2011 11:21	0425a053.d	1	SS71LCSW1
4 25-APR-2011 16:00	0425a004.d	1	DIESEL#1	54 26-APR-2011 11:45	0425a054.d	1	SS71LCSWD1
5 25-APR-2011 16:24	0425a005.d	1	MOIL#1	55 26-APR-2011 12:09	0425a055.d	1	SS71LCS1
6 25-APR-2011 16:48	0425a006.d	1	SS71MBS1	56 26-APR-2011 12:33	0425a056.d	1	SS71T
7 25-APR-2011 17:12	0425a007.d	1	SS71LCSS1	57 26-APR-2011 12:57	0425a057.d	1	SS83P
8 25-APR-2011 17:36	0425a008.d	1	SS71QLS	58 26-APR-2011 13:21	0425a058.d	1	DIESEL#6
9 25-APR-2011 17:59	0425a009.d	1	SS71A	59 26-APR-2011 13:45	0425a059.d	1	MOIL#6
10 25-APR-2011 18:23	0425a010.d	1	SS71B	60 26-APR-2011 14:09	0425a060.d	1	BUNKER#1
11 25-APR-2011 18:47	0425a011.d	1	SS71C				
12 25-APR-2011 19:11	0425a012.d	1	SS71D				
13 25-APR-2011 19:35	0425a013.d	1	SS71E				
14 25-APR-2011 19:58	0425a014.d	1	SS71F				
15 25-APR-2011 20:22	0425a015.d	1	SS71G				
16 25-APR-2011 20:46	0425a016.d	1	DIESEL#2				
17 25-APR-2011 21:09	0425a017.d	1	MOIL#2				
18 25-APR-2011 21:33	0425a018.d	1	ST61A				
19 25-APR-2011 21:57	0425a019.d	1	ST61B				
20 25-APR-2011 22:20	0425a020.d	1	ST61C				
21 25-APR-2011 22:44	0425a021.d	1	ST61D				
22 26-APR-2011 23:08	0425a022.d	50	ST61E				
23 26-APR-2011 23:31	0425a023.d	1	ST61F				
24 26-APR-2011 23:55	0425a024.d	1	ST61G				
25 26-APR-2011 00:18	0425a025.d	1	ST61H				
26 26-APR-2011 00:42	0425a026.d	1	ST61I				
27 26-APR-2011 01:06	0425a027.d	1	ST61J				
28 26-APR-2011 01:30	0425a028.d	1	ST61LCSS1				
29 26-APR-2011 01:53	0425a029.d	1	ST61LCSDS1				
30 26-APR-2011 02:17	0425a030.d	1	ST61MBS1				
31 26-APR-2011 02:40	0425a031.d	1	DIESEL#3				
32 26-APR-2011 03:04	0425a032.d	1	MOIL#3				
33 26-APR-2011 03:27	0425a033.d	1	SS71H				
34 26-APR-2011 03:51	0425a034.d	1	SS71I				
35 26-APR-2011 04:15	0425a035.d	1	SS71IMS				
36 26-APR-2011 04:38	0425a036.d	1	SS71IMSD				
37 26-APR-2011 05:02	0425a037.d	1	SS71J				
38 26-APR-2011 05:26	0425a038.d	1	SS71K				
39 26-APR-2011 05:49	0425a039.d	1	SS71L				
40 26-APR-2011 06:13	0425a040.d	1	SS71M				
41 26-APR-2011 06:37	0425a041.d	1	SS71N				
42 26-APR-2011 07:00	0425a042.d	1	SS71O				
43 26-APR-2011 07:24	0425a043.d	1	DIESEL#4				
44 26-APR-2011 07:48	0425a044.d	1	MOIL#4				
45 26-APR-2011 08:11	0425a045.d	20	ST61E				
46 26-APR-2011 08:35	0425a046.d	1	DIESEL#5				
47 26-APR-2011 08:59	0425a047.d	1	MOIL#5				
48 26-APR-2011 09:22	0425a048.d	1	SS71P				
49 26-APR-2011 09:46	0425a049.d	1	SS71Q				
50 26-APR-2011 10:10	0425a050.d	1	SS71R				

**Maintenance / Comments**

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

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



MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20110425.b

ARI Job No.: SS71 Method: ftphfid4a.m Instrument: fid4a.i Date: 26-APR-2011

Time Filename LabID ClientId DF Manually Integrated Compounds

1057 0425a052.d SS71MBW1 SS71MBW1 1 NO MANUAL INTEGRATION

1121 0425a053.d SS71LCSW1 SS71LCSW1 1 o-terph,

1145 0425a054.d SS71LCSDW1 SS71LCSDW1 1 o-terph,

1233 0425a056.d SS71T LL-ER-0419 1 NO MANUAL INTEGRATION

1257 0425a057.d SS83P DMA-RB-042 1 NO MANUAL INTEGRATION

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a002.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: RT  
Client ID: RT  
Injection: 25-APR-2011 15:12  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.524	0.000	398463	345325	GAS (Tol-C12)	1058371	53.47
C8	1.885	0.000	208637	234834	DIESEL (C12-C24)	1522269	76.71
C10	3.521	0.000	348818	208744	M.OIL (C24-C38)	1677870	147.25
C12	4.514	0.000	319952	198320	AK-102 (C10-C25)	1961644	88.66
C14	5.288	0.000	323547	211063	AK-103 (C25-C36)	1543677	223.65
C16	5.964	0.000	320462	221632			
C18	6.602	0.000	299338	211622			
C20	7.207	0.000	299785	206456			
C22	7.782	0.000	303734	214934	MSPiRIT (Tol-C12)	1058371	57.60
C24	8.319	0.000	342156	248197			
C25	8.577	0.000	458489	340629			
C26	8.826	0.000	304541	253093			
C28	9.341	0.000	280734	256724			
C32	10.402	0.000	219572	240312			
C34	10.929	0.000	181139	205798	BUNKERC (C10-C38)	3630155	490.46
Filter Peak	12.879	0.000	1071	1059			
C36	11.443	0.000	147054	170101			
C38	11.941	0.000	84561	109925			
C40	12.420	0.000	39932	65343			
o-terph	6.762	0.000	900395	737988	JET-A (C10-C18)	1129006	76.07
Triacon Surr	9.882	0.000	648525	769635			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	737988	38.1	84.8
Triacontane	769635	45.3	100.7

*Handwritten signature and date: M 4/26/11*

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010

Data File: /chem3/fid4a.i/20110425.b/0425a002.d

Date : 25-APR-2011 15:12

Client ID: RT

Sample Info: RT

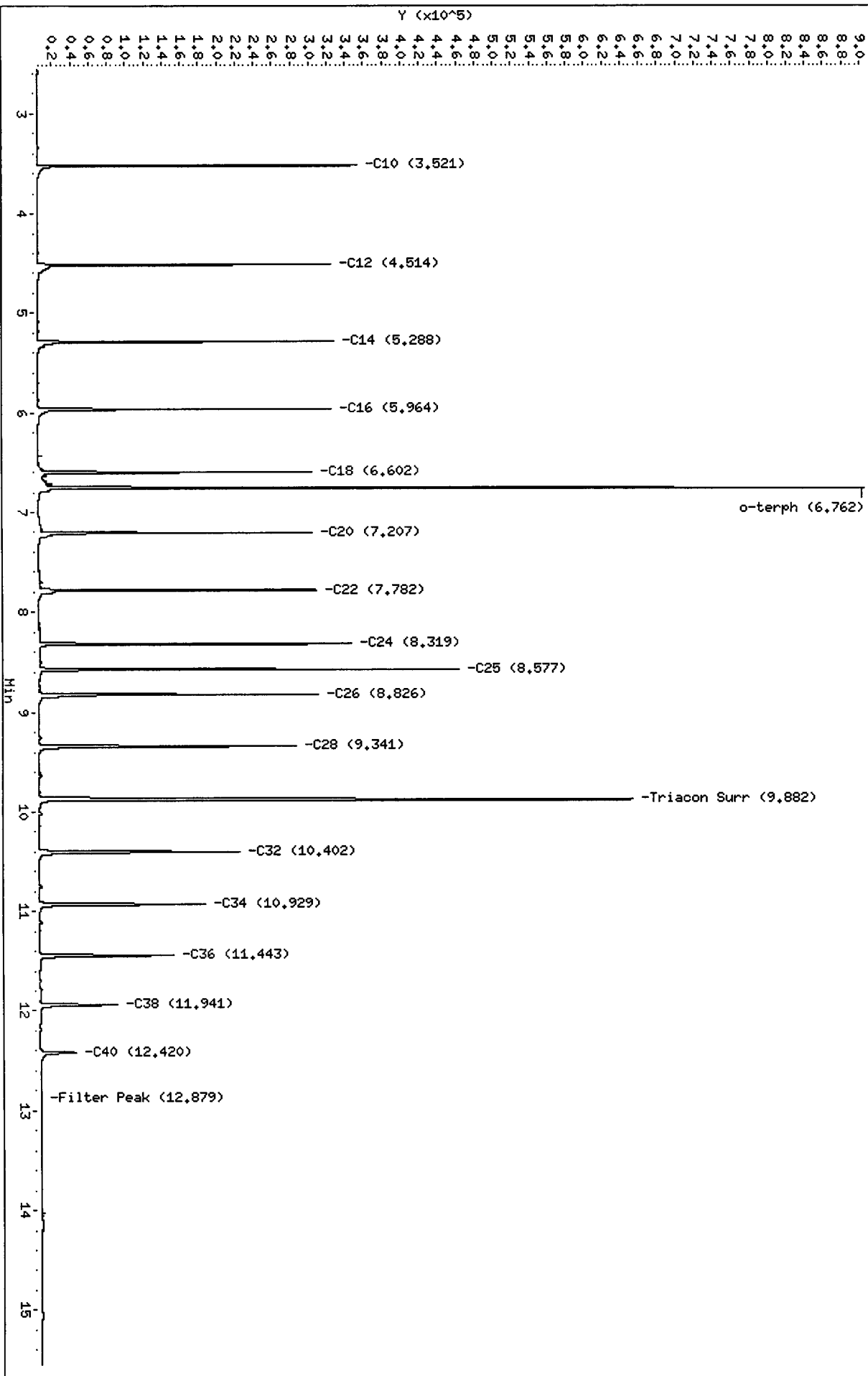
Column phase: RTX-1

Instrument: fid4a.i

Operator: HS

Column diameter: 0.25

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11.01341

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a003.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: IB  
Client ID: IB  
Injection: 25-APR-2011 15:36  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.499	-0.025	1689	5046	GAS (Tol-C12)	62408	3.15
C8	1.893	0.009	690	1220	DIESEL (C12-C24)	42375	2.14
C10	3.527	0.007	429	804	M.OIL (C24-C38)	97646	8.57
C12	4.514	0.000	218	62	AK-102 (C10-C25)	61247	2.77
C14	5.288	0.000	154	150	AK-103 (C25-C36)	80390	11.65
C16	5.971	0.008	72	121			
C18	6.597	-0.004	74	59			
C20	7.198	-0.009	239	239			
C22	7.788	0.007	287	348	MSPERIT (Tol-C12)	62408	3.40
C24	8.313	-0.005	256	289			
C25	8.577	0.001	231	256			
C26	8.822	-0.004	220	166			
C28	9.330	-0.011	244	142			
C32	10.387	-0.014	3608	5003			
C34	10.939	0.010	337	111	BUNKERC (C10-C38)	156010	21.08
Filter Peak	12.880	0.001	1011	1591			
C36	11.454	0.011	2584	4650			
C38	11.945	0.005	477	149			
C40	12.412	-0.008	1624	3954			
o-terph	6.764	0.002	1145224	929503	JET-A (C10-C18)	29907	2.02
Triacon Surr	9.883	0.001	648557	762882			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

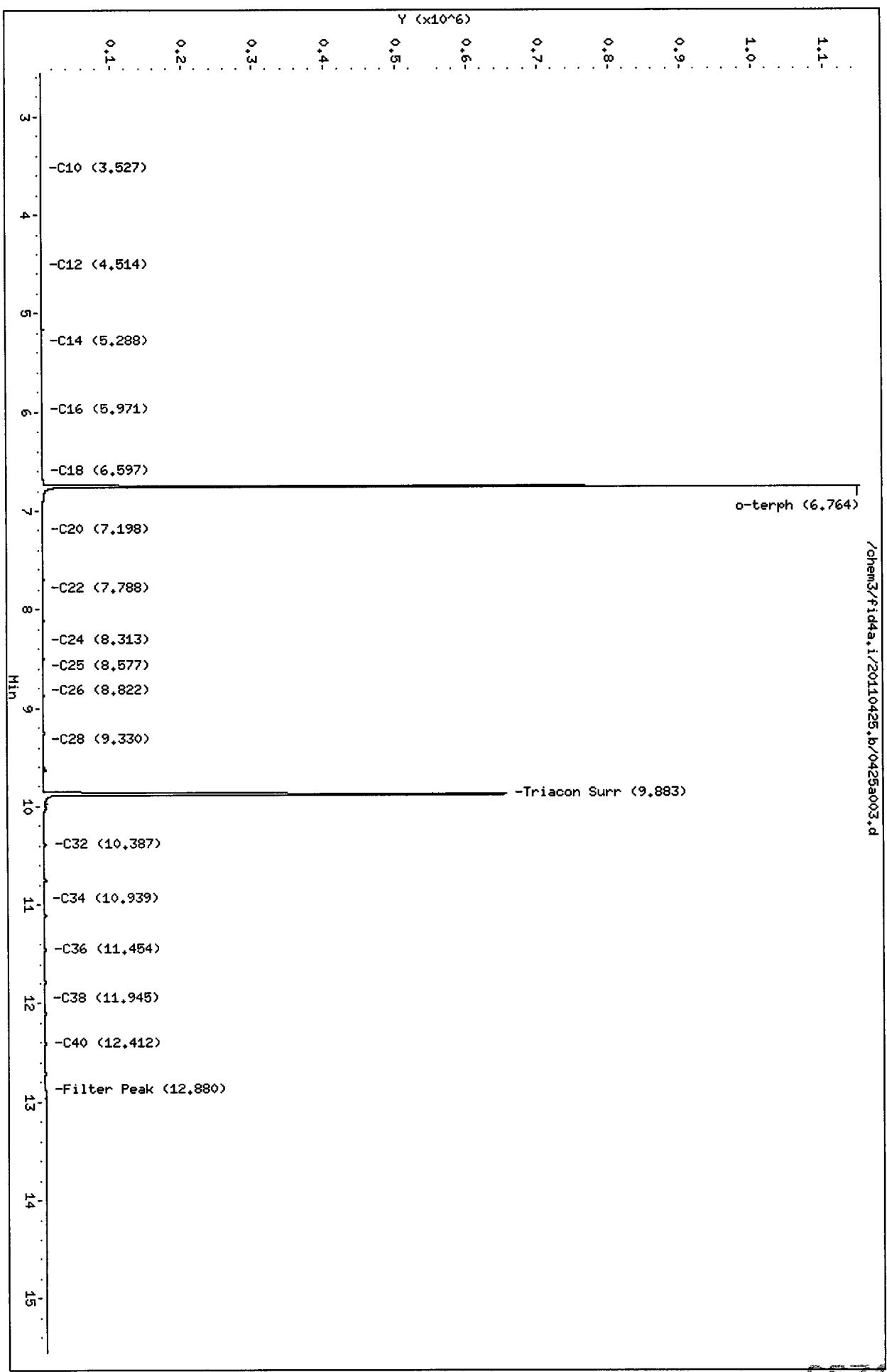
Surrogate	Area	Amount	%Rec
o-Terphenyl	929503	48.0	106.8
Triacontane	762882	44.9	99.8

*MS 4/26/11*

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010

Data File: /chem3/fid4a.i/20110425.b/0425a003.d  
Date: 25-APR-2011 15:36  
Client ID: IB  
Sample Info: IB  
Column phase: RTX-1

Instrument: fid4a.1  
Operator: MS  
Column diameter: 0.25



/chem3/fid4a.i/20110425.b/0425a003.d

042510:1755

Analytical Resources Inc.  
407S TPH Quantitation Report

AR 4/26/2011

Data file: /chem3/fid4a.i/20110425.b/0425a004.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: DIESEL#1  
Client ID:  
Injection: 25-APR-2011 16:00  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.543	0.019	5232	5590	GAS (Tol-C12)	698995	35.32
C8	1.899	0.014	2730	5249	DIESEL (C12-C24)	4740504	238.89
C10	3.522	0.002	17110	10634	M.OIL (C24-C38)	89865	7.89
C12	4.514	0.000	43284	37531	AK-102 (C10-C25)	5255956	237.56 M
C14	5.286	-0.002	83807	95365	AK-103 (C25-C36)	67230	9.74
C16	5.962	-0.001	153915	136218			
C18	6.599	-0.002	134598	152860			
C20	7.204	-0.003	79141	78104			
C22	7.778	-0.004	32315	46755	MSPiRiT (Tol-C12)	698995	38.04
C24	8.316	-0.002	7091	20359			
C25	8.579	0.003	2707	10621			
C26	8.837	0.012	1012	2182			
C28	9.347	0.006	240	270			
C32	10.388	-0.014	3495	3818			
C34	10.933	0.004	34	27	CREOSOT (C12-C22)	4572650	1123.17 M
Filter Peak	12.876	-0.003	572	799			
C36	11.453	0.010	2714	3480			
C38	11.954	0.013	166	249			
C40	12.416	-0.003	1423	2808			
o-terph	6.763	0.001	992815	768339	JET-A (C10-C18)	3818797	257.30
Triacon Surr	9.875	-0.007	91	43			

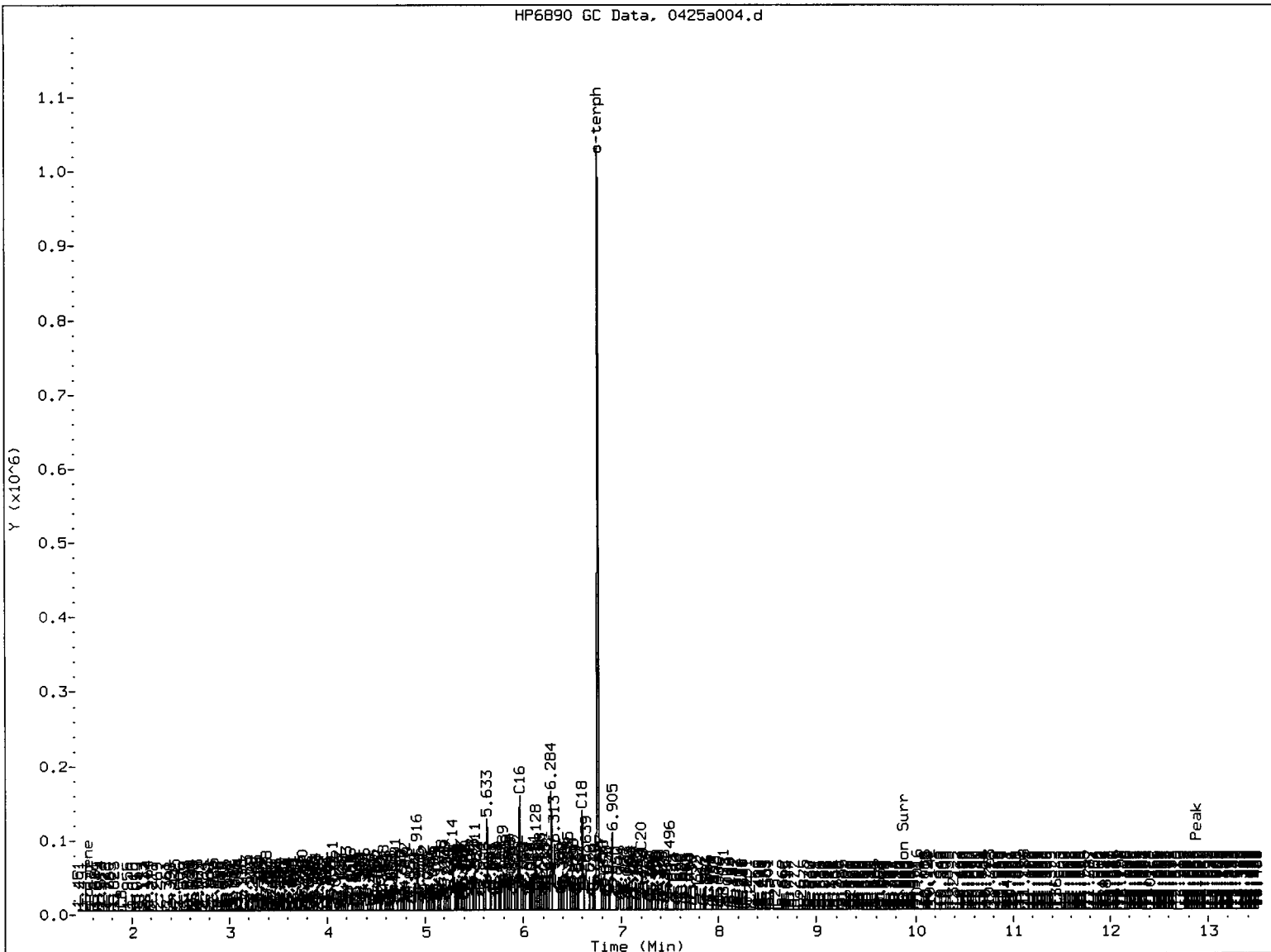
M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	768339	39.7	88.2
Triacontane	43	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

HP6890 GC Data, 0425a004.d



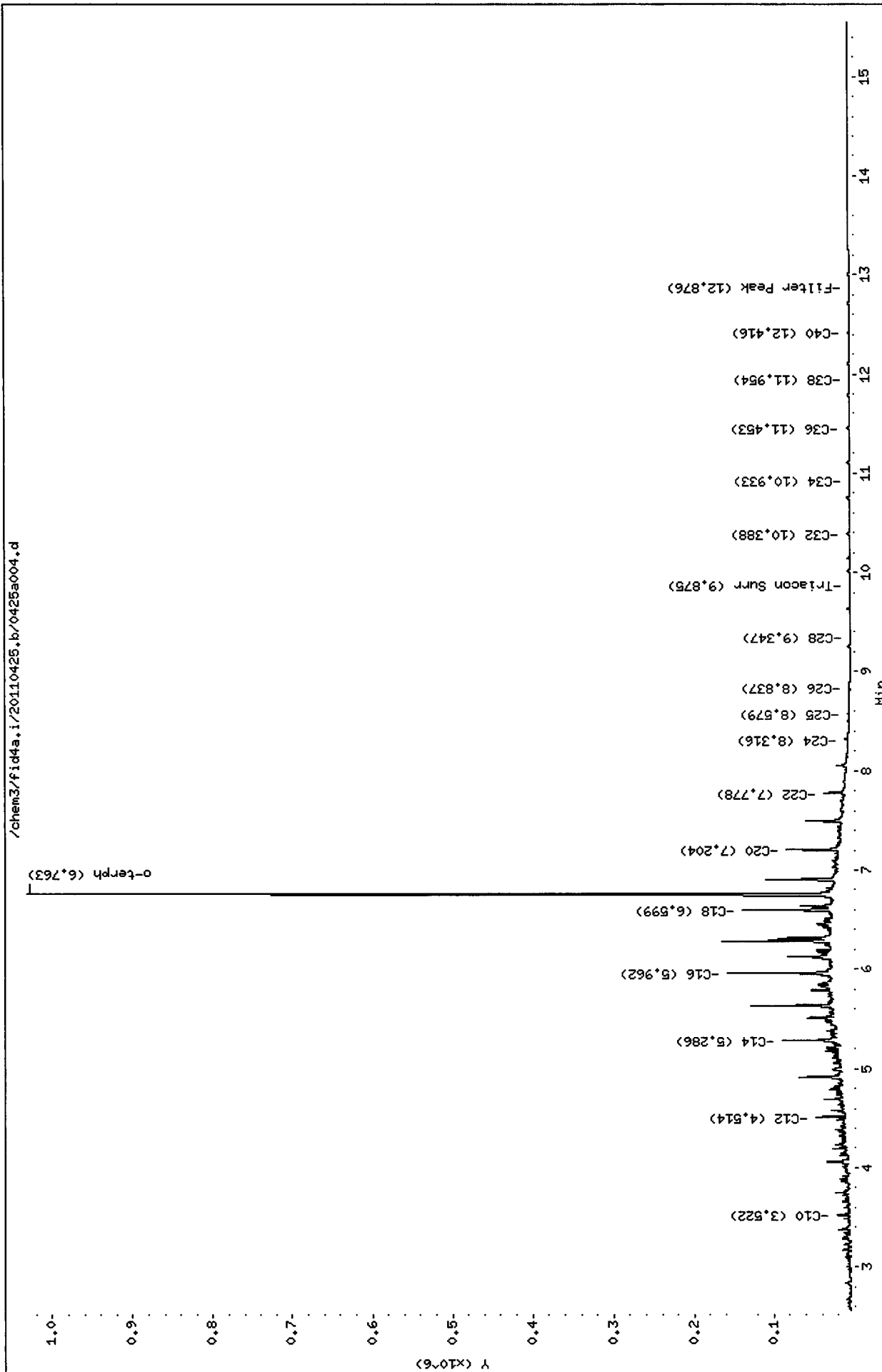
MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other Surr pk overlap

Analyst: AR

Date: 4/26/2011

Data File: /chem3/fid4a.i/20110425.b/0425a004.d  
Date : 25-APR-2011 16:00  
Client ID:  
Sample Info: DIESEL#1  
Instrument: fid4a.i  
Operator: MS  
Column diameter: 0.25  
Column phase: RTX-1





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a005.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: MOIL#1  
Client ID:  
Injection: 25-APR-2011 16:24  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.520	-0.004	892	2287	GAS (Tol-C12)	30355	1.53
C8	1.882	-0.003	189	128	DIESEL (C12-C24)	781830	39.40
C10	3.526	0.005	304	426	M.OIL (C24-C38)	5426739	476.24
C12	4.508	-0.007	210	175	AK-102 (C10-C25)	991939	44.83
C14	5.287	-0.002	192	82	AK-103 (C25-C36)	4831635	700.03 M
C16	5.962	-0.002	167	149			
C18	6.602	0.000	418	781			
C20	7.207	0.000	2564	2834			
C22	7.783	0.001	9587	5286	MSPIRIT (Tol-C12)	30355	1.65
C24	8.314	-0.005	19054	24744			
C25	8.578	0.001	24294	10595			
C26	8.828	0.002	27652	11949			
C28	9.341	-0.001	31312	19777			
C32	10.391	-0.011	35391	77019			
C34	10.923	-0.006	26212	22314	CREOSOT (C12-C22)	301945	74.17
Filter Peak	12.881	0.001	3613	5088			
C36	11.443	-0.001	18822	14668			
C38	11.944	0.003	11611	14353			
C40	12.414	-0.006	7987	22841			
o-terph	6.752	-0.010	1125	2427	JET-A (C10-C18)	50694	3.42
Triacon Surr	9.888	0.006	679510	794463			

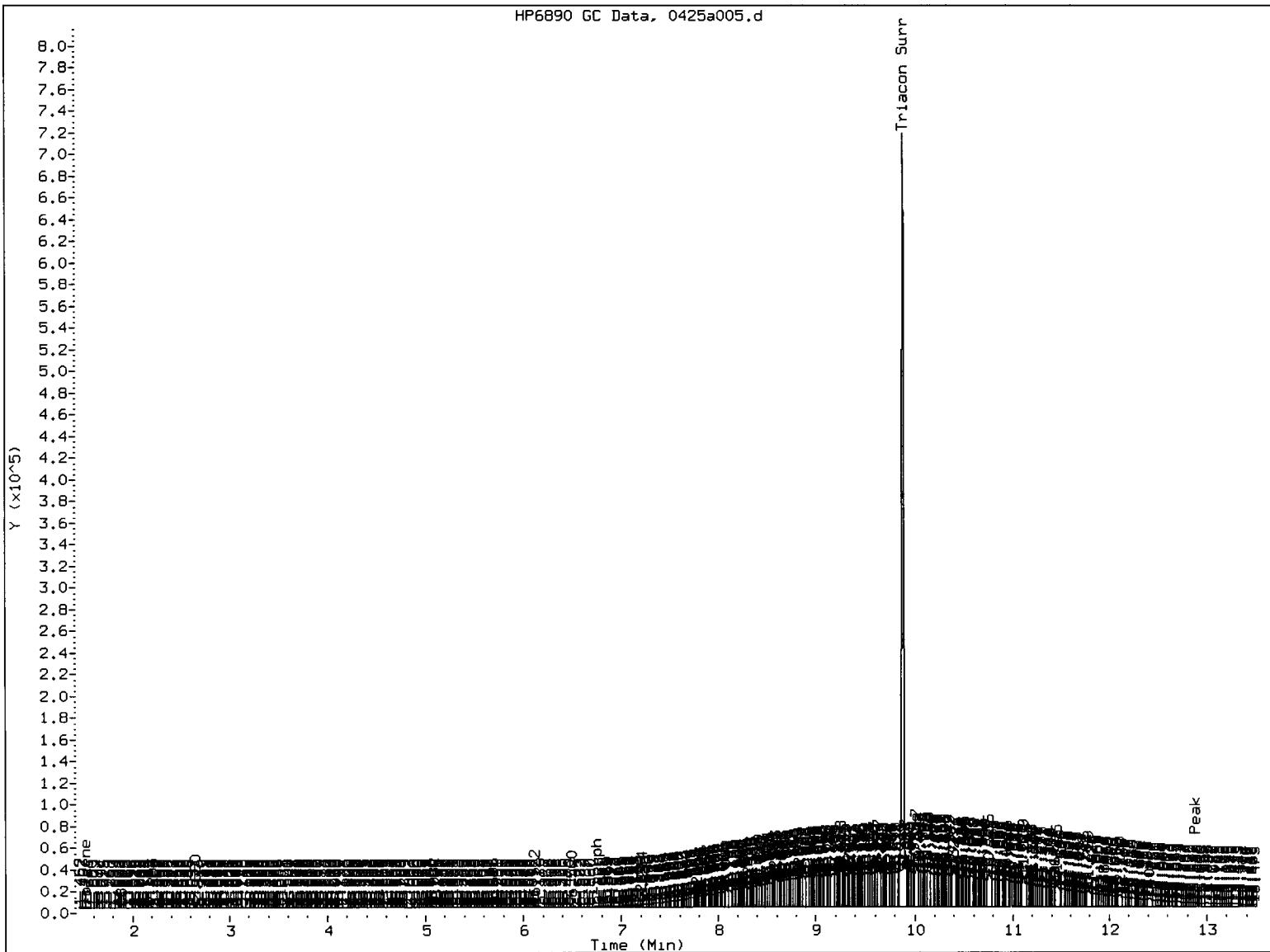
M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2427	0.1	0.3
Triacontane	794463	46.8	103.9

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

HP6890 GC Data, 0425a005.d



MANUAL INTEGRATION

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

✓ 5. Other Surr pk overlap

Analyst: AR

Date: 4/26/2011

Data File: /chem3/fid4a.i/20110425.b/0425a005.d

Date : 25-APR-2011 16:24

Client ID:

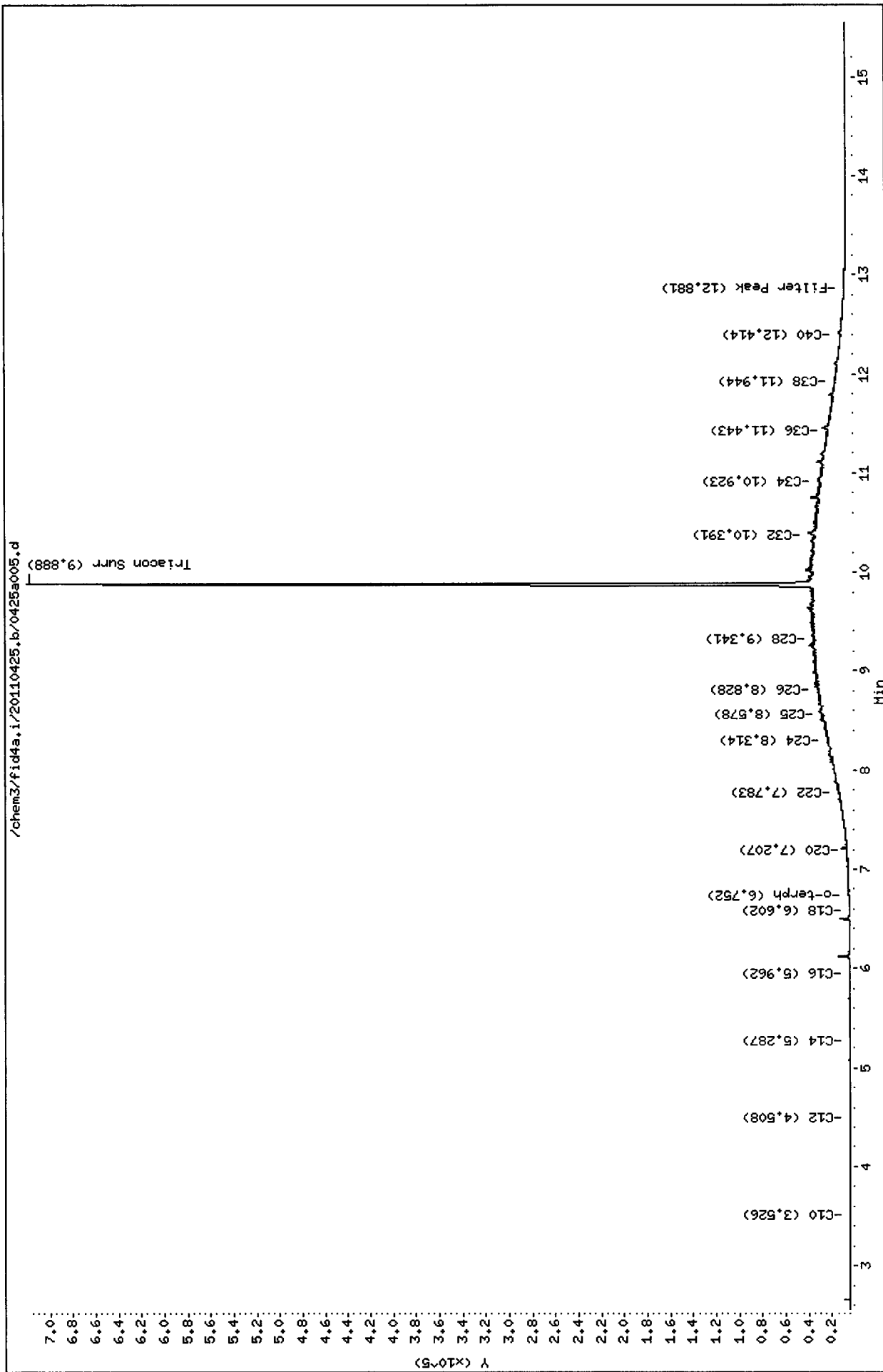
Sample Info: MDIL#1

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

AR 4/26/2011

Data file: /chem3/fid4a.i/20110425.b/0425a006.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71MBS1  
Client ID:  
Injection: 25-APR-2011 16:48  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.522	-0.003	836	750	GAS (Tol-C12)	106250	5.37
C8	1.869	-0.016	1574	1967	DIESEL (C12-C24)	142693	7.19 - <i>LR</i>
C10	3.512	-0.009	332	269	M.OIL (C24-C38)	108331	9.51 - <i>LR</i>
C12	4.519	0.005	662	588	AK-102 (C10-C25)	171478	7.75
C14	5.284	-0.005	1307	2183	AK-103 (C25-C36)	89830	13.01
C16	5.971	0.007	2811	4566			
C18	6.597	-0.004	846	1127			
C20	7.195	-0.012	490	665			
C22	7.785	0.003	608	345	MSPERIT (Tol-C12)	106250	5.78
C24	8.323	0.004	515	947			
C25	8.570	-0.006	404	316			
C26	8.839	0.013	423	710			
C28	9.355	0.014	590	1649			
C32	10.389	-0.013	4409	5545			
C34	10.916	-0.013	388	175	CREOSOT (C12-C22)	127059	31.21
Filter Peak	12.883	0.004	738	522			
C36	11.455	0.011	3817	6329			
C38	11.952	0.011	410	334			
C40	12.418	-0.002	1918	3755			
o-terph	6.762	0.000	972817	790468	JET-A (C10-C18)	108964	7.34
Triacon Surr	9.883	0.001	637542	705710			

M Indicates manual integration within range.

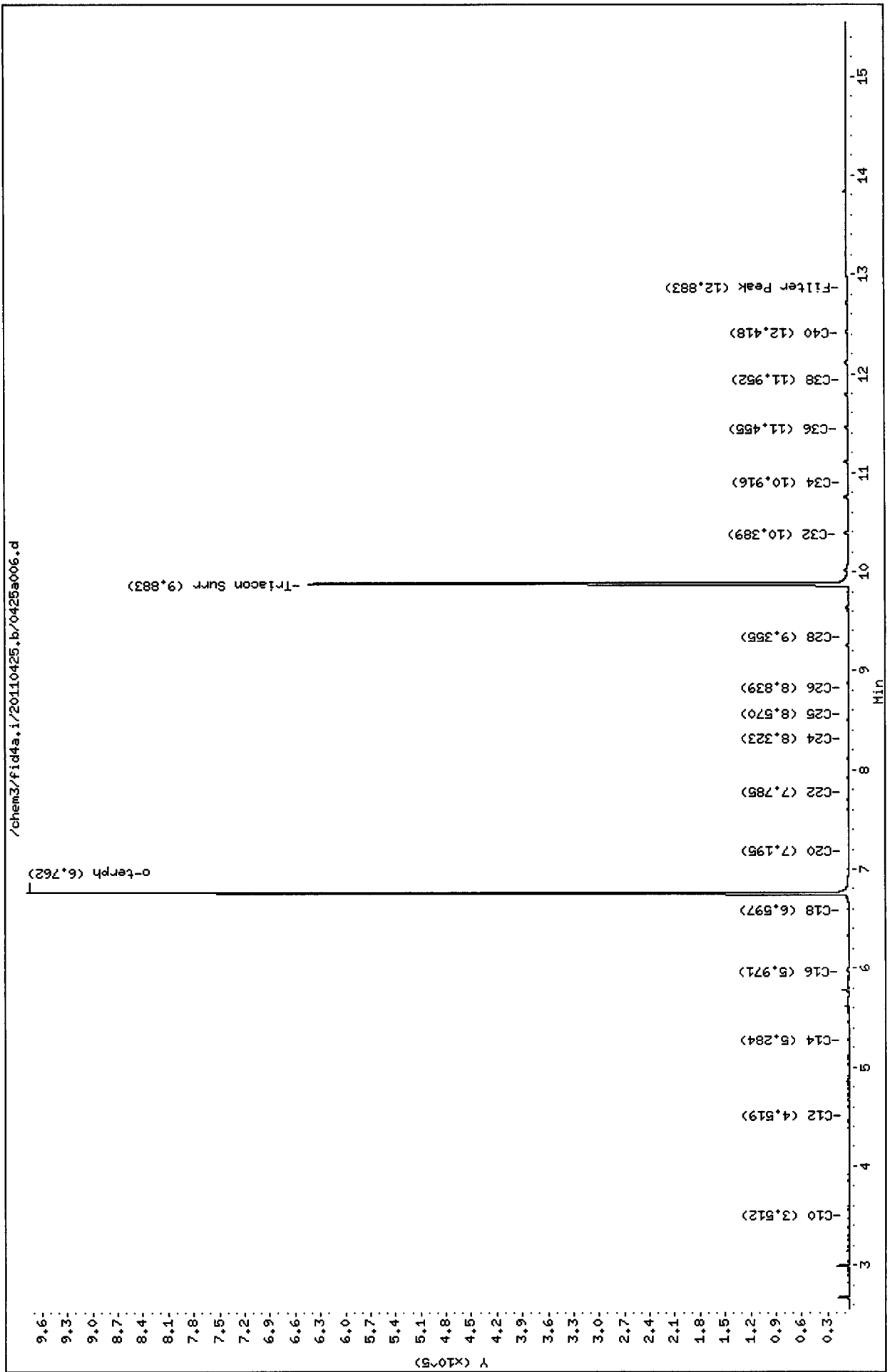
Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	790468	40.9	90.8
Triacotane	705710	41.5	92.3

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

Data File: /chem3/fid4a.i/20110425.b/0425a006.d  
 Date : 25-APR-2011 16:48  
 Client ID:  
 Sample Info: SS71HBS1  
 Column phase: RTX-1

Instrument: fid4a.i  
 Operator: MS  
 Column diameter: 0.25



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a007.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71LCSS1  
Client ID:  
Injection: 25-APR-2011 17:12  
Dilution Factor: 1

FID:4A RESULTS

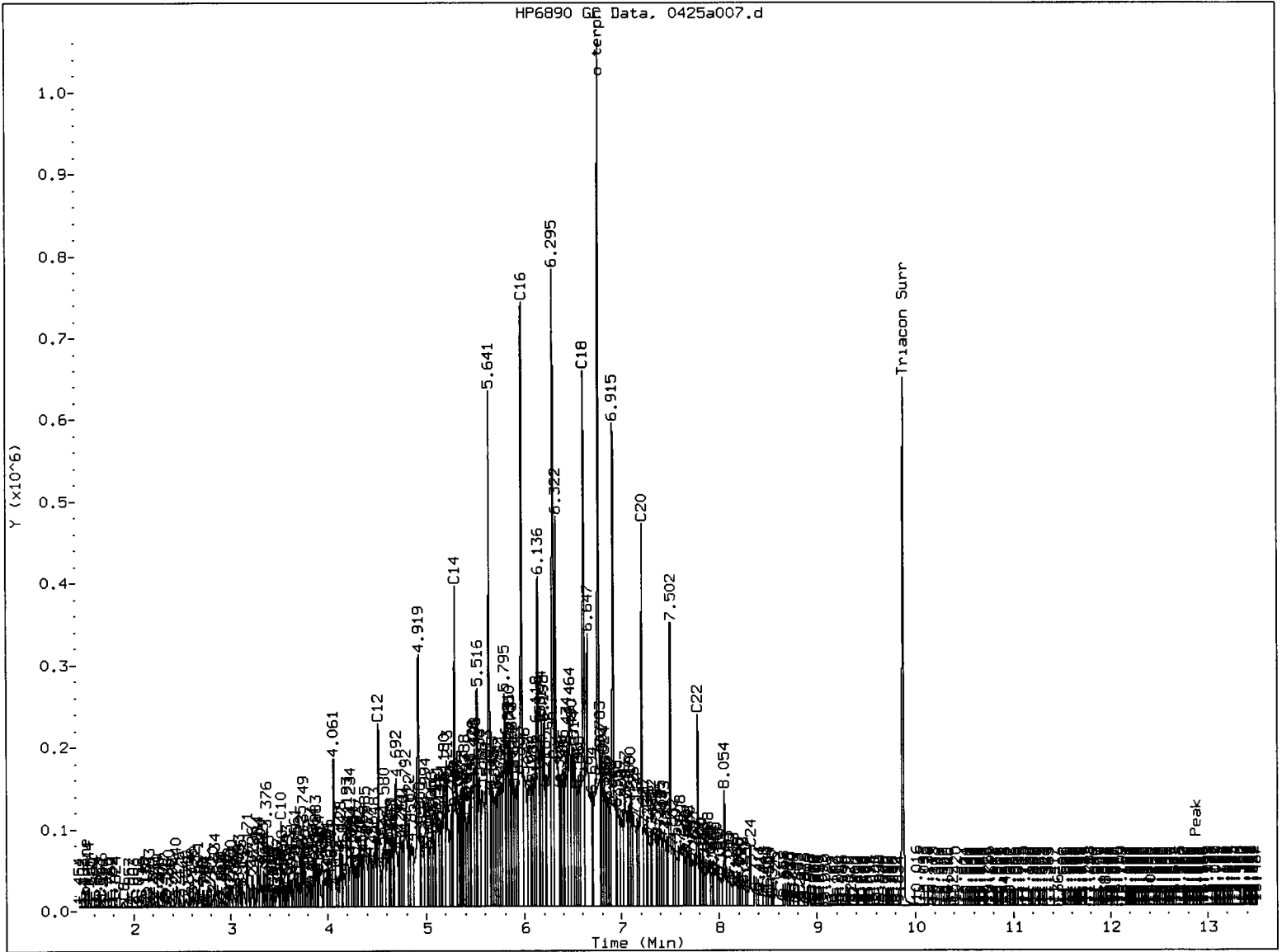
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.508	-0.016	962	836	GAS (Tol-C12)	3455818	174.61
C8	1.901	0.016	6757	9981	DIESEL (C12-C24)	26836671	1352.38 <sup>90.2%</sup>
C10	3.522	0.001	104134	60814	M.OIL (C24-C38)	405735	35.61 <sup>2</sup>
C12	4.516	0.001	223420	217884	AK-102 (C10-C25)	29602547	1337.97 M
C14	5.292	0.004	391845	556521	AK-103 (C25-C36)	278652	40.37
C16	5.972	0.008	739263	938405			
C18	6.611	0.009	655100	815592			
C20	7.213	0.006	467811	535280			
C22	7.783	0.001	234172	234833	MSPIRIT (Tol-C12)	3455818	188.09
C24	8.317	-0.002	69890	101258			
C25	8.571	-0.005	29277	69115			
C26	8.825	-0.001	10092	20819			
C28	9.342	0.001	2079	6068			
C32	10.389	-0.013	1915	3105			
C34	10.919	-0.010	508	1104	CREOSOT (C12-C22)	25804725	6338.36 M
Filter Peak	12.879	0.000	600	70			
C36	11.456	0.012	1407	2793			
C38	11.944	0.003	310	248			
C40	12.419	-0.001	949	2138			
o-terph	6.768	0.006	899816	777082	JET-A (C10-C18)	21344548	1438.12
Triacon Surr	9.883	0.001	646287	726648			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	777082	40.2	89.3
Triacontane	726648	42.8	95.1

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011



MANUAL INTEGRATION

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

5. Other Surr pk. overlap

Analyst: AR

Date: 4/26/204

Data File: /chem3/fid4a.i/20110425.b/0425a007.d

Date : 25-APR-2011 17:12

Client ID:

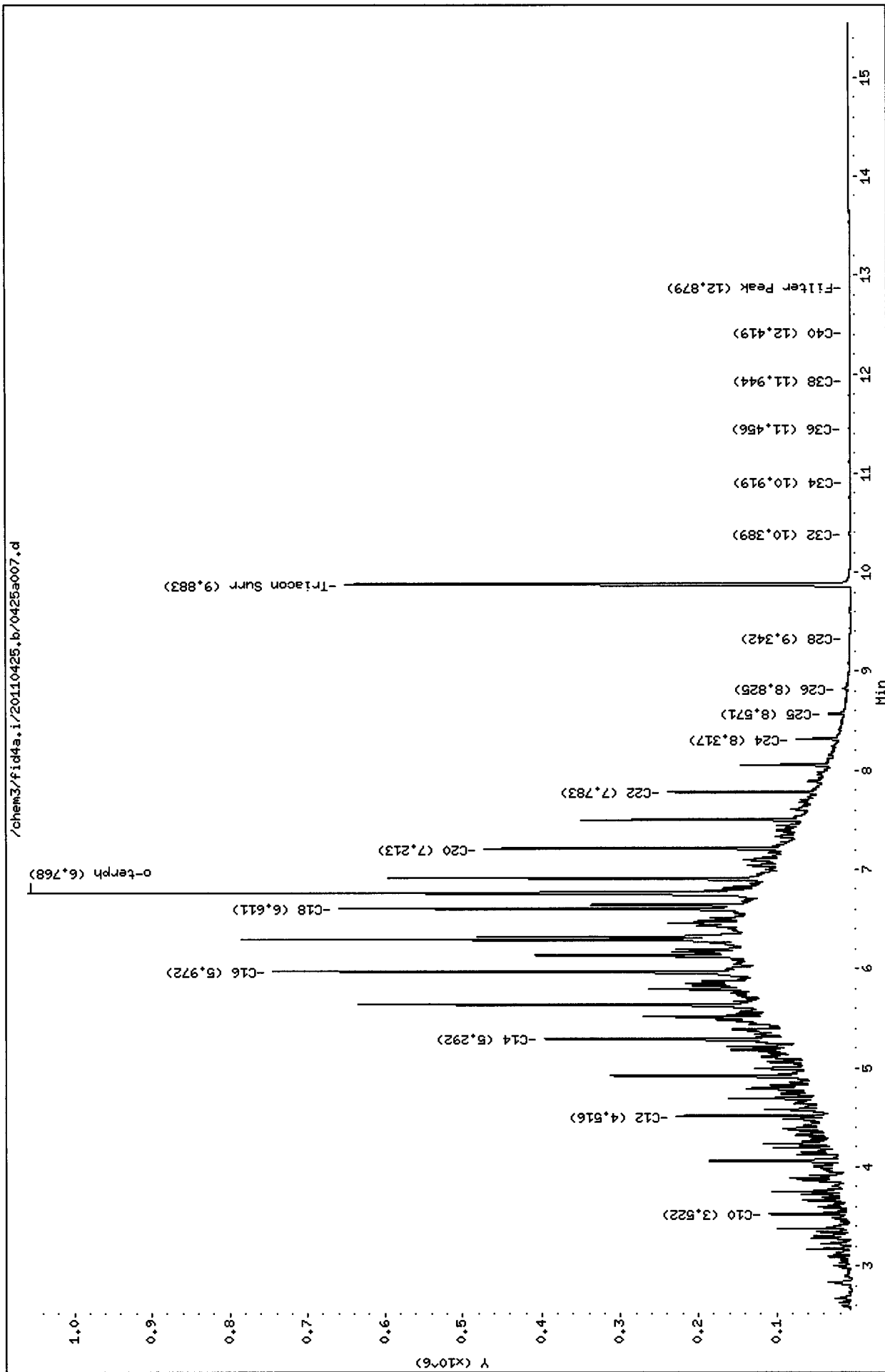
Sample Info: SS71LCSS1

Column phase: RTX-1

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25





Analytical Resources Inc.  
407S TPH Quantitation Report

AP 4/26/2011

Data file: /chem3/fid4a.i/20110425.b/0425a009.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71A  
Client ID:  
Injection: 25-APR-2011 17:59  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.532	0.007	927	860	GAS (Tol-C12)	124857	6.31
C8	1.892	0.007	2110	3409	DIESEL (C12-C24)	914663	46.09 - <i>R</i>
C10	3.527	0.006	1498	1481	M.OIL (C24-C38)	4659460	408.90 - <i>Moil</i>
C12	4.520	0.005	1132	997	AK-102 (C10-C25)	1129005	51.03 M
C14	5.296	0.007	1312	2776	AK-103 (C25-C36)	4271166	618.82 M
C16	5.967	0.003	1533	3227			
C18	6.598	-0.003	3152	4783			
C20	7.206	-0.001	4385	5465			
C22	7.778	-0.004	14378	31358	MSPIRIT (Tol-C12)	124857	6.80
C24	8.315	-0.004	37063	65926			
C25	8.569	-0.007	54712	82686			
C26	8.822	-0.004	52855	92103			
C28	9.337	-0.004	67077	123609			
C32	10.398	-0.004	41118	97616			
C34	10.924	-0.005	22101	59128	CREOSOT (C12-C22)	460542	113.12 M
Filter Peak	12.881	0.002	2445	6285			
C36	11.441	-0.002	13068	40553			
C38	11.937	-0.004	6859	17386			
C40	12.417	-0.003	4479	12858			
o-terph	6.762	-0.001	968016	760481	JET-A (C10-C18)	149426	10.07
Triacon Surr	9.885	0.002	644358	670421			

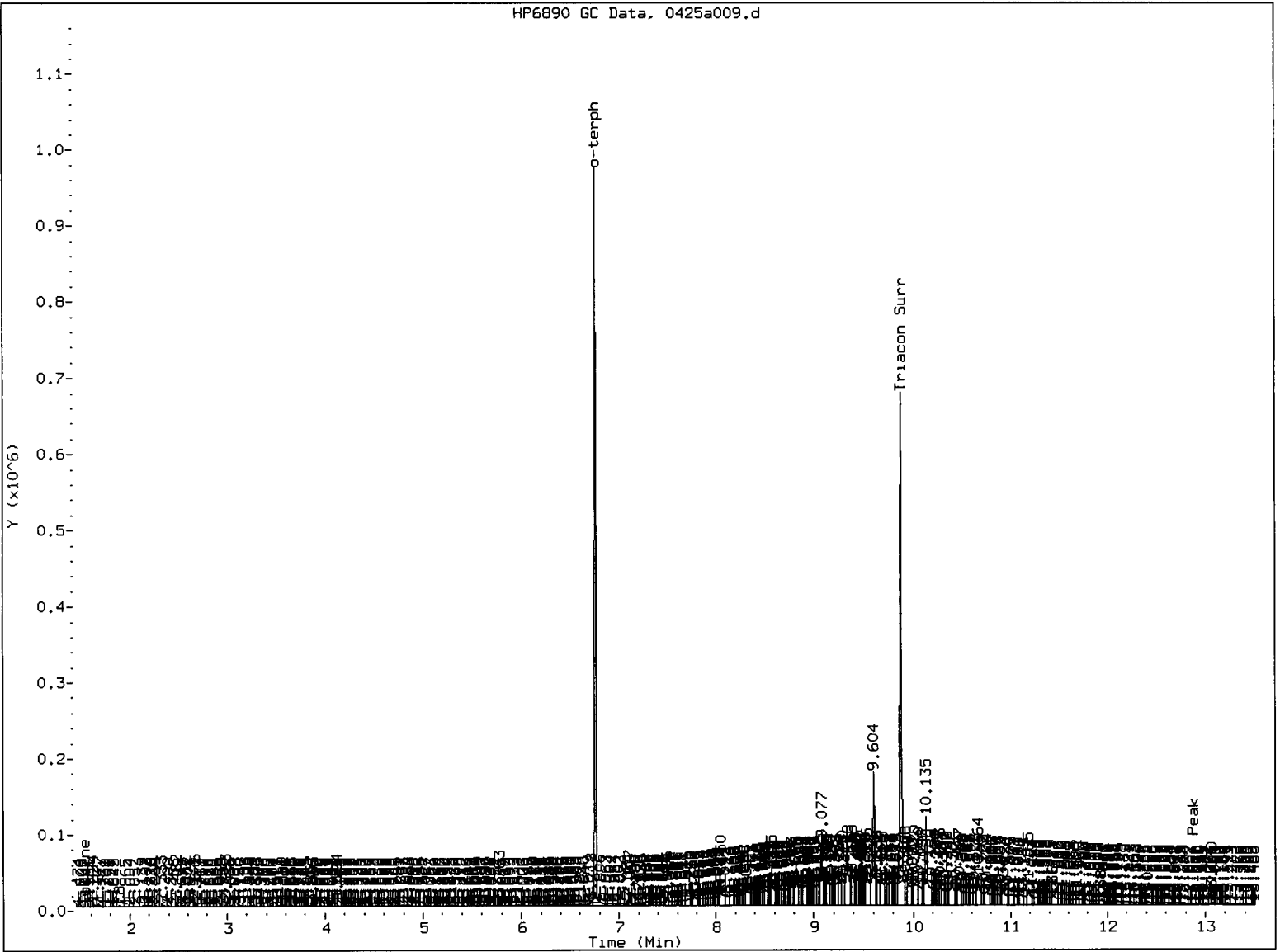
M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	760481	39.3	87.3
Triacontane	670421	39.5	87.7

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

HP6890 GC Data, 0425a009.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other Surr pk overlap

Analyst: AR

Date: 4/26/2011

Data File: /chem3/fid4a.i/20110425.b/0425a009.d

Date : 25-APR-2011 17:59

Client ID:

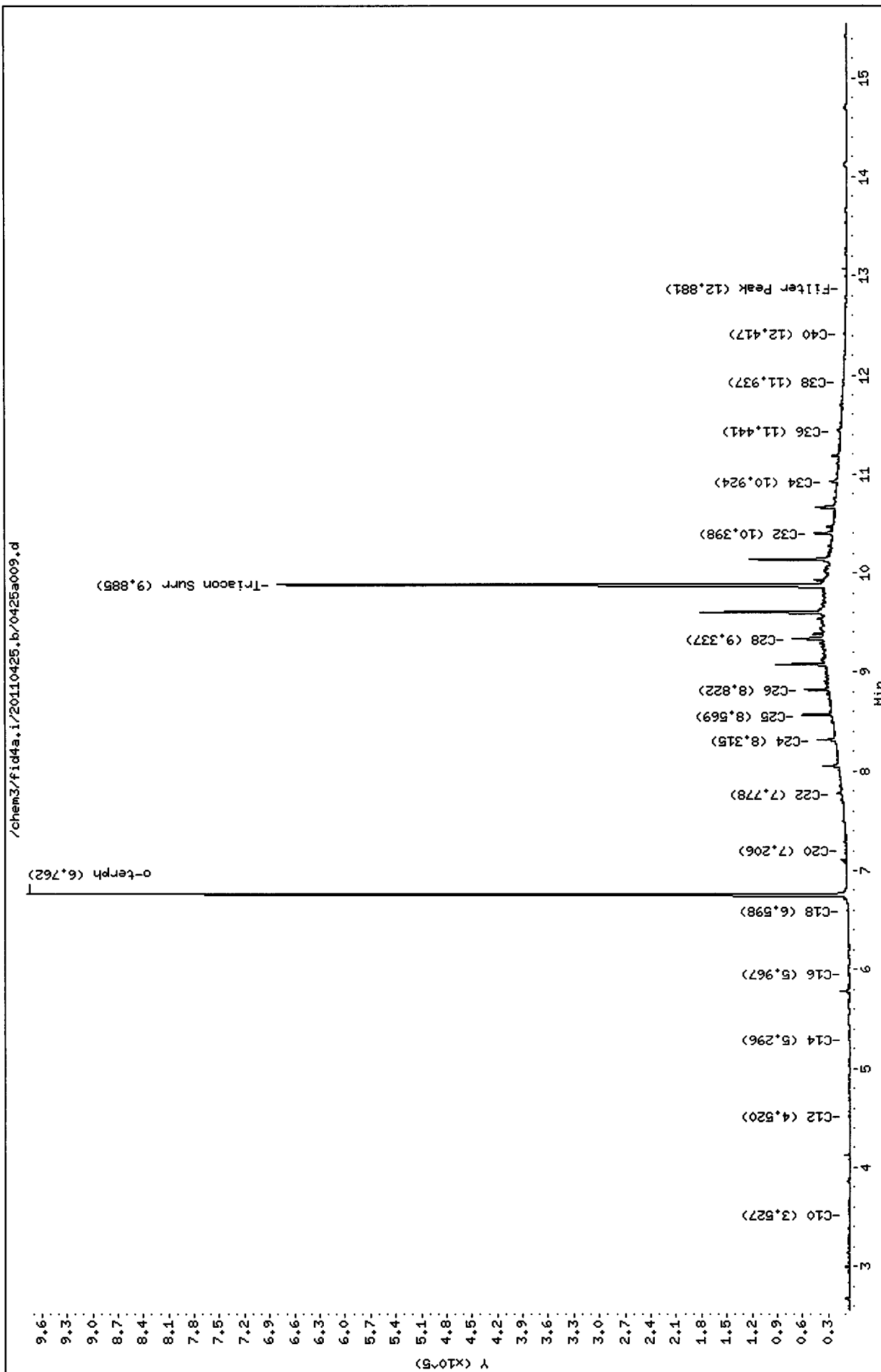
Sample Info: SS71A

Column phase: RTX-1

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a010.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71B  
Client ID:  
Injection: 25-APR-2011 18:23  
Dilution Factor: 1

FID:4A RESULTS

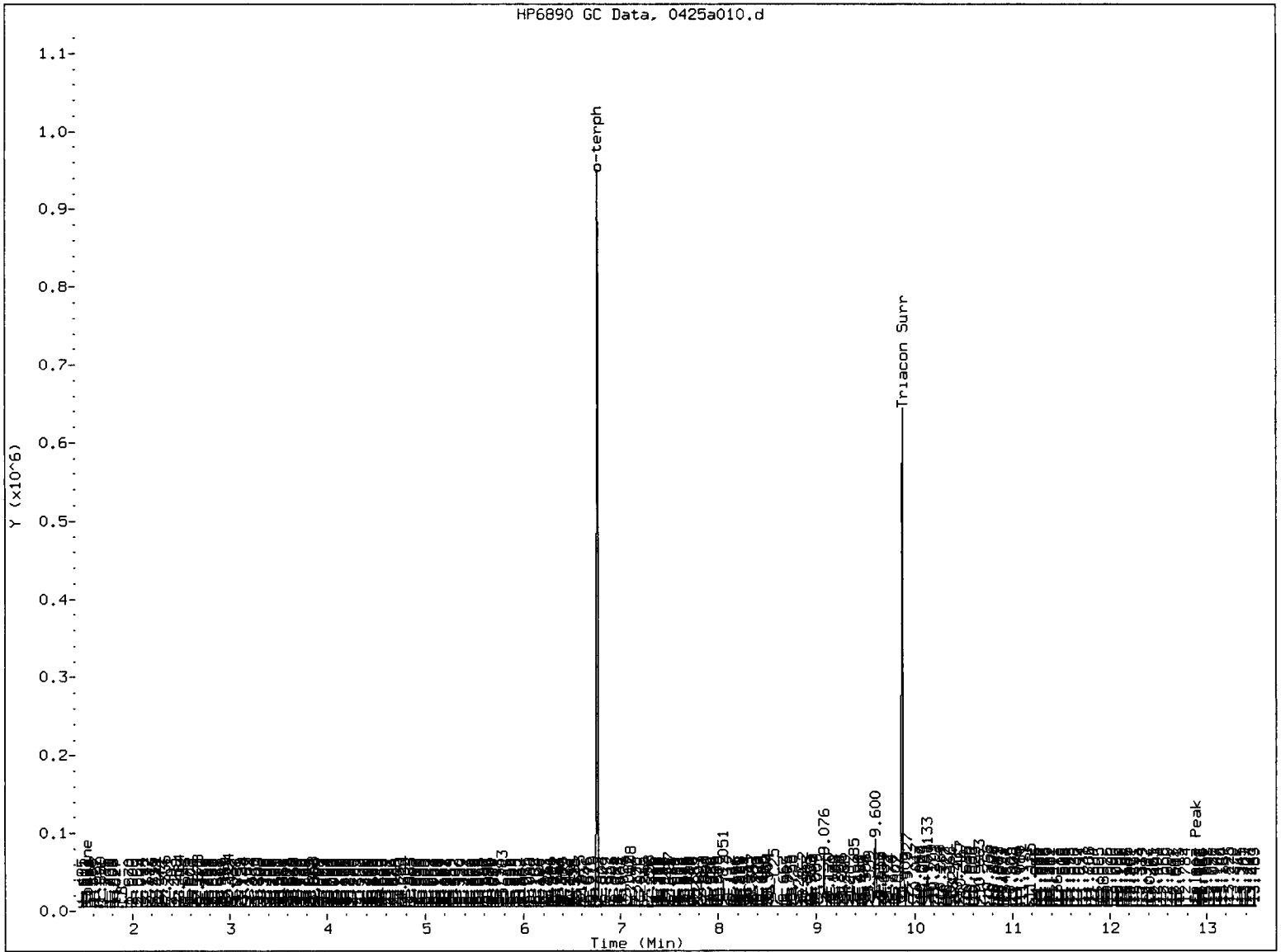
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.534	0.010	811	733	GAS (Tol-C12)	108648	5.49
C8	1.895	0.010	1274	2327	DIESEL (C12-C24)	386785	19.49
C10	3.528	0.007	1115	1261	M.OIL (C24-C38)	1093616	95.97
C12	4.520	0.005	1621	1276	AK-102 (C10-C25)	448930	20.29 M
C14	5.273	-0.015	375	525	AK-103 (C25-C36)	1017676	147.44 M
C16	5.969	0.005	1234	2312			
C18	6.597	-0.005	3018	3897			
C20	7.209	0.002	2595	3982			
C22	7.779	-0.003	6799	9065	MSPiRiT (Tol-C12)	108648	5.91
C24	8.316	-0.003	16527	19729			
C25	8.569	-0.007	36338	57606			
C26	8.821	-0.005	10679	18541			
C28	9.335	-0.007	15699	26860			
C32	10.395	-0.007	8834	17388			
C34	10.926	-0.004	3358	9965	CREOSOT (C12-C22)	257685	63.29 M
Filter Peak	12.888	0.009	1135	2504			
C36	11.455	0.011	3339	8510			
C38	11.936	-0.005	1333	1898			
C40	12.417	-0.003	1731	4372			
o-terph	6.763	0.000	943455	773103	JET-A (C10-C18)	131413	8.85
Triacon Surr	9.882	0.000	632027	647899			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	773103	40.0	88.8
Triacontane	647899	38.1	84.8

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other Surr pt overlap

Analyst: AR Date: 4/26/01

Data File: /chem3/fid4a.i/20110425.b/0425a010.d

Date : 25-APR-2011 18:23

Client ID:

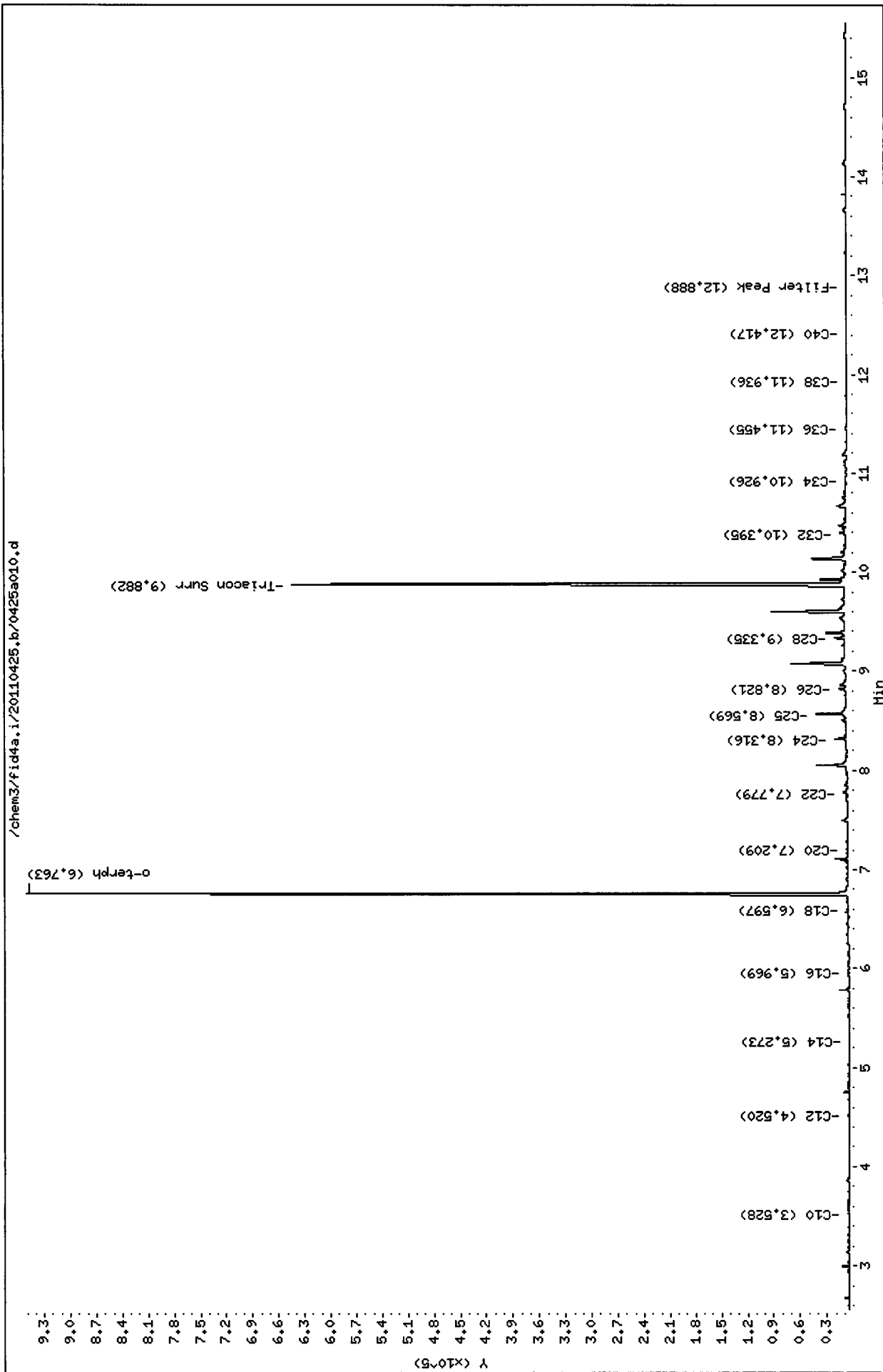
Sample Info: SS71B

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a011.d      ARI ID: SS71C  
 Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m      Client ID:  
 Instrument: fid4a.i      Injection: 25-APR-2011 18:47  
 Operator: MS  
 Report Date: 04/26/2011      Dilution Factor: 1  
 Macro: 13-APR-2011  
 Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.525	0.001	526	569	GAS (Tol-C12)	88685	4.48
C8	1.876	-0.008	214	182	DIESEL (C12-C24)	357021	17.99 <i>-LPC</i>
C10	3.513	-0.008	250	229	M.OIL (C24-C38)	780267	68.47 <i>-LPC</i>
C12	4.519	0.005	1036	748	AK-102 (C10-C25)	406942	18.39 M
C14	5.284	-0.004	226	311	AK-103 (C25-C36)	713115	103.32 M
C16	5.952	-0.012	919	923			
C18	6.598	-0.004	2190	3352			
C20	7.207	0.000	2364	4081			
C22	7.777	-0.005	4457	6697	MSPiRiT (Tol-C12)	88685	4.83
C24	8.314	-0.005	9028	11410			
C25	8.567	-0.010	12927	25313			
C26	8.821	-0.005	6131	14641			
C28	9.332	-0.009	9081	19993			
C32	10.388	-0.014	7533	13946			
C34	10.920	-0.009	2484	9904	CREOSOT (C12-C22)	237692	58.38 M
Filter Peak	12.870	-0.009	1058	770			
C36	11.447	0.004	3787	9629			
C38	11.953	0.012	1126	489			
C40	12.408	-0.012	1782	4756			
o-terph	6.761	-0.001	892824	682908	JET-A (C10-C18)	89448	6.03
Triacon Surr	9.876	-0.006	574671	592865			

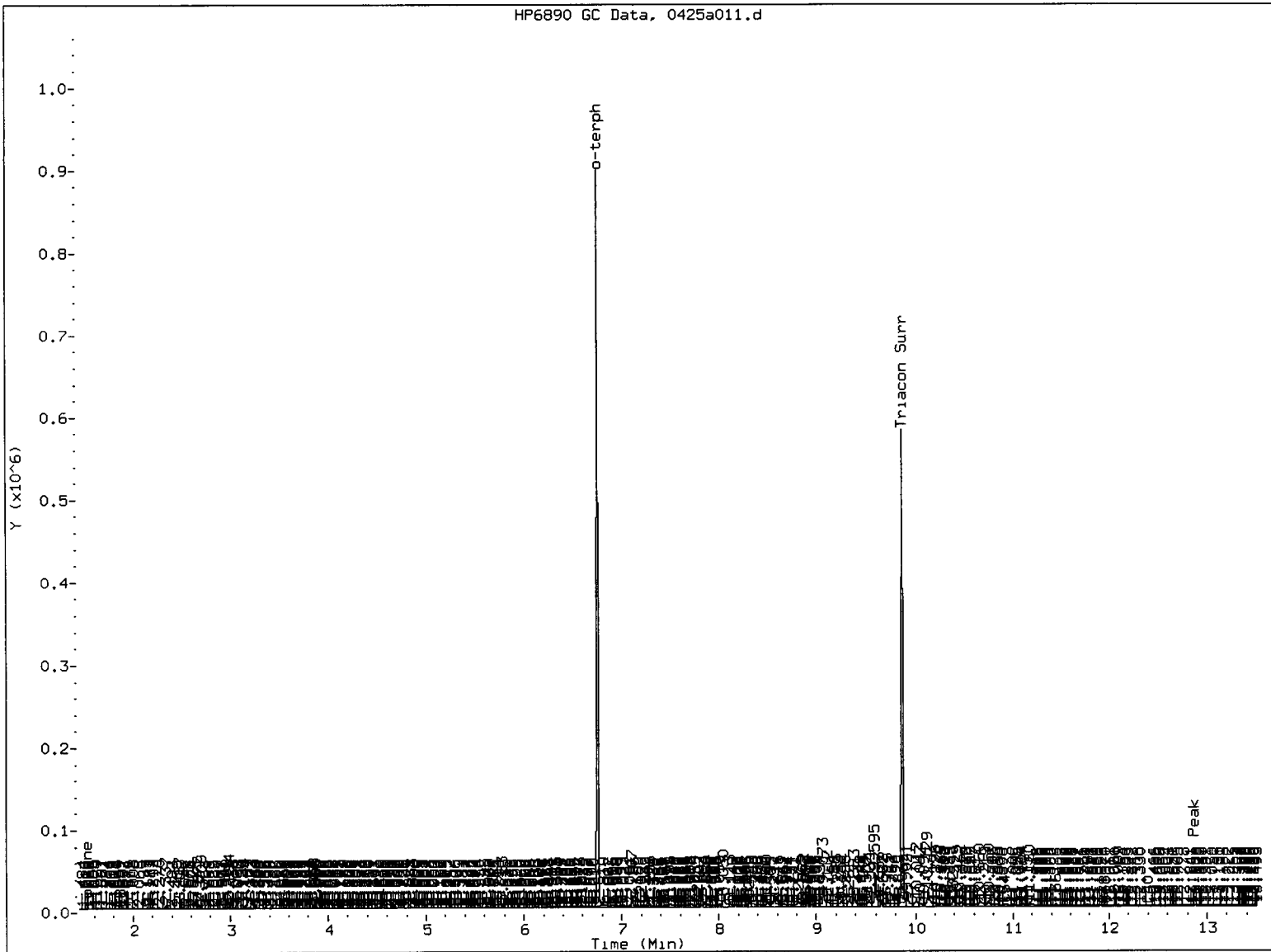
M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319)      AK102(3.52 - 8.58)      Jet A(3.52 - 6.60)  
 NW M.Oil(8.32 - 11.94)      AK103(8.58 - 11.44)      OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	682908	35.3	78.4
Triacontane	592865	34.9	77.6

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

HP6890 GC Data, 0425a011.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other Surr pt. overlap

Analyst: AP

Date: 4/26/2011



Data File: /chem3/fid4a.i/20110425.b/0425a011.d

Date : 25-APR-2011 18:47

Client ID:

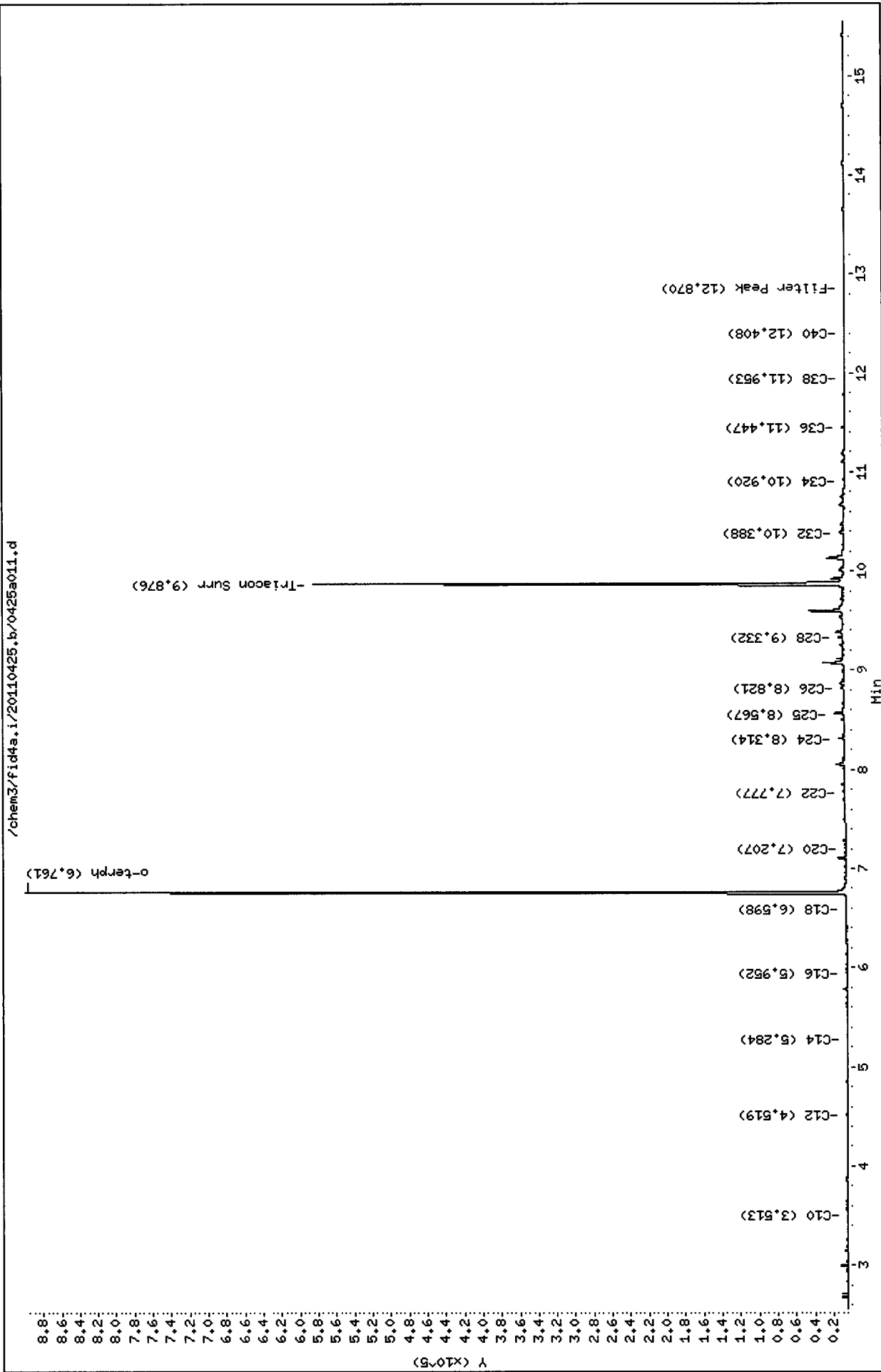
Sample Info: SS71C

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a012.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71D  
Client ID:  
Injection: 25-APR-2011 19:11  
Dilution Factor: 1

FID:4A RESULTS

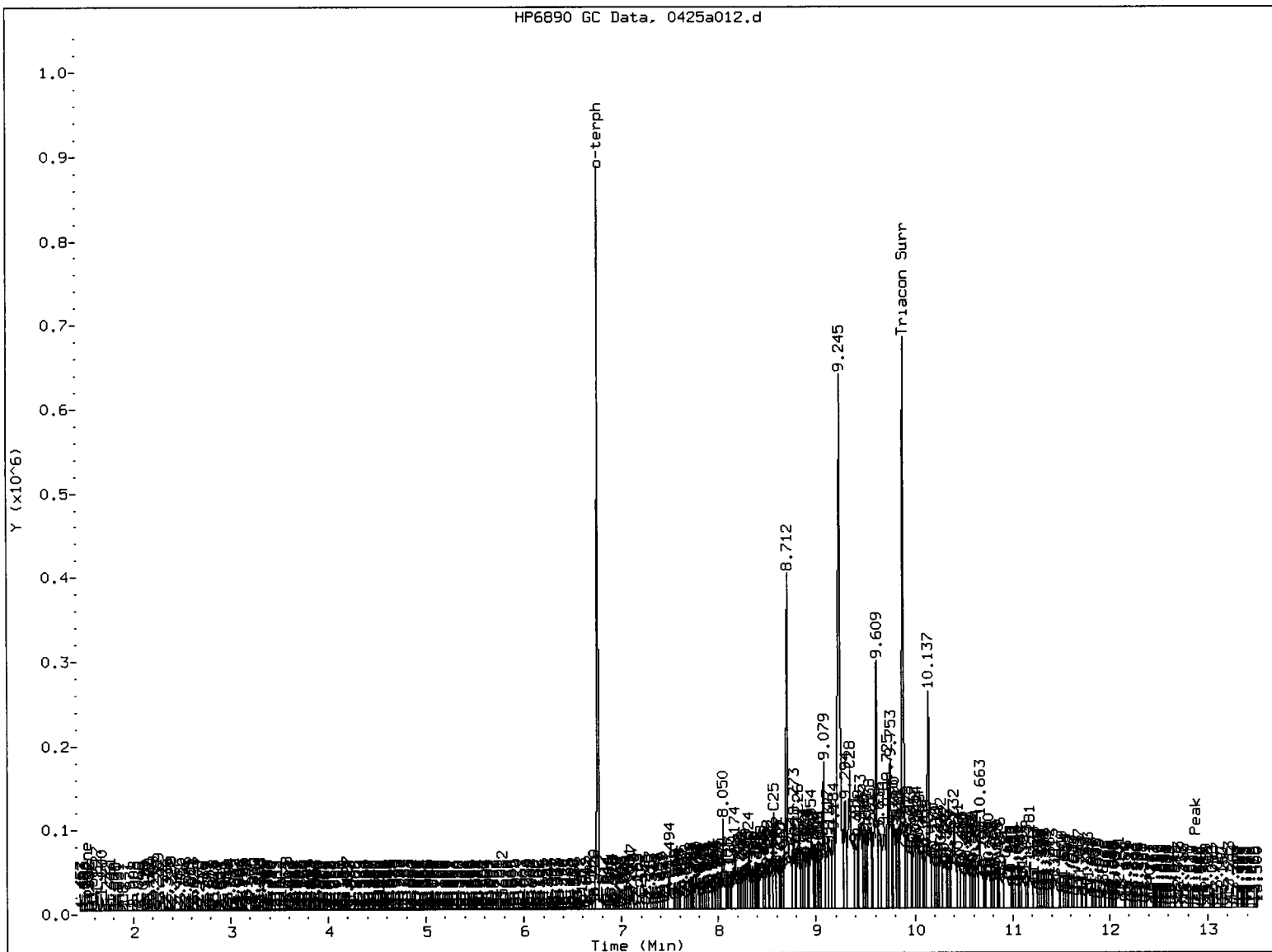
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.513	-0.011	1027	1289	GAS (Tol-C12)	288338	14.57
C8	1.893	0.009	7843	10052	DIESEL (C12-C24)	1896414	95.57- <del>DFO</del>
C10	3.525	0.004	2669	3563	M.OIL (C24-C38)	12473292	1094.63-Moil
C12	4.518	0.004	4014	3143	AK-102 (C10-C25)	2296933	103.82 M
C14	5.288	0.000	1434	2551	AK-103 (C25-C36)	11667055	1690.37 M
C16	5.962	-0.002	2932	4662			
C18	6.597	-0.005	5734	8293			
C20	7.203	-0.004	12866	17951			
C22	7.777	-0.005	43785	56608	MSPIRIT (Tol-C12)	288338	15.69
C24	8.314	-0.005	80214	103892			
C25	8.569	-0.007	113942	126708			
C26	8.823	-0.003	112486	169939			
C28	9.342	0.000	164070	379590			
C32	10.399	-0.003	106400	226490			
C34	10.924	-0.006	57629	167337	CREOSOT (C12-C22)	934828	229.62 M
Filter Peak	12.876	-0.003	5030	16686			
C36	11.437	-0.006	35040	93079			
C38	11.934	-0.007	16558	30698			
C40	12.411	-0.009	13868	34968			
o-terph	6.761	-0.002	874280	690572	JET-A (C10-C18)	265313	17.88
Triacon Surr	9.884	0.002	605284	653433			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	690572	35.7	79.3
Triacontane	653433	38.5	85.5

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- ✓ 5. Other Surr pk overlap

Analyst: AR Date: 4/26/2011

Data File: /chem3/fid4a.i/20110425\_b/0425a012.d

Date : 25-APR-2011 19:11

Client ID:

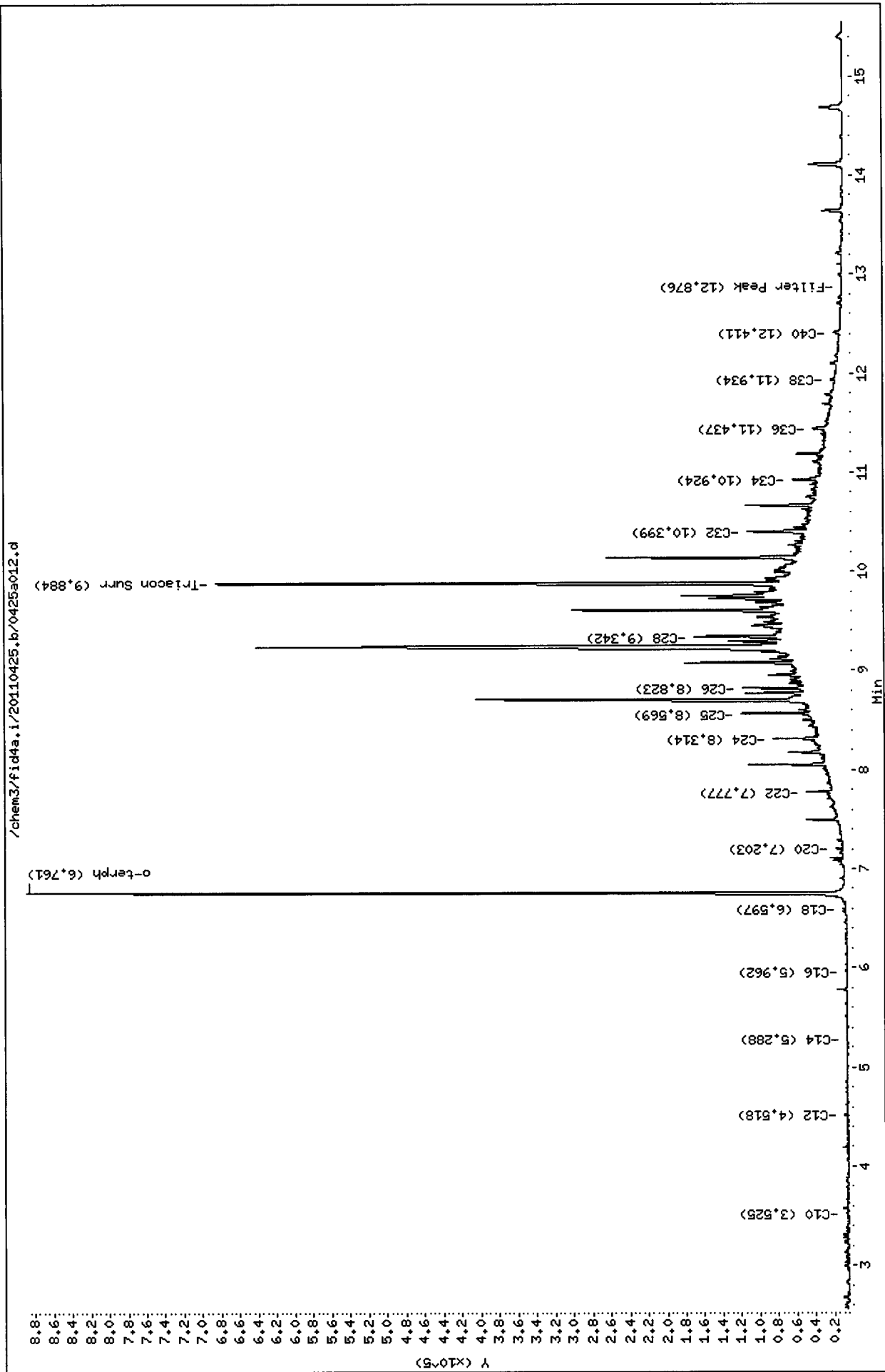
Sample Info: SS71D

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a013.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71E  
Client ID:  
Injection: 25-APR-2011 19:35  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.513	-0.012	694	975	GAS (Tol-C12)	111365	5.63
C8	1.896	0.012	1541	2606	DIESEL (C12-C24)	796609	40.14 <i>✓</i>
C10	3.528	0.007	1194	1254	M.OIL (C24-C38)	2248263	197.30 <i>-Moi</i>
C12	4.520	0.006	1523	1336	AK-102 (C10-C25)	911275	41.19 M
C14	5.303	0.015	692	1410	AK-103 (C25-C36)	2098734	304.07 M
C16	5.965	0.001	1530	2737			
C18	6.599	-0.003	4664	8994			
C20	7.205	-0.002	4317	7810			
C22	7.778	-0.004	10541	17244	MSPIRIT (Tol-C12)	111365	6.06
C24	8.314	-0.005	30598	28573			
C25	8.567	-0.009	47749	49190			
C26	8.818	-0.008	21321	45726			
C28	9.332	-0.010	27713	57071			
C32	10.390	-0.012	17570	35292			
C34	10.922	-0.008	6404	20051	CREOSOT (C12-C22)	529780	130.13 M
Filter Peak	12.879	-0.001	1611	3254			
C36	11.451	0.008	4937	17276			
C38	11.935	-0.006	1987	5192			
C40	12.412	-0.008	3123	8716			
o-terph	6.762	0.000	952272	767957	JET-A (C10-C18)	158084	10.65
Triacon Surr	9.881	-0.002	628925	660378			

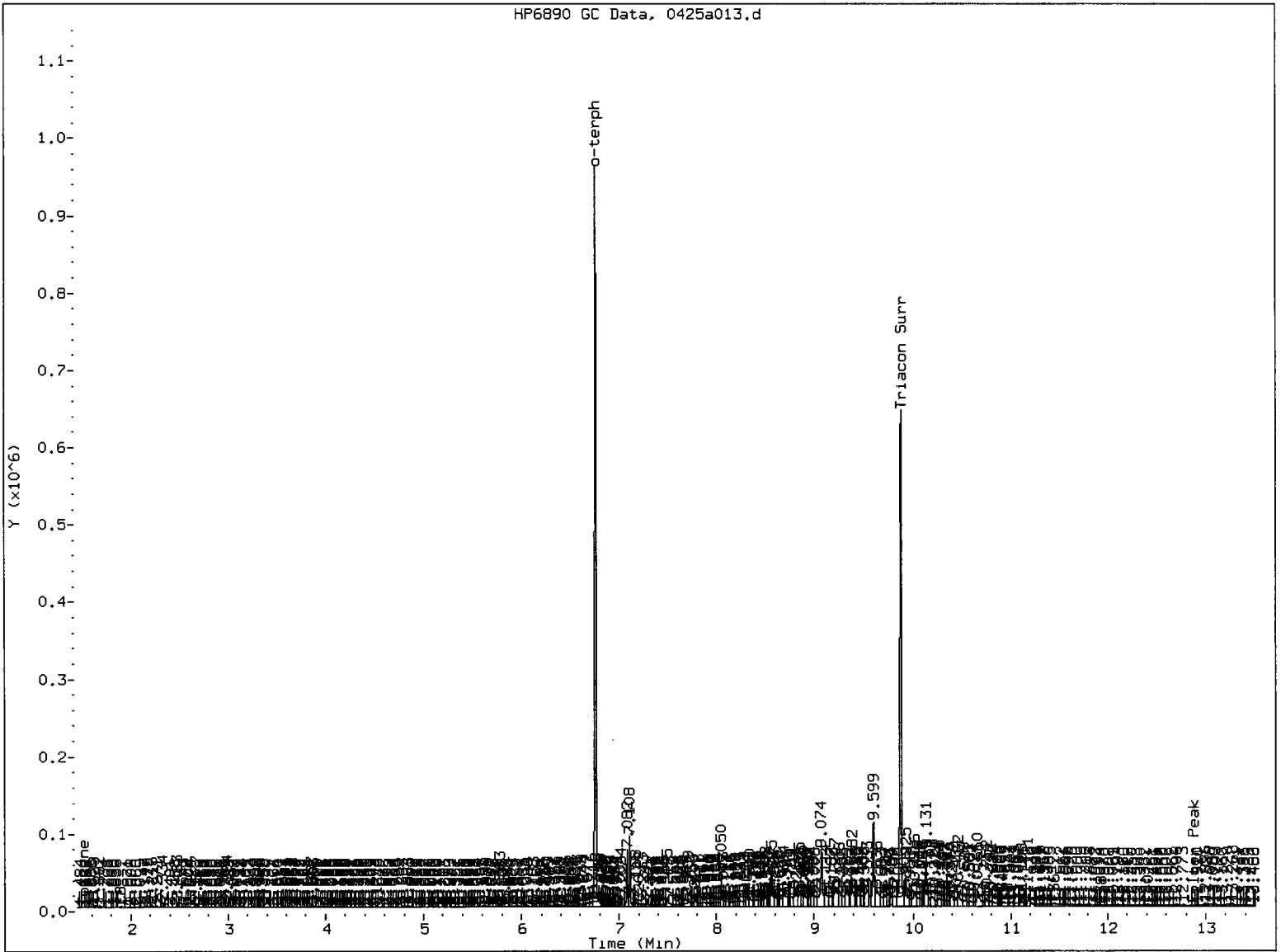
M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	767957	39.7	88.2
Triacontane	660378	38.9	86.4

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

HP6890 GC Data, 0425a013.d



MANUAL INTEGRATION

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

5. Other Surr pk overlap

Analyst: AR

Date: 4/26/2011

Data File: /chem3/fid4a.1/20110425.b/0425a013.d

Date : 25-APR-2011 19:35

Client ID:

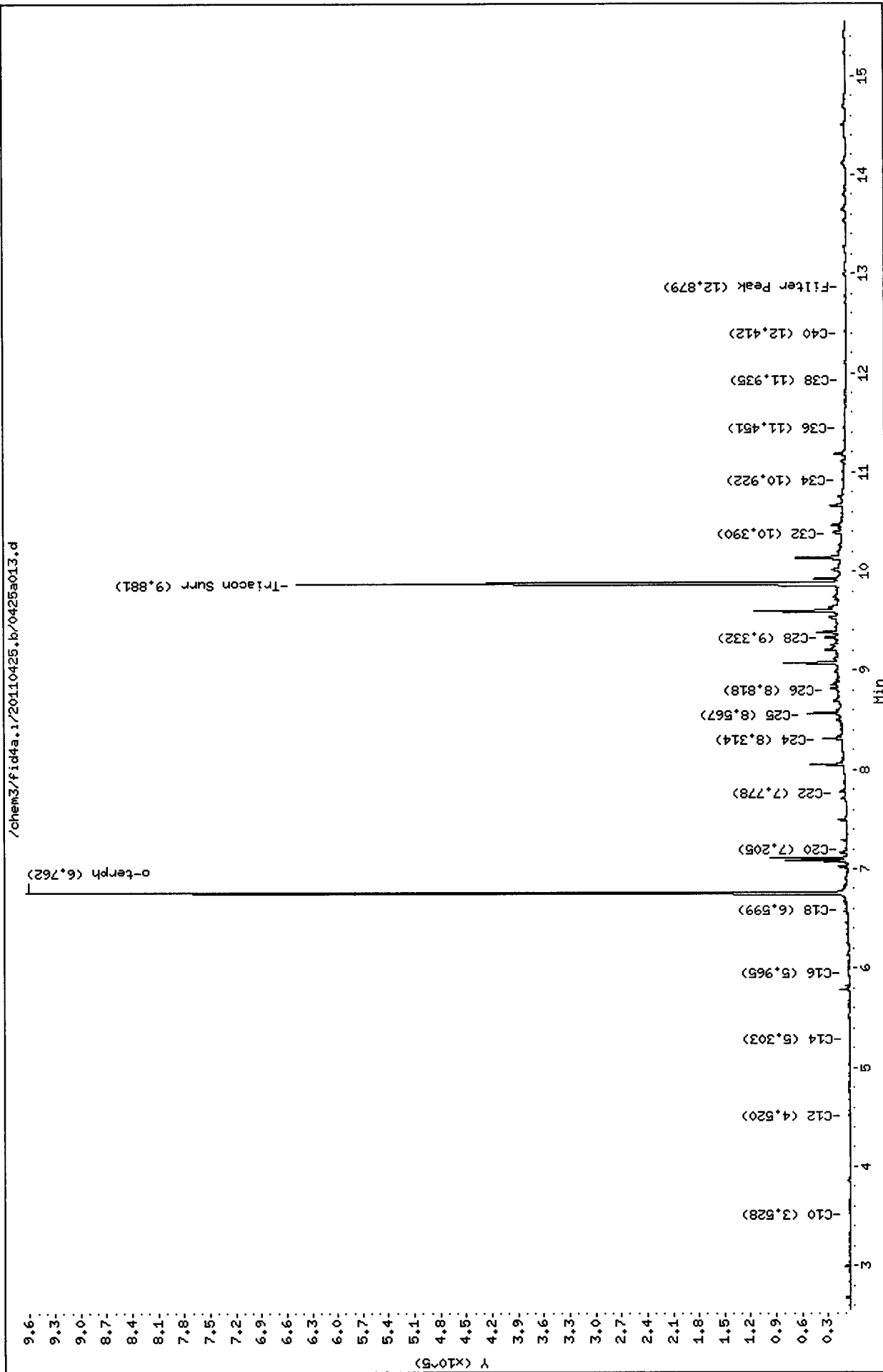
Sample Info: SS71E

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a014.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71F  
Client ID:  
Injection: 25-APR-2011 19:58  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.534	0.010	770	736	GAS (Tol-C12)	123228	6.23
C8	1.893	0.008	2701	3707	DIESEL (C12-C24)	667170	33.62 <i>LR</i>
C10	3.526	0.005	1310	1402	M.OIL (C24-C38)	1545596	135.64 - <i>Moil</i>
C12	4.519	0.005	3052	2509	AK-102 (C10-C25)	751378	33.96 M
C14	5.276	-0.013	429	597	AK-103 (C25-C36)	1433879	207.75 M
C16	5.966	0.002	1267	811			
C18	6.597	-0.005	3506	5383			
C20	7.206	-0.001	3605	5586			
C22	7.776	-0.006	9935	20850	MSPiRiT (Tol-C12)	123228	6.71
C24	8.314	-0.005	35955	30097			
C25	8.567	-0.010	45640	41922			
C26	8.817	-0.009	16202	30357			
C28	9.331	-0.011	21508	41089			
C32	10.391	-0.011	9900	20642			
C34	10.918	-0.012	5105	17161	CREOSOT (C12-C22)	463052	113.74 M
Filter Peak	12.873	-0.006	1464	2781			
C36	11.440	-0.003	3380	4675			
C38	11.930	-0.011	1973	3070			
C40	12.410	-0.010	2003	5667			
o-terph	6.761	-0.001	927585	721924	JET-A (C10-C18)	143946	9.70
Triacon Surr	9.876	-0.006	606174	629669			

M Indicates manual integration within range.

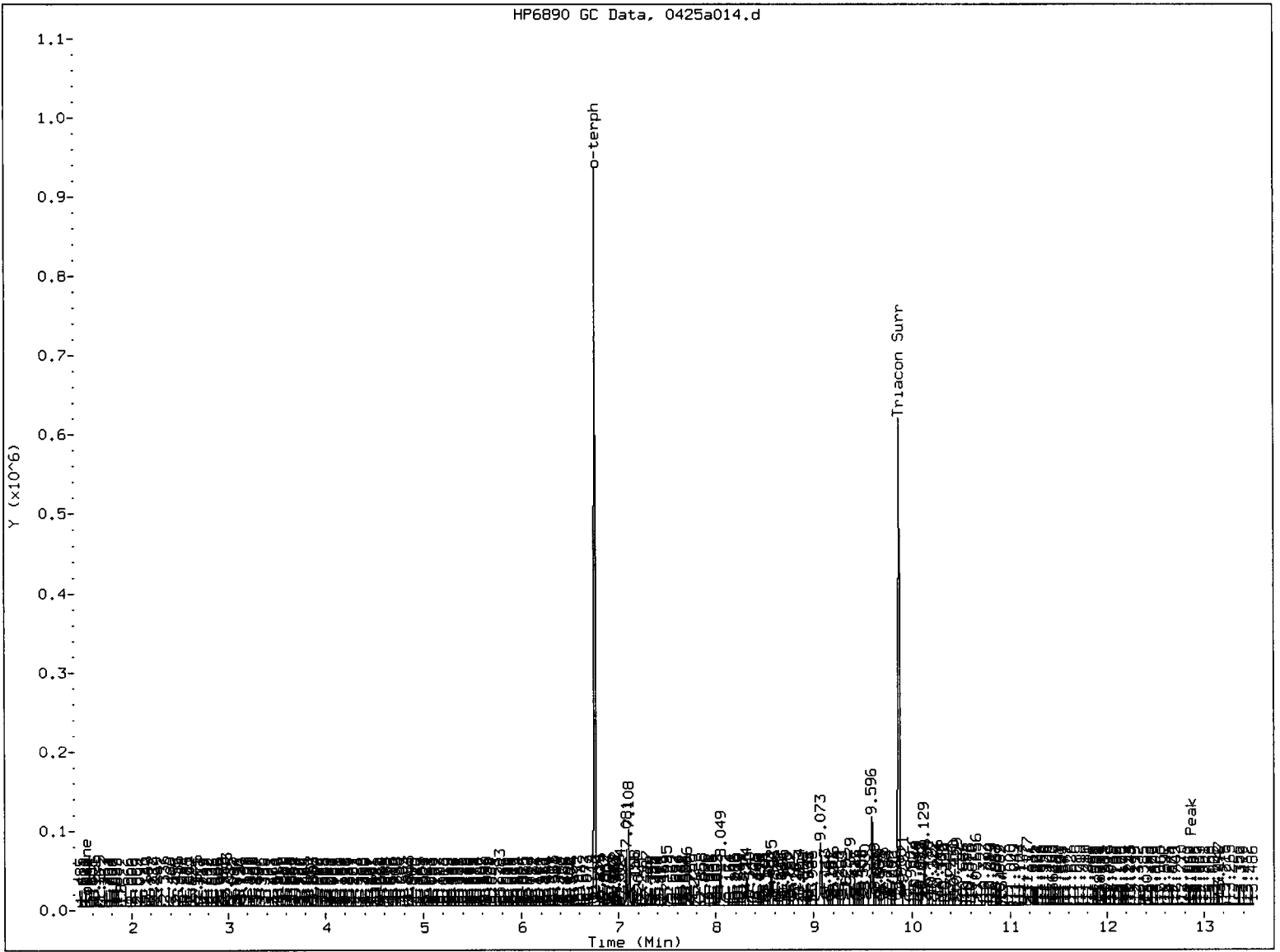
Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	721924	37.3	82.9
Triacontane	629669	37.1	82.4

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011



HP6890 GC Data, 0425a014.d



MANUAL INTEGRATION

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

✓ 5. Other Surr pk overlap

Analyst: AR

Date: 4/26/2011

Data File: /chem3/fid4a.i/20110425.b/0425a014.d

Date : 25-APR-2011 19:58

Client ID:

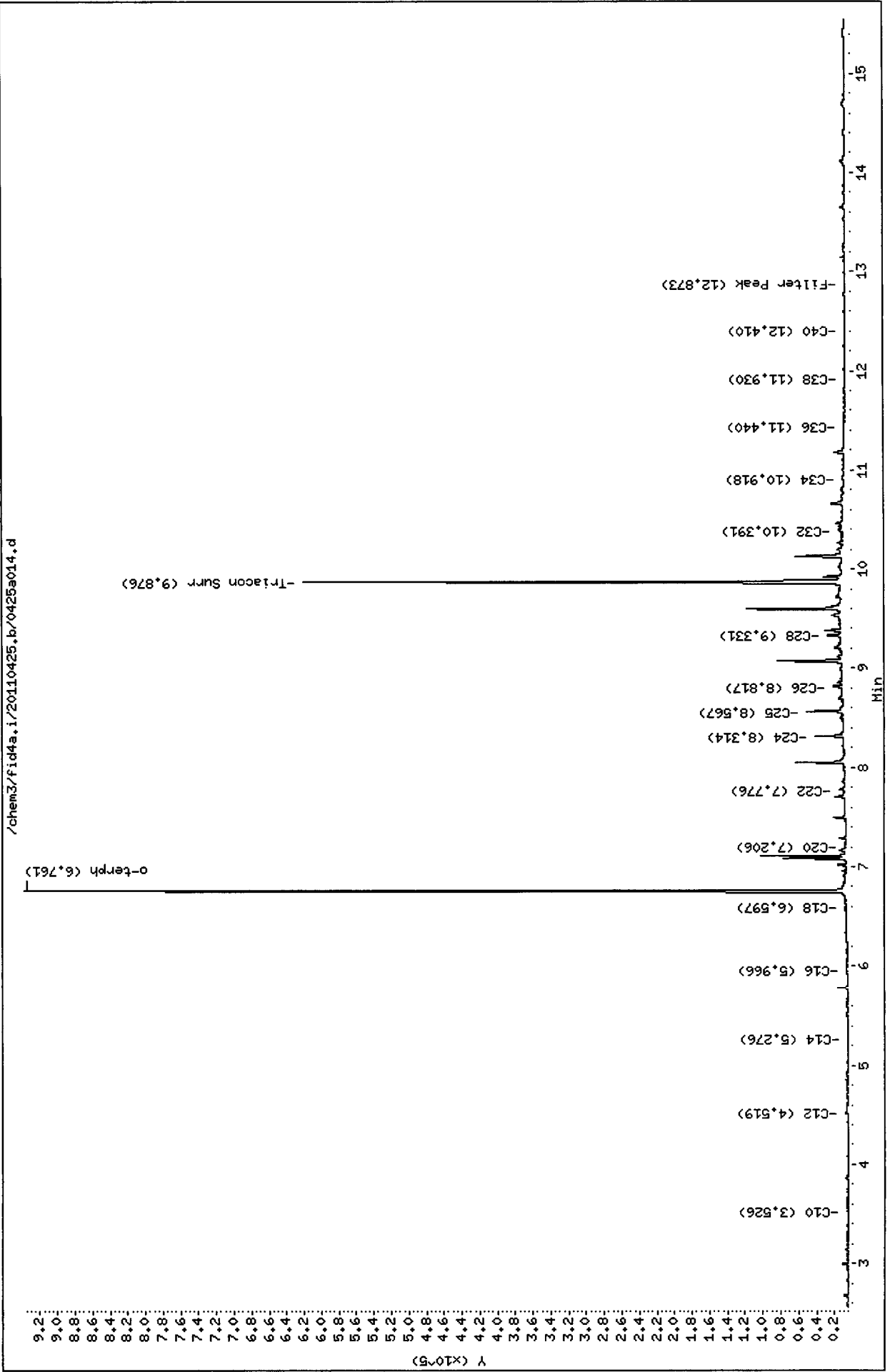
Sample Info: SS71F

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a015.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71G  
Client ID:  
Injection: 25-APR-2011 20:22  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.515	-0.009	764	1109	GAS (Tol-C12)	125866	6.36
C8	1.898	0.013	3320	4724	DIESEL (C12-C24)	1002678	50.53 - DFO
C10	3.527	0.006	1554	1512	M.OIL (C24-C38)	2694763	236.49 - Meil
C12	4.519	0.004	2069	1634	AK-102 (C10-C25)	1130294	51.09 M
C14	5.293	0.005	1042	1882	AK-103 (C25-C36)	2530812	366.67 M
C16	5.964	0.000	1943	3416			
C18	6.598	-0.004	4020	4981			
C20	7.205	-0.003	5832	9314			
C22	7.776	-0.006	27584	27752	MSPIRIT (Tol-C12)	125866	6.85
C24	8.312	-0.007	40262	38546			
C25	8.568	-0.009	122832	100135			
C26	8.817	-0.009	30159	55123			
C28	9.330	-0.011	44879	73011			
C32	10.391	-0.011	14204	27505			
C34	10.918	-0.011	6242	15440	CREOSOT (C12-C22)	505751	124.23 M
Filter Peak	12.869	-0.010	1581	2569			
C36	11.430	-0.013	4145	10420			
C38	11.929	-0.012	2266	3848			
C40	12.406	-0.014	2161	6510			
o-terph	6.759	-0.003	815981	630685	JET-A (C10-C18)	164663	11.09
Triacon Surr	9.875	-0.007	552606	551245			

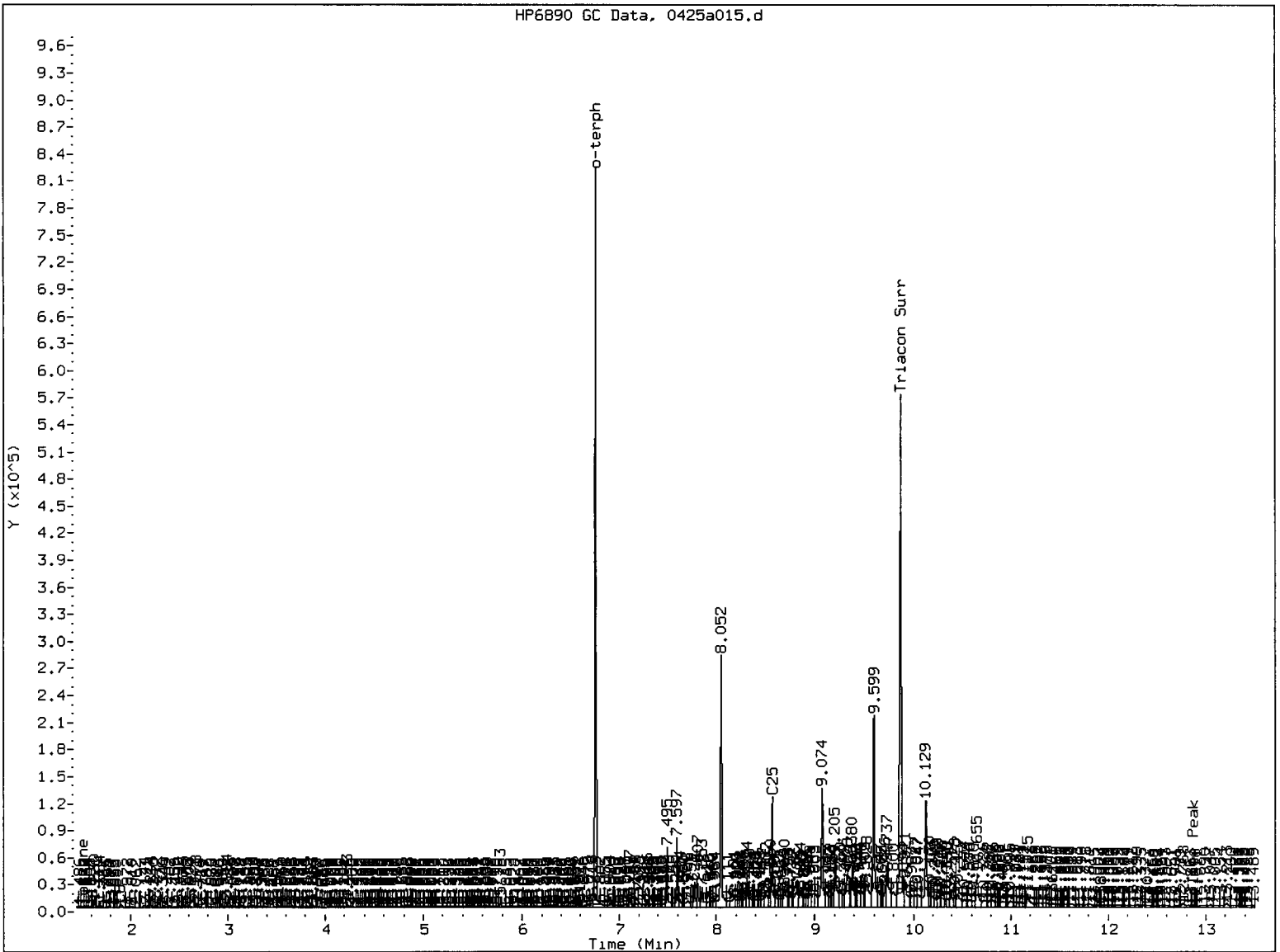
M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	630685	32.6	72.4 ✓
Triacontane	551245	32.5	72.1

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

HP6890 GC Data, 0425a015.d



MANUAL INTEGRATION

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

5. Other Surr pk overlap

Analyst: AR

Date: 4/26/2011

Data File: /chem3/fid4a.i/20110425.b/0425a015.d

Date : 25-APR-2011 20:22

Client ID:

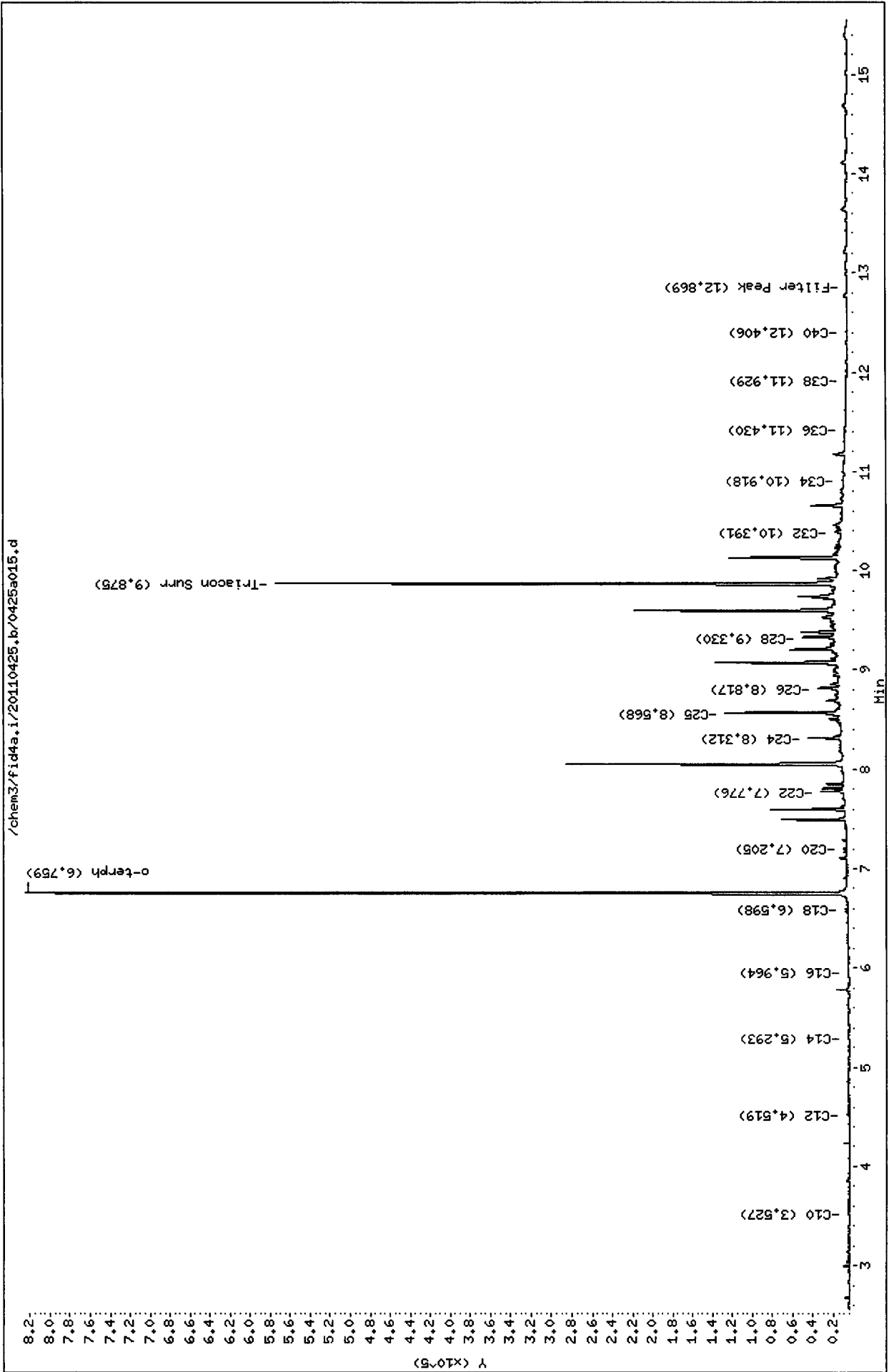
Sample Info: SS71G

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a016.d      ARI ID: DIESEL#2  
 Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m      Client ID:  
 Instrument: fid4a.i      Injection: 25-APR-2011 20:46  
 Operator: MS  
 Report Date: 04/26/2011      Dilution Factor: 1  
 Macro: 13-APR-2011  
 Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

FID:4A RESULTS

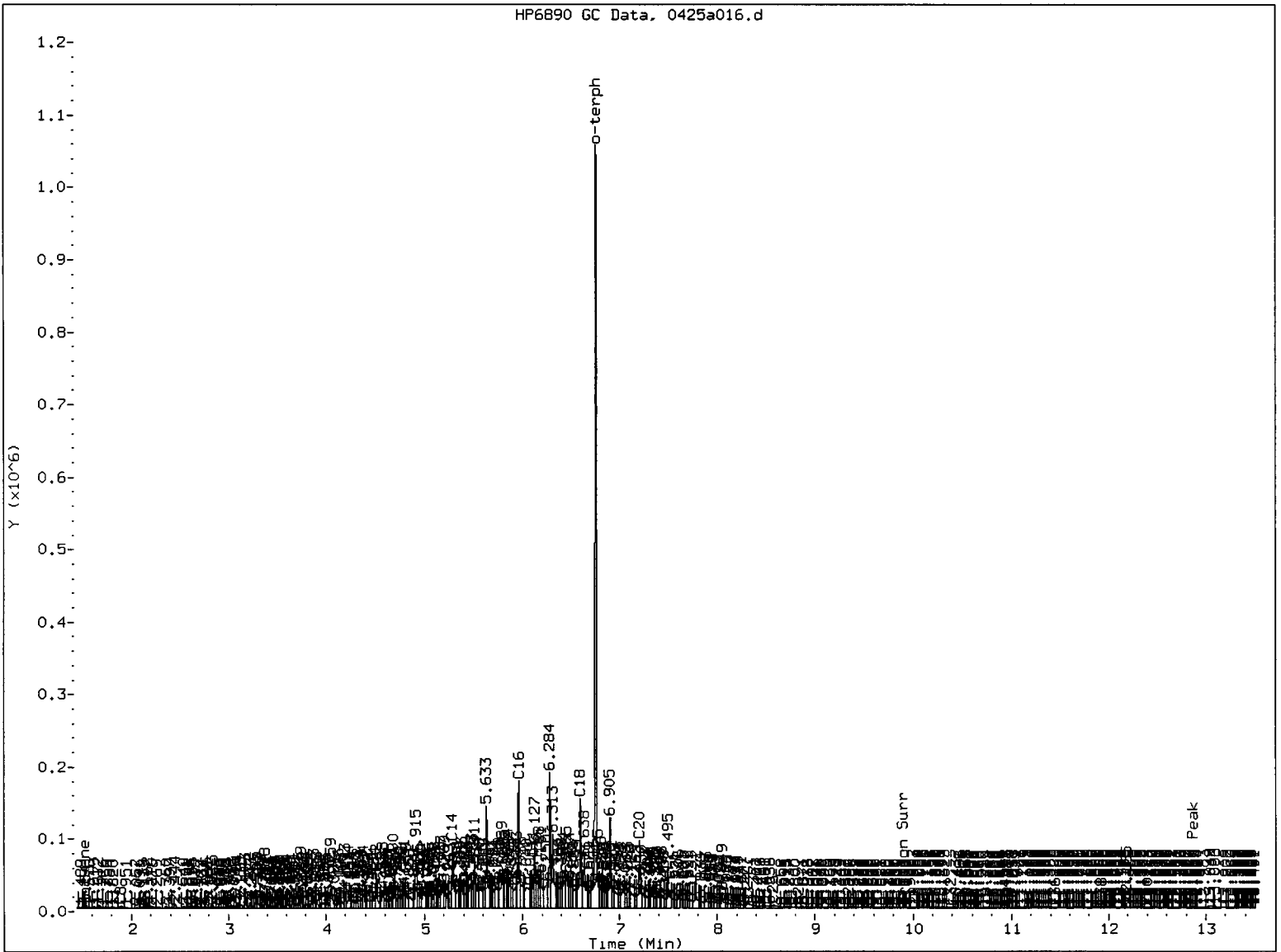
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.522	-0.003	488	398	GAS (Tol-C12)	717439	36.25
C8	1.898	0.014	2420	3975	DIESEL (C12-C24)	5127204	258.38
C10	3.522	0.001	17593	11041	M.OIL (C24-C38)	125814	11.04
C12	4.513	-0.001	47205	43526	AK-102 (C10-C25)	5685630	256.98 M
C14	5.286	-0.002	89829	107053	AK-103 (C25-C36)	87688	12.70
C16	5.963	-0.001	176623	148784			
C18	6.600	-0.002	151576	163255			
C20	7.203	-0.004	92368	101990			
C22	7.776	-0.006	38843	57519	MSPIRIT (Tol-C12)	717439	39.05
C24	8.313	-0.006	9346	22500			
C25	8.570	-0.006	3600	13437			
C26	8.827	0.001	1472	3882			
C28	9.339	-0.002	509	299			
C32	10.381	-0.021	1112	2024			
C34	10.939	0.010	300	296	CREOSOT (C12-C22)	4927427	1210.31 M
Filter Peak	12.873	-0.006	926	527			
C36	11.444	0.001	1101	2375			
C38	11.931	-0.010	464	527			
C40	12.404	-0.016	1149	2898			
o-terph	6.763	0.001	1016238	873242	JET-A (C10-C18)	4075731	274.61
Triacon Surr	9.891	0.009	351	541			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319)      AK102(3.52 - 8.58)      Jet A(3.52 - 6.60)  
 NW M.Oil(8.32 - 11.94)      AK103(8.58 - 11.44)      OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	873242	45.1	100.3
Triacontane	541	0.0	0.1

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other Surr pt. overlap

Analyst: AR

Date: 4/26/2011

Data File: /chem3/fid4a.i/20110425.b/0425a016.d

Date : 25-APR-2011 20:46

Client ID:

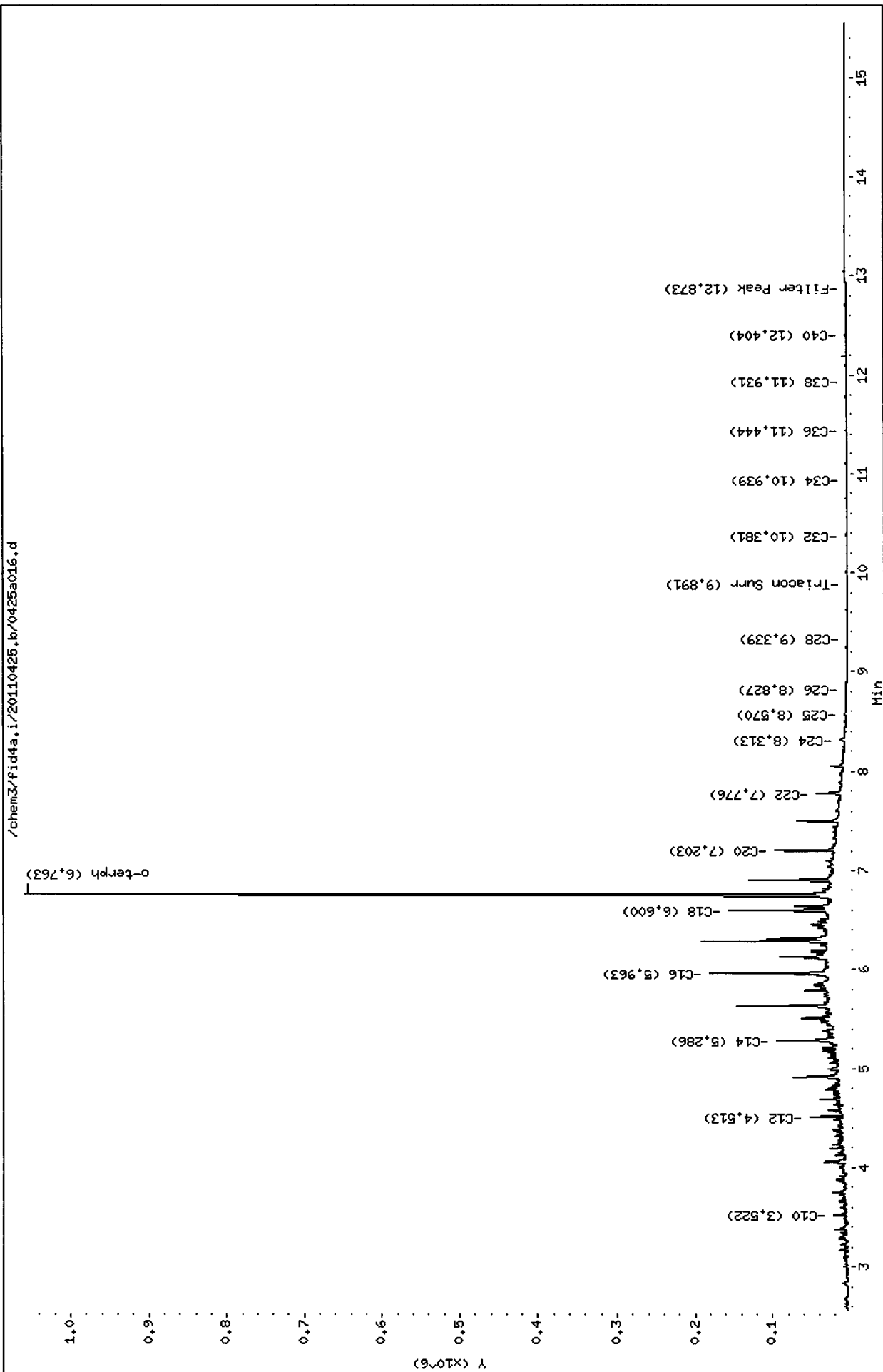
Sample Info: DIESEL#2

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a017.d      ARI ID: MOIL#2  
 Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m      Client ID:  
 Instrument: fid4a.i      Injection: 25-APR-2011 21:09  
 Operator: MS  
 Report Date: 04/26/2011      Dilution Factor: 1  
 Macro: 13-APR-2011  
 Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

FID:4A RESULTS

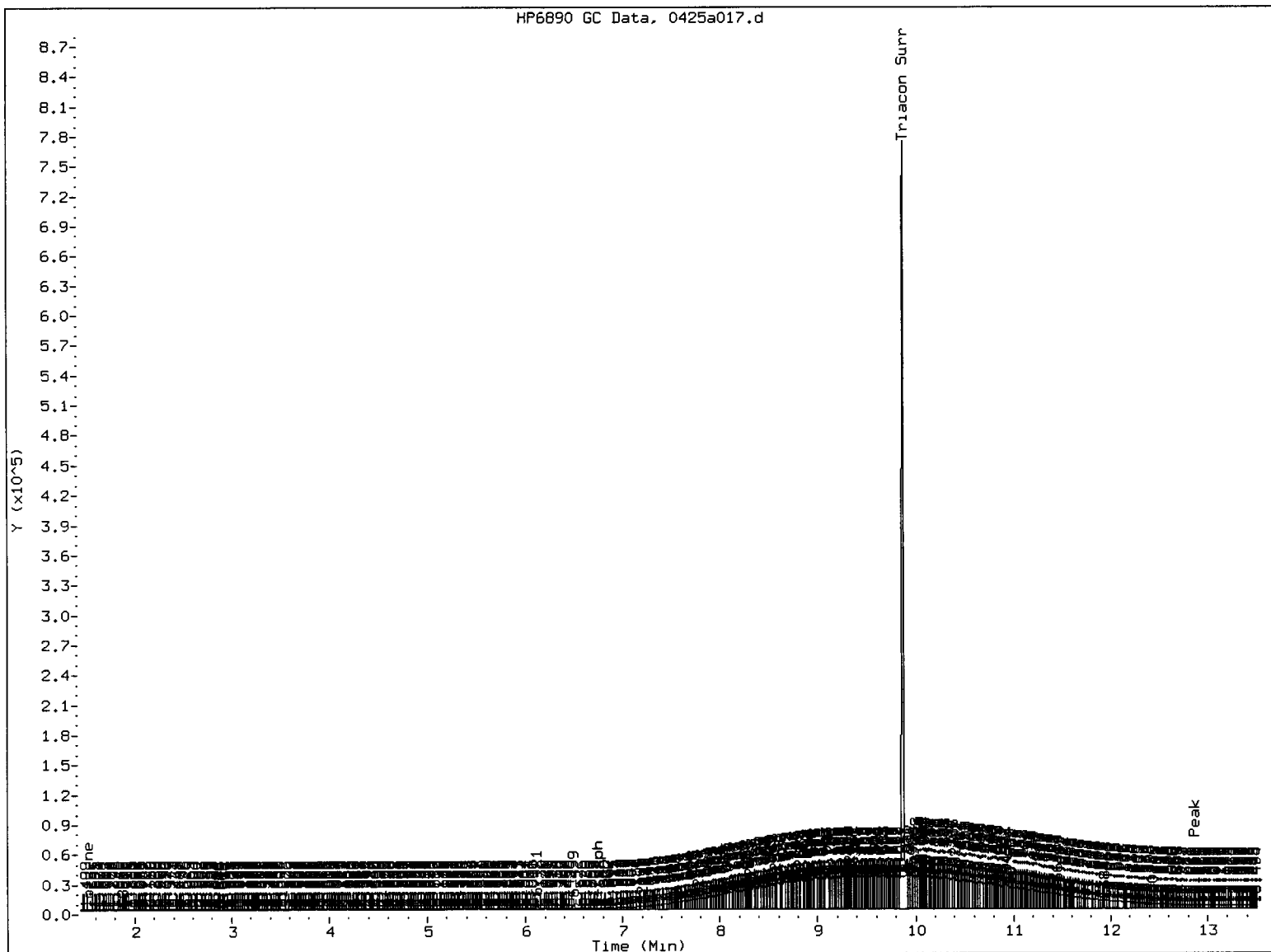
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.524	0.000	869	2326	GAS (Tol-C12)	37745	1.91
C8	1.880	-0.005	241	133	DIESEL (C12-C24)	828623	41.76
C10	3.526	0.005	371	658	M.OIL (C24-C38)	5278245	463.21
C12	4.528	0.014	258	448	AK-102 (C10-C25)	1057612	47.80
C14	5.292	0.004	257	253	AK-103 (C25-C36)	4792754	694.39 M
C16	5.963	-0.001	234	212			
C18	6.601	0.000	461	462			
C20	7.205	-0.002	2785	4058			
C22	7.784	0.002	10384	16344	MSPIRIT (Tol-C12)	37745	2.05
C24	8.314	-0.005	20263	19242			
C25	8.572	-0.005	26523	17723			
C26	8.821	-0.005	29265	16200			
C28	9.334	-0.008	33218	18261			
C32	10.401	-0.001	31105	53366			
C34	10.930	0.001	24376	36713	CREOSOT (C12-C22)	318683	78.28
Filter Peak	12.873	-0.006	2698	2819			
C36	11.446	0.002	15287	16070			
C38	11.941	0.000	8010	12036			
C40	12.433	0.013	4178	4477			
o-terph	6.753	-0.010	1098	2200	JET-A (C10-C18)	61021	4.11
Triacon Surr	9.881	-0.001	737321	846155			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319)      AK102(3.52 - 8.58)      Jet A(3.52 - 6.60)  
 NW M.Oil(8.32 - 11.94)      AK103(8.58 - 11.44)      OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2200	0.1	0.3
Triacontane	846155	49.8	110.7

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- ✓ 5. Other Surr pk. overlap

Analyst: AR

Date: 4/26/2011

Data File: /chem3/fid4a.i/20110425.b/0425a017.d

Date : 25-APR-2011 21:09

Client ID:

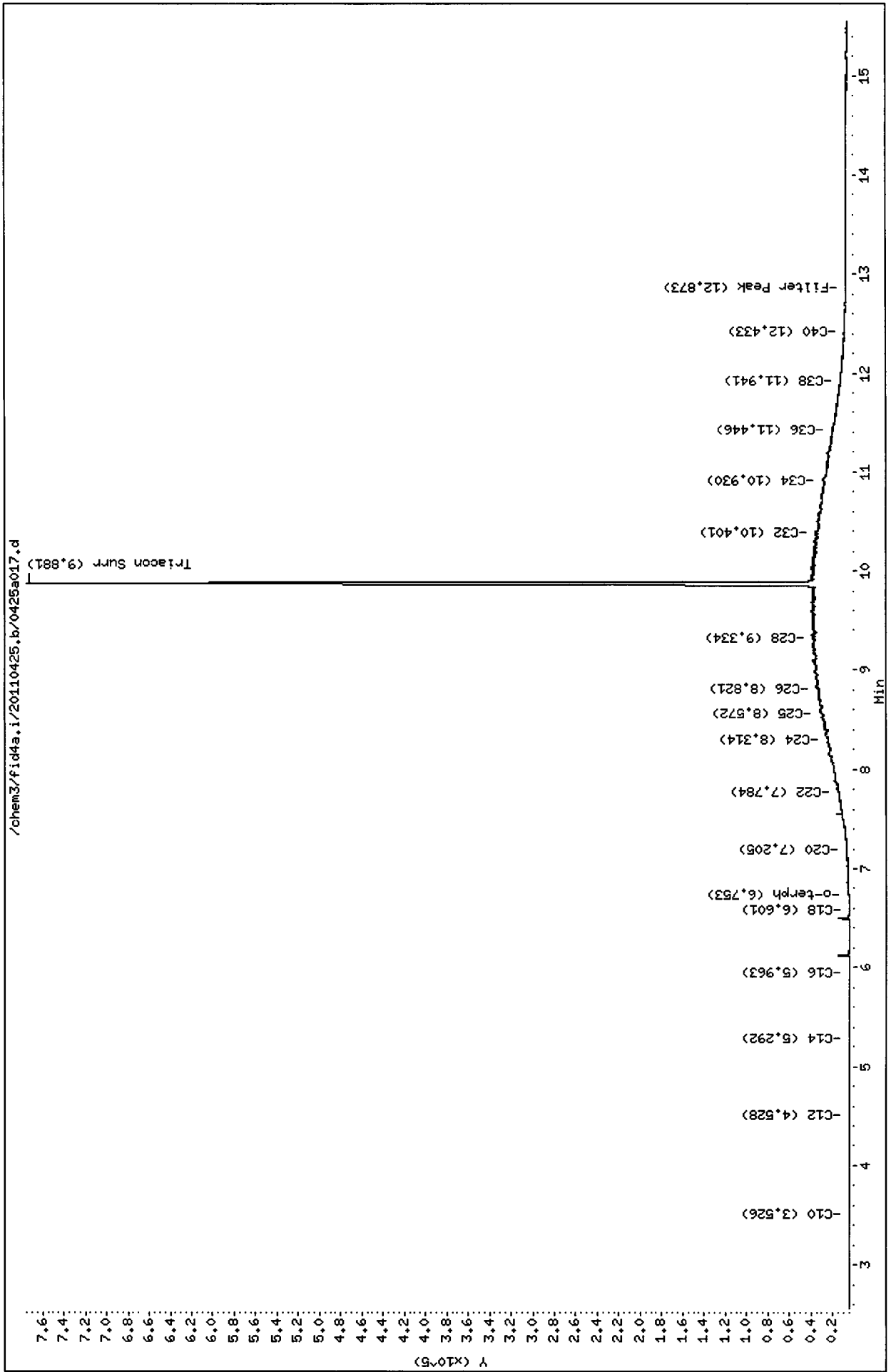
Sample Info: M01L#2

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a031.d      ARI ID: DIESEL#3  
 Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m      Client ID:  
 Instrument: fid4a.i      Injection: 26-APR-2011 02:40  
 Operator: MS  
 Report Date: 04/26/2011      Dilution Factor: 1  
 Macro: 13-APR-2011  
 Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

FID:4A RESULTS

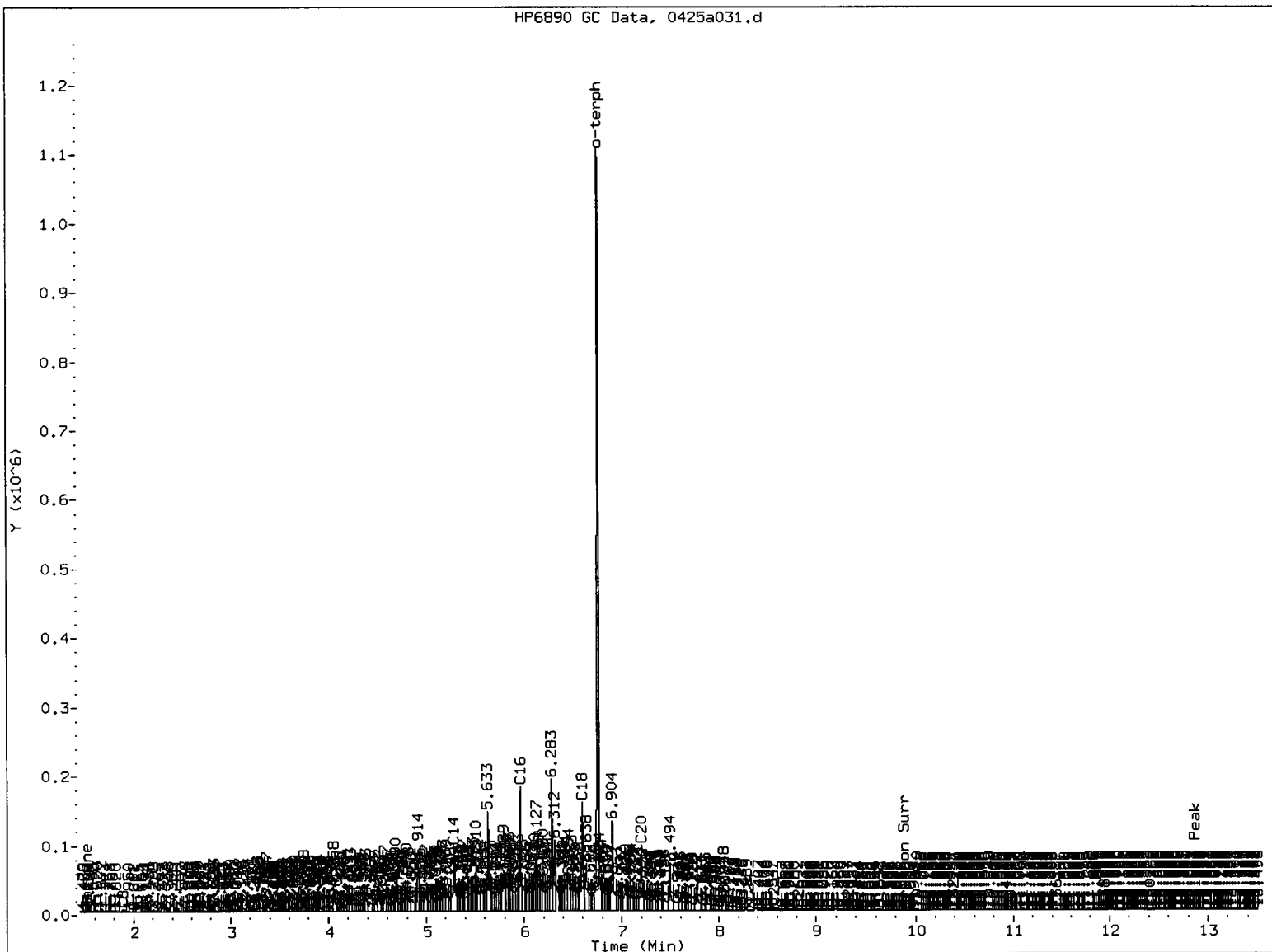
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.514	-0.010	515	491	GAS (Tol-C12)	742651	37.52
C8	1.897	0.012	2511	4037	DIESEL (C12-C24)	5315228	267.85 /
C10	3.521	0.000	18291	11499	M.OIL (C24-C38)	118262	10.38
C12	4.513	-0.002	47075	42056	AK-102 (C10-C25)	5888067	266.13 M
C14	5.285	-0.003	93015	127804	AK-103 (C25-C36)	85141	12.34
C16	5.962	-0.002	179937	151629			
C18	6.599	-0.003	156743	174300			
C20	7.203	-0.005	93864	104692			
C22	7.776	-0.006	41309	59104	MSPIRIT (Tol-C12)	742651	40.42
C24	8.312	-0.007	9836	21655			
C25	8.570	-0.007	3965	13026			
C26	8.824	-0.002	1608	4265			
C28	9.336	-0.005	471	411			
C32	10.383	-0.019	995	1782			
C34	10.926	-0.004	257	160	BUNKERC (C10-C38)	5984281	808.51 M
Filter Peak	12.874	-0.006	968	1544			
C36	11.447	0.004	872	2211			
C38	11.951	0.010	452	519			
C40	12.409	-0.011	1013	3200			
o-terph	6.763	0.001	1064800	893334	JET-A (C10-C18)	4213146	283.87
Triacon Surr	9.882	-0.001	322	550			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319)      AK102(3.52 - 8.58)      Jet A(3.52 - 6.60)  
 NW M.Oil(8.32 - 11.94)      AK103(8.58 - 11.44)      OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	893334	46.2	102.6
Triacontane	550	0.0	0.1

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010



MANUAL INTEGRATION

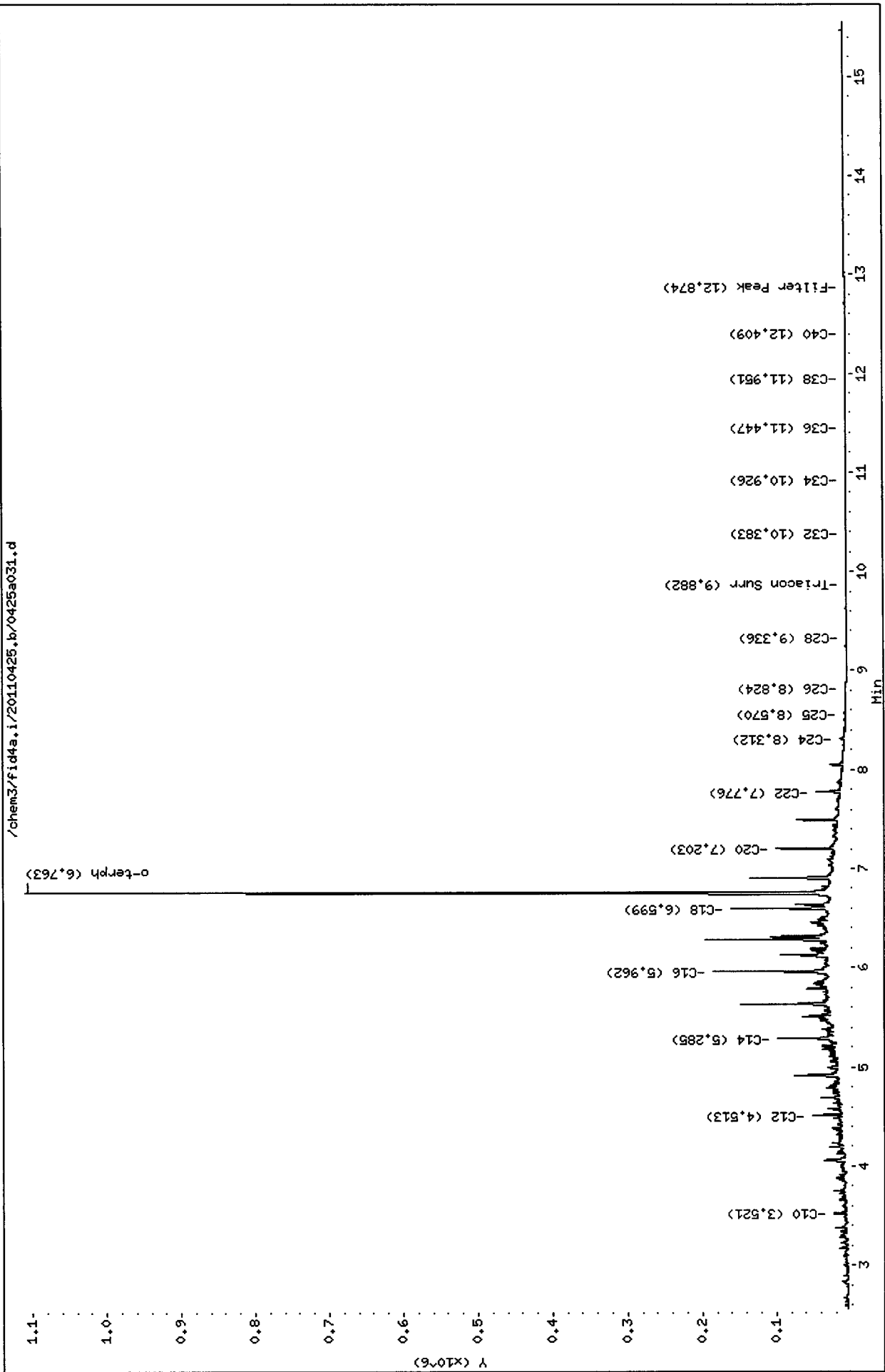
- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other Surr pk. overlap

Analyst: AL

Date: 4/26/2011

Data File: /chem3/fid4a.i/20110425.b/0425a031.d  
Date : 26-APR-2011 02:40  
Client ID:  
Sample Info: DIESEL#3  
Column phase: RTX-1

Instrument: fid4a.i  
Operator: MS  
Column diameter: 0.25



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a032.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: MOIL#3  
Client ID:  
Injection: 26-APR-2011 03:04  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.526	0.002	6708	2986	GAS (Tol-C12)	41100	2.08
C8	1.895	0.011	264	375	DIESEL (C12-C24)	820319	41.34
C10	3.526	0.005	449	759	M.OIL (C24-C38)	5077825	445.62
C12	4.523	0.009	244	181	AK-102 (C10-C25)	1057494	47.80
C14	5.283	-0.006	178	203	AK-103 (C25-C36)	4585234	664.33 M
C16	5.966	0.002	119	45			
C18	6.602	0.000	349	684			
C20	7.206	-0.001	2648	3408			
C22	7.783	0.001	10288	12823	MSPIRIT (Tol-C12)	41100	2.24
C24	8.321	0.002	20159	9568			
C25	8.573	-0.004	26486	22786			
C26	8.825	-0.001	29133	24029			
C28	9.345	0.003	32962	51641			
C32	10.399	-0.003	30215	34525			
C34	10.930	0.001	22908	26944	BUNKERC (C10-C38)	5914367	799.07 M
Filter Peak	12.883	0.004	2794	3750			
C36	11.445	0.002	14300	22558			
C38	11.934	-0.007	7742	7332			
C40	12.428	0.008	4325	5247			
o-terph	6.770	0.008	654	753	JET-A (C10-C18)	53468	3.60
Triacon Surr	9.886	0.003	732621	831206			

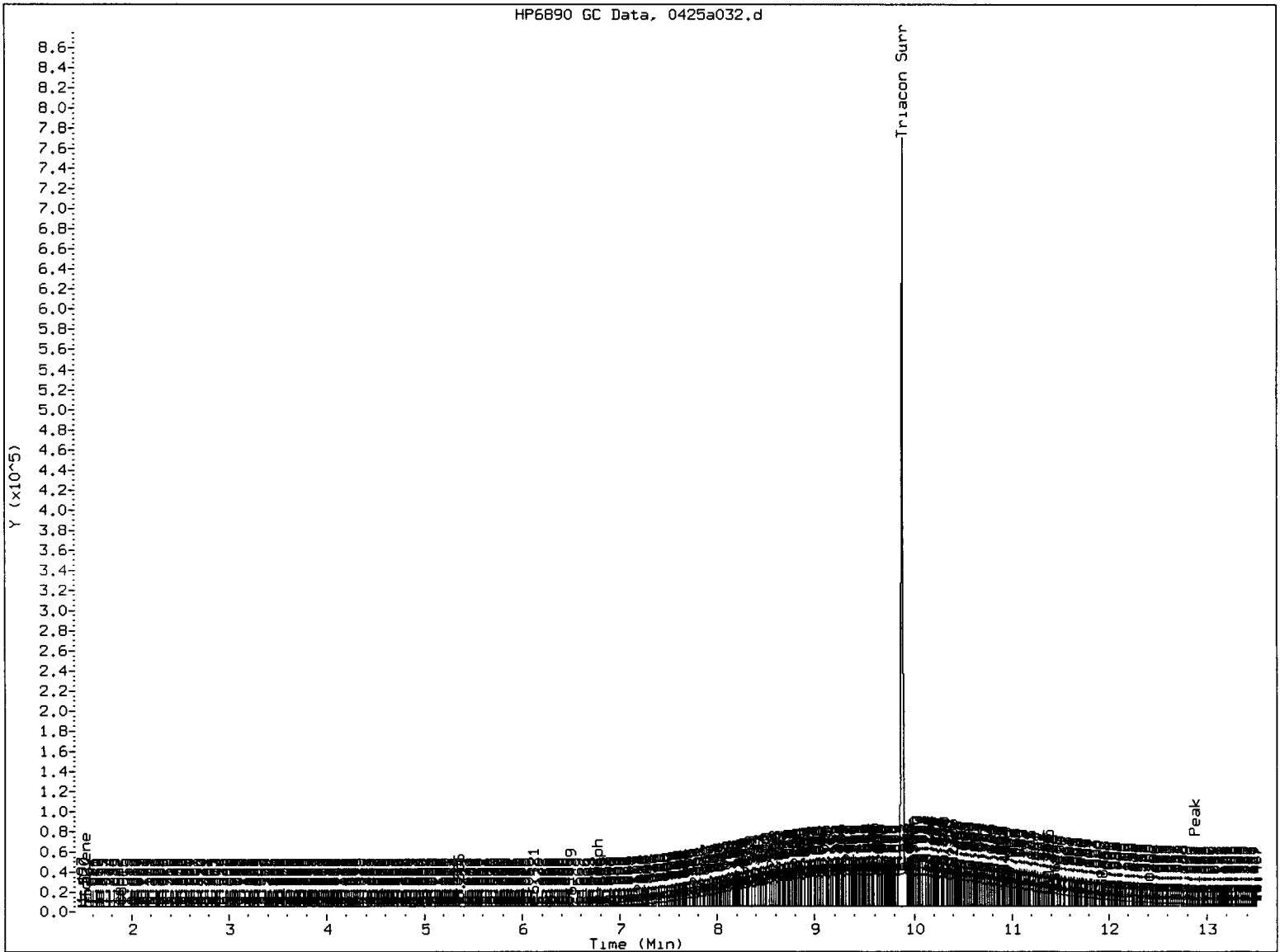
M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	753	0.0	0.1
Triacotane	831206	48.9	108.7

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010

HP6890 GC Data, 0425a032.d



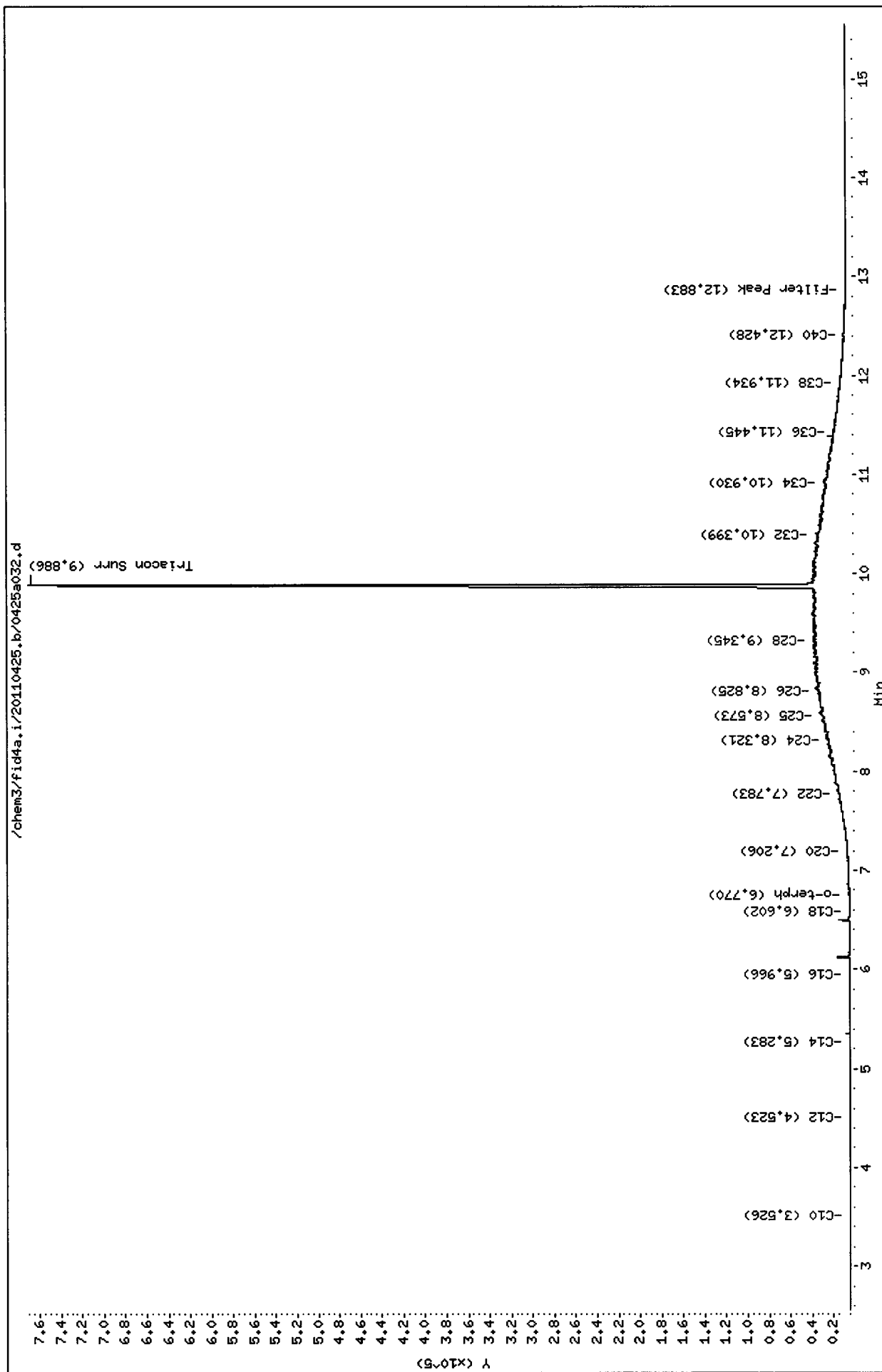
MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other Surr pk overlap

Analyst: AR Date: 4/26/2011



Data File: /chem3/fid4a.i/20110425.b/0425a032.d  
Date : 26-APR-2011 03:04  
Client ID:  
Sample Info: M0IL#3  
Instrument: fid4a.i  
Operator: MS  
Column diameter: 0.25  
Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a033.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71H  
Client ID:  
Injection: 26-APR-2011 03:27  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.527	0.002	602	670	GAS (Tol-C12)	129052	6.52
C8	1.872	-0.013	611	901	DIESEL (C12-C24)	170698	8.60 <i>-IRL</i>
C10	3.510	-0.011	590	539	M.OIL (C24-C38)	231818	20.34 <i>-IRL</i>
C12	4.520	0.006	897	1507	AK-102 (C10-C25)	210871	9.53
C14	5.283	-0.006	295	441	AK-103 (C25-C36)	207398	30.05
C16	5.974	0.010	852	2101			
C18	6.598	-0.004	1472	1858			
C20	7.211	0.003	985	2115			
C22	7.782	0.000	1528	2275	MSPiRiT (Tol-C12)	129052	7.02
C24	8.315	-0.004	1601	2590			
C25	8.570	-0.007	2654	5964			
C26	8.821	-0.005	1541	4920			
C28	9.332	-0.009	2403	6035			
C32	10.384	-0.018	1798	6438			
C34	10.915	-0.014	716	1826	CREOSOT (C12-C22)	129945	31.92
Filter Peak	12.875	-0.004	1010	920			
C36	11.445	0.002	1163	3231			
C38	11.939	-0.002	618	1162			
C40	12.408	-0.012	1096	2930			
o-terph	6.762	0.000	987817	811481	JET-A (C10-C18)	101026	6.81
Triacon Surr	9.876	-0.007	636062	672425			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	811481	41.9	93.2
Triacontane	672425	39.6	88.0

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

Data File: /chem3/fid4a.i/20110425.b/0425a033.d

Date : 26-APR-2011 03:27

Client ID:

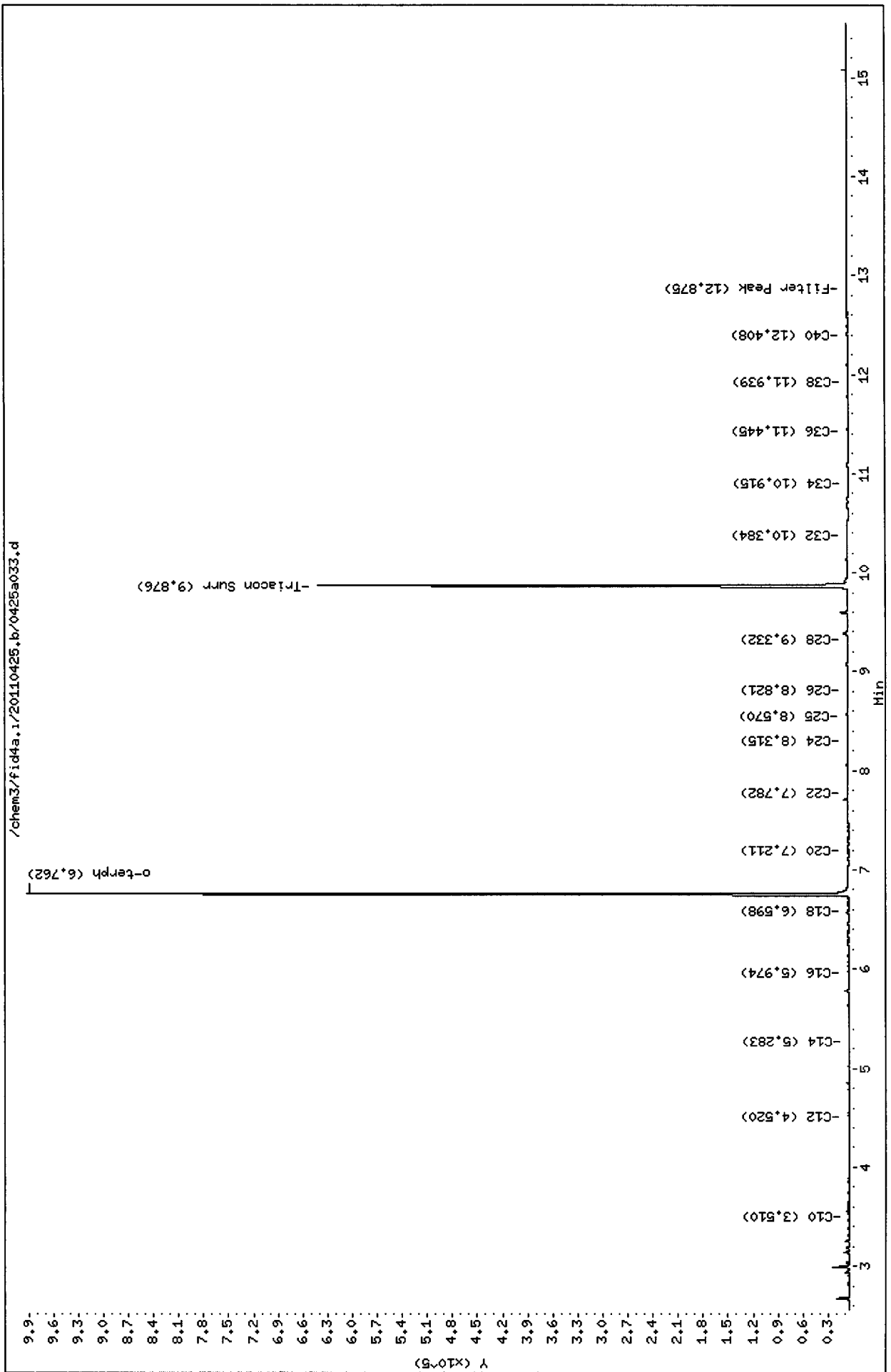
Sample Info: SS71H

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a034.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71I  
Client ID:  
Injection: 26-APR-2011 03:51  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.536	0.011	964	892	GAS (Tol-C12)	84782	4.28
C8	1.871	-0.014	422	618	DIESEL (C12-C24)	176267	8.88 - <i>LR</i>
C10	3.525	0.004	1086	1172	M.OIL (C24-C38)	148490	13.03 - <i>LR</i>
C12	4.520	0.006	1205	1610	AK-102 (C10-C25)	211218	9.55
C14	5.276	-0.012	315	589	AK-103 (C25-C36)	127274	18.44
C16	5.973	0.009	883	1684			
C18	6.597	-0.005	1699	2697			
C20	7.206	-0.001	1227	2192			
C22	7.779	-0.003	1393	3049	MSPIRIT (Tol-C12)	84782	4.61
C24	8.316	-0.003	1393	2471			
C25	8.570	-0.007	1851	4583			
C26	8.823	-0.003	1268	2453			
C28	9.335	-0.006	1500	4396			
C32	10.382	-0.020	1305	5175			
C34	10.912	-0.018	626	1890	CREOSOT (C12-C22)	140324	34.47
Filter Peak	12.872	-0.007	855	636			
C36	11.444	0.001	971	2440			
C38	11.936	-0.005	474	612			
C40	12.434	0.014	614	505			
o-terph	6.762	-0.001	955592	792882	JET-A (C10-C18)	98961	6.67
Triacon Surr	9.874	-0.009	585583	649156			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	792882	41.0	91.1
Triacontane	649156	38.2	84.9

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

Data File: /chem3/fid4a.i/20110425.b/0425a034.d

Date : 26-APR-2011 03:51

Client ID:

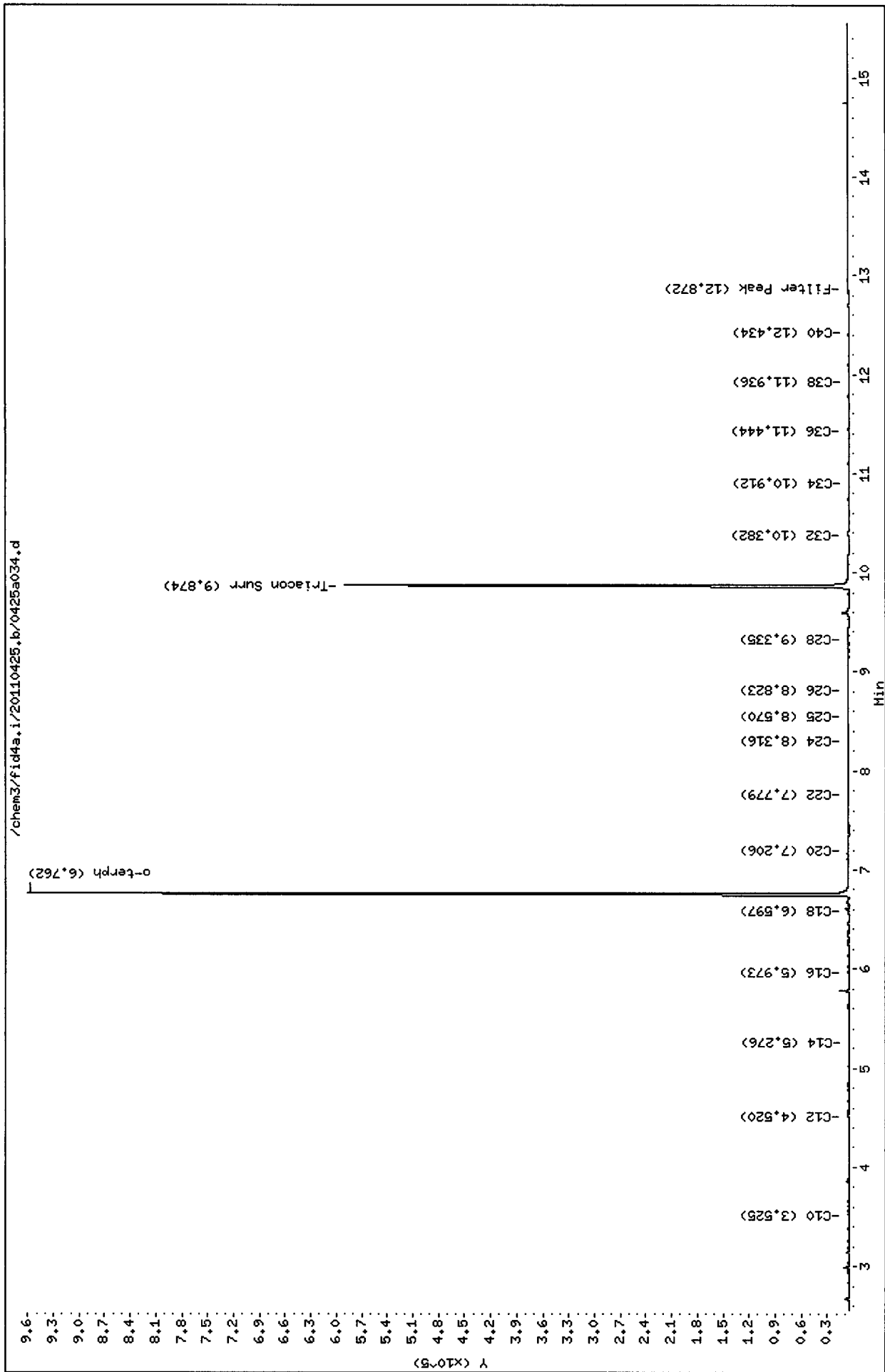
Sample Info: SS71I

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a035.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71IMS  
Client ID:  
Injection: 26-APR-2011 04:15  
Dilution Factor: 1

FID:4A RESULTS

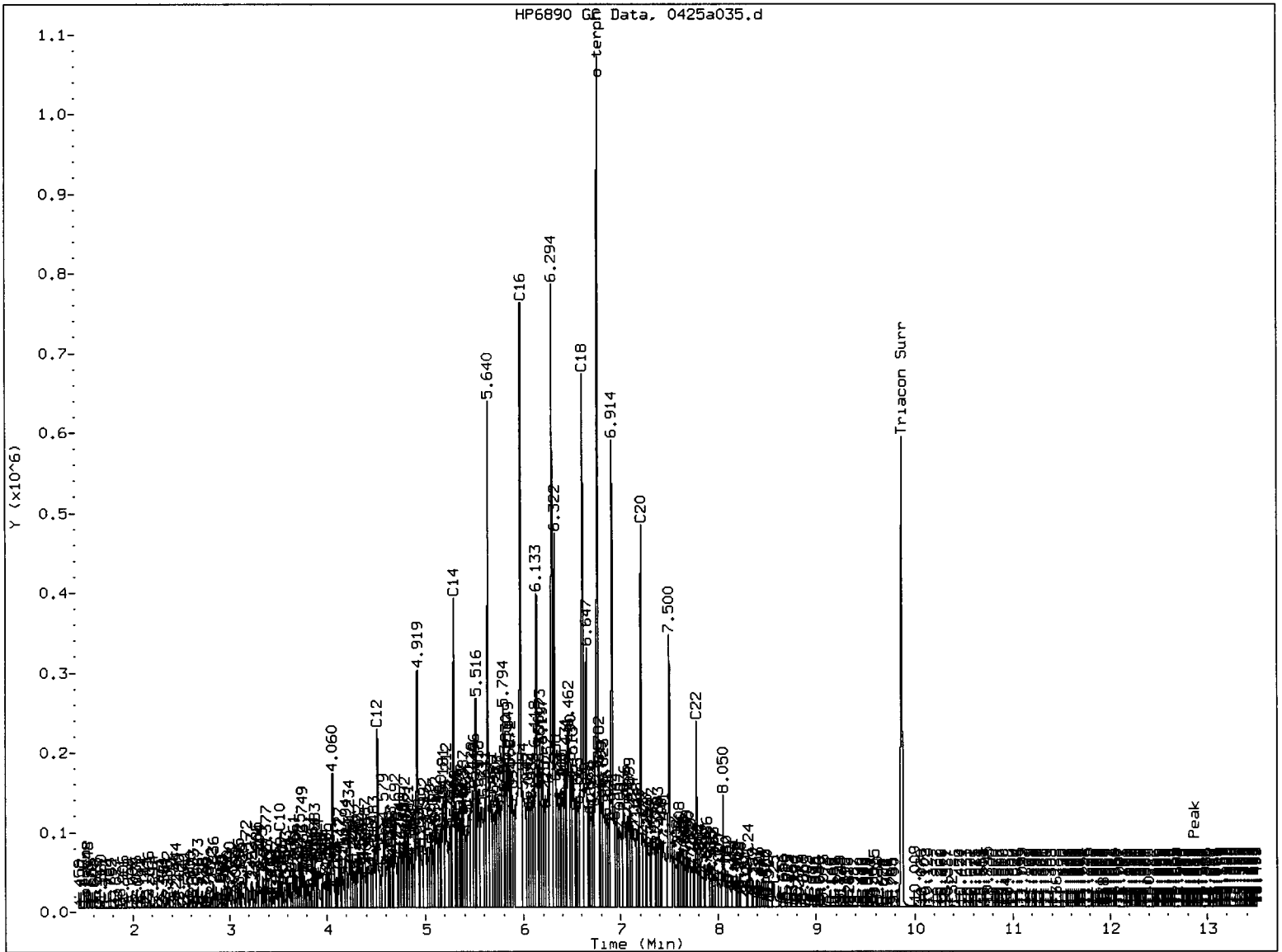
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.512	-0.012	781	707	GAS (Tol-C12)	3129963	158.14
C8	1.876	-0.009	663	581	DIESEL (C12-C24)	23703977	1194.52 <i>79.6%</i>
C10	3.523	0.002	94371	55593	M.OIL (C24-C38)	396014	34.75 <i>LR</i>
C12	4.516	0.001	223548	198808	AK-102 (C10-C25)	26185862	1183.54 M
C14	5.291	0.003	388721	411544	AK-103 (C25-C36)	285466	41.36
C16	5.972	0.008	758039	1037546			
C18	6.609	0.008	669047	768882			
C20	7.211	0.004	479517	448072			
C22	7.780	-0.002	233328	224315	MSPiRiT (Tol-C12)	3129963	170.35
C24	8.313	-0.006	67861	82088			
C25	8.566	-0.010	28730	51369			
C26	8.818	-0.008	10821	17372			
C28	9.333	-0.008	2771	5750			
C32	10.380	-0.022	3325	7019			
C34	10.936	0.007	444	172	CREOSOT (C12-C22)	22741944	5586.05 M
Filter Peak	12.874	-0.005	761	474			
C36	11.444	0.001	1613	3184			
C38	11.941	0.000	391	328			
C40	12.403	-0.017	992	2324			
o-terph	6.768	0.005	922822	771552	JET-A (C10-C18)	18659563	1257.21
Triacon Surr	9.874	-0.008	590319	665610			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	771552	39.9	88.6
Triacontane	665610	39.2	87.1

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011



MANUAL INTEGRATION

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

5. Other Surr pk overlap

Analyst: AD

Date: 4/26/2011

Data File: /chem3/fid4a.i/20110425.b/0425a035.d

Date : 26-APR-2011 04:15

Client ID:

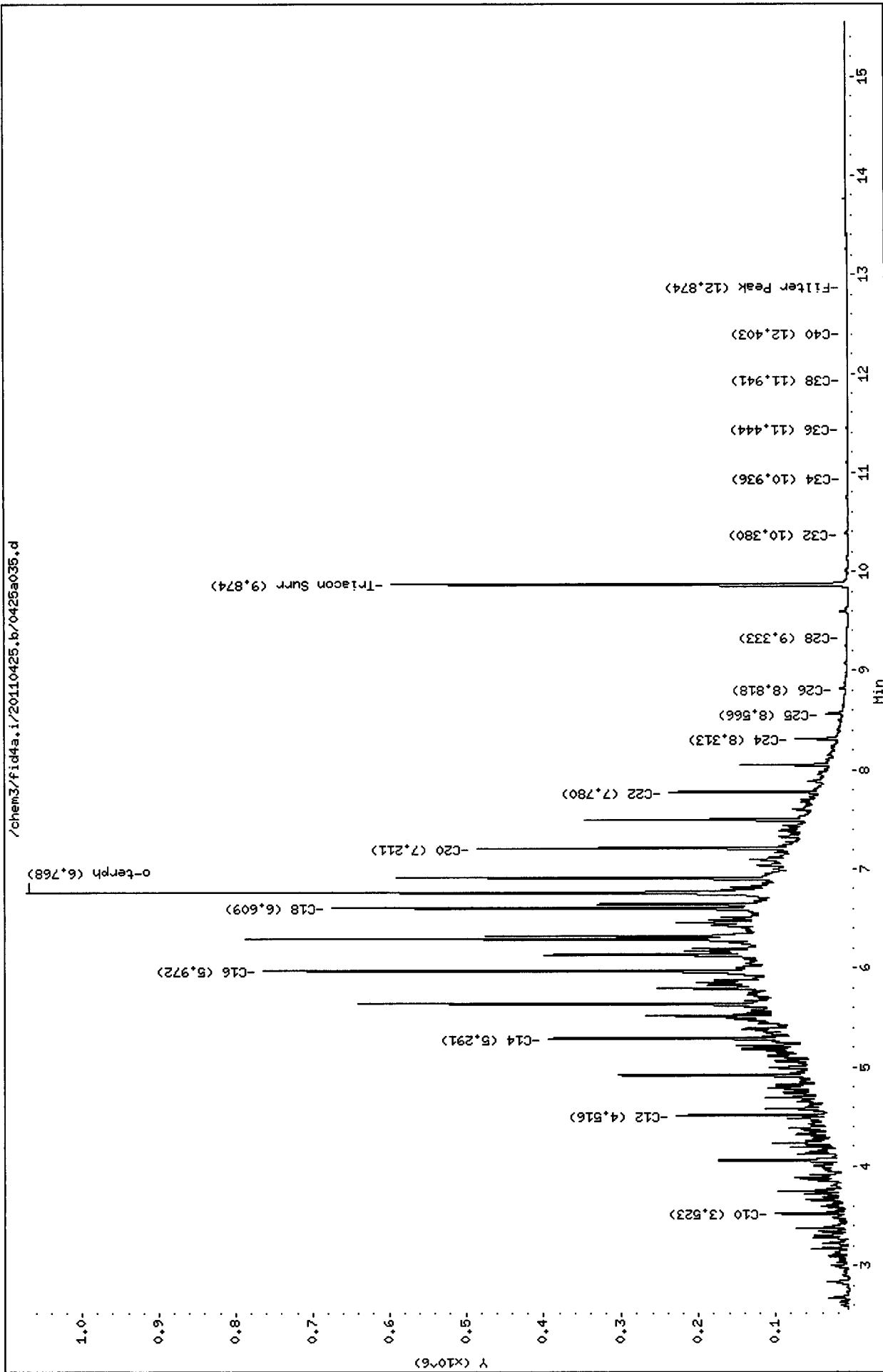
Sample Info: SS71IHS

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1





Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a036.d      ARI ID: SS71IMSD  
 Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m      Client ID:  
 Instrument: fid4a.i      Injection: 26-APR-2011 04:38  
 Operator: MS  
 Report Date: 04/26/2011      Dilution Factor: 1  
 Macro: 13-APR-2011  
 Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

FID:4A RESULTS

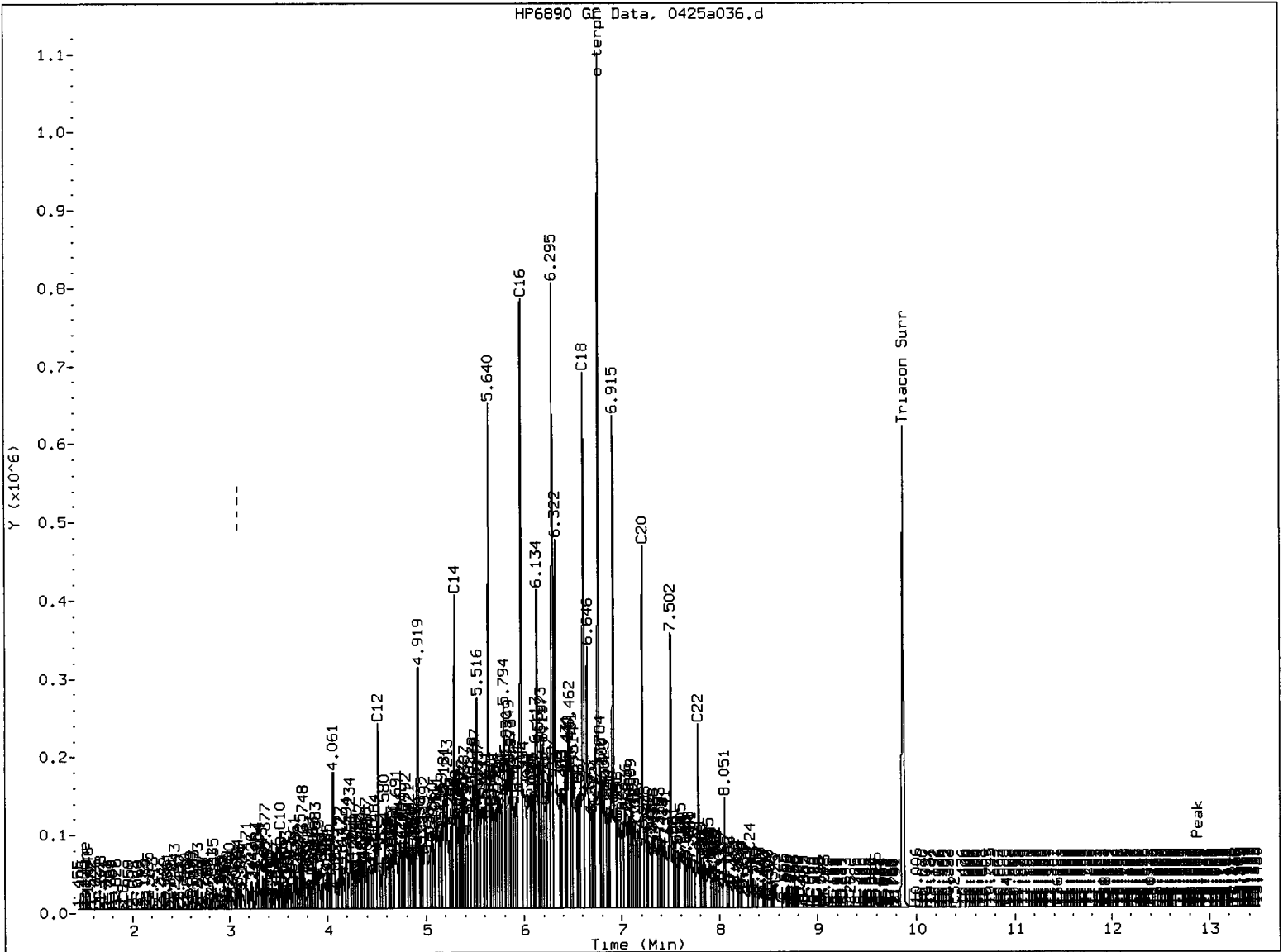
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.511	-0.014	896	781	GAS (Tol-C12)	3275361	165.49
C8	1.903	0.018	6655	10370	DIESEL (C12-C24)	25259116	1272.88 - 84.9%
C10	3.522	0.001	98757	58321	M.OIL (C24-C38)	416386	36.54 - 12%
C12	4.516	0.001	237500	208863	AK-102 (C10-C25)	27878932	1260.06 M
C14	5.292	0.003	401021	420877	AK-103 (C25-C36)	292867	42.43
C16	5.972	0.008	781176	874098			
C18	6.610	0.008	686701	840244			
C20	7.212	0.005	464375	525923			
C22	7.781	-0.001	235988	241770	MSPiRiT (Tol-C12)	3275361	178.27
C24	8.313	-0.006	70391	75253			
C25	8.566	-0.010	30278	62362			
C26	8.818	-0.008	11088	18677			
C28	9.334	-0.008	2843	7256			
C32	10.384	-0.018	1325	4601			
C34	10.913	-0.016	577	1621	CREOSOT (C12-C22)	24297143	5968.05 M
Filter Peak	12.883	0.004	741	1027			
C36	11.443	-0.001	911	2070			
C38	11.936	-0.005	401	648			
C40	12.402	-0.018	828	1756			
o-terph	6.768	0.006	944412	794455	JET-A (C10-C18)	19877786	1339.29
Triacon Surr	9.876	-0.006	617760	677077			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319)      AK102(3.52 - 8.58)      Jet A(3.52 - 6.60)  
 NW M.Oil(8.32 - 11.94)      AK103(8.58 - 11.44)      OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	794455	41.1	91.2
Triacontane	677077	39.9	88.6

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other Surr pk overlap

Analyst: AZ Date: 4/26/2011

Data File: /chem3/fid4a.i/20110425.b/0425a036.d

Date : 26-APR-2011 04:38

Client ID:

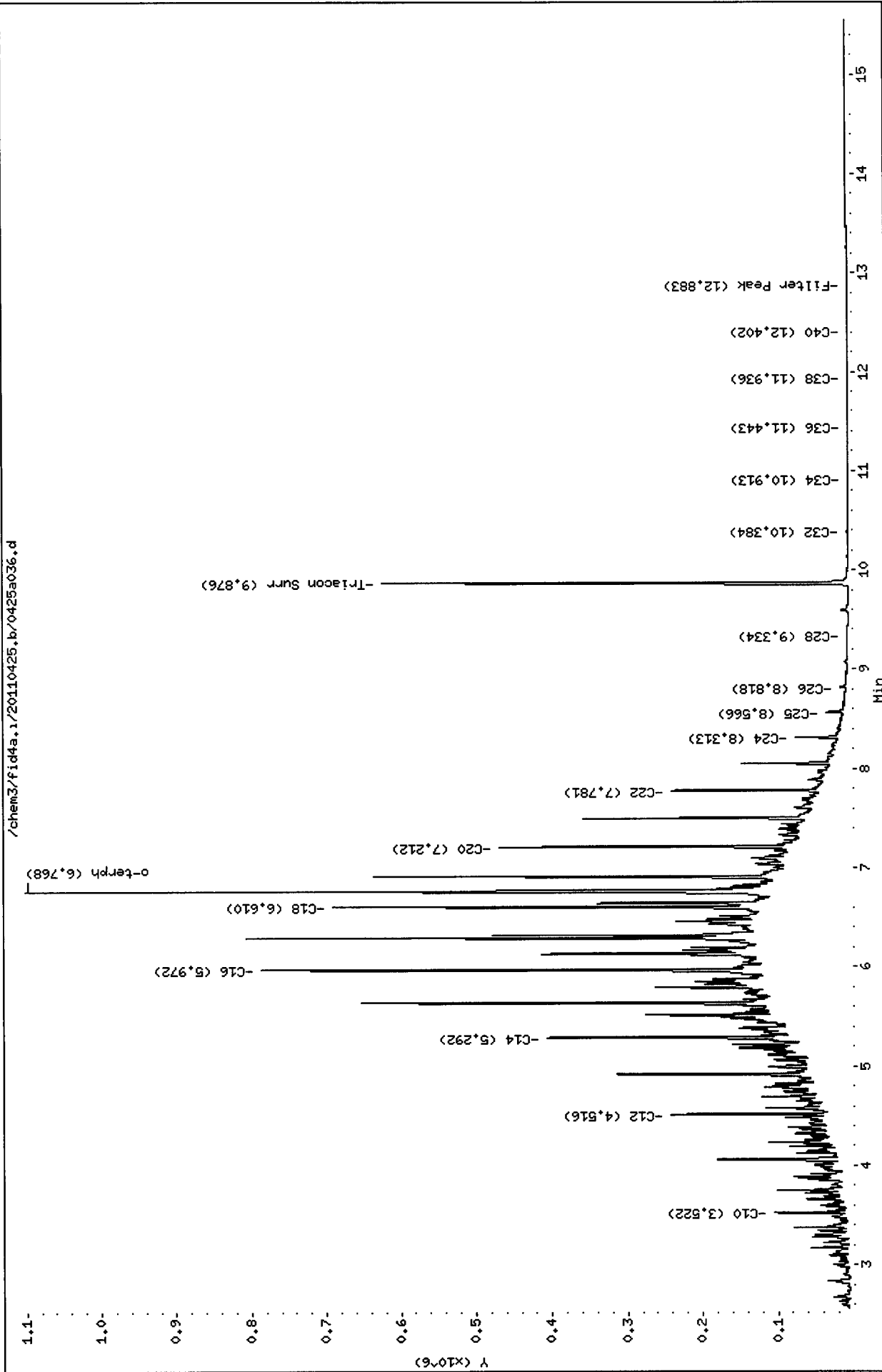
Sample Info: SS711MSD

Column phase: RTX-1

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a037.d      ARI ID: SS71J  
 Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m      Client ID:  
 Instrument: fid4a.i      Injection: 26-APR-2011 05:02  
 Operator: MS  
 Report Date: 04/26/2011      Dilution Factor: 1  
 Macro: 13-APR-2011  
 Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

FID:4A RESULTS

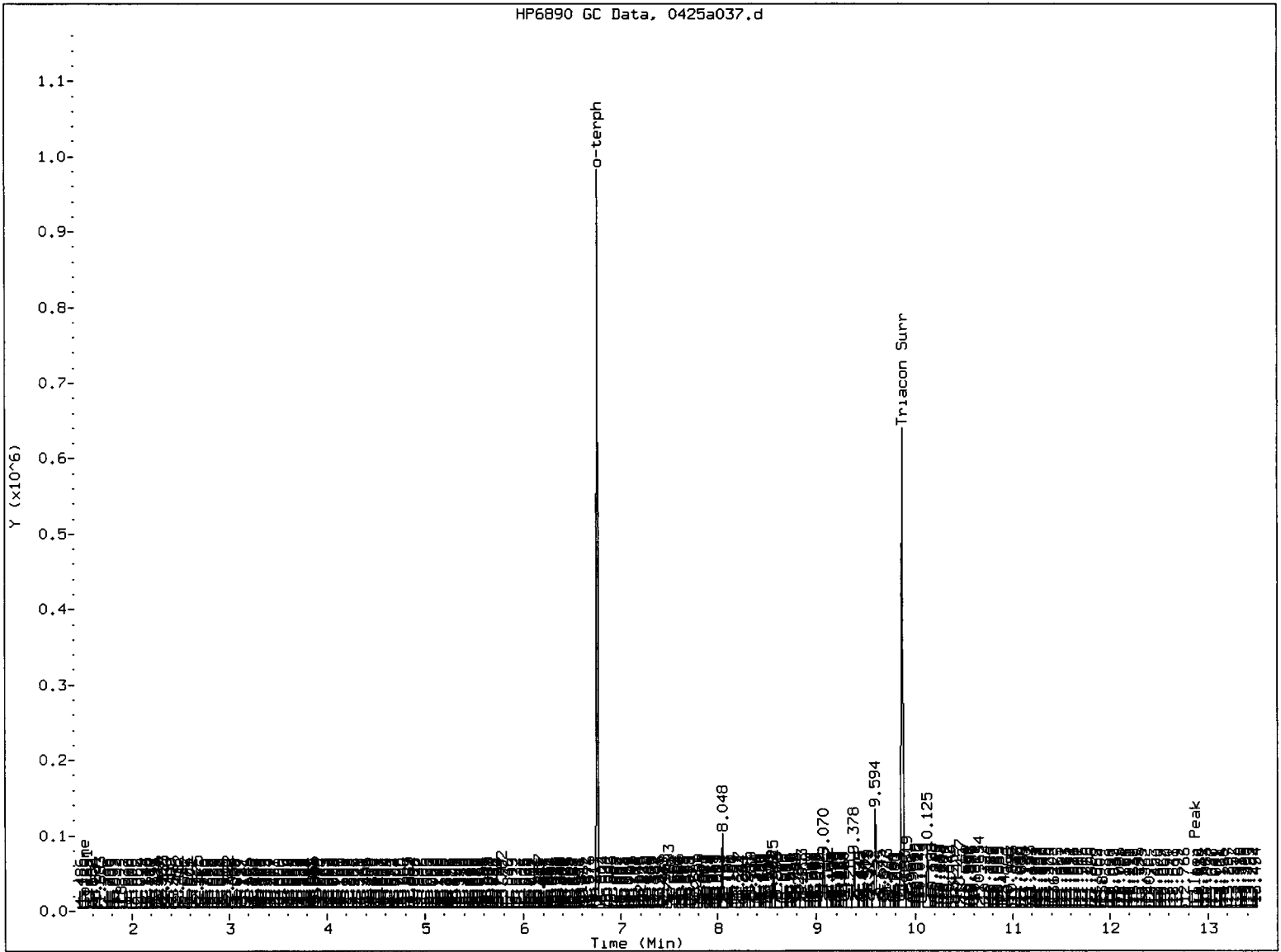
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.515	-0.009	789	1087	GAS (Tol-C12)	129488	6.54
C8	1.897	0.012	2480	3314	DIESEL (C12-C24)	563151	28.38 <i>IR</i>
C10	3.525	0.005	1379	1359	M.OIL (C24-C38)	1554301	136.40 <i>Moi</i>
C12	4.518	0.004	2080	2051	AK-102 (C10-C25)	658630	29.77 M
C14	5.279	-0.010	486	263	AK-103 (C25-C36)	1450756	210.19 M
C16	5.967	0.003	1354	2548			
C18	6.597	-0.005	3139	4161			
C20	7.205	-0.002	3472	4689			
C22	7.775	-0.007	11006	14686	MSPiRiT (Tol-C12)	129488	7.05
C24	8.311	-0.008	17639	19339			
C25	8.565	-0.012	49346	46712			
C26	8.816	-0.010	14465	27779			
C28	9.327	-0.014	24850	45036			
C32	10.390	-0.012	8465	18225			
C34	10.912	-0.018	3776	8752	CREOSOT (C12-C22)	326222	80.13 M
Filter Peak	12.867	-0.012	1309	4588			
C36	11.429	-0.014	2455	4719			
C38	11.929	-0.011	1591	4588			
C40	12.404	-0.016	1639	5452			
o-terph	6.762	0.000	975303	782643	JET-A (C10-C18)	142199	9.58
Triacon Surr	9.876	-0.007	624927	666030			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319)      AK102(3.52 - 8.58)      Jet A(3.52 - 6.60)  
 NW M.Oil(8.32 - 11.94)      AK103(8.58 - 11.44)      OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	782643	40.5	89.9
Triacontane	666030	39.2	87.1

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other Surr pk overlap

Analyst: AD Date: 4/26/2011

Data File: /chem3/fid4a.i/20110425.b/0425a037.d

Date : 26-APR-2011 05:02

Client ID:

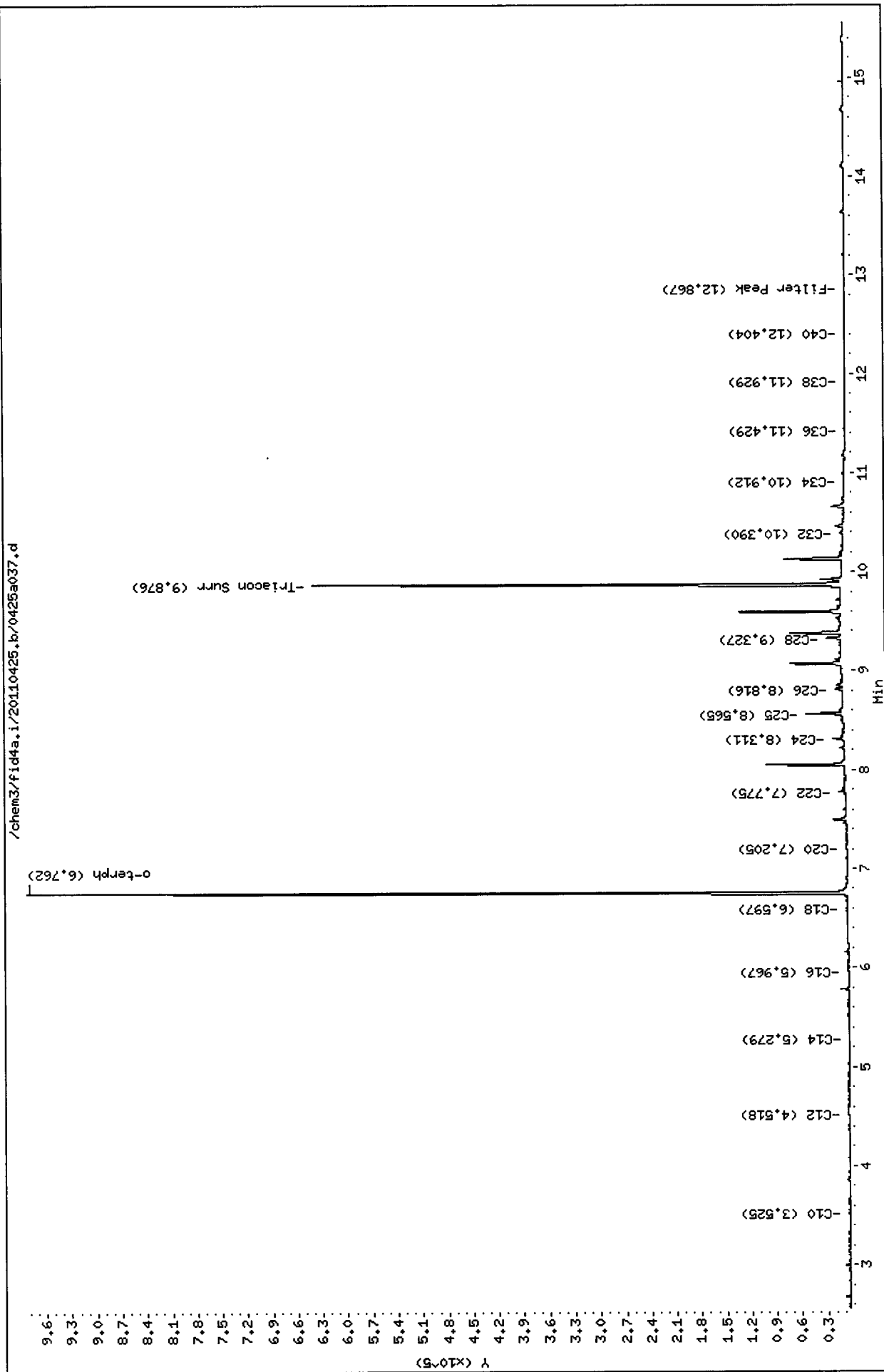
Sample Info: SS71J

Column phase: RTX-1

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25



00710 1705

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a038.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71K  
Client ID:  
Injection: 26-APR-2011 05:26  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.508	-0.016	640	966	GAS (Tol-C12)	78557	3.97
C8	1.870	-0.015	394	456	DIESEL (C12-C24)	256261	12.91 - <i>LR</i>
C10	3.529	0.008	511	675	M.OIL (C24-C38)	683777	60.01 - <i>LR</i>
C12	4.516	0.002	454	538	AK-102 (C10-C25)	301156	13.61 M
C14	5.297	0.009	406	1168	AK-103 (C25-C36)	632235	91.60 M
C16	5.972	0.008	1116	2762			
C18	6.598	-0.004	1806	2433			
C20	7.208	0.001	1329	2630			
C22	7.779	-0.003	2870	3731	MSPERIT (Tol-C12)	78557	4.28
C24	8.312	-0.007	5271	6685			
C25	8.566	-0.011	10053	21349			
C26	8.817	-0.009	4414	10182			
C28	9.330	-0.012	7376	16674			
C32	10.384	-0.018	6314	13921			
C34	10.933	0.004	1706	3765	CREOSOT (C12-C22)	168029	41.27 M
Filter Peak	12.871	-0.009	1061	1880			
C36	11.445	0.002	2810	8282			
C38	11.962	0.021	874	795			
C40	12.403	-0.017	2412	5540			
o-terph	6.763	0.000	989336	802520	JET-A (C10-C18)	93101	6.27
Triacon Surr	9.876	-0.006	619489	666505			

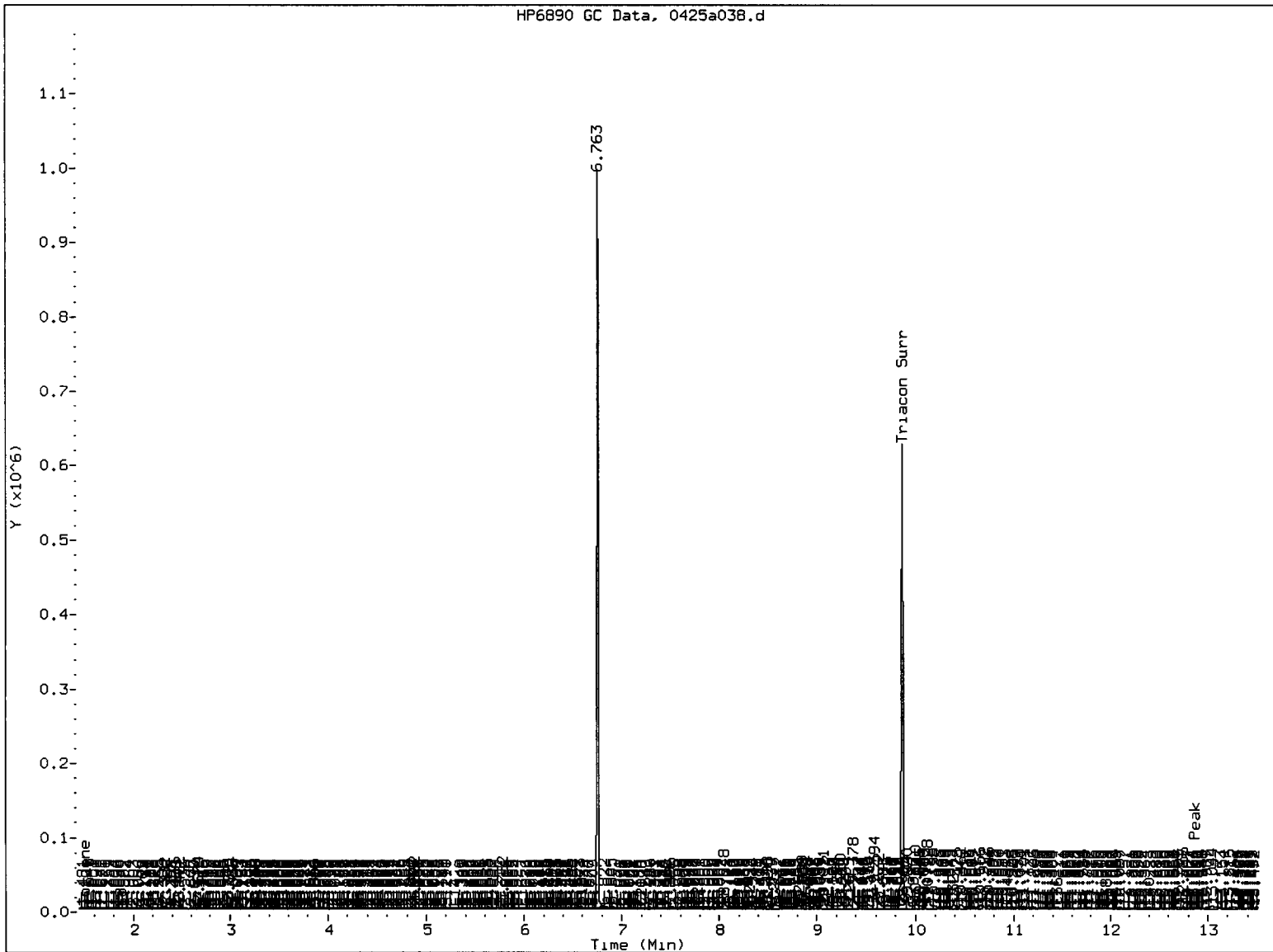
M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	802520	41.5	92.2
Triacontane	666505	39.2	87.2

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

HP6890 GC Data, 0425a038.d



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other Surr # overlap

Analyst: AR

Date: 4/26/2011



Data File: /chem3/fid4a.i/20110425.b/0425a038.d

Date : 26-APR-2011 05:26

Client ID:

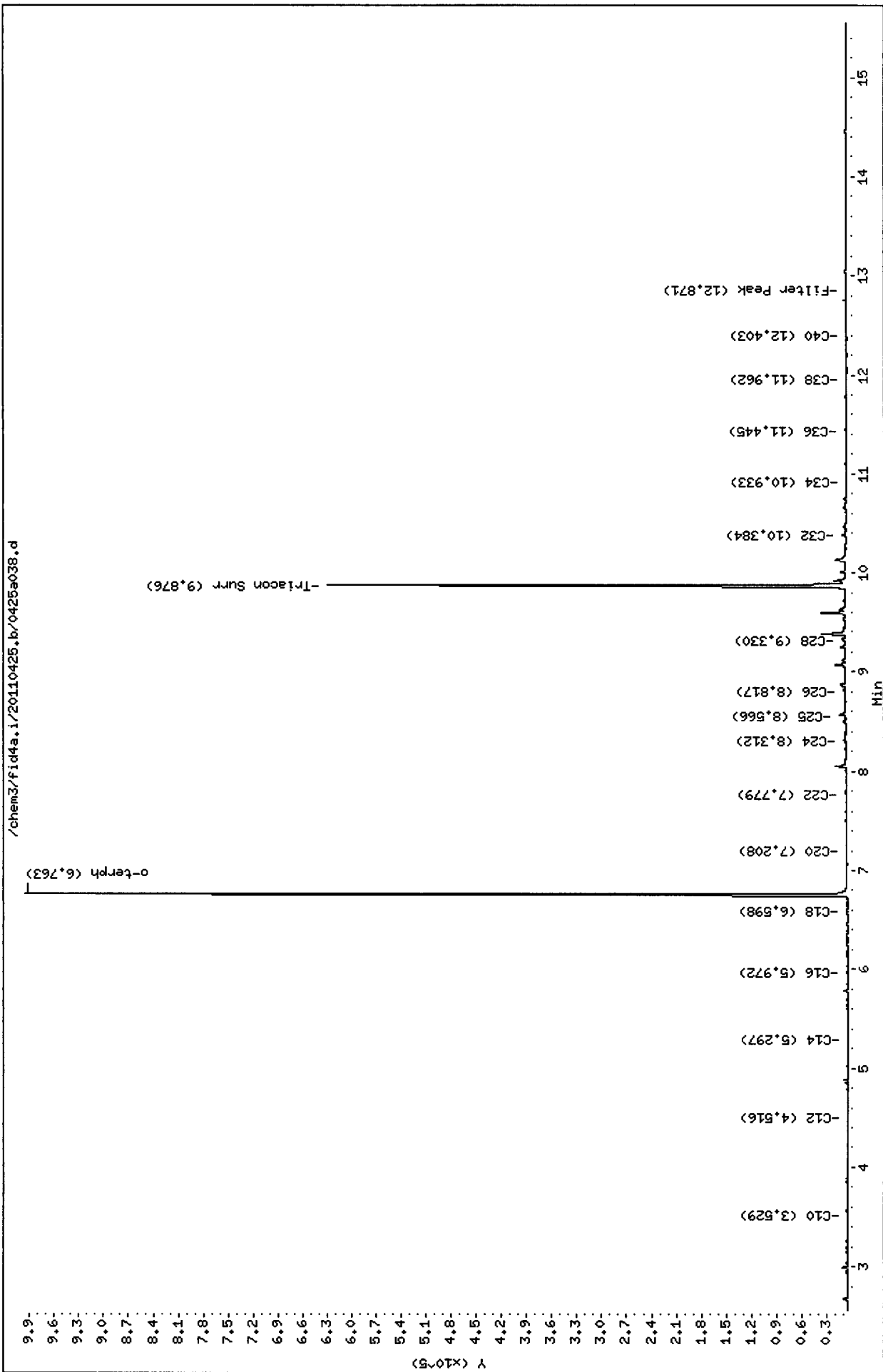
Sample Info: SS71K

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a039.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71L  
Client ID:  
Injection: 26-APR-2011 05:49  
Dilution Factor: 1

FID:4A RESULTS

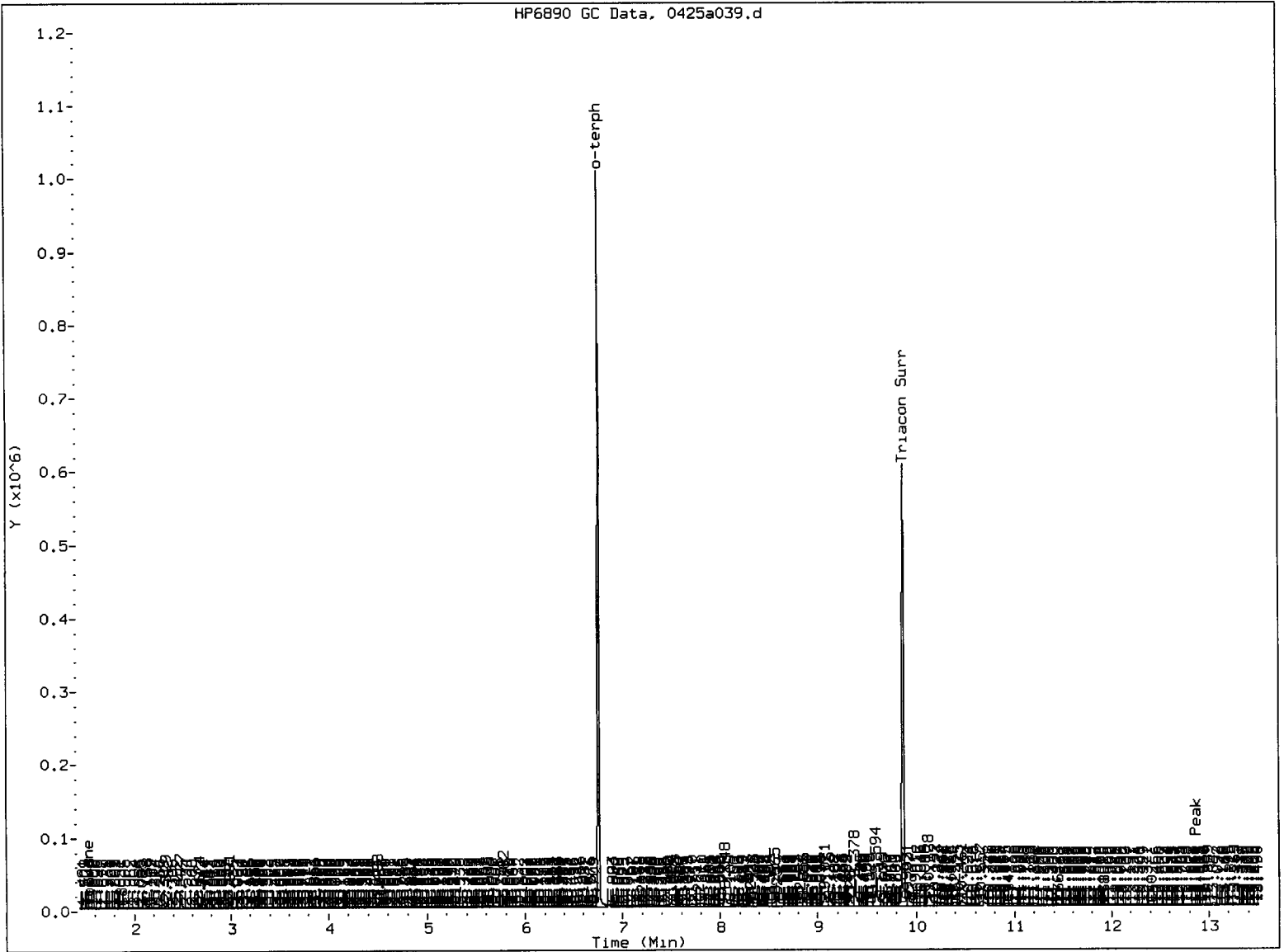
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.534	0.009	847	863	GAS (Tol-C12)	99161	5.01
C8	1.870	-0.015	440	549	DIESEL (C12-C24)	336381	16.95- <i>IR</i>
C10	3.525	0.004	1388	1435	M.OIL (C24-C38)	773420	67.87- <i>IR</i>
C12	4.520	0.005	1035	1383	AK-102 (C10-C25)	393828	17.80
C14	5.291	0.002	1623	2926	AK-103 (C25-C36)	715950	103.73 M
C16	5.965	0.001	1882	4104			
C18	6.596	-0.005	2393	3586			
C20	7.206	-0.001	1912	2095			
C22	7.777	-0.005	4234	5635	MSPIRIT (Tol-C12)	99161	5.40
C24	8.313	-0.006	6524	8693			
C25	8.581	0.005	12719	23261			
C26	8.817	-0.009	5608	13029			
C28	9.328	-0.014	8636	18884			
C32	10.390	-0.012	4410	10981			
C34	10.939	0.009	1940	4024	CREOSOT (C12-C22)	224738	55.20
Filter Peak	12.871	-0.008	1062	1382			
C36	11.445	0.001	1775	5031			
C38	11.930	-0.011	1042	2065			
C40	12.409	-0.011	1258	3684			
o-terph	6.762	-0.001	1005697	826415	JET-A (C10-C18)	142350	9.59
Triacon Surr	9.876	-0.006	598261	673764			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	826415	42.7	94.9
Triacotane	673764	39.7	88.1

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other Surr pk overlap

Analyst: AR

Date: 4/26/2011

Data File: /chem3/fid4a.i/20110425.b/0425a039.d

Date : 26-APR-2011 05:49

Client ID:

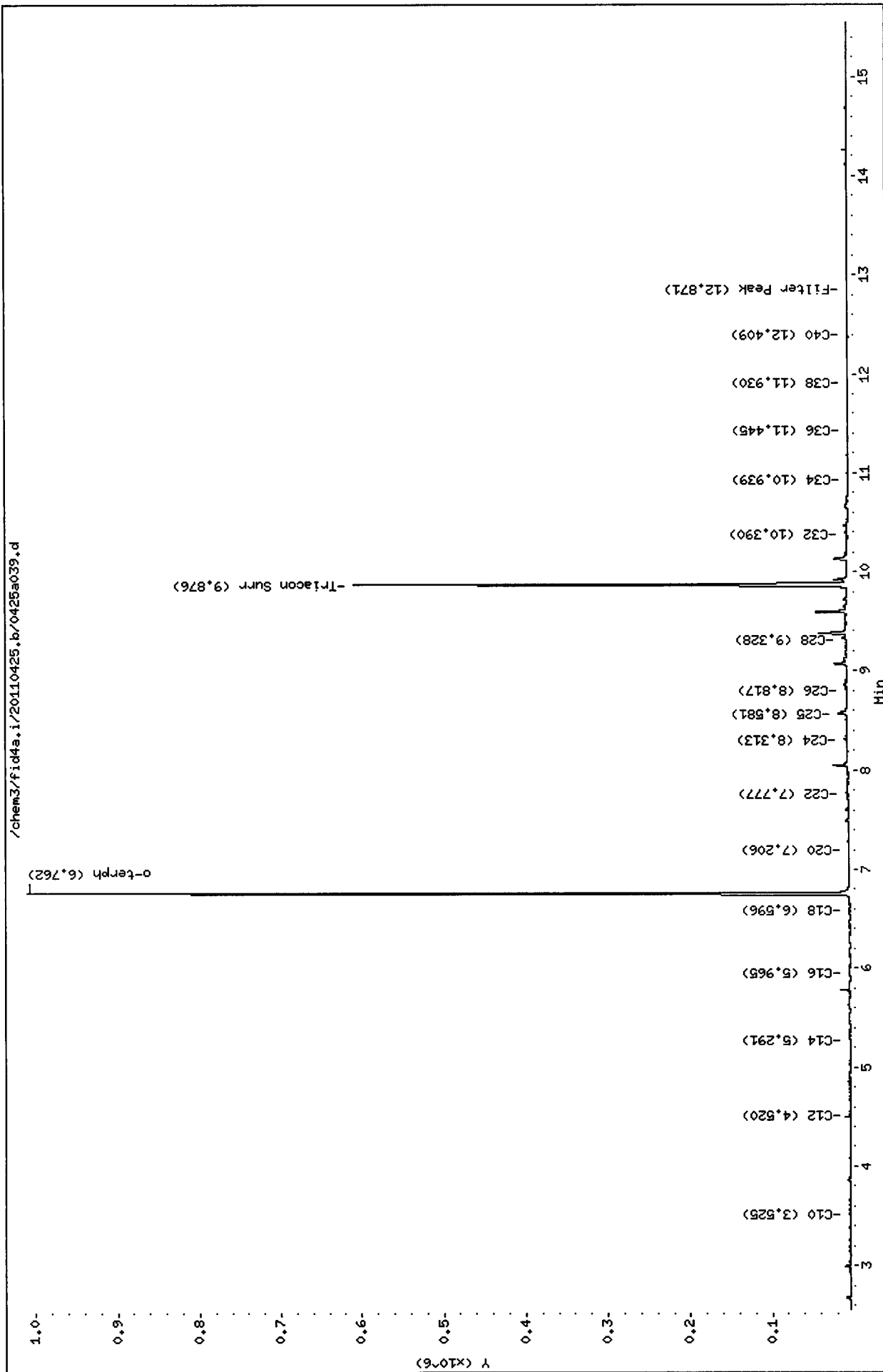
Sample Info: SS71L

Column phase: RTX-1

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a040.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71M  
Client ID:  
Injection: 26-APR-2011 06:13  
Dilution Factor: 1

FID:4A RESULTS

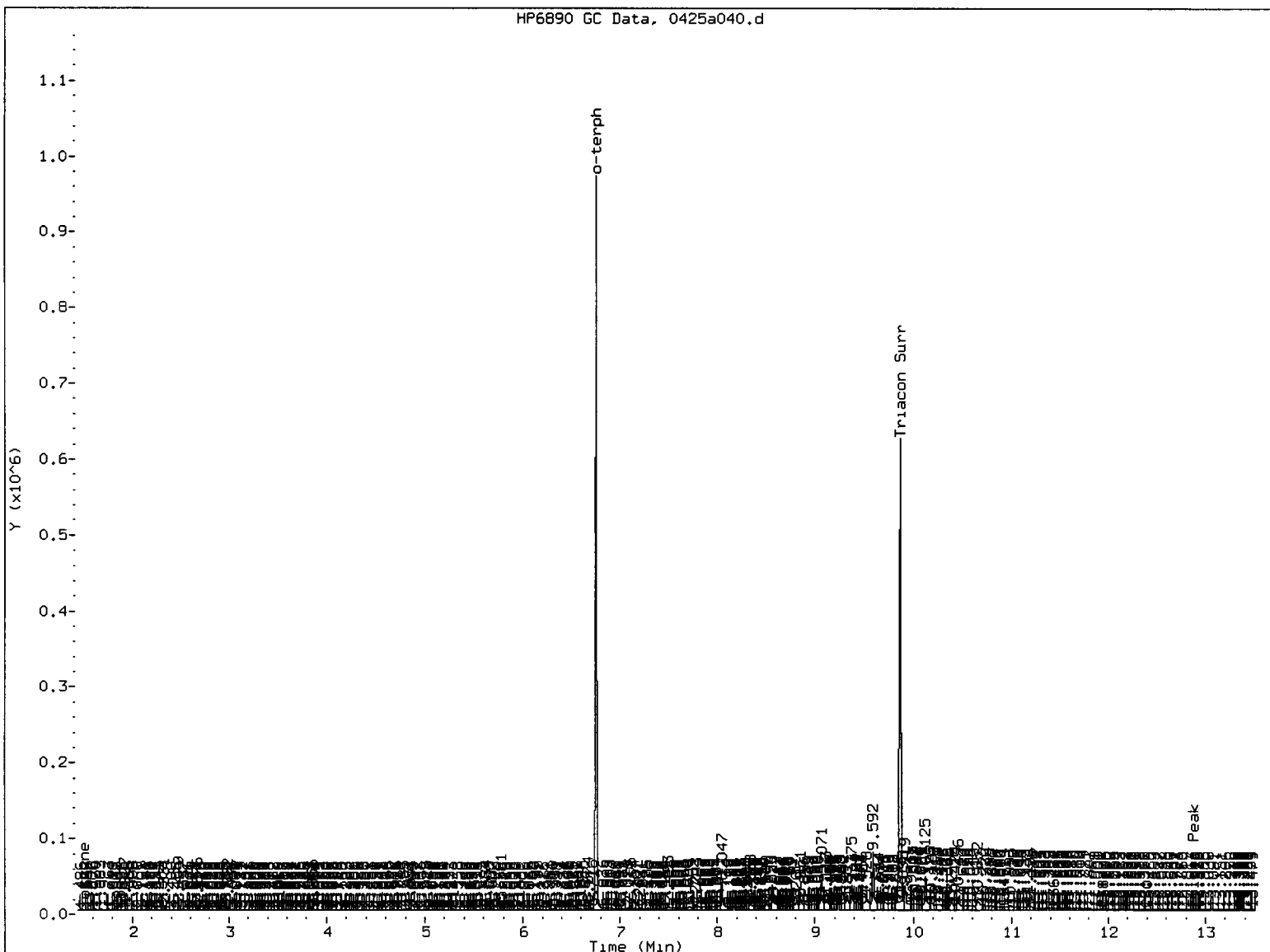
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.515	-0.009	846	1035	GAS (Tol-C12)	108901	5.50
C8	1.875	-0.010	328	428	DIESEL (C12-C24)	517427	26.07 <i>-LPC</i>
C10	3.525	0.004	1352	1414	M.OIL (C24-C38)	1712895	150.32 <i>-Moi</i>
C12	4.518	0.004	1196	1389	AK-102 (C10-C25)	607779	27.47
C14	5.289	0.001	1632	3089	AK-103 (C25-C36)	1572806	227.87 M
C16	5.964	0.000	2075	4607			
C18	6.596	-0.005	3226	4594			
C20	7.205	-0.002	3256	5307			
C22	7.775	-0.007	7111	7874	MSPiRiT (Tol-C12)	108901	5.93
C24	8.312	-0.007	15164	16131			
C25	8.564	-0.013	33775	47456			
C26	8.814	-0.012	13631	33641			
C28	9.325	-0.016	19638	44158			
C32	10.390	-0.012	10189	25061			
C34	10.928	-0.001	5367	13356	CREOSOT (C12-C22)	321249	78.91
Filter Peak	12.880	0.001	1532	2699			
C36	11.442	-0.002	3709	7025			
C38	11.948	0.007	2240	3721			
C40	12.405	-0.015	2103	5451			
o-terph	6.760	-0.002	969759	805054	JET-A (C10-C18)	161142	10.86
Triacon Surr	9.875	-0.007	610186	666808			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	805054	41.6	92.5
Triacontane	666808	39.3	87.2

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other Surr pk overlap

Analyst: AR

Date: 4/26/200

Data File: /chem3/fid4a.i/20110425.b/0425a040.d

Date : 26-APR-2011 06:13

Client ID:

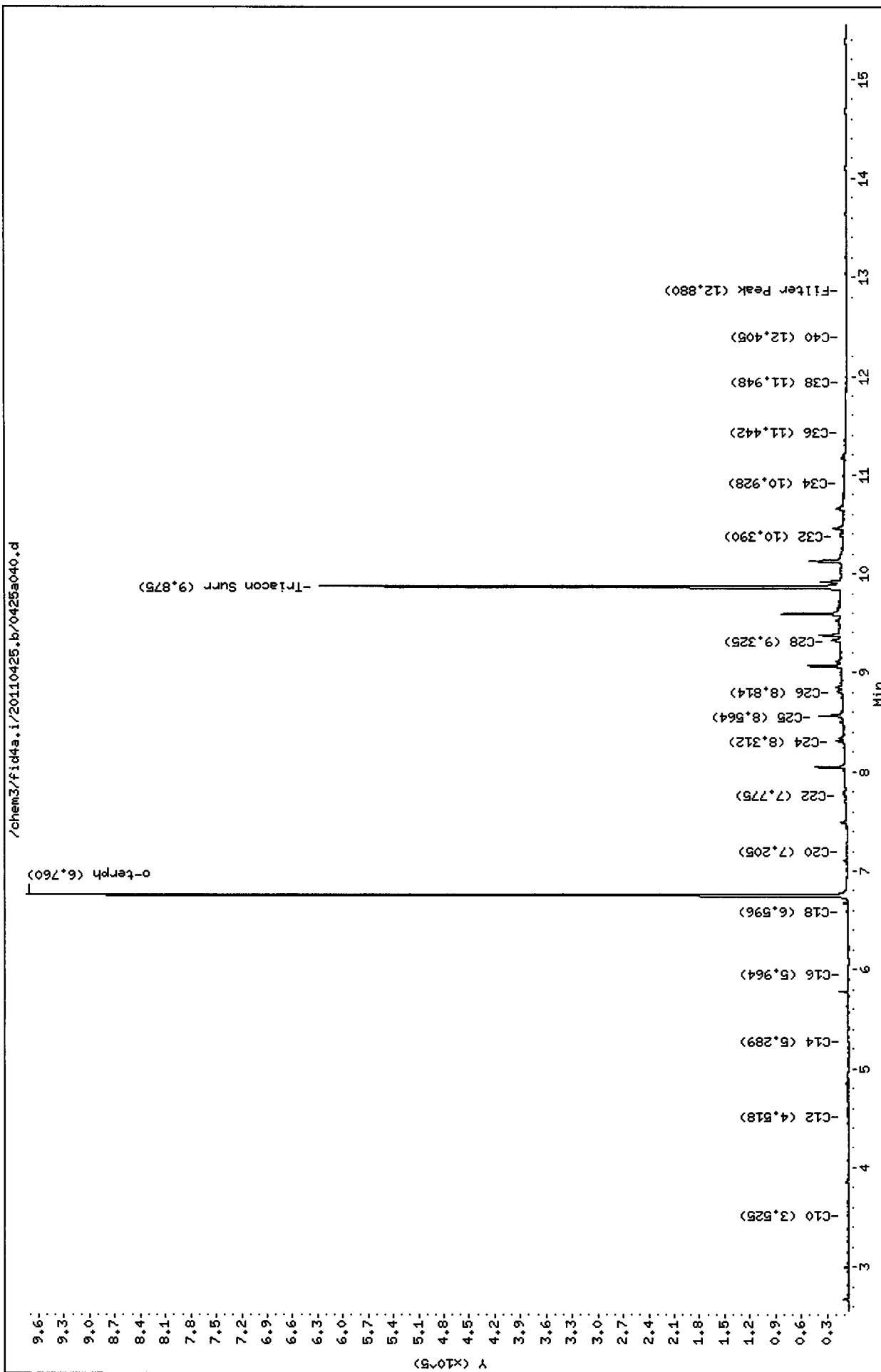
Sample Info: S571M

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a041.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71N  
Client ID:  
Injection: 26-APR-2011 06:37  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.515	-0.009	781	971	GAS (Tol-C12)	81391	4.11
C8	1.878	-0.006	363	533	DIESEL (C12-C24)	186518	9.40
C10	3.527	0.006	1156	1170	M.OIL (C24-C38)	172355	15.13
C12	4.517	0.003	1046	1500	AK-102 (C10-C25)	220842	9.98
C14	5.294	0.006	677	623	AK-103 (C25-C36)	145661	21.10
C16	5.973	0.009	1704	3075			
C18	6.597	-0.004	1709	2294			
C20	7.209	0.002	1033	1739			
C22	7.780	-0.002	1250	1662	MSPIRIT (Tol-C12)	81391	4.43
C24	8.311	-0.008	2121	5176			
C25	8.582	0.005	1905	6363			
C26	8.819	-0.006	1694	4328			
C28	9.334	-0.008	1791	5285			
C32	10.383	-0.019	1664	6334			
C34	10.915	-0.014	763	2206	CREOSOT (C12-C22)	148727	36.53
Filter Peak	12.886	0.006	964	1072			
C36	11.447	0.003	1185	2989			
C38	11.940	-0.001	578	576			
C40	12.407	-0.013	1010	2897			
o-terph	6.762	0.000	980989	818191	JET-A (C10-C18)	110943	7.47
Triacon Surr	9.875	-0.007	617756	690355			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	818191	42.3	94.0
Triacotane	690355	40.6	90.3

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011



Data File: /chem3/fid4a.i/20110425.b/0425a041.d

Date : 26-APR-2011 06:37

Client ID:

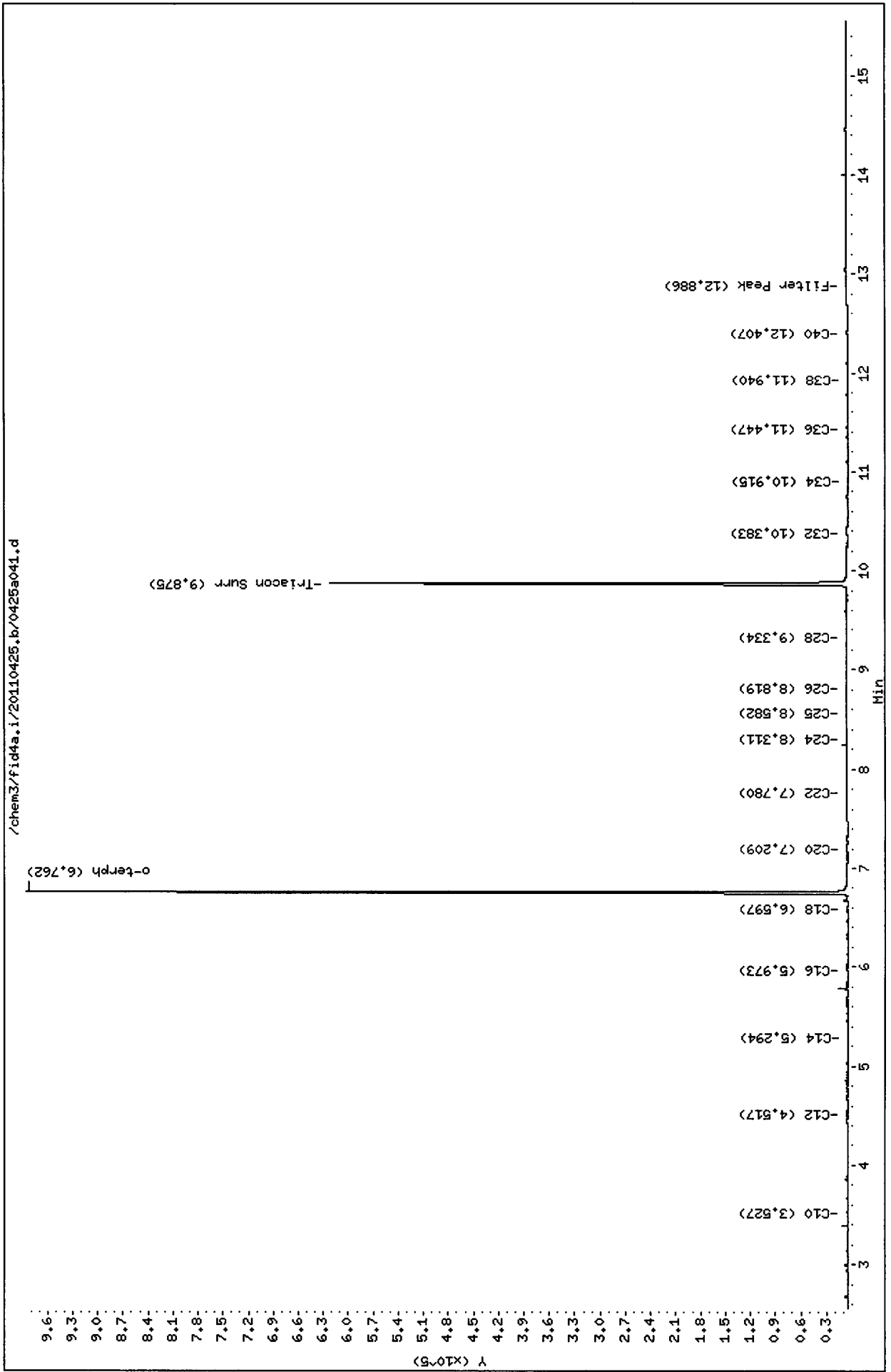
Sample Info: S571N

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a042.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS710  
Client ID:  
Injection: 26-APR-2011 07:00  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.534	0.009	875	790	GAS (Tol-C12)	68250	3.45
C8	1.882	-0.002	276	401	DIESEL (C12-C24)	191531	9.65 - LRL
C10	3.526	0.005	972	929	M.OIL (C24-C38)	130215	11.43 - LRL
C12	4.516	0.001	1434	1717	AK-102 (C10-C25)	220926	9.99
C14	5.305	0.016	1086	1995	AK-103 (C25-C36)	111170	16.11
C16	5.971	0.007	1969	2842			
C18	6.597	-0.005	1826	2469			
C20	7.210	0.002	1050	942			
C22	7.780	-0.002	1178	1358	MSPIRIT (Tol-C12)	68250	3.71
C24	8.316	-0.003	1101	1596			
C25	8.583	0.006	1883	4491			
C26	8.823	-0.003	968	1530			
C28	9.332	-0.009	1130	1512			
C32	10.382	-0.020	1472	4217			
C34	10.909	-0.020	676	1752	CREOSOT (C12-C22)	161644	39.70
Filter Peak	12.874	-0.005	819	451			
C36	11.442	-0.001	1016	2517			
C38	11.937	-0.004	453	741			
C40	12.436	0.016	570	827			
o-terph	6.762	0.000	1007830	835070	JET-A (C10-C18)	123100	8.29
Triacon Surr	9.875	-0.007	639144	702873			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	835070	43.2	95.9
Triacontane	702873	41.4	92.0

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Creosote	4071.2	31-MAR-2011

Data File: /chem3/fid4a.i/20110425.b/0425a042.d

Date : 26-APR-2011 07:00

Client ID:

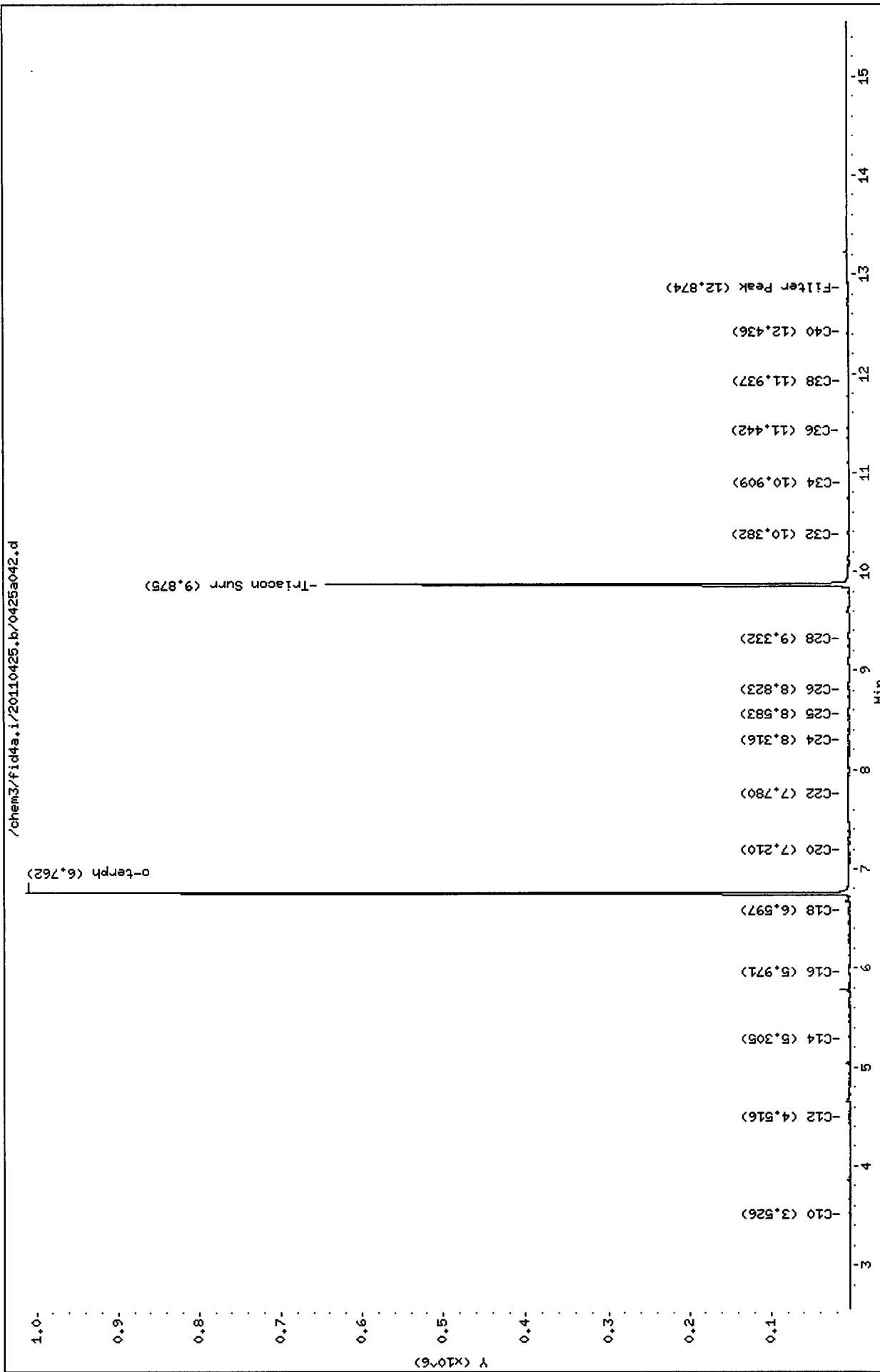
Sample Info: S5710

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a043.d      ARI ID: DIESEL#4  
 Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m      Client ID:  
 Instrument: fid4a.i      Injection: 26-APR-2011 07:24  
 Operator: MS  
 Report Date: 04/26/2011      Dilution Factor: 1  
 Macro: 13-APR-2011  
 Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

FID:4A RESULTS

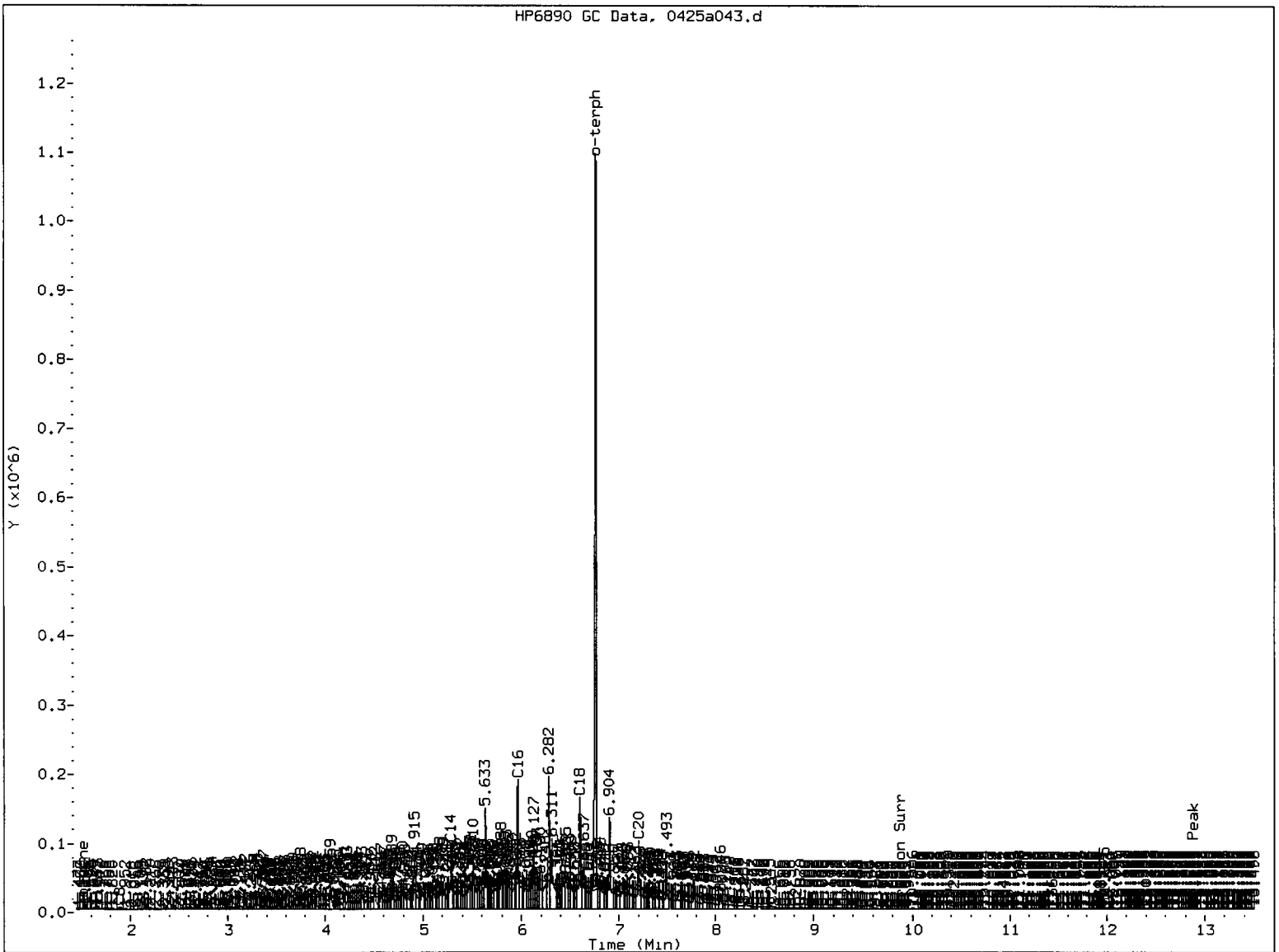
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.520	-0.004	552	466	GAS (Tol-C12)	743101	37.55
C8	1.897	0.013	2516	4181	DIESEL (C12-C24)	5372362	270.73
C10	3.521	0.000	18372	11582	M.OIL (C24-C38)	123045	10.80
C12	4.513	-0.001	47813	45983	AK-102 (C10-C25)	5941594	268.55 M
C14	5.285	-0.003	93870	93057	AK-103 (C25-C36)	93440	13.54
C16	5.962	-0.002	187042	158690			
C18	6.598	-0.003	161218	170106			
C20	7.202	-0.005	98703	107340			
C22	7.774	-0.008	41825	48315	MSPIRIT (Tol-C12)	743101	40.44
C24	8.311	-0.008	10434	23688			
C25	8.568	-0.009	3999	13650			
C26	8.822	-0.003	1578	3814			
C28	9.344	0.003	498	297			
C32	10.424	0.022	256	109			
C34	10.936	0.007	238	165	BUNKERC (C10-C38)	6045921	816.84 M
Filter Peak	12.876	-0.003	728	443			
C36	11.442	-0.001	1374	2399			
C38	11.941	0.001	368	170			
C40	12.403	-0.017	907	2081			
o-terph	6.763	0.001	1064328	939527	JET-A (C10-C18)	4287218	288.86
Triacon Surr	9.875	-0.007	325	498			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319)      AK102(3.52 - 8.58)      Jet A(3.52 - 6.60)  
 NW M.Oil(8.32 - 11.94)      AK103(8.58 - 11.44)      OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	939527	48.6	107.9
Triacontane	498	0.0	0.1

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010



MANUAL INTEGRATION

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

✓ 5. other Surf pk overlap

Analyst: AR

Date: 4/26/2011

Data File: /chem3/fid4a.i/20110425.b/0425a043.d

Date : 26-APR-2011 07:24

Client ID:

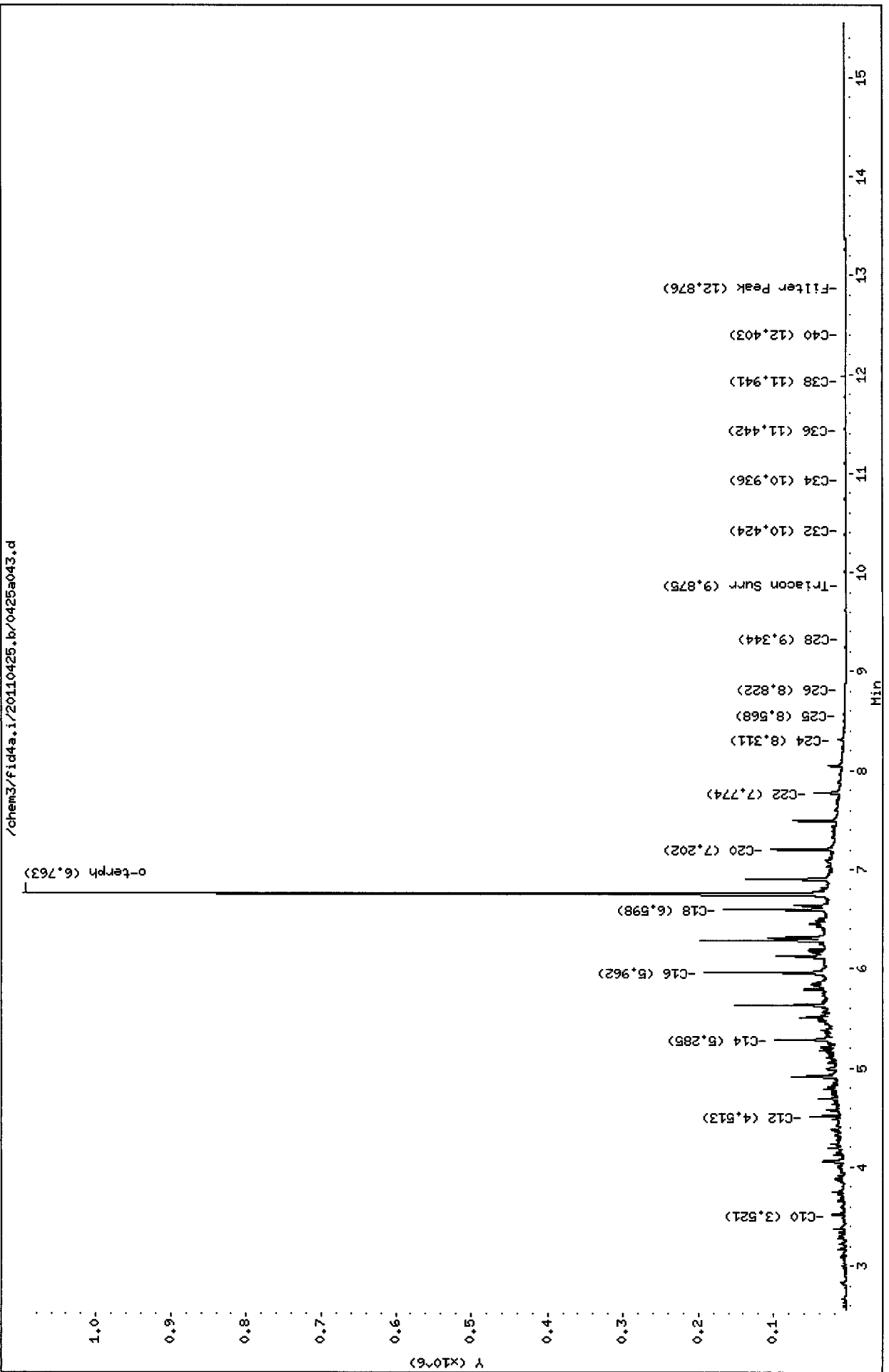
Sample Info: DIESEL#4

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



5571 : 01419

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a044.d      ARI ID: MOIL#4  
 Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m      Client ID:  
 Instrument: fid4a.i      Injection: 26-APR-2011 07:48  
 Operator: MS  
 Report Date: 04/26/2011      Dilution Factor: 1  
 Macro: 13-APR-2011  
 Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

FID:4A RESULTS

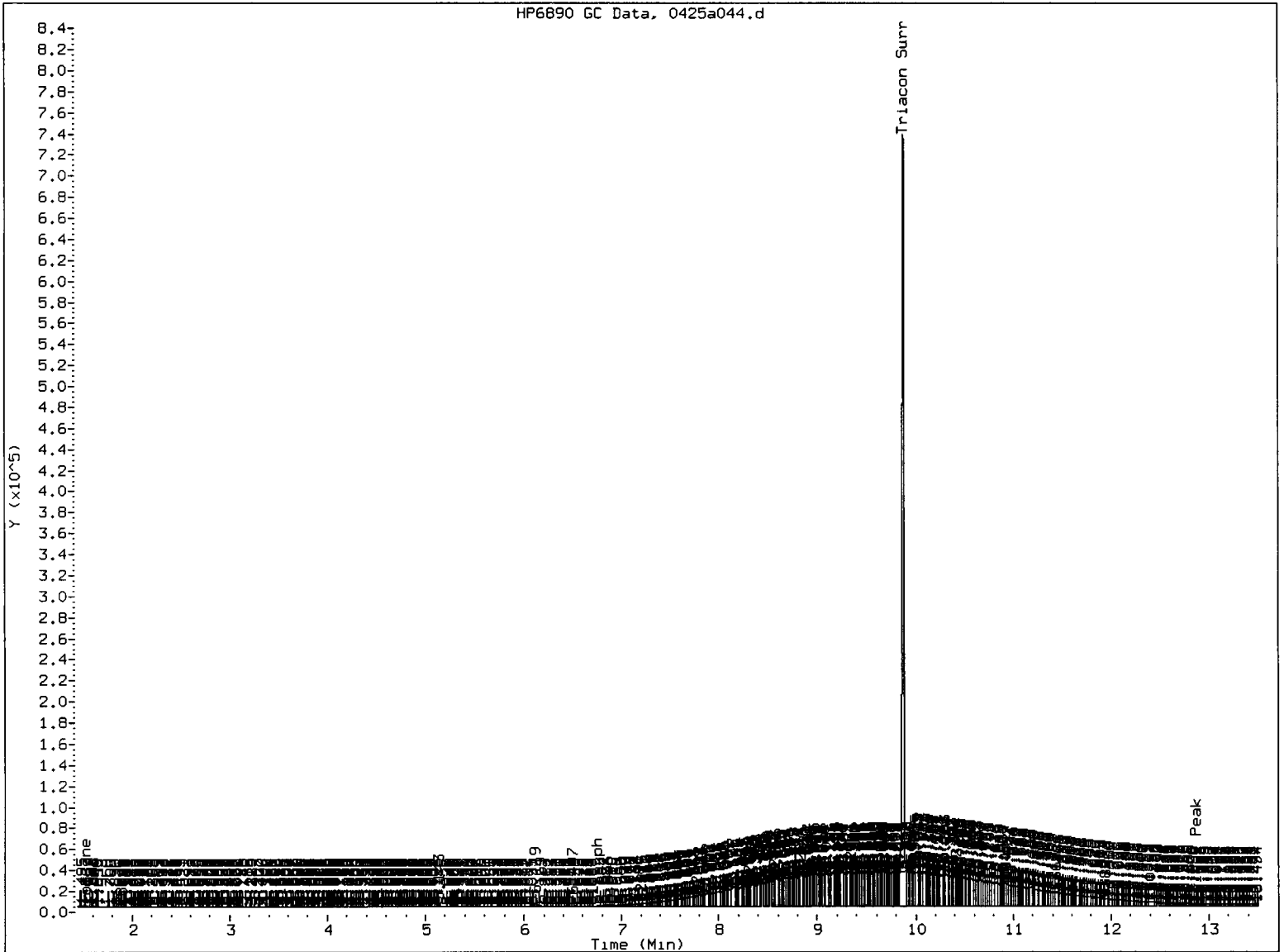
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.521	-0.004	850	672	GAS (Tol-C12)	30360	1.53
C8	1.892	0.007	269	214	DIESEL (C12-C24)	799305	40.28
C10	3.525	0.004	341	550	M.OIL (C24-C38)	5187360	455.23
C12	4.508	-0.006	212	97	AK-102 (C10-C25)	998444	45.13
C14	5.288	0.000	176	93	AK-103 (C25-C36)	4735049	686.03 M
C16	5.967	0.003	123	45			
C18	6.599	-0.003	366	536			
C20	7.204	-0.003	2742	4573			
C22	7.782	0.000	10566	10678	MSPIRIT (Tol-C12)	30360	1.65
C24	8.315	-0.004	20444	14511			
C25	8.572	-0.005	26604	19851			
C26	8.834	0.008	32026	70129			
C28	9.343	0.002	33360	36428			
C32	10.413	0.011	27664	16868			
C34	10.932	0.002	22892	27865	BUNKERC (C10-C38)	5998423	810.43 M
Filter Peak	12.869	-0.010	2523	2956			
C36	11.441	-0.002	14139	21731			
C38	11.944	0.003	7424	9577			
C40	12.402	-0.018	4397	14583			
o-terph	6.751	-0.012	1068	2718	JET-A (C10-C18)	50079	3.37
Triacon Surr	9.879	-0.004	700954	836191			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319)      AK102(3.52 - 8.58)      Jet A(3.52 - 6.60)  
 NW M.Oil(8.32 - 11.94)      AK103(8.58 - 11.44)      OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2718	0.1	0.3
Triacontane	836191	49.2	109.4

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- ✓ 5. Other Surr pt overlap

Analyst: AR

Date: 4/26/2011



Data File: /chem3/fid4a.i/20110425.b/0425a044.d

Date : 26-APR-2011 07:48

Client ID:

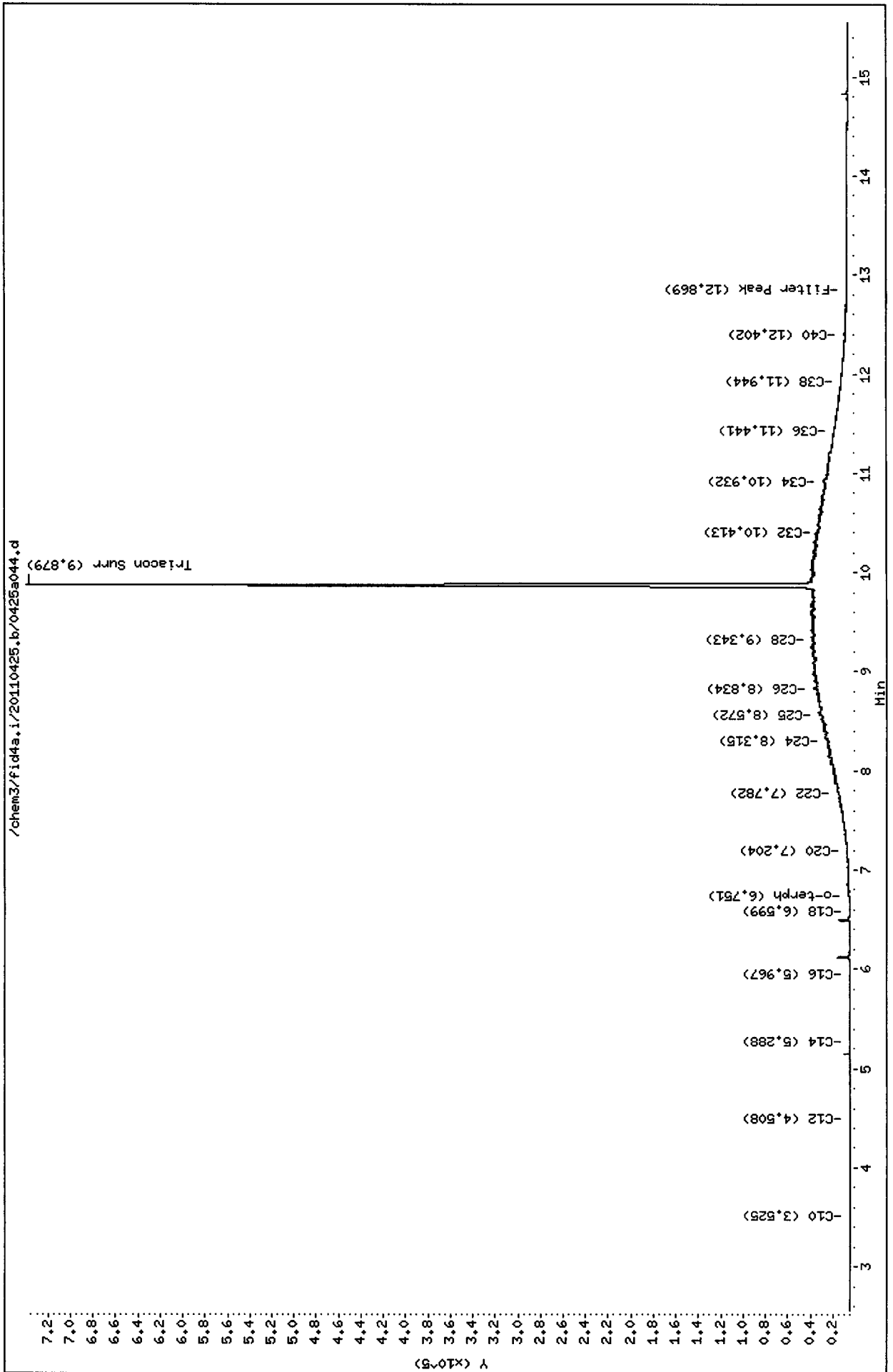
Sample Info: MDIL#4

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a046.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: DIESEL#5  
Client ID: LORA LAKE  
Injection: 26-APR-2011 08:35  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.515	-0.009	493	536	GAS (Tol-C12)	752315	38.01
C8	1.894	0.009	2507	4228	DIESEL (C12-C24)	5407190	272.48
C10	3.521	0.000	18034	11413	M.OIL (C24-C38)	178413	15.66
C12	4.513	-0.002	47902	45658	AK-102 (C10-C25)	5995517	270.98 M
C14	5.285	-0.003	94140	92609	AK-103 (C25-C36)	124194	17.99
C16	5.962	-0.002	181510	155143			
C18	6.598	-0.003	156158	162700			
C20	7.203	-0.005	95787	106225			
C22	7.775	-0.007	41982	48300	MSPIRIT (Tol-C12)	752315	40.95
C24	8.311	-0.008	10308	22631			
C25	8.568	-0.008	4235	13655			
C26	8.823	-0.003	1778	4620			
C28	9.336	-0.006	638	730			
C32	10.378	-0.024	2084	4307			
C34	10.923	-0.006	568	468	BUNKERC (C10-C38)	6144139	830.11 M
Filter Peak	12.894	0.015	6700	10235			
C36	11.443	0.000	1729	3748			
C38	11.935	-0.006	876	718			
C40	12.402	-0.018	1627	4833			
o-terph	6.764	0.001	1073444	925551	JET-A (C10-C18)	4320724	291.11
Triacon Surr	9.877	-0.005	483	838			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	925551	47.8	106.3
Triacontane	838	0.0	0.1

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010

Data File: /chem3/fid4a.i/20110425.b/0425a046.d

Date: 26-APR-2011 08:35

Client ID: LORA LAKE

Sample Info: DIESEL#5

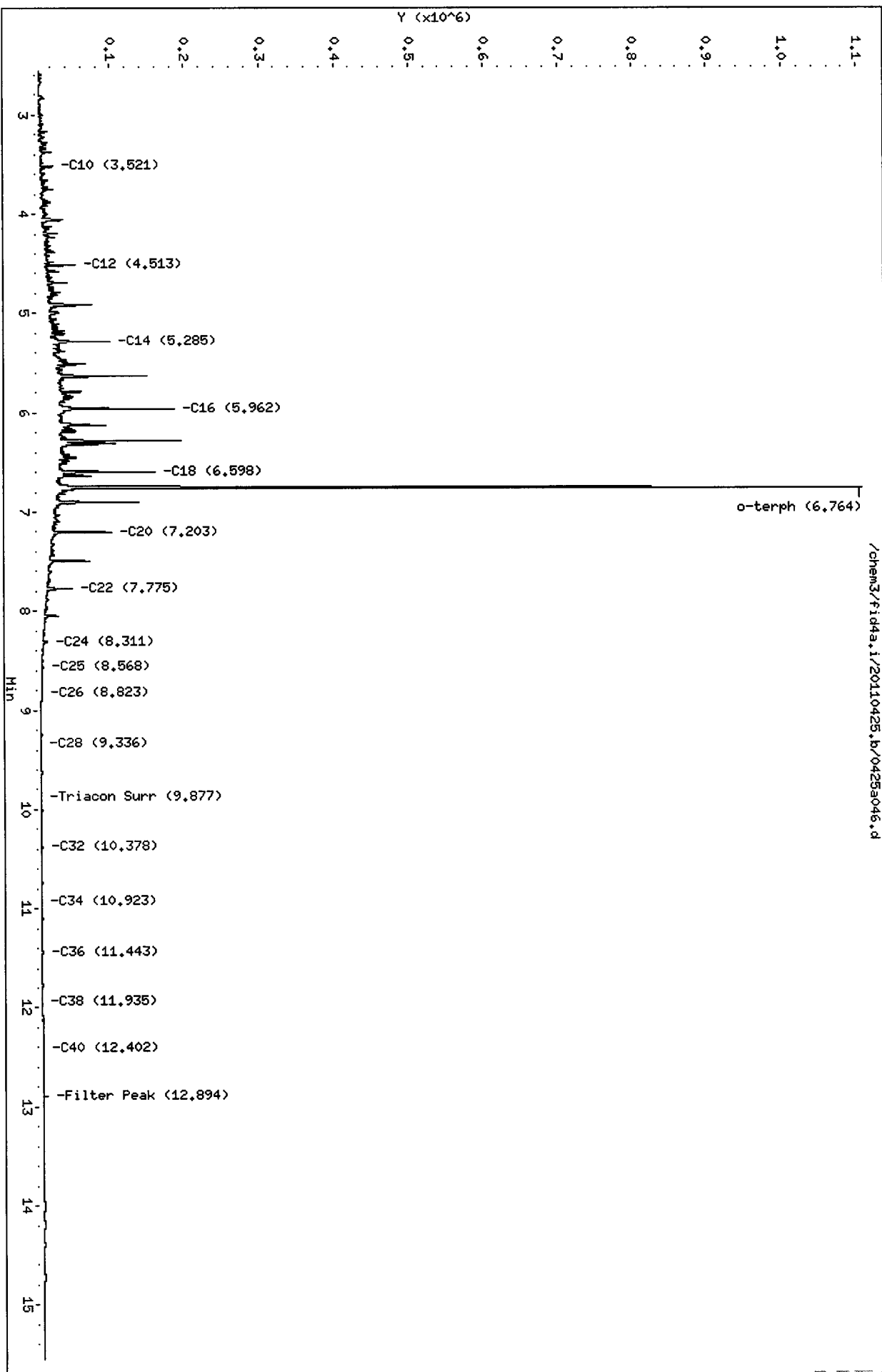
Column phase: RTX-1

Instrument: fid4a.1

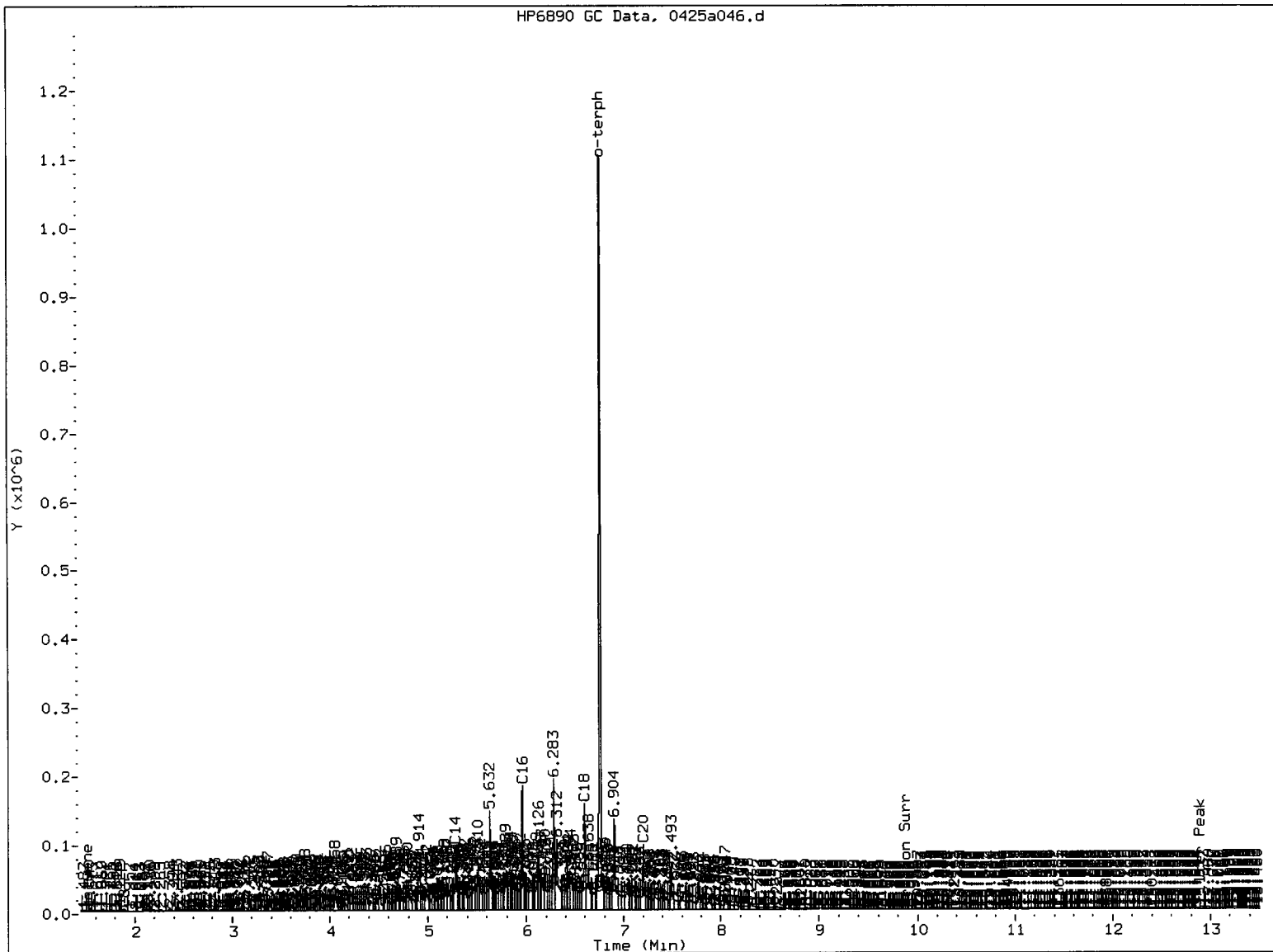
Operator: HS

Column diameter: 0.25

/chem3/fid4a.i/20110425.b/0425a046.d



0971 . 0425



MANUAL INTEGRATION

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

Analyst: *mm*      Date: *4/26/11*

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a047.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: MOIL#5  
Client ID: LORA LAKE  
Injection: 26-APR-2011 08:59  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.529	0.005	724	1130	GAS (Tol-C12)	39093	1.98
C8	1.887	0.003	233	341	DIESEL (C12-C24)	812109	40.92
C10	3.525	0.004	451	615	M.OIL (C24-C38)	5294572	464.64
C12	4.518	0.004	301	162	AK-102 (C10-C25)	1036295	46.84
C14	5.294	0.006	257	396	AK-103 (C25-C36)	4775780	691.93 M
C16	5.967	0.003	5366	1304			
C18	6.598	-0.003	448	888			
C20	7.202	-0.005	2847	3352			
C22	7.779	-0.002	10549	8069	MSPIRIT (Tol-C12)	39093	2.13
C24	8.320	0.002	20305	10066			
C25	8.581	0.005	27821	33651			
C26	8.837	0.011	31433	69862			
C28	9.340	-0.001	33322	12499			
C32	10.418	0.016	28641	27029			
C34	10.940	0.011	22918	34419	BUNKERC (C10-C38)	6124520	827.46 M
Filter Peak	12.877	-0.002	3259	3836			
C36	11.441	-0.002	16546	40101			
C38	11.947	0.006	8493	9899			
C40	12.435	0.016	4690	2499			
o-terph	6.771	0.009	776	855	JET-A (C10-C18)	64643	4.36
Triacon Surr	9.879	-0.003	740806	844840			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	855	0.0	0.1
Triacontane	844840	49.7	110.5

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010

Data File: /chem3/fid4a.i/20110425.b/0425a047.d

Date: 26-APR-2011 08:59

Client ID: LORA LAKE

Sample Info: H01L#5

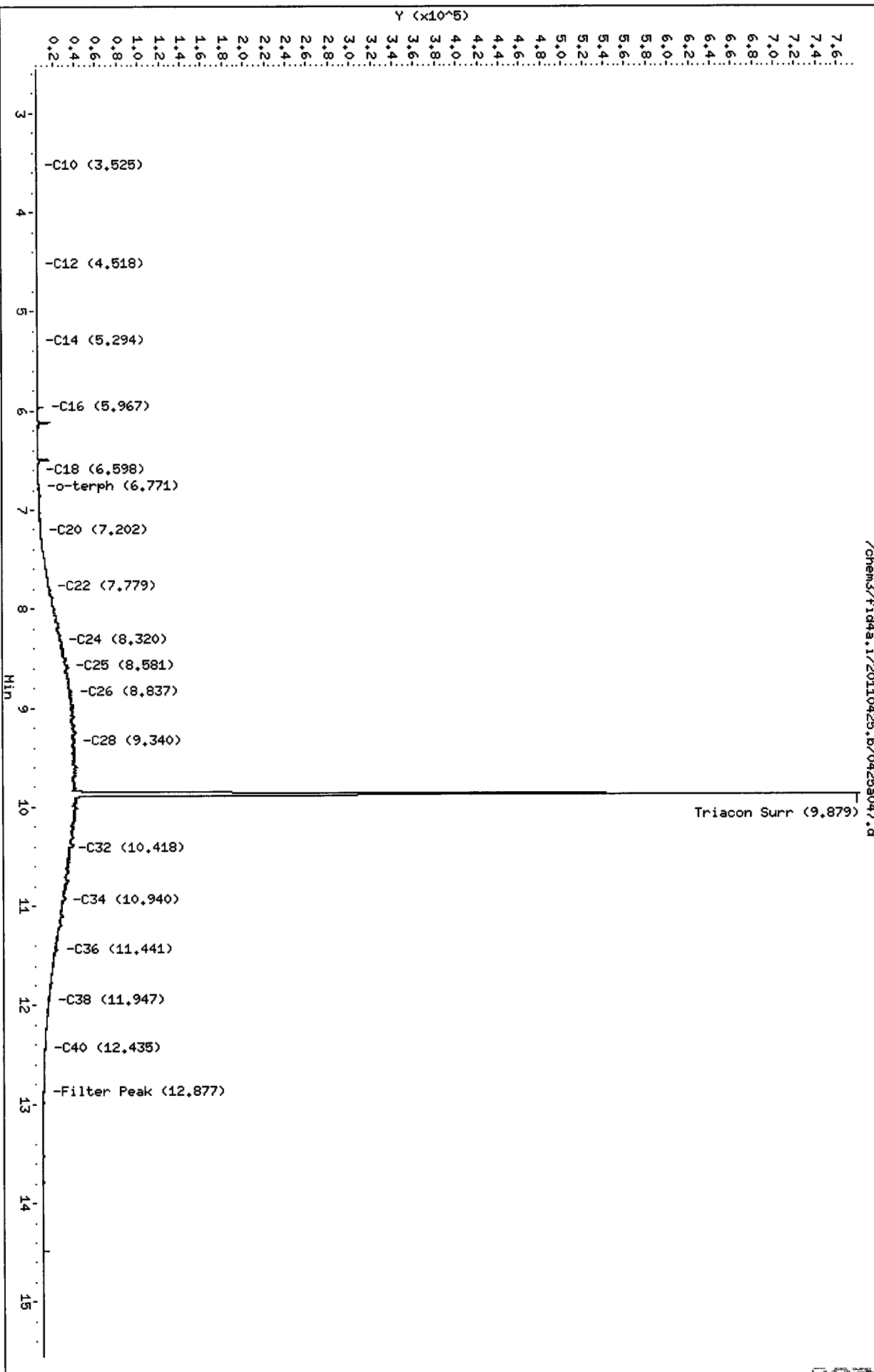
Column phase: RTX-1

Instrument: fid4a.i

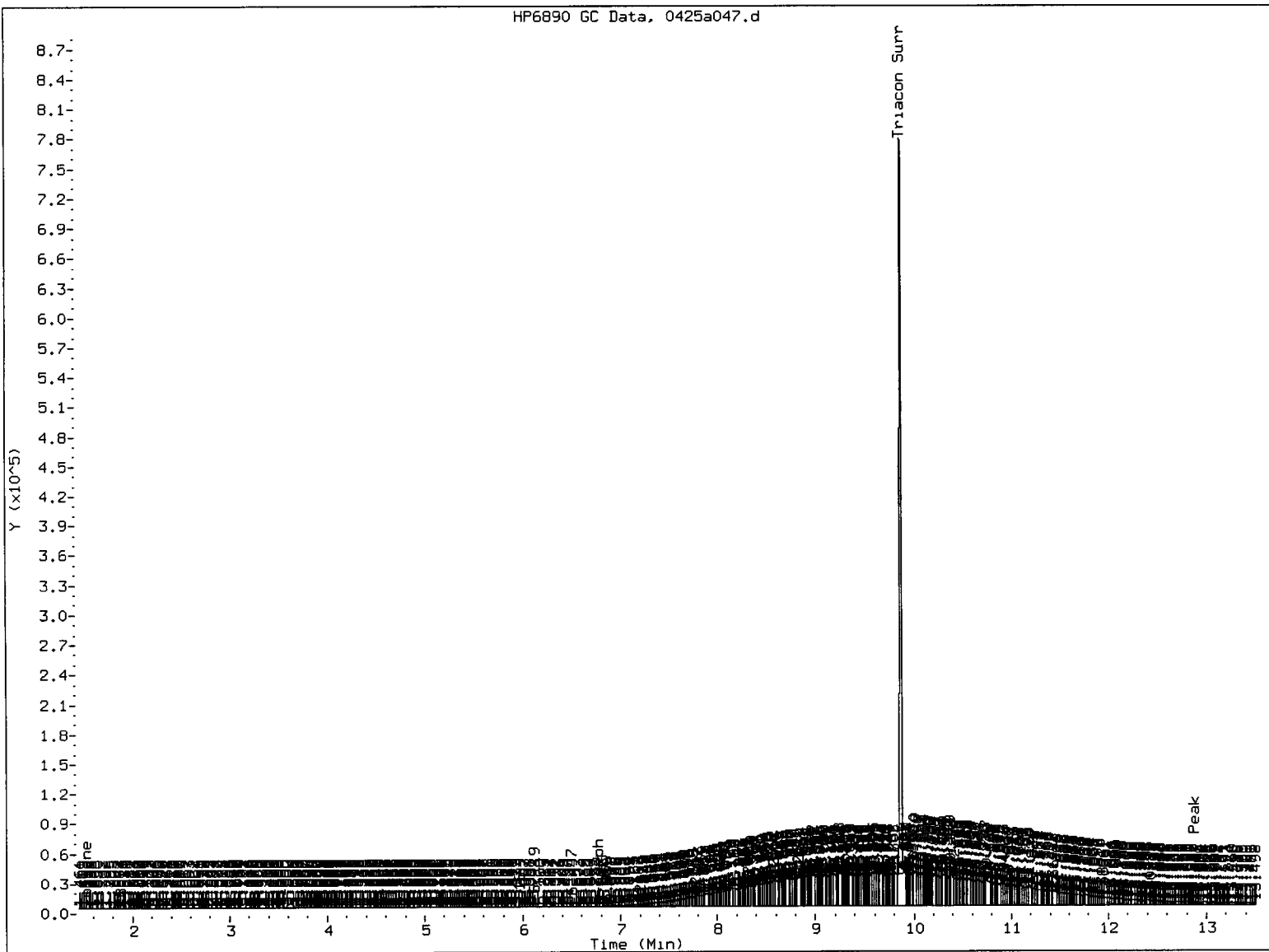
Operator: MS

Column diameter: 0.25

/chem3/fid4a.i/20110425.b/0425a047.d



HP6890 GC Data, 0425a047.d



MANUAL INTEGRATION

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

Analyst: Me

Date: 4/26/6

Analytical Resources Inc.  
407S TPH Quantitation Report

AR-4/26/2011

Data file: /chem3/fid4a.i/20110425.b/0425a048.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71P  
Client ID: LL-SB1-0-0.5-041911  
Injection: 26-APR-2011 09:22

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.525	0.001	608	585	GAS (Tol-C12)	93085	4.70
C8	1.894	0.010	408	767	DIESEL (C12-C24)	154588	7.79
C10	3.525	0.004	703	936	M.OIL (C24-C38)	361479	31.72
C12	4.517	0.003	827	1090	AK-102 (C10-C25)	185922	8.40
C14	5.289	0.001	689	1694	AK-103 (C25-C36)	330771	47.92
C16	5.970	0.006	1792	3438			
C18	6.594	-0.007	1513	1893			
C20	7.206	-0.002	908	1608			
C22	7.780	-0.002	994	1543	MSPiRiT (Tol-C12)	93085	5.07
C24	8.313	-0.006	1281	1777			
C25	8.567	-0.010	2131	4500			
C26	8.816	-0.010	1894	4807			
C28	9.328	-0.013	4263	9027			
C32	10.386	-0.016	3006	7022			
C34	10.917	-0.012	1249	3754	BUNKERC (C10-C38)	539297	72.86
Filter Peak	12.891	0.012	1136	1008			
C36	11.441	-0.002	1302	4073			
C38	11.945	0.004	822	1548			
C40	12.400	-0.020	1241	4018			
o-terph	6.760	-0.002	1009119	836684	JET-A (C10-C18)	103265	6.96
Triacon Surr	9.873	-0.010	637007	693832			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	836684	43.2	96.1
Triacontane	693832	40.8	90.8

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010



Data File: /chem3/fid4a.i/20110425.b/0425a048.d

Date : 26-APR-2011 09:22

Client ID: LL-SB1-0-0.5-041911

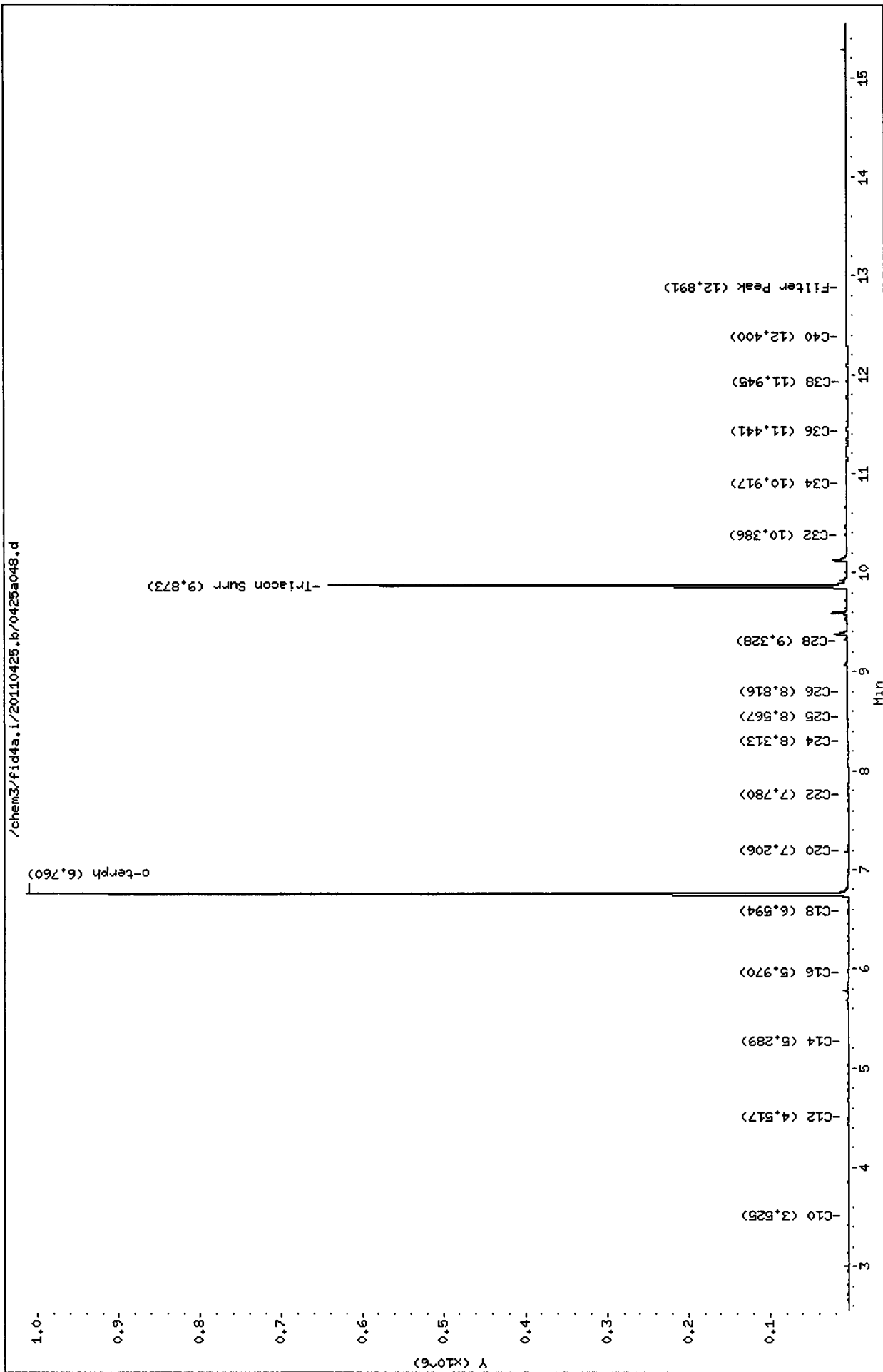
Sample Info: SS71P

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a049.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71Q  
Client ID: LL-SB1-0-0.5-041911  
Injection: 26-APR-2011 09:46

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.534	0.009	825	766	GAS (Tol-C12)	75021	3.79
C8	1.872	-0.013	318	421	DIESEL (C12-C24)	196540	9.90- <i>RC</i>
C10	3.524	0.003	1056	1316	M.OIL (C24-C38)	347804	30.52- <i>RC</i>
C12	4.517	0.002	994	1174	AK-102 (C10-C25)	231221	10.45
C14	5.289	0.000	932	2181	AK-103 (C25-C36)	317164	45.95
C16	5.969	0.005	2245	4085			
C18	6.595	-0.007	1712	2489			
C20	7.207	0.000	1073	1003			
C22	7.779	-0.003	1198	1636	MSPIRIT (Tol-C12)	75021	4.08
C24	8.310	-0.009	1435	2298			
C25	8.577	0.001	2044	3466			
C26	8.816	-0.010	1953	4915			
C28	9.326	-0.016	4209	8635			
C32	10.385	-0.017	2908	8527			
C34	10.910	-0.019	1311	3772	BUNKERC (C10-C38)	568893	76.86
Filter Peak	12.884	0.004	1023	629			
C36	11.440	-0.004	1322	3593			
C38	11.950	0.009	710	831			
C40	12.403	-0.017	1143	4077			
o-terph	6.760	-0.003	1012625	839216	JET-A (C10-C18)	128034	8.63
Triacon Surr	9.871	-0.011	624828	698685			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	839216	43.4	96.4
Triacontane	698685	41.1	91.4

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010

Data File: /chem3/fid4a.i/20110425.b/0425a049.d

Date : 26-APR-2011 09:46

Client ID: LL-SB1-0-0.5-041911

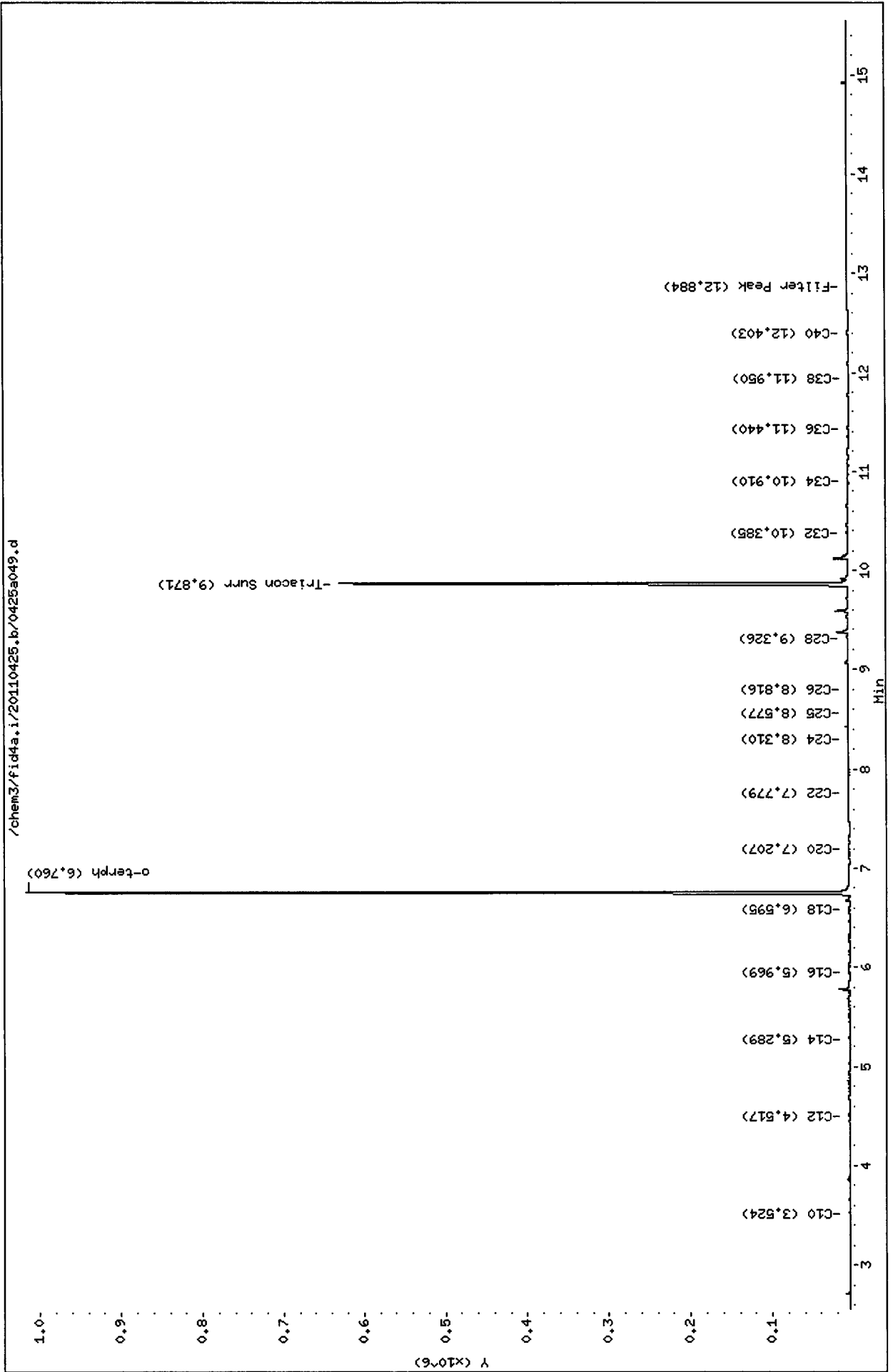
Sample Info: SS71Q

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a050.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71R  
Client ID: LL-SB1-1.5-2-041911  
Injection: 26-APR-2011 10:10

Dilution Factor: 1

FID:4A RESULTS

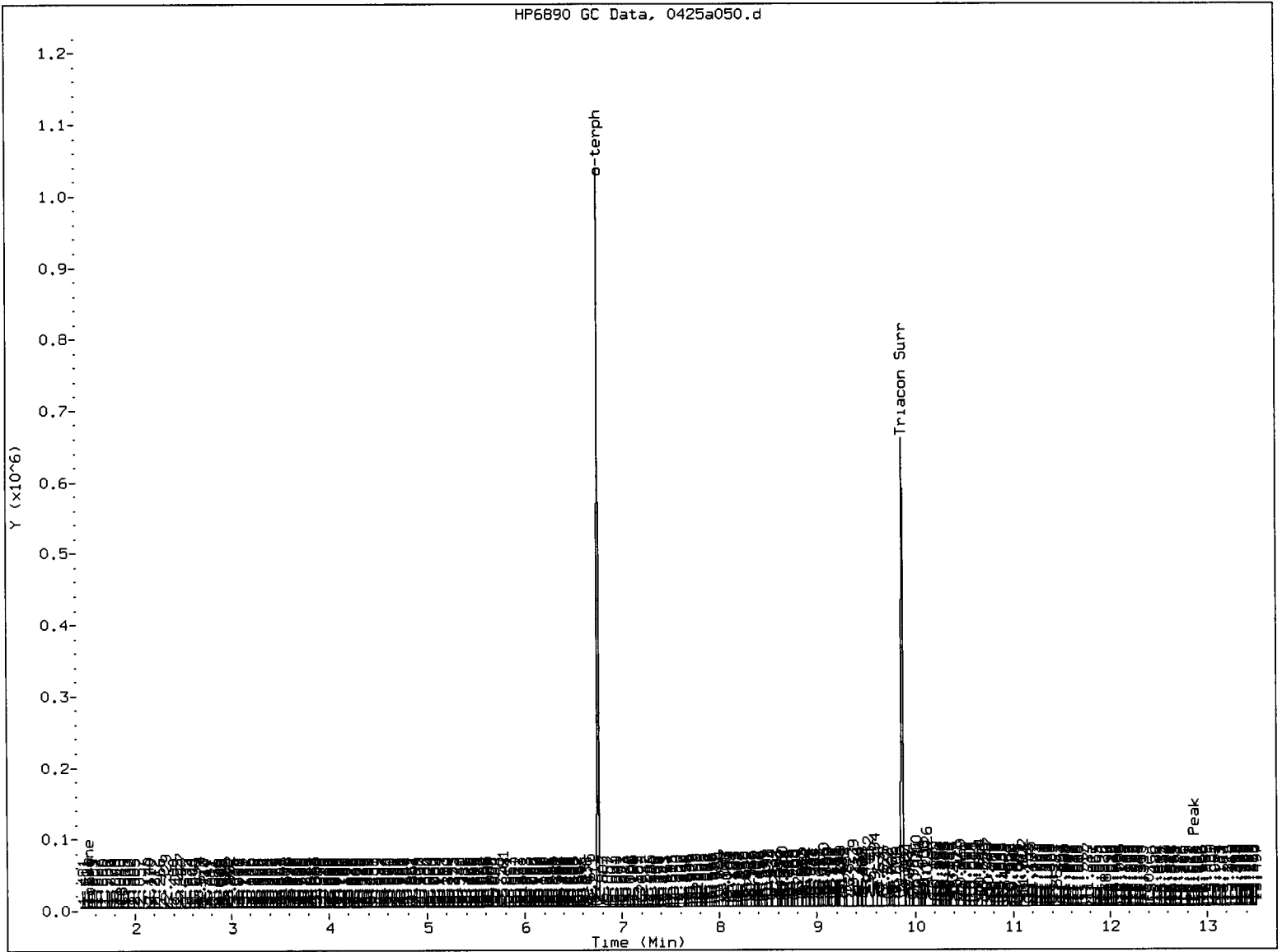
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.535	0.011	856	786	GAS (Tol-C12)	93589	4.73
C8	1.875	-0.010	314	323	DIESEL (C12-C24)	548797	27.66 <i>UR</i>
C10	3.525	0.004	1318	1350	M.OIL (C24-C38)	1838257	161.32 <i>Mai</i>
C12	4.518	0.004	810	1011	AK-102 (C10-C25)	649029	29.33 M
C14	5.293	0.005	824	1665	AK-103 (C25-C36)	1686242	244.31 M
C16	5.971	0.008	1761	3165			
C18	6.596	-0.005	2834	4119			
C20	7.204	-0.003	2825	5642			
C22	7.774	-0.008	6054	12437	MSPIRIT (Tol-C12)	93589	5.09
C24	8.310	-0.008	10798	24796			
C25	8.566	-0.010	15343	37058			
C26	8.815	-0.011	12535	27290			
C28	9.318	-0.023	17145	49648			
C32	10.384	-0.018	16118	34312			
C34	10.920	-0.009	6537	16365	BUNKERC (C10-C38)	2414028	326.15 M
Filter Peak	12.871	-0.008	1503	2489			
C36	11.446	0.003	8377	19750			
C38	11.954	0.014	2226	3149			
C40	12.405	-0.015	2992	8276			
o-terph	6.761	-0.001	1028729	832373	JET-A (C10-C18)	130356	8.78
Triacon Surr	9.877	-0.005	640370	685414			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	832373	43.0	95.6
Triacontane	685414	40.4	89.7

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- ✓ 5. Other Surr pk overlap

Analyst: AR

Date: 4/26/2011

Data File: /chem3/fid4a.i/20110425.b/0425a050.d

Date : 26-APR-2011 10:10

Client ID: LL-SB1-1.5-2-041911

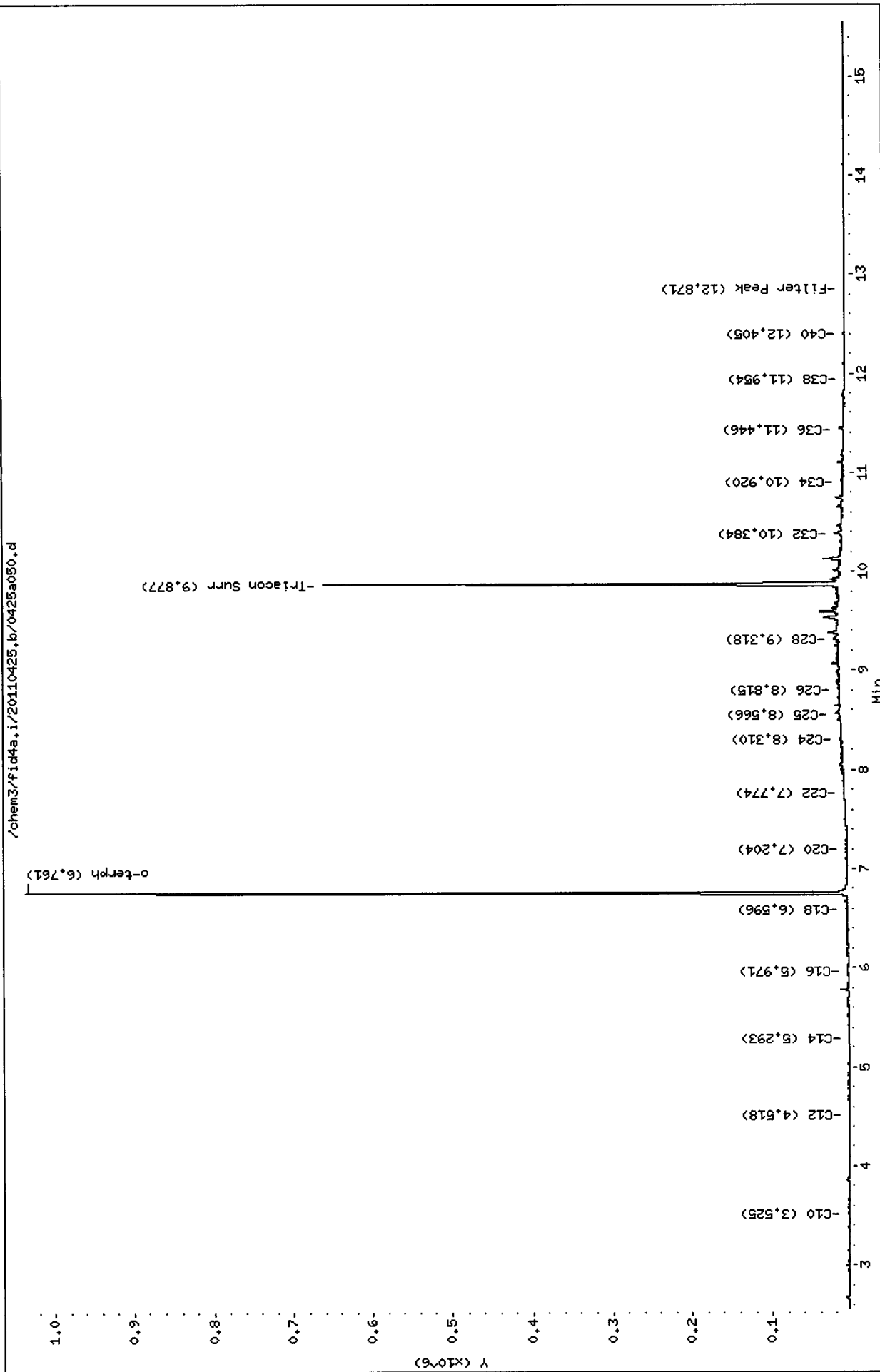
Sample Info: SS71R

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a051.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71S  
Client ID: LL-SB1-2-4-041911  
Injection: 26-APR-2011 10:33  
Dilution Factor: 1

FID:4A RESULTS

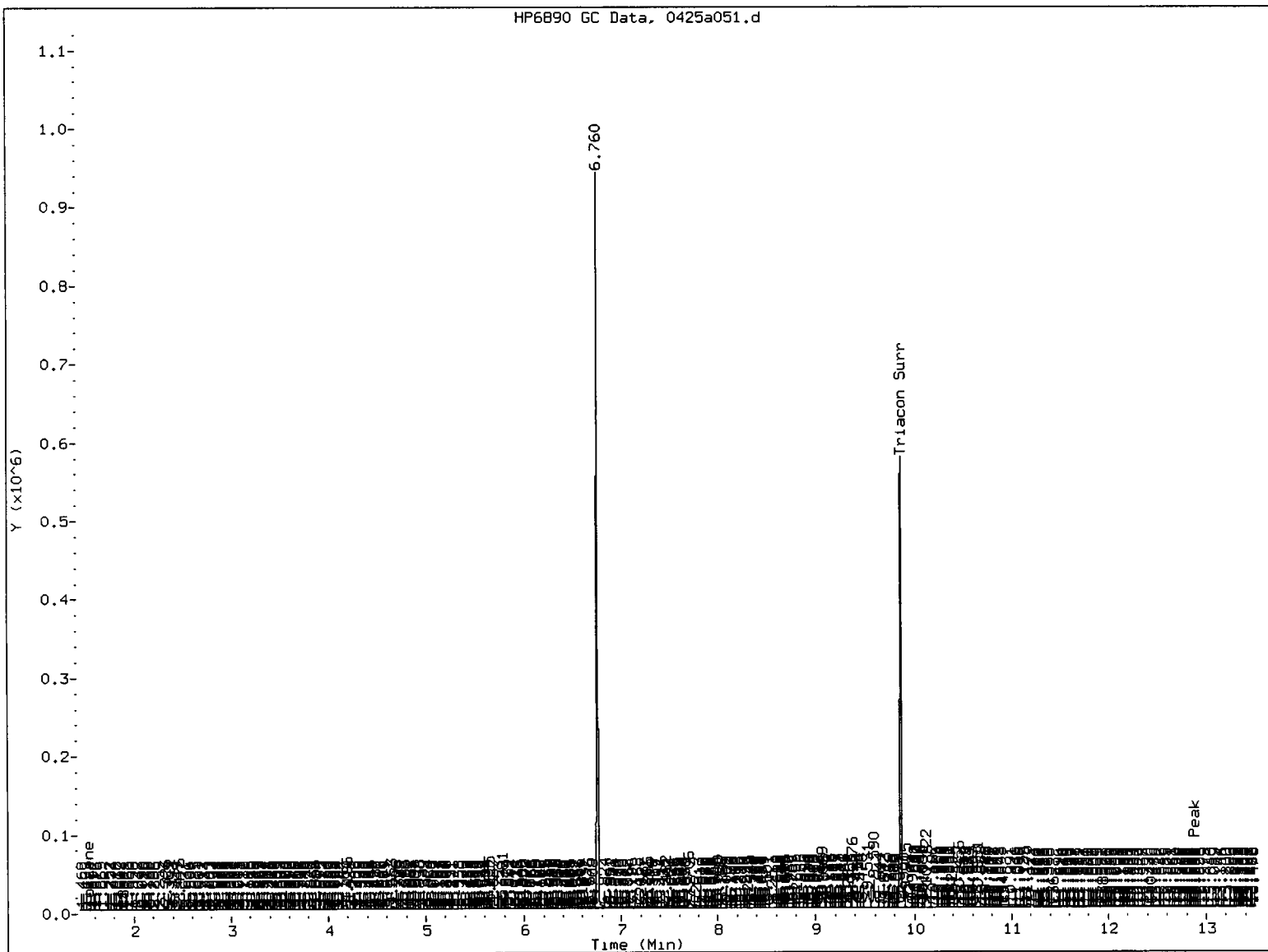
Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.539	0.014	1966	2707	GAS (Tol-C12)	55251	2.79
C8	1.894	0.009	330	745	DIESEL (C12-C24)	402078	20.26 <i>-LPE</i>
C10	3.524	0.003	607	725	M.OIL (C24-C38)	1103938	96.88 <i>-LPE</i>
C12	4.519	0.005	738	872	AK-102 (C10-C25)	464078	20.98 M
C14	5.291	0.002	998	2063	AK-103 (C25-C36)	1013866	146.89 M
C16	5.969	0.005	2018	3061			
C18	6.595	-0.006	2477	3474			
C20	7.203	-0.004	2198	3905			
C22	7.775	-0.007	4375	10249	MSPiRiT (Tol-C12)	55251	3.01
C24	8.310	-0.009	6074	7931			
C25	8.564	-0.012	10513	28918			
C26	8.814	-0.012	7233	13678			
C28	9.327	-0.014	10601	24356			
C32	10.385	-0.017	6390	14839			
C34	10.913	-0.016	3332	12811	BUNKERC (C10-C38)	1524281	205.94 M
Filter Peak	12.881	0.002	1224	992			
C36	11.438	-0.005	2273	8649			
C38	11.953	0.012	1273	1103			
C40	12.436	0.016	1115	396			
o-terph	6.760	-0.002	936454	715507	JET-A (C10-C18)	135346	9.12
Triacon Surr	9.870	-0.012	567540	591335			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	715507	37.0	82.2
Triacontane	591335	34.8	77.4

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010



MANUAL INTEGRATION

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- ✓ 5. Other Surr pk overlap

Analyst: AR Date: 4/26/2011



Data File: /chem3/fid4a.i/20110425.b/0425a051.d

Date : 26-APR-2011 10:33

Client ID: LL-SB1-2-4-041911

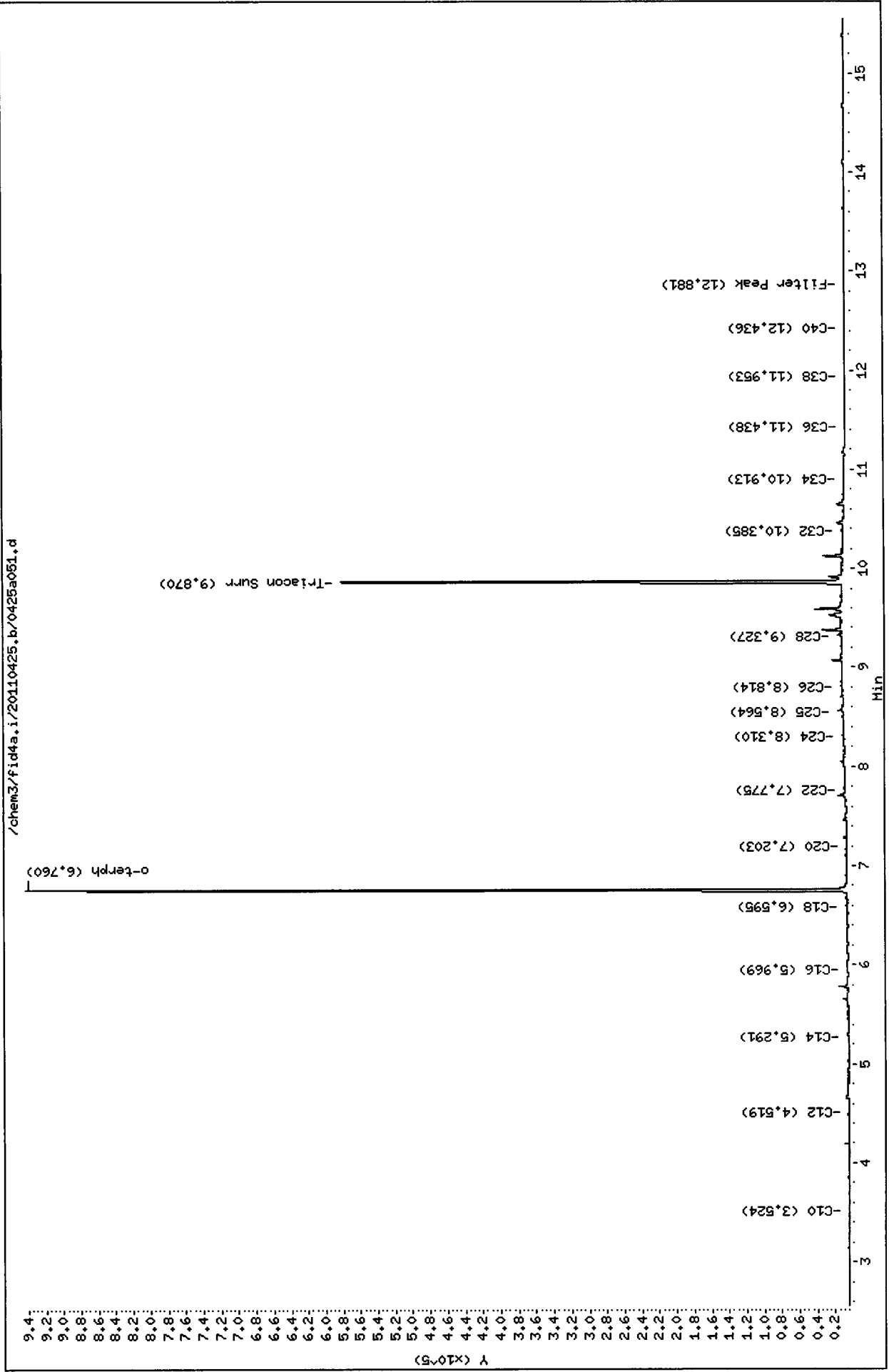
Sample Info: SS71S

Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a052.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71MBW1  
Client ID: SS71MBW1  
Injection: 26-APR-2011 10:57  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.530	0.006	4751	4372	GAS (Tol-C12)	48451	2.45
C8	1.890	0.005	271	716	DIESEL (C12-C24)	252011	12.70
C10	3.526	0.006	257	314	M.OIL (C24-C38)	260468	22.86
C12	4.513	-0.002	278	254	AK-102 (C10-C25)	286015	12.93
C14	5.298	0.009	517	1192	AK-103 (C25-C36)	234154	33.93
C16	5.965	0.002	1161	1579			
C18	6.598	-0.004	1392	1278			
C20	7.220	0.012	1379	1719			
C22	7.769	-0.013	1840	3944	MSPiRiT (Tol-C12)	48451	2.64
C24	8.314	-0.005	1348	1650			
C25	8.579	0.003	1198	2935			
C26	8.828	0.003	1043	1198			
C28	9.334	-0.008	946	1794			
C32	10.380	-0.021	2994	6293			
C34	10.910	-0.019	2085	4144	BUNKERC (C10-C38)	536217	72.45
Filter Peak	12.885	0.006	1040	1237			
C36	11.442	-0.001	3544	12196			
C38	11.951	0.010	618	754			
C40	12.405	-0.015	1611	3969			
o-terph	6.761	-0.001	1037658	855317	JET-A (C10-C18)	178619	12.03
Triacon Surr	9.876	-0.006	656458	736772			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	855317	44.2	98.2
Triacontane	736772	43.4	96.4

*MS 4/26/11*

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010

Data File: /chem3/fid4a.i/20110425.b/0425a052.d

Date : 26-APR-2011 10:57

Client ID: SS71MBM1

Sample Info: SS71MBM1

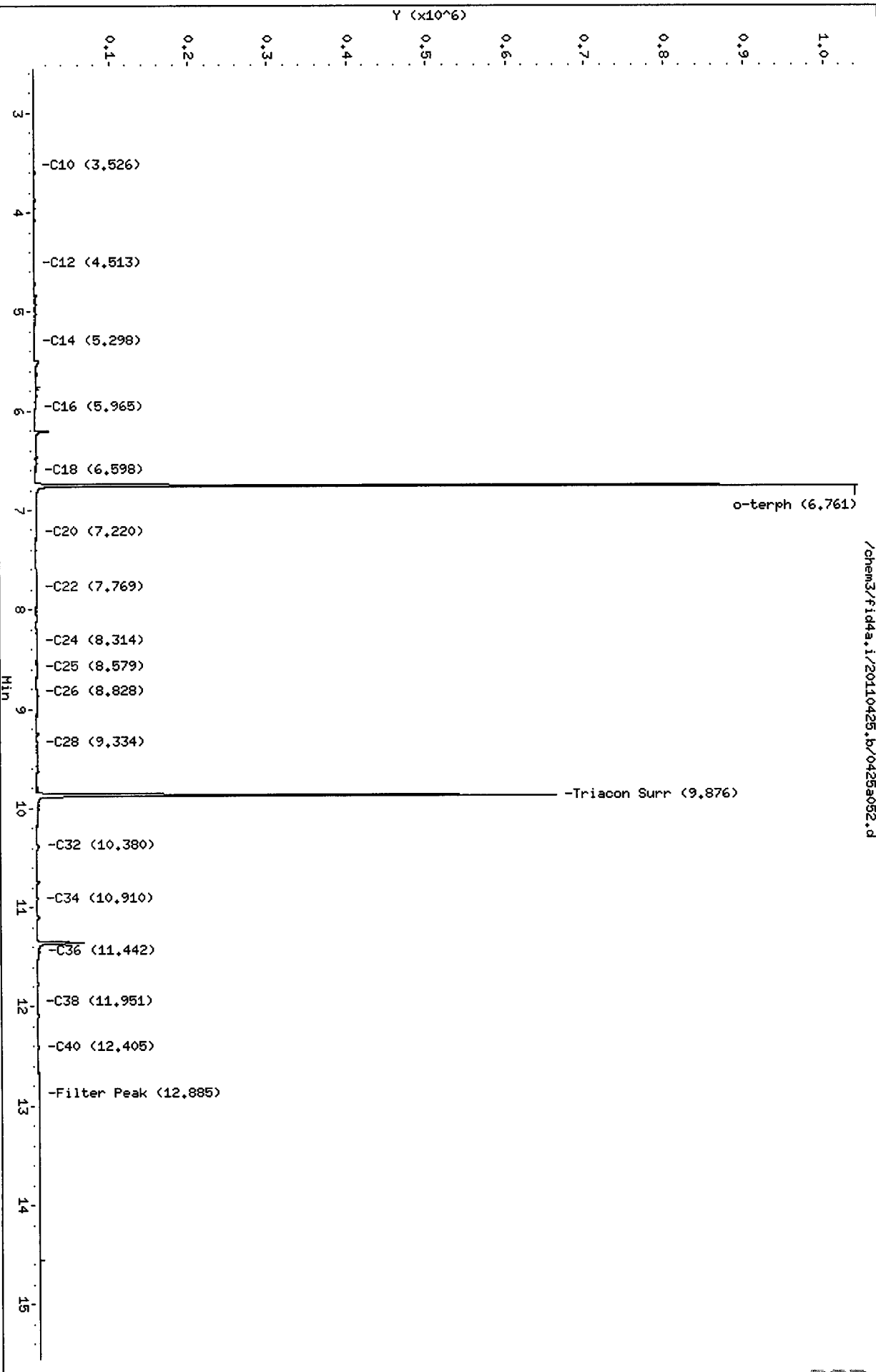
Column phase: RTX-1

Instrument: fid4a.i

Operator: NS

Column diameter: 0.25

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0571 : 01449

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a053.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71LCSW1  
Client ID: SS71LCSW1  
Injection: 26-APR-2011 11:21  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.527	0.003	28121	19823	GAS (Tol-C12)	2972522	150.19
C8	1.886	0.001	5907	9340	DIESEL (C12-C24)	25940445	1307.22
C10	3.520	-0.001	80653	49410	M.OIL (C24-C38)	460265	40.39
C12	4.515	0.001	201201	195969	AK-102 (C10-C25)	28337265	1280.78
C14	5.292	0.004	398847	554587	AK-103 (C25-C36)	353373	51.20
C16	5.958	-0.006	263631	254367			
C18	6.609	0.007	679685	823536			
C20	7.211	0.004	472799	539698			
C22	7.779	-0.003	233320	287863	MSPIRIT (Tol-C12)	2972522	161.79
C24	8.312	-0.007	71442	90947			
C25	8.566	-0.010	30424	67992			
C26	8.817	-0.009	10551	20878			
C28	9.332	-0.009	2059	6852			
C32	10.381	-0.021	1281	4691			
C34	10.911	-0.019	885	1787	BUNKERC (C10-C38)	28704177	3878.12
Filter Peak	12.881	0.001	858	727			
C36	11.439	-0.004	2003	6792			
C38	11.948	0.007	502	263			
C40	12.405	-0.015	930	2315			
o-terph	6.767	0.004	1075947	1229415	JET-A (C10-C18)	20520502	1382.60
Triacon Surr	9.875	-0.007	658498	715071			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1229415	63.5	141.2
Triacontane	715071	42.1	93.5

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010

*Per 4/26/11*

Data File: /chem3/fid4a.i/20110425.b/0425a053.d

Date: 26-APR-2011 11:21

Client ID: SS71LCSM4

Sample Info: SS71LCSM4

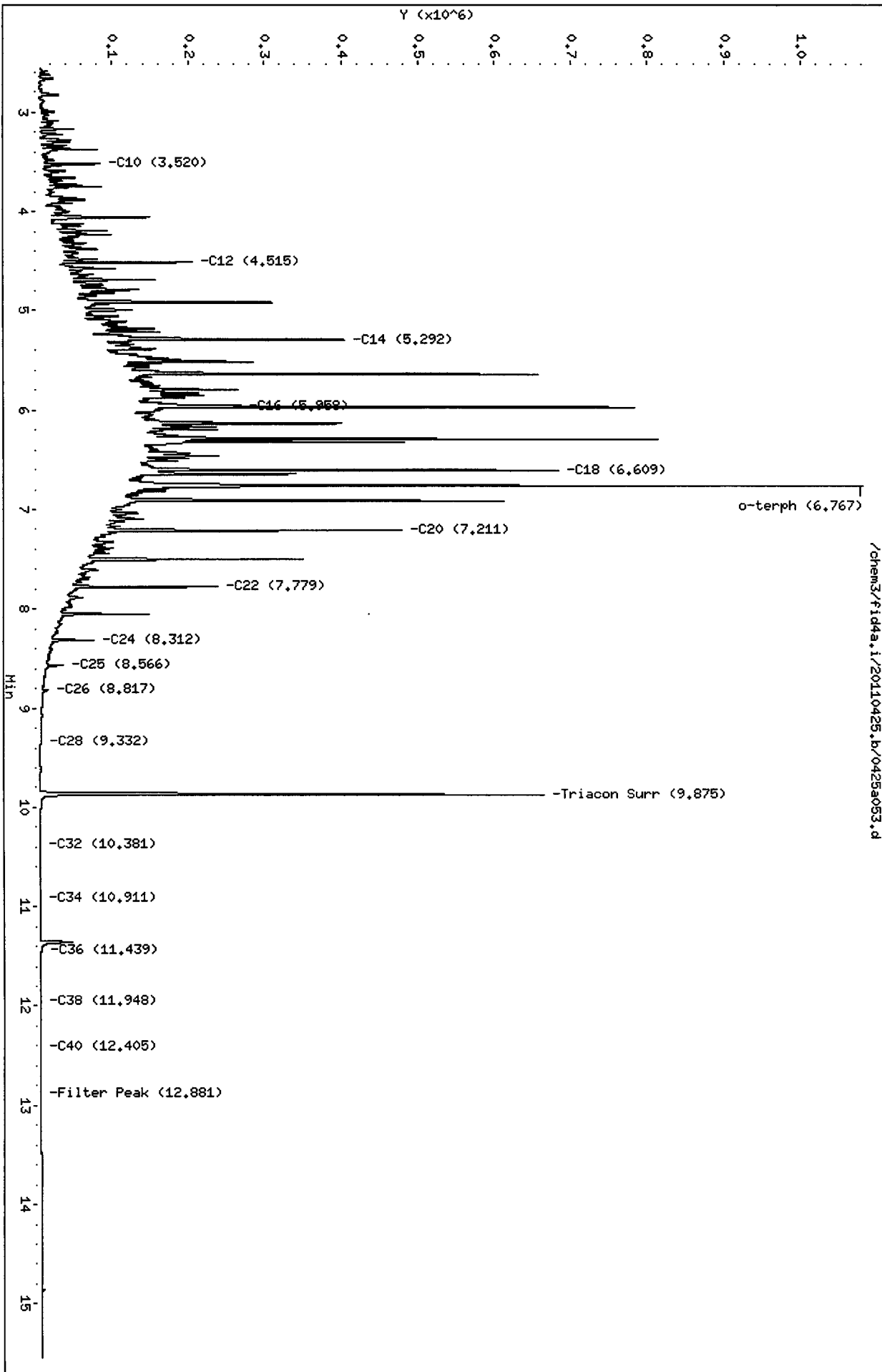
Column phase: RTX-1

Instrument: fid4a.i

Operator: HS

Column diameter: 0.25

/chem3/fid4a.i/20110425.b/0425a053.d



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a053.d      ARI ID: SS71LCSW1  
 Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m      Client ID: SS71LCSW1  
 Instrument: fid4a.i      Injection: 26-APR-2011 11:21  
 Operator: MS  
 Report Date: 04/26/2011      Dilution Factor: 1  
 Macro: 13-APR-2011  
 Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.527	0.003	28121	19823	GAS (Tol-C12)	2972522	150.19
C8	1.886	0.001	5907	9340	DIESEL (C12-C24)	26400765	1330.42
C10	3.520	-0.001	80653	49410	M.OIL (C24-C38)	460265	40.39
C12	4.515	0.001	201201	195969	AK-102 (C10-C25)	28797585	1301.59 M
C14	5.292	0.004	398847	554587	AK-103 (C25-C36)	353373	51.20
C16	5.958	-0.006	263631	254367			
C18	6.609	0.007	679685	823536			
C20	7.211	0.004	472799	539698			
C22	7.779	-0.003	233320	287863	MSPiRiT (Tol-C12)	2972522	161.79
C24	8.312	-0.007	71442	90947			
C25	8.566	-0.010	30424	67992			
C26	8.817	-0.009	10551	20878			
C28	9.332	-0.009	2059	6852			
C32	10.381	-0.021	1281	4691			
C34	10.911	-0.019	885	1787	BUNKERC (C10-C38)	29164497	3940.31 M
Filter Peak	12.881	0.001	858	727			
C36	11.439	-0.004	2003	6792			
C38	11.948	0.007	502	263			
C40	12.405	-0.015	930	2315			
o-terph	6.767	0.004	916655	772078	JET-A (C10-C18)	20520502	1382.60
Triacon Surr	9.875	-0.007	658498	715071			

M Indicates manual integration within range.

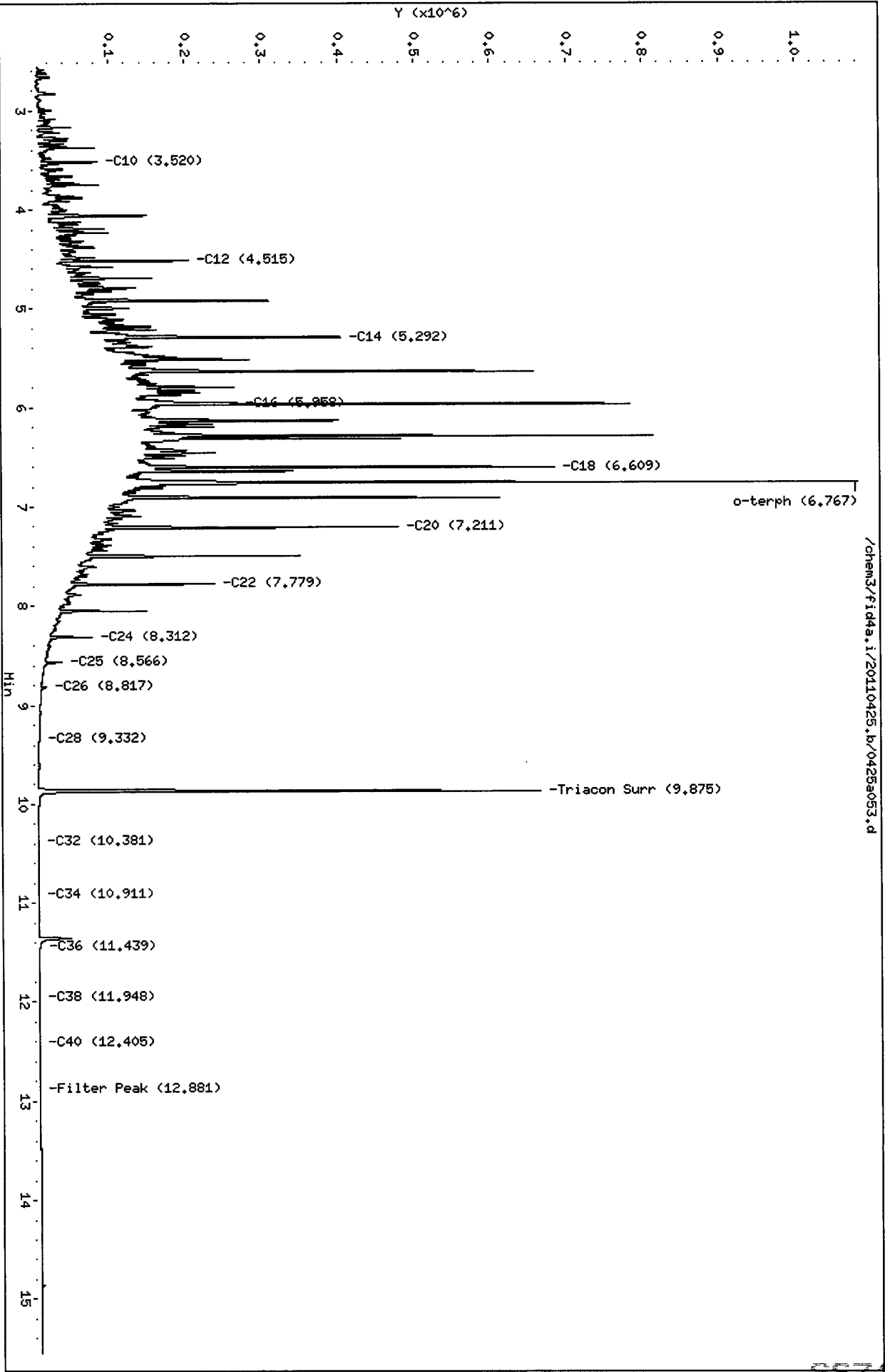
Range Times: NW Diesel(4.514 - 8.319)      AK102(3.52 - 8.58)      Jet A(3.52 - 6.60)  
 NW M.Oil(8.32 - 11.94)      AK103(8.58 - 11.44)      OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	772078	39.9	88.7
Triacontane	715071	42.1	93.5

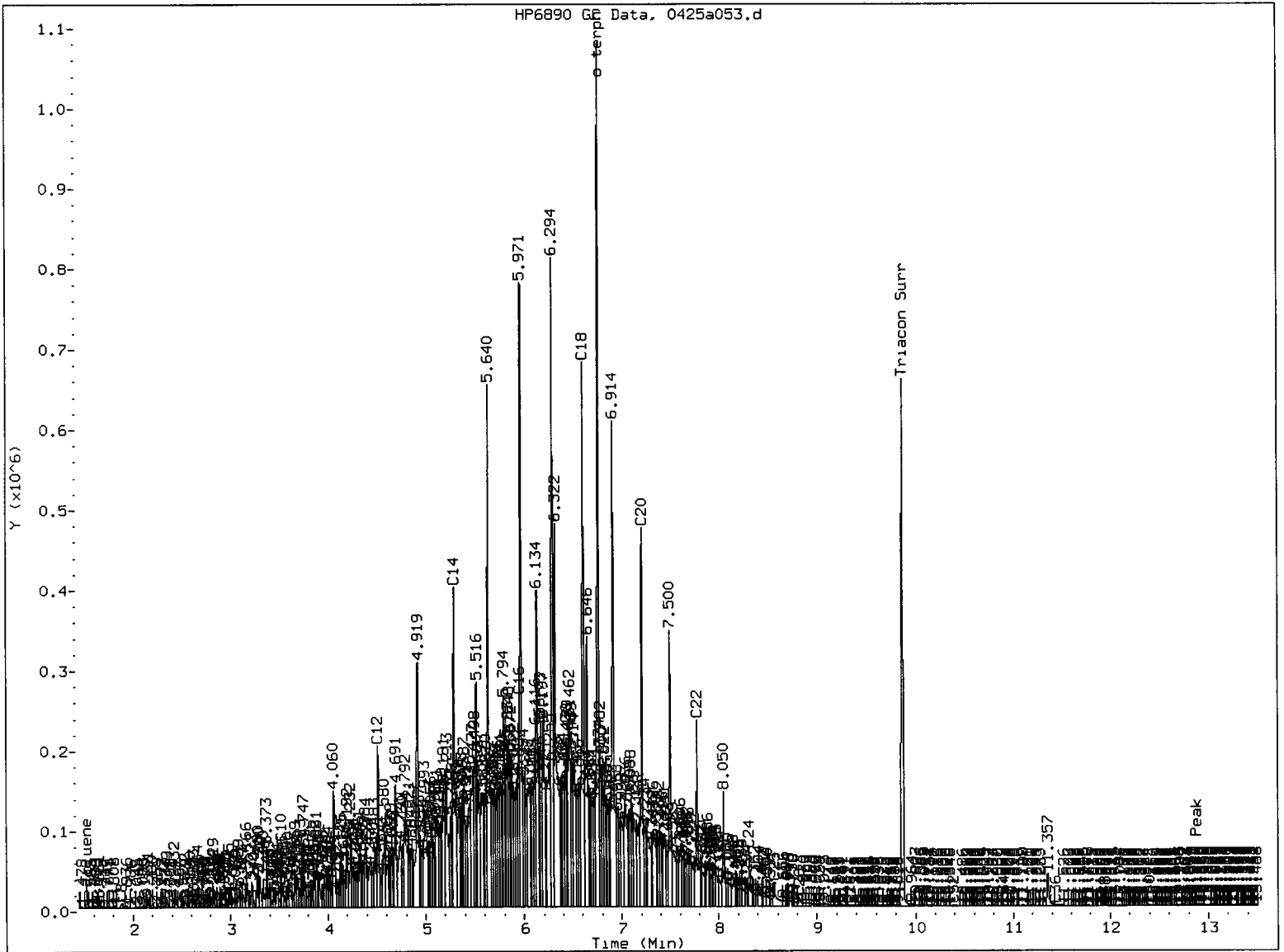
Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010

Data File: /chem3/fid4a.i/20110425.b/0425a053.d  
Date: 26-APR-2011 11:21  
Client ID: SS71LCSM1  
Sample Info: SS71LCSM1  
Column phase: RTX-1

Instrument: fid4a.i  
Operator: HS  
Column diameter: 0.25



/chem3/fid4a.i/20110425.b/0425a053.d



MANUAL INTEGRATION

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

Analyst: AM

Date: 4/26/11



Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a054.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71LCSDW1  
Client ID: SS71LCSDW1  
Injection: 26-APR-2011 11:45  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.531	0.007	23558	15461	GAS (Tol-C12)	2908985	146.98
C8	1.889	0.005	6048	5868	DIESEL (C12-C24)	26063752	1313.43
C10	3.519	-0.002	81620	48685	M.OIL (C24-C38)	464216	40.74
C12	4.515	0.001	212128	194155	AK-102 (C10-C25)	28428846	1284.92
C14	5.292	0.003	413073	526173	AK-103 (C25-C36)	345410	50.04
C16	5.971	0.007	786539	935634			
C18	6.609	0.007	681235	840910			
C20	7.210	0.003	480705	549539			
C22	7.779	-0.003	237656	247083	MSPIRIT (Tol-C12)	2908985	158.33
C24	8.311	-0.008	71126	101890			
C25	8.565	-0.012	30474	58266			
C26	8.816	-0.010	11002	22321			
C28	9.334	-0.007	2081	3396			
C32	10.380	-0.022	1513	4227			
C34	10.909	-0.021	1335	2366	BUNKERC (C10-C38)	28787010	3889.31
Filter Peak	12.870	-0.010	788	837			
C36	11.442	-0.001	2072	7433			
C38	11.938	-0.003	482	402			
C40	12.436	0.016	595	511			
o-terph	6.767	0.004	1086138	1222886	JET-A (C10-C18)	20557442	1385.09
Triacon Surr	9.874	-0.008	663532	716463			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1222886	63.2	140.5
Triacontane	716463	42.2	93.7

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010

*Handwritten signature: Susy B. 6/11*

Data File: /chem3/fid4a.i/20110425.b/0425a054.d

Date: 26-APR-2011 11:45

Client ID: SS71LCSDM1

Sample Info: SS71LCSDM1

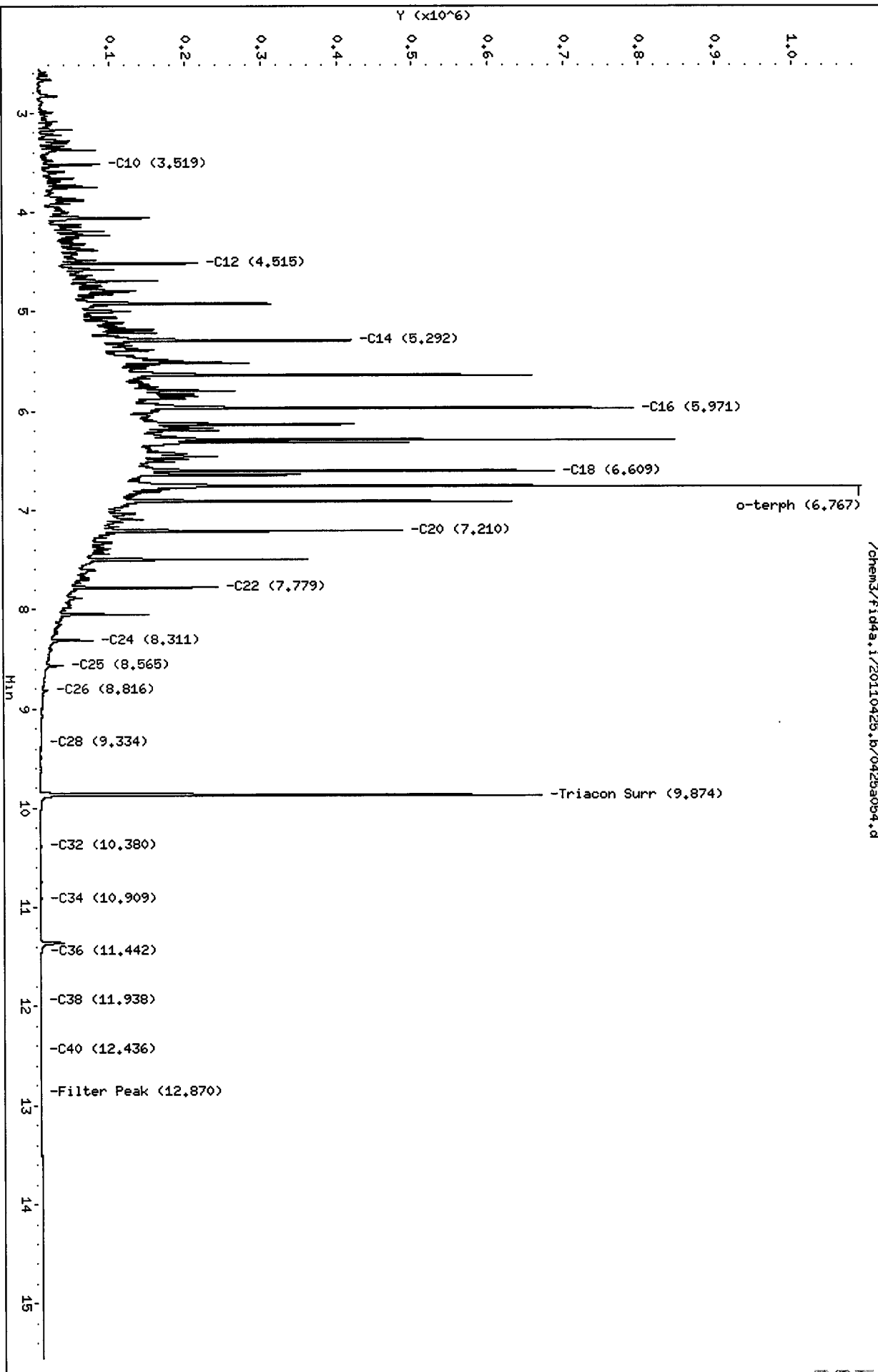
Column phase: RTX-1

Instrument: fid4a.i

Operator: HS

Column diameter: 0.25

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Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a054.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71LCSDW1  
Client ID: SS71LCSDW1  
Injection: 26-APR-2011 11:45  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.531	0.007	23558	15461	GAS (Tol-C12)	2908985	146.98
C8	1.889	0.005	6048	5868	DIESEL (C12-C24)	26508990	1335.87
C10	3.519	-0.002	81620	48685	M.OIL (C24-C38)	464216	40.74
C12	4.515	0.001	212128	194155	AK-102 (C10-C25)	28874084	1305.04 M
C14	5.292	0.003	413073	526173	AK-103 (C25-C36)	345410	50.04
C16	5.971	0.007	786539	935634			
C18	6.609	0.007	681235	840910			
C20	7.210	0.003	480705	549539			
C22	7.779	-0.003	237656	247083	MSPIRIT (Tol-C12)	2908985	158.33
C24	8.311	-0.008	71126	101890			
C25	8.565	-0.012	30474	58266			
C26	8.816	-0.010	11002	22321			
C28	9.334	-0.007	2081	3396			
C32	10.380	-0.022	1513	4227			
C34	10.909	-0.021	1335	2366	BUNKERC (C10-C38)	29232248	3949.46 M
Filter Peak	12.870	-0.010	788	837			
C36	11.442	-0.001	2072	7433			
C38	11.938	-0.003	482	402			
C40	12.436	0.016	595	511			
o-terph	6.767	0.004	928698	780604	JET-A (C10-C18)	20557442	1385.09
Triacon Surr	9.874	-0.008	663532	716463			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	780604	40.3	89.7
Triacontane	716463	42.2	93.7

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010

Data File: /chem3/fid4a.i/20110425.b/0425a054.d

Date : 26-APR-2011 11:45

Client ID: SS71LCSDM4

Sample Info: SS71LCSDM4

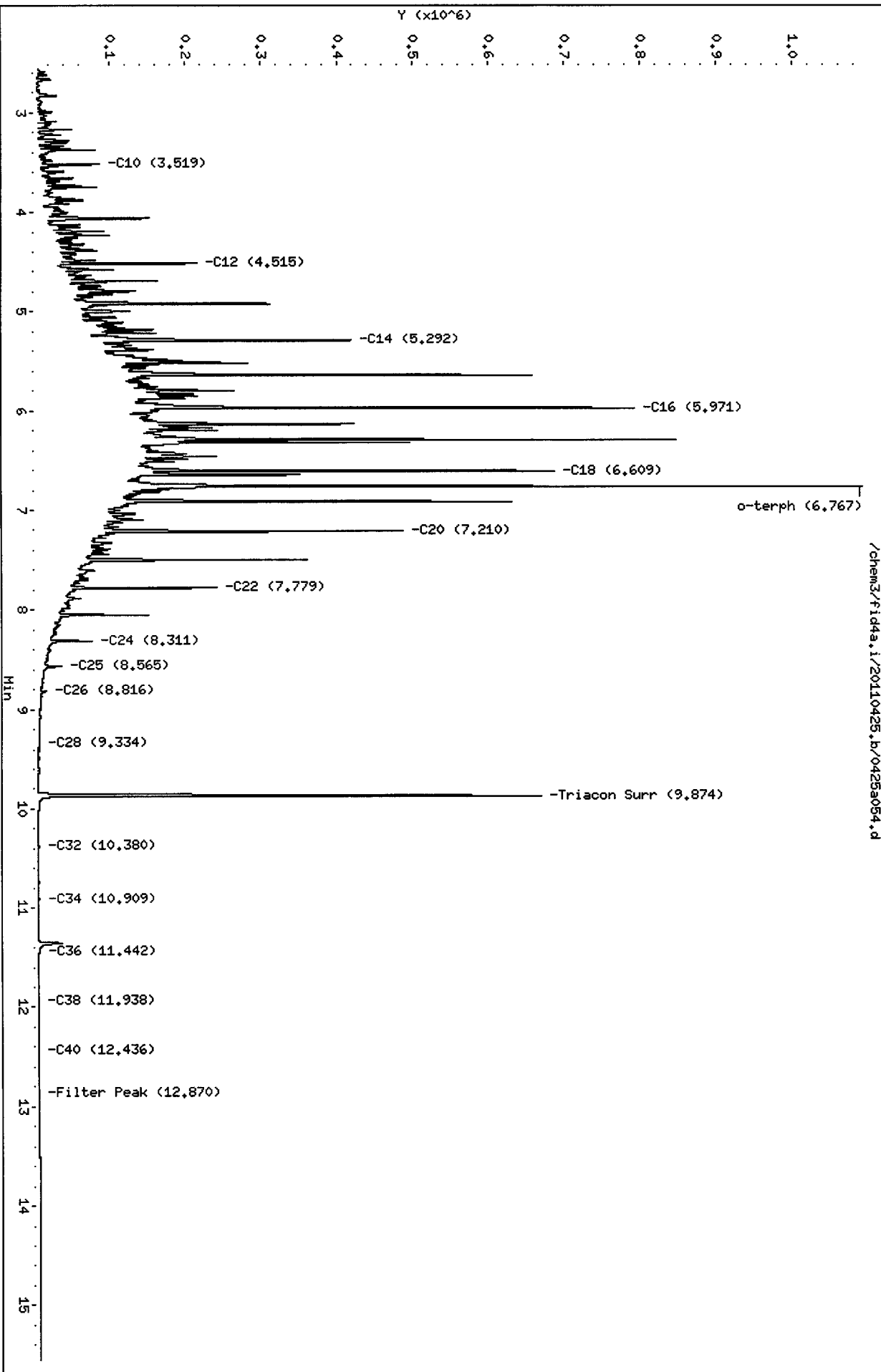
Column phase: RTX-1

Instrument: fid4a.i

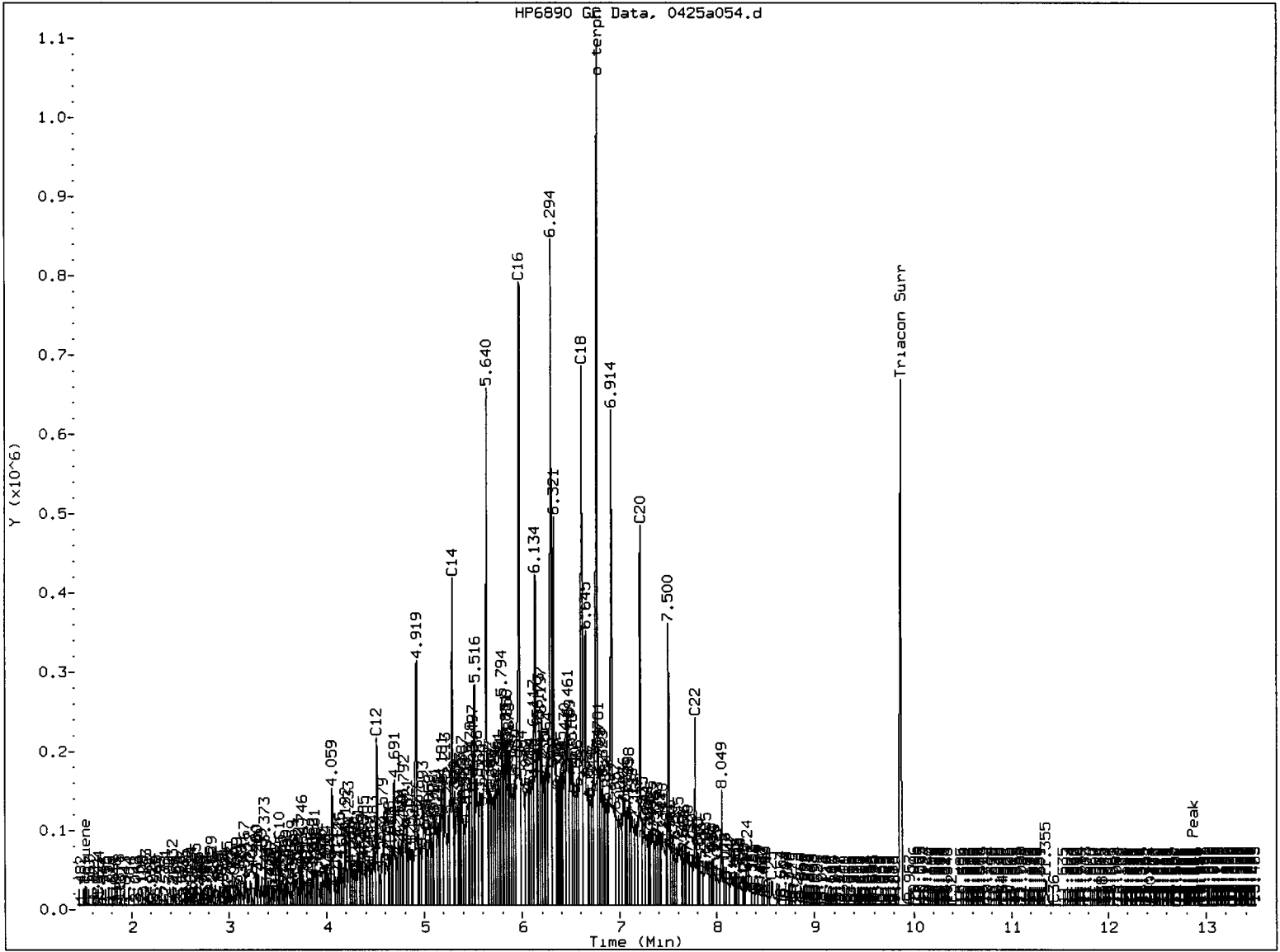
Operator: HS

Column diameter: 0.25

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5571 01440



MANUAL INTEGRATION

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

Analyst: ME

Date: 4/26/11

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a056.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: SS71T  
Client ID: LL-ER-041911  
Injection: 26-APR-2011 12:33  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.534	0.010	4405	4267	GAS (Tol-C12)	43601	2.20
C8	1.896	0.012	258	491	DIESEL (C12-C24)	206140	10.39
C10	3.526	0.005	224	381	M.OIL (C24-C38)	270321	23.72
C12	4.521	0.007	194	177	AK-102 (C10-C25)	235750	10.66
C14	5.298	0.010	420	865	AK-103 (C25-C36)	241529	34.99
C16	5.972	0.008	1061	2358			
C18	6.596	-0.005	1395	1160			
C20	7.212	0.005	1202	1061			
C22	7.780	-0.001	1425	926	MSPIRIT (Tol-C12)	43601	2.37
C24	8.312	-0.006	1062	1251			
C25	8.582	0.006	1366	2785			
C26	8.830	0.004	832	1124			
C28	9.336	-0.005	917	1624			
C32	10.382	-0.020	10617	14605			
C34	10.910	-0.019	1292	3262	BUNKERC (C10-C38)	495744	66.98
Filter Peak	12.876	-0.003	891	805			
C36	11.443	0.000	7358	15228			
C38	11.920	-0.020	598	506			
C40	12.403	-0.016	2197	4384			
o-terph	6.761	-0.001	1005163	852768	JET-A (C10-C18)	141714	9.55
Triacon Surr	9.875	-0.007	629278	712916			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	852768	44.1	97.9
Triacontane	712916	42.0	93.3

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010

*MS 4/26/11*

Data File: /chem3/fid4a.i/20110425.b/0425a056.d

Date: 26-APR-2011 12:33

Client ID: LL-ER-041914

Sample Info: SS71T

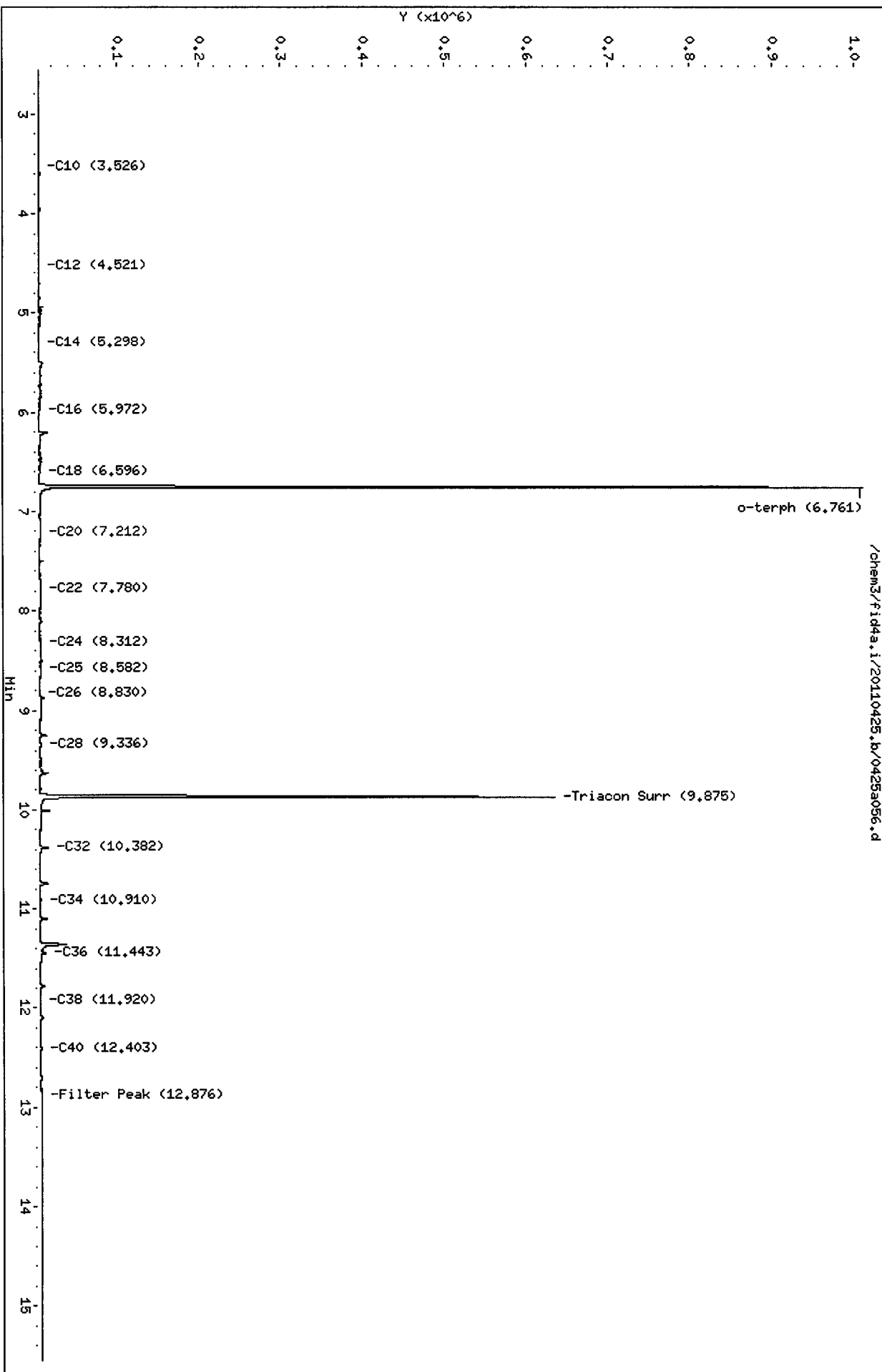
Column phase: RTX-1

Instrument: fid4a.i

Operator: HS

Column diameter: 0.25

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SS71T : 01450

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a058.d  
Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m  
Instrument: fid4a.i  
Operator: MS  
Report Date: 04/26/2011  
Macro: 13-APR-2011  
Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

ARI ID: DIESEL#6  
Client ID: LORA LAKE  
Injection: 26-APR-2011 13:21  
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.536	0.012	4634	4400	GAS (Tol-C12)	712511	36.00
C8	1.892	0.008	2382	3975	DIESEL (C12-C24)	4977888	250.85
C10	3.521	0.000	16302	10614	M.OIL (C24-C38)	136386	11.97
C12	4.514	-0.001	44330	43147	AK-102 (C10-C25)	5531698	250.02 M
C14	5.286	-0.002	86890	122960	AK-103 (C25-C36)	99646	14.44
C16	5.962	-0.002	171034	147276			
C18	6.599	-0.003	146909	141256			
C20	7.203	-0.004	89466	114575			
C22	7.776	-0.006	37920	48778	MSPIRIT (Tol-C12)	712511	38.78
C24	8.314	-0.005	8904	21091			
C25	8.572	-0.005	3555	12268			
C26	8.823	-0.003	1482	2444			
C28	9.344	0.003	516	353			
C32	10.379	-0.023	2409	3720			
C34	10.933	0.003	275	210	BUNKERC (C10-C38)	5642695	762.36 M
Filter Peak	12.883	0.004	738	751			
C36	11.444	0.000	2115	3577			
C38	11.947	0.006	379	145			
C40	12.402	-0.018	1214	2628			
o-terph	6.763	0.001	1015312	835128	JET-A (C10-C18)	3998259	269.39
Triacon Surr	9.886	0.004	380	814			

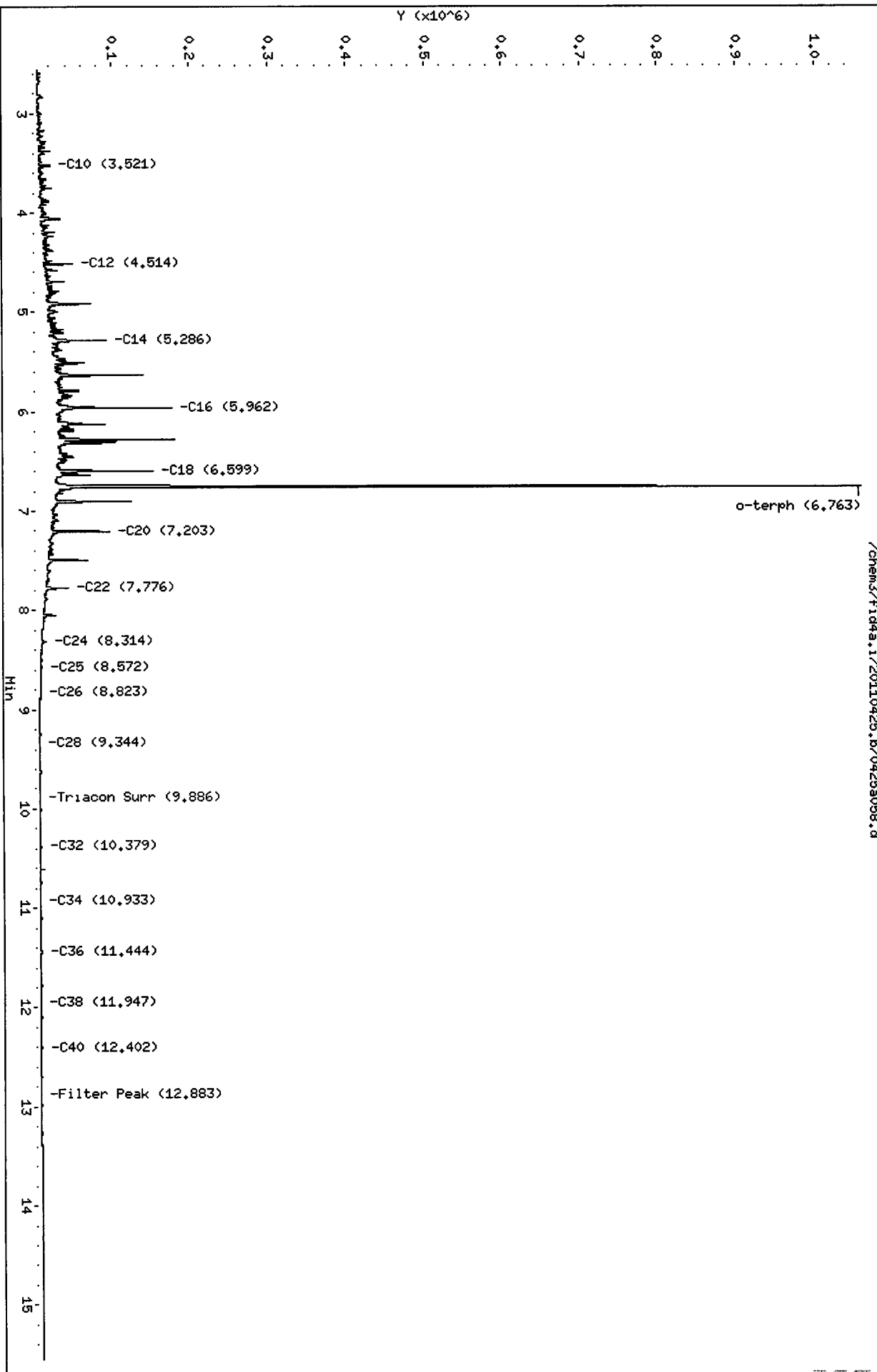
M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319) AK102(3.52 - 8.58) Jet A(3.52 - 6.60)  
NW M.Oil(8.32 - 11.94) AK103(8.58 - 11.44) OR Diesel(3.52 - 9.34)

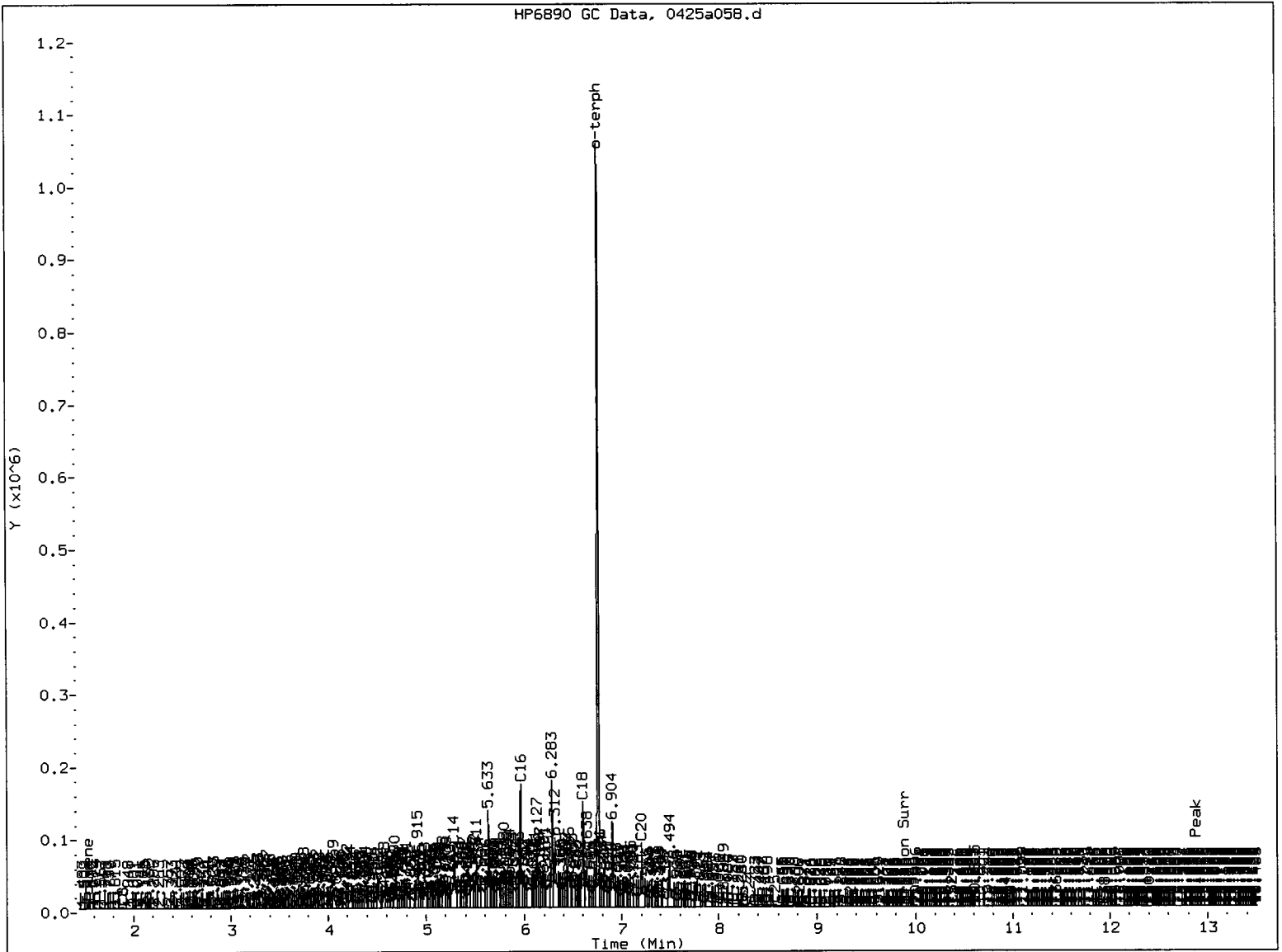
Surrogate	Area	Amount	%Rec
o-Terphenyl	835128	43.2	95.9
Triacotane	814	0.0	0.1

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010





1571 01457



MANUAL INTEGRATION

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

Analyst: Me

Date: 4/26/8

Analytical Resources Inc.  
407S TPH Quantitation Report

Data file: /chem3/fid4a.i/20110425.b/0425a059.d      ARI ID: MOIL#6  
 Method: /chem3/fid4a.i/20110425.b/ftphfid4a.m      Client ID:  
 Instrument: fid4a.i      Injection: 26-APR-2011 13:45  
 Operator: MS  
 Report Date: 04/26/2011      Dilution Factor: 1  
 Macro: 13-APR-2011  
 Calibration Dates: Gas:17-DEC-2010 Diesel:21-MAR-2011 M.Oil:21-MAR-2011

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Range	Total Area	Conc
Toluene	1.519	-0.006	827	792	GAS (Tol-C12)	40613	2.05
C8	1.894	0.010	240	446	DIESEL (C12-C24)	842960	42.48
C10	3.525	0.004	452	709	M.OIL (C24-C38)	5136792	450.79
C12	4.518	0.004	297	434	AK-102 (C10-C25)	1102841	49.85
C14	5.290	0.001	248	343	AK-103 (C25-C36)	4641896	672.54 M
C16	5.962	-0.002	184	122			
C18	6.601	0.000	429	632			
C20	7.199	-0.008	2771	4695			
C22	7.780	-0.002	10413	8972	MSPiRiT (Tol-C12)	40613	2.21
C24	8.320	0.001	20718	17729			
C25	8.577	0.000	27230	28557			
C26	8.835	0.009	31473	81675			
C28	9.334	-0.007	33554	15776			
C32	10.382	-0.020	33444	106429			
C34	10.932	0.003	22398	25895	BUNKERC (C10-C38)	5997934	810.36 M
Filter Peak	12.881	0.001	2606	2951			
C36	11.438	-0.005	15118	30320			
C38	11.950	0.009	7391	5060			
C40	12.432	0.012	4089	3490			
o-terph	6.771	0.009	810	868	JET-A (C10-C18)	64149	4.32
Triacon Surr	9.880	-0.003	736606	823940			

M Indicates manual integration within range.

Range Times: NW Diesel(4.514 - 8.319)      AK102(3.52 - 8.58)      Jet A(3.52 - 6.60)  
 NW M.Oil(8.32 - 11.94)      AK103(8.58 - 11.44)      OR Diesel(3.52 - 9.34)

Surrogate	Area	Amount	%Rec
o-Terphenyl	868	0.0	0.1
Triacontane	823940	48.5	107.8

Analyte	RF	Curve Date
o-Terph Surr	19348.3	13-APR-2011
Triacon Surr	16986.4	21-MAR-2011
Gas	19792.1	17-DEC-2010
Diesel	19844.0	21-MAR-2011
Motor Oil	11395.0	21-MAR-2011
AK102	22125.0	21-MAR-2011
AK103	6902.1	10-DEC-2009
JetA	14842.0	13-APR-2011
Min Spirit	18373.2	30-MAR-2011
Bunker C	7401.6	22-DEC-2010

Data File: /chem3/fid4a.i/20110425.b/0425a059.d

Date: 26-APR-2011 13:45

Client ID:

Sample Info: M01L#6

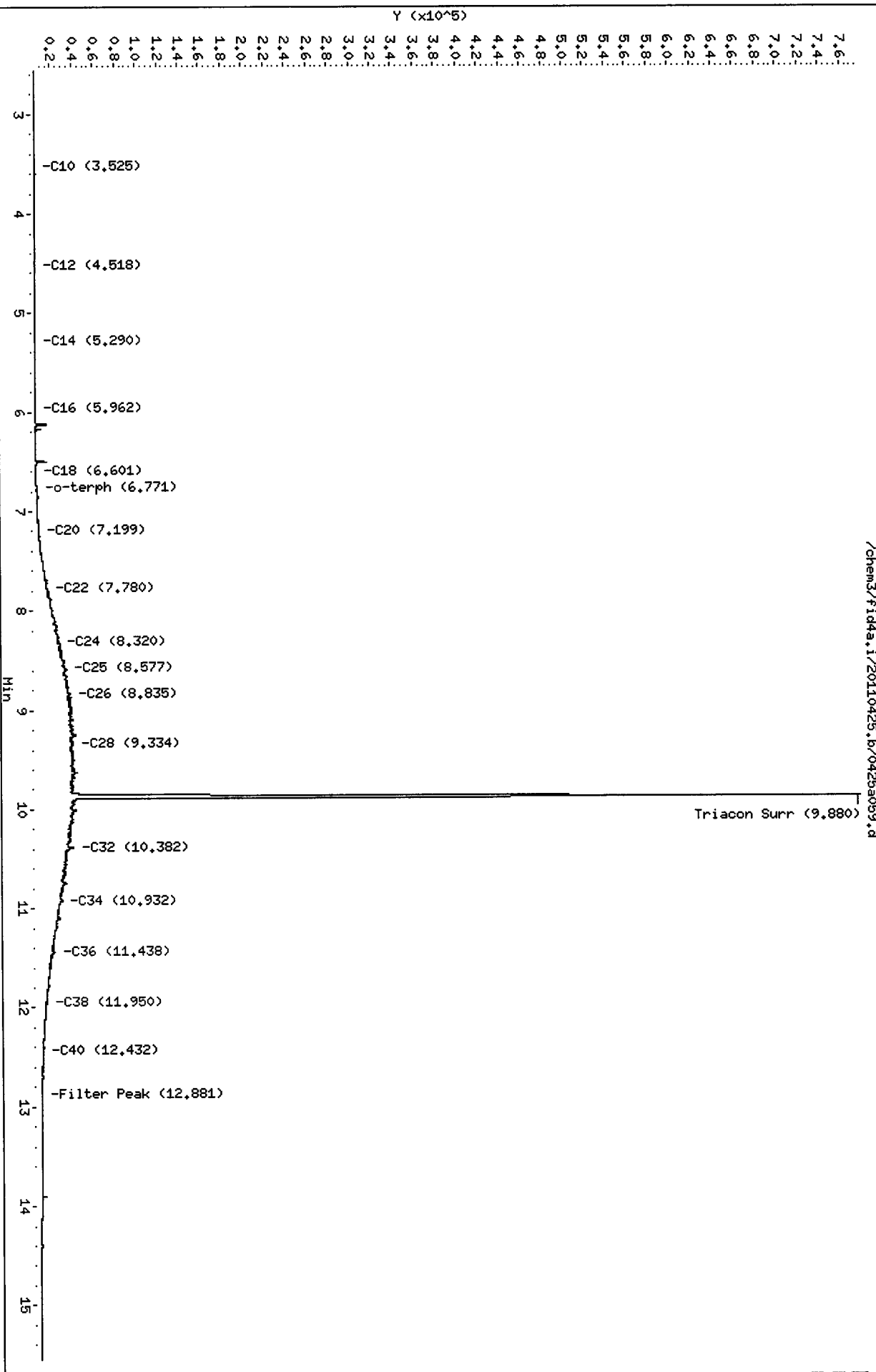
Column phase: RTX-1

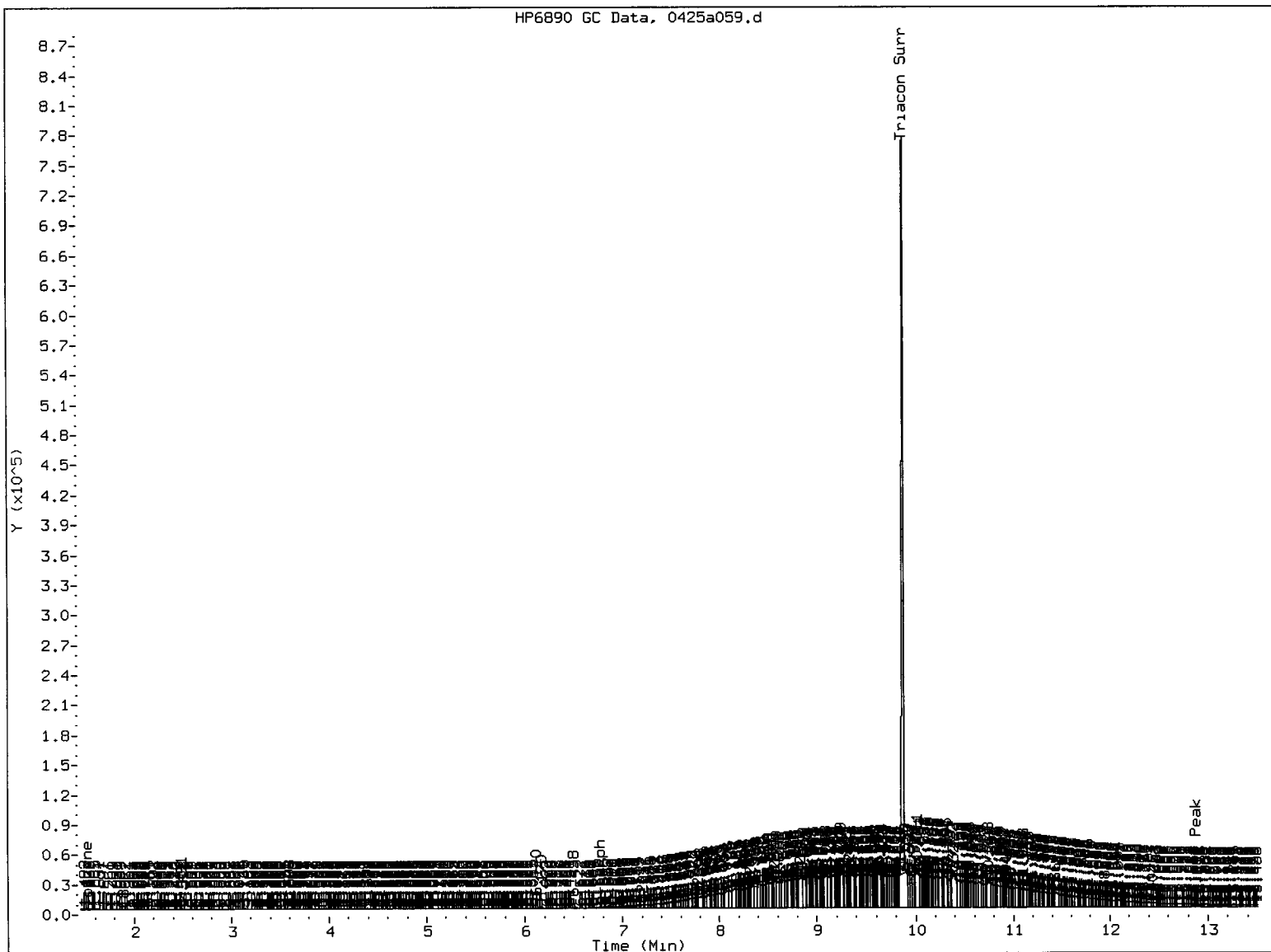
Instrument: fid4a.i

Operator: MS

Column diameter: 0.25

/chem3/fid4a.i/20110425.b/0425a059.d





MANUAL INTEGRATION

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

Analyst: *[Signature]* Date: *4/26/4*

**TPHG/BETX Raw Data  
Preparation Log**

**ARI Job ID: SS71**



Analytical Resources, Incorporated  
Analytical Chemists and Consultants

# Volatile Organics Extraction Bench Sheet

(8260B, 8260B-SIM, 8021, NWTPH-GX, AK-101, TPH-G, VPH, TCLP-ZHE)

ARI Project No. \_\_\_\_\_

Client ID/Project \_\_\_\_\_

1<sup>st</sup> Extraction: 1/22/11

Extraction Date

MeOH Lot No. \_\_\_\_\_

Analyst

MM

2<sup>nd</sup> Extraction: \_\_\_\_\_

Lab ID	Vial No.	Preservative		Method 5035 Sample Weight					Comments
		NaHSO <sub>3</sub>	CH <sub>3</sub> OH	Vial Weight	Tare (from vial)	Sample Weight	Extract Volume	MeOH Spilt Volume	
1	5571 A		X	33.09	28.179	4.911	S	900	
2	B		X	33.21	28.278	4.932			
3	C		X	33.78	28.407	4.690 <sup>MM</sup>			
4	D		X	33.21	28.520	4.690			
5	E		X	33.92	28.250	5.670			
6	F		X	33.66	28.328	5.322			
7	G		X	32.90	28.011	4.889			
8	H		X	33.51	27.837	5.673			
9	I		X	34.22	28.474	5.746			
10	J		X	33.22	28.557	4.663			
11	K		X	34.55	28.535	6.015			
12	L		X	34.49	28.227	6.263			
13	M		X	33.92	28.281	5.639			
14	N		X	33.03	28.260	4.770			
15	O		X	34.60	28.439	6.161			
16	P		X	33.57	28.398	5.172			
17	Q		X	33.29	28.258	5.032			
18	R		X	32.90	28.157	4.743			
19	S		X	33.82	28.294	5.526			
20									
Balance ID:									

Surrogate: \_\_\_\_\_

Solution ID

Concentration

Amount Spiked

Analyst

Witness

Spike: \_\_\_\_\_

5571 : 01460

**TPHG/BETX Raw Data  
Initial Calibration Notes and Raw Data**

**ARI Job ID: SS71**





### VOA Analyst Notes / Corrective Action Log

ARI Project ID: GAS/BETX CURVE Client ID: \_\_\_\_\_

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

Parameter(s): GAS/BETX

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

Purge Volume (mL) 5 Curve Date: 4/16/11 Analysis Start Date: 4/16/11

pH ≤ 2.0 YES / NO NA Method Blank In Control? YES / NO

BFB Tune Meets Criteria? YES / NO NA LCS / LCSD Recovery In Control? YES / NO

Internal Standard Meets Criteria? YES / NO NA Surrogate Recovery In Control? YES / NO

ICal acceptable? YES / NO CCal acceptable? YES / NO

Q flag applied? YES / NO NA Q flag applied? YES / NO NA

Manual Integrations for ICal? YES / NO Manual Integrations for Samples? Yes NO

Special Analysis Criteria Met? YES / NO / NA

Bubbles/Headspace: None SM (≤ 2mm ●) PB (2-4mm) LG (> 4mm ●) Head Space

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

Gas ICV Targeted 2.5 WAGA9 2.724 108.96% 801S 2.069 82.76%  
BETX ICV Targeted 25 AK101 1.934 77.4% NWTPHG 2.623 104.92%

TFT Gas 20 Taken out due to saturation, no a curve point, Surrogates curved from BETX curve  
ICV acceptance limit for AR101 ≤ 25%

Additional Details on Reverse: Yes / No

Analyst: [Signature] Date: 4/18/11

Reviewer: [Signature] Date: 4/18/11

# Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 4/16/11 Analysis: NWTPHC/BETX Analyst: MH  
 GC Program: BETX Column No: 821726 Column Type: RTX502-Z  
 Instrument Tune (.U or .CT.): \_\_\_\_\_ EM Voltage: \_\_\_\_\_  
 Calibration File: \_\_\_\_\_ Curve Date: 4/16/11

IS/SS	Ical/Ccal	LCS/ICV
<u>VW683-2</u>	<u>VW666-1</u>	<u>VW681-3</u>
_____	<u>VW683-3</u>	_____
_____	<u>VW681-3</u>	_____
_____	_____	_____
_____	_____	_____

Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0900	0416a001.d	RINSE			1
2	0929	0416a002.d	RT+BCAL 1			1
3	0958	0416a003.d	RINSE			1
4	1027	0416a004.d	BETX 25			1
5	1056	0416a005.d	BETX .5			1
6	1126	0416a006.d	BETX 5			1
7	1155	0416a007.d	BETX 25			1
8	1224	0416a008.d	BETX 50			1
9	1253	0416a009.d	BETX 100			1
10	1322	0416a010.d	BETX 200			1
11	1352	0416a011.d	BETX ICV			1
12	1421	0416a012.d	RINSE			1
13	1450	0416a013.d	GAS 1			1
14	1519	0416a014.d	GAS 25			1
15	1548	0416a015.d	GAS 1			1
16	1617	0416a016.d	GAS 2 5			1
17	1647	0416a017.d	GAS 5			1
18	1716	0416a018.d	GAS 20			1
19	1745	0416a019.d	RINSE			1
20	1814	0416a020.d	GAS ICV			1

MH  
4/18/11

**Maintenance / Comments**

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

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

MAH  
4/18/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pidl.i/vpcc0416-1.b/0416a002.d      ARI ID: RT+BCAL 1  
Data file 2: /chem3/pidl.i/vpcc0416-2.b/0416a002.d      Client ID:  
Method: /chem3/pidl.i/vpcc0416-2.b/PIDB.m            Injection Date: 16-APR-2011 09:29  
Instrument: pidl.i                                        Matrix: WATER  
Gas Ical Date: 16-APRIL-2011                         Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.903	0.000	2860	38897	101.1	TFT(Surr)
15.449	-0.001	2053	17468	98.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	----	-----	-----
WAGas Tol-C12 ( 9.85 to 17.94)	374773	522809	1.395
8015B 2MP-TMB ( 4.17 to 16.23)	747017	592583	0.793
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	416924	0.690
NWTPHG Tol-Nap ( 9.85 to 18.95)	403422	595802	1.477

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.901	0.000	6694	102.8	TFT(Surr)
15.449	-0.001	13426	99.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.060	-0.002	10845	24.74	Benzene
9.946	-0.004	10051	25.70	Toluene
12.851	-0.007	9018	26.40	Ethylbenzene
13.012	-0.013	19467	53.01	M/P-Xylene
13.970	-0.007	7735	27.01	O-Xylene
4.530	0.000	4689	27.62	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0416-1.b/0416a002.d

Date: 16-APR-2011 09:29

Client ID:

Sample Info: RT+BCAL 1

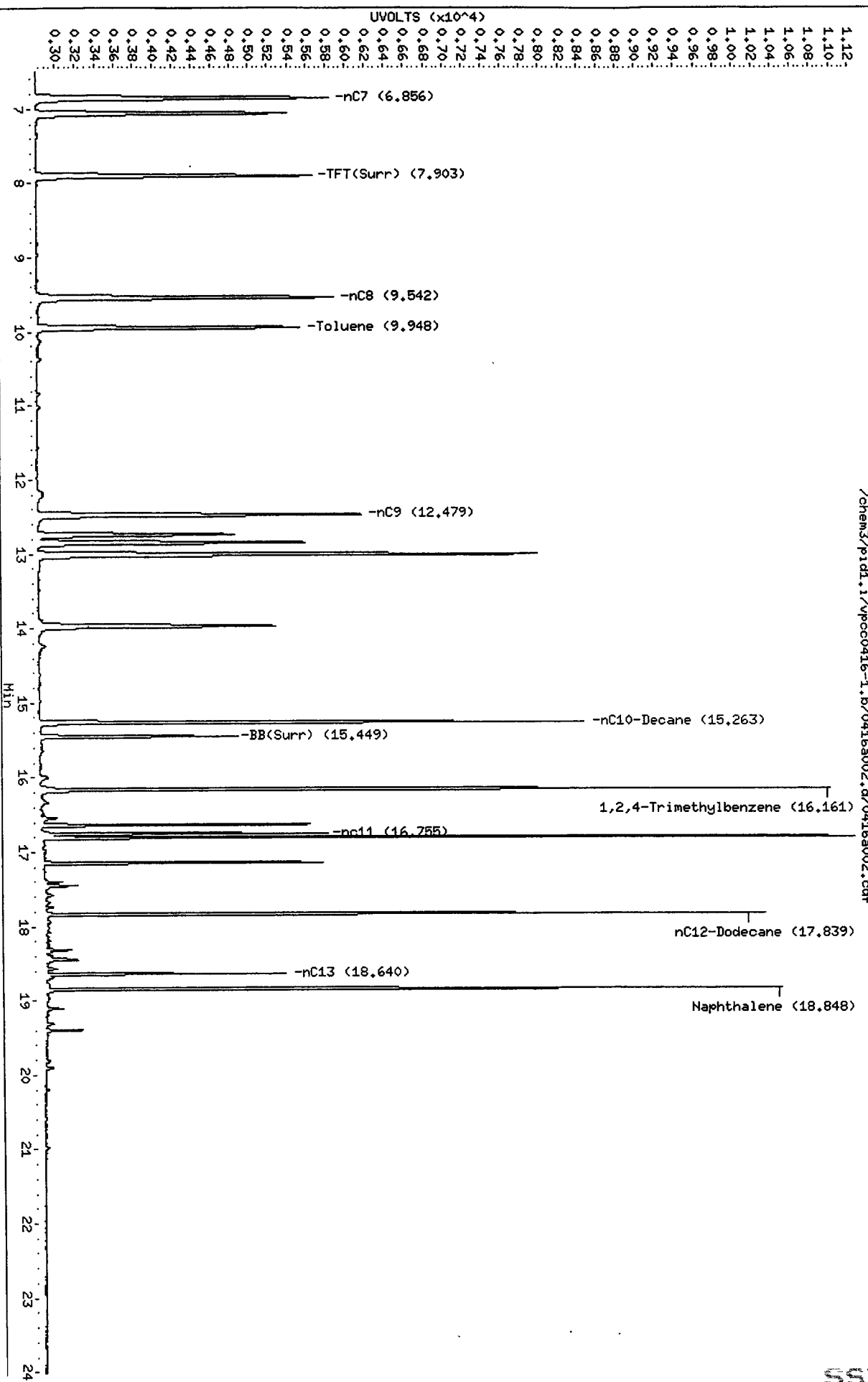
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: HH

Column diameter: 0.18

Page 1



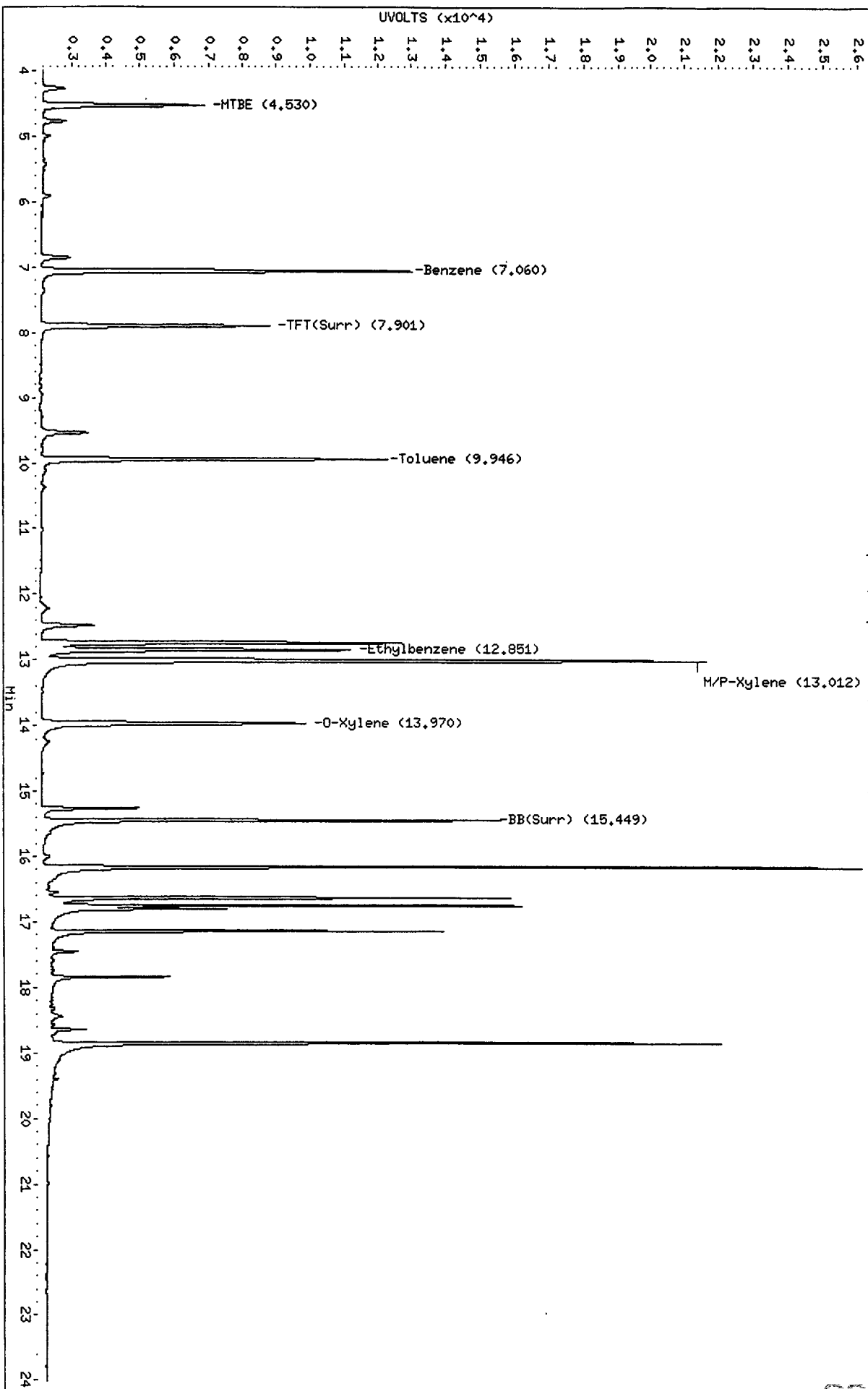
10711014015

Data File: /chem3/pid1.i/vpcc0416-2.b/0416002.d  
Date: 16-APR-2011 09:29  
Client ID:  
Sample Info: RT+BCAL 1

Column phase: RTX 502-2 PID

Instrument: pid1.i  
Operator: MH  
Column diameter: 0.18

/chem3/pid1.i/vpcc0416-2.b/0416002.d/0416002.cdf



MH  
4/18/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0416-1.b/0416a013.d    ARI ID: GAS .1  
Data file 2: /chem3/pid1.i/vpcc0416-2.b/0416a013.d    Client ID:  
Method: /chem3/pid1.i/vpcc0416-2.b/PIDB.m            Injection Date: 16-APR-2011 14:50  
Instrument: pid1.i                                        Matrix: WATER  
Gas Ical Date: 16-APRIL-2011                            Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.903	0.000	2771	38384	97.9	TFT(Surr)
15.450	0.000	2043	17440	98.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.85 to 17.94)	374773	47325	0.126 M
8015B 2MP-TMB ( 4.17 to 16.23)	747017	88180	0.118 M
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	72761	0.120 M
NWTPHG Tol-Nap ( 9.85 to 18.95)	403422	52064	0.129 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.901	0.000	6335	97.3	TFT(Surr)
15.450	-0.001	13443	99.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.047	-0.015	193	0.44	Benzene
9.947	-0.003	1481	3.79	Toluene
12.851	-0.008	380	1.11	Ethylbenzene
13.013	-0.012	1466	3.99	M/P-Xylene
13.970	-0.008	516	1.80	O-Xylene
ND	---	---	---	MTBE

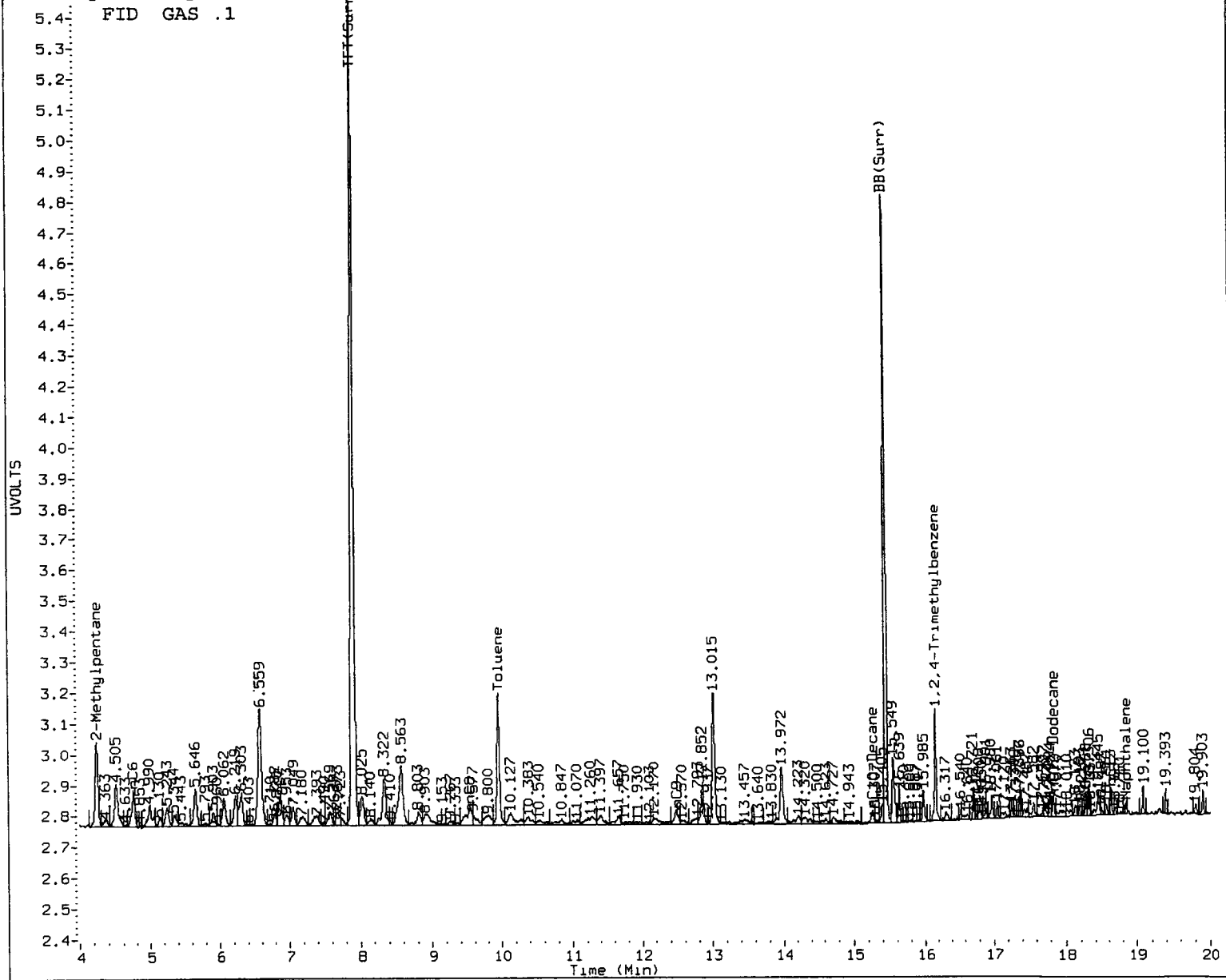
A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak peak was manually integrated









MANUAL INTEGRATION

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

Analyst: MH Date: 4/18/11

244  
4/18/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0416-1.b/0416a014.d    ARI ID: GAS .25  
Data file 2: /chem3/pid1.i/vpcc0416-2.b/0416a014.d    Client ID:  
Method: /chem3/pid1.i/vpcc0416-2.b/PIDB.m            Injection Date: 16-APR-2011 15:19  
Instrument: pid1.i                                        Matrix: WATER  
Gas Ical Date: 16-APRIL-2011                            Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
7.903	0.000	2677	38042	94.6	TFT(Surr)
15.450	0.000	2012	17210	96.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.85 to 17.94)	374773	95246	0.254 M
8015B 2MP-TMB ( 4.17 to 16.23)	747017	192190	0.257 M
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	155402	0.257 M
NWTPHG Tol-Nap ( 9.85 to 18.95)	403422	105233	0.261 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
7.901	0.000	6153	94.5	TFT(Surr)
15.450	-0.001	13197	97.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.048	-0.014	421	0.96	Benzene
9.946	-0.004	3686	9.43	Toluene
12.851	-0.008	923	2.70	Ethylbenzene
13.014	-0.012	3623	9.87	M/P-Xylene
13.970	-0.008	1313	4.59	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0416-1.b/0416a014.d  
Date: 16-APR-2011 15:19  
Client ID:  
Sample Info: GAS .25

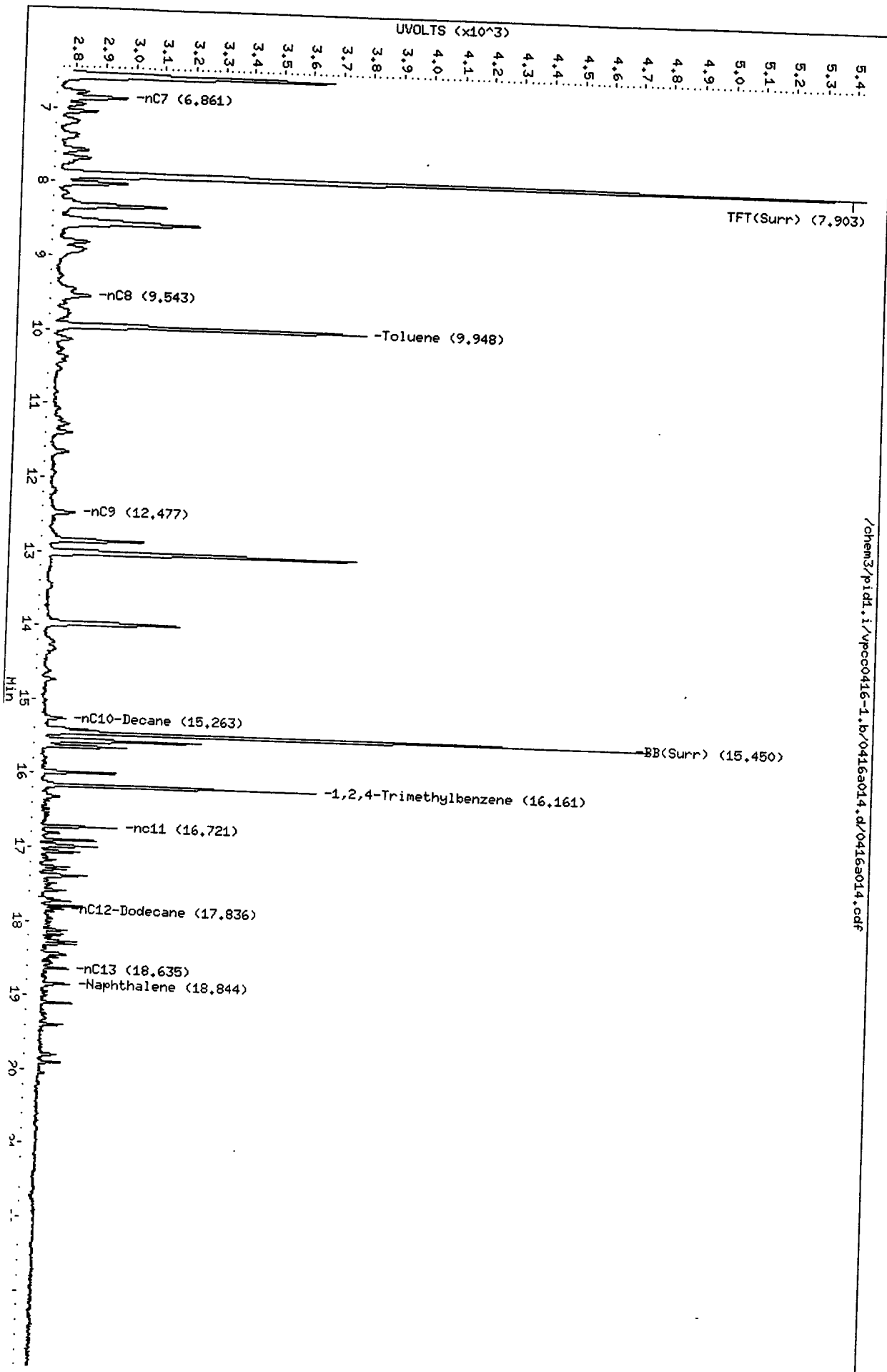
Instrument: pid1.i

Page 1

Column phase: RTX 502-2 FID

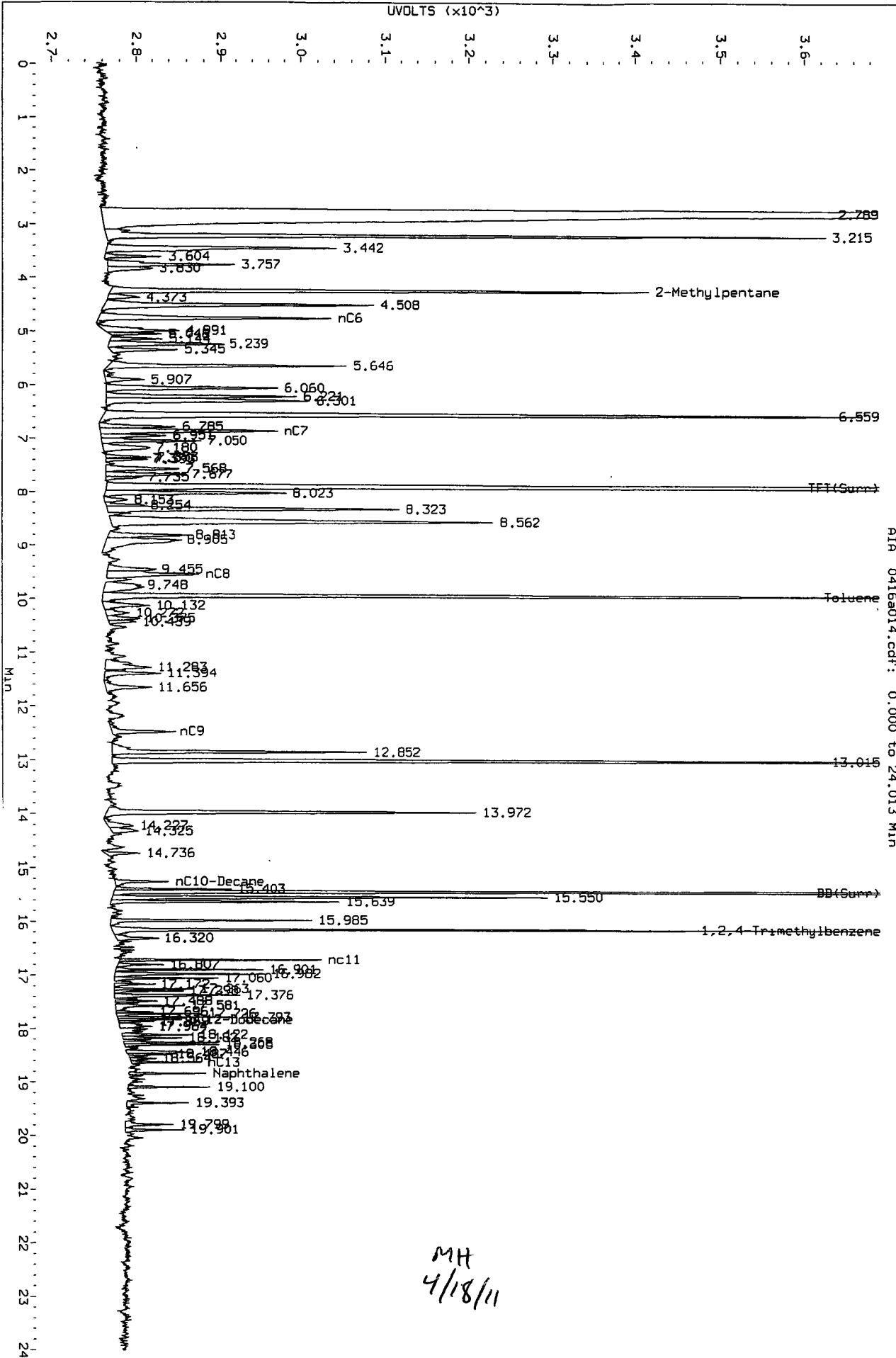
Operator: MH  
Column diameter: 0.18

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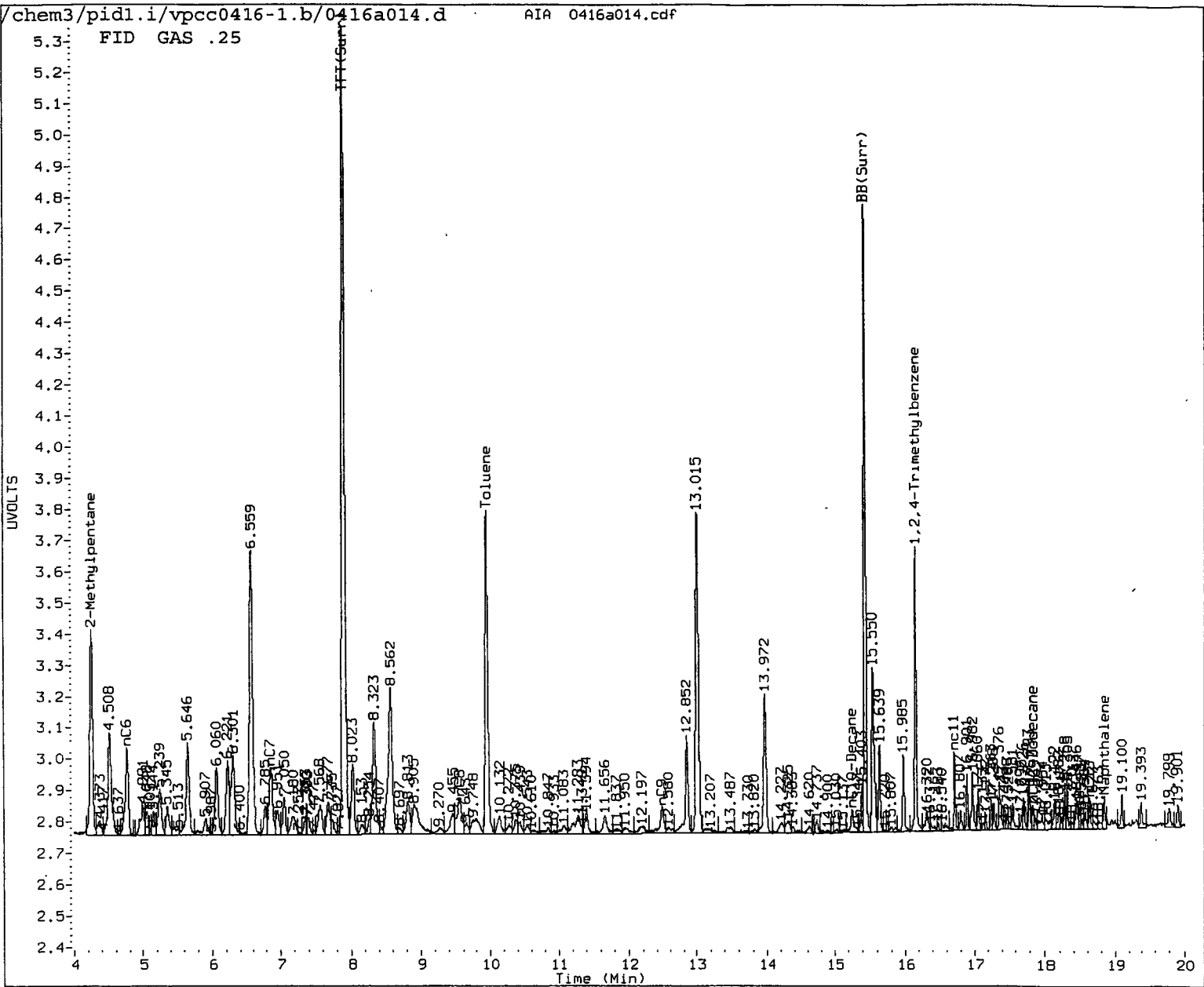


5571 : 01472

Data File: /chem3/pid1.1/vpcc0416-1.b/0416a014.d/0416a014.cdf  
Injection Date: 16-APR-2011 15:19  
Instrument: pid1.1  
Client Sample ID:



MH  
4/18/11



MANUAL INTEGRATION

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

Analyst: MH Date: 4/18/11

MH  
4/18/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0416-1.b/0416a015.d      ARI ID: GAS 1  
 Data file 2: /chem3/pid1.i/vpcc0416-2.b/0416a015.d      Client ID:  
 Method: /chem3/pid1.i/vpcc0416-2.b/PIDB.m              Injection Date: 16-APR-2011 15:48  
 Instrument: pid1.i    Matrix: WATER  
 Gas Ical Date: 16-APRIL-2011                              Dilution Factor: 1.000  
 BETX Ical Date: 16-APR-2011

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.903	0.000	2766	42400	97.8	TFT(Surr)
15.449	-0.001	2003	17577	96.0	BB(Surr)

-----

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.85 to 17.94)	374773	347138	0.926 M
8015B 2MP-TMB ( 4.17 to 16.23)	747017	703324	0.942 M
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	562218	0.931 M
NWTPHG Tol-Nap ( 9.85 to 18.95)	403422	370573	0.919 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
 Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.902	0.000	6233	95.7	TFT(Surr)
15.449	-0.001	13119	97.3	BB(Surr)

-----

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
7.055	-0.007	1513	3.45	Benzene
9.947	-0.003	14957	38.25	Toluene
12.850	-0.008	3706	10.85	Ethylbenzene
13.014	-0.011	14647	39.89	M/P-Xylene
13.970	-0.008	5266	18.39	O-Xylene
4.520	-0.010	293	1.73	MTBE

A Indicates Peak Area was used for quantitation instead of Height

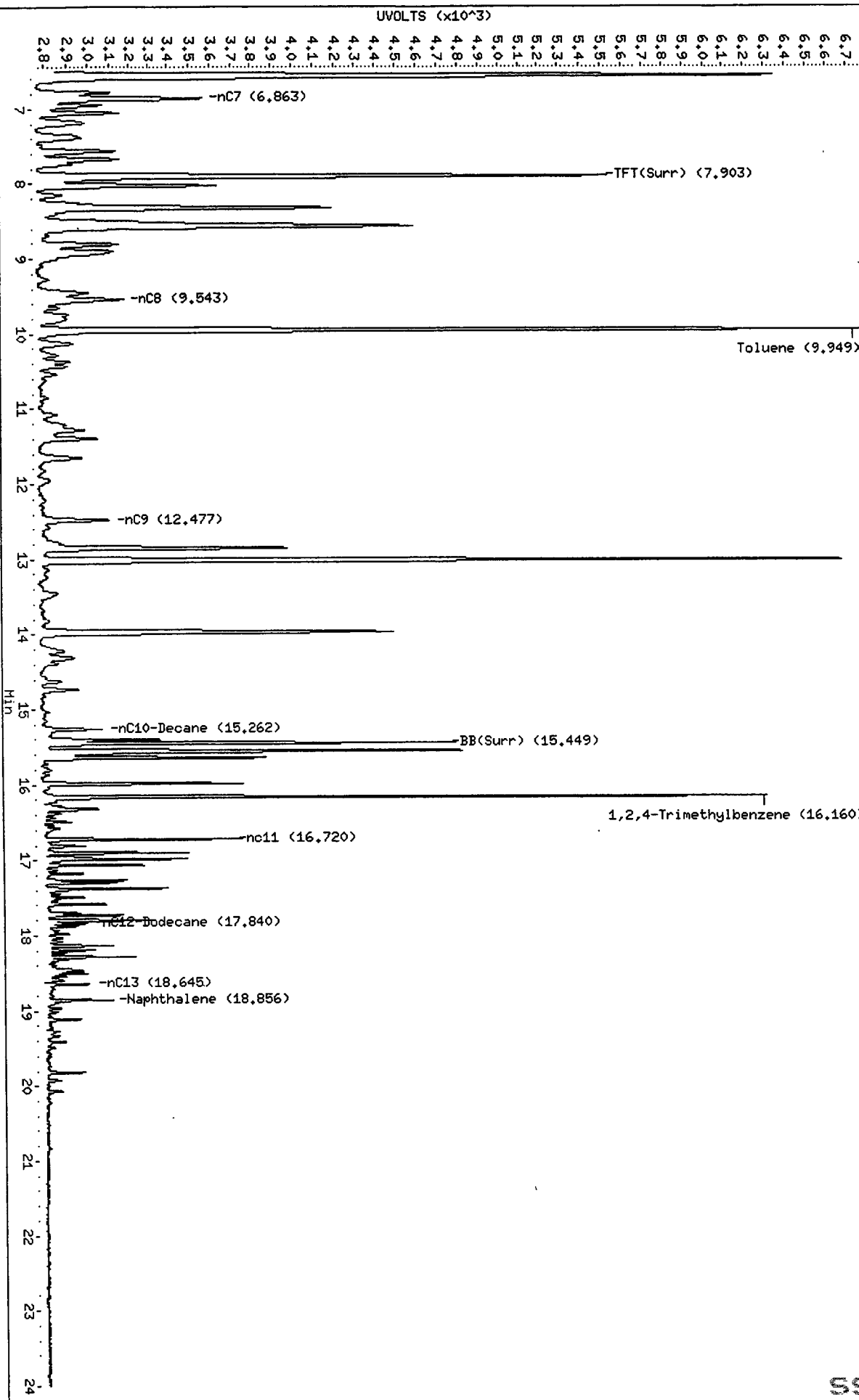
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.1/vpcc0416-1.b/0416a015.d  
Date: 16-APR-2011 15:48  
Client ID:  
Sample Info: GAS 1

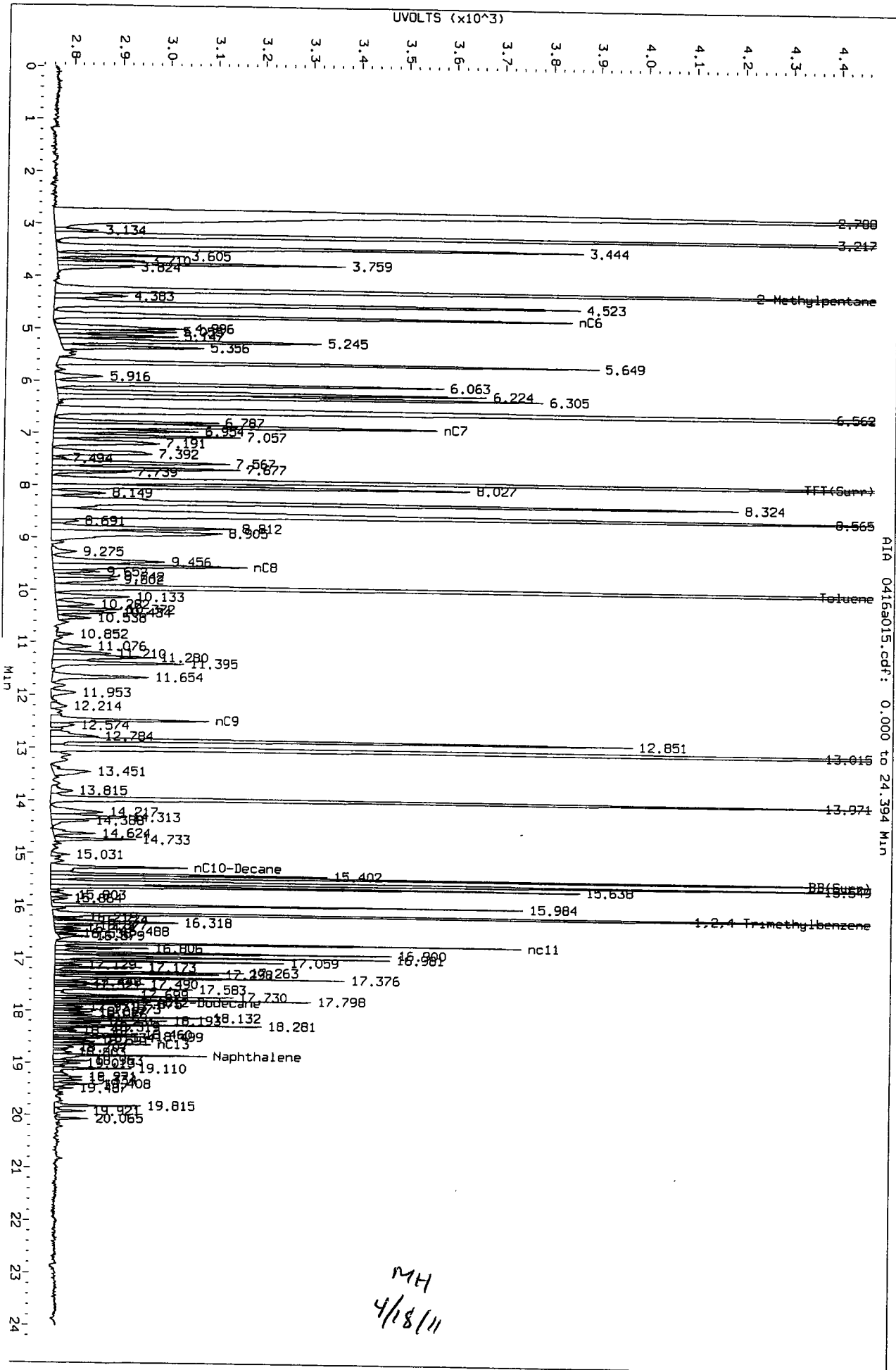
Column phase: RTX SO2-2 FID

Instrument: pid1.1  
Operator: MH  
Column diameter: 0.18

/chem3/pid1.1/vpcc0416-1.b/0416a015.d/0416a015.cdf

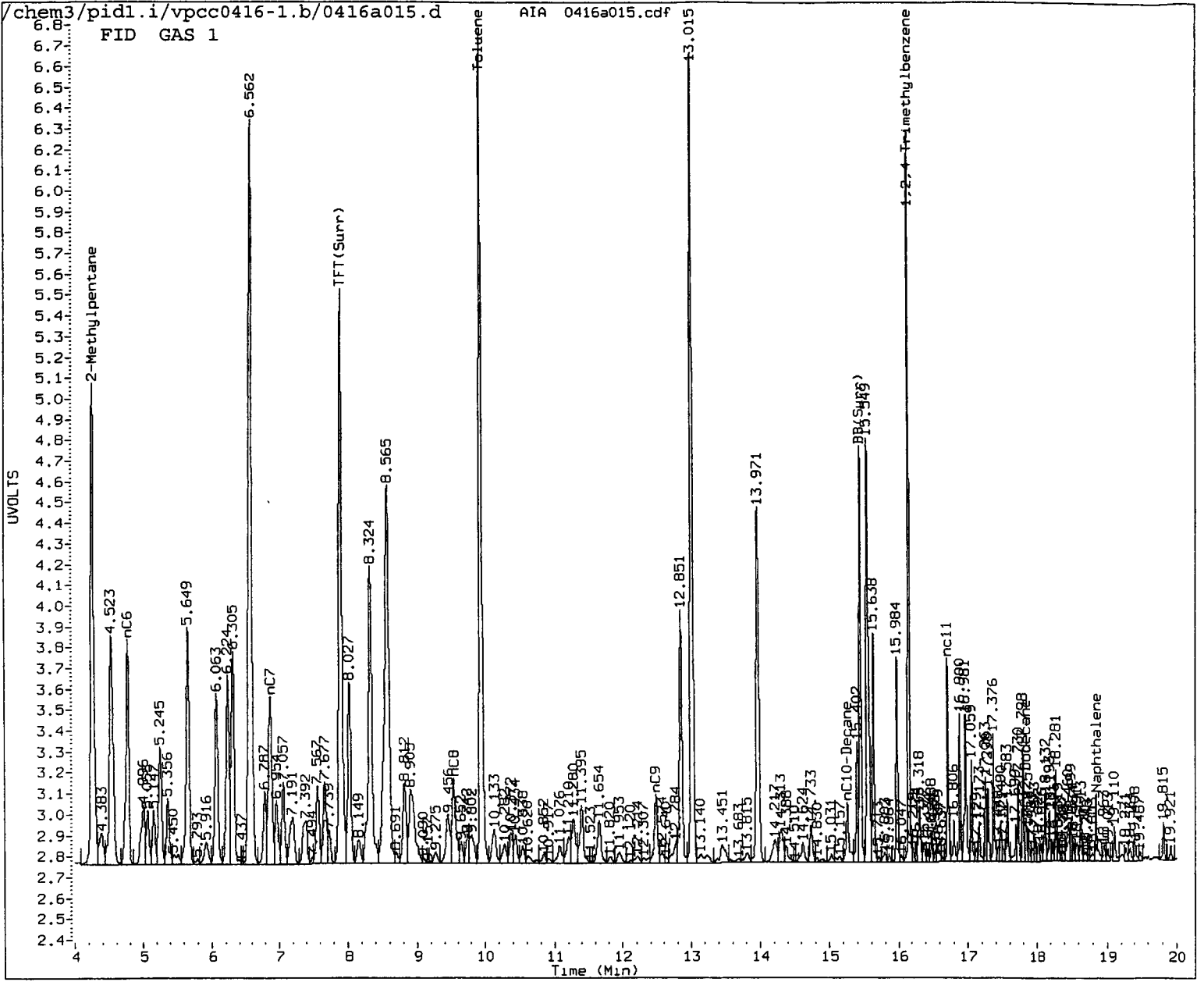


Data File: /chem3/pid1.1/vpcc0416-1.b/0416a015.d/0416a015.cdf  
Injection Date: 16-APR-2011 15:48  
Instrument: pid1.1  
Client Sample ID:



MH  
4/18/11





MANUAL INTEGRATION

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

Analyst: MH

Date: 4/18/11

Analytical Resources Inc.  
 BETX/Gas Quantitation Report

M.  
 4/18/11

Data file 1: /chem3/pid1.i/vpcc0416-1.b/0416a016.d  
 Data file 2: /chem3/pid1.i/vpcc0416-2.b/0416a016.d  
 Method: /chem3/pid1.i/vpcc0416-2.b/PIDB.m  
 Instrument: pid1.i  
 Gas Ical Date: 16-APRIL-2011  
 BETX Ical Date: 16-APR-2011

ARI ID: GAS 2.5  
 Client ID:  
 Injection Date: 16-APR-2011 16:17  
 Matrix: WATER  
 Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.901	-0.002	3070	53283	108.5	TFT(Surr)
15.449	-0.001	2096	19504	100.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.85 to 17.94)	374773	857874	2.289 M
8015B 2MP-TMB ( 4.17 to 16.23)	747017	1723866	2.308 M
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	1375148	2.276 M
NWTPHG Tol-Nap ( 9.85 to 18.95)	403422	908701	2.252 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.901	-0.001	6775	104.0	TFT(Surr)
15.450	-0.001	13761	102.1	BB(Surr)

SW8021 (PID)

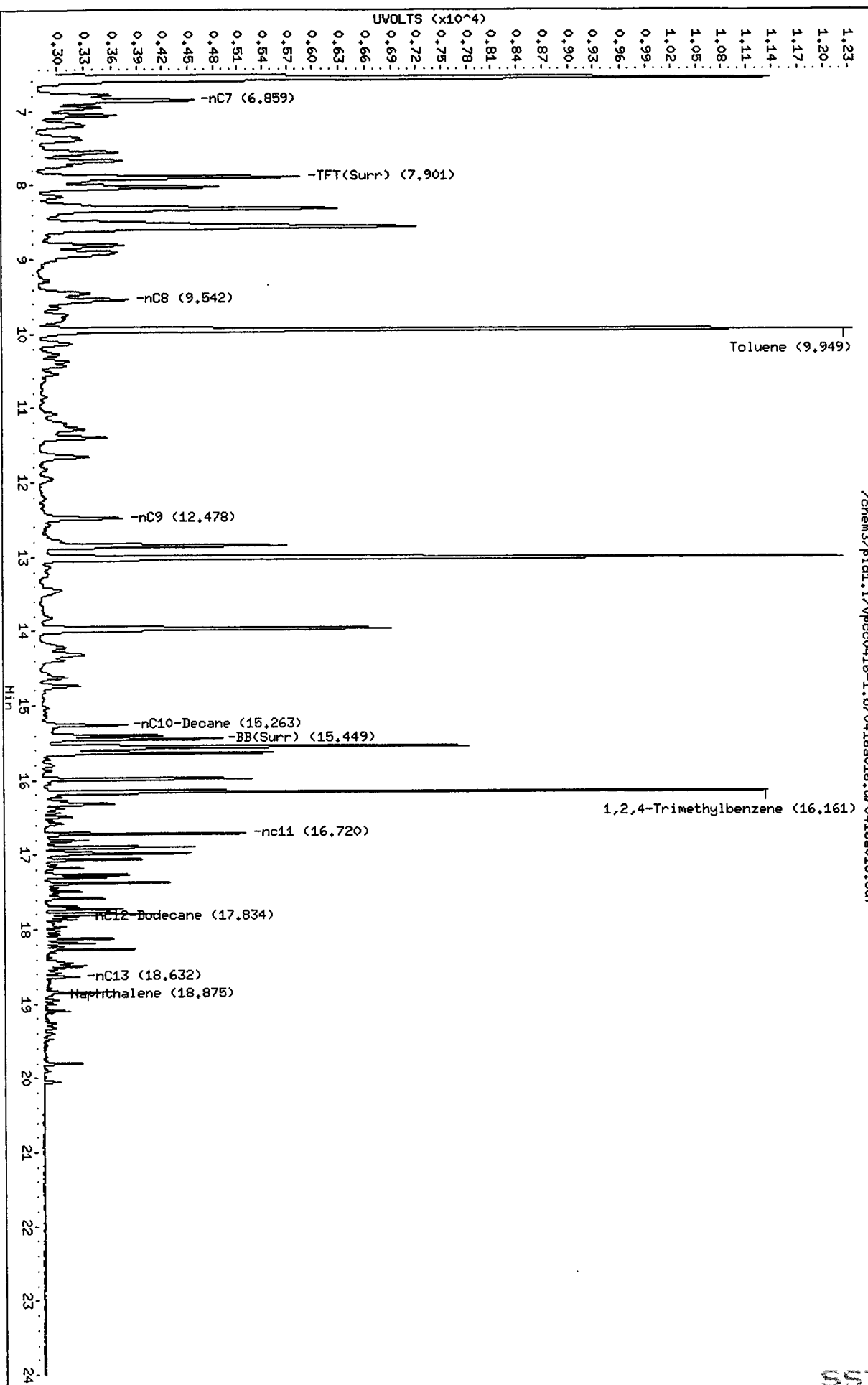
RT	Shift	Response	Amount	Compound
7.059	-0.002	3597	8.21	Benzene
9.948	-0.002	37082	94.84	Toluene
12.851	-0.007	9206	26.95	Ethylbenzene
13.016	-0.009	36727	100.01	M/P-Xylene
13.971	-0.007	13172	46.00	O-Xylene
4.529	-0.002	724	4.26	MTBE

Indicates Peak Area was used for quantitation instead of Height  
 Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0416-1.b/0416a016.d  
Date: 16-APR-2011 16:17  
Client ID:  
Sample Info: GAS 2.5

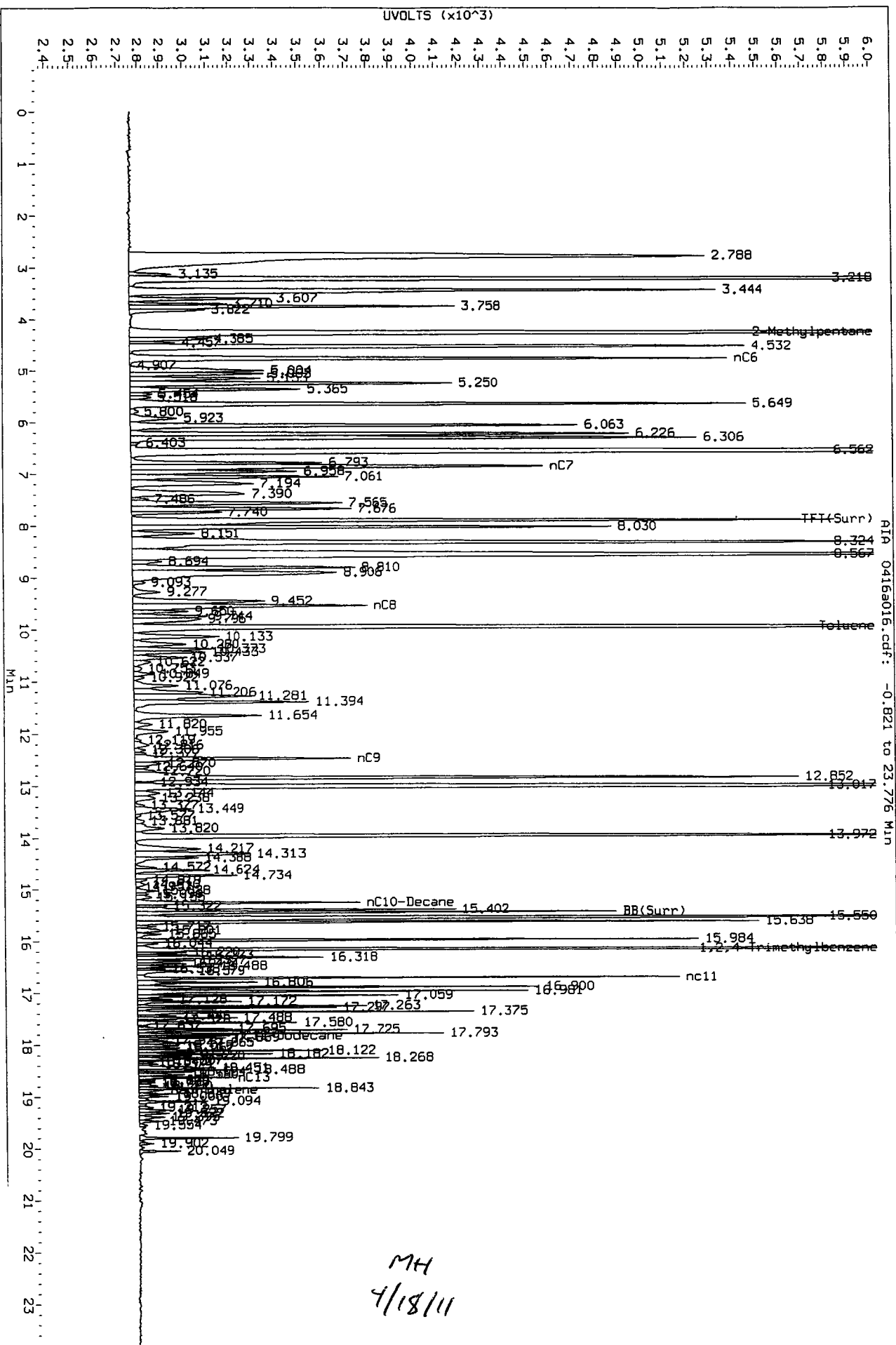
Column phase: RTX 502-2 FID

Instrument: pid1.i  
Operator: HH  
Column diameter: 0.18

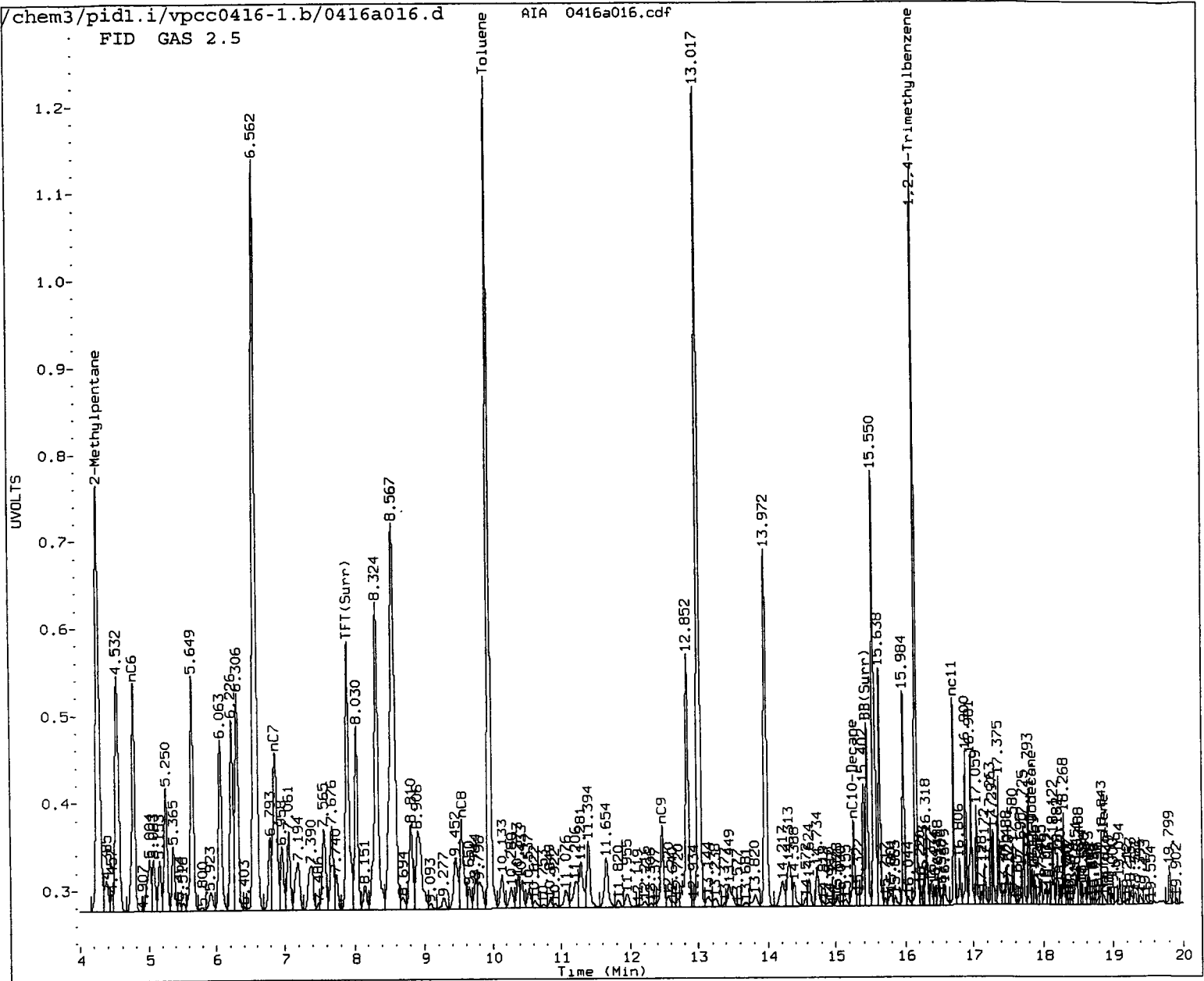


/chem3/pid1.i/vpcc0416-1.b/0416a016.d/0416a016.cdf

Data File: /chem3/p101.1/vpcc0415-1.b/0415a015.d/0415a015.cdf  
Injection Date: 16-APR-2011 16:17  
Instrument: pid1.1  
Client Sample ID:



MH  
4/18/11



MANUAL INTEGRATION

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

Analyst: MM

Date: 4/18/11

MH  
4/18/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0416-1.b/0416a017.d      ARI ID: GAS 5  
Data file 2: /chem3/pid1.i/vpcc0416-2.b/0416a017.d      Client ID:  
Method: /chem3/pid1.i/vpcc0416-2.b/PIDB.m              Injection Date: 16-APR-2011 16:47  
Instrument: pid1.i    Matrix: WATER  
Gas Ical Date: 16-APRIL-2011                                  Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
7.900	-0.003	3412	56035	120.6	TFT(Surr)
15.450	0.000	2226	20622	106.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 ( 9.85 to 17.94)	374773	1721114	4.592
8015B 2MP-TMB ( 4.17 to 16.23)	747017	3429189	4.591 M
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	2742657	4.540 M
NWTFPHG Tol-Nap ( 9.85 to 18.95)	403422	1819633	4.510

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
7.900	-0.002	7158	109.9	TFT(Surr)
15.450	-0.001	14426	107.0	BB(Surr)

SW8021 (PID)

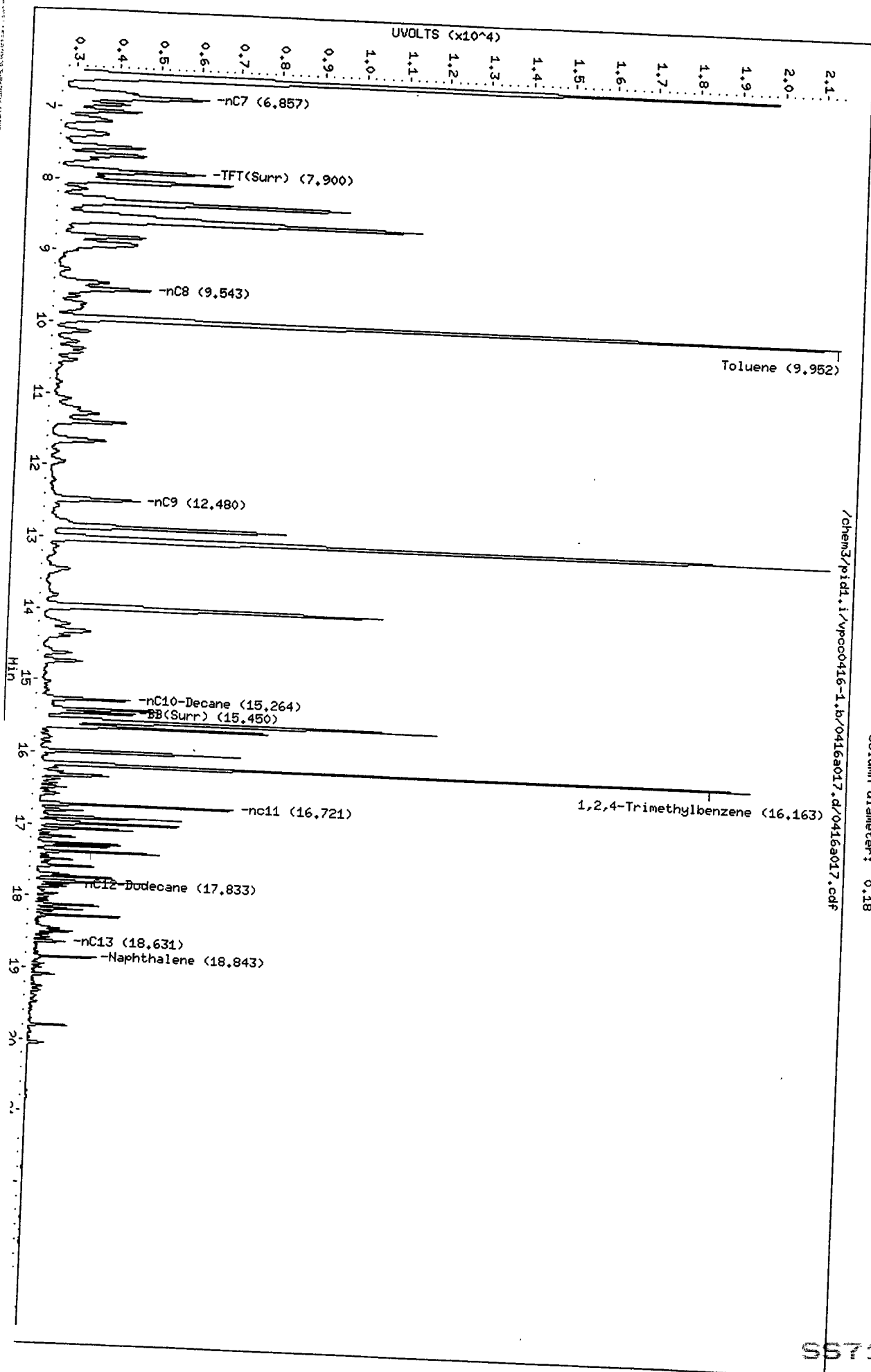
RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.061	-0.001	7211	16.45	Benzene
9.950	0.000	74619	190.83	Toluene
12.852	-0.006	18578	54.39	Ethylbenzene
13.020	-0.006	74830	203.77	M/P-Xylene
13.973	-0.004	26653	93.07	O-Xylene
4.530	0.000	1424	8.39	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

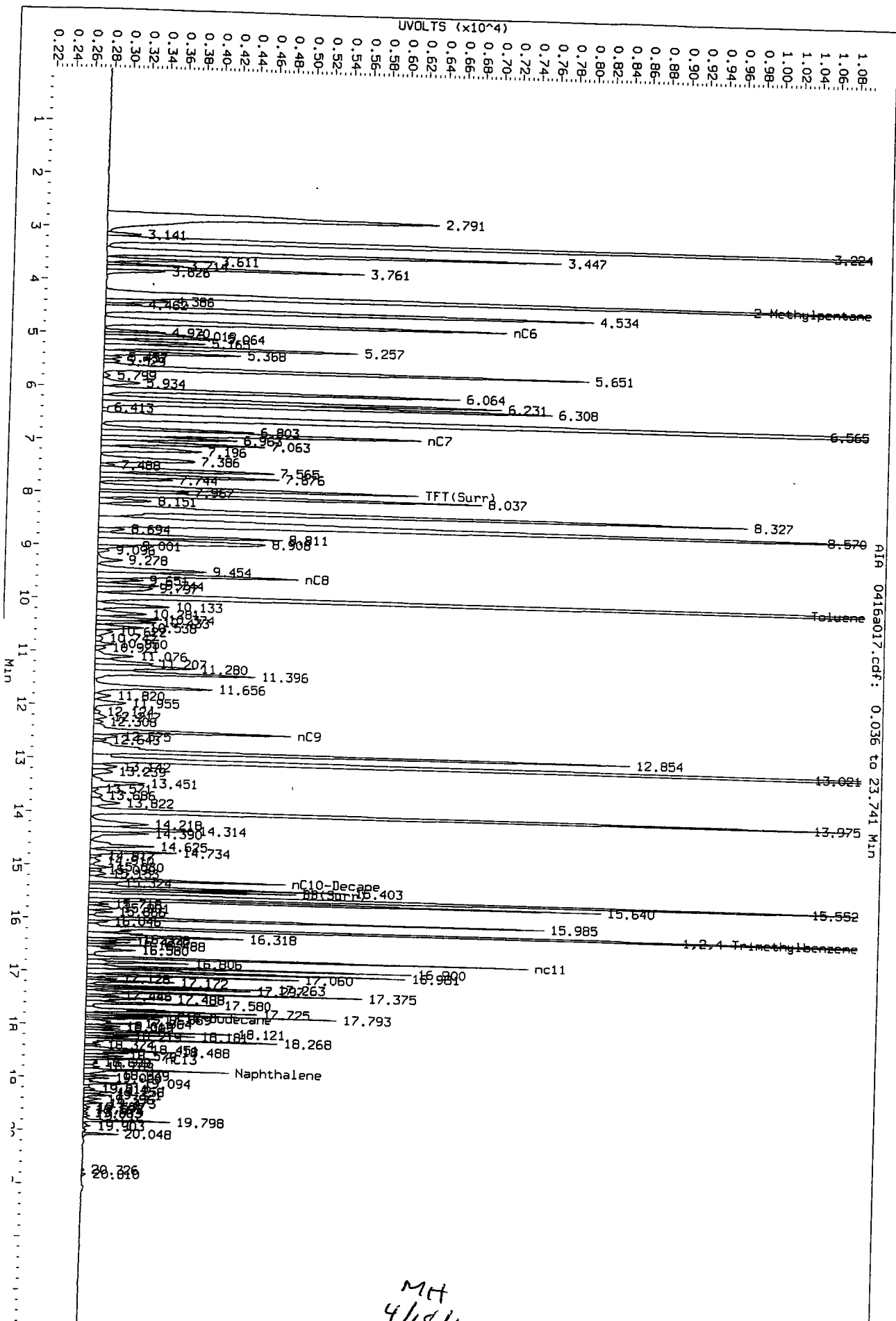
Data File: /chem3/pid1.i/vpcc0416-1.b/0416a017.d  
Date: 16-APR-2011 16:47  
Client ID:  
Sample Info: GAS 5

Column Phase: RTX 502-2 FID

Instrument: pid1.i  
Operator: HH  
Column diameter: 0.18



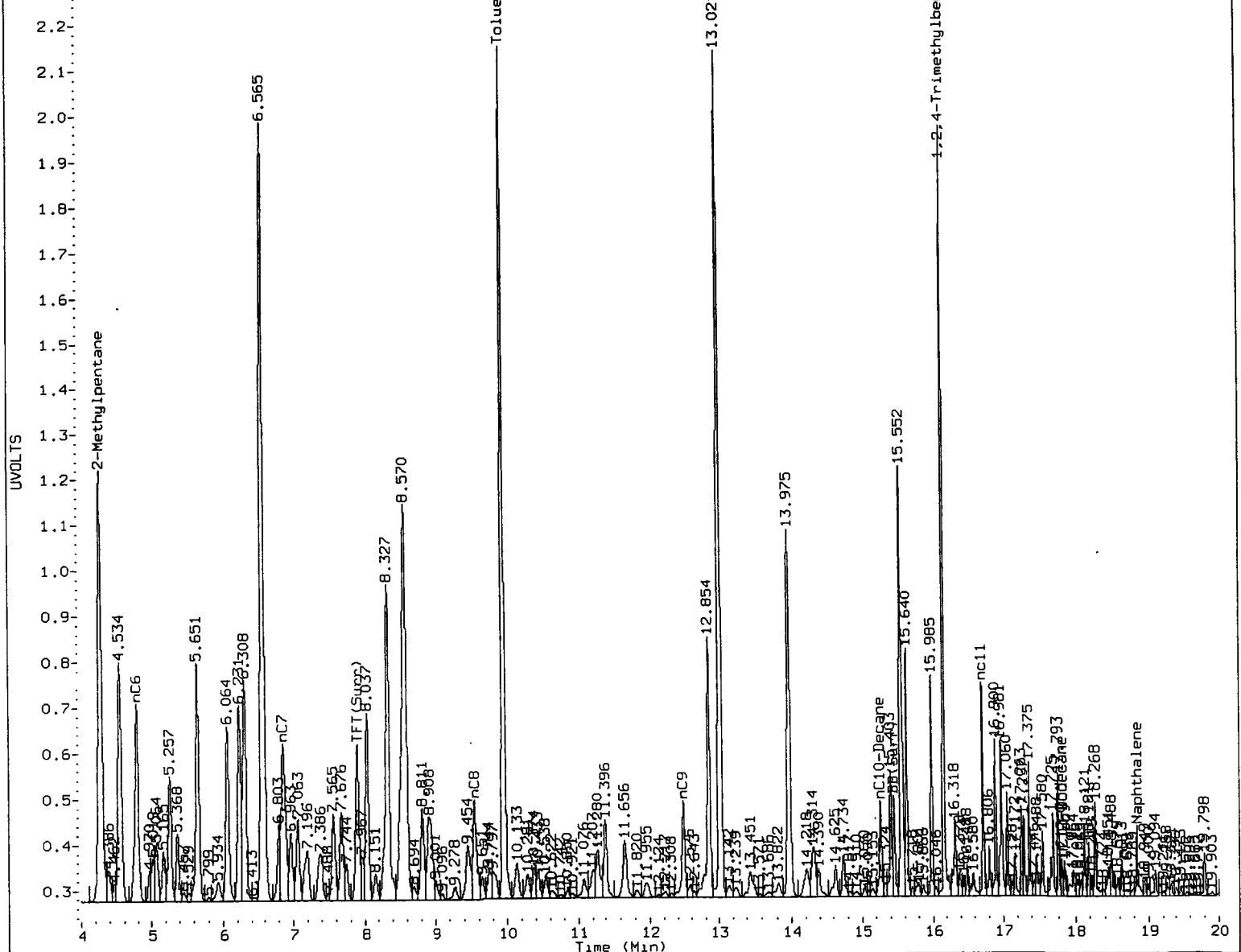
Data File: /chem3/pid1.i/vpcc0416-1.b/0416a017.d/0416a017.cdf  
 Injection Date: 16-APR-2011 16:47  
 Instrument: pid1.1  
 Client Sample ID:



MH  
4/18/11



FID GAS 5



MANUAL INTEGRATION

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

Analyst:   MH                        Date:   4/18/11

M4  
4/18/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0416-1.b/0416a018.d  
 Data file 2: /chem3/pid1.i/vpcc0416-2.b/0416a018.d  
 Method: /chem3/pid1.i/vpcc0416-2.b/PIDB.m  
 Instrument: pid1.i  
 Gas Ical Date: 16-APRIL-2011  
 BETX Ical Date: 16-APR-2011

ARI ID: GAS 20  
 Client ID:  
 Injection Date: 16-APR-2011 17:16  
 Matrix: WATER  
 Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
ND	---	---	---	---	---
15.450	0.000	1985	15553	95.2	TFT (Surr) BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.85 to 17.94)	374773	7197871	19.206 M
8015B 2MP-TMB ( 4.17 to 16.23)	747017	15056764	20.156 M
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	12286971	20.341 M
NWTPHG Tol-Nap ( 9.85 to 18.95)	403422	7578599	18.786 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	-0.006	11999	184.2	TFT (Surr)
15.450	0.000	17429	129.3	BB (Surr)

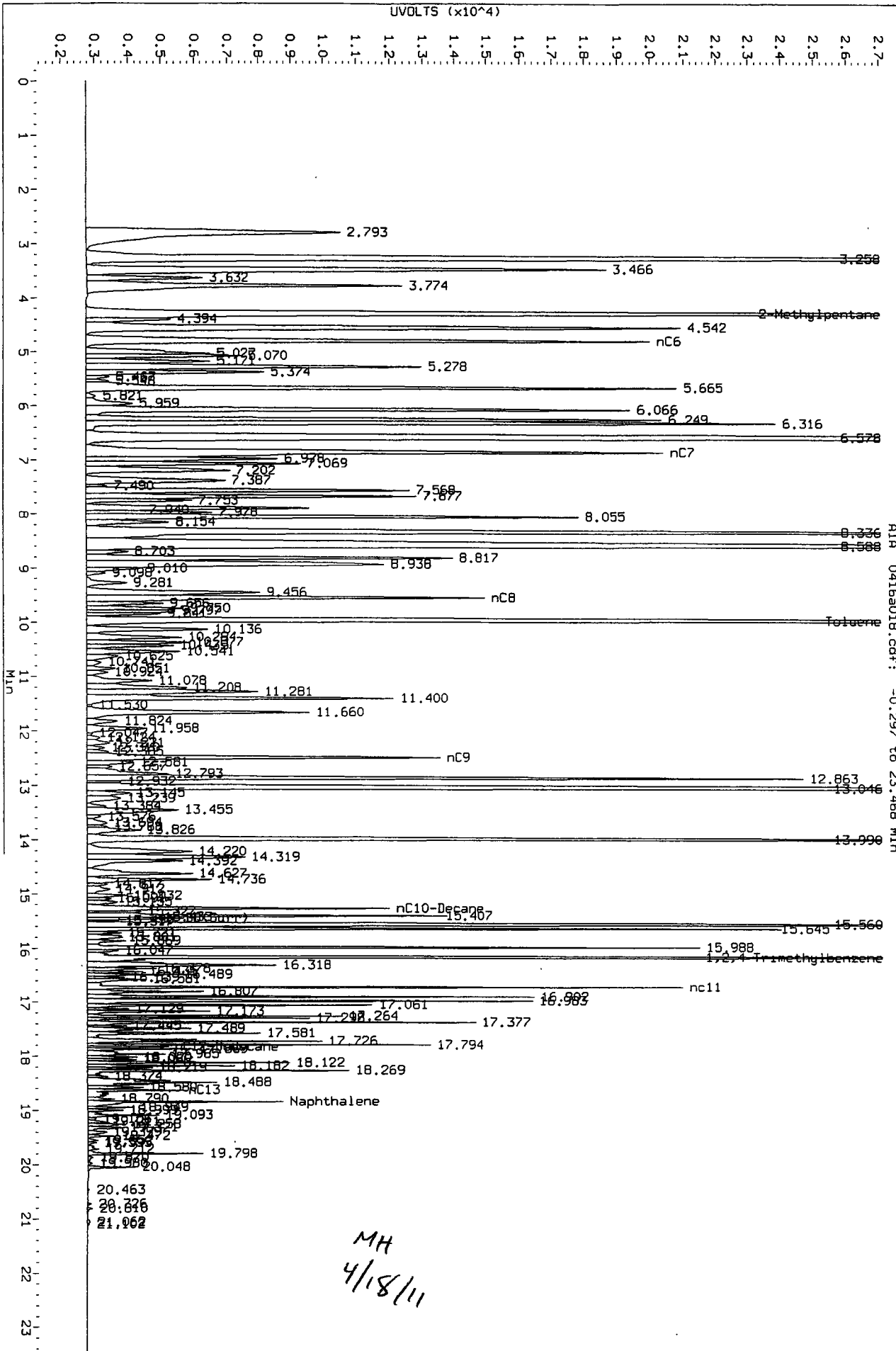
SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.067	0.005	28653	65.36	Benzene
9.964	0.014	283233	724.35	Toluene
12.862	0.004	74550	218.26	Ethylbenzene
13.043	0.018	274298	746.95	M/P-Xylene
13.987	0.009	106639	372.39	O-Xylene
4.537	0.006	5593	32.95	MTBE

Indicates Peak Area was used for quantitation instead of Height  
 Indicates peak peak was manually integrated



Data File: /chem3/pid1.1/vpcc0416-1.b/0416a018.d/0416a018.cdf  
Injection Date: 16-APR-2011 17:16  
Instrument: pid1.1  
Client Sample ID:



AIA 0416a018.cdf: -0.297 to 23.468 MIN

MH  
4/18/11



MH  
4/18/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0416-1.b/0416a020.d      ARI ID: GAS ICV  
Data file 2: /chem3/pid1.i/vpcc0416-2.b/0416a020.d      Client ID:  
Method: /chem3/pid1.i/vpcc0416-2.b/PIDB.m              Injection Date: 16-APR-2011 18:14  
Instrument: pid1.i    Matrix: WATER  
Gas Ical Date: 16-APRIL-2011                              Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	----	-----	----	----	-----
7.904	-0.001	2756	42761	97.4	TFT(Surr)
15.450	0.000	2078	18061	99.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.85 to 17.94)	374773	1020774	2.724 M
8015B 2MP-TMB ( 4.17 to 16.23)	747017	1545334	2.069 M
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	1168472	1.934 M
NWTPHG Tol-Nap ( 9.85 to 18.95)	403422	1058178	2.623 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	----	-----	----	-----
7.902	0.001	6301	96.8	TFT(Surr)
15.449	-0.001	13925	103.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	----	-----	-----	-----
7.062	0.000	10567	24.10	Benzene
9.951	0.001	78751	201.40	Toluene
12.852	-0.006	14691	43.01	Ethylbenzene
13.018	-0.008	58588	159.54	M/P-Xylene
13.971	-0.006	19252	67.23	O-Xylene
4.530	0.000	697	4.11	MTBE

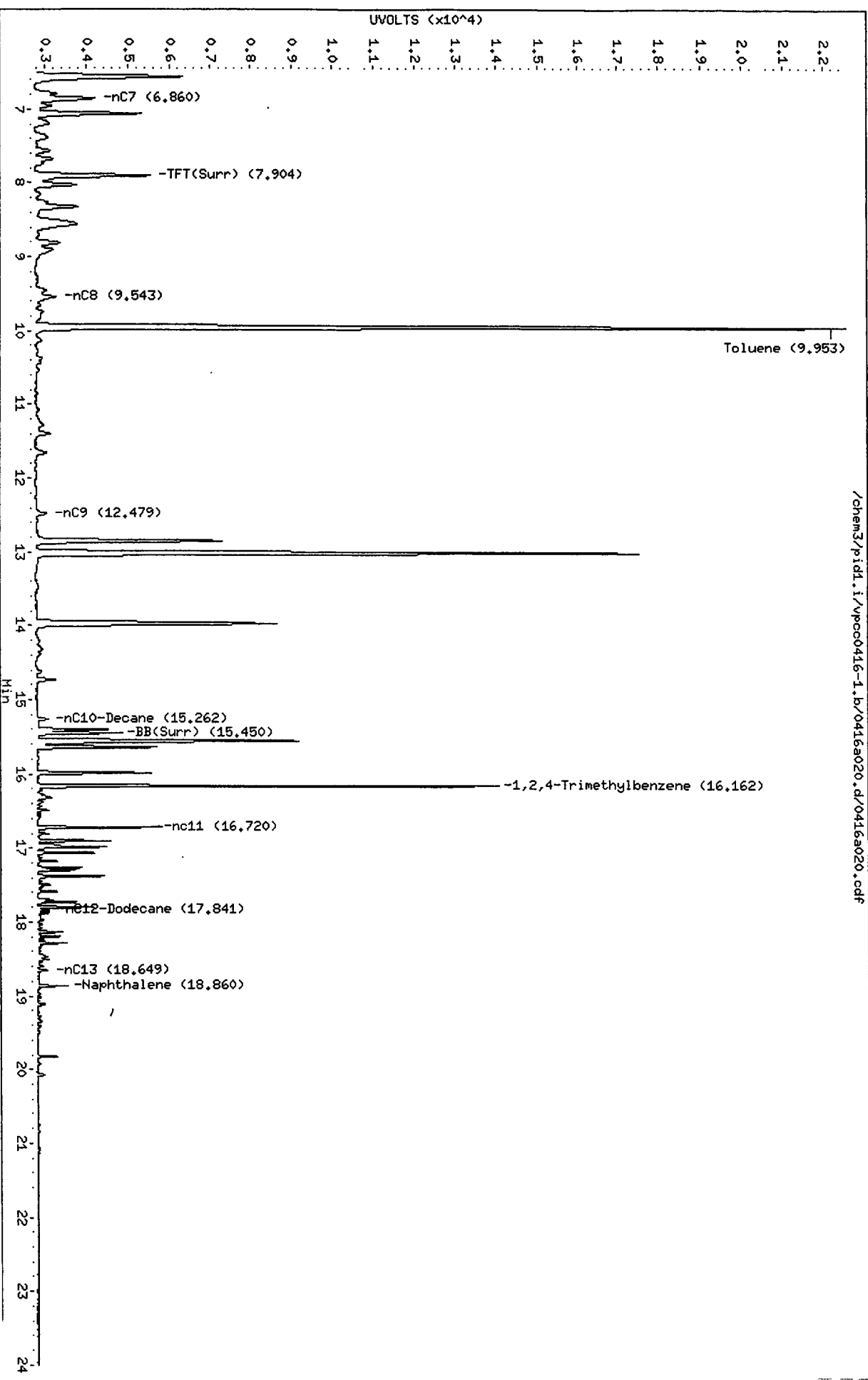
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0416-1.b/0416a020.d  
Date : 16-APR-2011 18:14  
Client ID:  
Sample Info: GAS ICV

Column phase: RTX 502-2 FID

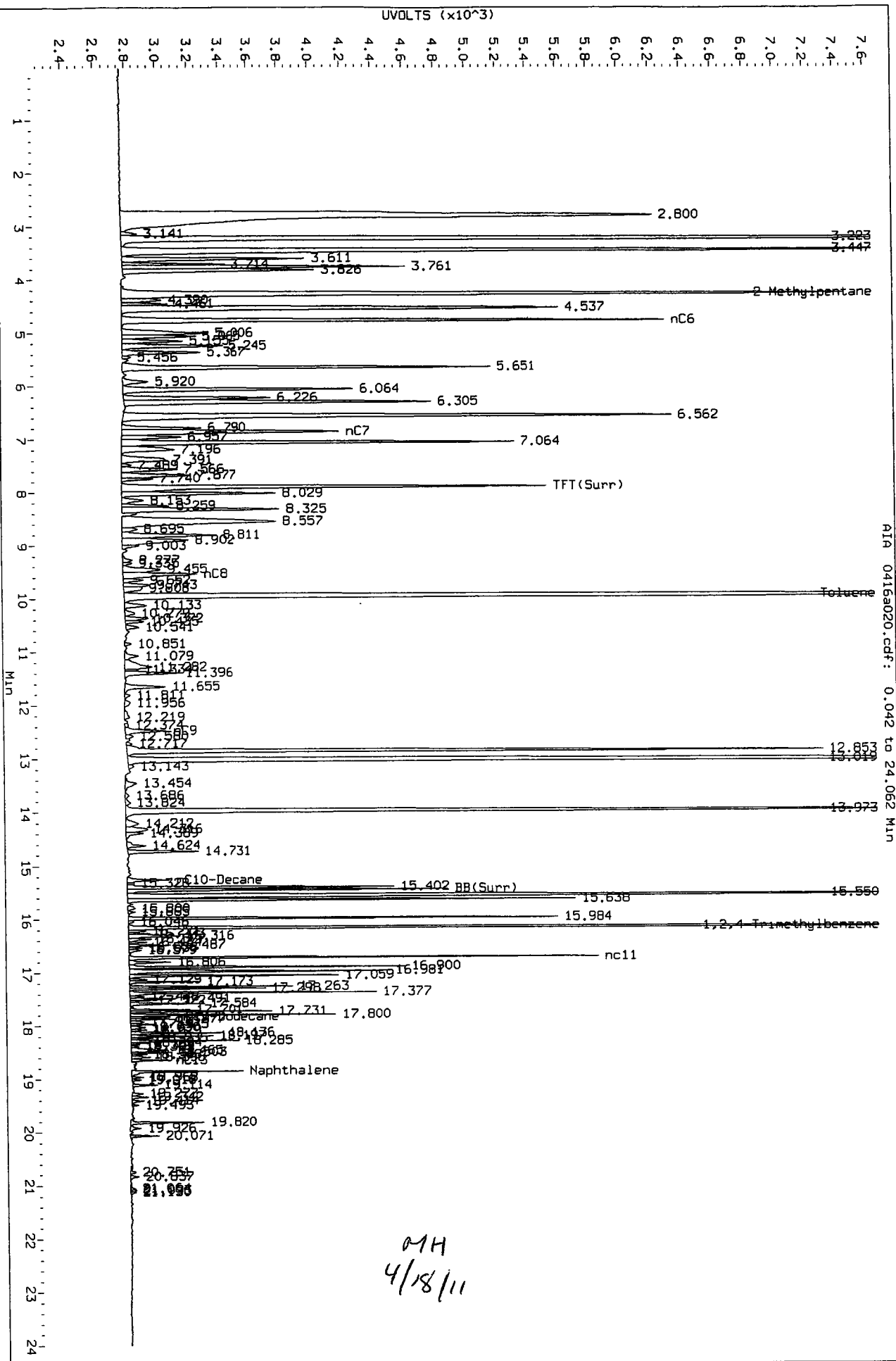
/chem3/pid1.i/vpcc0416-1.b/0416a020.d/0416a020.cdf

Instrument: pid1.i  
Operator: MH  
Column diameter: 0.18



001100

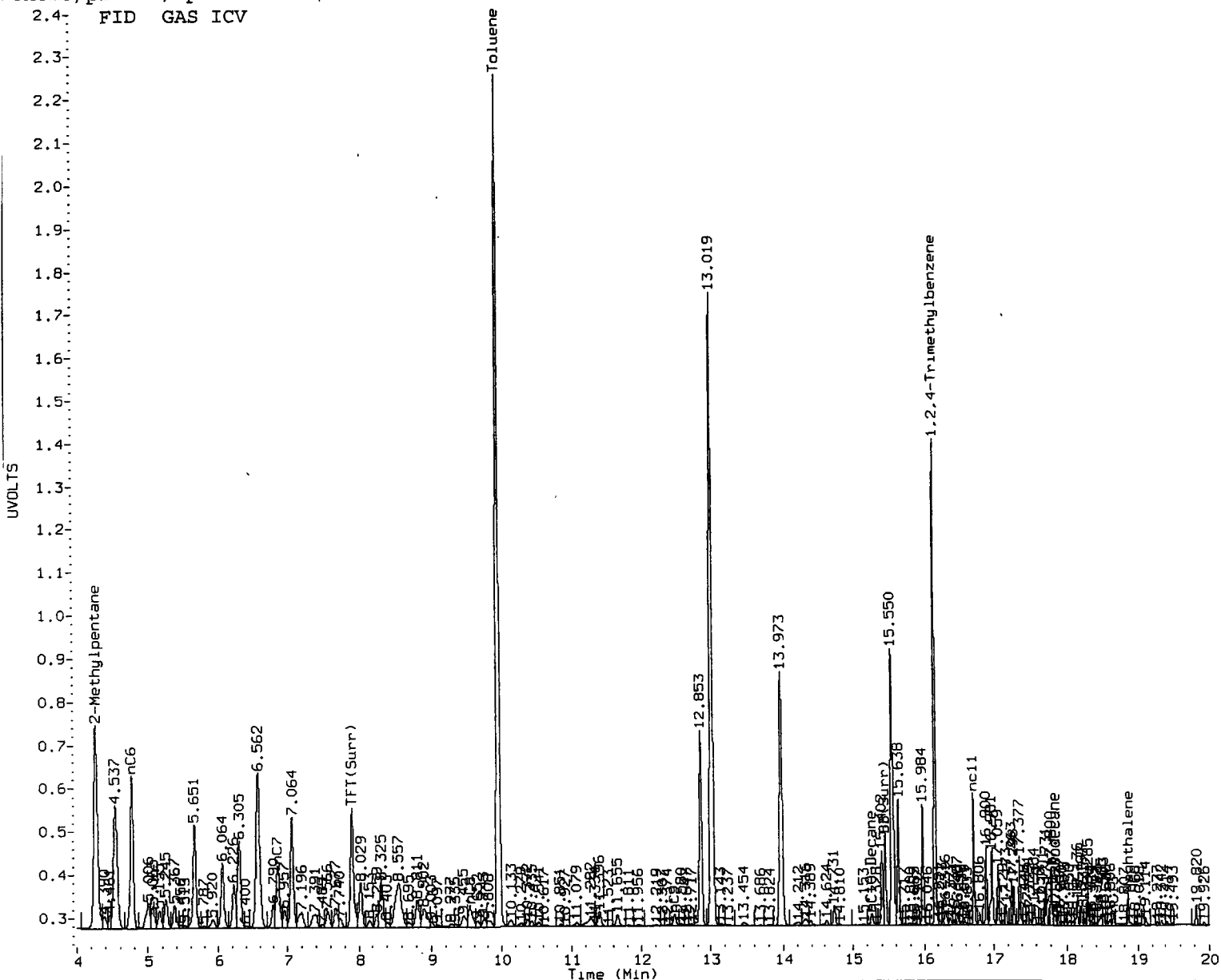
Data File: /chem3/pid1.1/vpcc0416-1.b/0416a020.d/0416a020.cdf  
 Injection Date: 16-APR-2011 18:14  
 Instrument: pid1.1  
 Client Sample ID:



MH  
4/18/11



FID GAS ICV



MANUAL INTEGRATION

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

Analyst: MH

Date: 4/18/11

Report Date : 18-Apr-2011 11:11

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/vpcc0416-1.b/FID.m  
Batch File: /chem3/pid1.i/vpcc0416-1.b  
Inst ID: pid1.i

ID: RT01 RT02 RT03 RT04 RT05 RT06  
 FILENAME: 0416a014 0416a015 0416a016 0416a017 0416a018  
 INJ. DATE: 16-APR-2011 16-APR-2011 16-APR-2011 16-APR-2011 16-APR-2011  
 INJ. TIME: 14:50 15:19 15:48 16:17 16:47 17:16

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 NMTPHG	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
20 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
19 AK101	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
21 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
1 2-Methylpentane	4.242	4.245	4.258	4.266	4.270	4.280	4.269	4.199-4.339	4.260	0.015
2 nC6	4.753	4.757	4.765	4.771	4.781	4.794	4.770	4.700-4.840	4.770	0.015
3 nC7	6.861	6.861	6.863	6.859	6.857	6.856	6.856	6.786-6.926	6.860	0.002
4 TPT(Surr)	7.903	7.903	7.903	7.901	7.900	0.000	7.903	7.833-7.973	6.585	3.226
5 nC8	9.538	9.543	9.543	9.542	9.543	9.551	9.527	9.457-9.597	9.544	0.004
6 Toluene	9.948	9.948	9.949	9.949	9.952	9.967	9.952	9.882-10.022	9.952	0.007
7 nC9	12.482	12.477	12.477	12.478	12.480	12.490	12.483	12.413-12.553	12.481	0.005
22 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
8 nC10-Decane	15.266	15.263	15.262	15.263	15.264	15.270	15.265	15.195-15.335	15.265	0.003
9 BB(Surr)	15.450	15.450	15.449	15.449	15.450	15.450	15.450	15.380-15.520	15.450	0.000
10 1,2,4-Trimethylbenzene	16.161	16.161	16.160	16.161	16.163	16.172	16.125	16.055-16.195	16.163	0.004
11 nC11	16.753	16.721	16.720	16.720	16.721	16.723	16.759	16.689-16.829	16.726	0.013
12 nC12-Dodecane	17.836	17.836	17.840	17.834	17.833	17.832	17.837	17.767-17.907	17.835	0.003

cut due to saturation.

Date: 4/18/11  
Date:

Reviewer 1 *mtt*  
Reviewer 2

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2011 10:27
End Cal Date : 16-APR-2011 13:22
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/vpcc0416-2.b/PIDB.m
Cal Date : 18-Apr-2011 05:11 monicah
Curve Type : Average

Calibration File Names:

- Level 1: /chem3/pid1.i/vpcc0416-2.b/0416a004.d/0416a004.cdf
Level 2: /chem3/pid1.i/vpcc0416-2.b/0416a005.d/0416a005.cdf
Level 3: /chem3/pid1.i/vpcc0416-2.b/0416a006.d/0416a006.cdf
Level 4: /chem3/pid1.i/vpcc0416-2.b/0416a007.d/0416a007.cdf
Level 5: /chem3/pid1.i/vpcc0416-2.b/0416a008.d
Level 6: /chem3/pid1.i/vpcc0416-2.b/0416a009.d/0416a009.cdf
Level 7: /chem3/pid1.i/vpcc0416-2.b/0416a010.d/0416a010.cdf

Table with 9 columns: Compound, 0.25000, 0.50000, 5.000, 25.000, 50.000, 100.000, RRF, % RSD. Rows include 1 MTBE, 2 Benzene, 4 Toluene, 15 Chlorobenzene, 5 Ethylbenzene, 6 M/P-Xylene.

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2011 10:27  
 End Cal Date : 16-APR-2011 13:22  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pidl.i/vpcc0416-2.b/PIDB.m  
 Cal Date : 18-Apr-2011 05:11 monicah  
 Curve Type : Average

Compound	0.25000	0.50000	5.000	25.000	50.000	100.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	200.000							
	Level 7							
7 O-Xylene	260 296	270	284	300	298	297	286	5.518
13 1,3,5 Trimethyl Benzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++ <-
14 1,2,4 Trimethyl Benzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++ <-
16 1,3 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++ <-
17 1,4 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++ <-
18 1,2 Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++ <-
\$ 3 TFT(Surr)	69.36364 63.05000	66.95455	62.01493	64.69000	64.92481	64.88202	65.12571	3.739
\$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++ <-
\$ 8 BB(Surr)	138 134	135	127	134	136	138	135	2.699

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2011 10:27  
 End Cal Date : 16-APR-2011 13:22  
 Quant Method : ESTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem3/pid1.i/vpcc0416-1.b/FID.m  
 Cal Date : 18-Apr-2011 05:23 monicah  
 Curve Type : Average

Compound	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	0.000e+00							
	Level 7							
14 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	+++++						+++++	+++++
\$ 4 TFT(Surr)	31.27273	29.79545	27.23881	28.27000	27.63910	27.41011		
	26.40500						28.29017	5.953
\$ 22 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	+++++						+++++	+++++
\$ 9 BB(Surr)	22.59091	21.52273	20.02985	21.00000	20.45113	20.64607		
	19.74500						20.85510	4.632

MH  
4/18/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0416-1.b/0416a004.d      ARI ID: BETX .25  
Data file 2: /chem3/pid1.i/vpcc0416-2.b/0416a004.d      Client ID:  
Method: /chem3/pid1.i/vpcc0416-2.b/PIDB.m              Injection Date: 16-APR-2011 10:27  
Instrument: pid1.i    Matrix: WATER  
Gas Ical Date: 16-APRIL-2011                                Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.903	0.000	688	9351	24.3	TFT(Surr)
15.450	0.000	497	4134	23.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.85 to 17.94)	374773	16938	0.045 M
8015B 2MP-TMB ( 4.17 to 16.23)	747017	10607	0.014 M
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	7824	0.013 M
NWTPHG Tol-Nap ( 9.85 to 18.95)	403422	23346	0.058 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.903	0.002	1526	23.4	TFT(Surr)
15.450	0.000	3047	22.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.053	-0.008	131	0.30N	Benzene
9.947	-0.003	103	0.26N	Toluene
12.850	-0.008	88	0.26N	Ethylbenzene
13.013	-0.012	188	0.51N	M/P-Xylene
13.970	-0.008	65	0.23N	O-Xylene
4.527	-0.004	37	0.22N	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0416-1.b/0416a004.d

Date: 16-APR-2011 10:27

Client ID:

Sample Info: BETX .25

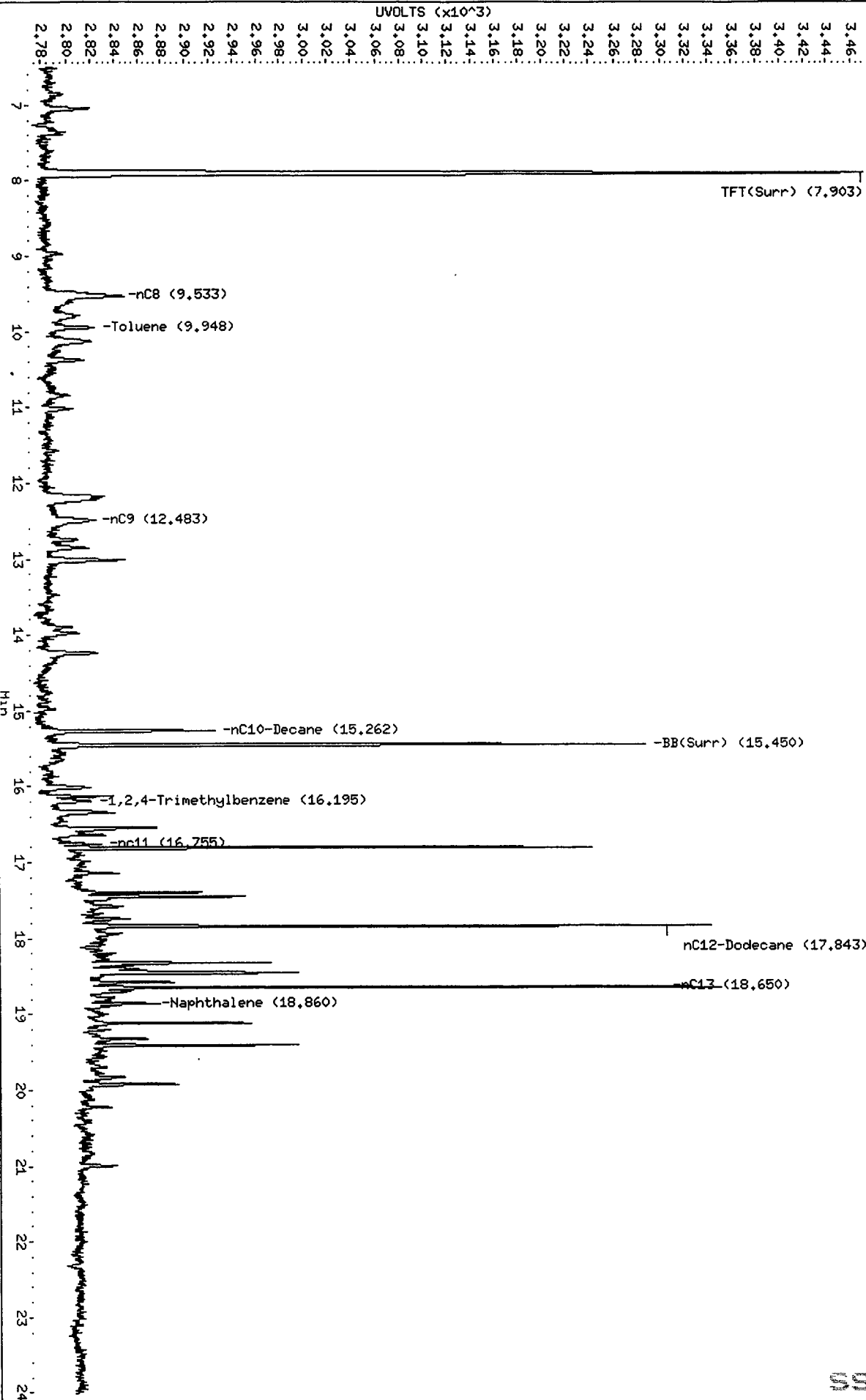
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

/chem3/pid1.i/vpcc0416-1.b/0416a004.d/0416a004.cdf



Data File: /chem3/pid1.i/vpcc0416-2.b/0416a004.d

Date: 16-APR-2011 10:27

Client ID:

Sample Info: BETX .25

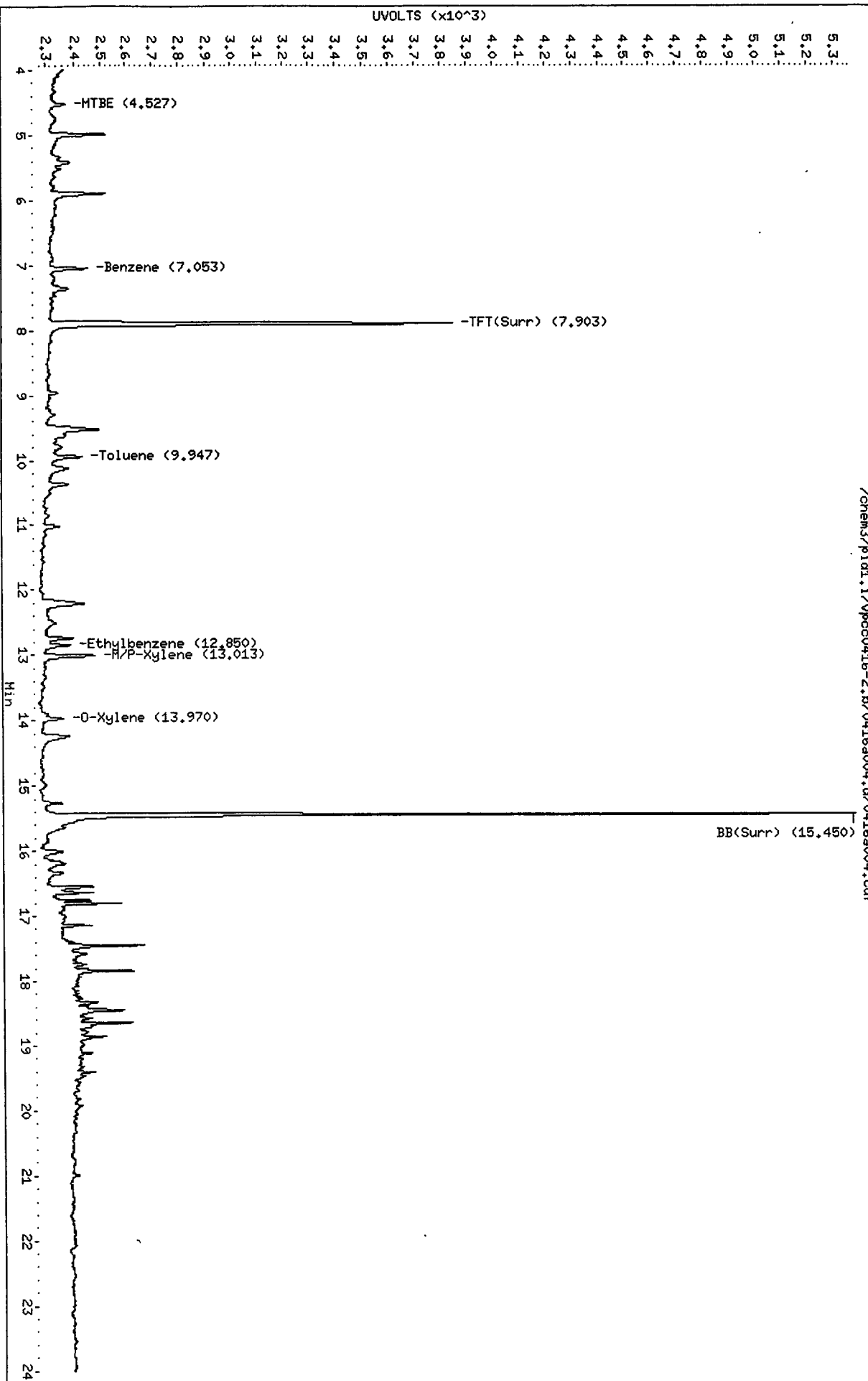
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: HH

Column diameter: 0.18

/chem3/pid1.i/vpcc0416-2.b/0416a004.d/0416a004.cdf





M  
4/18/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0416-1.b/0416a005.d  
Data file 2: /chem3/pid1.i/vpcc0416-2.b/0416a005.d  
Method: /chem3/pid1.i/vpcc0416-2.b/PIDB.m  
Instrument: pid1.i  
Gas Ical Date: 16-APRIL-2011  
BETX Ical Date: 16-APR-2011

ARI ID: BETX .5  
Client ID:  
Injection Date: 16-APR-2011 10:56  
Matrix: WATER  
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.903	0.000	1311	17666	46.3	TFT(Surr)
15.450	0.000	947	7848	45.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.85 to 17.94)	374773	15132	0.040 M
8015B 2MP-TMB ( 4.17 to 16.23)	747017	10419	0.014 M
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	9266	0.015 M
NWTPHG Tol-Nap ( 9.85 to 18.95)	403422	20842	0.052 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.903	0.002	2946	45.2	TFT(Surr)
15.450	0.000	5945	44.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.050	-0.011	244	0.56N	Benzene
9.947	-0.003	204	0.52N	Toluene
12.850	-0.008	170	0.50	Ethylbenzene
13.012	-0.014	364	0.99	M/P-Xylene
13.967	-0.011	135	0.47N	O-Xylene
4.533	0.003	83	0.49N	MTBE

Indicates Peak Area was used for quantitation instead of Height  
Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0416-1.b/0416a005.d  
Date: 16-APR-2011 10:56

Client ID:

Sample Info: BETX .5

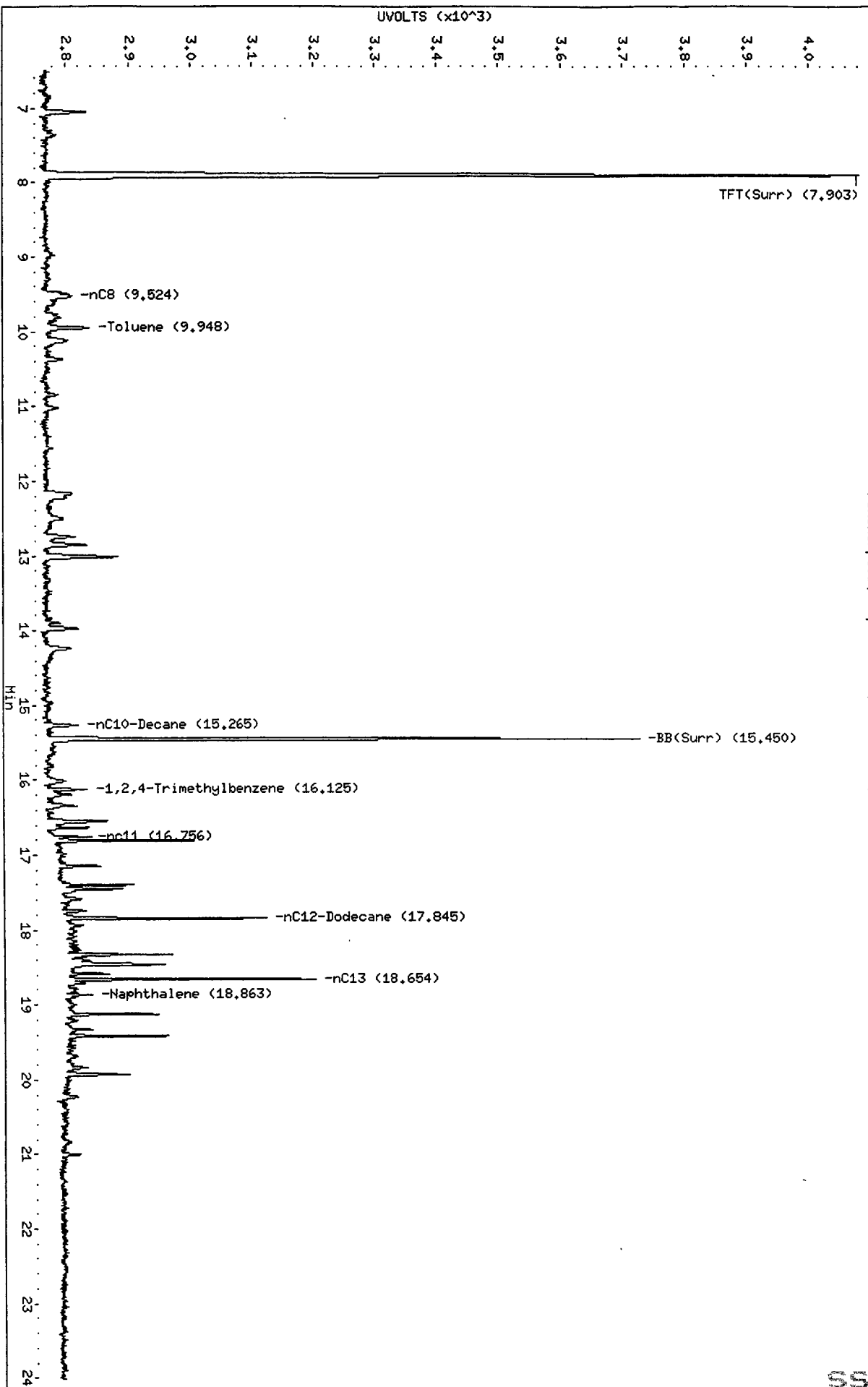
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: HH

Column diameter: 0.18

/chem3/pid1.i/vpcc0416-1.b/0416a005.d/0416a005.cdf



Data File: /chem3/pid1.i/vpcc0416-2.b/0416a005.d  
Date : 16-APR-2011 10:56

Client ID:

Sample Info: BETX .5

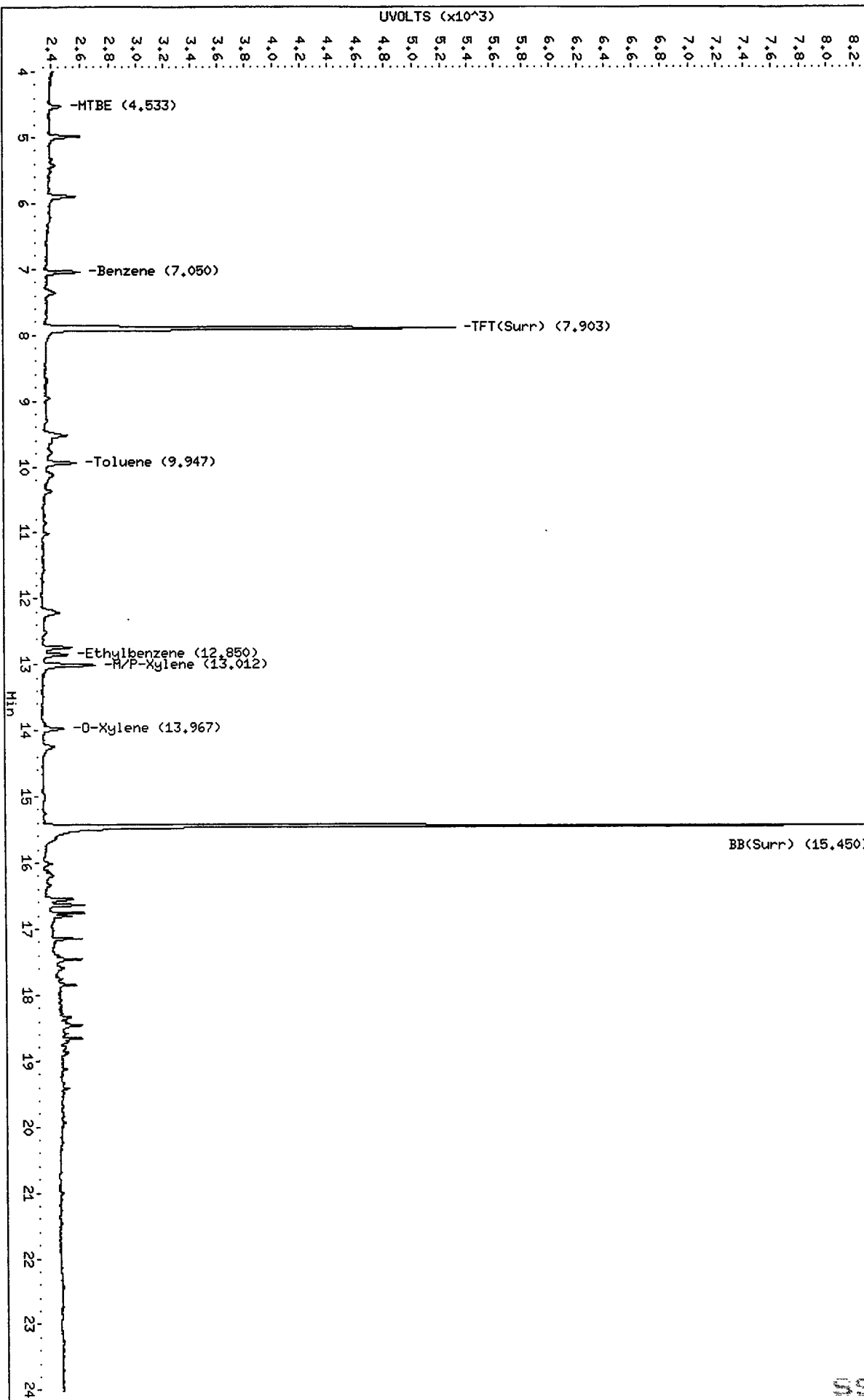
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

/chem3/pid1.i/vpcc0416-2.b/0416a005.d/0416a005.cdf



MH  
4/18/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0416-1.b/0416a006.d      ARI ID: BETX 5  
Data file 2: /chem3/pid1.i/vpcc0416-2.b/0416a006.d      Client ID:  
Method: /chem3/pid1.i/vpcc0416-2.b/PIDB.m              Injection Date: 16-APR-2011 11:26  
Instrument: pid1.i    Matrix: WATER  
Gas Ical Date: 16-APRIL-2011                                  Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.903	0.000	1825	24761	64.5	TFT(Surr)
15.450	0.000	1342	11132	64.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.85 to 17.94)	374773	58606	0.156
8015B 2MP-TMB ( 4.17 to 16.23)	747017	54443	0.073
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	49754	0.082
NWTPHG Tol-Nap ( 9.85 to 18.95)	403422	63476	0.157

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.900	-0.002	4155	63.8	TFT(Surr)
15.450	0.000	8542	63.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.050	-0.011	2204	5.03N	Benzene
9.947	-0.003	1890	4.83N	Toluene
12.851	-0.007	1655	4.85	Ethylbenzene
13.011	-0.014	3528	9.61	M/P-Xylene
13.970	-0.007	1418	4.95	O-Xylene
4.530	0.000	861	5.07N	MTBE

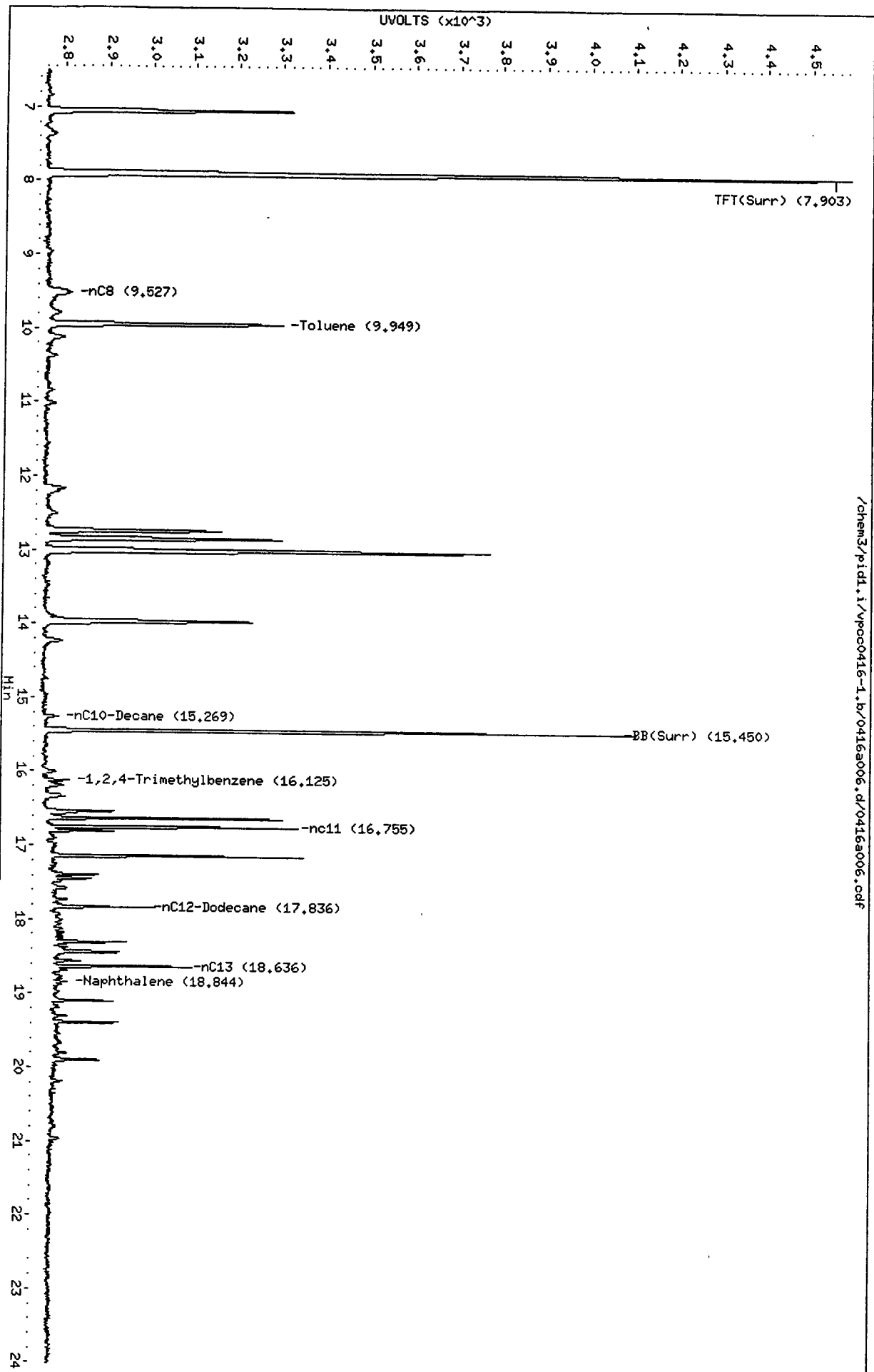
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

MH  
4/18/11

Data File: /chem3/pid1.i/vpcc0416-1.b/0416a006.d  
Date: 16-APR-2011 11:26  
Client ID:  
Sample Info: BETX 5

Column phase: RTX 502-2 FID

Instrument: pid1.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid1.i/vpcc0416-1.b/0416a006.d/0416a006.cdf

Data File: /chem3/pid1.i/vpcc0416-2.b/0416a006.d

Date: 16-APR-2011 11:26

Client ID:

Sample Info: BETX 5

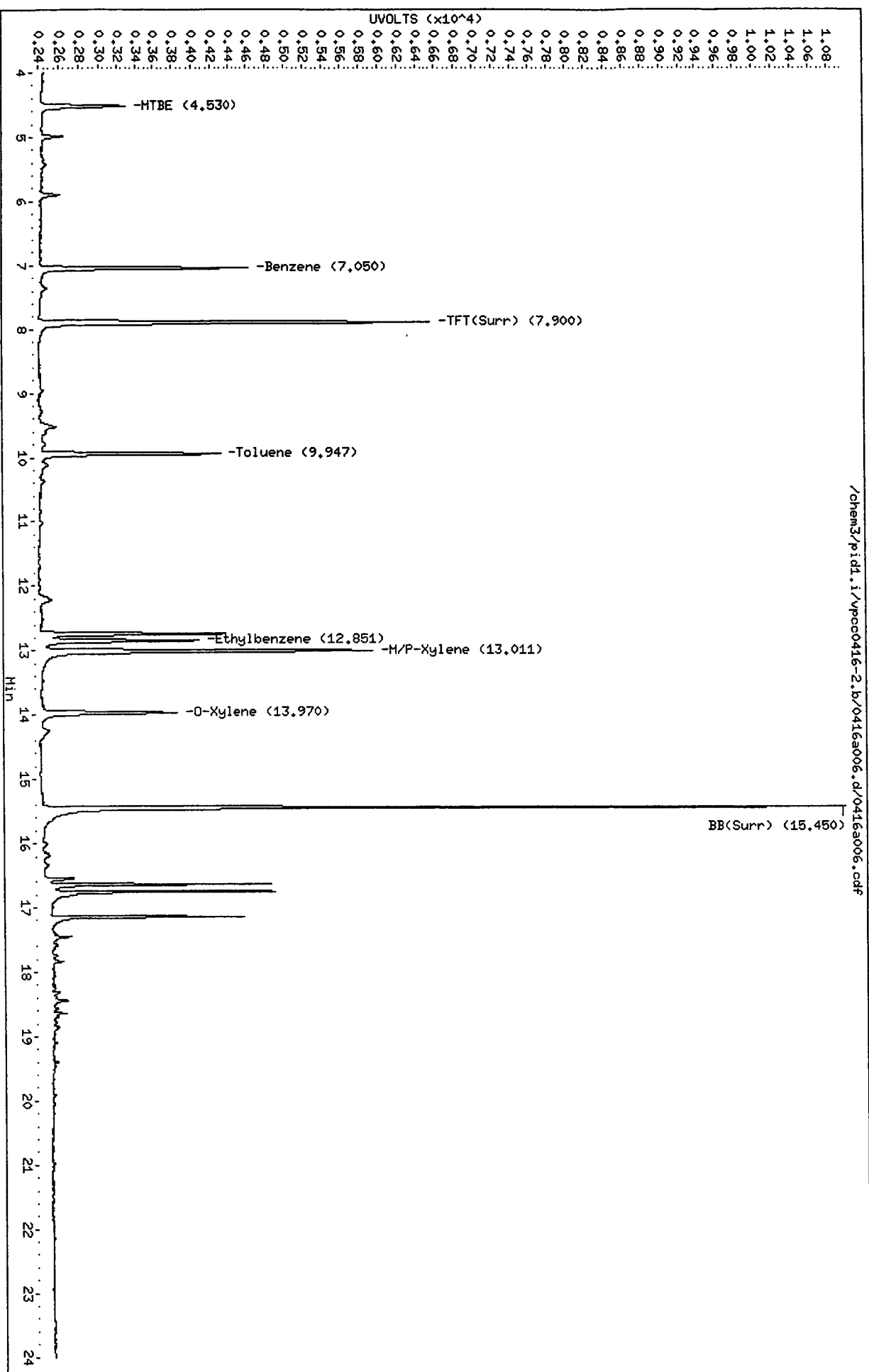
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

/chem3/pid1.i/vpcc0416-2.b/0416a006.d/0416a006.cdf



MH  
4/18/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0416-1.b/0416a007.d      ARI ID: BETX 25  
Data file 2: /chem3/pid1.i/vpcc0416-2.b/0416a007.d      Client ID:  
Method: /chem3/pid1.i/vpcc0416-2.b/PIDB.m              Injection Date: 16-APR-2011 11:55  
Instrument: pid1.i    Matrix: WATER  
Gas Ical Date: 16-APRIL-2011                              Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
7.903	0.000	2827	38759	99.9	TFT(Surr)
15.449	-0.001	2100	17338	100.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 ( 9.85 to 17.94)	374773	253075	0.675
8015B 2MP-TMB ( 4.17 to 16.23)	747017	247048	0.331
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	226561	0.375
NWTPHG Tol-Nap ( 9.85 to 18.95)	403422	257190	0.638

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
7.900	-0.002	6469	99.3	TFT(Surr)
15.450	0.000	13448	99.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.053	-0.008	10368	23.65N	Benzene
9.947	-0.003	9730	24.88N	Toluene
12.851	-0.008	8739	25.59	Ethylbenzene
13.012	-0.013	18703	50.93	M/P-Xylene
13.970	-0.008	7502	26.20N	O-Xylene
4.527	-0.004	4461	26.28N	MTBE

A Indicates Peak Area was used for quantitation instead of Height

N Indicates peak peak was manually integrated

Data File: /chem3/pidl.i/vpcc0416-1.b/0416a007.d  
Date: 16-APR-2011 11:55

Client ID:

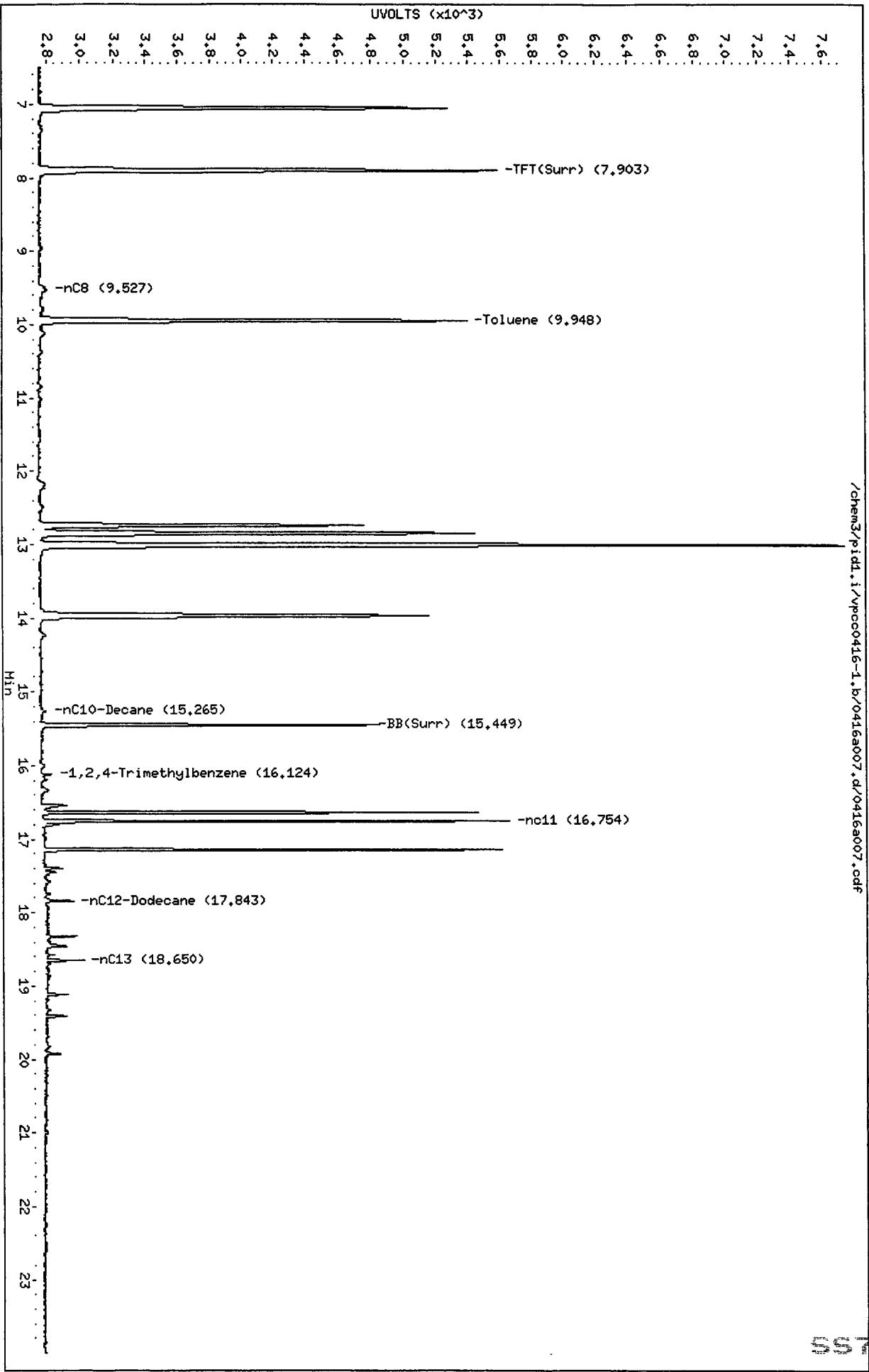
Sample Info: BETX 25

Column phase: RTX 502-2 FID

Instrument: pidl.i

Operator: MH

Column diameter: 0.18



/chem3/pidl.i/vpcc0416-1.b/0416a007.d/0416a007.cdf

041600



Data File: /chem3/pid1.i/vpcc0416-2.b/0416a007.d

Date: 16-APR-2011 11:55

Client ID:

Sample Info: BETX 25

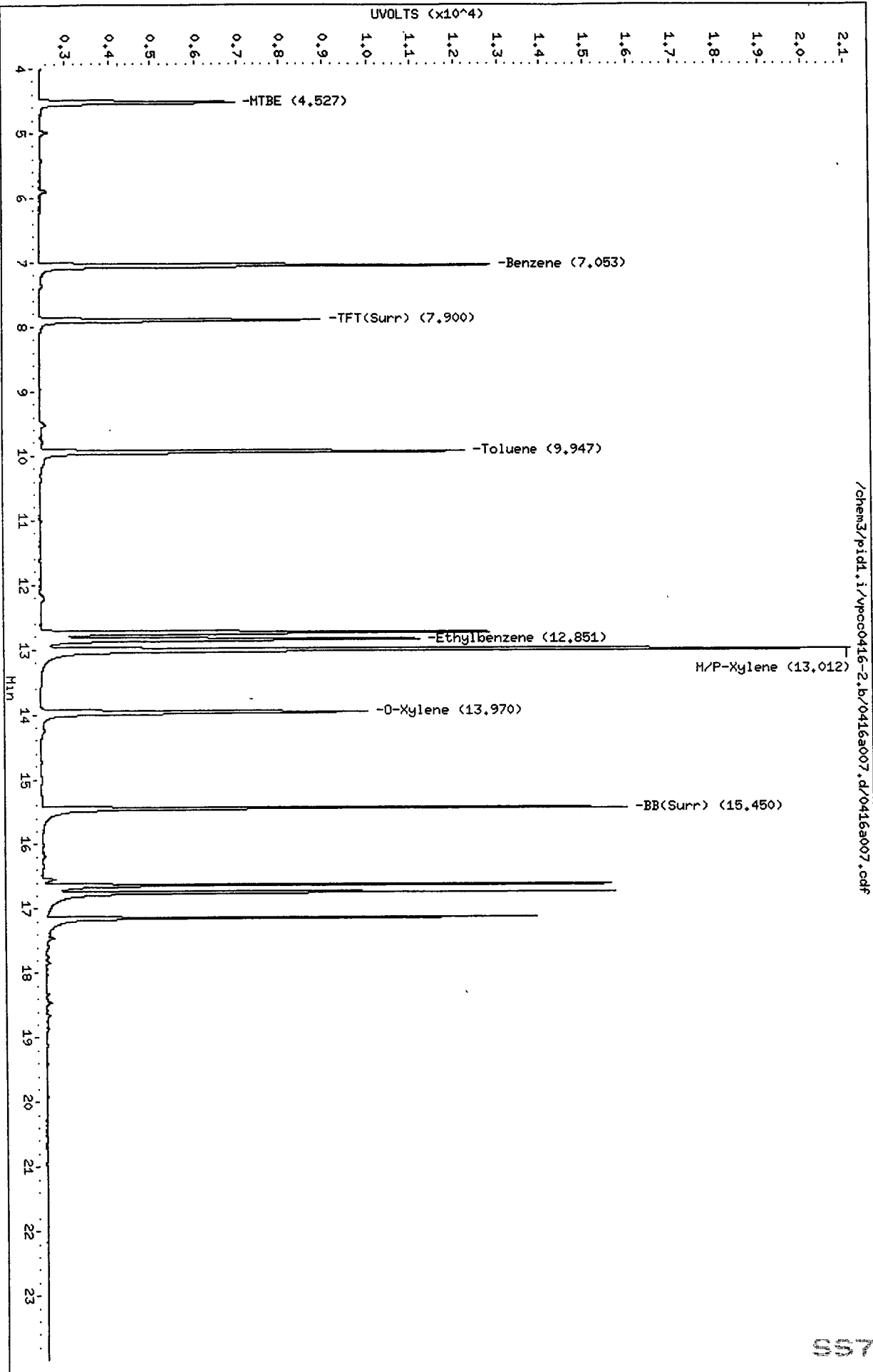
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: MH

Column diameter: 0.18

Page 1



0571 01510

MH  
4/18/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0416-1.b/0416a008.d      ARI ID: BETX 50  
Data file 2: /chem3/pid1.i/vpcc0416-2.b/0416a008.d      Client ID:  
Method: /chem3/pid1.i/vpcc0416-2.b/PIDB.m              Injection Date: 16-APR-2011 12:24  
Instrument: pid1.i    Matrix: WATER  
Gas Ical Date: 16-APRIL-2011                              Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
7.905	0.001	3676	50314	129.9	TFT(Surr)
15.449	-0.001	2720	22778	130.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 ( 9.85 to 17.94)	374773	473088	1.262
8015B 2MP-TMB ( 4.17 to 16.23)	747017	469500	0.628
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	433539	0.718
NWTPHG Tol-Nap ( 9.85 to 18.95)	403422	475864	1.180

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
7.903	0.001	8635	132.6	TFT(Surr)
15.449	-0.001	18039	133.8	BB(Surr)

SW8021 (PID)

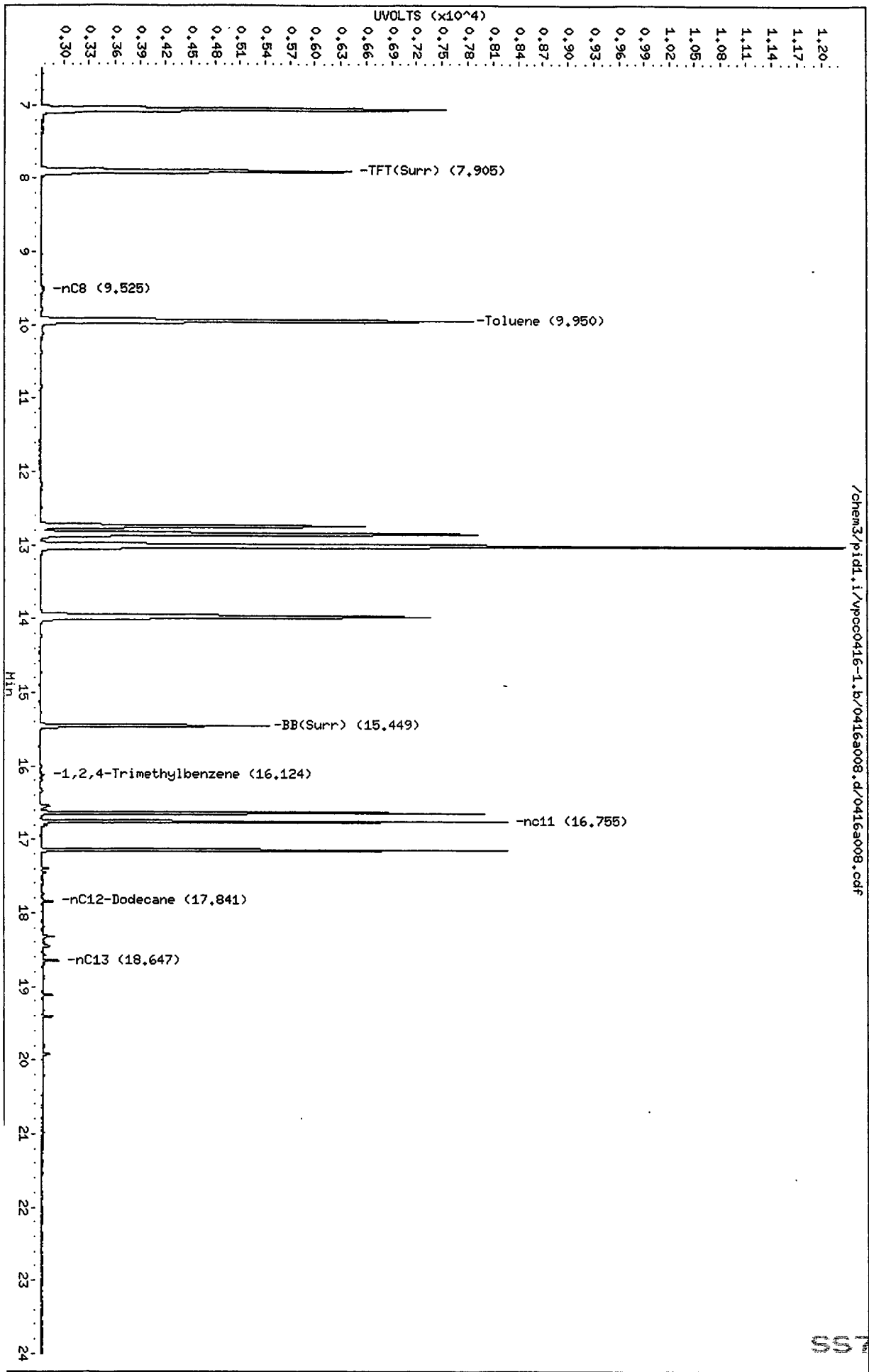
RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.058	-0.003	20297	46.30	Benzene
9.948	-0.002	19342	49.47	Toluene
12.851	-0.007	17231	50.45	Ethylbenzene
13.013	-0.012	37198	101.30	M/P-Xylene
13.970	-0.007	14916	52.09	O-Xylene
4.530	0.000	8842	52.08	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0416-1.b/0416a008.d  
Date : 16-APR-2011 12:24  
Client ID:  
Sample Info: BETX 50

Instrument: pid1.i

Column phase: RTX 502-2 FID  
Operator: MH  
Column diameter: 0.18

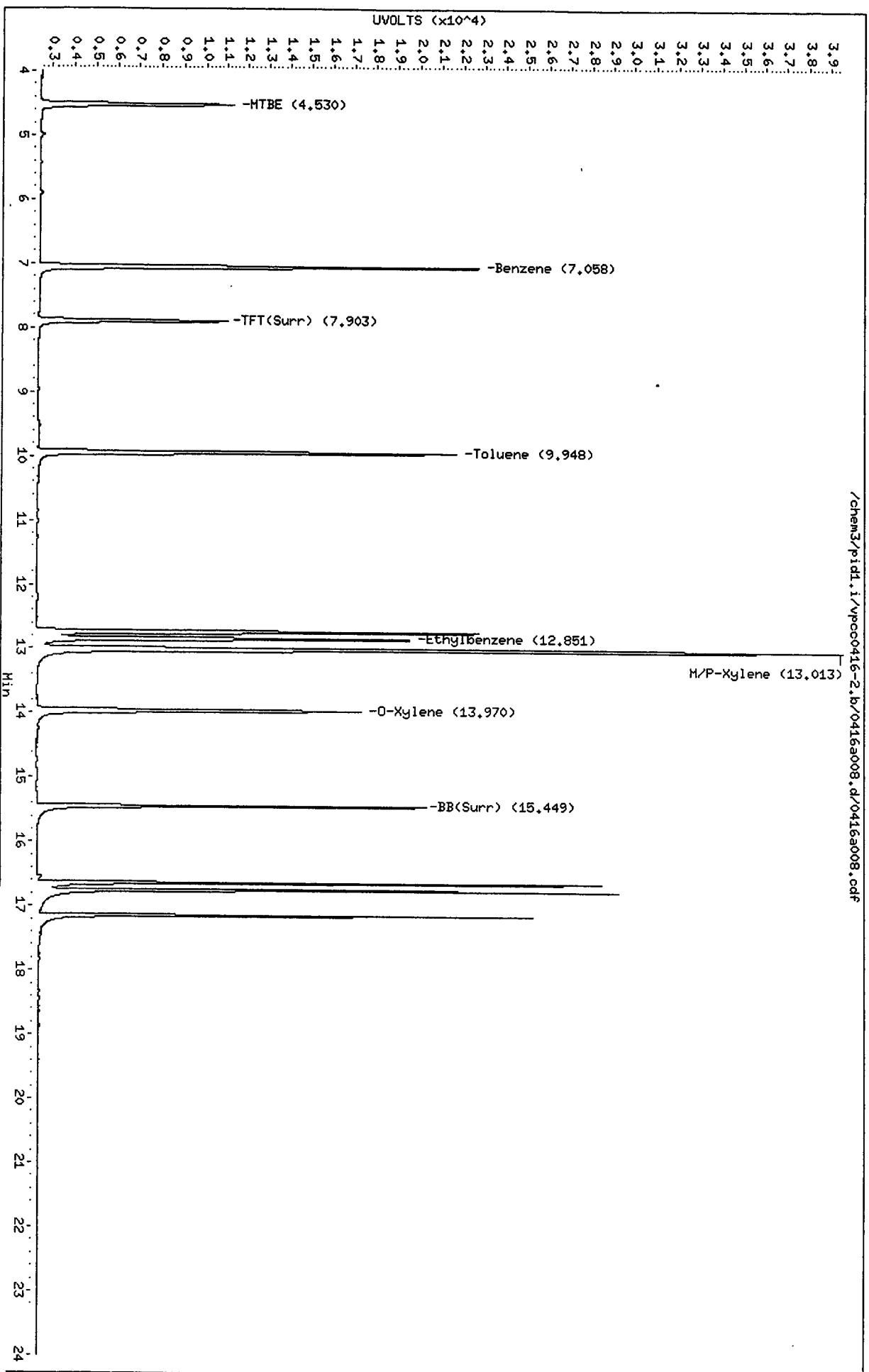


0416008

Data File: /chem3/pidl.i/vpcc0416-2.b/0416a008.d  
Date: 16-APR-2011 12:24  
Client ID:  
Sample Info: BETX 50

Column phase: RTX 502-2 PID

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



041611 1505

MH  
4/18/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0416-1.b/0416a009.d      ARI ID: BETX 100  
Data file 2: /chem3/pid1.i/vpcc0416-2.b/0416a009.d      Client ID:  
Method: /chem3/pid1.i/vpcc0416-2.b/PIDB.m              Injection Date: 16-APR-2011 12:53  
Instrument: pid1.i    Matrix: WATER  
Gas Ical Date: 16-APRIL-2011                                  Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.905	0.001	4879	66504	172.5	TFT(Surr)
15.451	0.001	3675	30850	176.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.85 to 17.94)	374773	907784	2.422
8015B 2MP-TMB ( 4.17 to 16.23)	747017	902434	1.208
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	832432	1.378
NWTPHG Tol-Nap ( 9.85 to 18.95)	403422	910944	2.258

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.903	0.001	11549	177.3	TFT(Surr)
15.451	0.000	24587	182.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.061	-0.001	39795	90.78	Benzene
9.949	-0.001	38591	98.69	Toluene
12.855	-0.003	33997	99.53	Ethylbenzene
13.019	-0.007	74404	202.61	M/P-Xylene
13.973	-0.004	29669	103.61N	O-Xylene
4.530	0.000	17418	102.60	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0416-1.b/0416a009.d

Date: 16-APR-2011 12:53

Client ID:

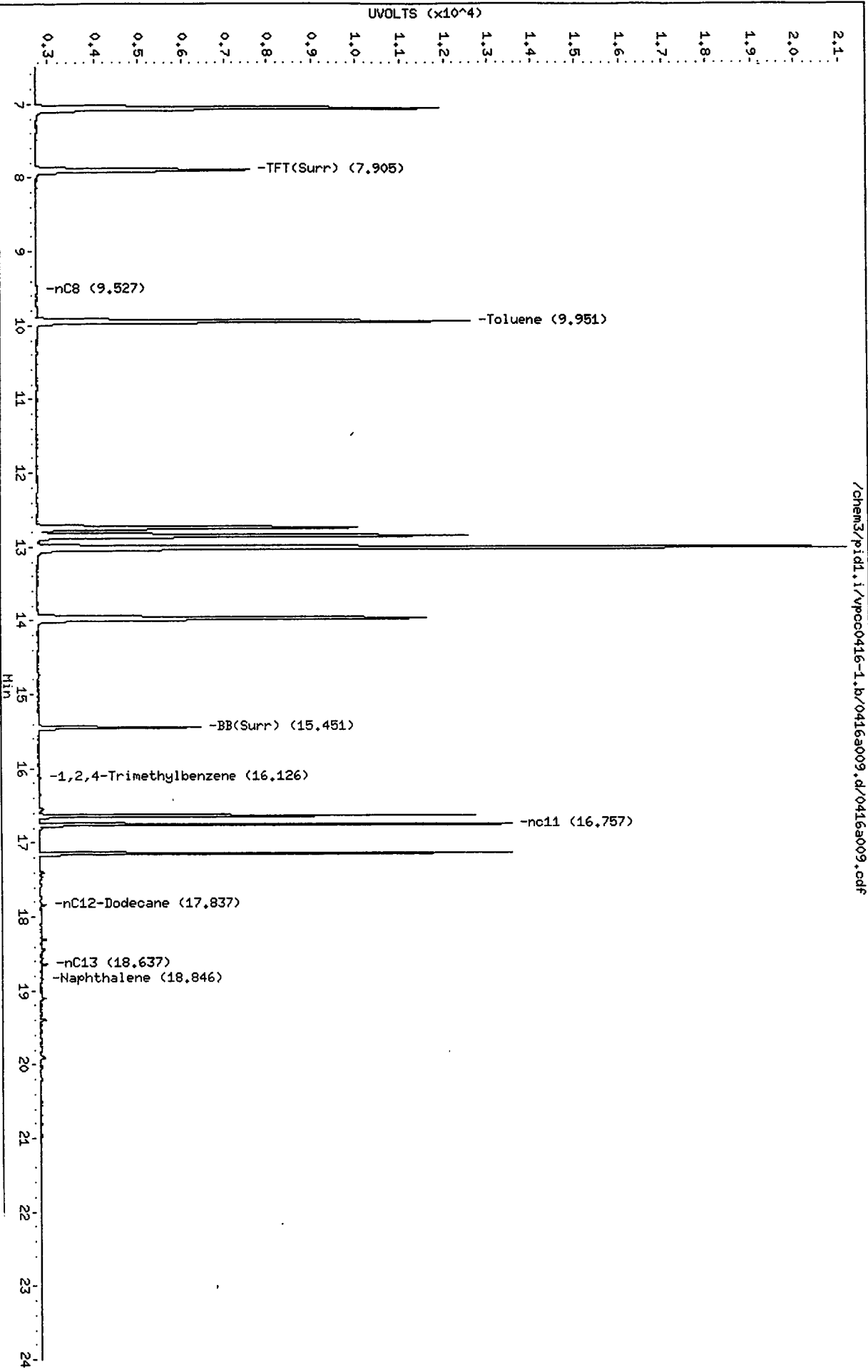
Sample Info: BETX 100

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: HH

Column diameter: 0.18

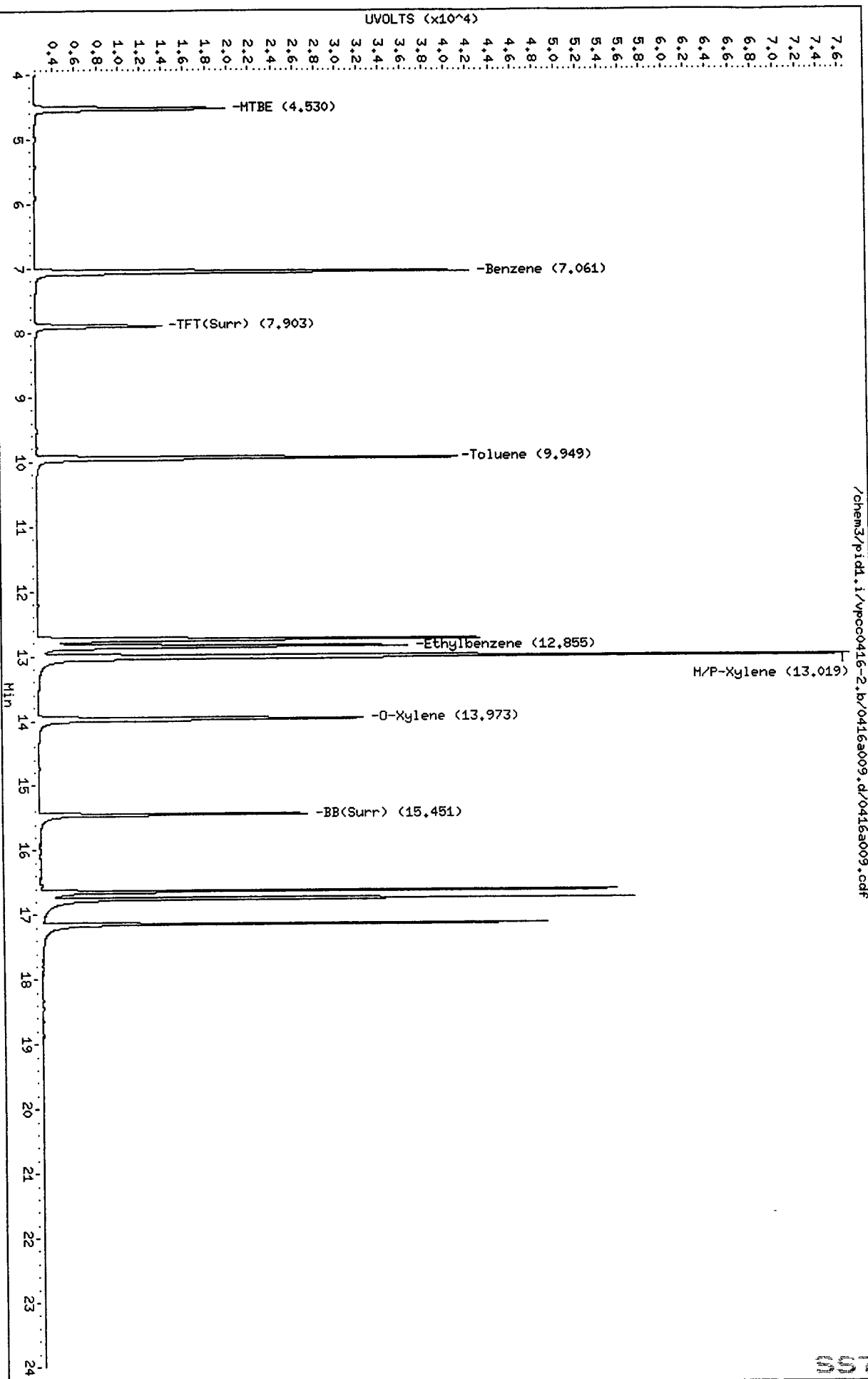


041615 12:53

Data File: /chem3/pid1.i/vpcc0416-2.b/0416a009.d  
Date: 16-APR-2011 12:53  
Client ID:  
Sample Info: BETX 100

Column phase: RTX 502-2 PID

Instrument: pid1.i  
Operator: HH  
Column diameter: 0.18



10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Analytical Resources Inc.  
 BETX/Gas Quantitation Report

M:  
 4/18/11

Data file 1: /chem3/pid1.i/vpcc0416-1.b/0416a010.d  
 Data file 2: /chem3/pid1.i/vpcc0416-2.b/0416a010.d  
 Method: /chem3/pid1.i/vpcc0416-2.b/PIDB.m  
 Instrument: pid1.i  
 Gas Ical Date: 16-APRIL-2011  
 BETX Ical Date: 16-APR-2011

ARI ID: BETX 200  
 Client ID:  
 Injection Date: 16-APR-2011 13:22  
 Matrix: WATER  
 Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.903	0.000	5281	71709	186.7	TFT(Surr)
15.450	0.000	3949	33007	189.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.85 to 17.94)	374773	1751023	4.672 M
8015B 2MP-TMB ( 4.17 to 16.23)	747017	1742510	2.333 M
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	1607931	2.662 M
NWTPHG Tol-Nap ( 9.85 to 18.95)	403422	1754965	4.350 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
 Range marker RT's are set by daily RT standard

RT	Shift	PID Surrogates Response	%Rec	Compound
7.902	0.000	12610	193.6	TFT(Surr)
15.450	0.000	26845	199.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.061	0.000	79451	181.24	Benzene
9.950	0.000	75431	192.91N	Toluene
12.858	0.000	66759	195.45	Ethylbenzene
13.025	0.000	143877	391.80	M/P-Xylene
13.978	0.000	59171	206.63	O-Xylene
4.530	0.000	34540	203.46	MTBE

Indicates Peak Area was used for quantitation instead of Height  
 Indicates peak peak was manually integrated



Data File: /chem3/pid1.i/vpcc0416-1.b/0416a010.d  
Date: 16-APR-2011 13:22

Client ID:

Sample Info: BETX 200

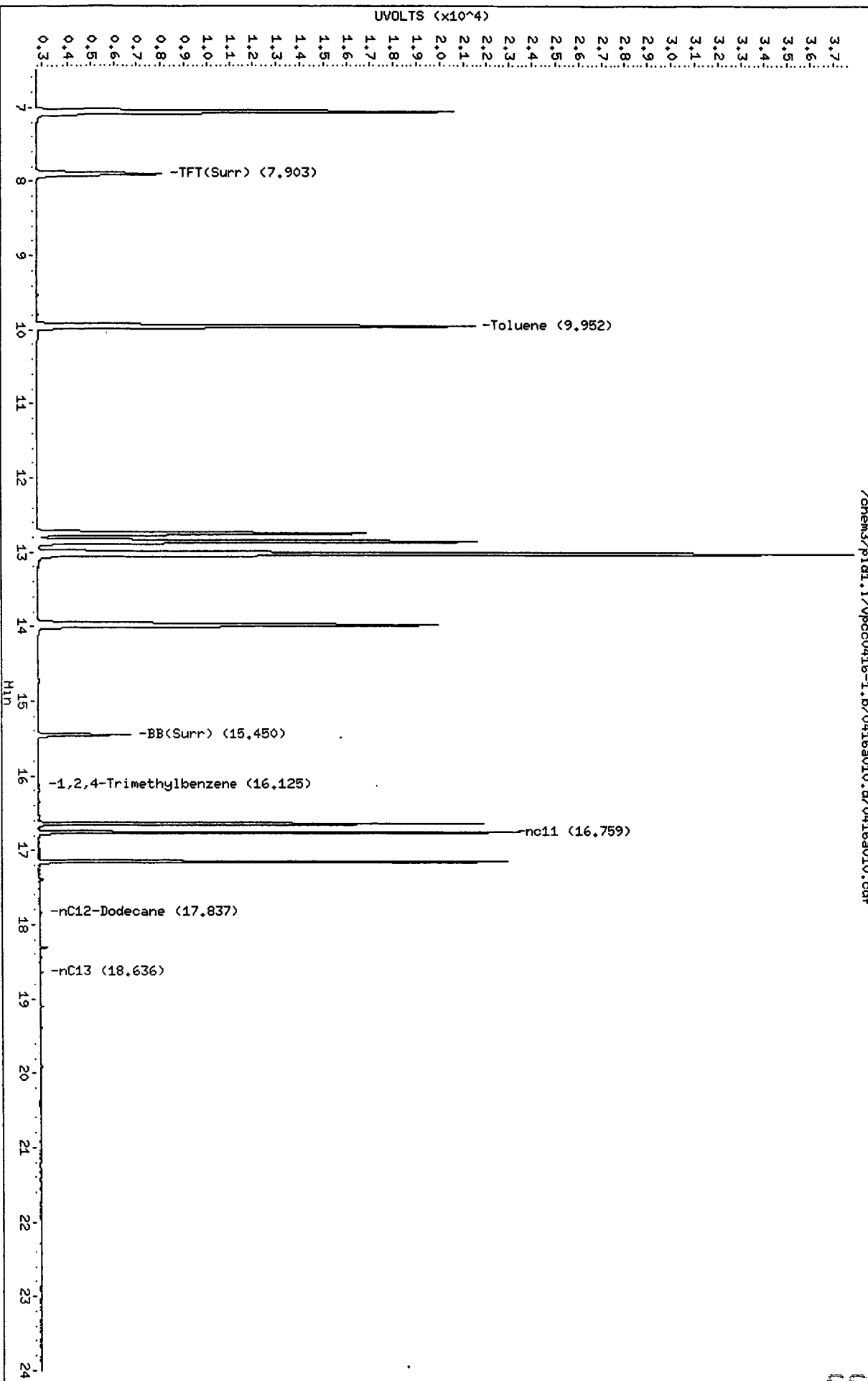
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: HH

Column diameter: 0.18

/chem3/pid1.i/vpcc0416-1.b/0416a010.d/0416a010.cdf



00 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Data File: /chem3/pid1.i/vpcc0416-2.b/0416a010.d  
Date: 16-APR-2011 13:22  
Client ID:  
Sample Info: BETX 200

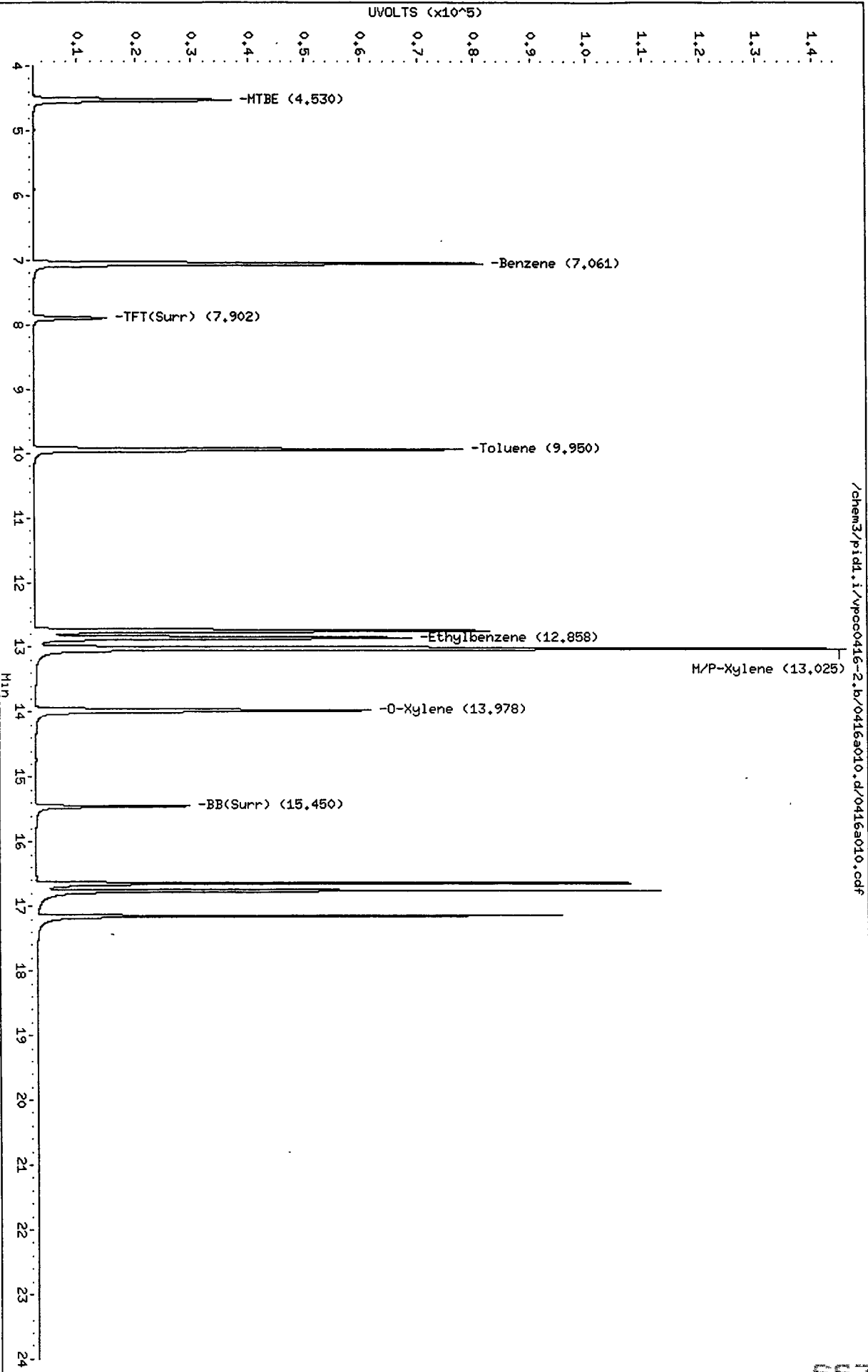
Instrument: pid1.i

Page 1

Column phase: RTX 502-2 PID

Operator: HH  
Column diameter: 0.18

/chem3/pid1.i/vpcc0416-2.b/0416a010.d/0416a010.cdf



0416a010.cdf

MH  
4/18/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0416-1.b/0416a011.d      ARI ID: BETX ICV  
Data file 2: /chem3/pid1.i/vpcc0416-2.b/0416a011.d      Client ID:  
Method: /chem3/pid1.i/vpcc0416-2.b/PIDB.m              Injection Date: 16-APR-2011 13:52  
Instrument: pid1.i    Matrix: WATER  
Gas Ical Date: 16-APRIL-2011                                  Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.903	0.000	2782	38131	98.3	TFT (Surr)
15.450	0.000	2065	17204	99.0	BB (Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.85 to 17.94)	374773	251158	0.670
8015B 2MP-TMB ( 4.17 to 16.23)	747017	247104	0.331
AK101 nC6-nC10 ( 4.67 to 15.17)	604063	228011	0.377
NWTPHG Tol-Nap ( 9.85 to 18.95)	403422	253630	0.629

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.902	0.001	6397	98.2	TFT (Surr)
15.451	0.001	13527	100.4	BB (Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.053	-0.008	10805	24.65	Benzene
9.948	-0.002	9895	25.31	Toluene
12.853	-0.006	8895	26.04	Ethylbenzene
13.014	-0.012	19031	51.82	M/P-Xylene
13.972	-0.005	7643	26.69	O-Xylene
4.529	-0.001	4606	27.13	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0416-1.b/0416a011.d

Date: 16-APR-2011 13:52

Client ID:

Sample Info: BETX ICV

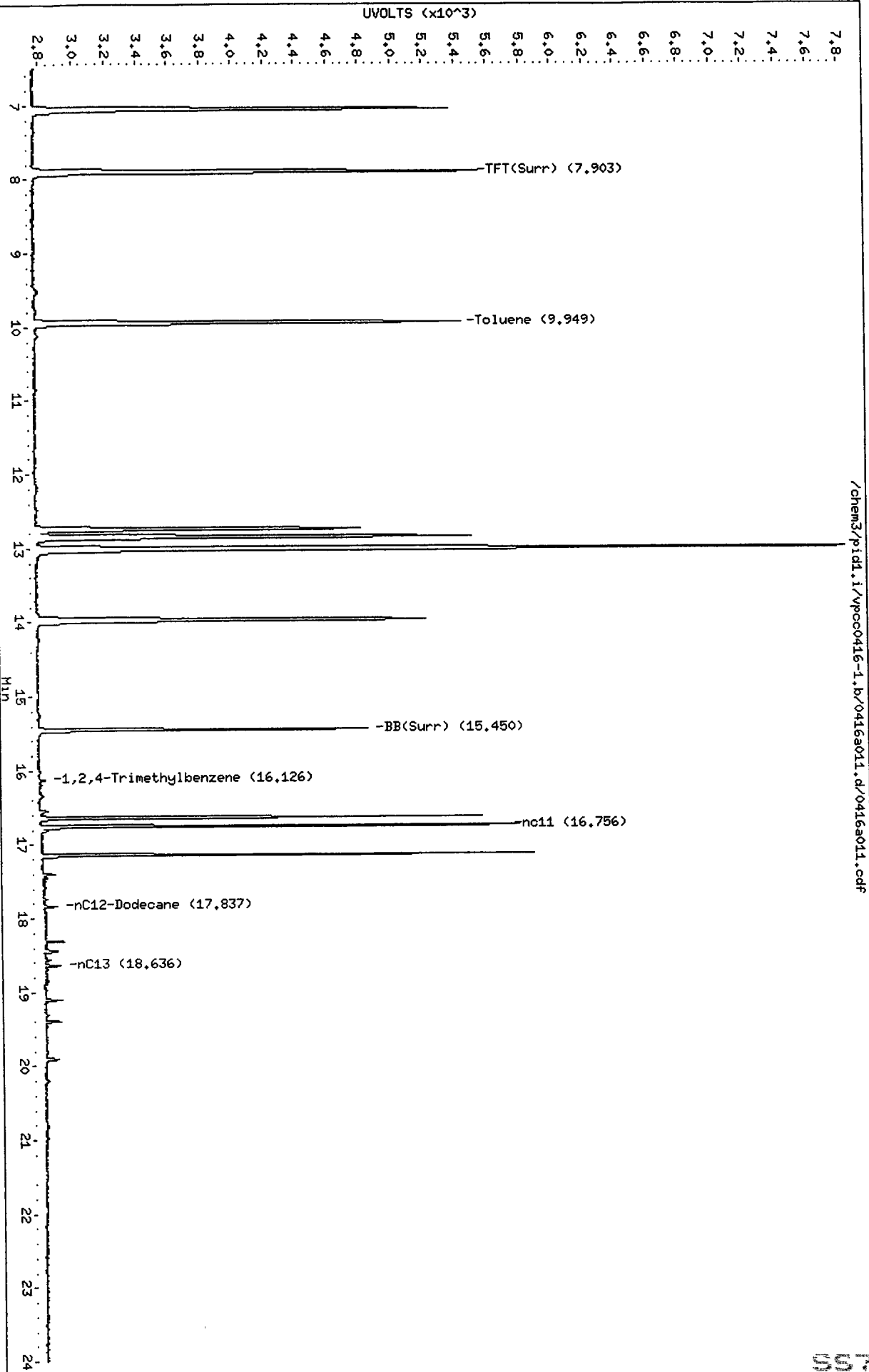
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: HH

Column diameter: 0.18

Page 1



16-APR-2011 13:52

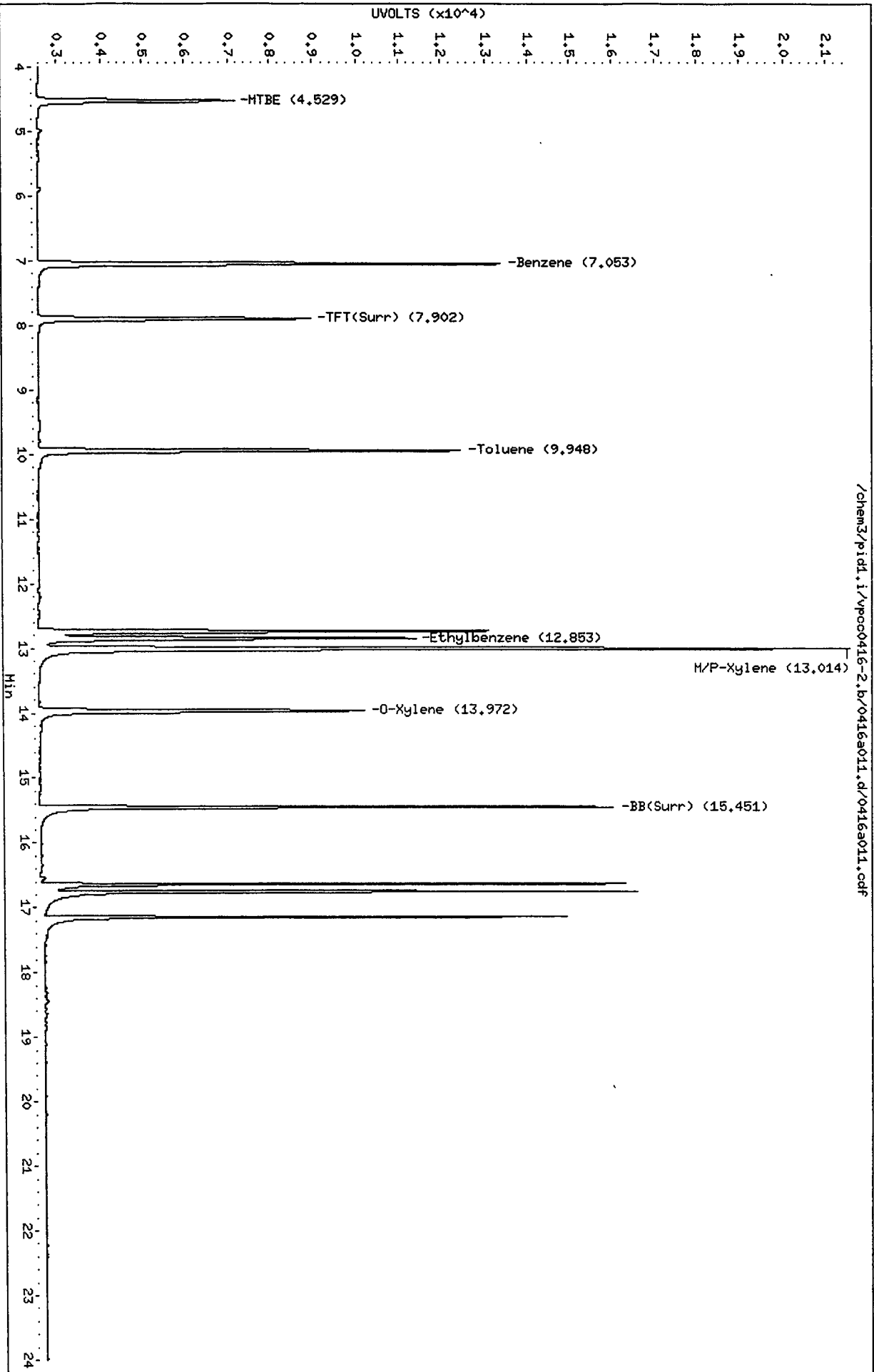
Data File: /chem3/pid1.i/vpcc0416-2.b/0416a011.d  
Date: 16-APR-2011 13:52  
Client ID:  
Sample Info: BETX ICV

Instrument: pid1.i

Page 1

Column phase: RTX 502-2 PID

Operator: MH  
Column diameter: 0.18



041622



Report Date : 18-Apr-2011 11:11

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/vpcc0416-1.b/FID.m  
Batch File: /chem3/pid1.i/vpcc0416-1.b  
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 NMTPHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
20 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
19 AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
21 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
1 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.269	4.199-4.339	+++++	+++++
2 nC6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.770	4.700-4.840	+++++	+++++
3 nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.856	6.786-6.926	+++++	+++++
\$ 4 TPT (Surr)	7.903	7.903	7.903	7.903	7.905	7.905	7.903	7.903	7.833-7.973	7.904	0.001
5 nC8	9.533	9.524	9.527	9.527	9.525	9.527	9.533	9.533	9.463-9.603	9.527	0.003
6 Toluene	9.948	9.948	9.949	9.948	9.950	9.951	9.952	9.948	9.878-10.018	9.949	0.002
7 nC9	12.483	+++++	+++++	+++++	+++++	+++++	+++++	12.483	12.413-12.553	12.483	0.000
\$ 22 BFB (Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
8 nC10-Decane	15.262	15.265	15.269	15.265	15.265	15.265	15.265	15.262	15.192-15.332	15.265	0.003
\$ 9 BB (Surr)	15.450	15.450	15.450	15.449	15.449	15.451	15.450	15.450	15.380-15.520	15.450	0.001
10 1,2,4-Trimethylbenzene	16.195	16.125	16.125	16.124	16.124	16.126	16.125	16.195	16.125-16.265	16.135	0.027
11 nC11	16.755	16.756	16.755	16.754	16.755	16.757	16.759	16.755	16.685-16.825	16.756	0.002
12 nC12-Dodecane	17.843	17.845	17.836	17.843	17.841	17.837	17.837	17.843	17.773-17.913	17.840	0.003

Reviewer 1 MH Date: 4/18/11  
Reviewer 2 [Signature] Date: 4/18/11

**TPHG/BETX Raw Data**  
**Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: SS71**





### VOA Analyst Notes / Corrective Action Log

ARI Project ID: 5571 Client ID: Floyd Snyder

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

Parameter(s): NWTPH6/BTEX

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

Purge Volume (mL) 5 Curve Date: 4/16/11 Analysis Start Date: 4/22/11

pH ≤ 2.0 YES / NO / NA Method Blank In Control? YES / NO

BFB Tune Meets Criteria? YES / NO / NA LCS / LCSD Recovery In Control? YES / NO

Internal Standard Meets Criteria? YES / NO / NA Surrogate Recovery In Control? YES / NO

ICal acceptable? YES / NO CCal acceptable? YES / NO

Q flag applied? YES / NO / NA Q flag applied? YES / NO / NA

Manual Integrations for ICal? YES / ~~NO~~ Manual Integrations for Samples? <sup>Incl. In</sup> YES / ~~NO~~

Special Analysis Criteria Met? YES / NO / NA

Bubbles/Headspace: None SM (≤ 2mm ●) PB (2-4mm) LG (> 4mm ●) Head Space

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

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

Analyst: [Signature] alt Date: 4/25/11

Reviewer: [Signature] Date: 4/25/11

# Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 4/22/11

Analysis: NWTPHG/BETA

Analyst: MH

GC Program: BETA

Column No.: 821726

Column Type: RTX502-Z

Instrument Tune (.U or .CT.):                     

EM Voltage:                     

Calibration File:                     

Curve Date: 4/16/11

IS/SS  
VW683-2

Ical/CCal  
VW666-1  
VW680-3  
VW681-3

LCS/ICV  
VW681-3

Time	Filename	LabID	ClientID	Vial#	pH	DF			
1 0559	0422a001.d	RINSE		23	1658	0422a023.d	SS71L	LL-SB3-2-4-041911	0.00
2 0628	0422a002.d	RT+BCAL 1		24	1727	0422a024.d	SS71M	LL-SB2-0-0 5-041911	0.00
3 0657	0422a003.d	GCAL 1		25	1757	0422a025.d	SS71N	LL-SB2-1 5-2-041911	0.00
4 0727	0422a004.d	LCS0422		26	1826	0422a026.d	RINSE		1
5 0756	0422a005.d	LCSD0422		27	1855	0422a027.d	BCAL 3		1
6 0825	0422a006.d	MB0422		28	1924	0422a028.d	GCAL 3		1
7 0911	0422a007.d	SS71A	LL-SB6-0-0.5-041811	29	1953	0422a029.d	SS71O	LL-SB2-2-3.5-041911	0.00
8 0940	0422a008.d	SS71B	LL-SB6-1.5-2-041811	30	2023	0422a030.d	SS71P	LL-SB1-0-0.5-041911	0.00
9 1010	0422a009.d	SS71C	LL-SB6-2-4-041811	31	2052	0422a031.d	SS71Q	LL-SB1-0-0.5-041911	0.00
10 1039	0422a010.d	SS71D	LL-SB5-0-0 5-041811	32	2121	0422a032.d	SS71R	LL-SB1-1.5-2-041911	0.00
11 1108	0422a011.d	SS71E	LL-SB5-1.5-2-041811	33	2150	0422a033.d	SS71S	LL-SB1-2-4-041911	0.00
12 1137	0422a012.d	SS71F	LL-SB5-2-4-041811	34	2219	0422a034.d	RINSE		1
13 1206	0422a013.d	RINSE		35	2248	0422a035.d	BCAL 4		1
14 1236	0422a014.d	BCAL 2		36	2318	0422a036.d	GCAL 4		1
15 1305	0422a015.d	GCAL 2							
16 1334	0422a016.d	SS71G	LL-SB4-0-0.5-041911						
17 1403	0422a017.d	SS71H	LL-SB4-1.5-2-041911						
18 1432	0422a018.d	SS71I	LL-SB4-2-4-041911						
19 1502	0422a019.d	SS71IMS	LL-SB4-2-4-0419 MS						
20 1531	0422a020.d	SS71IMSD	LL-SB4-2-4-0419 MSD						
21 1600	0422a021.d	SS71J	LL-SB3-0-0.5-041911						
22 1629	0422a022.d	SS71K	LL-SB3-1 5-2-041911						

*[Handwritten scribble]*

MH  
4/25/11

## Maintenance / Comments

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

MH  
4/25/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a002.d      ARI ID: RT+BCAL 1  
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a002.d      Client ID:  
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m              Injection Date: 22-APR-2011 06:28  
Instrument: pid1.i    Matrix: WATER  
Gas Ical Date: 16-APRIL-2011                                  Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.899	0.000	2770	37715	97.9	TFT(Surr)
15.446	0.000	1972	16469	94.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.84 to 17.94)	374773	468863	1.251
8015B 2MP-TMB ( 4.15 to 16.26)	747017	548962	0.735
AK101 nC6-nC10 ( 4.66 to 15.16)	604063	384732	0.637
NWTPHG Tol-Nap ( 9.84 to 18.96)	403422	524135	1.299

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.897	0.000	6364	97.7	TFT(Surr)
15.446	0.000	12979	96.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.051	0.000	10078	22.99	Benzene
9.942	0.000	9350	23.91	Toluene
12.846	0.000	8372	24.51	Ethylbenzene
13.008	0.000	17938	48.85	M/P-Xylene
13.965	0.000	7216	25.20	O-Xylene
4.527	0.000	3830	22.56	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a002.d  
Date : 22-APR-2011 06:28

Client ID:

Sample Info: RT+BCAL 1

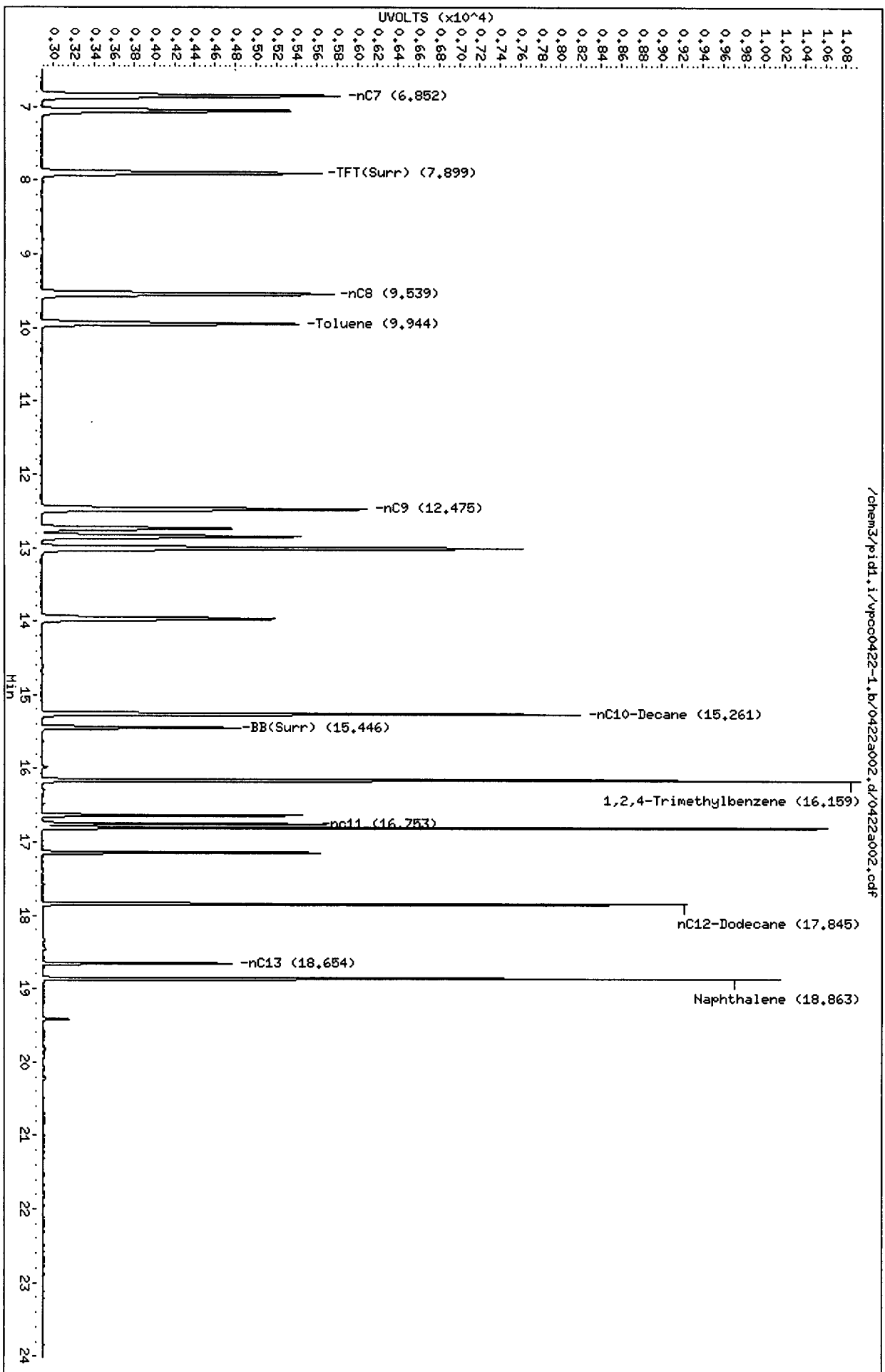
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: HH

Column diameter: 0.18

/chem3/pid1.i/vpcc0422-1.b/0422a002.d/0422a002.cdf



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a002.d

Date: 22-APR-2011 06:28

Client ID:

Sample Info: RT+BCAL 1

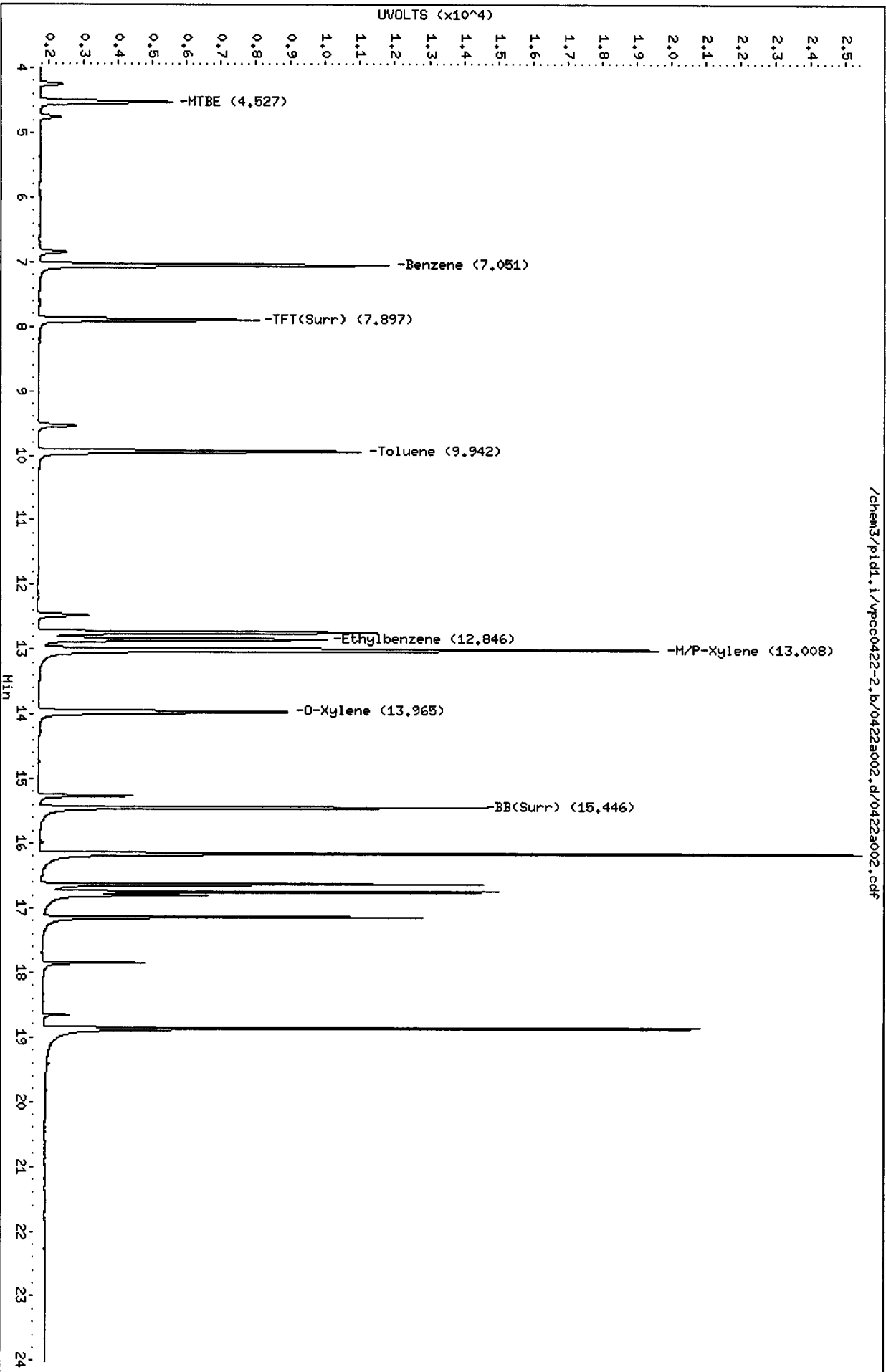
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: HH

Column diameter: 0.18

Page 1



/chem3/pid1.i/vpcc0422-2.b/0422a002.d/0422a002.cdf

0010100

Analytical Resources Inc.  
 BETX/Gas Quantitation Report

MH  
 4/25/11

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a003.d      ARI ID: GCAL 1  
 Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a003.d      Client ID:  
 Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m              Injection Date: 22-APR-2011 06:57  
 Instrument: pid1.i    Matrix: WATER  
 Gas Ical Date: 16-APRIL-2011                                  Dilution Factor: 1.000  
 BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.899	0.000	3032	52854	107.2	TFT(Surr)
15.447	0.001	2006	18403	96.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-Cl2 ( 9.84 to 17.94)	374773	904788	2.414 M
8015B 2MP-TMB ( 4.15 to 16.26)	747017	1821815	2.439 M
AK101 nC6-nC10 ( 4.66 to 15.16)	604063	1462570	2.421 M
NWTPHG Tol-Nap ( 9.84 to 18.96)	403422	962793	2.387 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
 Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.897	0.001	6581	101.1	TFT(Surr)
15.447	0.001	13271	98.5	BB(Surr)

SW8021 (PID)

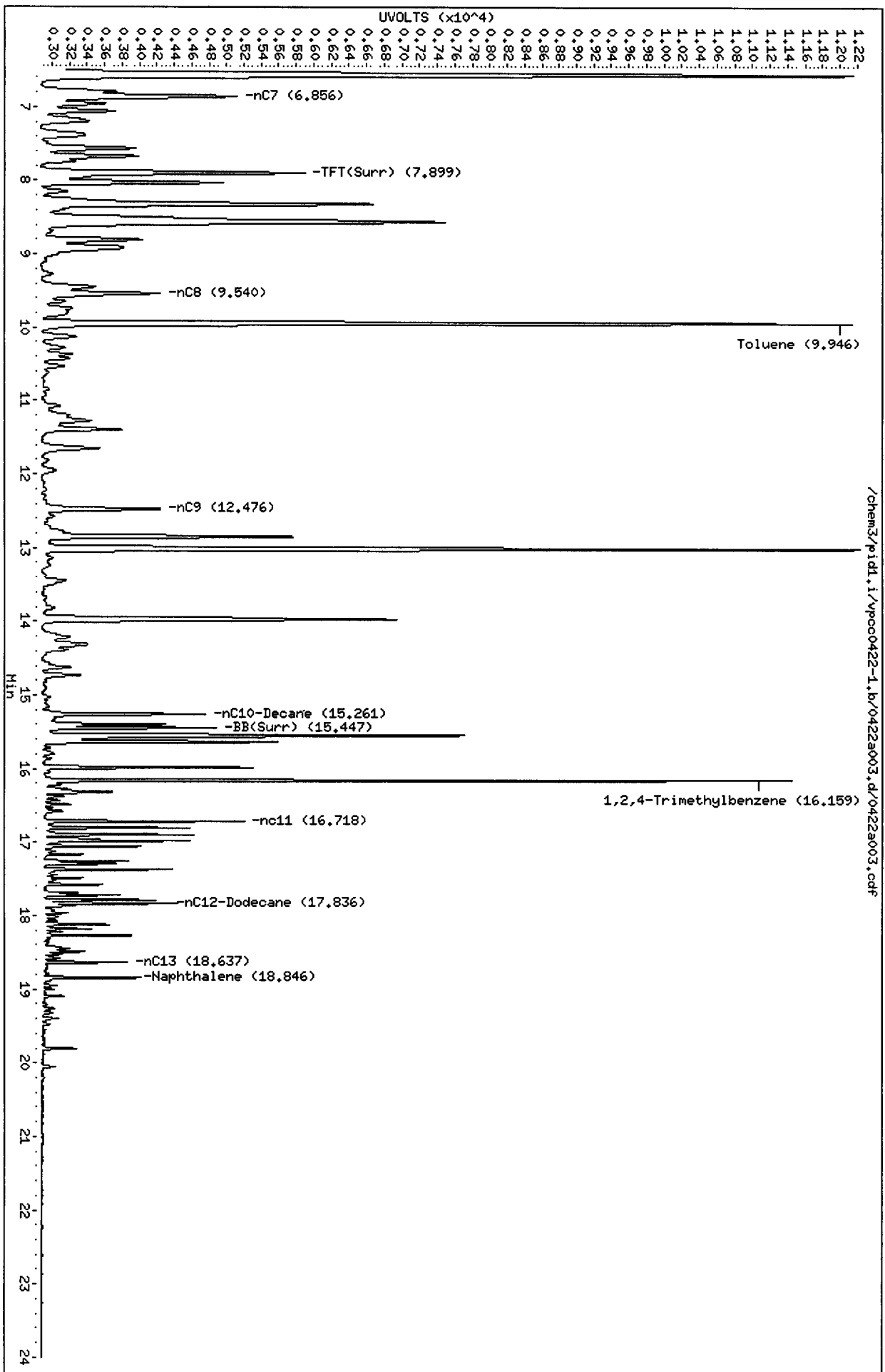
RT	Shift	Response	Amount	Compound
7.057	0.006	3327	7.59	Benzene
9.944	0.002	35310	90.30	Toluene
12.847	0.001	9073	26.56	Ethylbenzene
13.013	0.005	36214	98.62	M/P-Xylene
13.967	0.003	12988	45.35	O-Xylene
4.529	0.002	736	4.34	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
 N Indicates peak peak was manually integrated

Data File: /chem3/pidl.i/vpcc0422-1.b/0422a003.d  
Date : 22-APR-2011 06:57  
Client ID:  
Sample Info: GCAL 1

Column phase: RTX 502-2 FID

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

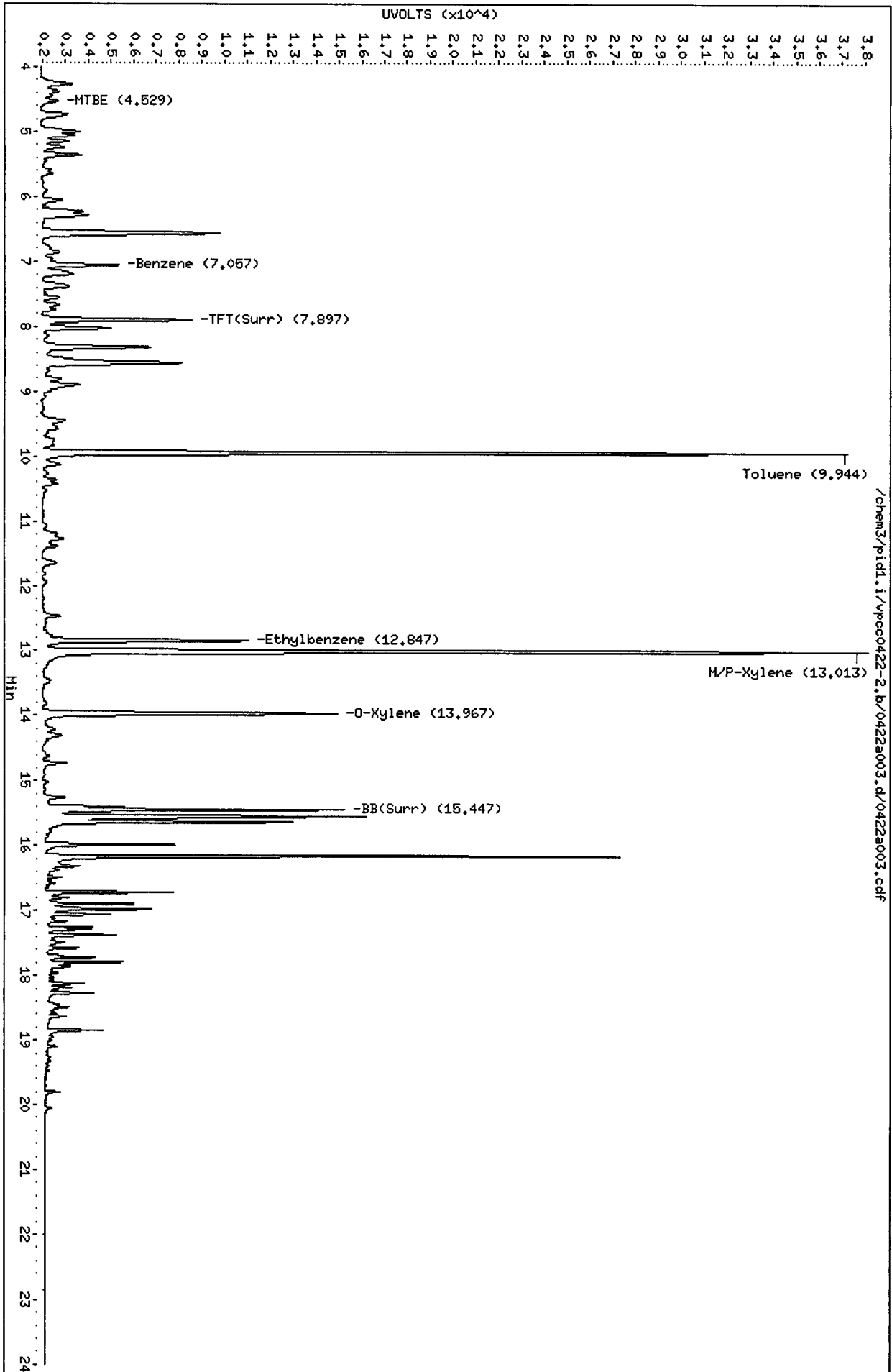


001002 0571

Data File: /chem3/pid1.i/vpcc0422-2.b/0422a003.d  
Date: 22-APR-2011 06:57  
Client ID:  
Sample Info: GCAL 1

Column phase: RTX 502-2 PID

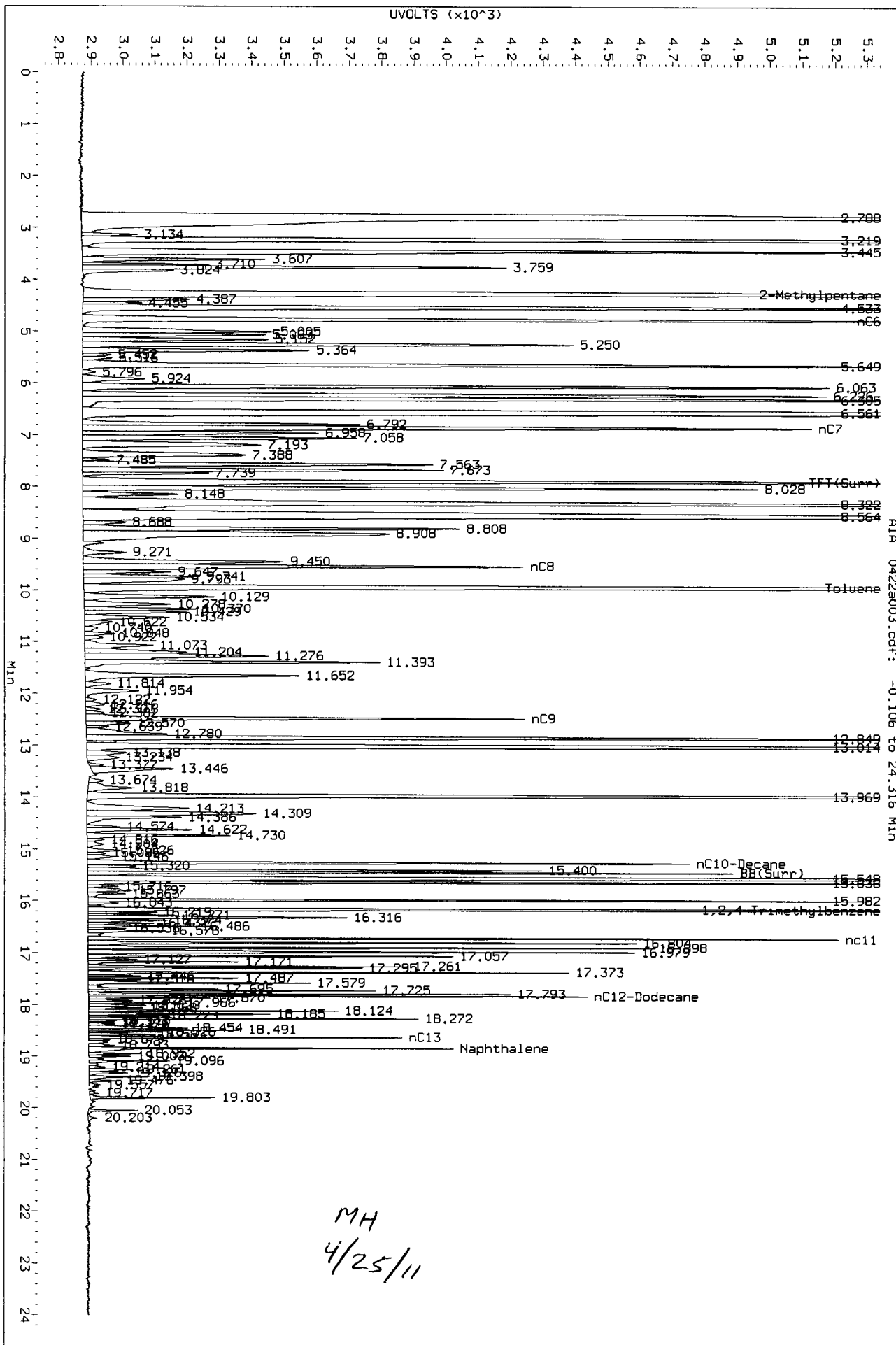
Instrument: pid1.i  
Operator: MH  
Column diameter: 0.18



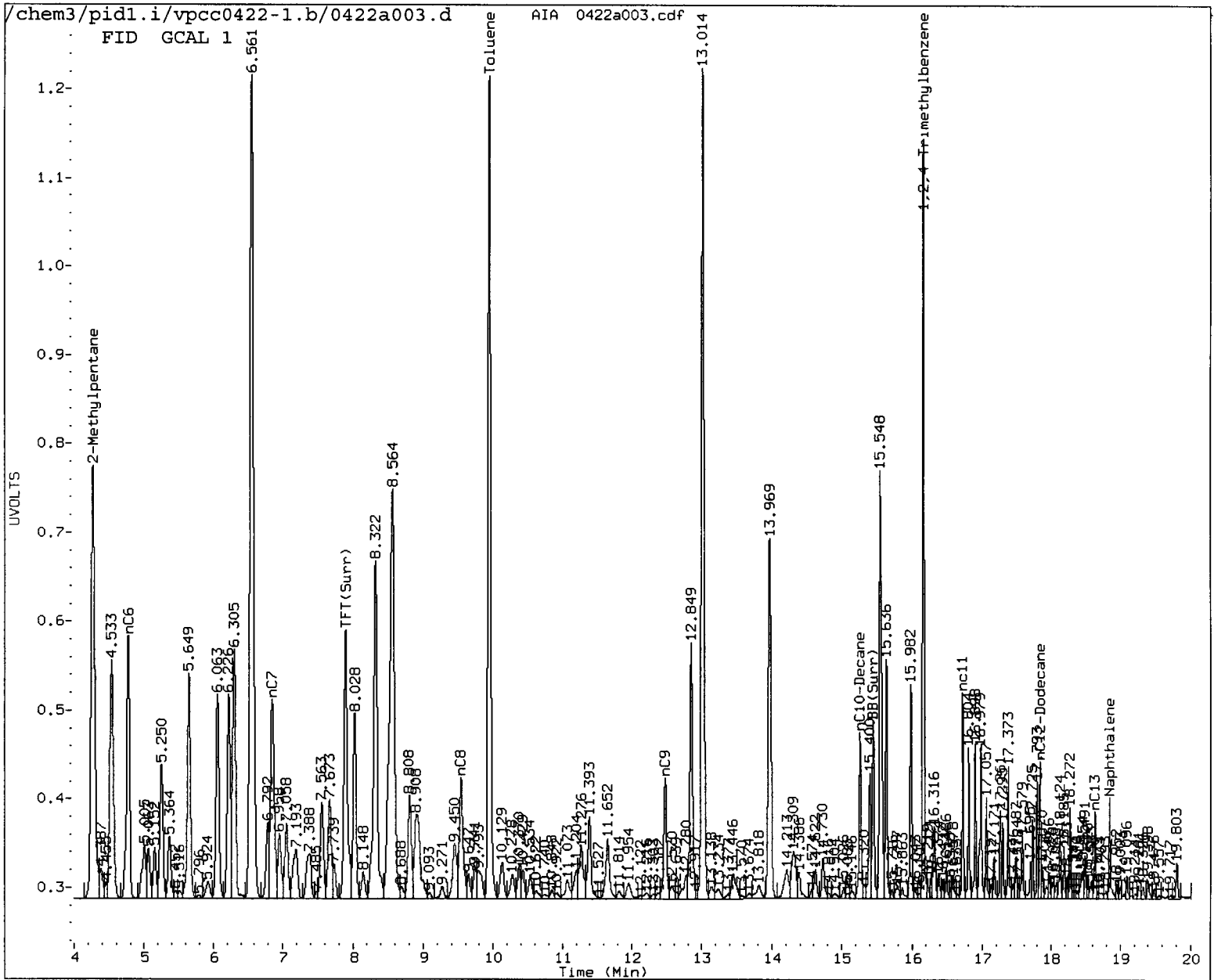
00001010



Data File: /chem3/pid1.i/vpcc0422-1.b/0422a003.d/0422a003.cdf  
 Injection Date: 22-APR-2011 06:57  
 Instrument: pid1.1  
 Client Sample ID:



AIA 0422a003.cdf: -0.106 to 24.316 MIN



MANUAL INTEGRATION

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

Analyst: MH Date: 4/25/11

MH  
4/25/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a004.d      ARI ID: LCS0422  
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a004.d      Client ID:  
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m              Injection Date: 22-APR-2011 07:27  
Instrument: pid1.i    Matrix: WATER  
Gas Ical Date: 16-APRIL-2011                                  Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.900	0.001	2844	43706	100.5	TFT(Surr)
15.447	0.001	2008	17724	96.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.84 to 17.94)	374773	380871	1.016 M
8015B 2MP-TMB ( 4.15 to 16.26)	747017	765281	1.024 M
AK101 nC6-nC10 ( 4.66 to 15.16)	604063	616360	1.020 M
NWTPHG Tol-Nap ( 9.84 to 18.96)	403422	407608	1.010 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.898	0.001	6339	97.3	TFT(Surr)
15.447	0.001	13131	97.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.051	0.000	1437	3.28	Benzene
9.943	0.001	14241	36.42	Toluene
12.847	0.001	3595	10.53	Ethylbenzene
13.011	0.003	14284	38.90	M/P-Xylene
13.967	0.002	5119	17.88	O-Xylene
4.514	-0.012	313	1.84	MTBE

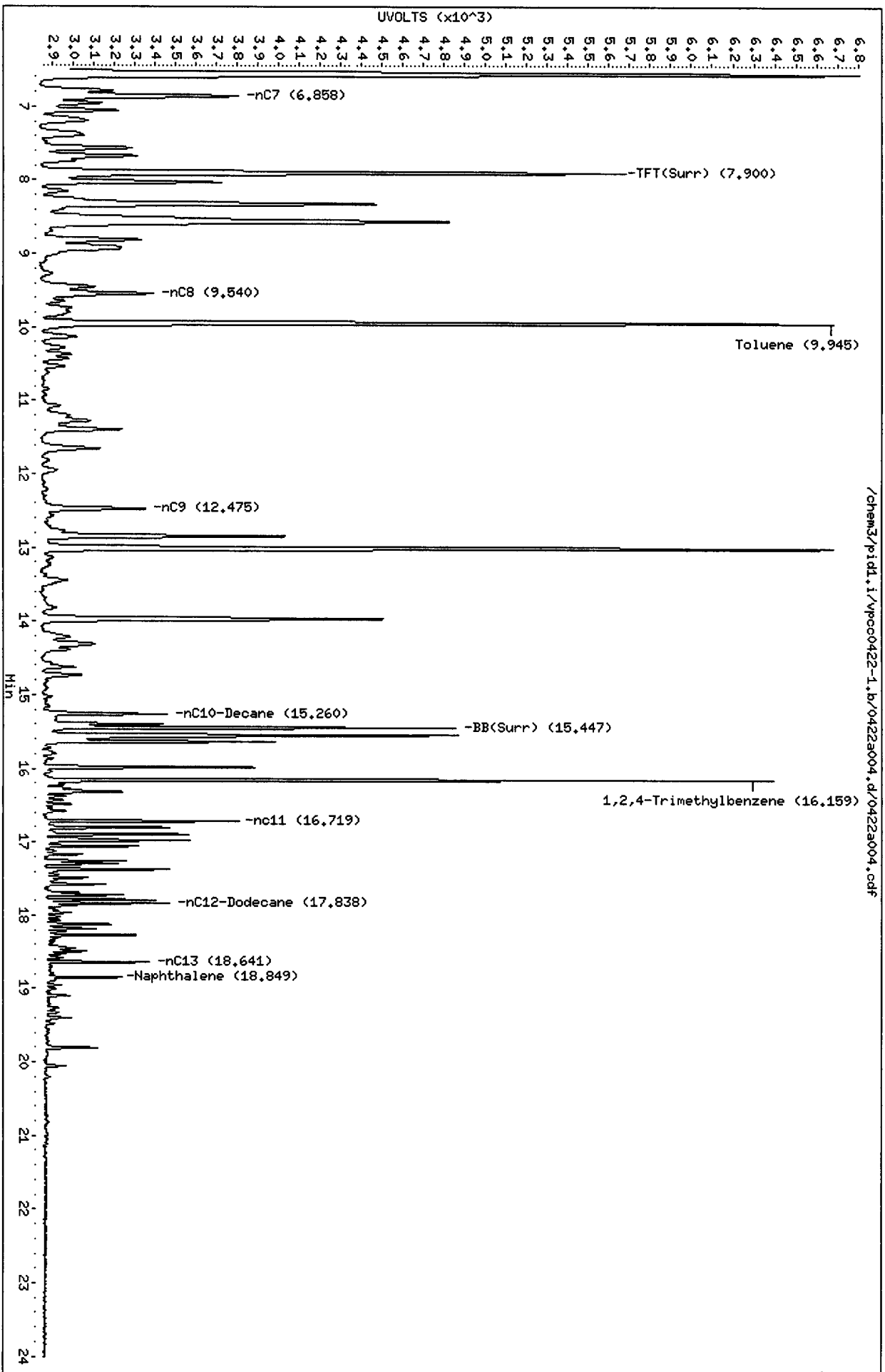
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a004.d  
Date : 22-APR-2011 07:27  
Client ID:  
Sample Info: LCS0422

Column phase: RTX 502-2 FID

/chem3/pid1.i/vpcc0422-1.b/0422a004.d/0422a004.cdf

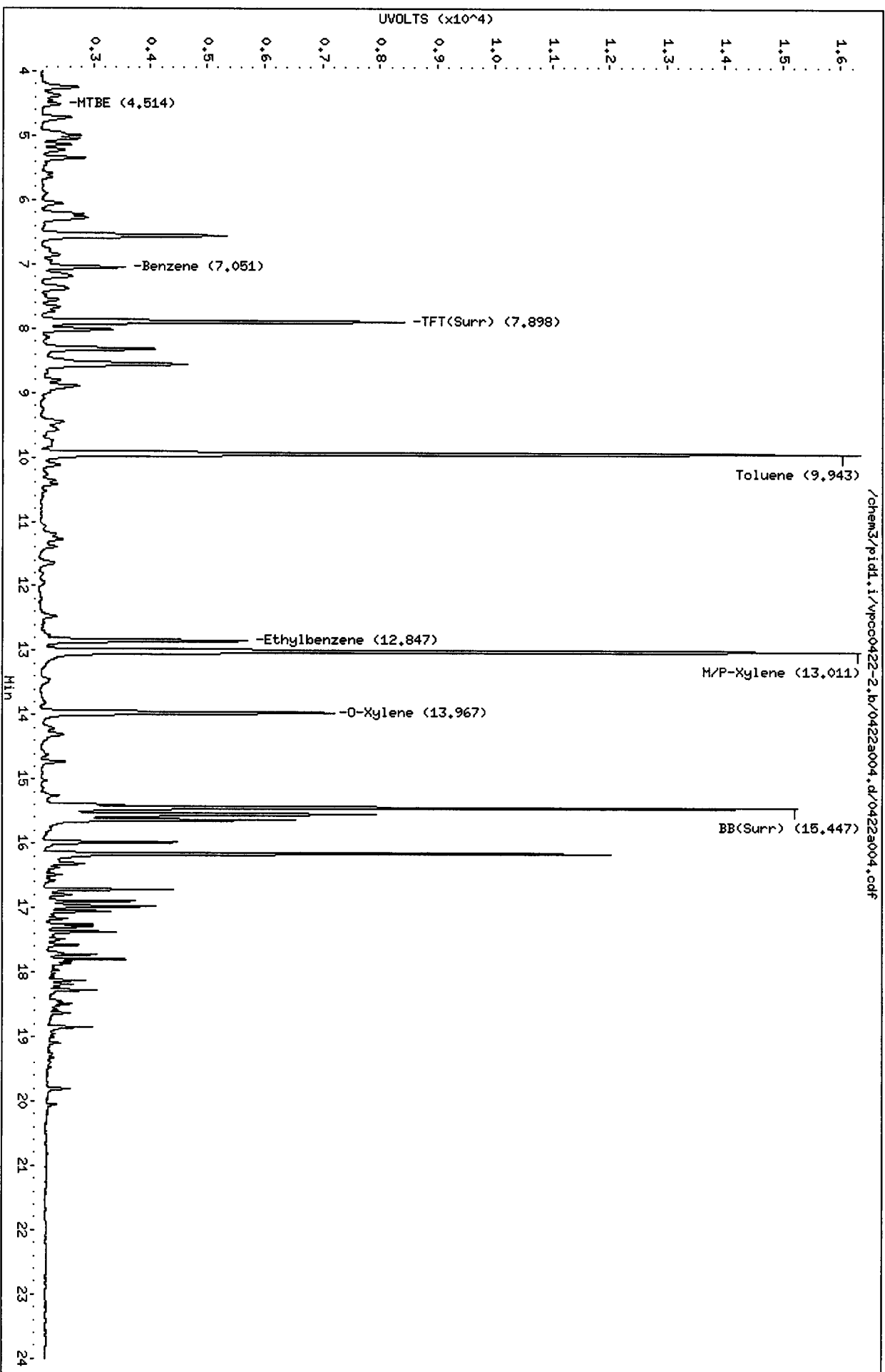
Instrument: pid1.i  
Operator: HH  
Column diameter: 0.18



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a004.d  
Date: 22-APR-2011 07:27  
Client ID:  
Sample Info: LCS0422

Column phase: RTX 502-2 PID

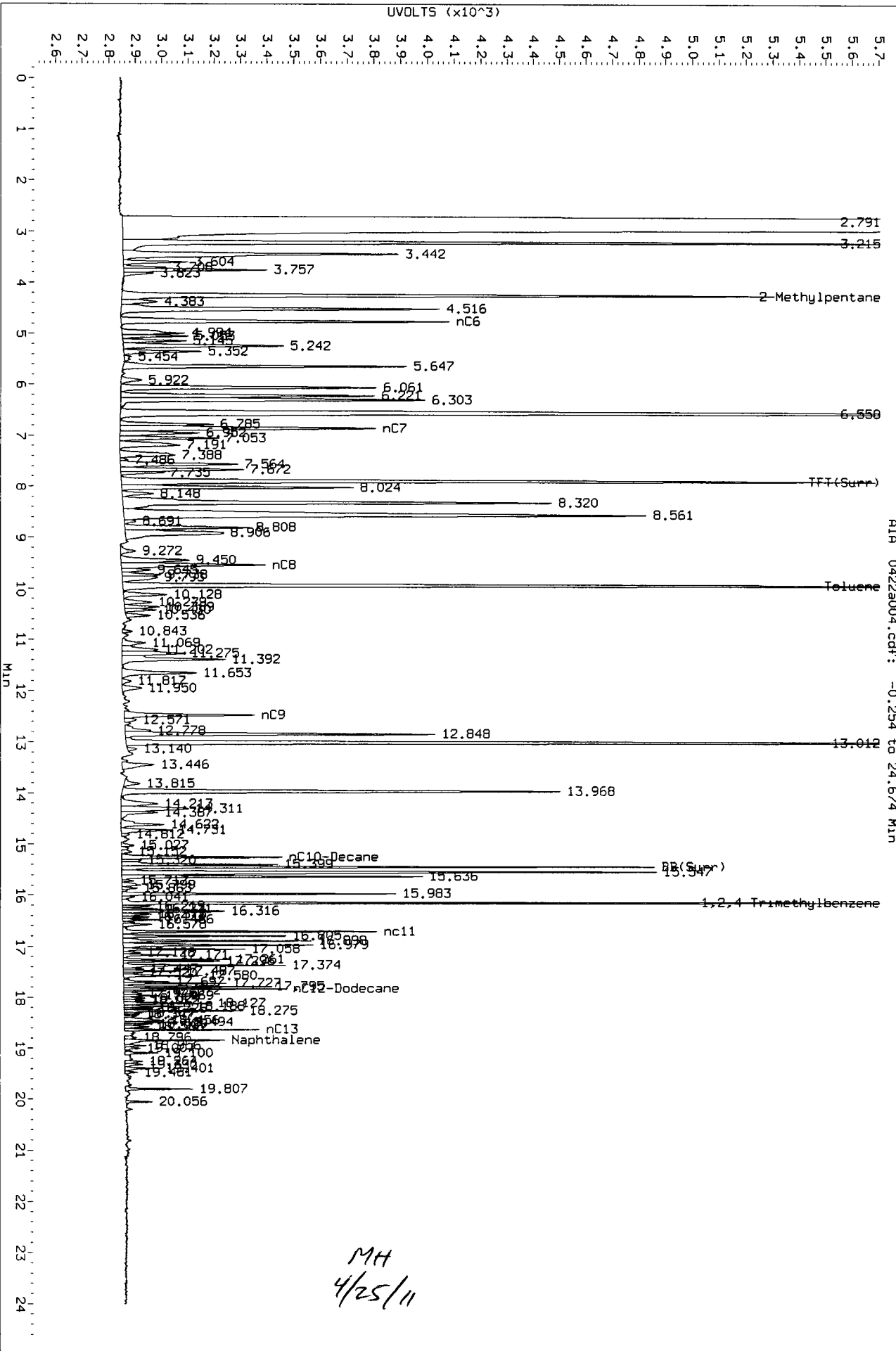
Instrument: pid1.i  
Operator: MH  
Column diameter: 0.18



/chem3/pid1.i/vpcc0422-2.b/0422a004.d/0422a004.cdf

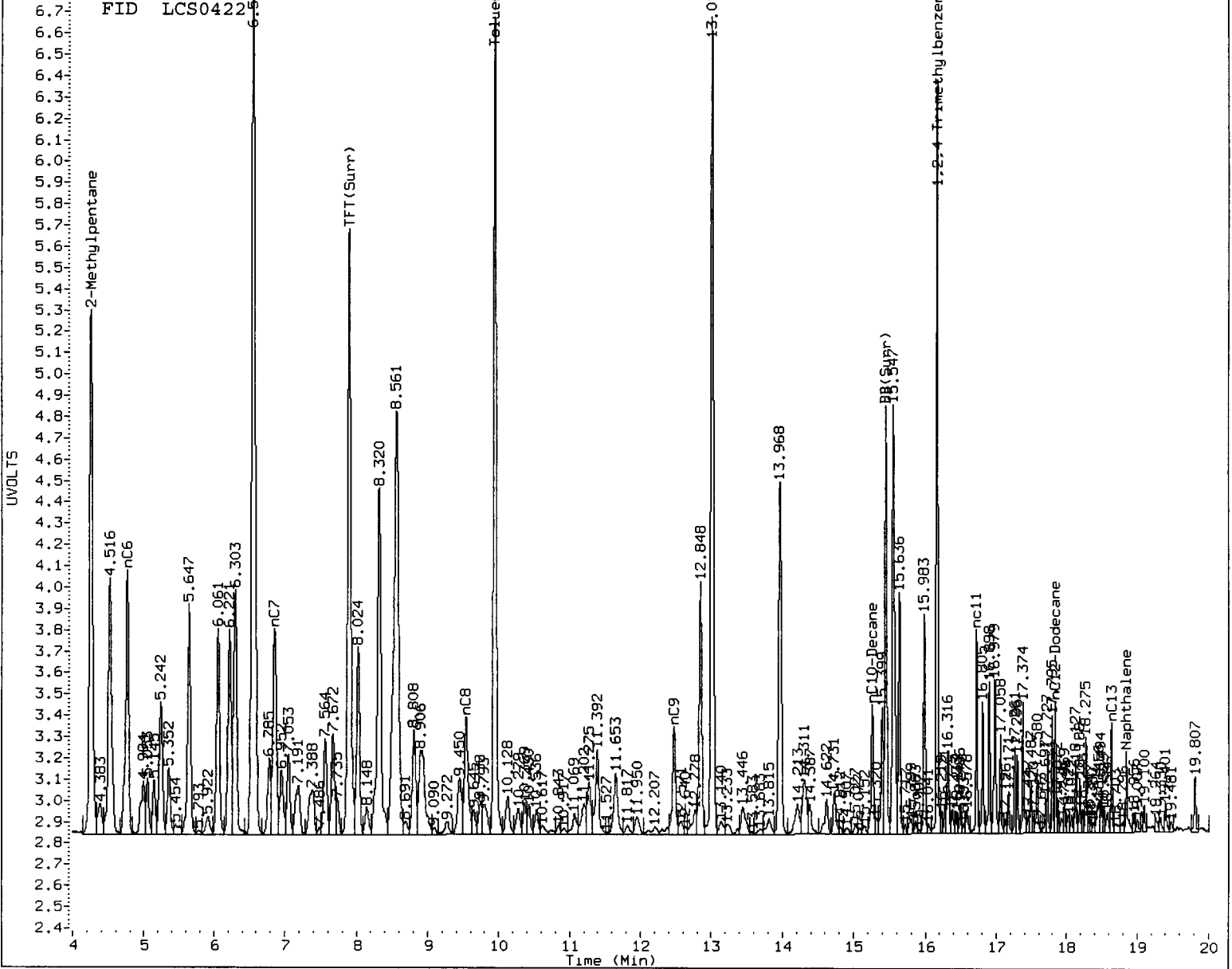
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Injection Date: 22-APR-2011 07:27  
Instrument: pid1.1  
Client Sample ID:



AIA 0422a004.cdf: -0.254 to 24.674 Min

MH  
4/25/11



MANUAL INTEGRATION

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

Analyst: MH Date: 4/25/11

MH  
4/25/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a005.d      ARI ID: LCSD0422  
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a005.d      Client ID:  
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m              Injection Date: 22-APR-2011 07:56  
Instrument: pid1.i    Matrix: WATER  
Gas Ical Date: 16-APRIL-2011                                  Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

=====

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
--	-----	-----	-----	-----	-----
7.898	-0.001	2840	43165	100.4	TFT(Surr)
15.447	0.001	1972	17557	94.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

-----

Range	RF	Total Area*	Amount
-----	-----	-----	-----
WAGas Tol-C12 ( 9.84 to 17.94)	374773	364459	0.972 M
8015B 2MP-TMB ( 4.15 to 16.26)	747017	741426	0.993 M
AK101 nC6-nC10 ( 4.66 to 15.16)	604063	596974	0.988 M
NWTPHG Tol-Nap ( 9.84 to 18.96)	403422	389889	0.966 M

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
--	-----	-----	-----	-----
7.896	-0.001	6355	97.6	TFT(Surr)
15.447	0.001	12968	96.2	BB(Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
--	-----	-----	-----	-----
7.050	0.000	1406	3.21	Benzene
9.941	-0.001	14187	36.28	Toluene
12.846	-0.001	3541	10.37	Ethylbenzene
13.010	0.002	13956	38.00	M/P-Xylene
13.966	0.001	5003	17.47	O-Xylene
4.513	-0.014	309	1.82	MTBE

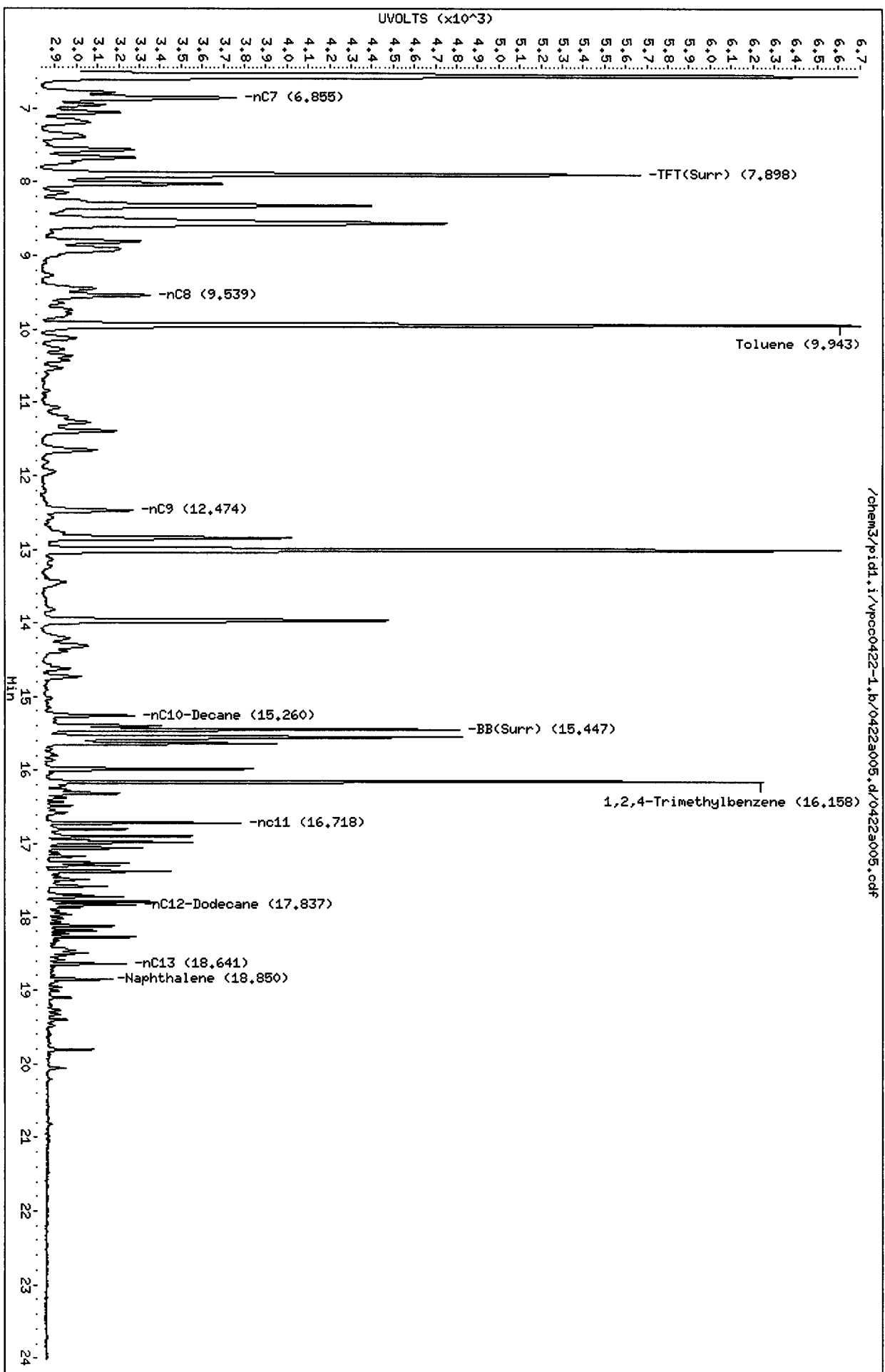
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated



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Date: 22-APR-2011 07:56  
Client ID:  
Sample Info: LCSD0422

Column phase: RTX 502-2 FID

Instrument: pid1.i  
Operator: HH  
Column diameter: 0.18



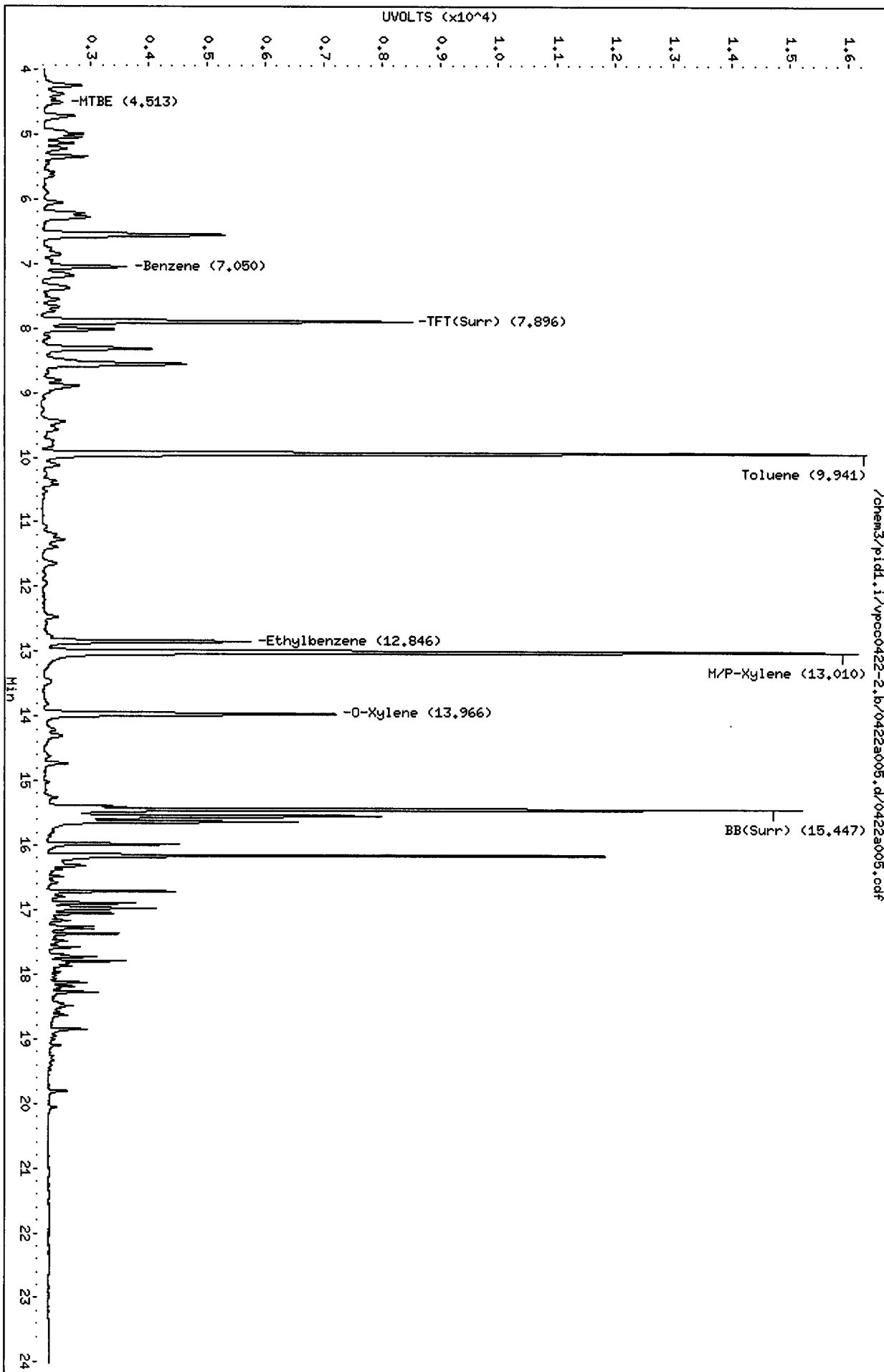
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047018 : 10105

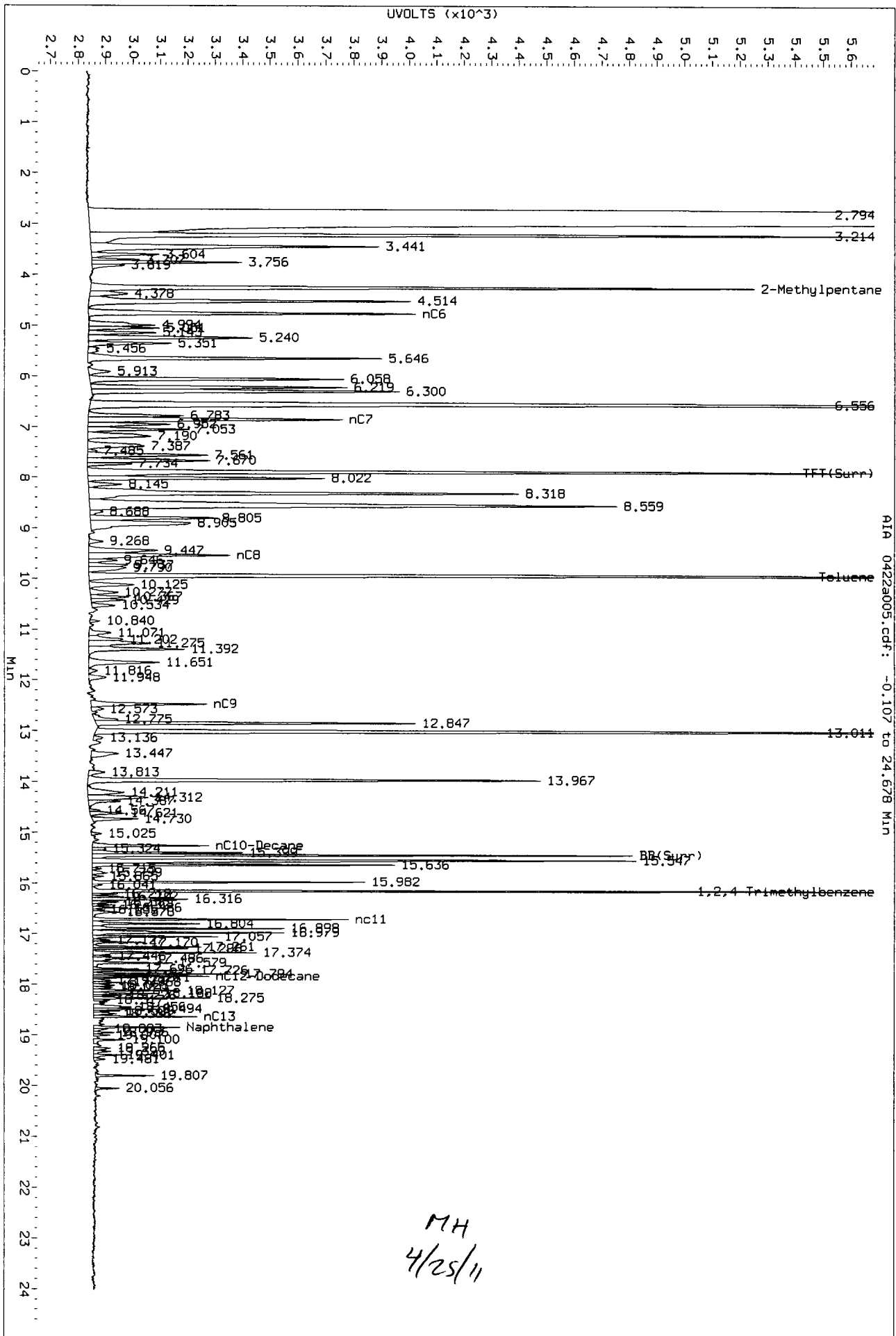
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Date: 22-APR-2011 07:56  
Client ID:  
Sample Info: LCSD0422

Column phase: RTX 502-2 PID

Instrument: pid1.i  
Operator: HH  
Column diameter: 0.18

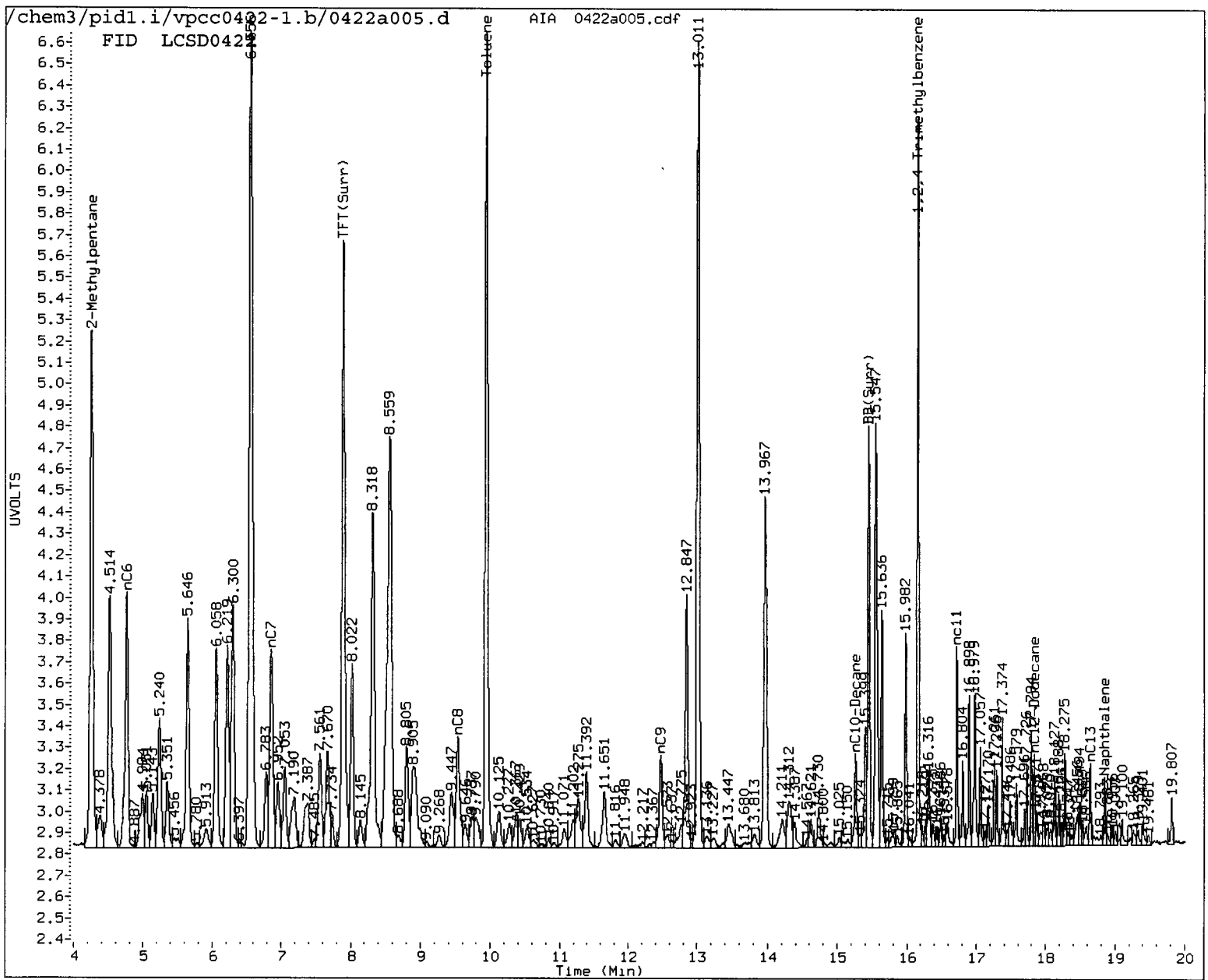


Data File: /chem3/pid1.1/vpcc0422-1.b/0422a005.d/0422a005.cdf  
Injection Date: 22-APR-2011 07:56  
Instrument: pid1.1  
Client Sample ID:



AIA 0422a005.cdf: -0.107 to 24.678 Min

MH  
4/25/11



MANUAL INTEGRATION

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

Analyst: MH Date: 4/25/11

MH  
4/25/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a006.d      ARI ID: MB0422  
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a006.d      Client ID:  
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m              Injection Date: 22-APR-2011 08:25  
Instrument: pid1.i    Matrix: WATER  
Gas Ical Date: 16-APRIL-2011                              Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.898	0.000	2721	36569	96.2	TFT(Surr)
15.447	0.001	1975	16546	94.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.84 to 17.94)	374773	5855	0.016
8015B 2MP-TMB ( 4.15 to 16.26)	747017	4398	0.006
AK101 nC6-nC10 ( 4.66 to 15.16)	604063	2094	0.003
NWTPHG Tol-Nap ( 9.84 to 18.96)	403422	7250	0.018

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.000	6156	94.5	TFT(Surr)
15.447	0.001	12841	95.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

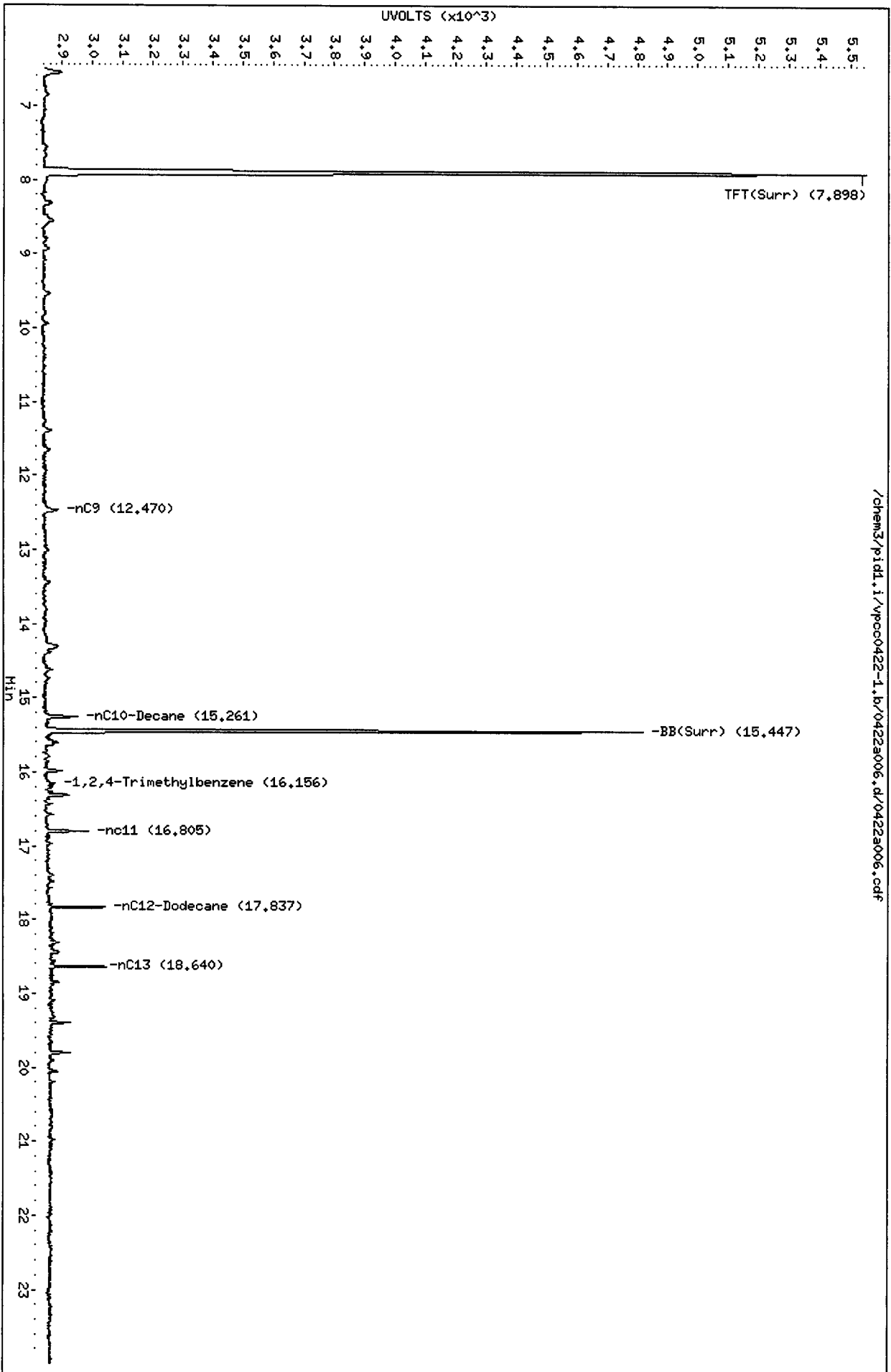
A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated

Data File: /chem3/pid1.i/vpcc0422-1.b/0422a006.d  
Date : 22-APR-2011 08:25  
Client ID:  
Sample Info: MB0422

Column phase: RTX 502-2 FID

/chem3/pid1.i/vpcc0422-1.b/0422a006.d/0422a006.cdf

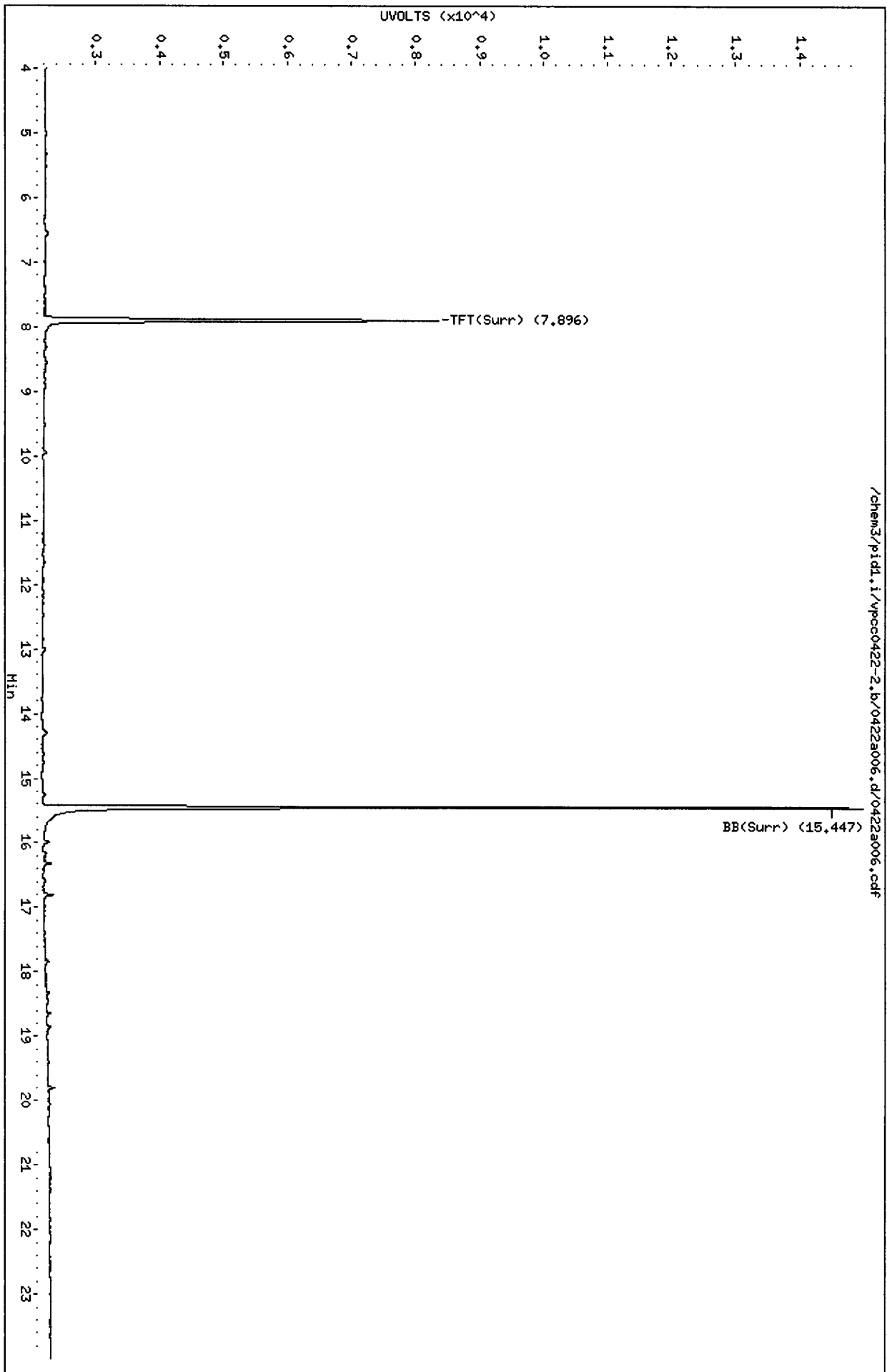
Instrument: pid1.i  
Operator: MH  
Column diameter: 0.18



Data File: /chem3/pid1.i/vpcc0422-2.b/0422a006.d  
Date : 22-APR-2011 08:25  
Client ID:  
Sample Info: MB0422

Column phase: RTX 502-2 PID

Instrument: pid1.i  
Operator: HH  
Column diameter: 0.18



00441018 1-05

MH  
4/25/11

Analytical Resources Inc.  
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/vpcc0422-1.b/0422a007.d      ARI ID: SS71A  
Data file 2: /chem3/pid1.i/vpcc0422-2.b/0422a007.d      Client ID: LL-SB6-0-0.5-041811  
Method: /chem3/pid1.i/vpcc0422-2.b/PIDB.m              Injection Date: 22-APR-2011 09:11  
Instrument: pid1.i    Matrix: SOIL  
Gas Ical Date: 16-APRIL-2011                              Dilution Factor: 1.000  
BETX Ical Date: 16-APR-2011

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.900	0.001	2768	37284	97.8	TFT(Surr)
15.448	0.002	1982	16534	95.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

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Range	RF	Total Area*	Amount
WAGas Tol-C12 ( 9.84 to 17.94)	374773	2999	0.008
8015B 2MP-TMB ( 4.15 to 16.26)	747017	756	0.001
AK101 nC6-nC10 ( 4.66 to 15.16)	604063	414	0.001
NWTPHG Tol-Nap ( 9.84 to 18.96)	403422	3836	0.010

M Indicates manual integration within range

\* Surrogate areas are subtracted from Total Area  
Range marker RT's are set by daily RT standard

=====

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.898	0.002	6352	97.5	TFT(Surr)
15.448	0.002	12890	95.6	BB(Surr)

SW8021 (PID)

-----

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height  
N Indicates peak peak was manually integrated