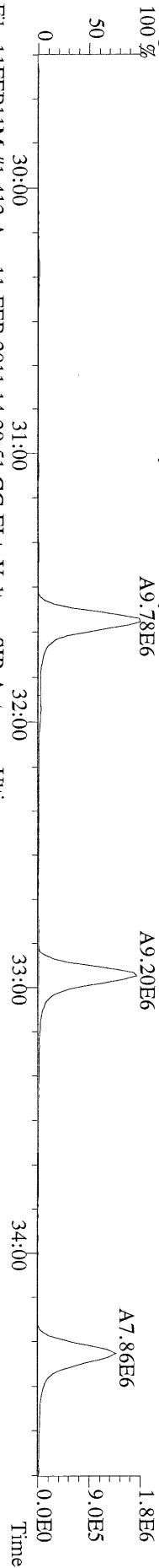
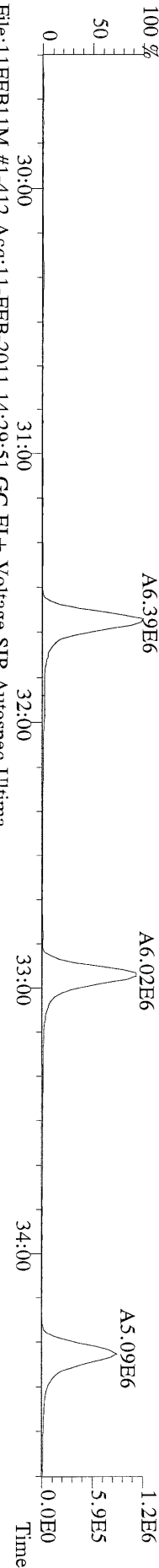




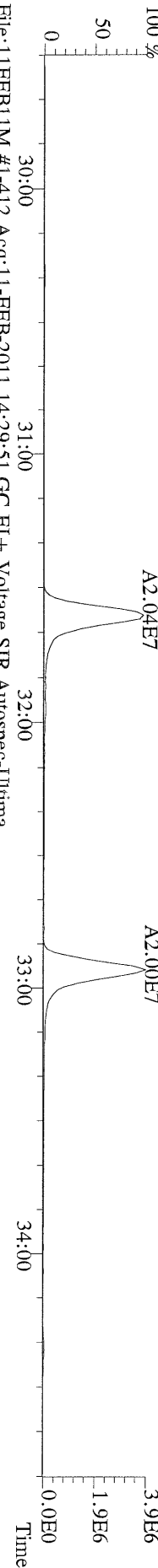
File:11FEB11M #1-412 Acq:11-FEB-2011 14:29:51 GC EI+ Voltage SIR Autospec-Ultima  
339.8597 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021111M1 File Text:Fronter Analytical Laboratory  
100 %



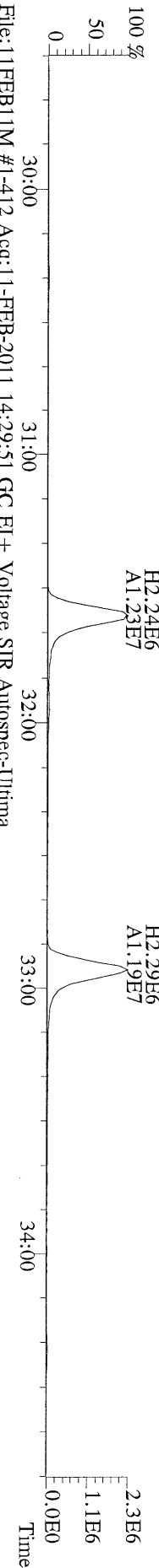
File:11FEB11M #1-412 Acq:11-FEB-2011 14:29:51 GC EI+ Voltage SIR Autospec-Ultima  
341.8568 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021111M1 File Text:Fronter Analytical Laboratory  
100 %



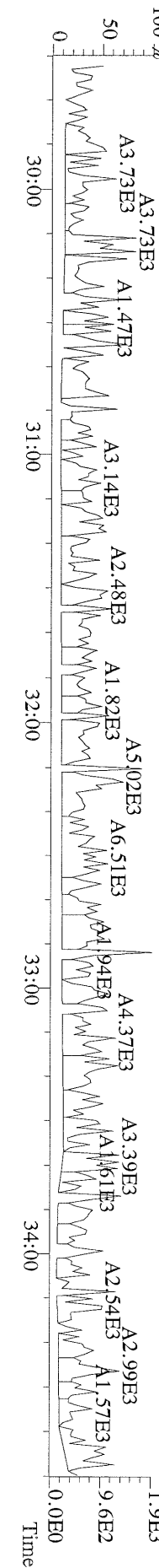
File:11FEB11M #1-412 Acq:11-FEB-2011 14:29:51 GC EI+ Voltage SIR Autospec-Ultima  
351.9000 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021111M1 File Text:Fronter Analytical Laboratory  
100 %



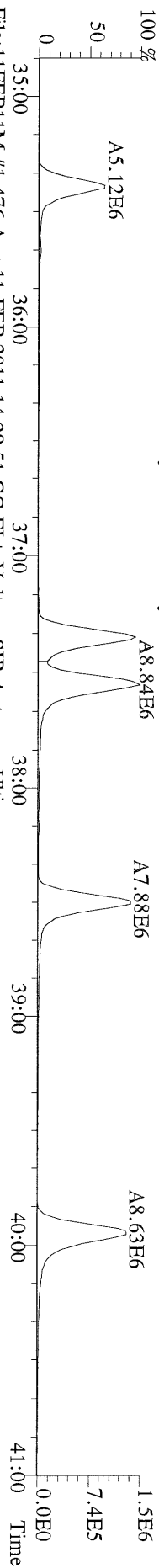
File:11FEB11M #1-412 Acq:11-FEB-2011 14:29:51 GC EI+ Voltage SIR Autospec-Ultima  
353.8970 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021111M1 File Text:Fronter Analytical Laboratory



File:11FEB11M #1-412 Acq:11-FEB-2011 14:29:51 GC EI+ Voltage SIR Autospec-Ultima  
409.7974 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021111M1 File Text:Fronter Analytical Laboratory  
100 %



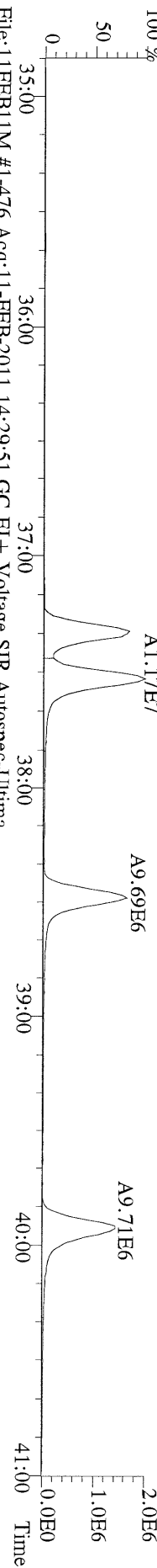
File:11FEB11M #1-476 Acq:11-FEB-2011 14:29:51 GC EI+ Voltage SIR Autospec-Ultima  
 373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021111M1 File Text:Frontier Analytical Laboratory



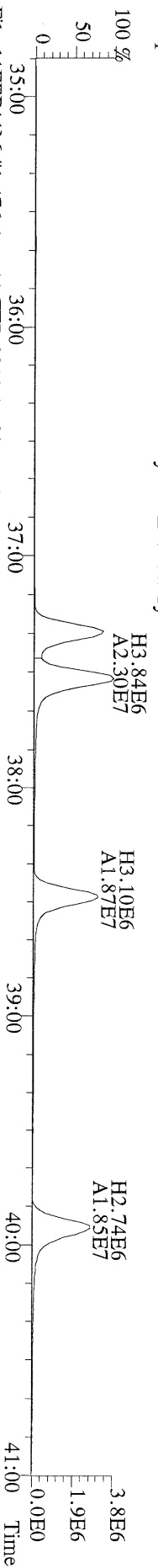
File:11FEB11M #1-476 Acq:11-FEB-2011 14:29:51 GC EI+ Voltage SIR Autospec-Ultima  
 375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021111M1 File Text:Frontier Analytical Laboratory



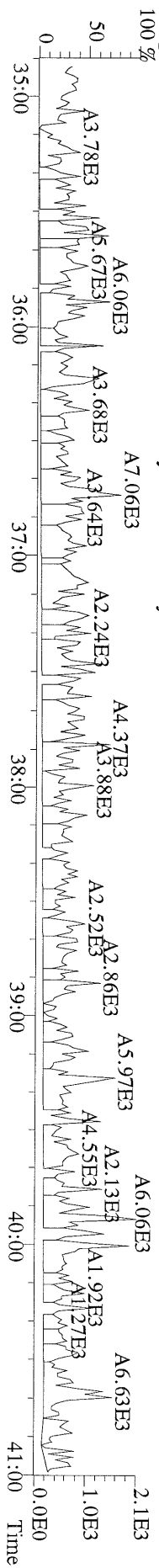
File:11FEB11M #1-476 Acq:11-FEB-2011 14:29:51 GC EI+ Voltage SIR Autospec-Ultima  
 383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021111M1 File Text:Frontier Analytical Laboratory



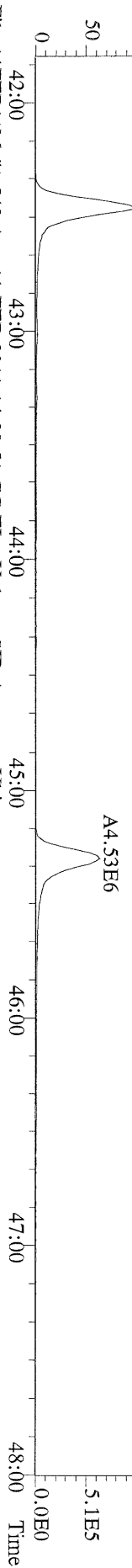
File:11FEB11M #1-476 Acq:11-FEB-2011 14:29:51 GC EI+ Voltage SIR Autospec-Ultima  
 385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021111M1 File Text:Frontier Analytical Laboratory



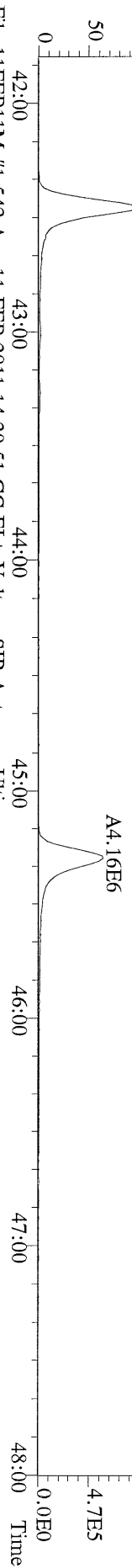
File:11FEB11M #1-476 Acq:11-FEB-2011 14:29:51 GC EI+ Voltage SIR Autospec-Ultima  
 445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021111M1 File Text:Frontier Analytical Laboratory



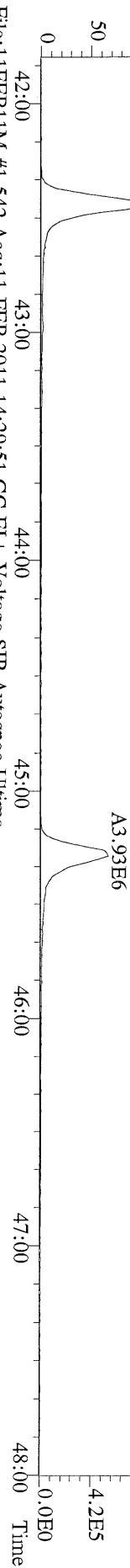
File:11FEB11M #1-542 Acq:11-FEB-2011 14:29:51 GC EI+ Voltage SIR Autospec-Ultima  
 407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021111M1 File Text:Frontier Analytical Laboratory  
 100 % A5.77E6



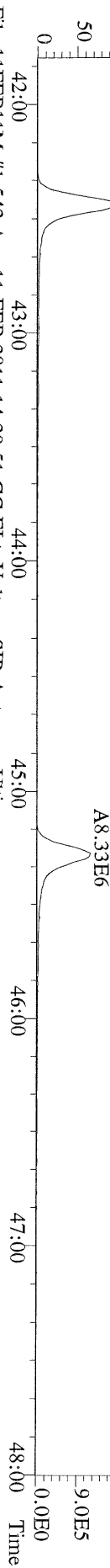
File:11FEB11M #1-542 Acq:11-FEB-2011 14:29:51 GC EI+ Voltage SIR Autospec-Ultima  
 409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021111M1 File Text:Frontier Analytical Laboratory  
 100 % A5.46E6



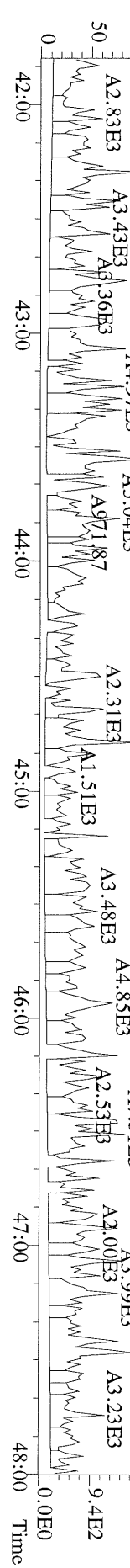
File:11FEB11M #1-542 Acq:11-FEB-2011 14:29:51 GC EI+ Voltage SIR Autospec-Ultima  
 417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021111M1 File Text:Frontier Analytical Laboratory  
 100 % A5.08E6



File:11FEB11M #1-542 Acq:11-FEB-2011 14:29:51 GC EI+ Voltage SIR Autospec-Ultima  
 419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021111M1 File Text:Frontier Analytical Laboratory  
 100 % H1.80E6  
 A1.07E7

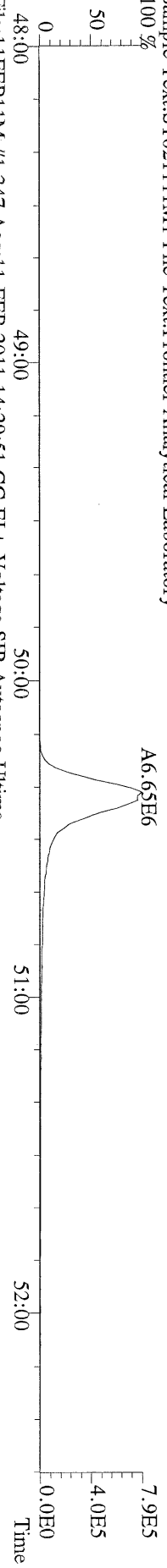


File:11FEB11M #1-542 Acq:11-FEB-2011 14:29:51 GC EI+ Voltage SIR Autospec-Ultima  
 479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021111M1 File Text:Frontier Analytical Laboratory  
 100 % A6.80E3

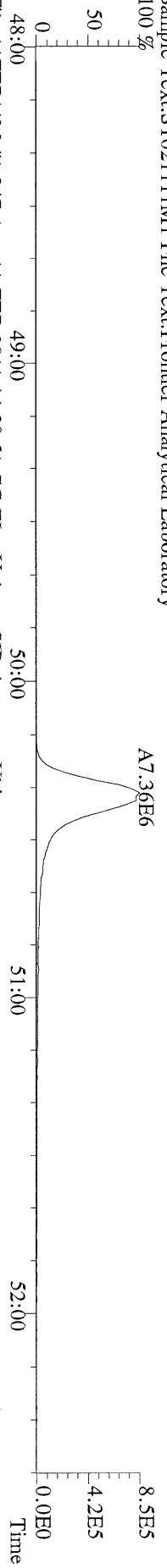




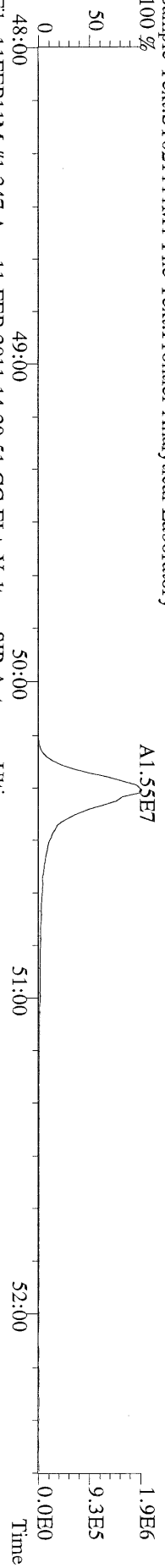
File:1\FEB11M #1-347 Acq:11-FEB-2011 14:29:51 GC EI + Voltage SIR Autospec-Ultima  
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M1 File Text:Frontier Analytical Laboratory  
100%



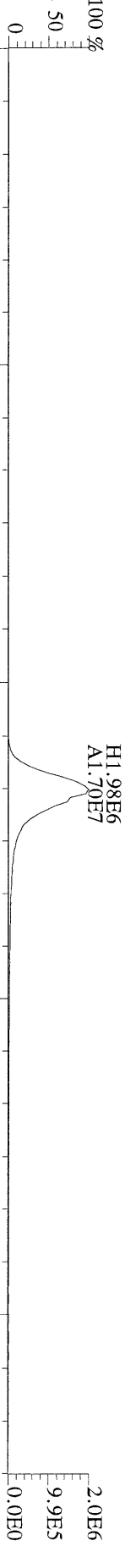
File:1\FEB11M #1-347 Acq:11-FEB-2011 14:29:51 GC EI + Voltage SIR Autospec-Ultima  
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M1 File Text:Frontier Analytical Laboratory  
100%



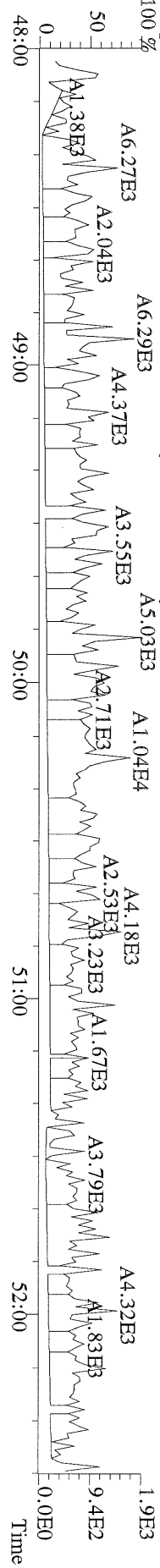
File:1\FEB11M #1-347 Acq:11-FEB-2011 14:29:51 GC EI + Voltage SIR Autospec-Ultima  
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M1 File Text:Frontier Analytical Laboratory  
100%

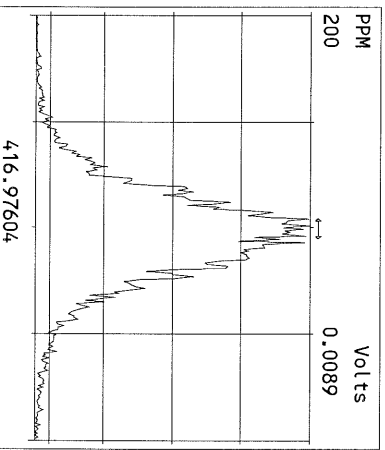
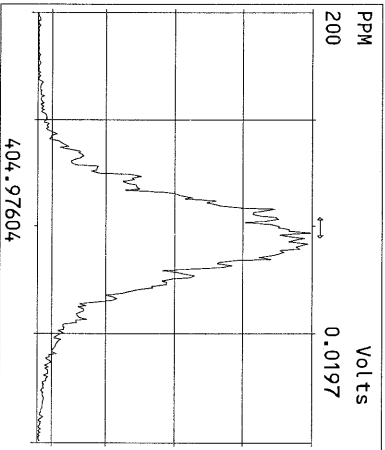
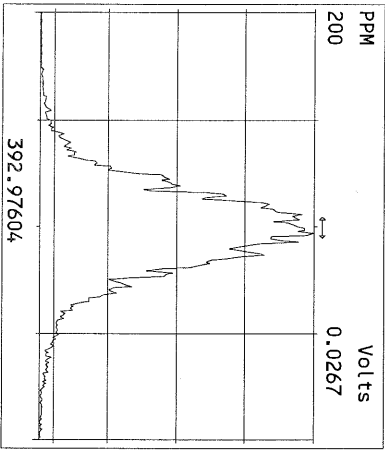
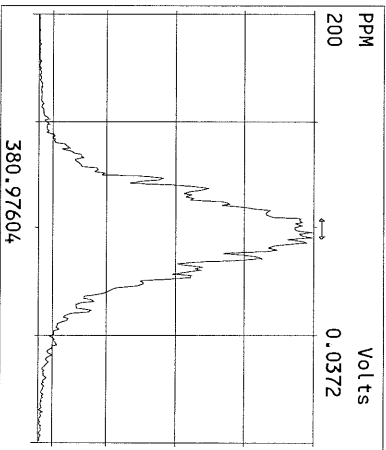
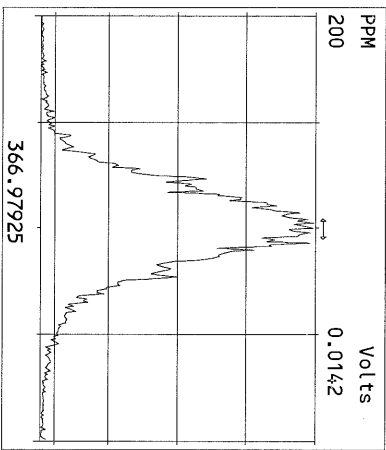
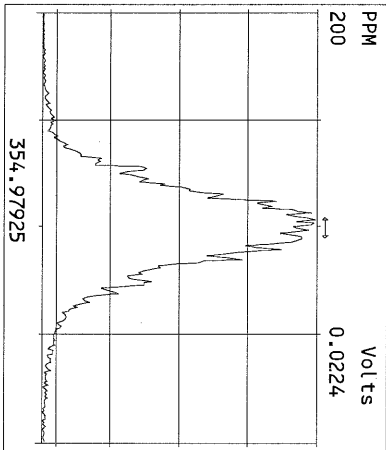
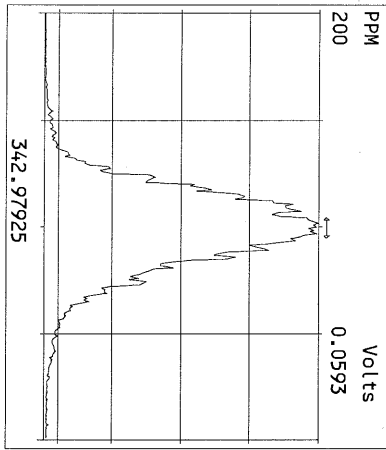
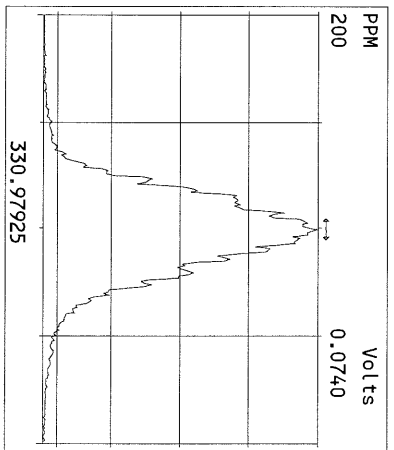
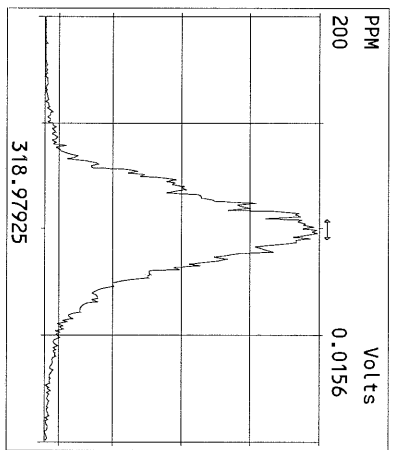
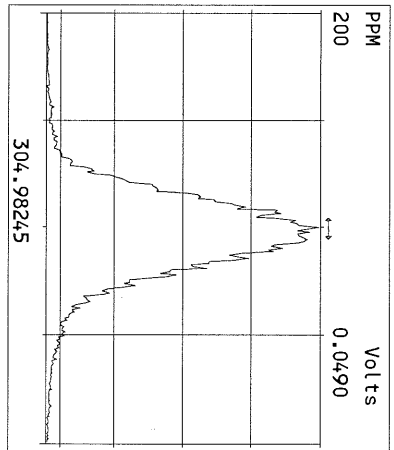
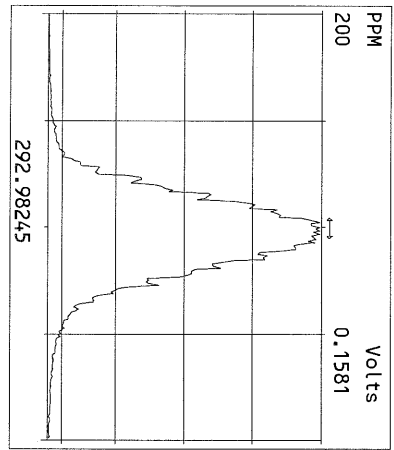


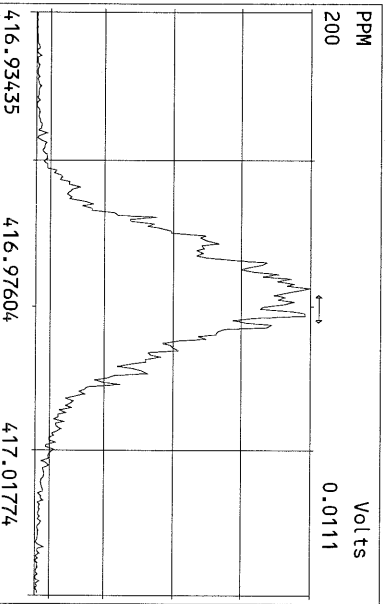
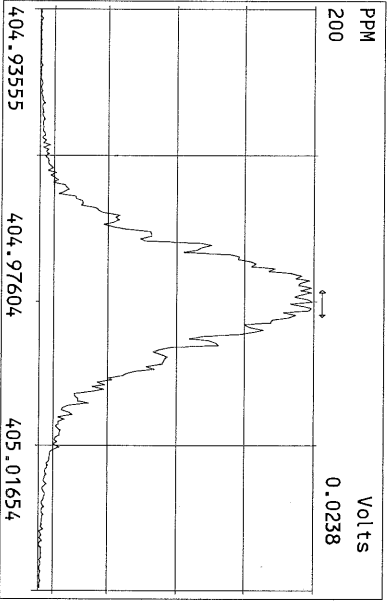
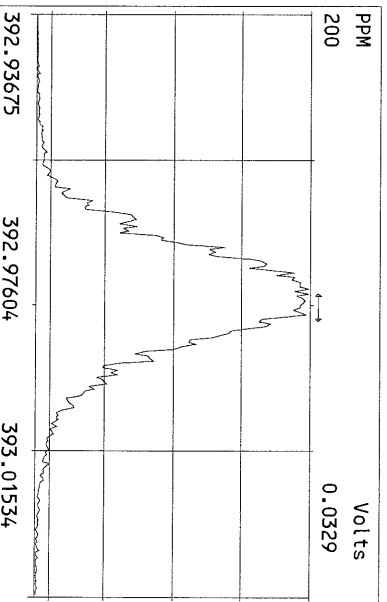
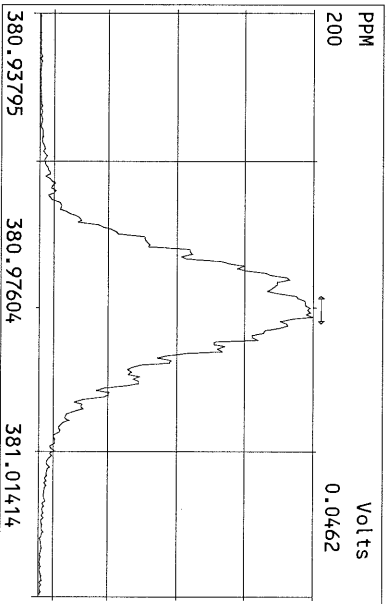
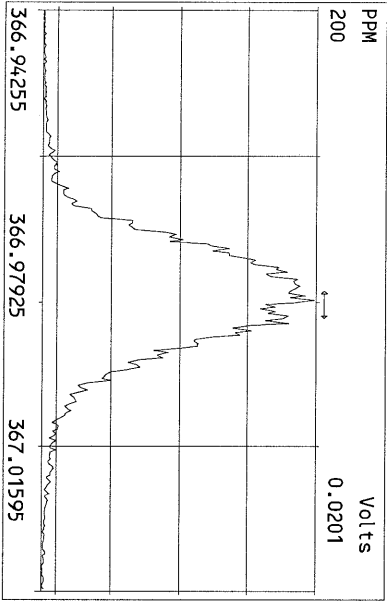
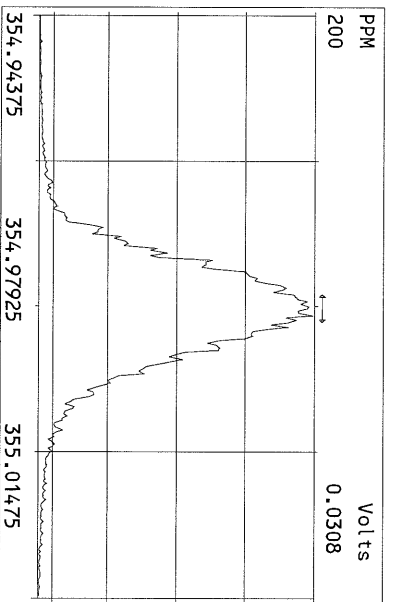
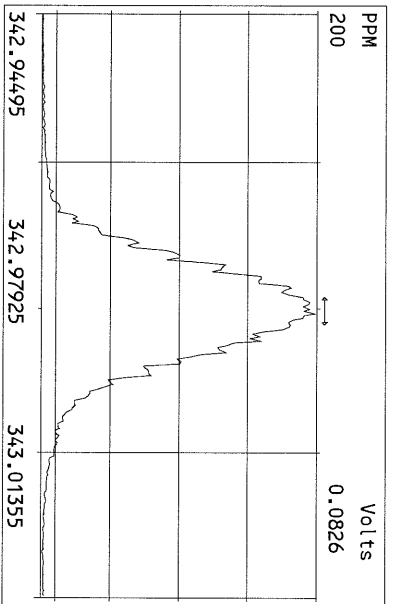
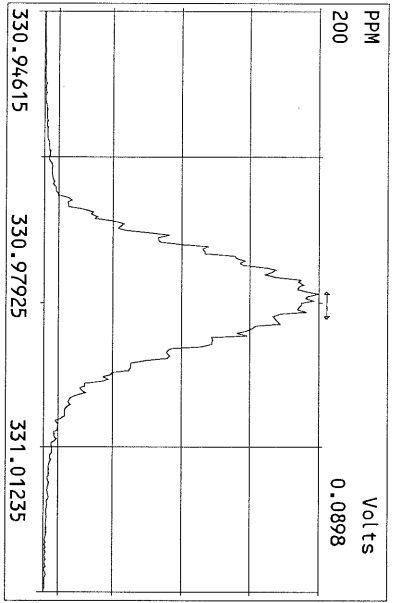
File:1\FEB11M #1-347 Acq:11-FEB-2011 14:29:51 GC EI + Voltage SIR Autospec-Ultima  
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M1 File Text:Frontier Analytical Laboratory

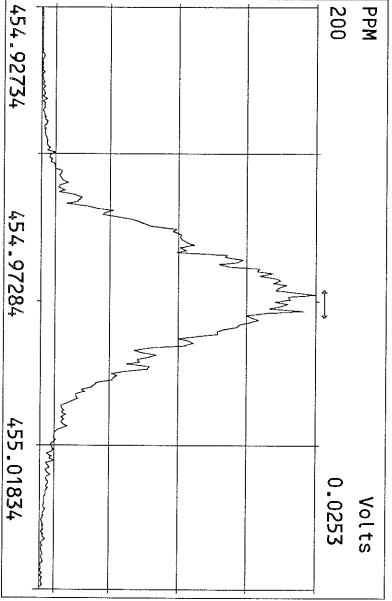
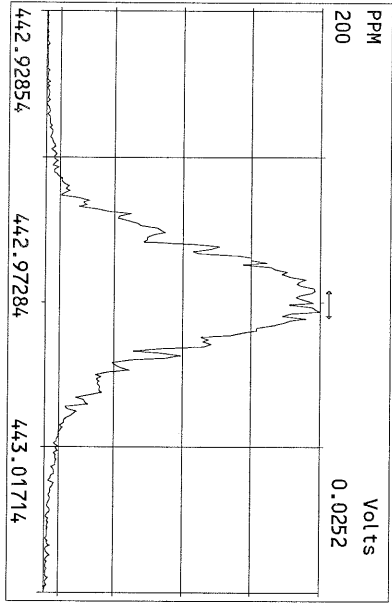
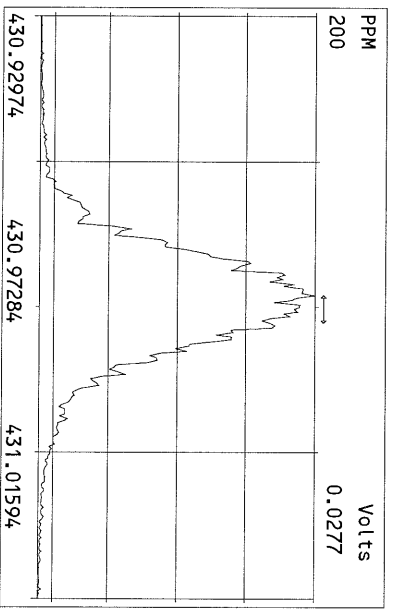
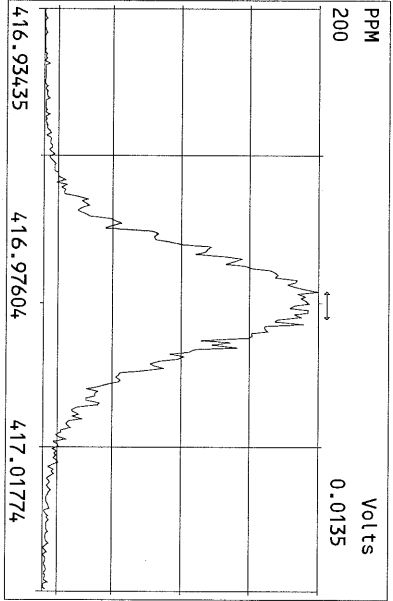
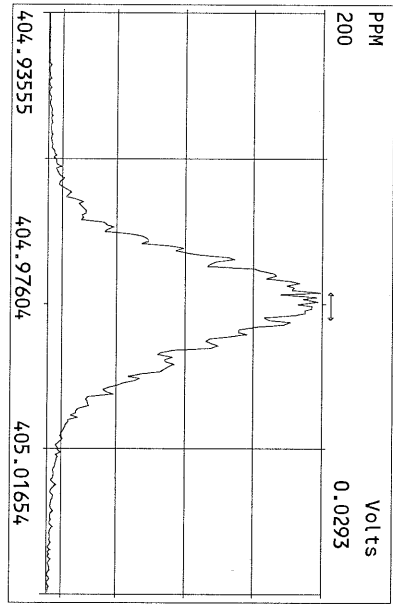
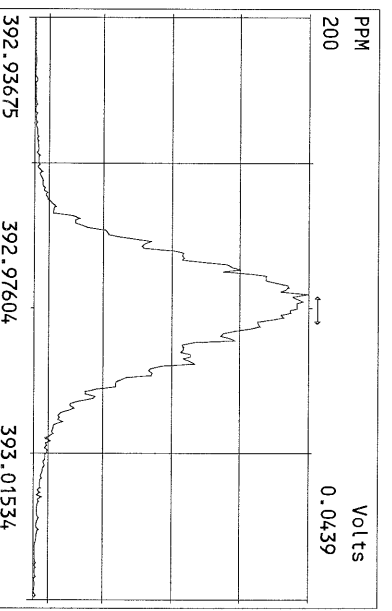
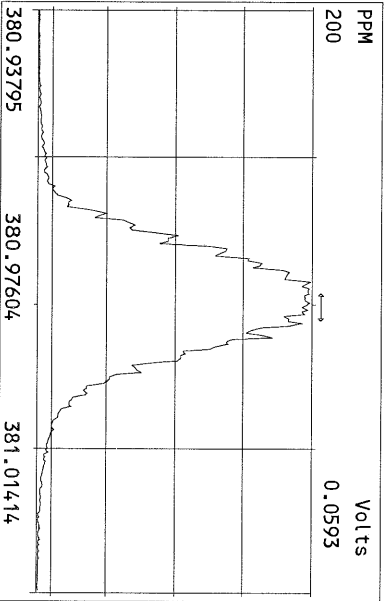
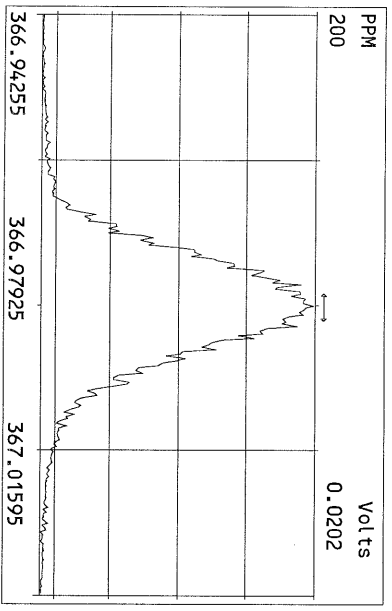


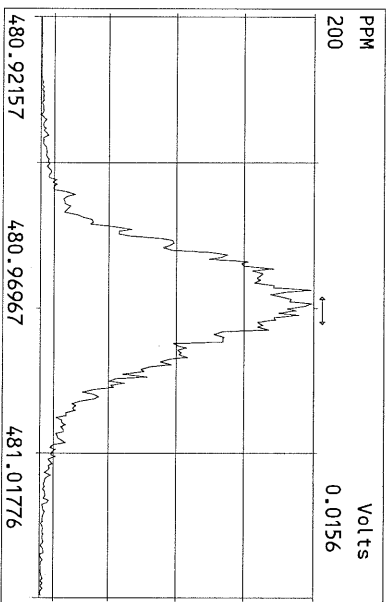
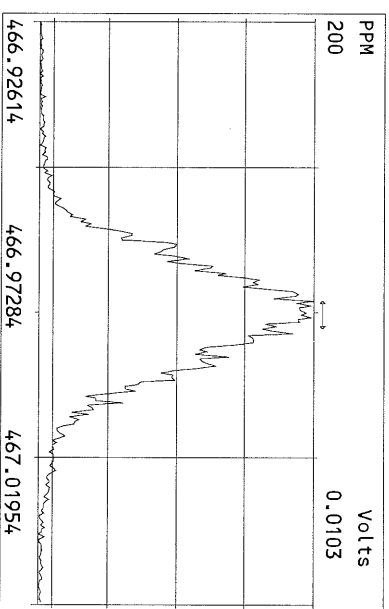
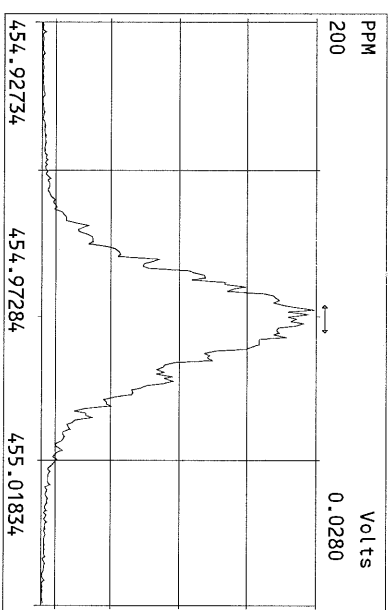
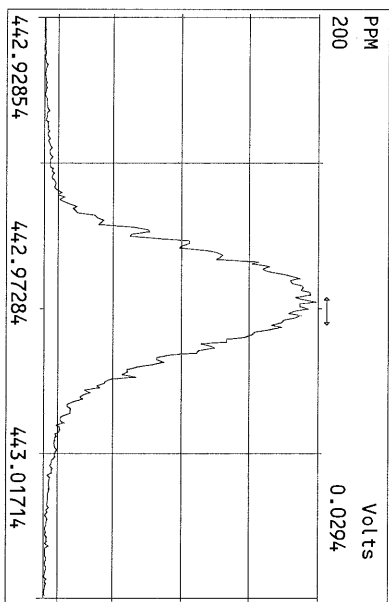
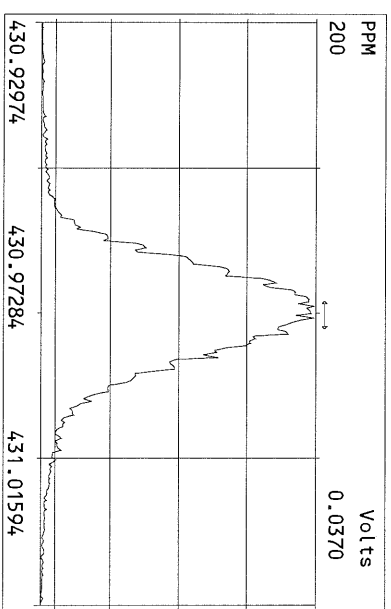
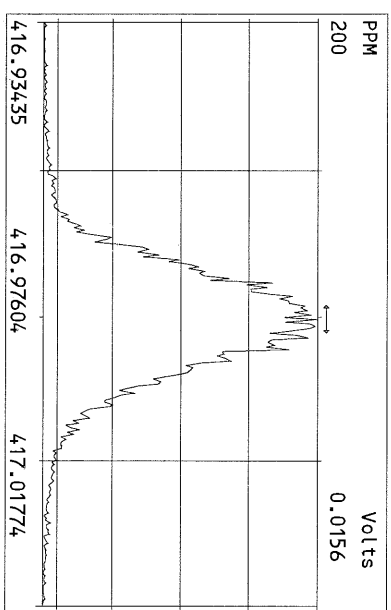
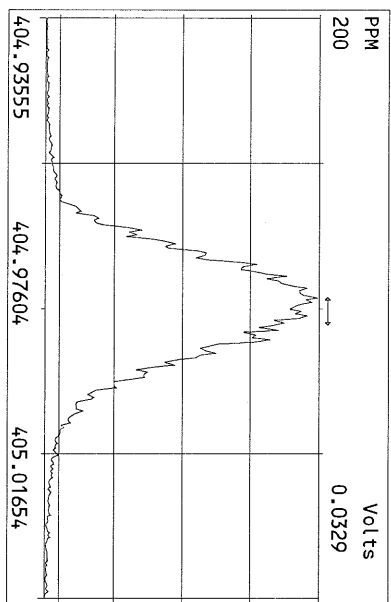
File:1\FEB11M #1-347 Acq:11-FEB-2011 14:29:51 GC EI + Voltage SIR Autospec-Ultima  
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M1 File Text:Frontier Analytical Laboratory

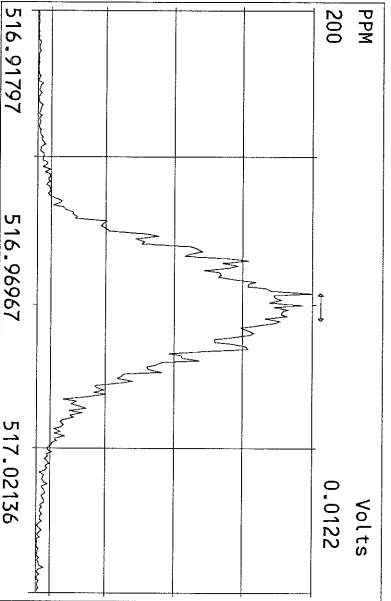
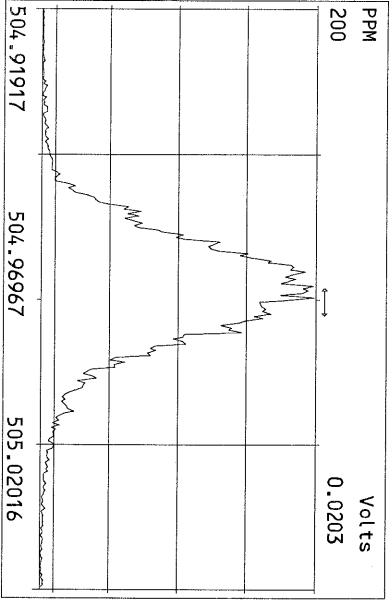
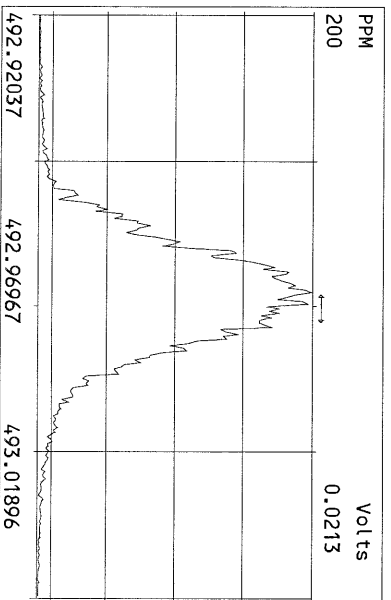
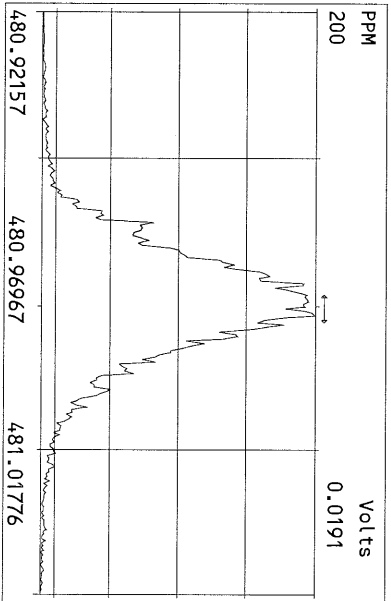
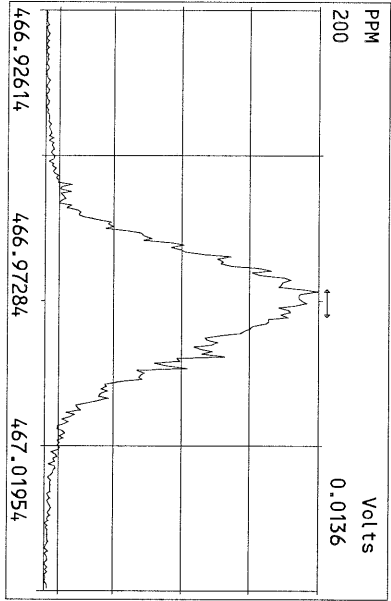
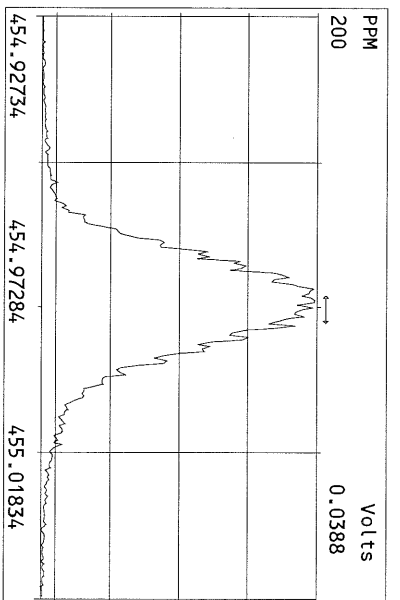
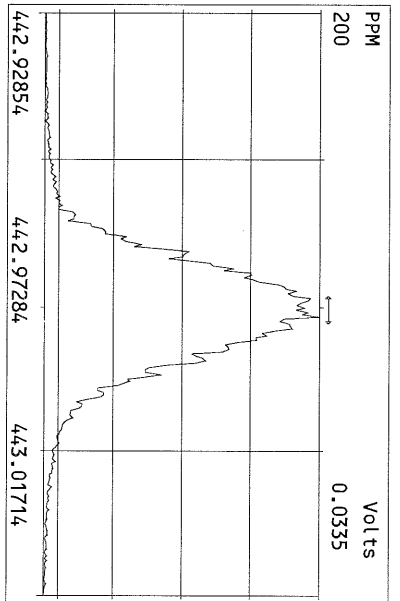
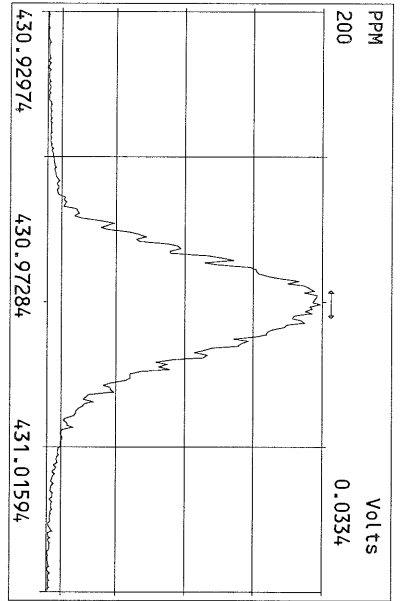












## USEPA - ITD

FORM 4A  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/23/10

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 11FEB11M Sam:8 Analysis Date: 11-FEB-11 20:58:24

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	y	11.7	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.56	1.32-1.78	y	52.7	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	52.9	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.33	1.05-1.43	y	52.8	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.22	1.05-1.43	y	51.0	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	0.98	0.88-1.20	y	46.1	43.0 - 58.0
OCDD	M+2/M+4	0.92	0.76-1.02	y	101	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.71	0.65-0.89	y	10.5	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	y	52.0	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.49	1.32-1.78	y	48.7	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	55.4	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	54.3	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	52.8	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.20	1.05-1.43	y	54.9	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.07	0.88-1.20	y	52.0	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	y	50.6	43.0 - 58.0
OCDF	M+2/M+4	0.92	0.76-1.02	y	116	63.0 - 159

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

Analyst: 

Date: 2/14/11

## USEPA - ITD

FORM 4B  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 11FEB11M Sam:8

Analysis Date: 11-FEB-11 20:58:24

LABELLED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
13C-2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	y	90.7	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.73	1.32-1.78	y	80.2	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	105	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	y	108	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	95.7	72.0 - 138
13C-OCDD	M+2/M+4	0.94	0.76-1.02	y	192	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.87	0.65-0.89	y	81.7	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.69	1.32-1.78	y	82.6	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	86.7	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	104	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	y	103	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	100	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	y	87.6	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.47	0.37-0.51	y	94.8	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.47	0.37-0.51	y	95.5	77.0 - 129
13C-OCDF	M+2/M+4	0.93	0.76-1.02	y	177	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.75	7.80 - 12.8

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) No ion abundance ratio; report concentration found.

Analyst: Date: 



FORM 5  
PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:  
Contract No.: SAS No.:  
Instrument ID: FAL3 Initial Calibration Date: 8/23/10  
RT Window Data Filename: 11FEB11M Sam:8 Analysis Date: 11-FEB-11 Time: 20:58:24  
DB-5 IS Data Filename: 11FEB11M Sam:8 Analysis Date: 11-FEB-11 Time: 20:58:24  
DB-225 IS Data Filename: Analysis Date: Time:

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:28	1,3,6,8-TCDF (F)	23:07
1,2,8,9-TCDD (L)	28:28	1,2,8,9-TCDF (L)	28:42
1,2,4,7,9-PeCDD (F)	30:22	1,3,4,6,8-PeCDF (F)	28:32
1,2,3,8,9-PeCDD (L)	33:57	1,2,3,8,9-PeCDF (L)	34:23
1,2,4,6,7,9-HxCDD (F)	36:16	1,2,3,4,6,8-HxCDF (F)	35:24
1,2,3,7,8,9-HxCDD (L)	39:22	1,2,3,7,8,9-HxCDF (L)	39:57
1,2,3,4,6,7,9-HpCDD (F)	42:59	1,2,3,4,6,7,8-HpCDF (F)	42:28
1,2,3,4,6,7,8-HpCDD (L)	44:23	1,2,3,4,7,8,9-HpCDF (L)	45:18

(F) = First eluting isomer (DB-5); (L) = Last eluting isomer (DB-5)

=====

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT  
BETWEEN  
COMPARED PEAKS (1)

<25%

(1) To meet contract requirement, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst:  Date: 2/14/11

## USEPA - ITD

FORM 6A

## PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5

Analysis Date: 11-FEB-11 20:58:24

CS3 or VER Data Filename: 11FEB11M

Sam:8

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052
13C-2,3,7,8-TCDD		1.022	0.976-1.043
13C-2,3,7,8-TCDF		0.994	0.923-1.103
13C-1,2,3,7,8-PeCDD		1.239	1.000-1.567
13C-1,2,3,7,8-PeCDF		1.175	0.923-1.203
13C-2,3,4,7,8-PeCDF		1.224	0.923-1.303

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: Date: 

## PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5


Analysis Date: 11-FEB-11 20:58:24

CS3 or VER Data Filename: 11FEB11M

Sam:8

NATIVE ANALYTES	RETENTION TIME		RRT	RRT
	REFERENCE			QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD		1.001	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD		1.001	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD		1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF		1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF		1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF		1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF		1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD		1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF		1.001	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF		1.000	0.999-1.001
OCDD	13C-OCDD		1.001	0.999-1.001
OCDF	13C-OCDF		1.001	0.999-1.001
LABELED COMPOUNDS				
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD		0.984	0.977-1.000
13C-1,2,3,6,7,8-HxCDD			0.989	0.981-1.003
13C-1,2,3,4,7,8-HxCDF			0.949	0.944-0.970
13C-1,2,3,6,7,8-HxCDF			0.954	0.949-0.975
13C-2,3,4,6,7,8-HxCDF			0.978	0.959-1.021
13C-1,2,3,7,8,9-HxCDF			1.015	0.977-1.047
13C-1,2,3,4,6,7,8-HpCDD			1.127	1.086-1.130
13C-1,2,3,4,6,7,8-HpCDF			1.079	1.043-1.085
13C-1,2,3,4,7,8,9-HpCDF			1.151	1.057-1.154
13C-OCDD			1.270	1.032-1.311
13C-OCDF			1.279	1.000-1.311

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: Date: 

Results:		GC Column: DB5	Amount: 1.000	NATO 1989 Tox: 105		WHO 1998 Tox: 131		WHO 2005 Tox:		121
Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	
2,3,7,8-TCDD	1.22e+06	0.77 y	27:31	1.11	11.7		2.50	-	-	*
1,2,3,7,8-PeCDD	3.98e+06	1.56 y	33:22	1.10	52.7		2.50	-	-	*
1,2,3,4,7,8-HxCDD	3.83e+06	1.24 y	38:45	1.37	52.9		2.50	-	-	*
1,2,3,6,7,8-HxCDD	3.69e+06	1.33 y	38:55	1.37	52.8		2.50	-	-	*
1,2,3,7,8,9-HxCDD	3.60e+06	1.22 y	39:22	1.36	51.0		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	2.57e+06	0.98 y	44:23	1.45	46.1		2.50	-	-	*
OCDD	3.53e+06	0.92 y	49:59	1.43	101		2.50	-	-	*
2,3,7,8-TCDF	2.25e+06	0.71 y	26:45	1.50	10.5		2.50	-	-	*
1,2,3,7,8-PeCDF	5.93e+06	1.52 y	31:38	0.94	52.0		2.50	-	-	*
2,3,4,7,8-PeCDF	5.62e+06	1.49 y	32:58	0.94	48.7		2.50	-	-	*
1,2,3,4,7,8-HxCDF	4.64e+06	1.24 y	37:21	0.93	55.4		2.50	-	-	*
1,2,3,6,7,8-HxCDF	5.47e+06	1.22 y	37:33	0.82	54.3		2.50	-	-	*
2,3,4,6,7,8-HxCDF	4.58e+06	1.22 y	38:30	0.92	52.8		2.50	-	-	*
1,2,3,7,8,9-HxCDF	4.55e+06	1.20 y	39:57	1.00	54.9		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	3.56e+06	1.07 y	42:28	1.39	52.0		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	2.46e+06	1.05 y	45:18	1.36	50.6		2.50	-	-	*
OCDF	4.09e+06	0.92 y	50:22	0.79	116		2.50	-	-	*
										Rec
13C-2,3,7,8-TCDD	9.42e+06	0.81 y	27:30	1.02	90.7					90.7
13C-1,2,3,7,8-PeCDD	6.85e+06	1.73 y	33:20	0.84	80.2					80.2
13C-1,2,3,4,7,8-HxCDD	5.27e+06	1.23 y	38:43	1.07	105					105
13C-1,2,3,6,7,8-HxCDD	5.10e+06	1.22 y	38:53	1.01	108					108
13C-1,2,3,4,6,7,8-HpCDD	3.83e+06	1.06 y	44:21	0.86	95.7					95.7
13C-OCDD	4.90e+06	0.94 y	49:57	0.55	192					95.8
13C-2,3,7,8-TCDF	1.42e+07	0.87 y	26:44	0.99	81.7					81.7
13C-1,2,3,7,8-PeCDF	1.21e+07	1.69 y	31:37	0.84	82.6					82.6
13C-2,3,4,7,8-PeCDF	1.23e+07	1.56 y	32:56	0.81	86.7					86.7
13C-1,2,3,4,7,8-HxCDF	9.02e+06	0.54 y	37:20	1.85	104					104
13C-1,2,3,6,7,8-HxCDF	1.23e+07	0.55 y	37:32	2.54	103					103
13C-2,3,4,6,7,8-HxCDF	9.45e+06	0.54 y	38:29	2.01	100					100
13C-1,2,3,7,8,9-HxCDF	8.32e+06	0.53 y	39:56	2.03	87.6					87.6
13C-1,2,3,4,6,7,8-HpCDF	4.92e+06	0.47 y	42:27	1.11	94.8					94.8
13C-1,2,3,4,7,8,9-HpCDF	3.59e+06	0.47 y	45:18	0.80	95.5					95.5
13C-OCDF	8.95e+06	0.93 y	50:20	1.08	177					88.3
37Cl-2,3,7,8-TCDD	6.78e+05		27:31	0.69	9.75					97.5
13C-1,2,3,4-TCDD	1.01e+07	0.80 y	26:54	-	22.6					
13C-1,2,3,4-TCDF	1.75e+07	0.88 y	25:38	-	24.2					
13C-1,2,3,7,8,9-HxCDD	4.68e+06	1.21 y	39:20	-	17.0					
Total Tetra-Dioxins	6.51e+06		23:02	1.11	62.2		2.50	-	-	* 32
Total Penta-Dioxins	9.54e+06		29:53	1.10	127		2.50	-	-	* 28
Total Hexa-Dioxins	1.35e+07		34:60	1.37	190		2.50	-	-	* 38
Total Hepta-Dioxins	6.36e+06		41:11	1.45	114		2.50	-	-	* 47
Total Tetra-Furans	1.19e+07		23:07	1.50	55.8		2.50	-	-	* 28
1st Fn. Tot Penta-Furans	7.92e+06		28:32	0.94	69.0		2.50	-	-	* PeCDF 1
Total Penta-Furans	1.65e+07		29:43	0.94	144		2.50	-	-	* 213 25
Total Hexa-Furans	2.34e+07		35:00	0.91	265		2.50	-	-	* 32
Total Hepta-Furans	6.67e+06		41:09	1.38	114		2.50	-	-	* 35

Analyst: 

Date: 2/14/11

Frontier Analytical Laboratory - Acquisition Log

Run Name:11FEB11M

Instrument: FAL3

GC: DB5

Experiment:OCDD

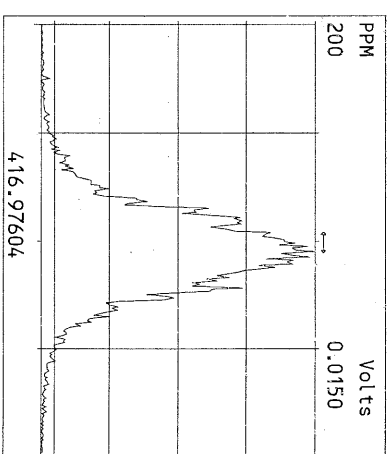
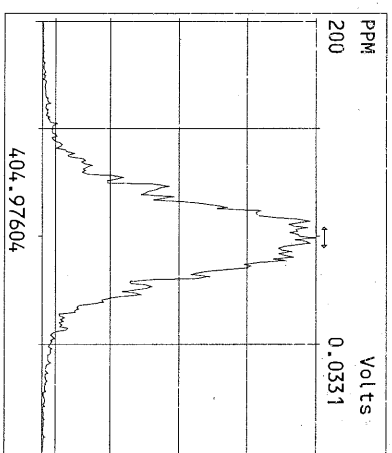
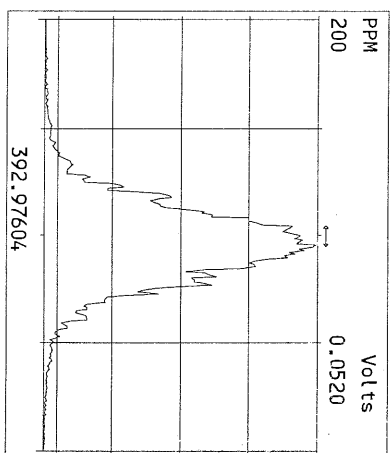
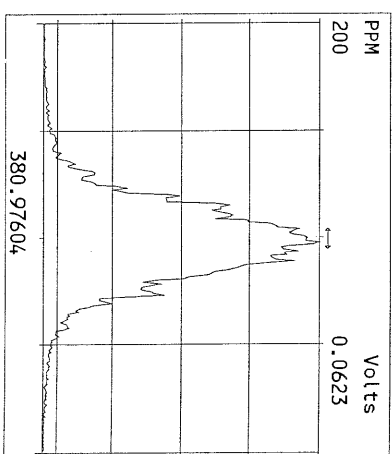
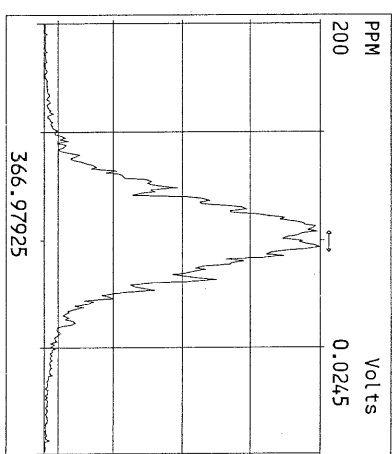
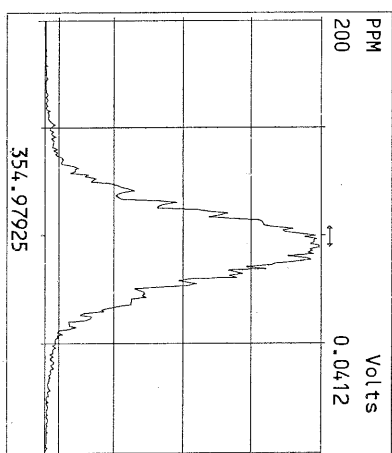
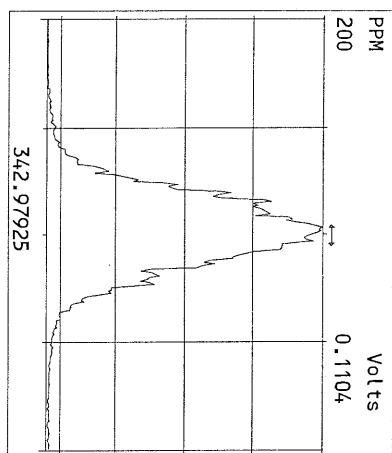
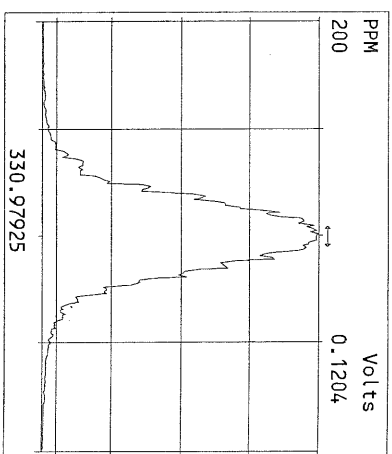
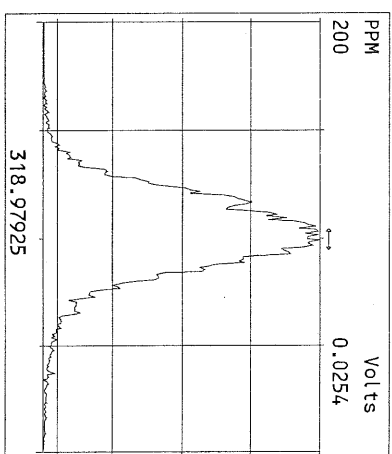
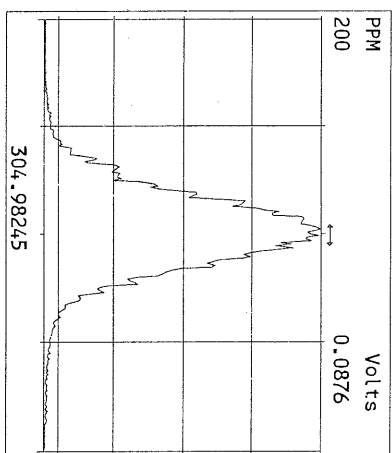
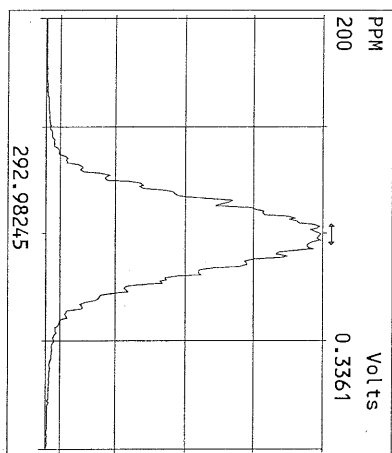
Data File S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
11FEB11M 1	ST021111M1	1613 CS3 100511J	11-FEB-11 14:29:51	ST021111M1	ST021111M2	TC
11FEB11M 2	2216-001-0001-OPR	OPR	11-FEB-11 15:25:09	ST021111M1	ST021111M2	TC
11FEB11M 3	2216-001-0001-MB	Method Blank	11-FEB-11 16:21:50	ST021111M1	ST021111M2	TC
11FEB11M 4	6556-001-0001-SA	PSB05-4-5-072810	11-FEB-11 17:17:09	ST021111M1	ST021111M2	TC
11FEB11M 5	6557-001-0001-SA	PSB12-14-17-072810	11-FEB-11 18:12:28	ST021111M1	ST021111M2	TC
11FEB11M 6	6558-001-0001-SA	PSB2-4-6-072910	11-FEB-11 19:07:47	ST021111M1	ST021111M2	TC
11FEB11M 7	SB021111M1	Solvent Blank	11-FEB-11 20:03:05	ST021111M1	ST021111M2	TC
11FEB11M 8	ST021111M2	1613 CS3 100511J	11-FEB-11 20:58:24	ST021111M1	ST021111M2	TC

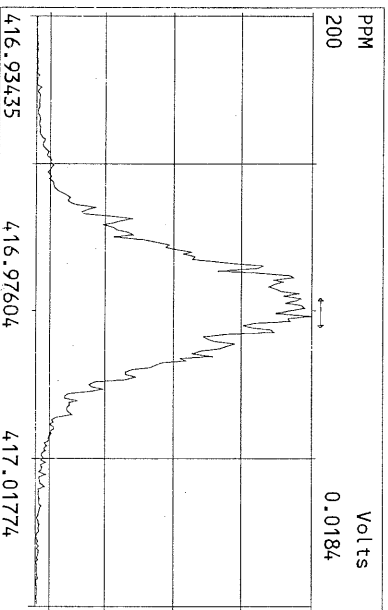
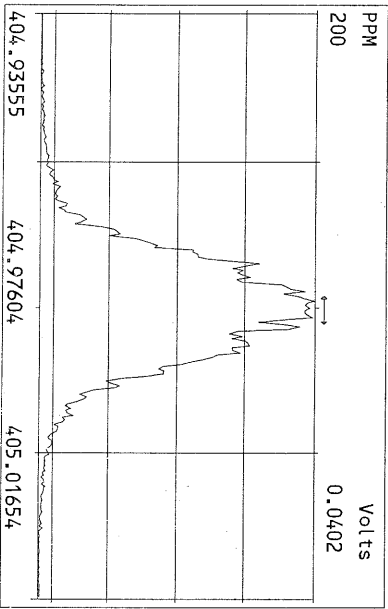
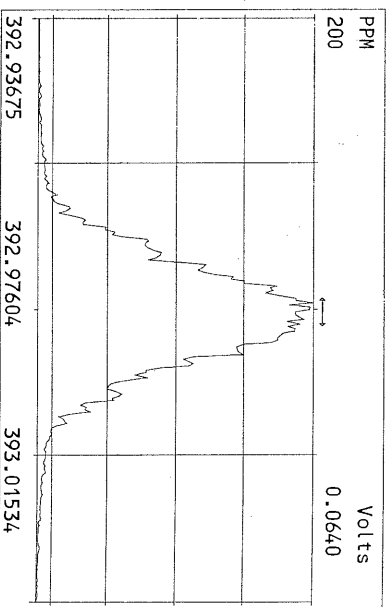
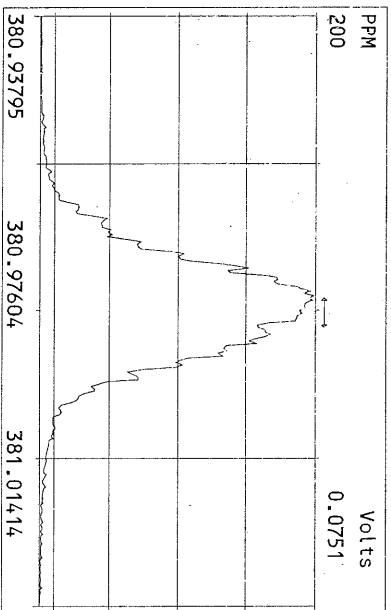
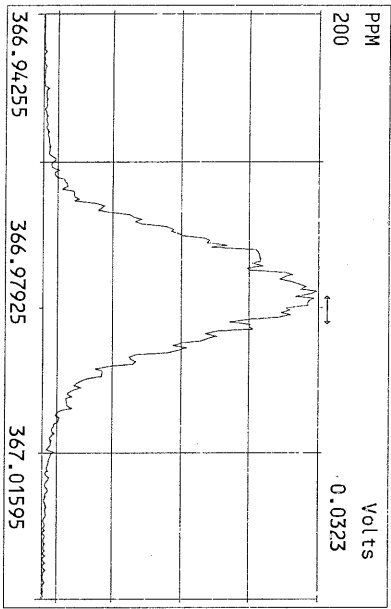
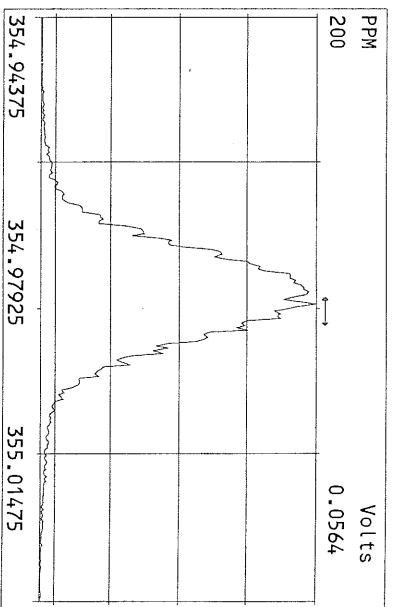
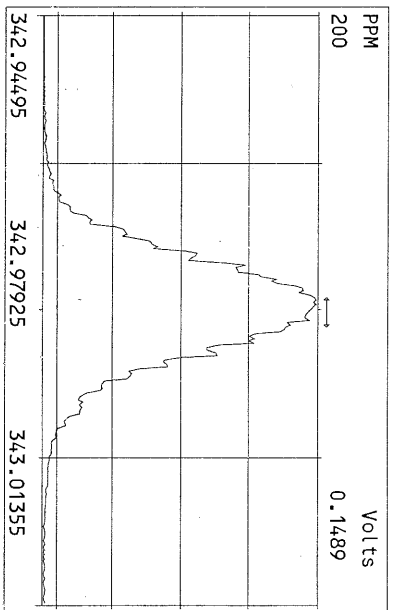
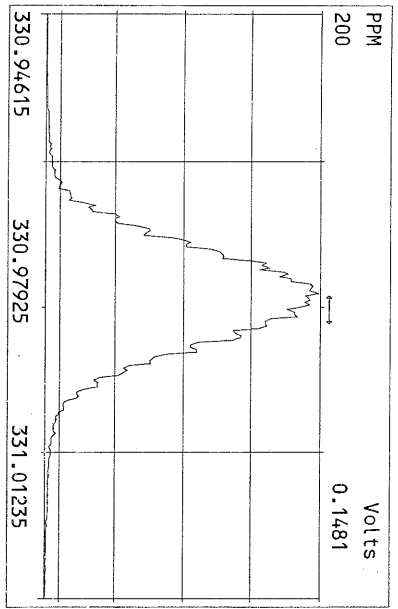


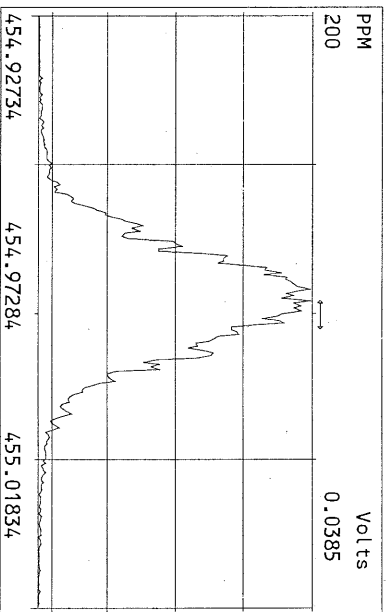
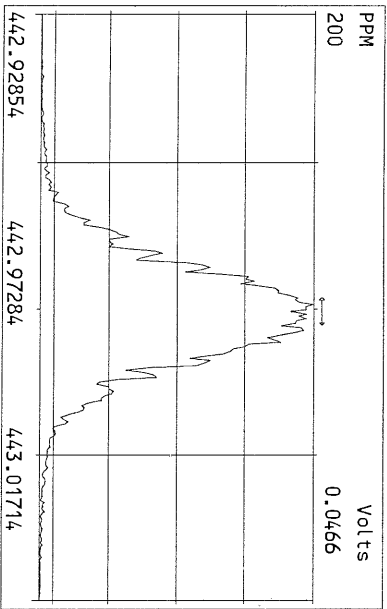
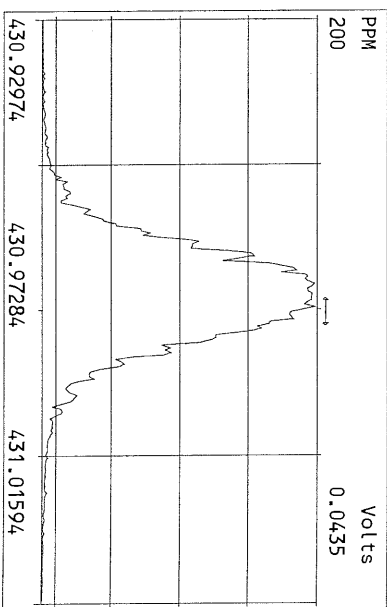
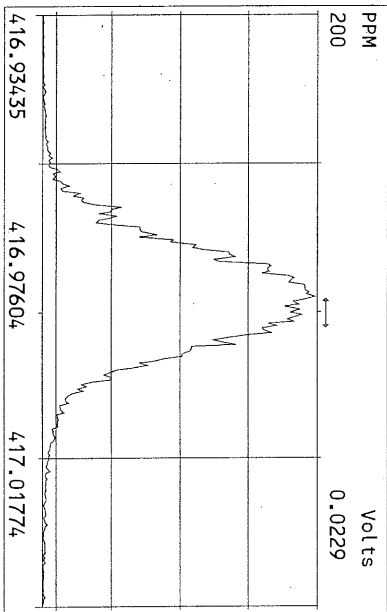
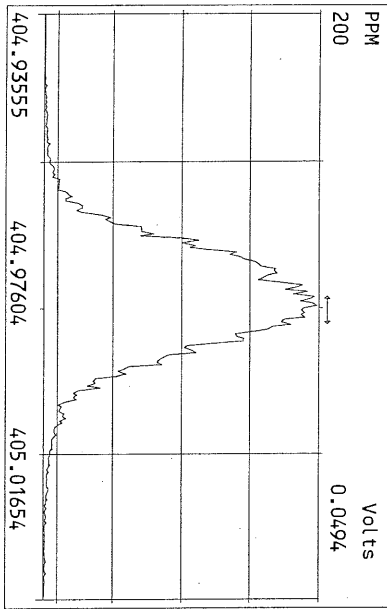
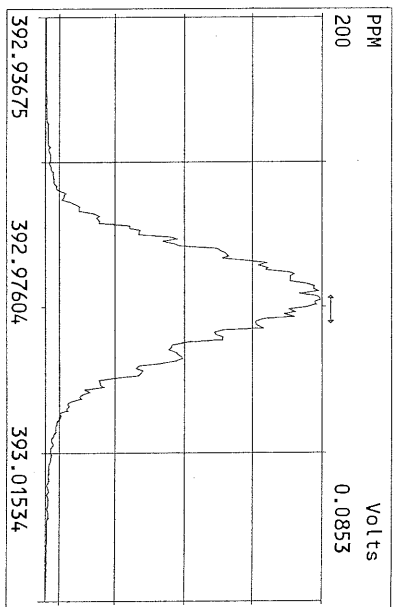
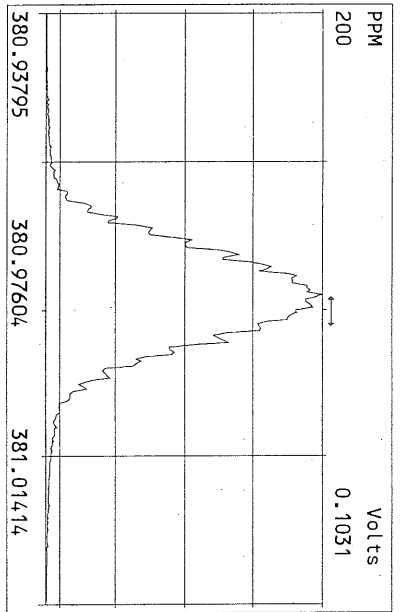
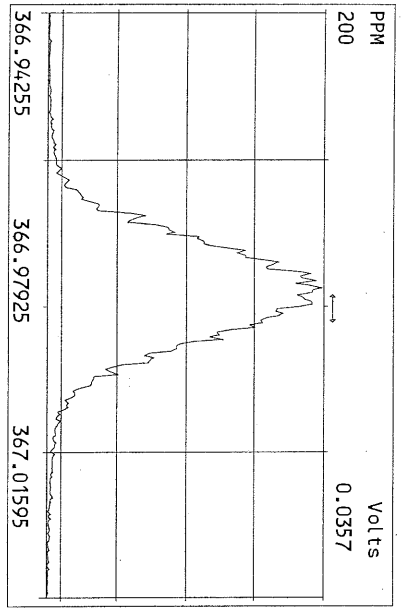
2/14/11

Data Backed Up: \_\_\_\_\_

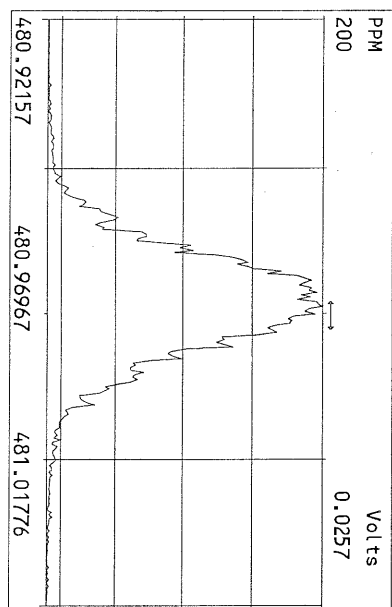
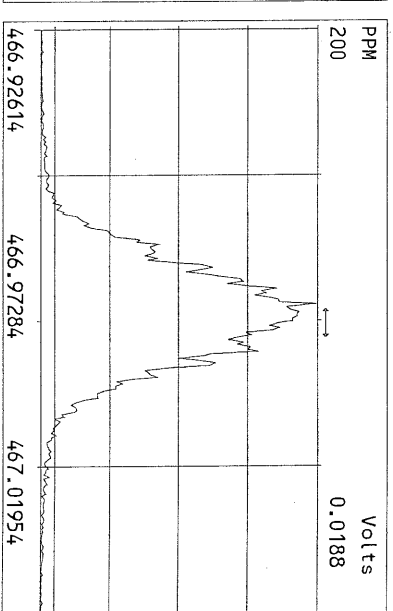
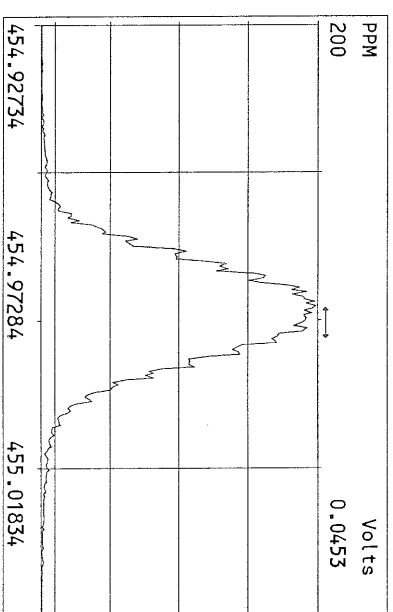
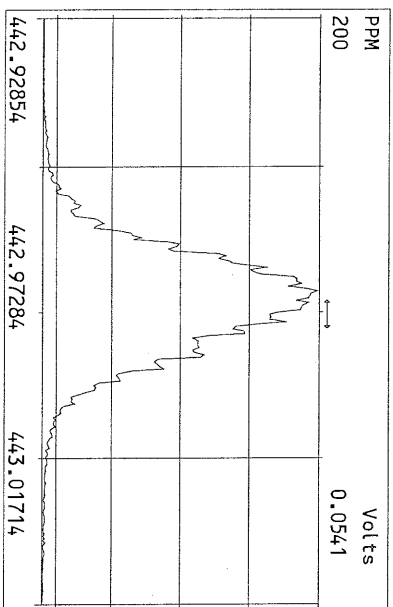
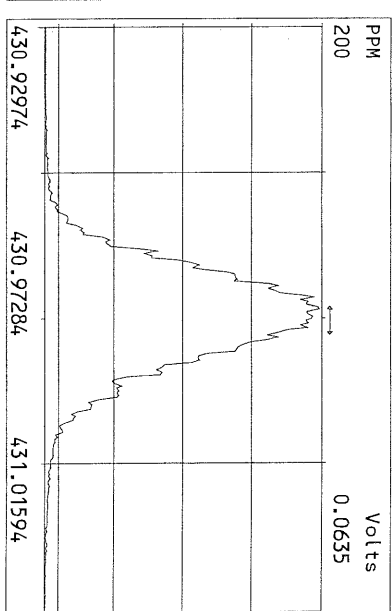
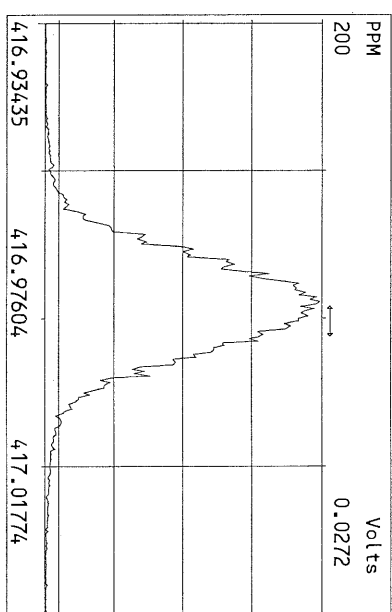
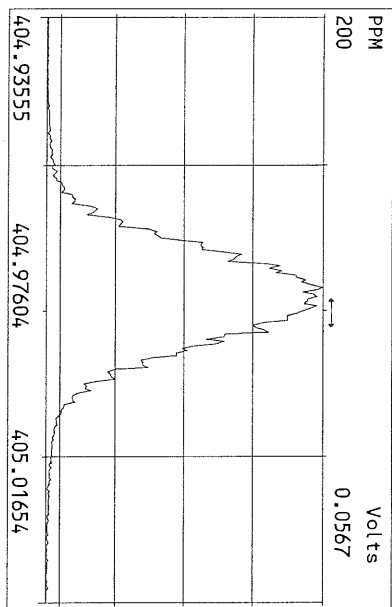
Date: \_\_\_\_\_

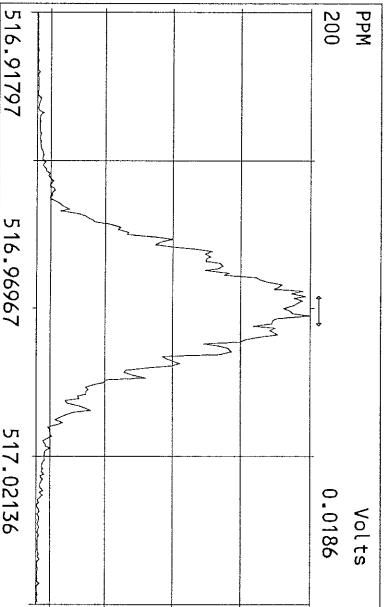
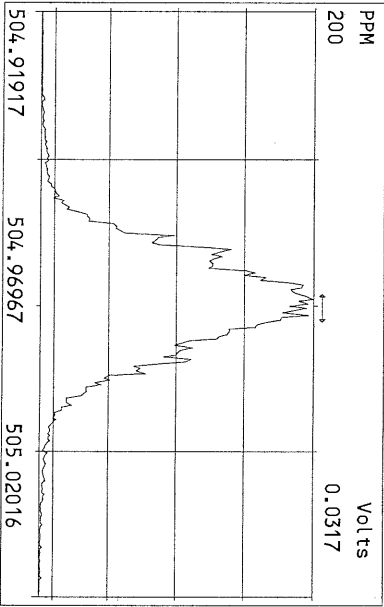
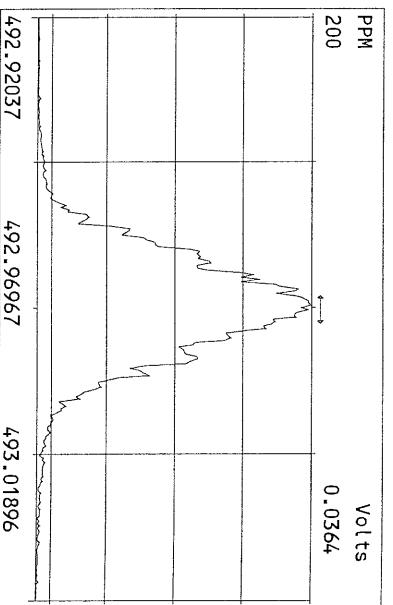
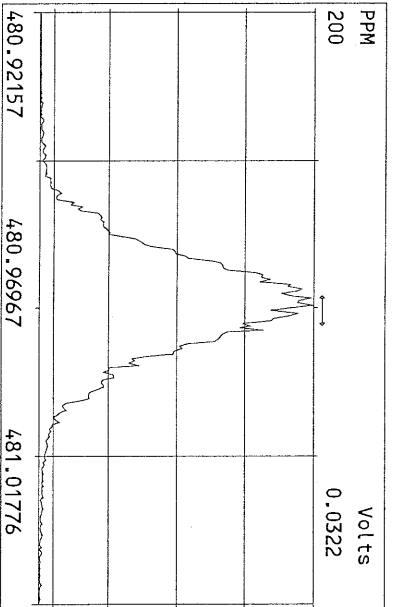
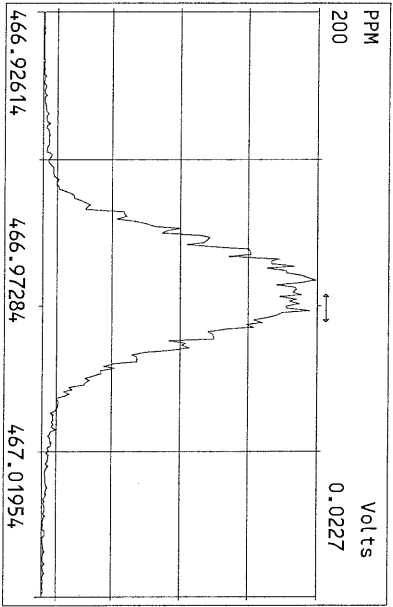
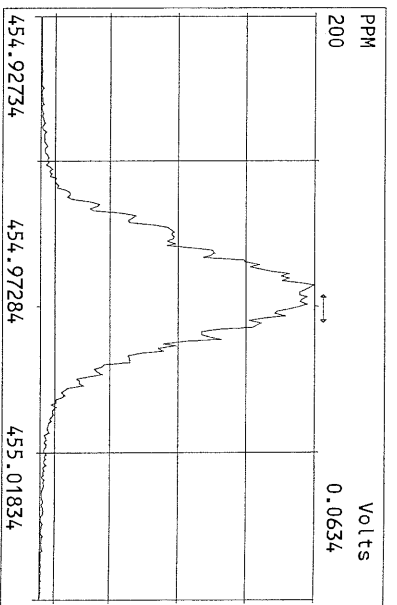
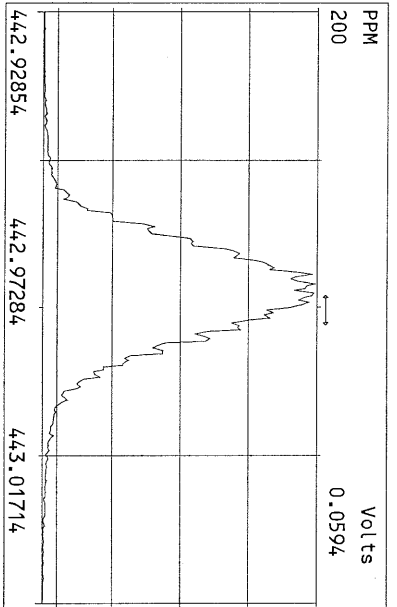
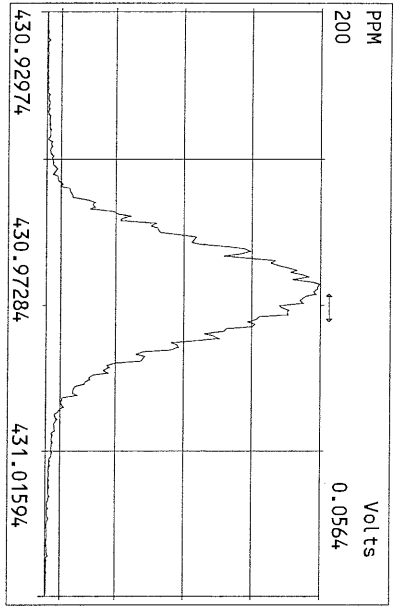




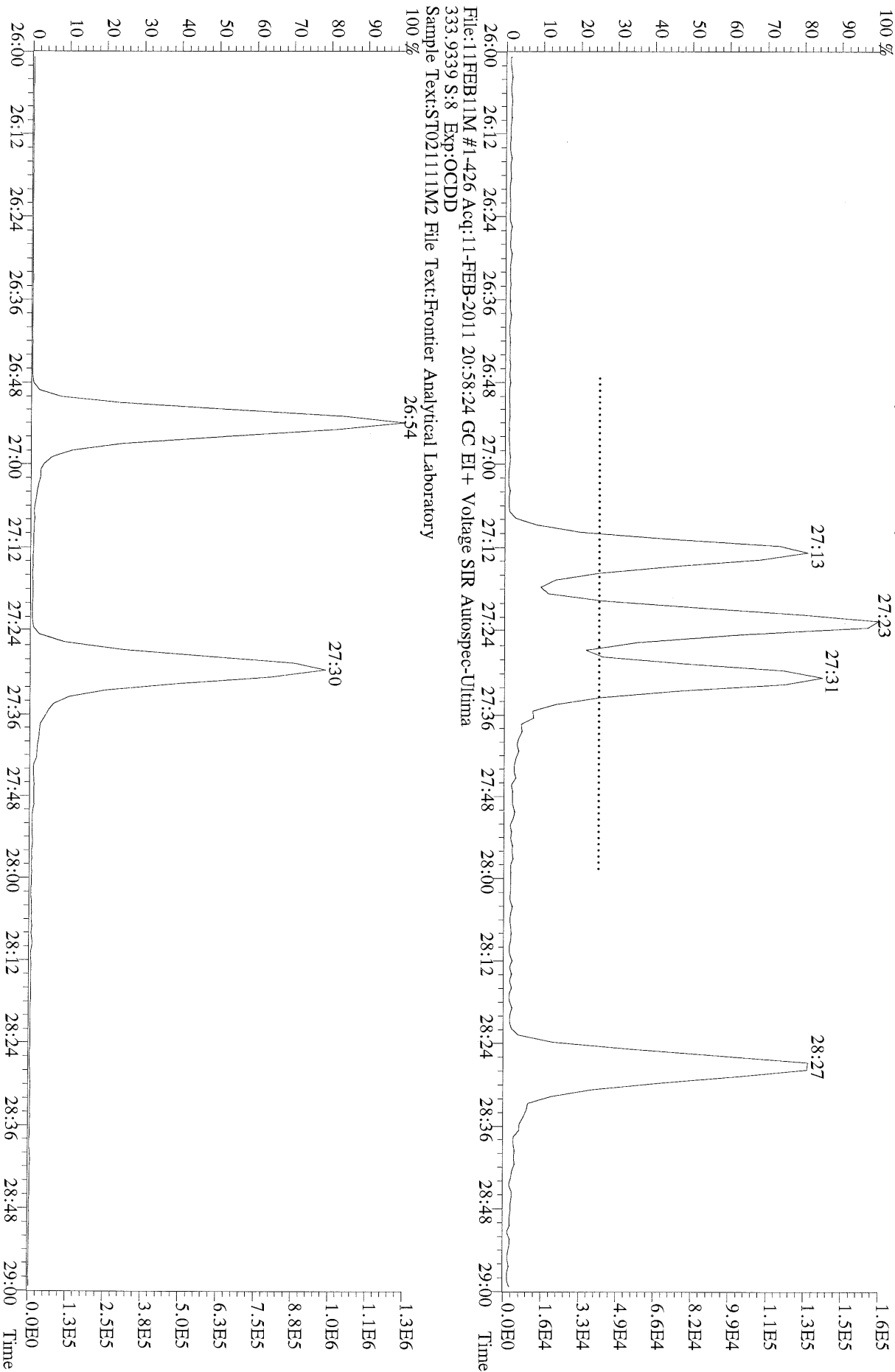




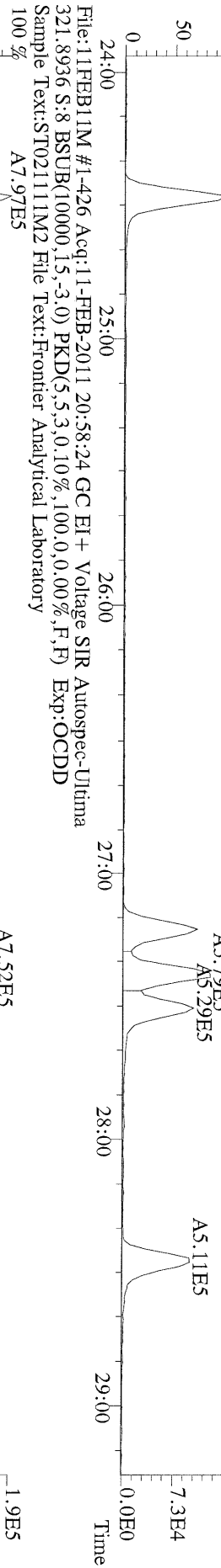




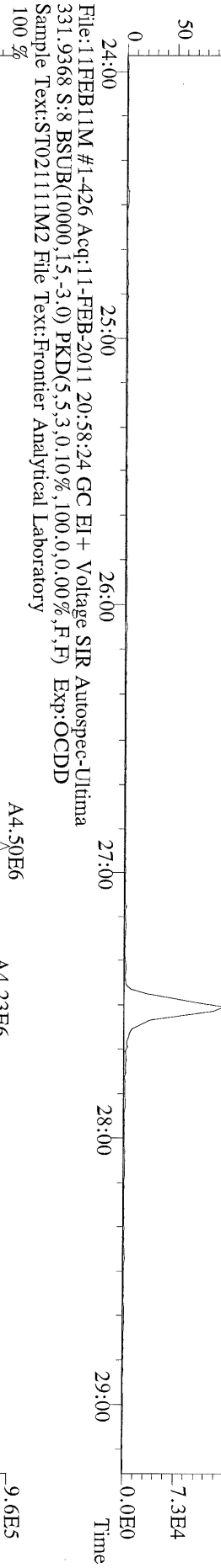
File:11FEB11M #1-426 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
321.8936 S:8 Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory  
100 %



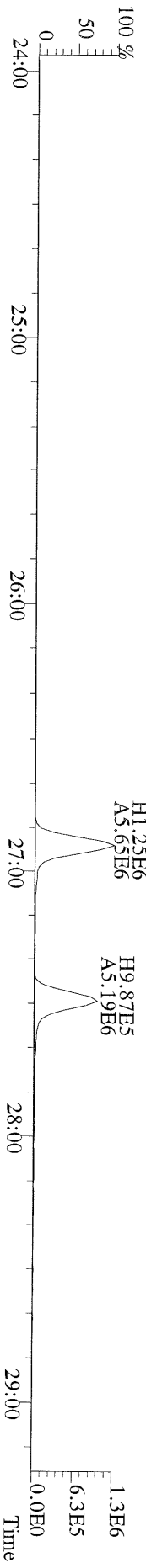
File:1\FEB11M #1-426 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
319.8965 S:8 BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Fronter Analytical Laboratory  
100 %  
A6.30E5



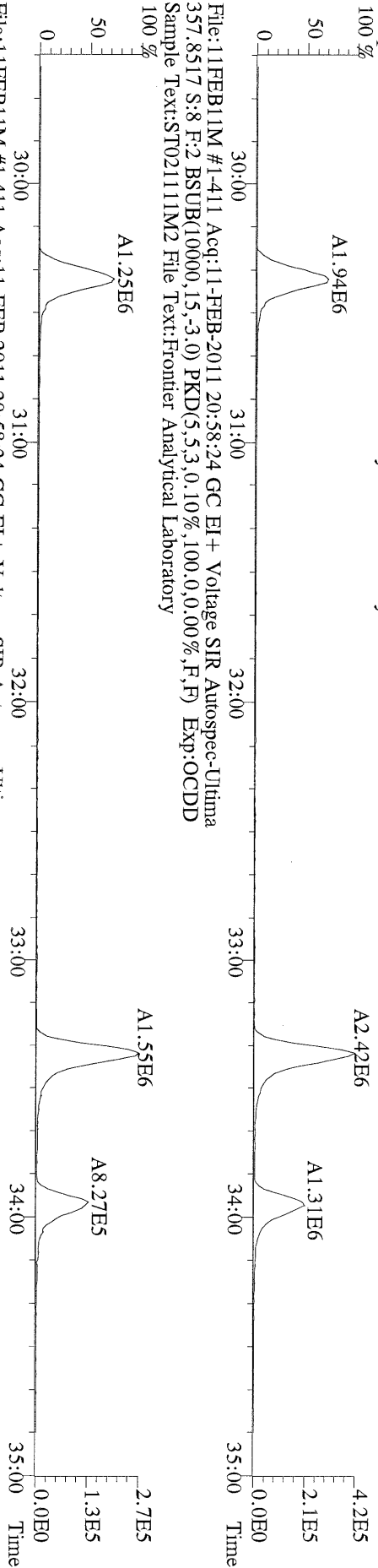
File:1\FEB11M #1-426 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
327.8847 S:8 BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Fronter Analytical Laboratory  
100 %  
A7.97E5



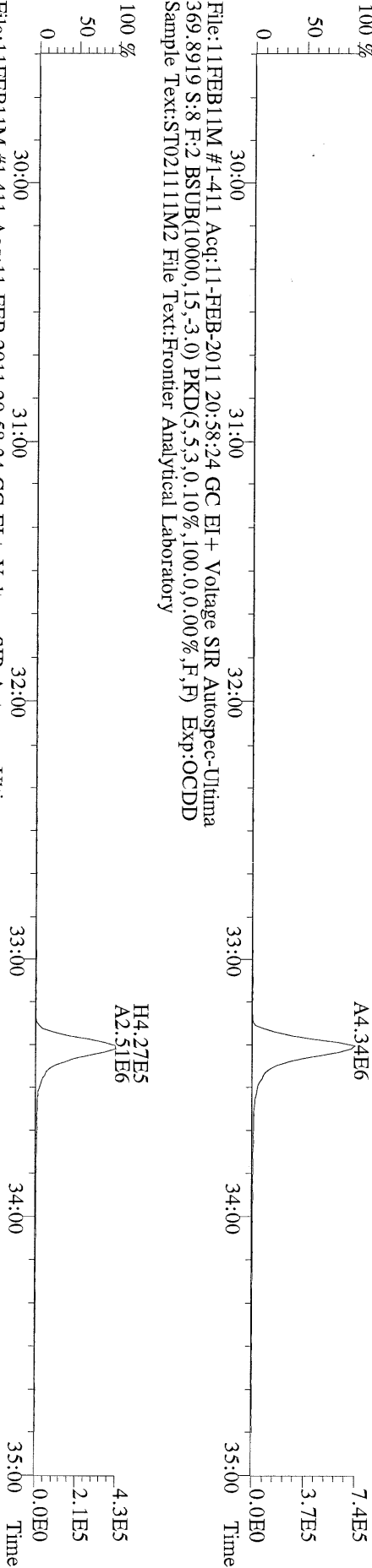
File:1\FEB11M #1-426 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
331.9368 S:8 BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Fronter Analytical Laboratory  
100 %



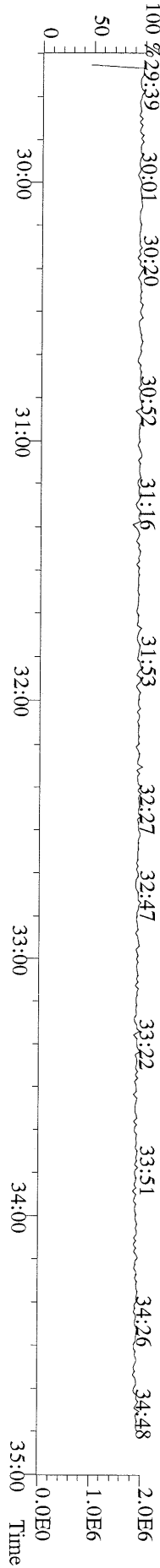
File:11FEB11M #1-411 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
355.8546 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Fronter Analytical Laboratory  
100 %



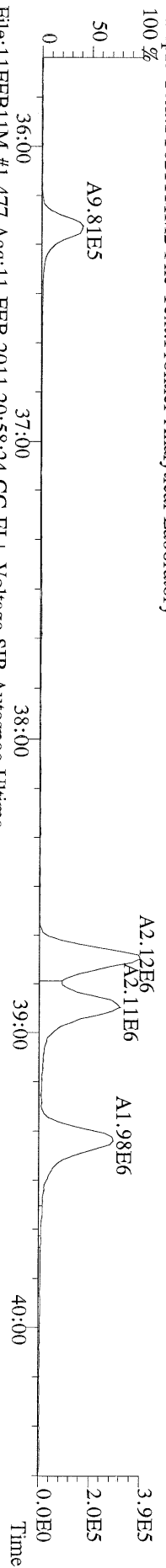
File:11FEB11M #1-411 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
367.8949 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Fronter Analytical Laboratory  
100 %



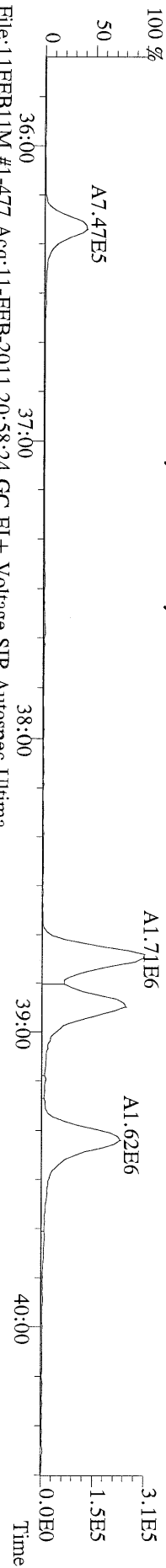
File:11FEB11M #1-411 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
366.9792 S:8 F:2 Exp:OCDD  
Sample Text:ST021111M2 File Text:Fronter Analytical Laboratory  
100 %



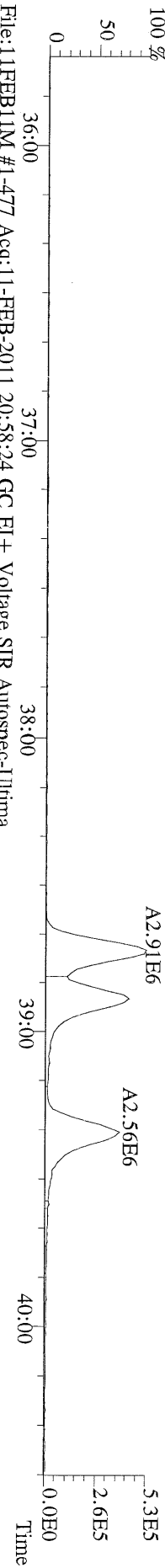
File:11FEB11M #1-477 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory  
100 %



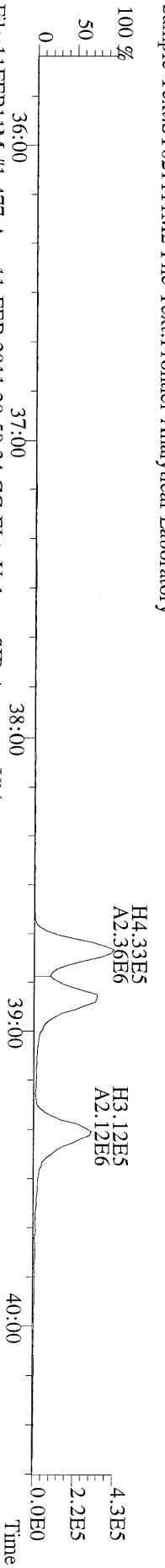
File:11FEB11M #1-477 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
391.8127 S:8 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory  
100 %



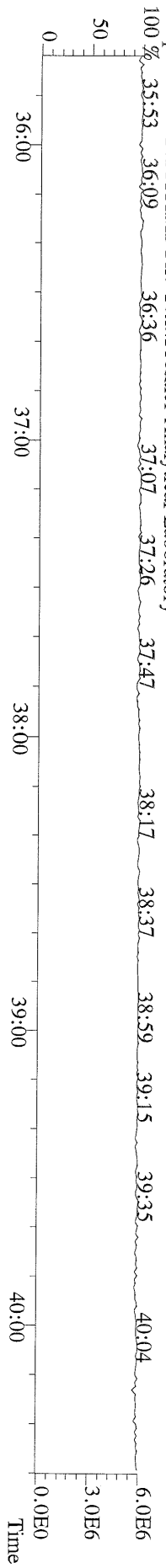
File:11FEB11M #1-477 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory  
100 %



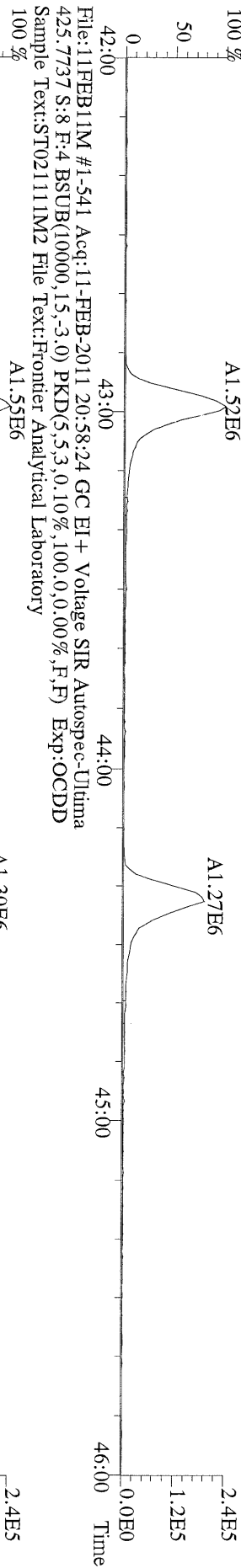
File:11FEB11M #1-477 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
403.8530 S:8 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



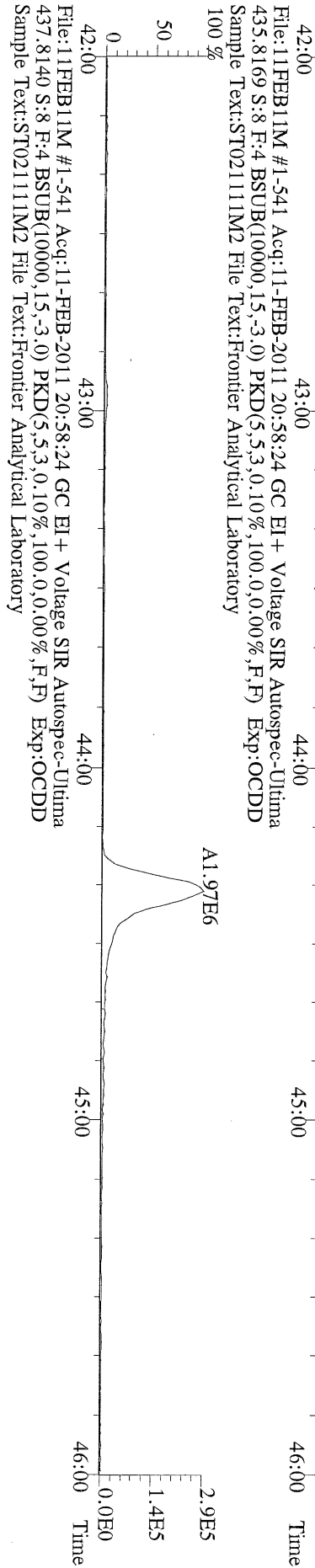
File:11FEB11M #1-477 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
380.9760 S:8 F:3 Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory  
100 %



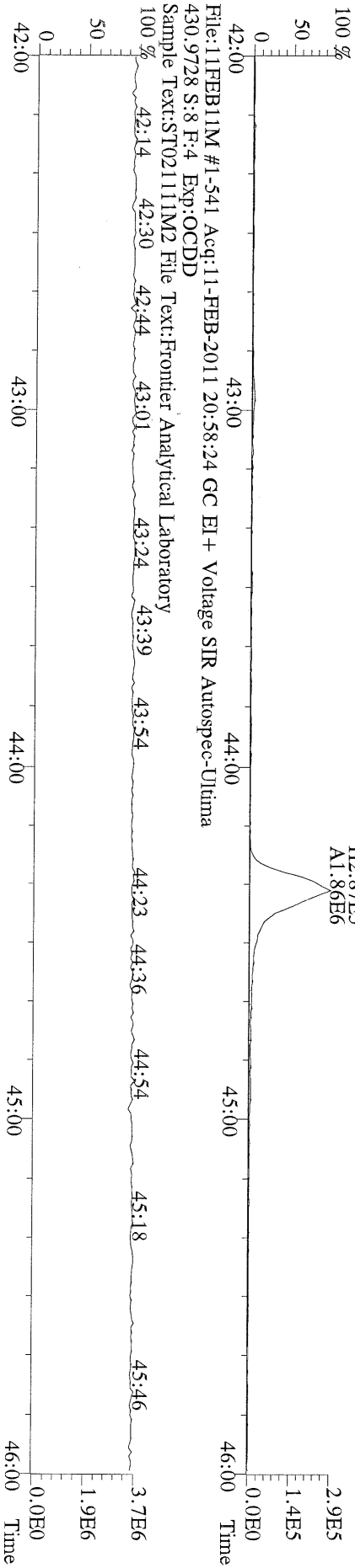
File:11FEB11M #1-541 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory  
100 %



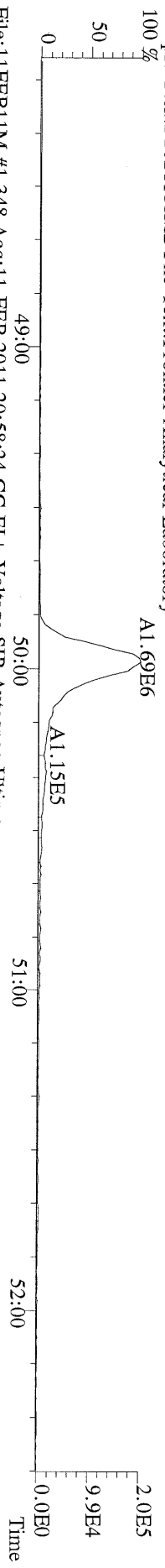
File:11FEB11M #1-541 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
435.8169 S:8 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory  
100 %



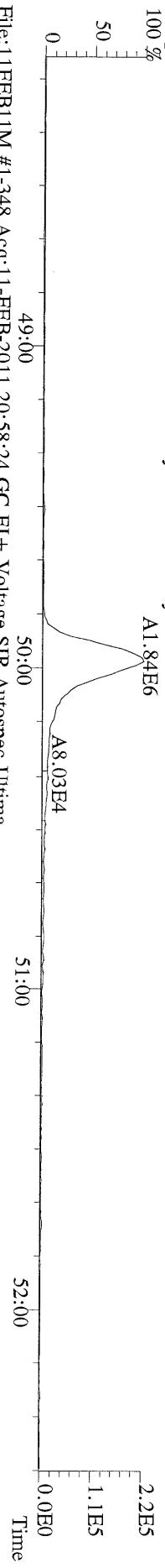
File:11FEB11M #1-541 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
430.9728 S:8 F:4 Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory  
100 %



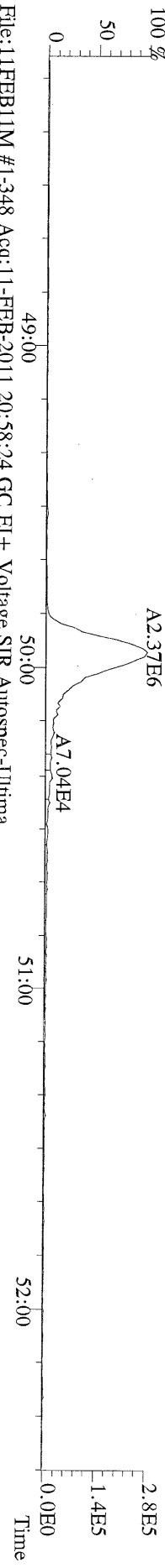
File:11FEB11M #1-348 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



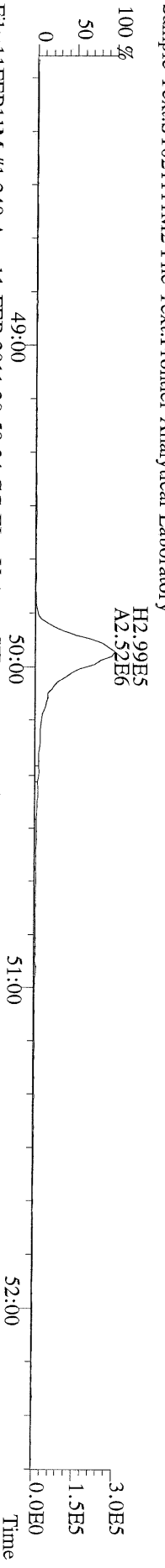
File:11FEB11M #1-348 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
459.7348 S:8 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



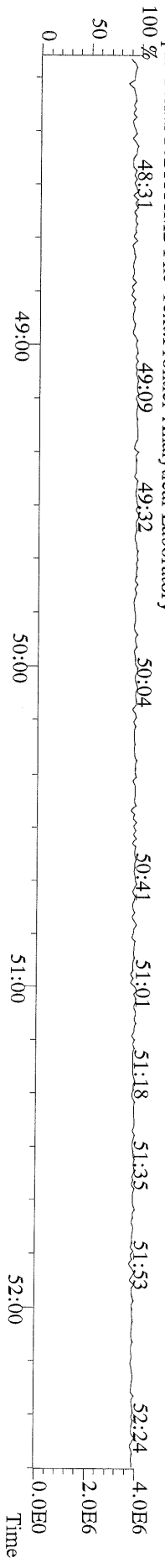
File:11FEB11M #1-348 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
469.7780 S:8 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



File:11FEB11M #1-348 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
471.7750 S:8 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory

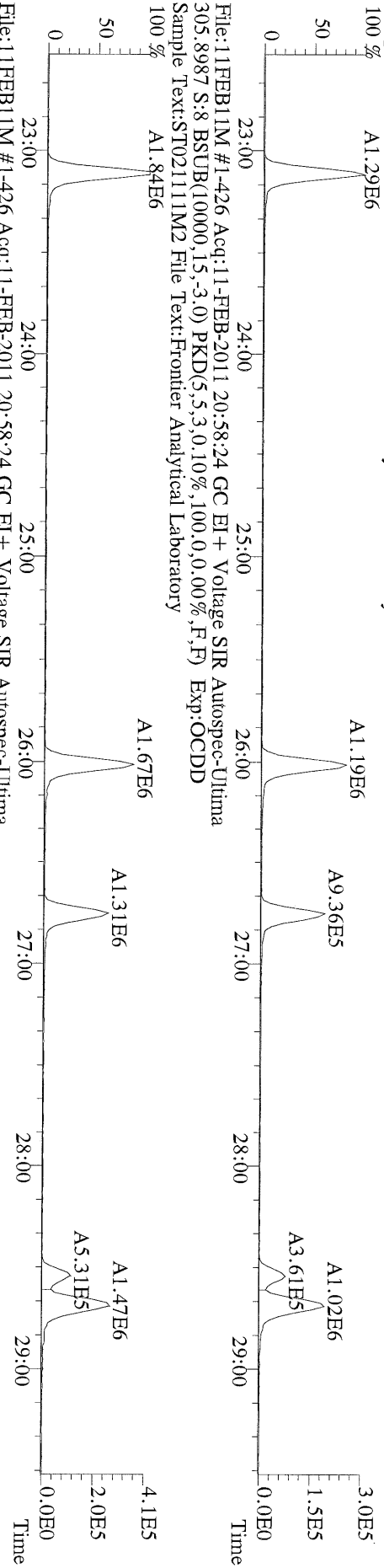


File:11FEB11M #1-348 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
454.9728 S:8 F:5 Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory

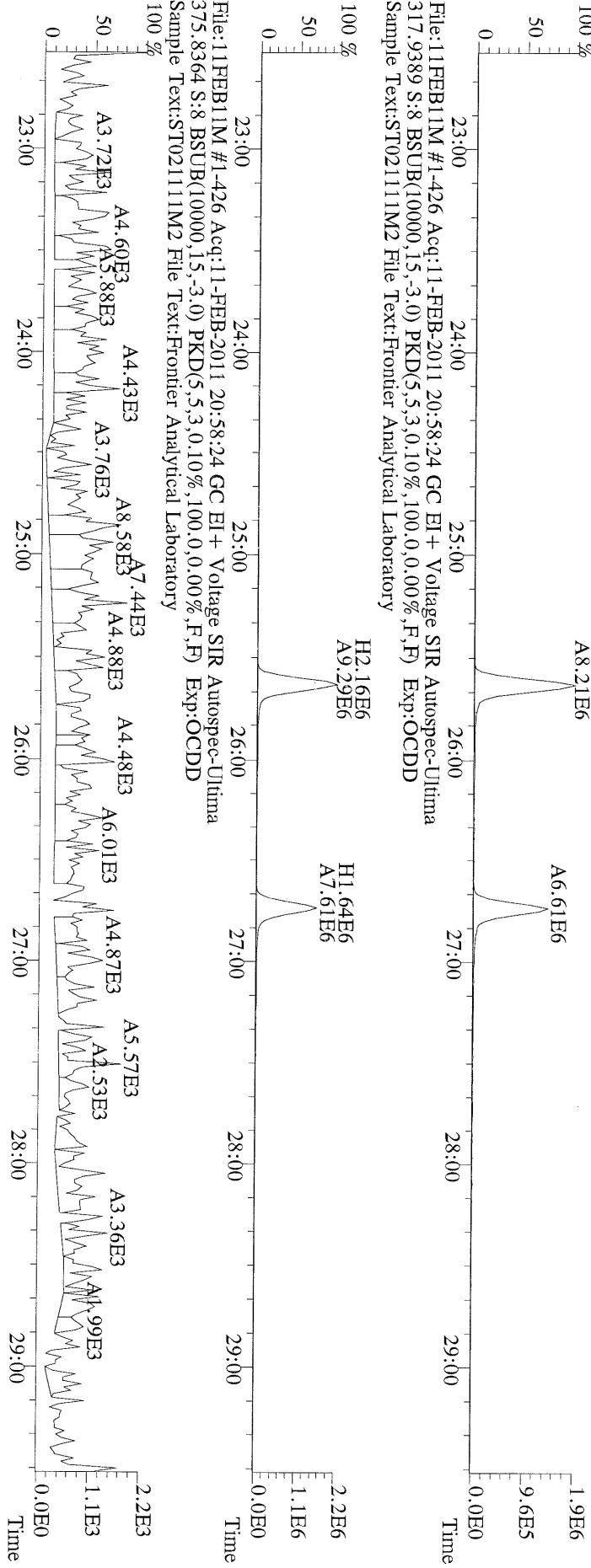




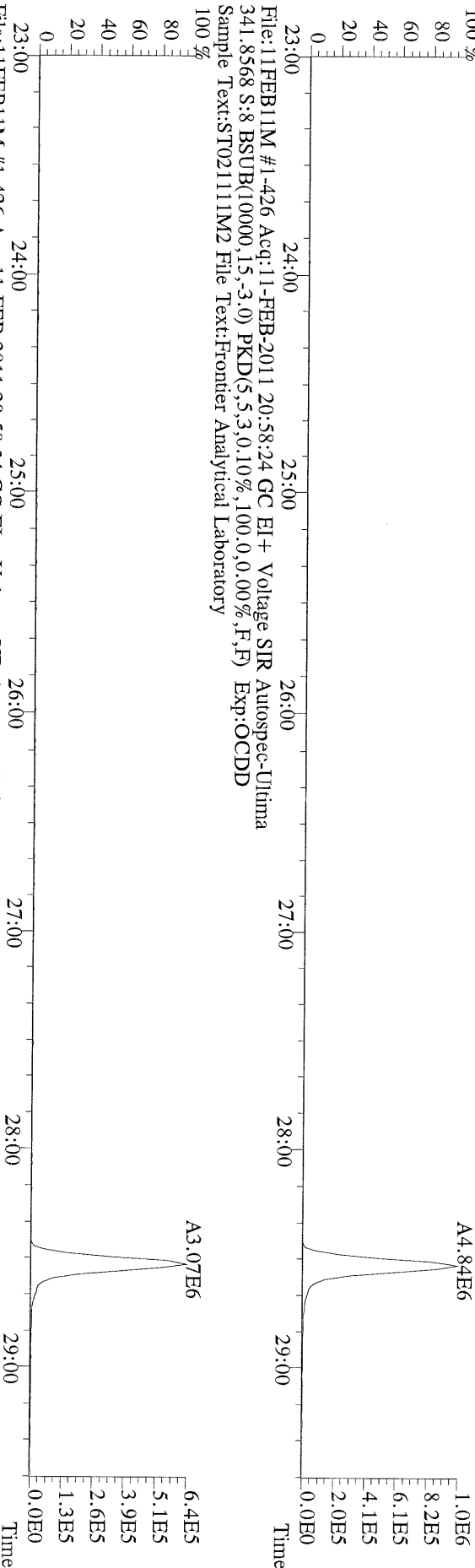
File:11FEB11M #1-426 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
303.9016 S:8 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Fronter Analytical Laboratory



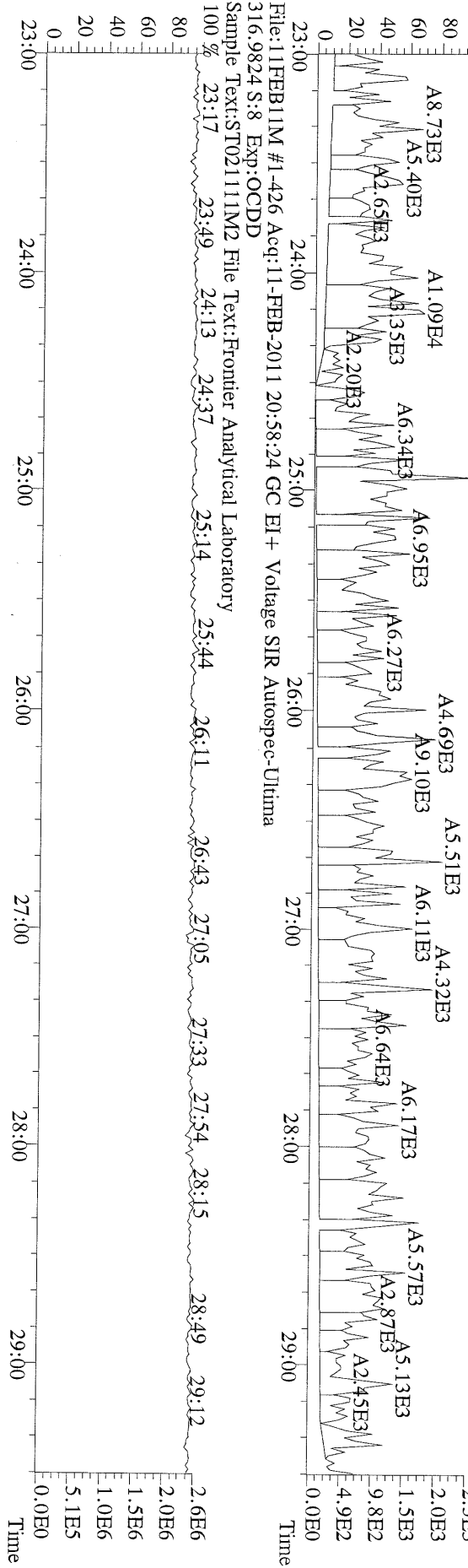
File:11FEB11M #1-426 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
315.9419 S:8 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Fronter Analytical Laboratory



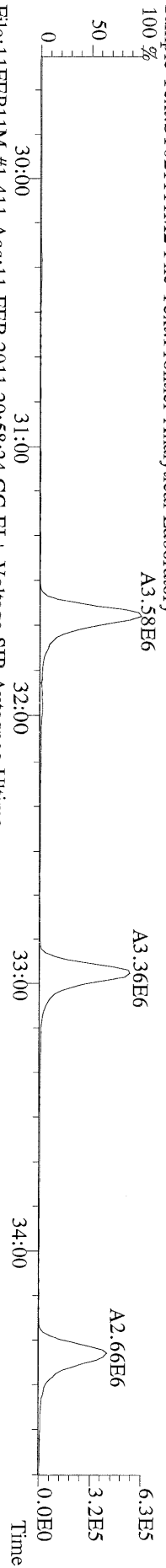
File:11FEB11M #1-426 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
 339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST02111M2 File Text:Frontier Analytical Laboratory



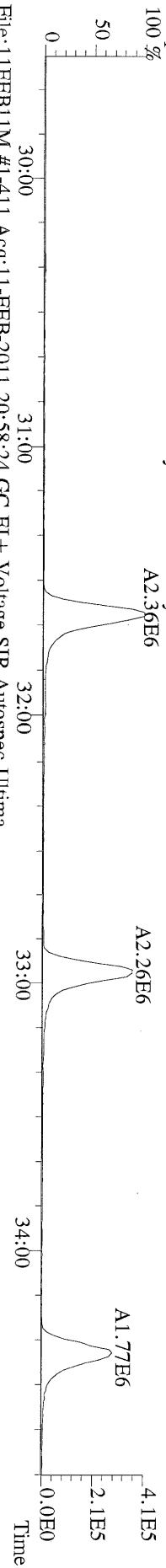
File:11FEB11M #1-426 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
 409.7974 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST02111M2 File Text:Frontier Analytical Laboratory



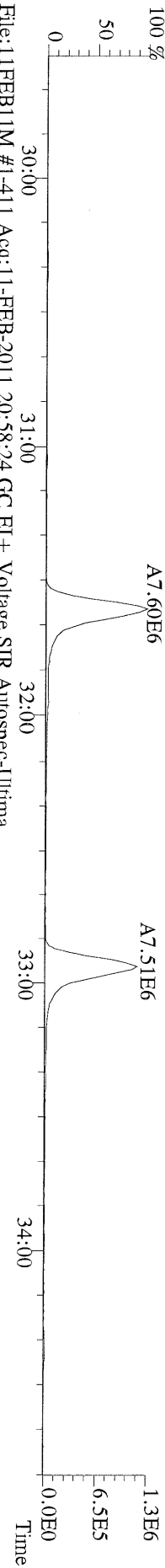
File:11FEB11M #1-411 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



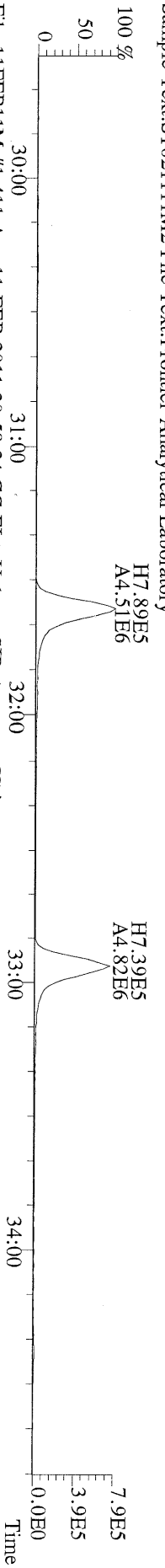
File:11FEB11M #1-411 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
341.8568 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



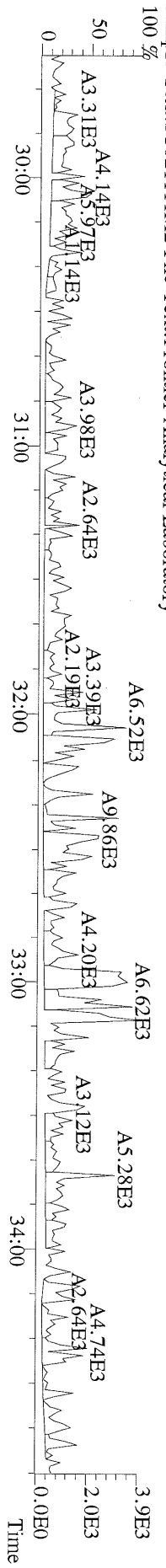
File:11FEB11M #1-411 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
351.9000 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



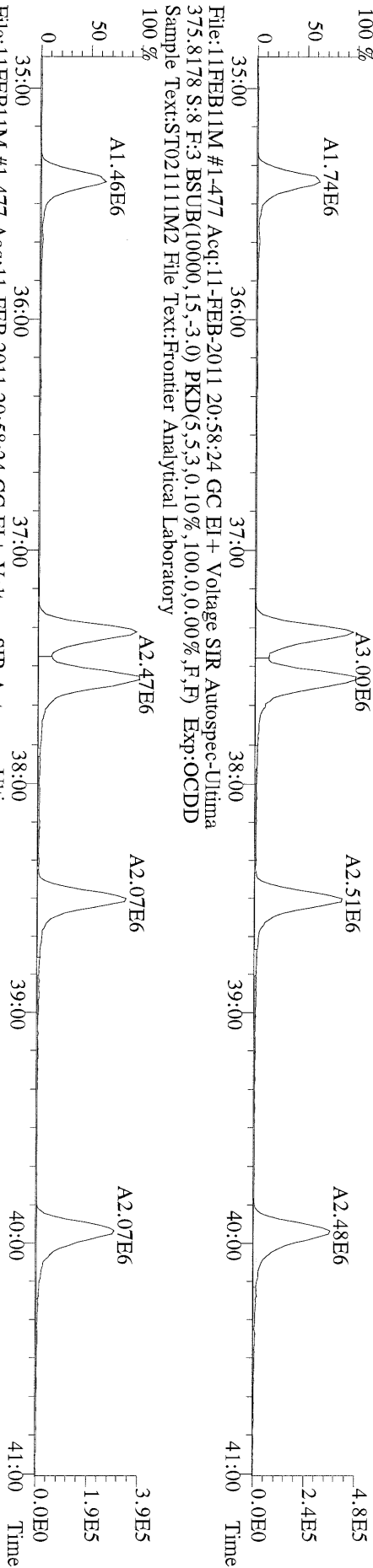
File:11FEB11M #1-411 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
353.8970 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



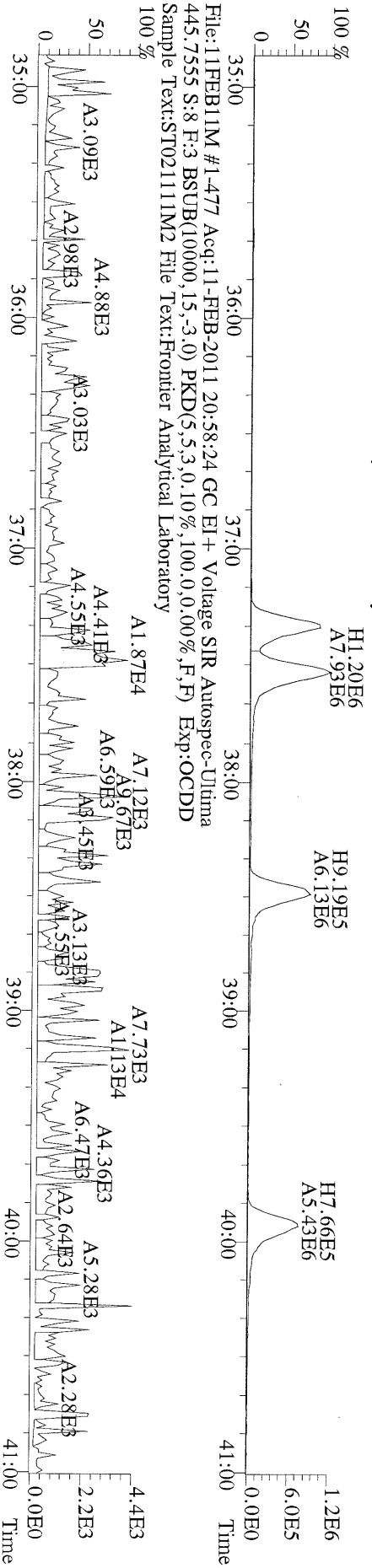
File:11FEB11M #1-411 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Ultima  
409.7974 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



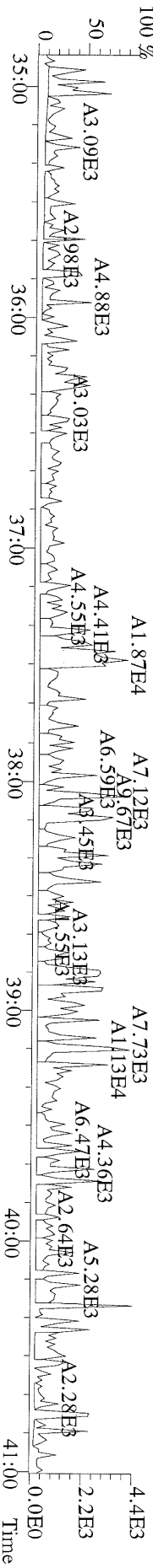
File:11FEB11M #1-477 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
 373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



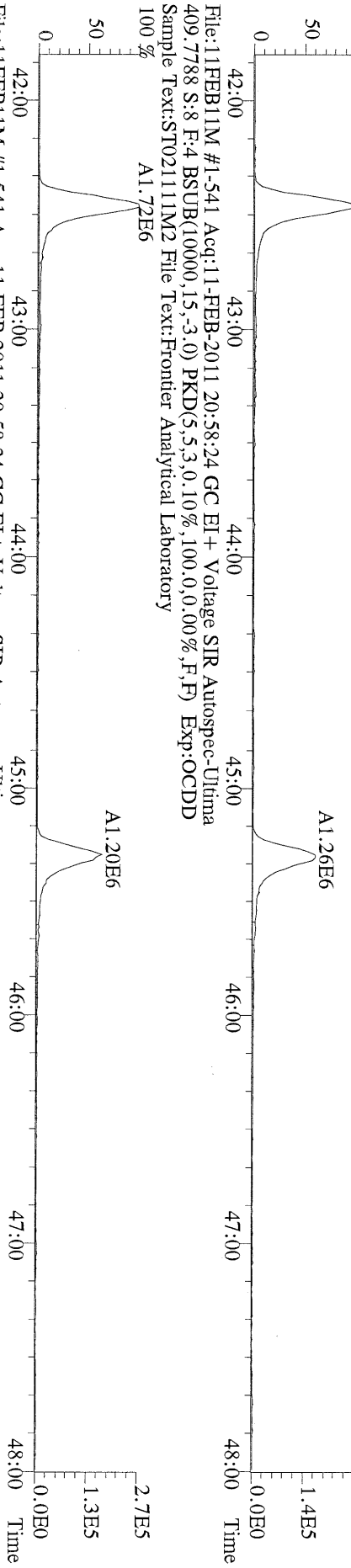
File:11FEB11M #1-477 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
 383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



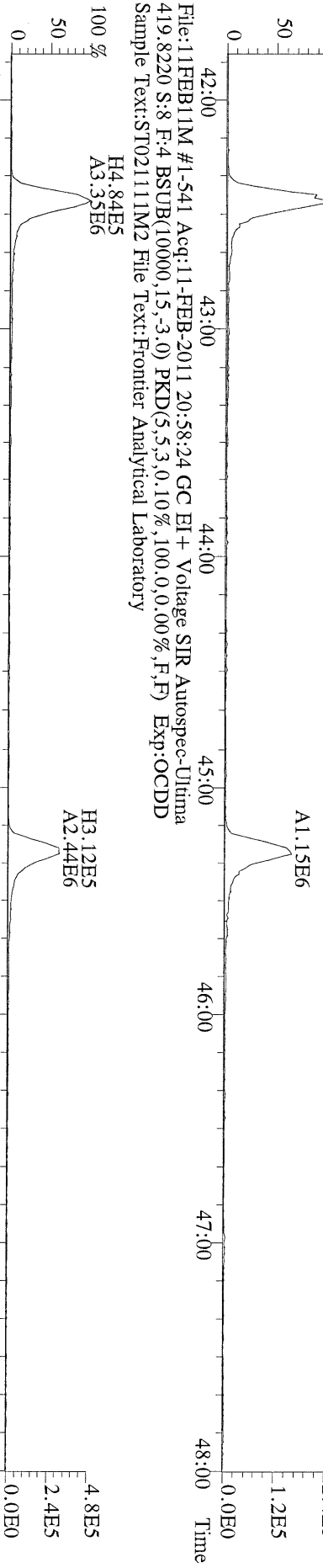
File:11FEB11M #1-477 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
 445.7555 S:8 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



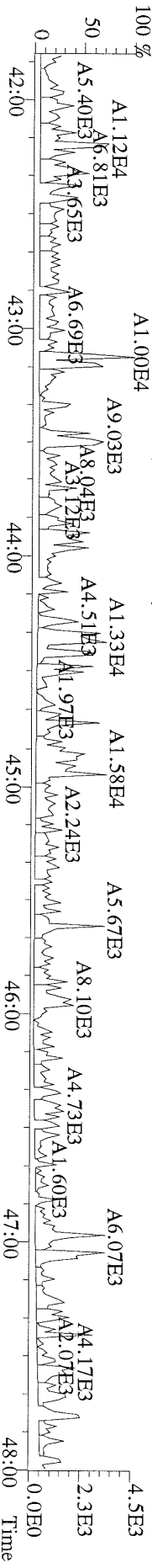
File:11FEB11M #1-541 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
407.7818 S:8 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



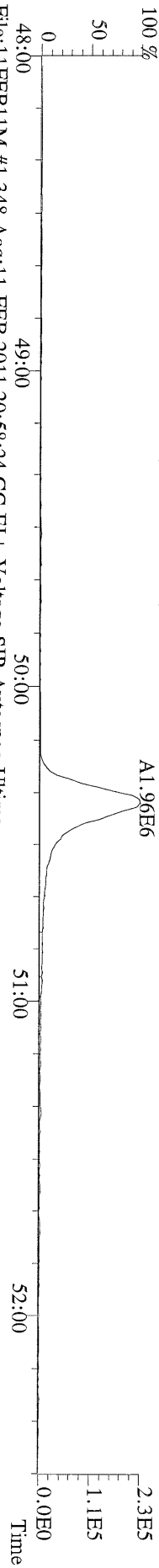
File:11FEB11M #1-541 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
417.8253 S:8 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



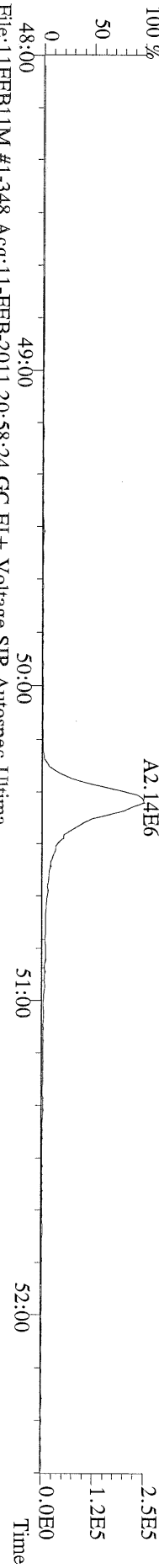
File:11FEB11M #1-541 Acq:11-FEB-2011 20:58:24 GC EI + Voltage SIR Autospec-Ultima  
419.8220 S:8 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



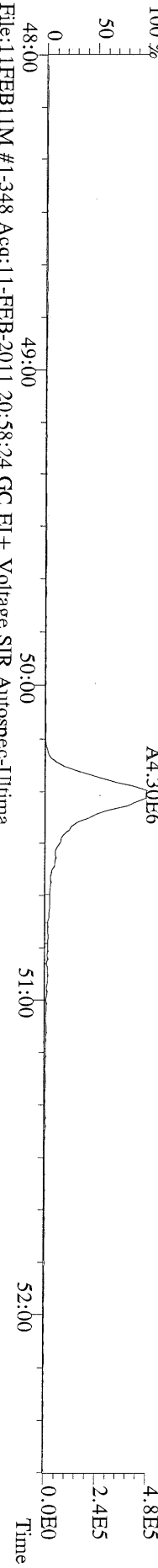
File:11FEB11M #1-348 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Utima  
441.7428 S:8 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



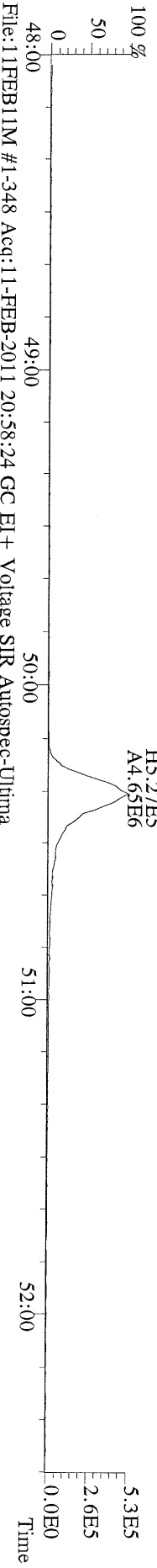
File:11FEB11M #1-348 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Utima  
443.7398 S:8 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



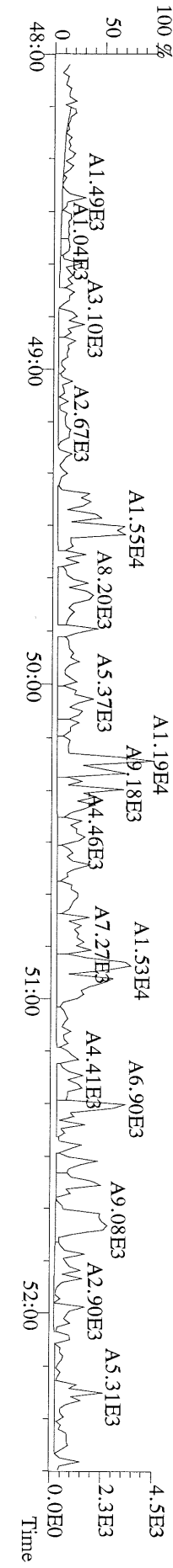
File:11FEB11M #1-348 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Utima  
453.7831 S:8 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory

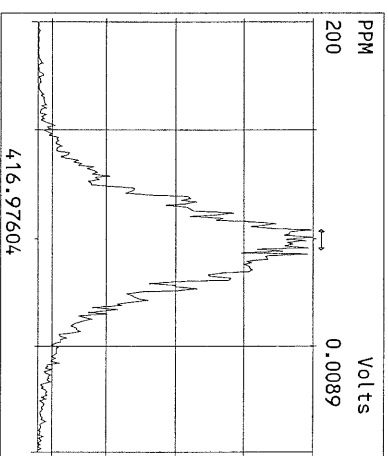
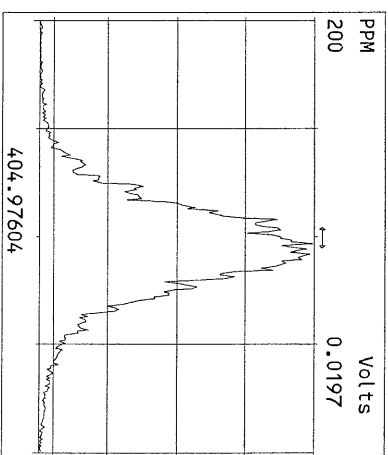
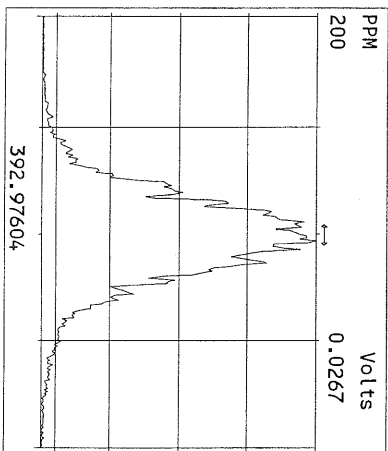
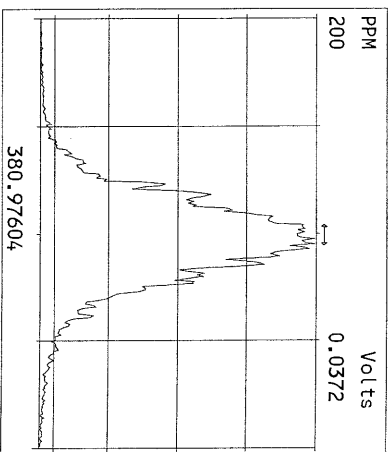
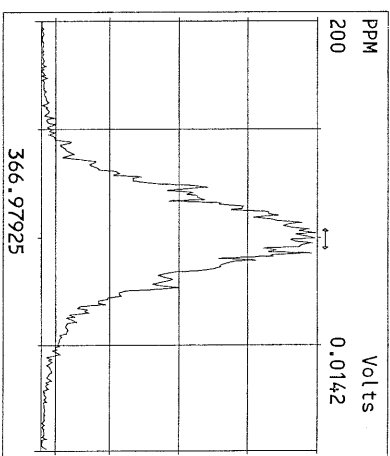
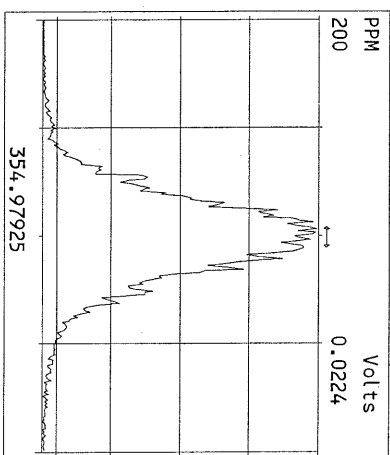
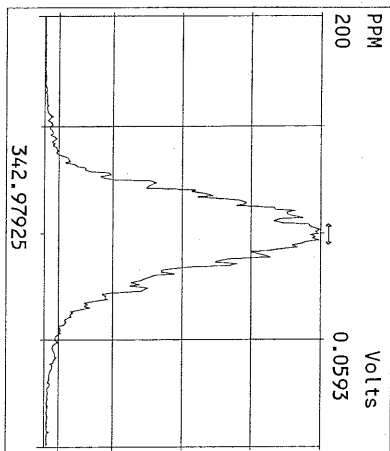
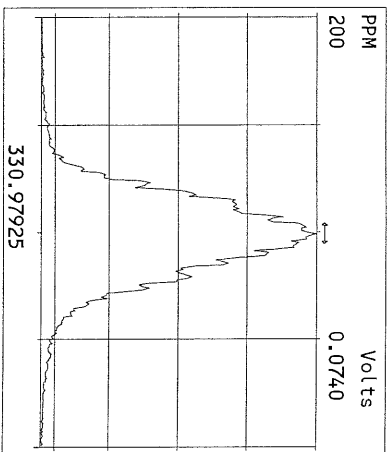
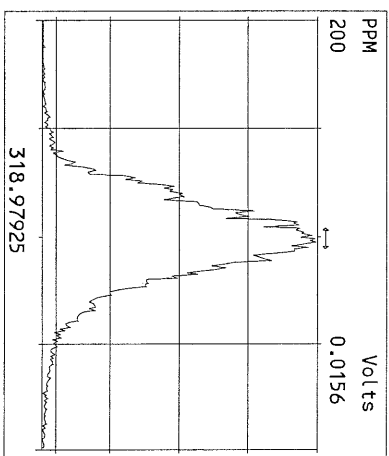
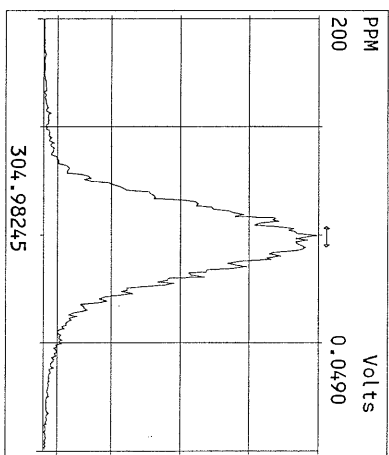
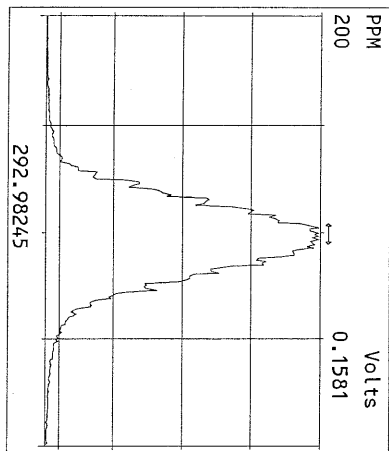


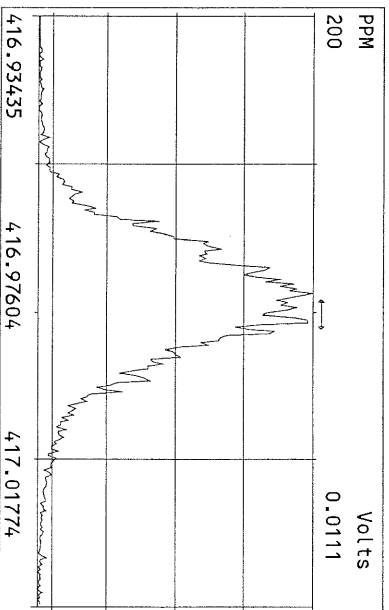
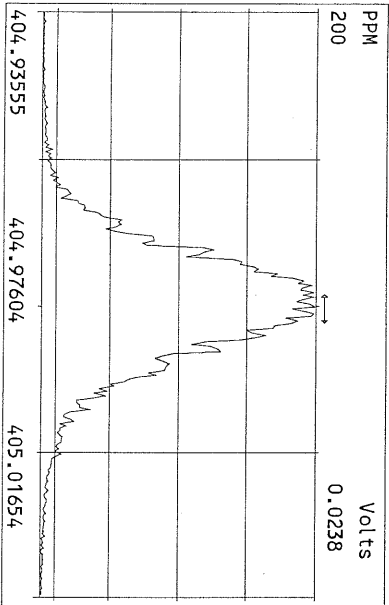
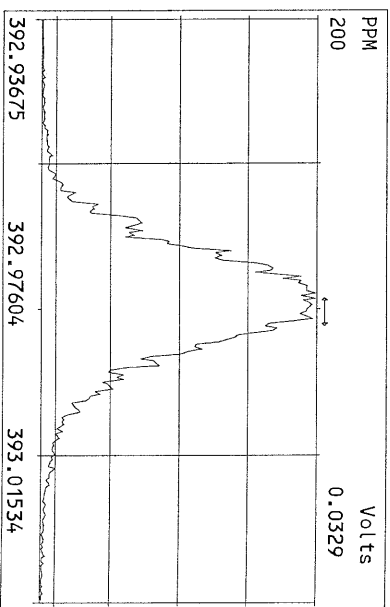
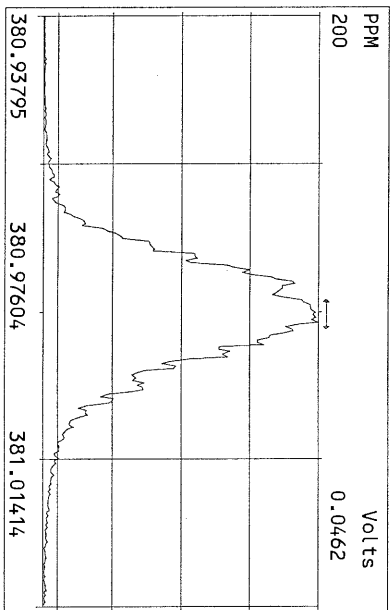
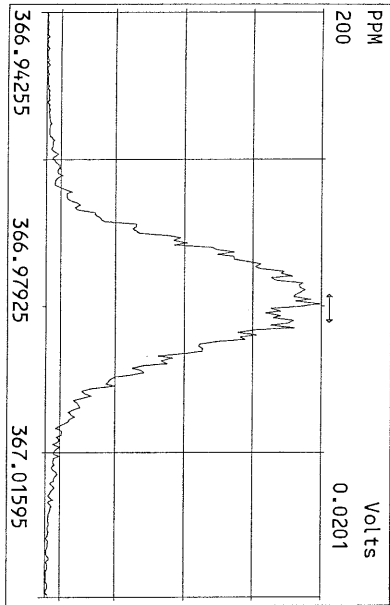
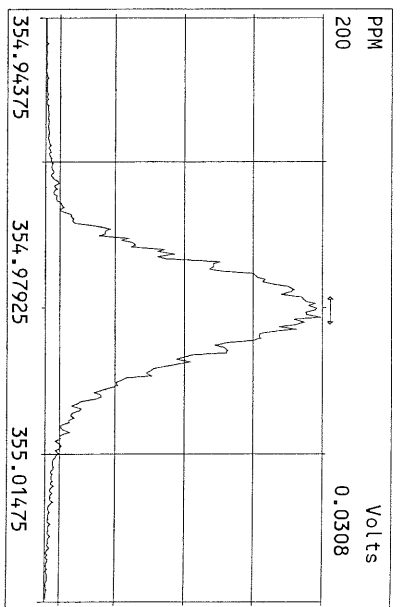
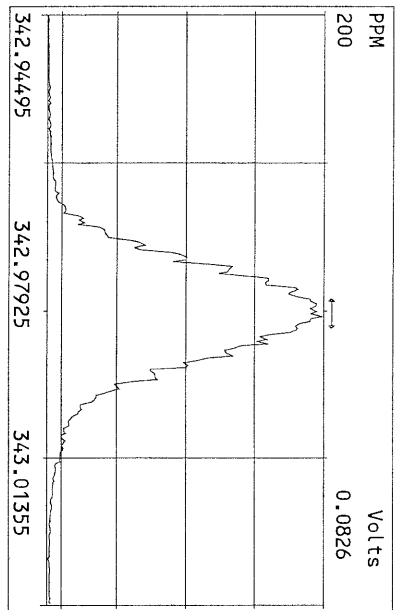
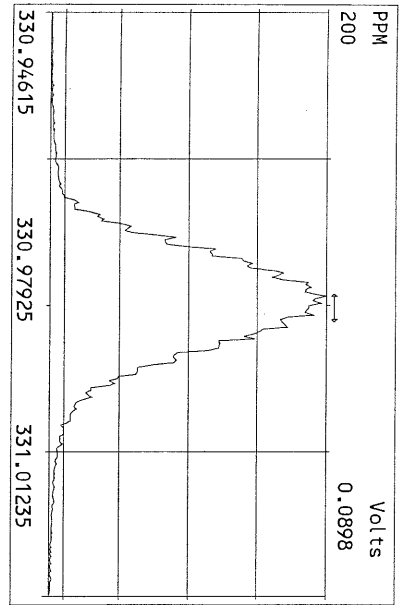
File:11FEB11M #1-348 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Utima  
455.7801 S:8 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory



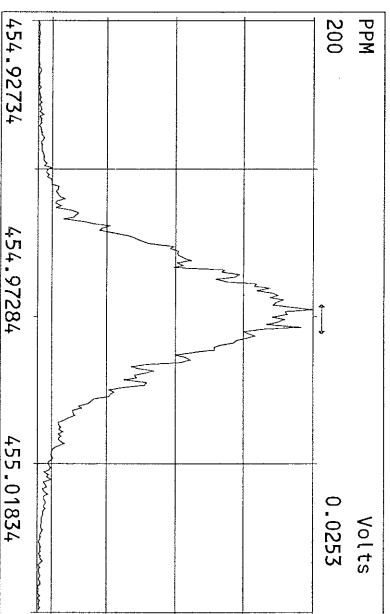
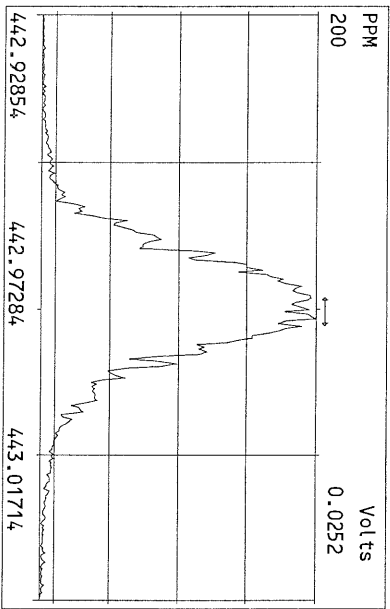
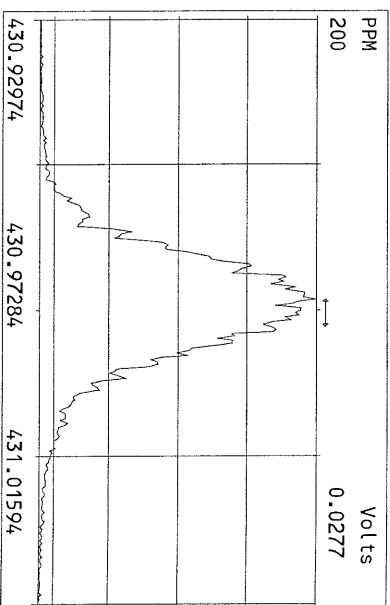
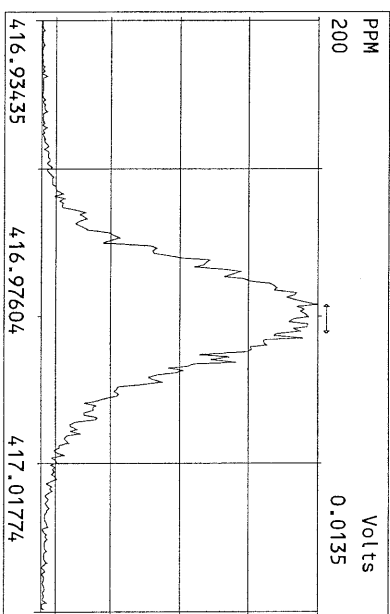
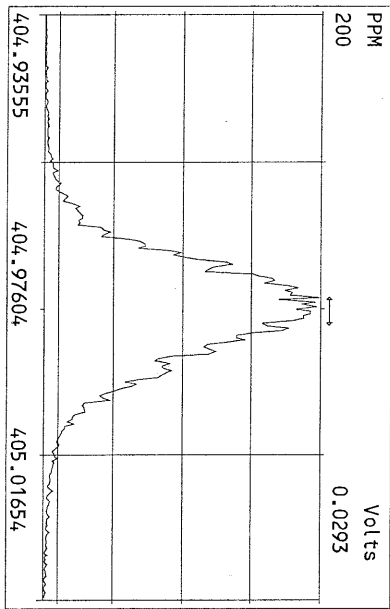
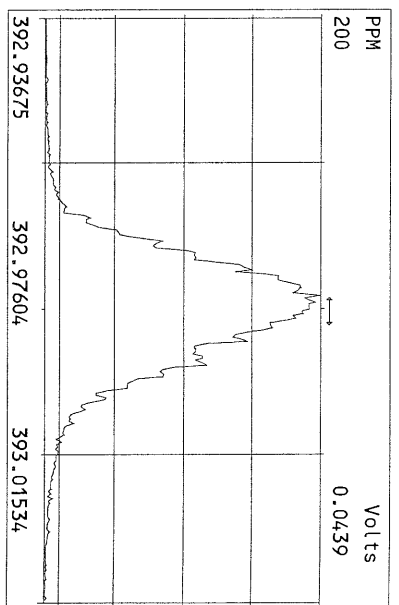
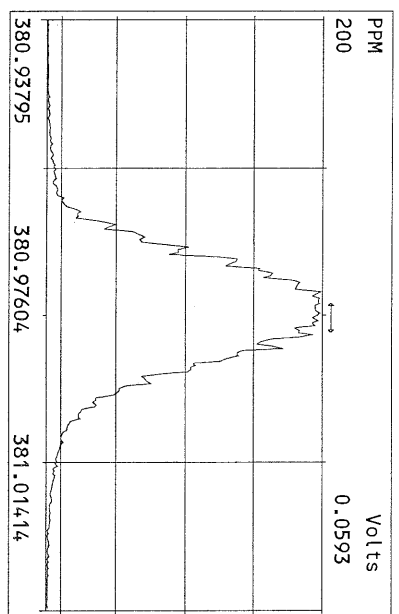
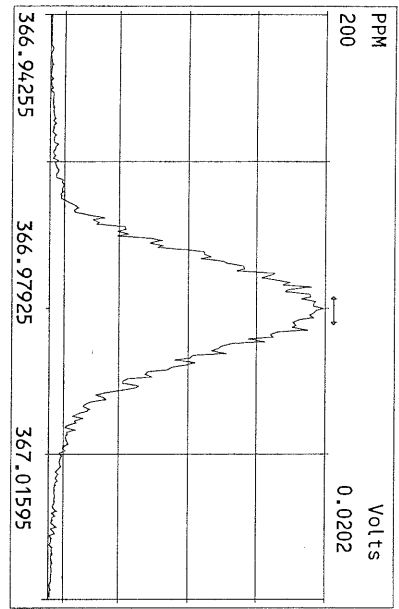
File:11FEB11M #1-348 Acq:11-FEB-2011 20:58:24 GC EI+ Voltage SIR Autospec-Utima  
513.6775 S:8 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021111M2 File Text:Frontier Analytical Laboratory

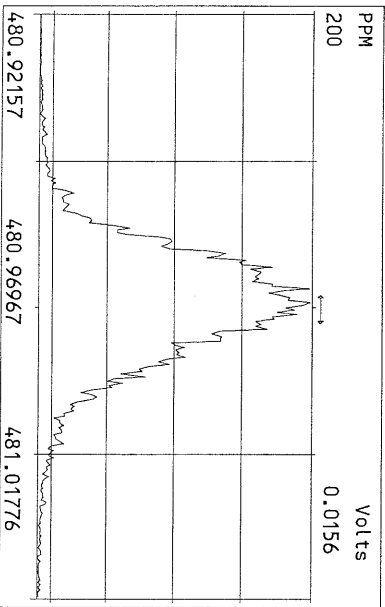
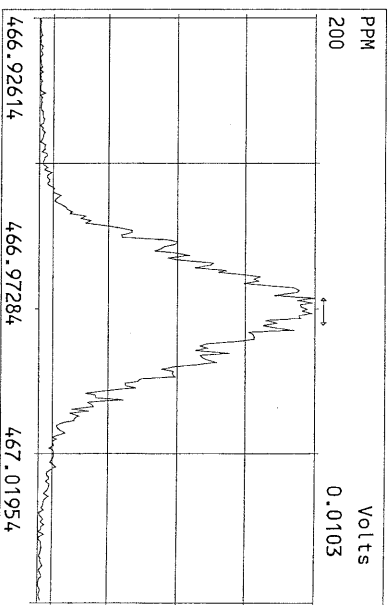
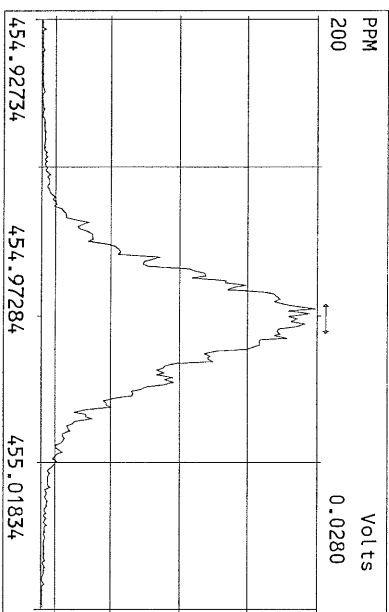
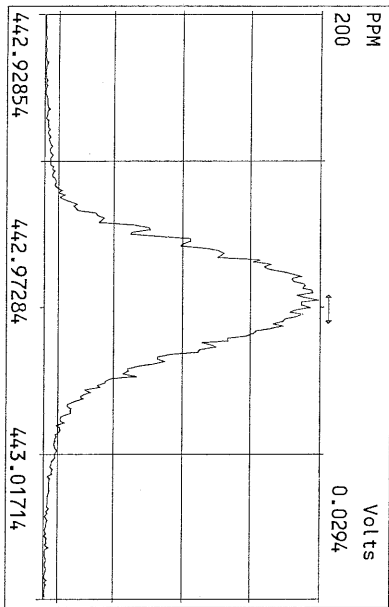
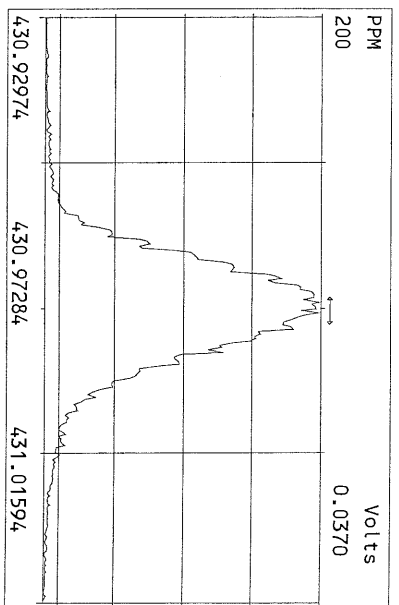
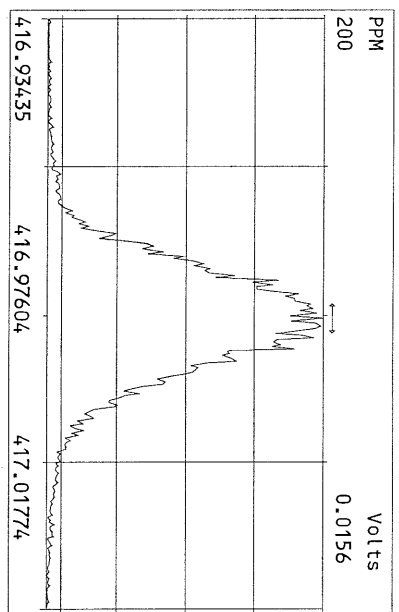
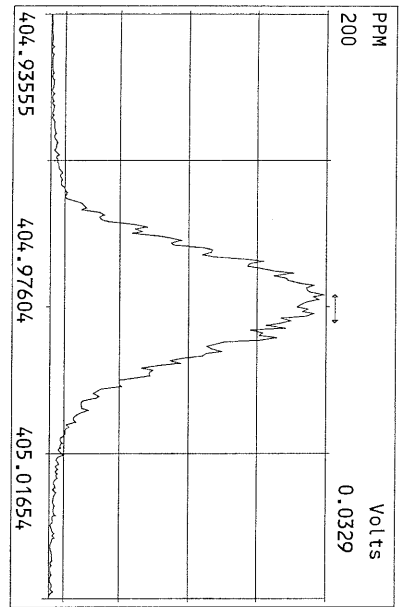


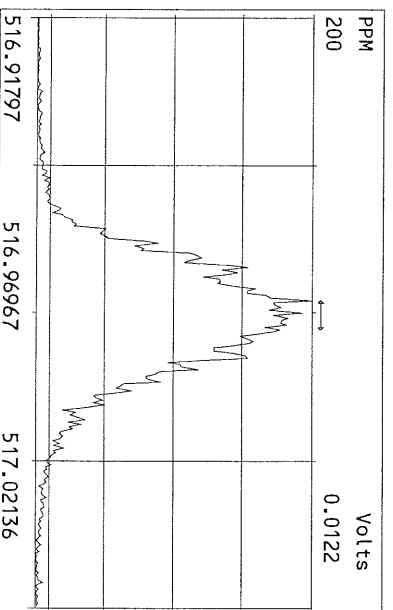
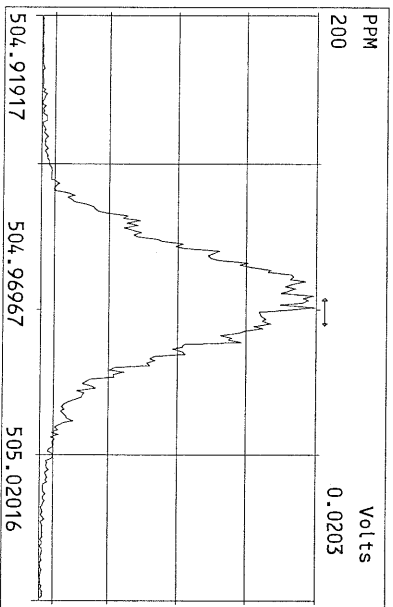
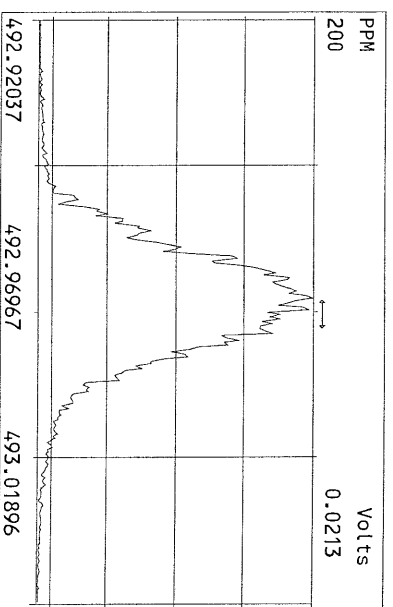
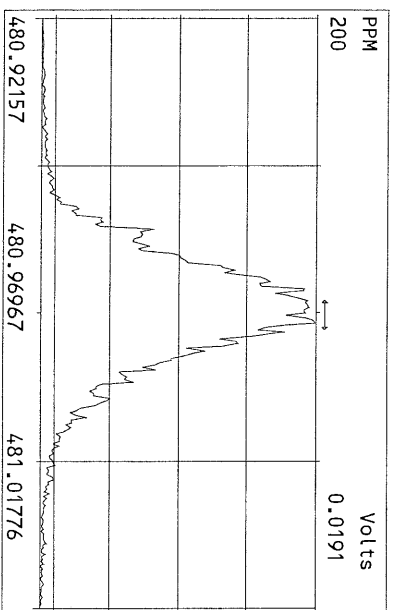
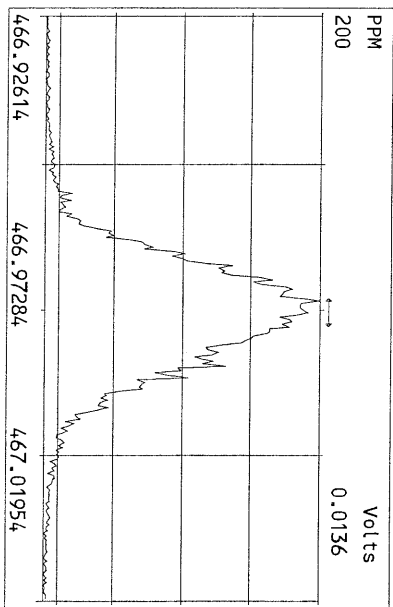
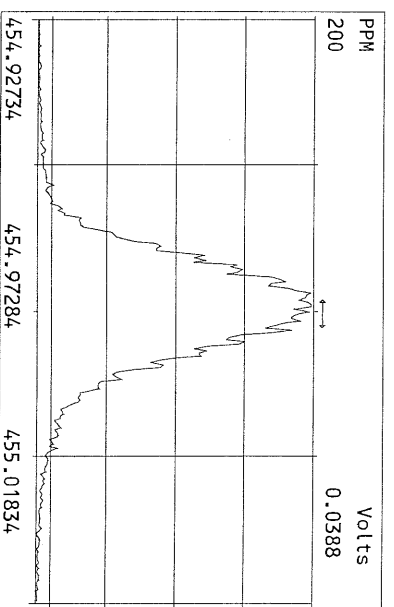
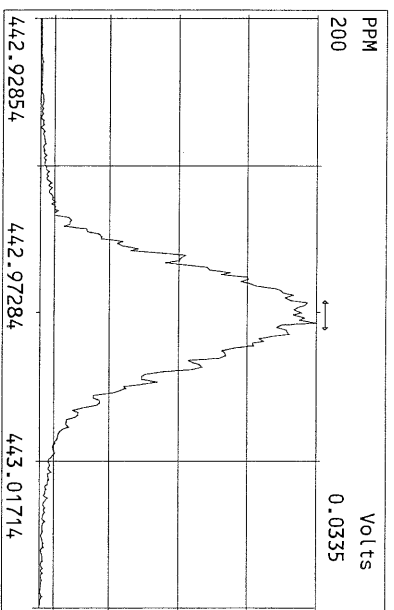
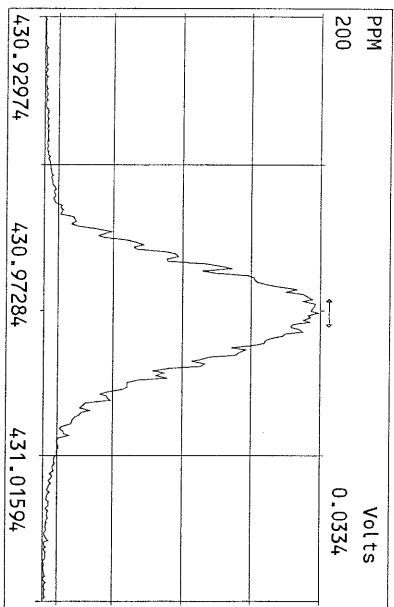












## USEPA - ITD

FORM 4A  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 2/16/11

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 18FEB11M Sam:1

Analysis Date: 18-FEB-11 09:01:50

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	y	10.1	7.80 - 12.9 ✓
1,2,3,7,8-PeCDD	M+2/M+4	1.61	1.32-1.78	y	48.5	39.0 - 65.0 ✓
1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	47.1	39.0 - 64.0 ✓
1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	44.9	39.0 - 64.0 ✓
1,2,3,7,8,9-HxCDD	M+2/M+4	1.29	1.05-1.43	y	47.3	41.0 - 61.0 ✓
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	46.9	43.0 - 58.0 ✓
OCDD	M+2/M+4	0.92	0.76-1.02	y	89.3	79.0 - 126 ✓
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	y	8.68	8.40 - 12.0 ✓
1,2,3,7,8-PeCDF	M+2/M+4	1.47	1.32-1.78	y	48.4	41.0 - 60.0 ✓
2,3,4,7,8-PeCDF	M+2/M+4	1.48	1.32-1.78	y	47.7	41.0 - 60.0 ✓
1,2,3,4,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	47.1	45.0 - 56.0 ✓
1,2,3,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	47.7	44.0 - 57.0 ✓
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	48.1	44.0 - 57.0 ✓
1,2,3,7,8,9-HxCDF	M+2/M+4	1.26	1.05-1.43	y	48.7	45.0 - 56.0 ✓
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.06	0.88-1.20	y	47.5	45.0 - 55.0 ✓
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	y	48.0	43.0 - 58.0 ✓
OCDF	M+2/M+4	0.88	0.76-1.02	y	95.1	63.0 - 159 ✓

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

Analyst: 6Date: 2/21/11

## USEPA - ITD

FORM 4B  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 2/16/11

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 18FEB11M Sam:1

Analysis Date: 18-FEB-11 09:01:50


LABELLED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
13C-2,3,7,8-TCDD	M/M+2	0.74	0.65-0.89	y	94.9	82.0 - 121 ✓
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.75	1.32-1.78	y	107	62.0 - 160 ✓
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	99.1	85.0 - 117 ✓
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	94.1	85.0 - 118 ✓
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.09	0.88-1.20	y	103	72.0 - 138 ✓
13C-OCDD	M+2/M+4	0.98	0.76-1.02	y	223	96.0 - 415 ✓
13C-2,3,7,8-TCDF	M/M+2	0.88	0.65-0.89	y	97.0	71.0 - 140 ✓
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.67	1.32-1.78	y	102	76.0 - 130 ✓
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.69	1.32-1.78	y	102	77.0 - 130 ✓
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	97.8	76.0 - 131 ✓
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	90.1	70.0 - 143 ✓
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	92.6	73.0 - 137 ✓
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	y	95.7	74.0 - 135 ✓
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	y	98.3	78.0 - 129 ✓
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.43	0.37-0.51	y	103	77.0 - 129 ✓
13C-OCDF	M+2/M+4	0.96	0.76-1.02	y	196	96.0 - 415 ✓
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.18	7.80 - 12.8 ✓

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) No ion abundance ratio; report concentration found.

Analyst: Date: 2/21/11





## USEPA - ITD

## FORM 6B

## PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 2/16/11

Instrument ID: FAL3

GC Column ID: DB5

Analysis Date: 18-FEB-11 09:01:50

CS3 or VER Data Filename: 18FEB11M

Sam:1

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001 ✓
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004 ✓
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019 ✓
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001 ✓
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005 ✓
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001 ✓
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999-1.001 ✓
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001 ✓
OCDD	13C-OCDD	1.001	0.999-1.001 ✓
OCDF	13C-OCDF	1.000	0.999-1.001 ✓
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.985	0.977-1.000 ✓
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003 ✓
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970 ✓
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975 ✓
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021 ✓
13C-1,2,3,7,8,9-HxCDF		1.014	0.977-1.047 ✓
13C-1,2,3,4,6,7,8-HpCDD		1.127	1.086-1.130 ✓
13C-1,2,3,4,6,7,8-HpCDF		1.078	1.043-1.085 ✓
13C-1,2,3,4,7,8,9-HpCDF		1.150	1.057-1.154 ✓
13C-OCDD		1.269	1.032-1.311 ✓
13C-OCDF		1.279	1.000-1.311 ✓

(1) Contract-required limits for Relative Retention Times (RRT) as specified  
in Table 2, Method 1613.

Analyst: \_\_\_\_\_



Date: \_\_\_\_\_

2/21/11



Results:	GC Column: DB5	Amount: 1.000	NATO 1989 Tox:		96.2		WHO 1998 Tox:		120		WHO 2005 Tox:		110
			Conc	Qual	Fac	Noise-1	Noise-2	DL					
Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL			
2,3,7,8-TCDD	3.17e+06	0.76 y	27:32	1.18	10.1		2.50	-	-	*			
1,2,3,7,8-PeCDD	1.47e+07	1.61 y	33:23	1.13	48.5		2.50	-	-	*			
1,2,3,4,7,8-HxCDD	1.63e+07	1.29 y	38:44	1.46	47.1		2.50	-	-	*			
1,2,3,6,7,8-HxCDD	1.37e+07	1.28 y	38:54	1.50	44.9		2.50	-	-	*			
1,2,3,7,8,9-HxCDD	1.58e+07	1.29 y	39:21	1.52	47.3		2.50	-	-	*			
1,2,3,4,6,7,8-HpCDD	1.28e+07	1.03 y	44:21	1.36	46.9		2.50	-	-	*			
OCDD	1.89e+07	0.92 y	49:56	1.58	89.3		2.50	-	-	*			
2,3,7,8-TCDF	5.89e+06	0.78 y	26:46	1.50	8.68		2.50	-	-	*			
1,2,3,7,8-PeCDF	2.09e+07	1.47 y	31:37	0.98	48.4		2.50	-	-	*			
2,3,4,7,8-PeCDF	1.99e+07	1.48 y	32:57	0.98	47.7		2.50	-	-	*			
1,2,3,4,7,8-HxCDF	1.77e+07	1.24 y	37:21	1.02	47.1		2.50	-	-	*			
1,2,3,6,7,8-HxCDF	1.96e+07	1.23 y	37:33	0.89	47.7		2.50	-	-	*			
2,3,4,6,7,8-HxCDF	1.81e+07	1.23 y	38:30	0.99	48.1		2.50	-	-	*			
1,2,3,7,8,9-HxCDF	2.23e+07	1.26 y	39:55	1.08	48.7		2.50	-	-	*			
1,2,3,4,6,7,8-HpCDF	1.57e+07	1.06 y	42:26	1.35	47.5		2.50	-	-	*			
1,2,3,4,7,8,9-HpCDF	1.28e+07	1.05 y	45:16	1.30	48.0		2.50	-	-	*			
OCDF	2.09e+07	0.88 y	50:19	0.89	95.1		2.50	-	-	*			
											Rec		
13C-2,3,7,8-TCDD	2.65e+07	0.74 y	27:30	1.06	94.9						94.9		
13C-1,2,3,7,8-PeCDD	2.69e+07	1.75 y	33:21	0.95	107						107		
13C-1,2,3,4,7,8-HxCDD	2.37e+07	1.25 y	38:43	1.10	99.1						99.1		
13C-1,2,3,6,7,8-HxCDD	2.02e+07	1.25 y	38:53	0.99	94.1						94.1		
13C-1,2,3,4,6,7,8-HpCDD	1.99e+07	1.09 y	44:19	0.90	103						103		
13C-OCDD	2.68e+07	0.98 y	49:55	0.55	223						112		
13C-2,3,7,8-TCDF	4.52e+07	0.88 y	26:45	1.02	97.0						97.0		
13C-1,2,3,7,8-PeCDF	4.39e+07	1.67 y	31:37	0.95	102						102		
13C-2,3,4,7,8-PeCDF	4.25e+07	1.69 y	32:56	0.91	102						102		
13C-1,2,3,4,7,8-HxCDF	3.70e+07	0.52 y	37:19	1.75	97.8						97.8		
13C-1,2,3,6,7,8-HxCDF	4.61e+07	0.53 y	37:31	2.36	90.1						90.1		
13C-2,3,4,6,7,8-HxCDF	3.79e+07	0.52 y	38:28	1.89	92.6						92.6		
13C-1,2,3,7,8,9-HxCDF	4.22e+07	0.53 y	39:54	2.04	95.7						95.7		
13C-1,2,3,4,6,7,8-HpCDF	2.45e+07	0.43 y	42:24	1.15	98.3						98.3		
13C-1,2,3,4,7,8,9-HpCDF	2.04e+07	0.43 y	45:15	0.91	103						103		
13C-OCDF	4.96e+07	0.96 y	50:18	1.17	196						98.2		
37Cl-2,3,7,8-TCDD	1.75e+06		27:32	0.72	9.18						91.8		
13C-1,2,3,4-TCDD	2.64e+07	0.74 y	26:55	-	64.7								
13C-1,2,3,4-TCDF	4.56e+07	0.88 y	25:39	-	68.1								
13C-1,2,3,7,8,9-HxCDD	2.16e+07	1.24 y	39:20	-	75.0								
											DL	#Hom	
Total Tetra-Dioxins	1.70e+07		23:55	1.18	54.3		2.50	-	-	*		23	
Total Penta-Dioxins	3.14e+07		30:23	1.13	103		2.50	-	-	*		6	
Total Hexa-Dioxins	5.17e+07		36:16	1.49	158		2.50	-	-	*		10	
Total Hepta-Dioxins	2.69e+07		42:57	1.36	99.0		2.50	-	-	*		11	
											DL	#Hom	
Total Tetra-Furans	2.66e+07		23:08	1.50	39.2		2.50	-	-	*		18	
1st Fn. Tot Penta-Furans	2.13e+07		28:33	0.98	50.2		2.50	-	-	*	PeCDF	1	
Total Penta-Furans	6.03e+07		30:08	0.98	142		2.50	-	-	*	192	12	
Total Hexa-Furans	8.92e+07		35:23	0.99	220		2.50	-	-	*		7	
Total Hepta-Furans	2.90e+07		42:26	1.33	97.3		2.50	-	-	*		4	

Analyst: J

Date: 2/21/11

Frontier Analytical Laboratory - Acquisition Log

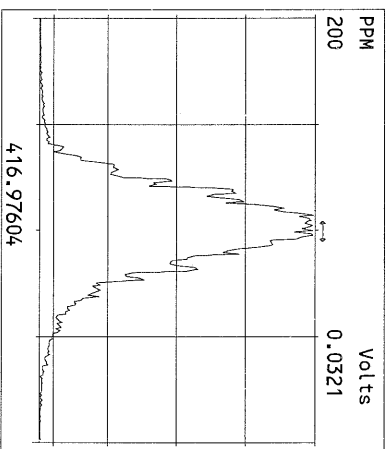
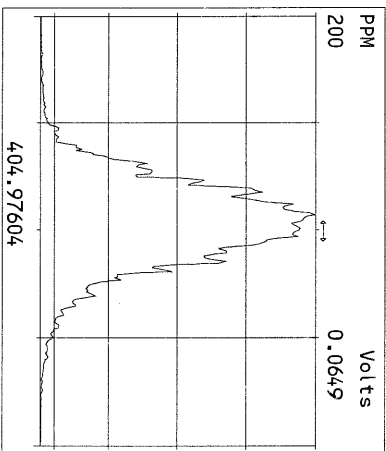
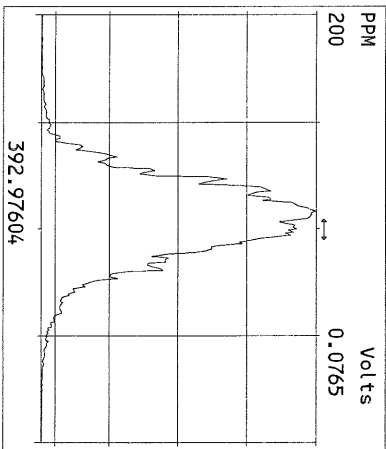
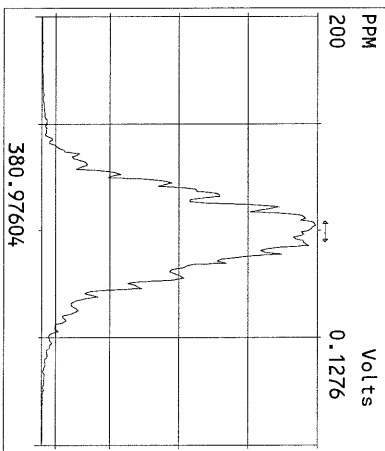
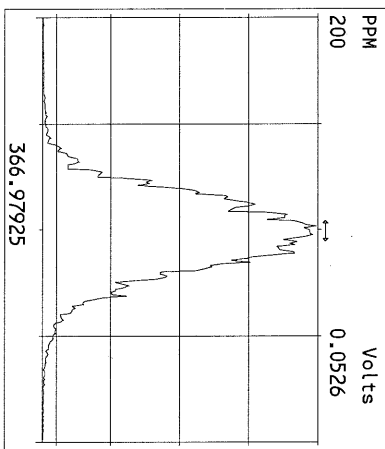
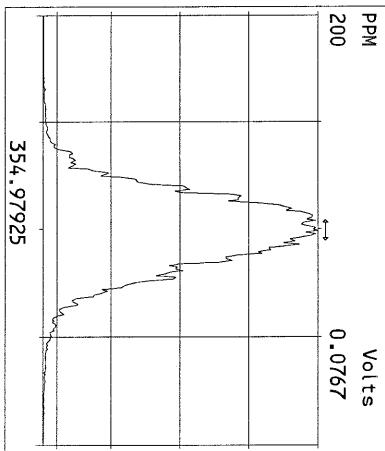
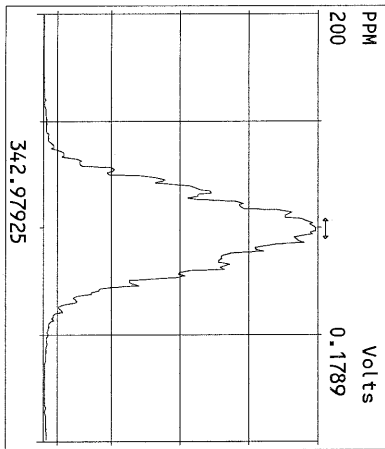
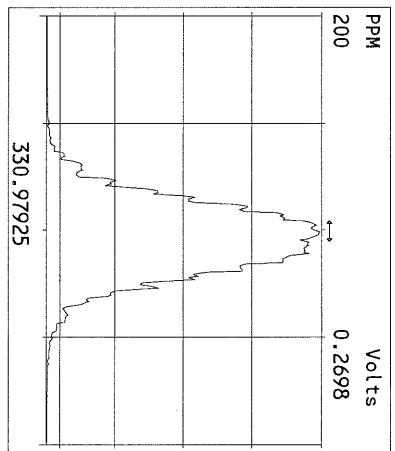
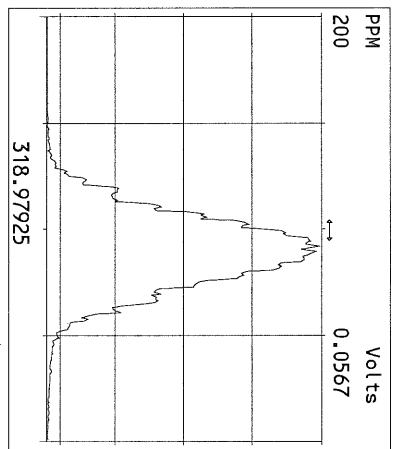
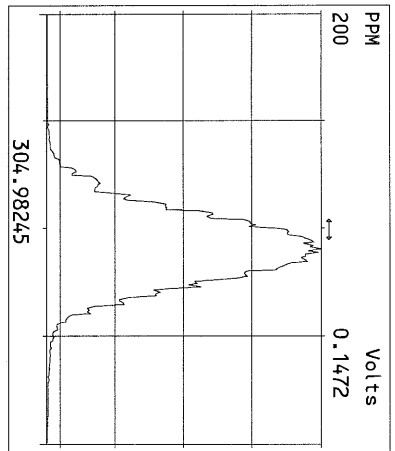
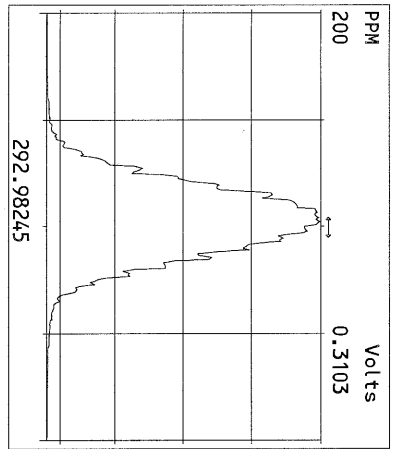
Run Name: 18FEB11M Instrument: FAL3 GC: DB5 Experiment: OCDD

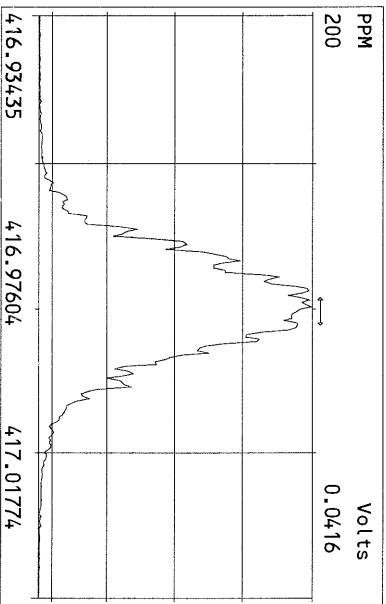
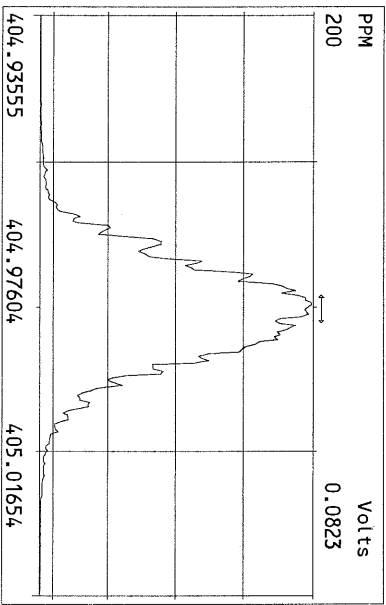
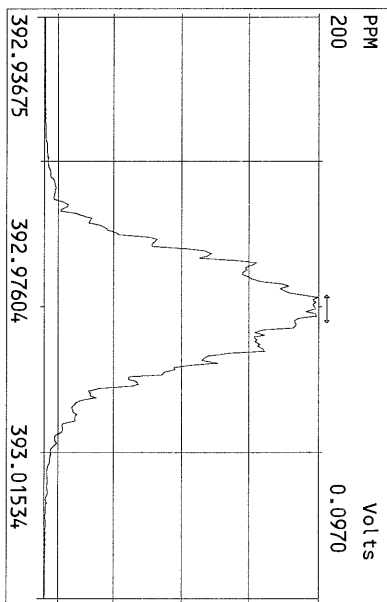
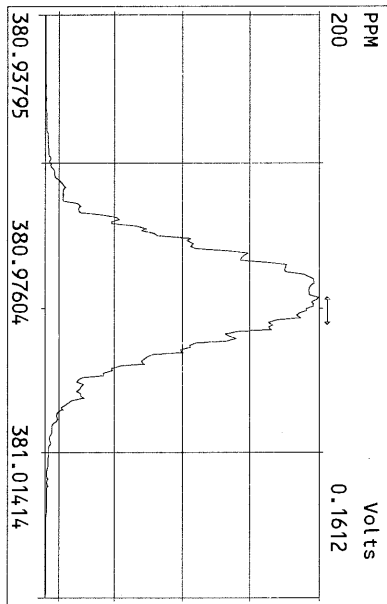
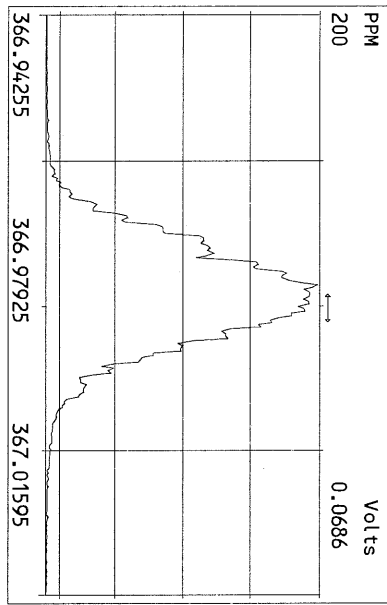
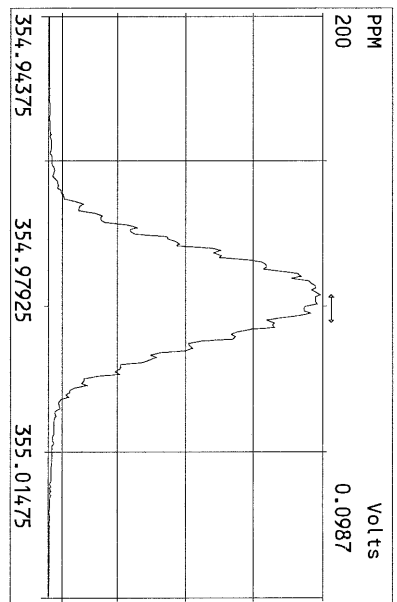
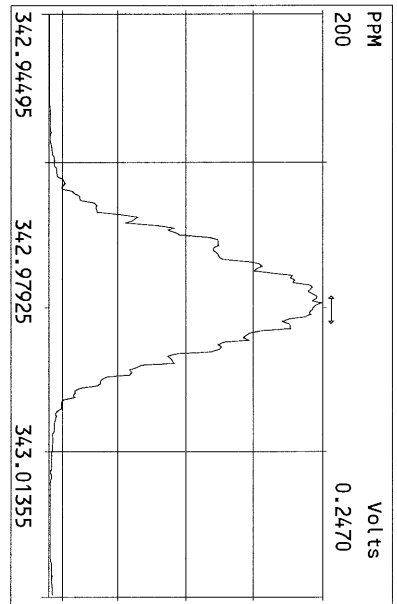
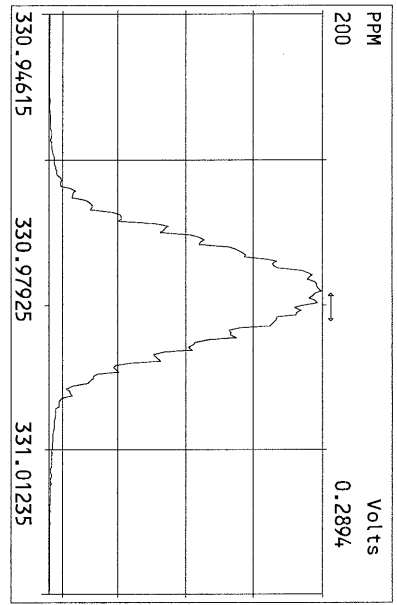
Data File S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
18FEB11M 1	ST021811M1	1613 CS3 100511J	18-FEB-11 09:01:50	ST021811M1	ST021811M2	TC
18FEB11M 2	2220-001-0001-OPR	OPR	18-FEB-11 09:57:08	ST021811M1	ST021811M2	TC
18FEB11M 3	2220-001-0001-MB	Method Blank	18-FEB-11 10:52:26	ST021811M1	ST021811M2	TC
18FEB11M 4	6564-001-0001-SA	L165152-1	18-FEB-11 11:47:46	ST021811M1	ST021811M2	TC
18FEB11M 5	6565-001-0001-SA	L165153-1	18-FEB-11 12:43:04	ST021811M1	ST021811M2	TC
18FEB11M 6	6566-001-0001-SA	L165154-1	18-FEB-11 13:38:23	ST021811M1	ST021811M2	TC
18FEB11M 7	6567-001-0001-SA	L165159-1	18-FEB-11 14:33:42	ST021811M1	ST021811M2	TC
18FEB11M 8	6568-001-0001-SA	L165173-4	18-FEB-11 15:29:01	ST021811M1	ST021811M2	TC
18FEB11M 9	6569-001-0001-SA	L165202-4	18-FEB-11 16:24:20	ST021811M1	ST021811M2	TC
18FEB11M 10	6570-001-0001-SA	L165205-4	18-FEB-11 17:19:39	ST021811M1	ST021811M2	TC
18FEB11M 11	6571-001-0001-SA	L165206-5	18-FEB-11 18:15:02	ST021811M1	ST021811M2	TC
18FEB11M 12	6572-001-0001-SA	L165212-3	18-FEB-11 19:10:25	ST021811M1	ST021811M2	TC
18FEB11M 13	6573-001-0001-SA	L165220-1	18-FEB-11 20:05:44	ST021811M1	ST021811M2	TC
18FEB11M 14	SB021811M1	Solvent Blank	18-FEB-11 21:01:03	ST021811M1	ST021811M2	TC
18FEB11M 15	ST021811M2	1613 CS3 100511J	18-FEB-11 21:56:26	ST021811M2	ST021811M3	TC
18FEB11M 16	SB021811M2	Solvent Blank	18-FEB-11 22:51:47	ST021811M2	ST021811M3	TC
18FEB11M 17	ST021811M-1	1613 CS(-1) 100511M	18-FEB-11 23:47:06	ST021811M2	ST021811M3	TC
18FEB11M 18	6558-001-0001-SA	PSB2-4-6-072910	19-FEB-11 00:42:25	ST021811M2	ST021811M3	TC
18FEB11M 19	SB021811M3	Solvent Blank	19-FEB-11 01:37:44	ST021811M2	ST021811M3	TC
18FEB11M 20	ST021811M3	1613 CS3 100511J	19-FEB-11 02:33:02	ST021811M2	ST021811M3	TC

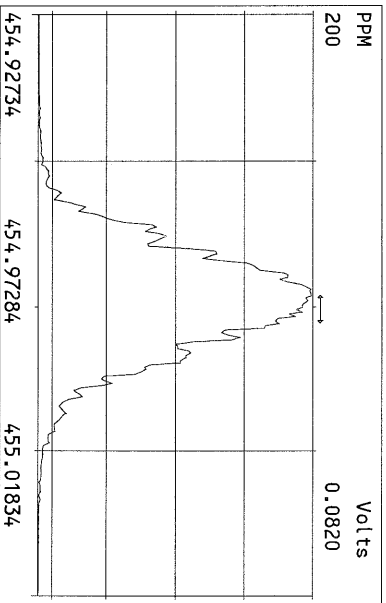
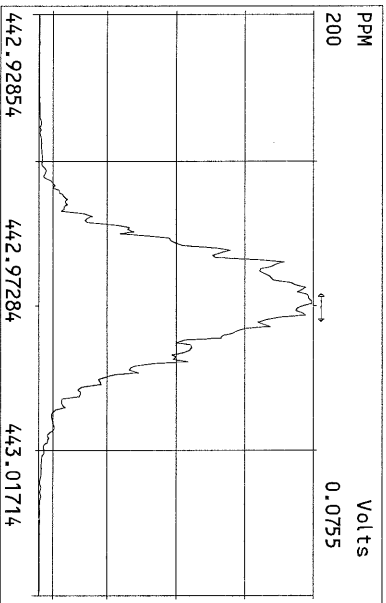
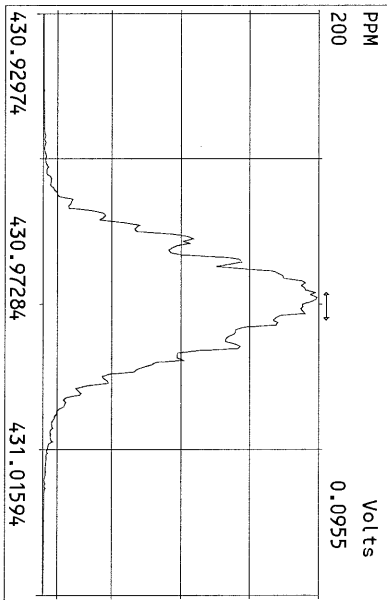
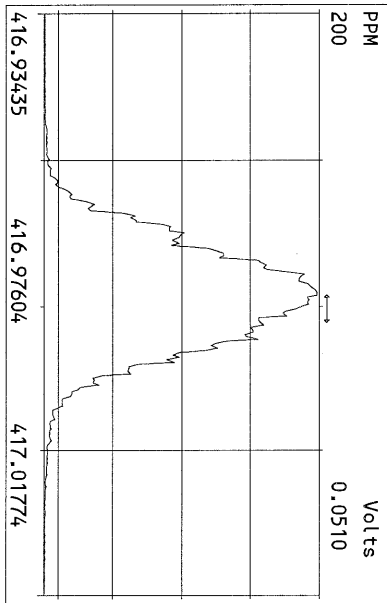
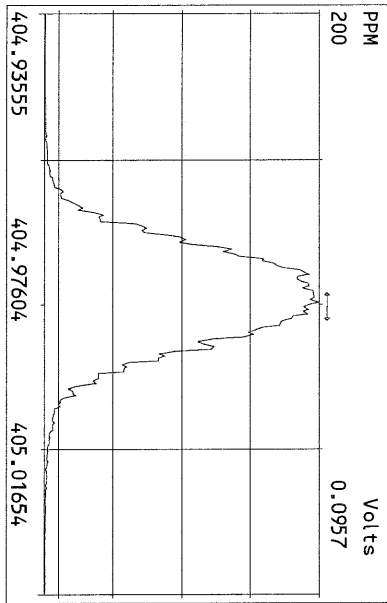
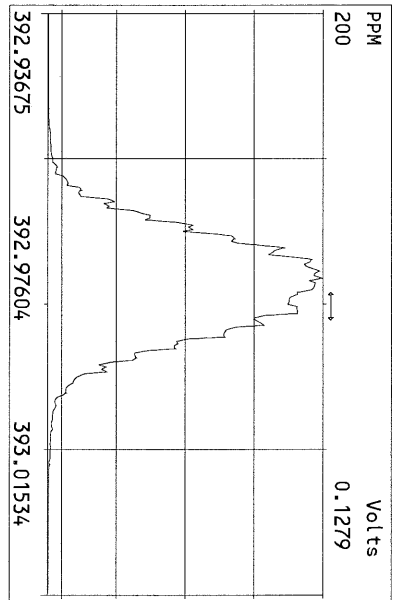
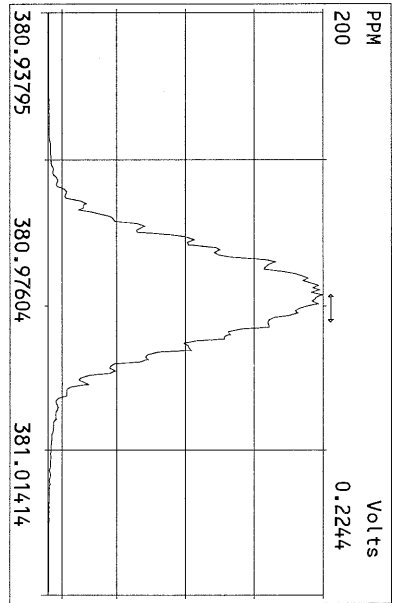
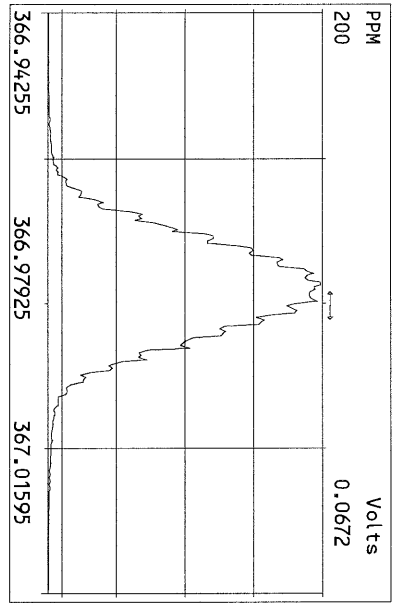
6/2/11

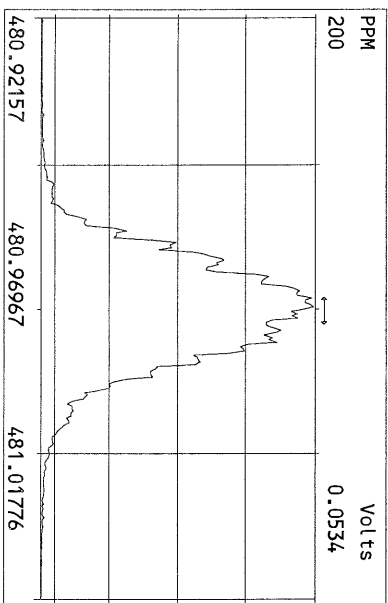
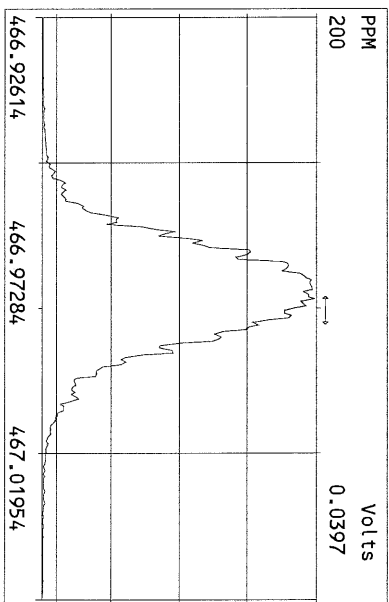
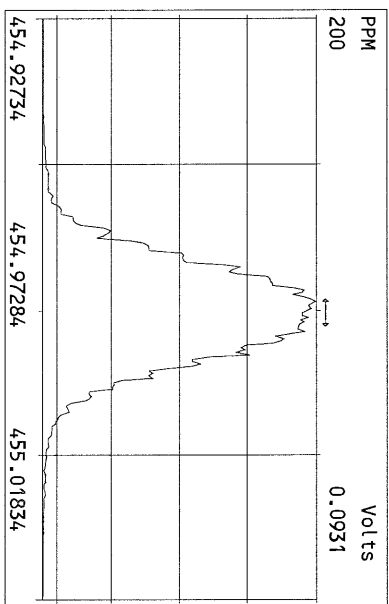
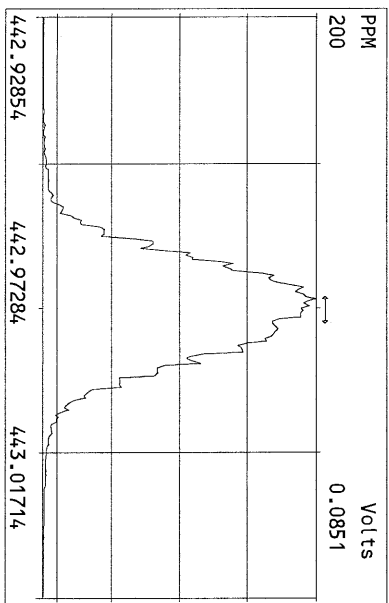
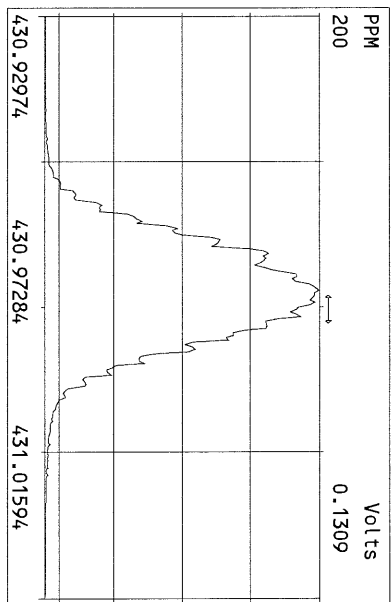
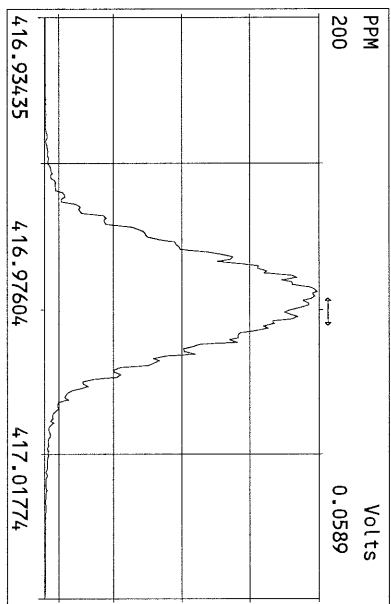
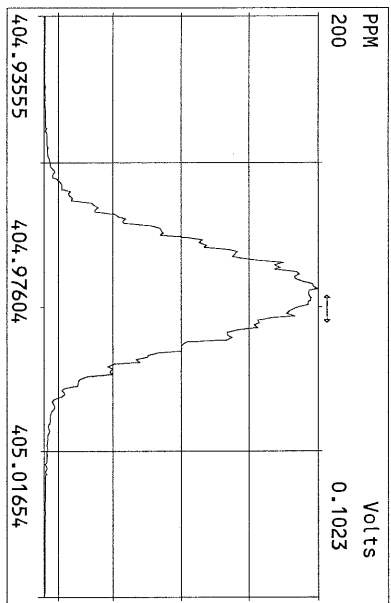
Data Backed Up: \_\_\_\_\_

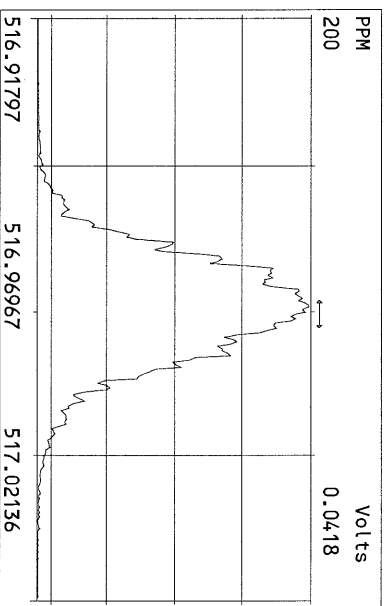
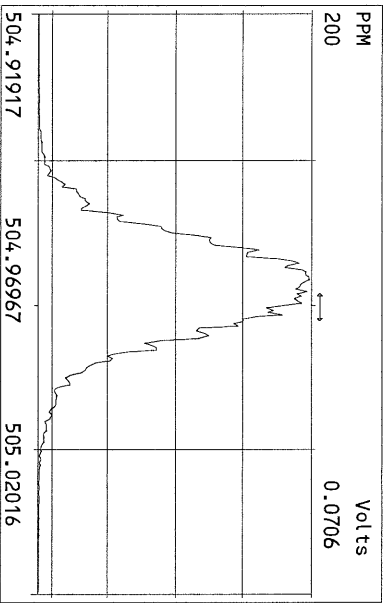
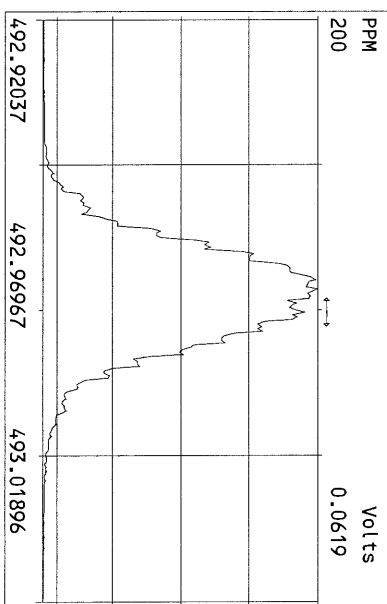
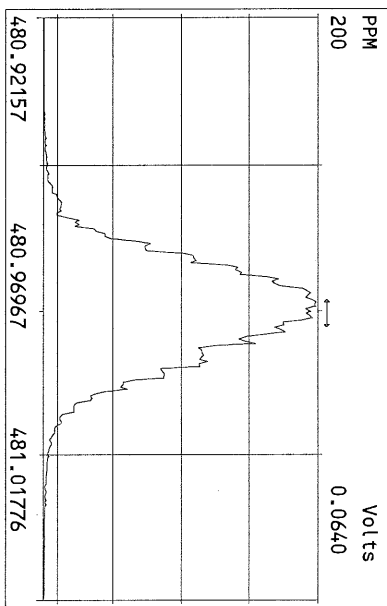
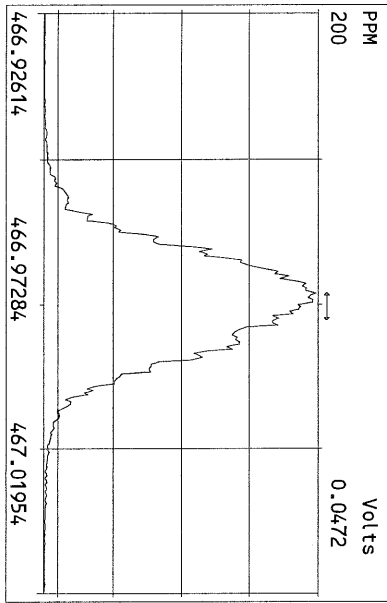
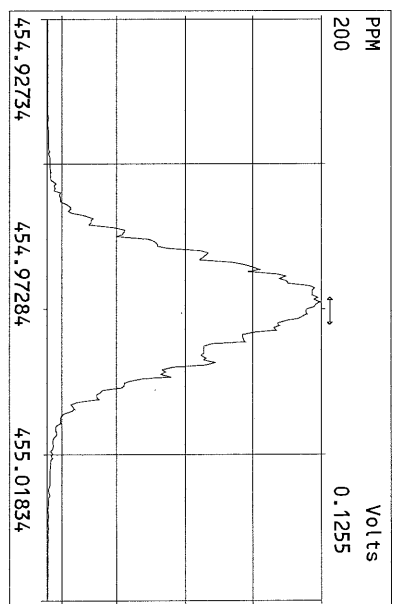
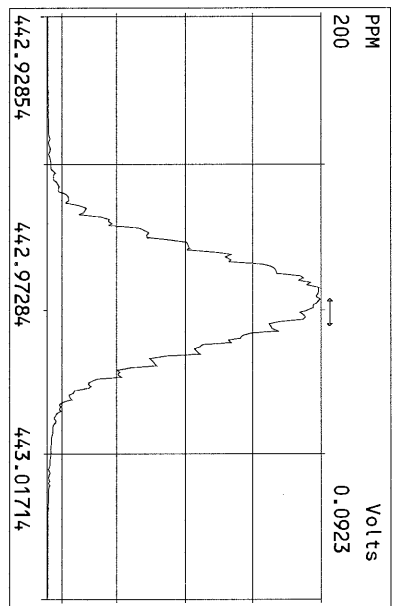
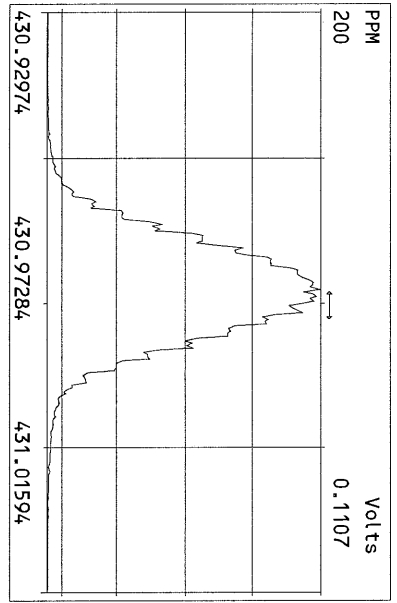
Date: \_\_\_\_\_



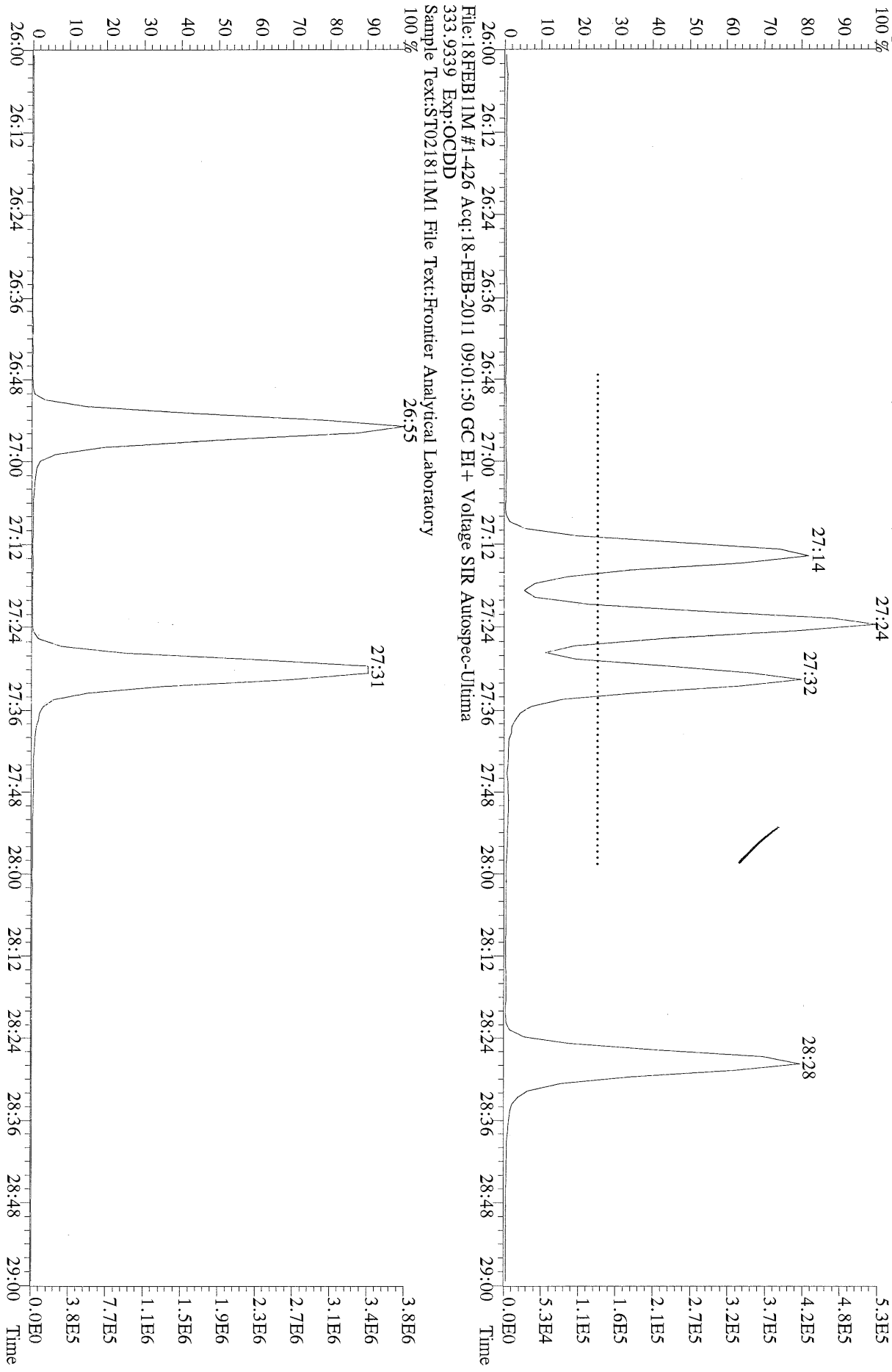






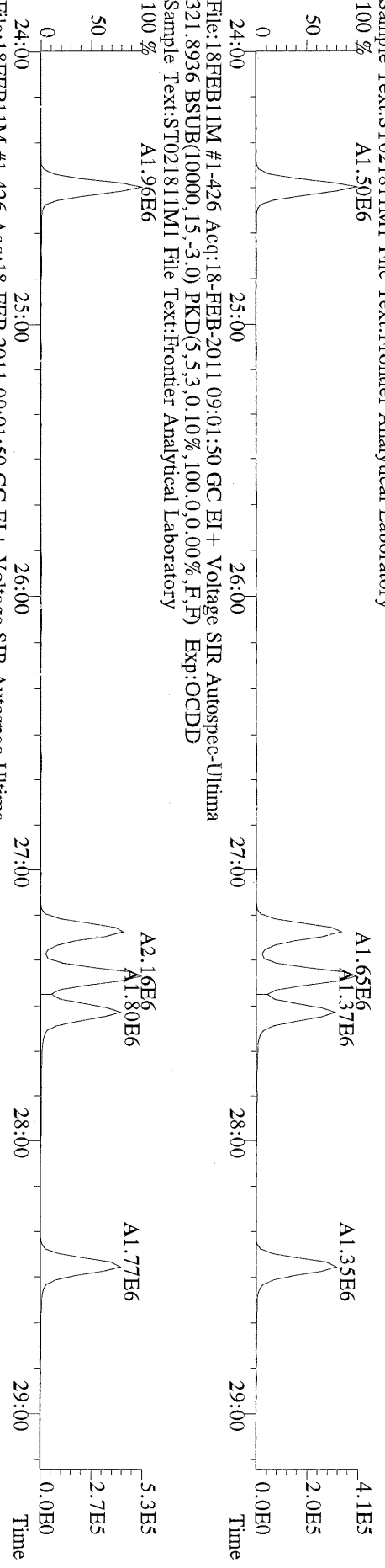


File:18FEB11M1-426 Acq:18-FEB-2011 09:01:50 GC EI+ Voltage SIR Autospec-Ultima  
321.8936 Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory  
100%

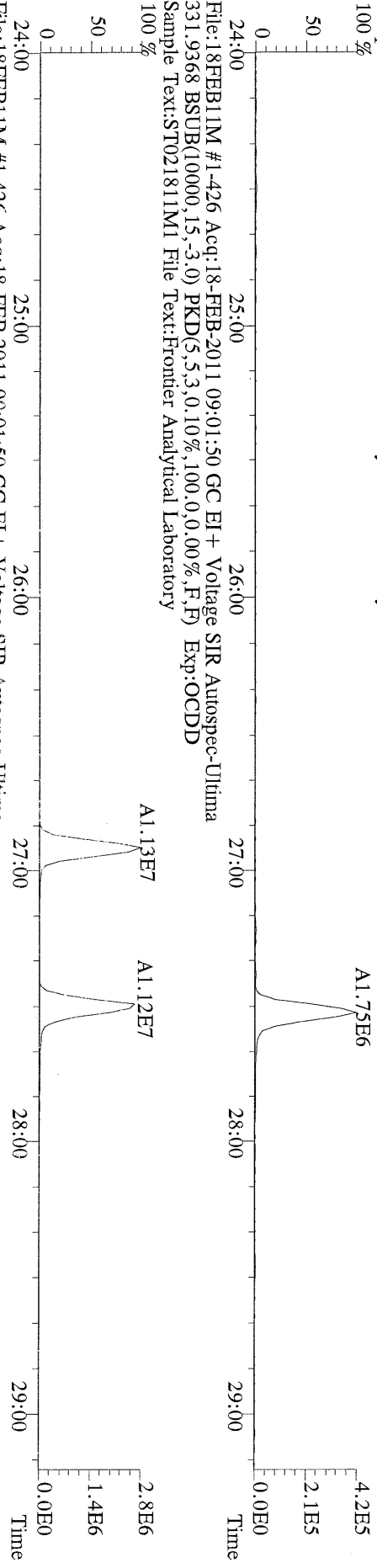




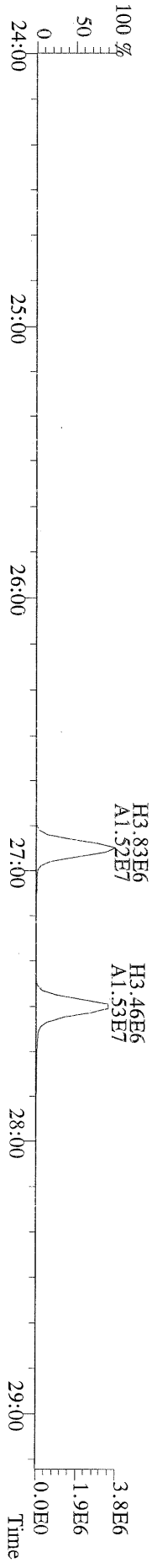
File:18FEB11M #1-426 Acq:18-FEB-2011 09:01:50 GC EI+ Voltage SIR Autospec-Ultima  
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



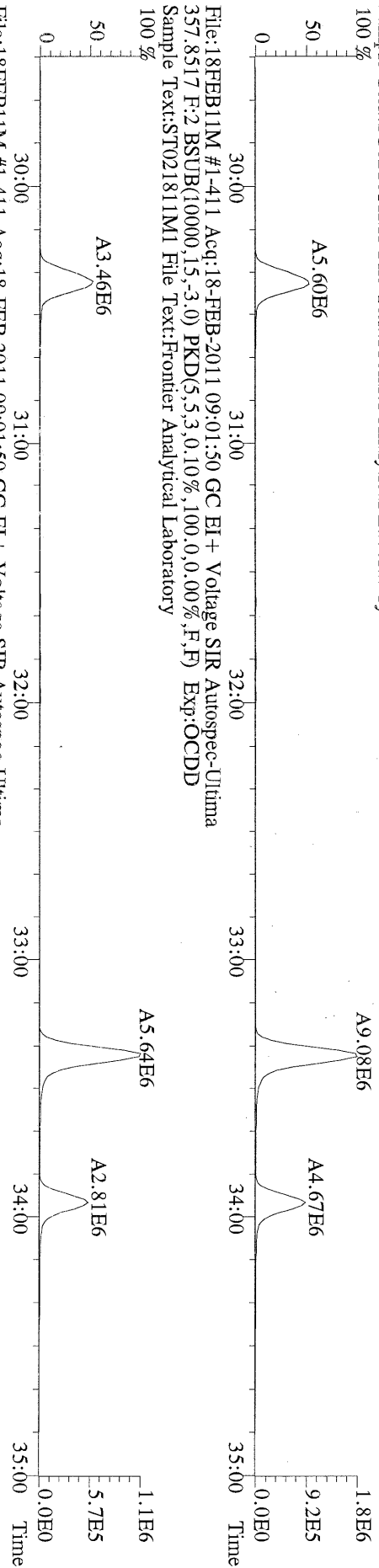
File:18FEB11M #1-426 Acq:18-FEB-2011 09:01:50 GC EI+ Voltage SIR Autospec-Ultima  
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



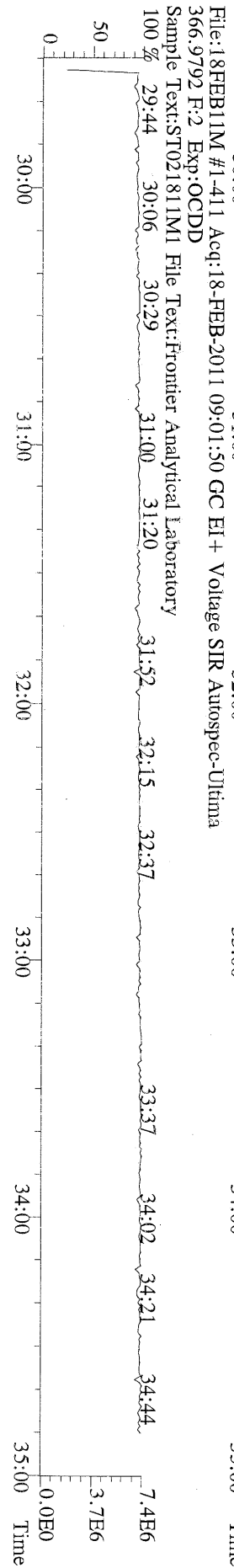
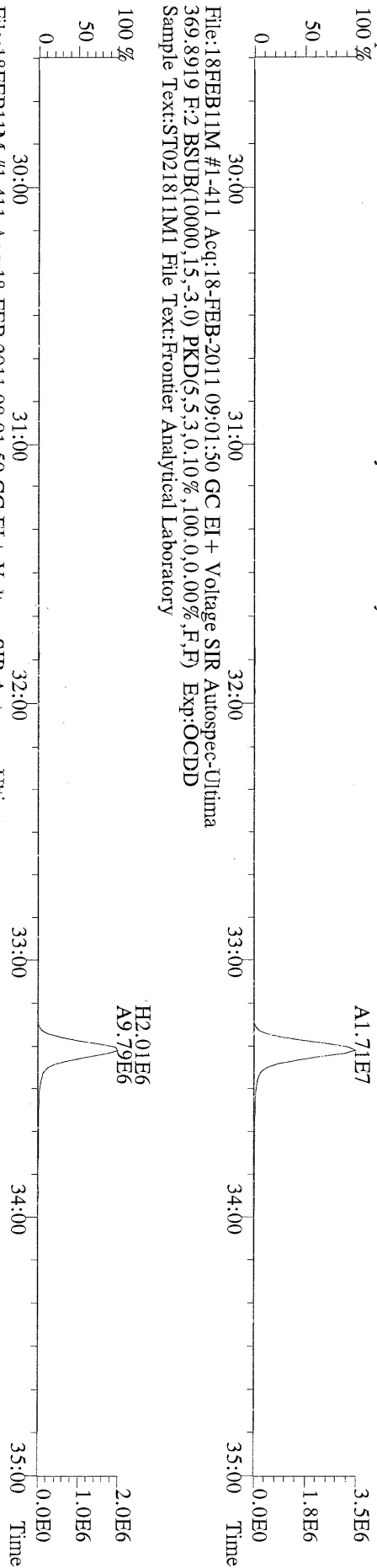
File:18FEB11M #1-426 Acq:18-FEB-2011 09:01:50 GC EI+ Voltage SIR Autospec-Ultima  
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



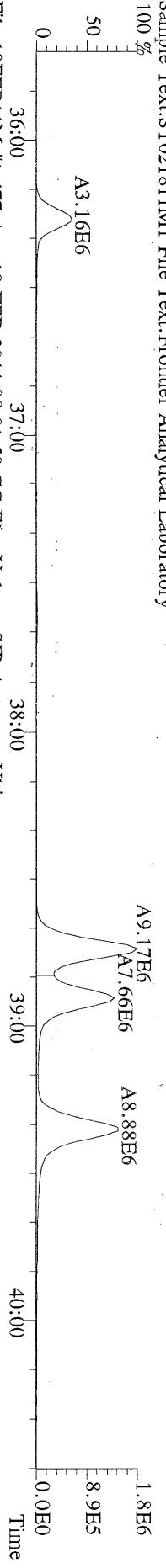
File:18FEB11M #1-411 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



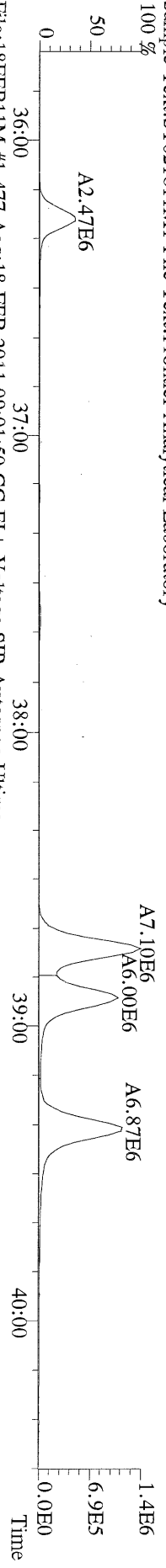
File:18FEB11M #1-411 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



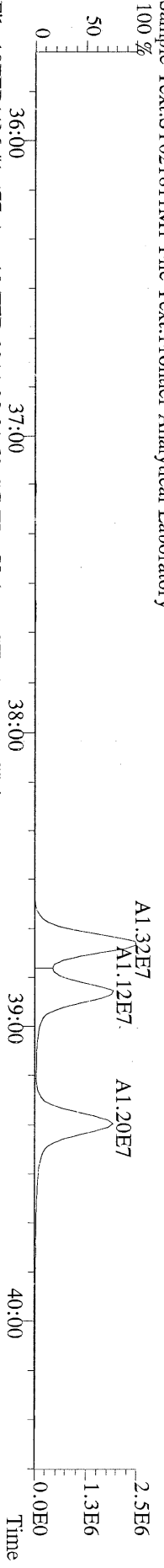
File:18FEB11M #1-477 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
 389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



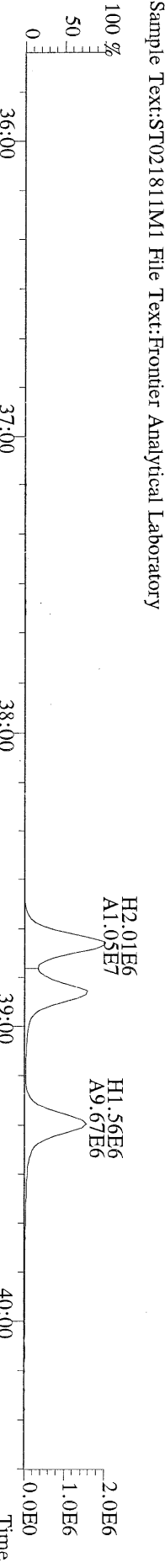
File:18FEB11M #1-477 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
 391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



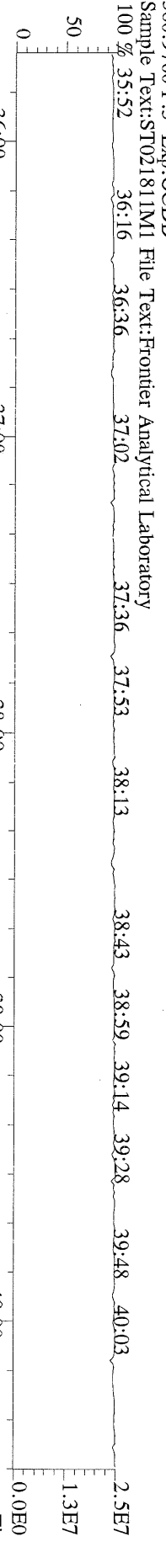
File:18FEB11M #1-477 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
 401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



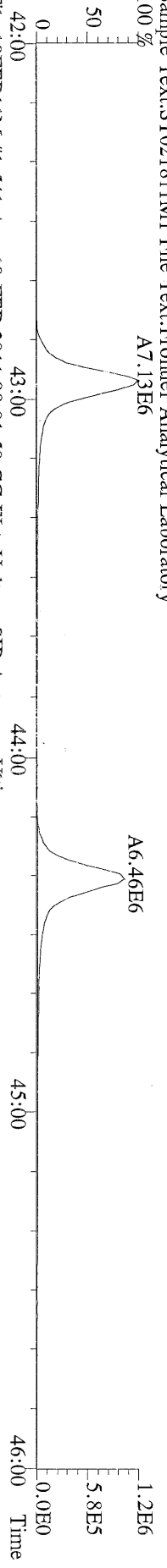
File:18FEB11M #1-477 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
 403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



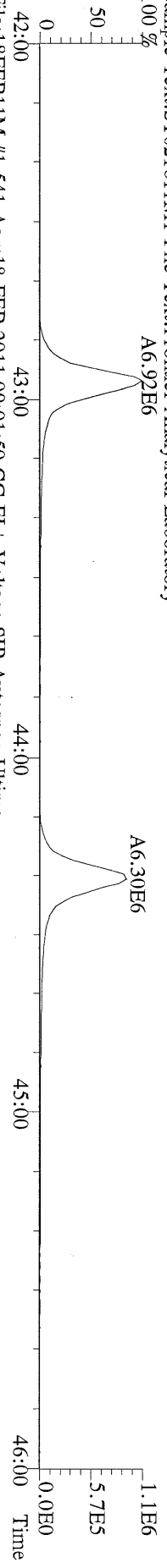
File:18FEB11M #1-477 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
 380.9760 F:3 Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



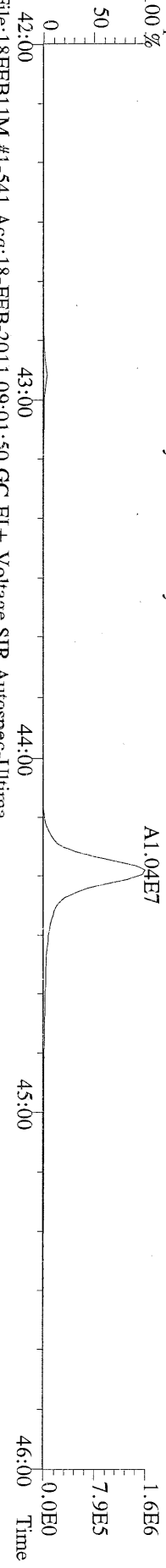
File:18FEB11M #1-541 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Fronier Analytical Laboratory



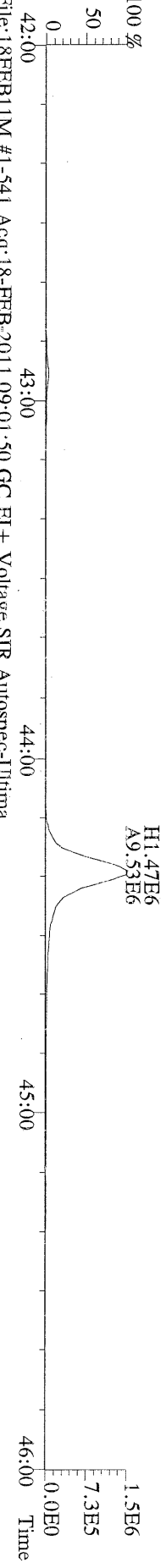
File:18FEB11M #1-541 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Fronier Analytical Laboratory



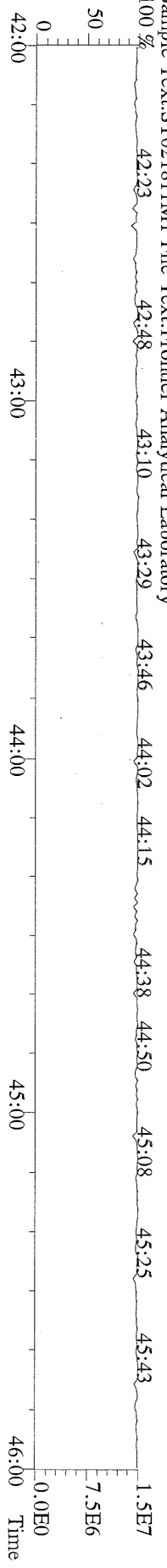
File:18FEB11M #1-541 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Fronier Analytical Laboratory



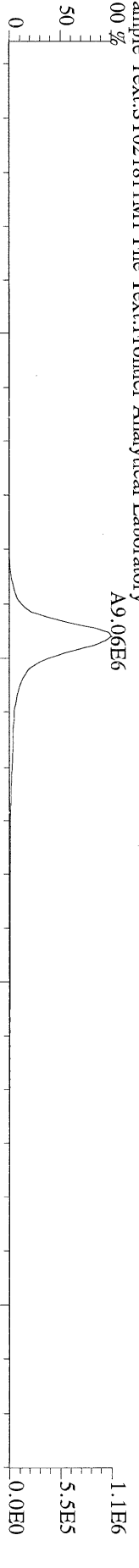
File:18FEB11M #1-541 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Fronier Analytical Laboratory



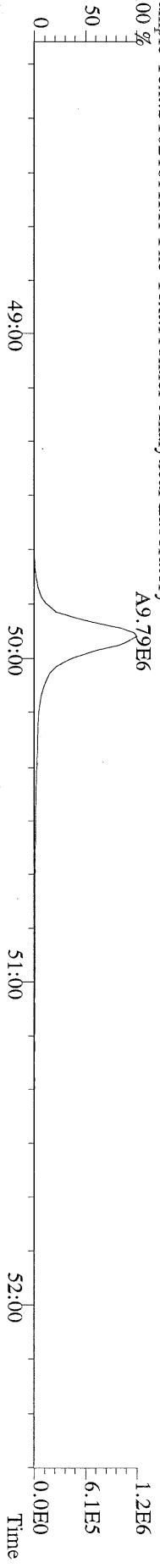
File:18FEB11M #1-541 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
430.9728 F:4 Exp:OCDD  
Sample Text:ST021811M1 File Text:Fronier Analytical Laboratory



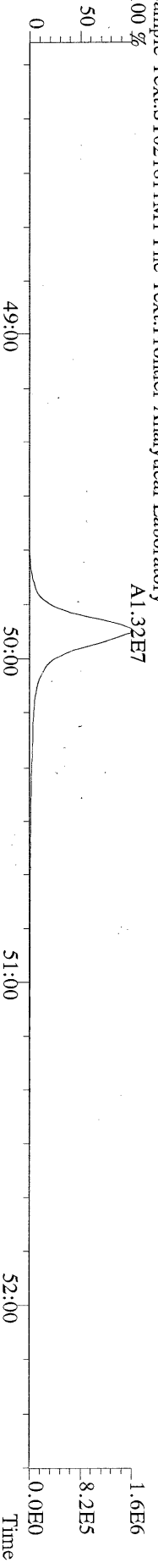
File:18FEB11M #1-347 Acq:18-FEB-2011 09:01:50 GC EI+ Voltage SIR Autospec-Utima  
 457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



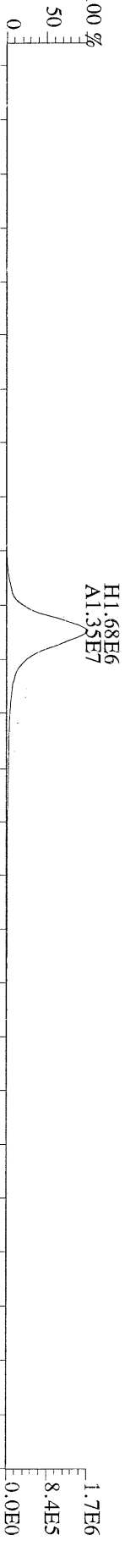
File:18FEB11M #1-347 Acq:18-FEB-2011 09:01:50 GC EI+ Voltage SIR Autospec-Utima  
 459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



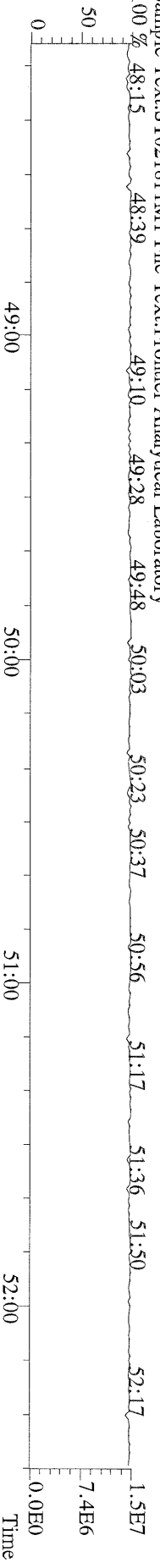
File:18FEB11M #1-347 Acq:18-FEB-2011 09:01:50 GC EI+ Voltage SIR Autospec-Utima  
 469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



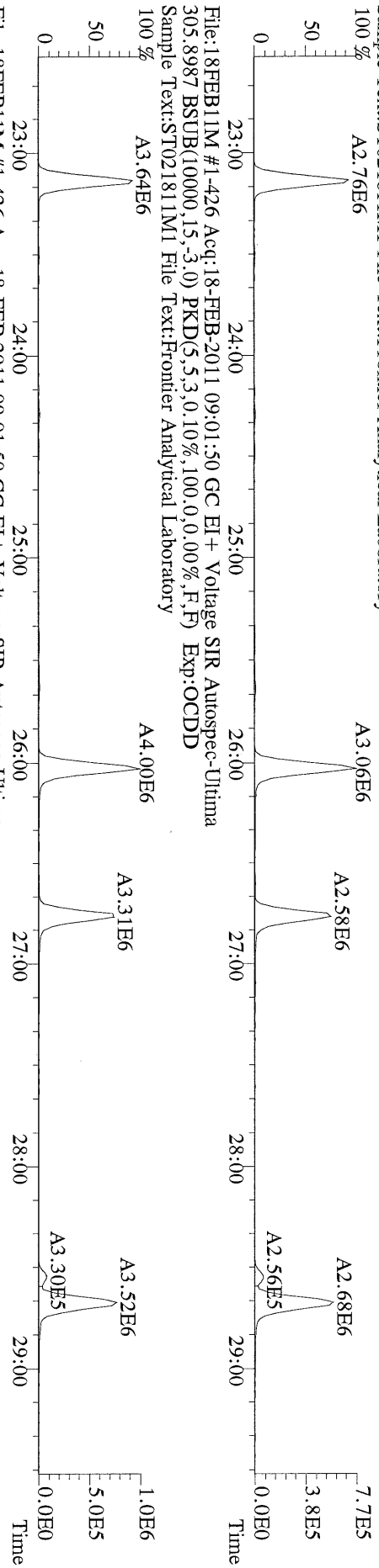
File:18FEB11M #1-347 Acq:18-FEB-2011 09:01:50 GC EI+ Voltage SIR Autospec-Utima  
 471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



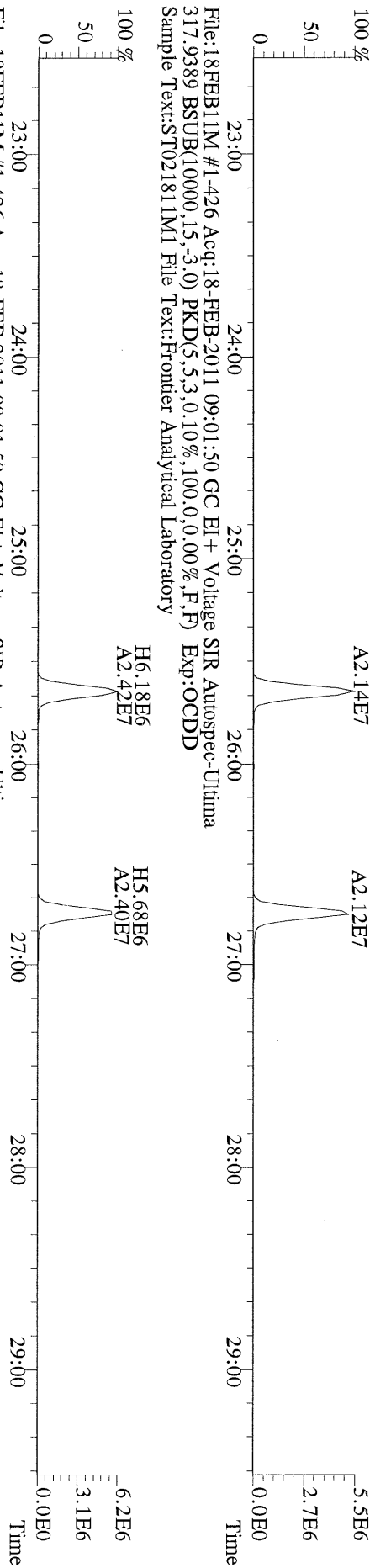
File:18FEB11M #1-347 Acq:18-FEB-2011 09:01:50 GC EI+ Voltage SIR Autospec-Utima  
 454.9728 F:5 Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



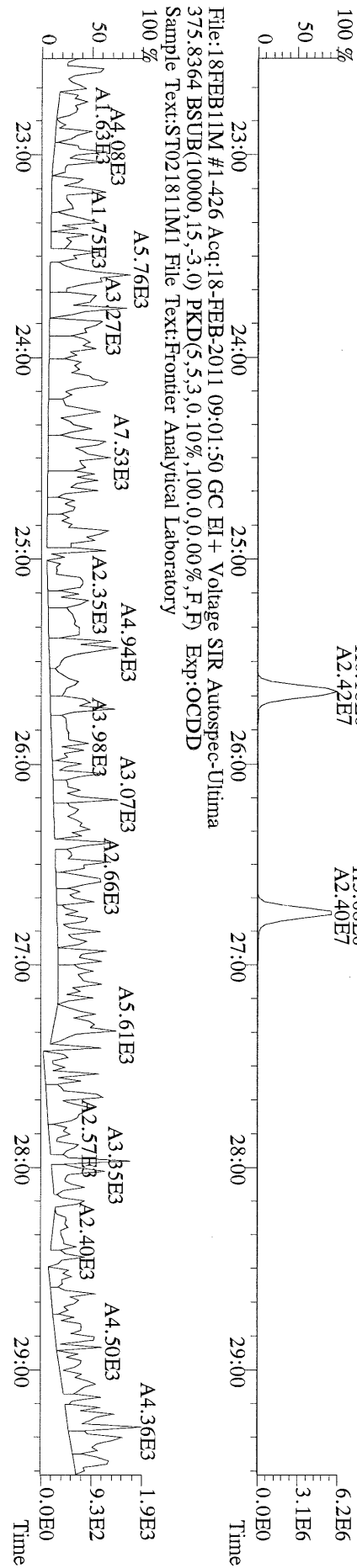
File:18FEB11M #1-426 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
 303.9016 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



File:18FEB11M #1-426 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
 315.9419 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory

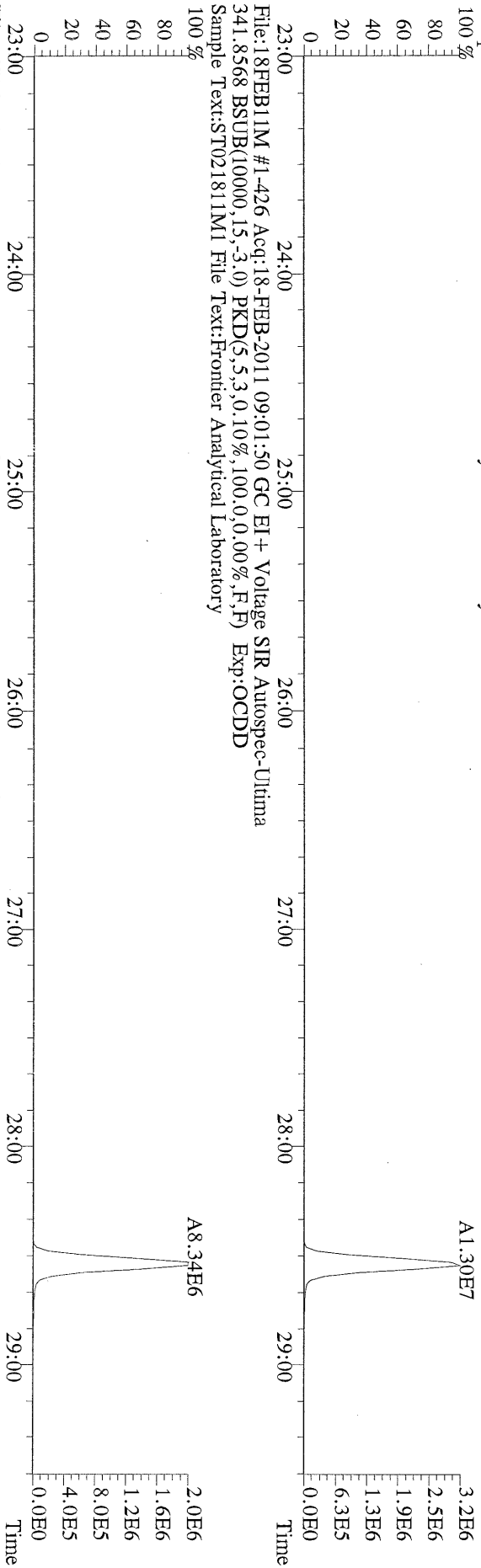


File:18FEB11M #1-426 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
 317.9389 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory

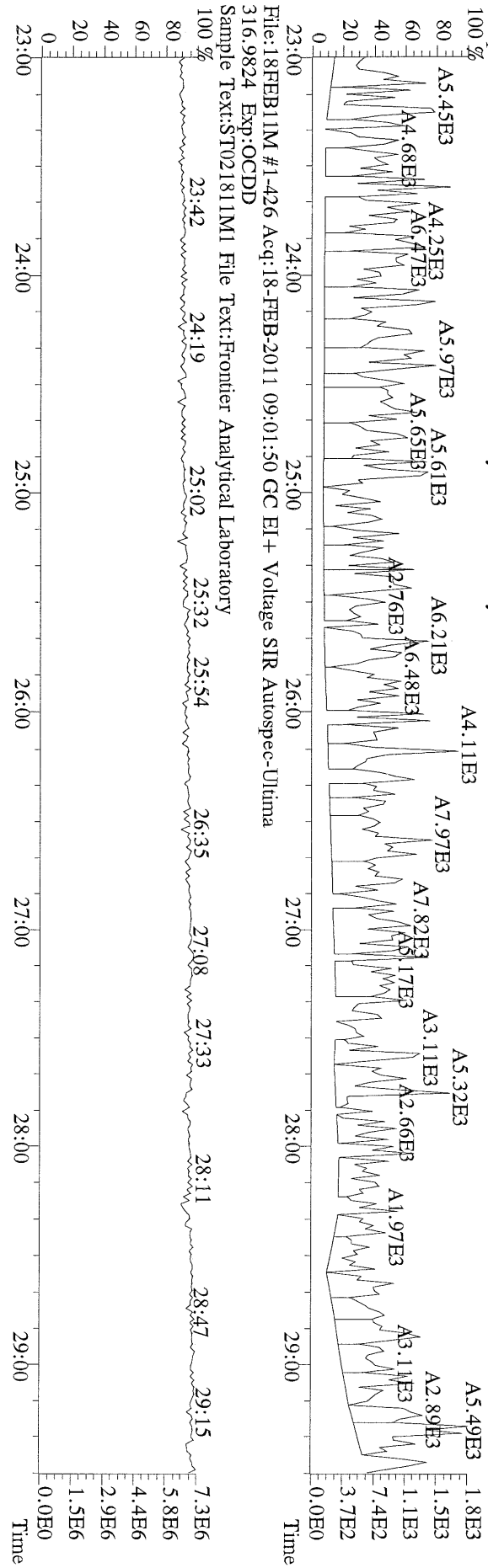


File:18FEB11M #1-426 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
 375.8364 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory

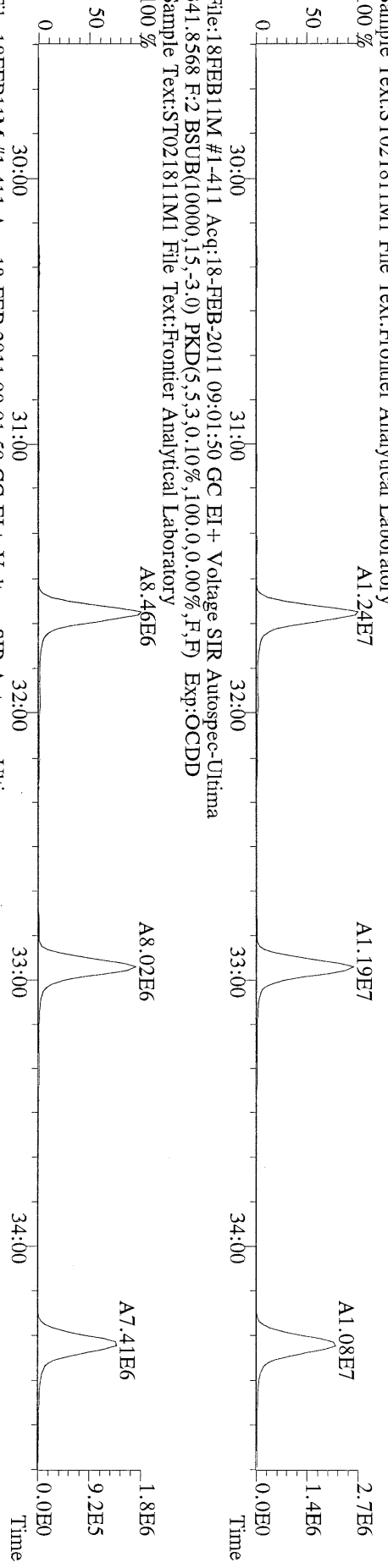
File:18FEB11M #1-426 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
 339.8597 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



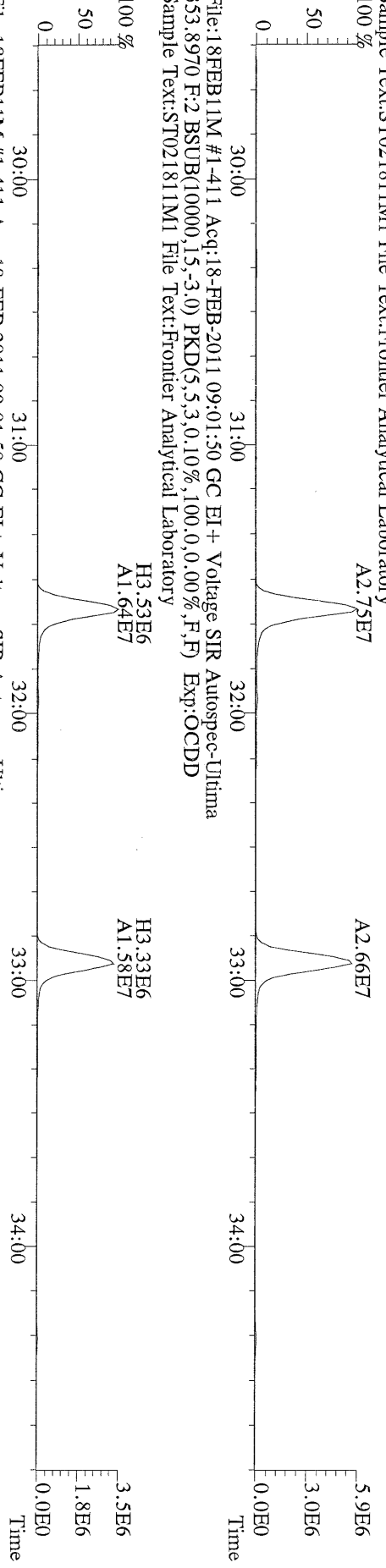
File:18FEB11M #1-426 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
 409.7974 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



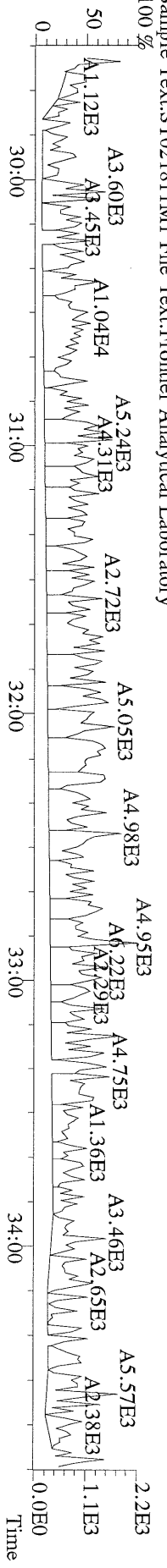
File:18FEB11M1 #1-411 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
 339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



File:18FEB11M1 #1-411 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
 351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory

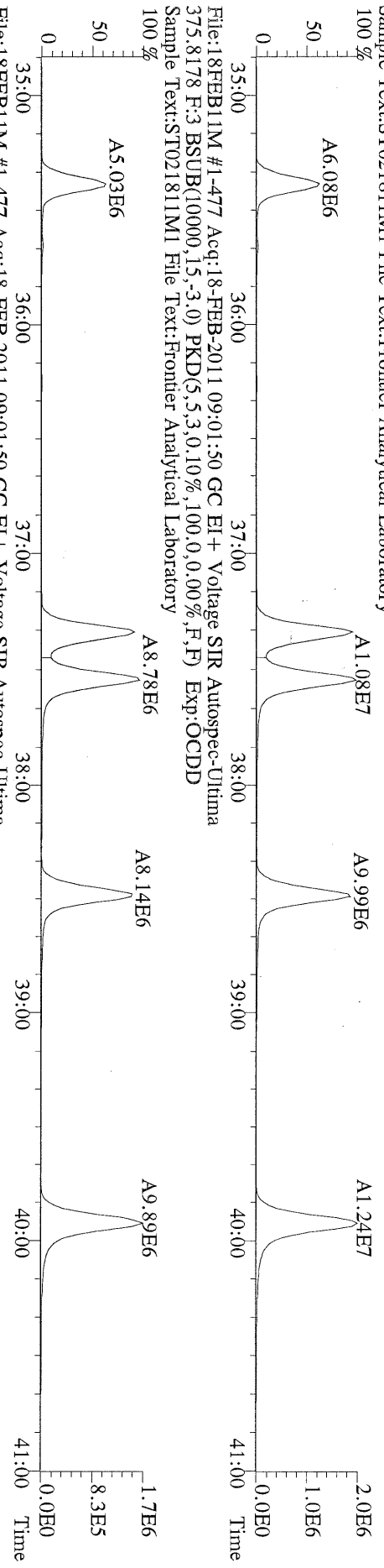


File:18FEB11M1 #1-411 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
 409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
 Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory

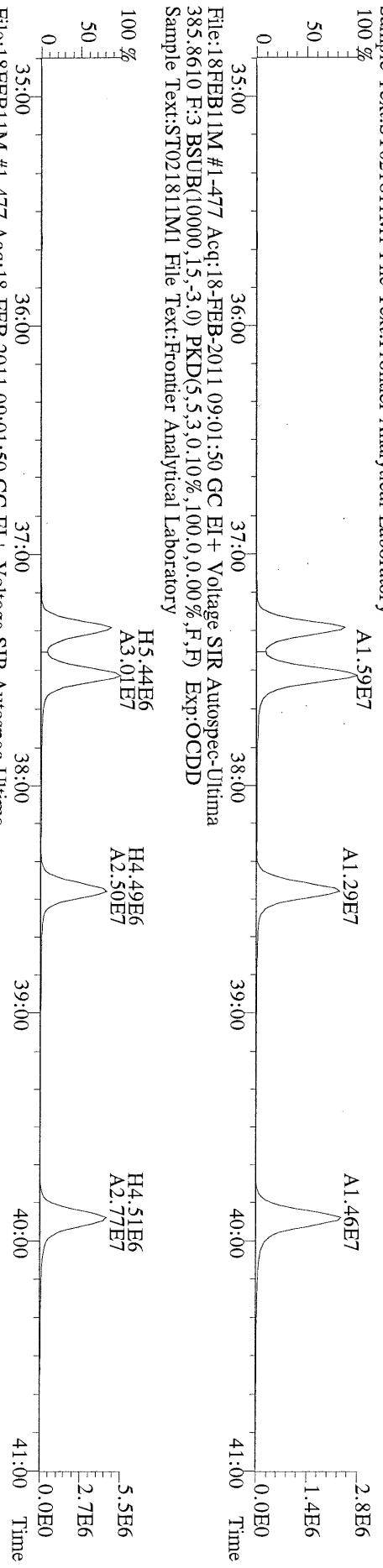




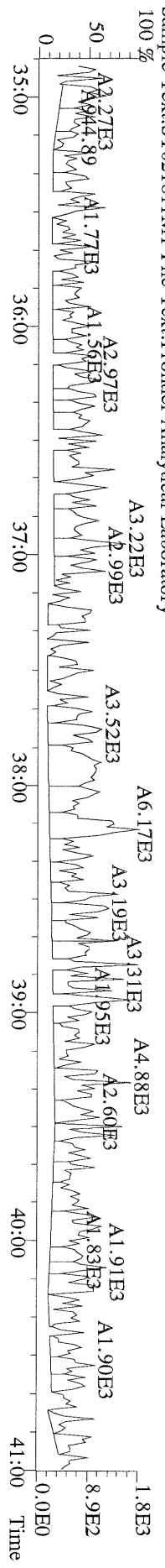
File:18FEB11M #1-477 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



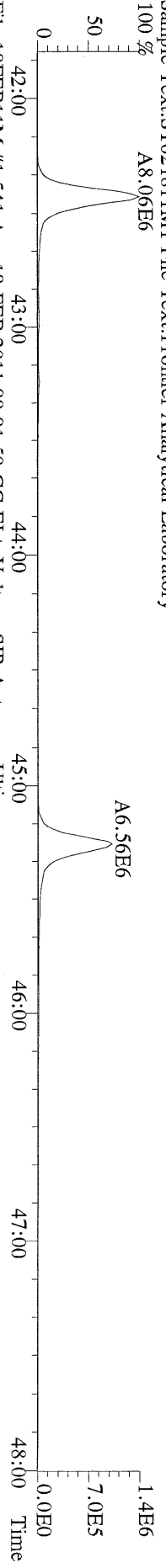
File:18FEB11M #1-477 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



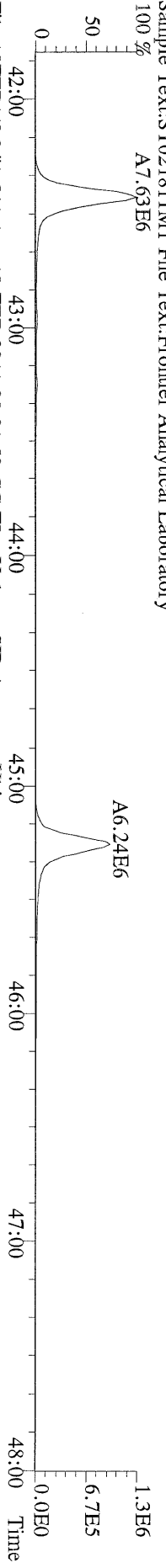
File:18FEB11M #1-477 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



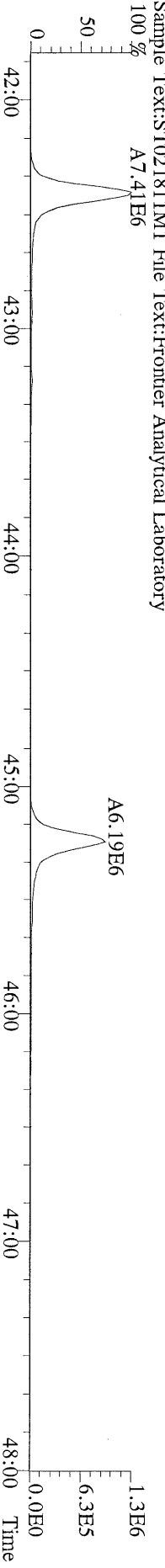
File:18FEB11M #1-541 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



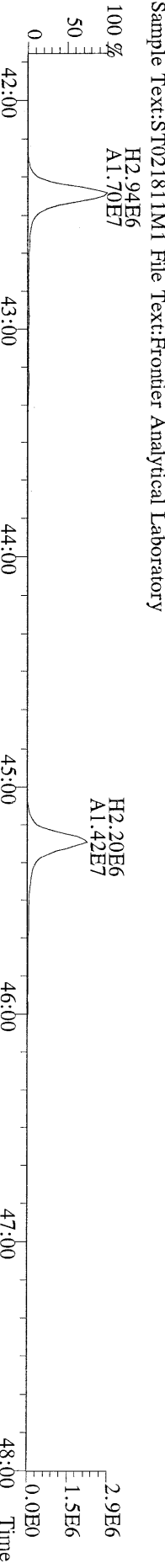
File:18FEB11M #1-541 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



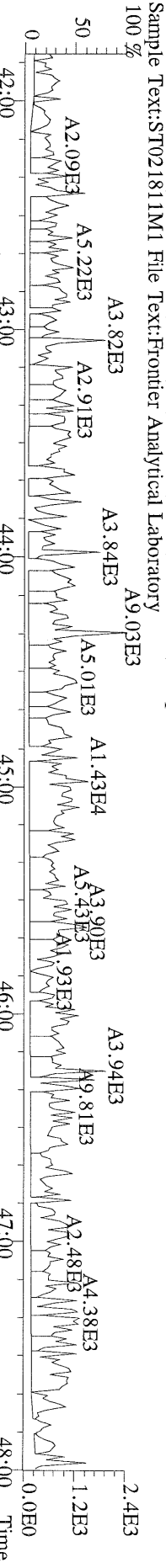
File:18FEB11M #1-541 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



File:18FEB11M #1-541 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



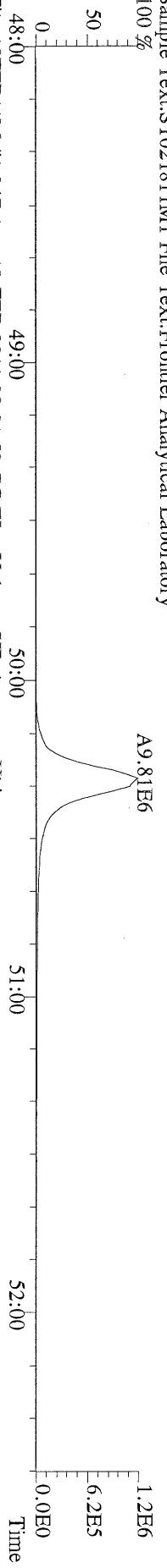
File:18FEB11M #1-541 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



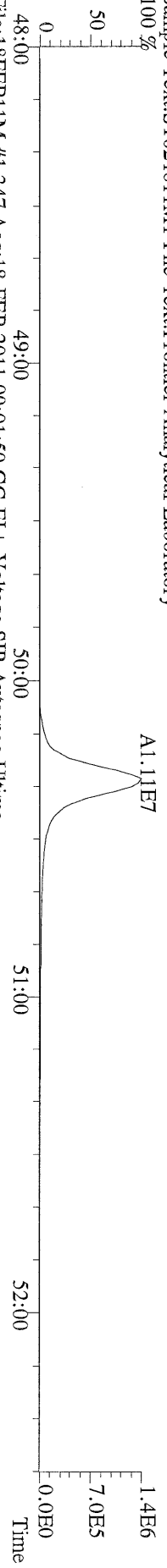
File:18FEB11M #1-541 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



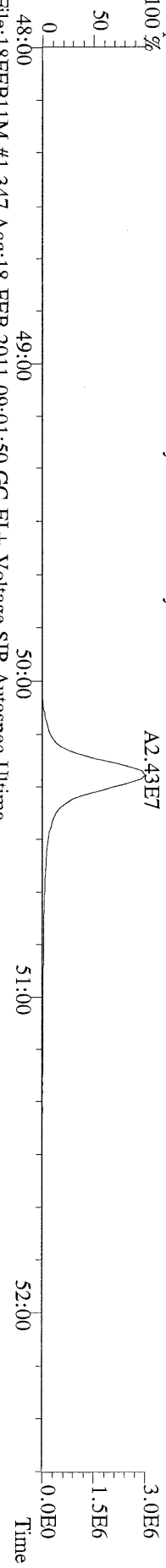
File:18FEB11M #1-347 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



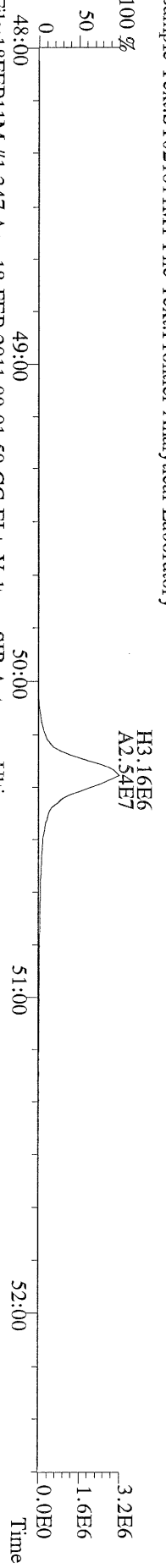
File:18FEB11M #1-347 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory



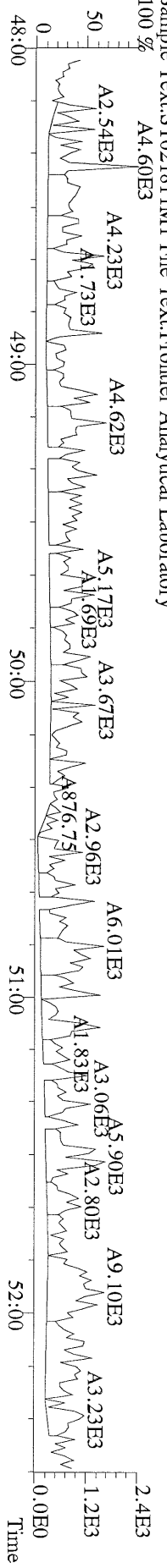
File:18FEB11M #1-347 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory

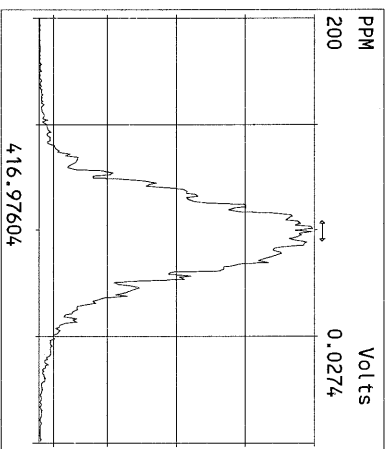
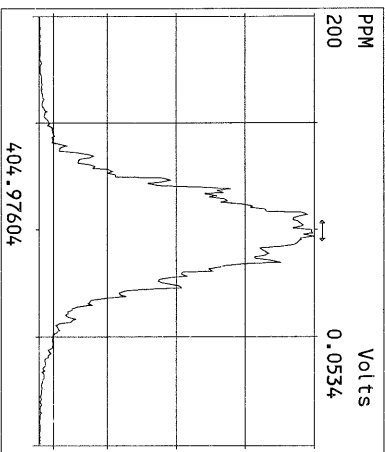
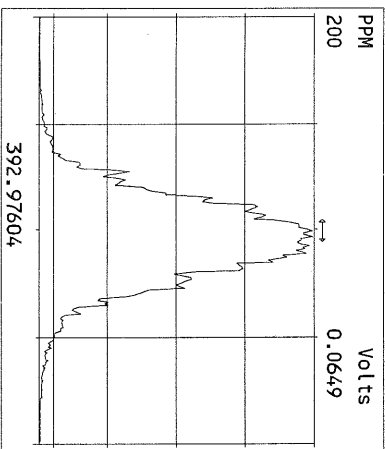
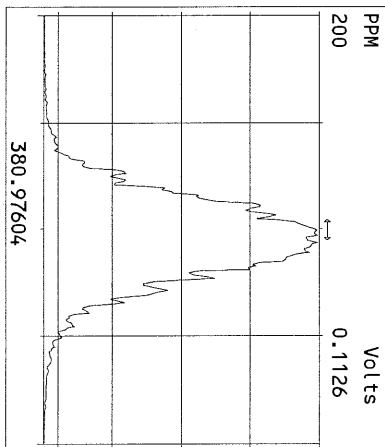
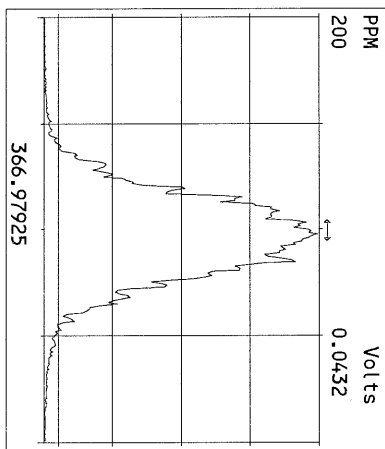
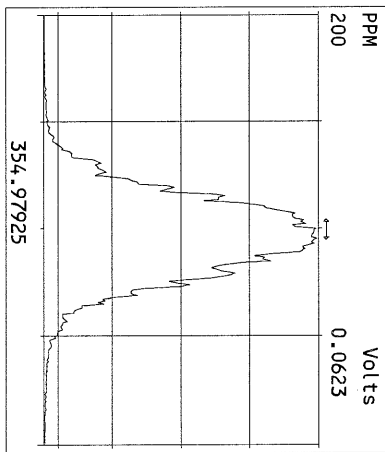
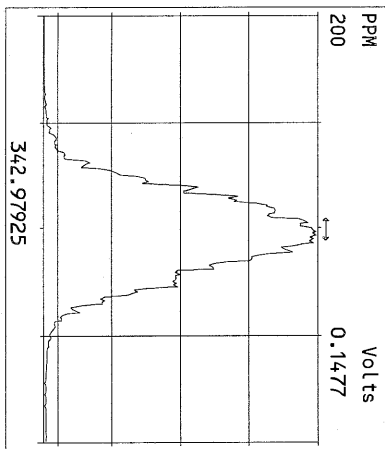
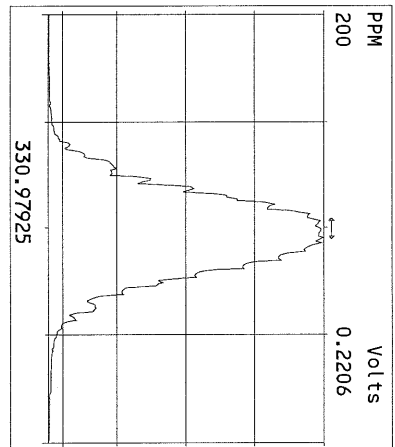
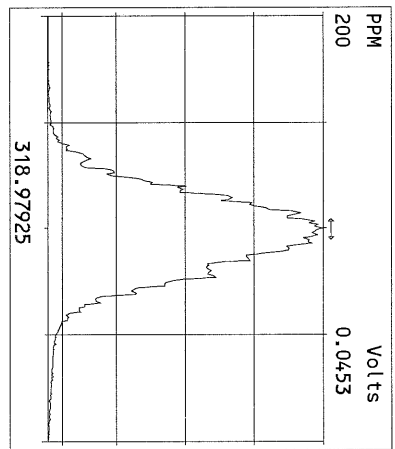
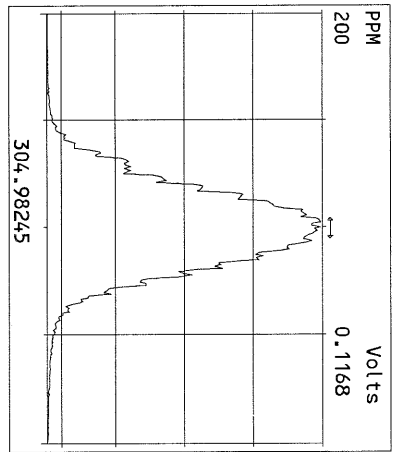
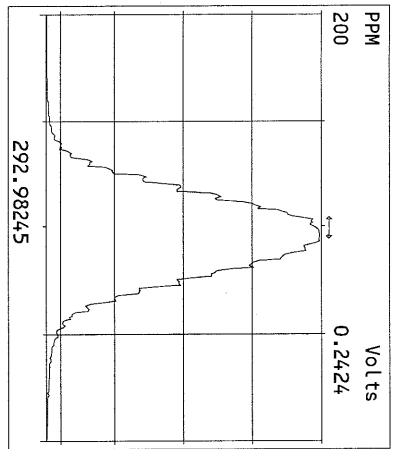


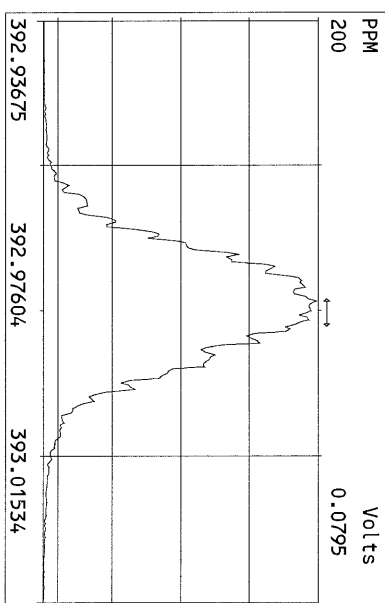
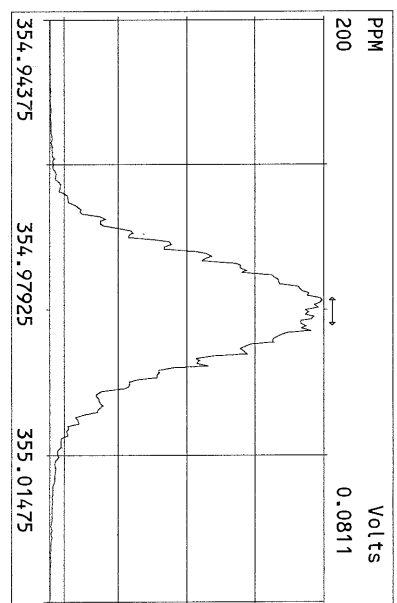
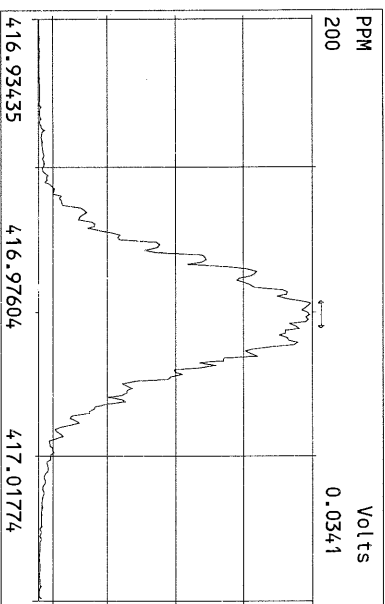
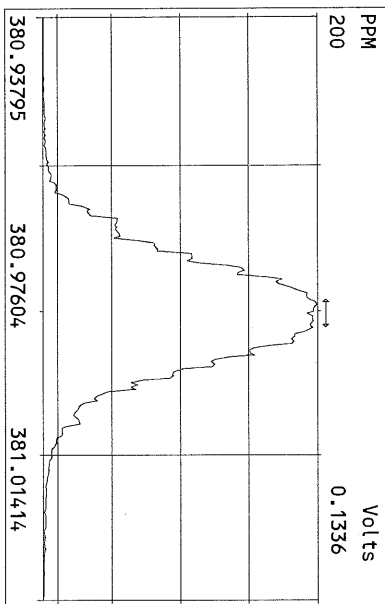
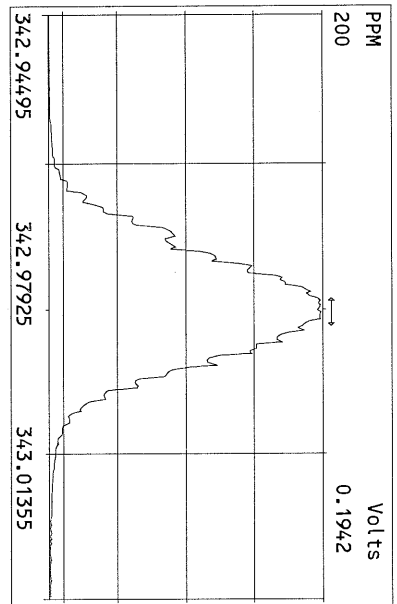
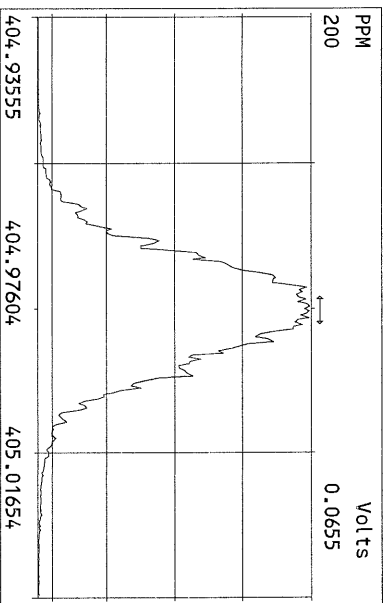
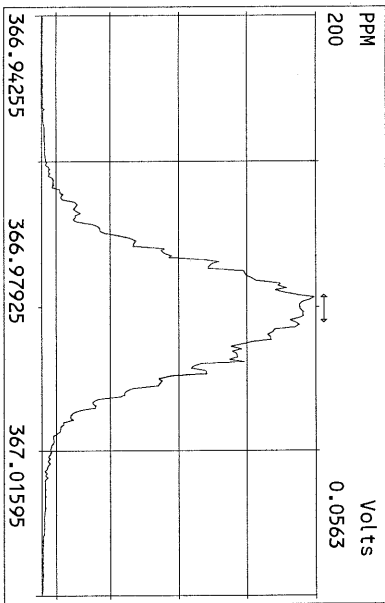
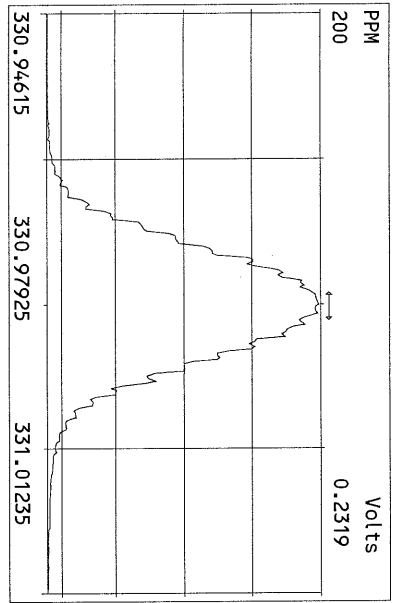
File:18FEB11M #1-347 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory

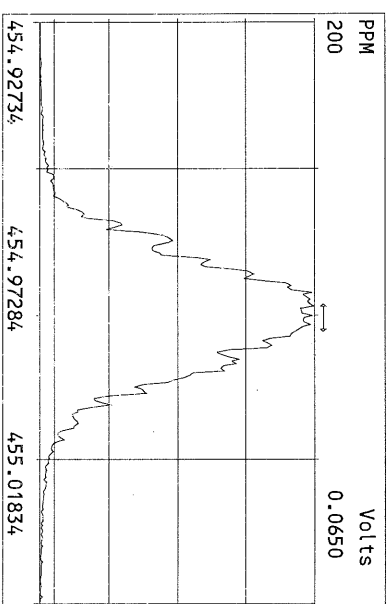
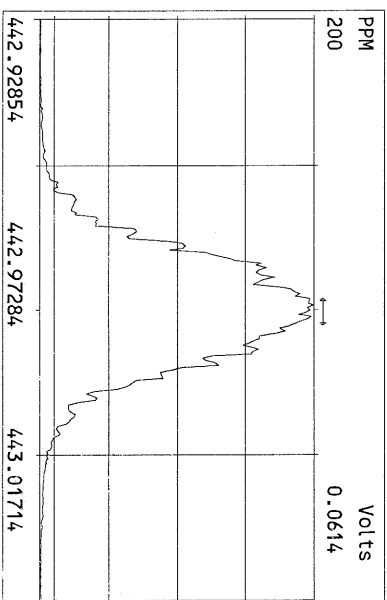
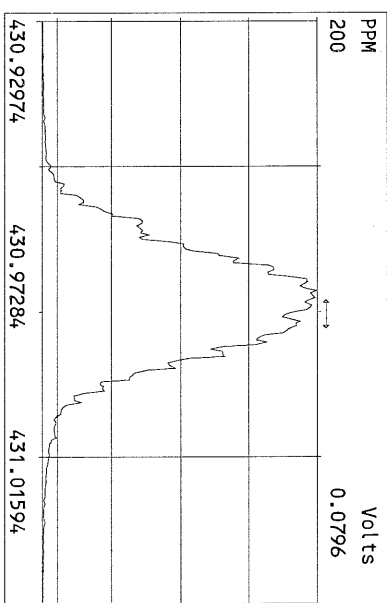
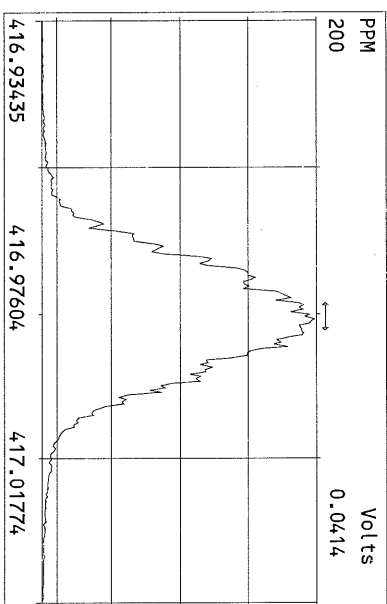
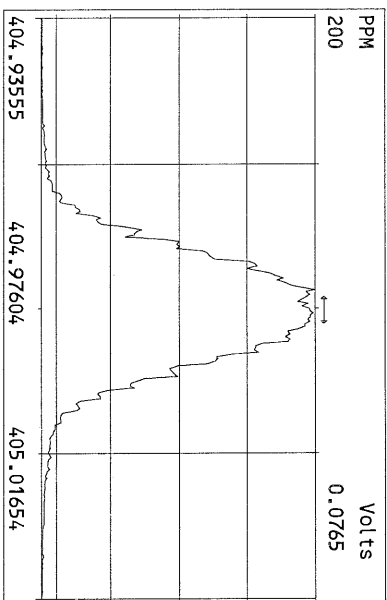
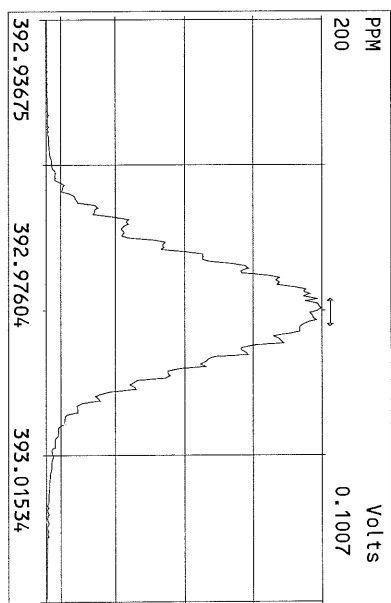
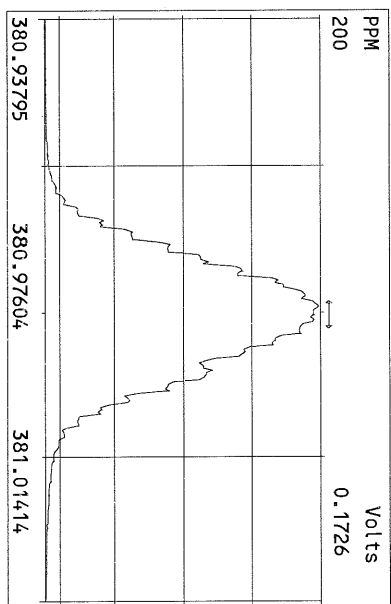
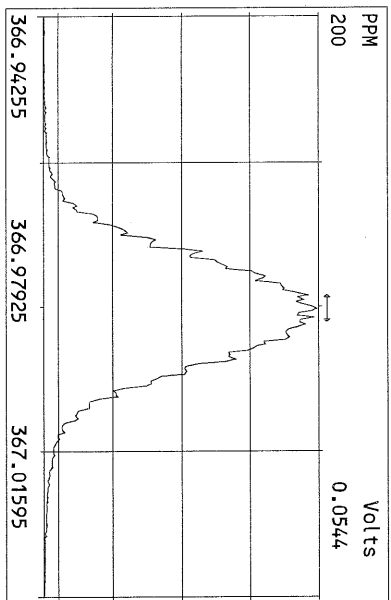


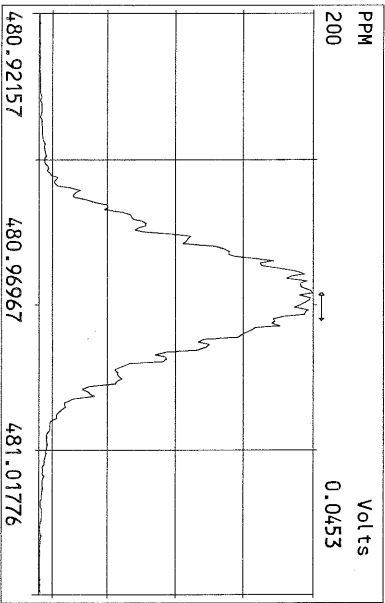
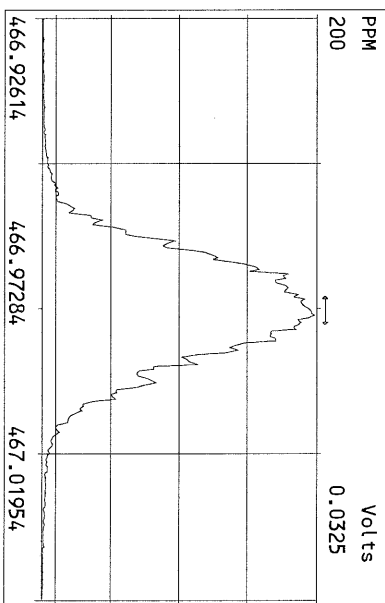
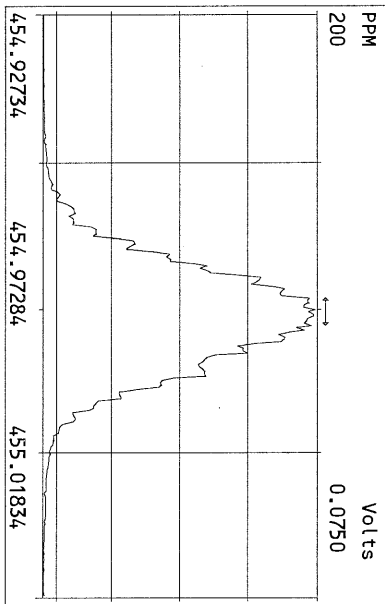
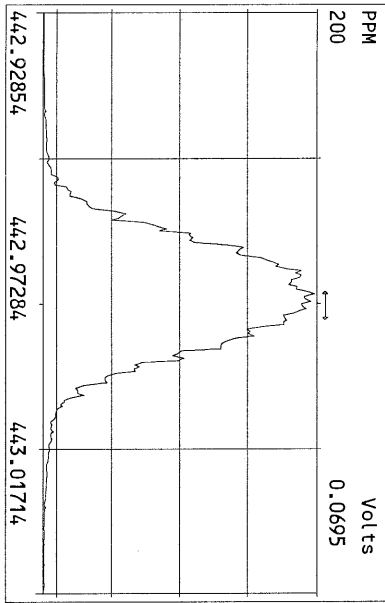
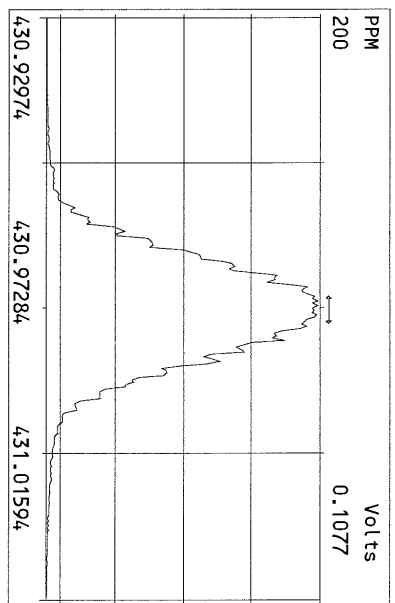
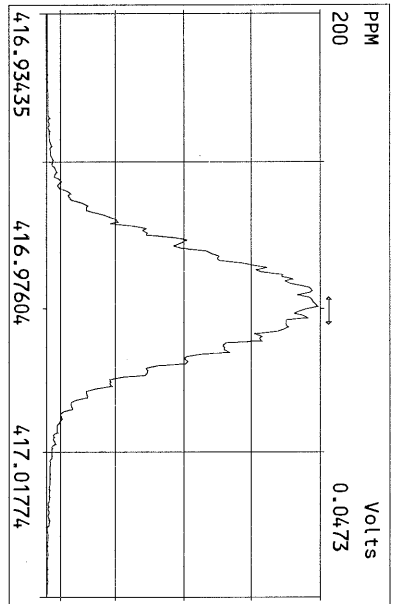
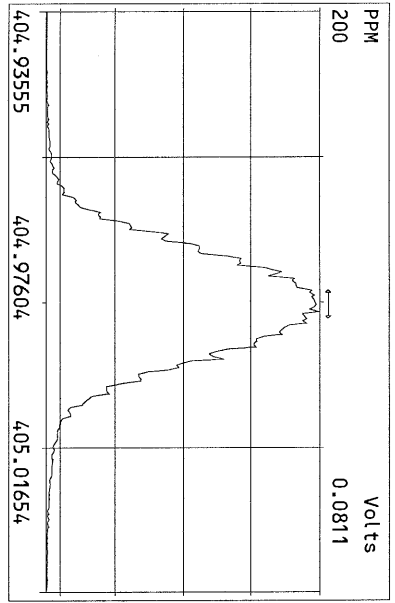
File:18FEB11M #1-347 Acq:18-FEB-2011 09:01:50 GC EI + Voltage SIR Autospec-Ultima  
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M1 File Text:Frontier Analytical Laboratory

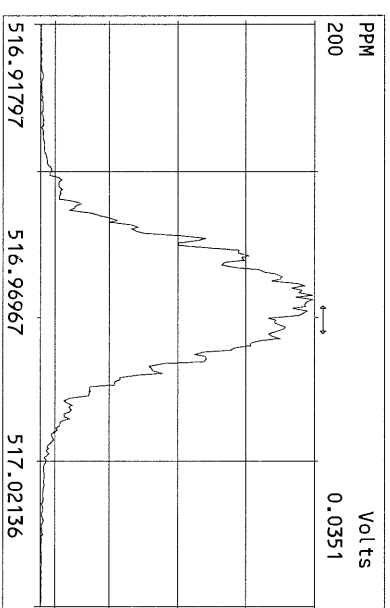
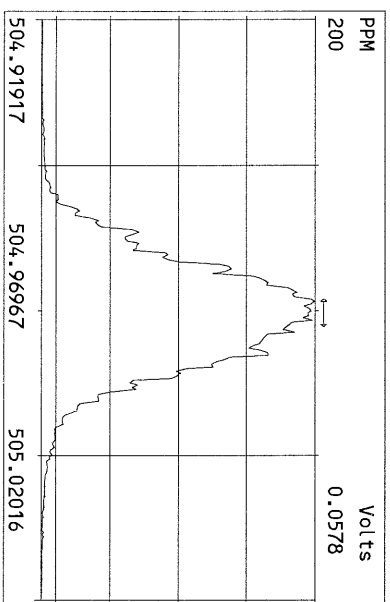
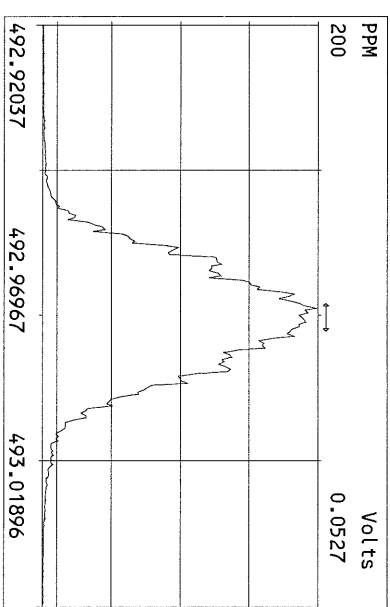
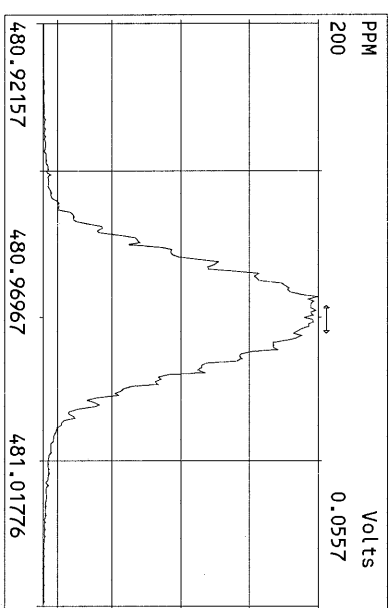
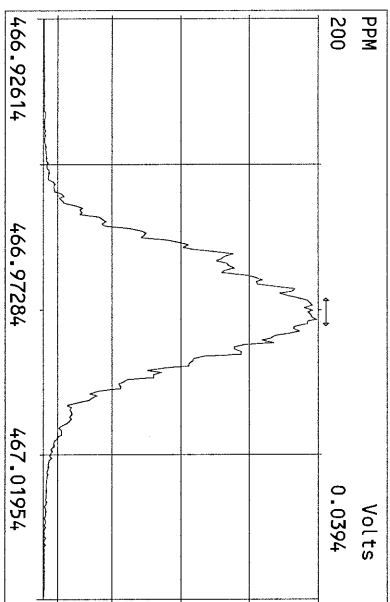
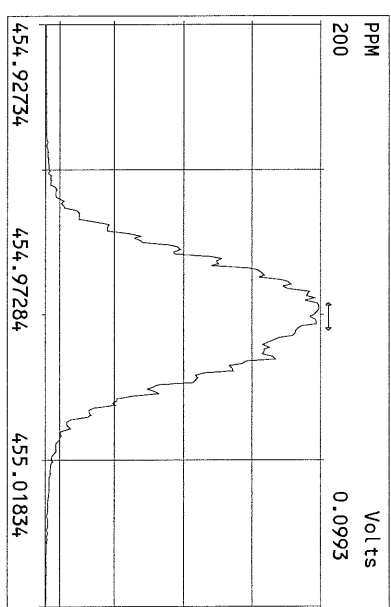
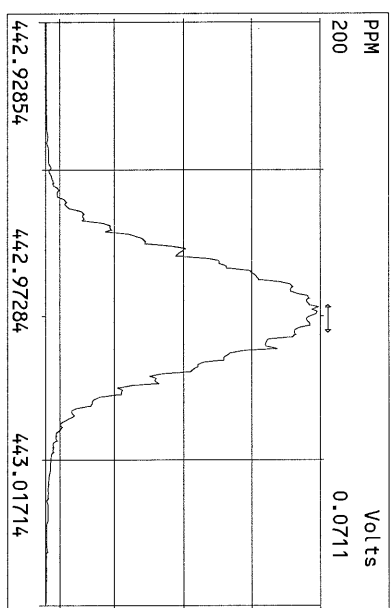
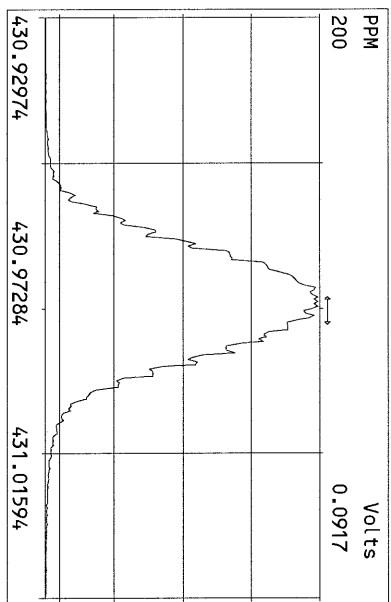




















## USEPA - ITD

FORM 6A

## PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 2/16/11

Instrument ID: FAL3

GC Column ID: DB5

Analysis Date: 18-FEB-11 21:56:26

CS3 or VER Data Filename: 18FEB11M

Sam:15

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002 ✓
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003 ✓
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002 ✓
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002 ✓
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002 ✓
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052 ✓
13C-2,3,7,8-TCDD		1.022	0.976-1.043 ✓
13C-2,3,7,8-TCDF		0.994	0.923-1.103 ✓
13C-1,2,3,7,8-PeCDD		1.239	1.000-1.567 ✓
13C-1,2,3,7,8-PeCDF		1.174	0.923-1.203 ✓
13C-2,3,4,7,8-PeCDF		1.223	0.923-1.303 ✓

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: JDate: 2/21/11

## USEPA - ITD

FORM 6B

## PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 2/16/11

Instrument ID: FAL3

GC Column ID: DB5

Analysis Date: 18-FEB-11 21:56:26

CS3 or VER Data Filename: 18FEB11M

Sam:15

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001 ✓
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004 ✓
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019 ✓
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001 ✓
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005 ✓
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001 ✓
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001 ✓
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.001	0.999-1.001 ✓
OCDD	13C-OCDD	1.001	0.999-1.001 ✓
OCDF	13C-OCDF	1.000	0.999-1.001 ✓
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.985	0.977-1.000 ✓
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003 ✓
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970 ✓
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975 ✓
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021 ✓
13C-1,2,3,7,8,9-HxCDF		1.014	0.977-1.047 ✓
13C-1,2,3,4,6,7,8-HpCDD		1.127	1.086-1.130 ✓
13C-1,2,3,4,6,7,8-HpCDF		1.078	1.043-1.085 ✓
13C-1,2,3,4,7,8,9-HpCDF		1.150	1.057-1.154 ✓
13C-OCDD		1.269	1.032-1.311 ✓
13C-OCDF		1.279	1.000-1.311 ✓

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: JDate: 2/21/11



Frontier Analytical Laboratory - Acquisition Log

Run Name:18FEB11M

Instrument: FAL3

GC: DB5

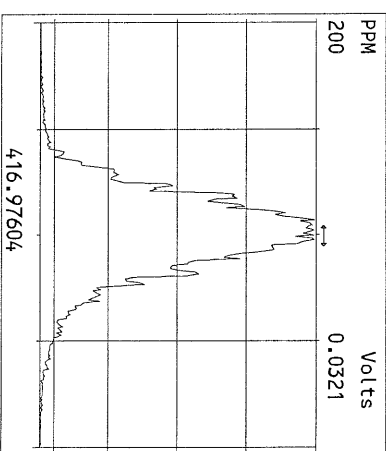
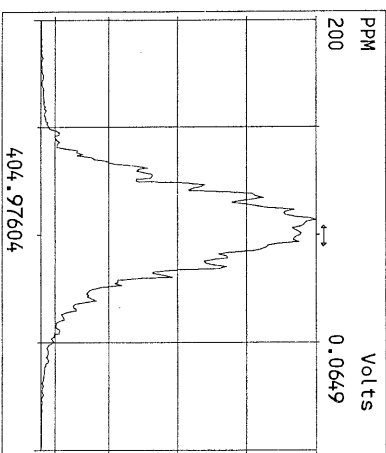
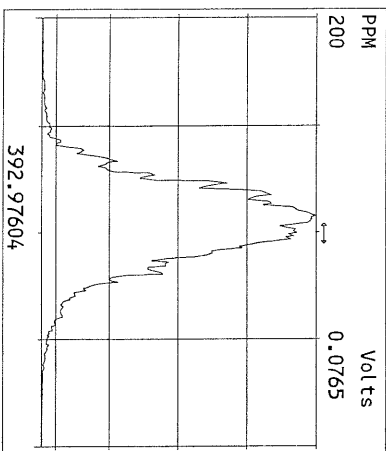
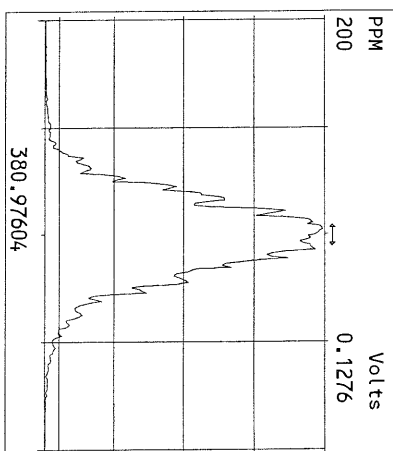
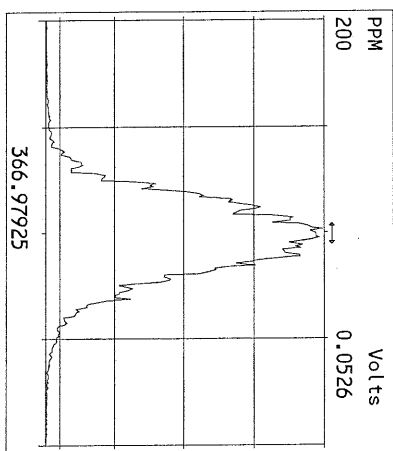
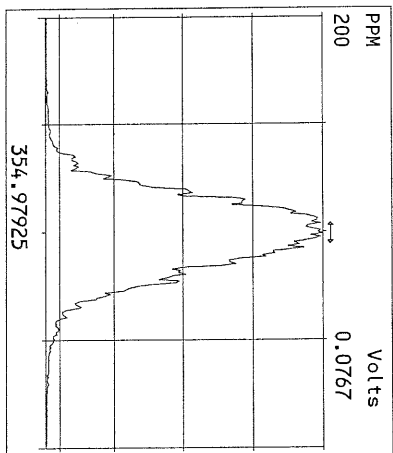
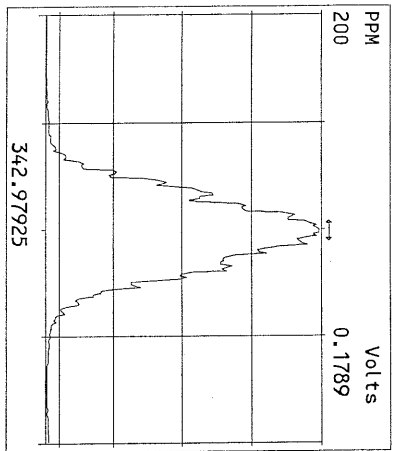
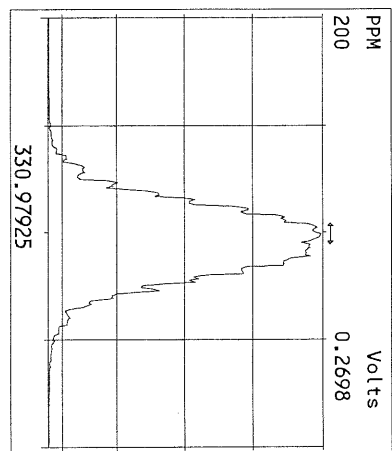
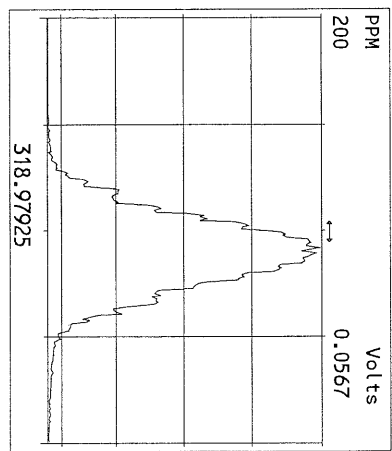
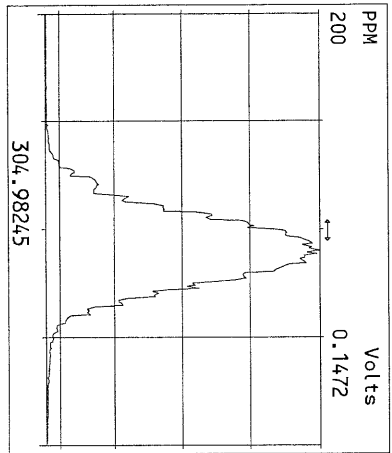
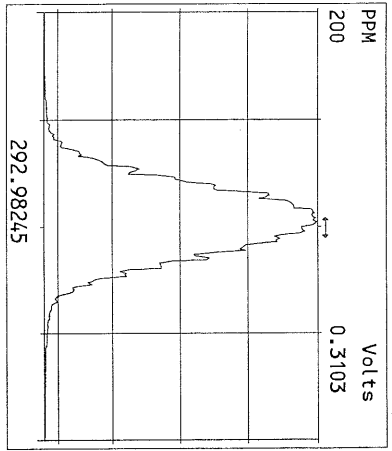
Experiment:OCDD

Data File S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
18FEB11M 1	ST021811M1	1613 CS3 100511J	18-FEB-11 09:01:50	ST021811M1	ST021811M2	TC
18FEB11M 2	2220-001-0001-OPR	OPR	18-FEB-11 09:57:08	ST021811M1	ST021811M2	TC
18FEB11M 3	2220-001-0001-MB	Method Blank	18-FEB-11 10:52:26	ST021811M1	ST021811M2	TC
18FEB11M 4	6564-001-0001-SA	L165152-1	18-FEB-11 11:47:46	ST021811M1	ST021811M2	TC
18FEB11M 5	6565-001-0001-SA	L165153-1	18-FEB-11 12:43:04	ST021811M1	ST021811M2	TC
18FEB11M 6	6566-001-0001-SA	L165154-1	18-FEB-11 13:38:23	ST021811M1	ST021811M2	TC
18FEB11M 7	6567-001-0001-SA	L165159-1	18-FEB-11 14:33:42	ST021811M1	ST021811M2	TC
18FEB11M 8	6568-001-0001-SA	L165173-4	18-FEB-11 15:29:01	ST021811M1	ST021811M2	TC
18FEB11M 9	6569-001-0001-SA	L165202-4	18-FEB-11 16:24:20	ST021811M1	ST021811M2	TC
18FEB11M 10	6570-001-0001-SA	L165205-4	18-FEB-11 17:19:39	ST021811M1	ST021811M2	TC
18FEB11M 11	6571-001-0001-SA	L165206-5	18-FEB-11 18:15:02	ST021811M1	ST021811M2	TC
18FEB11M 12	6572-001-0001-SA	L165212-3	18-FEB-11 19:10:25	ST021811M1	ST021811M2	TC
18FEB11M 13	6573-001-0001-SA	L165220-1	18-FEB-11 20:05:44	ST021811M1	ST021811M2	TC
18FEB11M 14	SB021811M1	Solvent Blank	18-FEB-11 21:01:03	ST021811M1	ST021811M2	TC
18FEB11M 15	ST021811M2	1613 CS3 100511J	18-FEB-11 21:56:26	ST021811M2	ST021811M3	TC
18FEB11M 16	SB021811M2	Solvent Blank	18-FEB-11 22:51:47	ST021811M2	ST021811M3	TC
18FEB11M 17	ST021811M-1	1613 CS(-1) 100511M	18-FEB-11 23:47:06	ST021811M2	ST021811M3	TC
18FEB11M 18	6558-001-0001-SA	PSB2-4-6-072910	19-FEB-11 00:42:25	ST021811M2	ST021811M3	TC
18FEB11M 19	SB021811M3	Solvent Blank	19-FEB-11 01:37:44	ST021811M2	ST021811M3	TC
18FEB11M 20	ST021811M3	1613 CS3 100511J	19-FEB-11 02:33:02	ST021811M2	ST021811M3	TC

*8/2/11*

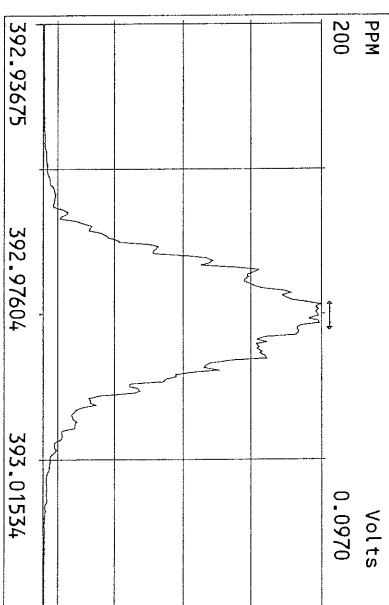
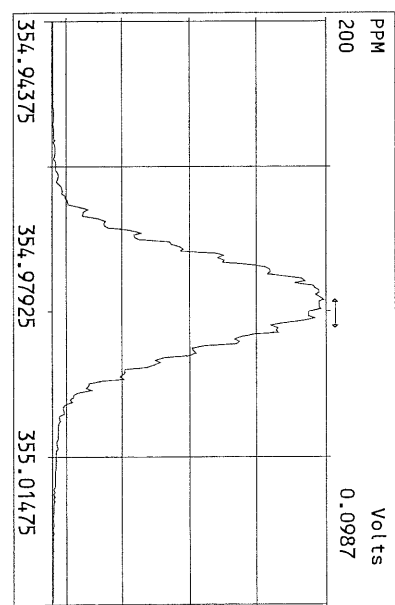
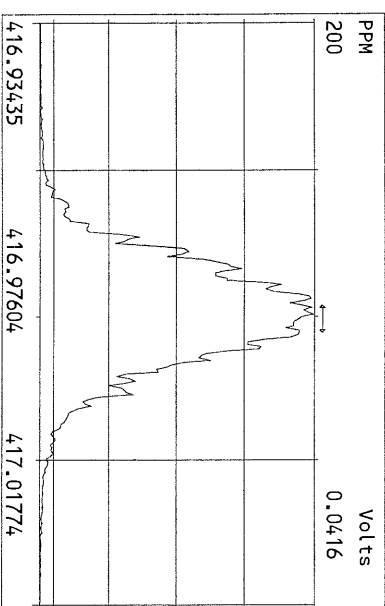
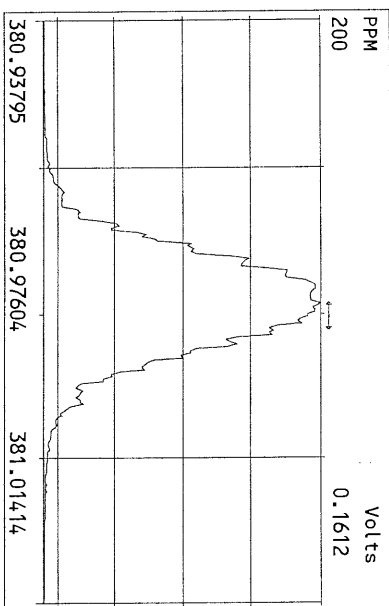
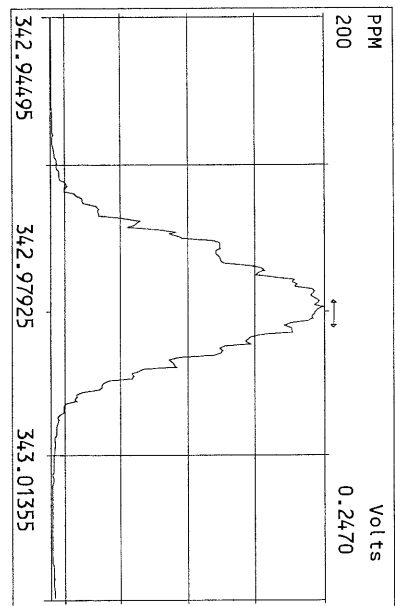
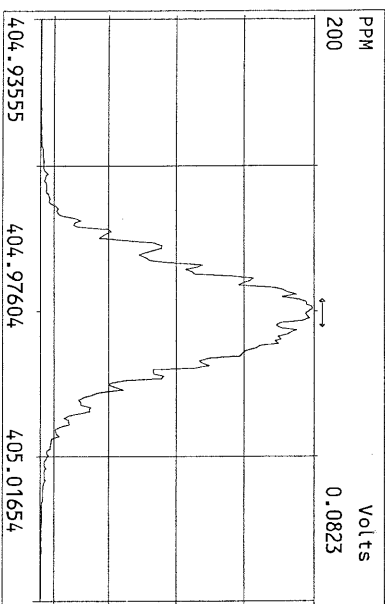
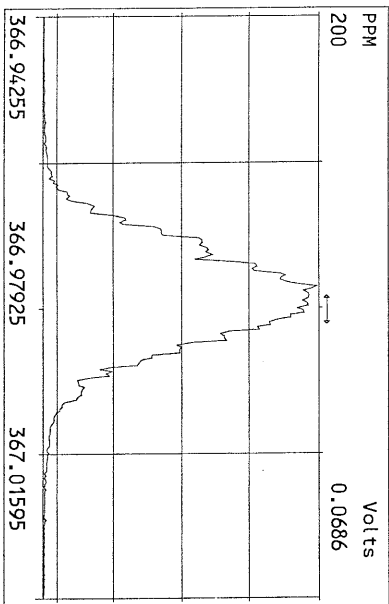
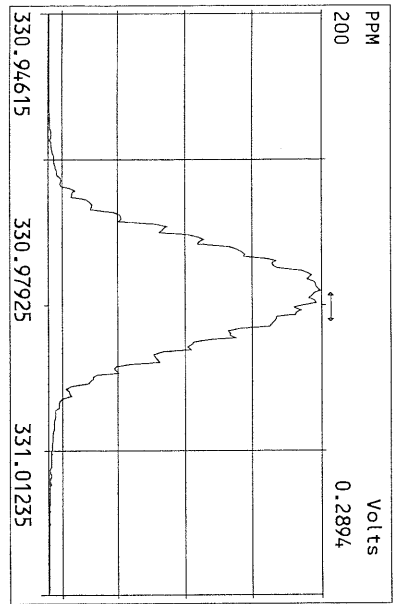
Data Backed Up: \_\_\_\_\_

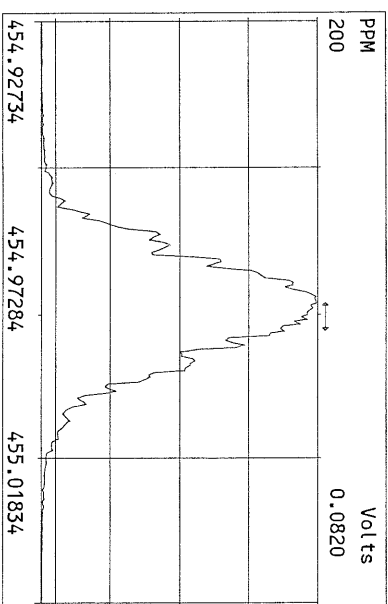
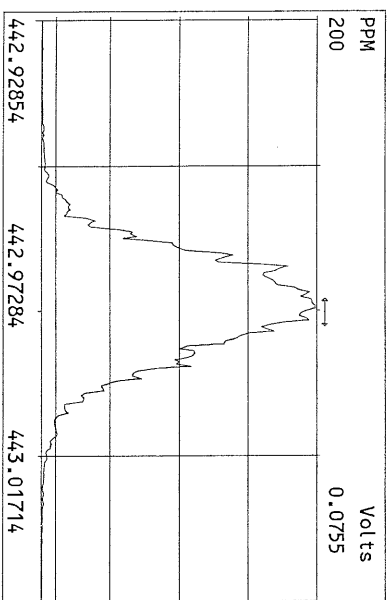
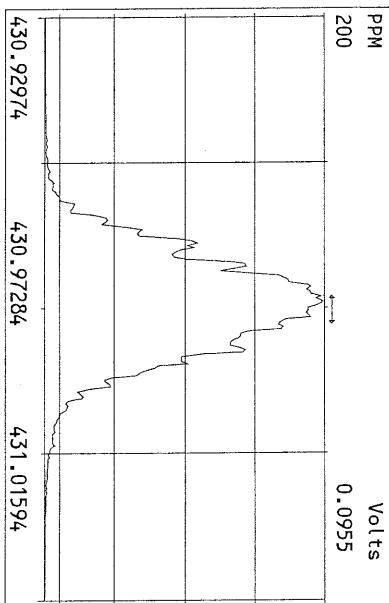
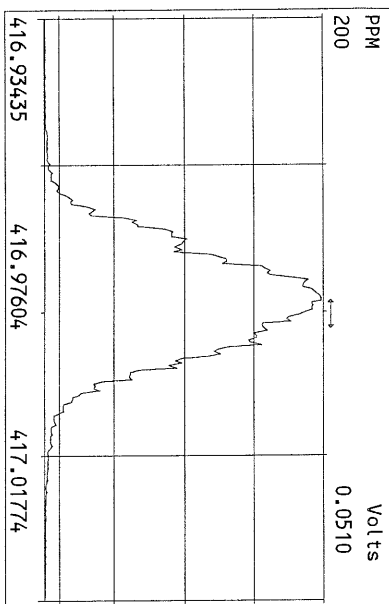
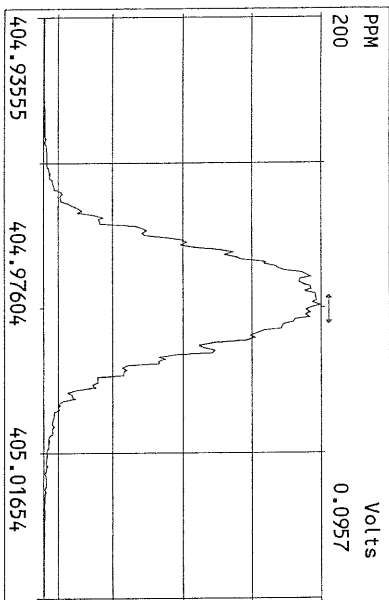
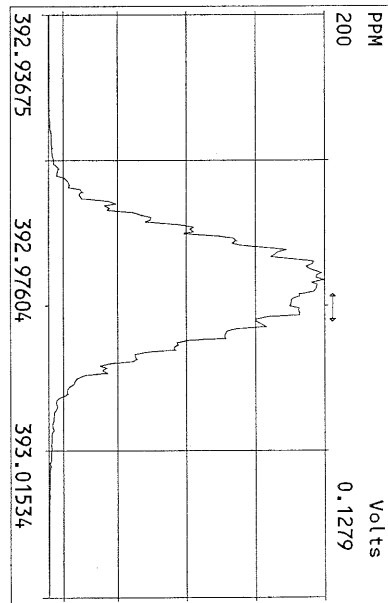
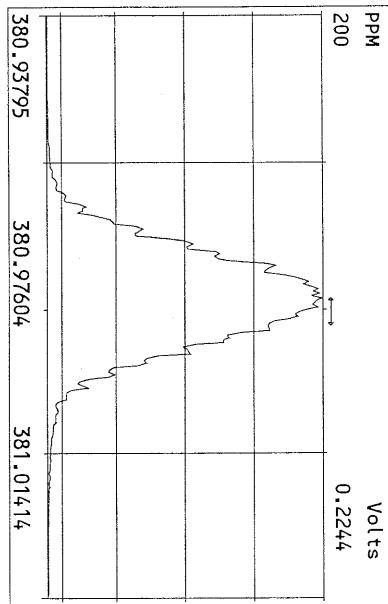
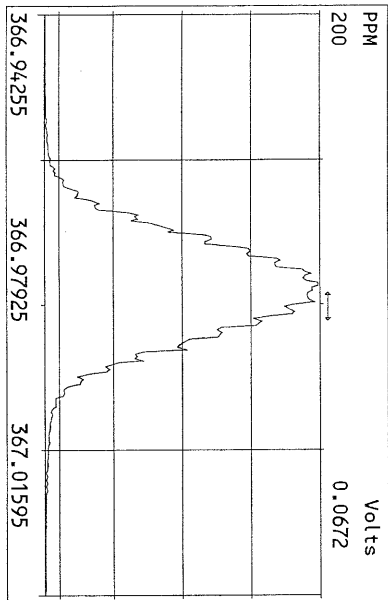
Date: \_\_\_\_\_



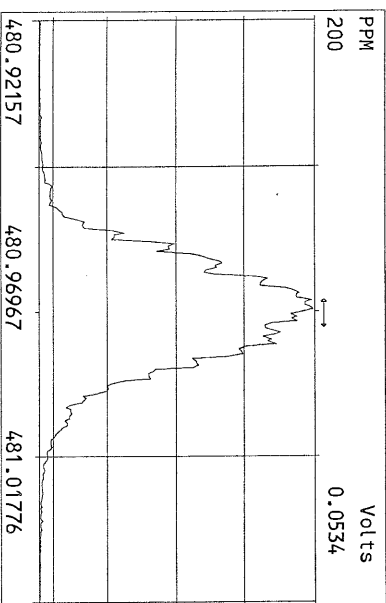
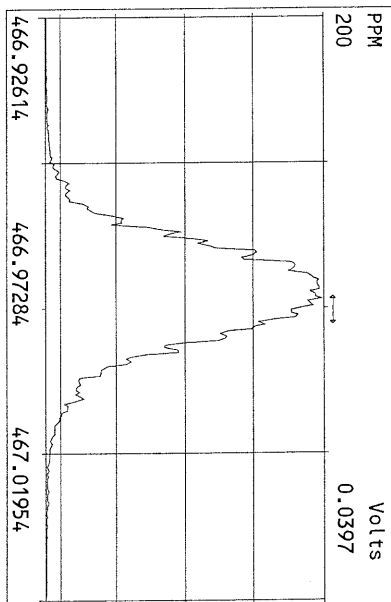
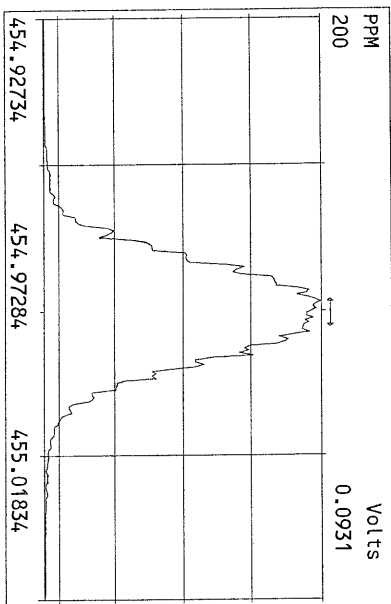
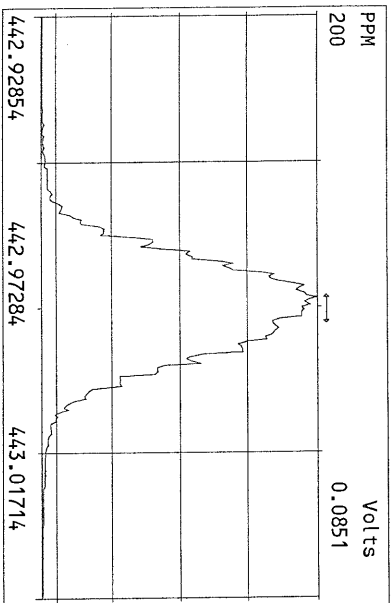
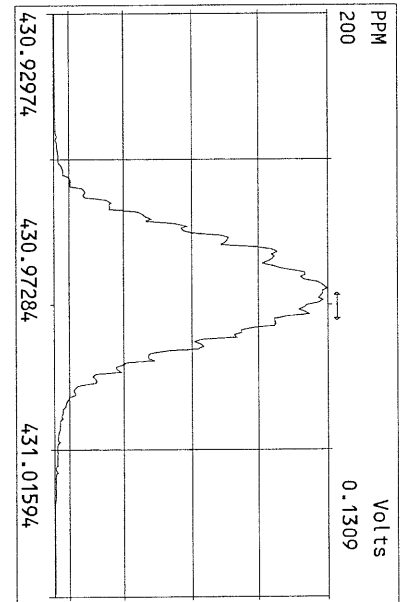
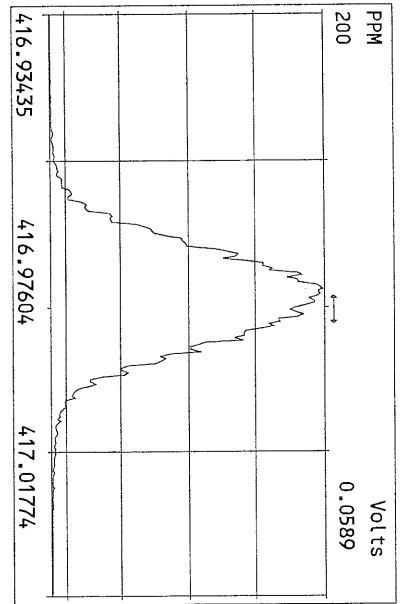
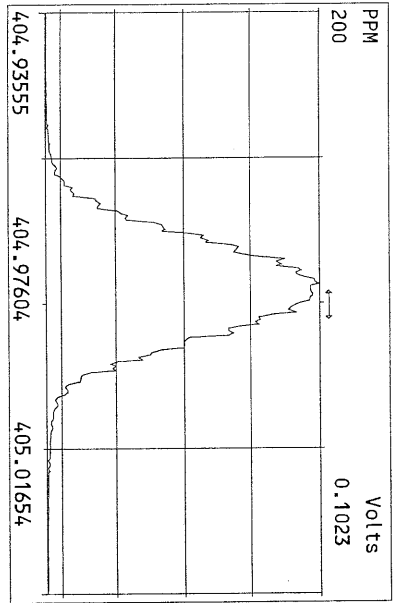


Peak Locate Examination:18-FEB-2011:09:00 File:18FEB11M  
Experiment:OCD Function:2 Reference:PFK

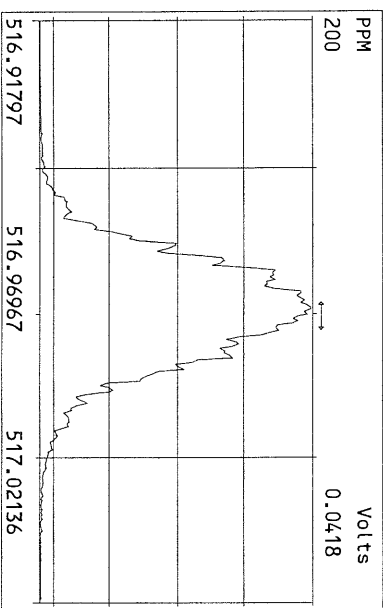
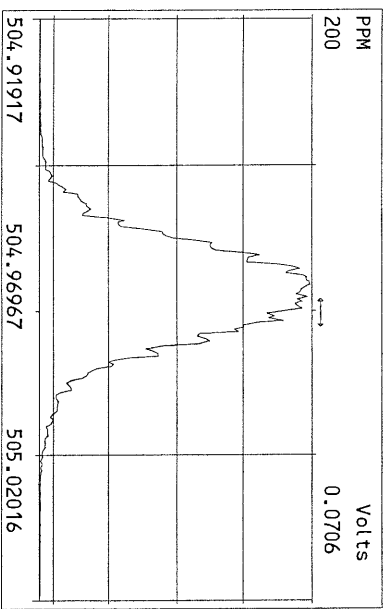
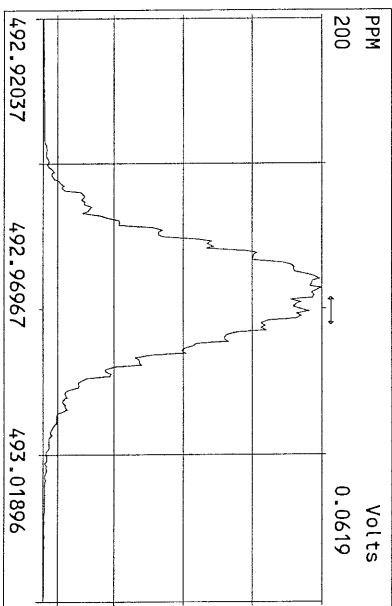
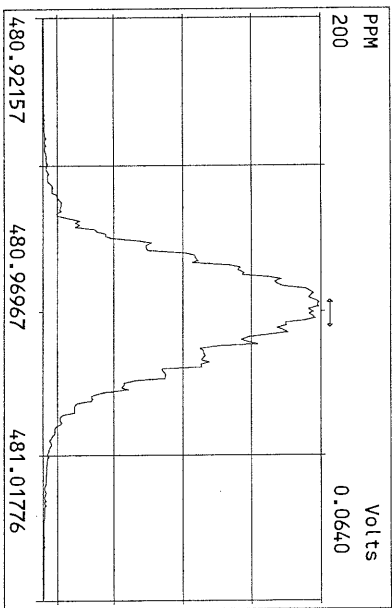
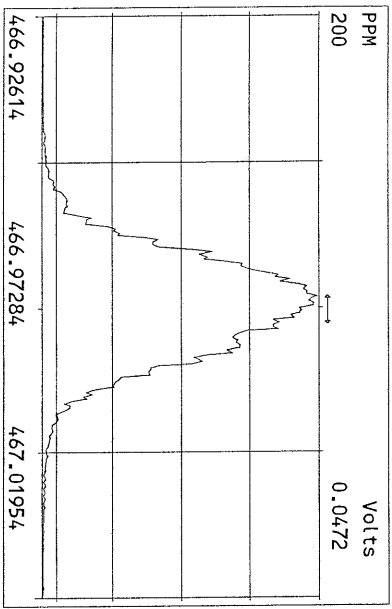
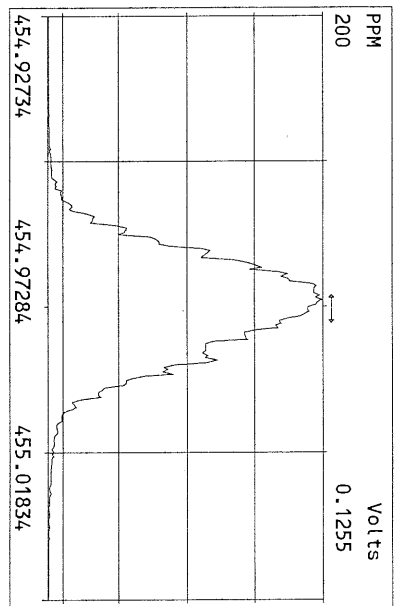
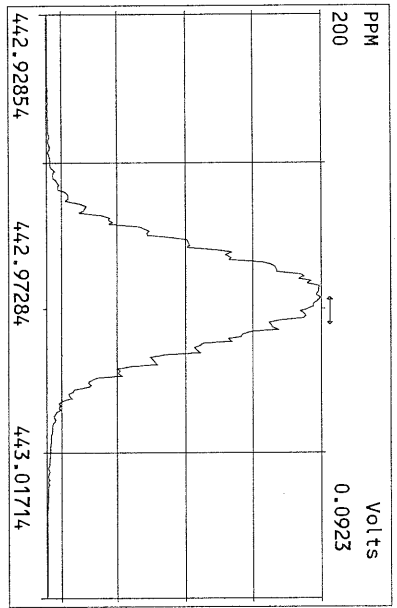
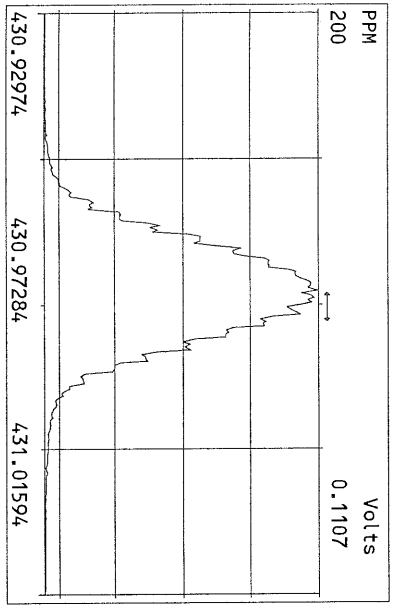




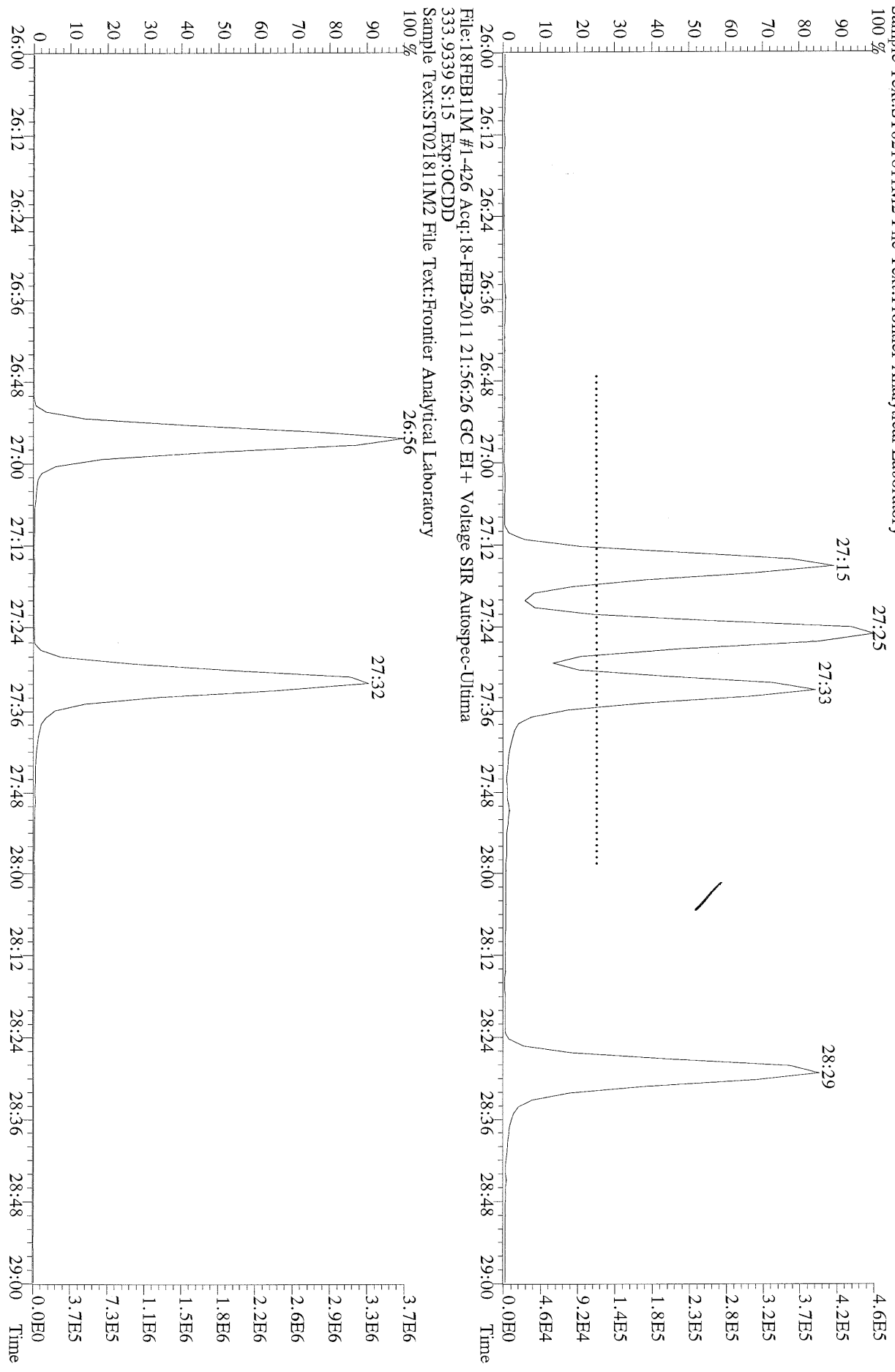
Peak Locate Examination:18-FEB-2011:09:01 File:18FEB11M  
Experiment:OCD Function:4 Reference:PK



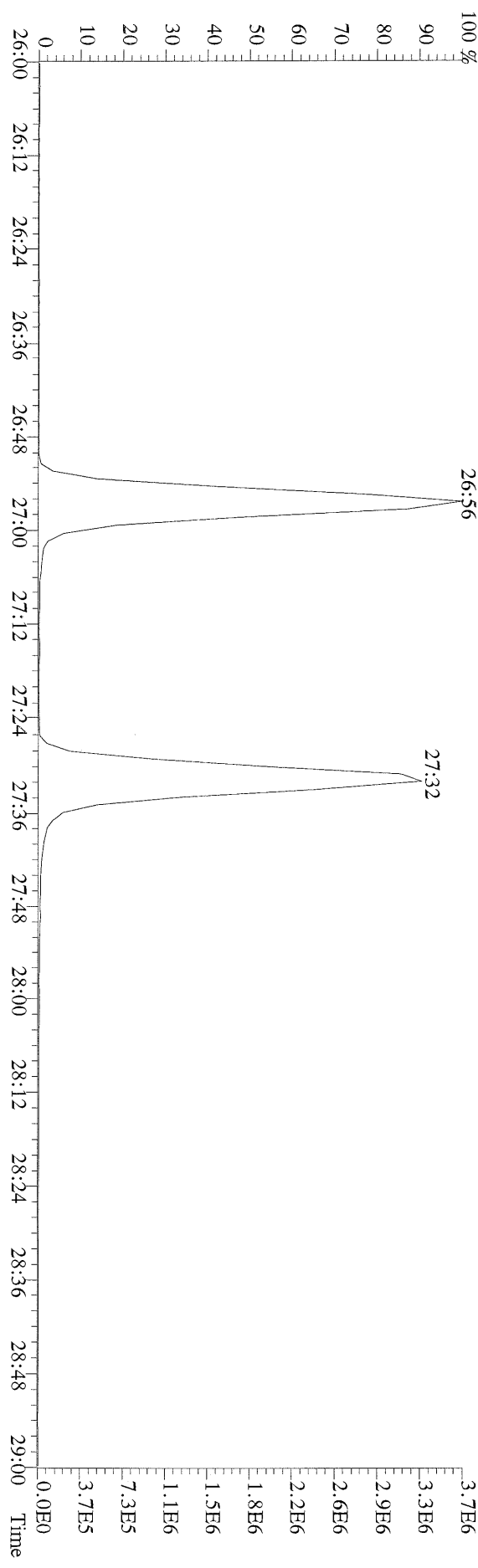
Peak Locate Examination:18-FEB-2011:09:01 File:18FEB11M  
Experiment:OCDD Function:5 Reference:PFK



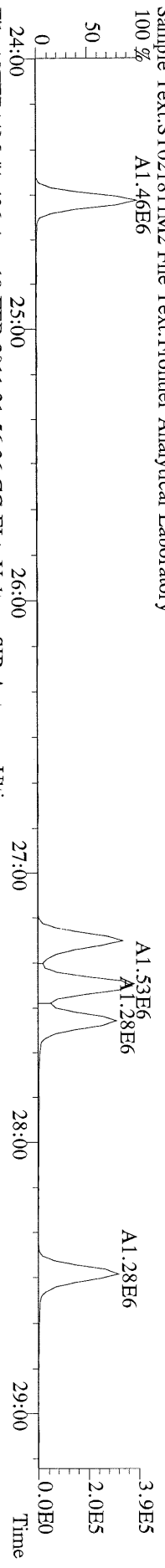
File:18FEB11M #1-426 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Utima  
321.8936 S:15 Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



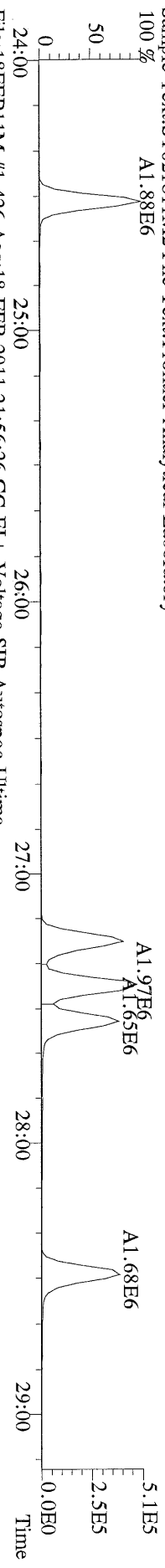
File:18FEB11M #1-426 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Utima  
333.9339 S:15 Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



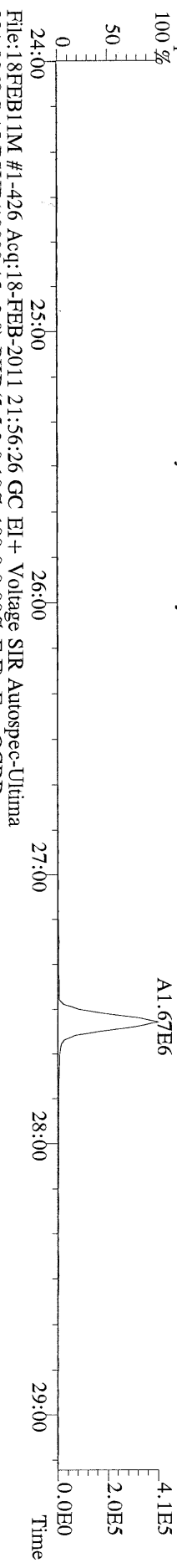
File:18FEB11M2 #1-426 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
319.8965 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



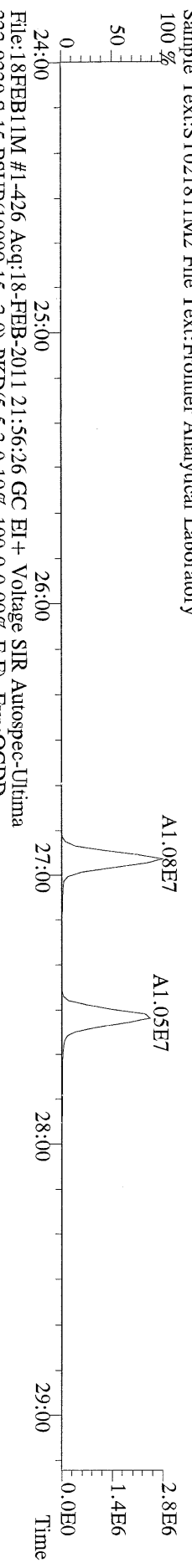
File:18FEB11M2 #1-426 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
321.8936 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



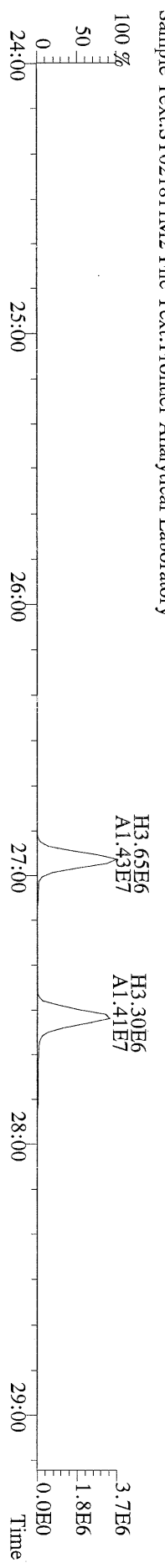
File:18FEB11M2 #1-426 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
327.8847 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



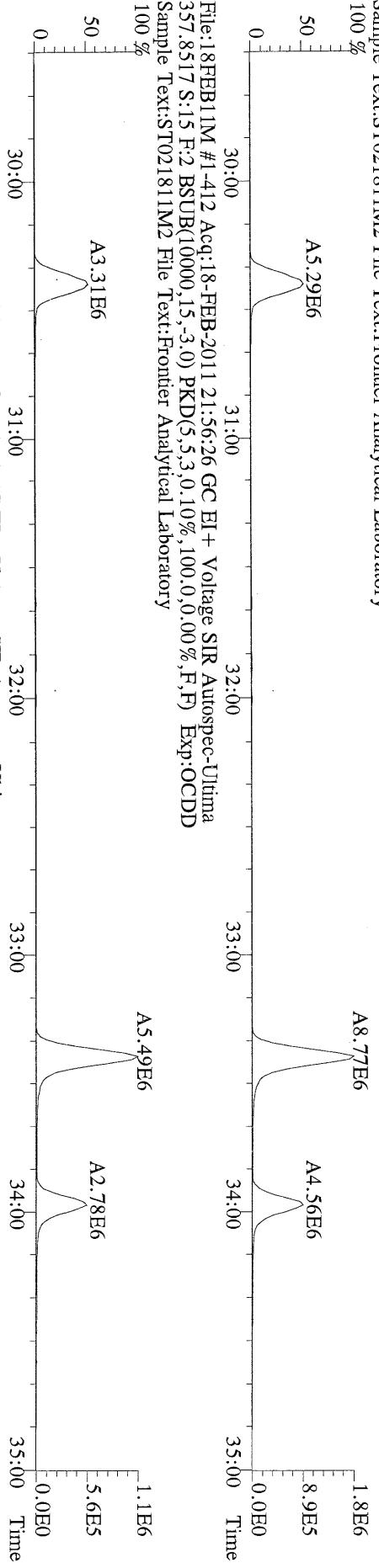
File:18FEB11M2 #1-426 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
331.9368 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



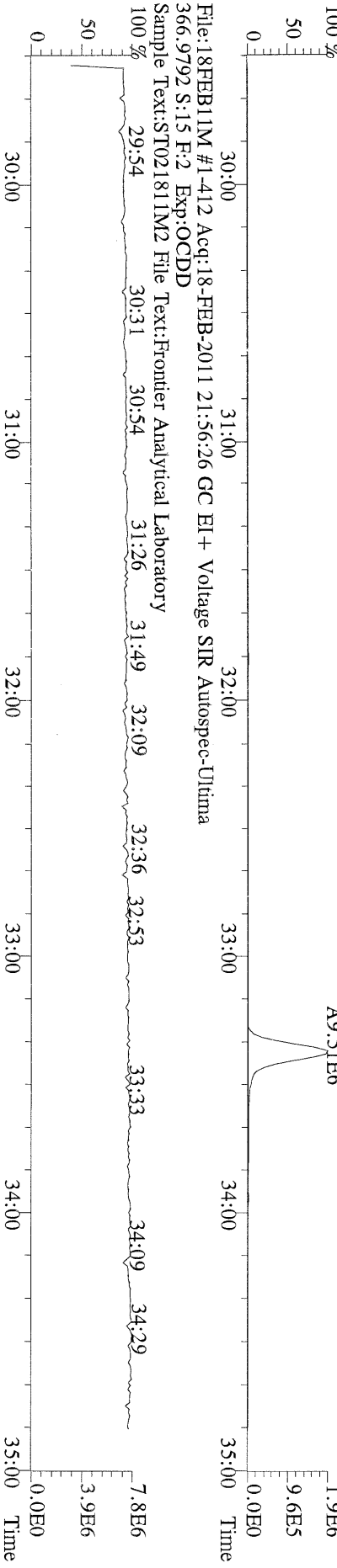
File:18FEB11M2 #1-426 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
333.9339 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



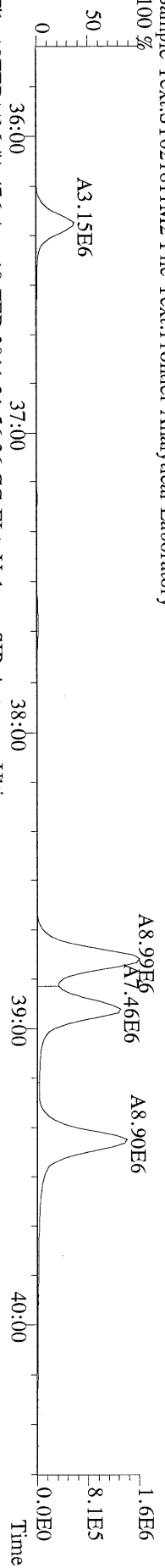
File:18FEBB11M #1-412 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
355.8546 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



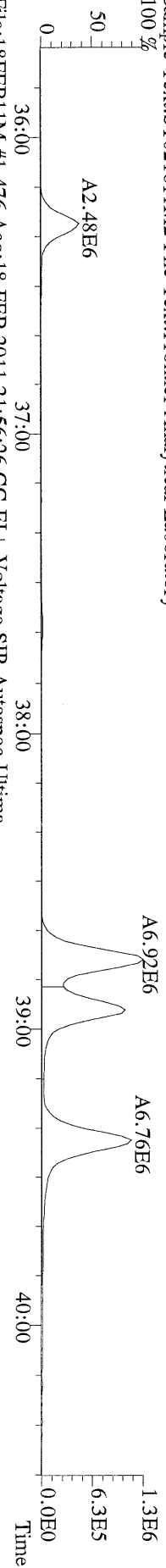
File:18FEBB11M #1-412 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
367.8949 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



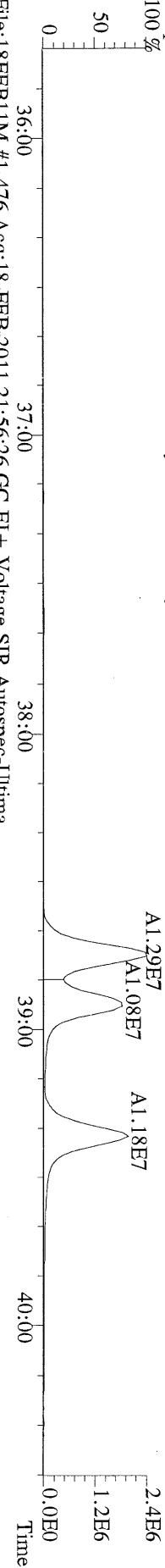
File:18FEB11M #1-476 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
389.8156 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Fronier Analytical Laboratory



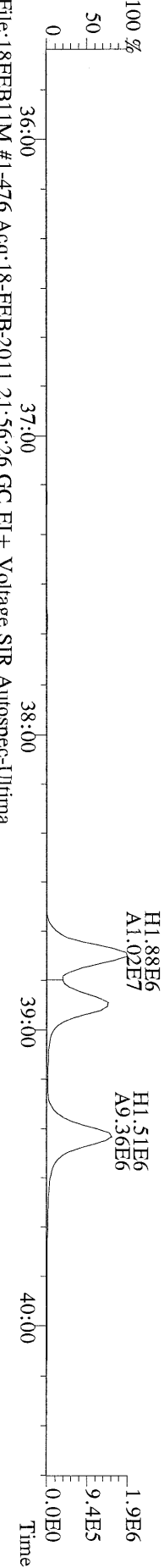
File:18FEB11M #1-476 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
391.8127 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Fronier Analytical Laboratory



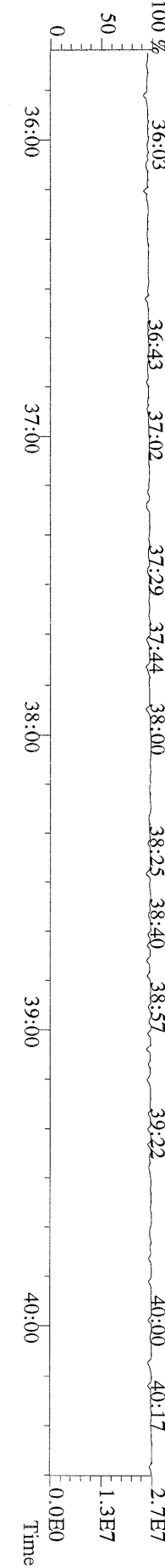
File:18FEB11M #1-476 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
401.8559 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Fronier Analytical Laboratory



File:18FEB11M #1-476 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
403.8530 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Fronier Analytical Laboratory

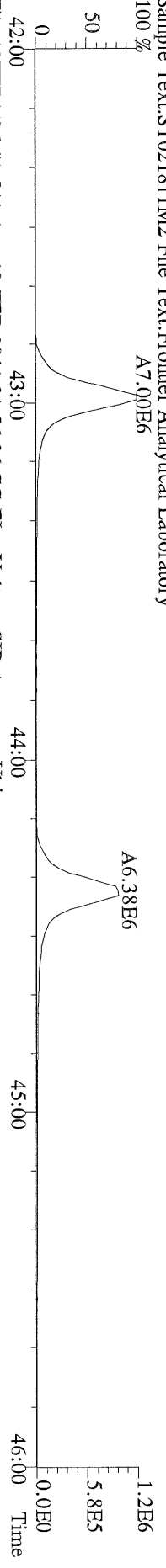


File:18FEB11M #1-476 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
380.9760 S:15 F:3 Exp:OCDD  
Sample Text:ST021811M2 File Text:Fronier Analytical Laboratory

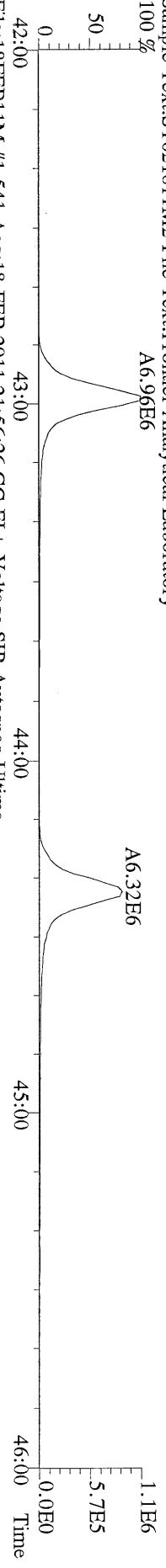




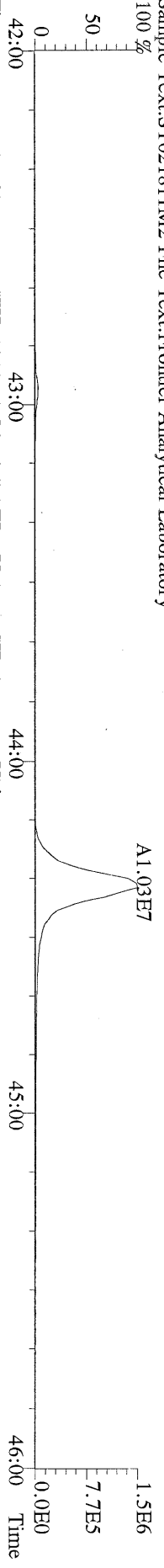
File:18FEB11M #1-541 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Utima  
423.7767 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



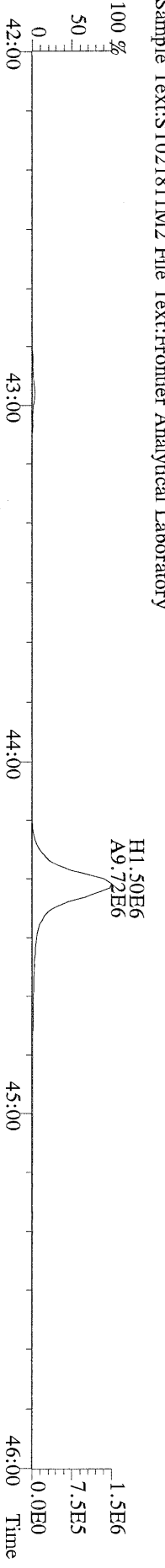
File:18FEB11M #1-541 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Utima  
425.7737 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



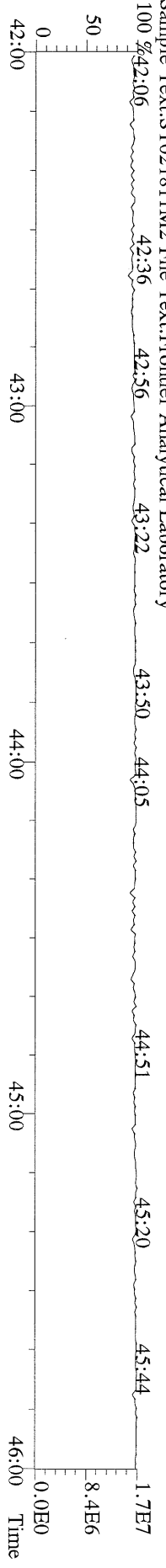
File:18FEB11M #1-541 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Utima  
435.8169 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



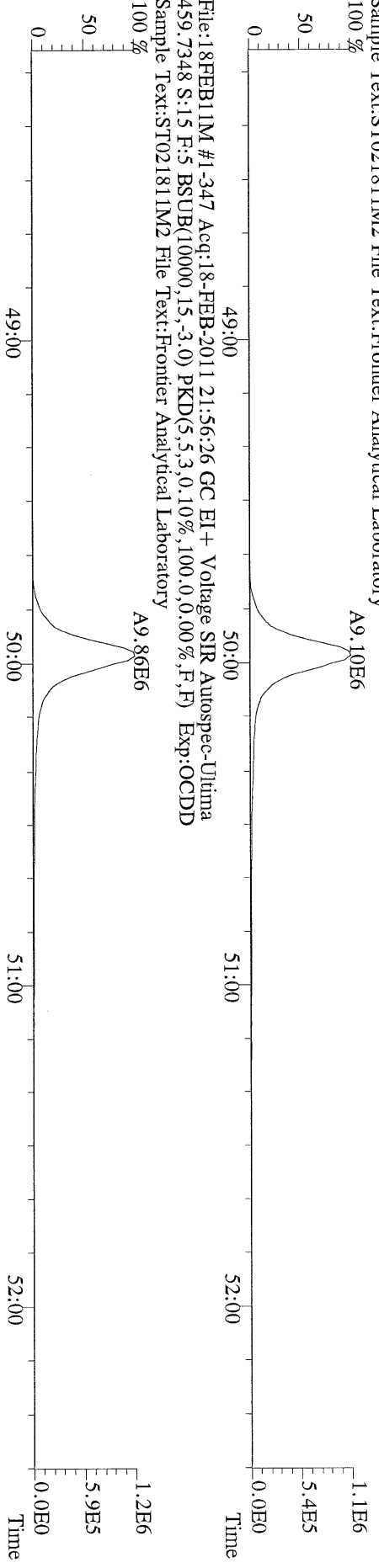
File:18FEB11M #1-541 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Utima  
437.8140 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



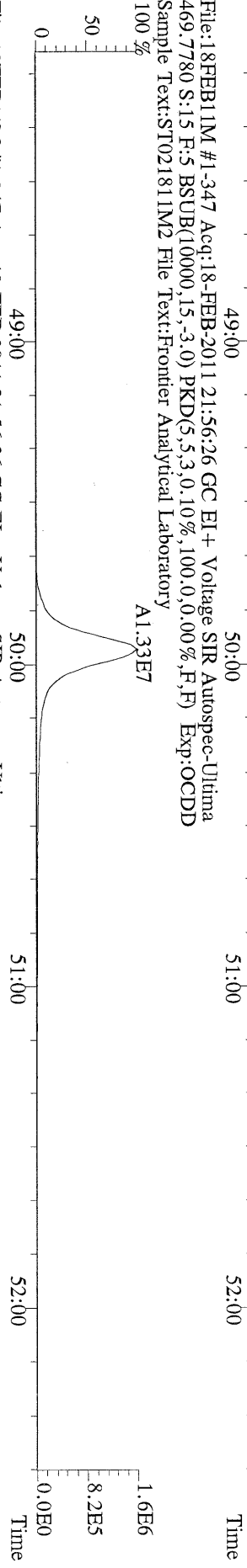
File:18FEB11M #1-541 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Utima  
430.9728 S:15 F:4 Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



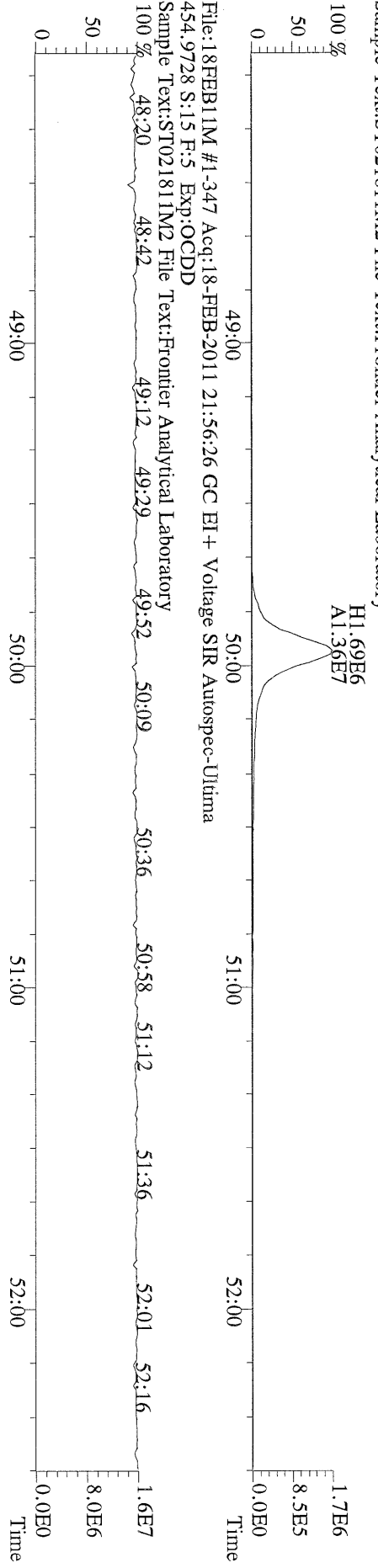
File:18FEBB11M #1-347 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
457.7377 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



File:18FEBB11M #1-347 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
459.7348 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory

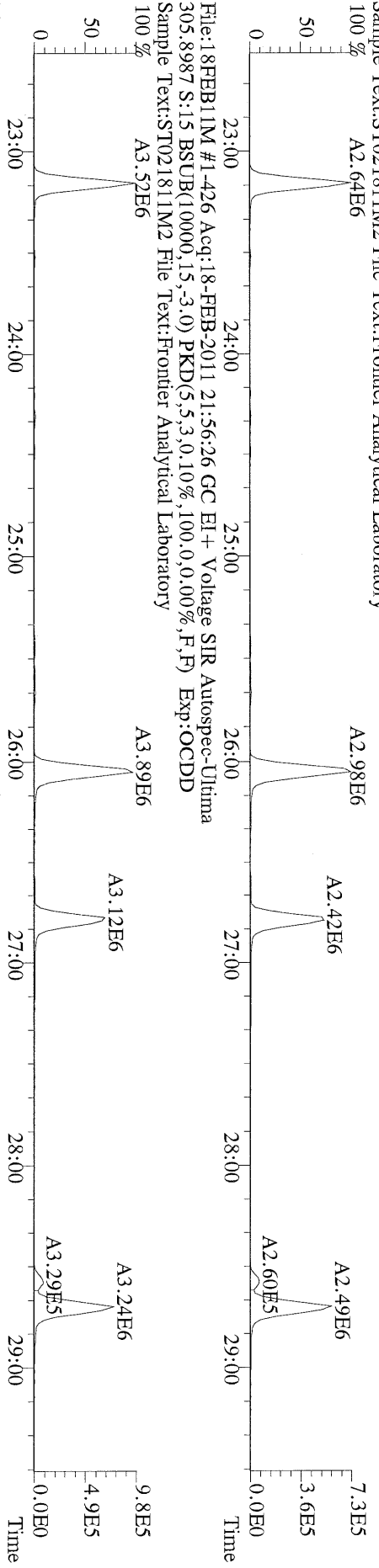


File:18FEBB11M #1-347 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
471.7750 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory

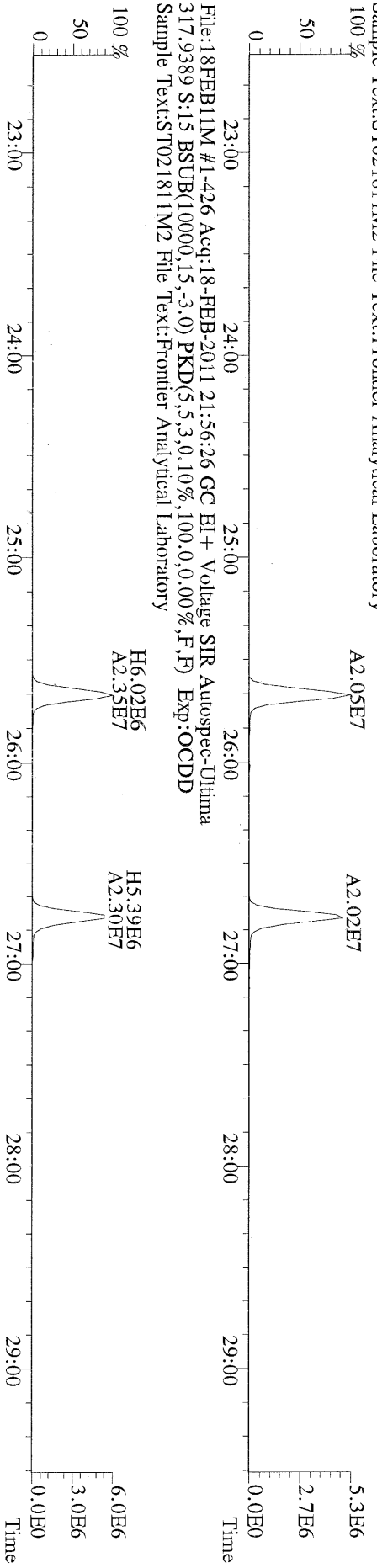


File:18FEBB11M #1-347 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
454.9728 S:15 F:5 Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory

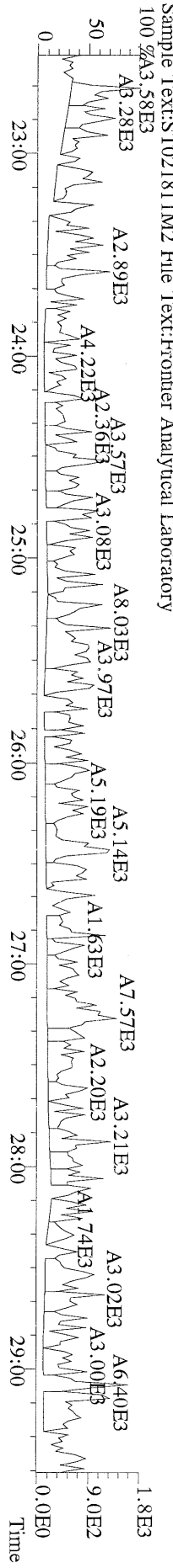
File:18FEB11M #1-426 Acq:18-FEB-2011 21:56:26 GC EI + Voltage SIR Autospec-Ultima  
 303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



File:18FEB11M #1-426 Acq:18-FEB-2011 21:56:26 GC EI + Voltage SIR Autospec-Ultima  
 315.9419 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory

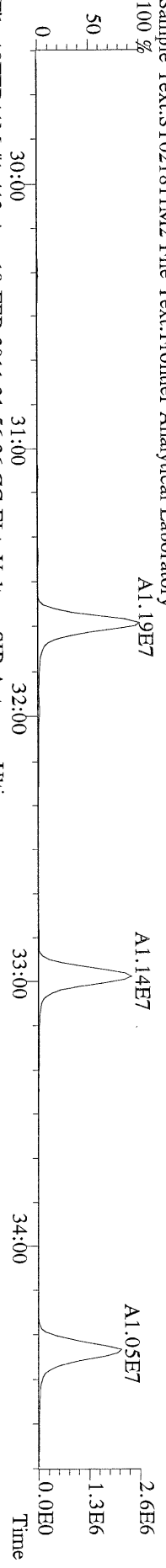


File:18FEB11M #1-426 Acq:18-FEB-2011 21:56:26 GC EI + Voltage SIR Autospec-Ultima  
 375.8364 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory

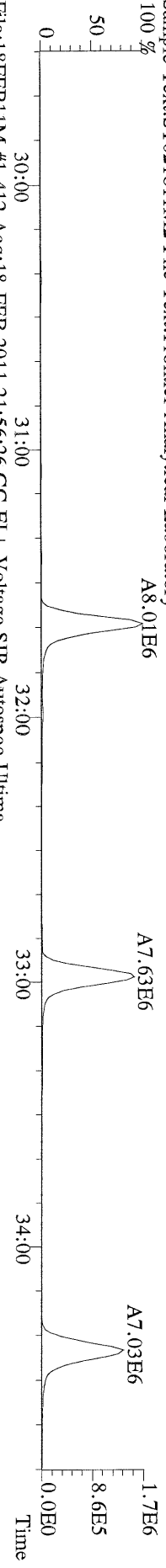




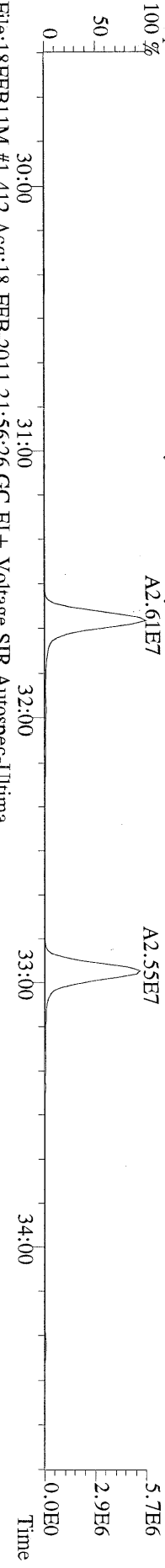
File:18FEBB11M #1-412 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Utima  
 339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Fronier Analytical Laboratory



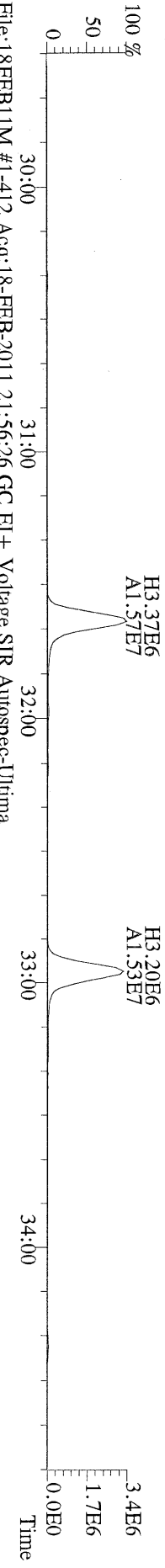
File:18FEBB11M #1-412 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Utima  
 341.8568 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Fronier Analytical Laboratory



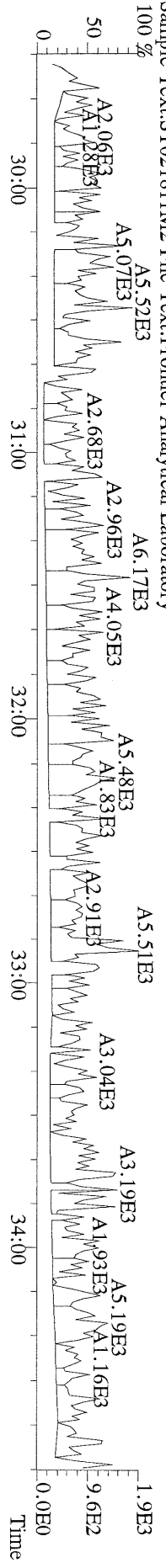
File:18FEBB11M #1-412 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Utima  
 351.9000 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Fronier Analytical Laboratory



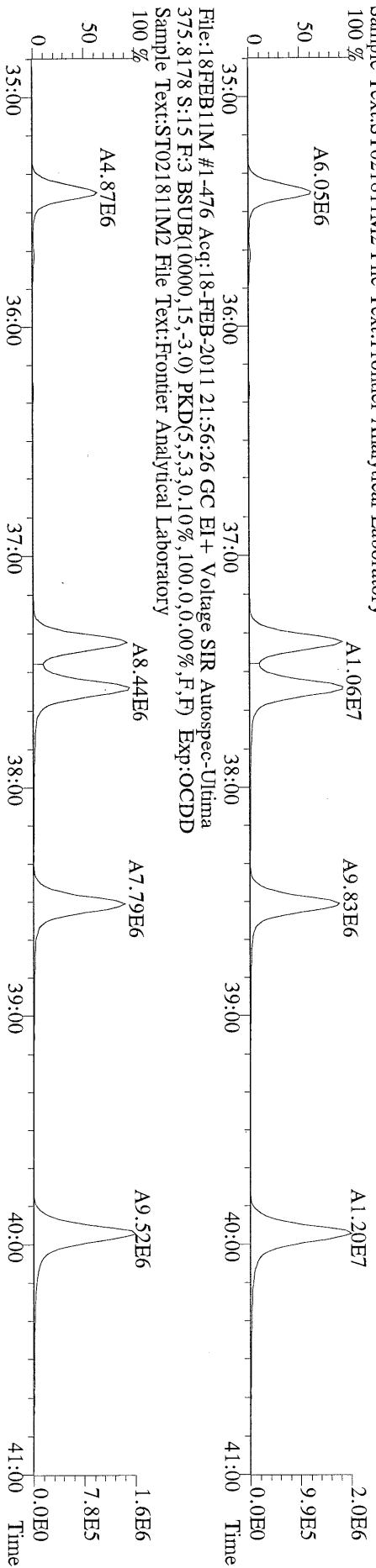
File:18FEBB11M #1-412 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Utima  
 353.8970 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Fronier Analytical Laboratory



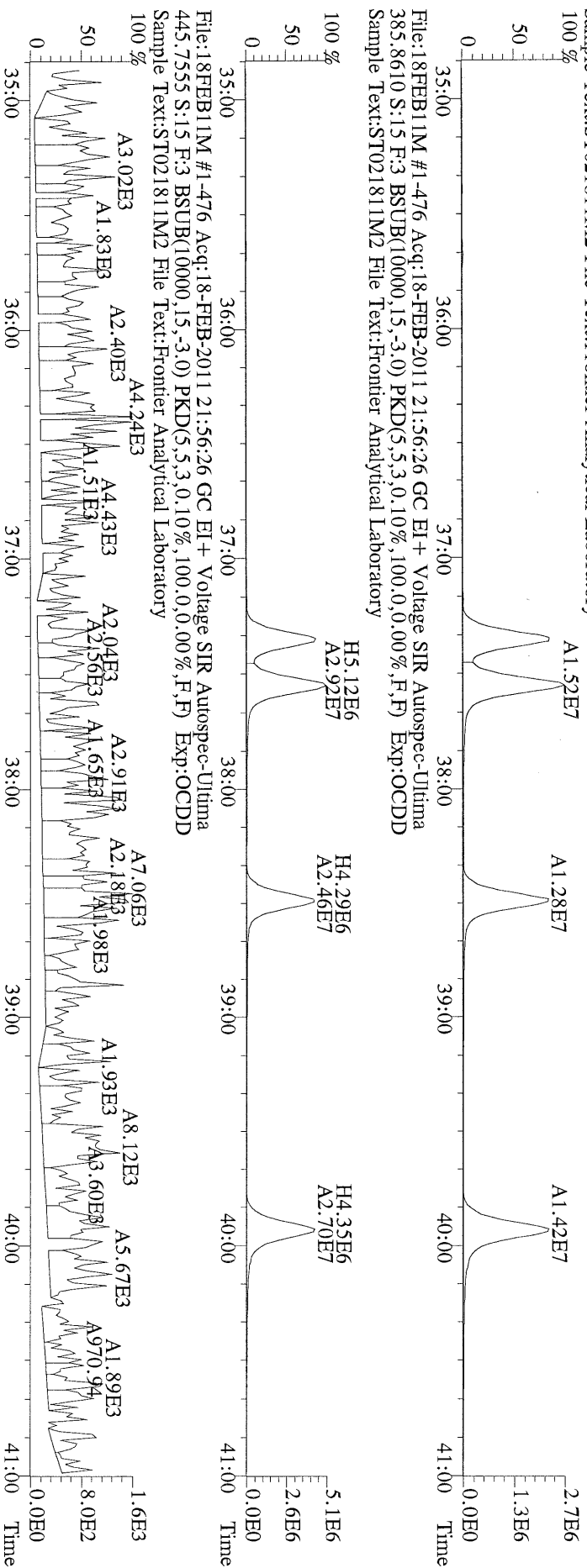
File:18FEBB11M #1-412 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Utima  
 409.7974 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Fronier Analytical Laboratory



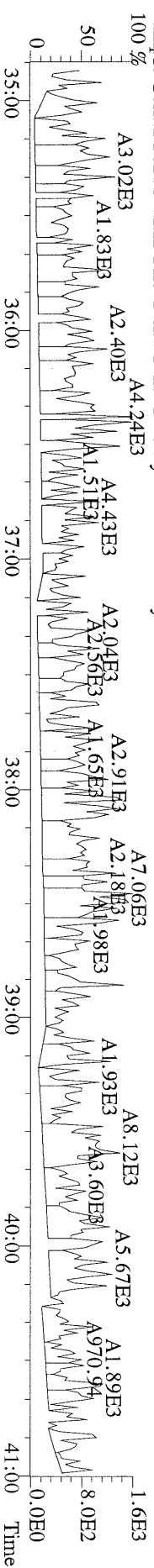
File:18FEB11M #1-476 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Utima  
 373.8207 S:15 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



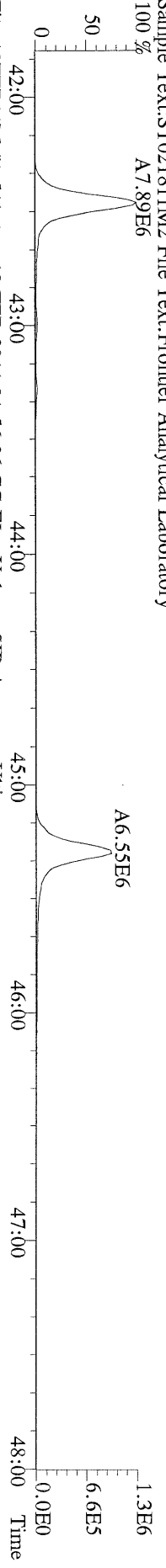
File:18FEB11M #1-476 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Utima  
 383.8639 S:15 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



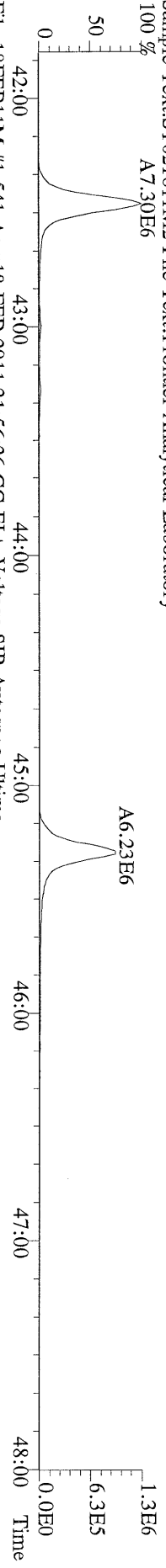
File:18FEB11M #1-476 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Utima  
 445.7555 S:15 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



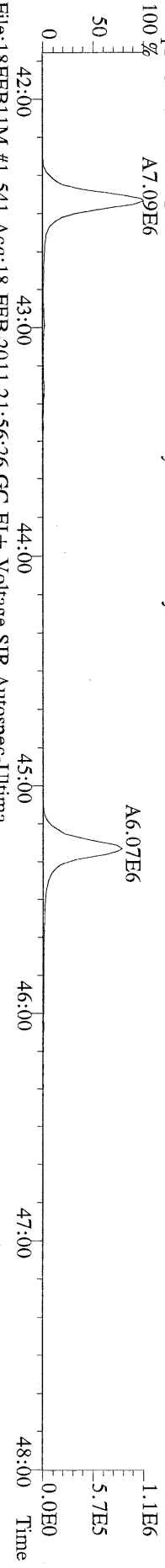
File:18FEB11M #1-541 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
407.7818 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



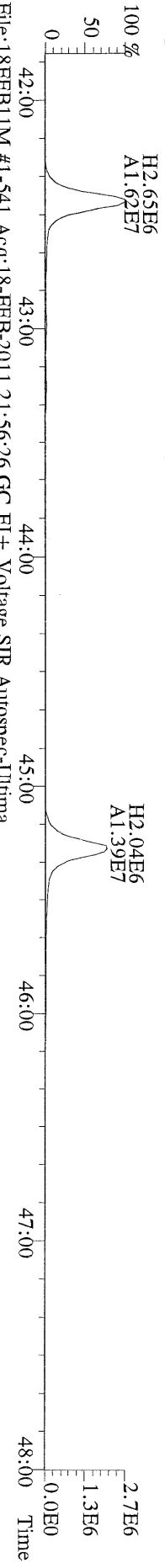
File:18FEB11M #1-541 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
409.7788 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



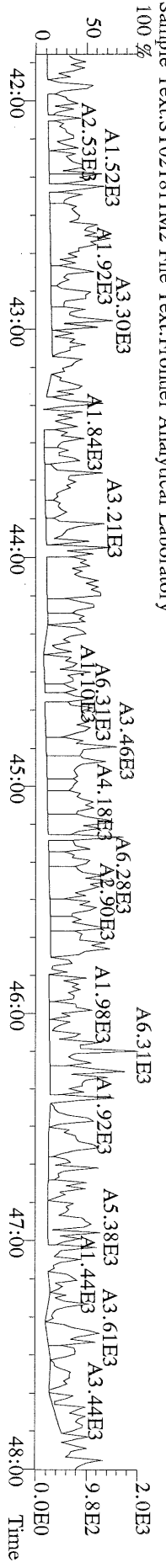
File:18FEB11M #1-541 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
417.8253 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



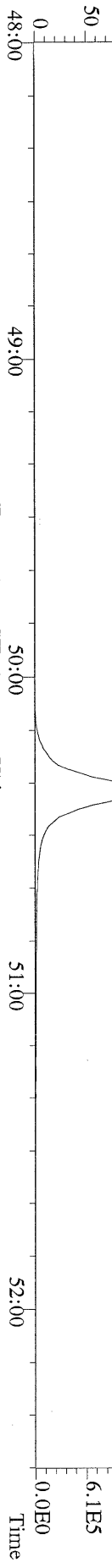
File:18FEB11M #1-541 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
419.8220 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



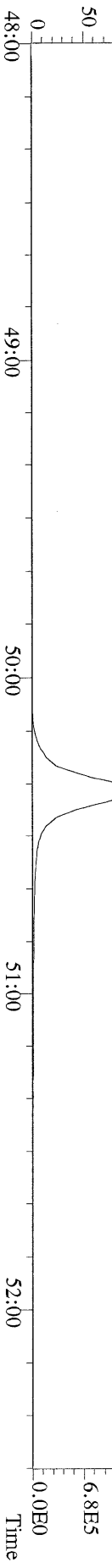
File:18FEB11M #1-541 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
479.7165 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



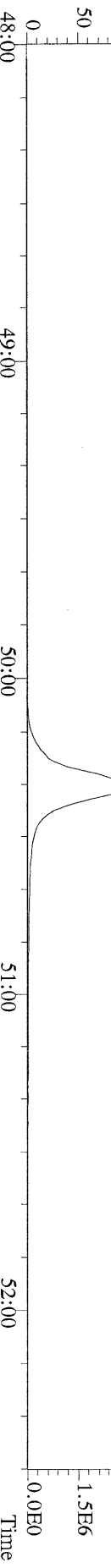
File:18FEB11M #1-347 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
 441.7428 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



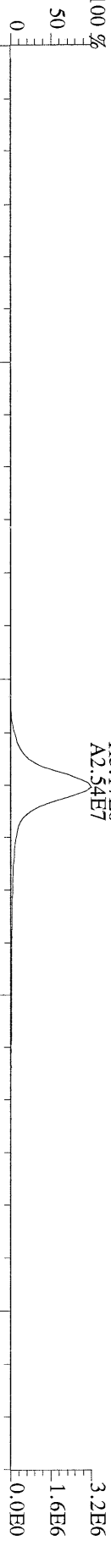
File:18FEB11M #1-347 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
 443.7398 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



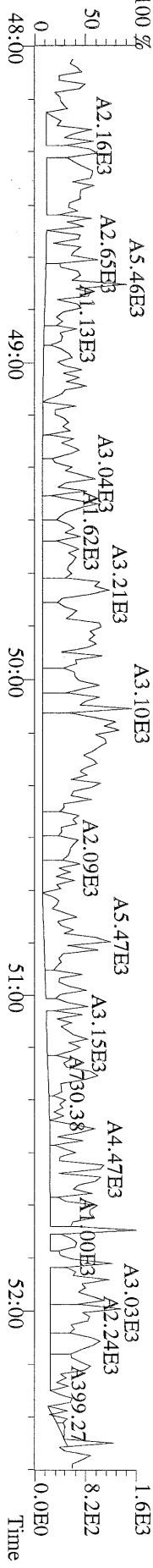
File:18FEB11M #1-347 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
 453.7831 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory



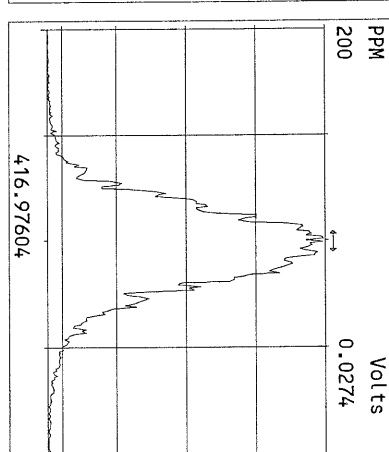
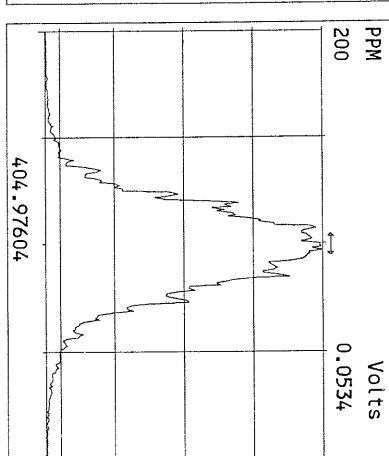
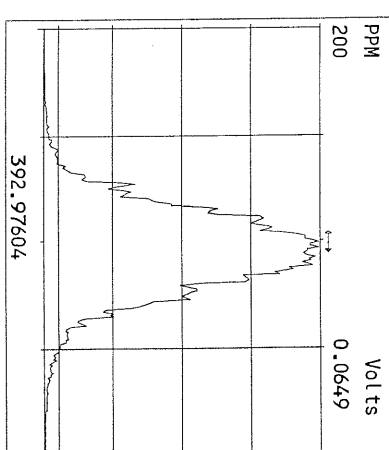
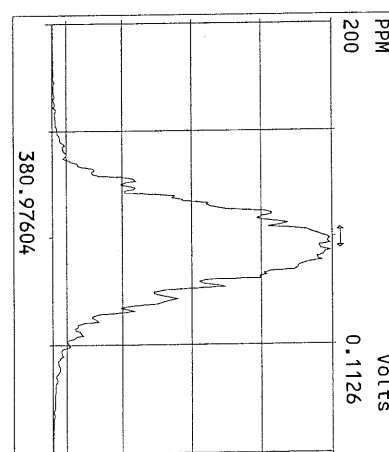
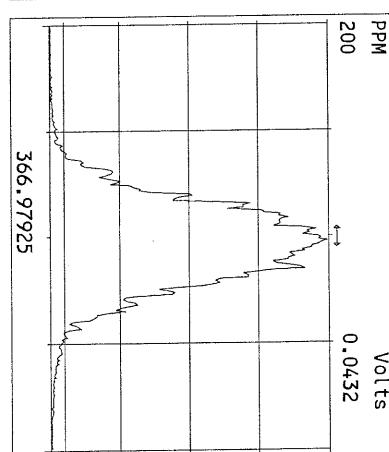
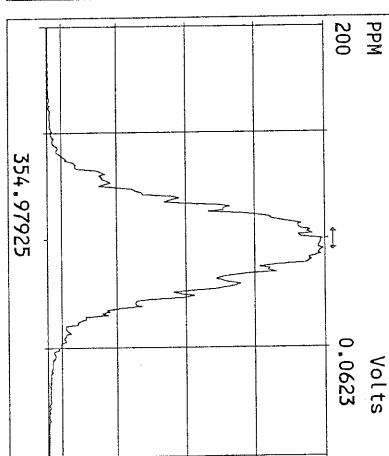
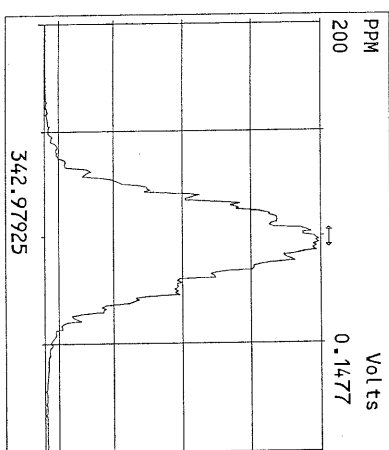
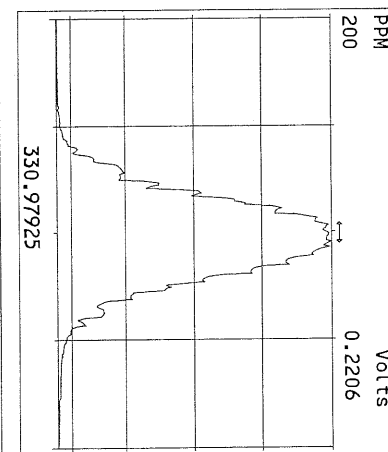
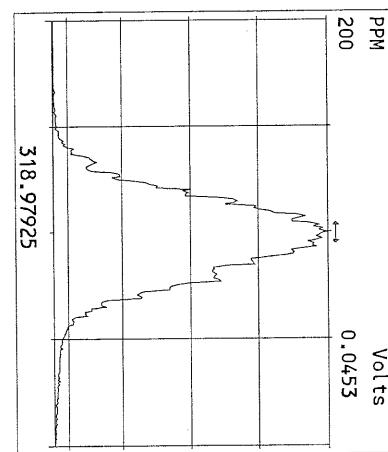
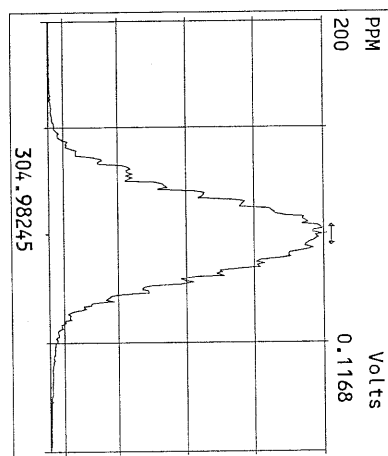
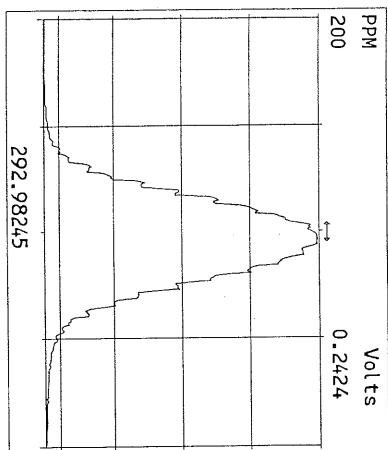
File:18FEB11M #1-347 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
 455.7801 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory

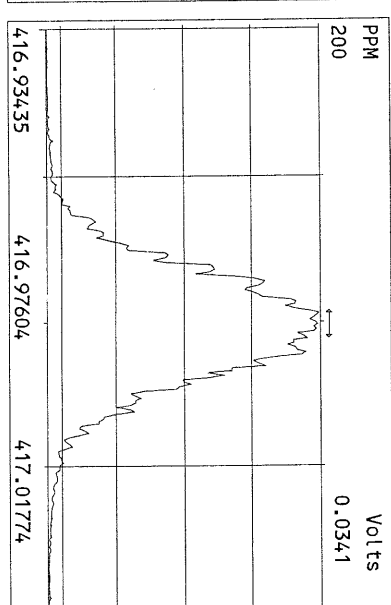
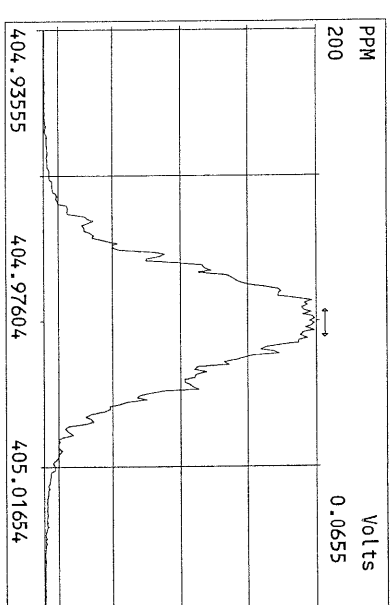
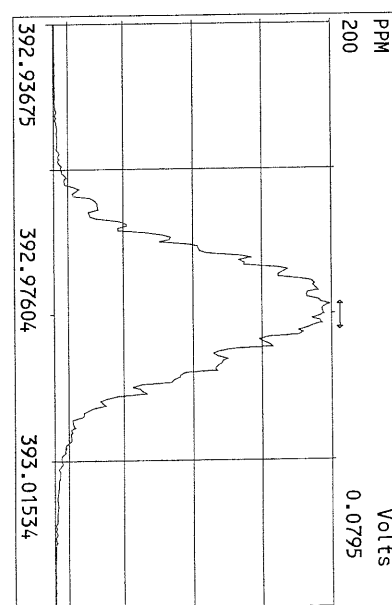
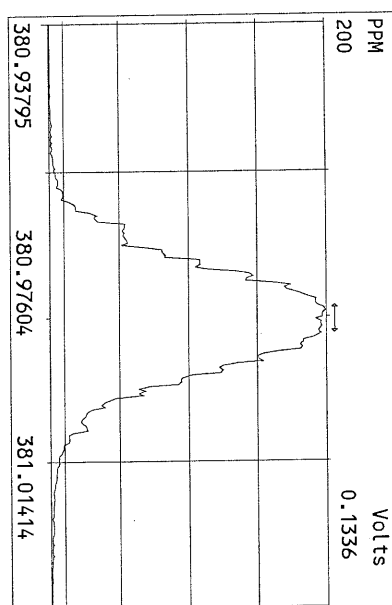
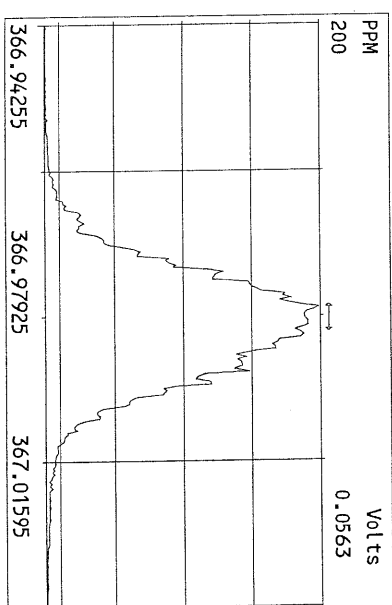
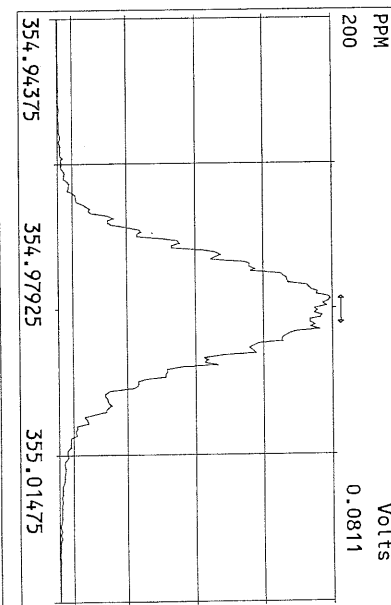
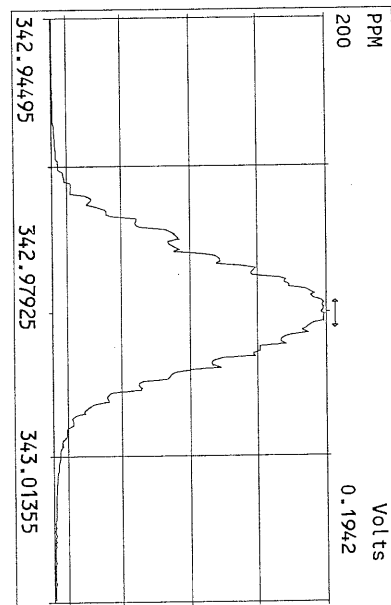
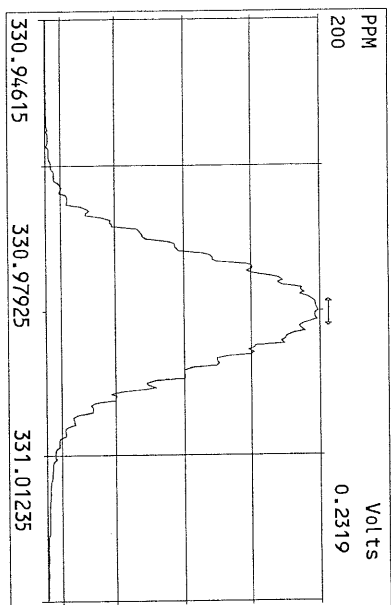


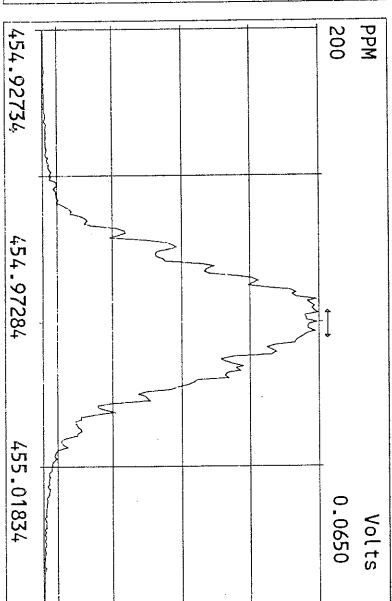
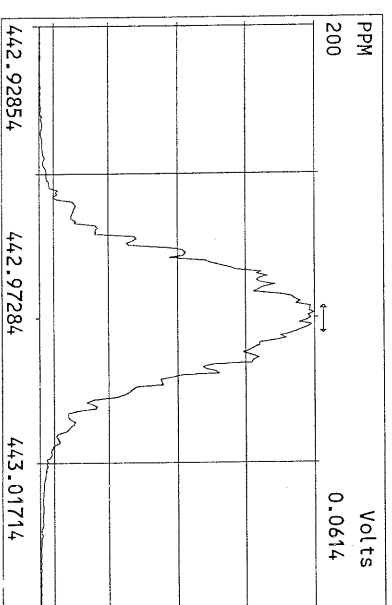
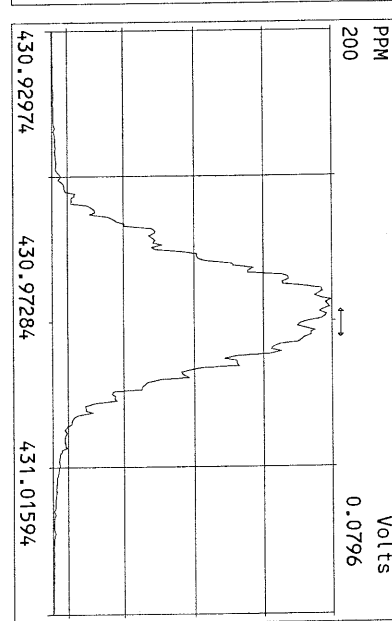
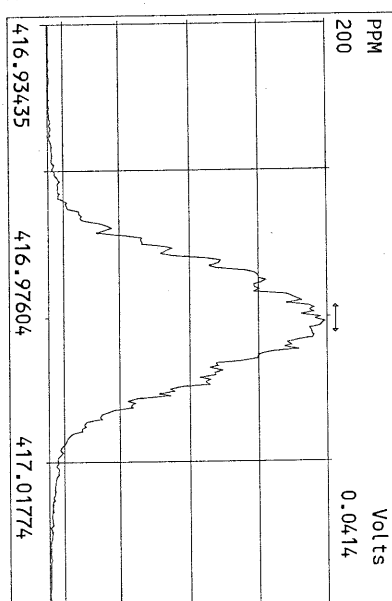
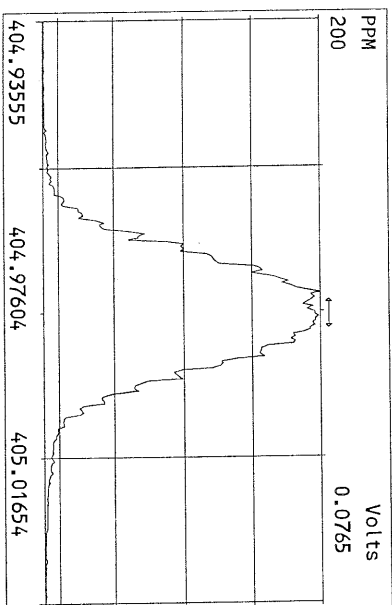
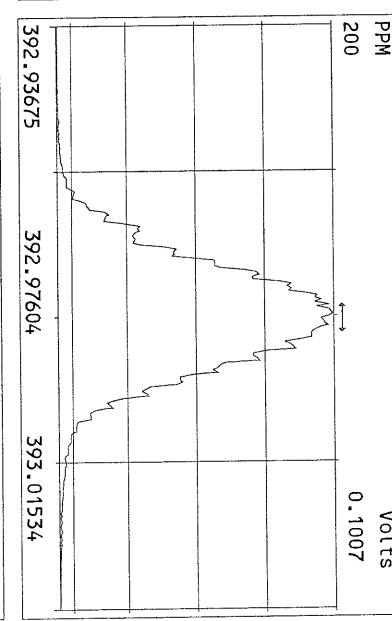
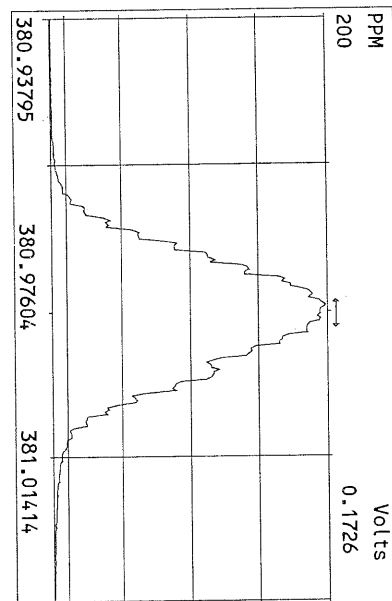
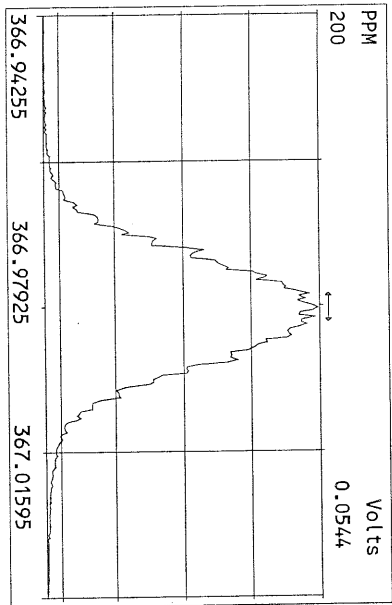
File:18FEB11M #1-347 Acq:18-FEB-2011 21:56:26 GC EI+ Voltage SIR Autospec-Ultima  
 513.6775 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M2 File Text:Frontier Analytical Laboratory

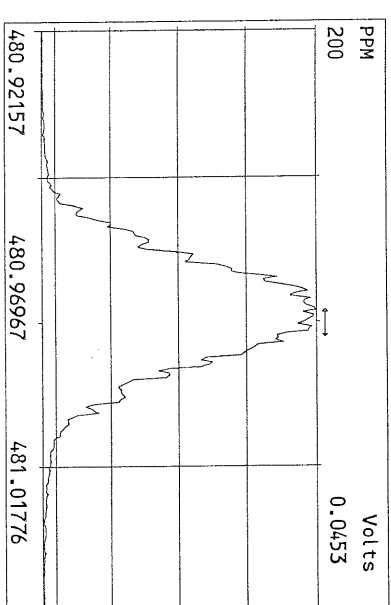
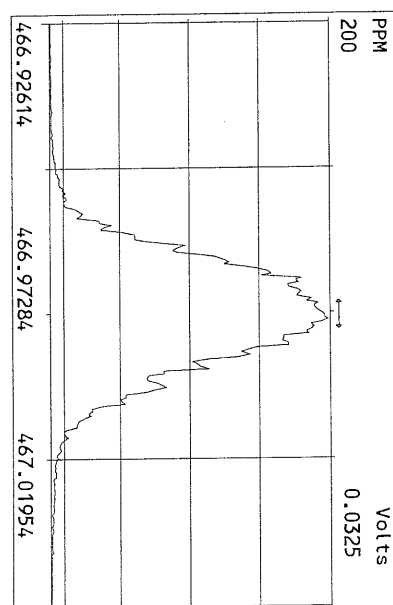
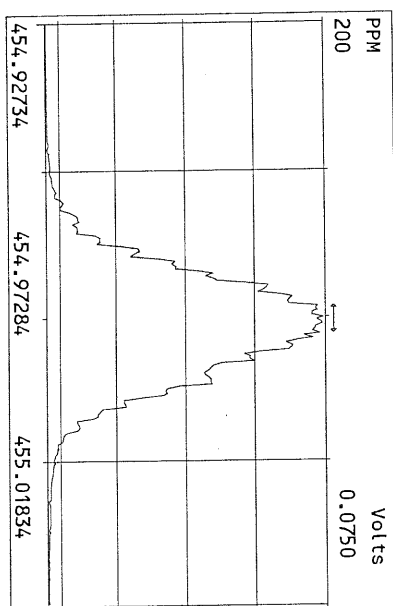
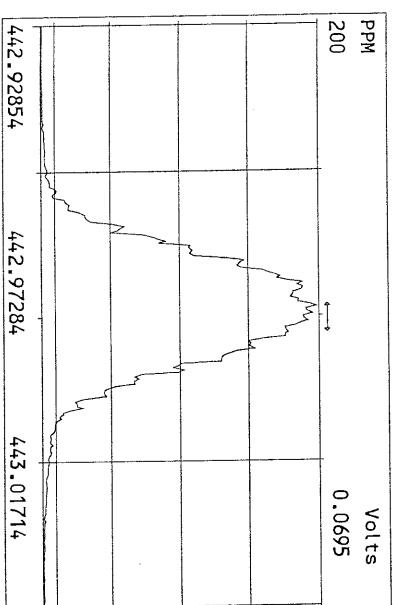
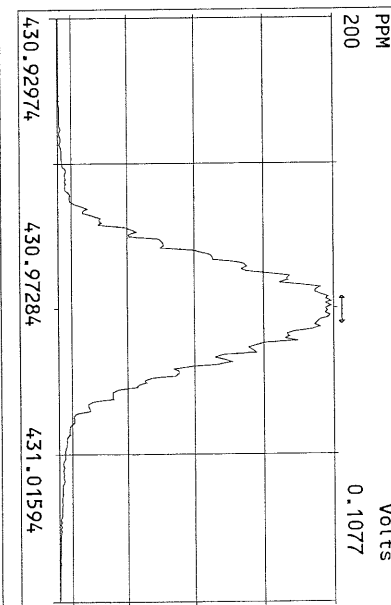
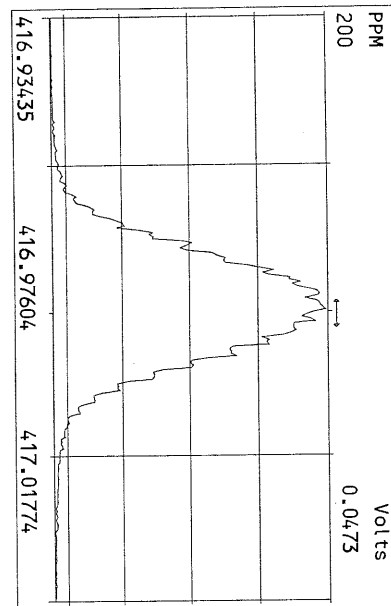
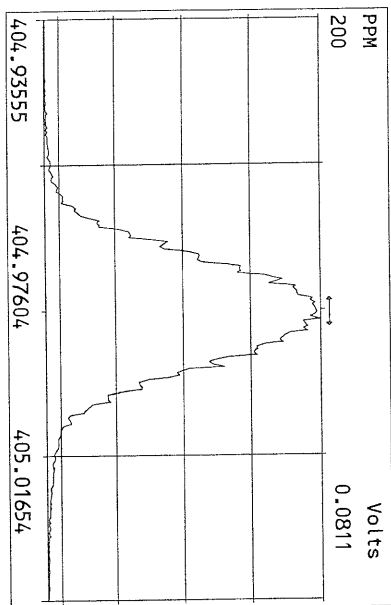


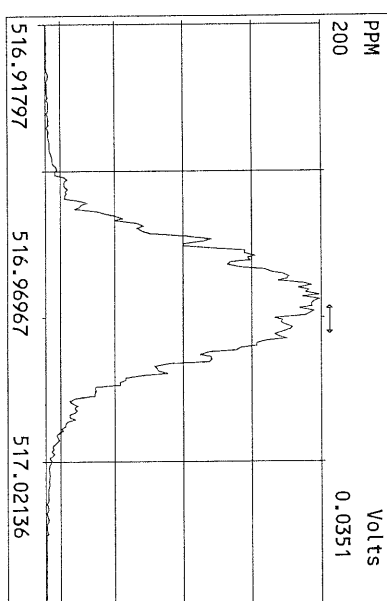
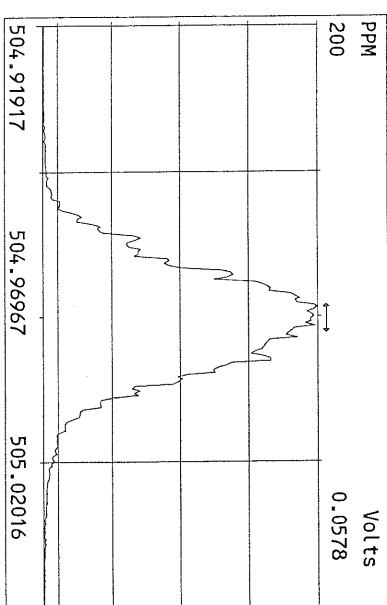
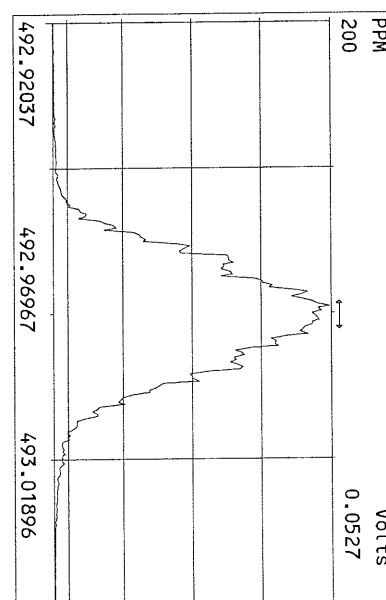
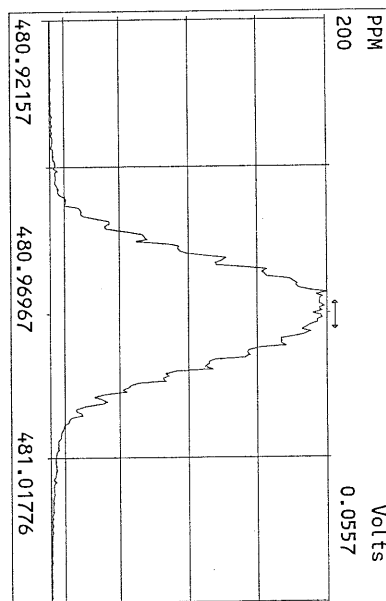
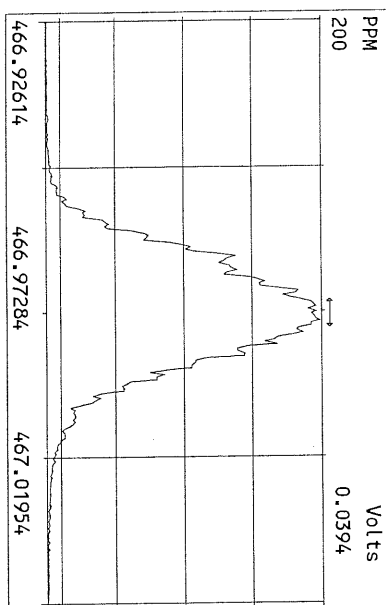
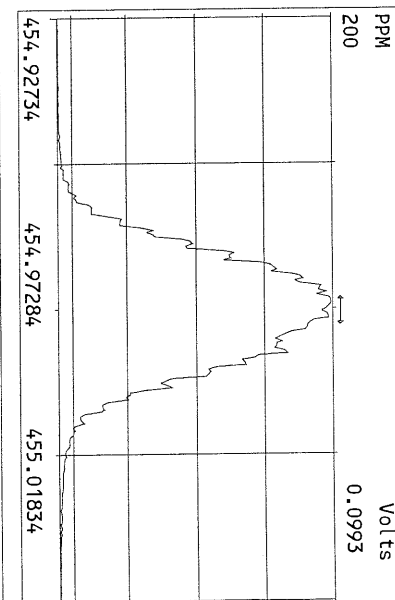
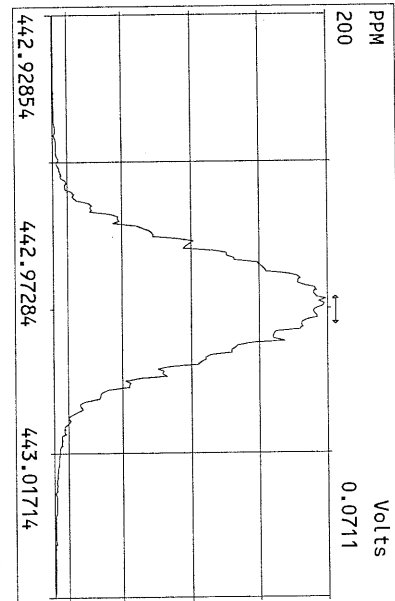
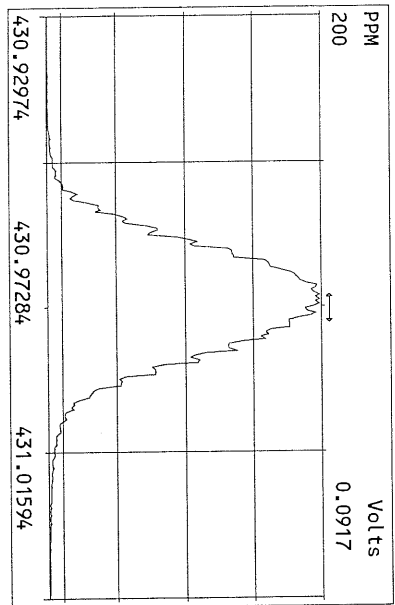












## USEPA - ITD

FORM 4A  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 2/16/11

Instrument ID: FAL3

GC Column ID: db5

VER Data Filename: 18FEB11M Sam:20

Analysis Date: 19-FEB-11 02:33:02

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	9.93	7.80 - 12.9 ✓
1,2,3,7,8-PeCDD	M+2/M+4	1.61	1.32-1.78	y	48.6	39.0 - 65.0 ✓
1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	46.2	39.0 - 64.0 ✓
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	45.9	39.0 - 64.0 ✓
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	46.8	41.0 - 61.0 ✓
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.00	0.88-1.20	y	47.3	43.0 - 58.0 ✓
OCDD	M+2/M+4	0.93	0.76-1.02	y	89.5	79.0 - 126 ✓
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	y	8.72	8.40 - 12.0 ✓
1,2,3,7,8-PeCDF	M+2/M+4	1.47	1.32-1.78	y	48.3	41.0 - 60.0 ✓
2,3,4,7,8-PeCDF	M+2/M+4	1.47	1.32-1.78	y	46.4	41.0 - 60.0 ✓
1,2,3,4,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	47.0	45.0 - 56.0 ✓
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	47.9	44.0 - 57.0 ✓
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	48.1	44.0 - 57.0 ✓
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	y	48.3	45.0 - 56.0 ✓
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.07	0.88-1.20	y	48.0	45.0 - 55.0 ✓
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	y	48.2	43.0 - 58.0 ✓
OCDF	M+2/M+4	0.88	0.76-1.02	y	95.2	63.0 - 159 ✓

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

Analyst: JDate: 2/21/11

## USEPA - ITD

FORM 4B  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 2/16/11

Instrument ID: FAL3

GC Column ID: db5

VER Data Filename: 18FEB11M Sam:20

Analysis Date: 19-FEB-11 02:33:02

LABELLED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
13C-2,3,7,8-TCDD	M/M+2	0.75	0.65-0.89	y	94.8	82.0 - 121 ✓
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.77	1.32-1.78	y	110	62.0 - 160 ✓
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	101	85.0 - 117 ✓
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	y	92.9	85.0 - 118 ✓
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	103	72.0 - 138 ✓
13C-OCDD	M+2/M+4	0.99	0.76-1.02	y	221	96.0 - 415 ✓
13C-2,3,7,8-TCDF	M/M+2	0.88	0.65-0.89	y	94.3	71.0 - 140 ✓
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.68	1.32-1.78	y	101	76.0 - 130 ✓
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.69	1.32-1.78	y	104	77.0 - 130 ✓
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	97.8	76.0 - 131 ✓
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	92.8	70.0 - 143 ✓
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	93.6	73.0 - 137 ✓
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	y	94.3	74.0 - 135 ✓
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	y	96.4	78.0 - 129 ✓
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.41	0.37-0.51	y	101	77.0 - 129 ✓
13C-OCDF	M+2/M+4	0.95	0.76-1.02	y	194	96.0 - 415 ✓
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.15	7.80 - 12.8 ✓

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) No ion abundance ratio; report concentration found.

Analyst:         Date: 2/21/11





## USEPA - ITD

FORM 6A

## PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 2/16/11

Instrument ID: FAL3

GC Column ID: DB5

Analysis Date: 19-FEB-11 02:33:02 CS3 or VER Data Filename: 18FEB11M Sam:20

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002 ✓
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003 ✓
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002 ✓
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002 ✓
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002 ✓
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052 ✓
13C-2,3,7,8-TCDD		1.021	0.976-1.043 ✓
13C-2,3,7,8-TCDF		0.993	0.923-1.103 ✓
13C-1,2,3,7,8-PeCDD		1.239	1.000-1.567 ✓
13C-1,2,3,7,8-PeCDF		1.174	0.923-1.203 ✓
13C-2,3,4,7,8-PeCDF		1.223	0.923-1.303 ✓

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: JDate: 2/21/11





Frontier Analytical Laboratory - Acquisition Log

Run Name:18FEB11M

Instrument: FAL3

GC: DB5

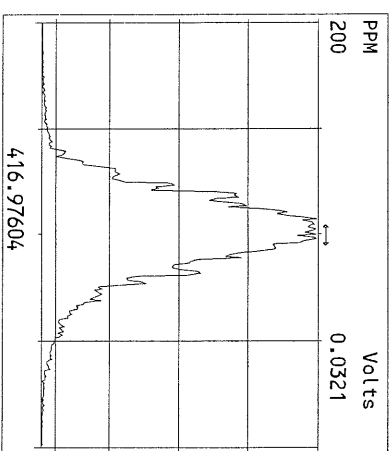
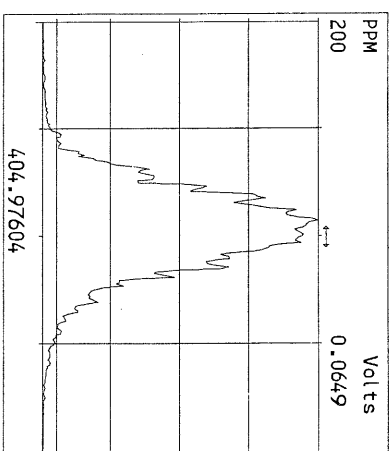
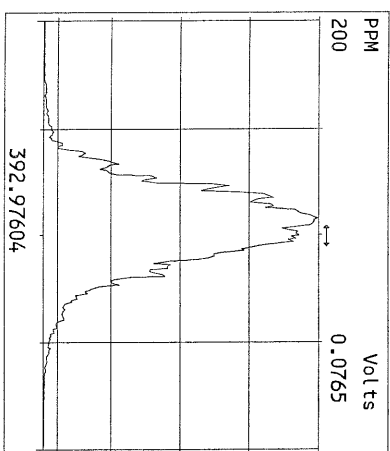
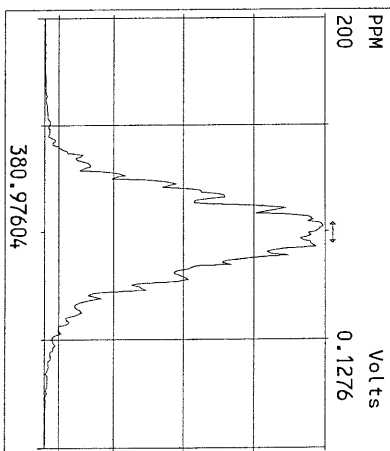
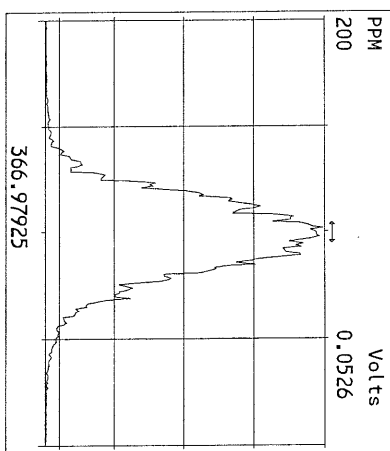
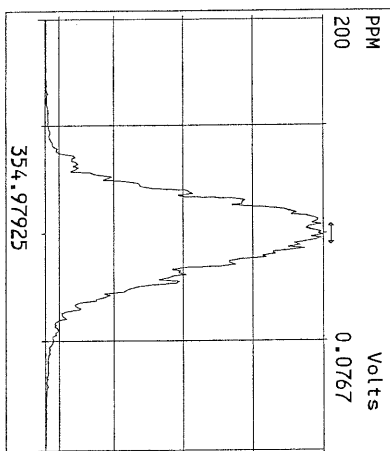
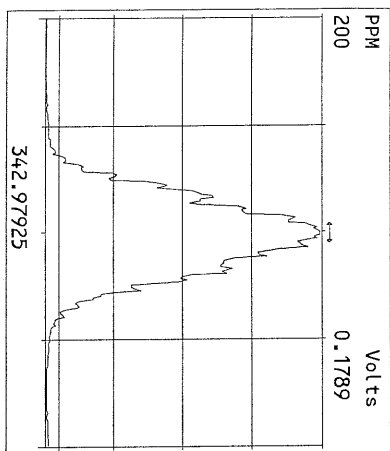
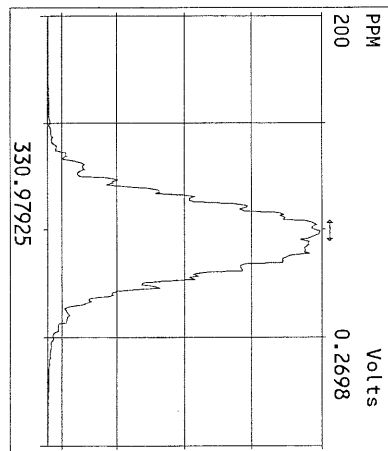
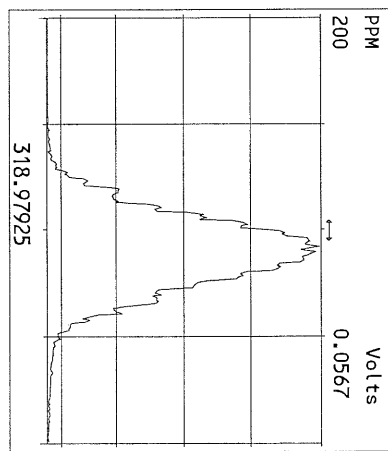
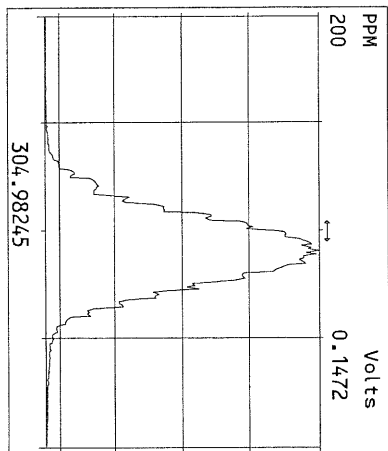
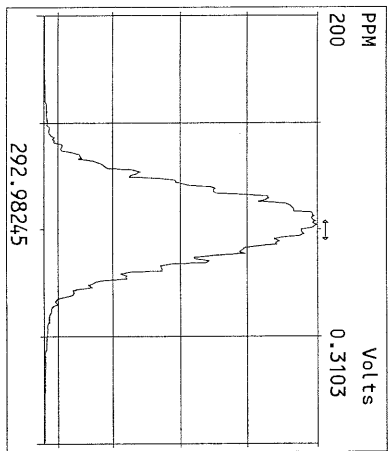
Experiment:OCDD

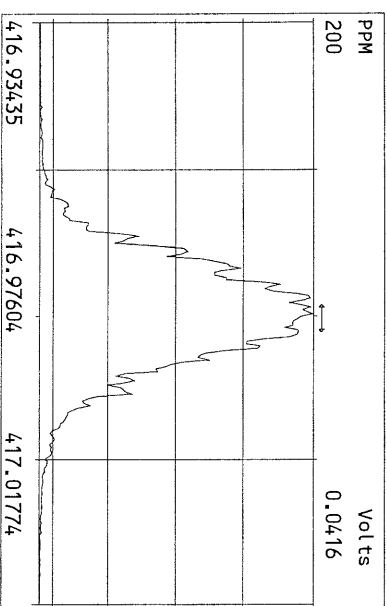
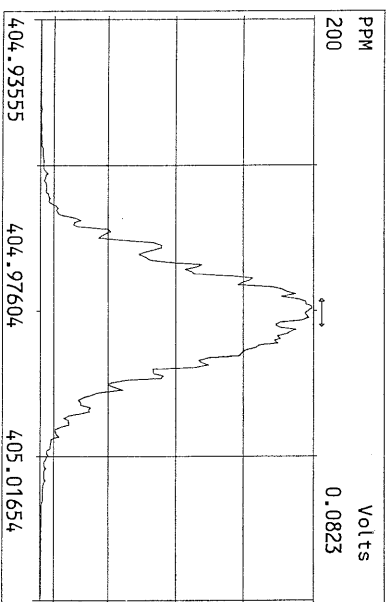
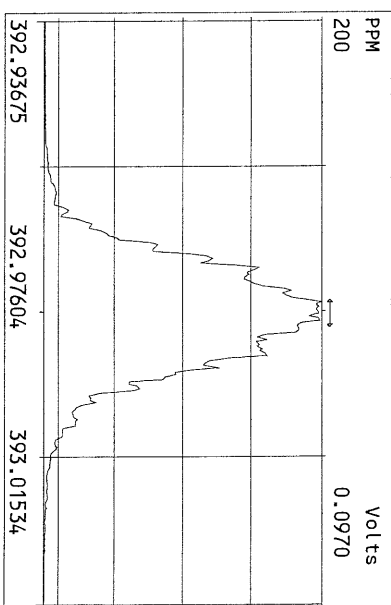
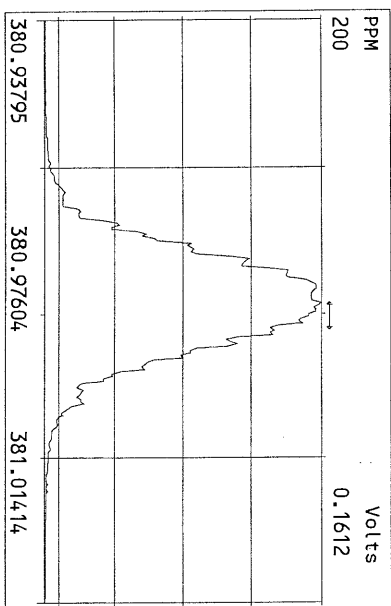
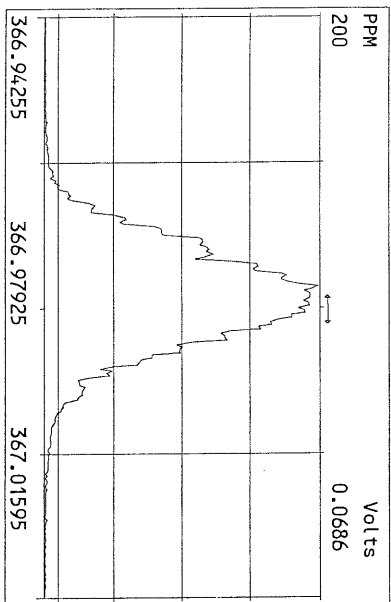
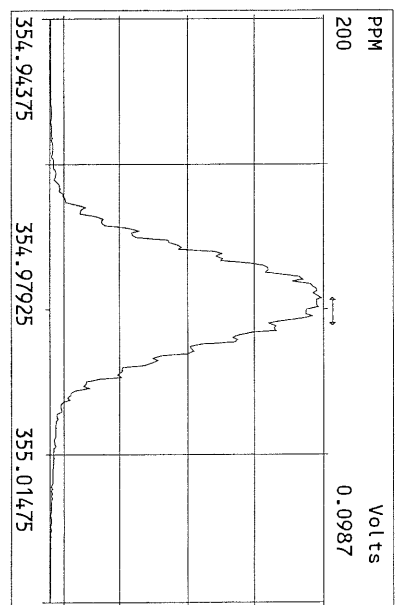
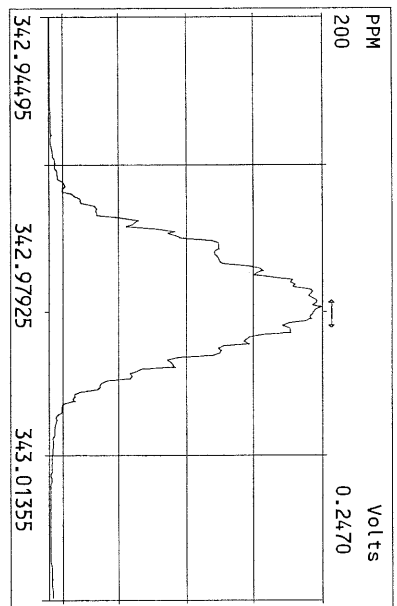
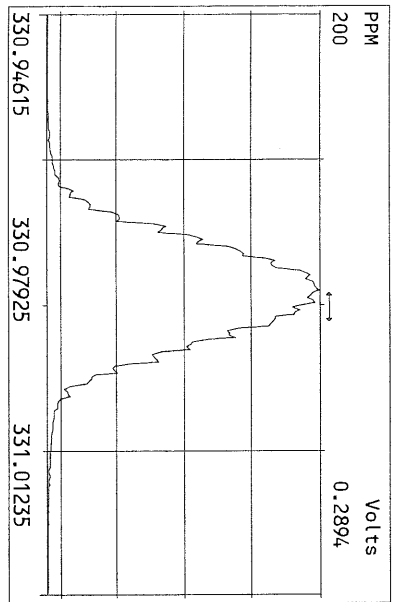
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
18FEB11M	1	ST021811M1	1613 CS3 100511J	18-FEB-11 09:01:50	ST021811M1	ST021811M2	TC
18FEB11M	2	2220-001-0001-OPR	OPR	18-FEB-11 09:57:08	ST021811M1	ST021811M2	TC
18FEB11M	3	2220-001-0001-MB	Method Blank	18-FEB-11 10:52:26	ST021811M1	ST021811M2	TC
18FEB11M	4	6564-001-0001-SA	L165152-1	18-FEB-11 11:47:46	ST021811M1	ST021811M2	TC
18FEB11M	5	6565-001-0001-SA	L165153-1	18-FEB-11 12:43:04	ST021811M1	ST021811M2	TC
18FEB11M	6	6566-001-0001-SA	L165154-1	18-FEB-11 13:38:23	ST021811M1	ST021811M2	TC
18FEB11M	7	6567-001-0001-SA	L165159-1	18-FEB-11 14:33:42	ST021811M1	ST021811M2	TC
18FEB11M	8	6568-001-0001-SA	L165173-4	18-FEB-11 15:29:01	ST021811M1	ST021811M2	TC
18FEB11M	9	6569-001-0001-SA	L165202-4	18-FEB-11 16:24:20	ST021811M1	ST021811M2	TC
18FEB11M	10	6570-001-0001-SA	L165205-4	18-FEB-11 17:19:39	ST021811M1	ST021811M2	TC
18FEB11M	11	6571-001-0001-SA	L165206-5	18-FEB-11 18:15:02	ST021811M1	ST021811M2	TC
18FEB11M	12	6572-001-0001-SA	L165212-3	18-FEB-11 19:10:25	ST021811M1	ST021811M2	TC
18FEB11M	13	6573-001-0001-SA	L165220-1	18-FEB-11 20:05:44	ST021811M1	ST021811M2	TC
18FEB11M	14	SB021811M1	Solvent Blank	18-FEB-11 21:01:03	ST021811M1	ST021811M2	TC
18FEB11M	15	ST021811M2	1613 CS3 100511J	18-FEB-11 21:56:26	ST021811M2	ST021811M3	TC
18FEB11M	16	SB021811M2	Solvent Blank	18-FEB-11 22:51:47	ST021811M2	ST021811M3	TC
18FEB11M	17	ST021811M-1	1613 CS(-1) 100511M	18-FEB-11 23:47:06	ST021811M2	ST021811M3	TC
18FEB11M	18	6558-001-0001-SA	PSB2-4-6-072910	19-FEB-11 00:42:25	ST021811M2	ST021811M3	TC
18FEB11M	19	SB021811M3	Solvent Blank	19-FEB-11 01:37:44	ST021811M2	ST021811M3	TC
18FEB11M	20	ST021811M3	1613 CS3 100511J	19-FEB-11 02:33:02	ST021811M2	ST021811M3	TC

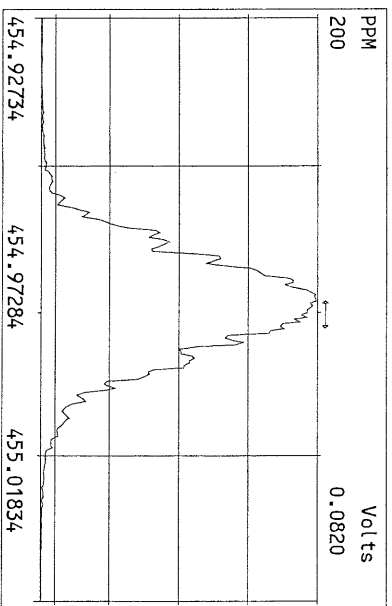
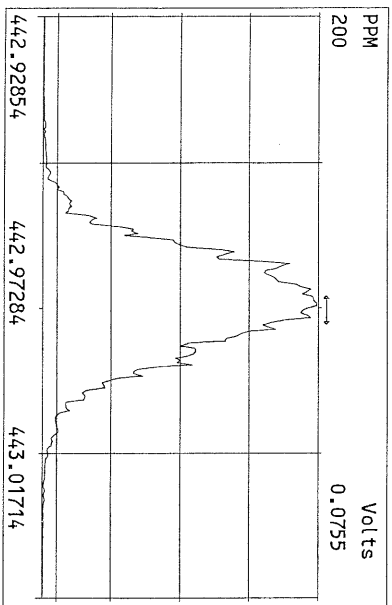
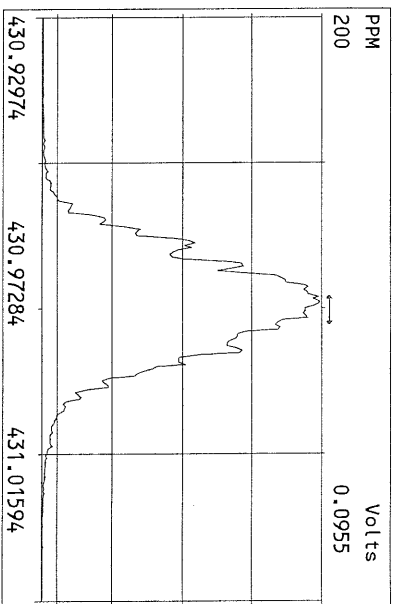
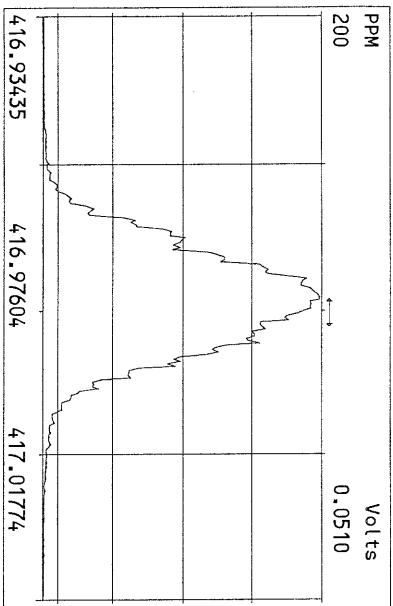
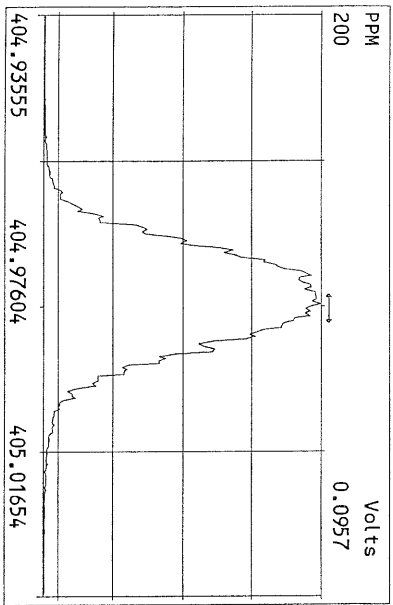
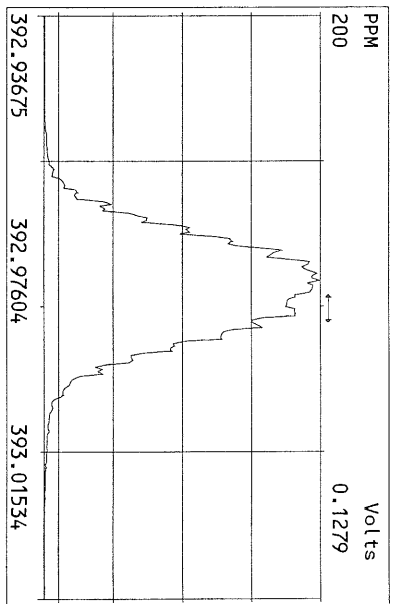
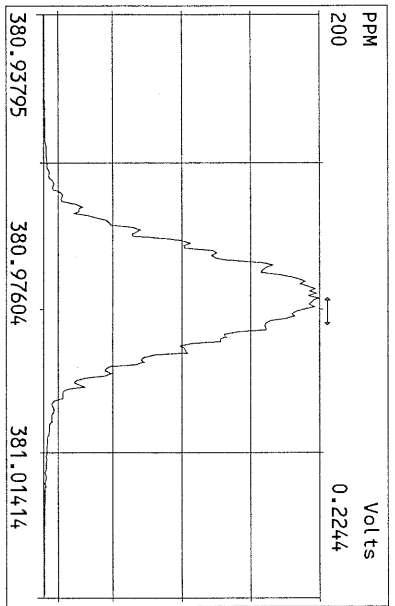
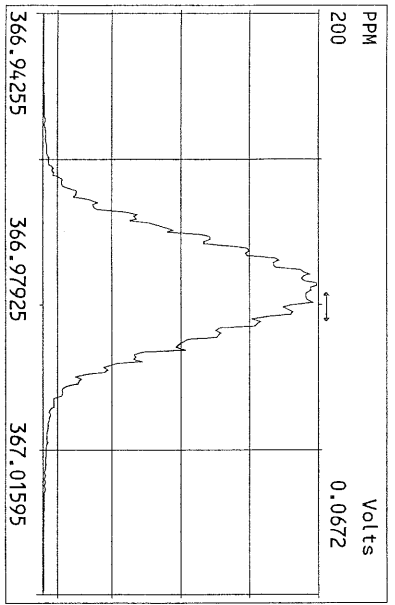
*6/2/11*

Data Backed Up: \_\_\_\_\_

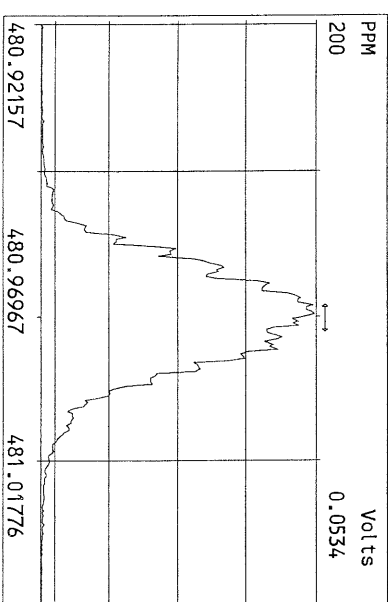
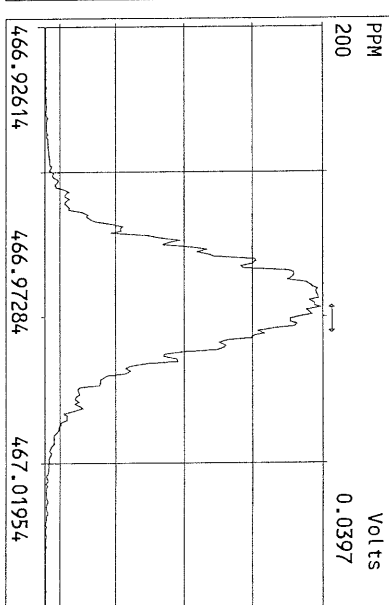
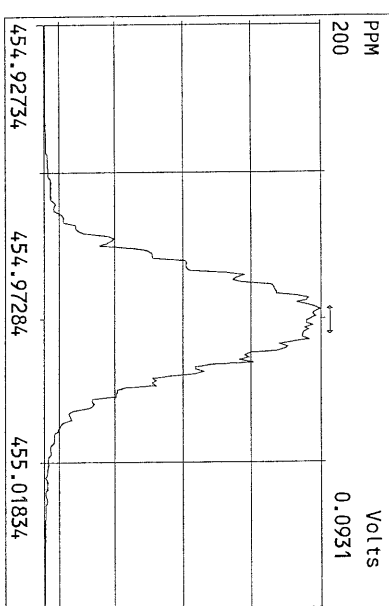
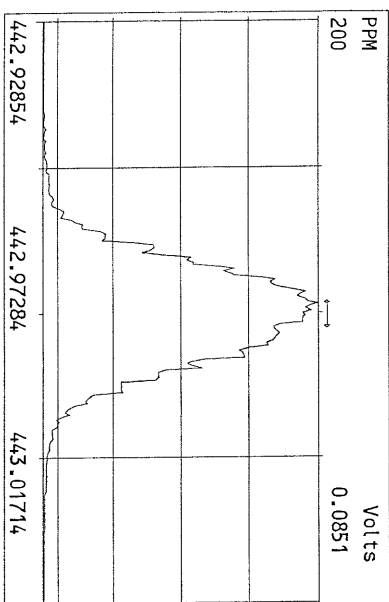
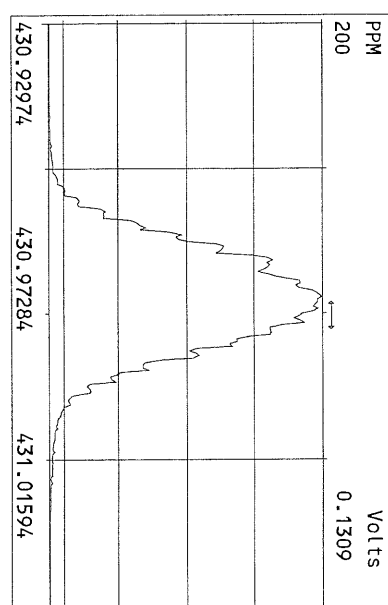
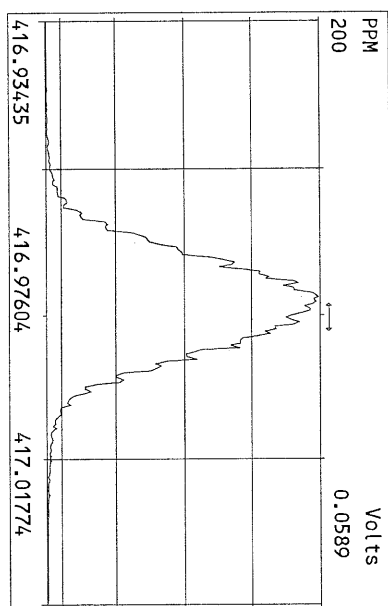
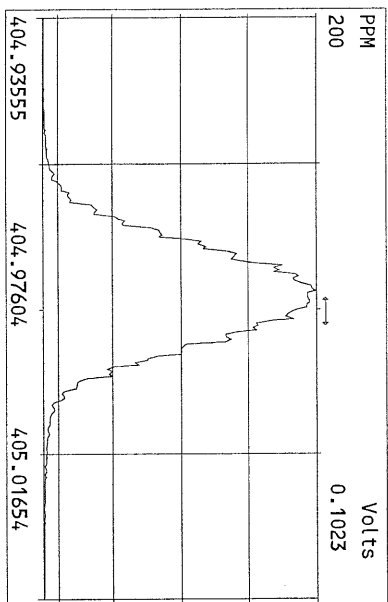
Date: \_\_\_\_\_





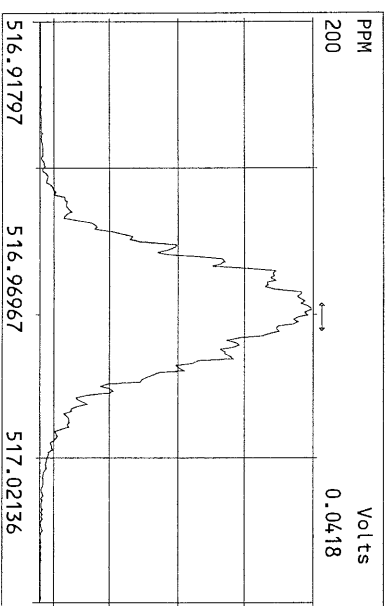
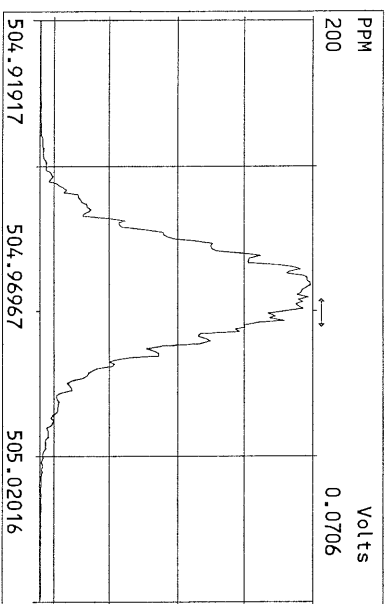
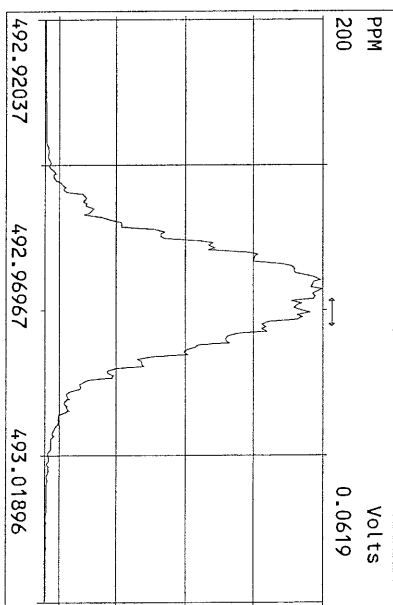
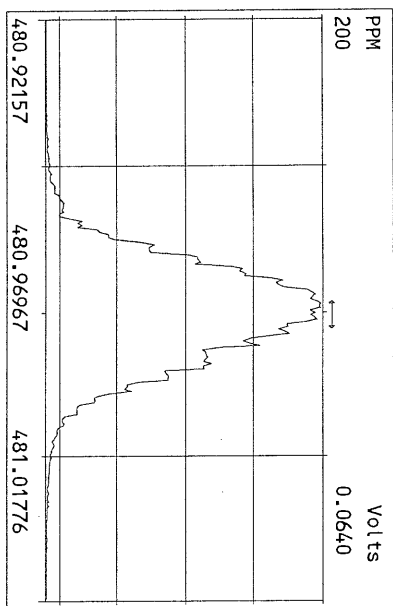
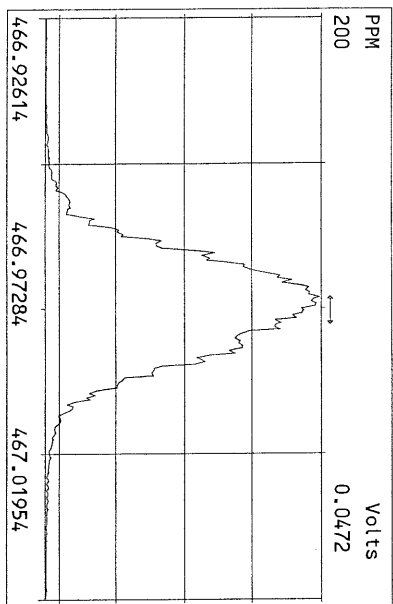
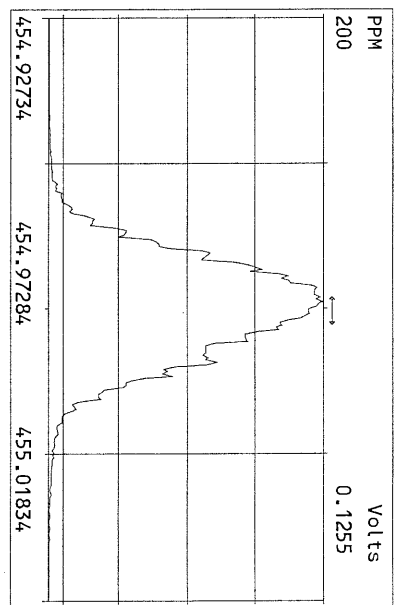
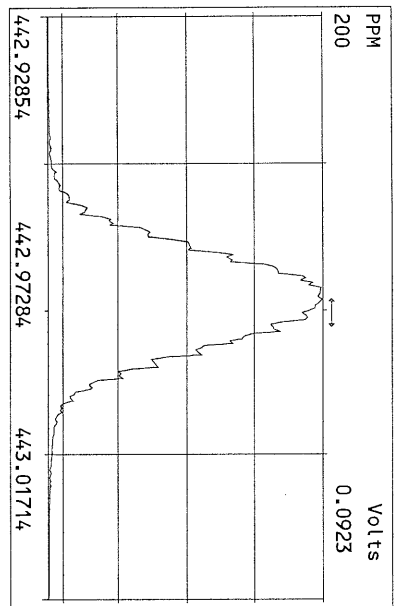
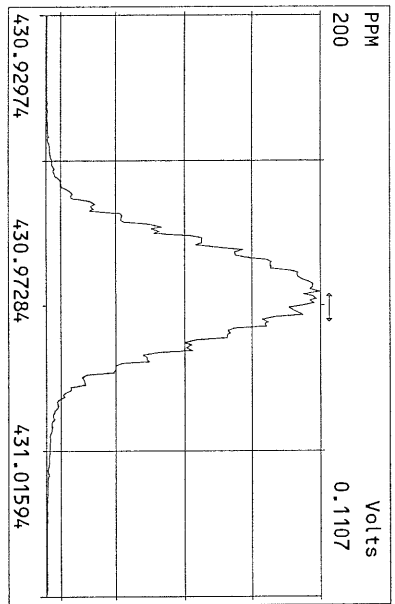


Peak Locate Examination:18-FEB-2011:09:01 File:18FEB11M  
Experiment:OCDD Function:4 Reference:PRK

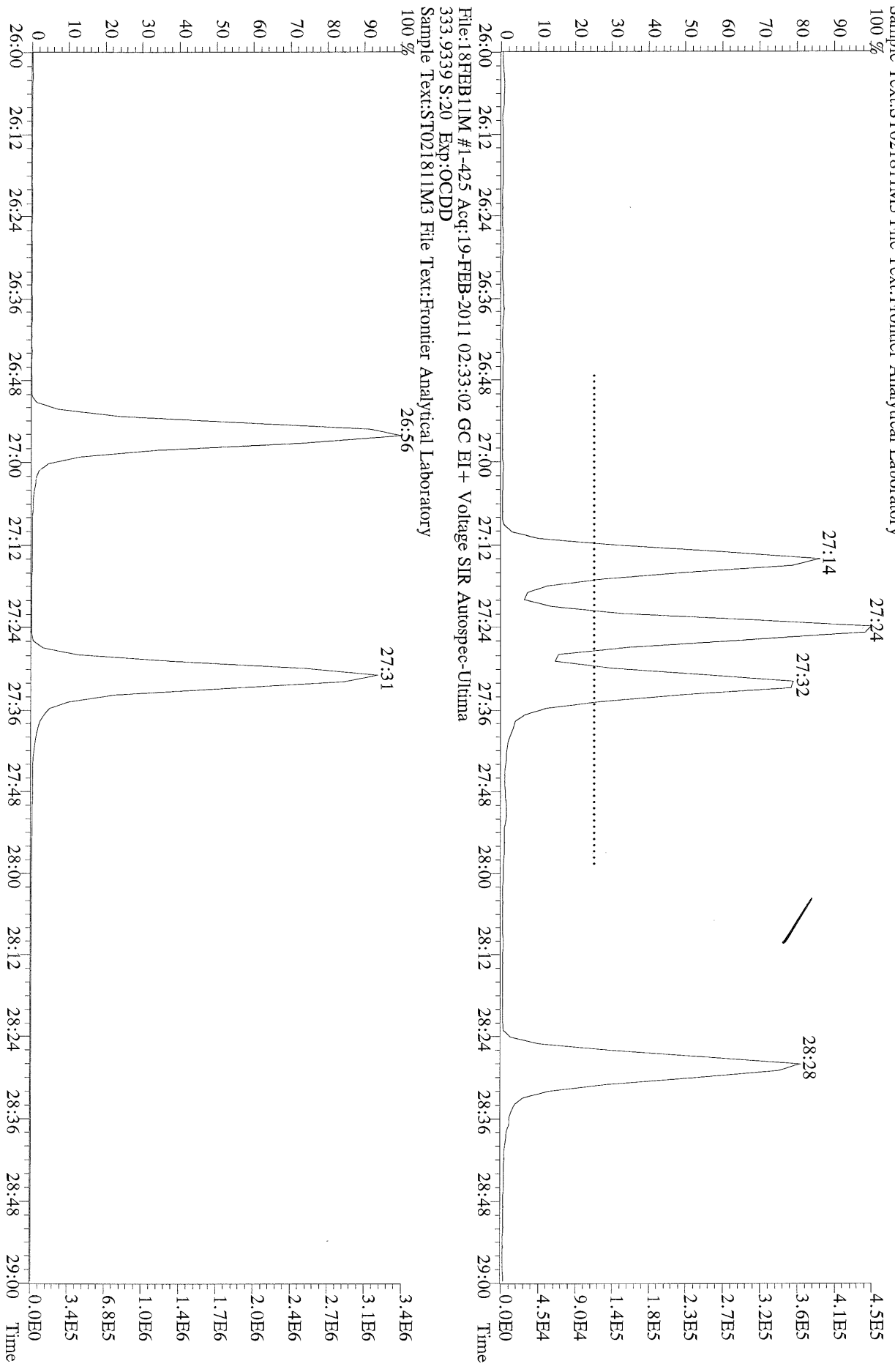




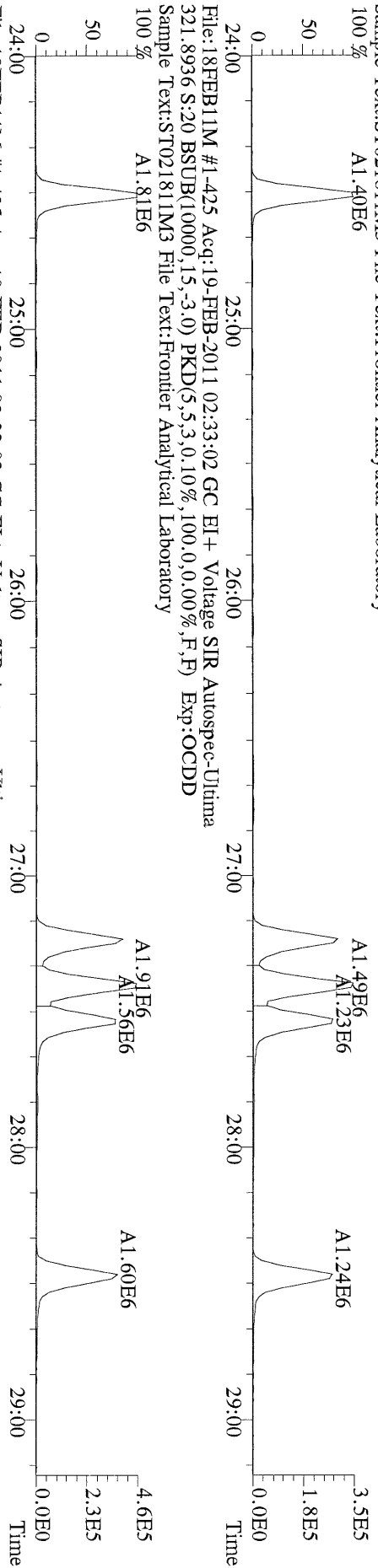
Peak Locate Examination:18-FEB-2011:09:01 File:18FEB11M  
Experiment:OCD Function:5 Reference:PK



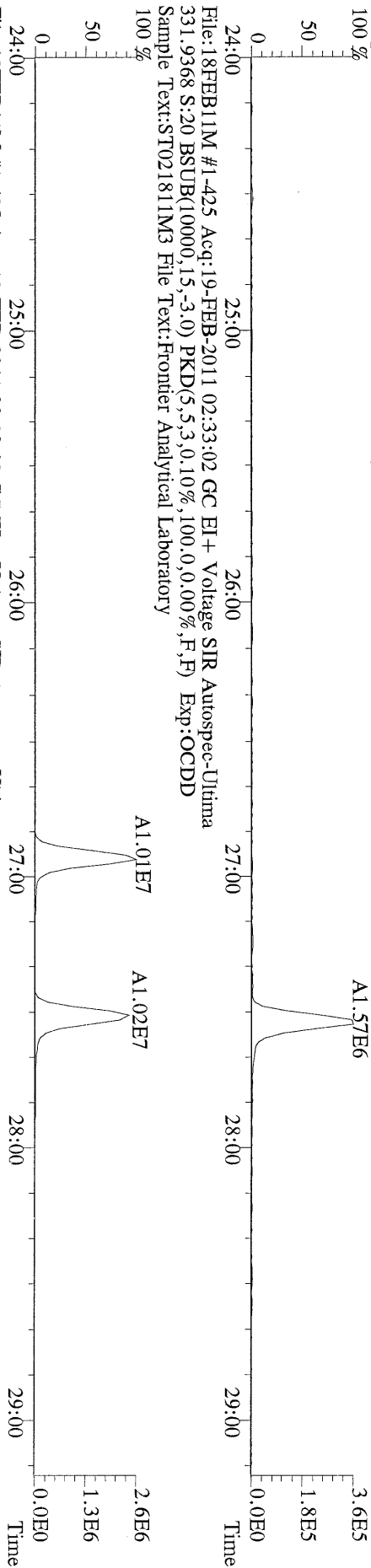
File:18FEB11M #1-425 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Utima  
321.8936 S:20 Exp:OCDD  
Sample Text:ST02181M3 File Text:Frontier Analytical Laboratory



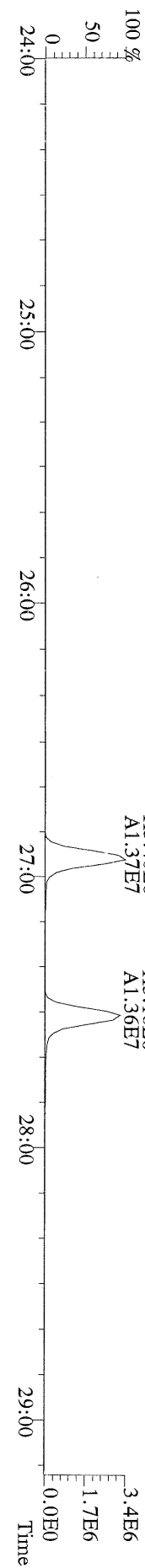
File:18FEB11M #1-425 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
319.8965 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



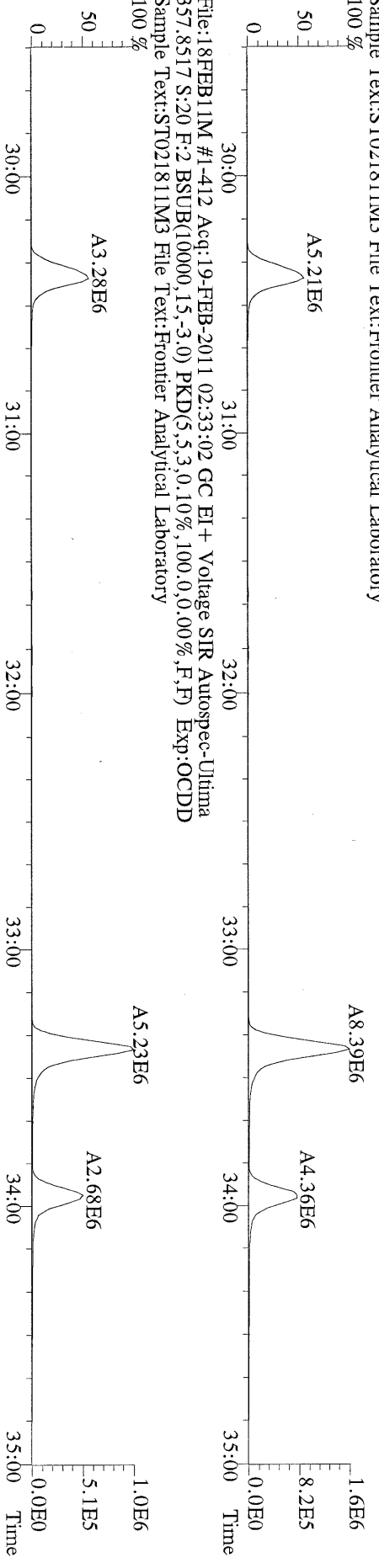
File:18FEB11M #1-425 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
327.8847 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



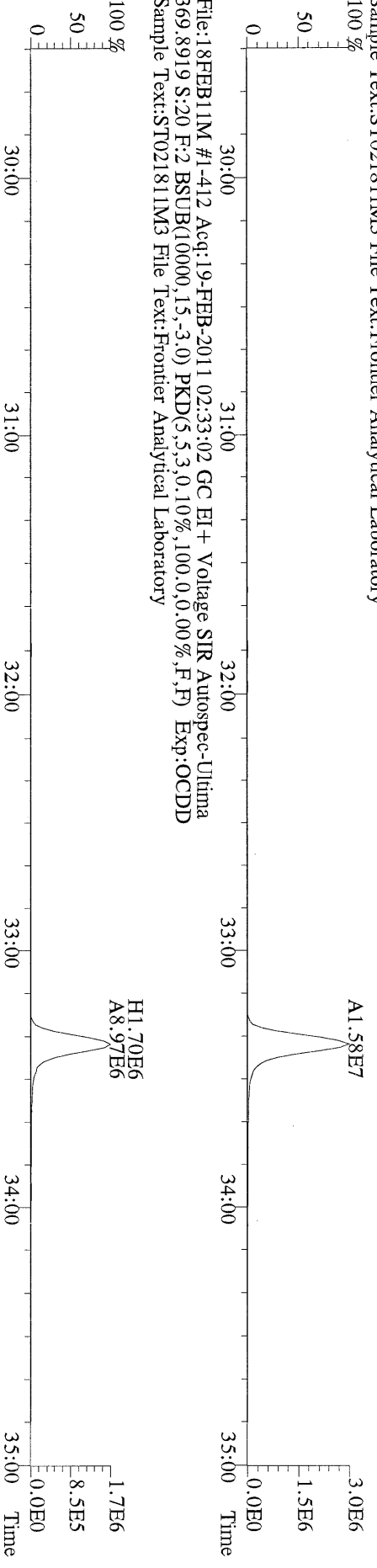
File:18FEB11M #1-425 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
333.9339 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



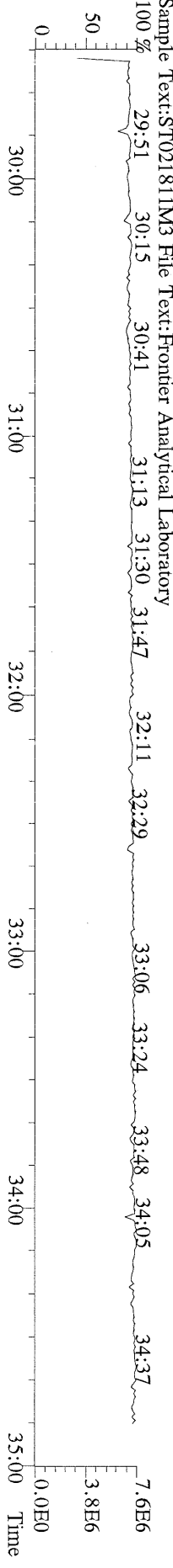
File:18FEB11M #1-412 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
355.8546 S:20 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100,0.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



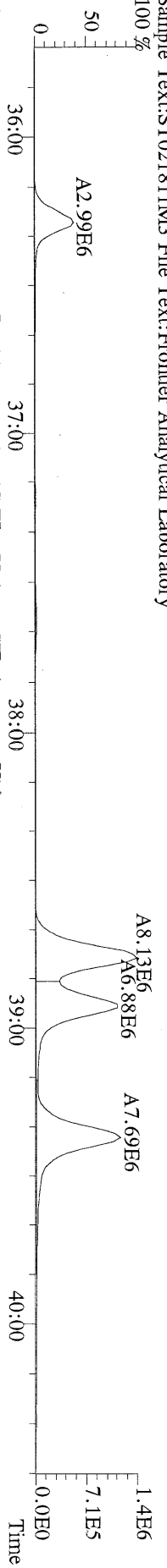
File:18FEB11M #1-412 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
367.8949 S:20 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100,0.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



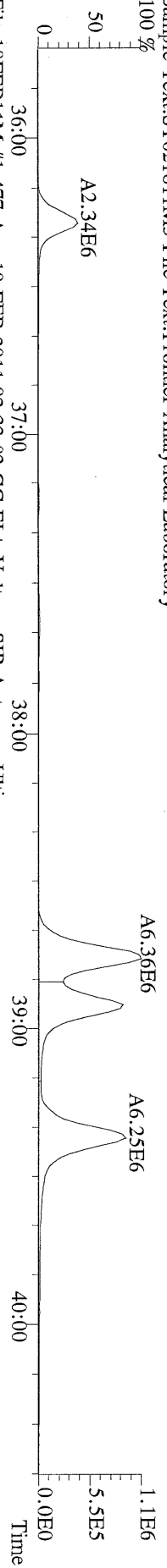
File:18FEB11M #1-412 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
366.9792 S:20 F:2 Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



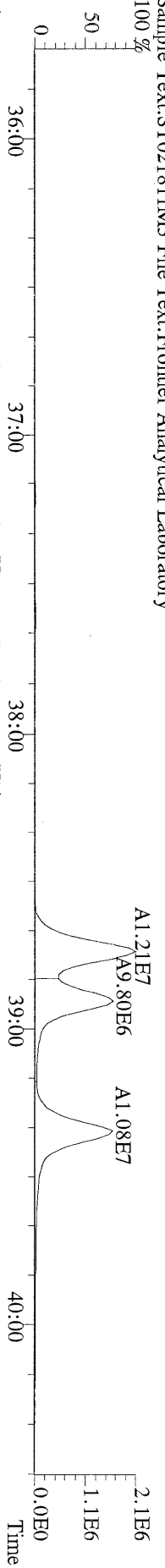
File:18FEB11M #1-477 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 389.8156 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



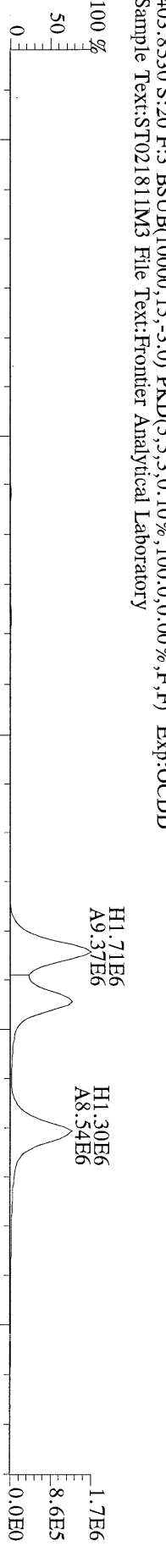
File:18FEB11M #1-477 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 391.8127 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



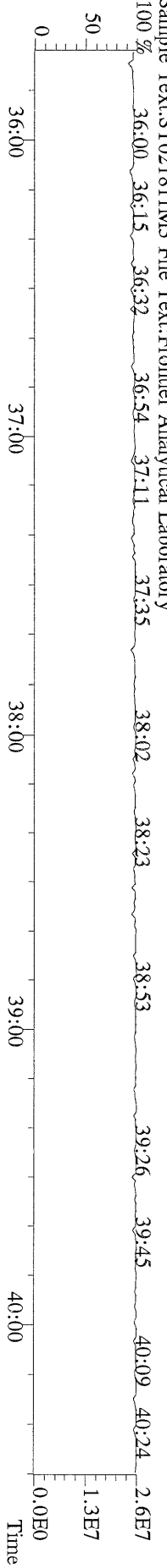
File:18FEB11M #1-477 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 401.8559 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



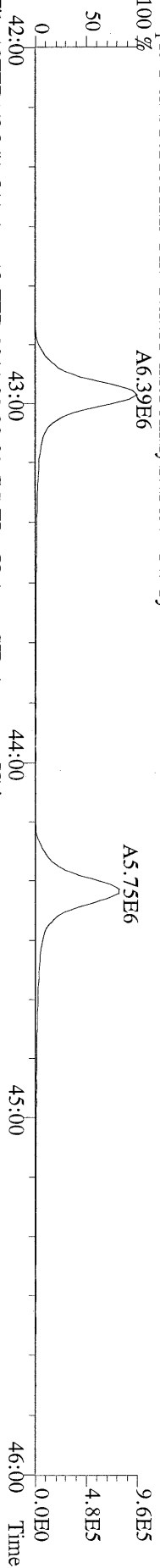
File:18FEB11M #1-477 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 403.8530 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



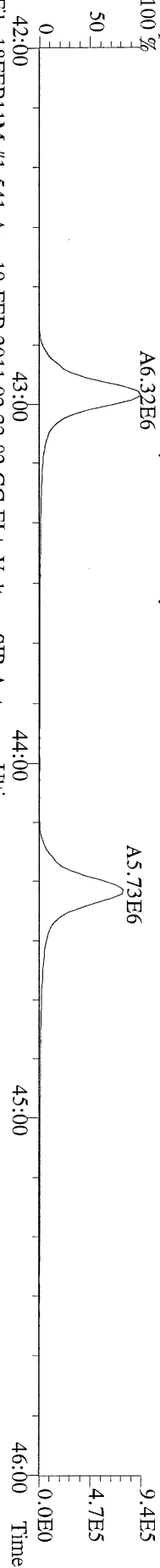
File:18FEB11M #1-477 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 380.9760 S:20 F:3 Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



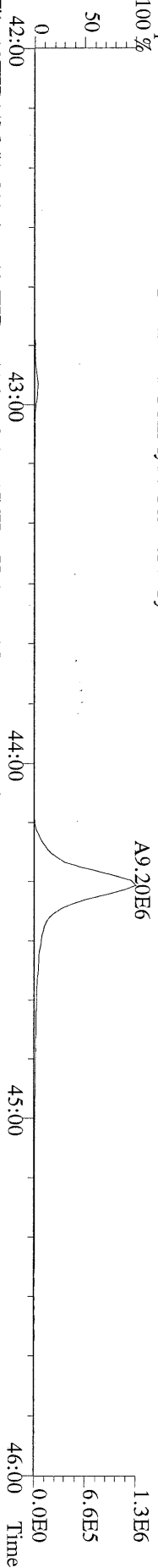
File:18FEB11M #1-541 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
423.7767 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



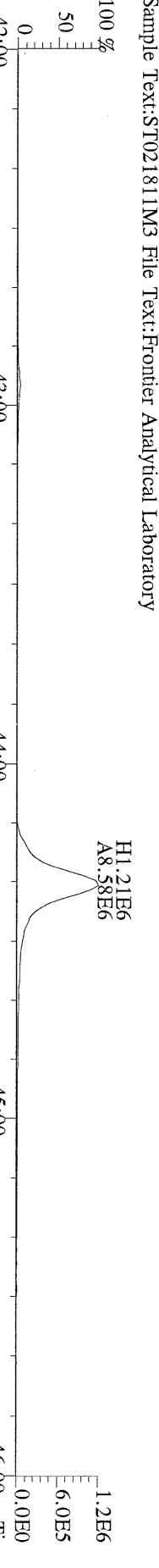
File:18FEB11M #1-541 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
425.7737 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



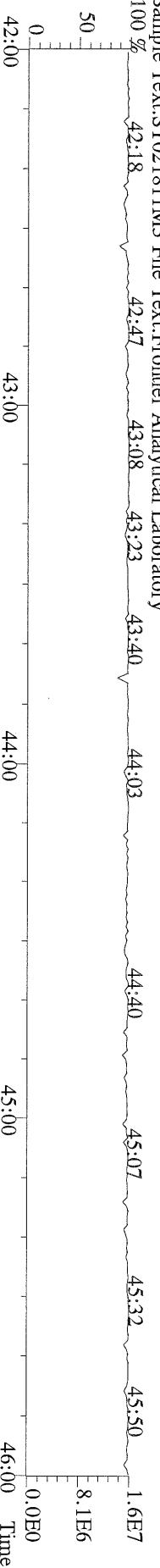
File:18FEB11M #1-541 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
435.8169 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



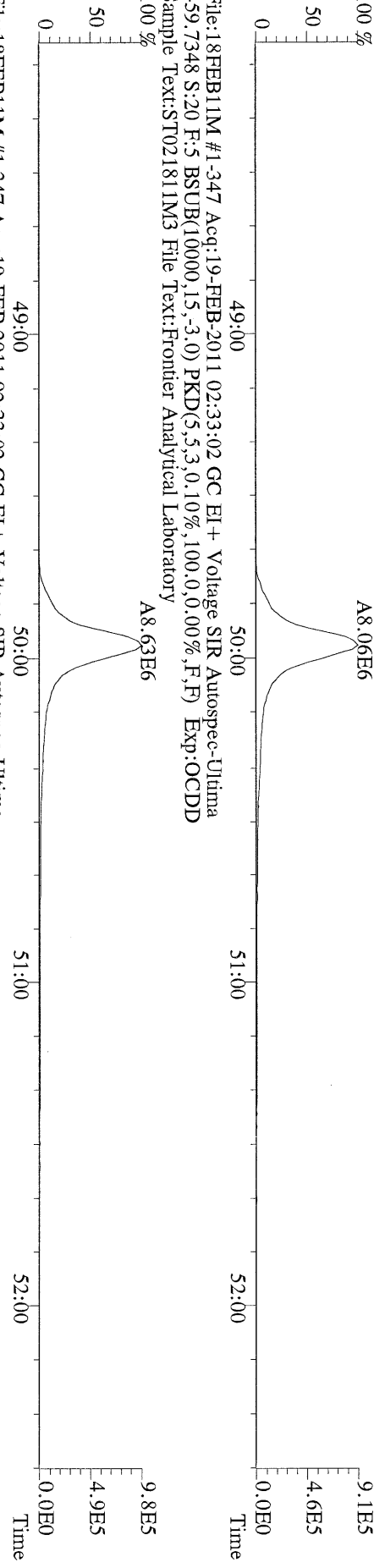
File:18FEB11M #1-541 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
437.8140 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



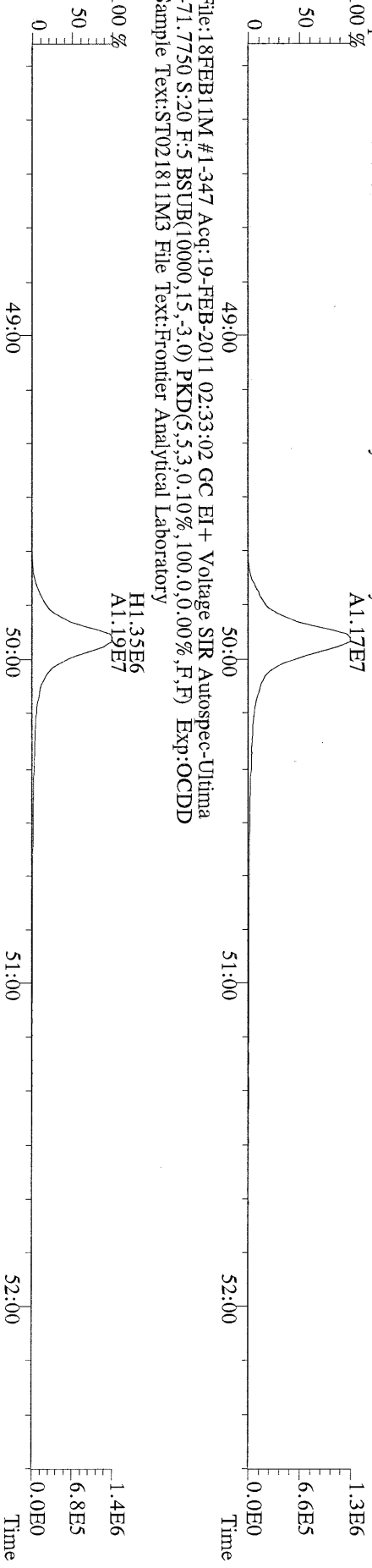
File:18FEB11M #1-541 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
430.9728 S:20 F:4 Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



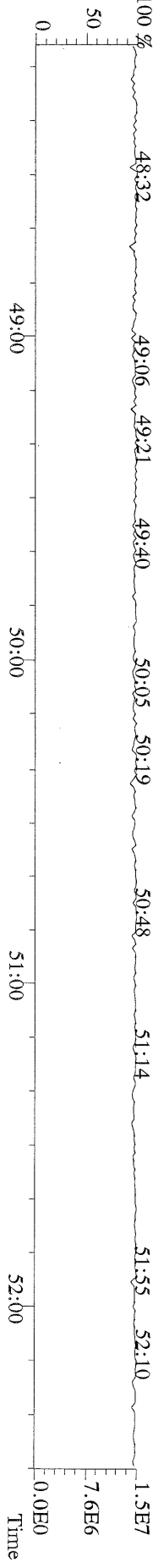
File:18FEB11M #1-347 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
457.7377 S:20 F:5 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory  
100 %



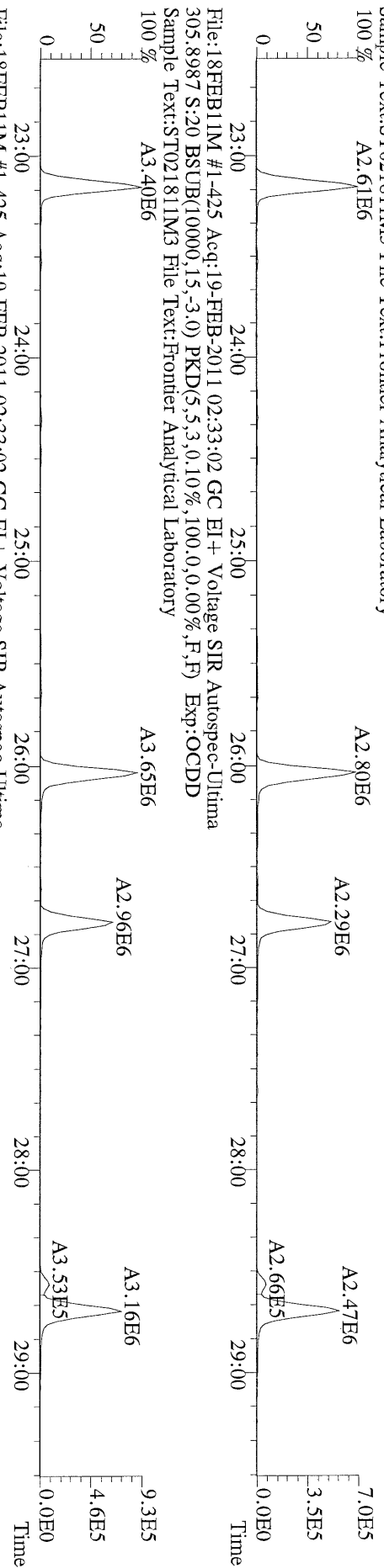
File:18FEB11M #1-347 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
469.7780 S:20 F:5 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory  
100 %



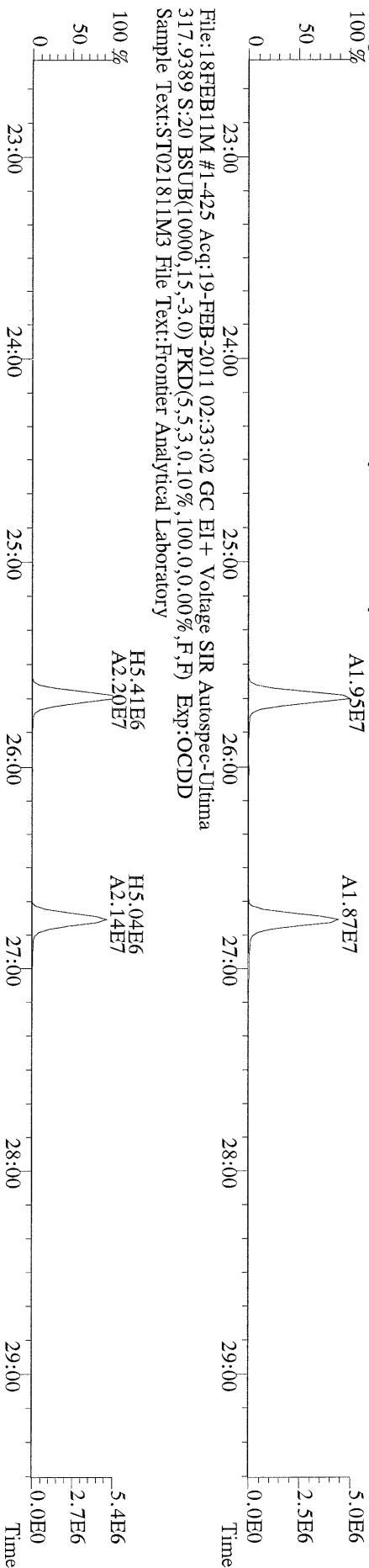
File:18FEB11M #1-347 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
454.9728 S:20 F:5 Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory  
100 %



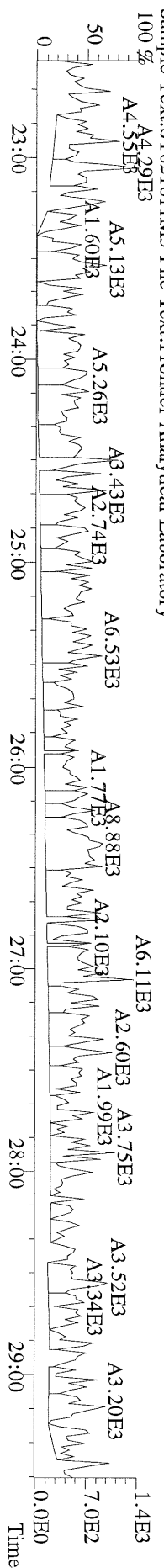
File:18FEBB11M #1-425 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 303.9016 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



File:18FEBB11M #1-425 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 315.9419 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory

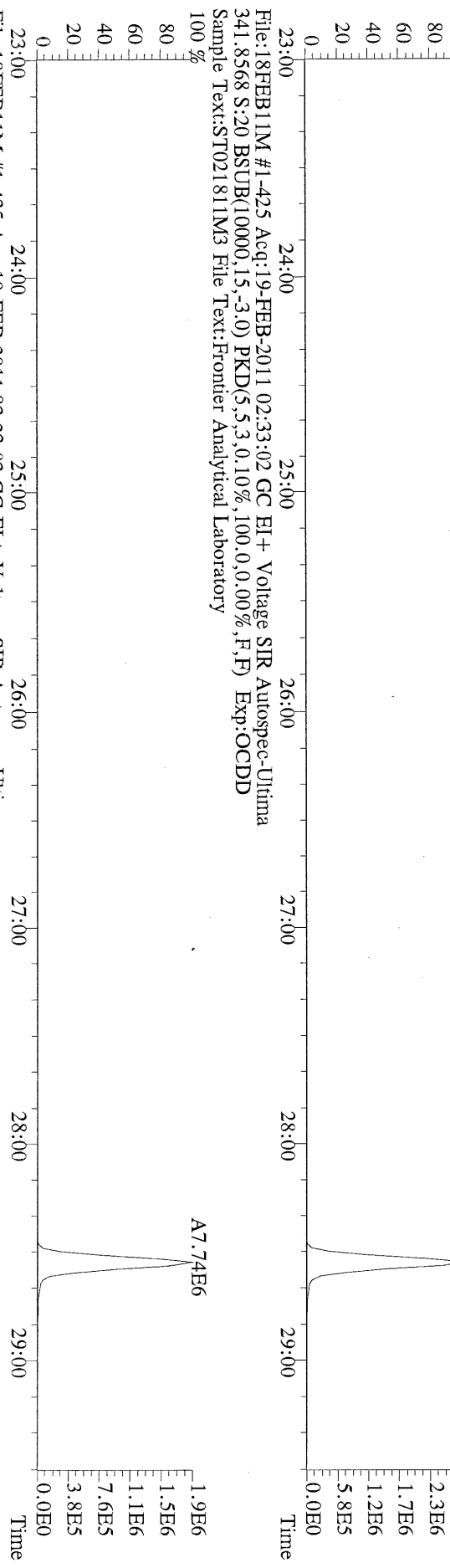


File:18FEBB11M #1-425 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 375.8364 S:20 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory

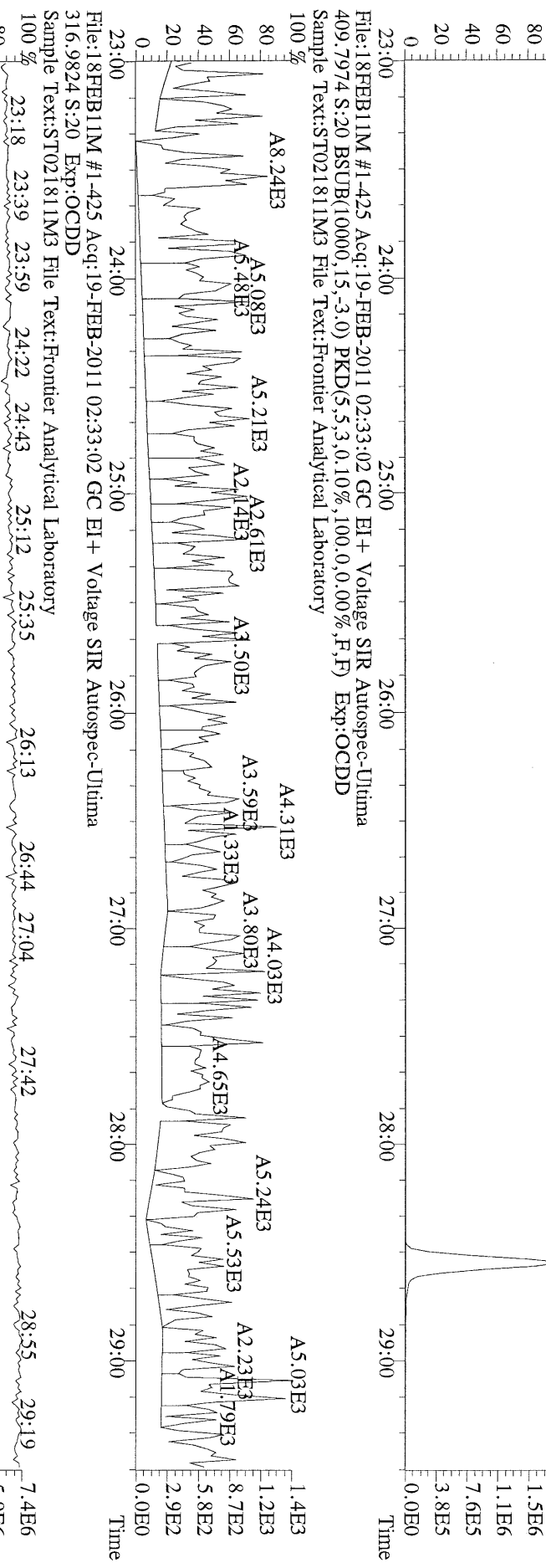




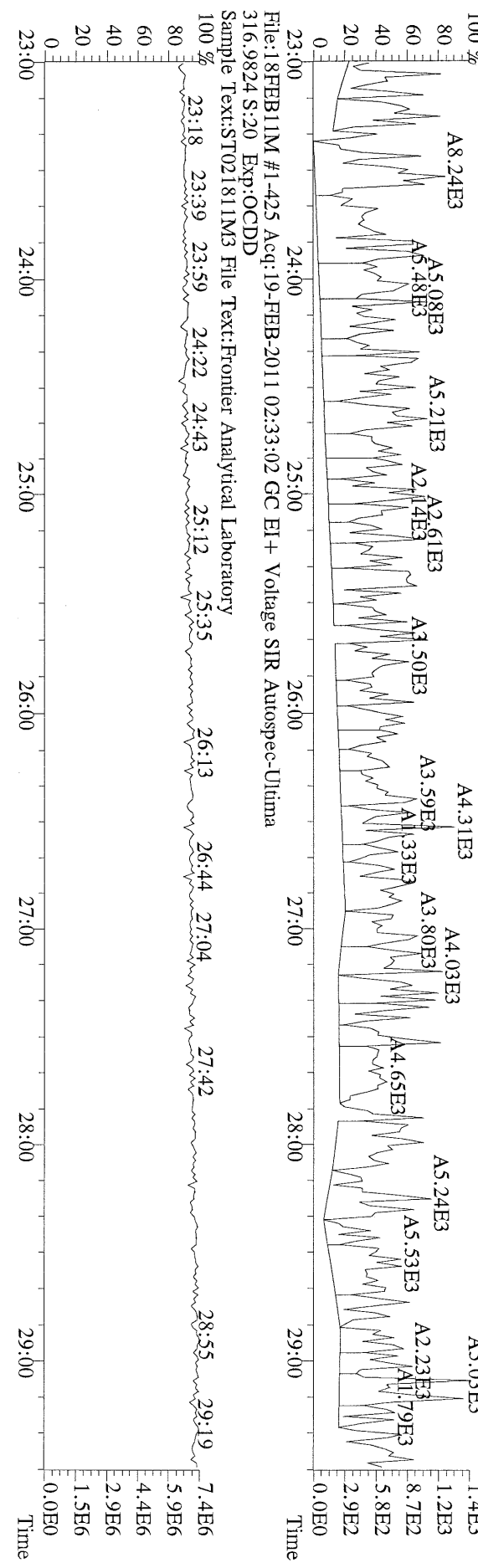
File:18FEB11M #1-425 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 339.8597 S:20 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



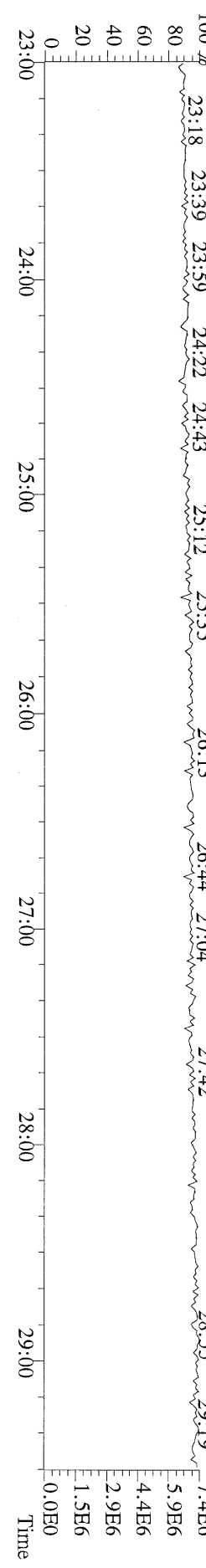
File:18FEB11M #1-425 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 341.8568 S:20 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



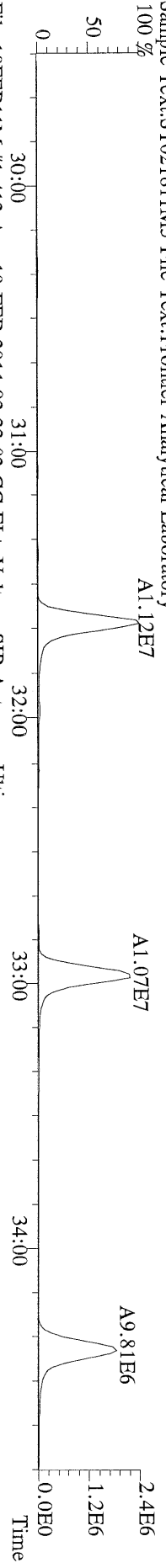
File:18FEB11M #1-425 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 409.7974 S:20 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



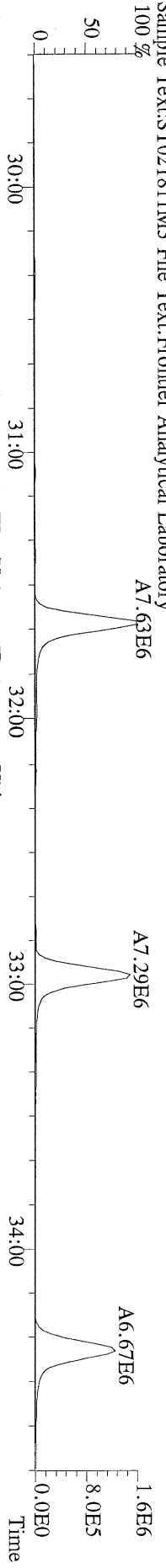
File:18FEB11M #1-425 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 316.9824 S:20 Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



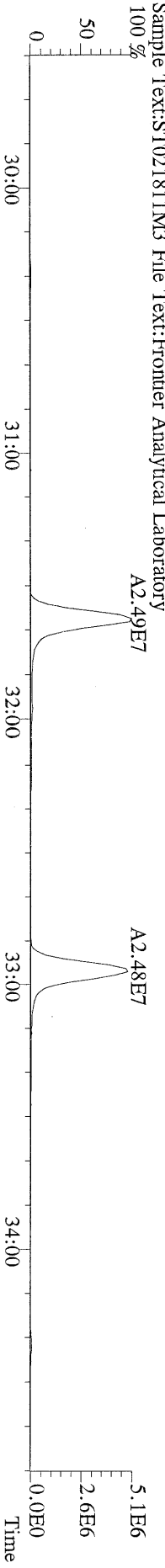
File:18FEB11M #1-412 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 339.8597 S:20 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



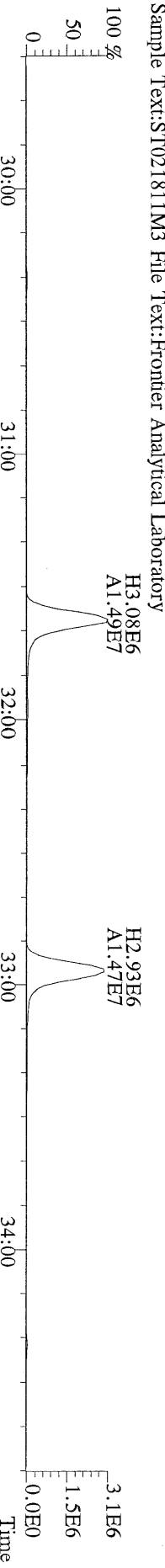
File:18FEB11M #1-412 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 341.8568 S:20 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



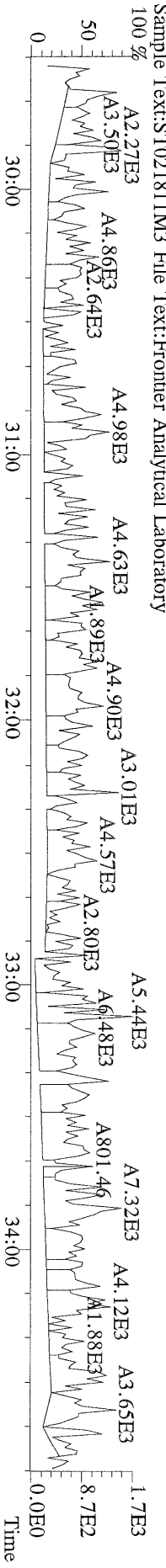
File:18FEB11M #1-412 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 351.9000 S:20 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



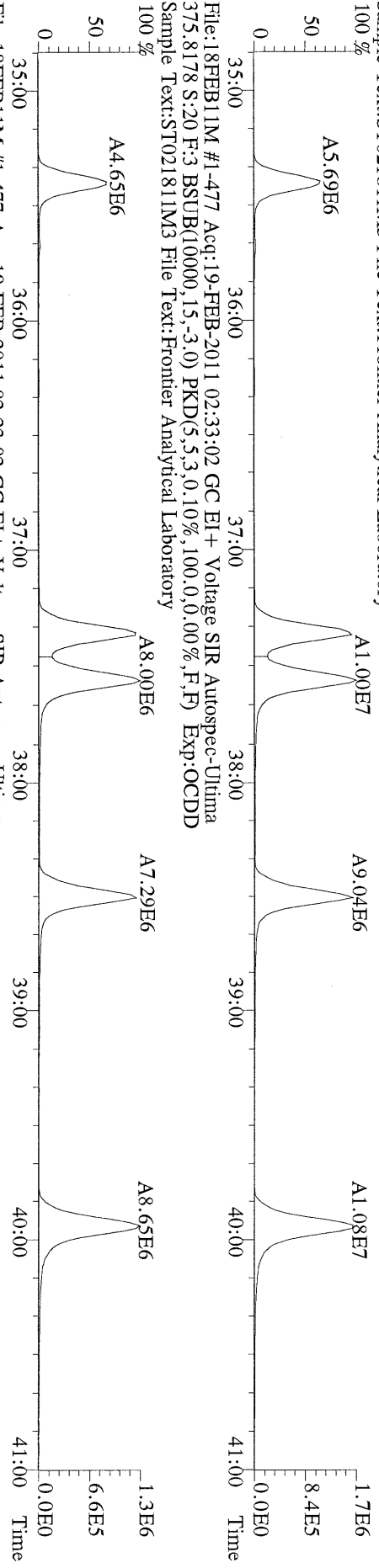
File:18FEB11M #1-412 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 353.8970 S:20 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



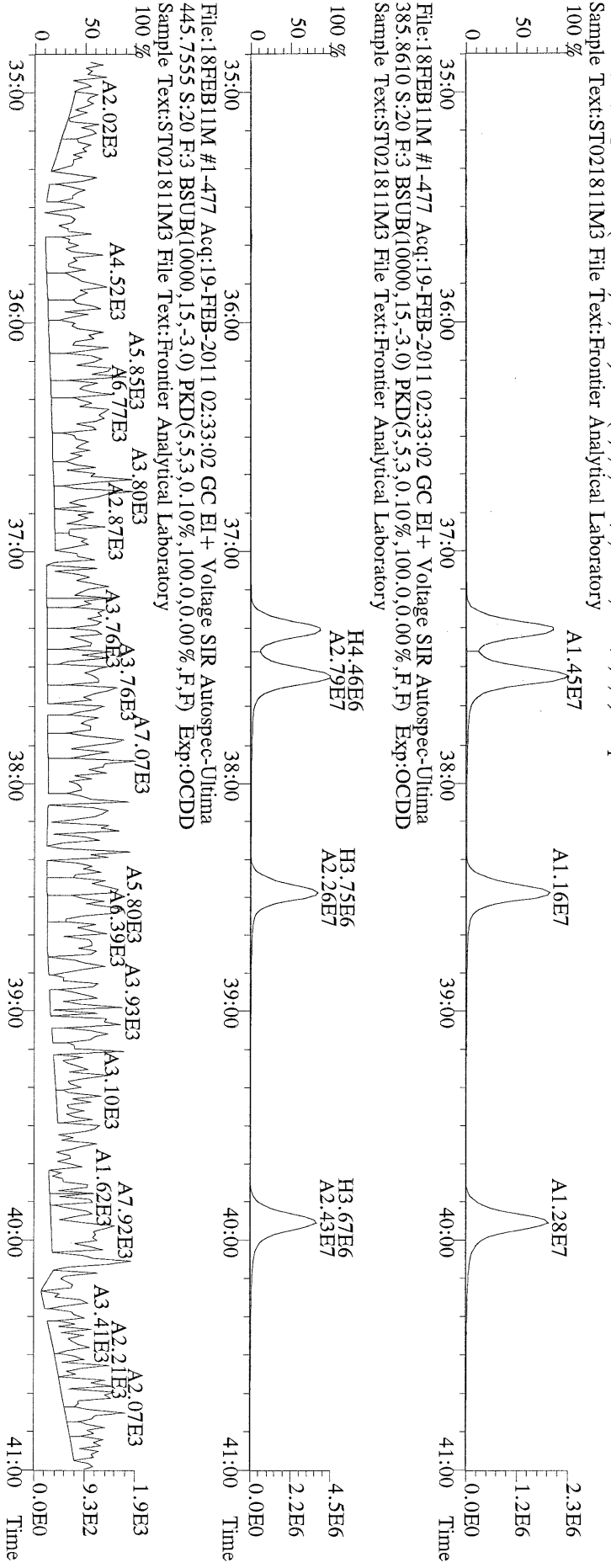
File:18FEB11M #1-412 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 409.7974 S:20 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



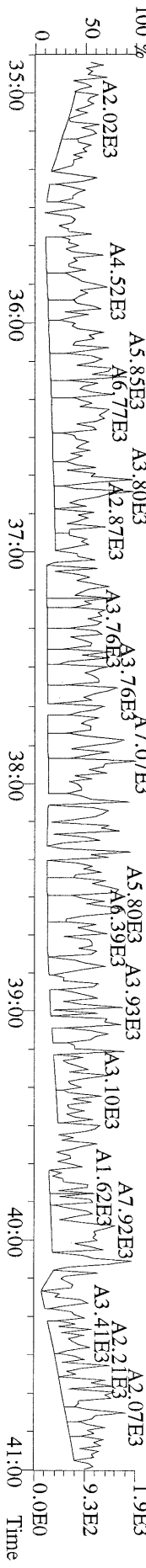
File:18FEB11M #1-477 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 373.8207 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



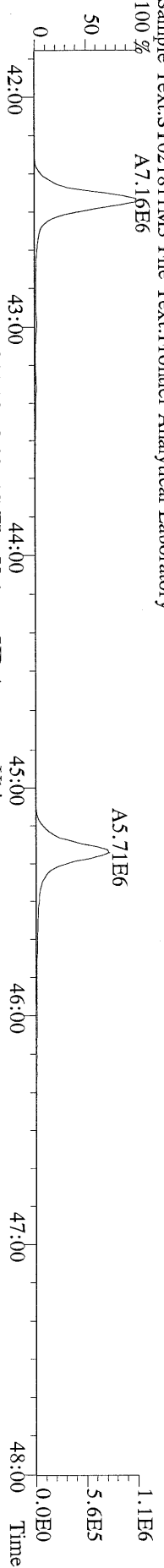
File:18FEB11M #1-477 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 383.8639 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



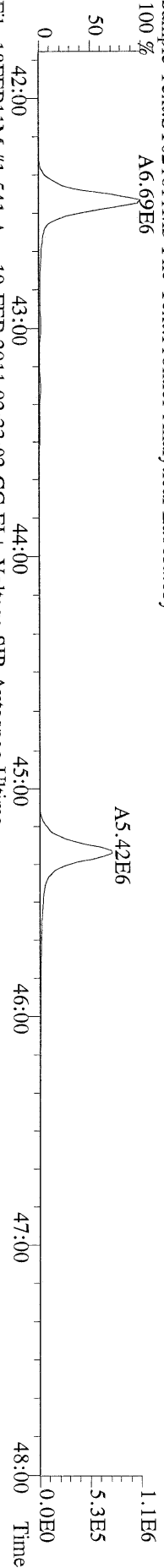
File:18FEB11M #1-477 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
 445.7555 S:20 F:3 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
 Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



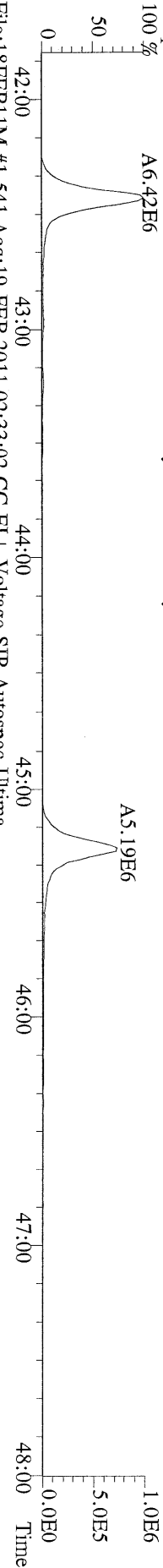
File:18FEB11M #1-541 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Utima  
407.7818 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory  
100 %



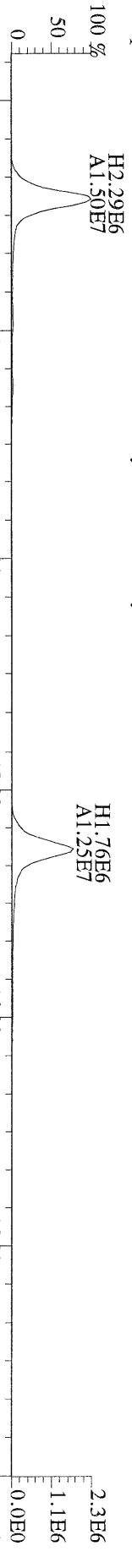
File:18FEB11M #1-541 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Utima  
409.7788 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory  
100 %



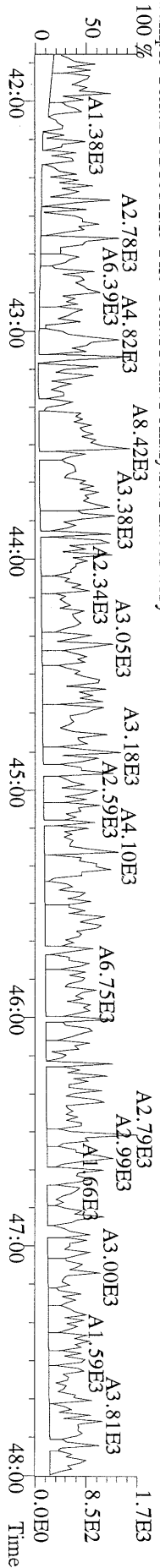
File:18FEB11M #1-541 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Utima  
417.8253 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory  
100 %



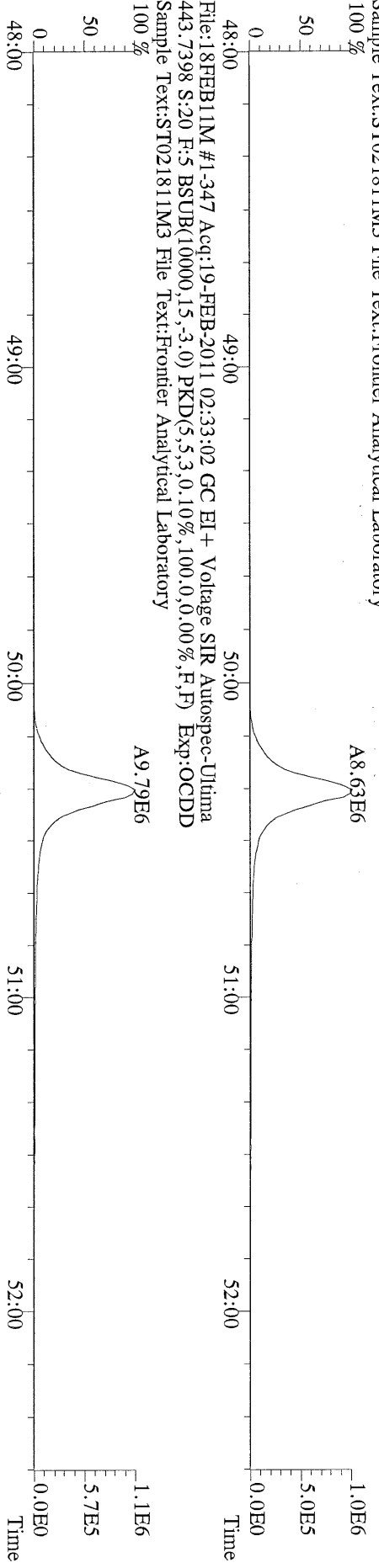
File:18FEB11M #1-541 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Utima  
419.8220 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



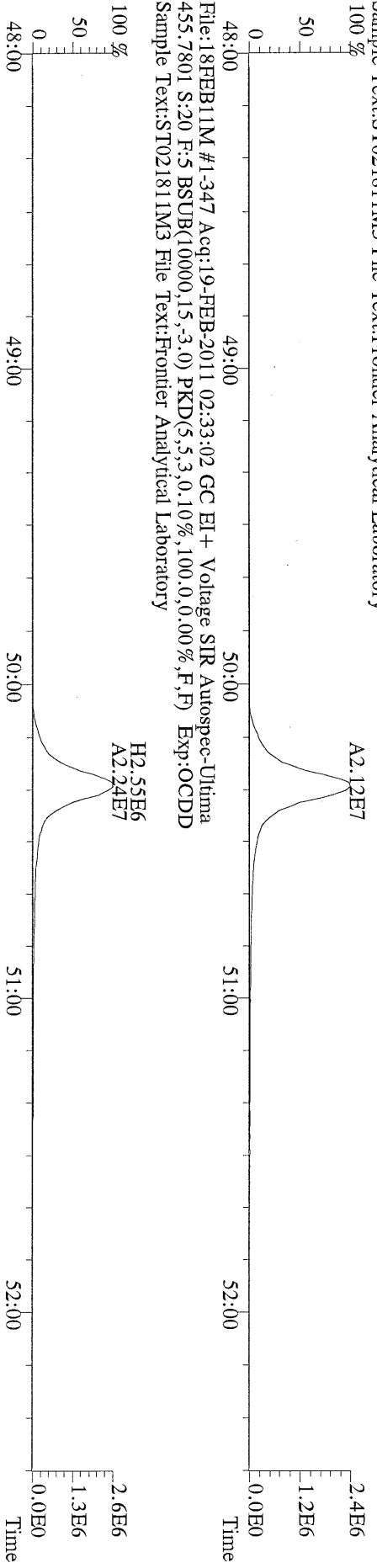
File:18FEB11M #1-541 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Utima  
479.7165 S:20 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



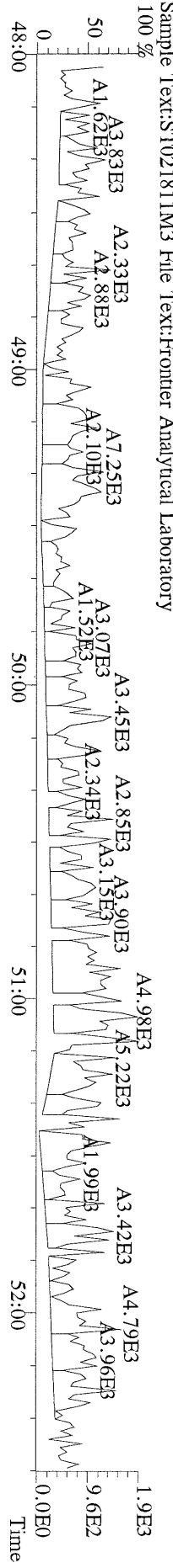
File:18FEB11M #1-347 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
441.7428 S:20 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



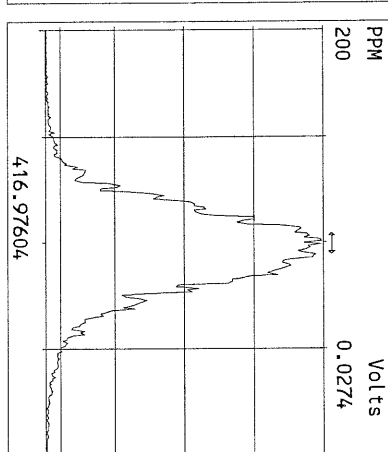
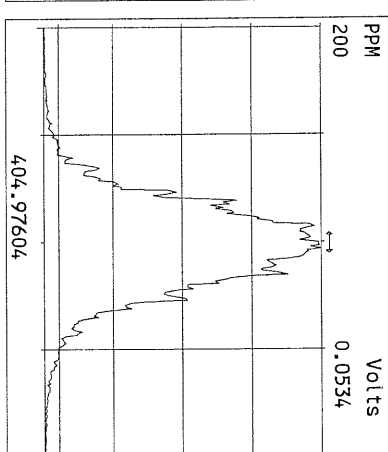
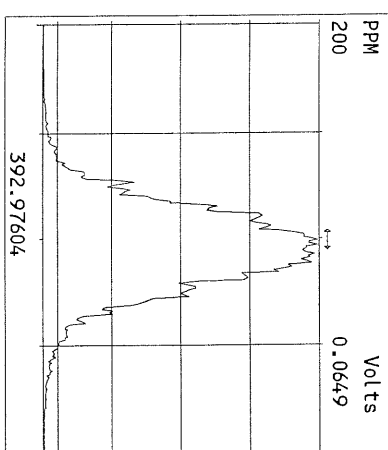
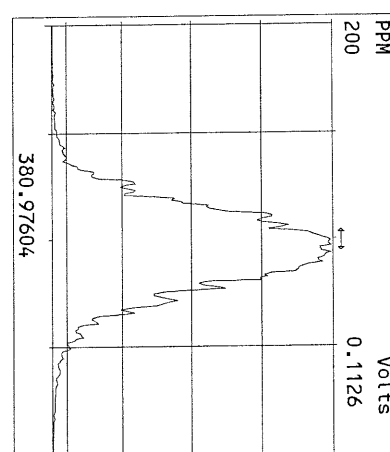
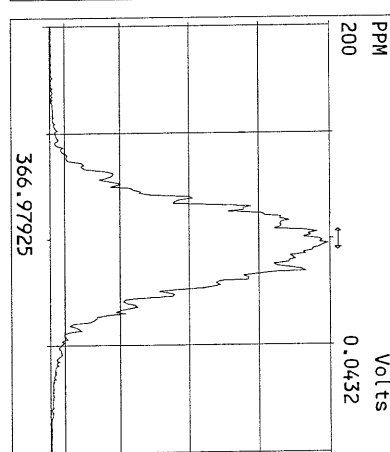
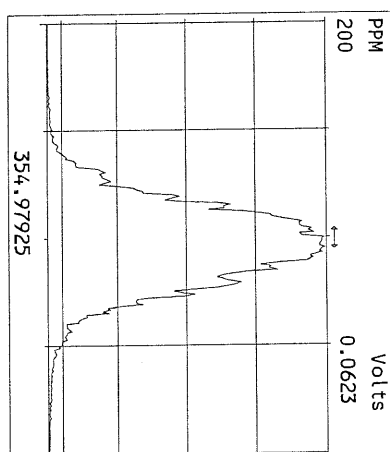
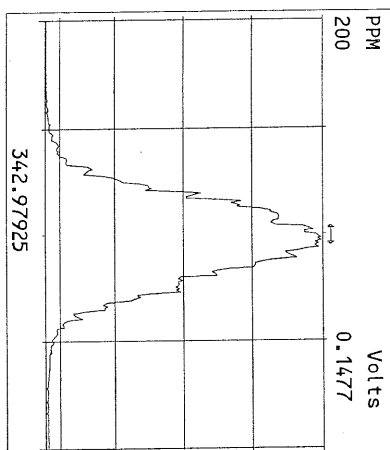
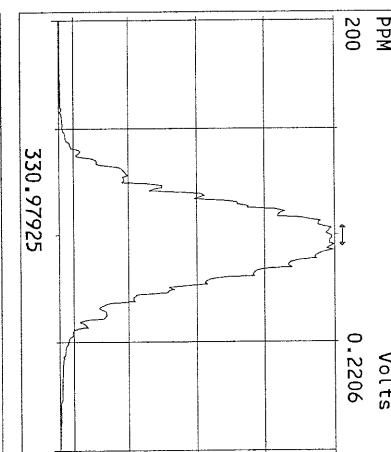
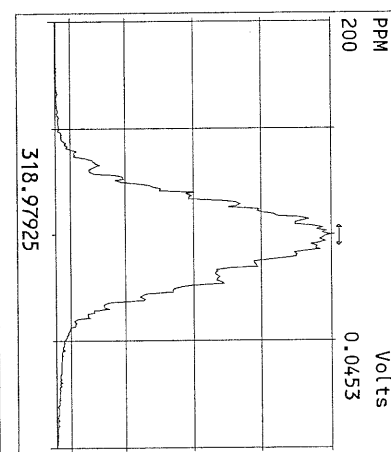
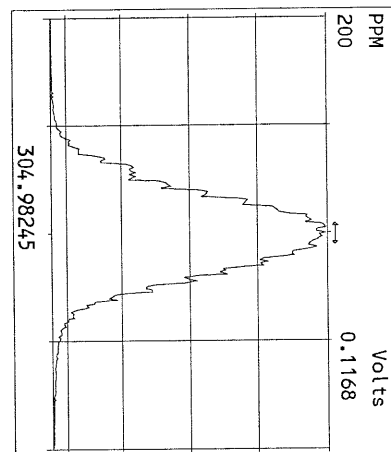
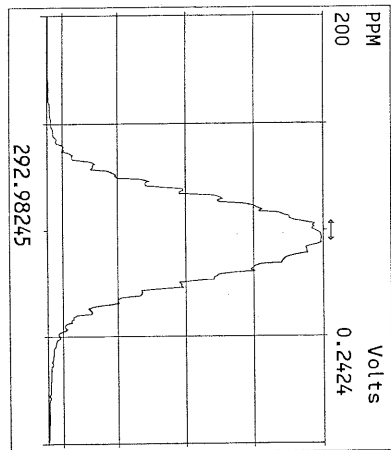
File:18FEB11M #1-347 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
453.7831 S:20 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory



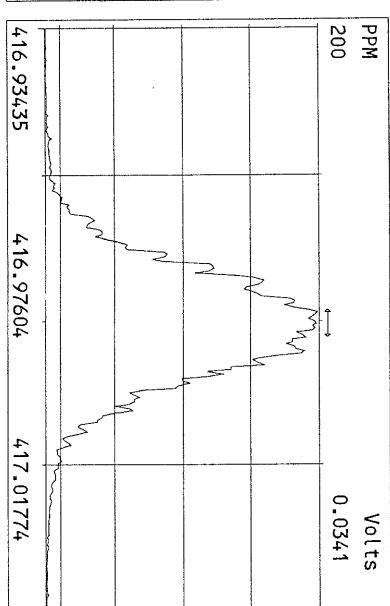
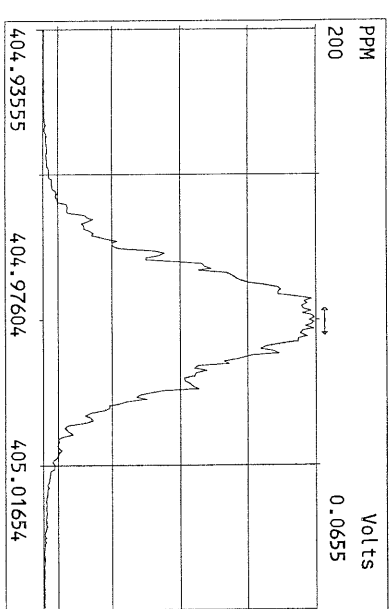
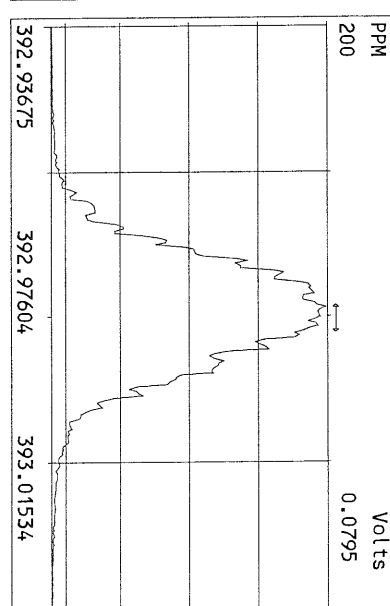
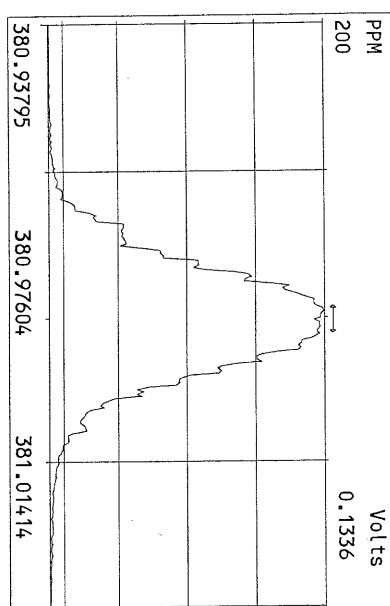
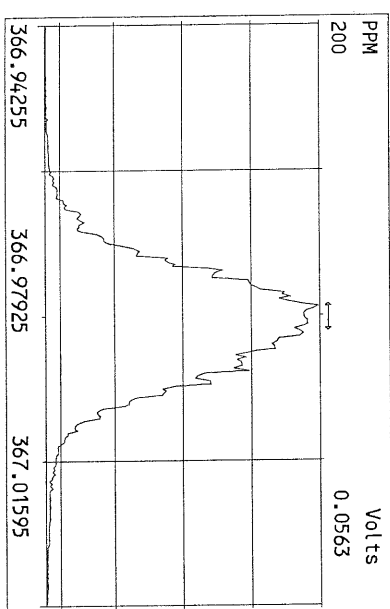
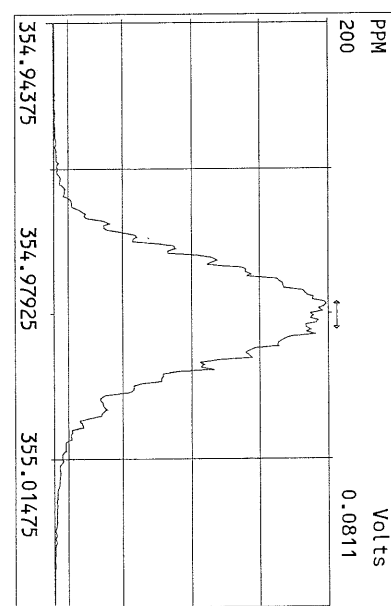
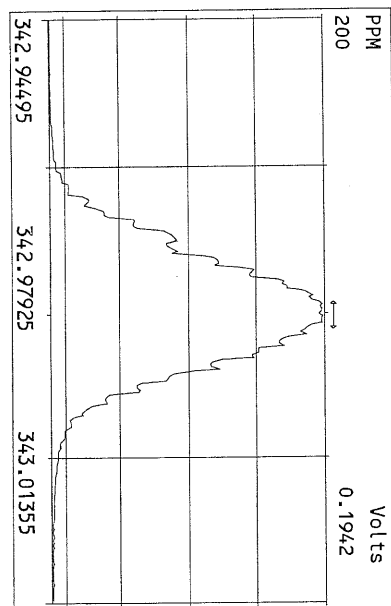
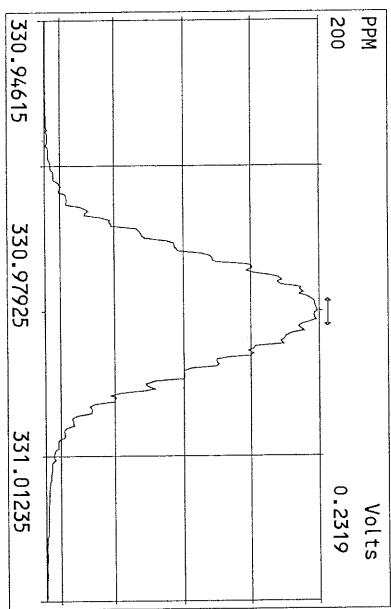
File:18FEB11M #1-347 Acq:19-FEB-2011 02:33:02 GC EI+ Voltage SIR Autospec-Ultima  
513.6775 S:20 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD  
Sample Text:ST021811M3 File Text:Frontier Analytical Laboratory

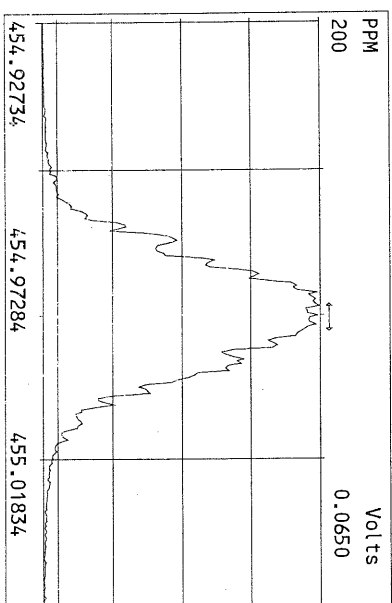
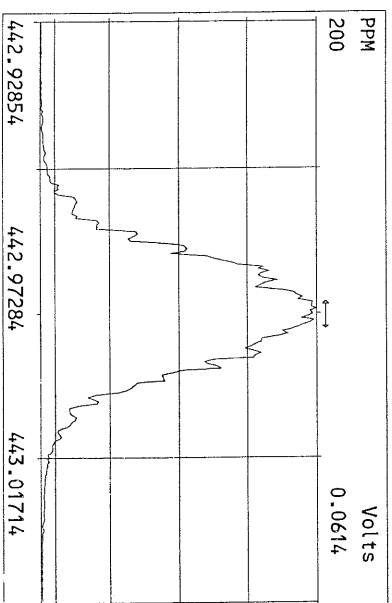
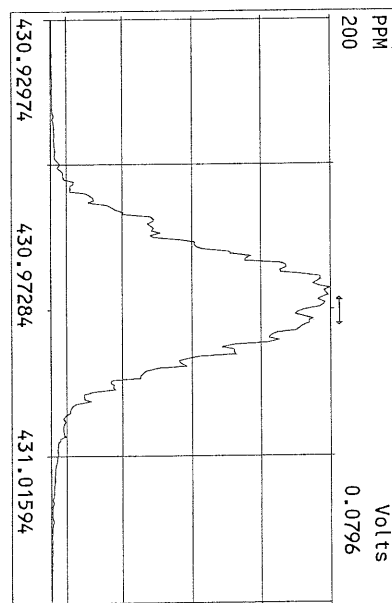
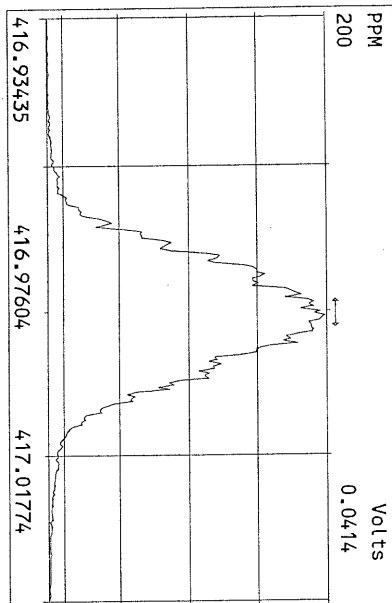
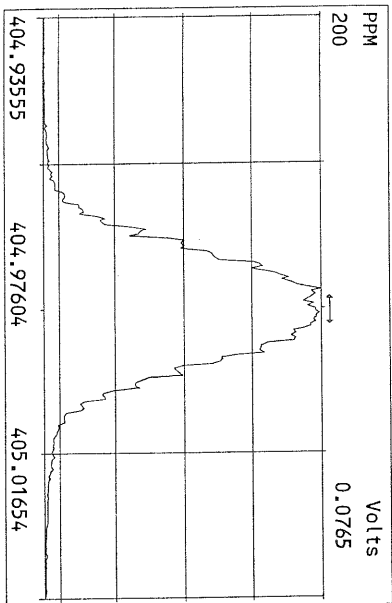
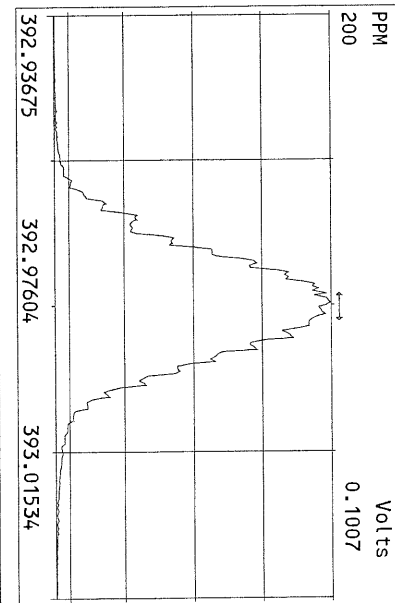
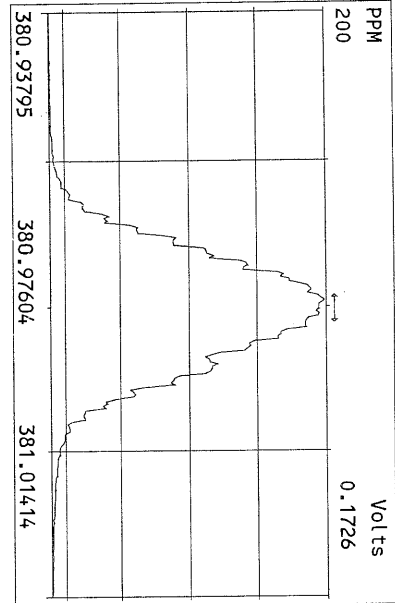
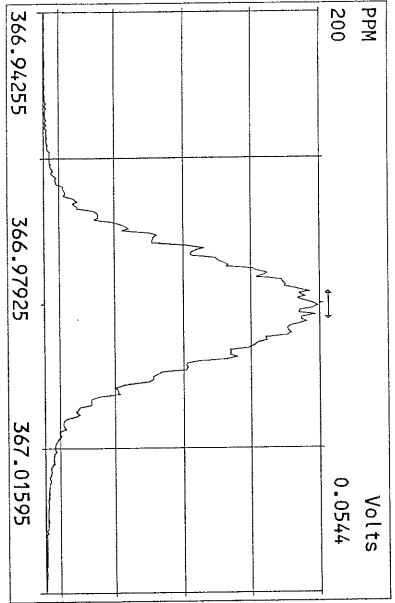


Peak Locate Examination: 19-FEB-2011:03:30 File: 18FEB11M\_RES\_CHECK  
Experiment: OCDD Function: 1 Reference: PFK

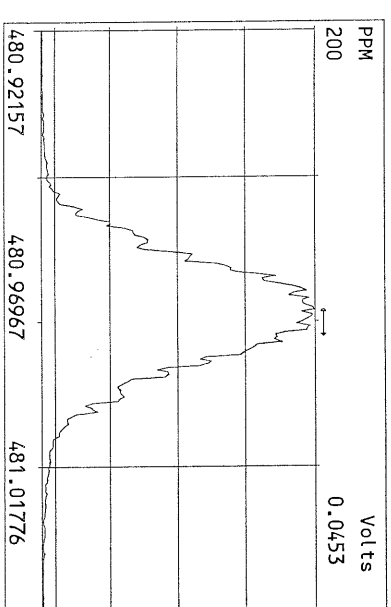
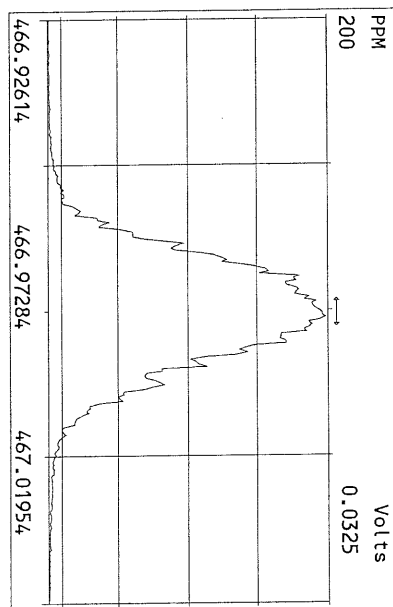
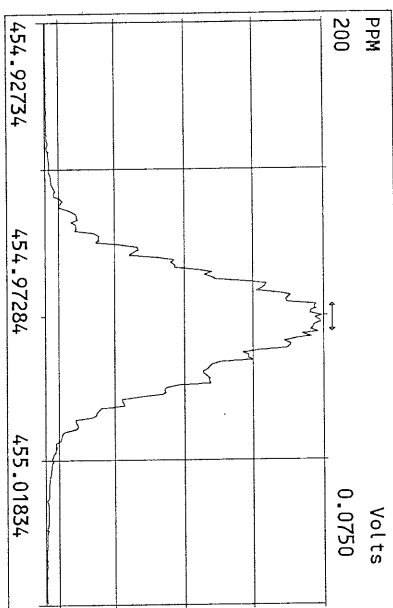
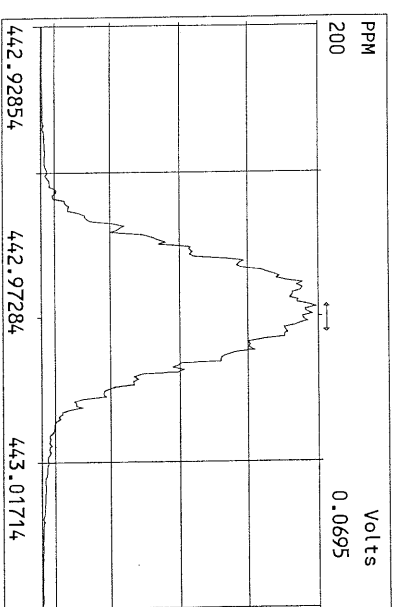
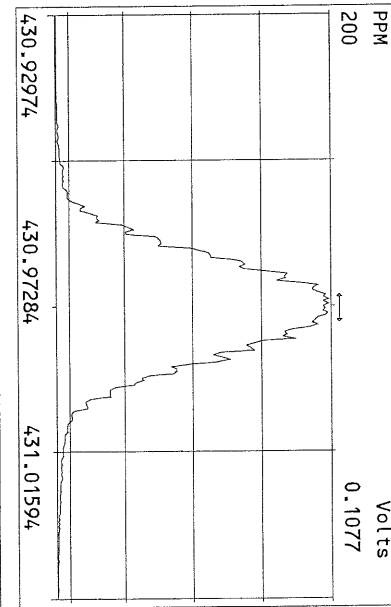
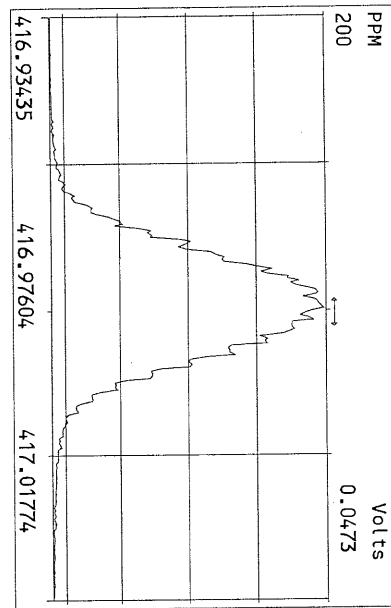
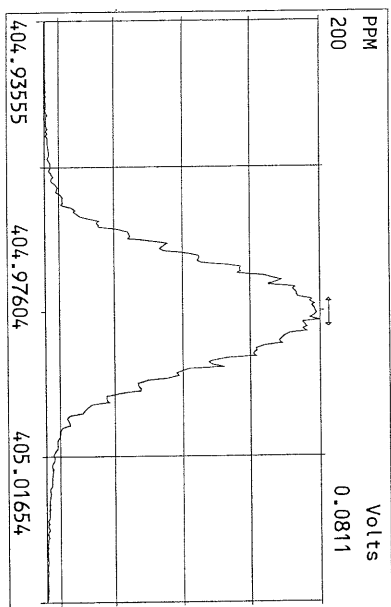


Peak Locate Examination:19-FEB-2011:03:32 File:18FEB1M\_RES\_CHECK  
Experiment:OCDI Function:2 Reference:PFK









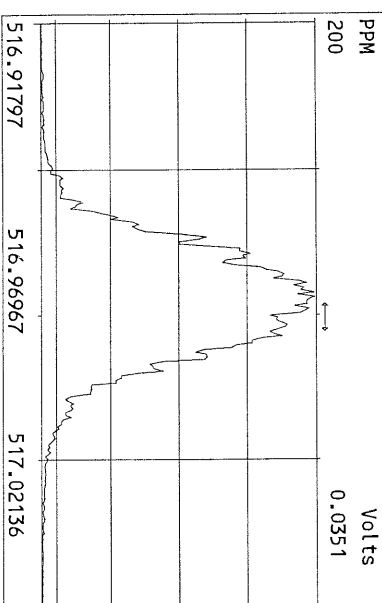
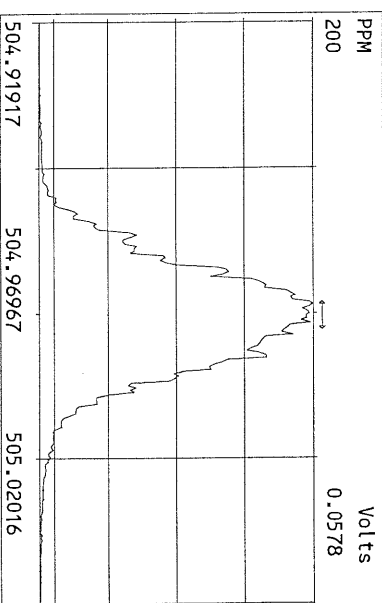
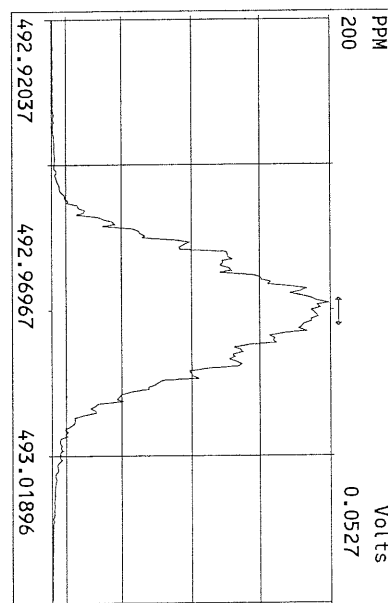
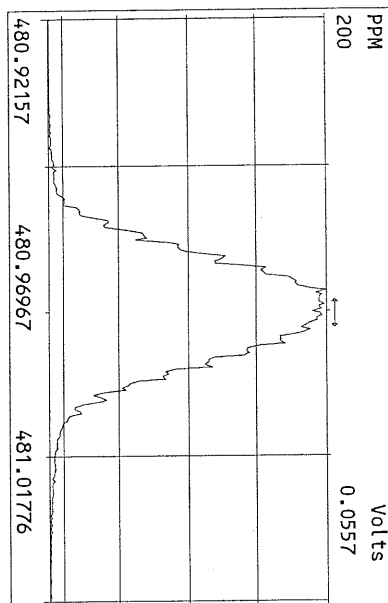
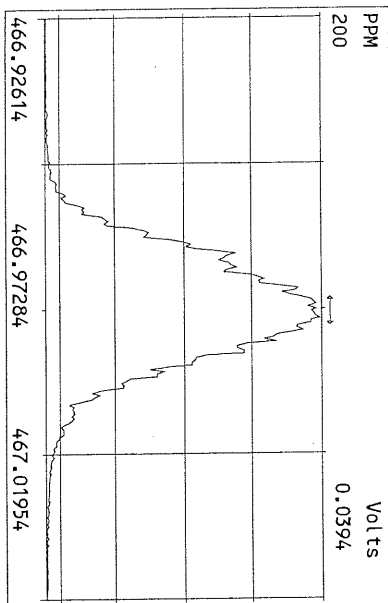
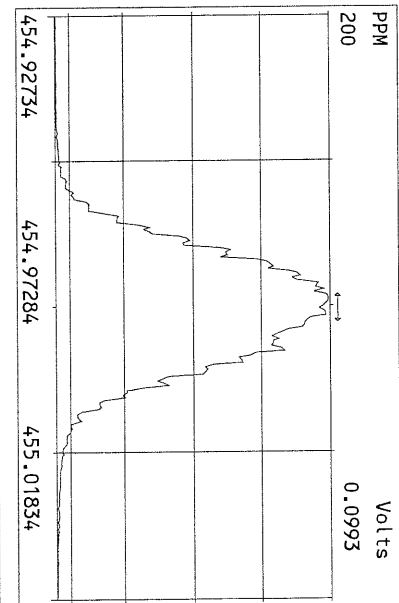
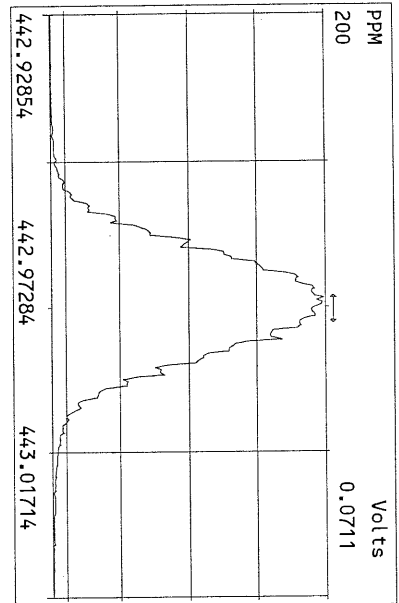
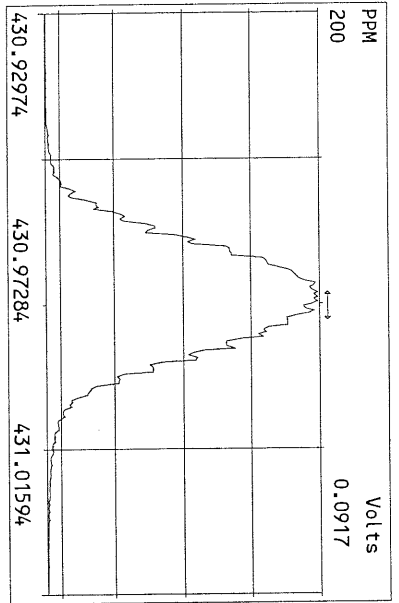


Table of Contents: ARI Job RI46

Client: Floyd-Snider

Project: POS-LLA Lora Lakes Apts. RI

	Page From:	Page To:
Inventory Sheet		
Cover Letter	<u>1</u>	<u>1</u>
Chain of Custody Documentation	<u>2</u>	<u>7</u>
Case Narrative, Data Qualifiers, Control Limits	<u>8</u>	<u>23</u>
<b>SIM Volatile Analysis</b>		
Report and Summary QC Forms	<u>24</u>	<u>58</u>
<b>SIM PAH Analysis</b>		
Report and Summary QC Forms	<u>59</u>	<u>78</u>
<b>PCP/Chlorophenols Analysis</b>		
Report and Summary QC Forms	<u>79</u>	<u>108</u>
<b>TPHD Analysis</b>		
Report and Summary QC Forms	<u>109</u>	<u>123</u>
<b>TPHG/BETX Analysis</b>		
Report and Summary QC Forms	<u>124</u>	<u>160</u>
<b>Metals Analysis</b>		
Report and Summary QC Forms	<u>161</u>	<u>183</u>
<b>General Chemistry Analysis</b>		
Report and Summary QC Forms	<u>184</u>	<u>196</u>
<b>Subcontracted Analysis</b>		
Report and Summary QC Forms	<u>NA</u>	<u>NA</u>
<b>SIM Volatile Raw Data</b>		
Initial Calibration	<u>197</u>	<u>276</u>
Run Logs, Continuing Calibrations, and Raw Data	<u>277</u>	<u>386</u>
<b>SIM PAH Raw Data</b>		
Extractions Bench Sheets and Notes	<u>387</u>	<u>389</u>
Initial Calibration	<u>390</u>	<u>429</u>
Run Logs, Continuing Calibrations, and Raw Data	<u>430</u>	<u>506</u>

E. Doshi  
Signature

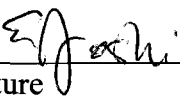
August-24-2010  
Date

Table of Contents: ARI Job RI46

Client: Floyd-Snider

Project: POS-LLA Lora Lakes Apts. RI

	Page From:	Page To:
<b>PCP/Chlorophenols Raw Data</b>		
Extractions Bench Sheets and Notes	<u>507</u>	<u>509</u>
Initial Calibration	<u>510</u>	<u>564</u>
Run Logs, Continuing Calibrations, and Raw Data	<u>565</u>	<u>609</u>
<b>TPHD Raw Data</b>		
Extractions Bench Sheets and Notes	<u>610</u>	<u>612</u>
Initial Calibration	<u>613</u>	<u>694</u>
Run Logs, Continuing Calibrations, and Raw Data	<u>695</u>	<u>752</u>
<b>TPHG/BETX Raw Data</b>		
Initial Calibration	<u>753</u>	<u>820</u>
Run Logs, Continuing Calibrations, and Raw Data	<u>821</u>	<u>903</u>
<b>Metals Raw Data</b>		
Preparation Bench Sheets and Notes	<u>904</u>	<u>906</u>
Run Logs, Calibrations, and Raw Data	<u>907</u>	<u>966</u>
<b>General Chemistry Raw Data</b>		
Analyst Notes and Raw Data	<u>967</u>	<u>971</u>

  
Signature

August-24-2010  
Date



**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

September 9, 2010

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

**RE: Lora Lake RI, POS-LLA**  
**ARI Job No: RI46**

Dear Ms. Massingale:

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

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

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

Sincerely,

ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Susan D. Dunning".

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

Enclosures

cc: eFile RI46

SD/co

**Chain of Custody Documentation**

**ARI Job ID: RI46**

**RI46:00002**



# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: Standard Turn-around Requested: Standard Page: 2 of 2

ARI Client Company: Floyd Snider Phone: 24-292-2578 Date: 8/12/10 Ice Present?

Client Contact: M.M. Culligan / J. Messinger No. of Coolers: 1025 Cooler Temps: NMTPH-6x

Client Project Name: Low-Lab Apts. R1



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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested			Notes/Comments												
					No. of Coolers	Cooler Temps	Ice Present?													
081110-TB	8/11/10	17:00	W	2	✓			Trip Blank												
081210-TB	8/12/10	17:10	W	2	✓			Trip Blank												
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%;">Relinquished by: (Signature) <u>Tucker Stevens</u></td> <td style="width:33%;">Received by: (Signature) <u>[Signature]</u></td> <td style="width:33%;">Received by: (Signature)</td> </tr> <tr> <td>Printed Name: <u>Tucker Stevens</u></td> <td>Printed Name: <u>C. OREIRO</u></td> <td>Printed Name:</td> </tr> <tr> <td>Company: <u>Floyd Snider</u></td> <td>Company: <u>ARI</u></td> <td>Company:</td> </tr> <tr> <td>Date &amp; Time: <u>8/12/10 17:46</u></td> <td>Date &amp; Time: <u>8/12/10 17:40</u></td> <td>Date &amp; Time:</td> </tr> </table>									Relinquished by: (Signature) <u>Tucker Stevens</u>	Received by: (Signature) <u>[Signature]</u>	Received by: (Signature)	Printed Name: <u>Tucker Stevens</u>	Printed Name: <u>C. OREIRO</u>	Printed Name:	Company: <u>Floyd Snider</u>	Company: <u>ARI</u>	Company:	Date & Time: <u>8/12/10 17:46</u>	Date & Time: <u>8/12/10 17:40</u>	Date & Time:
Relinquished by: (Signature) <u>Tucker Stevens</u>	Received by: (Signature) <u>[Signature]</u>	Received by: (Signature)																		
Printed Name: <u>Tucker Stevens</u>	Printed Name: <u>C. OREIRO</u>	Printed Name:																		
Company: <u>Floyd Snider</u>	Company: <u>ARI</u>	Company:																		
Date & Time: <u>8/12/10 17:46</u>	Date & Time: <u>8/12/10 17:40</u>	Date & Time:																		

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

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

RI 45: 00004





# Cooler Receipt Form

ARI Client: Floyd Snider

Project Name: Lora Lake Apts. RI

COC No(s): \_\_\_\_\_ (NA)

Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other: \_\_\_\_\_

Assigned ARI Job No: RF46

Tracking No: \_\_\_\_\_ (NA)

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO  
 Were custody papers included with the cooler? ..... YES NO  
 Were custody papers properly filled out (ink, signed, etc.) ..... YES NO  
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 12.3 3.9 5.7 5.8 5.1 5.1  
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: NO Date: 8/12/10 Time: 1740

**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

Was a temperature blank included in the cooler? ..... YES (NO)  
 What kind of packing material was used? ... (Bubble Wrap) (Wet Ice) Gel Packs Baggies (Foam Block) Paper Other: \_\_\_\_\_  
 Was sufficient ice used (if appropriate)? ..... NA YES (NO)  
 Were all bottles sealed in individual plastic bags? ..... YES (NO)  
 Did all bottles arrive in good condition (unbroken)? ..... YES NO  
 Were all bottle labels complete and legible? ..... YES NO  
 Did the number of containers listed on COC match with the number of containers received? ..... YES NO  
 Did all bottle labels and tags agree with custody papers? ..... YES NO  
 Were all bottles used correct for the requested analyses? ..... YES NO  
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES (NO)  
 Were all VOC vials free of air bubbles? ..... NA YES (NO)  
 Was sufficient amount of sample sent in each bottle? ..... YES NO  
 Date VOC Trip Blank was made at ARI..... NA 8/20/10  
 Was Sample Split by ARI : (NA) YES Date/Time: \_\_\_\_\_ Equipment: \_\_\_\_\_ Split by: \_\_\_\_\_

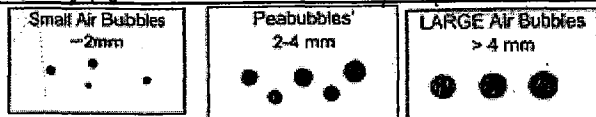
Samples Logged by: AV Date: 8/13/10 Time: 835

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

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

**Additional Notes, Discrepancies, & Resolutions:**

TB=081110-TB IN COOLER WITH ~~MW-14-081110, MW-04-AV-10/11-AV~~ 08/11/10 vials  
 TB=081210-TB IN COOLER WITH 8/12/10 vials. Trip Blanks = 4Lg  
 By: AV Date: 8/13/10 **Samples (Metals) A-E in small 10's**



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





ARI Job No: RI46  
 PC: Sue D.  
 VTSR: 08/12/10

Inquiry Number: NONE  
 Analysis Requested: 08/13/10  
 Contact: Massingale, Jessi  
 Client: Floyd-Snyder  
 Logged by: AV  
 Sample Set Used: Yes-481  
 Validatable Package: No  
 Deliverables:

Project #: POS-LLA  
 Project: Lora Lakes Apts. RI  
 Sample Site:  
 SDG No:  
 Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/ BY
10-19678 <b>RI46A</b>	MW-02-081110						DIS Fail									N						
10-19679 <b>RI46B</b>	MW-03-081110						DIS									N						
10-19680 <b>RI46C</b>	MW-03-081110-D						DIS									N						
10-19681 <b>RI46D</b>	MW-04-081110						DIS									N						
10-19682 <b>RI46E</b>	MW-14-081110						DIS									N						
10-19683 <b>RI46F</b>	MW-12-081210						DIS									N						
10-19684 <b>RI46G</b>	MW-13-081210						DIS									N						
10-19685 <b>RI46H</b>	MW-10-081210						DIS									N						
10-19686 <b>RI46I</b>	MW-11-081210						DIS									N						

\* Metals unfiltered/unpreserved

**Case Narrative, Data Qualifiers, Control Limits**

**ARI Job ID: RI46**



## Case Narrative

**Client:** Floyd Snider  
**Project:** Lora Lake RI, POS-LLA  
**ARI Job No.:** RI46

### Sample receipt

Analytical Resources, Inc. (ARI) accepted ten water samples and two trip blanks on August 12, 2010 under ARI job RI46. The cooler temperatures measured by IR thermometer following ARI SOP were between 3.9 and 12.3°C. Select sample containers were archived upon receipt. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

Dioxin/Furan analyses were subcontracted to Frontier Analytical Laboratory in El Dorado Hills, CA. The dioxin data on CD as generated by Frontier is forwarded with this package.

### SIM Volatiles by SW8260C

The samples and associated laboratory QC were analyzed within method recommended holding times.

Initial and continuing calibrations were within method requirements. Internal standard areas were within control limits.

The surrogate percent recoveries of d4-1,2-Dichloroethane were outside the control limits high for several samples. The samples were undetected for all requested compounds. No corrective action was taken.

The surrogate percent recovery of d4-1,2-Dichloroethane was outside the control limits high for the matrix spike duplicate of sample **MW-12-081210**. No corrective action is required for matrix QC.

The method blanks were clean at the reporting limit. The LCS and LCSD percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries were within advisory control limits.

### Low-Level SIM PAHs by SW8270D

The samples were initially extracted and analyzed within the method recommended holding times.



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

The surrogate percent recoveries were within control limits.

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

In response to comments from NELAP and DOD auditors, ARI will now report the 'total' benzofluoranthenes rather than the individual compounds. This total will include the response of the b, k and j isomers.

**Pentachlorophenol by SW8041**

The samples were extracted and analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limit. The LCS percent recovery was within control limits.

**Acid/Silica Cleaned NWTPH-Dx**

The samples were extracted and analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

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

**BETX by SW8021B Mod and NWTPH-Gx**

The samples and associated laboratory QC were analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.



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

The matrix spike and matrix spike duplicate percent recoveries were within advisory control limits.

### **Total Arsenic and Lead by 200.8**

The samples and associated laboratory QC were digested and analyzed within the method recommended holding time.

The method blank was clean at the reporting limits. The LCS percent recoveries were within control limits.

The matrix spike percent recoveries and duplicate RPDs were within control limits.

### **General Chemistry (pH and TSS)**

The samples and associated laboratory QC were prepared and analyzed within the method recommended holding time for TSS. The samples collected on 8/12/10 for pH were analyzed with method recommended holding times. The samples collected on 8/11/10 for pH were analyzed outside the method recommended holding times.

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

The replicate RPD was within the control limit.



## Data Reporting Qualifiers

Effective 7/10/2009

### Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but  $\geq$  the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is  $\leq 5$  times the Reporting Limit and the replicate control limit defaults to  $\pm 1$  RL instead of the normal 20% RPD

### Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- \* Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria ( $< 20\%$  RSD,  $< 20\%$  Drift or minimum RRF).
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte





- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by  $\geq 40\%$  RPD with no obvious chromatographic interference

### Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

## SURR SOLUTIONS

LABEL	SOLN ID	TEST	CONC. UG/ML	SOLVENT	EXP.
A	1752-2	ABN	100/150	MEOH	01/22/11
B	1747-2	SIM PNA	15/75	MEOH	10/07/10
C	1705-4	SIM ABN	25/37.5	MEOH	03/08/11
D	1751-1	LOW PCB	0.2	HEXANE	12/29/10
E	1661-2	HERB	62.5	MEOH	10/02/10
F	1683-3	PCP	12.5	ACETONE	12/09/10
G	1707-2	1,4DIOXANE	100	MEOH	03/19/11
H	1723-2	OP-PEST	25	MEOH	04/02/11
I	1747-1	LOW S. PNA	1.5	MEOH	10/07/10
J	1681-2	TBT-PORE	0.125	MECL2	12/01/10
K	1689-1	MED PCB	20	ACETONE	12/29/10
L	1681-1	TBT	2.5	MECL2	12/01/10
M	1682-1	EPH	1500	MECL2	09/17/10
N	1689-3	PCB	2	ACETONE	12/29/10
O	1755-1	TPH	450	MECL2	06/02/11
P	1742-2	HCID	2250	MECL2	05/13/11
Q	1620-2	EDB	1	MEOH	06/22/10
R	1615-1	RESIN ACID	250	ACETONE	06/17/10
S*	1568-5	PBDE	.25	MEOH	01/13/11
T	1674-2	ALKYL PNA	10	MEOH	07/30/10
U	1633-1	CONGENER	2.5	ACETONE	08/11/10
V					
	*reverified solution				

# LCS SOLUTIONS

8/12/2010

LABL	SOLN ID	TEST	CONC. UG/ML	SOLVENT	EXP.
1	1754-4	PCB 1660	20	ACETONE	03/30/11
2#		BCOC PEST	10	ACETONE	NA
3	1705-3	PEST	02/04/20	ACETONE	03/08/11
4	1744-3	LOW PEST	0.2/0.4/2	ACETONE	03/08/11
5	1677-1	EPH	1500	MECL2	11/12/10
6	1702-2	PCP	12.5/125	ACETONE	02/18/11
7	1750-1	ABN	100	ACETONE	01/31/11
8	1681-4	TBT	2.5	MECL2	12/01/10
9	1682-2	PORE TBT	.125/.25	MECL2	12/01/10
10	1749-1	ABN ACID	100/200	MECL2	01/28/11
11	1730-2	TPHD	15000	ACETONE	04/26/11
12	1749-2	ABN BASE	200	MEOH	01/29/11
13	1716-2	LOW PCB	2	ACETONE	03/30/11
14	1753-3	LOW ABN ACID	10/20	MEOH	01/28/11
15	1726-3	SIM PNA	15/75	MEOH	10/07/10
16	1707-1	DIOXANE	100	MEOH	11/05/10
17	1644-1	1248 PCB	10	ACETONE	09/10/10
18	1726-4	LOW SIM PNA	1.5	ACETONE	10/07/10
19	1746-3	AK103	7500	ACETONE	12/01/10
20	1682-4	PNA	100	ACETONE	12/04/10
21	1725-1	SKY/BHT	100	MEOH	03/18/11
22	1728-1	HERB	12.5/12500	MEOH	10/20/10
23	1753-4	LW ABN BASE	20	MEOH	01/29/11
24	1696-1	LOW ABN	10	ACETONE	01/13/11
25#		DIPHENYL	100	MEOH	NA
26	1723-3	OP-PEST	25	MEOH	11/20/10
27	1668-3	STEROLS	200	MEOH	10/30/10
28#	1750-2	ADD. PEST	4	ACETONE	09/03/10
29#		DECANES	100	MEOH	NA
30	1620-1	EDB/DBCP	0.2	MEOH	06/22/10

# LCS SOLUTIONS

8/12/2010

31	1707-3	TERPINEOL	100	MEOH	03/19/11
32	1619-3	GUAIACOL	50-200	ACETONE	04/30/10
33	1639-3	RETENE	100	MEOH	09/03/10
34	1633-1	CONGENERS	2.5	ACETONE	08/11/10
35	1674-3	ALKYL PNA A	10	MEOH	10/28/10
36	1601-3	ALKYL PNA B	10	MEOH	05/13/10
50	1617-1	FULL RESIN	250	ACETONE	06/17/10
51	1696-3	DDTS	2.5	ACETONE	06/03/10
52	1613-5	1232 PCB	20	ACETONE	06/16/10
53	1703-3	DALAPON	50	MEOH	09/11/10
53	1701-2	PBDE	0.5	ACETONE	02/10/11
54	1753-1	T-CHLORDANE	10	ACETONE	07/21/11
55	1753-2	TOXAPHENE	50	ACETONE	07/21/11
	#=PROJECT SPECIFIC SOLUTION				
	*=REVERIFIED SOLUTION				



<b>Spike Recovery Control Limits for SIM VOA EPA Method SW-846-8260C <sup>(1,2)</sup> Effective 8/1/2010</b>	
Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. <a href="http://www.arilabs.com/portal/downloads/ARI-CLs.zip">http://www.arilabs.com/portal/downloads/ARI-CLs.zip</a>	
<b>Sample Matrix:</b>	Water
<b>Purge Volume:</b>	10 mL
<b>LCS Spike Recovery <sup>(3)</sup></b>	
Vinyl Chloride	74 - <b>120</b>
1,1-Dichloroethene	<b>80 - 120</b>
1,2-Dichloroethane	79 - 134
<i>cis</i> -1,2-Dichloroethene	<b>80 - 120</b>
<i>trans</i> -1,2-Dichloroethene	<b>80 - 120</b>
Trichloroethene	<b>80 - 120</b>
Benzene	<b>80 - 120</b>
Tetrachloroethene	<b>80 - 122</b>
1,1,1,2-Tetrachloroethane	<b>80 - 125</b>
<b>Method Blank/LCS Surrogate Recovery</b>	
d4-1,2-Dichloroethane	80 - <b>120</b>
d8-Toluene	<b>80 - 120</b>
<b>Sample Surrogate Recovery</b>	
d4-1,2-Dichloroethane	<b>80 - 120</b>
d8-Toluene	<b>80 - 120</b>

(1) Control limits calculated using historic data collected from 4/1/05 to 11/15/07

(2) Highlighted control limits (**bold font**) adjusted from the calculated values as follows:

- a) ARI does not use control limits < 10
- b) Control limits for analytes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.

(3) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analytes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.



**Spike Recovery Control Limits for Polycyclic Aromatic Hydrocarbons  
Selected Ion Monitoring (SIM) EPA Method SW-846-8270D-Modified  
Low Level Aqueous Samples<sup>(1,7)</sup>  
Effective 5/1/09**

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

Sample Volume / Final Volume	500 mL to 0.5 mL	
	Control Limits	ME Limits <sup>(2)</sup>
<b>LCS Spike Recovery <sup>(6)</sup></b>		
Napthalene	41 - 101	31 - 111
2-Methylnapthalene	47 - <b>100</b>	39 - 103
1-Methylnapthalene	30 - 160 <sup>(3)</sup>	30 - 160 <sup>(3)</sup>
Acenaphthylene	35 - <b>100</b>	25 - 104
Acenaphthene	43 - 104	33 - 114
Dibenzofuran	37 - <b>100</b>	27 - 108
Fluorene	51 - 103	42 - 112
Phenanthrene	55 - 109	46 - 118
Anthracene	30 - 101	18 - 113
Fluoranthene	49 - 123	37 - 135
Pyrene	48 - 120	36 - 132
Benz(a)anthracene	43 - 113	31 - 125
Chrysene	59 - 112	50 - 121
Benzofluoranthene(s) (Total)	30 - 160 <sup>(8)</sup>	30 - 160 <sup>(8)</sup>
Benzo(a)pyrene	<b>10</b> - <b>100</b>	<b>10</b> - 109
Indeno(1,2,3-cd)pyrene	43 - 112	32 - 124
Dibenzo(a,h)anthracene	42 - 114	30 - 126
Benzo(g,h,i)perylene	31 - 118	17 - 133
<b>MB / LCS Surrogate Recovery</b>		
d10-2-Methylnaphthalene	42 - <b>100</b>	(4)
d14-Dibenzo(a,h)anthracene	40 - 125	(4)
<b>Sample Surrogate Recovery</b>		
d10-2-Methylnaphthalene	31 - 109	(4)
d14-Dibenzo(a,h)anthracene	<b>10</b> - 133	(4)

(1) ARI's Control limits calculated using all available spike recovery data from 1/1/08 through 12/1/08.

(2) **ME** = A **marginal exceedance** defined in the NELAC Standard <sup>(5)</sup> as beyond the LCS-CL but still within the ME limits. ME limits are between 3 and 4 standard deviations around the mean. A maximum of one marginal exceedance is acceptable. Two or more marginal exceedances require corrective action.

(3) 30 – 160 are default, advisory control limits used when there is insufficient data to calculate historic control limits. **DO NOT** use these limits as the sole reason to reject the data from a batch of analyses.

(4) Marginal Exceedances not allowed for surrogate standards.

(5) **2003 NELAC Standard (EPA/600/R-04/003), July 2003**, Chapter 5, pages 251-252.

(6) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.

(7) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.

(8) Default limits pending generation of historic limits for total benzofluoranthrenes (7/29/10)



**Spike Recovery Control Limits for Chlorinated Phenols**  
**EPA Method SW-846-8041<sup>(1,2)</sup>**  
Effective 5/1/09

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

	<b>ARI's Calculated Control Limits</b>	
<b>Sample Matrix:</b>	Water	Soil / Sediment
<b>Sample Amount / Final Volume:</b>	500 / 50 mL	10 g / 25 mL
<b>LCS Spike Recovery<sup>(3)</sup></b>		
Pentachlorophenol	27 - 115	<b>10 - 162</b>
<b>Method Blank/LCS Surrogate Recovery</b>		
2,4,6-Tribromophenol	40 - 130	50 - 115
<b>Sample Surrogate Recovery</b>		
2,4,6-Tribromophenol	11 - 156	<b>10 - 146</b>

(1) ARI's Control limits calculated using all available spike recovery data from 1/1/08 through 12/1/08.

(2) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10.

(3) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.



**Spike Recovery Control Limits Hydrocarbon Identification (NWTPH-HCID)  
and Diesel Range Petroleum Hydrocarbons (NWTPH-D & AK-102) <sup>(1)</sup>**  
Effective 5/1/09

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

<b>Method:</b>	<b>NWTPH-HCID <sup>(2)</sup></b>	<b>NWTPH-D</b>		<b>AK102 <sup>(2)</sup></b>
<b>Sample Matrix:</b>	Water& Soil	Water	Soil	Water & Soil
<b>Preparation:</b>	500 to 1 mL	500 to 1 mL	10g to 1 mL	500 to 1 mL or 10g to 1 mL
<b>LCS Spike Recovery <sup>(3)</sup></b>				
Diesel	-- - --	56 - 103	55 - 104	75 - 125
Diesel with Acid & Silica Clean-up	-- - --	43 - 100	54 - 96	(4)
Diesel with Silica Clean-up	-- --	43 - 100	54 - 96	75 - 125
<b>Method Blank/LCS Surrogate Recovery</b>				
o-Terphenyl	-- - --	57 - 120	58 - 121	60 - 120
o-Terphenyl with Acid & Silica Clean-up	-- - --	51 - 120	63 - 115	(4)
o-Terphenyl Silica Clean-up		51 - 120	63 - 115	60 - 120
<b>Sample Surrogate Recovery</b>				
o-Terphenyl	50 - 150	35 - 131	53 - 118	50 - 150
o-Terphenyl with Acid & Silica Clean-up	-- - --	41 - 121	49 - 120	(4)
o-Terphenyl with Silica Clean-up		41 - 121	49 - 120	50 - 150

1. Control Limits calculated using all data generated 1/1/08 through 12/31/08
2. Method specified, non-prescriptive limits. The NWTPH-HCID Method does not include LCS or MS analyses.
3. Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analyzes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.
4. Alaska State UST Methods do not allow acid cleanup of sample extracts.





**Spike Recovery Control Limits BTEX – EPA Method 8021 &  
Gasoline – Methods NWTPH-G and AK101<sup>(1,2)</sup>**  
Effective 5/1/09

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

Sample Matrix:	Aqueous Samples		Soil / Sediment Samples	
Analytical Method:	Method 8021B	NWTPH-G AK-101	Method 8021B	NWTPH-G AK-101
<b>LCS Spike Recovery<sup>(3)</sup></b>				
Benzene	73 - <b>120</b>		72 - <b>120</b>	
Toluene	73 - <b>120</b>		72 - <b>120</b>	
Ethyl benzene	69 - <b>120</b>		71 - <b>120</b>	
<i>m,p</i> -Xylenes	72 - <b>120</b>		72 - <b>120</b>	
<i>o</i> -Xlyene	73 - <b>120</b>		72 - <b>120</b>	
MTBE	30 - 182		40 - 163	
Gasoline		75 - 124		74 - 124
<b>Method Blank/LCS Surrogate Recovery</b>				
Trifluorotoluene (TFT)	79 - <b>120</b>	<b>80 - 120</b>	80 - <b>120</b>	<b>80 - 120</b>
Bromobenzene	79 - <b>120</b>	<b>80 - 120</b>	77 - <b>120</b>	<b>80 - 120</b>
<b>Sample Surrogate Recovery</b>				
Trifluorotoluene (TFT)	<b>80 - 120</b>	<b>80 - 120</b>	68 - 124	66 - 123
Bromobenzene	<b>80 - 120</b>	<b>80 - 120</b>	62 - 134	62 - 130

(1) Control Limits calculated using all data generated 1/1/08 through 12/31/08.

(2) Highlighted control limits (bold font) are adjusted from the calculated values as follows:

a) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.

b) Control limits for analytes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.

(3) Laboratory Control Sample (LCS) spike recovery control limits also used as advisory control limits for sample matrix spike (MS) analytes. MS recovery values are advisory and not used to assess the acceptability of an analytical batch.



### Summary of Laboratory Control Limits Metals Analyses (All Methods & Sample Matrices)

Effective 5/1/09

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

Element	Matrix Spike Recovery	LCS Recovery	Replicate RPD
Aluminum	75 - 125	80 - 120	≤ 20%
Antimony	75 - 125	80 - 120	≤ 20%
Arsenic	75 - 125	80 - 120	≤ 20%
Barium	75 - 125	80 - 120	≤ 20%
Beryllium	75 - 125	80 - 120	≤ 20%
Boron	75 - 125	80 - 120	≤ 20%
Cadmium	75 - 125	80 - 120	≤ 20%
Calcium	75 - 125	80 - 120	≤ 20%
Chromium	75 - 125	80 - 120	≤ 20%
Cobalt	75 - 125	80 - 120	≤ 20%
Copper	75 - 125	80 - 120	≤ 20%
Iron	75 - 125	80 - 120	≤ 20%
Lead	75 - 125	80 - 120	≤ 20%
Magnesium	75 - 125	80 - 120	≤ 20%
Manganese	75 - 125	80 - 120	≤ 20%
Mercury	75 - 125	80 - 120	≤ 20%
Nickel	75 - 125	80 - 120	≤ 20%
Potassium	75 - 125	80 - 120	≤ 20%
Selenium	75 - 125	80 - 120	≤ 20%
Silica	75 - 125	80 - 120	≤ 20%
Silver	75 - 125	80 - 120	≤ 20%
Sodium	75 - 125	80 - 120	≤ 20%
Strontium	75 - 125	80 - 120	≤ 20%
Thallium	75 - 125	80 - 120	≤ 20%
Vanadium	75 - 125	80 - 120	≤ 20%
Zinc	75 - 125	80 - 120	≤ 20%



**Spike Recovery Control Limits for Conventional Wet Chemistry**  
Effective 5/1/09

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

Sample Matrix:	ARI's Control Limits	
	Water	Soil / Sediment
<b>Matrix Spike Recoveries</b>	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 - 125	75 - 125
Chloride	75 - 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
<b>Duplicate RPDs</b>		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

**SIM Volatile Analysis  
Report and Summary QC Forms**

**ARI Job ID: RI46**

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: MW-02-081110**

Page 1 of 1

**SAMPLE**

Lab Sample ID: RI46A


QC Report No: RI46-Floyd-Snider

LIMS ID: 10-19678

Project: Lora Lakes Apts. RI

Matrix: Water

POS-LLA

Data Release Authorized: 

Date Sampled: 08/11/10

Reported: 08/25/10

Date Received: 08/12/10

Instrument/Analyst: NT7/PKC

Sample Amount: 10.0 mL

Date Analyzed: 08/20/10 12:23

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	122%
d8-Toluene	105%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: MW-03-081110  
Page 1 of 1 SAMPLE

Lab Sample ID: RI46B  
LIMS ID: 10-19679  
Matrix: Water  
Data Release Authorized: *AS*  
Reported: 08/25/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10

Instrument/Analyst: NT7/PKC  
Date Analyzed: 08/20/10 12:49

Sample Amount: 10.0 mL  
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	112%
d8-Toluene	105%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: MW-03-081110-D

Page 1 of 1

**SAMPLE**

Lab Sample ID: RI46C

QC Report No: RI46-Floyd-Snider

LIMS ID: 10-19680

Project: Lora Lakes Apts. RI

Matrix: Water

POS-LLA

Data Release Authorized: *AS*

Date Sampled: 08/11/10

Reported: 08/25/10

Date Received: 08/12/10

Instrument/Analyst: NT7/PKC

Sample Amount: 10.0 mL

Date Analyzed: 08/20/10 13:15

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	124%
d8-Toluene	104%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: MW-04-081110

Page 1 of 1

**SAMPLE**

Lab Sample ID: RI46D


QC Report No: RI46-Floyd-Snider

LIMS ID: 10-19681

Project: Lora Lakes Apts. RI

Matrix: Water

POS-LLA

Data Release Authorized: 

Date Sampled: 08/11/10

Reported: 08/25/10

Date Received: 08/12/10

Instrument/Analyst: NT7/PKC

Sample Amount: 10.0 mL

Date Analyzed: 08/20/10 13:40

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	118%
d8-Toluene	105%



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: MW-14-081110

Page 1 of 1

**SAMPLE**

Lab Sample ID: RI46E


QC Report No: RI46-Floyd-Snider

LIMS ID: 10-19682

Project: Lora Lakes Apts. RI

Matrix: Water

POS-LLA

Data Release Authorized: 

Date Sampled: 08/11/10

Reported: 08/25/10

Date Received: 08/12/10

Instrument/Analyst: NT7/PKC

Sample Amount: 10.0 mL

Date Analyzed: 08/20/10 14:06

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	125%
d8-Toluene	106%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: MW-12-081210**  
 Page 1 of 1 **SAMPLE**

Lab Sample ID: RI46F  
 LIMS ID: 10-19683  
 Matrix: Water  
 Data Release Authorized: *B*  
 Reported: 08/25/10

QC Report No: RI46-Floyd-Snider  
 Project: Lora Lakes Apts. RI  
 POS-LLA  
 Date Sampled: 08/12/10  
 Date Received: 08/12/10

Instrument/Analyst: NT7/PKC  
 Date Analyzed: 08/20/10 14:32

Sample Amount: 10.0 mL  
 Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	126%
d8-Toluene	106%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: MW-13-081210

Page 1 of 1

**SAMPLE**

Lab Sample ID: RI46G

QC Report No: RI46-Floyd-Snider

LIMS ID: 10-19684

Project: Lora Lakes Apts. RI

Matrix: Water

POS-LLA

Data Release Authorized: *AB*

Date Sampled: 08/12/10

Reported: 08/25/10

Date Received: 08/12/10

Instrument/Analyst: NT7/PKC

Sample Amount: 10.0 mL

Date Analyzed: 08/23/10 15:51

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
<b>127-18-4</b>	<b>Tetrachloroethene</b>	<b>0.020</b>	<b>0.035</b>	

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	106%
d8-Toluene	99.5%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: MW-10-081210

Page 1 of 1

**SAMPLE**

Lab Sample ID: RI46H

QC Report No: RI46-Floyd-Snider

LIMS ID: 10-19685

Project: Lora Lakes Apts. RI

Matrix: Water

POS-LLA

Data Release Authorized: *AB*

Date Sampled: 08/12/10

Reported: 08/25/10

Date Received: 08/12/10

Instrument/Analyst: NT7/PKC

Sample Amount: 10.0 mL

Date Analyzed: 08/20/10 15:23

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	128%
d8-Toluene	105%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: MW-11-081210

Page 1 of 1

**SAMPLE**

Lab Sample ID: RI46I


QC Report No: RI46-Floyd-Snider

LIMS ID: 10-19686

Project: Lora Lakes Apts. RI

Matrix: Water

POS-LLA

Data Release Authorized: 

Date Sampled: 08/12/10

Reported: 08/25/10

Date Received: 08/12/10

Instrument/Analyst: NT7/PKC

Sample Amount: 10.0 mL

Date Analyzed: 08/20/10 15:49

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	128%
d8-Toluene	105%

**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: 081110-TB**  
 Page 1 of 1 Trip Blanks

Lab Sample ID: RI46J


QC Report No: RI46-Floyd-Snider

LIMS ID: 10-19687

Project: Lora Lakes Apts. RI

Matrix: Water

POS-LLA

Data Release Authorized: 

Date Sampled: 08/11/10

Reported: 08/25/10

Date Received: 08/12/10

Instrument/Analyst: NT7/PKC

Sample Amount: 10.0 mL

Date Analyzed: 08/20/10 11:07

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U


Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	120%
d8-Toluene	105%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: 081210-TB  
Page 1 of 1 Trip Blanks

Lab Sample ID: RI46K  
LIMS ID: 10-19688  
Matrix: Water  
Data Release Authorized:   
Reported: 08/25/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
POS-LLA  
Date Sampled: 08/12/10  
Date Received: 08/12/10

Instrument/Analyst: NT7/PKC  
Date Analyzed: 08/20/10 11:32

Sample Amount: 10.0 mL  
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	115%
d8-Toluene	105%

**SW8260-SIM SURROGATE RECOVERY SUMMARY**

Matrix: Water

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
POS-LLA

<u>Client ID</u>	<u>DCE</u>	<u>TOL</u>	<u>TOT OUT</u>
MB-082010	116%	106%	0
LCS-082010	110%	108%	0
LCSD-082010	110%	107%	0
MW-02-081110	122%*	105%	1
MB-082310	110%	99.7%	0
LCS-082310	96.8%	99.7%	0
LCSD-082310	103%	90.4%	0
MW-03-081110	112%	105%	0
MW-03-081110-D	124%*	104%	1
MW-04-081110	118%	105%	0
MW-14-081110	125%*	106%	1
MW-12-081210	126%*	106%	1
MW-12-081210-MS	92.8%	101%	0
MW-12-081210-MSD	124%*	108%	1
MW-13-081210	106%	99.5%	0
MW-10-081210	128%*	105%	1
MW-11-081210	128%*	105%	1
081110-TB	120%	105%	0
081210-TB	115%	105%	0

**LCS/MB LIMITS      QC LIMITS**


(DCE) = d4-1,2-Dichloroethane      (80-120)      (80-120)  
(TOL) = d8-Toluene      (80-120)      (80-120)

Prep Method: SW5030  
Log Number Range: 10-19678 to 10-19688



**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: MW-12-081210  
Page 1 of 1 MATRIX SPIKE

Lab Sample ID: RI46F  
LIMS ID: 10-19683  
Matrix: Water  
Data Release Authorized:   
Reported: 08/25/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
POS-LLA  
Date Sampled: 08/12/10  
Date Received: 08/12/10

Instrument/Analyst MS: NT7/PKC  
MSD: NT7/PKC  
Date Analyzed MS: 08/23/10 17:34  
MSD: 08/20/10 19:39

Sample Amount MS: 10.0 mL  
MSD: 10.0 mL  
Purge Volume MS: 10.0 mL  
MSD: 10.0 mL

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
1,2-Dichloroethane	< 0.020 U	1.00	1.00	100%	1.27	1.00	127%	23.8%
cis-1,2-Dichloroethene	< 0.020 U	0.987	1.00	98.7%	1.12	1.00	112%	12.6%
trans-1,2-Dichloroethene	< 0.020 U	0.976	1.00	97.6%	1.13	1.00	113%	14.6%
Trichloroethene	< 0.020 U	0.981	1.00	98.1%	0.961	1.00	96.1%	2.1%
Tetrachloroethene	< 0.020 U	1.02	1.00	102%	1.08	1.00	108%	5.7%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: MW-12-081210  
Page 1 of 1 MATRIX SPIKE

Lab Sample ID: RI46F

QC Report No: RI46-Floyd-Snider

LIMS ID: 10-19683

Project: Lora Lakes Apts. RI

Matrix: Water

POS-LLA

Data Release Authorized: *AS*

Date Sampled: 08/12/10

Reported: 08/25/10

Date Received: 08/12/10

Instrument/Analyst: NT7/PKC

Sample Amount: 10.0 mL

Date Analyzed: 08/23/10 17:34

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	---	
156-59-2	cis-1,2-Dichloroethene	0.020	---	
156-60-5	trans-1,2-Dichloroethene	0.020	---	
79-01-6	Trichloroethene	0.020	---	
127-18-4	Tetrachloroethene	0.020	---	

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	92.8%
d8-Toluene	101%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: MW-12-081210

Page 1 of 1

MATRIX SPIKE DUP

Lab Sample ID: RI46F


QC Report No: RI46-Floyd-Snider

LIMS ID: 10-19683

Project: Lora Lakes Apts. RI

Matrix: Water

POS-LLA

Data Release Authorized: 

Date Sampled: 08/12/10

Reported: 08/25/10

Date Received: 08/12/10

Instrument/Analyst: NT7/PKC

Sample Amount: 10.0 mL

Date Analyzed: 08/20/10 19:39

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	---	
156-59-2	cis-1,2-Dichloroethene	0.020	---	
156-60-5	trans-1,2-Dichloroethene	0.020	---	
79-01-6	Trichloroethene	0.020	---	
127-18-4	Tetrachloroethene	0.020	---	

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	124%
d8-Toluene	108%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: LCS-082010

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-082010

LIMS ID: 10-19678

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 08/25/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: NA

Date Received: NA

Instrument/Analyst LCS: NT7/PKC

LCSD: NT7/PKC

Date Analyzed LCS: 08/20/10 09:44

LCSD: 08/20/10 10:10

Sample Amount LCS: 10.0 mL

LCSD: 10.0 mL

Purge Volume LCS: 10.0 mL

LCSD: 10.0 mL

Analyte	LCS	Spike		LCS Recovery	LCSD	Spike		RPD
		Added-LCS	Recovery			Added-LCSD	Recovery	
1,2-Dichloroethane	0.998	1.00	99.8%	1.03	1.00	103%	3.2%	
cis-1,2-Dichloroethene	0.959	1.00	95.9%	0.970	1.00	97.0%	1.1%	
trans-1,2-Dichloroethene	0.965	1.00	96.5%	0.977	1.00	97.7%	1.2%	
Trichloroethene	0.895	1.00	89.5%	0.893	1.00	89.3%	0.2%	
Tetrachloroethene	1.01	1.00	101%	1.00	1.00	100%	1.0%	

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

**Volatile Surrogate Recovery**

	LCS	LCSD
d4-1,2-Dichloroethane	110%	110%
d8-Toluene	108%	107%

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: LCS-082310

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-082310


QC Report No: RI46-Floyd-Snider

LIMS ID: 10-19679

Project: Lora Lakes Apts. RI

Matrix: Water

POS-LLA

Data Release Authorized: 

Date Sampled: NA

Reported: 08/25/10

Date Received: NA

Instrument/Analyst LCS: NT7/PKC

Sample Amount LCS: 10.0 mL

LCSD: NT7/PKC

LCSD: 10.0 mL

Date Analyzed LCS: 08/23/10 14:27

Purge Volume LCS: 10.0 mL

LCSD: 08/23/10 14:50

LCSD: 10.0 mL

Analyte	LCS	Spike		LCSD	Spike		RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
1,2-Dichloroethane	0.974	1.00	97.4%	1.19	1.00	119%	20.0%
cis-1,2-Dichloroethene	0.964	1.00	96.4%	1.17	1.00	117%	19.3%
trans-1,2-Dichloroethene	0.963	1.00	96.3%	1.16	1.00	116%	18.6%
Trichloroethene	0.914	1.00	91.4%	1.12	1.00	112%	20.3%
Tetrachloroethene	0.943	1.00	94.3%	1.14	1.00	114%	18.9%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

**Volatile Surrogate Recovery**

	LCS	LCSD
d4-1,2-Dichloroethane	96.8%	103%
d8-Toluene	99.7%	90.4%

4A  
VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0820

Lab Name: ANALYTICAL RESOURCES, INC  
 ARI Job No: RI46  
 Lab File ID: 08201005  
 Date Analyzed: 08/20/10  
 Instrument ID: NT7

Client: FLOYD-SNIDER  
 Project: LORA LAKE APTS RI  
 Lab Sample ID: MB0820  
 Time Analyzed: 1035  
 Heated Purge: (Y/N) N

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
	=====	=====	=====	=====
01	LCS0820	LCS0820	08201003	0944
02	LCSD0820	LCSD0820	08201004	1010
03	081110-TB	RI46J	08201006	1107
04	081210-TB	RI46K	08201007	1132
05	081310-TB	RI65F	08201008	1158
06	MW-02-081110	RI46A	08201009	1223
07	MW-03-081110	RI46B	08201010	1249
08	MW-03-081110	RI46C	08201011	1315
09	MW-04-081110	RI46D	08201012	1340
10	MW-14-081110	RI46E	08201013	1406
11	MW-12-081210	RI46F	08201014	1432
12	MW-10-081210	RI46H	08201016	1523
13	MW-11-081210	RI46I	08201017	1549
14	MW-08-081310	RI65B	08201019	1640
15	MW-07-081310	RI65C	08201020	1705
16	MW-08-081310	RI65BMS	08201023	1822
17	MW-08-081310	RI65BMSD	08201024	1848
18	MW-12-081210	RI46FMSD	08201026	1939
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

---

**ORGANICS ANALYSIS DATA SHEET**

Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: MB-082010


Page 1 of 1

**METHOD BLANK**

Lab Sample ID: MB-082010

LIMS ID: 10-19678

Matrix: Water

Data Release Authorized: 

Reported: 08/25/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: NA

Date Received: NA

Instrument/Analyst: NT7/PKC

Date Analyzed: 08/20/10 10:35

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	116%
d8-Toluene	106%

4A  
VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0823
--------

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

ARI Job No: RI46

Project: LORA LAKE APTS RI

Lab File ID: 08231016

Lab Sample ID: MB0823

Date Analyzed: 08/23/10

Time Analyzed: 1516

Instrument ID: NT7

Heated Purge: (Y/N) N

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	ICV1000	ICV1000	08231013	1326
02	LCS0823	LCS0823	08231014	1427
03	LCSD0823	LCSD0823	08231015	1450
04	MW-13-081210	RI46G	08231017	1551
05	MW-09-081310	RI65A	08231018	1617
06	MW-01-081310	RI65D	08231019	1643
07	MW-05-081310	RI65E	08231020	1708
08	MW-12-081210	RI46FMS	08231021	1734
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

---



---



**ORGANICS ANALYSIS DATA SHEET**

**Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: MB-082310**

Page 1 of 1

**METHOD BLANK**

Lab Sample ID: MB-082310


QC Report No: RI46-Floyd-Snider

LIMS ID: 10-19679

Project: Lora Lakes Apts. RI

Matrix: Water

POS-LLA

Data Release Authorized: 

Date Sampled: NA

Reported: 08/25/10

Date Received: NA

Instrument/Analyst: NT7/PKC

Sample Amount: 10.0 mL

Date Analyzed: 08/23/10 15:16

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
107-06-2	1,2-Dichloroethane	0.020	< 0.020	U
156-59-2	cis-1,2-Dichloroethene	0.020	< 0.020	U
156-60-5	trans-1,2-Dichloroethene	0.020	< 0.020	U
79-01-6	Trichloroethene	0.020	< 0.020	U
127-18-4	Tetrachloroethene	0.020	< 0.020	U

Reported in µg/L (ppb)

**Volatile Surrogate Recovery**

d4-1,2-Dichloroethane	110%
d8-Toluene	99.7%

5A  
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

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

Lab Code: ARI Case No.: LORA LAKE APTS RI SDG No.: RI46

Lab File ID: 07211004

BFB Injection Date: 07/21/10

Instrument ID: NT7

BFB Injection Time: 1026

GC Column: RTXVMS ID: 0.18 (mm)

Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	18.2
75	30.0 - 66.0% of mass 95	48.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	0.1 ( 0.2)1
174	50.0 - 101.0% of mass 95	63.8
175	4.0 - 9.0% of mass 174	4.8 ( 7.6)1
176	93.0 - 101.0% of mass 174	62.5 ( 98.0)1
177	5.0 - 9.0% of mass 176	4.2 ( 6.8)2

1-Value is % mass 174

2-Value is % mass 176

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	20 PPT	00200721	07211005	07/21/10	1104
02	50 PPT	00500721	07211006	07/21/10	1130
03	100 PPT	01000721	07211007	07/21/10	1156
04	500 PPT	05000721	07211008	07/21/10	1221
05	1000 PPT	10000721	07211009	07/21/10	1247
06	2000 PPT	20000721	07211010	07/21/10	1313
07	4000 PPT	40000721	07211011	07/21/10	1338
08	ICV 1000 PPT	ICV0721	07211012	07/21/10	1404
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A  
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

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

Lab Code: ARI Case No.: LORA LAKE APTS RI SDG No.: RI46

Lab File ID: 08201001 BFB Injection Date: 08/20/10

Instrument ID: NT7 BFB Injection Time: 0827

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	18.7
75	30.0 - 66.0% of mass 95	47.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.1 ( 0.2)1
174	50.0 - 101.0% of mass 95	58.5
175	4.0 - 9.0% of mass 174	4.2 ( 7.1)1
176	93.0 - 101.0% of mass 174	55.8 ( 95.4)1
177	5.0 - 9.0% of mass 176	3.8 ( 6.9)2

1-Value is % mass 174

2-Value is % mass 176

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CC0820	CC0820	08201002	08/20/10	0905
02	LCS0820	LCS0820	08201003	08/20/10	0944
03	LCSD0820	LCSD0820	08201004	08/20/10	1010
04	MB0820	MB0820	08201005	08/20/10	1035
05	081110-TB	RI46J	08201006	08/20/10	1107
06	081210-TB	RI46K	08201007	08/20/10	1132
07	081310-TB	RI65F	08201008	08/20/10	1158
08	MW-02-081110	RI46A	08201009	08/20/10	1223
09	MW-03-081110	RI46B	08201010	08/20/10	1249
10	MW-03-081110-D	RI46C	08201011	08/20/10	1315
11	MW-04-081110	RI46D	08201012	08/20/10	1340
12	MW-14-081110	RI46E	08201013	08/20/10	1406
13	MW-12-081210	RI46F	08201014	08/20/10	1432
14	MW-10-081210	RI46H	08201016	08/20/10	1523
15	MW-11-081210	RI46I	08201017	08/20/10	1549
16	MW-08-081310	RI65B	08201019	08/20/10	1640
17	MW-07-081310	RI65C	08201020	08/20/10	1705
18	MW-08-081310 MS	RI65BMS	08201023	08/20/10	1822
19	MW-08-081310 MSD	RI65BMSD	08201024	08/20/10	1848
20	MW-12-081210 MSD	RI46FMSD	08201026	08/20/10	1939
21					
22					



FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

ARI Job No: RI46

Project: LORA LAKE APTS RI

Instrument ID: NT7

Calibration Date: 07/21/10

LAB FILE ID: RF20: 07211005    RF50: 07211006    RF100: 07211007  
RF500: 07211008    RF1000: 07211009

COMPOUND	RF20	RF50	RF100	RF500	RF1000
Vinyl Chloride	0.957	0.958	0.770	0.722	0.692
1,1-Dichloroethene	0.688	0.698	0.542	0.507	0.475
cis-1,2-dichloroethene	0.773	0.751	0.641	0.593	0.562
Benzene	2.497	2.342	1.855	1.726	1.541
Trichloroethene	0.488	0.473	0.379	0.364	0.325
Tetrachloroethene	0.434	0.440	0.340	0.324	0.288
1,1,2,2-Tetrachloroethane	0.316	0.335	0.286	0.291	0.268
Trans-1,2-Dichloroethene	0.718	0.768	0.602	0.575	0.541
1,2-Dichloroethane	0.857	0.896	0.755	0.740	0.653
d4-1,2-Dichloroethane	0.547	0.532	0.543	0.486	0.505
d8-Toluene	1.273	1.279	1.280	1.268	1.268

FORM VI VOA

RI46:00049

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

ARI Job No: RI46

Project: LORA LAKE APTS RI

Instrument ID: NT7

Calibration Date: 07/21/10

LAB FILE ID: RF2000: 07211010 RF4000: 07211011

COMPOUND	RF2000	RF4000
Vinyl Chloride	0.677	0.691
1,1-Dichloroethene	0.458	0.470
cis-1,2-dichloroethene	0.546	0.562
Benzene	1.506	1.557
Trichloroethene	0.317	0.329
Tetrachloroethene	0.280	0.286
1,1,2,2-Tetrachloroethane	0.261	0.273
Trans-1,2-Dichloroethene	0.526	0.538
1,2-Dichloroethane	0.669	0.699
d4-1,2-Dichloroethane	0.499	0.499
d8-Toluene	1.285	1.273

FORM VI VOA

RI46:00050

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

ARI Job No: RI46

Project: LORA LAKE APTS RI

Instrument ID: NT7

Calibration Date: 07/21/10

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R <sup>2</sup>
Vinyl Chloride	AVRG	0.781	15.9
1,1-Dichloroethene	AVRG	0.548	18.8
cis-1,2-dichloroethene	AVRG	0.632	14.8
Benzene	LINR		0.9994
Trichloroethene	AVRG	0.382	18.5
Tetrachloroethene	LINR		0.9994
1,1,2,2-Tetrachloroethane	AVRG	0.290	9.3
Trans-1,2-Dichloroethene	AVRG	0.610	15.7
1,2-Dichloroethane	AVRG	0.753	12.3
d4-1,2-Dichloroethane	AVRG	0.516	4.7
d8-Toluene	AVRG	1.275	0.5

<- Indicates value outside QC limits:  
(%RSD < 20% or R<sup>2</sup> > 0.990)

FORM VI VOA

RI46:00051

FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

ARI Job No: RI46

Project: LORA LAKE APTS RI

Instrument ID: NT7

Calibration Date: 08/23/10

LAB FILE ID: RF20: 08231012 RF50: 08231011 RF100: 08231010

RF500: 08231009 RF1000: 08231008

COMPOUND	RF20	RF50	RF100	RF500	RF1000
Vinyl Chloride	0.881	0.850	0.926	0.876	0.867
1,1-Dichloroethene	0.497	0.510	0.542	0.507	0.494
cis-1,2-dichloroethene	0.608	0.579	0.637	0.616	0.601
Benzene	1.968	1.679	1.787	1.631	1.577
Trichloroethene	0.342	0.320	0.342	0.314	0.305
Tetrachloroethene	0.283	0.254	0.284	0.265	0.255
1,1,2,2-Tetrachloroethane	0.232	0.217	0.274	0.256	0.260
Trans-1,2-Dichloroethene	0.580	0.578	0.643	0.598	0.577
1,2-Dichloroethane	0.806	0.757	0.916	0.850	0.820
d4-1,2-Dichloroethane	0.748	0.710	0.764	0.650	0.651
d8-Toluene	1.364	1.363	1.380	1.389	1.389

FORM VI VOA

RI46:00052



FORM 6  
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

ARI Job No: RI46

Project: LORA LAKE APTS RI

Instrument ID: NT7

Calibration Date: 08/23/10

LAB FILE ID: RF2000: 08231007 RF4000: 08231006

COMPOUND	TYPE	RF	CURVE OR R <sup>2</sup>	AVE	%RSD
Vinyl Chloride	0.905	0.972	AVRG	0.897	4.6
1,1-Dichloroethene	0.513	0.510	AVRG	0.511	3.0
cis-1,2-dichloroethene	0.619	0.613	AVRG	0.610	2.9
Benzene	1.634	1.614	AVRG	1.699	8.0
Trichloroethene	0.324	0.317	AVRG	0.324	4.3
Tetrachloroethene	0.268	0.259	AVRG	0.267	4.7
1,1,2,2-Tetrachloroethane	0.289	0.272	AVRG	0.257	9.8
Trans-1,2-Dichloroethene	0.602	0.594	AVRG	0.596	3.9
1,2-Dichloroethane	0.868	0.837	AVRG	0.836	6.0
d4-1,2-Dichloroethane	0.650	0.634	AVRG	0.687	7.8
d8-Toluene	1.384	1.383	AVRG	1.379	0.8

<- Indicates value outside QC limits:  
(%RSD < 20% or R<sup>2</sup> > 0.990)

FORM VI VOA

RI46:00053

7A  
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

ARI Job No: RI46

Project: LORA LAKE APTS RI

Instrument ID: NT7

Cont. Calib. Date: 08/20/10

Init. Calib. Date: 07/21/10

Cont. Calib. Time: 0905

COMPOUND	CalAmt or ARF	CC Amt 1000	MIN RRF	CURVE TYPE	%D or Drift
Vinyl Chloride	0.781	0.725	0.010	AVRG	-7.2
1,1-Dichloroethene	0.548	0.529	0.010	AVRG	-3.5
cis-1,2-dichloroethene	0.632	0.615	0.010	AVRG	-2.7
Benzene	1000.0	1047.1	0.010	LINR	4.7
Trichloroethene	0.382	0.345	0.010	AVRG	-9.7
Tetrachloroethene	1000.0	1023.1	0.010	LINR	2.3
1,1,2,2-Tetrachloroethane	0.290	0.270	0.300	AVRG	-6.9 *
Trans-1,2-Dichloroethene	0.610	0.592	0.010	AVRG	-3.0
1,2-Dichloroethane	0.753	0.761	0.010	AVRG	1.1
d4-1,2-Dichloroethane	0.516	0.568	0.010	AVRG	10.1
d8-Toluene	1.275	1.359	0.010	AVRG	6.6

<- Exceeds QC limit of 20% D

\* RF less than minimum RF

## VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

ARI Job No: RI46

Project: LORA LAKE APTS RI

Instrument ID: NT7

Cont. Calib. Date: 08/23/10

Init. Calib. Date: 08/23/10

Cont. Calib. Time: 1118

COMPOUND	CalAmt or ARF	CC Amt 1000	MIN RRF	CURVE TYPE	%D or Drift
Vinyl Chloride	0.897	0.867	0.010	AVRG	-3.3
1,1-Dichloroethene	0.510	0.494	0.010	AVRG	-3.1
cis-1,2-dichloroethene	0.610	0.601	0.010	AVRG	-1.5
Benzene	1.698	1.577	0.010	AVRG	-7.1
Trichloroethene	0.323	0.305	0.010	AVRG	-5.6
Tetrachloroethene	0.267	0.255	0.010	AVRG	-4.5
1,1,2,2-Tetrachloroethane	0.257	0.260	0.300	AVRG	1.2 *
Trans-1,2-Dichloroethene	0.596	0.577	0.010	AVRG	-3.2
1,2-Dichloroethane	0.836	0.820	0.010	AVRG	-1.9
d4-1,2-Dichloroethane	0.687	0.651	0.010	AVRG	-5.2
d8-Toluene	1.379	1.389	0.010	AVRG	0.7

&lt;- Exceeds QC limit of 20% D

\* RF less than minimum RF

8A  
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

ARI Job No: RI46

Project: LORA LAKE APTS RI

Ical Midpoint ID: 07211008

Ical Date: 07/21/10

Instrument ID: NT7

Project Run Date: 07/21/10

	IS1 (PFB) AREA #	RT #	IS2 (DFB) AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	96505	5.32	146484	5.76		
UPPER LIMIT	193010	5.82	292968	6.26		
LOWER LIMIT	48252	4.82	73242	5.26		
=====	=====	=====	=====	=====	=====	=====
Sample ID						
=====	=====	=====	=====	=====	=====	=====
01 ICV 1000 PPT	91990	5.32	148203	5.76		
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (PFB) = Pentafluorobenzene  
IS2 (DFB) = 1,4-Difluorobenzene

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

\* Values outside of QC limits.

8A  
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

ARI Job No: RI46

Project: LORA LAKE APTS RI

Ical Midpoint ID: 07211008

Ical Date: 07/21/10

Instrument ID: NT7

Project Run Date: 08/20/10

	IS1 (PFB) AREA #	RT #	IS2 (DFB) AREA #	RT #	AREA #	RT #
ICAL MIDPT	96505	5.32	146484	5.76		
UPPER LIMIT	193010	5.82	292968	6.26		
LOWER LIMIT	48252	4.82	73242	5.26		
Sample ID						
01 LCS0820	119311	5.32	199529	5.74		
02 LCSD0820	117492	5.32	198297	5.76		
03 MB0820	117096	5.32	193817	5.75		
04 081110-TB	117375	5.32	193889	5.75		
05 081210-TB	115673	5.32	190521	5.76		
06 081310-TB	116375	5.32	190955	5.76		
07 MW-02-081110	116319	5.32	190925	5.75		
08 MW-03-081110	120282	5.32	188302	5.76		
09 MW-03-081110	113954	5.32	187693	5.76		
10 MW-04-081110	113191	5.33	186030	5.75		
11 MW-14-081110	113871	5.32	186671	5.75		
12 MW-12-081210	112477	5.32	185162	5.76		
13 MW-10-081210	110944	5.32	184565	5.75		
14 MW-11-081210	110555	5.32	182706	5.76		
15 MW-08-081310	99955	5.32	168882	5.75		
16 MW-07-081310	97293	5.32	164303	5.76		
17 MW-08-081310	99867	5.32	163693	5.76		
18 MW-08-081310	99451	5.32	162894	5.76		
19 MW-12-081210	86130	5.32	151285	5.75		
20						
21						
22						

IS1 (PFB) = Pentafluorobenzene  
IS2 (DFB) = 1,4-Difluorobenzene

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

\* Values outside of QC limits.

8A  
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: RI46  
Ical Midpoint ID: 08231009  
Instrument ID: NT7

Client: FLOYD-SNIDER  
Project: LORA LAKE APTS RI  
Ical Date: 08/23/10  
Project Run Date: 08/23/10

	IS1 (PFB) AREA #	RT #	IS2 (DFB) AREA #	RT #	AREA #	RT #
ICAL MIDPT	94405	5.32	164423	5.76		
UPPER LIMIT	188810	5.82	328846	6.26		
LOWER LIMIT	47202	4.82	82212	5.26		
Sample ID						
01 ICV1000	93596	5.31	163650	5.76		
02 LCS0823	94718	5.32	168101	5.74		
03 LCSD0823	84063	5.32	148835	5.76		
04 MB0823	91100	5.32	159719	5.76		
05 MW-13-081210	90849	5.32	160038	5.76		
06 MW-09-081310	90517	5.32	157840	5.75		
07 MW-01-081310	91429	5.32	157817	5.75		
08 MW-05-081310	95002	5.31	162456	5.76		
09 MW-12-081210	99393	5.32	166687	5.76		
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (PFB) = Pentafluorobenzene  
IS2 (DFB) = 1,4-Difluorobenzene

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

\* Values outside of QC limits.

**SIM PAH Analysis  
Report and Summary QC Forms**

**ARI Job ID: RI46**

**ORGANICS ANALYSIS DATA SHEET**

**PNAs by Low Level SW8270D-SIM GC/MS**

Page 1 of 1

**Sample ID: MW-02-081110**

**SAMPLE**

Lab Sample ID: RI46A

LIMS ID: 10-19678

Matrix: Water

Data Release Authorized: *AB*

Reported: 08/27/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

Event: POS-LLA

Date Sampled: 08/11/10

Date Received: 08/12/10

Date Extracted: 08/17/10

Date Analyzed: 08/26/10 17:49

Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)


**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 55.7%  
d14-Dibenzo(a,h)anthracene 60.3%



ORGANICS ANALYSIS DATA SHEET  
PNAs by Low Level SW8270D-SIM GC/MS  
Page 1 of 1

Sample ID: MW-03-081110  
SAMPLE

Lab Sample ID: RI46B  
LIMS ID: 10-19679  
Matrix: Water  
Data Release Authorized:   
Reported: 08/27/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10

Date Extracted: 08/17/10  
Date Analyzed: 08/26/10 18:13  
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)


**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 53.7%  
d14-Dibenzo(a,h)anthracene 57.3%

**ORGANICS ANALYSIS DATA SHEET**

PNAs by Low Level SW8270D-SIM GC/MS  
Page 1 of 1

Sample ID: MW-03-081110-D  
SAMPLE

Lab Sample ID: RI46C  
LIMS ID: 10-19680  
Matrix: Water  
Data Release Authorized:   
Reported: 08/27/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10

Date Extracted: 08/17/10  
Date Analyzed: 08/26/10 18:37  
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U


Reported in µg/L (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 57.0%  
d14-Dibenzo(a,h)anthracene 63.0%

ORGANICS ANALYSIS DATA SHEET  
PNAs by Low Level SW8270D-SIM GC/MS  
Page 1 of 1

Sample ID: MW-04-081110  
SAMPLE

Lab Sample ID: RI46D  
LIMS ID: 10-19681  
Matrix: Water  
Data Release Authorized:   
Reported: 08/27/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10

Date Extracted: 08/17/10  
Date Analyzed: 08/26/10 19:01  
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U


Reported in µg/L (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 55.7%  
d14-Dibenzo(a,h)anthracene 62.0%

ORGANICS ANALYSIS DATA SHEET  
PNAs by Low Level SW8270D-SIM GC/MS  
Page 1 of 1

Sample ID: MW-14-081110  
SAMPLE

Lab Sample ID: RI46E  
LIMS ID: 10-19682  
Matrix: Water  
Data Release Authorized:   
Reported: 08/27/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10

Date Extracted: 08/17/10  
Date Analyzed: 08/26/10 19:25  
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U


Reported in µg/L (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 58.3%  
d14-Dibenzo(a,h)anthracene 62.3%

ORGANICS ANALYSIS DATA SHEET  
PNAs by Low Level SW8270D-SIM GC/MS  
Page 1 of 1

Sample ID: MW-12-081210  
SAMPLE

Lab Sample ID: RI46F  
LIMS ID: 10-19683  
Matrix: Water  
Data Release Authorized:   
Reported: 08/27/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/12/10  
Date Received: 08/12/10

Date Extracted: 08/17/10  
Date Analyzed: 08/26/10 19:49  
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 50.7%  
d14-Dibenzo(a,h)anthracene 60.7%

ORGANICS ANALYSIS DATA SHEET  
PNAs by Low Level SW8270D-SIM GC/MS  
Page 1 of 1

Sample ID: MW-13-081210  
SAMPLE

Lab Sample ID: RI46G  
LIMS ID: 10-19684  
Matrix: Water  
Data Release Authorized: *AB*  
Reported: 08/27/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/12/10  
Date Received: 08/12/10

Date Extracted: 08/17/10  
Date Analyzed: 08/26/10 20:13  
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 54.3%  
d14-Dibenzo(a,h)anthracene 64.7%

ORGANICS ANALYSIS DATA SHEET  
PNAs by Low Level SW8270D-SIM GC/MS  
Page 1 of 1

Sample ID: MW-10-081210  
SAMPLE

Lab Sample ID: RI46H  
LIMS ID: 10-19685  
Matrix: Water  
Data Release Authorized: *MS*  
Reported: 08/27/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/12/10  
Date Received: 08/12/10

Date Extracted: 08/17/10  
Date Analyzed: 08/26/10 20:36  
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 53.7%  
d14-Dibenzo(a,h)anthracene 62.7%

**ORGANICS ANALYSIS DATA SHEET**  
**PNAs by Low Level SW8270D-SIM GC/MS**  
 Page 1 of 1

**Sample ID: MW-11-081210**  
**SAMPLE**

Lab Sample ID: RI46I  
 LIMS ID: 10-19686  
 Matrix: Water  
 Data Release Authorized: *AB*  
 Reported: 08/27/10

QC Report No: RI46-Floyd-Snider  
 Project: Lora Lakes Apts. RI  
 Event: POS-LLA  
 Date Sampled: 08/12/10  
 Date Received: 08/12/10

Date Extracted: 08/17/10  
 Date Analyzed: 08/26/10 21:00  
 Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 48.7%  
 d14-Dibenzo(a,h)anthracene 66.0%



**SIM SW8270 SURROGATE RECOVERY SUMMARY**

Matrix: Water

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
POS-LLA

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-081710	52.7%	53.7%	0
LCS-081710	56.0%	64.0%	0
LCSD-081710	53.0%	63.0%	0
MW-02-081110	55.7%	60.3%	0
MW-03-081110	53.7%	57.3%	0
MW-03-081110-D	57.0%	63.0%	0
MW-04-081110	55.7%	62.0%	0
MW-14-081110	58.3%	62.3%	0
MW-12-081210	50.7%	60.7%	0
MW-13-081210	54.3%	64.7%	0
MW-10-081210	53.7%	62.7%	0
MW-11-081210	48.7%	66.0%	0

**LCS/MB LIMITS      QC LIMITS**

(MNP) = d10-2-Methylnaphthalene      (42-100)      (31-109)  
(DBA) = d14-Dibenzo(a,h)anthracene      (40-125)      (10-133)

Prep Method: SW3510C  
Log Number Range: 10-19678 to 10-19686

ORGANICS ANALYSIS DATA SHEET  
PNAs by Low Level SW8270D-SIM GC/MS  
Page 1 of 1

Sample ID: LCS-081710  
LAB CONTROL SAMPLE

Lab Sample ID: LCS-081710  
LIMS ID: 10-19678  
Matrix: Water  
Data Release Authorized: *AB*  
Reported: 08/27/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: NA  
Date Received: NA

Date Extracted LCS/LCSD: 08/17/10

Sample Amount LCS: 500 mL  
LCSD: 500 mL

Date Analyzed LCS: 08/26/10 17:02

Final Extract Volume LCS: 0.50 mL

LCSD: 08/26/10 17:26

LCSD: 0.50 mL

Instrument/Analyst LCS: SVOA\_MSD/VTS

Dilution Factor LCS: 1.00

LCSD: SVOA\_MSD/VTS

LCSD: 1.00

Analyte	LCS	Spike		LCSD	Spike		RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Benzo(a)anthracene	0.214	0.300	71.3%	0.216	0.300	72.0%	0.9%
Chrysene	0.231	0.300	77.0%	0.233	0.300	77.7%	0.9%
Benzo(a)pyrene	0.195	0.300	65.0%	0.173	0.300	57.7%	12.0%
Indeno(1,2,3-cd)pyrene	0.189	0.300	63.0%	0.191	0.300	63.7%	1.1%
Dibenz(a,h)anthracene	0.186	0.300	62.0%	0.191	0.300	63.7%	2.7%
Total Benzofluoranthenes	0.430	0.600	71.7%	0.438	0.600	73.0%	1.8%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

**SIM Semivolatile Surrogate Recovery**

	LCS	LCSD
d10-2-Methylnaphthalene	56.0%	53.0%
d14-Dibenzo(a,h)anthracene	64.0%	63.0%

4B  
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

RI46MBW1

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: RI46  
Lab File ID: RI46MB  
Instrument ID: NT11  
Matrix: LIQUID


Client: FLOYD-SNIDER  
Project: LORA LAKES APTS. RI  
Date Extracted: 08/17/10  
Date Analyzed: 08/26/10  
Time Analyzed: 1638

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	=====	=====	=====	=====
01	RI46LCSW1	RI46LCSW1	RI46SB	08/26/10
02	RI46LCSDW1	RI46LCSDW1	RI46SBD	08/26/10
03	MW-02-081110	RI46A	RI46A	08/26/10
04	MW-03-081110	RI46B	RI46B	08/26/10
05	MW-03-081110-D	RI46C	RI46C	08/26/10
06	MW-04-081110	RI46D	RI46D	08/26/10
07	MW-14-081110	RI46E	RI46E	08/26/10
08	MW-12-081210	RI46F	RI46F	08/26/10
09	MW-13-081210	RI46G	RI46G	08/26/10
10	MW-10-081210	RI46H	RI46H	08/26/10
11	MW-11-081210	RI46I	RI46I	08/26/10
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by Low Level SW8270D-SIM GC/MS**  
 Page 1 of 1

**Sample ID: MB-081710**  
**METHOD BLANK**

Lab Sample ID: MB-081710  
 LIMS ID: 10-19678  
 Matrix: Water  
 Data Release Authorized:   
 Reported: 08/27/10

QC Report No: RI46-Floyd-Snider  
 Project: Lora Lakes Apts. RI  
 Event: POS-LLA  
 Date Sampled: NA  
 Date Received: NA

Date Extracted: 08/17/10  
 Date Analyzed: 08/26/10 16:38  
 Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
56-55-3	Benzo(a)anthracene	0.010	< 0.010 U
218-01-9	Chrysene	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.010	< 0.010 U

Reported in µg/L (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 52.7%  
 d14-Dibenzo(a,h)anthracene 53.7%

5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

Instrument ID: NT11

Project: LORA LAKES APTS

DFTPP Injection Date: 08/18/10

DFTPP Injection Time: 1511

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	23.1
68	Less than 2.0% of mass 69	0.1 ( 0.2)1
69	Mass 69 relative abundance	55.5
70	Less than 2.0% of mass 69	0.2 ( 0.4)1
127	10.0 - 80.0% of mass 198	56.2
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 60.0% of mass 198	22.4
365	Greater than 1.0% of mass 198	3.16
441	0.0 - 24.0% of mass 442	13.5 ( 15.0)2
442	50.0 - 200.0% of mass 198	89.9
443	15.0 - 24.0% of mass 442	17.2 ( 19.1)2

1-Value is % mass 69

2-Value is % mass 442

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		IC0818A	IC0818A	08/18/10	1525
02		IC0818B	IC0818B	08/18/10	1549
03		IC0818C	IC0818C	08/18/10	1627
04		IC0818D	IC0818D	08/18/10	1651
05		IC0818E	IC0818E	08/18/10	1714
06		IC0818F	IC0818F	08/18/10	1739
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

Instrument ID: NT11

Project: LORA LAKES APTS

DFTPP Injection Date: 08/26/10

DFTPP Injection Time: 1325

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	24.9
68	Less than 2.0% of mass 69	0.2 ( 0.4)1
69	Mass 69 relative abundance	57.1
70	Less than 2.0% of mass 69	0.3 ( 0.5)1
127	10.0 - 80.0% of mass 198	57.3
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 60.0% of mass 198	22.5
365	Greater than 1.0% of mass 198	3.51
441	0.0 - 24.0% of mass 442	13.5 ( 14.4)2
442	50.0 - 200.0% of mass 198	93.3
443	15.0 - 24.0% of mass 442	18.0 ( 19.3)2

1-Value is % mass 69

2-Value is % mass 442

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0826	CC0826	08/26/10	1339
02	RI46MBW1	RI46MBW1	RI46MB	08/26/10	1638
03	RI46LCSW1	RI46LCSW1	RI46SB	08/26/10	1702
04	RI46LCSDW1	RI46LCSDW1	RI46SBD	08/26/10	1726
05	MW-02-081110	RI46A	RI46A	08/26/10	1749
06	MW-03-081110	RI46B	RI46B	08/26/10	1813
07	MW-03-081110-D	RI46C	RI46C	08/26/10	1837
08	MW-04-081110	RI46D	RI46D	08/26/10	1901
09	MW-14-081110	RI46E	RI46E	08/26/10	1925
10	MW-12-081210	RI46F	RI46F	08/26/10	1949
11	MW-13-081210	RI46G	RI46G	08/26/10	2013
12	MW-10-081210	RI46H	RI46H	08/26/10	2036
13	MW-11-081210	RI46I	RI46I	08/26/10	2100
14					
15					
16					
17					
18					
19					
20					
21					
22					

## SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

ARI Job No: RI46

Project: LORA LAKES APTS

Instrument ID: NT11

Calibration Date: 08/18/10

LAB FILE ID:	RRF10 =IC0818C	RRF50 =IC0818F	RRF100=IC0818D
	RRF250=IC0818A	RRF500=IC0818E	RRF1000=IC0818B

COMPOUND	RRF 10	RRF 50	RRF 100	RRF 250	RRF 500	RRF 1000	RRF	%RSD /R^2
Naphthalene	1.064	1.023	0.994	0.998	1.019	0.975	1.012	3.1
2-Methylnaphthalene	0.624	0.614	0.618	0.629	0.652	0.617	0.626	2.2
Acenaphthylene	1.845	1.854	1.801	1.873	1.958	2.006	1.890	4.1
Acenaphthene	1.094	1.103	1.076	1.103	1.147	1.161	1.114	3.0
Dibenzofuran	1.582	1.601	1.601	1.614	1.657	1.698	1.626	2.7
Fluorene	1.240	1.154	1.152	1.206	1.234	1.256	1.207	3.7
Phenanthrene	1.045	1.035	1.040	0.998	1.004	1.028	1.025	1.9
Anthracene	0.977	0.956	0.973	1.027	1.039	1.067	1.006	4.4
Fluoranthene	1.057	1.025	1.055	1.087	1.112	1.149	1.081	4.1
Pyrene	1.094	1.061	1.087	1.139	1.168	1.176	1.121	4.2
Benzo(a)anthracene	1.460	1.365	1.364	1.388	1.359	1.388	1.387	2.7
Chrysene	1.449	1.406	1.398	1.363	1.384	1.370	1.395	2.2
Benzo(a)pyrene	1.402	1.349	1.338	1.426	1.425	1.403	1.390	2.7
Indeno(1,2,3-cd)pyrene	1.938	1.784	1.852	1.797	1.910	1.891	1.862	3.3
Dibenzo(a,h)anthracene	1.466	1.353	1.413	1.375	1.463	1.446	1.419	3.3
Benzo(g,h,i)perylene	1.709	1.603	1.658	1.573	1.715	1.596	1.642	3.7
1-Methylnaphthalene	0.622	0.610	0.616	0.618	0.639	0.613	0.620	1.7
Total Benzofluoranthenes	1.734	1.654	1.629	1.709	1.743	1.657	1.688	2.8
2-Methylnaphthalene-d10	0.639	0.628	0.629	0.631	0.650	0.630	0.634	1.3
Dibenzo(a,h)anthracene-d14	1.123	0.990	1.042	1.010	1.072	1.065	1.050	4.5

&lt;- Outside QC limits: %RSD &lt;20% or R^2 &gt; 0.990

## SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD-SNIDER

ARI Job No: RI46

Project: LORA LAKES APTS

Instrument ID: NT11

Cont. Calib. Date: 08/26/10

Init. Calib. Date: 08/18/10

Cont. Calib. Time: 1339

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Naphthalene	1.012	1.003	0.700	AVRG	-0.9
2-Methylnaphthalene	0.626	0.613	0.400	AVRG	-2.1
Acenaphthylene	1.890	1.803	0.900	AVRG	-4.6
Acenaphthene	1.114	1.133	0.900	AVRG	1.7
Dibenzofuran	1.626	1.629	0.800	AVRG	0.2
Fluorene	1.207	1.169	0.900	AVRG	-3.1
Phenanthrene	1.025	1.034	0.700	AVRG	0.9
Anthracene	1.006	0.995	0.700	AVRG	-1.1
Fluoranthene	1.081	1.049	0.600	AVRG	-3.0
Pyrene	1.121	1.162	0.600	AVRG	3.6
Benzo(a)anthracene	1.387	1.308	0.800	AVRG	-5.7
Chrysene	1.395	1.399	0.700	AVRG	0.3
Benzo(a)pyrene	1.390	1.375	0.700	AVRG	-1.1
Indeno(1,2,3-cd)pyrene	1.862	1.764	0.500	AVRG	-5.3
Dibenzo(a,h)anthracene	1.419	1.325	0.400	AVRG	-6.6
Benzo(g,h,i)perylene	1.642	1.554	0.500	AVRG	-5.4
1-Methylnaphthalene	0.620	0.603	0.010	AVRG	-2.7
Total Benzofluoranthenes	1.688	1.655	0.010	AVRG	-2.0
2-Methylnaphthalene-d10	0.634	0.608	0.010	AVRG	-4.1
Dibenzo(a,h)anthracene-d14	1.050	0.966	0.010	AVRG	-8.0

&lt;- Exceeds QC limit of 20% D

\* RF less than minimum RF



8B  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: RI46  
Ical Midpoint ID: IC0818A  
Instrument ID: NT11

Client: FLOYD-SNIDER  
Project: LORA LAKES APTS  
Ical Date: 08/18/10  
Cont. Cal Date: 08/26/10

	IS1 (NPT) AREA #	RT #	IS2 (ANT) AREA #	RT #	IS3 (PHN) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	422551	5.94	241002	8.10	409999	9.94
UPPER LIMIT	845102		482004		819998	
LOWER LIMIT	211276		120501		205000	
=====	=====	=====	=====	=====	=====	=====
CCAL	445766	5.94	227615	8.10	372924	9.93
UPPER LIMIT		6.44		8.60		10.43
LOWER LIMIT		5.44		7.60		9.43
01 RI46MBW1	469490	5.94	255832	8.10	421230	9.93
02 RI46LCSW1	495739	5.94	270286	8.10	451080	9.93
03 RI46LCSDW1	489134	5.94	264218	8.10	447054	9.93
04 MW-02-081110	478940	5.94	251968	8.10	414033	9.93
05 MW-03-081110	482790	5.94	259776	8.10	425137	9.93
06 MW-03-081110	488297	5.94	255980	8.10	422839	9.93
07 MW-04-081110	496886	5.94	265093	8.10	446120	9.93
08 MW-14-081110	483836	5.94	262903	8.10	444882	9.93
09 MW-12-081210	505451	5.94	274159	8.10	463875	9.93
10 MW-13-081210	502663	5.94	268638	8.10	438395	9.93
11 MW-10-081210	502397	5.94	270078	8.10	443739	9.93
12 MW-11-081210	492327	5.95	260157	8.10	447500	9.93
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

IS1 = Naphthalene-d8  
IS2 = Acenaphthene-d10  
IS3 = Phenanthrene-d10

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

\* Values outside of QC limits.

8B  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC  
ARI Job No: RI46  
Ical Midpoint ID: IC0818A  
Instrument ID: NT11

Client: FLOYD-SNIDER  
Project: LORA LAKES APTS  
Ical Date: 08/18/10  
Cont. Cal Date: 08/26/10

	IS4 (CRY) AREA #	RT #	IS5 (PRY) AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	258429	13.24	200470	15.03		
UPPER LIMIT	516858		400940			
LOWER LIMIT	129214		100235			
=====	=====	=====	=====	=====	=====	=====
CCAL	235553	13.23	177028	15.02		
UPPER LIMIT		13.73		15.52		
LOWER LIMIT		12.73		14.52		
01 RI46MBW1	261623	13.23	191997	15.02		
02 RI46LCSW1	283892	13.23	210050	15.02		
03 RI46LCSW1	280156	13.23	207927	15.02		
04 MW-02-081110	250712	13.23	189731	15.02		
05 MW-03-081110	261582	13.23	194807	15.02		
06 MW-03-081110	255213	13.23	195216	15.02		
07 MW-04-081110	273315	13.23	203061	15.02		
08 MW-14-081110	272573	13.23	204432	15.02		
09 MW-12-081210	283489	13.23	210912	15.02		
10 MW-13-081210	275888	13.23	206305	15.02		
11 MW-10-081210	273461	13.23	204218	15.02		
12 MW-11-081210	267175	13.23	202485	15.02		
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

IS4 = Chrysene-d12  
IS5 = Perylene-d12

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

\* Values outside of QC limits.

**PCP/Chlorophenols Analysis  
Report and Summary QC Forms**

**ARI Job ID: RI46**

**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1


Sample ID: MW-02-081110

SAMPLE

Lab Sample ID: RI46A

LIMS ID: 10-19678

Matrix: Water

Data Release Authorized: 

Reported: 08/25/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/11/10

Date Received: 08/12/10

Date Extracted: 08/17/10

Sample Amount: 500 mL

Date Analyzed: 08/24/10 17:08

Final Extract Volume: 50 mL

Instrument/Analyst: ECD1/AAR

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	62.8%
----------------------	-------

**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1

Sample ID: MW-03-081110

SAMPLE

Lab Sample ID: RI46B

LIMS ID: 10-19679

Matrix: Water

Data Release Authorized: *AB*

Reported: 08/25/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/11/10

Date Received: 08/12/10

Date Extracted: 08/17/10

Sample Amount: 500 mL

Date Analyzed: 08/24/10 17:28

Final Extract Volume: 50 mL

Instrument/Analyst: ECD1/AAR

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	61.6%
----------------------	-------

**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1


Sample ID: MW-03-081110-D

**SAMPLE**

Lab Sample ID: RI46C

LIMS ID: 10-19680

Matrix: Water

Data Release Authorized: 

Reported: 08/25/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/11/10

Date Received: 08/12/10

Date Extracted: 08/17/10

Date Analyzed: 08/24/10 17:48

Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL

Final Extract Volume: 50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	55.6%
----------------------	-------

**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1


Sample ID: MW-04-081110

**SAMPLE**

Lab Sample ID: RI46D

LIMS ID: 10-19681

Matrix: Water

Data Release Authorized: 

Reported: 08/25/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/11/10

Date Received: 08/12/10

Date Extracted: 08/17/10

Sample Amount: 500 mL

Date Analyzed: 08/24/10 18:08

Final Extract Volume: 50 mL

Instrument/Analyst: ECD1/AAR

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	60.4%
----------------------	-------

**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1


Sample ID: MW-14-081110

SAMPLE

Lab Sample ID: RI46E

LIMS ID: 10-19682

Matrix: Water

Data Release Authorized: 

Reported: 08/25/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/11/10

Date Received: 08/12/10

Date Extracted: 08/17/10

Date Analyzed: 08/24/10 18:28

Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL

Final Extract Volume: 50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	46.8%
----------------------	-------



**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1


Sample ID: MW-12-081210

**SAMPLE**

Lab Sample ID: RI46F

LIMS ID: 10-19683

Matrix: Water

Data Release Authorized: 

Reported: 08/25/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/12/10

Date Received: 08/12/10

Date Extracted: 08/17/10

Date Analyzed: 08/24/10 18:48

Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL

Final Extract Volume: 50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	62.0%
----------------------	-------

**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1


Sample ID: MW-13-081210

SAMPLE

Lab Sample ID: RI46G

LIMS ID: 10-19684

Matrix: Water

Data Release Authorized: 

Reported: 08/25/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/12/10

Date Received: 08/12/10

Date Extracted: 08/17/10

Sample Amount: 500 mL

Date Analyzed: 08/24/10 19:08

Final Extract Volume: 50 mL

Instrument/Analyst: ECD1/AAR

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	52.8%
----------------------	-------

**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1


Sample ID: MW-10-081210

**SAMPLE**

Lab Sample ID: RI46H

LIMS ID: 10-19685

Matrix: Water

Data Release Authorized: 

Reported: 08/25/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/12/10

Date Received: 08/12/10

Date Extracted: 08/17/10

Date Analyzed: 08/25/10 10:56

Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL

Final Extract Volume: 50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	60.8%
----------------------	-------

**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1


Sample ID: MW-11-081210

SAMPLE

Lab Sample ID: RI46I

LIMS ID: 10-19686

Matrix: Water

Data Release Authorized: 

Reported: 08/25/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/12/10

Date Received: 08/12/10

Date Extracted: 08/17/10

Date Analyzed: 08/25/10 11:16

Instrument/Analyst: ECD1/AAR

Sample Amount: 500 mL

Final Extract Volume: 50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	64.0%
----------------------	-------

**SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY**

Matrix: Water

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
POS-LLA

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-081710	45.6%	0
LCS-081710	62.6%	0
LCSD-081710	64.8%	0
MW-02-081110	62.8%	0
MW-03-081110	61.6%	0
MW-03-081110-D	55.6%	0
MW-04-081110	60.4%	0
MW-14-081110	46.8%	0
MW-12-081210	62.0%	0
MW-13-081210	52.8%	0
MW-10-081210	60.8%	0
MW-11-081210	64.0%	0

**LCS/MB LIMITS      QC LIMITS**

(TBP) = 2,4,6-Tribromophenol

(40-130)

(11-156)

Prep Method: SW3510C  
Log Number Range: 10-19678 to 10-19686

**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041


Page 1 of 1

Sample ID: LCS-081710  
LCS/LCSD

Lab Sample ID: LCS-081710

LIMS ID: 10-19678

Matrix: Water

Data Release Authorized: 

Reported: 08/25/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/11/10

Date Received: 08/12/10

Date Extracted LCS/LCSD: 08/17/10

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 08/24/10 16:28

Final Extract Volume LCS: 50 mL

LCSD: 08/24/10 16:48

LCSD: 50 mL

Instrument/Analyst LCS: ECD1/AAR

Dilution Factor LCS: 1.00

LCSD: ECD1/AAR

LCSD: 1.00

Analyte	Spike		LCS		Spike		LCSD		RPD
	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	LCSD		
Pentachlorophenol	2.02	2.50	80.8%	2.20	2.50	88.0%	8.5%		

**Chlorophenols Surrogate Recovery**

	LCS	LCSD
2,4,6-Tribromophenol	62.6%	64.8%

Results reported in µg/L

RPD calculated using sample concentrations per SW846.

4  
 CHLOROPHENOL METHOD BLANK SUMMARY

SAMPLE NO.

RI46MBW1
----------

Lab Name: ANALYTICAL RESOURCES, INC	Client: FLOYD/SNIDER
ARI Job No.: RI46	Project: LORA LAKE APTS. RI
Lab Sample ID: RI46MBW1	Lab File ID: 0824A006
Matrix (soil/water) LIQUID	Extraction: (SepF/Cont/Sonc) SW3510C
Sulfur Cleanup (Y/N) Y	Date Extracted: 08/17/10
Date Analyzed (1): 08/24/10	Date Analyzed (2): 08/24/10
Time Analyzed (1): 1608	Time Analyzed (2): 1608
Instrument ID (1): ECD1	Instrument ID (2): ECD1
GC Column (1): ZB5      ID: 0.53 (mm)	GC Column (2): ZB35      ID: 0.53 (mm)

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	=====	=====	=====	=====
01	RI46LCSW1	RI46LCSW1	08/24/10	08/24/10
02	RI46LCSDW1	RI46LCSDW1	08/24/10	08/24/10
03	MW-02-081110	RI46A	08/24/10	08/24/10
04	MW-03-081110	RI46B	08/24/10	08/24/10
05	MW-03-081110	RI46C	08/24/10	08/24/10
06	MW-04-081110	RI46D	08/24/10	08/24/10
07	MW-14-081110	RI46E	08/24/10	08/24/10
08	MW-12-081210	RI46F	08/24/10	08/24/10
09	MW-13-081210	RI46G	08/24/10	08/24/10
10	MW-10-081210	RI46H	08/25/10	08/25/10
11	MW-11-081210	RI46I	08/25/10	08/25/10

**ORGANICS ANALYSIS DATA SHEET**

PCP by GC/ECD Method SW8041

Page 1 of 1


Sample ID: MB-081710

METHOD BLANK

Lab Sample ID: MB-081710

LIMS ID: 10-19678

Matrix: Water

Data Release Authorized: 

Reported: 08/25/10

QC Report No: RI46-Floyd-Snyder

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: NA

Date Received: NA

Date Extracted: 08/17/10

Sample Amount: 500 mL

Date Analyzed: 08/24/10 16:08

Final Extract Volume: 50 mL

Instrument/Analyst: ECD1/AAR

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

**Chlorophenol Surrogate Recovery**

2,4,6-Tribromophenol	45.6%
----------------------	-------



6D  
 CHLOROPHENOL INITIAL CALIBRATION  
 RETENTION TIME WINDOWS

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RI46

Project: LORA LAKE APTS. RI

GC Column: ZB5 ID: 0.53 (mm)

Instrument ID: ECD1

Calibration Date: 08/09/10

COMPOUND	RT OF STANDARDS					MEAN RT	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		FROM	TO
Pentachlorophenol	11.22	11.22	11.22	11.21	11.21	11.21	11.15	11.29
2,4,6-Trichloropheno	7.26	7.26	7.26	7.26	7.26	7.26	7.19	7.33
2,3,6-Trichloropheno	7.62	7.62	7.62	7.61	7.61	7.62	7.55	7.69
2,4,5-Trichloropheno	8.25	8.24	8.23	8.22	8.21	8.23	8.17	8.31
2,3,4-Trichloropheno	8.81	8.79	8.78	8.77	8.76	8.78	8.72	8.86
2,3,5,6-Tetrachlorop	9.01	9.01	9.00	9.00	8.99	9.00	8.94	9.08
2,3,4,5-Tetrachlorop	10.42	10.41	10.41	10.40	10.39	10.40	10.34	10.48
2,4-Dichlorophenol	6.90	6.89	6.89	6.89	6.88	6.89	6.82	6.96
2,4,6-Tribromophenol	10.01	10.00	10.00	9.99	9.98	10.00	9.93	10.07

6D  
 CHLOROPHENOL INITIAL CALIBRATION  
 RETENTION TIME WINDOWS

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RI46

Project: LORA LAKE APTS. RI

GC Column: ZB35 ID: 0.53 (mm)

Instrument ID: ECD1

Calibration Date: 08/09/10

COMPOUND	RT OF STANDARDS					MEAN RT	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		FROM	TO
Pentachlorophenol	11.66	11.65	11.65	11.65	11.65	11.65	11.59	11.73
2,4,6-Trichloropheno	7.33	7.33	7.33	7.33	7.33	7.33	7.26	7.40
2,3,6-Trichloropheno	7.86	7.86	7.86	7.86	7.85	7.86	7.79	7.93
2,4,5-Trichloropheno	8.62	8.61	8.60	8.59	8.59	8.60	8.54	8.69
2,3,4-Trichloropheno	9.38	9.37	9.36	9.36	9.35	9.36	9.31	9.45
2,3,5,6-Tetrachlorop	9.28	9.27	9.27	9.26	9.26	9.27	9.21	9.35
2,3,4,5-Tetrachlorop	11.13	11.12	11.11	11.11	11.10	11.11	11.06	11.20
2,4-Dichlorophenol	7.17	7.16	7.16	7.16	7.15	7.16	7.10	7.24
2,4,6-Tribromophenol	10.65	10.64	10.64	10.63	10.63	10.64	10.58	10.72

6E  
 CHLOROPHENOL INITIAL CALIBRATION  
 CALIBRATION FACTORS

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RI46

Project: LORA LAKE APTS. RI

GC Column: ZB5 ID: 0.53 (mm)

Instrument ID: ECD1

Calibration Date: 08/09/10

COMPOUND	CALIBRATION FACTORS						R <sup>2</sup> / %RSD	CT
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6		
Pentachlorophenol	24528	19824	17830	15337	13686	11965	0.9996	Q
2,4,6-Trichlorophenol	13540	10473	9560	8413	7539	6660	0.9997	Q
2,3,6-Trichlorophenol	12902	10500	9607	8801	8025	7161	0.9998	Q
2,4,5-Trichlorophenol	6404	5362	5688	4915	4290	3627	19.7	A
2,3,4-Trichlorophenol	8393	7068	7135	7922	5474	5053	19.4	A
2,3,5,6-Tetrachloroph	17905	15060	14996	14233	11882	10558	18.4	A
2,3,4,5-Tetrachloroph	16324	13459	12294	10216	8895	7628	0.9995	Q
2,4-Dichlorophenol	721	627	611	486	409	342	0.9993	Q
2,4,6-Tribromophenol	18561	14998	13969	12135	11200	9940	0.9997	Q
AVE RSD							23.3	

CT stands for Curve Types:

- A Indicates an Average Response Factor Curve
- L Indicates a Linear Curve
- Q Indicates a Quadratic Curve

CALIBRATION FILES  
 -----

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

6E  
 CHLOROPHENOL INITIAL CALIBRATION  
 CALIBRATION FACTORS

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RI46

Project: LORA LAKE APTS. RI

GC Column: ZB35 ID: 0.53 (mm)

Instrument ID: ECD1

Calibration Date: 08/09/10

COMPOUND	CALIBRATION FACTORS						R <sup>2</sup> / %RSD	CT
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6		
Pentachlorophenol	28790	24995	23903	21206	20507	18368	16.2	A
2,4,6-Trichlorophenol	14811	12542	14020	12241	11222	10070	14.0	A
2,3,6-Trichlorophenol	15358	13183	12610	12054	11138	10108	14.6	A
2,4,5-Trichlorophenol	9451	7724	7152	6203	5568	4896	0.9997	Q
2,3,4-Trichlorophenol	13138	11714	9430	8408	7532	6669	0.9995	Q
2,3,5,6-Tetrachloroph	22710	20100	18581	17733	16666	15298	14.2	A
2,3,4,5-Tetrachloroph	18414	16106	15136	13550	12798	11541	17.0	A
2,4-Dichlorophenol	859	720	733	619	536	458	0.9997	Q
2,4,6-Tribromophenol	22648	19438	18816	17793	17226	16083	12.2	A
AVE RSD							17.9	

CT stands for Curve Types:

- A Indicates an Average Response Factor Curve
- L Indicates a Linear Curve
- Q Indicates a Quadratic Curve

CALIBRATION FILES  
 -----

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

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RI46

Project: LORA LAKE APTS. RI

GC Column: ZB5 ID: 0.53 (mm)

Init. Calib. Date(s): 08/09/10 08/09/10

Client Sample No. (PCP):

Date Analyzed :08/24/10

Lab Sample ID (PCP): PCPCCAL

Time Analyzed :1547

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
=====	=====	FROM	TO	=====	=====	=====
Pentachlorophenol	11.21	11.15	11.29	22.2	25.0	-11.2
2,4,6-Trichlorophenol	7.26	7.19	7.33	23.9	25.0	-4.4
2,3,6-Trichlorophenol	7.62	7.55	7.69	24.2	25.0	-3.2
2,4,5-Trichlorophenol	8.22	8.17	8.31	23.0	25.0	-8.0
2,3,4-Trichlorophenol	8.77	8.72	8.86	21.6	25.0	-13.6
2,3,5,6-Tetrachlorophenol	9.00	8.94	9.08	21.4	25.0	-14.4
2,3,4,5-Tetrachlorophenol	10.40	10.34	10.48	21.0	25.0	-16.0
2,4-Dichlorophenol	6.89	6.82	6.96	213	250	-14.8
2,4,6-Tribromophenol (surr)	9.99	9.93	10.07	21.6	25.0	-13.6

AVERAGE %D = 11.0

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RI46

Project: LORA LAKE APTS. RI

GC Column: ZB35 ID: 0.53 (mm)

Init. Calib. Date(s): 08/09/10 08/09/10

Client Sample No. (PCP):

Date Analyzed :08/24/10

Lab Sample ID (PCP): PCPCCAL

Time Analyzed :1547

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
=====	=====	FROM	TO	=====	=====	=====
Pentachlorophenol	11.65	11.59	11.73	22.9	25.0	-8.4
2,4,6-Trichlorophenol	7.33	7.26	7.40	22.6	25.0	-9.6
2,3,6-Trichlorophenol	7.86	7.79	7.93	21.8	25.0	-12.8
2,4,5-Trichlorophenol	8.59	8.54	8.69	23.3	25.0	-6.8
2,3,4-Trichlorophenol	9.36	9.31	9.45	23.6	25.0	-5.6
2,3,5,6-Tetrachlorophenol	9.26	9.21	9.35	23.7	25.0	-5.2
2,3,4,5-Tetrachlorophenol	11.11	11.06	11.20	20.9	25.0	-16.4
2,4-Dichlorophenol	7.16	7.10	7.24	222	250	-11.2
2,4,6-Tribromophenol (surr	10.63	10.58	10.72	21.6	25.0	-13.6

AVERAGE %D = 10.0

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RI46

Project: LORA LAKE APTS. RI

GC Column: ZB5 ID: 0.53 (mm)

Init. Calib. Date(s): 08/09/10 08/09/10

Client Sample No. (PCP):

Date Analyzed :08/24/10

Lab Sample ID (PCP): PCPCCAL

Time Analyzed :2008

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
=====	=====	FROM	TO	=====	=====	=====
Pentachlorophenol	11.22	11.15	11.29	22.0	25.0	-12.0
2,4,6-Trichlorophenol	7.27	7.19	7.33	24.2	25.0	-3.2
2,3,6-Trichlorophenol	7.62	7.55	7.69	24.7	25.0	-1.2
2,4,5-Trichlorophenol	8.22	8.17	8.31	25.0	25.0	0.0
2,3,4-Trichlorophenol	8.77	8.72	8.86	22.1	25.0	-11.6
2,3,5,6-Tetrachlorophenol	9.00	8.94	9.08	22.7	25.0	-9.2
2,3,4,5-Tetrachlorophenol	10.40	10.34	10.48	22.6	25.0	-9.6
2,4-Dichlorophenol	6.89	6.82	6.96	220	250	-12.0
2,4,6-Tribromophenol (surr	9.99	9.93	10.07	22.9	25.0	-8.4

AVERAGE %D = 7.5

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RI46

Project: LORA LAKE APTS. RI

GC Column: ZB35 ID: 0.53 (mm)

Init. Calib. Date(s): 08/09/10 08/09/10

Client Sample No. (PCP):

Date Analyzed :08/24/10

Lab Sample ID (PCP): PCPCCAL

Time Analyzed :2008

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	11.65	11.59	11.73	22.3	25.0	-10.8
2,4,6-Trichlorophenol	7.33	7.26	7.40	23.8	25.0	-4.8
2,3,6-Trichlorophenol	7.86	7.79	7.93	22.7	25.0	-9.2
2,4,5-Trichlorophenol	8.59	8.54	8.69	24.4	25.0	-2.4
2,3,4-Trichlorophenol	9.36	9.31	9.45	24.5	25.0	-2.0
2,3,5,6-Tetrachlorophenol	9.26	9.21	9.35	23.9	25.0	-4.4
2,3,4,5-Tetrachlorophenol	11.11	11.06	11.20	21.9	25.0	-12.4
2,4-Dichlorophenol	7.16	7.10	7.24	232	250	-7.2
2,4,6-Tribromophenol (surr)	10.64	10.58	10.72	22.9	25.0	-8.4

AVERAGE %D = 6.8



7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RI46

Project: LORA LAKE APTS. RI

GC Column: ZB5 ID: 0.53 (mm)

Init. Calib. Date(s): 08/09/10 08/09/10

Client Sample No. (PCP):

Date Analyzed :08/25/10

Lab Sample ID (PCP): PCPCCAL

Time Analyzed :1016

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	11.22	11.15	11.29	21.8	25.0	-12.8
2,4,6-Trichlorophenol	7.27	7.19	7.33	24.9	25.0	-0.4
2,3,6-Trichlorophenol	7.62	7.55	7.69	25.8	25.0	3.2
2,4,5-Trichlorophenol	8.23	8.17	8.31	24.5	25.0	-2.0
2,3,4-Trichlorophenol	8.78	8.72	8.86	23.5	25.0	-6.0
2,3,5,6-Tetrachlorophenol	9.00	8.94	9.08	23.2	25.0	-7.2
2,3,4,5-Tetrachlorophenol	10.40	10.34	10.48	23.2	25.0	-7.2
2,4-Dichlorophenol	6.89	6.82	6.96	221	250	-11.6
2,4,6-Tribromophenol (surr	10.00	9.93	10.07	23.6	25.0	-5.6

AVERAGE %D = 6.2

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RI46

Project: LORA LAKE APTS. RI

GC Column: ZB35 ID: 0.53 (mm)

Init. Calib. Date(s): 08/09/10 08/09/10

Client Sample No. (PCP):

Date Analyzed :08/25/10

Lab Sample ID (PCP): PCPCCAL

Time Analyzed :1016

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
		FROM	TO			
Pentachlorophenol	11.66	11.59	11.73	22.3	25.0	-10.8
2,4,6-Trichlorophenol	7.34	7.26	7.40	23.6	25.0	-5.6
2,3,6-Trichlorophenol	7.87	7.79	7.93	22.5	25.0	-10.0
2,4,5-Trichlorophenol	8.60	8.54	8.69	24.0	25.0	-4.0
2,3,4-Trichlorophenol	9.36	9.31	9.45	25.1	25.0	0.4
2,3,5,6-Tetrachlorophenol	9.27	9.21	9.35	25.0	25.0	0.0
2,3,4,5-Tetrachlorophenol	11.12	11.06	11.20	21.5	25.0	-14.0
2,4-Dichlorophenol	7.16	7.10	7.24	227	250	-9.2
2,4,6-Tribromophenol (surr)	10.64	10.58	10.72	22.7	25.0	-9.2

AVERAGE %D = 7.0

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RI46

Project: LORA LAKE APTS. RI

GC Column: ZB5 ID: 0.53 (mm)

Init. Calib. Date(s): 08/09/10 08/09/10

Client Sample No. (PCP):

Date Analyzed :08/25/10

Lab Sample ID (PCP): PCPCCAL

Time Analyzed :1241

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
=====	=====	FROM	TO	=====	=====	=====
Pentachlorophenol	11.22	11.15	11.29	22.7	25.0	-9.2
2,4,6-Trichlorophenol	7.27	7.19	7.33	25.7	25.0	2.8
2,3,6-Trichlorophenol	7.62	7.55	7.69	25.1	25.0	0.4
2,4,5-Trichlorophenol	8.22	8.17	8.31	24.8	25.0	-0.8
2,3,4-Trichlorophenol	8.77	8.72	8.86	22.4	25.0	-10.4
2,3,5,6-Tetrachlorophenol	9.00	8.94	9.08	23.7	25.0	-5.2
2,3,4,5-Tetrachlorophenol	10.40	10.34	10.48	24.1	25.0	-3.6
2,4-Dichlorophenol	6.89	6.82	6.96	229	250	-8.4
2,4,6-Tribromophenol (surr)	9.99	9.93	10.07	24.4	25.0	-2.4

AVERAGE %D = 4.8

7E  
 CHLOROPHENOL CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

ARI Job No.: RI46

Project: LORA LAKE APTS. RI

GC Column: ZB35 ID: 0.53 (mm)

Init. Calib. Date(s): 08/09/10 08/09/10

Client Sample No. (PCP):

Date Analyzed :08/25/10

Lab Sample ID (PCP): PCPCCAL

Time Analyzed :1241

PCP MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT	NOM AMOUNT	%D
=====	=====	FROM	TO	=====	=====	=====
Pentachlorophenol	11.65	11.59	11.73	23.4	25.0	-6.4
2,4,6-Trichlorophenol	7.33	7.26	7.40	25.1	25.0	0.4
2,3,6-Trichlorophenol	7.86	7.79	7.93	23.5	25.0	-6.0
2,4,5-Trichlorophenol	8.59	8.54	8.69	25.5	25.0	2.0
2,3,4-Trichlorophenol	9.36	9.31	9.45	24.1	25.0	-3.6
2,3,5,6-Tetrachlorophenol	9.26	9.21	9.35	24.4	25.0	-2.4
2,3,4,5-Tetrachlorophenol	11.11	11.06	11.20	22.6	25.0	-9.6
2,4-Dichlorophenol	7.16	7.10	7.24	240	250	-4.0
2,4,6-Tribromophenol (surr)	10.63	10.58	10.72	24.0	25.0	-4.0

AVERAGE %D = 4.3

8  
CHLOROPHENOL ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC      Client: FLOYD/SNIDER  
 ARI Job No.: RI46      Project: LORA LAKE APTS. RI  
 GC Column: ZB5      ID: 0.53 (mm)      Instrument ID: ECD1  
 Init. Calib. Date(s): 08/09/10 08/09/10

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,  
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION S1 : 10.00				
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #
=====	=====	=====	=====	=====
01	PCPD	08/09/10	1223	9.99
02	PCPA	08/09/10	1243	10.01
03	PCPB	08/09/10	1303	10.00
04	PCPC	08/09/10	1323	10.00
05	PCPE	08/09/10	1343	9.98
06	PCPF	08/09/10	1403	9.98
07	ZZZZZ	08/09/10	1423	10.00
08	ZZZZZ	08/24/10	1427	10.00
09	ZZZZZ	08/24/10	1447	10.00
10	ZZZZZ	08/24/10	1507	9.99
11	ZZZZZ	08/24/10	1527	9.99
12	PCPCCAL	08/24/10	1547	9.99
13	RI46MBW1	08/24/10	1608	9.99
14	RI46LCSW1	08/24/10	1628	9.99
15	RI46LCSDW1	08/24/10	1648	9.99
16	MW-02-081110	08/24/10	1708	9.99
17	MW-03-081110	08/24/10	1728	9.99
18	MW-03-081110	08/24/10	1748	9.99
19	MW-04-081110	08/24/10	1808	9.99
20	MW-14-081110	08/24/10	1828	9.99
21	MW-12-081210	08/24/10	1848	9.99
22	MW-13-081210	08/24/10	1908	9.99
23	ZZZZZ	08/24/10	1928	9.99
24	ZZZZZ	08/24/10	1948	9.99
25	PCPCCAL	08/24/10	2008	9.99
26	ZZZZZ	08/25/10	0936	10.01
27	ZZZZZ	08/25/10	0956	10.00
28	PCPCCAL	08/25/10	1016	10.00
29	MW-10-081210	08/25/10	1056	9.99
30	MW-11-081210	08/25/10	1116	9.99
31	ZZZZZ	08/25/10	1221	9.99
32	PCPCCAL	08/25/10	1241	9.99

QC LIMITS  
 S1 = 2,4,6-Tribromophenol (+/- 0.07 MINUTES)

\* Values outside of QC limits.

8  
CHLOROPHENOL ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC                      Client: FLOYD/SNIDER  
 ARI Job No.: RI46    Project: LORA LAKE APTS. RI  
 GC Column: ZB5                      ID: 0.53 (mm)                      Instrument ID: ECD1  
 Init. Calib. Date(s): 08/09/10 08/09/10

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,  
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION					
S1 : 10.00					
	CLIENT	LAB	DATE	TIME	S1
	SAMPLE NO.	SAMPLE ID	ANALYZED	ANALYZED	RT #
	=====	=====	=====	=====	=====
01	ZZZZZ	ZZZZZ	08/25/10	1301	9.99
02	ZZZZZ	ZZZZZ	08/25/10	1322	9.99

QC LIMITS

S1 = 2,4,6-Tribromophenol (+/- 0.07 MINUTES)

\* Values outside of QC limits.

8  
CHLOROPHENOL ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC      Client: FLOYD/SNIDER  
 ARI Job No.: RI46      Project: LORA LAKE APTS. RI  
 GC Column: ZB35      ID: 0.53 (mm)      Instrument ID: ECD1  
 Init. Calib. Date(s): 08/09/10 08/09/10

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,  
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION				
S1 : 10.65				
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #
=====	=====	=====	=====	=====
01		08/09/10	1223	10.63
02		08/09/10	1243	10.65
03		08/09/10	1303	10.64
04		08/09/10	1323	10.64
05		08/09/10	1343	10.63
06		08/09/10	1403	10.63
07	ZZZZZ	08/09/10	1423	10.64
08	ZZZZZ	08/24/10	1427	10.64
09	ZZZZZ	08/24/10	1447	10.64
10	ZZZZZ	08/24/10	1507	10.64
11	ZZZZZ	08/24/10	1527	10.63
12		08/24/10	1547	10.63
13	RI46MBW1	08/24/10	1608	10.63
14	RI46LCSW1	08/24/10	1628	10.63
15	RI46LCSDW1	08/24/10	1648	10.63
16	MW-02-081110	08/24/10	1708	10.63
17	MW-03-081110	08/24/10	1728	10.63
18	MW-03-081110	08/24/10	1748	10.63
19	MW-04-081110	08/24/10	1808	10.63
20	MW-14-081110	08/24/10	1828	10.63
21	MW-12-081210	08/24/10	1848	10.63
22	MW-13-081210	08/24/10	1908	10.63
23	ZZZZZ	08/24/10	1928	10.63
24	ZZZZZ	08/24/10	1948	10.63
25		08/24/10	2008	10.64
26	ZZZZZ	08/25/10	0936	10.64
27	ZZZZZ	08/25/10	0956	10.64
28		08/25/10	1016	10.64
29	MW-10-081210	08/25/10	1056	10.64
30	MW-11-081210	08/25/10	1116	10.63
31	ZZZZZ	08/25/10	1221	10.63
32		08/25/10	1241	10.63

QC LIMITS  
 S1 = 2,4,6-Tribromophenol (+/- 0.07 MINUTES)

\* Values outside of QC limits.

8  
CHLOROPHENOL ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC      Client: FLOYD/SNIDER  
 ARI Job No.: RI46      Project: LORA LAKE APTS. RI  
 GC Column: ZB35      ID: 0.53 (mm)      Instrument ID: ECD1  
 Init. Calib. Date(s): 08/09/10 08/09/10

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS,  
 SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION				
S1 : 10.65				
CLIENT	LAB	DATE	TIME	S1
SAMPLE NO.	SAMPLE ID	ANALYZED	ANALYZED	RT #
=====	=====	=====	=====	=====
01 ZZZZZ	ZZZZZ	08/25/10	1301	10.64
02 ZZZZZ	ZZZZZ	08/25/10	1322	10.63

QC LIMITS  
 S1 = 2,4,6-Tribromophenol (+/- 0.07 MINUTES)

\* Values outside of QC limits.



**TPHD Analysis  
Report and Summary QC Forms**

**ARI Job ID: RI46**

**ORGANICS ANALYSIS DATA SHEET  
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned  
Page 1 of 2  
Matrix: Water

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
POS-LLA

Data Release Authorized: *UTS*  
Reported: 08/19/10

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-081710 10-19678	Method Blank HC ID: ---	08/17/10	08/19/10 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.10 0.20	< 0.10 U < 0.20 U 68.1%
RI46A 10-19678	MW-02-081110 HC ID: ---	08/17/10	08/18/10 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.10 0.20	< 0.10 U < 0.20 U 58.5%
RI46B 10-19679	MW-03-081110 HC ID: ---	08/17/10	08/18/10 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.10 0.20	< 0.10 U < 0.20 U 73.9%
RI46C 10-19680	MW-03-081110-D HC ID: ---	08/17/10	08/18/10 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.10 0.20	< 0.10 U < 0.20 U 68.1%
RI46D 10-19681	MW-04-081110 HC ID: ---	08/17/10	08/18/10 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.10 0.20	< 0.10 U < 0.20 U 73.9%
RI46E 10-19682	MW-14-081110 HC ID: ---	08/17/10	08/18/10 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.10 0.20	< 0.10 U < 0.20 U 74.1%
RI46F 10-19683	MW-12-081210 HC ID: ---	08/17/10	08/18/10 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.10 0.20	< 0.10 U < 0.20 U 70.5%
RI46G 10-19684	MW-13-081210 HC ID: ---	08/17/10	08/18/10 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.10 0.20	< 0.10 U < 0.20 U 67.8%
RI46H 10-19685	MW-10-081210 HC ID: ---	08/17/10	08/18/10 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.10 0.20	< 0.10 U < 0.20 U 69.5%
RI46I 10-19686	MW-11-081210 HC ID: ---	08/17/10	08/18/10 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.10 0.20	< 0.10 U < 0.20 U 76.6%

FORM I

RI46:00110

**ORGANICS ANALYSIS DATA SHEET**

**TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 2 of 2

Matrix: Water

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Data Release Authorized: *VTS*

Reported: 08/19/10

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
--------	-----------	-----------------	---------------	--------	-------	----	--------

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL.

DL-Dilution of extract prior to analysis.

RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.

Motor Oil quantitation on total peaks in the range from C24 to C38.

HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

**CLEANED TPHD SURROGATE RECOVERY SUMMARY**

Matrix: Water

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
POS-LLA

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-081710	68.1%	0
LCS-081710	68.0%	0
LCSD-081710	81.0%	0
MW-02-081110	58.5%	0
MW-03-081110	73.9%	0
MW-03-081110-D	68.1%	0
MW-04-081110	73.9%	0
MW-14-081110	74.1%	0
MW-12-081210	70.5%	0
MW-13-081210	67.8%	0
MW-10-081210	69.5%	0
MW-11-081210	76.6%	0

**LCS/MB LIMITS      QC LIMITS**

(OTER) = o-Terphenyl

(51-120)

(41-121)

Prep Method: SW3510C  
Log Number Range: 10-19678 to 10-19686

**FORM-II TPHD**

**ORGANICS ANALYSIS DATA SHEET**

NWTPHD by GC/FID-Silica and Acid Cleaned  
Page 1 of 1

Sample ID: LCS-081710  
LCS/LCSD

Lab Sample ID: LCS-081710  
LIMS ID: 10-19678  
Matrix: Water  
Data Release Authorized: **VIB**  
Reported: 08/19/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10

Date Extracted LCS/LCSD: 08/17/10

Sample Amount LCS: 500 mL  
LCSD: 500 mL

Date Analyzed LCS: 08/18/10 23:26  
LCSD: 08/18/10 23:48

Final Extract Volume LCS: 1.0 mL  
LCSD: 1.0 mL

Instrument/Analyst LCS: FID/MS  
LCSD: FID/MS

Dilution Factor LCS: 1.00  
LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.00	3.00	66.7%	2.19	3.00	73.0%	9.1%

**TPHD Surrogate Recovery**

	LCS	LCSD
o-Terphenyl	68.0%	81.0%

Results reported in mg/L  
RPD calculated using sample concentrations per SW846.

**TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT**

Matrix: Water  
Date Received: 08/12/10

ARI Job: RI46  
Project: Lora Lakes Apts. RI  
POS-LLA

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
10-19678-081710MB1	Method Blank	500 mL	1.00 mL	08/17/10
10-19678-081710LCS1	Lab Control	500 mL	1.00 mL	08/17/10
10-19678-081710LCS1	Lab Control Dup	500 mL	1.00 mL	08/17/10
10-19678-RI46A	MW-02-081110	500 mL	1.00 mL	08/17/10
10-19679-RI46B	MW-03-081110	500 mL	1.00 mL	08/17/10
10-19680-RI46C	MW-03-081110-D	500 mL	1.00 mL	08/17/10
10-19681-RI46D	MW-04-081110	500 mL	1.00 mL	08/17/10
10-19682-RI46E	MW-14-081110	500 mL	1.00 mL	08/17/10
10-19683-RI46F	MW-12-081210	500 mL	1.00 mL	08/17/10
10-19684-RI46G	MW-13-081210	500 mL	1.00 mL	08/17/10
10-19685-RI46H	MW-10-081210	500 mL	1.00 mL	08/17/10
10-19686-RI46I	MW-11-081210	500 mL	1.00 mL	08/17/10

**Diesel Extraction Report**

**RI46:00114**

4  
TPH METHOD BLANK SUMMARY

BLANK NO.

RI46MBW1

Lab Name: ANALYTICAL RESOURCES, INC  
 SDG No.: RI46  
 Date Extracted: 08/17/10  
 Date Analyzed : 08/19/10  
 Time Analyzed : 0009

Client: FLOYD/SNIDER  
 Project No.: LORA LAKE APTS.  
 Matrix: LIQUID  
 Instrument ID : FID9

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
	=====	=====	=====
01	MW-02-081110	RI46A	08/18/10
02	MW-03-081110	RI46B	08/18/10
03	MW-03-081110	RI46C	08/18/10
04	MW-04-081110	RI46D	08/18/10
05	MW-14-081110	RI46E	08/18/10
06	MW-12-081210	RI46F	08/18/10
07	MW-13-081210	RI46G	08/18/10
08	MW-10-081210	RI46H	08/18/10
09	MW-11-081210	RI46I	08/18/10
10	RI46LCSW1	RI46LCSW1	08/18/10
11	RI46LCSDW1	RI46LCSDW1	08/18/10
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

6a  
NW DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

Instrument: FID9.I

Project: LORA LAKE APTS.

Calibration Date: 28-JUL-2010

SDG No.: RI46

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	25798	26021	26287	26699	26258	26926	26331	1.6
AK Diesel	28440	28641	29044	29481	28983	29726	29053	1.7
OR Diesel	28651	28856	29299	29708	29231	30010	29293	1.7
o-Terph	25541	25406	25759	26018	26067	25782	25762	1.0

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

Quant Ranges :   WA Diesel    C12-C24 (3.091-6.020)  
                  AK Diesel    C10-C25 (2.455-6.212)  
                  OR Diesel    C10-C28 (2.455-6.723)

Calibration Files      Analysis Time

---

0728A012.D	28-JUL-2010 20:24
0728A013.D	28-JUL-2010 20:45
0728A014.D	28-JUL-2010 21:07
0728A015.D	28-JUL-2010 21:28
0728A016.D	28-JUL-2010 21:49
0728A017.D	28-JUL-2010 22:11



6a  
NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

Instrument: FID9.I

Project: LORA LAKE APTS.

Calibration Date: 29-JUL-2010

SDG No.: RI46

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	14669	13064	12525	12576	12003	11886	12787	7.9
Triac Surr	20395	20154	19766	20069	19304	19306	19832	2.3

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

Calibration Files      Analysis Time

---

0728A019.D	28-JUL-2010 22:53
0728A020.D	28-JUL-2010 23:15
0728A021.D	28-JUL-2010 23:36
0728A022.D	28-JUL-2010 23:57
0728A023.D	29-JUL-2010 00:18
0728A024.D	29-JUL-2010 00:40

7a  
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.      Client: FLOYD/SNIDER  
 ICal Date: 28-JUL-2010                      Project: LORA LAKE APTS.  
 CCal Date: 18-AUG-2010                      SDG No.: RI46  
 Analysis Time: 18:48                          Lab ID: DIESEL#3  
 Instrument: FID9.I                              Lab File Name: 0818A019.D

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies (C12-C24)	6494595	246.7	250	-1.3
AK102 (C10-C25)	7213078	248.3	250	-0.7
Terphenyl	1111063	43.1	45	-4.2

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :    WA Diesel    C12-C24  
                       AK Diesel    C10-C25

7a  
MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE APTS.

CCal Date: 18-AUG-2010

SDG No.: RI46

Analysis Time: 19:09

Lab ID: MOIL#3

Instrument: FID9.I

Lab File Name: 0818A020.D

M.oil Range	Area*	CalcAmt	NomAmt	% D
WAMoil (C24-C38)	6217252	486.2	500	-2.8
AK103 (C25-C36)	5363630	1070.8	500	114.2
n-Triacontane	863708	43.6	45	-3.2

<-

\* Surrogate areas are subtracted from range areas  
<- Indicates a %D outside QC limits

Quant Ranges :   WA M.Oil    C24-C38  
                  AK M.Oil    C25-C36

7a  
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE APTS.

CCal Date: 19-AUG-2010

SDG No.: RI46

Analysis Time: 00:30

Lab ID: DIESEL#4

Instrument: FID9.I

Lab File Name: 0818A035.D

Diesel Range	Area*	CalcAmt	NomAmt	% D
WADies (C12-C24)	6523111	247.7	250	-0.9
AK102 (C10-C25)	7238000	249.1	250	-0.3
Terphenyl	1120649	43.5	45	-3.3

\* Surrogate areas are subtracted from range areas  
<- Indicates a %D outside QC limits

Quant Ranges :   WA Diesel    C12-C24  
                  AK Diesel    C10-C25

7a  
MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.      Client: FLOYD/SNIDER  
 ICal Date: 28-JUL-2010                      Project: LORA LAKE APTS.  
 CCal Date: 19-AUG-2010                      SDG No.: RI46  
 Analysis Time: 00:52                          Lab ID: MOIL#4  
 Instrument: FID9.I                              Lab File Name: 0818A036.D

M.oil Range	Area*	CalcAmt	NomAmt	% D
WAMoil (C24-C38)	6201135	485.0	500	-3.0
AK103 (C25-C36)	5360450	1070.2	500	114.0
n-Triacontane	871638	44.0	45	-2.3

<-

\* Surrogate areas are subtracted from range areas  
 <- Indicates a %D outside QC limits

Quant Ranges :    WA M.Oil    C24-C38  
                       AK M.Oil    C25-C36

8  
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RI46

Project: LORA LAKE APTS.

Instrument ID: FID9

GC Column: RTX-1

Run Date: 08/18/10

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD						
TERPH: 4.79			TRIAIC: 7.15			
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAIC RT #	
01	RT	08/18/10	1225	4.80	7.13	
02	IB	08/18/10	1246	4.80	7.13	
03	LORA LAKE AP	08/18/10	1848	4.80	7.15	
04	LORA LAKE AP	08/18/10	1909	4.79	7.13	
05	ZZZZZ	08/18/10	1931	4.82	7.16	
06	ZZZZZ	08/18/10	1952	4.79	7.12	
07	MW-02-081110	08/18/10	2014	4.79	7.12	
08	MW-03-081110	08/18/10	2035	4.79	7.13	
09	MW-03-081110	08/18/10	2056	4.79	7.12	
10	MW-04-081110	08/18/10	2118	4.79	7.13	
11	MW-14-081110	08/18/10	2139	4.79	7.13	
12	MW-12-081210	08/18/10	2201	4.79	7.13	
13	MW-13-081210	08/18/10	2222	4.79	7.12	
14	MW-10-081210	08/18/10	2243	4.79	7.13	
15	MW-11-081210	08/18/10	2305	4.80	7.12	
16	RI46LCSW1	08/18/10	2326	4.80	7.16	
17	RI46LCSDW1	08/18/10	2348	4.80	7.12	
18	RI46MBW1	08/19/10	0009	4.79	7.12	
19	LORA LAKE AP	08/19/10	0030	4.80	7.15	
20	LORA LAKE AP	08/19/10	0052	4.79	7.14	

TERPH = o-terph (+/- 0.05 MINUTES)  
 TRIAC = Triacon Surr (+/- 0.05 MINUTES)

\* Values outside of QC limits.

8  
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RI46

Project: LORA LAKE APTS.

Instrument ID: FID9

GC Column: RTX-1

Run Date: 07/29/10

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD						
TERPH: 4.77			TRIAAC: 7.04			
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAAC RT #	
01	RT	07/28/10	1941	4.77	7.08	
02	IB	07/28/10	2002	4.77	7.08	
03	DIESEL 50	07/28/10	2024	4.76	7.04	
04	DIESEL 100	07/28/10	2045	4.76	7.04	
05	DIESEL 250	07/28/10	2107	4.77	7.04	
06	DIESEL 500	07/28/10	2128	4.78	7.04	
07	DIESEL 1000	07/28/10	2149	4.80	7.03	
08	DIESEL 2500	07/28/10	2211	4.83*	7.04	
09	DIESEL ICV	07/28/10	2232	4.77	7.04	
10	MOIL 100	07/28/10	2253	4.77	7.08	
11	MOIL 250	07/28/10	2315	4.77	7.09	
12	MOIL 500	07/28/10	2336	4.76	7.09*	
13	MOIL 1000	07/28/10	2357	4.76	7.10*	
14	MOIL 2500	07/29/10	0018	4.76	7.13*	
15	MOIL 5000	07/29/10	0040	4.76	7.16*	
16	MOIL ICV	07/29/10	0101	4.76	7.09*	

TERPH = o-terph  
TRIAAC = Triacon Surr

QC LIMITS  
(+/- 0.05 MINUTES)  
(+/- 0.05 MINUTES)

\* Values outside of QC limits.

**TPHG/BETX Analysis  
Report and Summary QC Forms**

**ARI Job ID: RI46**



ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021BMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: MW-02-081110  
 SAMPLE

Lab Sample ID: RI46A  
 LIMS ID: 10-19678  
 Matrix: Water  
 Data Release Authorized: *MW*  
 Reported: 08/23/10

QC Report No: RI46-Floyd-Snider  
 Project: Lora Lakes Apts. RI  
 Event: POS-LLA  
 Date Sampled: 08/11/10  
 Date Received: 08/12/10

Date Analyzed: 08/13/10 17:11  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	1.0	< 1.0 U	
108-88-3	Toluene	1.0	< 1.0 U	
100-41-4	Ethylbenzene	1.0	< 1.0 U	
179601-23-1	m,p-Xylene	1.0	< 1.0 U	
95-47-6	o-Xylene	1.0	< 1.0 U	
	Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	93.9%
Bromobenzene	95.4%

**Gasoline Surrogate Recovery**

Trifluorotoluene	99.3%
Bromobenzene	98.9%

BETX values reported in µg/L (ppb)  
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021BMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: MW-03-081110  
 SAMPLE

Lab Sample ID: RI46B  
 LIMS ID: 10-19679  
 Matrix: Water  
 Data Release Authorized: *mm*  
 Reported: 08/23/10

QC Report No: RI46-Floyd-Snider  
 Project: Lora Lakes Apts. RI  
 Event: POS-LLA  
 Date Sampled: 08/11/10  
 Date Received: 08/12/10

Date Analyzed: 08/13/10 17:35  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
-----------------------------	------	----------	---------------

**BETX Surrogate Recovery**

Trifluorotoluene	92.4%
Bromobenzene	93.8%

**Gasoline Surrogate Recovery**

Trifluorotoluene	98.1%
Bromobenzene	97.1%

BETX values reported in µg/L (ppb)  
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021BMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: MW-03-081110-D  
 SAMPLE

Lab Sample ID: RI46C  
 LIMS ID: 10-19680  
 Matrix: Water  
 Data Release Authorized: *MMW*  
 Reported: 08/23/10

QC Report No: RI46-Floyd-Snider  
 Project: Lora Lakes Apts. RI  
 Event: POS-LLA  
 Date Sampled: 08/11/10  
 Date Received: 08/12/10

Date Analyzed: 08/13/10 20:02  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

	RL	Result	GAS ID
Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	96.6%
Bromobenzene	97.6%

**Gasoline Surrogate Recovery**

Trifluorotoluene	100%
Bromobenzene	101%

BETX values reported in µg/L (ppb)  
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

**ORGANICS ANALYSIS DATA SHEET**

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MW-04-081110

SAMPLE

Lab Sample ID: RI46D

LIMS ID: 10-19681

Matrix: Water

Data Release Authorized: *WVW*

Reported: 08/23/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

Event: POS-LLA

Date Sampled: 08/11/10

Date Received: 08/12/10

Date Analyzed: 08/13/10 20:27

Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
-----------------------------	------	----------	------------

**BETX Surrogate Recovery**

Trifluorotoluene	94.9%
Bromobenzene	94.0%

**Gasoline Surrogate Recovery**

Trifluorotoluene	99.2%
Bromobenzene	98.7%

BETX values reported in µg/L (ppb)  
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021BMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: MW-14-081110  
 SAMPLE

Lab Sample ID: RI46E  
 LIMS ID: 10-19682  
 Matrix: Water  
 Data Release Authorized: *WJW*  
 Reported: 08/23/10

QC Report No: RI46-Floyd-Snider  
 Project: Lora Lakes Apts. RI  
 Event: POS-LLA  
 Date Sampled: 08/11/10  
 Date Received: 08/12/10

Date Analyzed: 08/13/10 21:41  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	1.0	< 1.0 U	
108-88-3	Toluene	1.0	< 1.0 U	
100-41-4	Ethylbenzene	1.0	< 1.0 U	
179601-23-1	m,p-Xylene	1.0	< 1.0 U	
95-47-6	o-Xylene	1.0	< 1.0 U	
	Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	92.9%
Bromobenzene	96.1%

**Gasoline Surrogate Recovery**

Trifluorotoluene	98.0%
Bromobenzene	99.4%

BETX values reported in µg/L (ppb)  
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021BMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: MW-12-081210  
 SAMPLE

Lab Sample ID: RI46F  
 LIMS ID: 10-19683  
 Matrix: Water  
 Data Release Authorized: *WVW*  
 Reported: 08/23/10

QC Report No: RI46-Floyd-Snider  
 Project: Lora Lakes Apts. RI  
 Event: POS-LLA  
 Date Sampled: 08/12/10  
 Date Received: 08/12/10

Date Analyzed: 08/13/10 22:05  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	1.0	< 1.0 U	
108-88-3	Toluene	1.0	< 1.0 U	
100-41-4	Ethylbenzene	1.0	< 1.0 U	
179601-23-1	m,p-Xylene	1.0	< 1.0 U	
95-47-6	o-Xylene	1.0	< 1.0 U	
	Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	90.8%
Bromobenzene	92.2%

**Gasoline Surrogate Recovery**

Trifluorotoluene	96.8%
Bromobenzene	96.7%

BETX values reported in µg/L (ppb)  
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021BMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: MW-13-081210  
 SAMPLE

Lab Sample ID: RI46G  
 LIMS ID: 10-19684  
 Matrix: Water  
 Data Release Authorized: *WWW*  
 Reported: 08/23/10

QC Report No: RI46-Floyd-Snider  
 Project: Lora Lakes Apts. RI  
 Event: POS-LLA  
 Date Sampled: 08/12/10  
 Date Received: 08/12/10

Date Analyzed: 08/13/10 22:30  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	1.0	< 1.0 U	
108-88-3	Toluene	1.0	< 1.0 U	
100-41-4	Ethylbenzene	1.0	< 1.0 U	
179601-23-1	m,p-Xylene	1.0	< 1.0 U	
95-47-6	o-Xylene	1.0	< 1.0 U	
	Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	93.2%
Bromobenzene	93.7%

**Gasoline Surrogate Recovery**

Trifluorotoluene	98.0%
Bromobenzene	97.7%

BETX values reported in µg/L (ppb)  
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

**ORGANICS ANALYSIS DATA SHEET**

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MW-10-081210

SAMPLE

Lab Sample ID: RI46H

LIMS ID: 10-19685

Matrix: Water

Data Release Authorized: *W*

Reported: 08/23/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

Event: POS-LLA

Date Sampled: 08/12/10

Date Received: 08/12/10

Date Analyzed: 08/13/10 22:54

Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
-----------------------------	------	----------	---------------

**BETX Surrogate Recovery**

Trifluorotoluene	89.6%
Bromobenzene	91.3%

**Gasoline Surrogate Recovery**

Trifluorotoluene	94.7%
Bromobenzene	95.2%

BETX values reported in µg/L (ppb)  
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.



ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021EMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: MW-11-081210  
 SAMPLE

Lab Sample ID: RI46I  
 LIMS ID: 10-19686  
 Matrix: Water  
 Data Release Authorized: *MW*  
 Reported: 08/23/10

QC Report No: RI46-Floyd-Snider  
 Project: Lora Lakes Apts. RI  
 Event: POS-LLA  
 Date Sampled: 08/12/10  
 Date Received: 08/12/10

Date Analyzed: 08/13/10 23:19  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	1.0	< 1.0 U	
108-88-3	Toluene	1.0	< 1.0 U	
100-41-4	Ethylbenzene	1.0	< 1.0 U	
179601-23-1	m,p-Xylene	1.0	< 1.0 U	
95-47-6	o-Xylene	1.0	< 1.0 U	
	Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	93.3%
Bromobenzene	94.2%

**Gasoline Surrogate Recovery**

Trifluorotoluene	98.1%
Bromobenzene	98.5%

BETX values reported in µg/L (ppb)  
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.  
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

**ORGANICS ANALYSIS DATA SHEET**

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: 081110-TB

SAMPLE

Lab Sample ID: RI46J

LIMS ID: 10-19687

Matrix: Water

Data Release Authorized: *MMW*

Reported: 08/23/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

Event: POS-LLA

Date Sampled: 08/11/10

Date Received: 08/12/10

Date Analyzed: 08/13/10 16:46

Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
-----------------------------	------	----------	---------------

**BETX Surrogate Recovery**

Trifluorotoluene	94.0%
Bromobenzene	95.0%

**Gasoline Surrogate Recovery**

Trifluorotoluene	98.8%
Bromobenzene	98.5%

BETX values reported in µg/L (ppb)  
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021BMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: 081210-TB  
 SAMPLE

Lab Sample ID: RI46K  
 LIMS ID: 10-19688  
 Matrix: Water  
 Data Release Authorized: *MMW*  
 Reported: 08/23/10

QC Report No: RI46-Floyd-Snider  
 Project: Lora Lakes Apts. RI  
 Event: POS-LLA  
 Date Sampled: 08/12/10  
 Date Received: 08/12/10

Date Analyzed: 08/13/10 16:21  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	GAS ID
71-43-2	Benzene	1.0	< 1.0 U	
108-88-3	Toluene	1.0	< 1.0 U	
100-41-4	Ethylbenzene	1.0	< 1.0 U	
179601-23-1	m,p-Xylene	1.0	< 1.0 U	
95-47-6	o-Xylene	1.0	< 1.0 U	
	Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

**BETX Surrogate Recovery**

Trifluorotoluene	96.3%
Bromobenzene	96.1%

**Gasoline Surrogate Recovery**

Trifluorotoluene	99.6%
Bromobenzene	99.0%

BETX values reported in µg/L (ppb)  
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

**TPHG WATER SURROGATE RECOVERY SUMMARY**

ARI Job: RI46  
Matrix: Water

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
Event: POS-LLA

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-081310	95.4%	98.5%	0
LCS-081310	99.3%	101%	0
LCS-D-081310	98.4%	102%	0
MW-02-081110	99.3%	98.9%	0
MW-03-081110	98.1%	97.1%	0
MW-03-081110-D	100%	101%	0
MW-04-081110	99.2%	98.7%	0
MW-04-081110 MS	99.0%	98.8%	0
MW-04-081110 MSD	98.9%	98.5%	0
MW-14-081110	98.0%	99.4%	0
MW-12-081210	96.8%	96.7%	0
MW-13-081210	98.0%	97.7%	0
MW-10-081210	94.7%	95.2%	0
MW-11-081210	98.1%	98.5%	0
081110-TB	98.8%	98.5%	0
081210-TB	99.6%	99.0%	0

	<b>LCS/MB LIMITS</b>	<b>QC LIMITS</b>
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 10-19678 to 10-19688

**BETX WATER SURROGATE RECOVERY SUMMARY**

ARI Job: RI46  
Matrix: Water

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
Event: POS-LLA

Client ID	TFT	BBZ	TOT OUT
MB-081310	91.1%	95.7%	0
LCS-081310	96.0%	97.1%	0
LCSD-081310	95.3%	97.6%	0
MW-02-081110	93.9%	95.4%	0
MW-03-081110	92.4%	93.8%	0
MW-03-081110-D	96.6%	97.6%	0
MW-04-081110	94.9%	94.0%	0
MW-04-081110 MS	94.1%	95.1%	0
MW-04-081110 MSD	95.2%	95.8%	0
MW-14-081110	92.9%	96.1%	0
MW-12-081210	90.8%	92.2%	0
MW-13-081210	93.2%	93.7%	0
MW-10-081210	89.6%	91.3%	0
MW-11-081210	93.3%	94.2%	0
081110-TB	94.0%	95.0%	0
081210-TB	96.3%	96.1%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(79-120)	(80-120)
(BBZ) = Bromobenzene	(79-120)	(80-120)

Log Number Range: 10-19678 to 10-19688

ORGANICS ANALYSIS DATA SHEET  
TPHG by Method NWTPHG  
Page 1 of 1

Sample ID: MW-04-081110  
MATRIX SPIKE

Lab Sample ID: RI46D  
LIMS ID: 10-19681  
Matrix: Water  
Data Release Authorized: *mw*  
Reported: 08/23/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10

Date Analyzed MS: 08/13/10 20:51  
MSD: 08/13/10 21:16  
Instrument/Analyst MS: PID3/MH  
MSD: PID3/MH

Purge Volume: 5.0 mL  
Dilution Factor MS: 1.0  
MSD: 1.0

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Gasoline Range Hydrocarbons < 0.25 U		0.95	1.00	95.0%	0.97	1.00	97.0%	2.1%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	MS	MSD
Trifluorotoluene	99.0%	98.9%
Bromobenzene	98.8%	98.5%

**ORGANICS ANALYSIS DATA SHEET**

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: MW-04-081110

MATRIX SPIKE

Lab Sample ID: RI46D

QC Report No: RI46-Floyd-Snider

LIMS ID: 10-19681

Project: Lora Lakes Apts. RI

Matrix: Water

Event: POS-LLA

Data Release Authorized: *WW*

Date Sampled: 08/11/10

Reported: 08/23/10

Date Received: 08/12/10

Date Analyzed MS: 08/13/10 20:51

Purge Volume: 5.0 mL

MSD: 08/13/10 21:16

Instrument/Analyst MS: PID3/MH

Dilution Factor MS: 1.0

MSD: PID3/MH

MSD: 1.0

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Benzene	< 1.00 U	2.16	2.10	103%	2.15	2.10	102%	0.5%
Toluene	< 1.00 U	27.7	28.7	96.5%	28.2	28.7	98.3%	1.8%
Ethylbenzene	< 1.00 U	8.53	9.20	92.7%	8.74	9.20	95.0%	2.4%
m,p-Xylene	< 1.00 U	30.2	33.8	89.3%	30.8	33.8	91.1%	2.0%
o-Xylene	< 1.00 U	13.0	14.0	92.9%	13.2	14.0	94.3%	1.5%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

**BETX Surrogate Recovery**

	MS	MSD
Trifluorotoluene	94.1%	95.2%
Bromobenzene	95.1%	95.8%

ORGANICS ANALYSIS DATA SHEET  
TPHG by Method NWTPHG  
Page 1 of 1

Sample ID: LCS-081310  
LAB CONTROL SAMPLE

Lab Sample ID: LCS-081310  
LIMS ID: 10-19678  
Matrix: Water  
Data Release Authorized: *mmw*  
Reported: 08/23/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: NA  
Date Received: NA

Date Analyzed LCS: 08/13/10 14:42  
LCSD: 08/13/10 15:07  
Instrument/Analyst LCS: PID3/MH  
LCSD: PID3/MH

Purge Volume: 5.0 mL  
Dilution Factor LCS: 1.0  
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	0.97	1.00	97.0%	0.95	1.00	95.0%	2.1%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

**TPHG Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	99.3%	98.4%
Bromobenzene	101%	102%



ORGANICS ANALYSIS DATA SHEET  
BETX by Method SW8021BMod  
Page 1 of 1

Sample ID: LCS-081310  
LAB CONTROL SAMPLE

Lab Sample ID: LCS-081310  
LIMS ID: 10-19678  
Matrix: Water  
Data Release Authorized: *MMW*  
Reported: 08/23/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: NA  
Date Received: NA

Date Analyzed LCS: 08/13/10 14:42  
LCSD: 08/13/10 15:07  
Instrument/Analyst LCS: PID3/MH  
LCSD: PID3/MH

Purge Volume: 5.0 mL  
Dilution Factor LCS: 1.0  
LCSD: 1.0

Analyte	LCS	Spike	LCS	LCSD	Spike	LCS	RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Benzene	2.25	2.10	107%	2.21	2.10	105%	1.8%
Toluene	29.0	28.7	101%	28.9	28.7	101%	0.3%
Ethylbenzene	8.87	9.20	96.4%	8.82	9.20	95.9%	0.6%
m,p-Xylene	31.4	33.8	92.9%	31.6	33.8	93.5%	0.6%
o-Xylene	13.6	14.0	97.1%	13.5	14.0	96.4%	0.7%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

**BETX Surrogate Recovery**

	LCS	LCSD
Trifluorotoluene	96.0%	95.3%
Bromobenzene	97.1%	97.6%

4  
BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB0813S1

Lab Name: ANALYTICAL RESOURCES, INC      Client: FLOYD/SNIDER  
 SDG No.: RI46      Project No.: LORA LAKE  
 Date Analyzed : 08/13/10      Matrix: WATER  
 Time Analyzed : 1531      Instrument ID : PID3

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
	=====	=====	=====
01	LCS0813	LCS0813	08/13/10
02	LCSD0813	LCSD0813	08/13/10
03	081210-TB	RI46K	08/13/10
04	081110-TB	RI46J	08/13/10
05	MW-02-081110	RI46A	08/13/10
06	MW-03-081110	RI46B	08/13/10
07	MW-03-081110	RI46C	08/13/10
08	MW-04-081110	RI46D	08/13/10
09	MW-04-081110	RI46DMS	08/13/10
10	MW-04-081110	RI46DMSD	08/13/10
11	MW-14-081110	RI46E	08/13/10
12	MW-12-081210	RI46F	08/13/10
13	MW-13-081210	RI46G	08/13/10
14	MW-10-081210	RI46H	08/13/10
15	MW-11-081210	RI46I	08/13/10
16			
17			

ORGANICS ANALYSIS DATA SHEET  
 BETX by Method SW8021BMod  
 TPHG by Method NWTPHG  
 Page 1 of 1

Sample ID: MB-081310  
 METHOD BLANK

Lab Sample ID: MB-081310  
 LIMS ID: 10-19678  
 Matrix: Water  
 Data Release Authorized: *MW*  
 Reported: 08/23/10

QC Report No: RI46-Floyd-Snider  
 Project: Lora Lakes Apts. RI  
 Event: POS-LLA  
 Date Sampled: NA  
 Date Received: NA

Date Analyzed: 08/13/10 15:31  
 Instrument/Analyst: PID3/MH

Purge Volume: 5.0 mL  
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

Gasoline Range Hydrocarbons	0.25	< 0.25 U	GAS ID ---
-----------------------------	------	----------	---------------

**BETX Surrogate Recovery**

Trifluorotoluene	91.1%
Bromobenzene	95.7%

**Gasoline Surrogate Recovery**

Trifluorotoluene	95.4%
Bromobenzene	98.5%

BETX values reported in µg/L (ppb)  
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.  
 GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

6a  
GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.  
Instrument/Det: PID3.I/RTX 502-2 FID  
Calibration Date: 28-JUL-2010

Client: FLOYD/SNIDER  
Project: LORA LAKE  
SDG No.: RI46

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 20	Ave RF	%RSD
WA Gas	1009250	772696	761867	782843	800745	839442	827807	11.2
AK Gas	1342560	1066876	1050254	1042480	1063396	1225137	1131784	10.9
NW Gas	1102210	829838	811111	828987	844316	875713	882029	12.5
8015Gas	1959390	1600162	1564234	1551602	1571254	1738000	1664107	9.6
\$TFT(Surr)	78.13636 70.30000	73.54545	71.97015	70.35000	70.48120	69.03933	71.97607	4.271
\$BB(Surr)	48.72727 42.23000	43.22727	42.49254	41.18000	42.06767	41.53933	43.06630	5.994

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

Quant Ranges :   WA Gas    Toluene - nC12  
                  AK Gas    nC6 - nC10  
                  NW Gas    Toluene - Naphthalene  
                  8015 Gas   2-Methylpentane - 1,2,4-Trimethylbenzene

Calibration Files      Analysis Time

---

0728a012.d	28-JUL-2010 11:42
0728a004.d	28-JUL-2010 08:07
0728a005.d	28-JUL-2010 08:31
0728a006.d	28-JUL-2010 08:56
0728a007.d	28-JUL-2010 09:20
0728a008.d	28-JUL-2010 09:45

Surr Calibration Files      Analysis Time

---

0629a005.d	29-JUN-2010 07:59
0629a006.d	29-JUN-2010 08:24
0629a007.d	29-JUN-2010 08:48
0629a008.d	29-JUN-2010 09:12
0629a009.d	29-JUN-2010 09:37
0629a010.d	29-JUN-2010 10:01
0629a011.d	29-JUN-2010 10:26

6  
BETX INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RI46

Project: LORA LAKE

Instrument/Det: PID3 /RTX 502-2 PID

Calibration Date: 06/29/10

COMPOUND	CALIBRATION FACTORS					MEAN	%RSD
	0.25	0.5	5	25	50		
Benzene	1564	1462	1257	1240	1256		
Toluene	1608	1252	1288	1275	1275		
Ethylbenzene	1404	1420	1164	1185	1190		
M/P-Xylene	1614	1381	1314	1300	1302		
O-Xylene	1352	1232	1295	1269	1282		
MTBE	464	288	367	346	348		
TFT (Surr)	243	220	213	214	217		
BB (Surr)	496	451	434	440	456		

Calibration Files

/chem3/pid3.i/20100629-1.b/0629a005.d  
 /chem3/pid3.i/20100629-1.b/0629a006.d  
 /chem3/pid3.i/20100629-1.b/0629a007.d  
 /chem3/pid3.i/20100629-1.b/0629a008.d  
 /chem3/pid3.i/20100629-1.b/0629a009.d  
 /chem3/pid3.i/20100629-1.b/0629a010.d  
 /chem3/pid3.i/20100629-1.b/0629a011.d

6  
BETX INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RI46

Project: LORA LAKE

Instrument/Det: PID3 /RTX 502-2 PID

Calibration Date: 06/29/10

COMPOUND	CALIBRATION FACTORS			
	100	200	MEAN	%RSD
Benzene	1220	1254	1322	10.16
Toluene	1247	1294	1320	9.72
Ethylbenzene	1152	1183	1242	9.38
M/P-Xylene	1247	1268	1346	9.29
O-Xylene	1256	1307	1285	3.02
MTBE	334	343	356	15.04
TFT (Surr)	212	219	220	4.94
BB (Surr)	450	463	456	4.41

7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 28-JUL-2010

SDG No.: RI46

Lab File Name: 0728a010.d

Inst/Det: PID3.I/RTX 502-2 FID

Gas Range	Area*	CalcAmt	NomAmt	%D	
WAGas (Tol-C12)	2493506	3.01	2.50	20.5	<-
AKGas (C6-C10)	2858408	2.53	2.50	1.0	
NWGas (Tol-Nap)	2556570	2.90	2.50	15.9	
8015B (2MP-TMB)	3739886	2.25	2.50	-10.1	

\* Surrogate areas are subtracted from Total Area  
<- Indicates an RPD outside QC limits

7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 28-JUL-2010

SDG No.: RI46

Lab File Name: 0728a010.d

Inst/Det: PID3.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	85915	99.7	100.0	-0.3
Bromoflrbenz	33856	101.1	100.0	1.1



7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 13-AUG-2010

SDG No.: RI46

Lab File Name: 0813a003.d

Inst/Det: PID3.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	1973217	2.38	2.50	-4.7
AKGas (C6-C10)	2603334	2.30	2.50	-8.0
NWGas (Tol-Nap)	2101664	2.38	2.50	-4.7
8015B (2MP-TMB)	3860578	2.32	2.50	-7.2

\* Surrogate areas are subtracted from Total Area  
<- Indicates an RPD outside QC limits

7  
 BETX CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RI46

Project No.: LORA LAKE

Instrument/Det: PID3/RTX 502-2 PID

Calibration Date: 08/13/10

Init. Calib. Date(s): 06/29/10

Calib. File: 0813A002.D

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Benzene	7.69	7.62	7.76	25.43	25.00	1.7
Toluene	10.27	10.20	10.34	24.74	25.00	-1.0
Ethylbenzene	12.80	12.73	12.87	24.10	25.00	-3.6
M/P-Xylene	12.94	12.87	13.01	49.01	50.00	-2.0
O-Xylene	13.72	13.67	13.77	24.87	25.00	-0.5
MTBE	5.29	5.22	5.36	27.03	25.00	8.1
TFT (Surr)	8.41	8.34	8.48	94.09	100.0	-5.9
BB (Surr)	14.88	14.81	14.95	96.08	100.0	-3.9

7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 13-AUG-2010

SDG No.: RI46

Lab File Name: 0813a003.d

Inst/Det: PID3.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	86638	100.4	100.0	0.4
Bromoflrbenz	36610	103.1	100.0	3.1

7  
 BETX CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RI46

Project No.: LORA LAKE

Instrument/Det: PID3/RTX 502-2 PID

Calibration Date: 08/13/10

Init. Calib. Date(s): 06/29/10

Calib. File: 0813A014.D

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	%D
		FROM	TO			
Benzene	7.72	7.62	7.76	25.46	25.00	1.8
Toluene	10.31	10.20	10.34	24.94	25.00	-0.2
Ethylbenzene	12.84	12.73	12.87	24.32	25.00	-2.7
M/P-Xylene	12.98	12.87	13.01	48.72	50.00	-2.6
O-Xylene	13.76	13.67	13.77	24.95	25.00	-0.2
MTBE	5.31	5.22	5.36	26.66	25.00	6.6
TFT (Surr)	8.44	8.34	8.48	94.46	100.0	-5.5
BB (Surr)	14.91	14.81	14.95	96.36	100.0	-3.6

7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 13-AUG-2010

SDG No.: RI46

Lab File Name: 0813a015.d

Inst/Det: PID3.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	1960964	2.37	2.50	-5.2
AKGas (C6-C10)	2584374	2.28	2.50	-8.7
NWGas (Tol-Nap)	2075720	2.35	2.50	-5.9
8015B (2MP-TMB)	3836033	2.31	2.50	-7.8

\* Surrogate areas are subtracted from Total Area  
<- Indicates an RPD outside QC limits

7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 13-AUG-2010

SDG No.: RI46

Lab File Name: 0813a015.d

Inst/Det: PID3.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	87573	101.1	100.0	1.1
Bromoflrbenz	37836	102.0	100.0	2.0

7  
 BETX CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RI46

Project No.: LORA LAKE

Instrument/Det: PID3/RTX 502-2 PID

Calibration Date: 08/14/10

Init. Calib. Date(s): 06/29/10

Calib. File: 0813A026.D

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	%D
		FROM	TO			
Benzene	7.72	7.62	7.76	25.71	25.00	2.8
Toluene	10.31	10.20	10.34	25.06	25.00	0.2
Ethylbenzene	12.84	12.73	12.87	24.30	25.00	-2.8
M/P-Xylene	12.98	12.87	13.01	48.49	50.00	-3.0
O-Xylene	13.76	13.67	13.77	25.09	25.00	0.4
MTBE	5.31	5.22	5.36	26.89	25.00	7.6
TFT (Surr)	8.44	8.34	8.48	92.92	100.0	-7.1
BB (Surr)	14.91	14.81	14.95	99.37	100.0	-0.6

7a  
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 14-AUG-2010

SDG No.: RI46

Lab File Name: 0813a027.d

Inst/Det: PID3.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D	
WAGas (Tol-C12)	1814268	2.19	2.50	-12.3	
AKGas (C6-C10)	2349556	2.08	2.50	-17.0	
NWGas (Tol-Nap)	1920448	2.18	2.50	-12.9	
8015B (2MP-TMB)	3536182	2.12	2.50	-15.0	<-

\* Surrogate areas are subtracted from Total Area  
<- Indicates an RPD outside QC limits



7b  
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: FLOYD/SNIDER

ICal Date: 28-JUL-2010

Project: LORA LAKE

CCal Date: 14-AUG-2010

SDG No.: RI46

Lab File Name: 0813a027.d

Inst/Det: PID3.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	82617	96.9	100.0	-3.1
Bromoflrbenz	35485	100.8	100.0	0.8

## BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RI46

Project: LORA LAKE

Instrument ID: PID3

GC Detector: RTX 502-2 PID

Run Date: 07/28/10

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

METHOD SURROGATE RT							
				S1 : 8.44		S2 : 14.91	
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	#	S2 RT	#
=====							
01	ZZZZZ	07/28/10	0653			14.86	
02	RT+BCAL 1	07/28/10	0718	8.41		14.89	
03	ZZZZZ	07/28/10	0742	8.43		14.90	
04	GAS .25	07/28/10	0807	8.43		14.91	
05	GAS 1	07/28/10	0831	8.44		14.91	
06	GAS 2.5	07/28/10	0856	8.44		14.91	
07	GAS 5	07/28/10	0920	8.44		14.91	
08	GAS 20	07/28/10	0945	8.44		14.91	
09	ZZZZZ	07/28/10	1009			14.84	
10	GAS ICV	07/28/10	1034	8.44		14.91	
11	ZZZZZ	07/28/10	1117			14.93	
12	GAS .1	07/28/10	1142	8.43		14.90	

S1 = TFT(Surr) (+/- 0.07 MINUTES)  
S2 = BB(Surr) (+/- 0.07 MINUTES)

## QC LIMITS

\* Values outside of QC limits.

## BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RI46

Project: LORA LAKE

Instrument ID: PID3

GC Detector: RTX 502-2 PID

Run Date: 06/29/10

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

METHOD SURROGATE RT							
S1 : 8.44		S2 : 14.91					
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	#	S2 RT	#
=====	=====	=====	=====	=====	=====	=====	=====
01	RINSE	06/29/10	0548				
02	RT+BCAL 1	06/29/10	0613	8.42		14.90	
03	GCAL 1	06/29/10	0637	8.43		14.91	
04	RINSE	06/29/10	0735				
05	BETX .25	06/29/10	0759	8.42		14.89	
06	BETX .5	06/29/10	0824	8.43		14.90	
07	BETX 5	06/29/10	0848	8.43		14.91	
08	BETX 25	06/29/10	0912	8.44		14.91	
09	BETX 50	06/29/10	0937	8.44		14.91	
10	BETX 100	06/29/10	1001	8.44		14.91	
11	BETX 200	06/29/10	1026	8.44		14.91	
12	BETX ICV	06/29/10	1050	8.44		14.91	
13	GCAL 2	06/29/10	1145	8.37		14.87	
14	LCS0629	06/29/10	1210	8.42		14.89	
15	LCSD0629	06/29/10	1234	8.43		14.90	
16	MB0629	06/29/10	1259	8.43		14.91	
17	ZZZZZ	06/29/10	1344	8.38		14.88	
18	ZZZZZ	06/29/10	1408	8.42		14.90	
19	ZZZZZ	06/29/10	1433	8.43		14.90	
20	ZZZZZ	06/29/10	1458	8.43		14.91	
21	ZZZZZ	06/29/10	1522	8.43		14.91	
22	ZZZZZ	06/29/10	1547	8.44		14.91	
23	ZZZZZ	06/29/10	1611	8.44		14.91	
24	RINSE	06/29/10	1636				
25	BCAL 3	06/29/10	1700	8.44		14.91	
26	GCAL 2	06/29/10	1725	8.44		14.91	

S1 = TFT(Surr) (+/- 0.07 MINUTES)  
S2 = BB(Surr) (+/- 0.07 MINUTES)

## QC LIMITS

\* Values outside of QC limits.

## BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES, INC

Client: FLOYD/SNIDER

SDG No.: RI46

Project: LORA LAKE

Instrument ID: PID3

GC Detector: RTX 502-2 PID

Run Date: 08/13/10

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS,  
IS GIVEN BELOW:

METHOD SURROGATE RT				S1	S2		
S1 : 8.41		S2 : 14.88					
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	#	S2 RT	#
=====	=====	=====	=====	=====	=====	=====	=====
01 ZZZZZ	ZZZZZ	08/13/10	1328			14.85	
02 RT+BCAL 1	RT+BCAL 1	08/13/10	1353	8.41		14.88	
03 GCAL 1	GCAL 1	08/13/10	1417	8.42		14.90	
04 LCS0813S1	LCS0813	08/13/10	1442	8.43		14.90	
05 LCSD0813S1	LCSD0813	08/13/10	1507	8.44		14.91	
06 MB0813S1	MB0813	08/13/10	1531	8.44		14.91	
07 081210-TB	RI46K	08/13/10	1621	8.37		14.88	
08 081110-TB	RI46J	08/13/10	1646	8.42		14.90	
09 MW-02-081110	RI46A	08/13/10	1711	8.43		14.90	
10 MW-03-081110	RI46B	08/13/10	1735	8.44		14.91	
11 ZZZZZ	ZZZZZ	08/13/10	1759	8.44		14.91	
12 ZZZZZ	ZZZZZ	08/13/10	1824	8.44		14.91	
13 ZZZZZ	ZZZZZ	08/13/10	1848				
14 BCAL 2	BCAL 2	08/13/10	1913	8.44		14.91	
15 GCAL 2	GCAL 2	08/13/10	1938	8.44		14.91	
16 MW-03-081110	RI46C	08/13/10	2002	8.44		14.91	
17 MW-04-081110	RI46D	08/13/10	2027	8.44		14.91	
18 MW-04-081110	RI46DMS	08/13/10	2051	8.44		14.91	
19 MW-04-081110	RI46DMSD	08/13/10	2116	8.44		14.91	
20 MW-14-081110	RI46E	08/13/10	2141	8.44		14.91	
21 MW-12-081210	RI46F	08/13/10	2205	8.44		14.91	
22 MW-13-081210	RI46G	08/13/10	2230	8.44		14.91	
23 MW-10-081210	RI46H	08/13/10	2254	8.44		14.91	
24 MW-11-081210	RI46I	08/13/10	2319	8.44		14.91	
25 ZZZZZ	ZZZZZ	08/13/10	2344				
26 BCAL 3	BCAL 3	08/14/10	0008	8.44		14.91	
27 GCAL 3	GCAL 3	08/14/10	0033	8.44		14.91	

QC LIMITS  
S1 = TFT(Surr) (+/- 0.07 MINUTES)  
S2 = BB(Surr) (+/- 0.07 MINUTES)

\* Values outside of QC limits.

**Metals Analysis  
Report and Summary QC Forms**

**ARI Job ID: RI46**

# Cover Page

INORGANIC ANALYSIS DATA PACKAGE



CLIENT: Floyd-Snider

PROJECT: Lora Lakes Apts. RI

SDG: RI46

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
MW-02-081110	RI46A	10-19678	
MW-02-081110D	RI46ADUP	10-19678	
MW-02-081110S	RI46ASPK	10-19678	
MW-03-081110	RI46B	10-19679	
PBW	RI46MB1	10-19679	
LCSW	RI46MB1SPK	10-19679	
MW-03-081110-D	RI46C	10-19680	
MW-04-081110	RI46D	10-19681	
MW-14-081110	RI46E	10-19682	
MW-12-081210	RI46F	10-19683	
MW-13-081210	RI46G	10-19684	
MW-10-081210	RI46H	10-19685	
MW-11-081210	RI46I	10-19686	

Were ICP interelement corrections applied ?                      Yes/No    YES  
Were ICP background corrections applied ?                      Yes/No    YES  
If yes - were raw data generated before  
application of background corrections ?                      Yes/No    NO

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

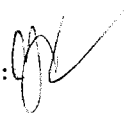
THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: Jay Kuhn                      Name: Jay Kuhn

Date: 8/20/10                      Title: Inorganic Manager

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

Sample ID: MW-02-081110  
SAMPLE

Lab Sample ID: RI46A  
LIMS ID: 10-19678  
Matrix: Water  
Data Release Authorized:   
Reported: 08/20/10

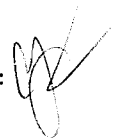
QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/17/10	200.8	08/19/10	7440-38-2	Arsenic	0.2	0.2	U
200.8	08/17/10	200.8	08/19/10	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

Sample ID: MW-03-081110  
SAMPLE

Lab Sample ID: RI46B  
LIMS ID: 10-19679  
Matrix: Water  
Data Release Authorized:   
Reported: 08/20/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10


Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/17/10	200.8	08/19/10	7440-38-2	Arsenic	0.2	0.4	
200.8	08/17/10	200.8	08/19/10	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL  
RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

Sample ID: MW-03-081110-D  
SAMPLE

Lab Sample ID: RI46C  
LIMS ID: 10-19680  
Matrix: Water  
Data Release Authorized:   
Reported: 08/20/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/17/10	200.8	08/19/10	7440-38-2	Arsenic	0.2	0.4	
200.8	08/17/10	200.8	08/19/10	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1


Sample ID: MW-04-081110

SAMPLE

Lab Sample ID: RI46D

LIMS ID: 10-19681

Matrix: Water

Data Release Authorized 

Reported: 08/20/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/11/10

Date Received: 08/12/10

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/17/10	200.8	08/19/10	7440-38-2	Arsenic	0.2	0.4	
200.8	08/17/10	200.8	08/19/10	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

Sample ID: MW-14-081110

SAMPLE

Lab Sample ID: RI46E

LIMS ID: 10-19682

Matrix: Water

Data Release Authorized: 

Reported: 08/20/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/11/10

Date Received: 08/12/10

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/17/10	200.8	08/19/10	7440-38-2	Arsenic	0.2	0.4	
200.8	08/17/10	200.8	08/19/10	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

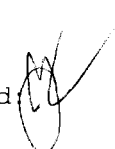
Sample ID: MW-12-081210

SAMPLE

Lab Sample ID: RI46F

LIMS ID: 10-19683

Matrix: Water

Data Release Authorized: 

Reported: 08/20/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/12/10

Date Received: 08/12/10


Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/17/10	200.8	08/19/10	7440-38-2	Arsenic	0.2	0.5	
200.8	08/17/10	200.8	08/19/10	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

Sample ID: MW-13-081210  
SAMPLE

Lab Sample ID: RI46G  
LIMS ID: 10-19684  
Matrix: Water  
Data Release Authorized:   
Reported: 08/20/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
POS-LLA  
Date Sampled: 08/12/10  
Date Received: 08/12/10

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/17/10	200.8	08/19/10	7440-38-2	Arsenic	0.2	0.3	
200.8	08/17/10	200.8	08/19/10	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

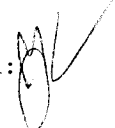
Sample ID: MW-10-081210

SAMPLE

Lab Sample ID: RI46H

LIMS ID: 10-19685

Matrix: Water

Data Release Authorized: 

Reported: 08/20/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/12/10

Date Received: 08/12/10

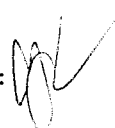
Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/17/10	200.8	08/19/10	7440-38-2	Arsenic	0.2	0.6	
200.8	08/17/10	200.8	08/19/10	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**  
**DISSOLVED METALS**  
Page 1 of 1

Sample ID: MW-11-081210  
SAMPLE

Lab Sample ID: RI46I  
LIMS ID: 10-19686  
Matrix: Water  
Data Release Authorized:   
Reported: 08/20/10

QC Report No: RI46-Floyd-Snider  
Project: Lora Lakes Apts. RI  
POS-LLA  
Date Sampled: 08/12/10  
Date Received: 08/12/10

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/17/10	200.8	08/19/10	7440-38-2	Arsenic	0.2	0.2	U
200.8	08/17/10	200.8	08/19/10	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL  
RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

Sample ID: MW-02-081110

**MATRIX SPIKE**

Lab Sample ID: RI46A

LIMS ID: 10-19678

Matrix: Water

Data Release Authorized: 

Reported: 08/20/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/11/10

Date Received: 08/12/10

**MATRIX SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	200.8	0.200 U	26.1	25.0	104%	
Lead	200.8	1.00 U	24.2	25.0	96.8%	

Reported in µg/L

N-Control Limit Not Met

H-% Recovery Not Applicable, Sample Concentration Too High

NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%



**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

Page 1 of 1

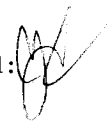
Sample ID: MW-02-081110

DUPLICATE

Lab Sample ID: RI46A

LIMS ID: 10-19678

Matrix: Water

Data Release Authorized: 

Reported: 08/20/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: 08/11/10

Date Received: 08/12/10

**MATRIX DUPLICATE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Lead	200.8	1 U	1 U	0.0%	+/- 1	L

Reported in µg/L

\*-Control Limit Not Met

L-RPD Invalid, Limit = Detection Limit

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

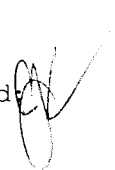
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: RI46LCS

LIMS ID: 10-19679

Matrix: Water

Data Release Authorized: 

Reported: 08/20/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: NA

Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	25.4	25.0	102%	
Lead	200.8	26	25	104%	

Reported in µg/L

N-Control limit not met

Control Limits: 80-120%

**INORGANICS ANALYSIS DATA SHEET**

**DISSOLVED METALS**

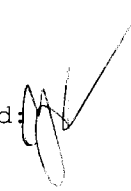
**Sample ID: METHOD BLANK**

Page 1 of 1

Lab Sample ID: RI46MB

LIMS ID: 10-19679

Matrix: Water

Data Release Authorized: 

Reported: 08/20/10

QC Report No: RI46-Floyd-Snider

Project: Lora Lakes Apts. RI

POS-LLA

Date Sampled: NA

Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	08/17/10	200.8	08/19/10	7440-38-2	Arsenic	0.2	0.2	U
200.8	08/17/10	200.8	08/19/10	7439-92-1	Lead	1	1	U

U-Analyte undetected at given RL

RL-Reporting Limit

# Calibration Verification



CLIENT: Floyd-Snyder

PROJECT: Lora Lakes Apts. RI

SDG: RI46

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Arsenic	AS	PMS	MS081981	50.0	49.73	99.5	50.0	50.61	101.2	50.45	100.9	50.26	100.5	50.24	100.5	50.35	100.7
Lead	PB	PMS	MS081981	50.0	48.76	97.5	50.0	49.95	99.9	46.18	92.4	50.44	100.9	46.78	93.6	46.86	93.7

Control Limits: Mercury 80-120; Other Metals 90-110

# CRDL Standard

CLIENT: Floyd-Snyder

PROJECT: Lora Lakes Apts. RI

SDG: RI46



UNITS: ug/L

ANALYTE	EL	M	RUN	CRA/I	TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Arsenic	AS	PMS	MS081981	0.2		0.21	105.0										
Lead	PB	PMS	MS081981	1.0		1.01	101.0										

Control Limits: no control limits have been established by the EPA at this time.

# Calibration Blanks



CLIENT: Floyd-Snyder

PROJECT: Lora Lakes Apts. RI

SDG: RI46

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	CCB1	CCB2	CCB3	CCB4	CCB5
Arsenic	AS	PMS	MS081981	10.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Lead	PB	PMS	MS081981	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

RI46: 00178

# ICP Interference Check Sample



CLIENT: Floyd-Snyder  
 PROJECT: Lora Lakes Apts. RI  
 SDG: RI46

ICS SOURCE: I.V.  
 RUNID: MS081981  
 INSTRUMENT ID: PE ELAN 6000

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic	20		0.0	18.9	94.5						
Cadmium	20		0.0	19.2	96.0						
Copper	20		0.5	18.7	93.5						
Nickel	20		0.6	19.5	97.5						
Silver	20		0.0	17.7	88.5						
Zinc	20		1.3	20.4	102.0						

# IDLs and ICP Linear Ranges



CLIENT: Floyd-Snider

PROJECT: Lora Lakes Apts. RI

SDG: RI46

UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENGTH (nm)	GFA BACK- GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Arsenic	AS	PMS	PE ELAN 6000 MS	0.00		10	0.2	4/1/2010		
Lead	PB	PMS	PE ELAN 6000 MS	0.00		3	1.0	4/1/2010		



# Preparation Log



CLIENT: Floyd-Snider

ANALYSIS METHOD: PMS

PROJECT: Lora Lakes Apts. RI

ARI PREP CODE: REN

SDG: RI46

PREPDATE: 8/17/2010

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
MW-02-081110	RI46A	0.000	50.0	25.0
MW-02-081110D	RI46ADUP	0.000	50.0	25.0
MW-02-081110S	RI46ASPK	0.000	50.0	25.0
MW-03-081110	RI46B	0.000	50.0	25.0
MW-03-081110-D	RI46C	0.000	50.0	25.0
MW-04-081110	RI46D	0.000	50.0	25.0
MW-14-081110	RI46E	0.000	50.0	25.0
MW-12-081210	RI46F	0.000	50.0	25.0
MW-13-081210	RI46G	0.000	50.0	25.0
MW-10-081210	RI46H	0.000	50.0	25.0
MW-11-081210	RI46I	0.000	50.0	25.0
PBW	RI46MB1	0.000	50.0	25.0
LCSW	RI46MB1SPK	0.000	50.0	25.0

# Analysis Run Log

CLIENT: Floyd-Snyder

PROJECT: Lora Lakes Apts. RI

SDG: RI46

INSTRUMENT ID: PE ELAN 6000 MS

RUNID: MS081981 METHOD: PMS

START DATE: 8/19/2010

END DATE: 8/19/2010



CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN				
S0			1.00	11240																														X			
S1			1.00	11320																														X			
S2			1.00	11390																														X			
S3			1.00	11460																														X			
S4			1.00	11530																														X			
ZZZZZZ			1.00	12000																														X			
ICV			1.00	12070																														X			
ICB			1.00	12140																															X		
CCV			1.00	12210																															X		
CCB			1.00	12270																															X		
CRI			1.00	12340																															X		
ICSA			1.00	12410																															X		
ICSAB			1.00	12480																															X		
CCV			1.00	12550																															X		
CCB			1.00	13010																															X		
ZZZZZZ			10.00	13080																															X		
ZZZZZZ			2.00	13140																																	
ZZZZZZ			2.00	13200																																	
ZZZZZZ			2.00	13260																																	
ZZZZZZ			5.00	13320																																	
ZZZZZZ			5.00	13380																																	
ZZZZZZ			2.00	13440																																	
ZZZZZZ			2.00	13500																																	
ZZZZZZ			2.00	13570																																	
ZZZZZZ			2.00	14030																																	
CCV			1.00	14090																																X	
CCB			1.00	14150																																X	
PBW			2.00	14220																																X	
ZZZZZZ			2.00	14280																																	
ZZZZZZ			2.00	14340																																	
LCSW			2.00	14400																																X	
MW-02-081110D			2.00	14460																																X	
MW-02-081110			2.00	14520																																X	
MW-02-081110S			2.00	14580																																X	
MW-03-081110			2.00	15040																																X	

# Analysis Run Log

CLIENT: Floyd-Snyder

PROJECT: Lora Lakes Apts. RI

SDG: RI46

INSTRUMENT ID: PE ELAN 6000 MS  
 RUNID: MS081981 METHOD: PMS

START DATE: 8/19/2010  
 END DATE: 8/19/2010



CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN										
MW-03-081110-D	RI46C		2.00	15100																																	X						
MW-04-081110	RI46D		2.00	15160																																		X					
CCV	MCCV4		1.00	15220																																		X					
CCB	CCB4		1.00	15290																																		X					
ZZZZZZ	RI65MB1		2.00	15390																																			X				
ZZZZZZ	RI65MB1SPK		2.00	15450																																				X			
MW-14-081110	RI46E		2.00	15510																																			X				
MW-12-081210	RI46F		2.00	15570																																			X				
MW-13-081210	RI46G		2.00	16030																																			X				
MW-10-081210	RI46H		2.00	16090																																			X				
MW-11-081210	RI46I		2.00	16150																																				X			
ZZZZZZ	RH66F		10.00	16210																																				X			
ZZZZZZ	LR200		1.00	16270																																						X	
ZZZZZZ	LR300		1.00	16330																																						X	
CCV	MCCV5		1.00	16390																																					X		
CCB	CCB5		1.00	16460																																						X	

RI46: 00183

**General Chemistry Analysis  
Report and Summary QC Forms**

**ARI Job ID: RI46**

SAMPLE RESULTS-CONVENTIONALS  
RI46-Floyd-Snider



Matrix: Water  
Data Release Authorized: *[Signature]*  
Reported: 08/16/10

Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10

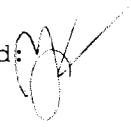
Client ID: MW-02-081110  
ARI ID: 10-19678 RI46A

Analyte	Date Batch	Method	Units	RL	Sample
pH	08/12/10 081210#1	EPA 150.1	std units	0.01	5.98
Total Suspended Solids	08/13/10 081310#1	EPA 160.2	mg/L	1.1	< 1.1 U

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
RI46-Floyd-Snider



Matrix: Water  
Data Release Authorized:   
Reported: 08/16/10

Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10

Client ID: MW-03-081110  
ARI ID: 10-19679 RI46B

Analyte	Date Batch	Method	Units	RL	Sample
pH	08/12/10 081210#1	EPA 150.1	std units	0.01	6.19
Total Suspended Solids	08/13/10 081310#1	EPA 160.2	mg/L	1.1	< 1.1 U

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
RI46-Floyd-Snider



Matrix: Water  
Data Release Authorized: *[Signature]*  
Reported: 08/16/10

Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10

Client ID: MW-03-081110-D  
ARI ID: 10-19680 RI46C

Analyte	Date Batch	Method	Units	RL	Sample
pH	08/12/10 081210#1	EPA 150.1	std units	0.01	6.29
Total Suspended Solids	08/13/10 081310#1	EPA 160.2	mg/L	1.1	< 1.1 U

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
RI46-Floyd-Snider



Matrix: Water  
Data Release Authorized: *[Signature]*  
Reported: 08/16/10

Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10

Client ID: MW-04-081110  
ARI ID: 10-19681 RI46D

Analyte	Date Batch	Method	Units	RL	Sample
pH	08/12/10 081210#1	EPA 150.1	std units	0.01	6.44
Total Suspended Solids	08/13/10 081310#1	EPA 160.2	mg/L	1.1	< 1.1 U

RL Analytical reporting limit  
U Undetected at reported detection limit



SAMPLE RESULTS-CONVENTIONALS  
RI46-Floyd-Snider



Matrix: Water  
Data Release Authorized: *[Signature]*  
Reported: 08/16/10

Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10

Client ID: MW-14-081110  
ARI ID: 10-19682 RI46E

Analyte	Date Batch	Method	Units	RL	Sample
pH	08/12/10 081210#1	EPA 150.1	std units	0.01	6.49
Total Suspended Solids	08/13/10 081310#1	EPA 160.2	mg/L	1.0	< 1.0 U

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
RI46-Floyd-Snider



Matrix: Water  
Data Release Authorized  
Reported: 08/16/10

A handwritten signature in black ink, appearing to be 'Floyd Snider', written over the 'Data Release Authorized' text.

Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/12/10  
Date Received: 08/12/10

Client ID: MW-12-081210  
ARI ID: 10-19683 RI46F

Analyte	Date Batch	Method	Units	RL	Sample
pH	08/12/10 081210#1	EPA 150.1	std units	0.01	6.12
Total Suspended Solids	08/13/10 081310#1	EPA 160.2	mg/L	1.1	< 1.1 U

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
RI46-Floyd-Snyder



Matrix: Water  
Data Release Authorized: *[Signature]*  
Reported: 08/16/10

Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/12/10  
Date Received: 08/12/10


Client ID: MW-13-081210  
ARI ID: 10-19684 RI46G

Analyte	Date Batch	Method	Units	RL	Sample
pH	08/12/10 081210#1	EPA 150.1	std units	0.01	6.34
Total Suspended Solids	08/13/10 081310#1	EPA 160.2	mg/L	1.1	< 1.1 U

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
RI46-Floyd-Snider



Matrix: Water  
Data Release Authorized:   
Reported: 08/16/10

Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/12/10  
Date Received: 08/12/10

Client ID: MW-10-081210  
ARI ID: 10-19685 RI46H

Analyte	Date Batch	Method	Units	RL	Sample
pH	08/12/10 081210#1	EPA 150.1	std units	0.01	6.80
Total Suspended Solids	08/13/10 081310#1	EPA 160.2	mg/L	1.0	< 1.0 U

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
RI46-Floyd-Snider



Matrix: Water  
Data Release Authorized:  
Reported: 08/16/10

A handwritten signature in black ink, appearing to be 'Floyd Snider', written over the 'Data Release Authorized' text.

Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/12/10  
Date Received: 08/12/10

Client ID: MW-11-081210  
ARI ID: 10-19686 RI46I

Analyte	Date Batch	Method	Units	RL	Sample
pH	08/12/10 081210#1	EPA 150.1	std units	0.01	6.40
Total Suspended Solids	08/13/10 081310#1	EPA 160.2	mg/L	1.1	1.2

RL Analytical reporting limit  
U Undetected at reported detection limit

REPLICATE RESULTS-CONVENTIONALS  
RI46-Floyd-Snider



Matrix: Water  
Data Release Authorized: *[Signature]*  
Reported: 08/16/10

Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: 08/11/10  
Date Received: 08/12/10

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: RI46A Client ID: MW-02-081110						
pH	EPA 150.1	08/12/10	std units	5.98	5.98	0.00

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

LAB CONTROL RESULTS-CONVENTIONALS  
RI46-Floyd-Snider



Matrix: Water  
Data Release Authorized:  
Reported: 08/16/10

A handwritten signature in black ink, appearing to be 'Floyd Snider', written over the 'Data Release Authorized' line.


Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: NA  
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH EPA 150.1	ICVL	08/12/10	std units	7.00	7.00	0.00
Total Suspended Solids EPA 160.2	ICVL	08/13/10	mg/L	49.7	50.0	99.4%

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

METHOD BLANK RESULTS-CONVENTIONALS  
RI46-Floyd-Snyder



Matrix: Water  
Data Release Authorized:   
Reported: 08/16/10

Project: Lora Lakes Apts. RI  
Event: POS-LLA  
Date Sampled: NA  
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Total Suspended Solids	EPA 160.2	08/13/10	mg/L	< 1.0 U	



**SIM Volatile Raw Data  
Initial Calibration Notes and Raw Data**

**ARI Job ID: RI46**



### VOA Analyst Notes / Corrective Action Log

ARI Project ID: NT7 Curve SIM Client ID: \_\_\_\_\_

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

Parameter(s): SIM

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

Purge Volume (mL) 10 Curve Date: 7/21/10 Analysis Start Date: 7/21/10

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

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

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

ICal acceptable? **YES** / NO CCal acceptable? YES / NO  
Q flag applied? YES / NO / NA Q flag applied? YES / NO / NA

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

Special Analysis Criteria Met? YES / NO **NA**

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

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

Additional Details on Reverse: Yes / No

Analyst: [Signature] Date: 7/22/10

Reviewer: [Signature] Date: 7/22/10

# Analytical Resources Inc.: Volatile Organics Instrument Log

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

Date: 7/21/10 Analysis: SIM VOA Analyst: MH  
 GC Program: VC Column No: 850322 Column Type: RTXVMS  
 Instrument Tune (.U or .CT.): 07211004 EM Voltage: 2306  
 Calibration File: 07211009 Curve Date: 7/21/10

IS/SS	Ical/Ccal	LCS/ICV
VW641-2	VW641-1	VW640-1 MH VW637-2

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt7.i/21Jul2010.b

Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0823	07211001.d	00200721	1	5.32	11389   5.74 17915
2	0905	07211002.d	00200721	1	5.31	35679   5.74 56727
3	0948	07211003.d	00200721	1	5.32	94816   5.75 150585
4	1026	07211004.d	BFB0721		0.00	
5	1104	07211005.d	00200721	1	5.32	94293   5.76 147843
6	1130	07211006.d	00500721	1	5.32	92801   5.75 147874
7	1156	07211007.d	01000721	1	5.32	92386   5.76 146365
8	1221	07211008.d	05000721	1	5.32	96505   5.76 146484
9	1247	07211009.d	10000721	1	5.32	91666   5.75 147386
10	1313	07211010.d	20000721	1	5.32	93055   5.75 148831
11	1338	07211011.d	40000721	1	5.32	92839   5.76 148421
12	1404	07211012.d	ICV0721	1	5.32	91990   5.76 148203

MH  
7/22/10

**Maintenance / Comments**

---



---



---



---

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

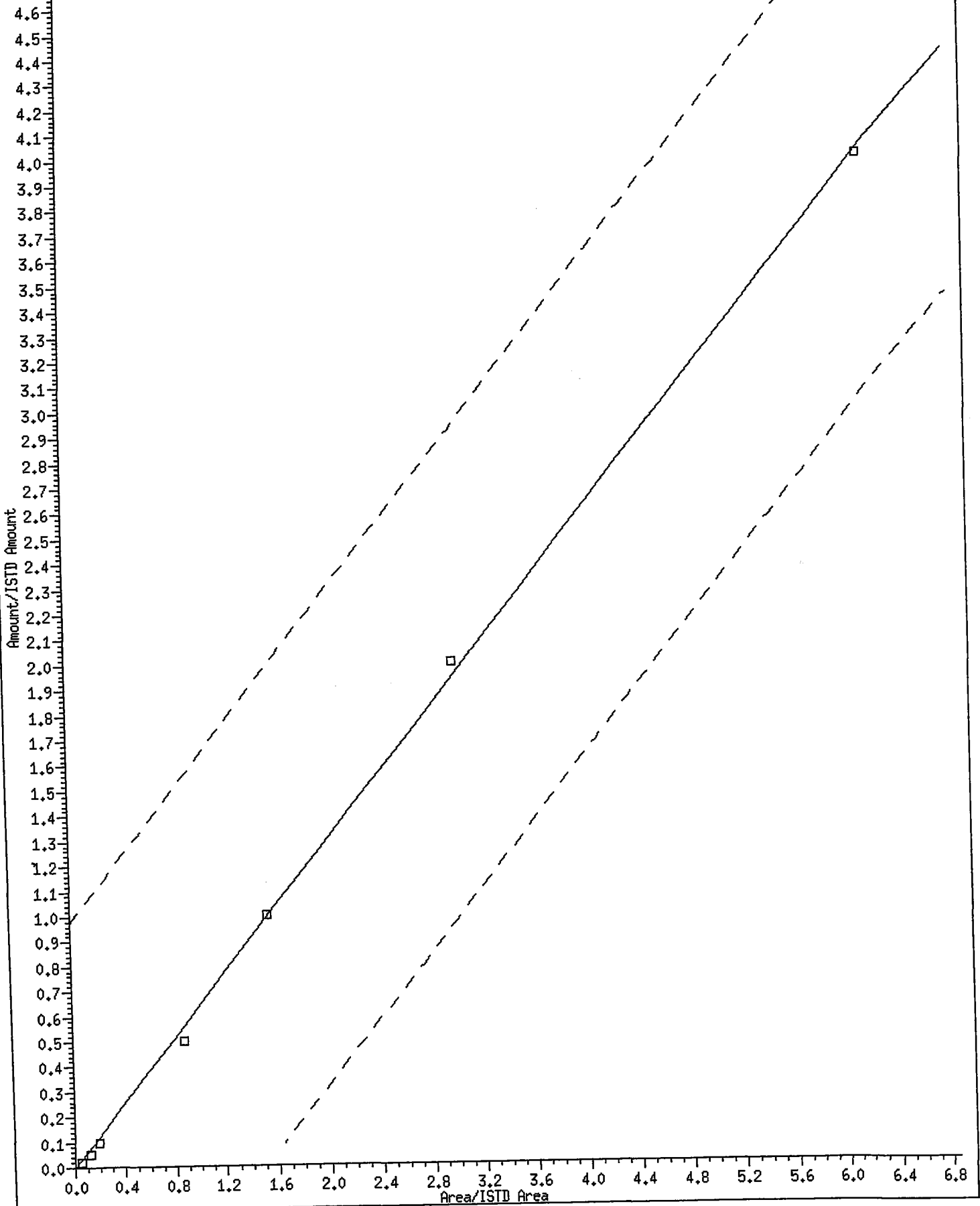
MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt7.i/21Jul2010.b

ARI Job No.: 0020 Method: sim072110.m Instrument: nt7.i Date: 21-JUL-2010

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1104	07211005.d	00200721		1	NO MANUAL INTEGRATION
1130	07211006.d	00500721		1	NO MANUAL INTEGRATION
1156	07211007.d	01000721		1	NO MANUAL INTEGRATION
1221	07211008.d	05000721		1	NO MANUAL INTEGRATION
1247	07211009.d	10000721		1	NO MANUAL INTEGRATION
1313	07211010.d	20000721		1	NO MANUAL INTEGRATION
1338	07211011.d	40000721		1	NO MANUAL INTEGRATION
1404	07211012.d	ICV0721		1	NO MANUAL INTEGRATION

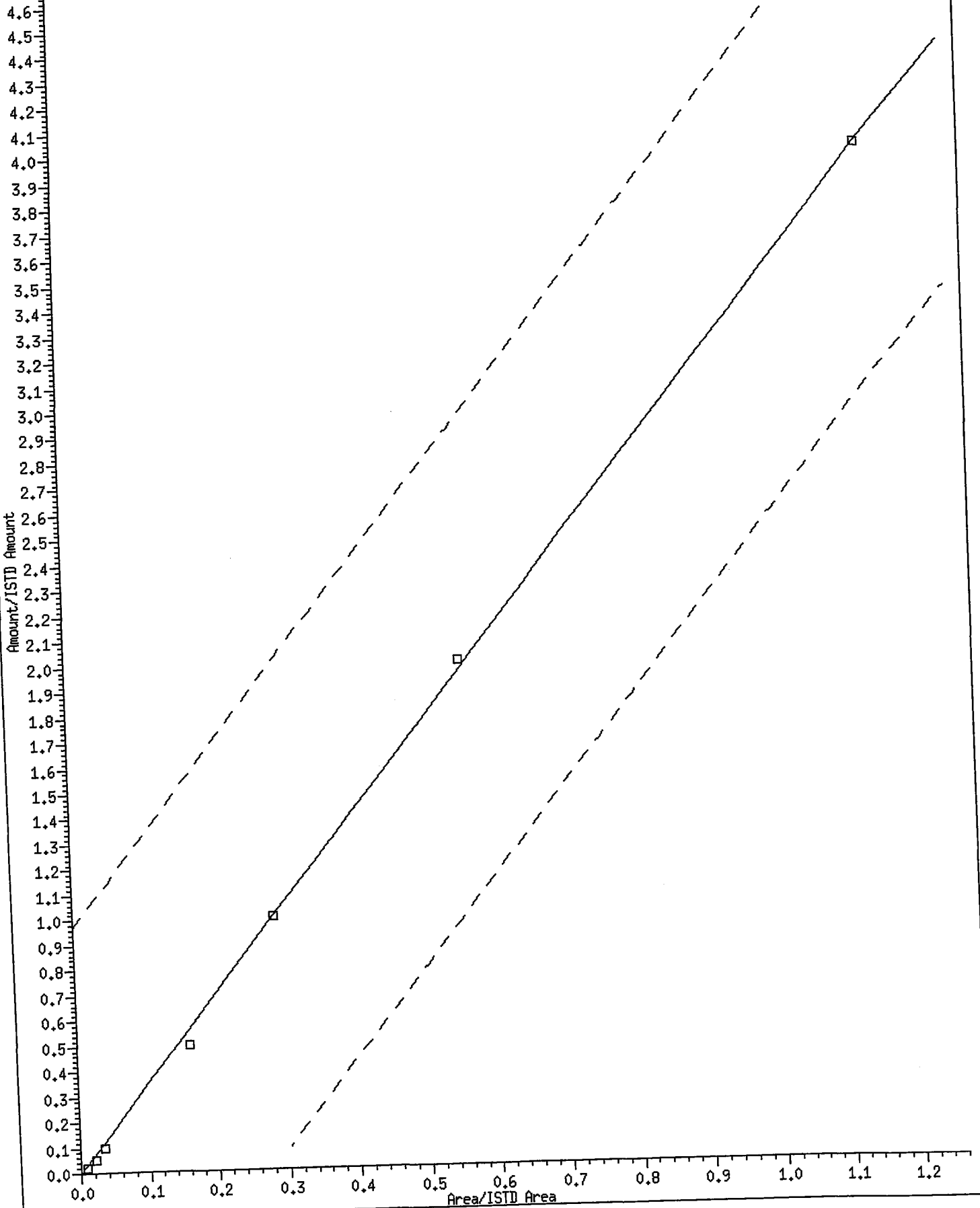
6 Benzene

Curve Type: Linear By-Response  
Amt = 0 + Rsp/1.549854  
R<sup>2</sup>: 0.9993734



10 Tetrachloroethene

Curve Type: Linear By-Response  
Amt = 0 + Rsp/0.2859838  
R<sup>2</sup>: 0.9994221



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUL-2010 11:04  
 End Cal Date : 21-JUL-2010 13:38  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt7.i/21Jul2010.b/sim072110.m  
 Cal Date : 21-Jul-2010 14:18 monicah  
 Curve Type : Average

Calibration File Names:

Level 1: /chem1/nt7.i/21Jul2010.b/07211005.d  
 Level 2: /chem1/nt7.i/21Jul2010.b/07211006.d  
 Level 3: /chem1/nt7.i/21Jul2010.b/07211007.d  
 Level 4: /chem1/nt7.i/21Jul2010.b/07211008.d  
 Level 5: /chem1/nt7.i/21Jul2010.b/07211009.d  
 Level 6: /chem1/nt7.i/21Jul2010.b/07211010.d  
 Level 7: /chem1/nt7.i/21Jul2010.b/07211011.d

Compound	20.000	50.000	100.000	500.000	1000.000	2000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	4000.000							
	Level 7							
1 Vinyl Chloride	0.95712 0.69081	0.95839	0.77014	0.72226	0.69232	0.67746	0.78121	15.917
2 1,1-Dichloroethene	0.68828 0.46959	0.69848	0.54153	0.50731	0.47493	0.45821	0.54833	18.772
175 Trans-1,2-Dichloroethene	0.71797 0.53792	0.76810	0.60236	0.57466	0.54083	0.52554	0.60963	15.716
177 Acrylonitrile	++++ ++++	++++	++++	++++	++++	++++	++++	++++ <-
3 cis-1,2-dichloroethene	0.77312 0.56156	0.75085	0.64111	0.59303	0.56187	0.54654	0.63258	14.833
6 Benzene	2.49691 1.55748	2.34199	1.85488	1.72640	1.54127	1.50598	1.86070	21.657 <-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUL-2010 11:04  
 End Cal Date : 21-JUL-2010 13:38  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt7.i/21Jul2010.b/sim072110.m  
 Cal Date : 21-Jul-2010 14:18 monicah  
 Curve Type : Average

Compound	20.000	50.000	100.000	500.000	1000.000	2000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	4000.000							
	Level 7							
176 1,2-Dichloroethane	0.85743 0.69874	0.89611	0.75498	0.74002	0.65292	0.66928	0.75278	12.311
8 Trichloroethene	0.48803 0.32912	0.47297	0.37939	0.36441	0.32525	0.31725	0.38235	18.506
10 Tetrachloroethene	0.43395 0.28654	0.44024	0.33984	0.32380	0.28836	0.28002	0.34182	20.069 <-
11 1,1,2,2-Tetrachloroethane	0.31566 0.27347	0.33529	0.28572	0.29135	0.26814	0.26063	0.29004	9.276
\$ 5 d4-1,2-Dichloroethane	0.54686 0.49921	0.53157	0.54300	0.48659	0.50513	0.49875	0.51587	4.673
\$ 9 d8-Toluene	1.27334 1.27324	1.27937	1.28009	1.26858	1.26768	1.28491	1.27531	0.499



Report Date : 21-Jul-2010 14:21

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 21-JUL-2010 11:04  
 End Cal Date : 21-JUL-2010 13:38  
 Quant Method : ISTD  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt7.i/21Jul2010.b/sim072110.m  
 Cal Date : 21-Jul-2010 14:18 monicah

Calibration File Names:  
 Level 1: /chem1/nt7.i/21Jul2010.b/07211005.d  
 Level 2: /chem1/nt7.i/21Jul2010.b/07211006.d  
 Level 3: /chem1/nt7.i/21Jul2010.b/07211007.d  
 Level 4: /chem1/nt7.i/21Jul2010.b/07211008.d  
 Level 5: /chem1/nt7.i/21Jul2010.b/07211009.d  
 Level 6: /chem1/nt7.i/21Jul2010.b/07211010.d  
 Level 7: /chem1/nt7.i/21Jul2010.b/07211011.d

Compound	Levels							Coefficients			%RSD or R <sup>2</sup>
	20 Level 1	50 Level 2	100 Level 3	500 Level 4	1000 Level 5	2000 Level 6	Curve	b	m1	m2	
1 Vinyl Chloride	0.95712 0.69081	0.95839	0.77014	0.72226	0.69232	0.67746	AVRG		0.78121		15.91735
2 1,1-Dichloroethene	0.68828 0.46959	0.69848	0.54153	0.50731	0.47493	0.45821	AVRG		0.54833		18.77184
175 Trans-1,2-Dichloroethene	0.71797 0.53792	0.76810	0.60236	0.57466	0.54083	0.52554	AVRG		0.60963		15.71550
177 Acrylonitrile	++++ ++++	++++	++++	++++	++++	++++	AVRG		0.000e+00		0.000e+00

00205

Report Date : 21-Jul-2010 14:21

Analytical Resources, Inc.  
INITIAL CALIBRATION DATA

Start Cal Date : 21-JUL-2010 11:04  
 End Cal Date : 21-JUL-2010 13:38  
 Quant Method : ISTD  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt7.i/21Jul2010.b/sim072110.m  
 Cal Date : 21-Jul-2010 14:18 monican

Compound	2000							Coefficients			%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2	
3 cis-1,2-dichloroethene	0.77312 0.56156	0.75085	0.64111	0.59303	0.56187	0.54654	AVRG		0.63258		14.83290
6 Benzene	7388 924652	17316	27149	126445	227162	448273	LINR	0.000e+00	1.54985		0.99937
176 1,2-Dichloroethane	0.85743 0.69874	0.89611	0.75498	0.74002	0.65292	0.66928	AVRG		0.75278		12.31060
8 Trichloroethene	0.48803 0.32912	0.47297	0.37939	0.36441	0.32525	0.31725	AVRG		0.38235		18.50638
10 Tetrachloroethene	1284 170115	3255	4974	23716	42500	83351	LINR	0.000e+00	0.28598		0.99942
11 1,1,2,2-Tetrachloroethane	0.31566 0.27347	0.33529	0.28572	0.29135	0.26814	0.26063	AVRG		0.29004		9.27596
5 d4-1,2-Dichloroethane	0.54686 0.49921	0.53157	0.54300	0.48659	0.50513	0.49875	AVRG		0.51587		4.67300

Report Date : 21-Jul-2010 14:21

Analytical Resources, Inc.  
INITIAL CALIBRATION DATA

Start Cal Date : 21-JUL-2010 11:04  
 End Cal Date : 21-JUL-2010 13:38  
 Quant Method : ISTD  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt7.i/21Jul2010.b/sim072110.m  
 Cal Date : 21-Jul-2010 14:18 monicah

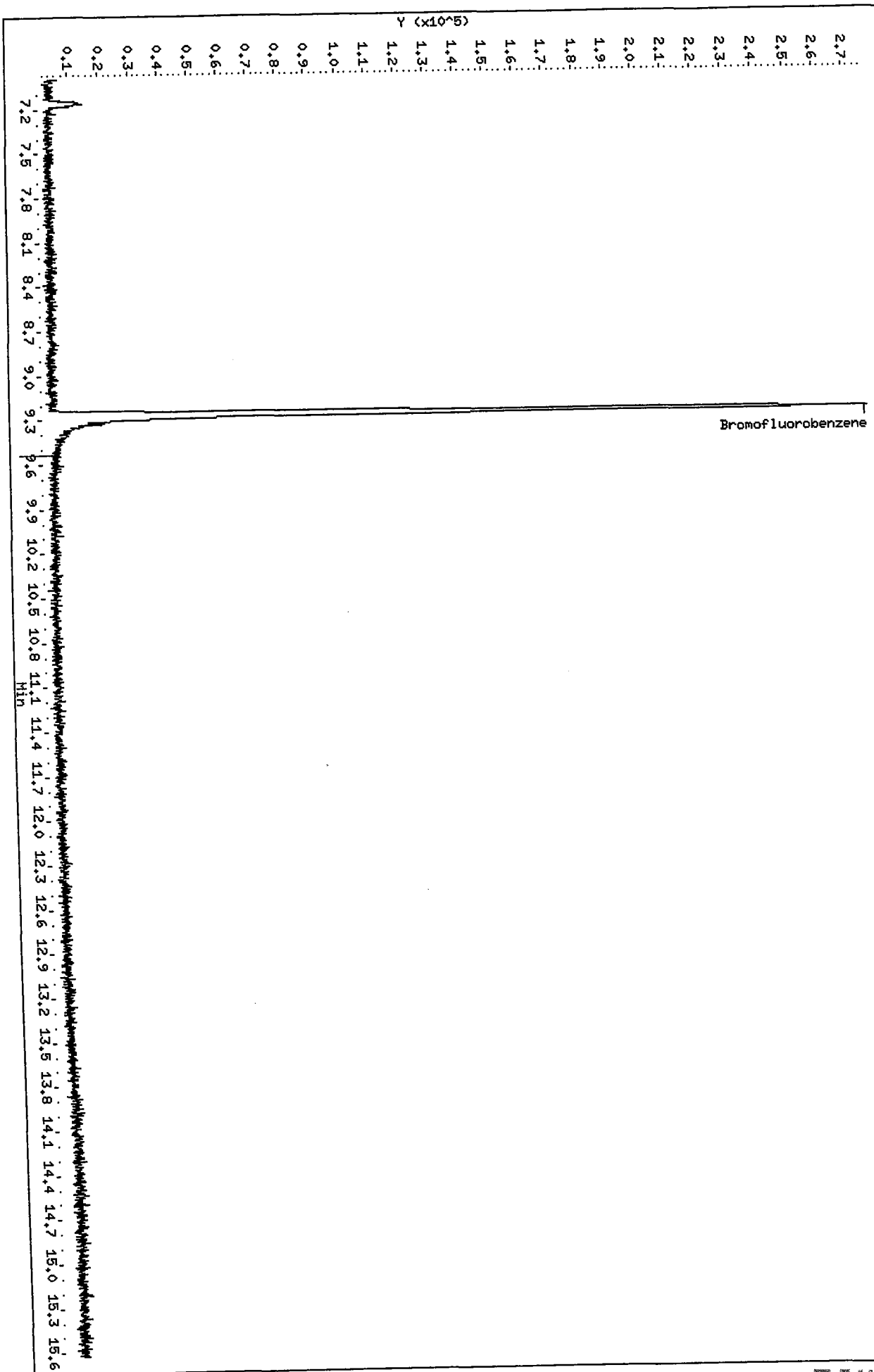
Compound	2000							Curve	Coefficients		%RSD or R <sup>2</sup>
	20 Level 1	50 Level 2	100 Level 3	500 Level 4	1000 Level 5	2000 Level 6	b		m1	m2	
4000 Level 7											
1.27334	1.27937	1.28009	1.26858	1.26768	1.28491	AVRG	1.27531			0.49917	
1.27324											

MH  
7/22/10

Data File: /chem1/nt7.i/21Jul2010.b/07211004.d  
Date: 21-JUL-2010 10:26  
Client ID:  
Sample Info: BFB0721

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

Column phase: RTXVMS  
/chem1/nt7.i/21Jul2010.b/07211004.d



Date : 21-JUL-2010 10:26

Client ID:

Instrument: nt7.i

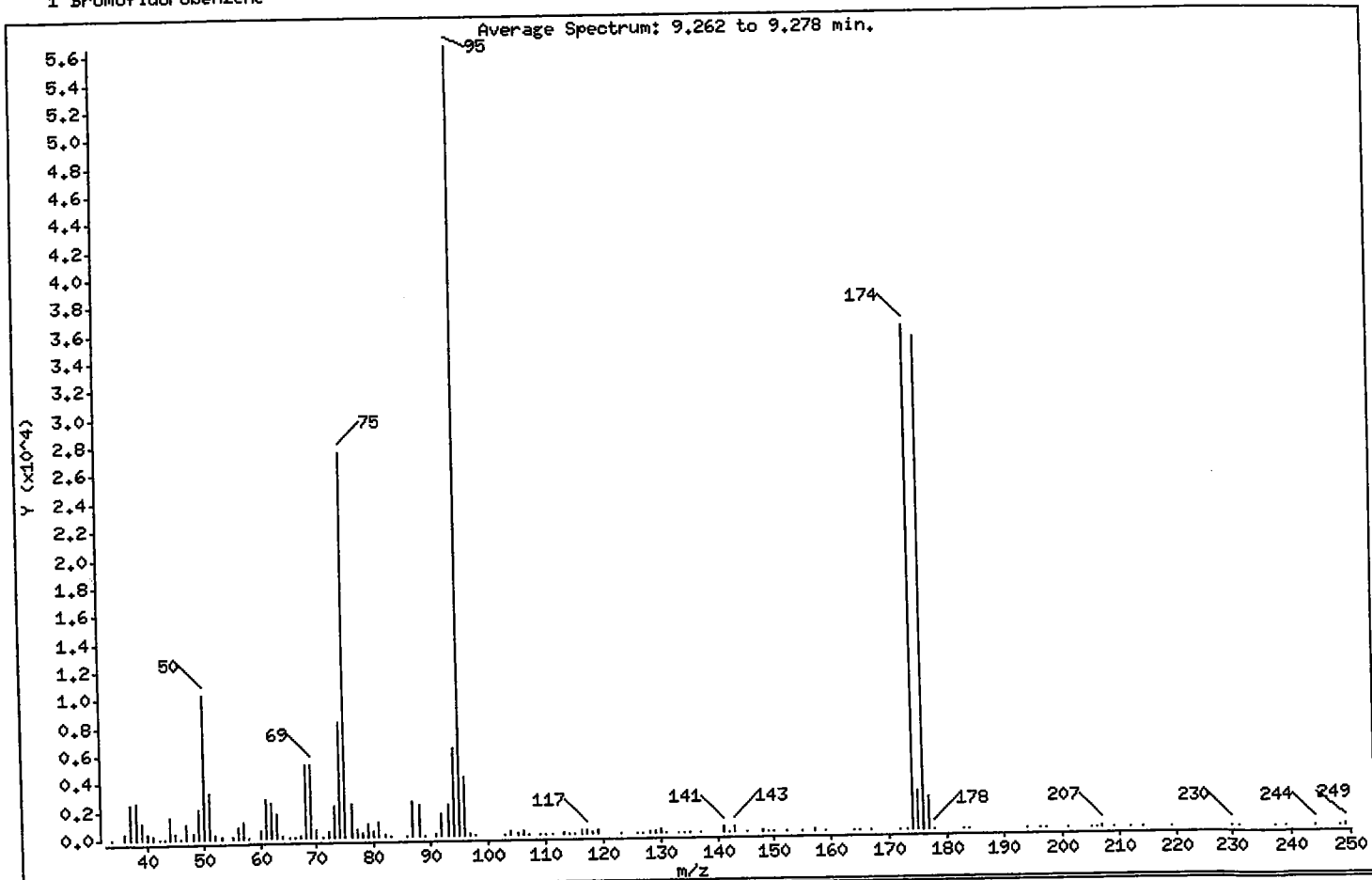
Sample Info: BFB0721

Operator: MH

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	18.21
75	30.00 - 66.00% of mass 95	48.69
96	5.00 - 9.00% of mass 95	7.28
173	Less than 2.00% of mass 174	0.11 ( 0.17)
174	50.00 - 101.00% of mass 95	63.77
175	4.00 - 9.00% of mass 174	4.83 ( 7.57)
176	93.00 - 101.00% of mass 174	62.48 ( 97.97)
177	5.00 - 9.00% of mass 176	4.24 ( 6.79)

Date : 21-JUL-2010 10:26

Client ID:

Instrument: nt7.i

Sample Info: BFB0721

Operator: MH

Column phase: RTXVMS

Column diameter: 0.18

Data File: 07211004.d

Spectrum: Average Spectrum: 9.262 to 9.278 min.

Location of Maximum: 95.00

Number of points: 126

m/z	Y	m/z	Y	m/z	Y	m/z	Y
34.00	58	69.00	5243	109.00	22	164.00	30
36.00	445	70.00	524	110.00	22	165.00	24
37.00	2433	71.00	52	111.00	21	167.00	30
38.00	2613	72.00	382	113.00	87	172.00	55
39.00	1187	73.00	2274	114.00	21	173.00	63
40.00	358	74.00	8178	115.00	57	174.00	36064
41.00	233	75.00	27536	116.00	221	175.00	2731
42.00	47	76.00	2369	117.00	281	176.00	35336
43.00	45	77.00	479	118.00	190	177.00	2399
44.00	1617	78.00	287	119.00	216	178.00	48
45.00	428	79.00	866	123.00	24	183.00	23
46.00	28	80.00	355	126.00	33	184.00	28
47.00	1075	81.00	1090	127.00	57	194.00	26
48.00	394	82.00	148	128.00	194	196.00	49
49.00	2085	83.00	56	129.00	108	197.00	30
50.00	10301	86.00	59	130.00	209	201.00	31
51.00	3302	87.00	2537	131.00	41	205.00	25
52.00	237	88.00	2244	133.00	22	206.00	25
53.00	93	89.00	36	134.00	22	207.00	75
55.00	136	91.00	150	135.00	60	209.00	24
56.00	735	92.00	1546	137.00	22	212.00	26
57.00	1162	93.00	2174	141.00	456	214.00	29
58.00	31	94.00	6195	142.00	22	219.00	22
60.00	466	95.00	56552	143.00	357	230.00	60
61.00	2790	96.00	4119	145.00	23	231.00	25
62.00	2456	97.00	189	148.00	76	237.00	22
63.00	1714	98.00	25	149.00	32	239.00	22
64.00	146	103.00	24	150.00	24	244.00	28
65.00	22	104.00	225	152.00	22	248.00	22
66.00	25	105.00	89	155.00	29	249.00	72
67.00	150	106.00	212	157.00	66		
68.00	5235	107.00	23	159.00	31		

MH  
7/22/10

Data File: /chem1/nt7.i/21Jul2010.b/07211005.d  
Report Date: 22-Jul-2010 06:50

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/21Jul2010.b/07211005.d  
Lab Smp Id: 00200721  
Inj Date : 21-JUL-2010 11:04  
Operator : MH  
Smp Info : 00200721,10,10,0  
Misc Info : 10-  
Comment :  
Method : /chem1/nt7.i/21Jul2010.b/sim072110.m  
Meth Date : 22-Jul-2010 06:50 monicah  
Cal Date : 21-JUL-2010 11:04  
Als bottle: 1  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50  
Inst ID: nt7.i  
Quant Type: ISTD  
Cal File: 07211005.d  
Calibration Sample, Level: 1  
Compound Sublist: sim12dca.sub

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT ( ng/L)	ON-COL ( ng/L)
1 Vinyl Chloride	62	1.553	1.554	(0.292)	1805	20.0000	24.503
2 1,1-Dichloroethene	96	2.509	2.509	(0.472)	1298	20.0000	25.104
175 Trans-1,2-Dichloroethene	96	3.288	3.289	(0.619)	1354	20.0000	23.555
3 cis-1,2-dichloroethene	96	4.438	4.438	(0.835)	1458	20.0000	24.443
6 Benzene	78	5.211	5.211	(0.905)	7388	20.0000	32.221
* 4 Pentafluorobenzene	168	5.316	5.316	(1.000)	94293	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	51565	1000.00	1060.1
176 1,2-Dichloroethane	62	5.382	5.382	(1.012)	1617	20.0000	22.780
8 Trichloroethene	130	5.710	5.708	(0.992)	1444	20.0000	25.528
* 7 1,4-Difluorobenzene	114	5.756	5.754	(1.000)	147943	1000.00	
\$ 9 d8-Toluene	98	6.902	6.903	(1.199)	188382	1000.00	998.45
10 Tetrachloroethene	166	7.271	7.260	(1.263)	1284	20.0000	30.348
11 1,1,2,2-Tetrachloroethane	83	9.458	9.447	(1.643)	934	20.0000	21.767

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 07211005.d  
Lab Smp Id: 00200721  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/21Jul2010.b/sim072110.m  
Misc Info: 10-

Calibration Date: 21-JUL-2010  
Calibration Time: 12:47

Level: LOW  
Sample Type: WATER

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	94293	2.87
7 1,4-Difluorobenze	147386	73693	294772	147943	0.38

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.00
7 1,4-Difluorobenze	5.75	5.25	6.25	5.76	0.03

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



Data File: /chem1/nt7.1/21Jul2010.b/07211005.d

Date: 21-JUL-2010 11:04

Client ID:

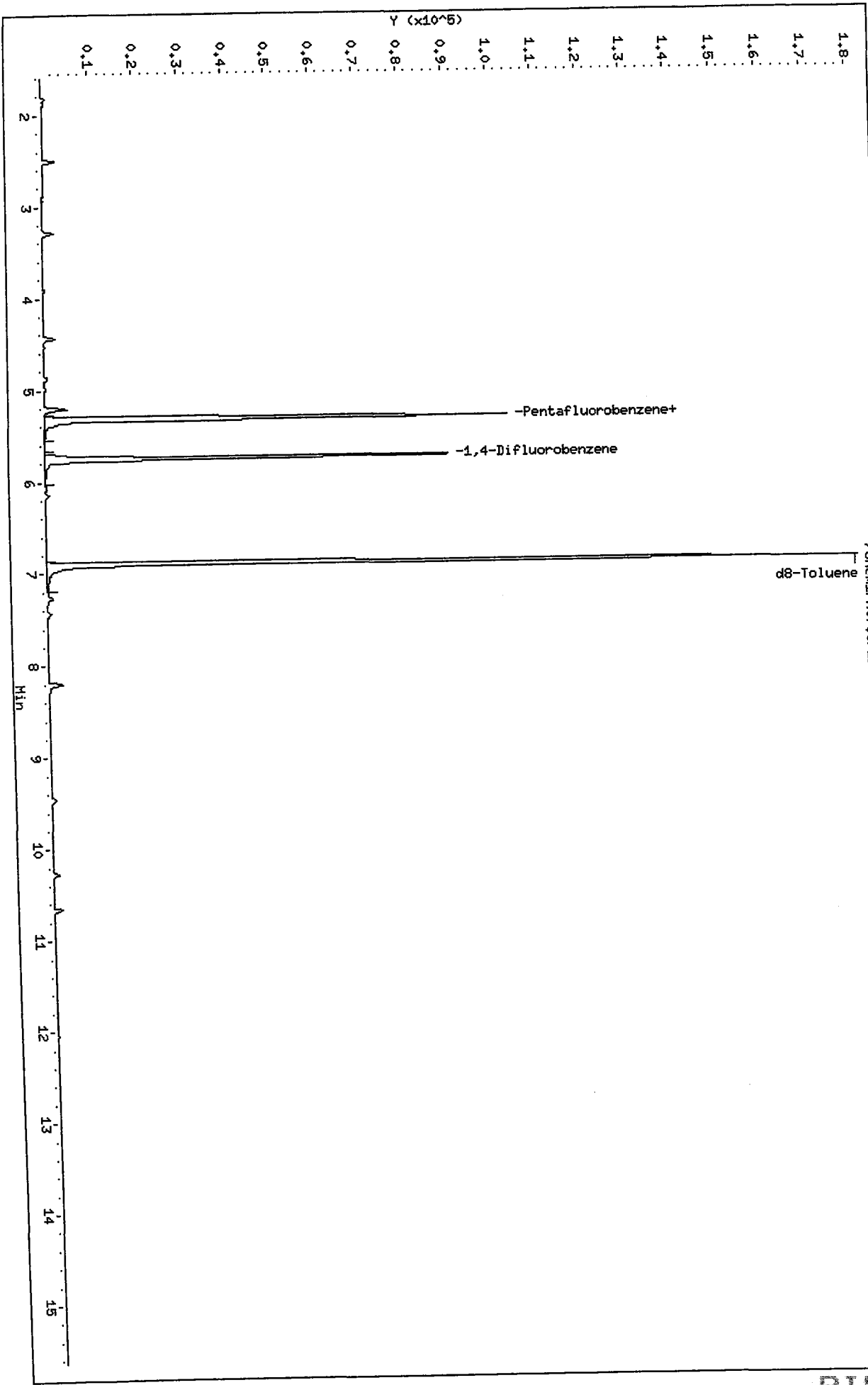
Sample Info: 00200721.10.10.0

Column phase: RTXVMS

Instrument: nt7.1

Operator: HH

Column diameter: 0.18



MH  
7/22/10

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/21Jul2010.b/07211006.d  
Lab Smp Id: 00500721  
Inj Date : 21-JUL-2010 11:30  
Operator : MH  
Smp Info : 00500721,10,10,0  
Misc Info : 10-  
Comment :  
Method : /chem1/nt7.i/21Jul2010.b/sim072110.m  
Meth Date : 22-Jul-2010 06:50 monicah  
Cal Date : 21-JUL-2010 11:30  
Als bottle: 1  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50  
Inst ID: nt7.i  
Quant Type: ISTD  
Cal File: 07211006.d  
Calibration Sample, Level: 2  
Compound Sublist: sim12dca.sub

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

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

Cpnd Variable Local Compound Variable

Compounds	QUANT	SIG	AMOUNTS					
			MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/L)
1 Vinyl Chloride	62		1.554	1.554	(0.292)	4447	50.0000	61.340
2 1,1-Dichloroethene	96		2.509	2.509	(0.472)	3241	50.0000	63.691
175 Trans-1,2-Dichloroethene	96		3.289	3.289	(0.619)	3564	50.0000	62.997
3 cis-1,2-dichloroethene	96		4.438	4.438	(0.835)	3484	50.0000	59.348
6 Benzene	78		5.212	5.211	(0.906)	17316	50.0000	75.555
* 4 Pentafluorobenzene	168		5.316	5.316	(1.000)	92801	1000.00	
\$ 5 d4-1,2-Dichloroethane	65		5.325	5.325	(1.002)	49330	1000.00	1030.4
176 1,2-Dichloroethane	62		5.382	5.382	(1.012)	4158	50.0000	59.520
8 Trichloroethene	130		5.720	5.708	(0.994)	3497	50.0000	61.851
* 7 1,4-Difluorobenzene	114		5.755	5.754	(1.000)	147874	1000.00	
\$ 9 d8-Toluene	98		6.903	6.903	(1.200)	189185	1000.00	1003.2
10 Tetrachloroethene	166		7.271	7.260	(1.264)	3255	50.0000	76.969
11 1,1,2,2-Tetrachloroethane	83		9.458	9.447	(1.644)	2479	50.0000	57.800

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i  
 Lab File ID: 07211006.d  
 Lab Smp Id: 00500721  
 Analysis Type: VOA  
 Quant Type: ISTD  
 Operator: MH  
 Method File: /chem1/nt7.i/21Jul2010.b/sim072110.m  
 Misc Info: 10-

Calibration Date: 21-JUL-2010  
 Calibration Time: 12:47

Level: LOW  
 Sample Type: WATER

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	92801	1.24
7 1,4-Difluorobenze	147386	73693	294772	147874	0.33

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

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

Data File: /chem1/nt7.i/21Jul2010.b/07211006.d

Date: 21-JUL-2010 11:30

Client ID:

Sample Info: 00500721,10,10,0

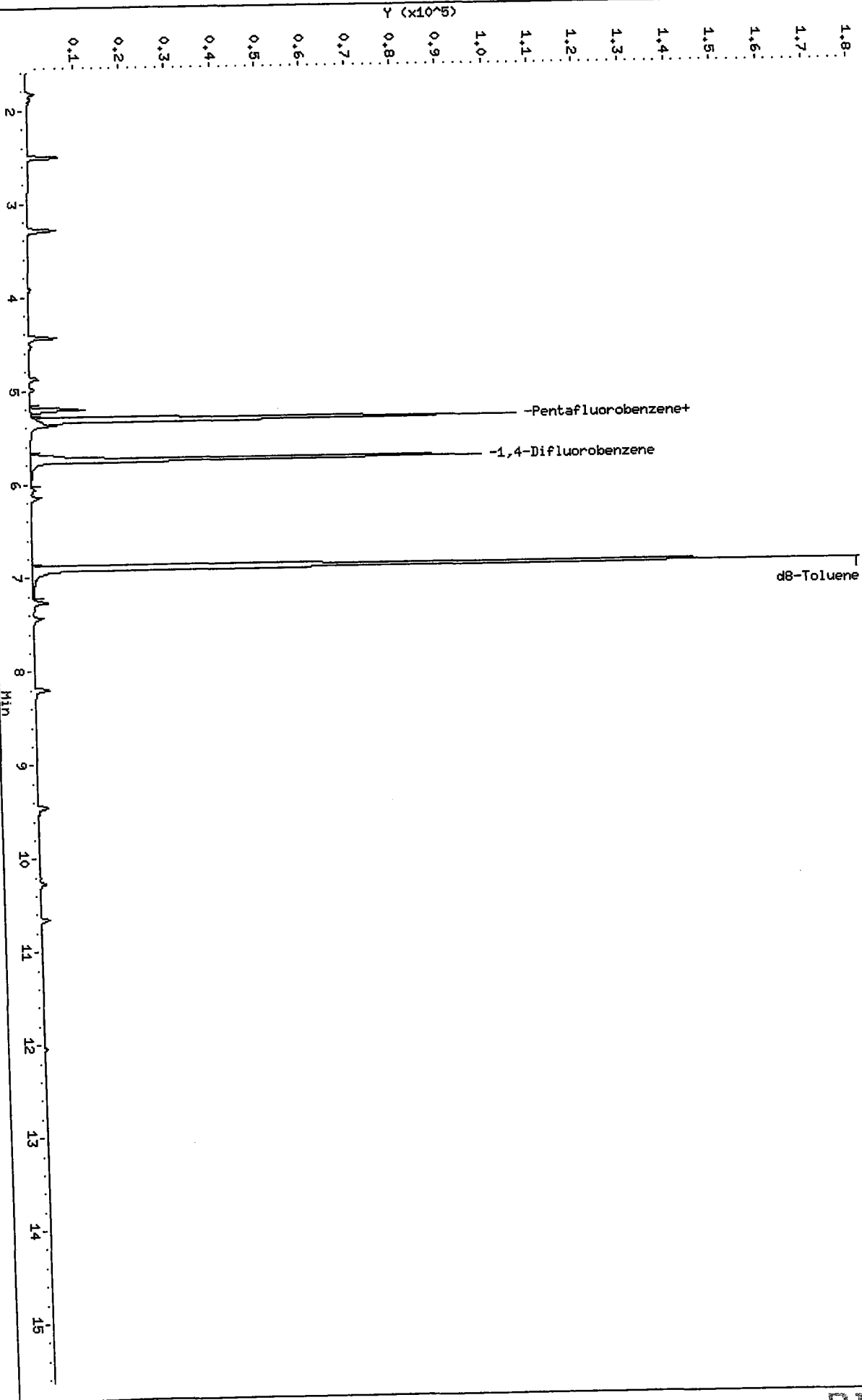
Column phase: RTXVMS

Instrument: nt7.1

Operator: MH

Column diameter: 0.18

/chem1/nt7.i/21Jul2010.b/07211006.d



MH  
7/22/10

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/21Jul2010.b/07211007.d  
Lab Smp Id: 01000721  
Inj Date : 21-JUL-2010 11:56  
Operator : MH  
Smp Info : 01000721,10,10,0  
Misc Info : 10-  
Comment :  
Method : /chem1/nt7.i/21Jul2010.b/sim072110.m  
Meth Date : 22-Jul-2010 06:50 monicah  
Cal Date : 21-JUL-2010 11:56  
Als bottle: 1  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50  
Inst ID: nt7.i  
Quant Type: ISTD  
Cal File: 07211007.d  
Calibration Sample, Level: 3  
Compound Sublist: sim12dca.sub

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT ( ng/L)	ON-COL ( ng/L)
1 Vinyl Chloride	62		1.551	1.554	(0.291)	7115	100.000	98.582
2 1,1-Dichloroethene	96		2.510	2.509	(0.472)	5003	100.000	98.760
175 Trans-1,2-Dichloroethene	96		3.290	3.289	(0.618)	5565	100.000	98.809
3 cis-1,2-dichloroethene	96		4.439	4.438	(0.834)	5923	100.000	101.35
6 Benzene	78		5.210	5.211	(0.905)	27149	100.000	119.68
* 4 Pentafluorobenzene	168		5.324	5.316	(1.000)	92386	1000.00	
\$ 5 d4-1,2-Dichloroethane	65		5.324	5.325	(1.000)	50166	1000.00	1052.6
176 1,2-Dichloroethane	62		5.381	5.382	(1.011)	6975	100.000	100.29
8 Trichloroethene	130		5.721	5.708	(0.994)	5553	100.000	99.228
* 7 1,4-Difluorobenzene	114		5.755	5.754	(1.000)	146365	1000.00	
\$ 9 d8-Toluene	98		6.901	6.903	(1.199)	187361	1000.00	1003.7
10 Tetrachloroethene	166		7.270	7.260	(1.263)	4974	100.000	118.83
11 1,1,1,2,2-Tetrachloroethane	83		9.457	9.447	(1.643)	4182	100.000	98.513

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i  
 Lab File ID: 07211007.d  
 Lab Smp Id: 01000721  
 Analysis Type: VOA  
 Quant Type: ISTD  
 Operator: MH  
 Method File: /chem1/nt7.i/21Jul2010.b/sim072110.m  
 Misc Info: 10-

Calibration Date: 21-JUL-2010  
 Calibration Time: 12:47

Level: LOW  
 Sample Type: WATER

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	92386	0.79
7 1,4-Difluorobenze	147386	73693	294772	146365	-0.69

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

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

Data File: /chem1/nt7.i/21Jul2010.b/07211007.d

Date: 21-JUL-2010 11:56

Client ID:

Sample Info: 01000721,10,10,0

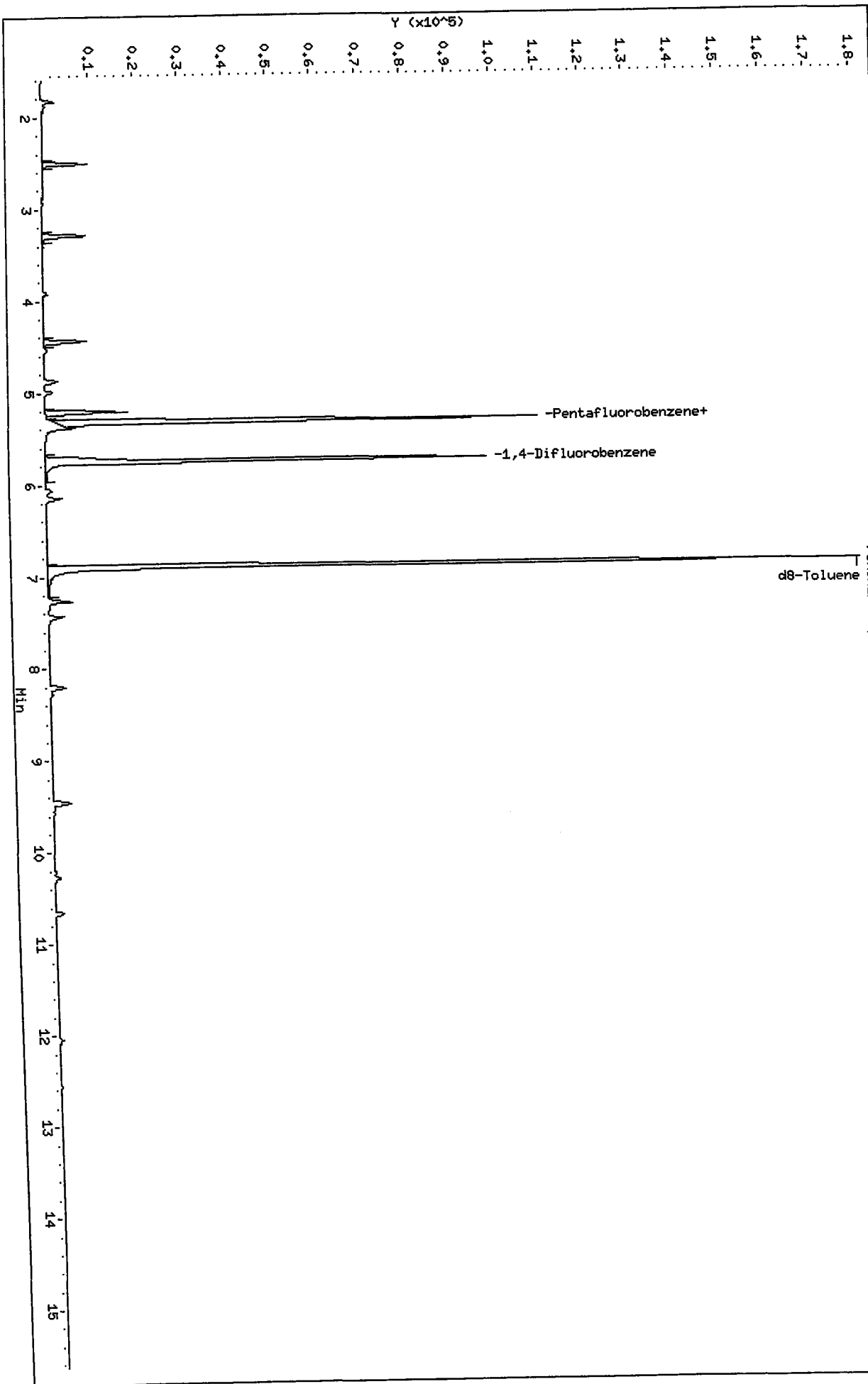
Column phase: RTXVHS

Instrument: nt7.i

Operator: MH

Column diameter: 0.18

/chem1/nt7.i/21Jul2010.b/07211007.d



MH  
7/22/10

Data File: /chem1/nt7.i/21Jul2010.b/07211008.d  
Report Date: 22-Jul-2010 06:50

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/21Jul2010.b/07211008.d  
Lab Smp Id: 05000721  
Inj Date : 21-JUL-2010 12:21  
Operator : MH  
Smp Info : 05000721,10,10,0  
Misc Info : 10-

Inst ID: nt7.i

Comment :  
Method : /chem1/nt7.i/21Jul2010.b/sim072110.m  
Meth Date : 22-Jul-2010 06:50 monicah  
Cal Date : 21-JUL-2010 12:21  
Als bottle: 1  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50  
Quant Type: ISTD  
Cal File: 07211008.d  
Calibration Sample, Level: 4  
Compound Sublist: sim12dca.sub

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (ng/L)	ON-COL (ng/L)
1 Vinyl Chloride	62	1.553	1.554	(0.292)	34851	500.000	462.27
2 1,1-Dichloroethene	96	2.509	2.509	(0.472)	24479	500.000	462.59
175 Trans-1,2-Dichloroethene	96	3.288	3.289	(0.619)	27729	500.000	471.32
3 cis-1,2-dichloroethene	96	4.438	4.438	(0.835)	28615	500.000	468.73
6 Benzene	78	5.211	5.211	(0.905)	126445	500.000	556.96
* 4 Pentafluorobenzene	168	5.316	5.316	(1.000)	96505	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	46958	1000.00	943.23
176 1,2-Dichloroethane	62	5.382	5.382	(1.012)	35708	500.000	491.52
8 Trichloroethene	130	5.710	5.708	(0.992)	26690	500.000	476.54
* 7 1,4-Difluorobenzene	114	5.756	5.754	(1.000)	146484	1000.00	
\$ 9 d8-Toluene	98	6.903	6.903	(1.199)	185827	1000.00	994.72
10 Tetrachloroethene	166	7.271	7.260	(1.263)	23716	500.000	566.12
11 1,1,1,2,2-Tetrachloroethane	83	9.446	9.447	(1.641)	21339	500.000	502.26



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i  
 Lab File ID: 07211008.d  
 Lab Smp Id: 05000721  
 Analysis Type: VOA  
 Quant Type: ISTD  
 Operator: MH  
 Method File: /chem1/nt7.i/21Jul2010.b/sim072110.m  
 Misc Info: 10-

Calibration Date: 21-JUL-2010  
 Calibration Time: 12:47

Level: LOW  
 Sample Type: WATER

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	96505	5.28
7 1,4-Difluorobenze	147386	73693	294772	146484	-0.61

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.00
7 1,4-Difluorobenze	5.75	5.25	6.25	5.76	0.03

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

Data File: /chem1/nt7.i/21Jul2010.b/07211008.d

Date : 21-JUL-2010 12:21

Client ID:

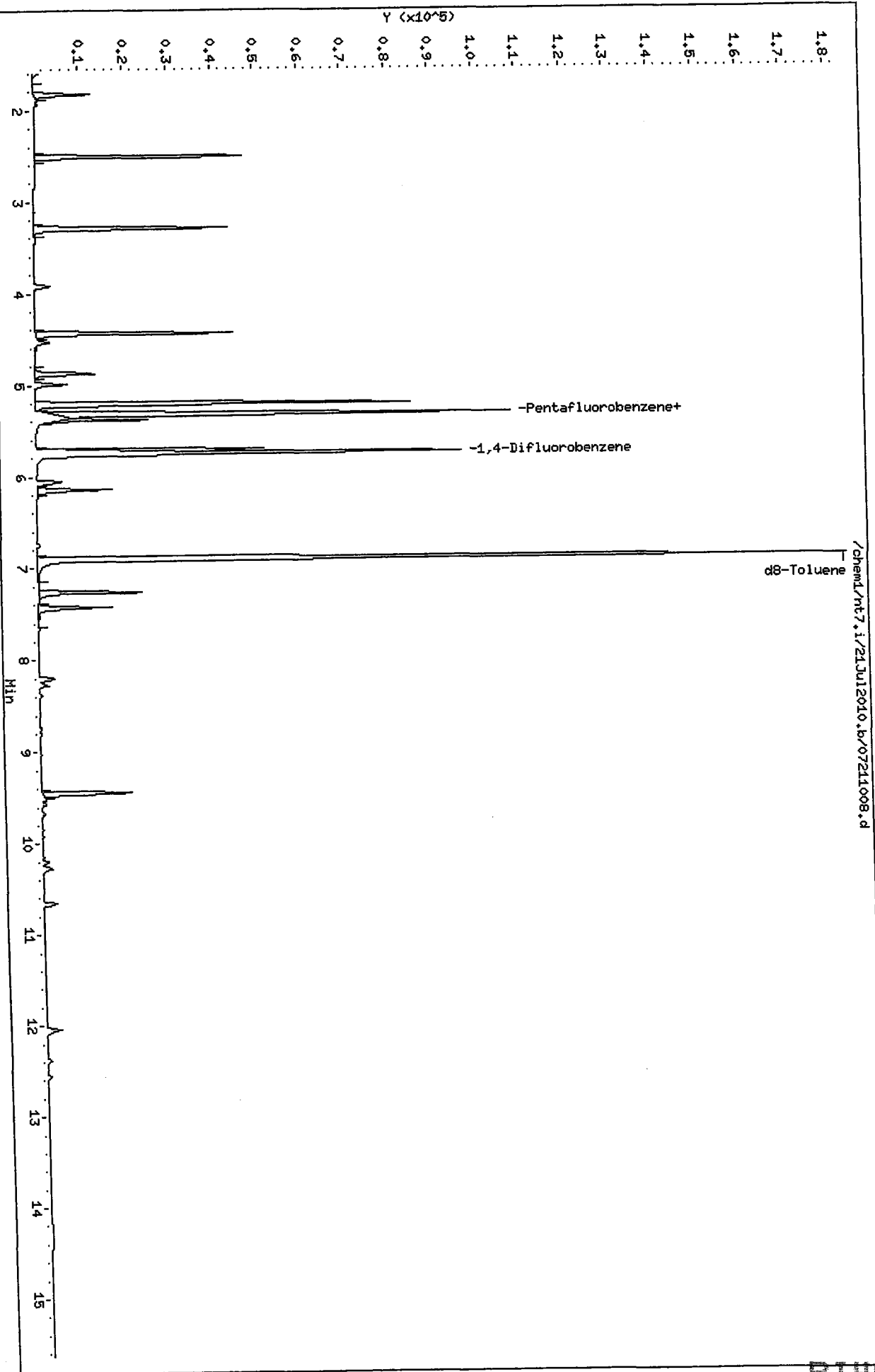
Sample Info: 05000721,10,10,0

Column phase: RTXVMS

Instrument: nt7.i

Operator: MH

Column diameter: 0.18



MH  
7/22/10

Data File: /chem1/nt7.i/21Jul2010.b/07211009.d  
Report Date: 22-Jul-2010 06:50

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/21Jul2010.b/07211009.d

Lab Smp Id: 10000721

Inj Date : 21-JUL-2010 12:47

Operator : MH

Inst ID: nt7.i

Smp Info : 10000721,10,10,0

Misc Info : 10-

Comment :

Method : /chem1/nt7.i/21Jul2010.b/sim072110.m

Meth Date : 22-Jul-2010 06:50 monicah

Quant Type: ISTD

Cal Date : 21-JUL-2010 12:47

Cal File: 07211009.d

Als bottle: 1

Calibration Sample, Level: 5

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: sim12dca.sub

Target Version: 3.50

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT ( ng/L)	ON-COL ( ng/L)
1 Vinyl Chloride	62		1.554	1.554	(0.292)	63462	1000.00	886.21
2 1,1-Dichloroethene	96		2.509	2.509	(0.472)	43535	1000.00	866.13
175 Trans-1,2-Dichloroethene	96		3.289	3.289	(0.619)	49576	1000.00	887.15
3 cis-1,2-dichloroethene	96		4.438	4.438	(0.835)	51504	1000.00	888.21
6 Benzene	78		5.211	5.211	(0.906)	227162	1000.00	994.46
* 4 Pentafluorobenzene	168		5.316	5.316	(1.000)	91666	1000.00	
\$ 5 d4-1,2-Dichloroethane	65		5.325	5.325	(1.002)	46303	1000.00	979.17
176 1,2-Dichloroethane	62		5.382	5.382	(1.012)	59851	1000.00	867.35
8 Trichloroethene	130		5.708	5.708	(0.992)	47938	1000.00	850.68
* 7 1,4-Difluorobenzene	114		5.754	5.754	(1.000)	147386	1000.00	
\$ 9 d8-Toluene	98		6.903	6.903	(1.200)	186838	1000.00	994.01
10 Tetrachloroethene	166		7.260	7.260	(1.262)	42500	1000.00	1008.3
11 1,1,2,2-Tetrachloroethane	83		9.447	9.447	(1.642)	39520	1000.00	924.50

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 07211009.d  
Lab Smp Id: 10000721  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/21Jul2010.b/sim072110.m  
Misc Info: 10-

Calibration Date: 21-JUL-2010  
Calibration Time: 12:47

Level: LOW  
Sample Type: WATER

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	91666	0.00
7 1,4-Difluorobenze	147386	73693	294772	147386	0.00

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

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

Data File: /chem1/nt7.i/21Jul2010.b/07211009.d

Date: 21-JUL-2010 12:47

Client ID:

Sample Info: 10000721,10,10,0

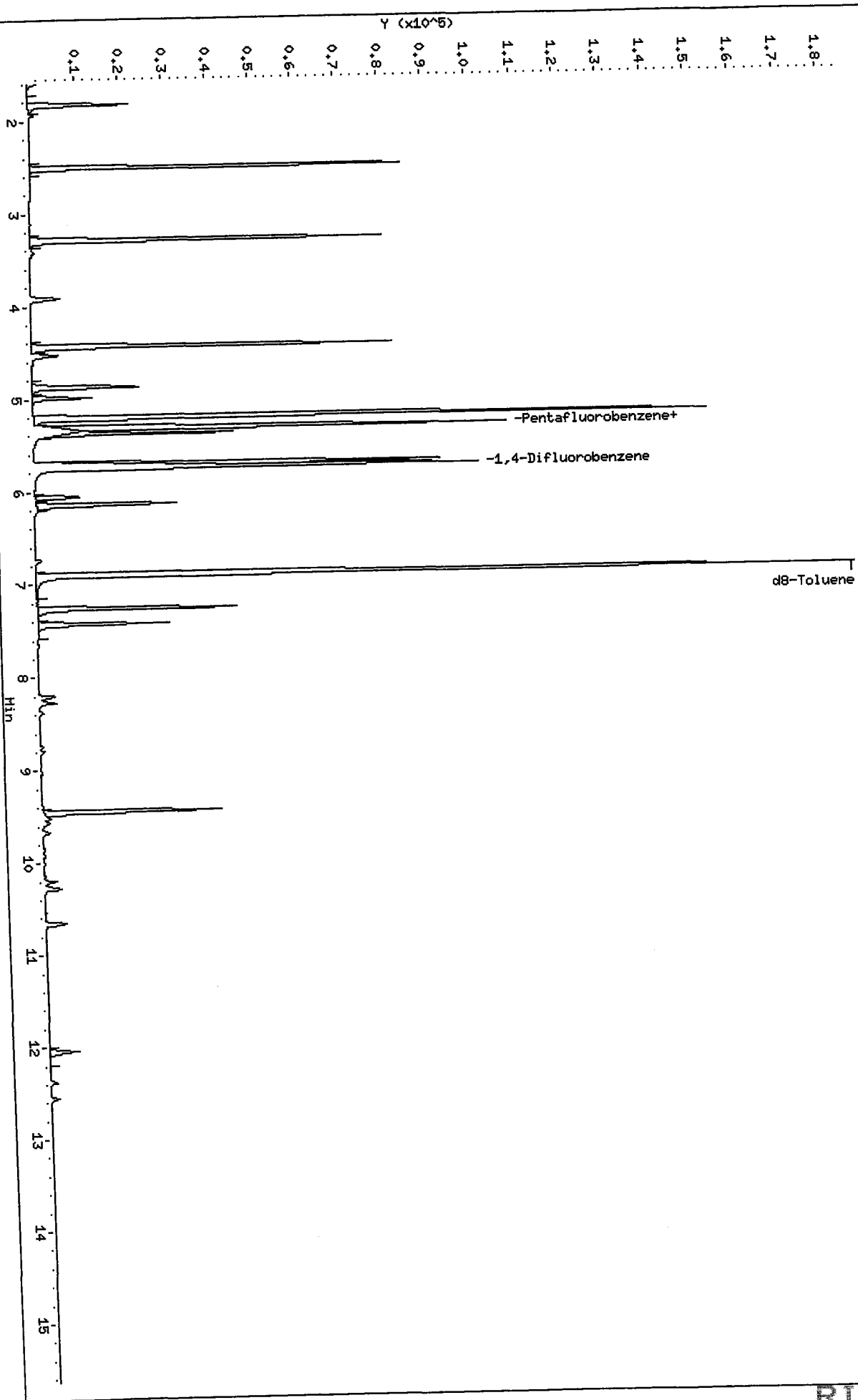
Column phase: RTXVHS

Instrument: nt7.i

Operator: MH

Column diameter: 0.18

/chem1/nt7.i/21Jul2010.b/07211009.d



MH  
7/22/10

Data File: /chem1/nt7.i/21Jul2010.b/07211010.d  
Report Date: 22-Jul-2010 06:50

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/21Jul2010.b/07211010.d

Lab Smp Id: 20000721

Inj Date : 21-JUL-2010 13:13

Inst ID: nt7.i

Operator : MH

Smp Info : 20000721,10,10,0

Misc Info : 10-

Comment :  
Method : /chem1/nt7.i/21Jul2010.b/sim072110.m

Meth Date : 22-Jul-2010 06:50 monicah Quant Type: ISTD

Cal Date : 21-JUL-2010 13:13 Cal File: 07211010.d

Als bottle: 1 Calibration Sample, Level: 6

Dil Factor: 1.00000

Compound Sublist: sim12dca.sub

Integrator: HP RTE

Target Version: 3.50

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT (ng/L)	ON-COL (ng/L)
1 Vinyl Chloride	62	1.552	1.554	(0.292)	126083	2000.00	1734.4
2 1,1-Dichloroethene	96	2.510	2.509	(0.472)	85278	2000.00	1671.3
175 Trans-1,2-Dichloroethene	96	3.290	3.289	(0.619)	97808	2000.00	1724.1
3 cis-1,2-dichloroethene	96	4.439	4.438	(0.835)	101717	2000.00	1728.0
6 Benzene	78	5.212	5.211	(0.906)	448273	2000.00	1943.4
* 4 Pentafluorobenzene	168	5.317	5.316	(1.000)	93055	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.326	5.325	(1.002)	46411	1000.00	966.81
176 1,2-Dichloroethane	62	5.383	5.382	(1.012)	124559	2000.00	1778.1
8 Trichloroethene	130	5.708	5.708	(0.992)	94434	2000.00	1659.5
* 7 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	148831	1000.00	
\$ 9 d8-Toluene	98	6.902	6.903	(1.199)	191234	1000.00	1007.5
10 Tetrachloroethene	166	7.259	7.260	(1.261)	83351	2000.00	1958.3
11 1,1,2,2-Tetrachloroethane	83	9.446	9.447	(1.641)	77581	2000.00	1797.2

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

Instrument ID: nt7.i  
 Lab File ID: 07211010.d  
 Lab Smp Id: 20000721  
 Analysis Type: VOA  
 Quant Type: ISTD  
 Operator: MH  
 Method File: /chem1/nt7.i/21Jul2010.b/sim072110.m  
 Misc Info: 10-

Calibration Date: 21-JUL-2010  
 Calibration Time: 12:47  
 Level: LOW  
 Sample Type: WATER

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	93055	1.52
7 1,4-Difluorobenze	147386	73693	294772	148831	0.98

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

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

Data File: /chem1/nt7.i/21Jul2010.b/07211010.d

Date: 21-JUL-2010 13:13

Client ID:

Sample Info: 20000721,10,10,0

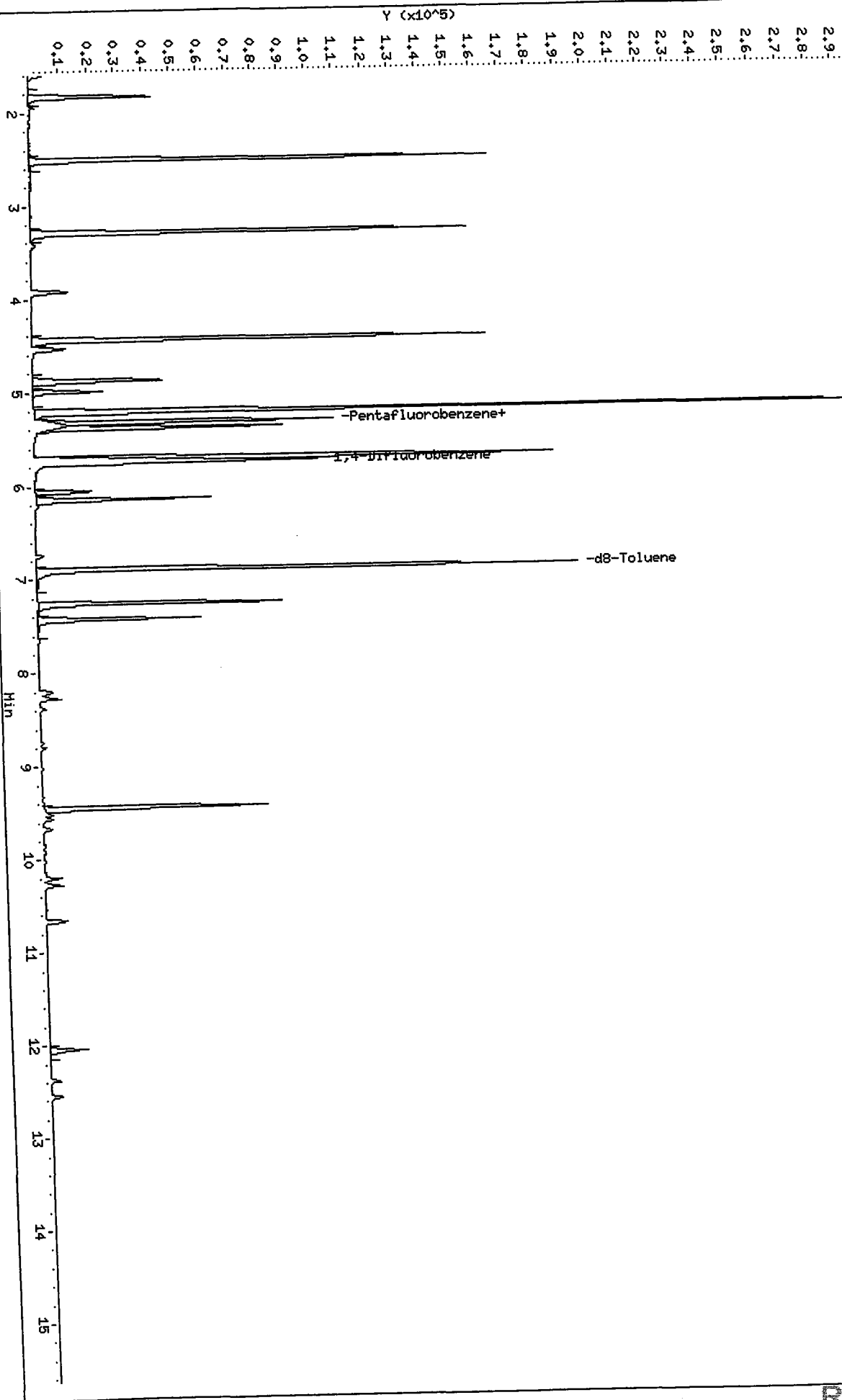
Column phase: RTXVHS

Instrument: nt7.i

Operator: HH

Column diameter: 0.18

/chem1/nt7.i/21Jul2010.b/07211010.d





7/22/10  
 14

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/21Jul2010.b/07211011.d  
 Lab Smp Id: 40000721  
 Inj Date : 21-JUL-2010 13:38  
 Operator : MH  
 Smp Info : 40000721,10,10,0  
 Misc Info : 10-  
 Comment :  
 Method : /chem1/nt7.i/21Jul2010.b/sim072110.m  
 Meth Date : 22-Jul-2010 06:50 monicah  
 Cal Date : 21-JUL-2010 13:38  
 Als bottle: 1  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50

Inst ID: nt7.i  
 Quant Type: ISTD  
 Cal File: 07211011.d  
 Calibration Sample, Level: 7  
 Compound Sublist: sim12dca.sub

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

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

Cpnd Variable                      Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT ( ng/L)	ON-COL ( ng/L)
1 Vinyl Chloride	62		1.551	1.554	(0.292)	256535	4000.00	3537.1
2 1,1-Dichloroethene	96		2.511	2.509	(0.472)	174384	4000.00	3425.6
175 Trans-1,2-Dichloroethene	96		3.290	3.289	(0.619)	199759	4000.00	3529.5
3 cis-1,2-dichloroethene	96		4.440	4.438	(0.835)	208540	4000.00	3550.9
6 Benzene	78		5.211	5.211	(0.905)	924652	4000.00	4019.7
* 4 Pentafluorobenzene	168		5.315	5.316	(1.000)	92839	1000.00	
\$ 5 d4-1,2-Dichloroethane	65		5.325	5.325	(1.002)	46346	1000.00	967.70
176 1,2-Dichloroethane	62		5.381	5.382	(1.012)	259480	4000.00	3712.8
8 Trichloroethene	130		5.709	5.708	(0.992)	195396	4000.00	3443.2
* 7 1,4-Difluorobenzene	114		5.755	5.754	(1.000)	148421	1000.00	
\$ 9 d8-Toluene	98		6.902	6.903	(1.199)	188975	1000.00	998.37
10 Tetrachloroethene	166		7.259	7.260	(1.261)	170115	4000.00	4007.8
11 1,1,2,2-Tetrachloroethane	83		9.445	9.447	(1.641)	162355	4000.00	3771.5

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i  
 Lab File ID: 07211011.d  
 Lab Smp Id: 40000721  
 Analysis Type: VOA  
 Quant Type: ISTD  
 Operator: MH  
 Method File: /chem1/nt7.i/21Jul2010.b/sim072110.m  
 Misc Info: 10-

Calibration Date: 21-JUL-2010  
 Calibration Time: 12:47

Level: LOW  
 Sample Type: WATER

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzene	91666	45833	183332	92839	1.28
7 1,4-Difluorobenzene	147386	73693	294772	148421	0.70

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

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

Data File: /chem1/nt7.i/21JUL2010.b/07211011.d

Date: 21-JUL-2010 13:38

Client ID:

Sample Info: 40000721,10,10,0

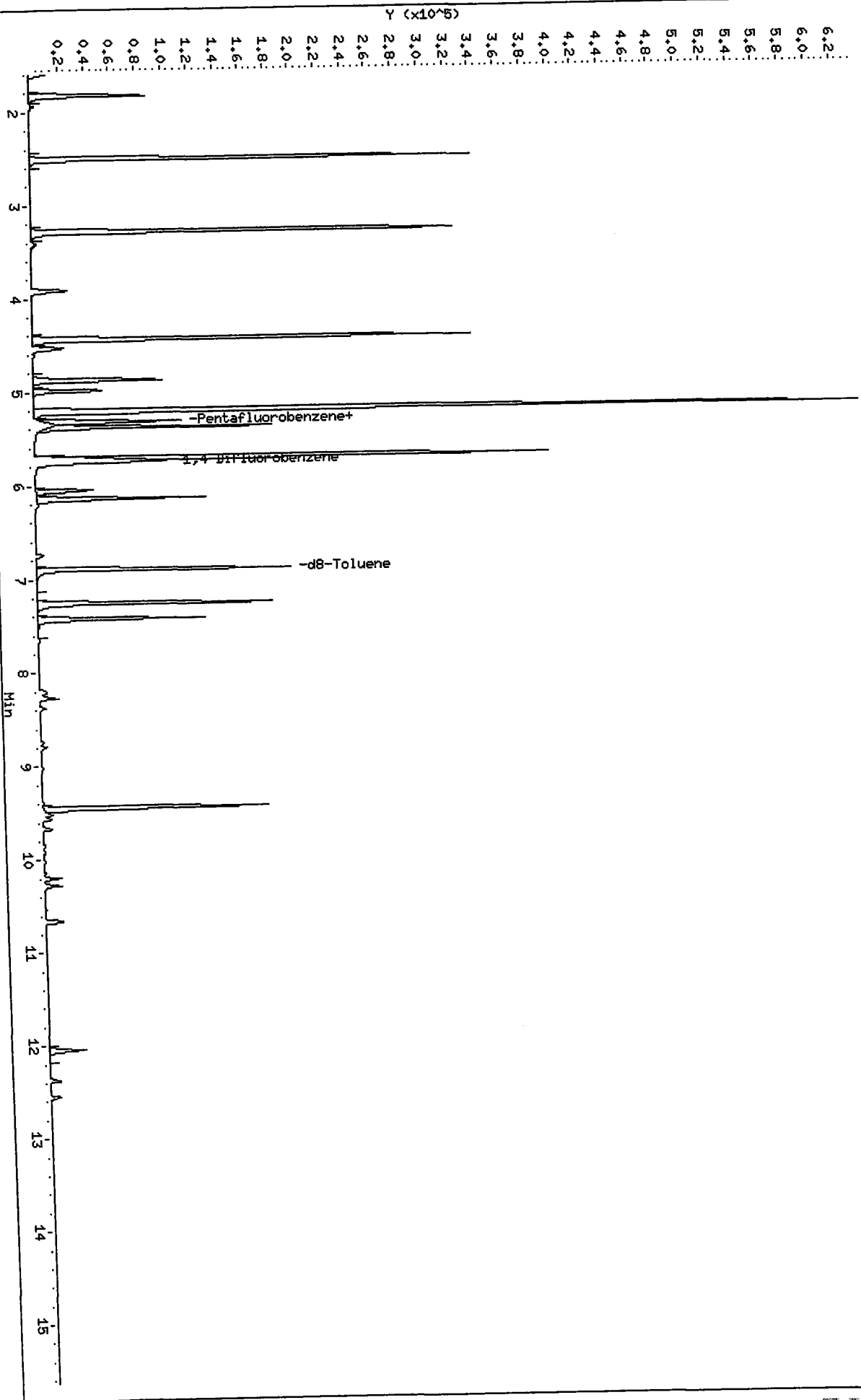
Column phase: RTXVMS

Instrument: nt7.i

Operator: MH

Column diameter: 0.18

/chem1/nt7.i/21JUL2010.b/07211011.d



MH  
7/22/10

Data File: /chem1/nt7.i/21Jul2010.b/07211012.d  
Report Date: 22-Jul-2010 06:50

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/21Jul2010.b/07211012.d  
Lab Smp Id: ICV0721  
Inj Date : 21-JUL-2010 14:04  
Operator : MH  
Smp Info : ICV0721,10,10,0  
Misc Info : 10-  
Comment :  
Method : /chem1/nt7.i/21Jul2010.b/sim072110.m  
Meth Date : 22-Jul-2010 06:50 monicah  
Cal Date : 21-JUL-2010 13:38  
Als bottle: 1  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50  
Inst ID: nt7.i  
Quant Type: ISTD  
Cal File: 07211011.d  
QC Sample: LCS  
Compound Sublist: sim12dca.sub

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

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

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62	1.552	1.554	(0.292)	69353	965.065	965.07
2 1,1-Dichloroethene	96	2.510	2.509	(0.472)	43932	870.962	870.96
175 Trans-1,2-Dichloroethene	96	3.289	3.289	(0.619)	51664	921.269	921.27
3 cis-1,2-dichloroethene	96	4.439	4.438	(0.835)	53617	921.400	921.40
6 Benzene	78	5.211	5.211	(0.905)	230183	1002.13	1002.1
* 4 Pentafluorobenzene	168	5.316	5.316	(1.000)	91990	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	46932	988.993	988.99
176 1,2-Dichloroethane	62	5.382	5.382	(1.012)	66224	956.330	956.33
8 Trichloroethene	130	5.710	5.708	(0.992)	48902	863.014	863.01
* 7 1,4-Difluorobenzene	114	5.756	5.754	(1.000)	148203	1000.00	
\$ 9 d8-Toluene	98	6.902	6.903	(1.199)	190057	1005.56	1005.6
10 Tetrachloroethene	166	7.259	7.260	(1.261)	42797	1009.76	1009.8
11 1,1,2,2-Tetrachloroethane	83	9.446	9.447	(1.641)	40922	952.019	952.02

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 07211012.d  
Lab Smp Id: ICV0721  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/21Jul2010.b/sim072110.m  
Misc Info: 10-

Calibration Date: 21-JUL-2010  
Calibration Time: 12:47  
Level: LOW  
Sample Type: WATER

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	91990	0.35
7 1,4-Difluorobenze	147386	73693	294772	148203	0.55

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.00
7 1,4-Difluorobenze	5.75	5.25	6.25	5.76	0.03

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 21Jul2010  
 Sample Matrix: LIQUID Fraction: VOA  
 Lab Smp Id: ICV0721 Operator: MH  
 Level: LOW SampleType: LCS  
 Data Type: MS DATA Quant Type: ISTD  
 SpikeList File: special.spk  
 Sublist File: sim12dca.sub  
 Method File: /chem1/nt7.i/21Jul2010.b/sim072110.m  
 Misc Info: 10-

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Vinyl Chloride	1000.0	965.07	96.51	76-120
176 1,2-Dichloroethane	1000.0	956.33	95.63	70-130
175 Trans-1,2-Dichloro	1000.0	921.27	92.13	70-130
2 1,1-Dichloroethene	1000.0	870.96	87.10	79-126
3 cis-1,2-dichloroet	1000.0	921.40	92.14	76-127
6 Benzene	1000.0	1002.1	100.21	75-121
8 Trichloroethene	1000.0	863.01	86.30	79-120
10 Tetrachloroethene	1000.0	1009.8	100.98	75-123
11 1,1,2,2-Tetrachlor	1000.0	952.02	95.20	72-129

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	988.99	98.90	80-133
\$ 9 d8-Toluene	1000.0	1005.6	100.56	80-120

Data File: /chem1/nt7.i/21JUL2010.b/07211012.d

Date: 21-JUL-2010 14:04

Client ID:

Sample Info: ICV0721,10,10,0

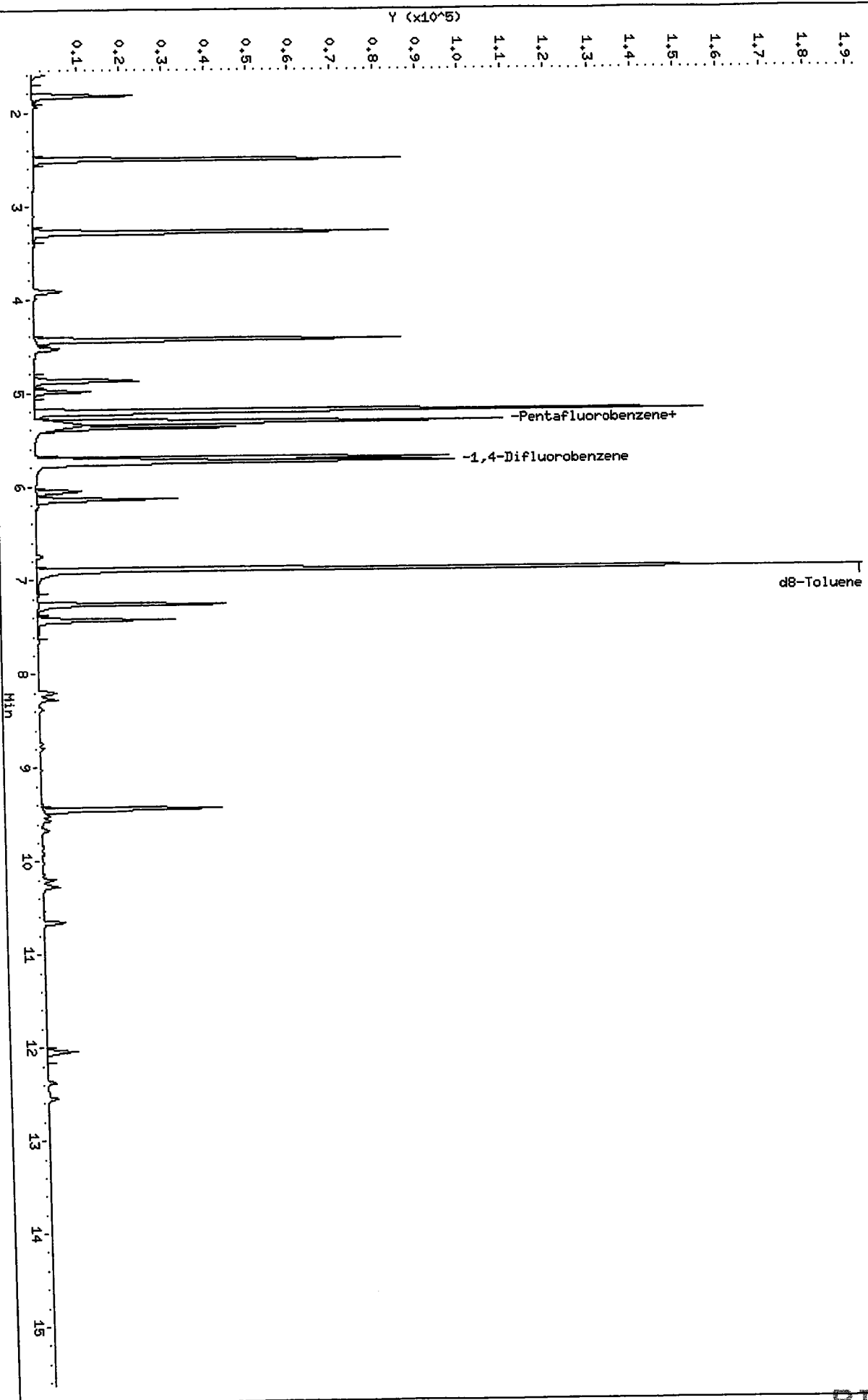
Column phase: RTXWMS

Instrument: nt7.i

Operator: MH

Column diameter: 0.18

/chem1/nt7.i/21JUL2010.b/07211012.d



Report Date : 22-Jul-2010 06:51

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt7.i/21Jul2010.b/sim072110.m  
Batch File: /chem1/nt7.i/21Jul2010.b  
Inst ID: nt7.i

RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV	
07211005	07211006	07211007	07211008	07211009	07211010	07211011					
21-JUL-2010	21-JUL-2010	21-JUL-2010	21-JUL-2010	21-JUL-2010	21-JUL-2010	21-JUL-2010					
11:30	11:56	12:21	12:47	13:13	13:38						
Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Vinyl Chloride	1.553	1.554	1.551	1.553	1.554	1.552	1.551	1.554	1.341-1.766	1.553	0.001
2 1,1-Dichloroethene	2.509	2.509	2.510	2.509	2.509	2.510	2.511	2.509	2.297-2.722	2.510	0.001
175 Trans-1,2-Dichloroethene	3.288	3.289	3.290	3.288	3.289	3.290	3.290	3.289	3.076-3.501	3.289	0.001
177 Acrylonitrile	4.438	4.438	4.439	4.438	4.438	4.439	4.440	4.438	3.767-4.192	4.439	0.001
3 cis-1,2-dichloroethene	5.211	5.212	5.210	5.211	5.211	5.212	5.211	5.211	4.981-5.441	5.211	0.001
6 Benzene	5.316	5.316	5.324	5.316	5.316	5.317	5.315	5.316	5.103-5.528	5.317	0.003
* 4 Pentafluorobenzene											
5 d4-1,2-Dichloroethane	5.325	5.325	5.324	5.325	5.325	5.326	5.325	5.325	5.112-5.538	5.325	0.001
176 1,2-Dichloroethane	5.382	5.382	5.381	5.382	5.382	5.383	5.381	5.382	5.169-5.595	5.382	0.001
8 Trichloroethene	5.710	5.720	5.721	5.710	5.708	5.708	5.709	5.708	5.478-5.938	5.712	0.006
* 7 1,4-Difluorobenzene	5.756	5.755	5.755	5.755	5.754	5.754	5.755	5.754	5.524-5.984	5.755	0.001
9 d8-Toluene	6.902	6.903	6.901	6.903	6.903	6.902	6.902	6.903	6.673-7.133	6.902	0.001
10 Tetrachloroethene	7.271	7.271	7.270	7.271	7.260	7.259	7.259	7.260	7.030-7.490	7.266	0.006
11 1,1,2,2-Tetrachloroethane	9.458	9.458	9.457	9.446	9.447	9.446	9.445	9.447	9.217-9.677	9.451	0.006

Reviewer 1 MH Date: 7/22/10  
Reviewer 2 [Signature] Date: 7/22/10





### VOA Analyst Notes / Corrective Action Log

ARI Project ID: SIM VOA ICAI Client ID: \_\_\_\_\_

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

Parameter(s): SIM chlorinated VOA

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

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

pH ≤ 2.0	YES / NO / NA	Method Blank In Control?	<u>YES</u> / NO
BFB Tune Meets Criteria?	<u>YES</u> / NO / NA	LCS / LCSD Recovery In Control?	<u>YES</u> / NO
Internal Standard Meets Criteria?	<u>YES</u> / NO / NA	Surrogate Recovery In Control?	<u>YES</u> / NO
ICal acceptable?	<u>YES</u> / NO	CCal acceptable?	<u>YES</u> / NO
Q flag applied?	YES / <u>NO</u> / NA	Q flag applied?	YES / <u>NO</u> / NA
Manual Integrations for ICal?	YES / <u>NO</u>	Manual Integrations for Samples?	Yes / <u>NO</u>
Special Analysis Criteria Met?	YES / NO / <u>NA</u>		

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

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

*All averaged.*

Additional Details on Reverse: Yes / No  
Analyst: Paul Capwell Date: 8/23/10

Reviewer: \_\_\_\_\_ Date: 8/23/10

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

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

Time	Filename	LabID	Clientid	DF	Manually Integrated Compounds
1027	08231006.d	IC4000	IC4000	1	NO MANUAL INTEGRATION
1052	08231007.d	IC2000	IC2000	1	NO MANUAL INTEGRATION
1118	08231008.d	IC1000	IC1000	1	NO MANUAL INTEGRATION
1144	08231009.d	IC500	IC500	1	NO MANUAL INTEGRATION
1209	08231010.d	IC100	IC100	1	NO MANUAL INTEGRATION
1235	08231011.d	IC50	IC50	1	NO MANUAL INTEGRATION
1301	08231012.d	IC20	IC20	1	NO MANUAL INTEGRATION
1326	08231013.d	ICV1000	ICV1000	1	NO MANUAL INTEGRATION

Report Date : 23-Aug-2010 15:32

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
Batch File: /chem1/nt7.i/23AUG2010.b  
Inst ID: nt7.i

RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1.551	1.551	1.552	1.552	1.552	1.552	1.552	1.551	1.552	1.339-1.765	1.552	0.001
2.505	2.510	2.510	2.511	2.511	2.510	2.510	2.511	2.510	2.297-2.723	2.509	0.002
3.284	3.289	3.289	3.290	3.290	3.289	3.295	3.291	3.289	3.077-3.502	3.290	0.003
+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.980	3.767-4.193	+++++	+++++
4.434	4.439	4.439	4.440	4.440	4.444	4.439	4.440	4.439	4.227-4.652	4.439	0.003
5.201	5.211	5.212	5.210	5.211	5.211	5.212	5.210	5.212	4.991-5.452	5.210	0.004
5.315	5.315	5.316	5.324	5.324	5.325	5.316	5.315	5.316	5.103-5.529	5.319	0.005
5.324	5.325	5.325	5.334	5.324	5.325	5.325	5.324	5.325	5.113-5.538	5.326	0.003
5.381	5.382	5.382	5.381	5.381	5.382	5.382	5.381	5.382	5.170-5.595	5.382	0.001
5.709	5.710	5.720	5.721	5.721	5.720	5.720	5.709	5.720	5.500-5.961	5.716	0.006
5.744	5.756	5.754	5.755	5.756	5.754	5.755	5.755	5.754	5.524-5.984	5.754	0.004
6.902	6.902	6.902	6.902	6.902	6.903	6.903	6.902	6.903	6.672-7.133	6.902	0.001
7.258	7.259	7.260	7.270	7.270	7.271	7.272	7.270	7.260	7.029-7.489	7.266	0.006
9.445	9.446	9.446	9.447	9.457	9.458	9.458	9.445	9.447	9.216-9.676	9.450	0.006

Reviewer 1 PC Date: 8/23/10  
Reviewer 2 8/22/10

Report Date : 23-Aug-2010 15:32

## Analytical Resources, Inc.

## INITIAL CALIBRATION DATA

Start Cal Date : 23-AUG-2010 10:27  
 End Cal Date : 23-AUG-2010 13:01  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Cal Date : 23-Aug-2010 15:29 paul  
 Curve Type : Average

## Calibration File Names:

Level 1: /chem1/nt7.i/23AUG2010.b/08231012.d  
 Level 2: /chem1/nt7.i/23AUG2010.b/08231011.d  
 Level 3: /chem1/nt7.i/23AUG2010.b/08231010.d  
 Level 4: /chem1/nt7.i/23AUG2010.b/08231009.d  
 Level 5: /chem1/nt7.i/23AUG2010.b/08231008.d  
 Level 6: /chem1/nt7.i/23AUG2010.b/08231007.d  
 Level 7: /chem1/nt7.i/23AUG2010.b/08231006.d

Compound	20.000	50.000	100.000	500.000	1000.000	2000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	4000.000							
	Level 7							
1 Vinyl Chloride	0.88083 0.97204	0.85023	0.92552	0.87622	0.86744	0.90518	0.89685	4.609
2 1,1-Dichloroethene	0.49668 0.51051	0.51036	0.54175	0.50724	0.49398	0.51339	0.51063	3.040
175 Trans-1,2-Dichloroethene	0.58000 0.59362	0.57846	0.64317	0.59808	0.57685	0.60158	0.59603	3.863
177 Acrylonitrile	++++ ++++	++++	++++	++++	++++	++++	++++	++++
3 cis-1,2-dichloroethene	0.60760 0.61302	0.57868	0.63679	0.61584	0.60093	0.61870	0.61028	2.918
6 Benzene	1.96823 1.61415	1.67941	1.78672	1.63067	1.57682	1.63446	1.69864	8.026

Report Date : 23-Aug-2010 15:32

## Analytical Resources, Inc.

## INITIAL CALIBRATION DATA

Start Cal Date : 23-AUG-2010 10:27  
 End Cal Date : 23-AUG-2010 13:01  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Cal Date : 23-Aug-2010 15:29 paul  
 Curve Type : Average

Compound	20.000	50.000	100.000	500.000	1000.000	2000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	4000.000							
	Level 7							
176 1,2-Dichloroethane	0.80562 0.83731	0.75718	0.91585	0.85021	0.82041	0.86836	0.83648	5.973
8 Trichloroethene	0.34256 0.31687	0.32015	0.34177	0.31437	0.30527	0.32364	0.32354	4.322
10 Tetrachloroethene	0.28294 0.25872	0.25370	0.28457	0.26545	0.25535	0.26844	0.26702	4.708
11 1,1,2,2-Tetrachloroethane	0.23228 0.27225	0.21684	0.27428	0.25618	0.25983	0.28918	0.25726	9.780
\$ 5 d4-1,2-Dichloroethane	0.74851 0.63366	0.71022	0.76363	0.64999	0.65142	0.65039	0.68683	7.754
\$ 9 d8-Toluene	1.36399 1.38296	1.36333	1.37986	1.38864	1.38900	1.38372	1.37878	0.785

MC  
8/23/10

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

Date : 23-AUG-2010 07:11

Client ID: BFB0823

Sample Info: BFB0823,BFB0823,1,082310,

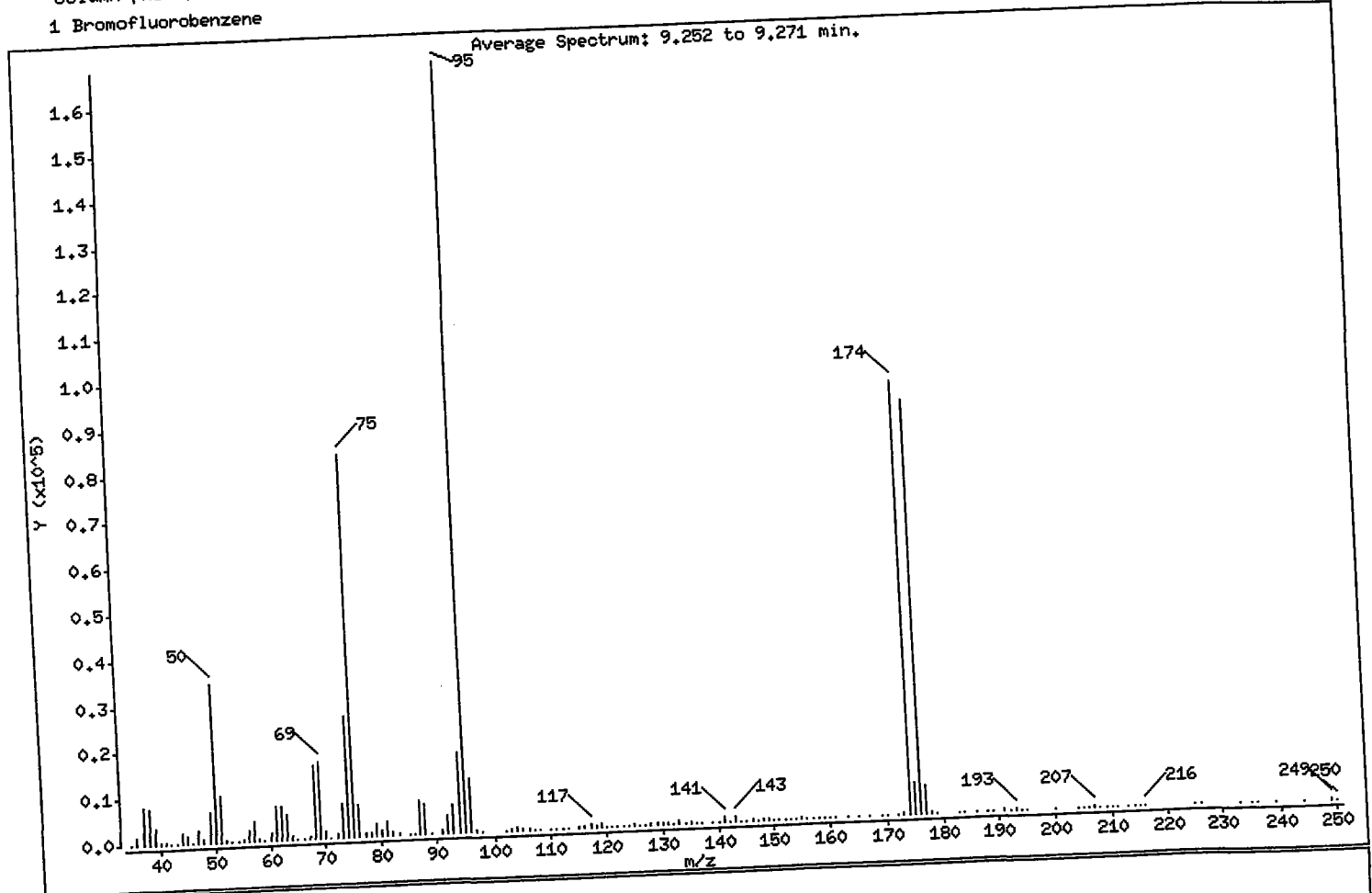
Instrument: nt7.i

Operator: MH

Column diameter: 0.18

Column phase: RTXVHS  
1 Bromofluorobenzene

Average Spectrum: 9.252 to 9.271 min.



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

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

Date : 23-AUG-2010 07:11

Client ID: BFB0823

Sample Info: BFB0823,BFB0823,1,082310,

Instrument: nt7.i

Operator: MH

Column diameter: 0.18

Column phase: RTXVMS

Data File: 08231001.d  
 Spectrum: Average Spectrum: 9.252 to 9.271 min.  
 Location of Maximum: 95.00  
 Number of points: 164

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

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

Date : 23-AUG-2010 07:11

Client ID: BFB0823

Instrument: nt7.i

Sample Info: BFB0823,BFB0823,1,082310,

Operator: MH

Column diameter: 0.18

Column phase: RTXVMS

Data File: 08231001.d

Spectrum: Average Spectrum: 9.252 to 9.271 min.

Location of Maximum: 95.00

Number of points: 164

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

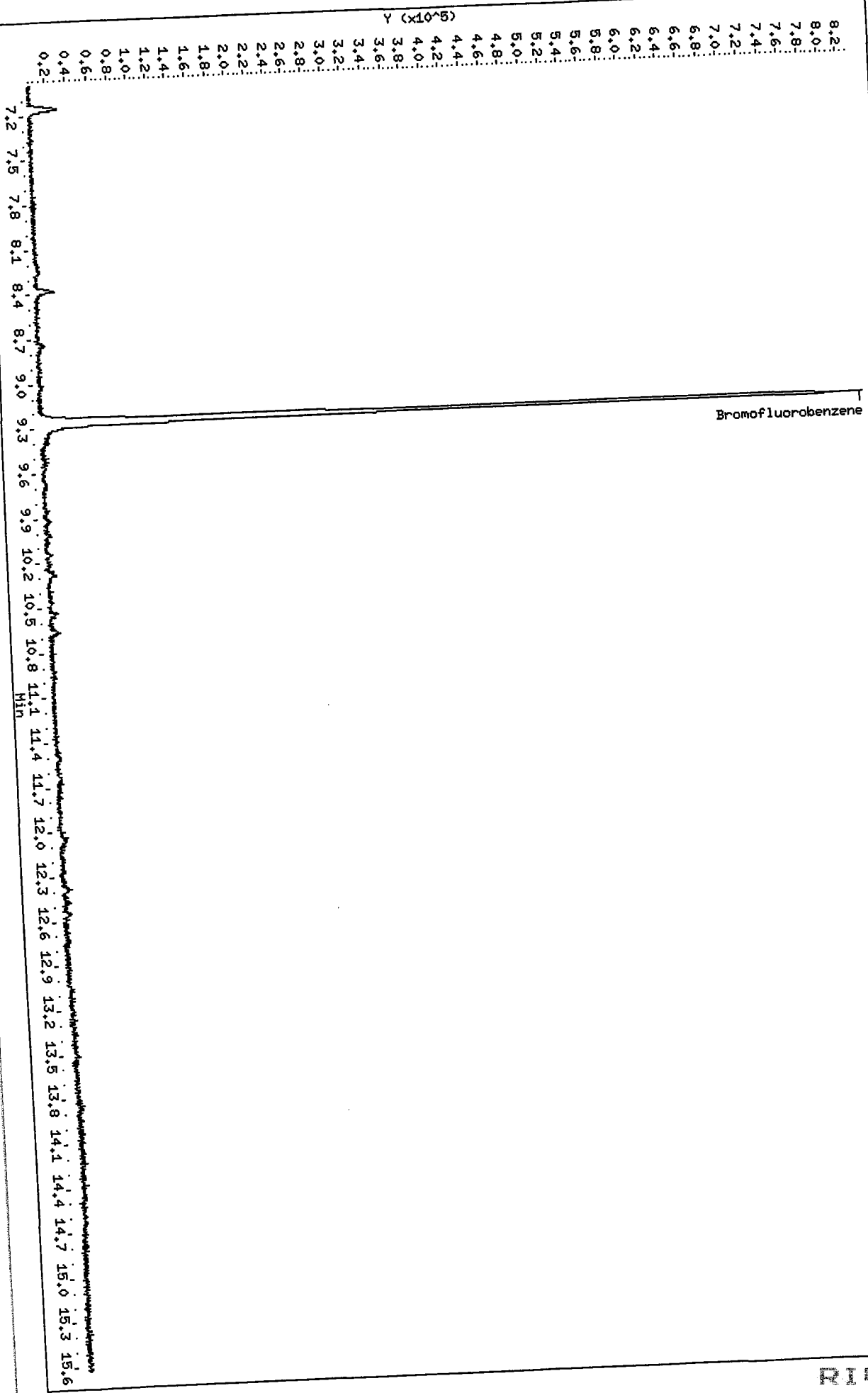


Data File: /chemd/nt7.i/23AUG2010.b/08231001.d  
Date: 23-AUG-2010 07:11  
Client ID: BFB0823  
Sample Info: BFB0823,BFB0823.1,082310,

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

Column phase: RTXVMS

/chemd/nt7.i/23AUG2010.b/08231001.d



PC  
8/23/10

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

Analytical Resources, Inc.

SW8260C SIM  
Data file : /chem1/nt7.i/23AUG2010.b/08231006.d Client Smp ID: IC4000  
Lab Smp Id: IC4000  
Inj Date : 23-AUG-2010 10:27 Inst ID: nt7.i  
Operator : PC  
Smp Info : IC4000,10,10,0,  
Misc Info : 10-  
Comment :  
Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
Meth Date : 23-Aug-2010 15:29 paul Quant Type: ISTD  
Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
Als bottle: 1 Calibration Sample, Level: 7  
Dil Factor: 1.00000 Compound Sublist: sim12dca.sub  
Integrator: HP RTE  
Target Version: 3.50

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

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

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
						CAL-AMT ( ng/L)	ON-COL ( ng/L)
1 Vinyl Chloride	62	1.551	1.552	(0.292)	375182	4000.00	4335.4
2 1,1-Dichloroethene	96	2.505	2.510	(0.471)	197042	4000.00	3999.1
175 Trans-1,2-Dichloroethene	96	3.284	3.289	(0.618)	229120	4000.00	3983.8
3 cis-1,2-dichloroethene	96	4.434	4.439	(0.834)	236607	4000.00	4018.0
6 Benzene	78	5.201	5.212	(0.906)	1096904	4000.00	3801.0
* 4 Pentafluorobenzene	168	5.315	5.316	(1.000)	96493	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.324	5.325	(1.002)	61144	1000.00	922.59
176 1,2-Dichloroethane	62	5.381	5.382	(1.012)	323180	4000.00	4004.0
8 Trichloroethene	130	5.709	5.720	(0.994)	215334	4000.00	3917.6(Q)
* 7 1,4-Difluorobenzene	114	5.744	5.754	(1.000)	169889	1000.00	
\$ 9 d8-Toluene	98	6.902	6.903	(1.202)	234949	1000.00	1003.0
10 Tetrachloroethene	166	7.258	7.260	(1.264)	175815	4000.00	3875.6
11 1,1,1,2,2-Tetrachloroethane	83	9.445	9.447	(1.645)	185009	4000.00	4233.0

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

Page 2

QC Flag Legend

Q - Qualifier signal failed the ratio test.

RI46:00247

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

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

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

Test Mode: Use Initial Calibration Level 5.

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

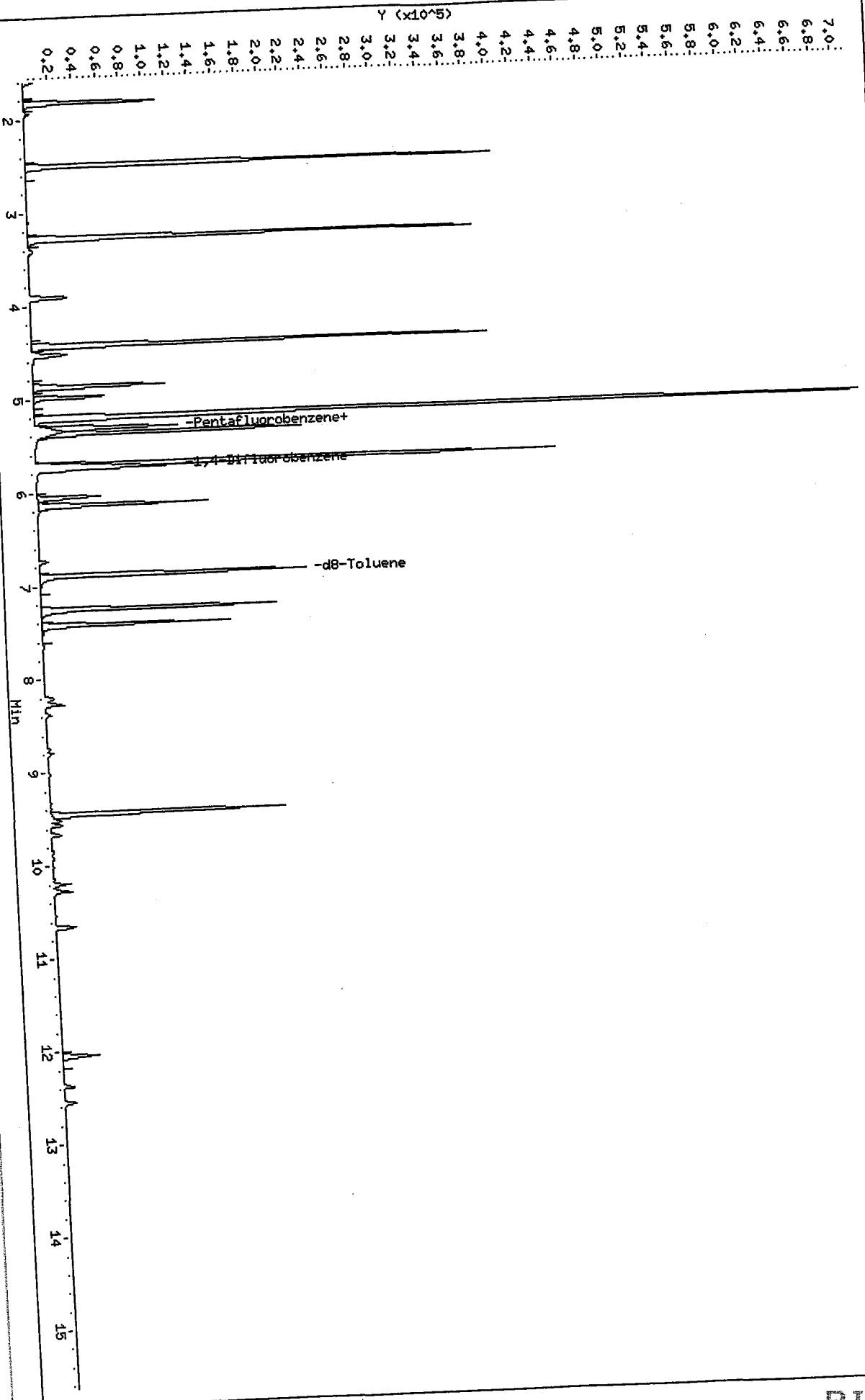
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.31	-0.02
7 1,4-Difluorobenze	5.75	5.25	6.25	5.74	-0.19

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

Data File: /chem1/nt7.i/23AUG2010.b/08231006.d  
Date: 23-AUG-2010 10:27  
Client ID: IC4000  
Sample Info: IC4000,10,10,0,  
Column phase: RTXVMS

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

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



8/23/10

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

Analytical Resources, Inc.

SW8260C SIM  
Data file : /chem1/nt7.i/23AUG2010.b/08231007.d Client Smp ID: IC2000  
Lab Smp Id: IC2000  
Inj Date : 23-AUG-2010 10:52 Inst ID: nt7.i  
Operator : PC  
Smp Info : IC2000,10,10,0,  
Misc Info : 10-  
Comment :  
Method : /chem1/nt7.i/23AUG2010.b/sim082310.m Quant Type: ISTD  
Meth Date : 23-Aug-2010 15:29 paul Cal File: 08231012.d  
Cal Date : 23-AUG-2010 13:01 Calibration Sample, Level: 6  
Als bottle: 1  
Dil Factor: 1.00000 Compound Sublist: sim12dca.sub  
Integrator: HP RTE  
Target Version: 3.50

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

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

Cpnd Variable Local Compound Variable

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

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

QC Flag Legend

Q - Qualifier signal failed the ratio test.

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

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

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

Test Mode: Use Initial Calibration Level 5.

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

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

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

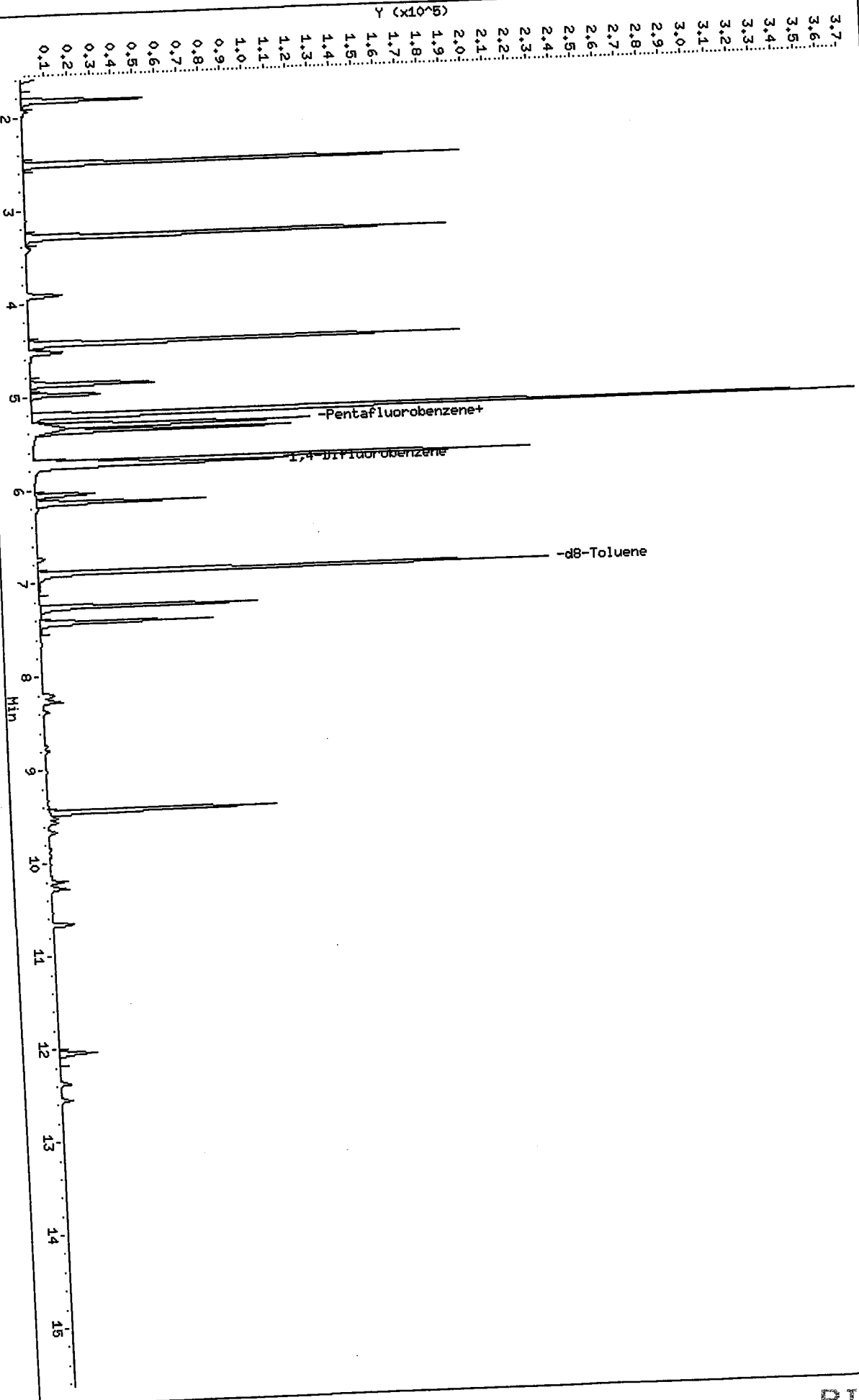


Data File: /chem1/nt7.1/23AUG2010.b/08231007.d  
Date : 23-AUG-2010 10:52  
Client ID: IC2000  
Sample Info: IC2000.10.10.0,

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

Column phase: RTXVMS

/chem1/nt7.1/23AUG2010.b/08231007.d



MC  
8/23/10

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

Analytical Resources, Inc.

SW8260C SIM  
Data file : /chem1/nt7.i/23AUG2010.b/08231008.d Client Smp ID: IC1000  
Lab Smp Id: IC1000  
Inj Date : 23-AUG-2010 11:18 Inst ID: nt7.i  
Operator : PC  
Smp Info : IC1000,10,10,0,  
Misc Info : 10-  
Comment :  
Method : /chem1/nt7.i/23AUG2010.b/sim082310.m Quant Type: ISTD  
Meth Date : 23-Aug-2010 15:29 paul Cal File: 08231012.d  
Cal Date : 23-AUG-2010 13:01 Calibration Sample, Level: 5  
Als bottle: 1  
Dil Factor: 1.00000 Compound Sublist: sim12dca.sub  
Integrator: HP RTE  
Target Version: 3.50

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

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

Cpnd Variable Local Compound Variable

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

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

QC Flag Legend

Q - Qualifier signal failed the ratio test.

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

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

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

Test Mode: Use Initial Calibration Level 5.

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

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

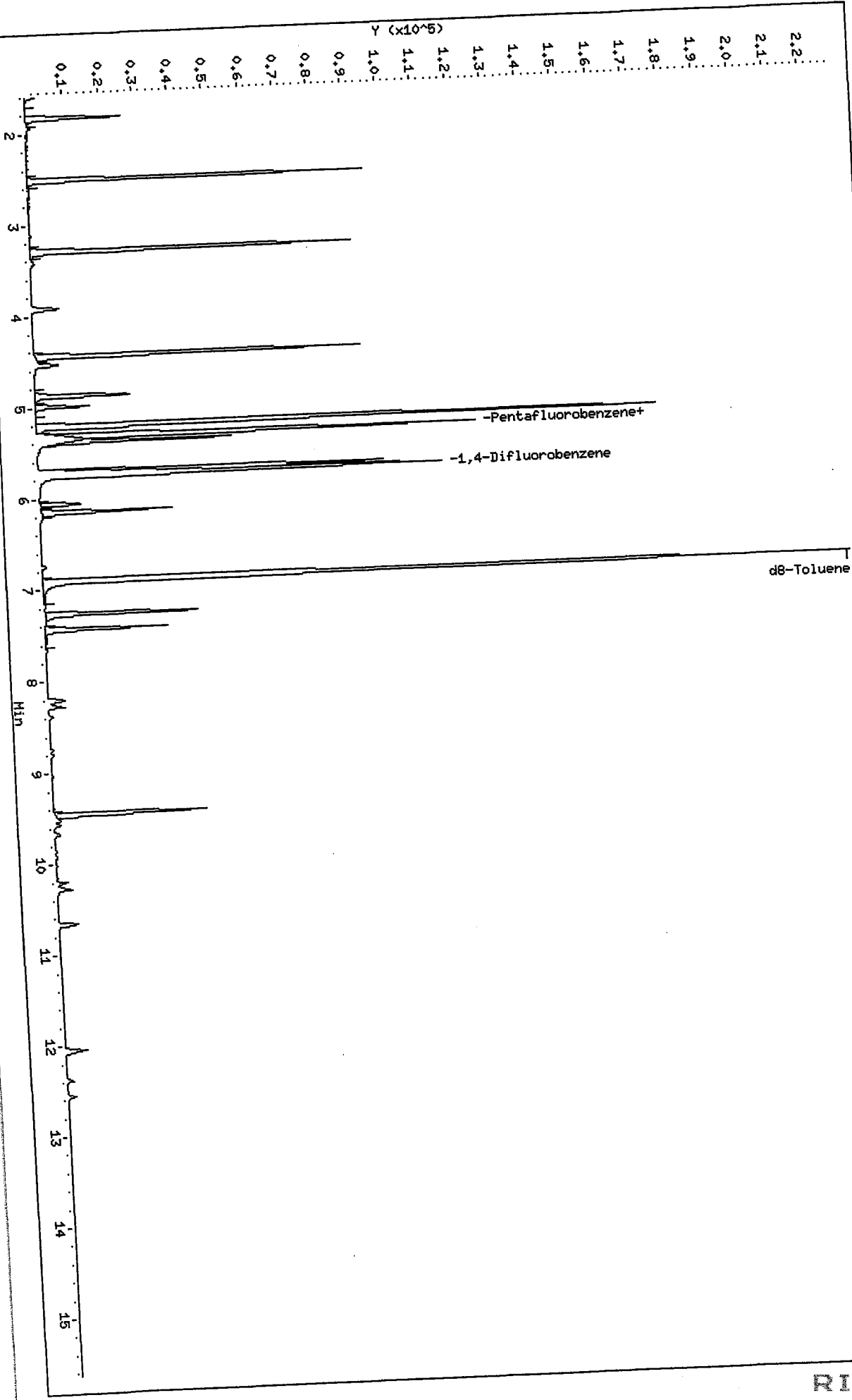
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt7.i/23AUG2010.b/08231008.d  
Date: 23-AUG-2010 11:18  
Client ID: ICI000  
Sample Info: ICI000,10,10,0,

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

Column phase: RTXVHS

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



PK 8/23/10

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

Analytical Resources, Inc.

SW8260C SIM  
Data file : /chem1/nt7.i/23AUG2010.b/08231009.d Client Smp ID: IC500  
Lab Smp Id: IC500  
Inj Date : 23-AUG-2010 11:44 Inst ID: nt7.i  
Operator : MH  
Smp Info : IC500,10,10,0,  
Misc Info : 10-  
Comment :  
Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
Meth Date : 23-Aug-2010 15:29 paul Quant Type: ISTD  
Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
Als bottle: 1 Calibration Sample, Level: 4  
Dil Factor: 1.00000 Compound Sublist: sim12dca.sub  
Integrator: HP RTE  
Target Version: 3.50

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

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

Cpnd Variable Local Compound Variable

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

QC Flag Legend

Q - Qualifier signal failed the ratio test.

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

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

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

Test Mode: Use Initial Calibration Level 5.

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

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

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



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

Date : 23-AUG-2010 11:44

Client ID: IC500

Sample Info: IC500,10,10,0,

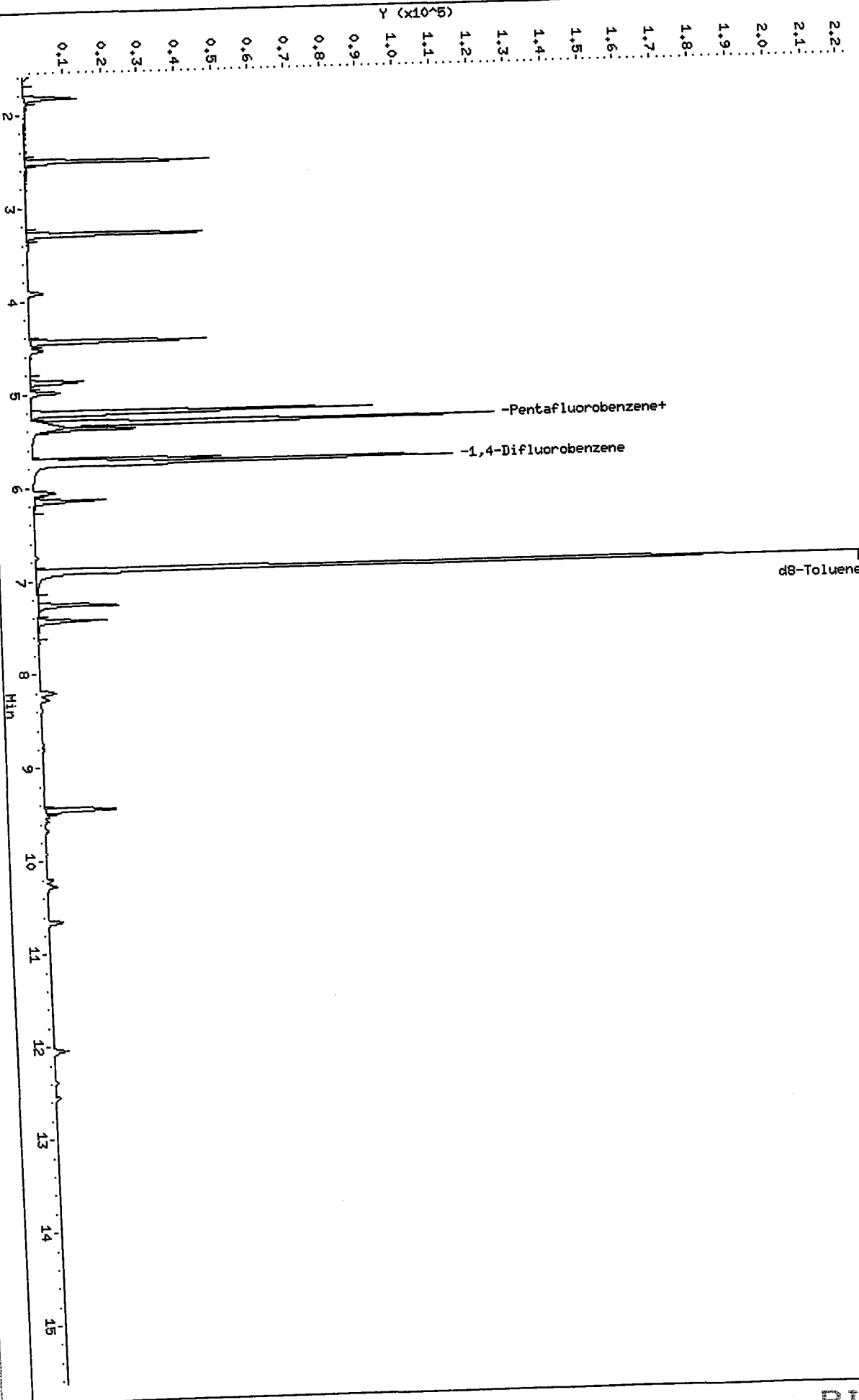
Column phase: RTXVMS

Instrument: nt7.i

Operator: MH

Column diameter: 0.18

/chem1/nt7.i/23AUG2010.b/08231009.d



125  
8/23/10

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

Analytical Resources, Inc.

SW8260C SIM

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

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

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

Cpnd Variable Local Compound Variable

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

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

QC Flag Legend

Q - Qualifier signal failed the ratio test.

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

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

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

Test Mode: Use Initial Calibration Level 5.

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

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

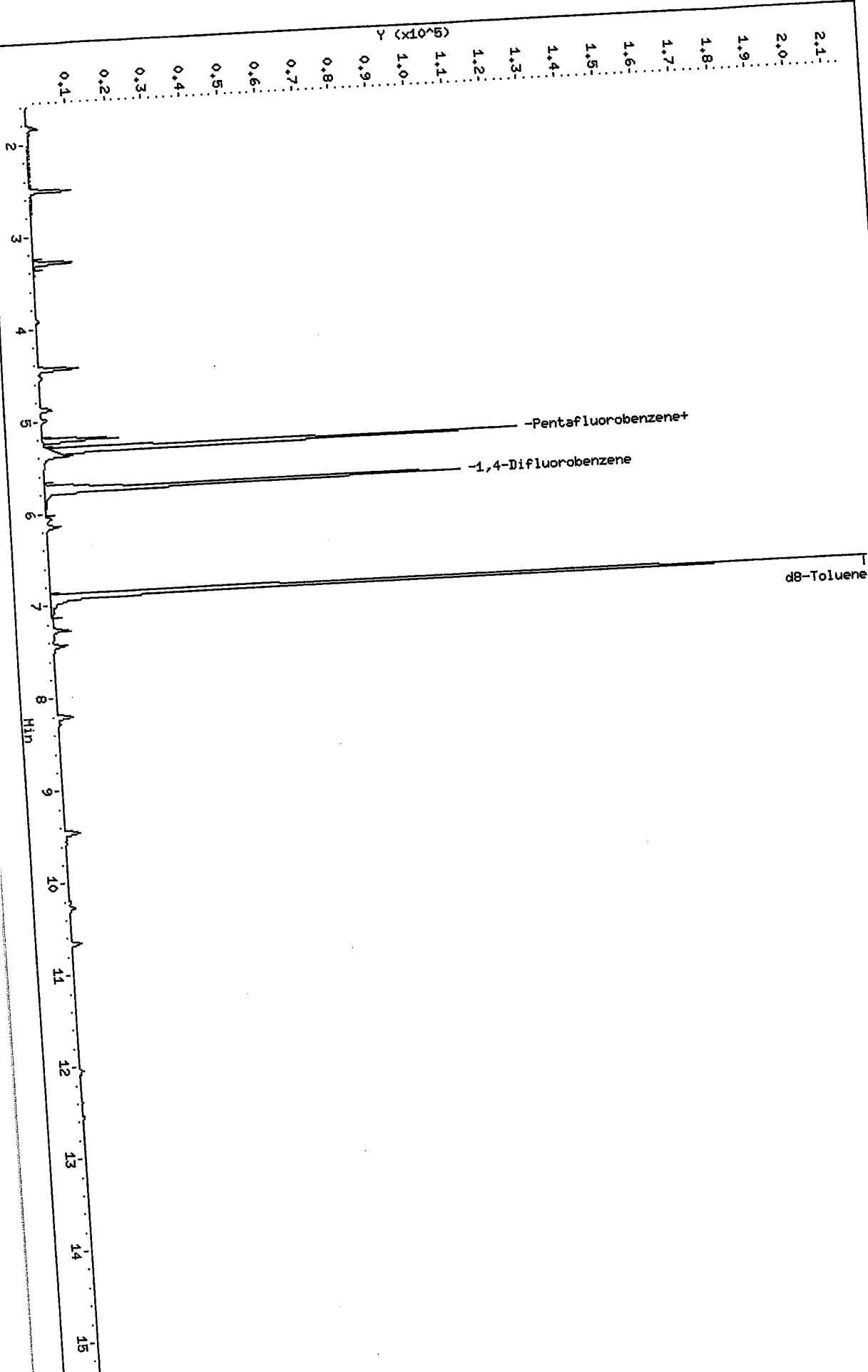
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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

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

Column phase: RTXWMS

/chem1/nt7.1/23AUG2010.b/08231010.d



PK  
8/23/10

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

Analytical Resources, Inc.

SW8260C SIM  
Data file : /chem1/nt7.i/23AUG2010.b/08231011.d Client Smp ID: IC50  
Lab Smp Id: IC50  
Inj Date : 23-AUG-2010 12:35 Inst ID: nt7.i  
Operator : PC  
Smp Info : IC50,10,10,0,  
Misc Info : 10-  
Comment :  
Method : /chem1/nt7.i/23AUG2010.b/sim082310.m Quant Type: ISTD  
Meth Date : 23-Aug-2010 15:29 paul Cal File: 08231012.d  
Cal Date : 23-AUG-2010 13:01 Calibration Sample, Level: 2  
Als bottle: 1  
Dil Factor: 1.00000 Compound Sublist: sim12dca.sub  
Integrator: HP RTE  
Target Version: 3.50

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

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

Cpnd Variable Local Compound Variable

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

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

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

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

Test Mode: Use Initial Calibration Level 5.

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

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

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

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

Date: 23-AUG-2010 12:35

Client ID: IC50

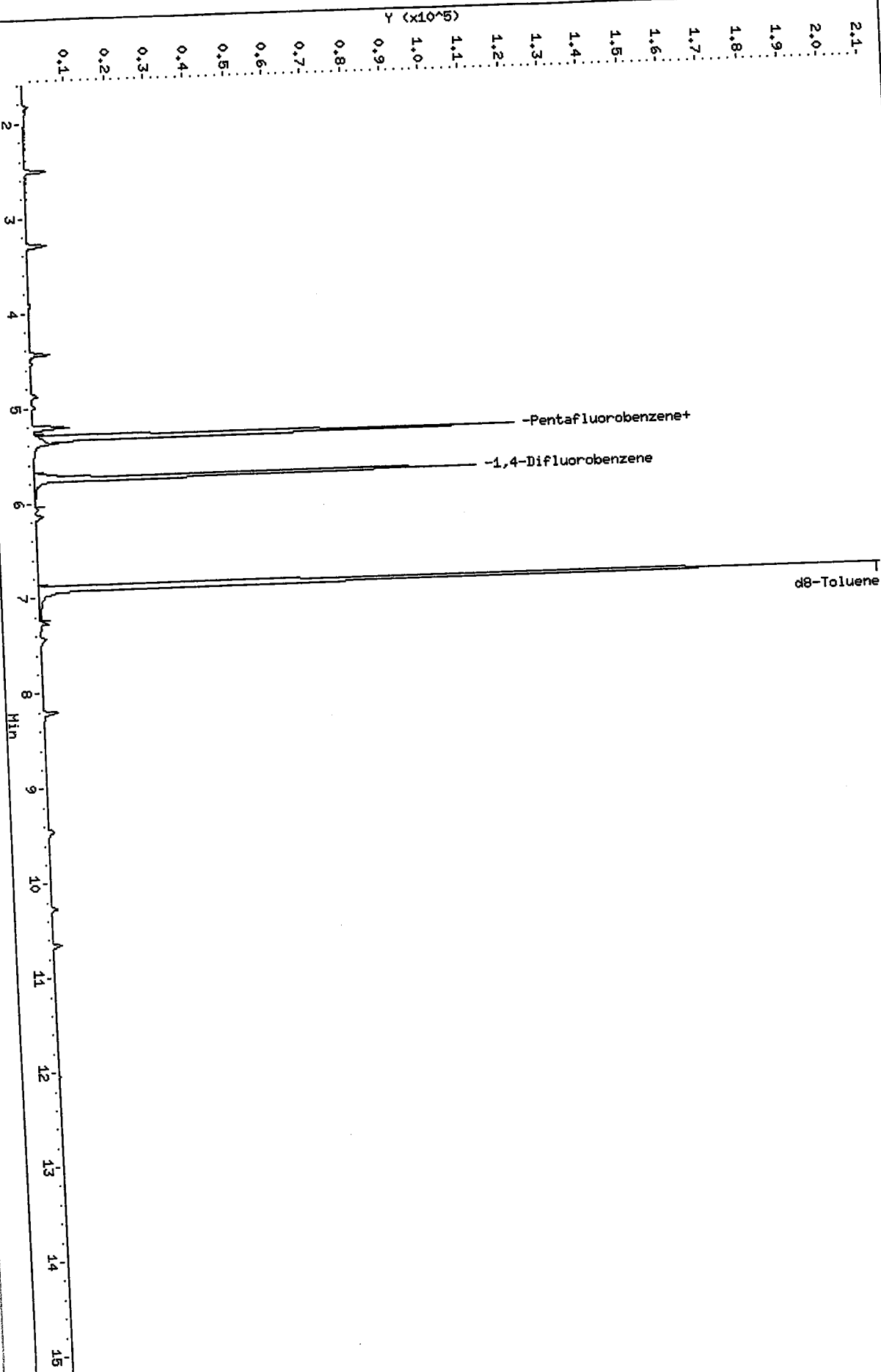
Sample Info: IC50,10,10,0,

Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18



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



PG  
8/23/10

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

Analytical Resources, Inc.

SW8260C SIM  
Data file : /chem1/nt7.i/23AUG2010.b/08231012.d Client Smp ID: IC20  
Lab Smp Id: IC20  
Inj Date : 23-AUG-2010 13:01 Inst ID: nt7.i  
Operator : PC  
Smp Info : IC20,10,10,0,  
Misc Info : 10-  
Comment :  
Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
Meth Date : 23-Aug-2010 15:29 paul Quant Type: ISTD  
Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
Als bottle: 1 Calibration Sample, Level: 1  
Dil Factor: 1.00000 Compound Sublist: sim12dca.sub  
Integrator: HP RTE  
Target Version: 3.50

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

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

Cpnd Variable

Local Compound Variable

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

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

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

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

Test Mode: Use Initial Calibration Level 5.

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

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

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

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

Date: 23-AUG-2010 13:01

Client ID: IC20

Sample Info: IC20,10,10,0,

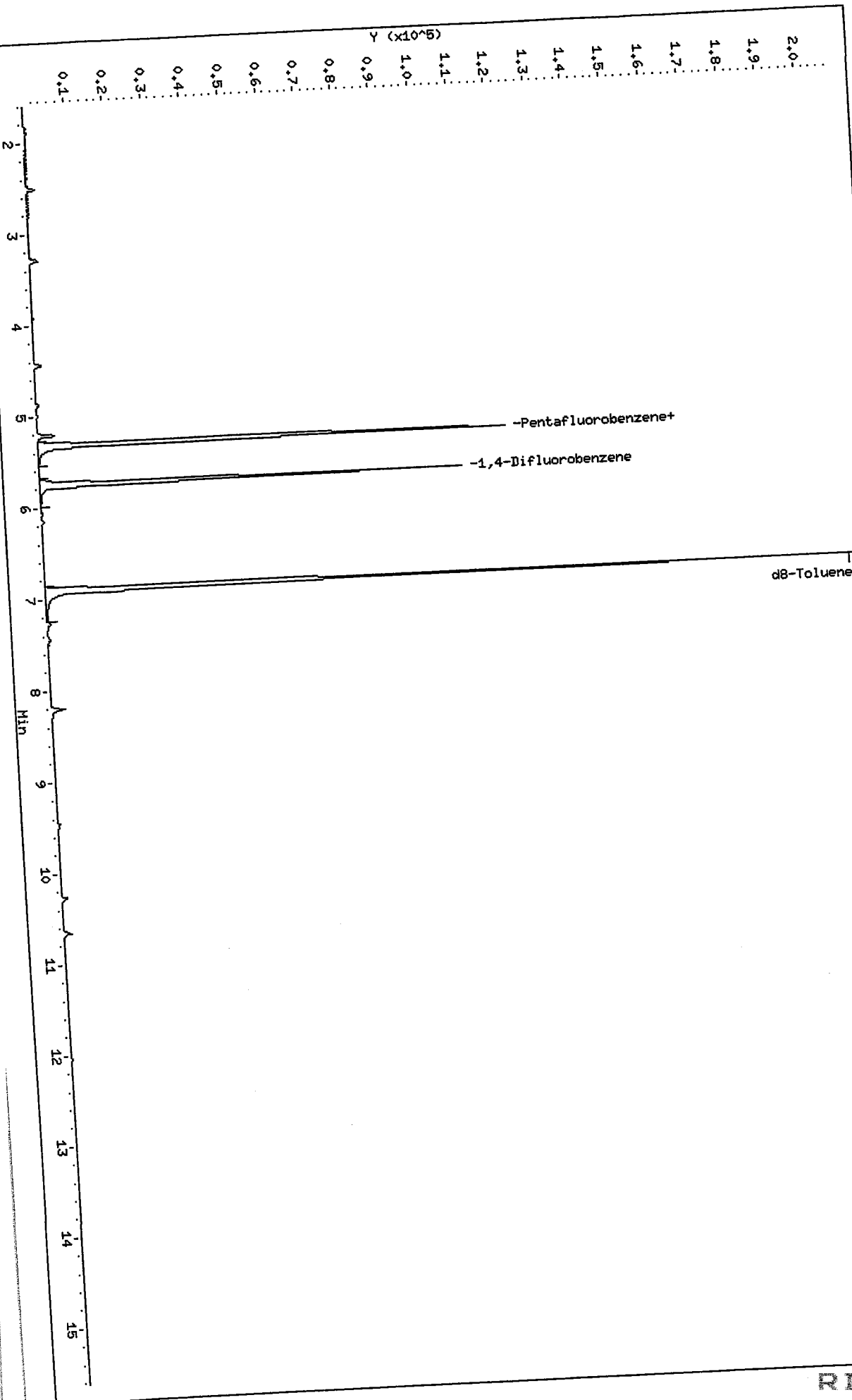
Column phase: RTXVHS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18

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



PL  
8/23/10

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

Analytical Resources, Inc.

SW8260C SIM

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

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

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

Cpnd Variable Local Compound Variable

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

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

Page 2

QC Flag Legend

Q - Qualifier signal failed the ratio test.

RI46:00273

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

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

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

Test Mode:  
 Use Initial Calibration Level 5.

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

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

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

Analytical Resources, Inc.

RECOVERY REPORT

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

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

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

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

Date: 23-AUG-2010 13:26

Client ID: ICV1000

Sample Info: ICV1000,10,10,0,

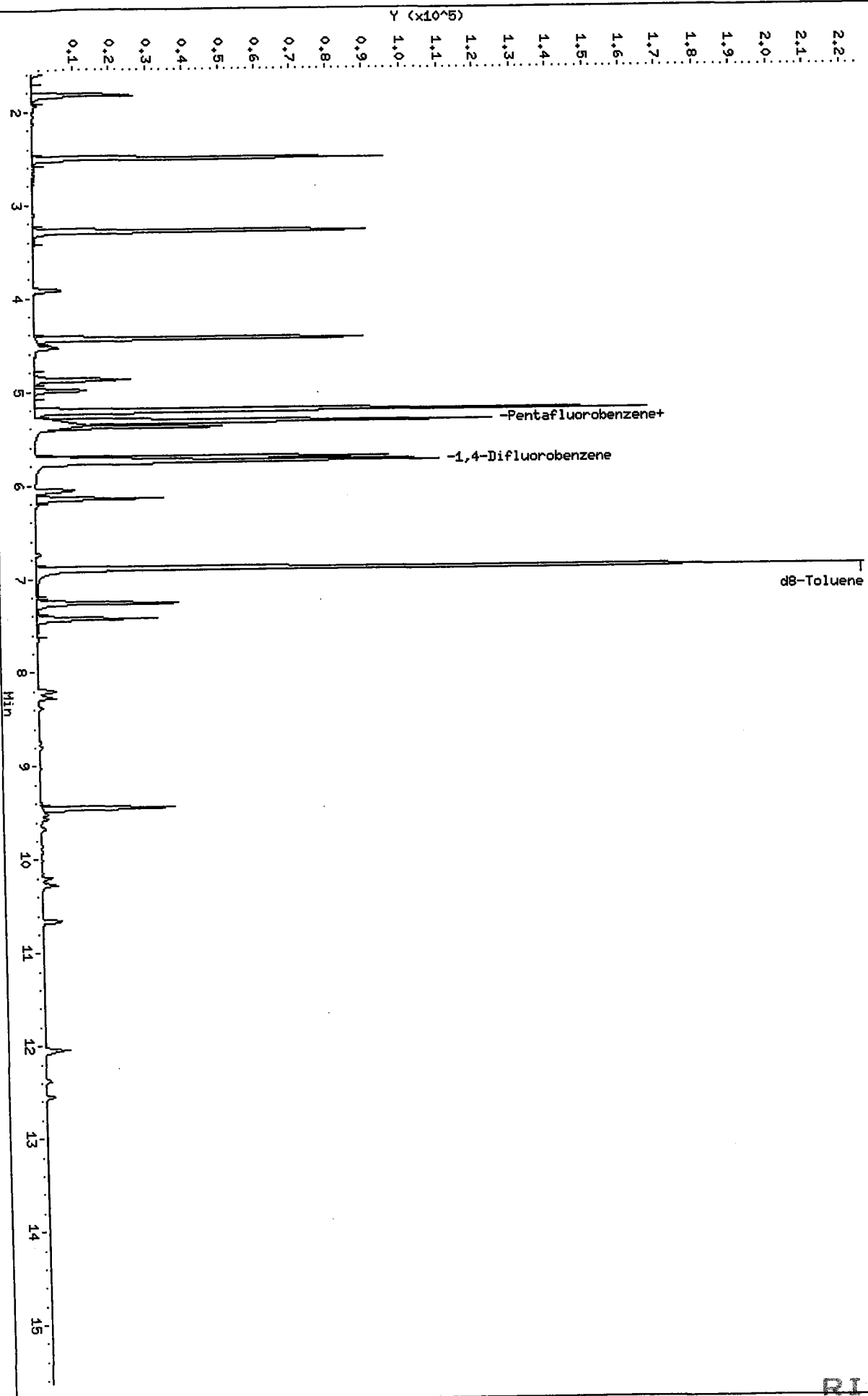
Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18

/chem1/nt7.i/23AUG2010.b/08231013.d





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

**ARI Job ID: RI46**



**VOA Analyst Notes / Corrective Action Log**

ARI Project ID: RI46 Client ID: Floyd / Suite

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

Parameter(s): SIM VOA

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

Purge Volume (mL) 10 Curve Date: 7/21/10 8/23/10 Analysis Start Date: 8/20/10

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

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

*du by 2 DCA surrogate > 120% in A, C, E, F, H, I, J. These samples were non-detected. > 120% NO hits NO C.A taken per SW846*  
*du by 2 DCA > 120% in FMSD. Limited volume available, RIFSBMS/MSD from same project is within control.*  
*FMS analyzed on different day from FMSD due to IS failure in initial analysis*

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

Analyst: Paul Empert Date: 8/25/10

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

# Analytical Resources Inc.: Volatile Organics Instrument Log

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

Date: 8/20/10 Analysis: SIM chlor Analyst: PE MA

GC Program: VC Column No.: 850322 Column Type: RACVMS

Instrument Tune (.U or .CT.): 0820001 EM Voltage: 2447

Calibration File: 0820002 Curve Date: 7/20/10

IS/SS	Ical/Ccal	LCS/ICV
<u>vw651-3</u>	<u>vw644-1</u>	<u>vw644-1</u>

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

Time	Filename	LabID	ClientID	WT	
1	0827	08201001.d	RFB0820	RFB0820	0.00
2	0905	08201002.d	CC0820		1   5.32 121108   5.74 205228
3	0944	08201003.d	LCS0820		1   5.32 119311   5.74 199529
4	1010	08201004.d	LCS0820		1   5.32 117492   5.76 198297
5	1035	08201005.d	MB0820		1   5.32 117096   5.75 193817
6	1107	08201006.d	RI46J	081110-TB	1   5.32 117375   5.75 193889
7	1132	08201007.d	RI46K	081210-TB	1   5.32 115673   5.76 190521
8	1158	08201008.d	RI65F	081310-TB	1   5.32 116375   5.76 190955
9	1221	08201009.d	RI46A	MW-02-081110	1   5.32 116319   5.75 190925
10	1249	08201010.d	RI46B	MW-03-081110	1   5.32 120282   5.76 188302
11	1315	08201011.d	RI46C	MW-03-081110-D	1   5.32 113954   5.76 187693
12	1340	08201012.d	RI46D	MW-04-081110	1   5.33 113191   5.75 186030
13	1405	08201013.d	RI46E	MW-14-081110	1   5.32 113872   5.75 186671
14	1432	08201014.d	RI46F	MW-12-081210	1   5.32 112477   5.76 185162
15	1457	08201015.d	RI46G	MW-13-081210	1   5.32 112646   5.76 184912   <i>high D4-1,2 Dichlor</i>
16	1523	08201016.d	RI46H	MW-10-081210	1   5.32 110944   5.75 184565
17	1549	08201017.d	RI46I	MW-11-081210	1   5.32 110555   5.76 182706
18	1614	08201018.d	RI65A	MW-09-081310	1   5.33 20204   5.76 33577   <i>IS</i>
19	1640	08201019.d	RI65B	MW-08-081310	1   5.32 99955   5.75 168882
20	1705	08201020.d	RI65C	MW-07-081310	1   5.32 97293   5.76 164302
21	1731	08201021.d	RI65D	MW-01-081310	1   5.32 96603   5.76 163271   <i>high D4-1,2 Dichlor</i>
22	1757	08201022.d	RI65E	MW-05-081310	1   5.32 96686   5.75 165378   <i>1)</i>
23	1822	08201023.d	RI65BMS	MW-08-081310 MS	1   5.32 99867   5.76 163693
24	1848	08201024.d	RI65BMSD	MW-08-081310 MSD	1   5.32 99451   5.76 162894
25	1914	08201025.d	RI46FMS		1   5.33 19922   5.75 34783   <i>IS</i>
26	1939	08201026.d	RI46FMSD		1   5.32 86130   5.75 151285

Maintenance / Comments

*vc 8/25/10*

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

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

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

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

INITIAL CAL: 21-JUL-2010

Compound	%RSD or R <sup>2</sup>
----------	------------------------

-----  
NO Q-FLAGS  
-----

CONTINUING CAL: 20-AUG-2010

Compound	%D
----------	----

-----  
NO Q-FLAGS  
-----

RI46:00280

*PK*  
8/25/10

Date : 20-AUG-2010 08:27

Client ID: BFB0820

Instrument: nt7.i

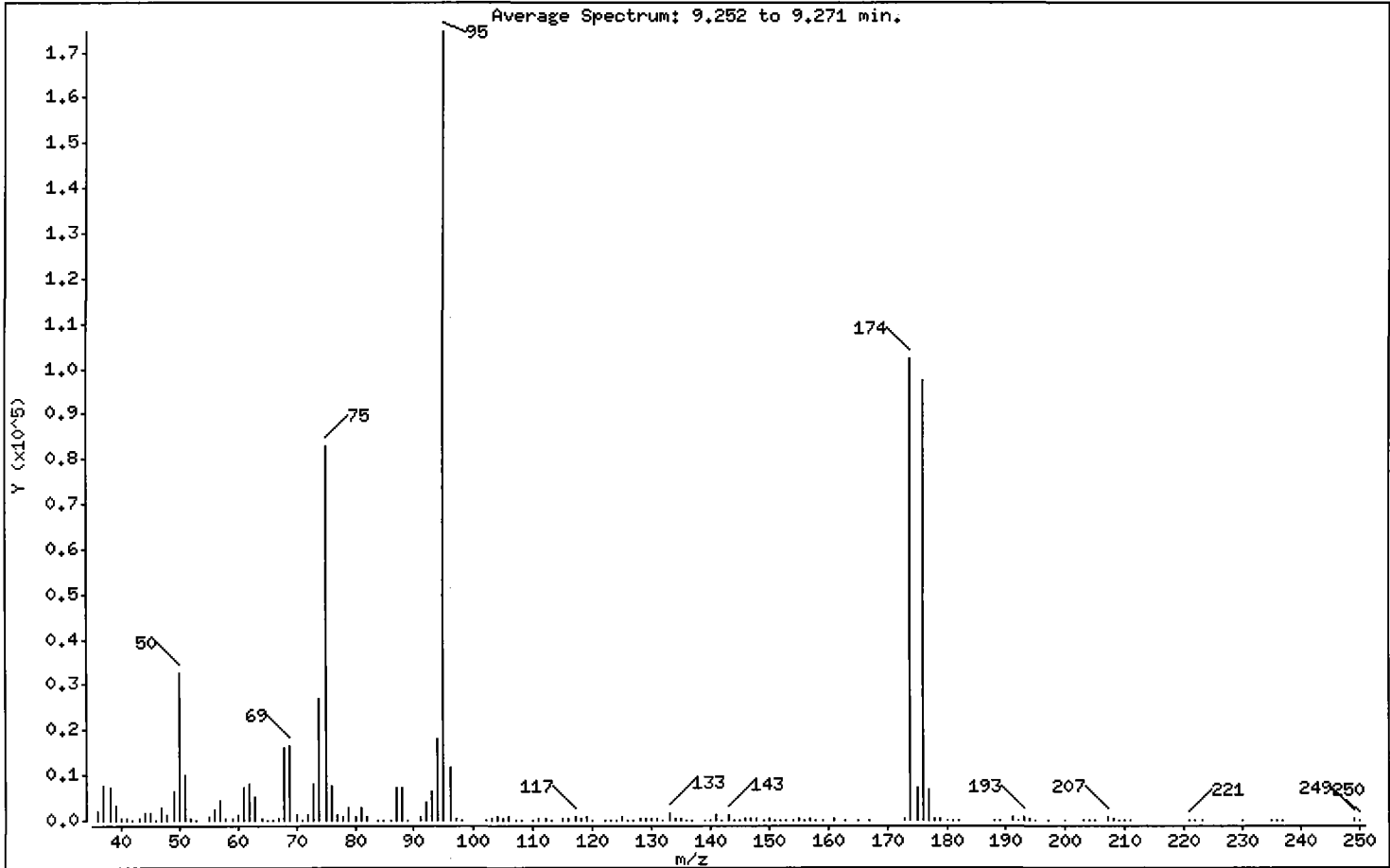
Sample Info: BFB0820,BFB0820,1,082010,

Operator: MH

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



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

Date : 20-AUG-2010 08:27

Client ID: BFB0820

Instrument: nt7.i

Sample Info: BFB0820,BFB0820,1,082010,

Operator: MH

Column phase: RTXVMS

Column diameter: 0.18

Data File: 08201001.d

Spectrum: Average Spectrum: 9.252 to 9.271 min.

Location of Maximum: 95.00

Number of points: 154

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

Date : 20-AUG-2010 08:27

Client ID: BFB0820

Instrument: nt7.i

Sample Info: BFB0820,BFB0820,1,082010,

Operator: MH

Column phase: RTXVMS

Column diameter: 0.18

Data File: 08201001.d

Spectrum: Average Spectrum; 9.252 to 9.271 min.

Location of Maximum: 95.00

Number of points: 154

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

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

Date: 20-AUG-2010 08:27

Client ID: BFB0820

Sample Info: BFB0820,BFB0820,1,082010,

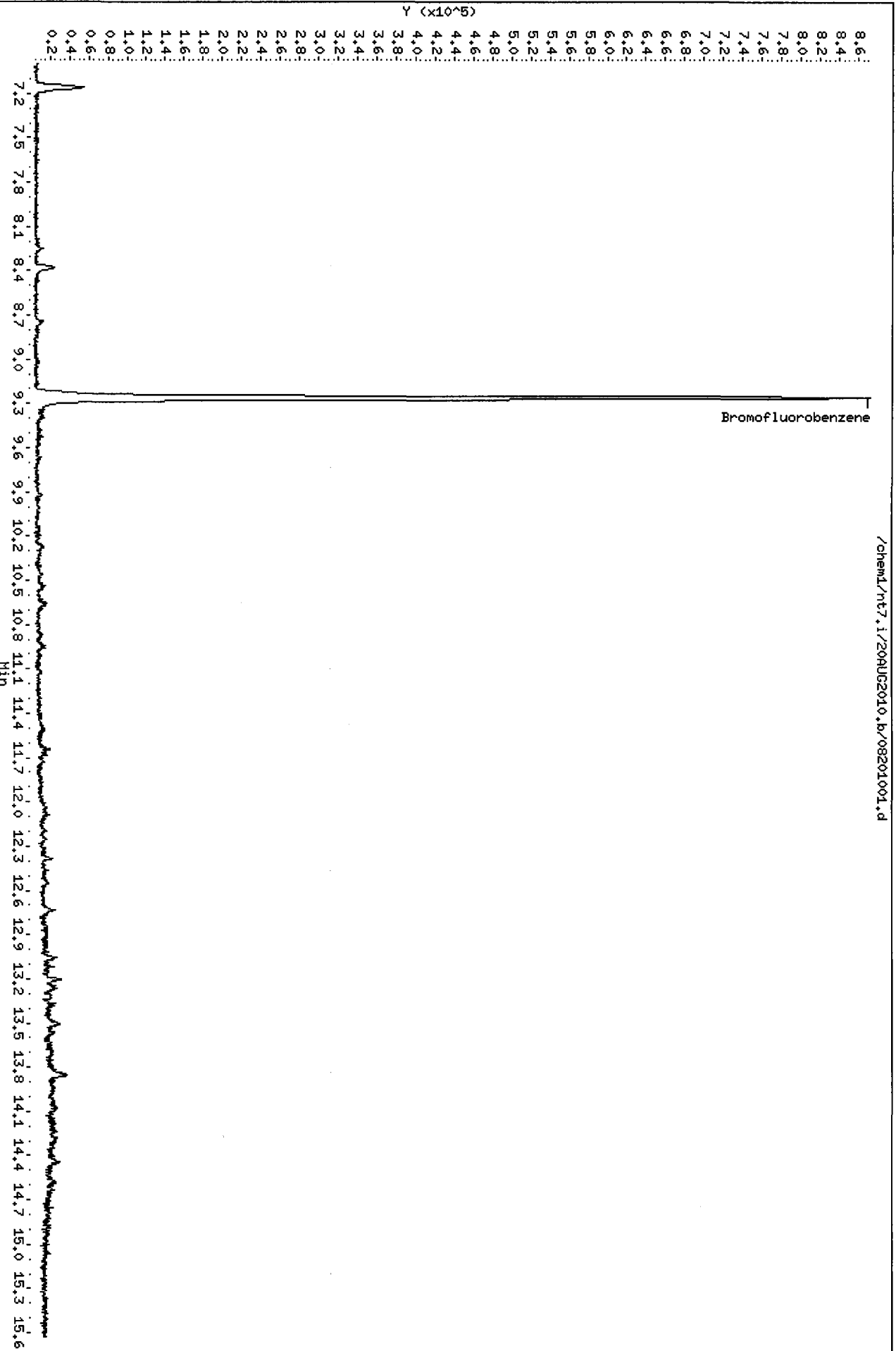
Instrument: nt7.i

Operator: NH

Column diameter: 0.18

Column phase: RTXVHS

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





PC  
8/25/10

Data File: /chem1/nt7.i/20AUG2010.b/08201002.d  
Report Date: 25-Aug-2010 14:09

Analytical Resources, Inc.

SW8260C SIM

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

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

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

Cpnd Variable Local Compound Variable

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

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

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

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i	Calibration Date: 20-AUG-2010
Lab File ID: 08201002.d	Calibration Time: 09:05
Lab Smp Id: CC0820	Client Smp ID: CC0820
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: WATER
Operator: MH	
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m	
Misc Info: 10-	

Test Mode:  
 Use Initial Calibration Level 5.

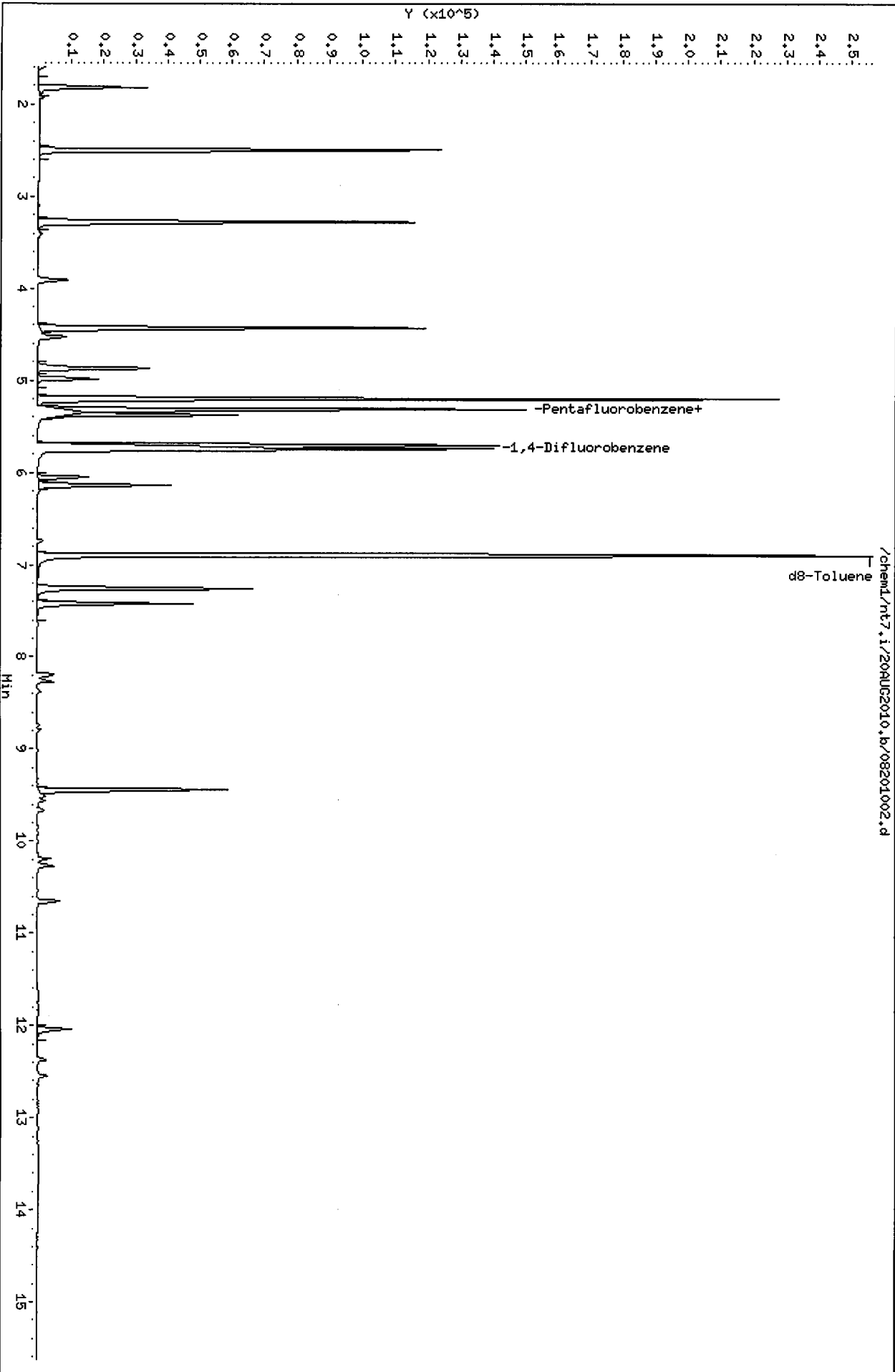
COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	121108	32.12
7 1,4-Difluorobenze	147386	73693	294772	205229	39.25

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

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

Data File: /chem1/nt7.i/20AUG2010.b/08201002.d  
Date : 20-AUG-2010 09:05  
Client ID: CC0820  
Sample Info: CC0820,10,10,0,  
Column phase: RTXVHS

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



*PK*  
*8/25/10*

Analytical Resources, Inc.

SW8260C SIM

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

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

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

Cpnd Variable Local Compound Variable

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

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

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

Test Mode:  
Use Initial Calibration Level 5.

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

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

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

Analytical Resources, Inc.

RECOVERY REPORT

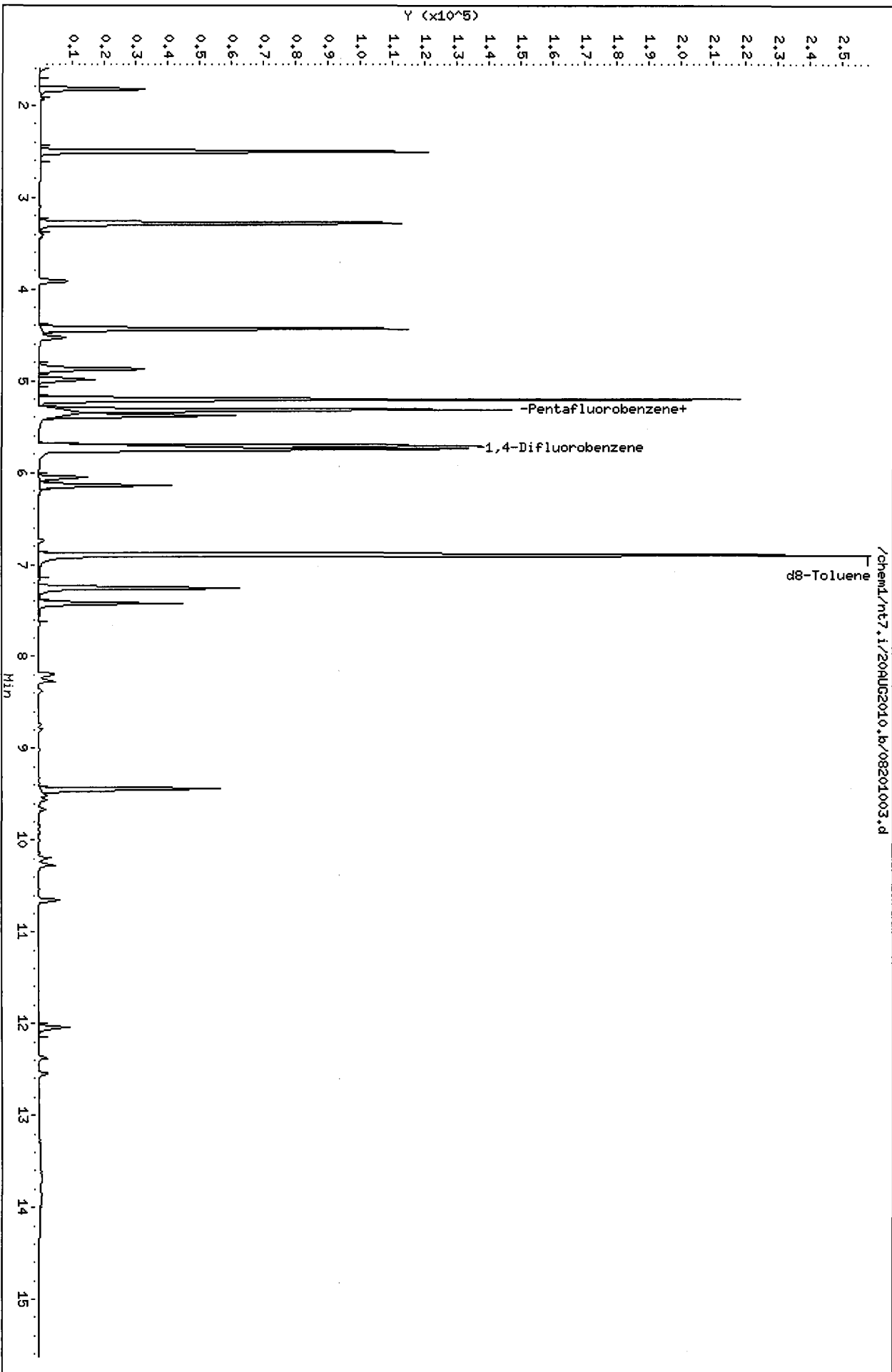
Client Name: Client SDG: 20AUG2010  
 Sample Matrix: LIQUID Fraction: VOA  
 Lab Smp Id: LCS0820 Client Smp ID: LCS0820  
 Level: LOW Operator: MH  
 Data Type: MS DATA SampleType: LCS  
 SpikeList File: special.spk Quant Type: ISTD  
 Sublist File: sim12dca.sub  
 Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Misc Info: 10-

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

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

Data File: /chem1/nt7.i/20AUG2010.b/08201003.d  
Date : 20-AUG-2010 09:44  
Client ID: LCS0820  
Sample Info: LCS0820,10,10,0,  
Column phase: RTXVMS

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





PC  
8/25/10

Analytical Resources, Inc.

SW8260C SIM

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

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

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

Cpnd Variable

Local Compound Variable

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i	Calibration Date: 20-AUG-2010
Lab File ID: 08201004.d	Calibration Time: 09:05
Lab Smp Id: LCSD0820	Client Smp ID: LCSD0820
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: WATER
Operator: MH	
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m	
Misc Info: 10-	

Test Mode:  
 Use Initial Calibration Level 5.

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

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

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

Analytical Resources, Inc.

RECOVERY REPORT

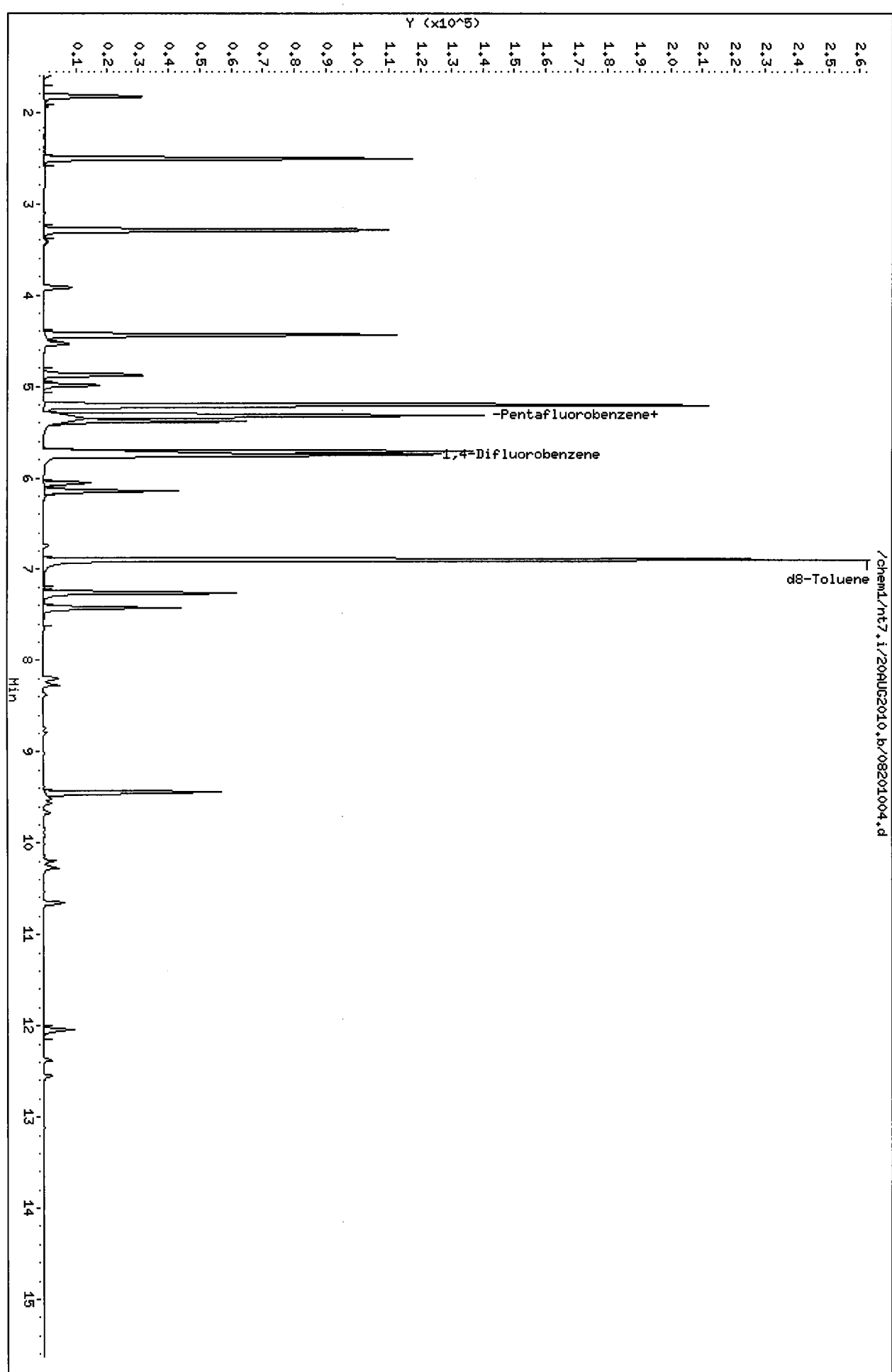
Client Name: Client SDG: 20AUG2010  
 Sample Matrix: LIQUID Fraction: VOA  
 Lab Smp Id: LCSD0820 Client Smp ID: LCSD0820  
 Level: LOW Operator: MH  
 Data Type: MS DATA SampleType: LCS  
 SpikeList File: special.spk Quant Type: ISTD  
 Sublist File: sim12dca.sub  
 Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m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

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

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

Data File: /chem1/nt7.i/20AUG2010.b/08201004.d  
Date: 20-AUG-2010 10:10  
Client ID: LCSD0820  
Sample Info: LCSD0820,10,10,0,  
Column phase: RTXVHS

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



PK  
8/25/10

Data File: /chem1/nt7.i/20AUG2010.b/08201005.d  
Report Date: 25-Aug-2010 14:10

Page 1

Analytical Resources, Inc.

SW8260C SIM

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

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

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

Cpnd Variable Local Compound Variable

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

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

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

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

Test Mode:  
Use Initial Calibration Level 5.

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

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	-0.01
7 1,4-Difluorobenze	5.74	5.24	6.24	5.75	0.20

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

Analytical Resources, Inc.

RECOVERY REPORT

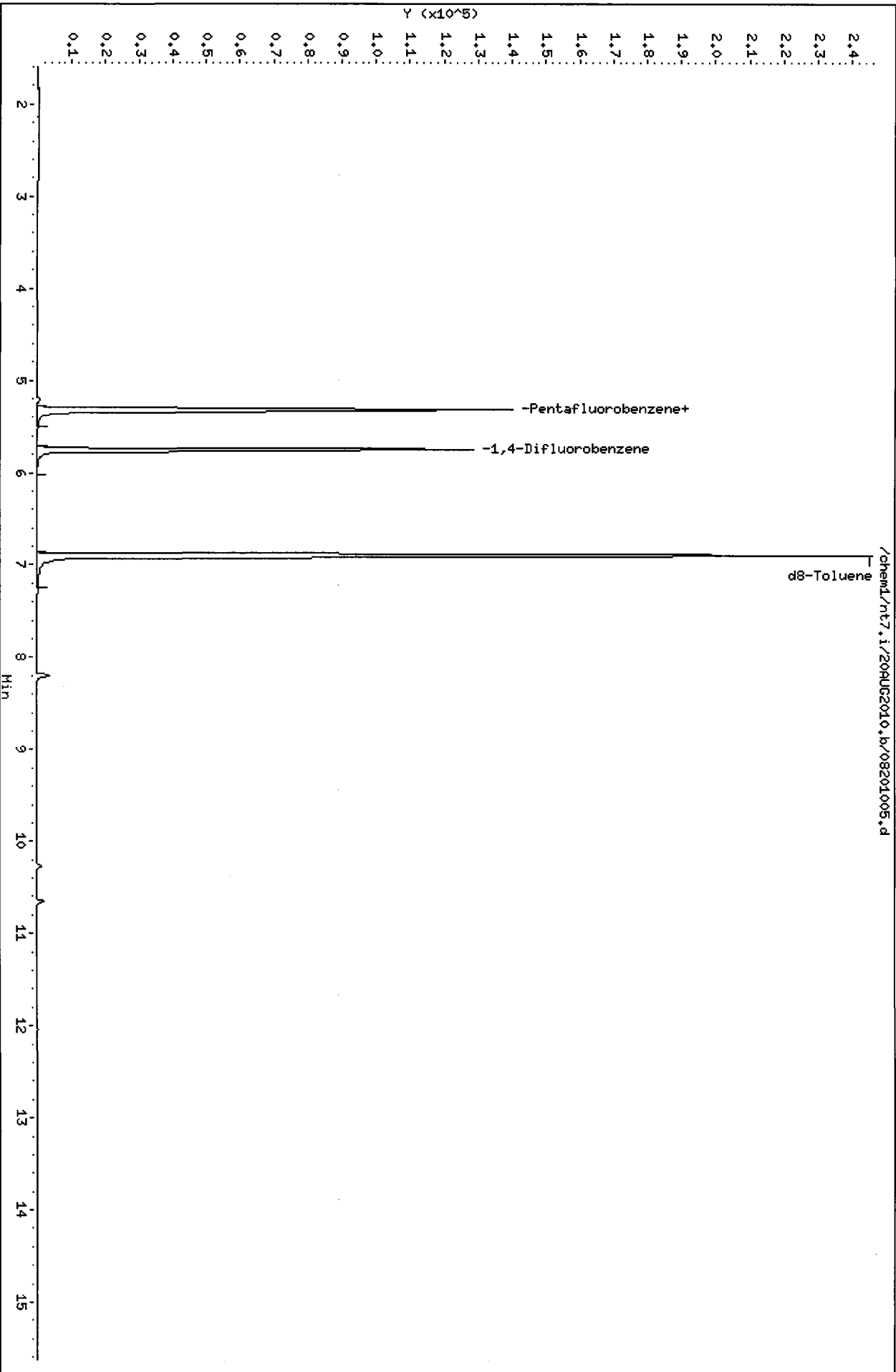
Client Name: Client SDG: 20AUG2010  
Sample Matrix: LIQUID Fraction: VOA  
Lab Smp Id: MB0820 Client Smp ID: MB0820  
Level: LOW Operator: MH  
Data Type: MS DATA SampleType: BLANK  
SpikeList File: special.spk Quant Type: ISTD  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-

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



Data File: /chem1/rt7.i/20AUG2010.b/08201005.d  
Date : 20-AUG-2010 10:35  
Client ID: HB0820  
Sample Info: HB0820,10,10,0,  
Column phase: RTXVMS

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



Date : 20-AUG-2010 10:35

Client ID: MB0820

Instrument: nt7.i

Sample Info: MB0820,10,10,0,

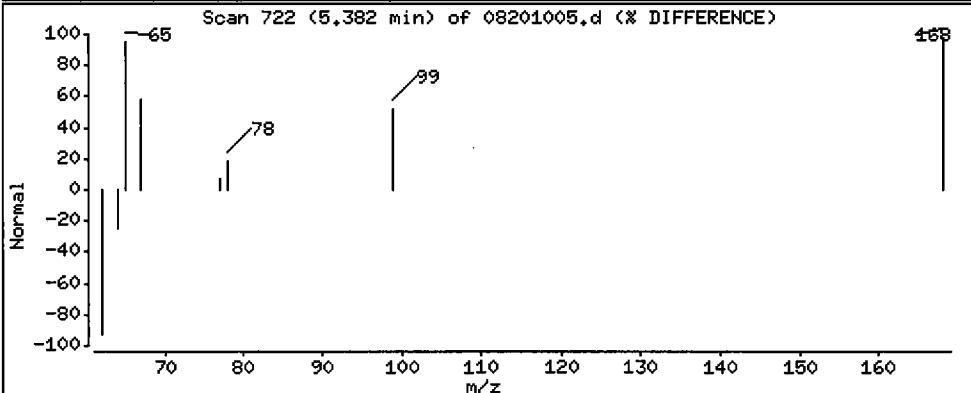
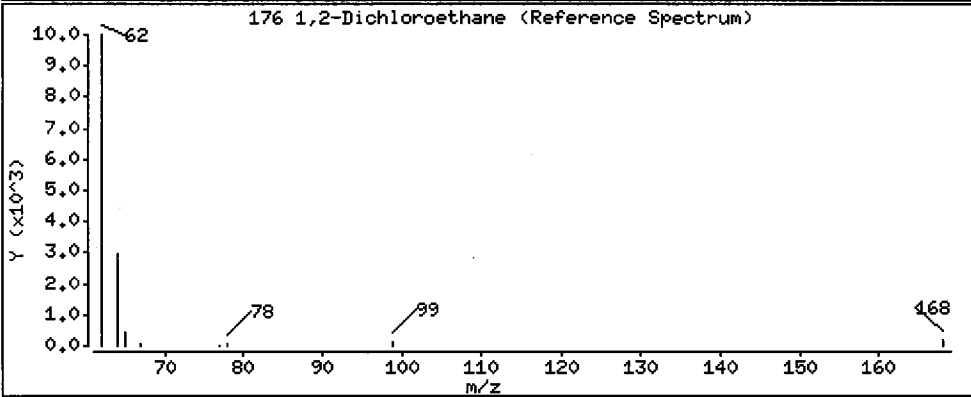
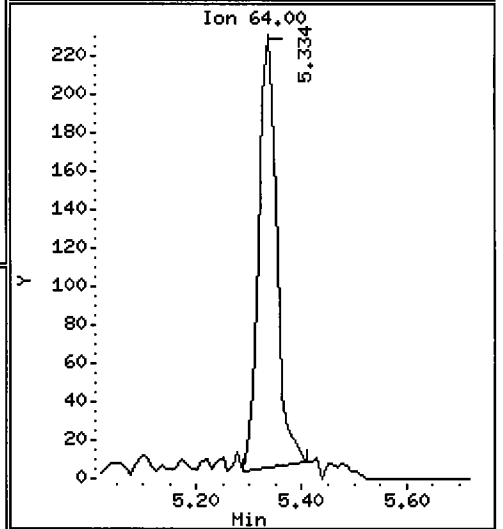
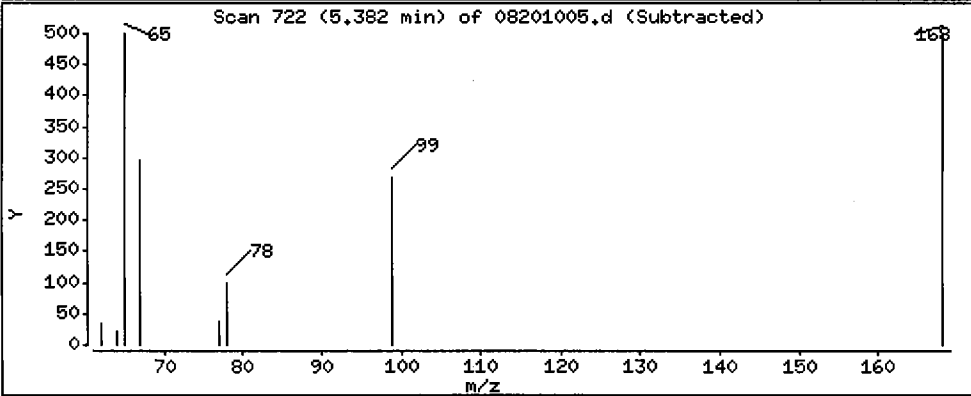
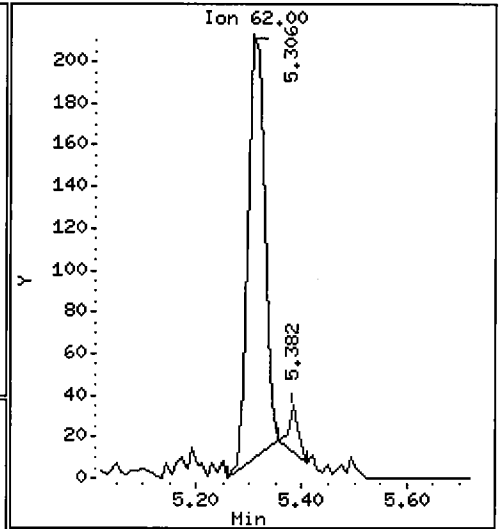
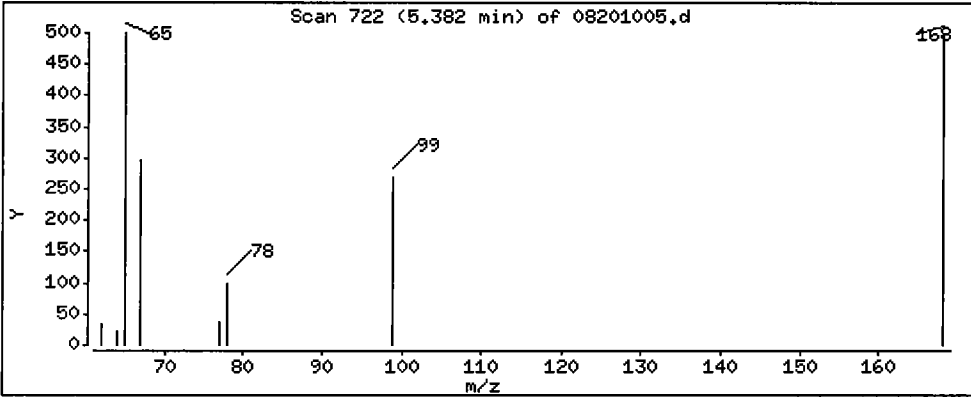
Operator: MH

Column phase: RTXVMS

Column diameter: 0.18

176 1,2-Dichloroethane

Concentration: 0.3176 ug/L



*PC*  
*8/25/10*

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201006.d  
 Lab Smp Id: RI46J Client Smp ID: 081110-TB  
 Inj Date : 20-AUG-2010 11:07  
 Operator : MH Inst ID: nt7.i  
 Smp Info : RI46J,10,10,0,  
 Misc Info : 10-19687  
 Comment :  
 Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Meth Date : 25-Aug-2010 14:09 paul Quant Type: ISTD  
 Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
 Als bottle: 1  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

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

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

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96						
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.316	5.316	(1.000)	117375	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.326	5.325	(1.002)	72877	1203.58	1203.6 (R)
176 1,2-Dichloroethane	62	5.382	5.373	(1.012)	35	0.39612	0.3961 (Q)
8 Trichloroethene	130						
* 7 1,4-Difluorobenzene	114	5.754	5.743	(1.000)	193889	1000.00	
\$ 9 d8-Toluene	98	6.903	6.901	(1.200)	259437	1049.21	1049.2
10 Tetrachloroethene	166						
11 1,1,2,2-Tetrachloroethane	83						

*nd hits*

QC Flag Legend

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201006.d  
Lab Smp Id: RI46J  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19687

Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: 081110-TB  
Level: LOW  
Sample Type: Water

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	117375	28.05
7 1,4-Difluorobenze	147386	73693	294772	193889	31.55

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.00
7 1,4-Difluorobenze	5.74	5.24	6.24	5.75	0.20

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

Analytical Resources, Inc.

RECOVERY REPORT

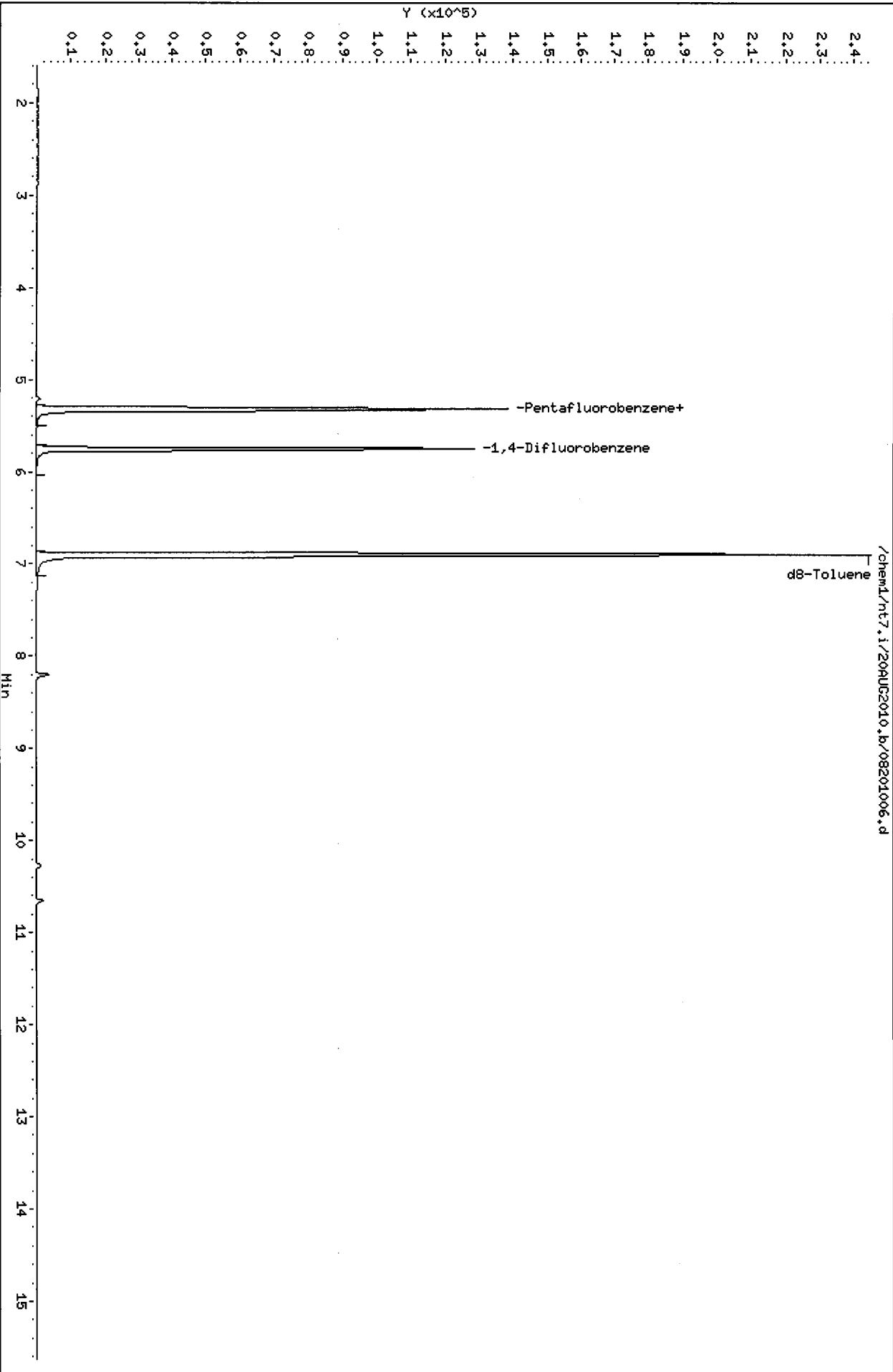
Client Name: Floyd-Snider  
Sample Matrix: LIQUID  
Lab Smp Id: RI46J  
Level: LOW  
Data Type: MS DATA  
SpikeList File: special.spk  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19687

Client SDG: RI46  
Fraction: VOA  
Client Smp ID: 081110-TB  
Operator: MH  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1203.6	120.36*	80-120
\$ 9 d8-Toluene	1000.0	1049.2	104.92	80-120

Data File: /chem1/nt7.i/20AUG2010.b/08201006.d  
Date : 20-AUG-2010 11:07  
Client ID: 081110-TB  
Sample Info: RI46J,10,10,0,  
Column phase: RTXVHS

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



*MC*  
*8/25/10*

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201007.d  
 Lab Smp Id: RI46K Client Smp ID: 081210-TB  
 Inj Date : 20-AUG-2010 11:32  
 Operator : MH Inst ID: nt7.i  
 Smp Info : RI46K,10,10,0,  
 Misc Info : 10-19688  
 Comment :  
 Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Meth Date : 25-Aug-2010 14:09 paul Quant Type: ISTD  
 Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
 Als bottle: 1  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

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

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

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96						
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.324	5.316	(1.000)	115673	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.334	5.325	(1.002)	68457	1147.21	1147.2
176 1,2-Dichloroethane	62	5.315	5.373	(0.998)	418	4.80036	4.800(Q)
8 Trichloroethene	130						
* 7 1,4-Difluorobenzene	114	5.756	5.743	(1.000)	190521	1000.00	
\$ 9 d8-Toluene	98	6.902	6.901	(1.199)	255680	1052.29	1052.3
10 Tetrachloroethene	166						
11 1,1,2,2-Tetrachloroethane	83						



QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i	Calibration Date: 20-AUG-2010
Lab File ID: 08201007.d	Calibration Time: 09:05
Lab Smp Id: RI46K	Client Smp ID: 081210-TB
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: MH	
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m	
Misc Info: 10-19688	

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	115673	26.19
7 1,4-Difluorobenze	147386	73693	294772	190521	29.27

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.16
7 1,4-Difluorobenze	5.74	5.24	6.24	5.76	0.22

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd-Snider  
Sample Matrix: LIQUID  
Lab Smp Id: RI46K  
Level: LOW  
Data Type: MS DATA  
SpikeList File: special.spk  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19688

Client SDG: RI46  
Fraction: VOA  
Client Smp ID: 081210-TB  
Operator: MH  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1147.2	114.72	80-120
\$ 9 d8-Toluene	1000.0	1052.3	105.23	80-120

Data File: /chem1/nt7.i/20AUG2010.b/08201007.d

Date : 20-AUG-2010 11:32

Client ID: 081210-TB

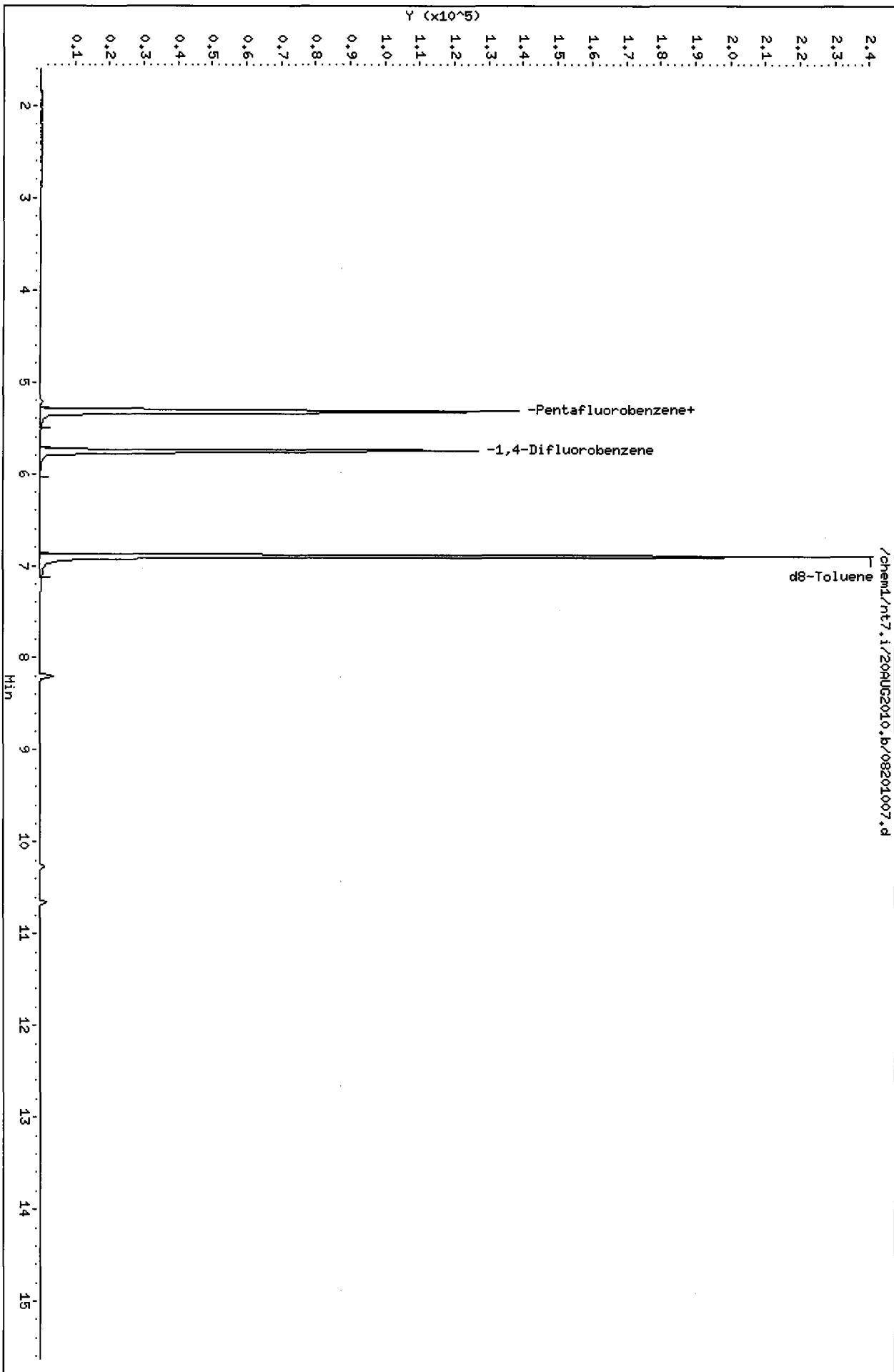
Sample Info: RI46K,10,10,0,

Column phase: RTXVMS

Instrument: nt7.i

Operator: HH

Column diameter: 0.18



Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201009.d  
 Lab Smp Id: RI46A Client Smp ID: MW-02-081110  
 Inj Date : 20-AUG-2010 12:23  
 Operator : MH Inst ID: nt7.i  
 Smp Info : RI46A,10,10,0,  
 Misc Info : 10-19678  
 Comment :  
 Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Meth Date : 25-Aug-2010 14:09 paul Quant Type: ISTD  
 Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
 Als bottle: 1  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96						
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.316	5.316	(1.000)	116319	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	73128	1218.68	1218.7 (R)
176 1,2-Dichloroethane	62	5.306	5.373	(0.998)	441	5.03637	5.036 (Q)
8 Trichloroethene	130						
* 7 1,4-Difluorobenzene	114	5.754	5.743	(1.000)	190925	1000.00	
\$ 9 d8-Toluene	98	6.903	6.901	(1.200)	255745	1050.33	1050.3
10 Tetrachloroethene	166						
11 1,1,2,2-Tetrachloroethane	83						

*no hits*

QC Flag Legend

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201009.d  
Lab Smp Id: RI46A  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19678

Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: MW-02-081110  
Level: LOW  
Sample Type: Water

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	116319	26.89
7 1,4-Difluorobenze	147386	73693	294772	190925	29.54

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.00
7 1,4-Difluorobenze	5.74	5.24	6.24	5.75	0.19

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

Analytical Resources, Inc.

RECOVERY REPORT

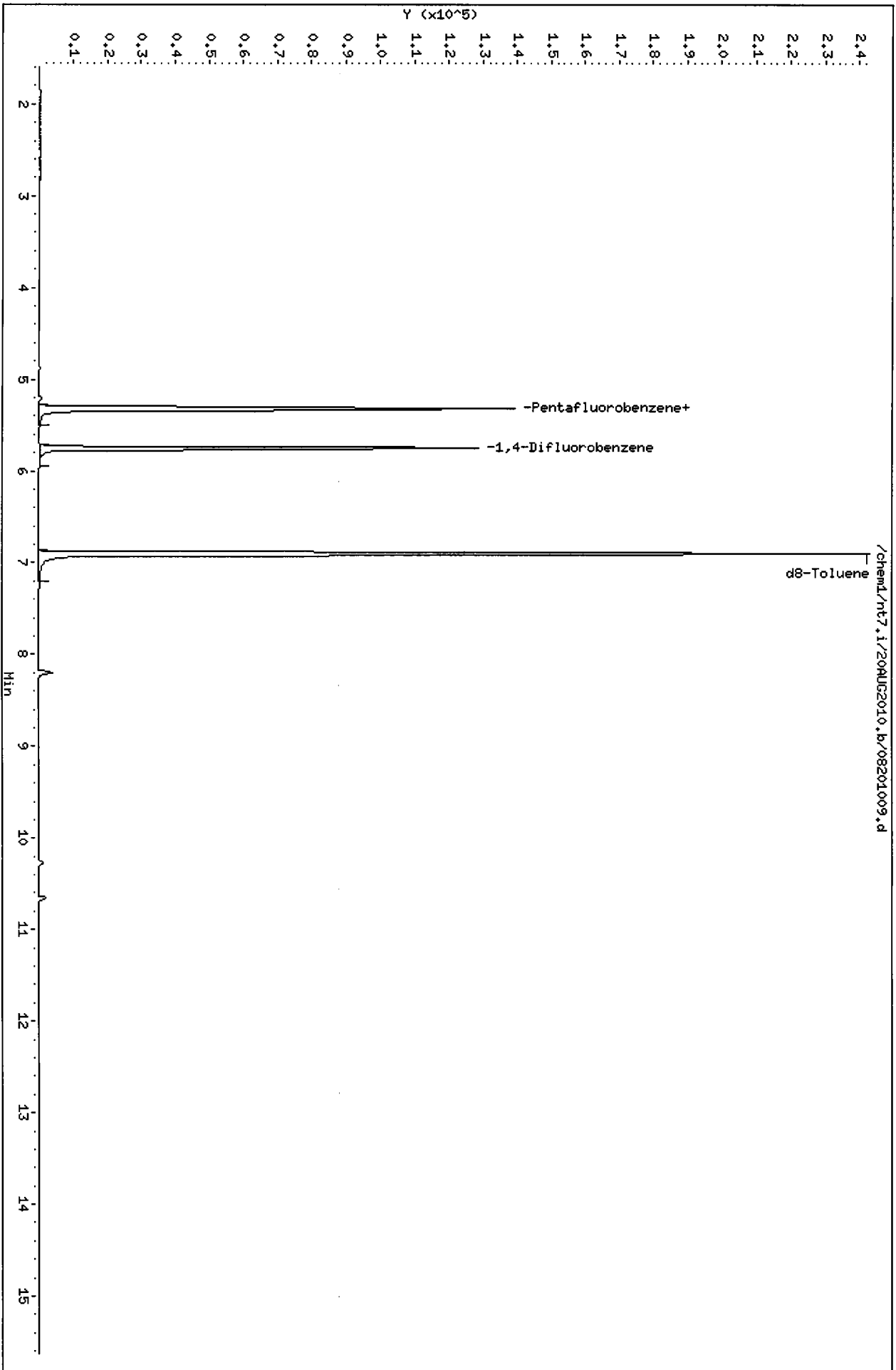
Client Name: Floyd-Snider Client SDG: RI46  
Sample Matrix: LIQUID Fraction: VOA  
Lab Smp Id: RI46A Client Smp ID: MW-02-081110  
Level: LOW Operator: MH  
Data Type: MS DATA SampleType: SAMPLE  
SpikeList File: special.spk Quant Type: ISTD  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19678

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1218.7	121.87*	80-120
\$ 9 d8-Toluene	1000.0	1050.3	105.03	80-120



Data File: /chem1/nt7.i/20AUG2010.b/08201009.d  
Date : 20-AUG-2010 12:23  
Client ID: MH-02-081110  
Sample Info: RI466,10,10,0,  
Column phase: RTXVMS

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



ML  
8/25/10

Data File: /chem1/nt7.i/20AUG2010.b/08201010.d  
Report Date: 25-Aug-2010 14:10

Page 1

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201010.d  
Lab Smp Id: RI46B Client Smp ID: MW-03-081110  
Inj Date : 20-AUG-2010 12:49 Inst ID: nt7.i  
Operator : MH  
Smp Info : RI46B,10,10,0,  
Misc Info : 10-19679  
Comment :  
Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
Meth Date : 25-Aug-2010 14:09 paul Quant Type: ISTD  
Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
Als bottle: 1  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: sim12dca.sub  
Target Version: 3.50

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

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

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96						
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.324	5.316	(1.000)	120282	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.333	5.325	(1.002)	69397	1118.40	1118.4
176 1,2-Dichloroethane	62	5.314	5.373	(0.998)	449	4.95878	4.959(Q)
8 Trichloroethene	130						
* 7 1,4-Difluorobenzene	114	5.755	5.743	(1.000)	188302	1000.00	
\$ 9 d8-Toluene	98	6.902	6.901	(1.199)	253115	1054.01	1054.0
10 Tetrachloroethene	166						
11 1,1,2,2-Tetrachloroethane	83						

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201010.d  
Lab Smp Id: RI46B  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19679

Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: MW-03-081110  
Level: LOW  
Sample Type: Water

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	120282	31.22
7 1,4-Difluorobenze	147386	73693	294772	188302	27.76

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

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

Analytical Resources, Inc.

RECOVERY REPORT

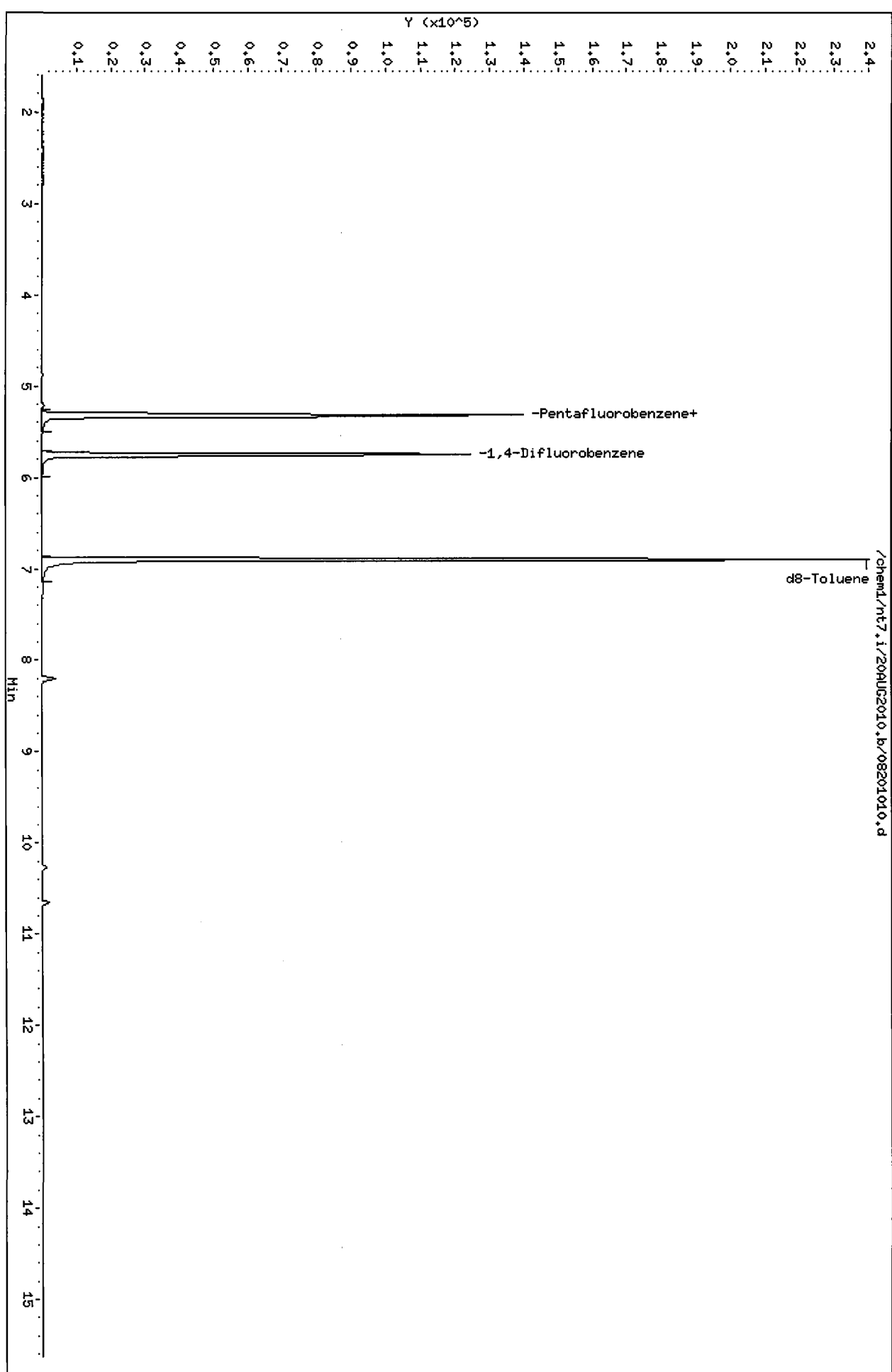
Client Name: Floyd-Snider  
Sample Matrix: LIQUID  
Lab Smp Id: RI46B  
Level: LOW  
Data Type: MS DATA  
SpikeList File: special.spk  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19679

Client SDG: RI46  
Fraction: VOA  
Client Smp ID: MW-03-081110  
Operator: MH  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1118.4	111.84	80-120
\$ 9 d8-Toluene	1000.0	1054.0	105.40	80-120

Data File: /chem1/nt7.i/20AUG2010.b/08201010.d  
Date : 20-AUG-2010 12:49  
Client ID: MM-03-081110  
Sample Info: R146B,10,10,0,  
Column phase: RTXVHS

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



*M*  
*8/25/10*

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201011.d  
 Lab Smp Id: RI46C Client Smp ID: MW-03-081110-D  
 Inj Date : 20-AUG-2010 13:15  
 Operator : MH Inst ID: nt7.i  
 Smp Info : RI46C,10,10,0,  
 Misc Info : 10-19680  
 Comment :  
 Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Meth Date : 25-Aug-2010 14:09 paul Quant Type: ISTD  
 Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
 Als bottle: 1  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

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

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

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96						
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.325	5.316	(1.000)	113954	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.334	5.325	(1.002)	73216	1245.47	1245.5 (R)
176 1,2-Dichloroethane	62	5.315	5.373	(0.998)	421	4.90774	4.908 (Q)
8 Trichloroethene	130						
* 7 1,4-Difluorobenzene	114	5.756	5.743	(1.000)	187693	1000.00	
\$ 9 d8-Toluene	98	6.902	6.901	(1.199)	248586	1038.51	1038.5
10 Tetrachloroethene	166						
11 1,1,2,2-Tetrachloroethane	83						

*hd 4/45*

QC Flag Legend

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



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201011.d  
Lab Smp Id: RI46C  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19680

Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: MW-03-081110-D  
Level: LOW  
Sample Type: Water

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	113954	24.31
7 1,4-Difluorobenze	147386	73693	294772	187693	27.35

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.17
7 1,4-Difluorobenze	5.74	5.24	6.24	5.76	0.23

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

Analytical Resources, Inc.

RECOVERY REPORT

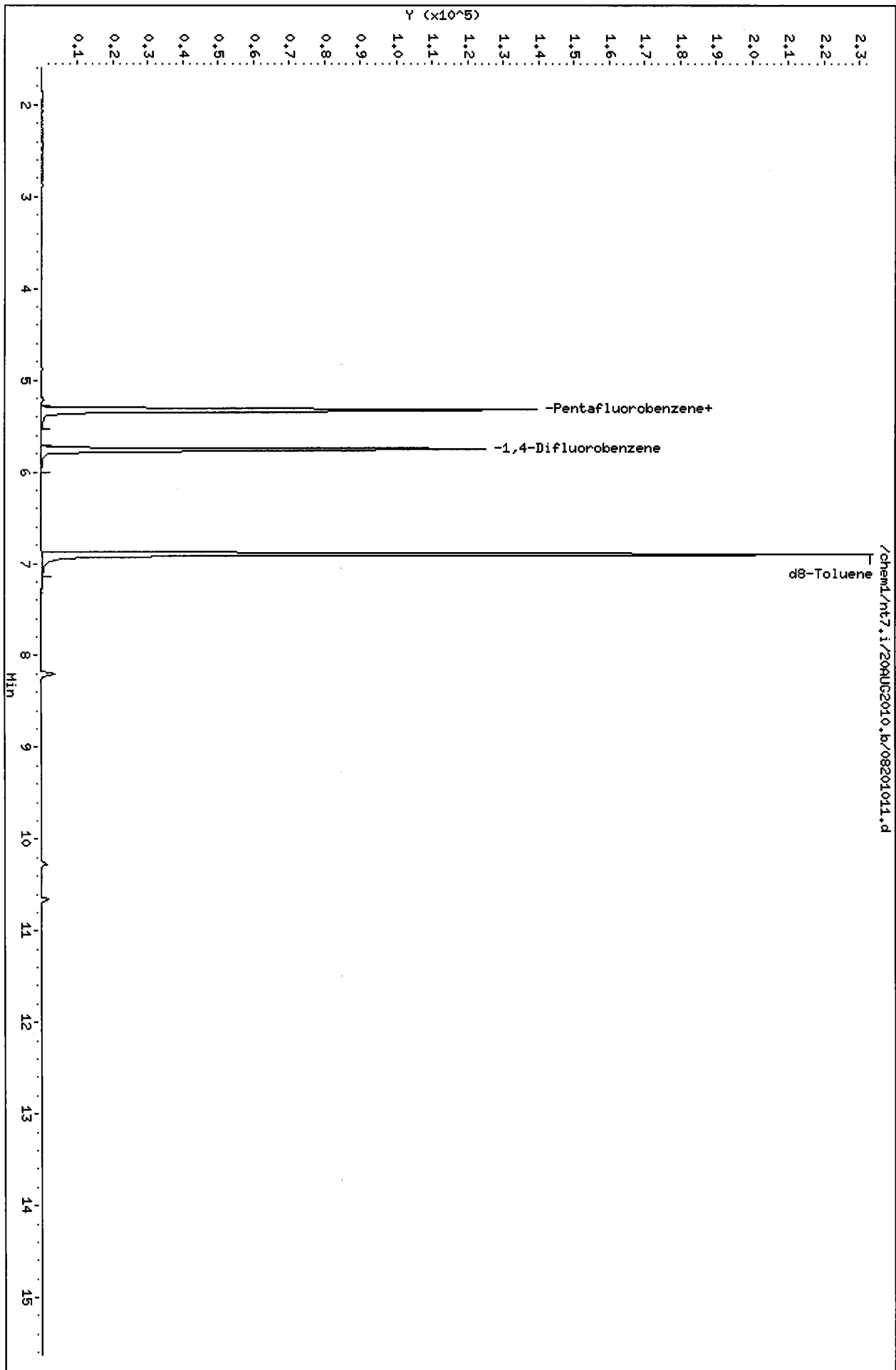
Client Name: Floyd-Snider  
Sample Matrix: LIQUID  
Lab Smp Id: RI46C  
Level: LOW  
Data Type: MS DATA  
SpikeList File: special.spk  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19680

Client SDG: RI46  
Fraction: VOA  
Client Smp ID: MW-03-081110-D  
Operator: MH  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1245.5	124.55*	80-120
\$ 9 d8-Toluene	1000.0	1038.5	103.85	80-120

Data File: /chem1/nt7.i/20AUG2010.b/08201011.d  
Date : 20-AUG-2010 13:15  
Client ID: MM-03-081110-D  
Sample Info: R146C,10,10,0,  
Column phase: RTXVHS

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



/chem1/nt7.i/20AUG2010.b/08201011.d

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201012.d  
 Lab Smp Id: RI46D Client Smp ID: MW-04-081110  
 Inj Date : 20-AUG-2010 13:40  
 Operator : MH Inst ID: nt7.i  
 Smp Info : RI46D,10,10,0,  
 Misc Info : 10-19681  
 Comment :  
 Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Meth Date : 25-Aug-2010 14:09 paul Quant Type: ISTD  
 Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
 Als bottle: 1  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96						
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.326	5.316	(1.000)	113191	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.326	5.325	(1.000)	68774	1177.80	1177.8
176 1,2-Dichloroethane	62	5.316	5.373	(0.998)	446	5.23422	5.234(Q)
8 Trichloroethene	130						
* 7 1,4-Difluorobenzene	114	5.754	5.743	(1.000)	186030	1000.00	
\$ 9 d8-Toluene	98	6.903	6.901	(1.200)	249125	1050.07	1050.1
10 Tetrachloroethene	166						
11 1,1,2,2-Tetrachloroethane	83						

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201012.d  
Lab Smp Id: RI46D  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19681  
Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: MW-04-081110  
Level: LOW  
Sample Type: Water

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	113191	23.48
7 1,4-Difluorobenze	147386	73693	294772	186030	26.22

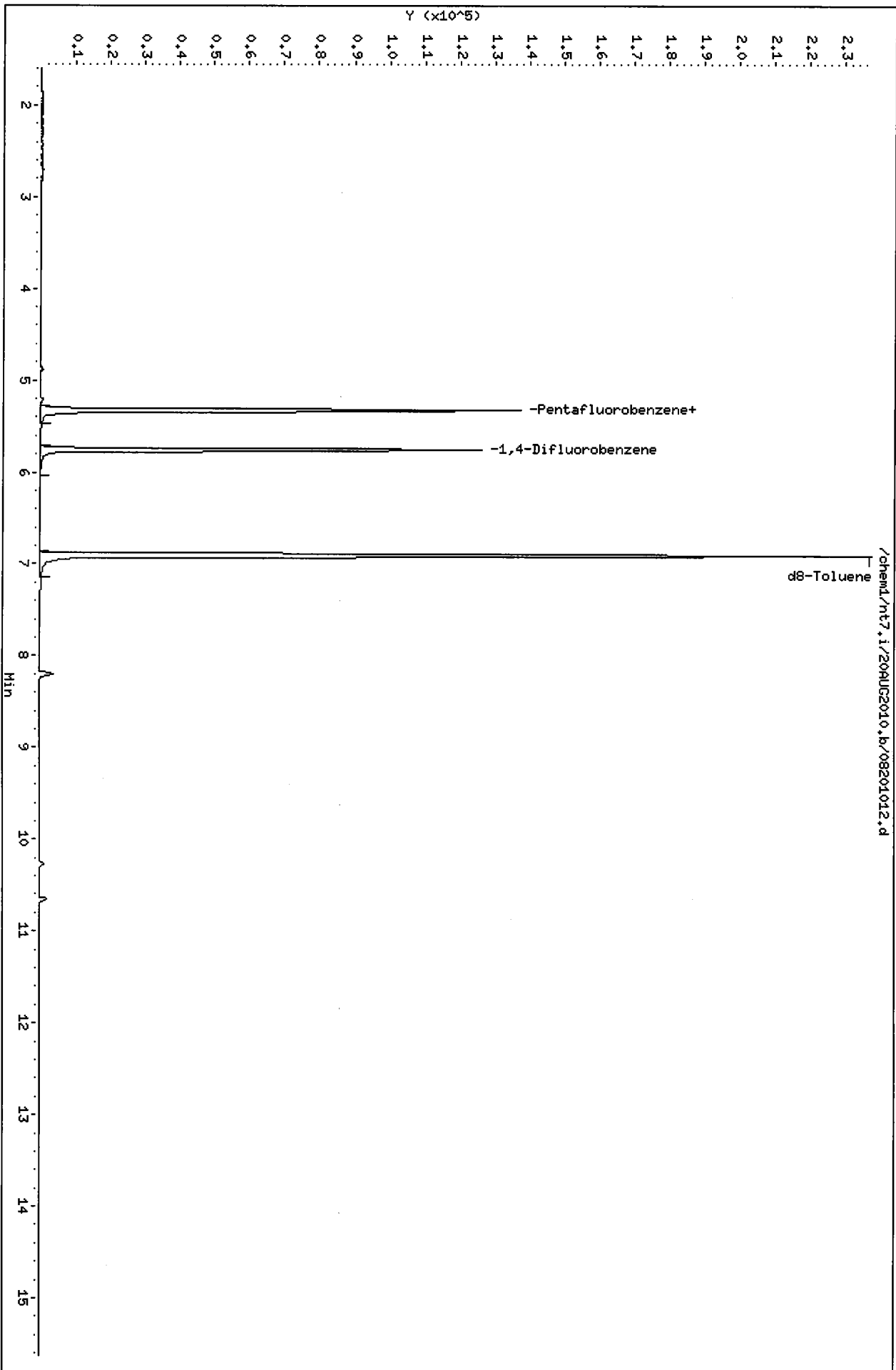
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.33	0.19
7 1,4-Difluorobenze	5.74	5.24	6.24	5.75	0.19

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



Data File: /chem1/nt7.i/20AUG2010.b/08201012.d  
Date : 20-AUG-2010 13:40  
Client ID: MH-04-081110  
Sample Info: RI46D,10,10,0,  
Column phase: RTXVMS

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





*PC  
8/25/10*

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201013.d  
 Lab Smp Id: RI46E Client Smp ID: MW-14-081110  
 Inj Date : 20-AUG-2010 14:06  
 Operator : MH Inst ID: nt7.i  
 Smp Info : RI46E,10,10,0,  
 Misc Info : 10-19682  
 Comment :  
 Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Meth Date : 25-Aug-2010 14:09 paul Quant Type: ISTD  
 Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
 Als bottle: 1  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96						
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.316	5.316	(1.000)	113871	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.326	5.325	(1.002)	73417	1249.80	1249.8 (R) <i>no lots</i>
176 1,2-Dichloroethane	62	5.383	5.373	(1.012)	32	0.37331	0.3733 (Q)
8 Trichloroethene	130						
* 7 1,4-Difluorobenzene	114	5.755	5.743	(1.000)	186671	1000.00	
\$ 9 d8-Toluene	98	6.902	6.901	(1.199)	251308	1055.63	1055.6
10 Tetrachloroethene	166						
11 1,1,2,2-Tetrachloroethane	83						

QC Flag Legend

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201013.d  
Lab Smp Id: RI46E  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19682

Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: MW-14-081110  
Level: LOW  
Sample Type: Water

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	113871	24.22
7 1,4-Difluorobenze	147386	73693	294772	186671	26.65

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.00
7 1,4-Difluorobenze	5.74	5.24	6.24	5.75	0.20

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

Analytical Resources, Inc.

RECOVERY REPORT

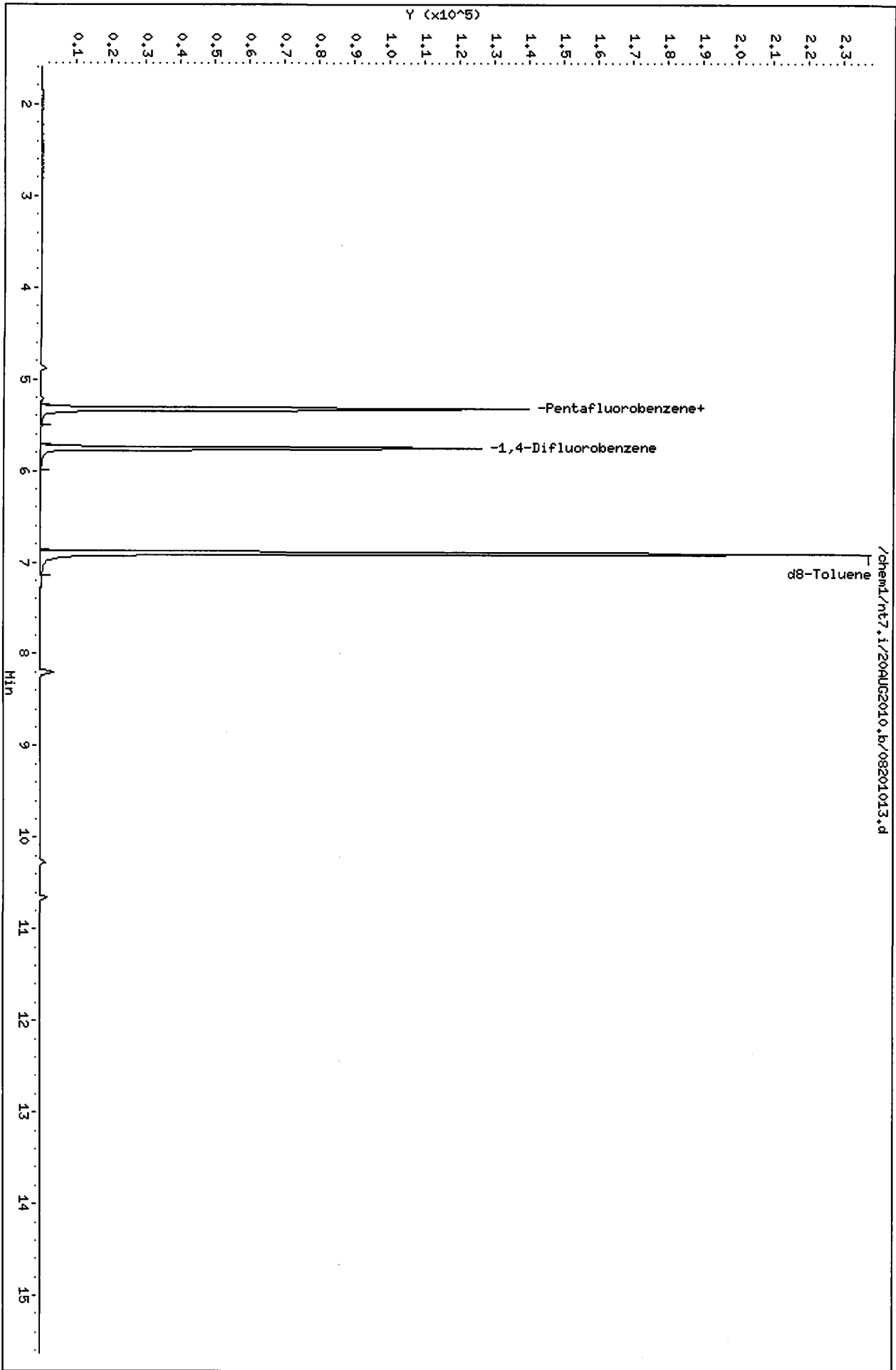
Client Name: Floyd-Snider  
Sample Matrix: LIQUID  
Lab Smp Id: RI46E  
Level: LOW  
Data Type: MS DATA  
SpikeList File: special.spk  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19682

Client SDG: RI46  
Fraction: VOA  
Client Smp ID: MW-14-081110  
Operator: MH  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1249.8	124.98*	80-120
\$ 9 d8-Toluene	1000.0	1055.6	105.56	80-120

Data File: /chem1/nt7.i/20AUG2010.b/08201013.d  
Date : 20-AUG-2010 14:06  
Client ID: MM-14-081110  
Sample Info: RI46E,10,10,0,  
Column phase: RTXVHS

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



/chem1/nt7.i/20AUG2010.b/08201013.d

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201014.d  
 Lab Smp Id: RI46F Client Smp ID: MW-12-081210  
 Inj Date : 20-AUG-2010 14:32  
 Operator : MH Inst ID: nt7.i  
 Smp Info : RI46F,10,10,0,  
 Misc Info : 10-19683  
 Comment :  
 Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Meth Date : 25-Aug-2010 14:09 paul Quant Type: ISTD  
 Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
 Als bottle: 1  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

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

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

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96						
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.324	5.316	(1.000)	112477	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.334	5.325	(1.002)	72992	1257.97	1258.0 (R)
176 1,2-Dichloroethane	62	5.315	5.373	(0.998)	449	5.30288	5.303 (Q)
8 Trichloroethene	130						
* 7 1,4-Difluorobenzene	114	5.756	5.743	(1.000)	185162	1000.00	
\$ 9 d8-Toluene	98	6.902	6.901	(1.199)	249136	1055.04	1055.0
10 Tetrachloroethene	166						
11 1,1,2,2-Tetrachloroethane	83						

*no hits*

QC Flag Legend

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201014.d  
Lab Smp Id: RI46F  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19683

Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: MW-12-081210  
Level: LOW  
Sample Type: Water

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	112477	22.70
7 1,4-Difluorobenze	147386	73693	294772	185162	25.63

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.16
7 1,4-Difluorobenze	5.74	5.24	6.24	5.76	0.22

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



Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd-Snyder  
Sample Matrix: LIQUID  
Lab Smp Id: RI46F  
Level: LOW  
Data Type: MS DATA  
SpikeList File: special.spk  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19683

Client SDG: RI46  
Fraction: VOA  
Client Smp ID: MW-12-081210  
Operator: MH  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1258.0	125.80*	80-120
\$ 9 d8-Toluene	1000.0	1055.0	105.50	80-120

Data File: /chem1/nt7.i/20AUG2010.b/08201014.d

Date : 20-AUG-2010 14:32

Client ID: MH-12-081210

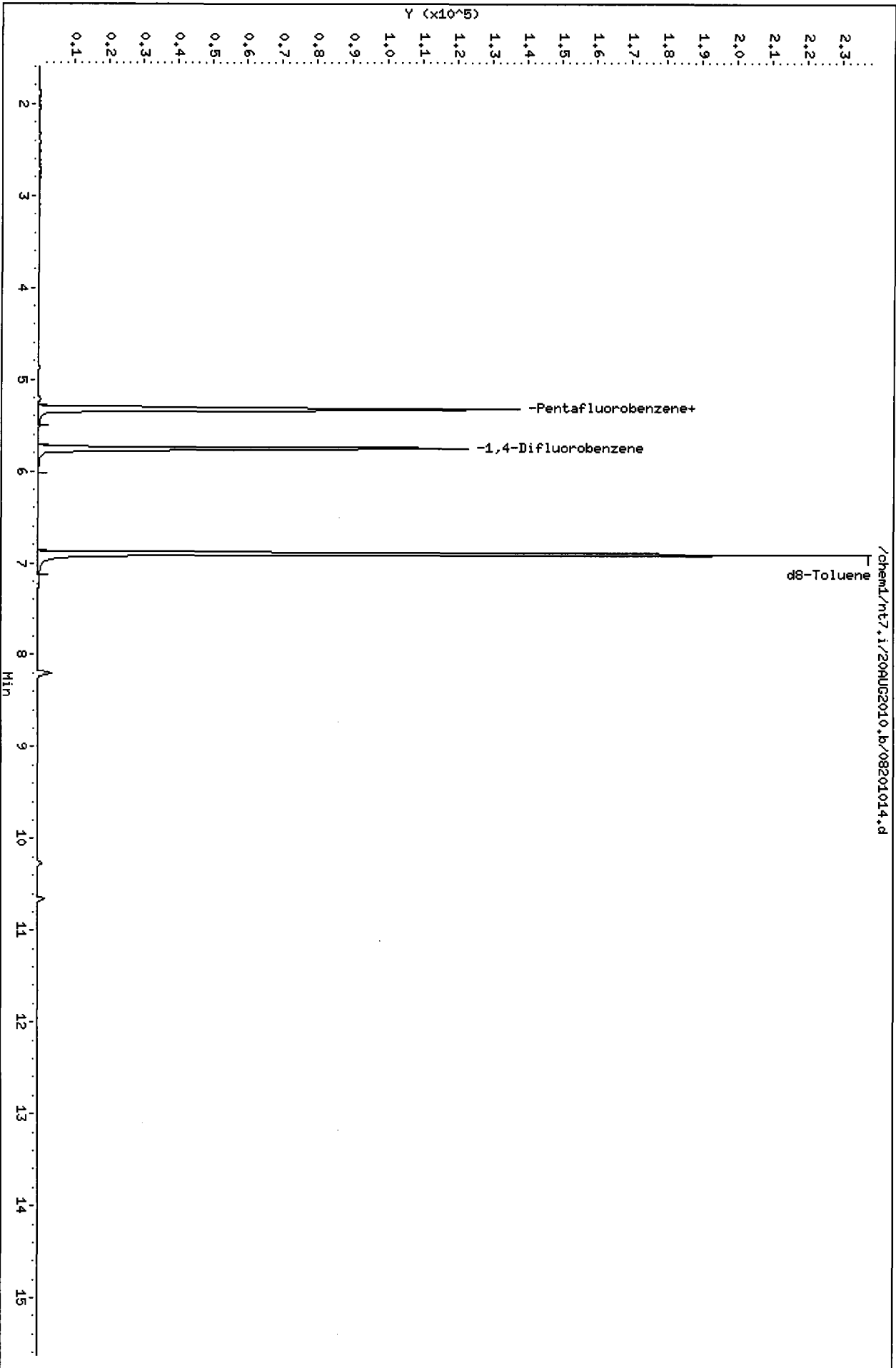
Sample Info: R146F,10,10,0,

Column phase: RTXVHS

Instrument: nt7.i

Operator: MH

Column diameter: 0.18



*MK*  
*8/25/10*

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201016.d  
Lab Smp Id: RI46H Client Smp ID: MW-10-081210  
Inj Date : 20-AUG-2010 15:23  
Operator : MH Inst ID: nt7.i  
Smp Info : RI46H,10,10,0,  
Misc Info : 10-19685  
Comment :  
Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
Meth Date : 25-Aug-2010 14:09 paul Quant Type: ISTD  
Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
Als bottle: 1  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: sim12dca.sub  
Target Version: 3.50

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

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

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96						
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.316	5.316	(1.000)	110944	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	72998	1275.46	1275.5 (R) <i>no hits</i>
176 1,2-Dichloroethane	62	5.382	5.373	(1.012)	25	0.29934	0.2993 (Q)
8 Trichloroethene	130						
* 7 1,4-Difluorobenzene	114	5.754	5.743	(1.000)	184565	1000.00	
\$ 9 d8-Toluene	98	6.903	6.901	(1.200)	246527	1047.36	1047.4
10 Tetrachloroethene	166						
11 1,1,2,2-Tetrachloroethane	83						

QC Flag Legend

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201016.d  
Lab Smp Id: RI46H  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19685

Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: MW-10-081210  
Level: LOW  
Sample Type: Water

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	110944	21.03
7 1,4-Difluorobenze	147386	73693	294772	184565	25.23

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	-0.01
7 1,4-Difluorobenze	5.74	5.24	6.24	5.75	0.20

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd-Snider  
Sample Matrix: LIQUID  
Lab Smp Id: RI46H  
Level: LOW  
Data Type: MS DATA  
SpikeList File: special.spk  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19685

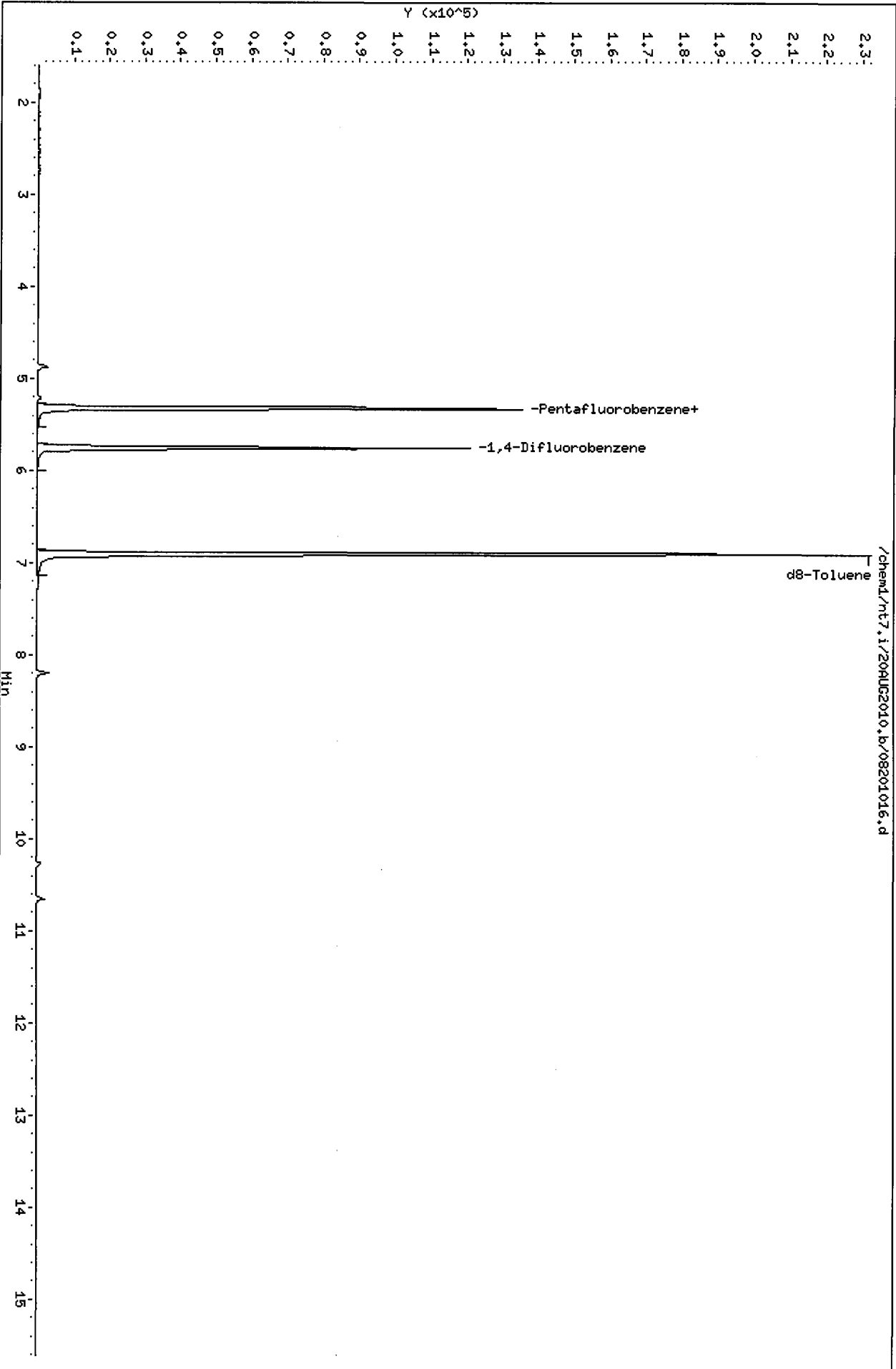
Client SDG: RI46  
Fraction: VOA  
Client Smp ID: MW-10-081210  
Operator: MH  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1275.5	127.55*	80-120
\$ 9 d8-Toluene	1000.0	1047.4	104.74	80-120

Data File: /chem1/nt7.i/20AUG2010.b/08201016.d  
Date : 20-AUG-2010 15:23  
Client ID: MM-10-081210  
Sample Info: RI46H,10,10,0,

Column phase: RTXVHS

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



*AC*  
*8/25/10*

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201017.d  
Lab Smp Id: RI46I Client Smp ID: MW-11-081210  
Inj Date : 20-AUG-2010 15:49  
Operator : MH Inst ID: nt7.i  
Smp Info : RI46I,10,10,0,  
Misc Info : 10-19686  
Comment :  
Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
Meth Date : 25-Aug-2010 14:09 paul Quant Type: ISTD  
Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
Als bottle: 1  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: sim12dca.sub  
Target Version: 3.50

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

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

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS						
		RT	EXP RT	REL RT	RESPONSE	ON-COLUMN ( ng/L)	FINAL ( ug/L)	
1 Vinyl Chloride	62							
2 1,1-Dichloroethene	96							
175 Trans-1,2-Dichloroethene	96							
3 cis-1,2-dichloroethene	96							
6 Benzene	78							
* 4 Pentafluorobenzene	168	5.324	5.316	(1.000)	110555	1000.00		
\$ 5 d4-1,2-Dichloroethane	65	5.324	5.325	(1.000)	72939	1278.91	1278.9 (R)	
176 1,2-Dichloroethane	62	5.315	5.373	(0.998)	437	5.25088	5.251 (Q)	
8 Trichloroethene	130							
* 7 1,4-Difluorobenzene	114	5.755	5.743	(1.000)	182706	1000.00		
\$ 9 d8-Toluene	98	6.902	6.901	(1.199)	243892	1046.71	1046.7	
10 Tetrachloroethene	166							
11 1,1,2,2-Tetrachloroethane	83							

*nd 675*



QC Flag Legend

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08201017.d  
Lab Smp Id: RI46I  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: MH  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19686

Calibration Date: 20-AUG-2010  
Calibration Time: 09:05  
Client Smp ID: MW-11-081210  
Level: LOW  
Sample Type: Water

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	110555	20.61
7 1,4-Difluorobenze	147386	73693	294772	182706	23.96

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.16
7 1,4-Difluorobenze	5.74	5.24	6.24	5.76	0.22

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd-Snyder  
Sample Matrix: LIQUID  
Lab Smp Id: RI46I  
Level: LOW  
Data Type: MS DATA  
SpikeList File: special.spk  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
Misc Info: 10-19686

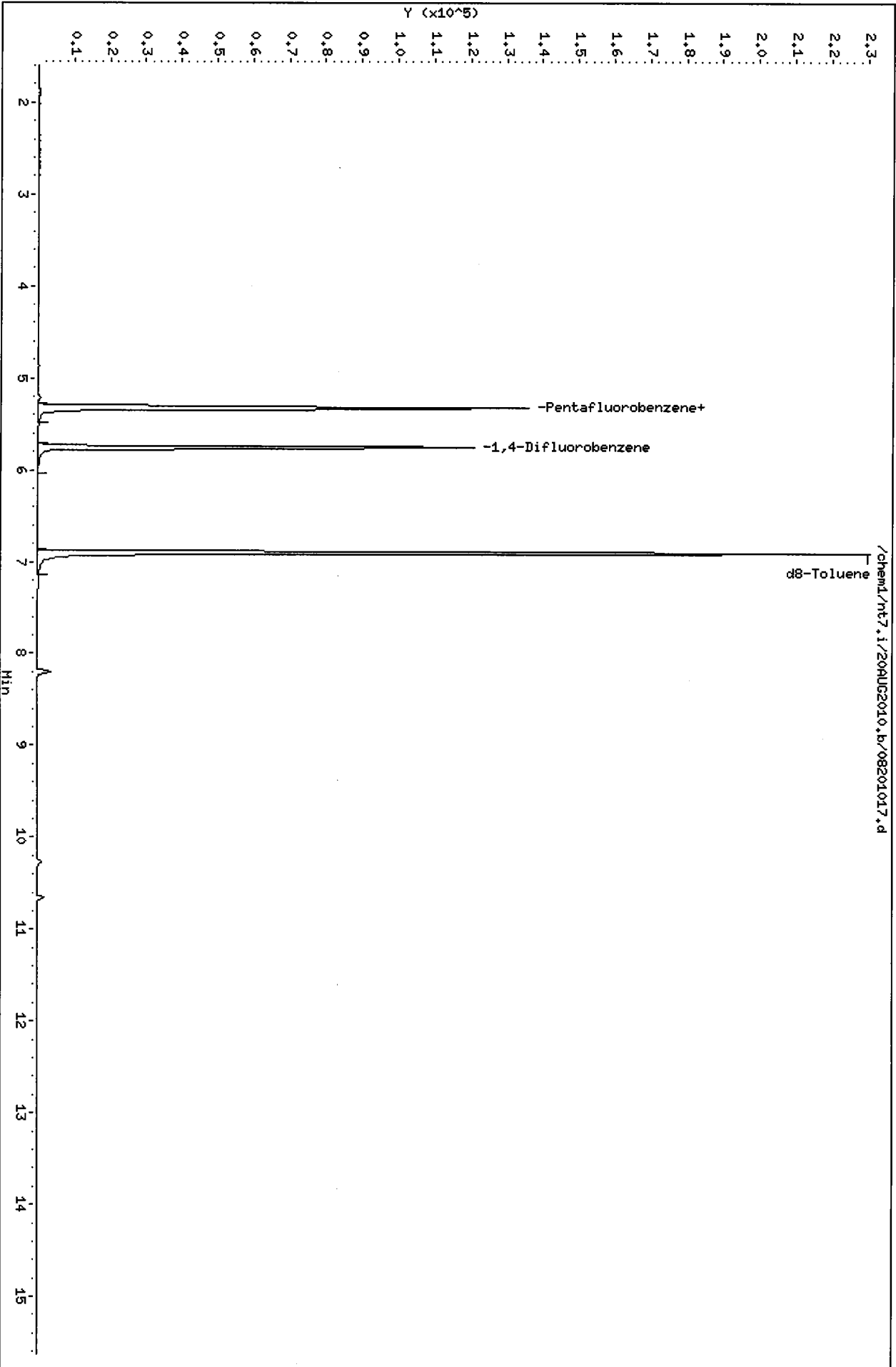
Client SDG: RI46  
Fraction: VOA  
Client Smp ID: MW-11-081210  
Operator: MH  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1278.9	127.89*	80-120
\$ 9 d8-Toluene	1000.0	1046.7	104.67	80-120

Data File: /chem1/nt7.i/20AUG2010.b/08201017.d  
Date : 20-AUG-2010 15:49  
Client ID: MM-11-081210  
Sample Info: RI461,10,10,0,

Column phase: RTXVHS

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



Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20AUG2010.b/08201026.d  
 Lab Smp Id: RI46FMSD Client Smp ID: MW-12-081210 MSD  
 Inj Date : 20-AUG-2010 19:39  
 Operator : MH Inst ID: nt7.i  
 Smp Info : RI46FMSD,10,10,0,  
 Misc Info : 10-  
 Comment :  
 Method : /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Meth Date : 25-Aug-2010 14:08 paul Quant Type: ISTD  
 Cal Date : 21-JUL-2010 13:38 Cal File: 07211011.d  
 Als bottle: 1 QC Sample: MSD  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

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

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

Cpnd Variable Local Compound Variable

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
								ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62			1.552	1.552	(0.292)	73768	1096.33	1096.3
2 1,1-Dichloroethene	96			2.511	2.504	(0.472)	51525	1090.98	1091.0
175 Trans-1,2-Dichloroethene	96			3.290	3.283	(0.619)	59235	1128.13	1128.1
3 cis-1,2-dichloroethene	96			4.440	4.433	(0.835)	61249	1124.16	1124.2
6 Benzene	78			5.212	5.202	(0.906)	278164	1186.35	1186.4
* 4 Pentafluorobenzene	168			5.316	5.316	(1.000)	86130	1000.00	
\$ 5 d4-1,2-Dichloroethane	65			5.326	5.325	(1.002)	54870	1234.92	1234.9 (R)
176 1,2-Dichloroethane	62			5.383	5.373	(1.012)	82288	1269.15	1269.1
8 Trichloroethene	130			5.709	5.708	(0.992)	55577	960.818	960.82
* 7 1,4-Difluorobenzene	114			5.755	5.743	(1.000)	151285	1000.00	
\$ 9 d8-Toluene	98			6.902	6.901	(1.199)	207875	1077.43	1077.4
10 Tetrachloroethene	166			7.270	7.258	(1.263)	46623	1077.61	1077.6
11 1,1,2,2-Tetrachloroethane	83			9.446	9.445	(1.641)	48255	1099.74	1099.7

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i	Calibration Date: 20-AUG-2010
Lab File ID: 08201026.d	Calibration Time: 09:05
Lab Smp Id: RI46FMSD	Client Smp ID: MW-12-081210 MSD
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: WATER
Operator: MH	
Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m	
Misc Info: 10-	

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	91666	45833	183332	86130	-6.04
7 1,4-Difluorobenze	147386	73693	294772	151285	2.65

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.01
7 1,4-Difluorobenze	5.74	5.24	6.24	5.75	0.21

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: RI46  
 Sample Matrix: LIQUID Fraction: VOA  
 Lab Smp Id: RI46FMSD Client Smp ID: MW-12-081210 MSD  
 Level: LOW Operator: MH  
 Data Type: MS DATA SampleType: MSD  
 SpikeList File: special.spk Quant Type: ISTD  
 Sublist File: sim12dca.sub  
 Method File: /chem1/nt7.i/20AUG2010.b/sim072110.m  
 Misc Info: 10-

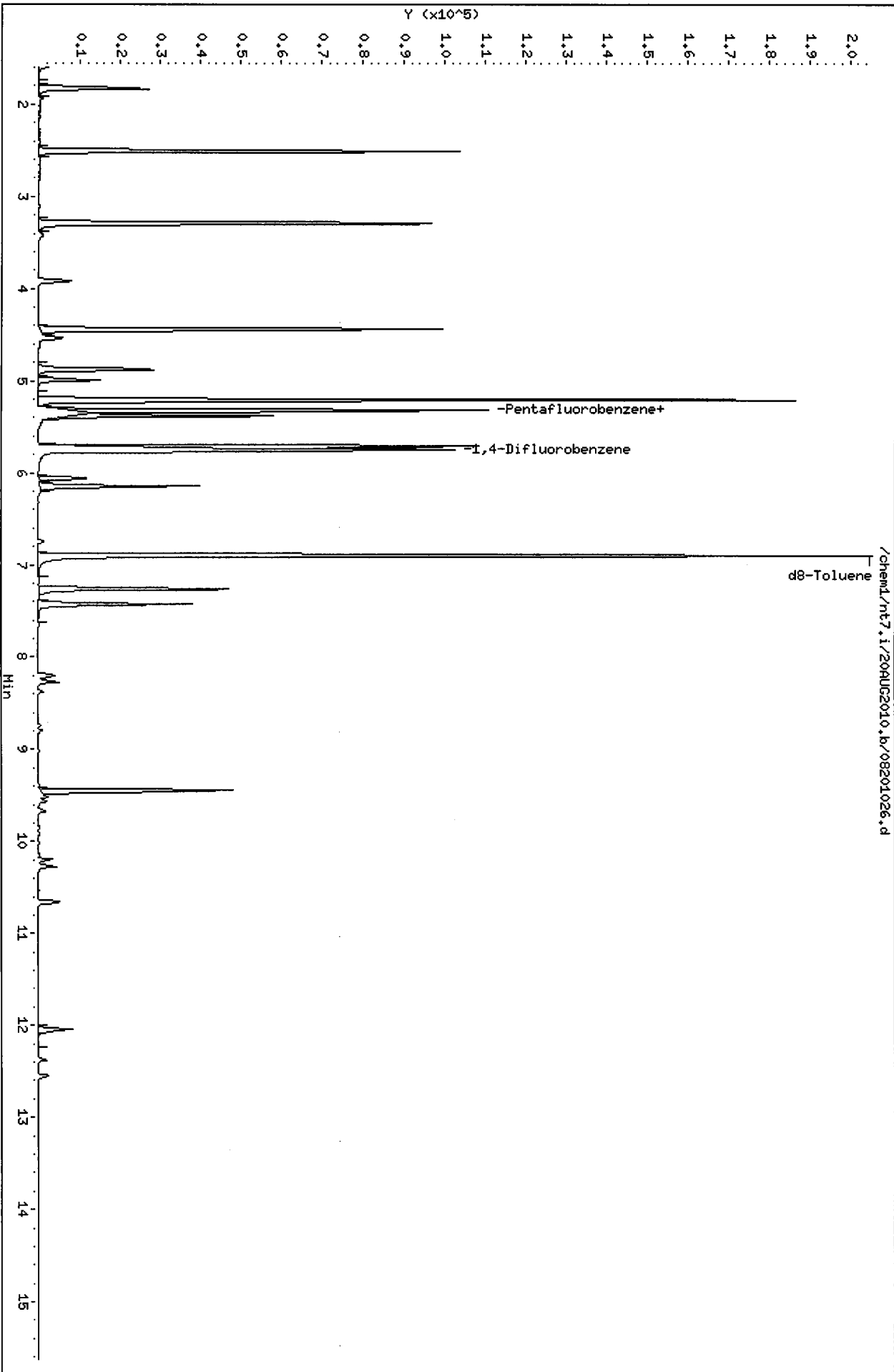
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Vinyl Chloride	1000.0	1096.3	109.63	74-120
176 1,2-Dichloroethane	1000.0	1269.1	126.91	79-134
175 Trans-1,2-Dichloro	1000.0	1128.1	112.81	80-120
2 1,1-Dichloroethene	1000.0	1091.0	109.10	80-120
3 cis-1,2-dichloroet	1000.0	1124.2	112.42	80-120
6 Benzene	1000.0	1186.4	118.64	80-120
8 Trichloroethene	1000.0	960.82	96.08	80-120
10 Tetrachloroethene	1000.0	1077.6	107.76	80-122
11 1,1,2,2-Tetrachlor	1000.0	1099.7	109.97	80-125

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1234.9	123.49*	80-120
\$ 9 d8-Toluene	1000.0	1077.4	107.74	80-120



Data File: /chem1/nt7.i/20AUG2010.b/08201026.d  
Date : 20-AUG-2010 19:39  
Client ID: MW-12-081210 MSD  
Sample Info: R146FHSJ,10,10,0,  
Column phase: RTXVMS

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



# Analytical Resources Inc.: Volatile Organics Instrument Log

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

Date: 8/23/10 Analysis: SIM Chlor Analyst: PC KAH  
 GC Program: VC Column No: 880322 Column Type: RTXVMS  
 Instrument Tune (.U or .CT.): 08231001 EM Voltage: 2447  
 Calibration File: 08231008 Curve Date: 8/23/10

IS/SS	Ical/Ccal	LCS/ICV
<u>VW65V3</u>	<u>VW649-1</u>	<u>VW637-2</u>
		<u>VW649-1</u>

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

Time	Filename	LabID	ClientID	WT
1	0711 08231001.d	BFB0823	BFB0823	0.00
2	0752 08231002.d	CC0823	CC0823	1
3	0818 08231003.d	LCS0823	LCS0823	1
<i>KAH</i> 4	0844 08231004.d	LCSD0823	LCSD0823	1
5	0909 08231005.d	MB0823	MB0823	1
<i>PC</i> 6	1027 08231006.d	IC4000	IC4000	1   5.31 96493   5.74 169889
7	1052 08231007.d	IC2000	IC2000	1   5.32 95583   5.76 166703
8	1118 08231008.d	IC1000	IC1000	1   5.32 94653   5.75 166153
9	1144 08231009.d	ICS00	ICS00	1   5.32 94405   5.76 164423
10	1209 08231010.d	IC100	IC100	1   5.32 94066   5.76 163266
11	1235 08231011.d	ICS0	ICS0	1   5.32 92210   5.75 162226
12	1301 08231012.d	IC20	IC20	1   5.32 92413   5.75 161871
13	1326 08231013.d	ICV1000	ICV1000	1   5.31 93596   5.76 163650
14	1427 08231014.d	LCS0823	LCS0823	1   5.32 94718   5.74 166101
15	1450 08231015.d	LCSD0823	LCSD0823	1   5.32 84063   5.76 148835
16	1516 08231016.d	MB0823	MB0823	1   5.32 91100   5.76 159719
17	1551 08231017.d	RI46G	MW-13-081210	<i>10</i> <i>2</i> 1   5.32 90849   5.76 160038
18	1617 08231018.d	RI65A	MW-09-081310	<i>5</i> 1   5.32 90517   5.75 157840
19	1643 08231019.d	RI65D	MW-01-081310	<i>2</i> 1   5.32 91429   5.75 157817
20	1708 08231020.d	RI65E	MW-05-081310	<i>2</i> 1   5.31 95002   5.76 162456
21	1734 08231021.d	RI46FMS		<i>12</i> 1   5.32 99393   5.76 166687

*PC 8/25/10*

Maintenance / Comments

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

PC  
8/25/10

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

Page 2

Date : 23-AUG-2010 07:11

Client ID: BFB0823

Instrument: nt7.i

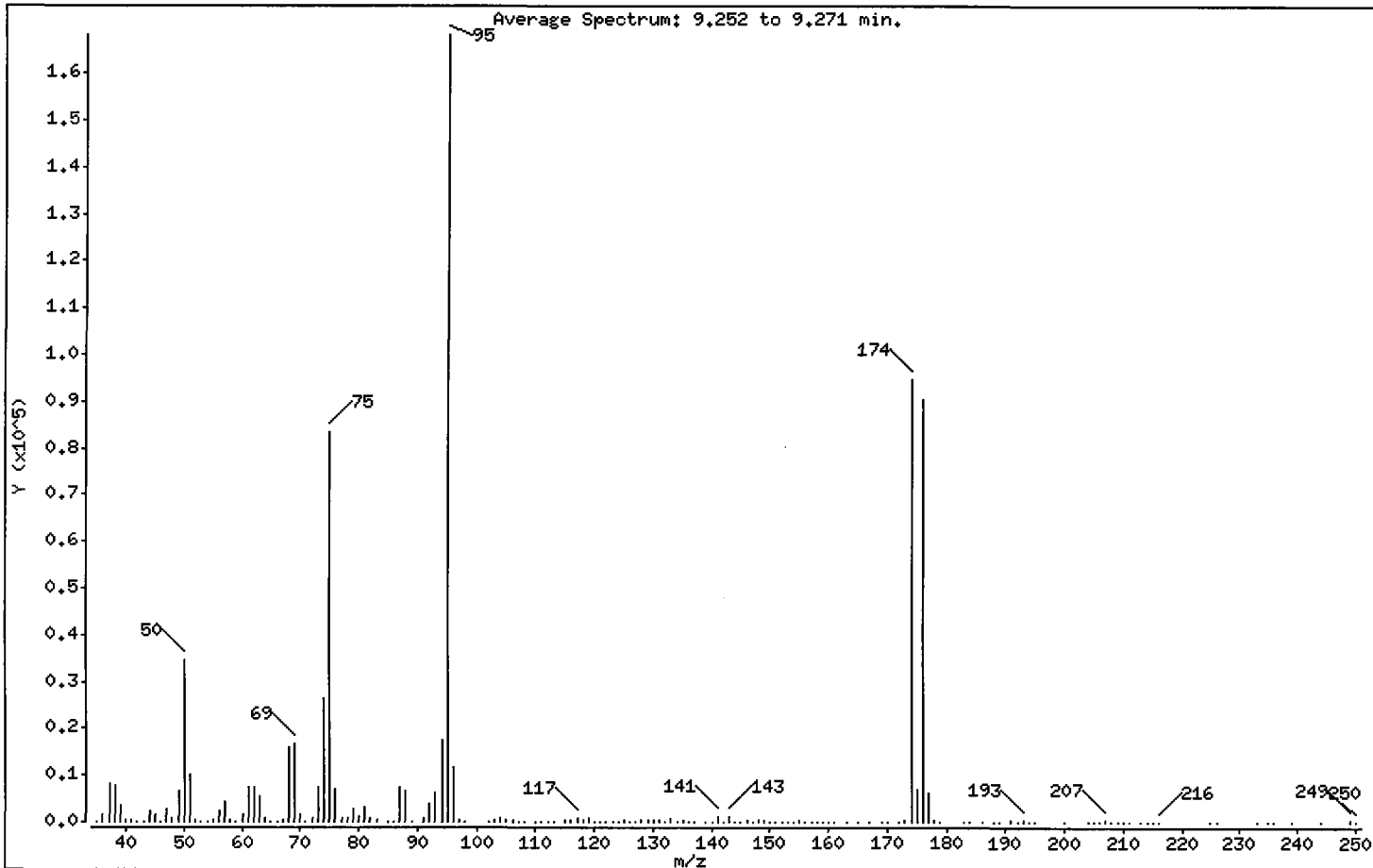
Sample Info: BFB0823,BFB0823,1,082310,

Operator: MH

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



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

Date : 23-AUG-2010 07:11

Client ID: BFB0823

Instrument: nt7.i

Sample Info: BFB0823,BFB0823,1,082310,

Operator: MH

Column phase: RTXVMS

Column diameter: 0.18

Data File: 08231001.d

Spectrum: Average Spectrum: 9.252 to 9.271 min.

Location of Maximum: 95.00

Number of points: 164

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

Date : 23-AUG-2010 07:11

Client ID: BFB0823

Instrument: nt7.i

Sample Info: BFB0823,BFB0823,1,082310,

Operator: MH

Column phase: RTXVMS

Column diameter: 0.18

Data File: 08231001.d

Spectrum: Average Spectrum: 9.252 to 9.271 min.

Location of Maximum: 95.00

Number of points: 164

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

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

Date: 23-AUG-2010 07:11

Client ID: BFB0823

Sample Info: BFB0823, BFB0823, 1, 082310,

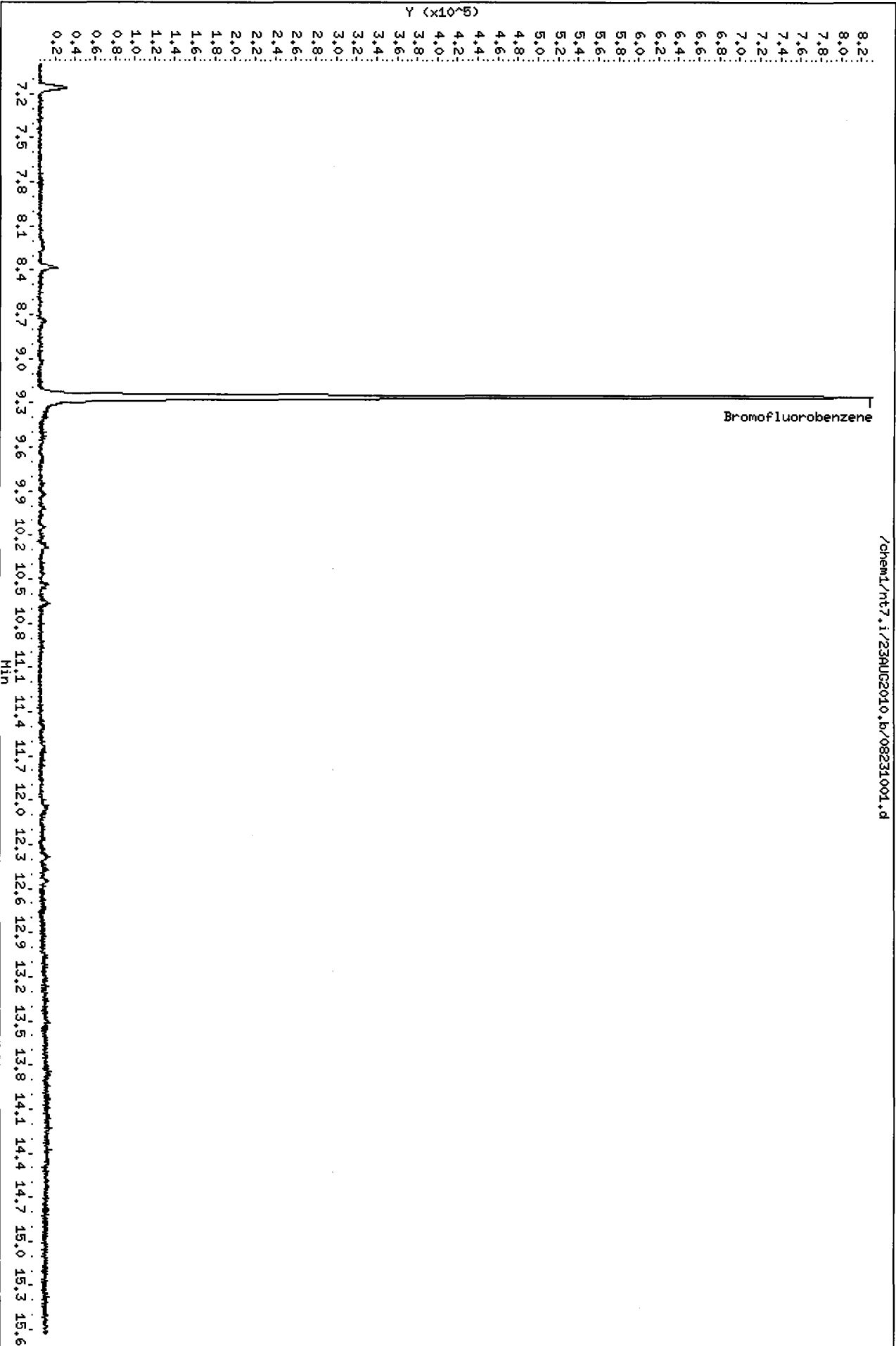
Column phase: RTXVHS

Instrument: nt7.i

Operator: MH

Column diameter: 0.18

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



Analytical Resources, Inc.

SW8260C SIM

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

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

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

Cpnd Variable Local Compound Variable

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

QC Flag Legend

Q - Qualifier signal failed the ratio test.



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

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

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

Test Mode:  
Use Initial Calibration Level 5.

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

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	-0.01
7 1,4-Difluorobenze	5.75	5.25	6.25	5.74	-0.18

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 23AUG2010  
 Sample Matrix: LIQUID Fraction: VOA  
 Lab Smp Id: LCS0823 Client Smp ID: LCS0823  
 Level: LOW Operator: PC  
 Data Type: MS DATA SampleType: LCS  
 SpikeList File: special.spk Quant Type: ISTD  
 Sublist File: sim12dca.sub  
 Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Misc Info: 10-

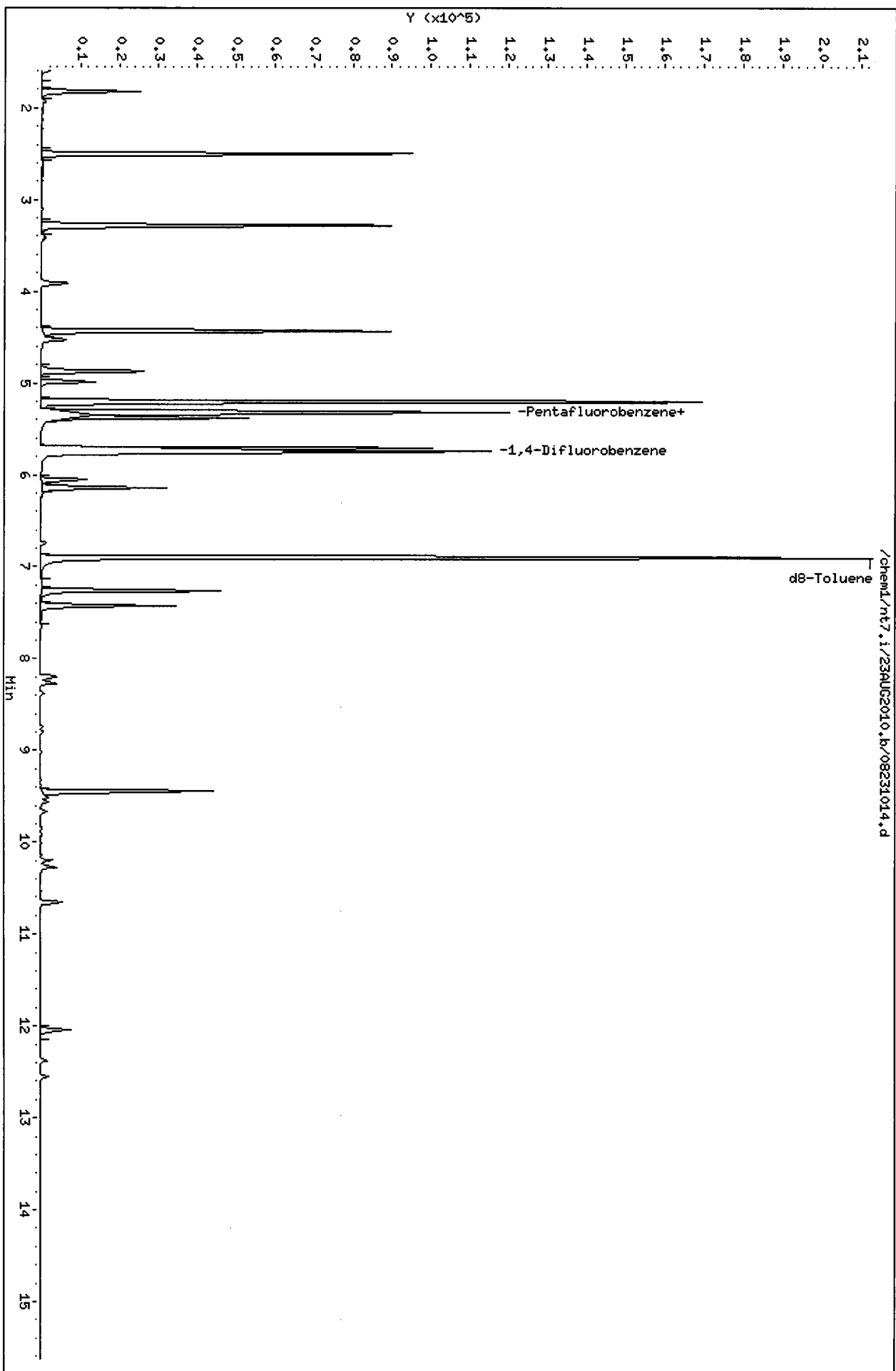
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Vinyl Chloride	1000.0	952.91	95.29	74-120
176 1,2-Dichloroethane	1000.0	974.33	97.43	79-134
175 Trans-1,2-Dichloro	1000.0	962.87	96.29	80-120
2 1,1-Dichloroethene	1000.0	958.24	95.82	80-120
3 cis-1,2-dichloroet	1000.0	964.34	96.43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

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

Data File: /chem1/nt7.i/23AUG2010.b/08231014.d  
Date : 23-AUG-2010 14:27  
Client ID: LCS0823  
Sample Info: LCS0823,10,10,0,

Column phase: RTXVHS

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



*PK*  
*8/25/10*

Analytical Resources, Inc.

SW8260C SIM

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

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

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

Cpnd Variable

Local Compound Variable

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

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

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

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

Test Mode:  
Use Initial Calibration Level 5.

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

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

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

Analytical Resources, Inc.

RECOVERY REPORT

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

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

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

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

Date: 23-AUG-2010 14:50

Client ID: LCSD0823

Sample Info: LCSD0823,10,10,0,

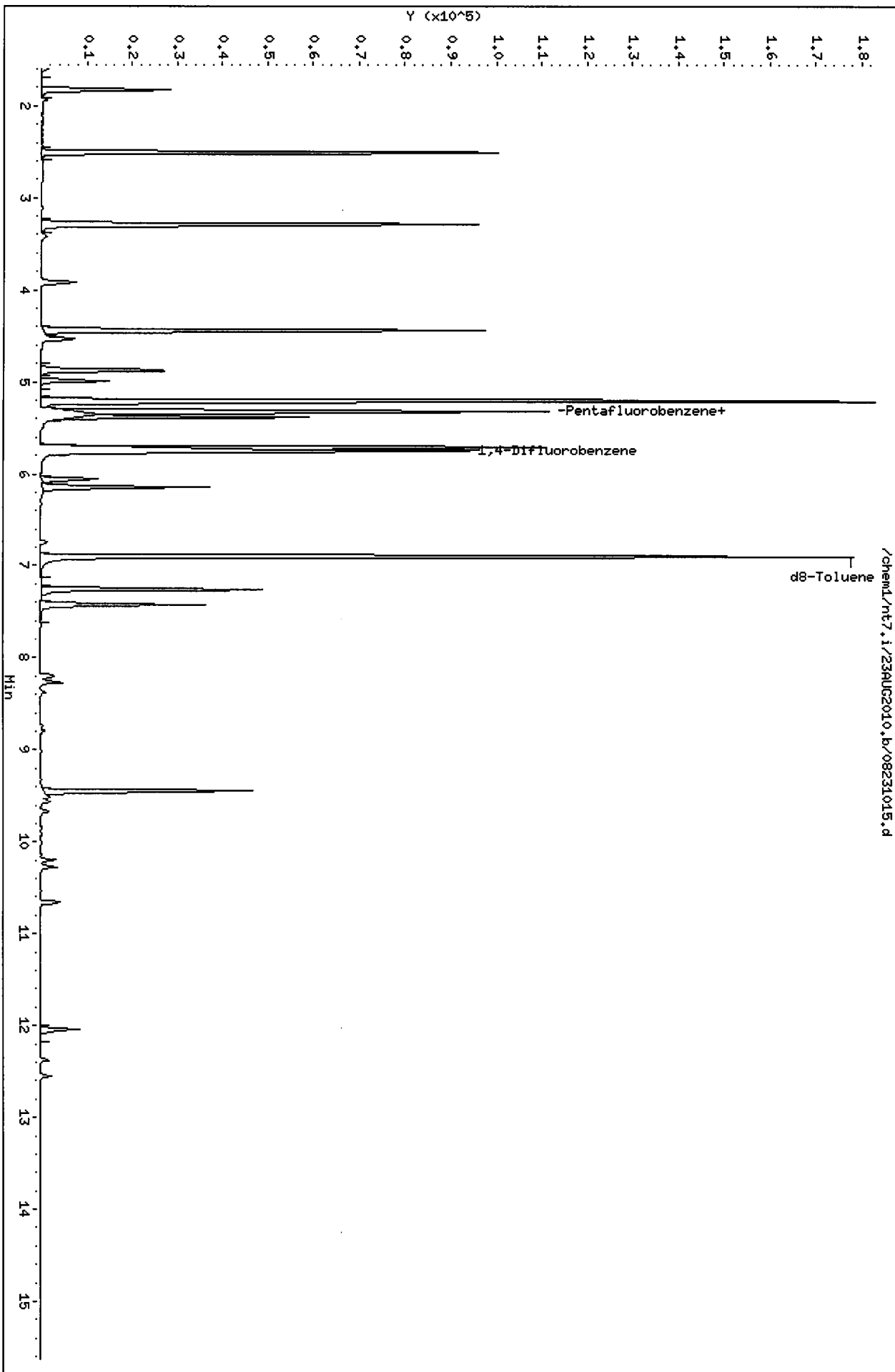
Column phase: RTXVHS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18

Page 5



RI46: 00372



Analytical Resources, Inc.

SW8260C SIM

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

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

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

Cpnd Variable Local Compound Variable

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

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

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

Test Mode: Use Initial Calibration Level 5.

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

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.00
7 1,4-Difluorobenze	5.75	5.25	6.25	5.76	0.03

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 23AUG2010  
Sample Matrix: LIQUID Fraction: VOA  
Lab Smp Id: MB0823 Client Smp ID: MB0823  
Level: LOW Operator: PC  
Data Type: MS DATA SampleType: BLANK  
SpikeList File: special.spk Quant Type: ISTD  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
Misc Info: 10-

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

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

Date: 23-AUG-2010 15:16

Client ID: MB0823

Sample Info: MB0823,10,10,0,

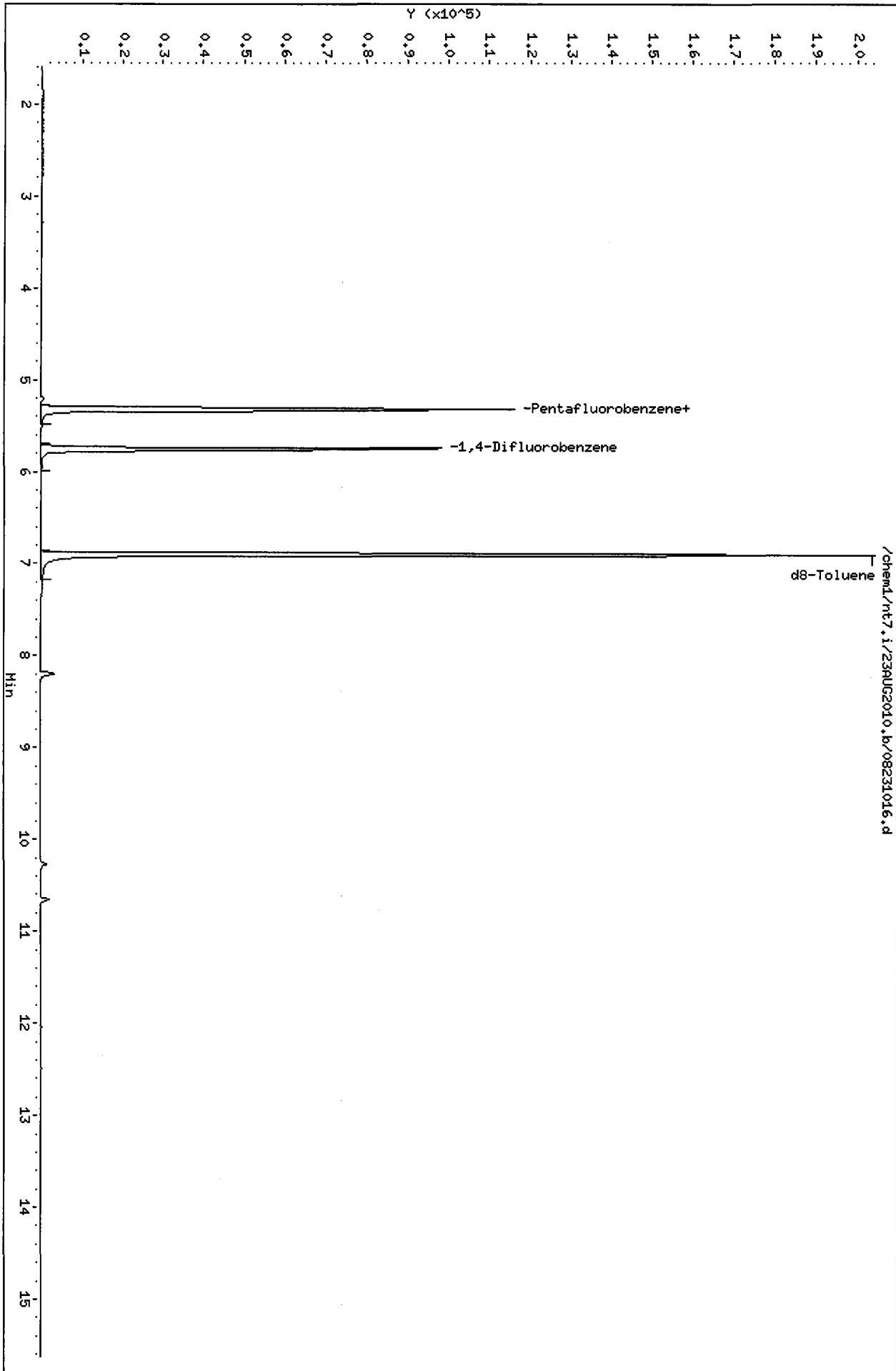
Column phase: RTXVHS

Instrument: nt7.1

Operator: PC

Column diameter: 0.18

Page 4



RI46: 00376

PK  
8/25/10

Data File: /chem1/nt7.i/23AUG2010.b/08231017.d  
Report Date: 25-Aug-2010 14:11

Page 1

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/23AUG2010.b/08231017.d  
Lab Smp Id: RI46G Client Smp ID: MW-13-081210  
Inj Date : 23-AUG-2010 15:51  
Operator : PC Inst ID: nt7.i  
Smp Info : RI46G,10,10,0,  
Misc Info : 10-19684  
Comment :  
Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
Meth Date : 25-Aug-2010 14:10 paul Quant Type: ISTD  
Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
Als bottle: 1  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: sim12dca.sub  
Target Version: 3.50

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

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

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62						
2 1,1-Dichloroethene	96						
175 Trans-1,2-Dichloroethene	96						
3 cis-1,2-dichloroethene	96						
6 Benzene	78						
* 4 Pentafluorobenzene	168	5.315	5.316	(1.000)	90849	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	65802	1054.55	1054.6
176 1,2-Dichloroethane	62						
8 Trichloroethene	130						
* 7 1,4-Difluorobenzene	114	5.756	5.754	(1.000)	160038	1000.00	
\$ 9 d8-Toluene	98	6.902	6.903	(1.199)	219533	994.903	994.90
10 Tetrachloroethene	166	7.271	7.260	(1.263)	1501	35.1243	35.124
11 1,1,2,2-Tetrachloroethane	83						

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt7.i	Calibration Date: 23-AUG-2010
Lab File ID: 08231017.d	Calibration Time: 11:18
Lab Smp Id: RI46G	Client Smp ID: MW-13-081210
Analysis Type: VOA	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: PC	
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m	
Misc Info: 10-19684	

Test Mode: Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	90849	-4.02
7 1,4-Difluorobenze	166153	83076	332306	160038	-3.68

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

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd-Snider  
Sample Matrix: LIQUID  
Lab Smp Id: RI46G  
Level: LOW  
Data Type: MS DATA  
SpikeList File: special.spk  
Sublist File: sim12dca.sub  
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
Misc Info: 10-19684

Client SDG: RI46  
Fraction: VOA  
Client Smp ID: MW-13-081210  
Operator: PC  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	1054.6	105.46	80-120
\$ 9 d8-Toluene	1000.0	994.90	99.49	80-120

Data File: /chem1/nt7.i/23AUG2010.b/08231017.d

Date: 23-AUG-2010 15:51

Client ID: MM-13-081210

Sample Info: RI466,10,10,0,

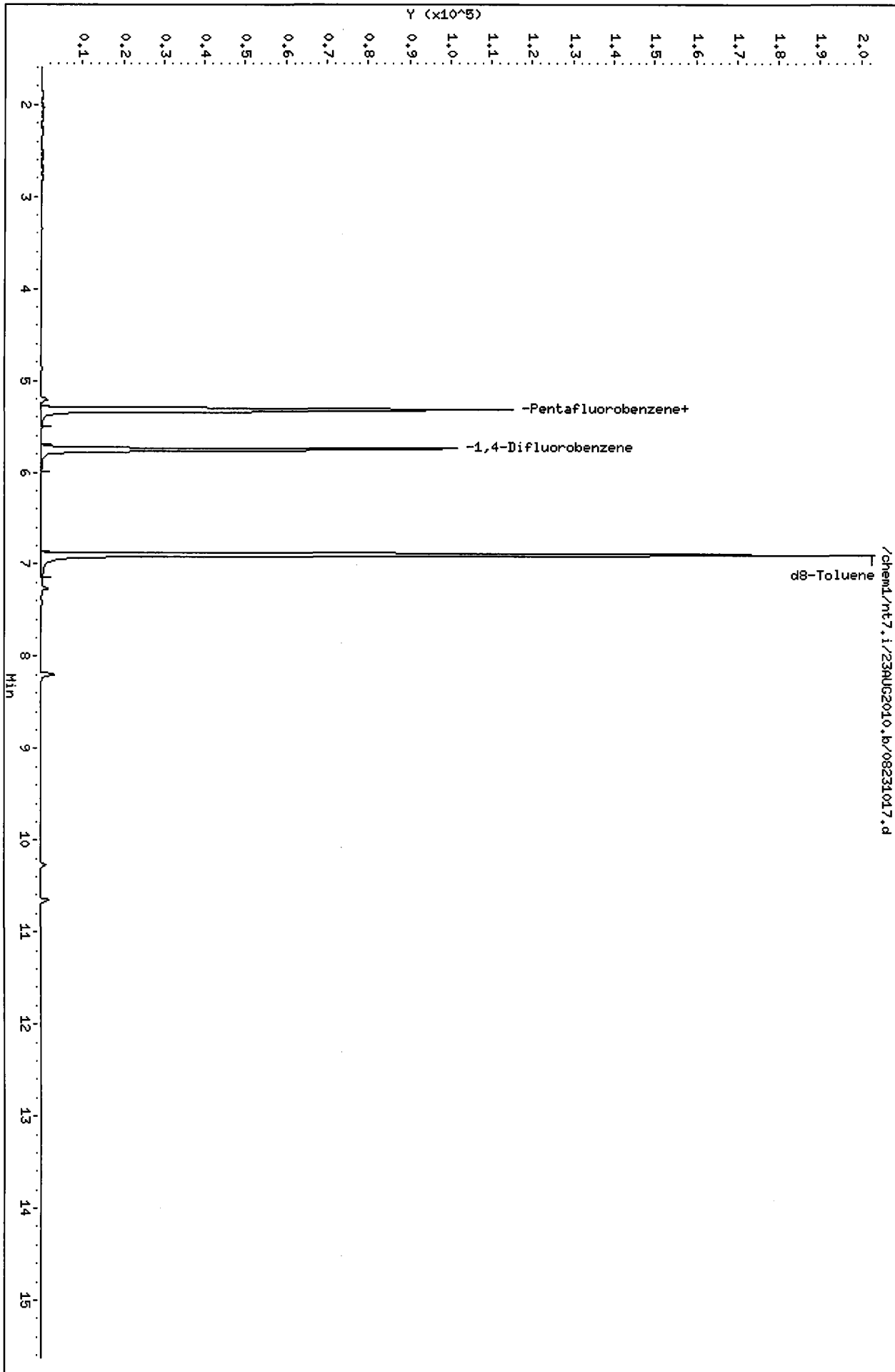
Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18

Page 4



RI46 : 00380



Date : 23-AUG-2010 15:51

Client ID: MW-13-081210

Instrument: nt7.i

Sample Info: RI46G,10,10,0,

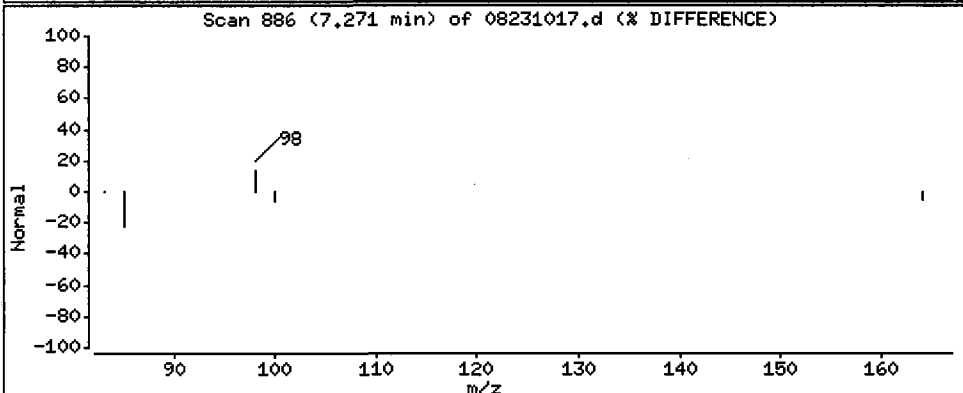
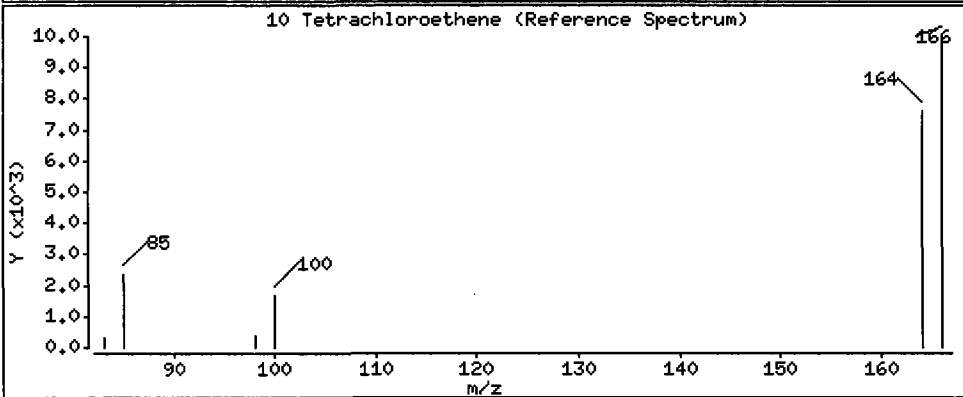
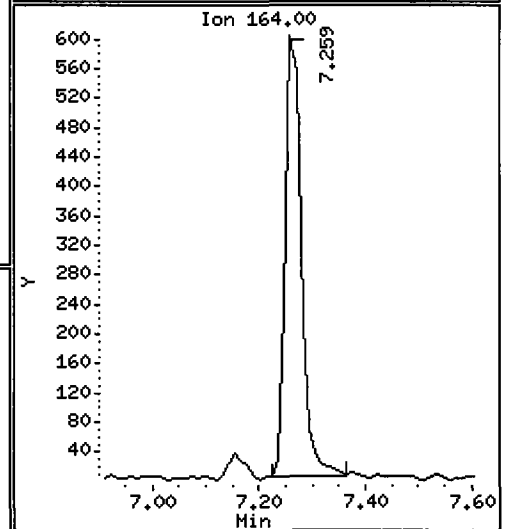
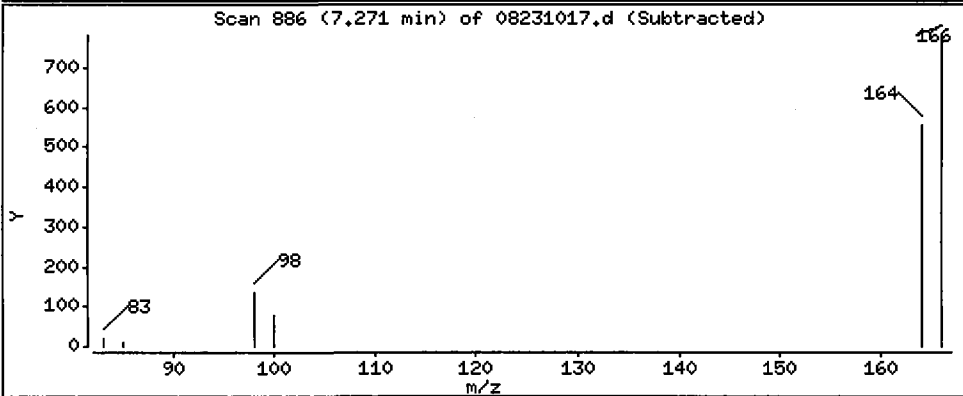
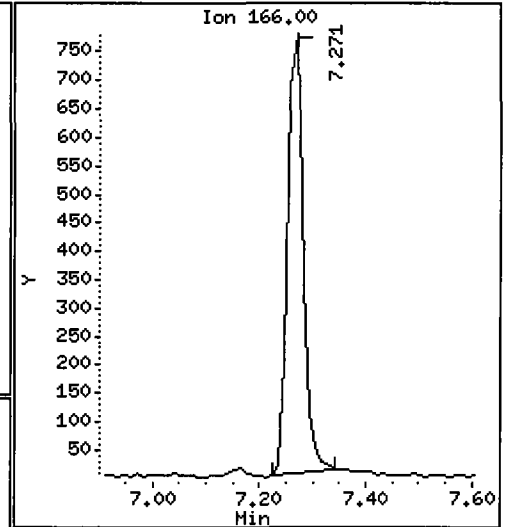
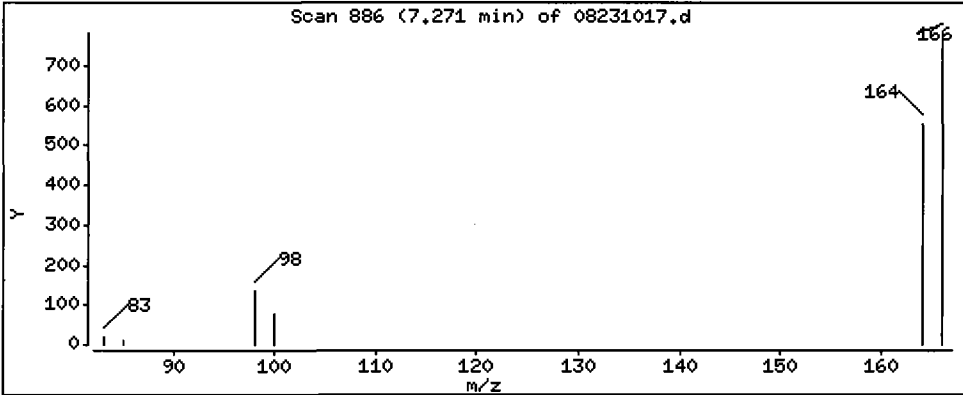
Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

10 Tetrachloroethene

Concentration: 35.124 ug/L



*PL*  
*8/25/10*

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/23AUG2010.b/08231021.d  
 Lab Smp Id: RI46FMS Client Smp ID: MW-12-081210 MS  
 Inj Date : 23-AUG-2010 17:34  
 Operator : PC Inst ID: nt7.i  
 Smp Info : RI46FMS,10,10,0,  
 Misc Info : 10-  
 Comment :  
 Method : /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Meth Date : 23-Aug-2010 15:32 paul Quant Type: ISTD  
 Cal Date : 23-AUG-2010 13:01 Cal File: 08231012.d  
 Als bottle: 1 QC Sample: MS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: sim12dca.sub  
 Target Version: 3.50

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG		CONCENTRATIONS					
	MASS	SIG	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN ( ng/L)	FINAL ( ug/L)
1 Vinyl Chloride	62	====	1.552	1.552	(0.292)	85473	958.852	958.85
2 1,1-Dichloroethene	96	==	2.510	2.510	(0.472)	48942	964.318	964.32
175 Trans-1,2-Dichloroethene	96	=====	3.289	3.289	(0.619)	57802	975.700	975.70
3 cis-1,2-dichloroethene	96	=====	4.439	4.439	(0.835)	59853	986.741	986.74
6 Benzene	78	=====	5.212	5.212	(0.905)	274563	969.705	969.70
* 4 Pentafluorobenzene	168	=====	5.316	5.316	(1.000)	99393	1000.00	
\$ 5 d4-1,2-Dichloroethane	65	=====	5.326	5.325	(1.002)	63352	928.013	928.01
176 1,2-Dichloroethane	62	=====	5.383	5.382	(1.012)	83575	1005.23	1005.2
8 Trichloroethene	130	=====	5.710	5.720	(0.992)	52920	981.275	981.28(Q)
* 7 1,4-Difluorobenzene	114	=====	5.756	5.754	(1.000)	166687	1000.00	
\$ 9 d8-Toluene	98	=====	6.903	6.903	(1.199)	231867	1008.88	1008.9
10 Tetrachloroethene	166	=====	7.260	7.260	(1.261)	45268	1017.04	1017.0
11 1,1,2,2-Tetrachloroethane	83	=====	9.447	9.447	(1.641)	48765	1137.17	1137.2

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt7.i  
Lab File ID: 08231021.d  
Lab Smp Id: RI46FMS  
Analysis Type: VOA  
Quant Type: ISTD  
Operator: PC  
Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
Misc Info: 10-

Calibration Date: 23-AUG-2010  
Calibration Time: 11:18  
Client Smp ID: MW-12-081210 MS  
Level: LOW  
Sample Type: WATER

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	94653	47326	189306	99393	5.01
7 1,4-Difluorobenze	166153	83076	332306	166687	0.32

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Pentafluorobenzen	5.32	4.82	5.82	5.32	0.00
7 1,4-Difluorobenze	5.75	5.25	6.25	5.76	0.03

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: RI46  
 Sample Matrix: LIQUID Fraction: VOA  
 Lab Smp Id: RI46FMS Client Smp ID: MW-12-081210 MS  
 Level: LOW Operator: PC  
 Data Type: MS DATA SampleType: MS  
 SpikeList File: special.spk Quant Type: ISTD  
 Sublist File: sim12dca.sub  
 Method File: /chem1/nt7.i/23AUG2010.b/sim082310.m  
 Misc Info: 10-

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Vinyl Chloride	1000.0	958.85	95.89	74-120
176 1,2-Dichloroethane	1000.0	1005.2	100.52	79-134
175 Trans-1,2-Dichloro	1000.0	975.70	97.57	80-120
2 1,1-Dichloroethene	1000.0	964.32	96.43	80-120
3 cis-1,2-dichloroet	1000.0	986.74	98.67	80-120
6 Benzene	1000.0	969.70	96.97	80-120
8 Trichloroethene	1000.0	981.28	98.13	80-120
10 Tetrachloroethene	1000.0	1017.0	101.70	80-122
11 1,1,2,2-Tetrachlor	1000.0	1137.2	113.72	80-125

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 d4-1,2-Dichloroeth	1000.0	928.01	92.80	80-120
\$ 9 d8-Toluene	1000.0	1008.9	100.89	80-120

Data File: /chem1/nt7.i/23AUG2010.b/08231021.d

Date: 23-AUG-2010 17:34

Client ID: MW-12-081210 HS

Sample Info: R146FMS.10.10.0,

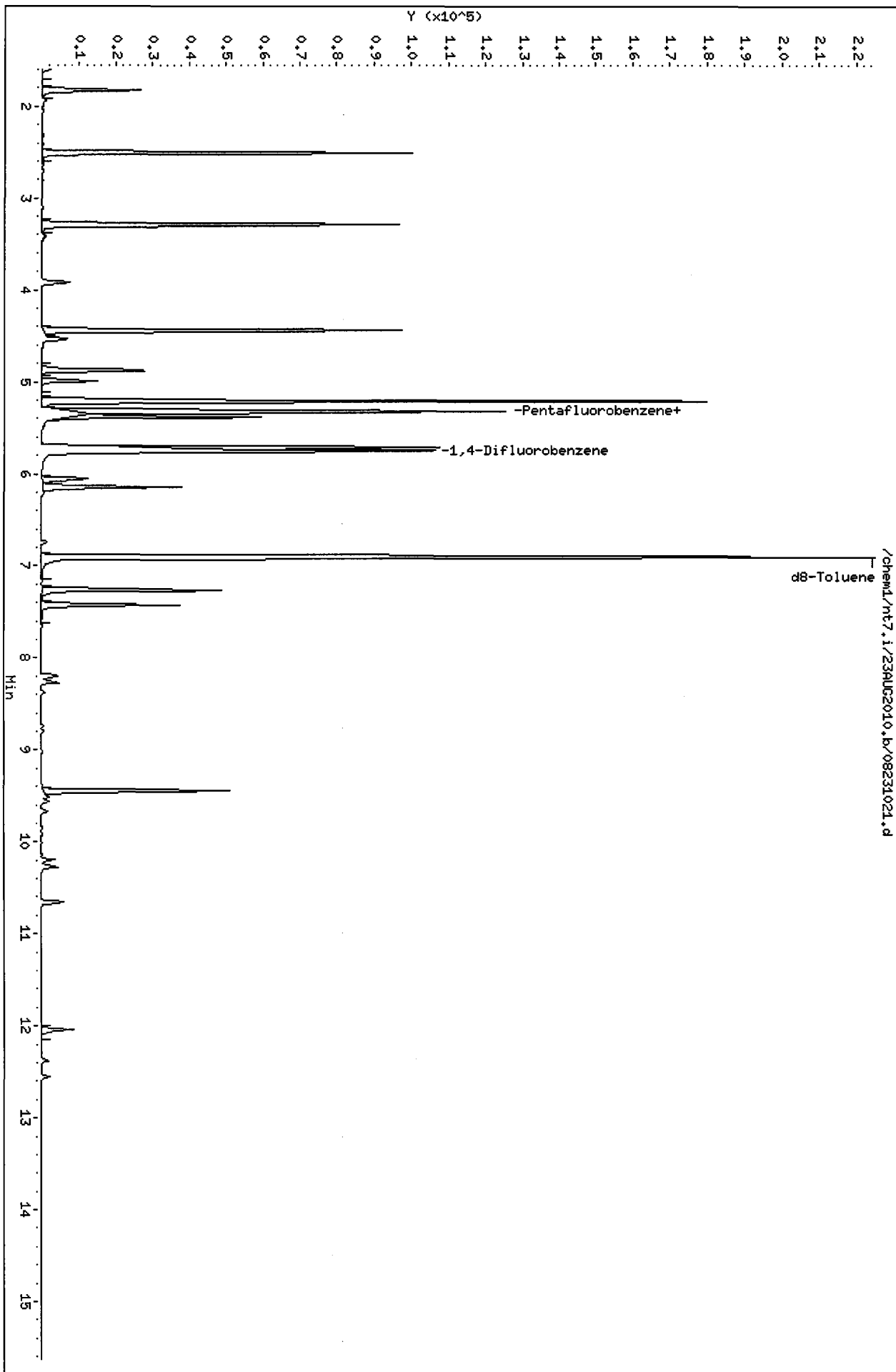
Page 5

Instrument: nt7.i

Operator: PC

Column diameter: 0.18

Column phase: RTXMS



R146: 00986

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

**ARI Job ID: RI46**



Preparation Test SIM PNA # 6

ARI Job No(s) RI46

Batch set up by: JH

Bottle #	Extraction Requirements	Verify Client ID	Volume Extracted	KD Exchange to Hexane (X2)	Turbo Vap 1(2)3	(REQ) Silica Gel Clean (1:1) (Y) N	Turbo Vap 1(2)3	Final Effective Volume	Volume to Lab	Comments
	RI46 MBW	Date 8-17-10	500mL		T	T		0.5mL	0.5mL	
	SBW	↓	↓					↓	↓	
	SBW Dup.	↓	↓					↓	↓	
3	A	verified								
4	B									
4	C									
2	D									
4	E									
5	F									
4	G									
4	H									
3	I									
10-19678										
Analyst/Date:		AC 8-17-10	RR/TS 8/20/10	JP 8/24/10	MP 8/24/10	WW 8/24/10	→			

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	I	100µL	1/1/11	AC	GS
Spike	18	100µL	1/1/11	AC	GS

Extraction Time: 16:28

SPECIAL INSTRUCTIONS: 1. Rinse all glassware with Low Level DCM. 2. Extract 3X with 30mL Low Level DCM.

3. KD (no drying column) to ~8mL at 80°. 4. Exchange (2 X with 10mL) to Low Level Hexane at 100°. 5. TurboVap.

6. Silica Clean-up=REQUIRED. 6. TurboVap. 7. Vial in Low Level DCM. 8. Post screen extracts with any color.

Archive Y N





**SIM PAH Raw Data  
Initial Calibration**

**ARI Job ID: RI46**



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

ARI Project ID: Curvix Client ID: \_\_\_\_\_

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

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

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

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

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

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

*See report*

*- All targets <20% RSD.*

Additional Details on Reverse: Yes / No

Analyst: VIS Date: 8.19.10

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

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

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

Date: 8.18.10 Analysis: LOW SIM PWA Analyst: VJB

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

Instrument Tune (.U or .CT.): 100605.11 EM Voltage: 2200

Calibration File: DF0818 Curve Date: 8.18.10

IS/SS	Ical/Ccal	LCS/ICV
<u>1665-3 VBS</u>	<u>1665-3</u>	<u>1663-4</u>
<u>1754-5</u>		

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

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

8.19.10 VJB

**Maintenance / Comments**

New line / new septum / clipped column / flushed injector

**Maintenance Verification** (Identify ICal or CCal that demonstrates the instrument is in control): IC0818A  
 Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

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

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

Time Filename LabID ClientId DF Manually Integrated Compounds

1525 ic0818a.d IC0818A 1 NO MANUAL INTEGRATION

1549 ic0818b.d IC0818B 1 NO MANUAL INTEGRATION

1627 ic0818c.d IC0818C 1 NO MANUAL INTEGRATION

1651 ic0818d.d IC0818D 1 NO MANUAL INTEGRATION

1714 ic0818e.d IC0818E 1 NO MANUAL INTEGRATION

1739 ic0818f.d IC0818F 1 Total Benzofluoranthenes,

1802 icv0818.d ICV0818 1 NO MANUAL INTEGRATION

RI46:00393

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

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

ID:	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
FILENAME:	ic0818a	ic0818b	ic0818c	ic0818d	ic0818e	ic0818f				
INJ. DATE:	18-AUG-2010	18-AUG-2010	18-AUG-2010	18-AUG-2010	18-AUG-2010	18-AUG-2010	17:39			
INJ. TIME:	15:25	15:49	16:27	16:51	17:14	17:39				
Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
\$ 1 D5-Phenol	+++++	+++++	+++++	+++++	+++++	+++++	3.150	2.900-3.400	+++++	+++++
2 Phenol	+++++	+++++	+++++	+++++	+++++	+++++	3.160	2.910-3.410	+++++	+++++
3 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	6.639	6.389-6.889	+++++	+++++
* 4 Naphthalene-d8	5.939	5.939	5.939	5.939	5.939	5.939	5.939	5.689-6.189	5.939	0.000
5 Naphthalene	5.962	5.962	5.962	5.962	5.962	5.962	5.962	5.712-6.212	5.962	0.000
\$ 6 2-Methylnaphthalene-d1	6.767	6.767	6.767	6.767	6.767	6.767	6.767	6.517-7.017	6.767	0.000
7 2-Methylnaphthalene	6.802	6.802	6.802	6.802	6.802	6.802	6.802	6.552-7.052	6.802	0.000
8 1-Methylnaphthalene	6.940	6.940	6.940	6.940	6.940	6.940	6.940	6.690-7.190	6.940	0.000
9 Dimethylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	10.433	10.183-10.683	+++++	+++++
10 Acenaphthylene	7.916	7.916	7.915	7.916	7.915	7.916	7.916	7.666-8.166	7.916	0.000
* 11 Acenaphthene-d10	8.103	8.103	8.103	8.103	8.103	8.103	8.103	7.853-8.353	8.103	0.000
12 Acenaphthene	8.143	8.143	8.143	8.144	8.143	8.143	8.143	7.893-8.393	8.143	0.000
13 Diethylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	11.543	11.293-11.793	+++++	+++++
14 Dibenzofuran	8.345	8.345	8.345	8.345	8.344	8.345	8.345	8.095-8.595	8.345	0.000
15 Fluorene	8.760	8.760	8.760	8.760	8.760	8.760	8.760	8.510-9.010	8.760	0.000
\$ 16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	12.499	12.249-12.749	+++++	+++++
17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	13.381	13.131-13.631	+++++	+++++

Reviewer 1 VOS Date: 8-19-10  
 Reviewer 2 [Signature] Date: 8/19/10

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

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

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

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Calibration File Names:

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

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



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

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

Date : 18-AUG-2010 15:11

Client ID:

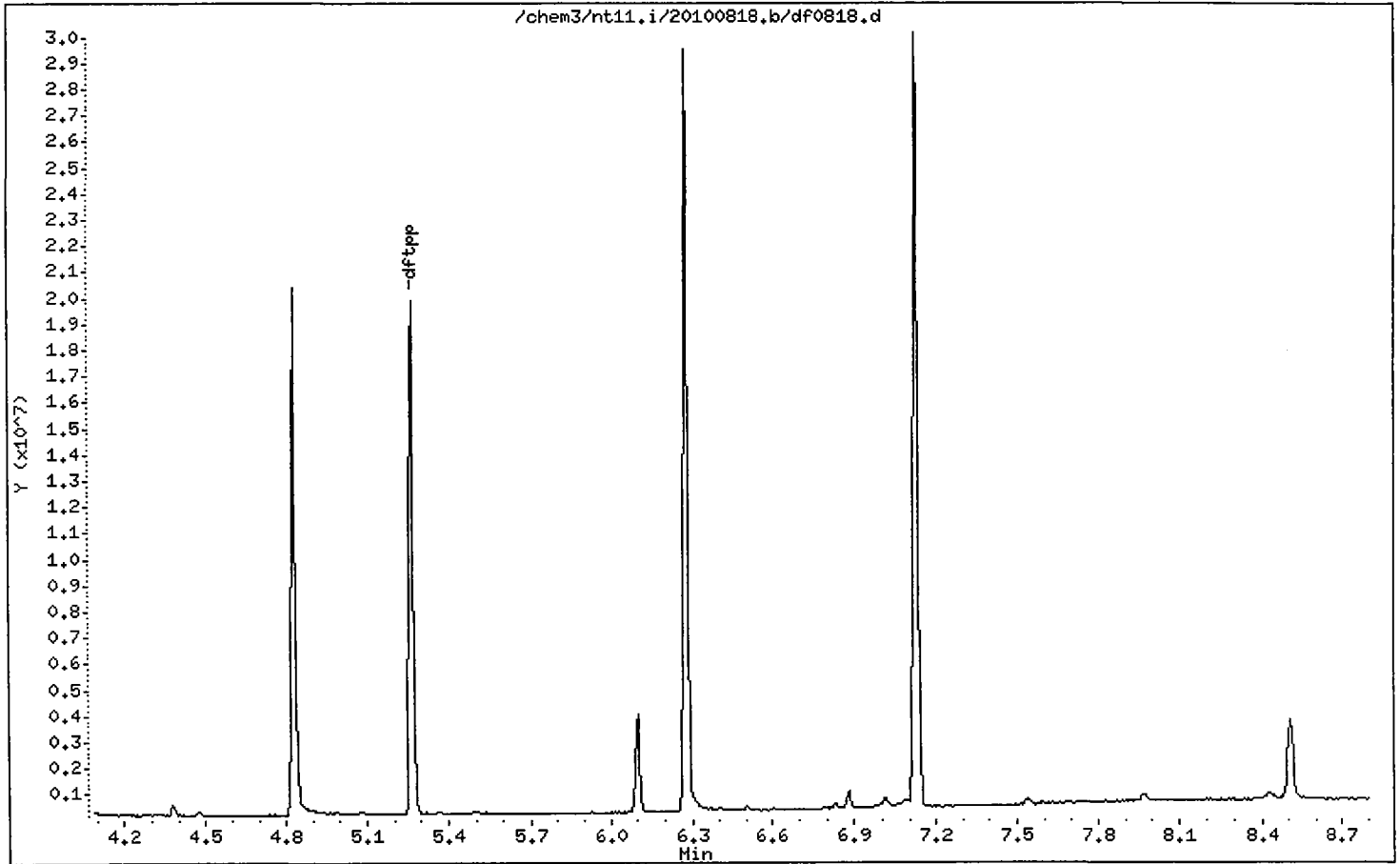
Instrument: nt11.i

Sample Info: DF0818

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Date : 18-AUG-2010 15:11

Client ID:

Instrument: nt11.i

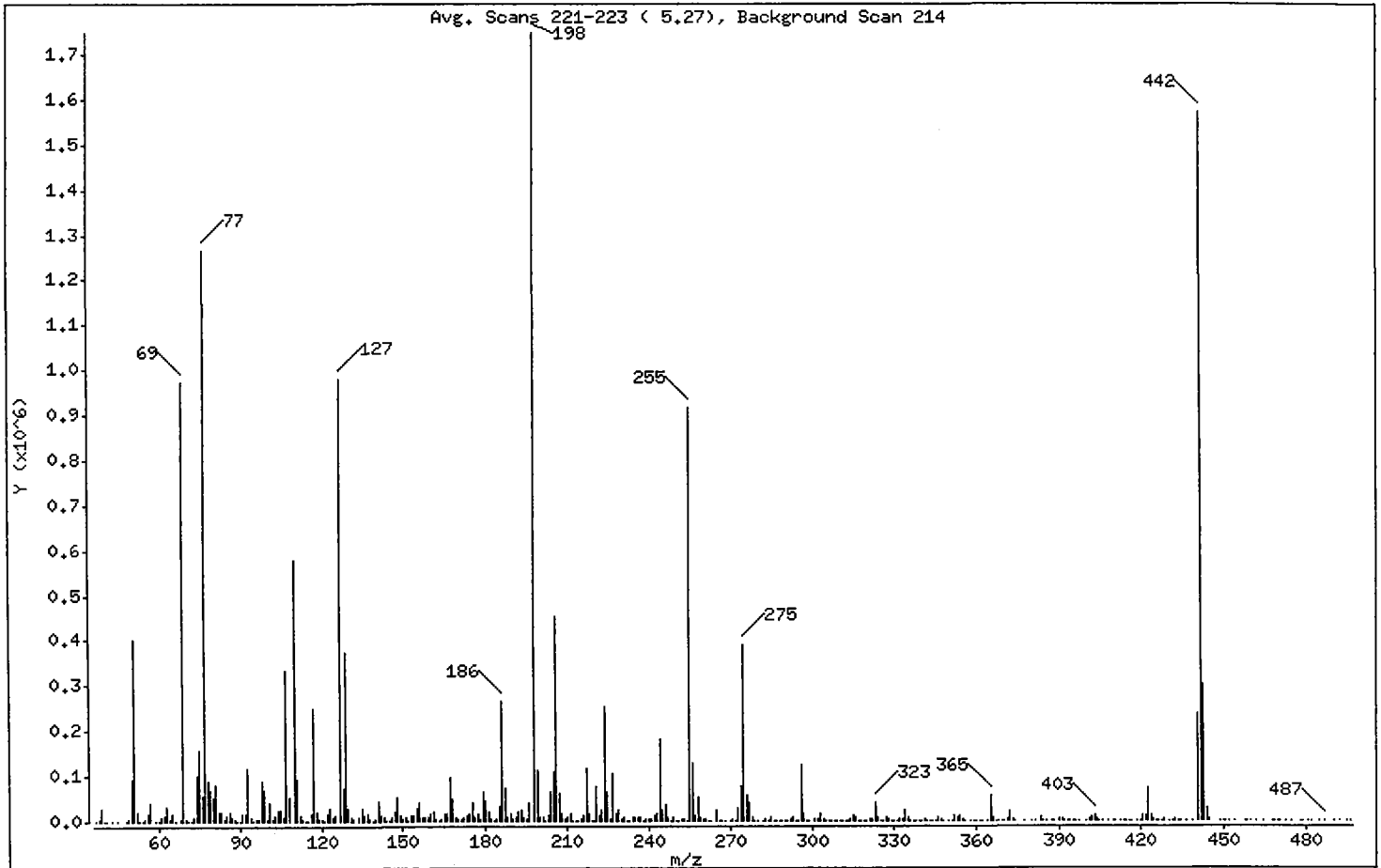
Sample Info: DF0818

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



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

Date : 18-AUG-2010 15:11

Client ID:

Instrument: nt11.i

Sample Info: DF0818

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0818.d

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

Location of Maximum: 198.00

Number of points: 401

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

Date : 18-AUG-2010 15:11

Client ID:

Instrument: nt11.i

Sample Info: DF0818

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

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

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

Date : 18-AUG-2010 15:11

Client ID:

Instrument: nt11.i

Sample Info: DF0818

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0818.d

Spectrum: Avg. Scans 221-223 ( 5.27), Background Scan 214

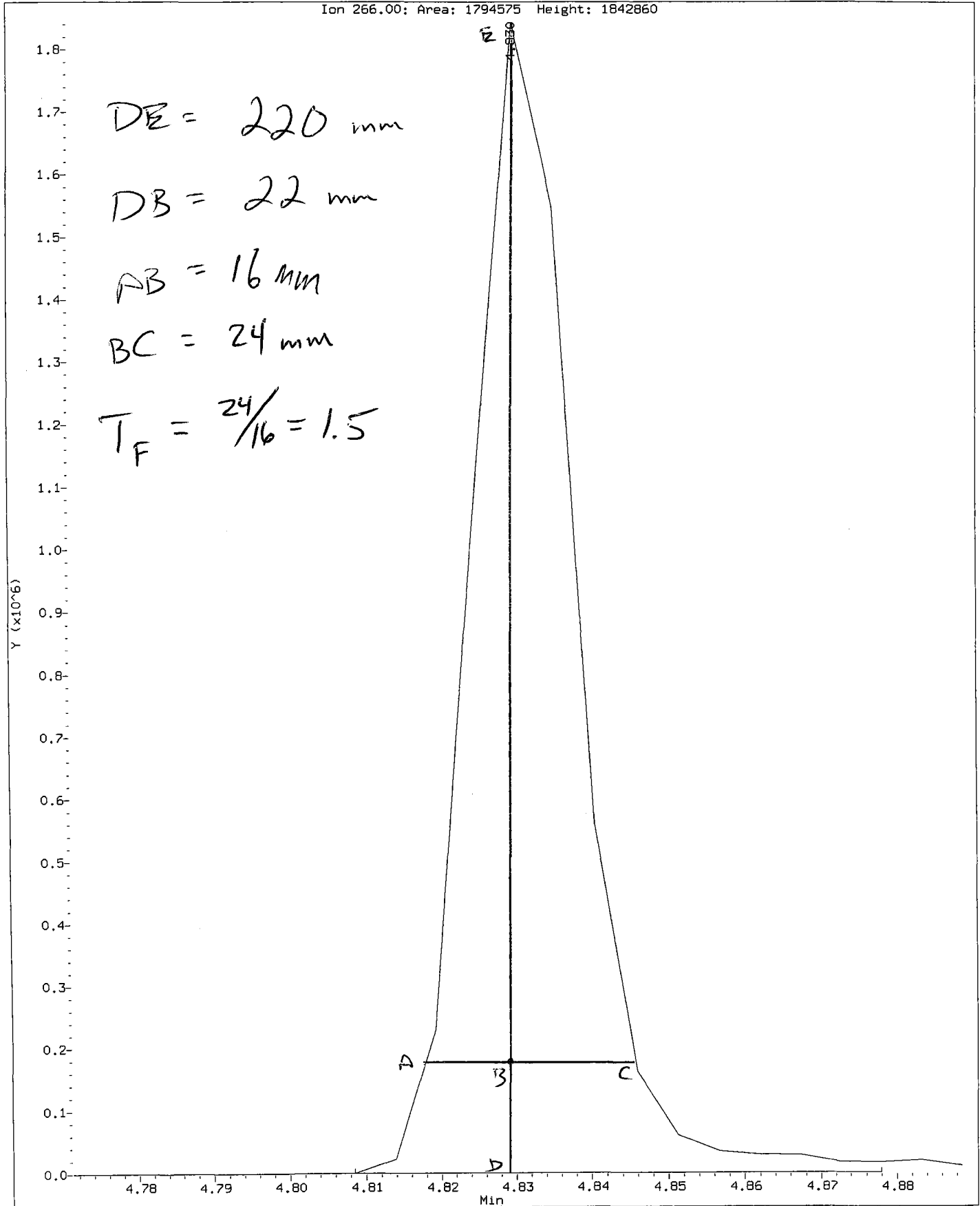
Location of Maximum: 198.00

Number of points: 401

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

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

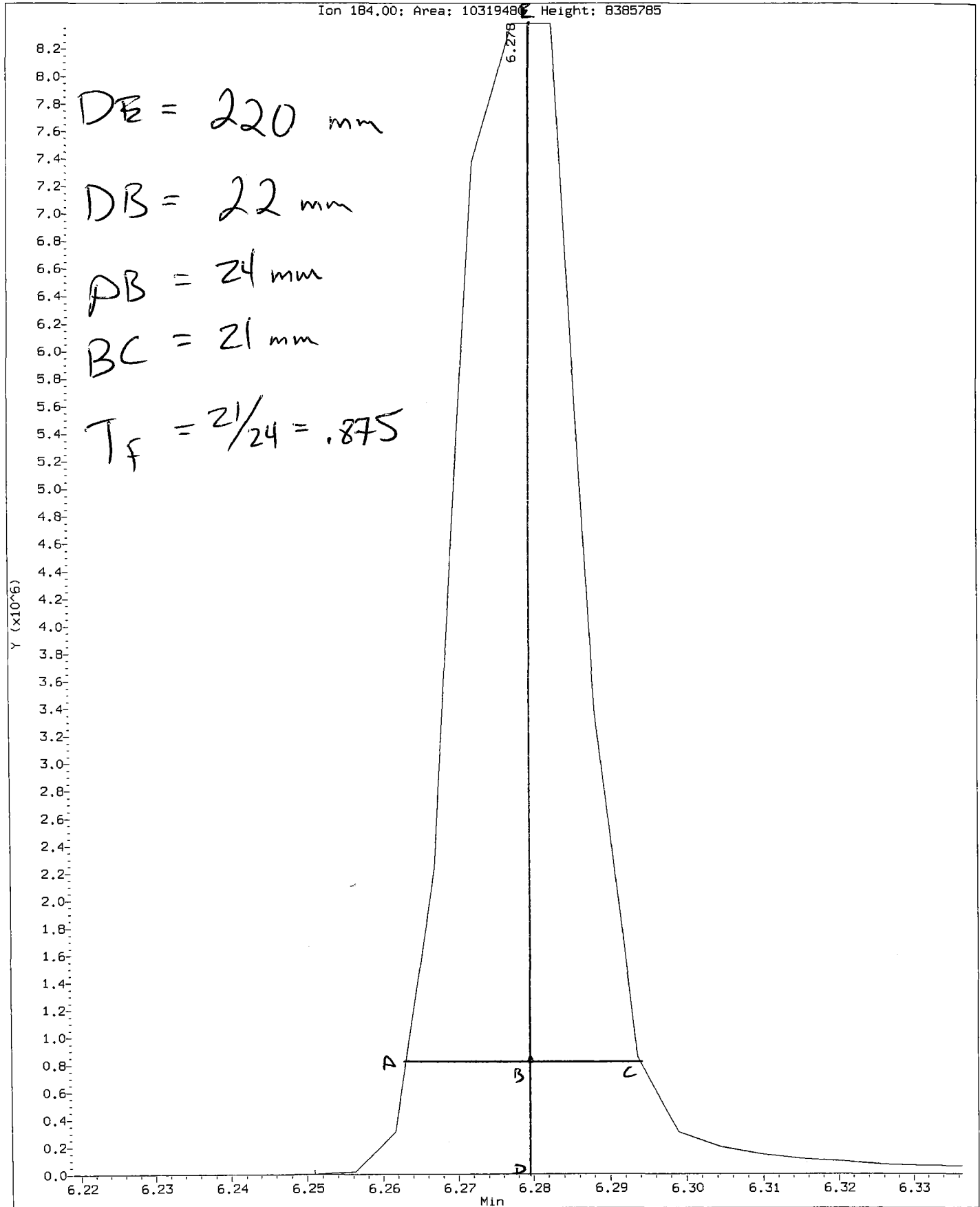
Compound: Pentachlorophenol  
CAS Number: 87-86-5



RI46: 00403

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

Compound: Benzidine  
CAS Number:



RI46:00404



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

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

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

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

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

DDT Percent Breakdown = 0.9 %

Analytical Resources, Inc.

LOW LEVEL PNAS BY SW8270D-SIM

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

Inst ID: nt11.i

Quant Type: ISTD

Cal File: ic0818f.d

Calibration Sample, Level: 4

Compound Sublist: pnalnm.sub

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

2.19.10  
 LIS

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

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

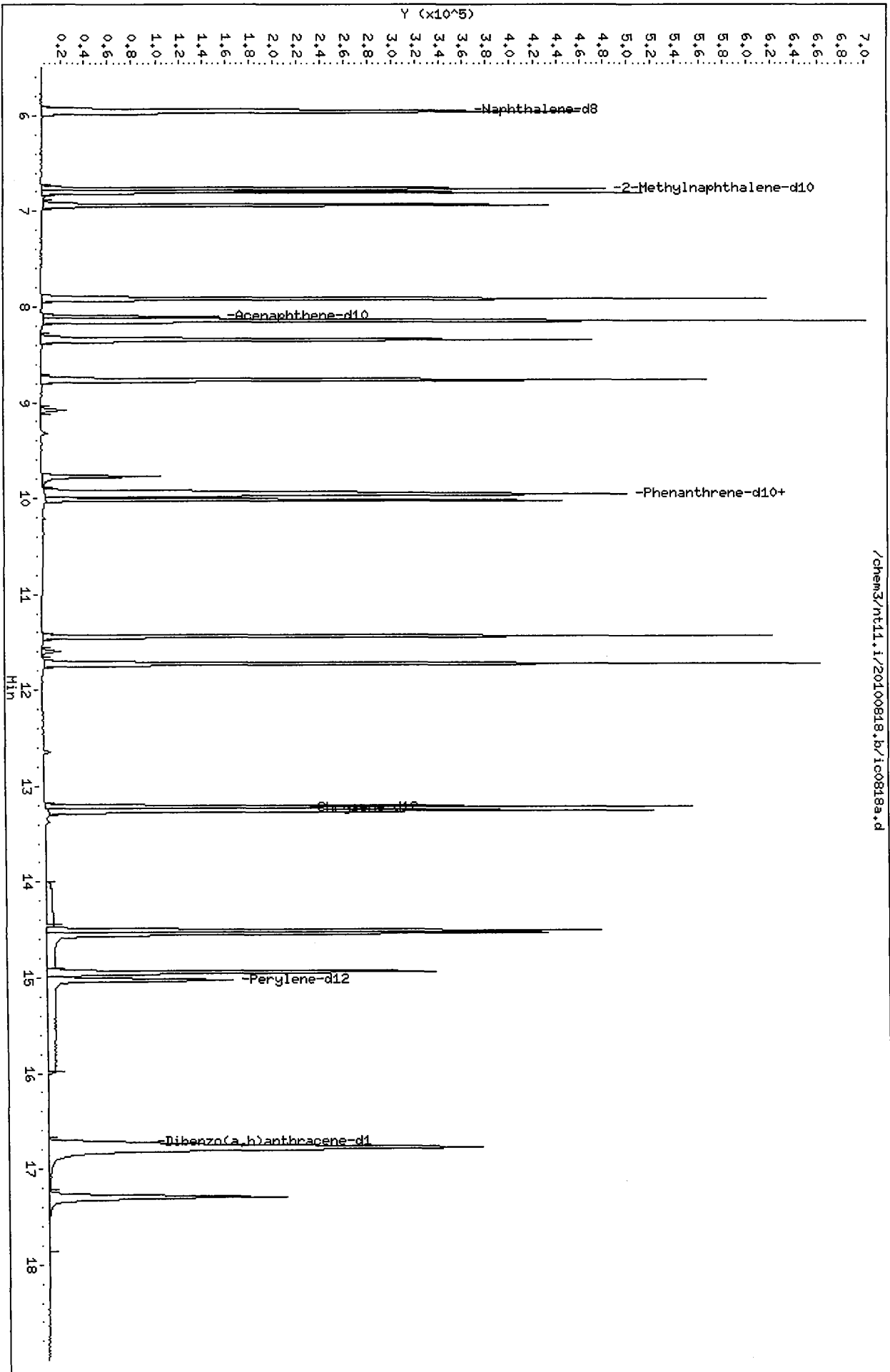
Calibration Date: 18-AUG-2010  
 Calibration Time: 15:25  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

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

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

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



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100818.b/ic0818b.d  
 Lab Smp Id: IC0818B  
 Inj Date : 18-AUG-2010 15:49  
 Operator : VTS  
 Smp Info : IC0818B  
 Misc Info :  
 Comment :  
 Method : /chem3/nt11.i/20100818.b/lowsim.m  
 Meth Date : 19-Aug-2010 08:51 van  
 Cal Date : 18-AUG-2010 17:39  
 Als bottle: 3  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50  
 Processing Host: cserv3

Inst ID: nt11.i  
 Quant Type: ISTD  
 Cal File: ic0818f.d  
 Calibration Sample, Level: 6  
 Compound Sublist: pnalnm.sub

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

*WIS*  
*8-19-10*

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

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

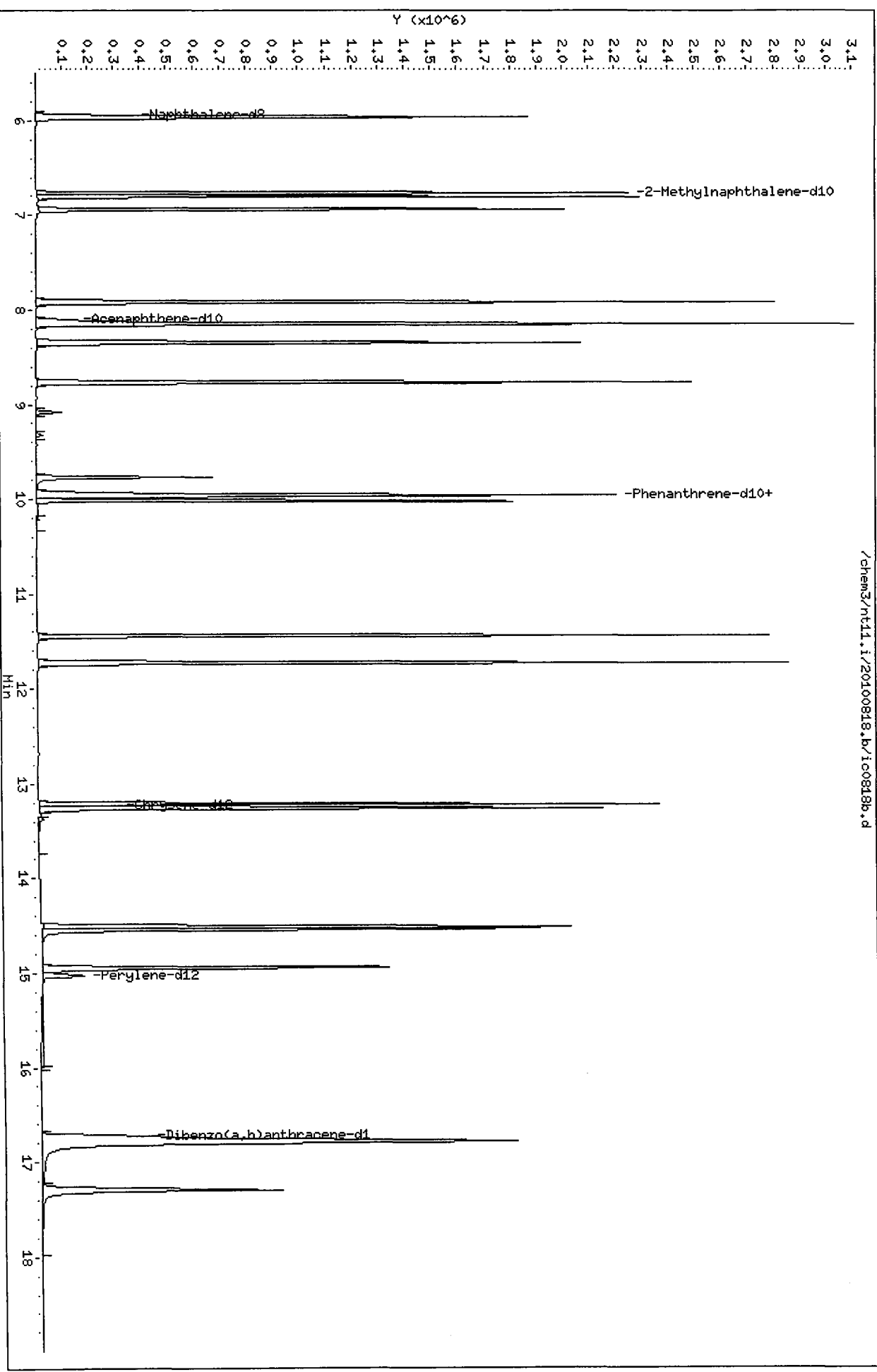
Calibration Date: 18-AUG-2010  
 Calibration Time: 15:25  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

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

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

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



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

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

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

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

VTS  
8-19-10



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

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

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

Test Mode:  
 Use Initial Calibration Level 4.

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

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.94	9.44	10.44	9.93	-0.14
29 Chrysene-d12	13.24	12.74	13.74	13.24	0.00
35 Perylene-d12	15.03	14.53	15.53	15.03	0.01

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

Date: 18-AUG-2010 16:27

Instrument: nt11.i

Client ID:

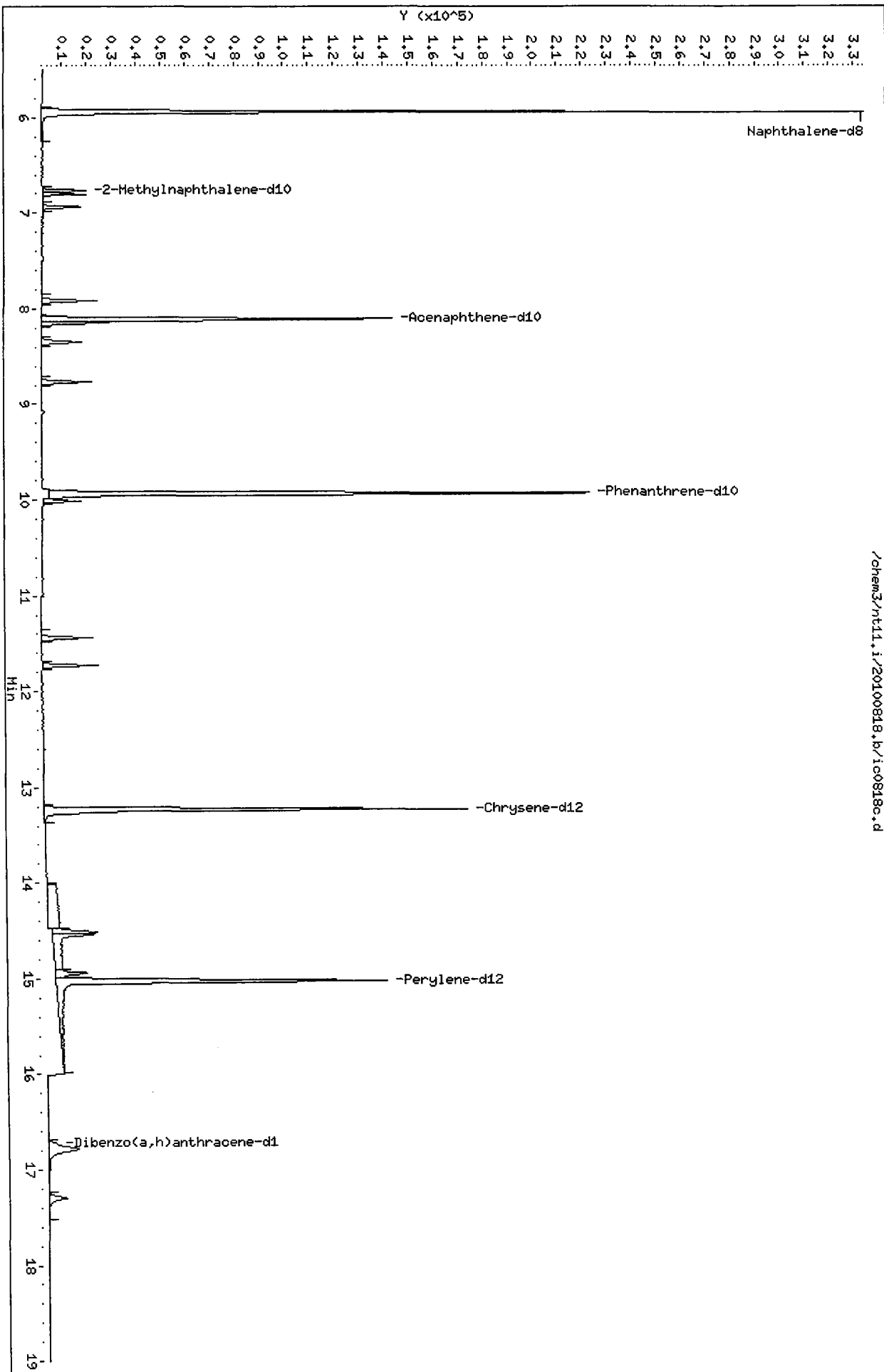
Operator: VTS

Sample Info: IC0818C

Column diameter: 0.25

Column phase: ZB-5msi

/chem3/nt11.i/20100818.b/ic0818c.d



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

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

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

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

*UTS*  
*8.19.10*

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

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

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

Test Mode:  
 Use Initial Calibration Level 4.

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

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.94	9.44	10.44	9.93	-0.13
29 Chrysene-d12	13.24	12.74	13.74	13.24	0.00
35 Perylene-d12	15.03	14.53	15.53	15.03	0.00

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

Date: 18-AUG-2010 16:51

Instrument: nt11.i

Client ID:

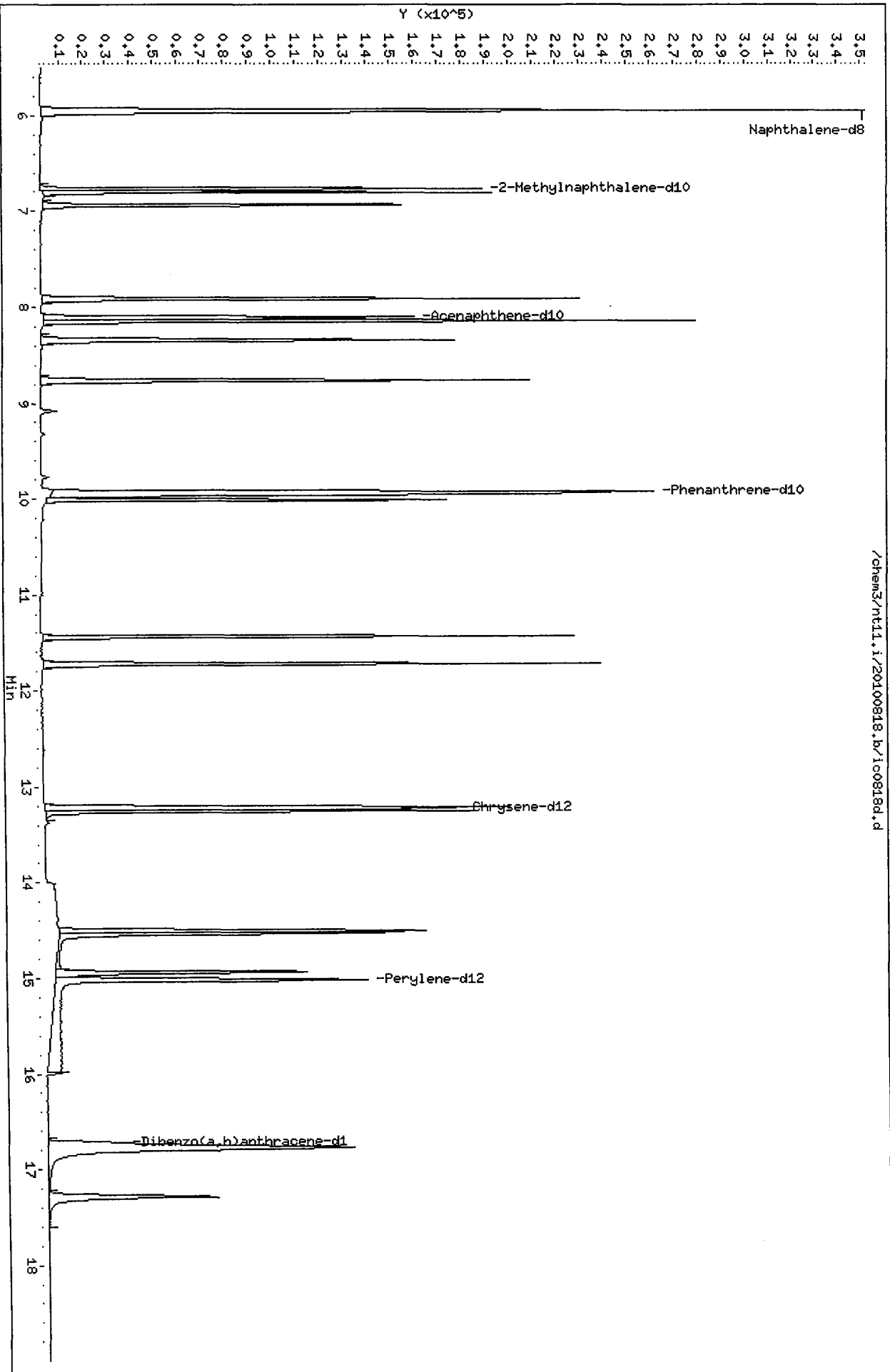
Operator: VTS

Sample Info: IC0818D

Column diameter: 0.25

Column phase: ZB-5msi

/chem3/nt11.i/20100818.b/ic0818d.d



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

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

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

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

215  
8.19.10

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

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

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

Test Mode:  
 Use Initial Calibration Level 4.

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

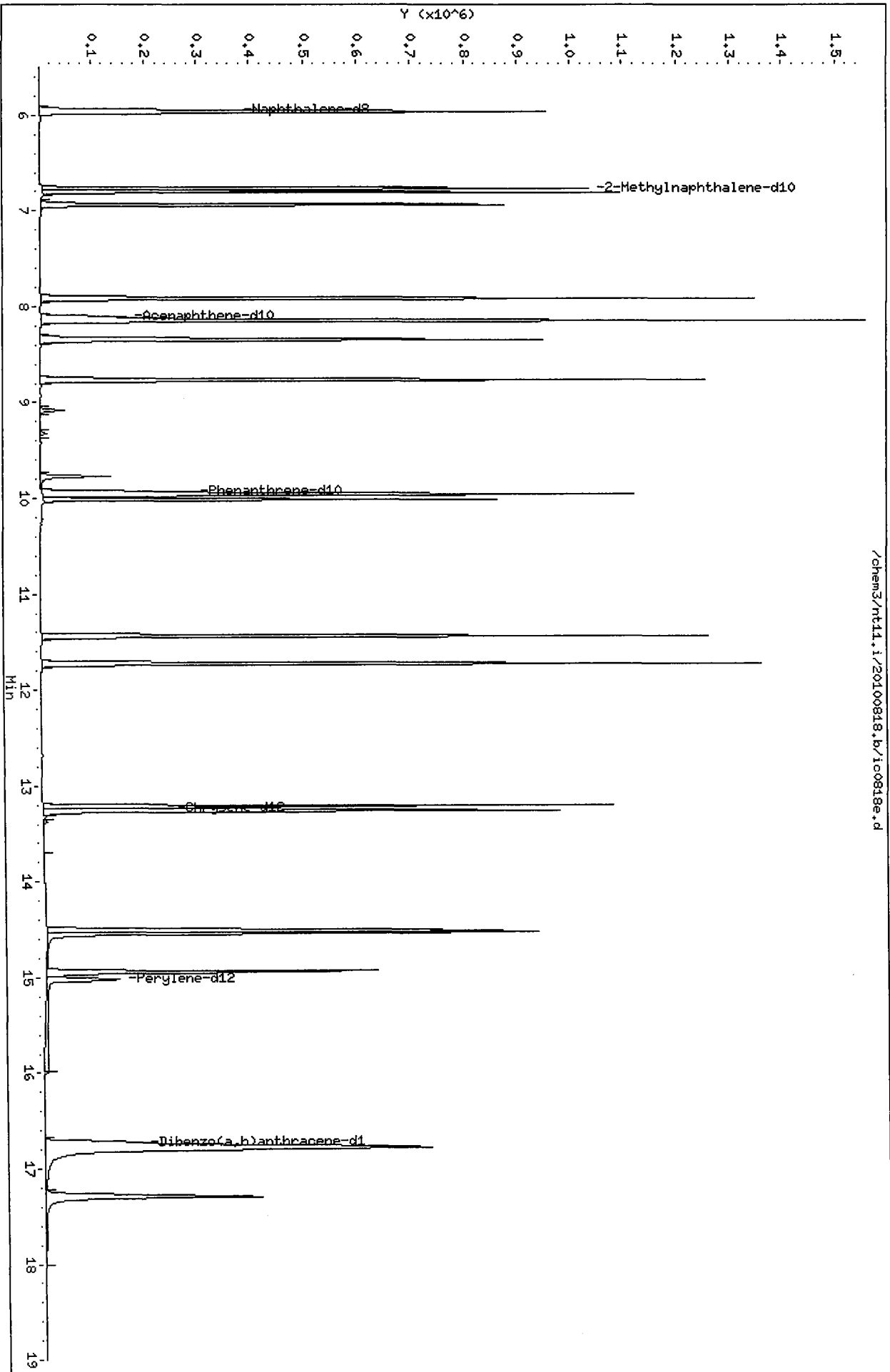
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.94	9.44	10.44	9.93	-0.14
29 Chrysene-d12	13.24	12.74	13.74	13.24	0.00
35 Perylene-d12	15.03	14.53	15.53	15.02	-0.06

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

Column phase: ZB-5msi

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

/chem3/nt11.i/20100818.b/ic0818e.d





Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

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

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

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

VTS  
8.19.10

QC Flag Legend

M - Compound response manually integrated.

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

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

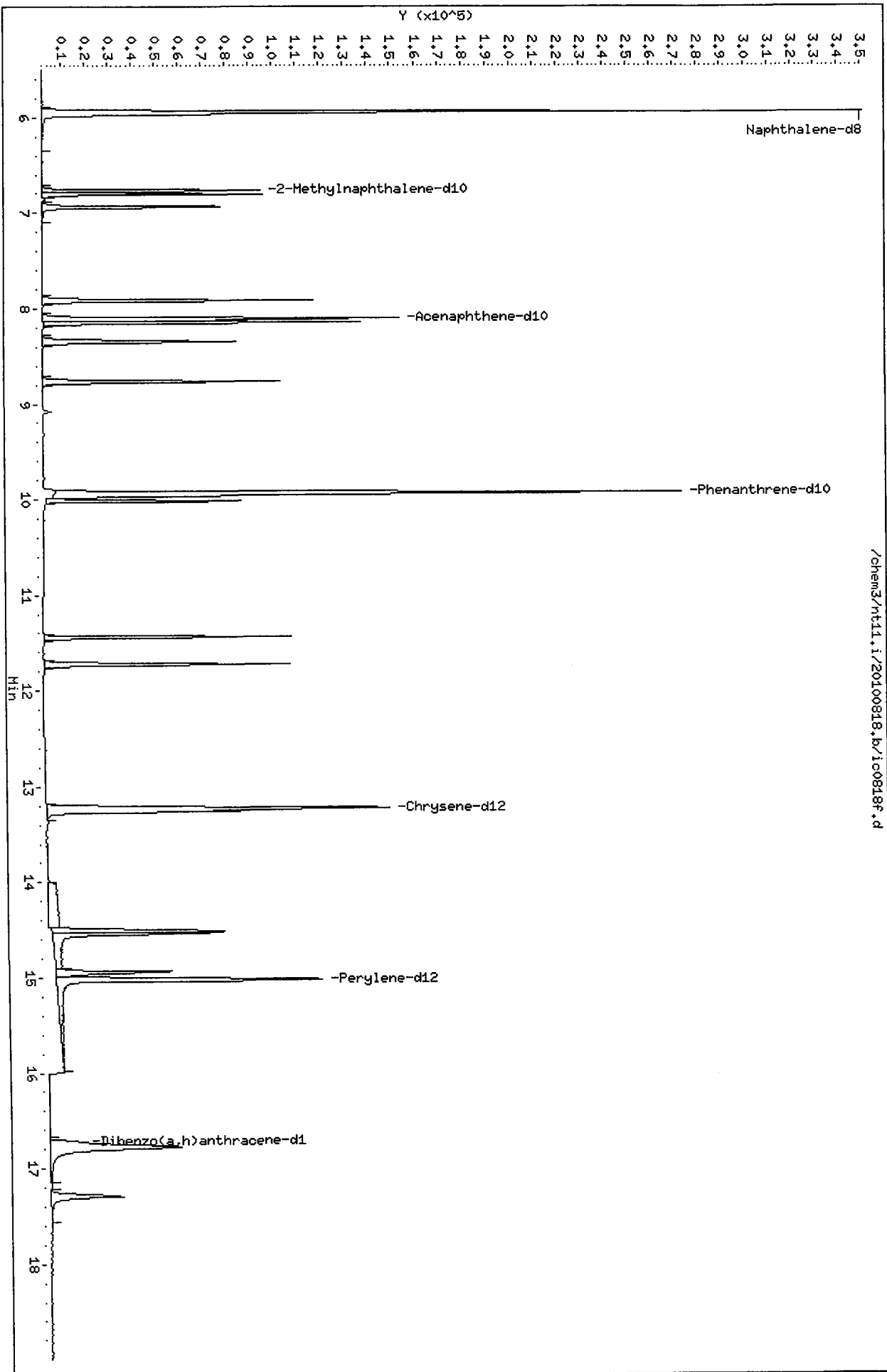
Calibration Date: 18-AUG-2010  
 Calibration Time: 15:25  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

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

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.94	9.44	10.44	9.93	-0.13
29 Chrysene-d12	13.24	12.74	13.74	13.24	0.00
35 Perylene-d12	15.03	14.53	15.53	15.03	0.00

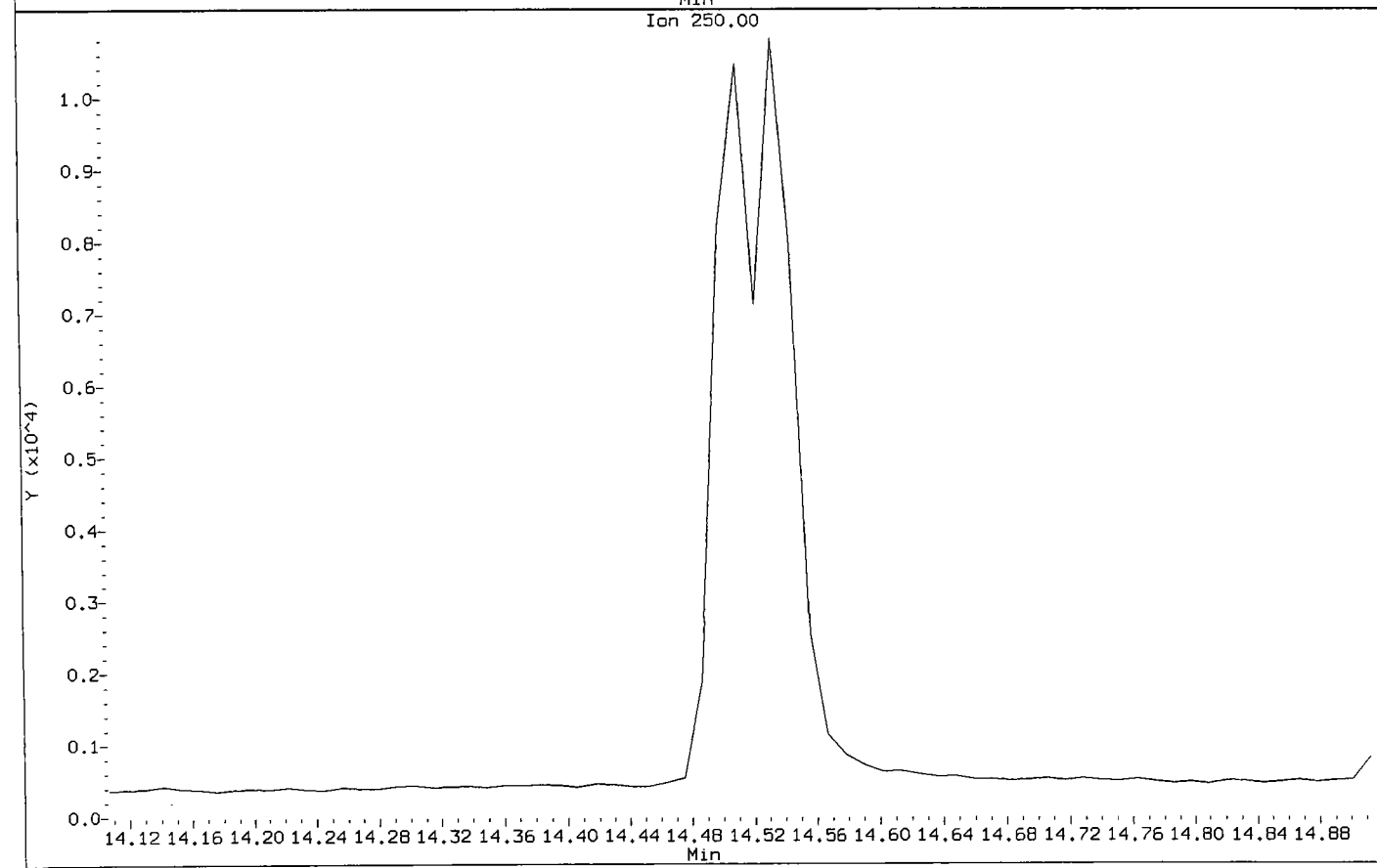
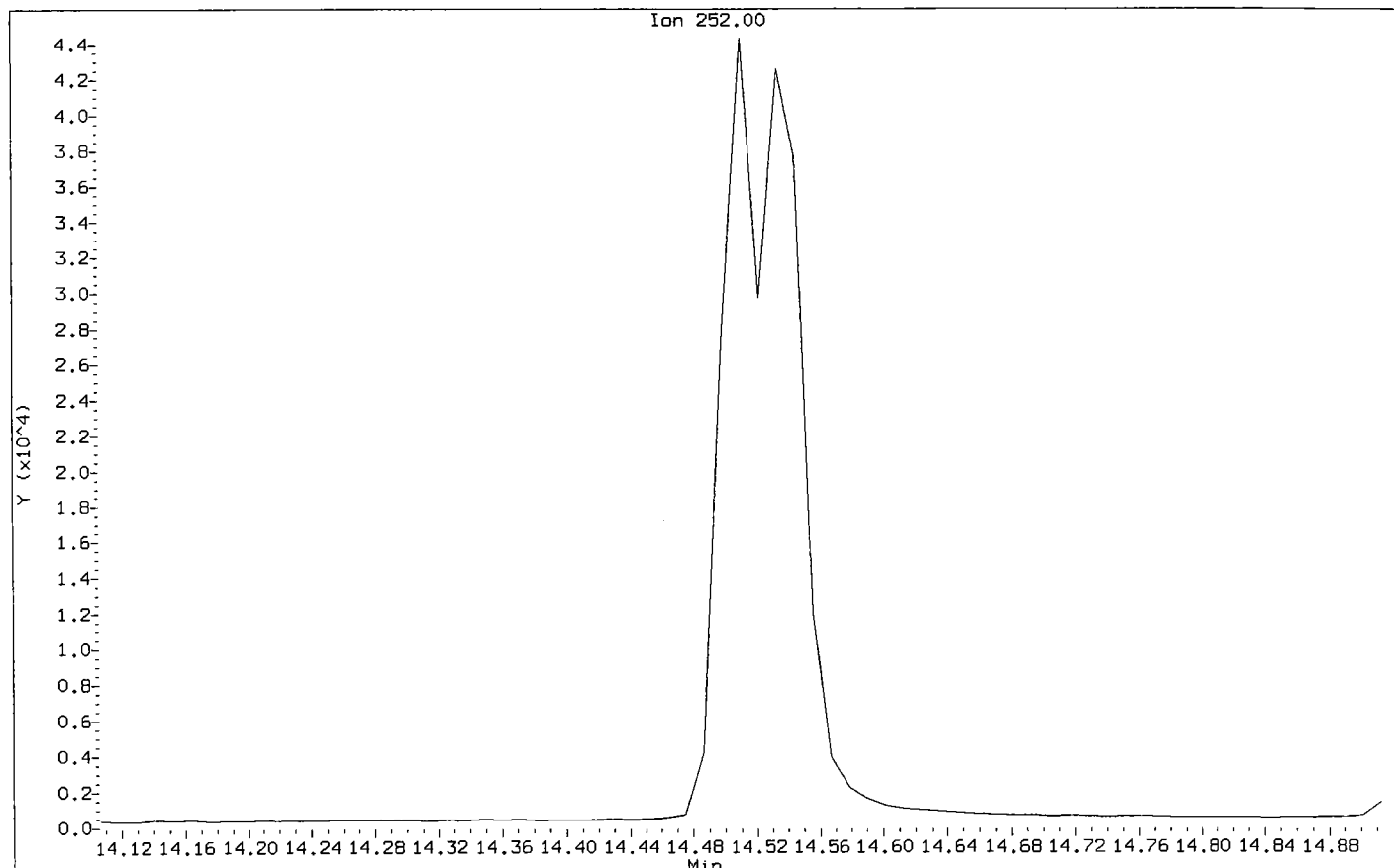
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



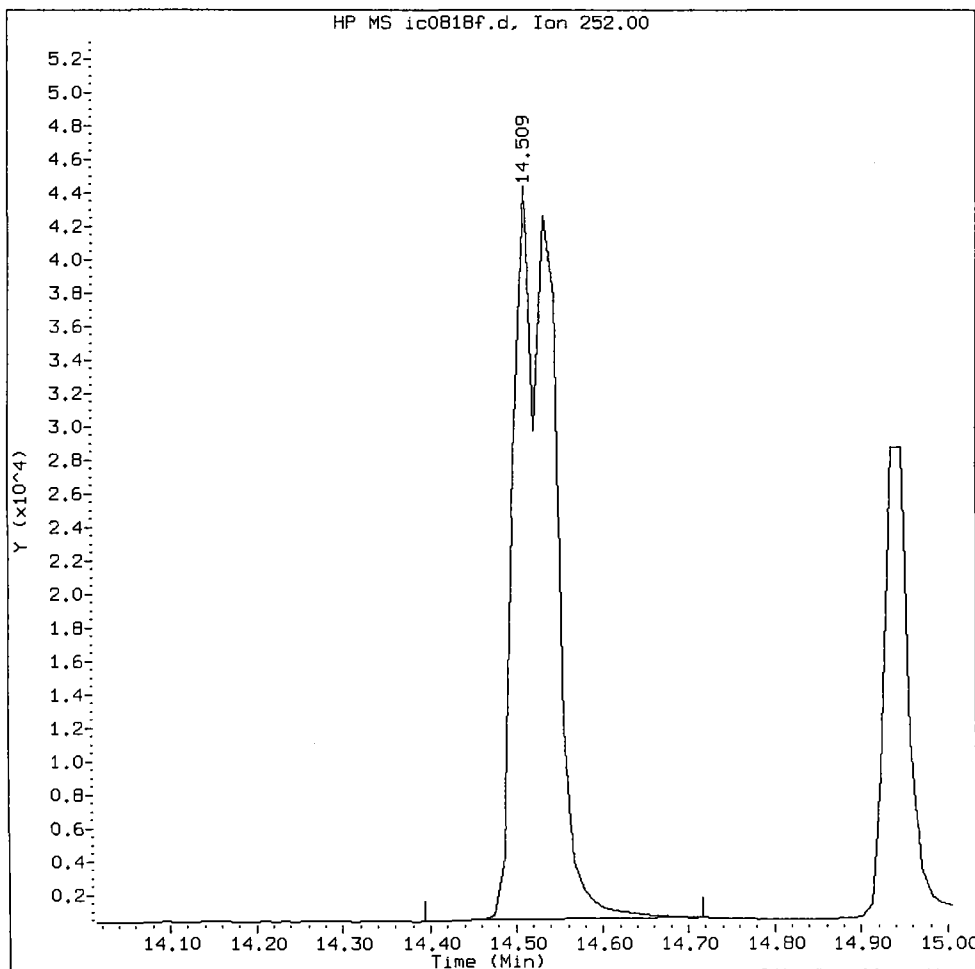
Data File: /chem3/nt11.i/20100818.b/1c0818f.d  
Injection Date: 18-AUG-2010 17:39  
Instrument: nt11.i  
Client Sample ID:

VTS  
8.19.10

Compound: Total Benzo[fluoranthenes]  
CAS Number:



Total Benzofluoranthenes Amount: 97.98 Area: 140724



MANUAL INTEGRATION for Total Benzofluoranthenes

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

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

Analyst: VR

Date: 8.19.10

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

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

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

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

VTS  
8.19.10

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

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

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

Test Mode:  
 Use Initial Calibration Level 4.

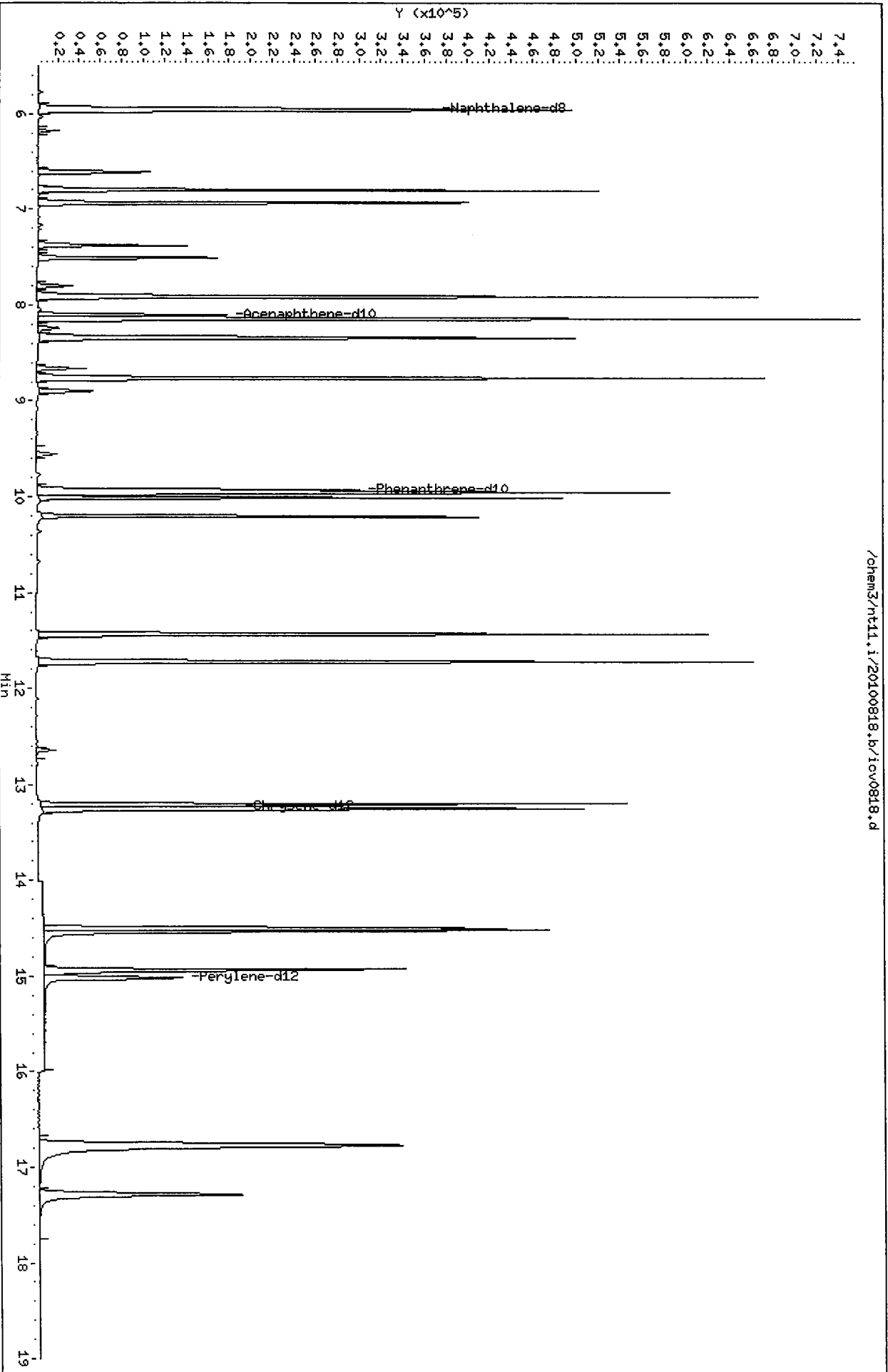
COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	421880	-0.16
11 Acenaphthene-d10	241002	120501	482004	237318	-1.53
18 Phenanthrene-d10	409999	205000	819998	392583	-4.25
29 Chrysene-d12	258429	129214	516858	242433	-6.19
35 Perylene-d12	200470	100235	400940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

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

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



/chem3/nt11.i/20100818.b/iov0818.d



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

**ARI Job ID: RI46**



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

ARI Project ID: RI46 Client ID: Floyd/Snyder

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

Parameter(s): LOW SIM PNAS

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

Curve Date: 8/18/10 Analysis Start Date: 8.26.10

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

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

*Samples A-I, Full package.*

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

Analyst: VJB Date: 8.27.10

Reviewer: [Signature] Date: 8/23/10

# Analytical Resources Inc.: Organics Instrument Log

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

Date: 8-26-10 Analysis: Low Sim PPA Analyst: VIS  
 GC Program: LowSim Column No: 180393 Column Type: ZB-5ms  
 Instrument Tune (U or .CT.): 100605.U EM Voltage: 2200  
 Calibration File: df0826 Curve Date: 8/18/10

IS/SS 1754.5 Ical/Ccal 1665-3 LCS/ICV \_\_\_\_\_

## INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20100826.b

Time	Filename	LabID	ClientID	DF										
1 1325	df0826.d	DF0826		1	NO ISTDs FOUND									
2 1339	cc0826.d	CC0826		1	5.94	445766	8.10	227615	9.93	372924	13.23	235553	15.02	177028
3 1403	rg96mb.d	RG96MBS1	RG96MBS1	1	5.94	460547	8.10	243811	9.93	404540	13.23	240633	15.02	179594
4 1427	rg96sb.d	RG96LCSS1	RG96LCSS1	1	5.94	456318	8.10	243371	9.93	410844	13.23	255778	15.02	184948
5 1451	rg96sbd.d	RG96LCSDS1	RG96LCSDS1	1	5.94	456946	8.10	246333	9.93	400038	13.23	247376	15.02	177914
6 1522	rg96a.d	RG96A	PGST 100219	5	5.95	464828	8.12	247034	9.94	426374	13.24	251802	15.03	193959
7 1550	rg96a2.d	RG96A	PGST 100219	1	5.94	472034	8.10	252521	9.93	413601	13.24	252163	15.02	190105
8 1614	rg96b.d	RG96B	PGST 100517	1	5.94	466681	8.10	250252	9.93	399481	13.23	238548	15.02	183517
9 1638	ri46mb.d	RI46MBW1	RI46MBW1	1	5.94	469490	8.10	255832	9.93	421230	13.23	261623	15.02	191997
0 1702	ri46sb.d	RI46LCSW1	RI46LCSW1	1	5.94	495739	8.10	270286	9.93	451080	13.23	283892	15.02	210050
1 1726	ri46sbd.d	RI46LCSDW1	RI46LCSDW1	1	5.94	489134	8.10	264218	9.93	447054	13.23	280156	15.02	207927
2 1749	ri46a.d	RI46A	MW-02-081110	1	5.94	478940	8.10	251968	9.93	414033	13.23	250712	15.02	189731
3 1813	ri46b.d	RI46B	MW-03-081110	1	5.94	482790	8.10	259776	9.93	425137	13.23	261582	15.02	194807
4 1837	ri46c.d	RI46C	MW-03-081110	1	5.94	488297	8.10	255980	9.93	422839	13.23	255213	15.02	195216
5 1901	ri46d.d	RI46D	MW-04-081110	1	5.94	496886	8.10	265093	9.93	446120	13.23	273315	15.02	203061
6 1925	ri46e.d	RI46E	MW-14-081110	1	5.94	483836	8.10	262903	9.93	444882	13.23	272573	15.02	204432
7 1949	ri46f.d	RI46F	MW-12-081210	1	5.94	505451	8.10	274159	9.93	463875	13.23	283489	15.02	210912
8 2013	ri46g.d	RI46G	MW-13-081210	1	5.94	502663	8.10	268638	9.93	438395	13.23	275888	15.02	206305
9 2036	ri46h.d	RI46H	MW-10-081210	1	5.94	502397	8.10	270078	9.93	443739	13.23	273461	15.02	204218
0 2100	ri46i.d	RI46I	MW-11-081210	1	5.95	492327	8.10	260157	9.93	447500	13.23	267175	15.02	202485

**Maintenance Verification** (Identify ICal or CCal that demonstrates the instrument is in control): CC0826  
 Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

NONE

*Handwritten signature and date:*  
 VIS  
 8-27-10

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20100826.b

ARI Job No.: CC08 Method: lowsim.m Instrument: nt11.i Date: 26-AUG-2010

Time Filename LabID ClientId DF Manually Integrated Compounds

1339 cc0826.d CC0826 1 NO MANUAL INTEGRATION

1638 ri46mb.d RI46MBW1 RI46MBW1 1 NO MANUAL INTEGRATION

1702 ri46sb.d RI46LCSW1 RI46LCSW1 1 NO MANUAL INTEGRATION

1726 ri46sbd.d RI46LCSW1 RI46LCSW1 1 NO MANUAL INTEGRATION

1749 ri46a.d RI46A MW-02-0811 1 NO MANUAL INTEGRATION

1813 ri46b.d RI46B MW-03-0811 1 NO MANUAL INTEGRATION

1837 ri46c.d RI46C MW-03-0811 1 NO MANUAL INTEGRATION

1901 ri46d.d RI46D MW-04-0811 1 NO MANUAL INTEGRATION

1925 ri46e.d RI46E MW-14-0811 1 NO MANUAL INTEGRATION

1949 ri46f.d RI46F MW-12-0812 1 NO MANUAL INTEGRATION

2013 ri46g.d RI46G MW-13-0812 1 NO MANUAL INTEGRATION

2036 ri46h.d RI46H MW-10-0812 1 NO MANUAL INTEGRATION

2100 ri46i.d RI46I MW-11-0812 1 NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt11.i/20100826.b

Instrument: nt11.i Date: 26-AUG-2010 Method: lowsim.m

INITIAL CAL: 18-AUG-2010

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

CONTINUING CAL: 26-AUG-2010

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

Date : 26-AUG-2010 13:25

Client ID:

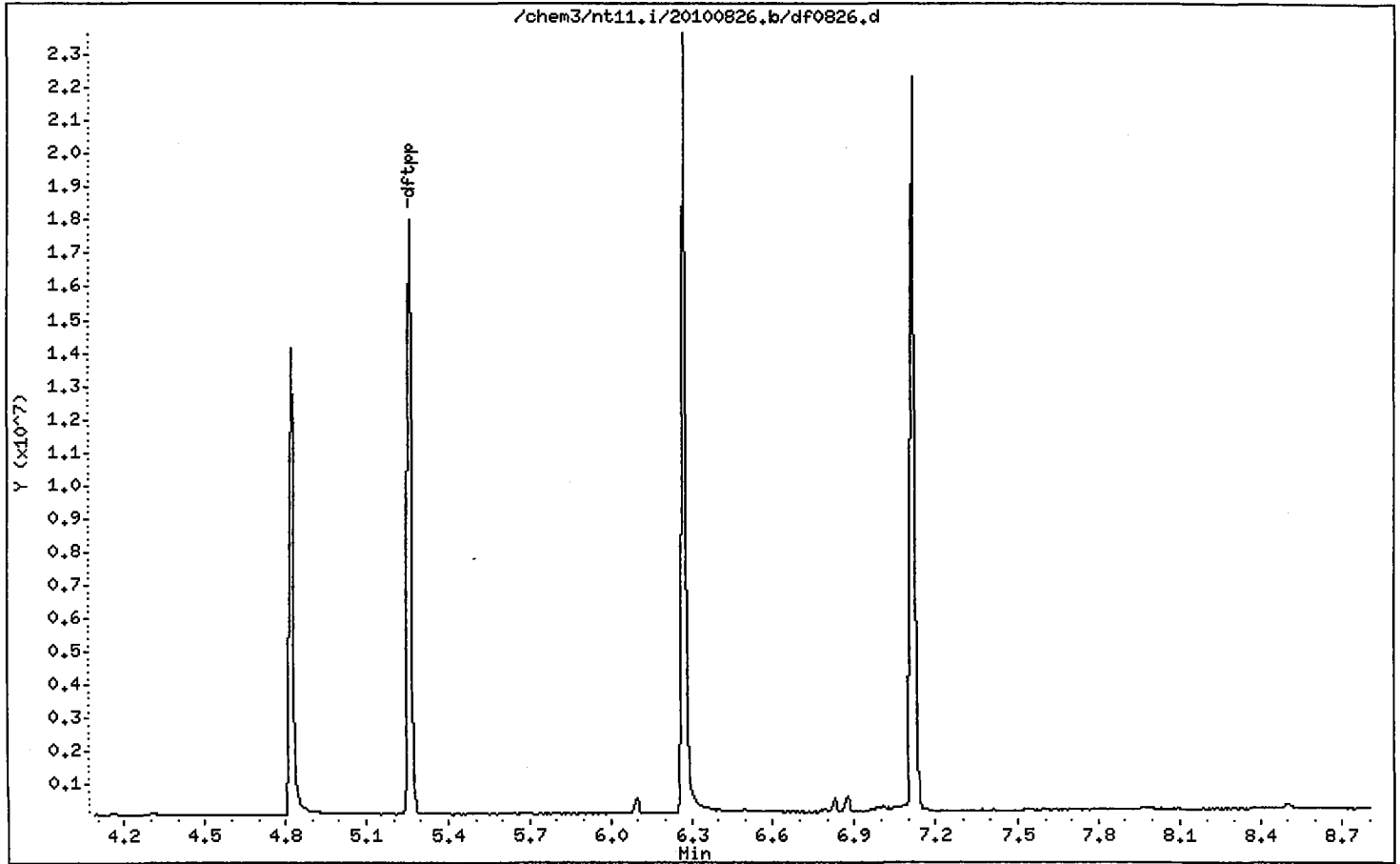
Instrument: nt11.i

Sample Info: DF0826

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Date : 26-AUG-2010 13:25

Client ID:

Instrument: nt11.i

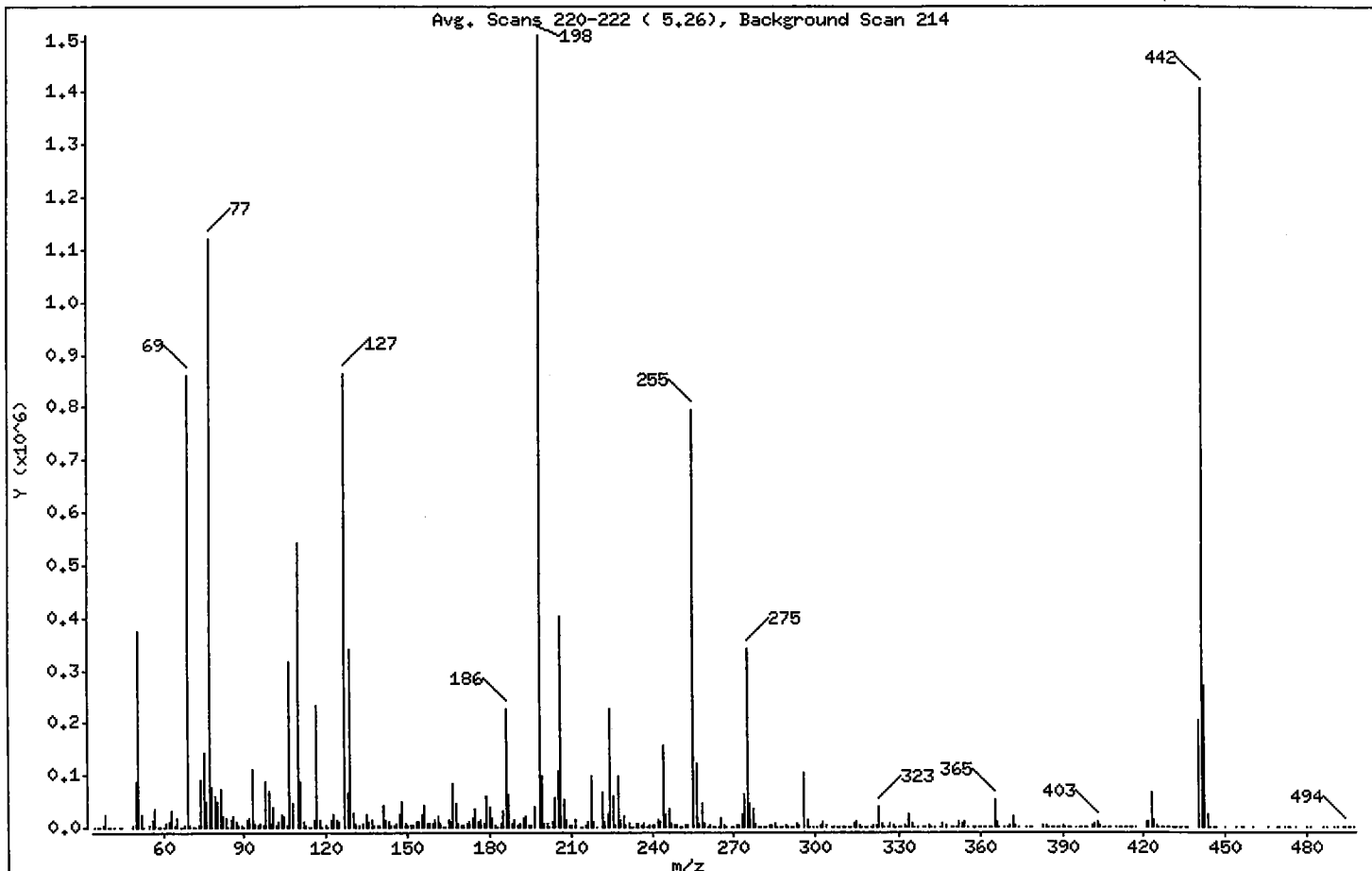
Sample Info: DF0826

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	24.90
68	Less than 2.00% of mass 69	0.25 ( 0.44)
69	Mass 69 relative abundance	57.12
70	Less than 2.00% of mass 69	0.30 ( 0.52)
127	10.00 - 80.00% of mass 198	57.27
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.54
275	10.00 - 60.00% of mass 198	22.47
365	Greater than 1.00% of mass 198	3.51
441	0.01 - 24.00% of mass 442	13.48 ( 14.45)
442	50.00 - 200.00% of mass 198	93.30
443	15.00 - 24.00% of mass 442	18.02 ( 19.32)



Date : 26-AUG-2010 13:25

Client ID:

Instrument: nt11.i

Sample Info: DF0826

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0826.d  
 Spectrum: Avg. Scans 220-222 ( 5.26), Background Scan 214  
 Location of Maximum: 198.00  
 Number of points: 401

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	79	144.00	1981	248.00	2193	358.00	533
36.00	226	145.00	2327	249.00	5177	359.00	800
37.00	435	146.00	8226	250.00	1568	360.00	333
38.00	3381	147.00	22632	251.00	1436	361.00	110
39.00	25280	148.00	49872	252.00	2352	362.00	212
40.00	459	149.00	8311	253.00	4411	363.00	86
41.00	1192	150.00	2944	255.00	792896	364.00	567
42.00	508	151.00	5113	256.00	120208	365.00	53016
44.00	554	152.00	2753	257.00	8404	366.00	8869
45.00	256	153.00	11527	258.00	45864	367.00	864
49.00	2450	154.00	10695	259.00	7262	369.00	75
50.00	88088	155.00	23672	260.00	1483	370.00	764
51.00	375680	156.00	41168	261.00	2191	371.00	2149
52.00	24128	157.00	7524	262.00	302	372.00	20088
53.00	557	158.00	6724	263.00	818	373.00	4972
55.00	3167	159.00	5633	264.00	587	374.00	1187
56.00	12702	160.00	12397	265.00	17496	377.00	305
57.00	34408	161.00	19208	266.00	2957	378.00	128
58.00	1284	162.00	5853	267.00	1118	379.00	107
59.00	357	163.00	931	269.00	368	383.00	4028
60.00	40	164.00	1395	270.00	1273	384.00	1988
61.00	7816	165.00	14057	271.00	1757	385.00	1229
62.00	11993	166.00	12021	272.00	2464	386.00	251
63.00	30712	167.00	83744	273.00	25368	387.00	78
64.00	3687	168.00	44424	274.00	62456	388.00	178
65.00	16712	169.00	7421	275.00	339008	389.00	165
66.00	857	170.00	2539	276.00	48440	390.00	2665
67.00	1444	171.00	3145	277.00	33904	391.00	1721
68.00	3763	172.00	6853	278.00	5944	392.00	988
69.00	861824	173.00	9784	279.00	1382	393.00	237
70.00	4479	174.00	16266	280.00	349	395.00	210
71.00	1253	175.00	33728	281.00	296	396.00	214
72.00	632	176.00	10605	282.00	884	397.00	373
73.00	4103	177.00	13470	283.00	2883	398.00	134
74.00	91760	178.00	5269	284.00	2844	399.00	135

Date : 26-AUG-2010 13:25

Client ID:

Instrument: nt11.i

Sample Info: DF0826

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0826.d  
 Spectrum: Avg. Scans 220-222 ( 5,26), Background Scan 214  
 Location of Maximum: 198.00  
 Number of points: 401

m/z	Y	m/z	Y	m/z	Y	m/z	Y
75.00	143488	179.00	57936	285.00	6058	401.00	1847
76.00	47056	180.00	39600	286.00	1010	402.00	7263
77.00	1120768	181.00	17984	287.00	166	403.00	10947
78.00	77736	182.00	2834	288.00	1077	404.00	3069
79.00	58648	183.00	1550	289.00	2151	405.00	1020
80.00	49168	184.00	5433	290.00	1251	406.00	55
81.00	73384	185.00	30384	291.00	840	407.00	20
82.00	19240	186.00	226048	292.00	929	408.00	216
83.00	16728	187.00	63984	293.00	7100	410.00	361
84.00	605	188.00	6322	294.00	1924	411.00	384
85.00	13750	189.00	12899	296.00	105688	412.00	577
86.00	19520	190.00	1844	297.00	13783	413.00	68
87.00	8850	191.00	6744	298.00	1372	414.00	563
88.00	4405	192.00	17984	299.00	542	415.00	602
89.00	1821	193.00	21104	301.00	955	416.00	57
90.00	740	194.00	4808	302.00	1815	417.00	236
91.00	13581	195.00	2928	303.00	11708	421.00	8905
92.00	16189	196.00	39608	304.00	2803	422.00	10522
93.00	112576	198.00	1508864	306.00	137	423.00	64568
94.00	8487	199.00	98696	307.00	436	424.00	13822
95.00	1775	200.00	8215	308.00	1360	425.00	2497
96.00	5512	201.00	6121	309.00	655	426.00	321
97.00	2172	202.00	506	310.00	1137	427.00	312
98.00	86216	203.00	10777	311.00	305	428.00	409
99.00	71032	204.00	56936	312.00	246	429.00	656
100.00	6592	205.00	106896	313.00	962	430.00	605
101.00	39696	206.00	401024	314.00	5208	431.00	1489
102.00	2176	207.00	51256	315.00	11195	432.00	122
103.00	10423	208.00	13343	316.00	4657	433.00	1244
104.00	22712	209.00	4334	317.00	870	434.00	1124
105.00	21392	210.00	3390	318.00	343	435.00	613
106.00	2772	211.00	15038	319.00	205	436.00	84
107.00	317248	213.00	1050	320.00	412	437.00	137
108.00	44704	214.00	111	321.00	2487	441.00	203392
110.00	542400	215.00	4137	322.00	2669	442.00	1407488

Date : 26-AUG-2010 13:25

Client ID:

Instrument: nt11.i

Sample Info: DF0826

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0826.d  
 Spectrum: Avg. Scans 220-222 ( 5.26), Background Scan 214  
 Location of Maximum: 198.00  
 Number of points: 401

m/z	Y	m/z	Y	m/z	Y	m/z	Y
111.00	85048	216.00	8887	323.00	36784	443.00	271872
112.00	9393	217.00	97320	324.00	5967	444.00	23376
113.00	2842	218.00	10407	325.00	599	445.00	1252
114.00	1033	219.00	1680	326.00	356	446.00	443
115.00	1141	221.00	66608	327.00	5385	447.00	130
116.00	14121	222.00	8743	328.00	3566	450.00	96
117.00	231680	223.00	22592	329.00	741	454.00	145
118.00	15147	224.00	225472	330.00	168	456.00	199
119.00	1191	225.00	58608	331.00	307	457.00	57
120.00	3568	226.00	3582	332.00	3648	460.00	173
121.00	563	227.00	95392	333.00	1178	466.00	83
122.00	15559	228.00	14387	334.00	24296	469.00	117
123.00	24144	229.00	19312	335.00	5897	470.00	106
124.00	13142	230.00	2499	336.00	509	472.00	64
125.00	9116	231.00	8322	337.00	90	473.00	120
127.00	864128	232.00	989	339.00	738	474.00	121
128.00	65712	233.00	1155	340.00	435	476.00	65
129.00	341056	234.00	6590	341.00	3876	480.00	74
130.00	27424	235.00	6238	342.00	1312	481.00	117
131.00	6617	236.00	5157	343.00	286	486.00	70
132.00	2993	237.00	7339	345.00	16	487.00	212
134.00	8093	238.00	833	346.00	7533	490.00	137
135.00	25848	239.00	2648	347.00	1951	491.00	86
136.00	9389	240.00	2324	349.00	241	493.00	148
137.00	12640	241.00	4584	350.00	542	494.00	308
138.00	2697	242.00	12433	351.00	18	495.00	57
139.00	1913	243.00	11865	352.00	10516	496.00	197
140.00	4108	244.00	157056	353.00	7174	497.00	67
141.00	40000	245.00	24456	354.00	11561		
142.00	12268	246.00	33264	355.00	1446		
143.00	8951	247.00	7374	357.00	109		

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100826.b/cc0826.d  
 Lab Smp Id: CC0826  
 Inj Date : 26-AUG-2010 13:39  
 Operator : VTS  
 Smp Info : CC0826  
 Misc Info :  
 Comment :  
 Method : /chem3/nt11.i/20100826.b/lowsim.m  
 Meth Date : 26-Aug-2010 14:19 van  
 Cal Date : 18-AUG-2010 17:39  
 Als bottle: 3  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50  
 Processing Host: cserv3

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

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	445766	200.000	
5 Naphthalene	128	5.962	5.962	(1.004)	558876	250.000	248
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	338964	250.000	240
7 2-Methylnaphthalene	142	6.802	6.802	(1.145)	341481	250.000	245
8 1-Methylnaphthalene	142	6.928	6.928	(1.167)	335942	250.000	243
10 Acenaphthylene	152	7.916	7.916	(0.977)	512988	250.000	239
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	227615	200.000	
12 Acenaphthene	153	8.143	8.143	(1.005)	322472	250.000	254
14 Dibenzofuran	168	8.345	8.345	(1.030)	463525	250.000	251
15 Fluorene	166	8.760	8.760	(1.081)	332510	250.000	242
* 18 Phenanthrene-d10	188	9.927	9.927	(1.000)	372924	200.000	
19 Phenanthrene	178	9.953	9.953	(1.003)	482281	250.000	252
20 Anthracene	178	10.007	10.007	(1.008)	463976	250.000	247
24 Fluoranthene	202	11.442	11.442	(1.153)	488975	250.000	243
25 Pyrene	202	11.723	11.723	(1.181)	541927	250.000	259
28 Benzo(a)anthracene	228	13.212	13.212	(0.999)	385186	250.000	236
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	235553	200.000	
30 Chrysene	228	13.265	13.265	(1.003)	411945	250.000	251
43 Total Benzofluoranthenes	252	14.534	14.534	(0.968)	732596	500.000	490
34 Benzo(a)pyrene	252	14.937	14.937	(0.995)	304270	250.000	247
* 35 Perylene-d12	264	15.018	15.018	(1.000)	177028	200.000	
37 Indeno(1,2,3-cd)pyrene	276	16.772	16.772	(1.117)	390390	250.000	237
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.732	16.732	(1.114)	213718	250.000	230
38 Dibenzo(a,h)anthracene	278	16.785	16.785	(1.118)	293235	250.000	233
39 Benzo(g,h,i)perylene	276	17.282	17.282	(1.151)	343939	250.000	237

VTS  
8.26.10

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: cc0826.d  
 Lab Smp Id: CC0826  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem3/nt11.i/20100826.b/lowsim.m  
 Misc Info:

Calibration Date: 26-AUG-2010  
 Calibration Time: 13:39  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	445766	5.49
11 Acenaphthene-d10	241002	120501	482004	227615	-5.55
18 Phenanthrene-d10	409999	205000	819998	372924	-9.04
29 Chrysene-d12	258429	129214	516858	235553	-8.85
35 Perylene-d12	200470	100235	400940	177028	-11.69

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

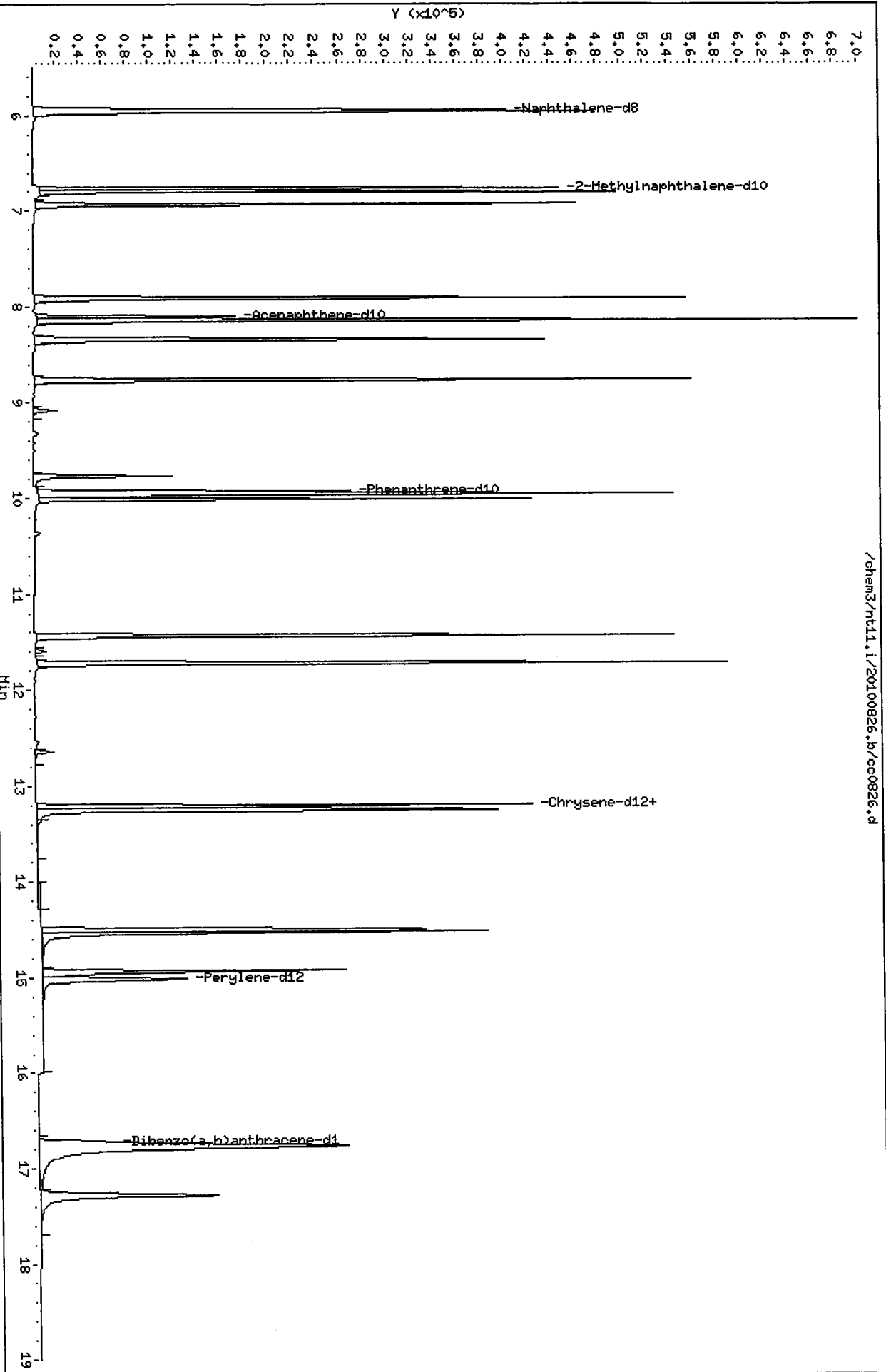
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i                      Injection Date: 26-AUG-2010 13:39  
 Lab File ID: cc0826.d                    Init. Cal. Date(s): 18-AUG-2010 18-AUG-2010  
 Analysis Type:                            Init. Cal. Times: 15:25 17:39  
 Lab Sample ID: CC0826                    Quant Type: ISTD  
 Method: /chem3/nt11.i/20100826.b/lowsim.m

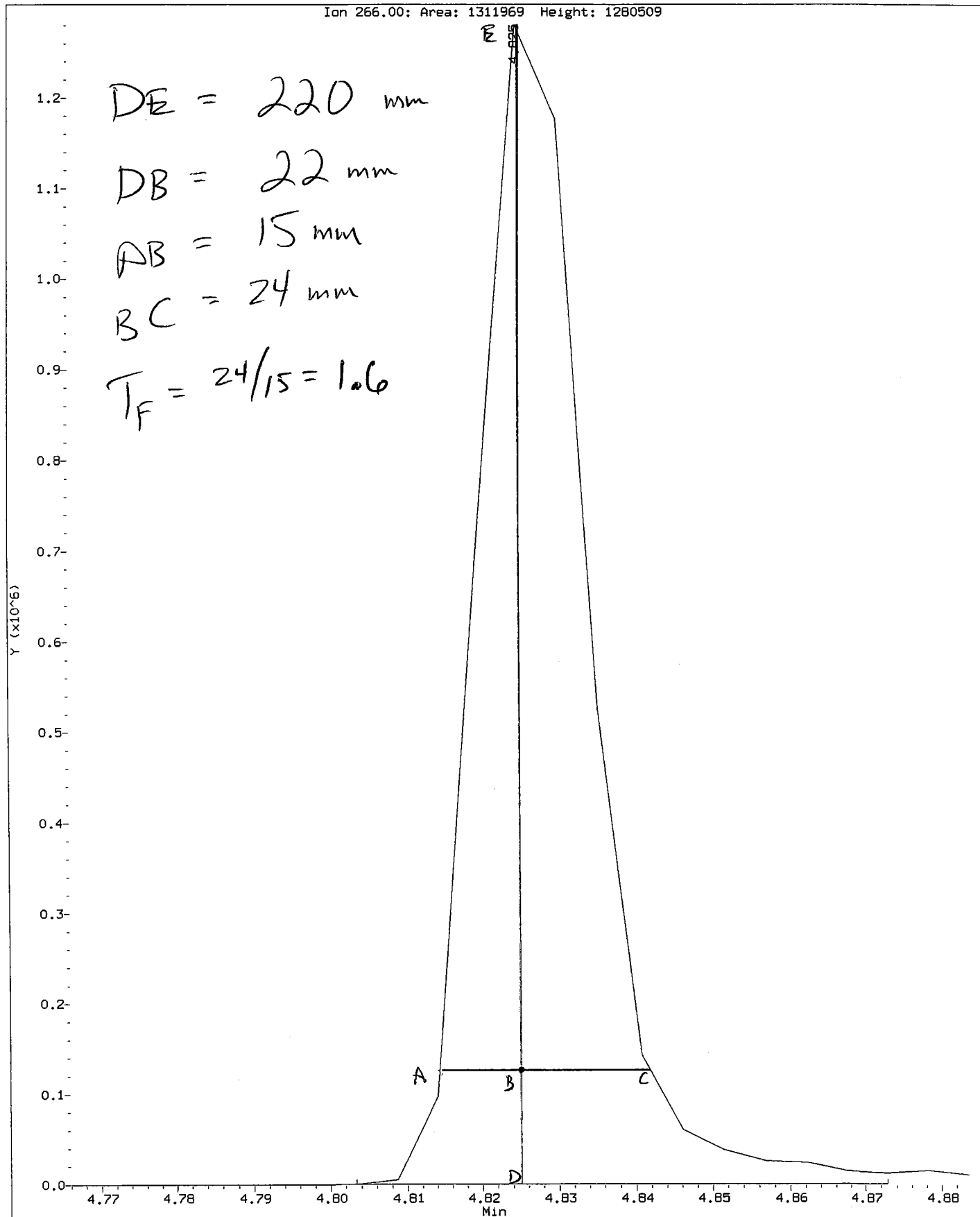
COMPOUND	RRF / AMOUNT	RF250	MIN		MAX		CURVE TYPE
			RRF	%D / %DRIFT	%D / %DRIFT		
5 Naphthalene	1.01222	1.00300	0.010	-0.91152	20.00000	Averaged	
\$ 6 2-Methylnaphthalene-d10	0.63465	0.60833	0.010	-4.14785	20.00000	Averaged	
7 2-Methylnaphthalene	0.62545	0.61284	0.010	-2.01627	20.00000	Averaged	
8 1-Methylnaphthalene	0.61962	0.60290	0.010	-2.69844	20.00000	Averaged	
10 Acenaphthylene	1.88951	1.80300	0.010	-4.57861	20.00000	Averaged	
12 Acenaphthene	1.11389	1.13339	0.010	1.75095	20.00000	Averaged	
14 Dibenzofuran	1.62576	1.62915	0.010	0.20874	20.00000	Averaged	
15 Fluorene	1.20694	1.16868	0.010	-3.17024	20.00000	Averaged	
19 Phenanthrene	1.02523	1.03459	0.010	0.91368	20.00000	Averaged	
20 Anthracene	1.00656	0.99533	0.010	-1.11658	20.00000	Averaged	
24 Fluoranthene	1.08058	1.04895	0.010	-2.92703	20.00000	Averaged	
25 Pyrene	1.12081	1.16255	0.010	3.72405	20.00000	Averaged	
28 Benzo (a) anthracene	1.38730	1.30820	0.010	-5.70179	20.00000	Averaged	
30 Chrysene	1.39504	1.39907	0.010	0.28888	20.00000	Averaged	
43 Total Benzofluoranthenes	1.68779	1.65531	0.010	-1.92384	20.00000	Averaged	
34 Benzo (a) pyrene	1.39066	1.37501	0.010	-1.12562	20.00000	Averaged	
37 Indeno (1,2,3-cd) pyrene	1.86185	1.76419	0.010	-5.24532	20.00000	Averaged	
\$ 36 Dibenzo (a,h) anthracene-d14	1.05013	0.96580	0.010	-8.03061	20.00000	Averaged	
38 Dibenzo (a,h) anthracene	1.41922	1.32514	0.010	-6.62923	20.00000	Averaged	
39 Benzo (g,h,i) perylene	1.64235	1.55428	0.010	-5.36247	20.00000	Averaged	



Data File: /chem3/nt11.i/20100826.b/ddt.b/df0826.d  
Injection Date: 26-AUG-2010 13:25  
Instrument: nt11.i  
Client Sample ID:

Compound: Pentachlorophenol  
CAS Number: 87-86-5

Ion 266.00: Area: 1311969 Height: 1280509



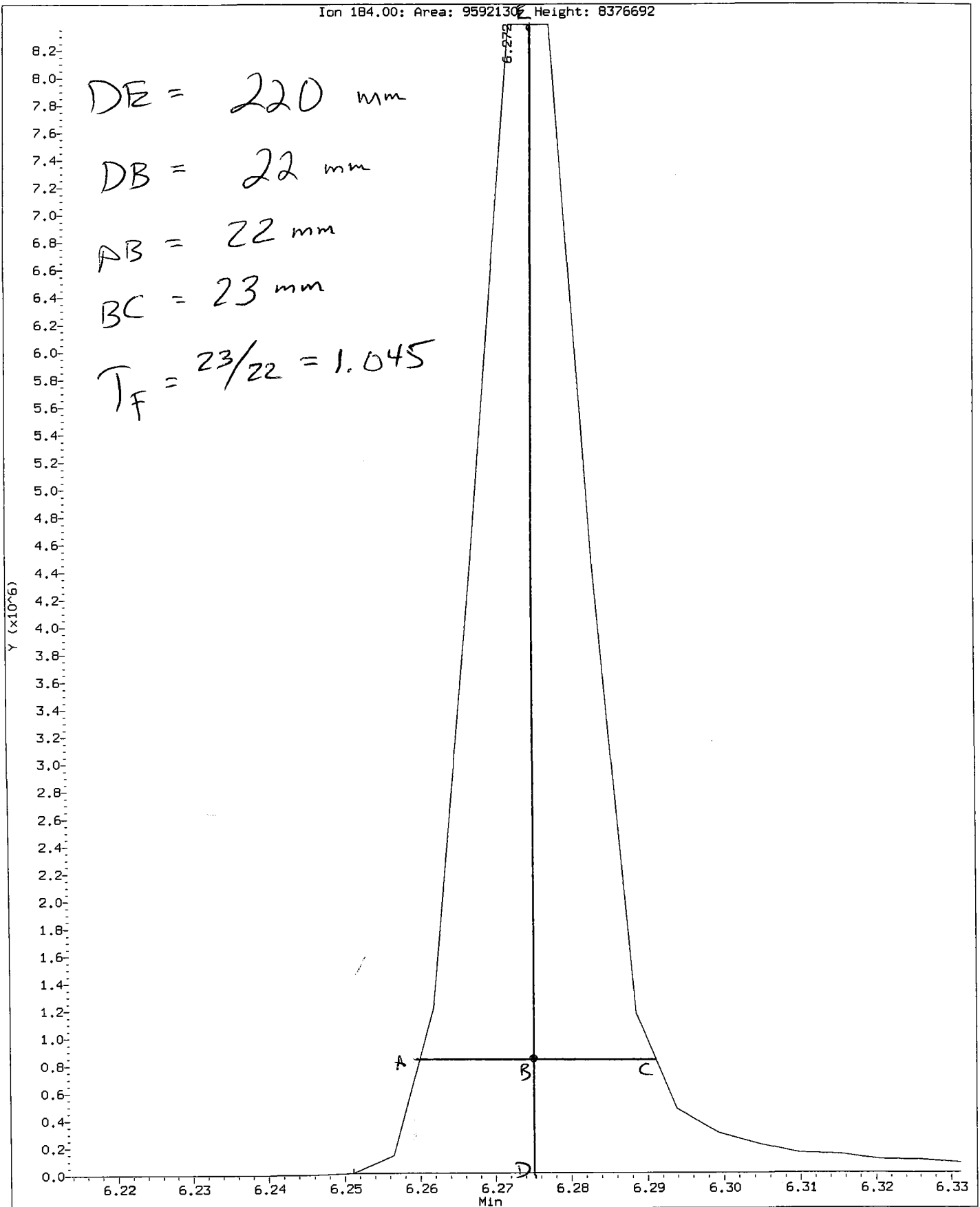
RI46: 00444



Data File: /chem3/nt11.1/20100826.b/ddt.b/df0826.d  
Injection Date: 26-AUG-2010 13:25  
Instrument: nt11.1  
Client Sample ID:

Compound: Benzidine  
CAS Number:

Ion 184.00; Area: 9592130; Height: 8376692



RI46:00445

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

Data file: /chem3/nt11.i/20100826.b/ddt.b/df0826.d      ARI ID: DF0826  
Method: /chem3/nt11.i/20100826.b/ddt.b/sw846ddt.m      Misc:  
Analysis Date: 26-AUG-2010 13:25      Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.825	1311969
Benzidine	6.272	9592130
4,4'-DDE	6.497	10777
4,4'-DDD	6.828	64572
4,4'-DDT	7.122	4193400

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

$$\text{DDT Percent Breakdown} = \frac{(10777 + 64572) * 100}{(10777 + 64572 + 4193400)}$$

DDT Percent Breakdown = 1.8 %

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100826.b/ri46mb.d  
 Lab Smp Id: RI46MBW1 Client Smp ID: RI46MBW1  
 Inj Date : 26-AUG-2010 16:38  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI46MBW1  
 Misc Info : 10-19678  
 Comment :  
 Method : /chem3/nt11.i/20100826.b/lowsim.m  
 Meth Date : 27-Aug-2010 11:00 van Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 10 QC Sample: BLANK  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ng/mL)	FINAL (ug/L)	
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	469490	200.000		
5 Naphthalene	128	Compound Not Detected.						
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	235462	158.048	158	
7 2-Methylnaphthalene	142	Compound Not Detected.						
8 1-Methylnaphthalene	142	Compound Not Detected.						
10 Acenaphthylene	152	Compound Not Detected.						
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	255832	200.000		
12 Acenaphthene	153	Compound Not Detected.						
14 Dibenzofuran	168	Compound Not Detected.						
15 Fluorene	166	Compound Not Detected.						
* 18 Phenanthrene-d10	188	9.927	9.927	(1.000)	421230	200.000		
19 Phenanthrene	178	Compound Not Detected.						
20 Anthracene	178	Compound Not Detected.						
24 Fluoranthene	202	Compound Not Detected.						
25 Pyrene	202	Compound Not Detected.						

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL (ug/L)
=====	====	==	=====	=====	=====	=====	=====
28 Benzo(a)anthracene	228		Compound Not Detected.				
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	261623	200.000	
30 Chrysene	228		Compound Not Detected.				
43 Total Benzofluoranthenes	252		Compound Not Detected.				
34 Benzo(a)pyrene	252		Compound Not Detected.				
* 35 Perylene-d12	264	15.016	15.018	(1.000)	191997	200.000	
37 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.				
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.730	16.732	(1.114)	162746	161.436	161
38 Dibenzo(a,h)anthracene	278		Compound Not Detected.				
39 Benzo(g,h,i)perylene	276		Compound Not Detected.				

US  
8.27.10

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

Instrument ID: nt11.i	Calibration Date: 26-AUG-2010
Lab File ID: ri46mb.d	Calibration Time: 13:39
Lab Smp Id: RI46MBW1	Client Smp ID: RI46MBW1
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Liquid
Operator: VTS	
Method File: /chem3/nt11.i/20100826.b/lowsim.m	
Misc Info: 10-19678	

Test Mode: Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	469490	11.11
11 Acenaphthene-d10	241002	120501	482004	255832	6.15
18 Phenanthrene-d10	409999	205000	819998	421230	2.74
29 Chrysene-d12	258429	129214	516858	261623	1.24
35 Perylene-d12	200470	100235	400940	191997	-4.23

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

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

Analytical Resources, Inc.

RECOVERY REPORT

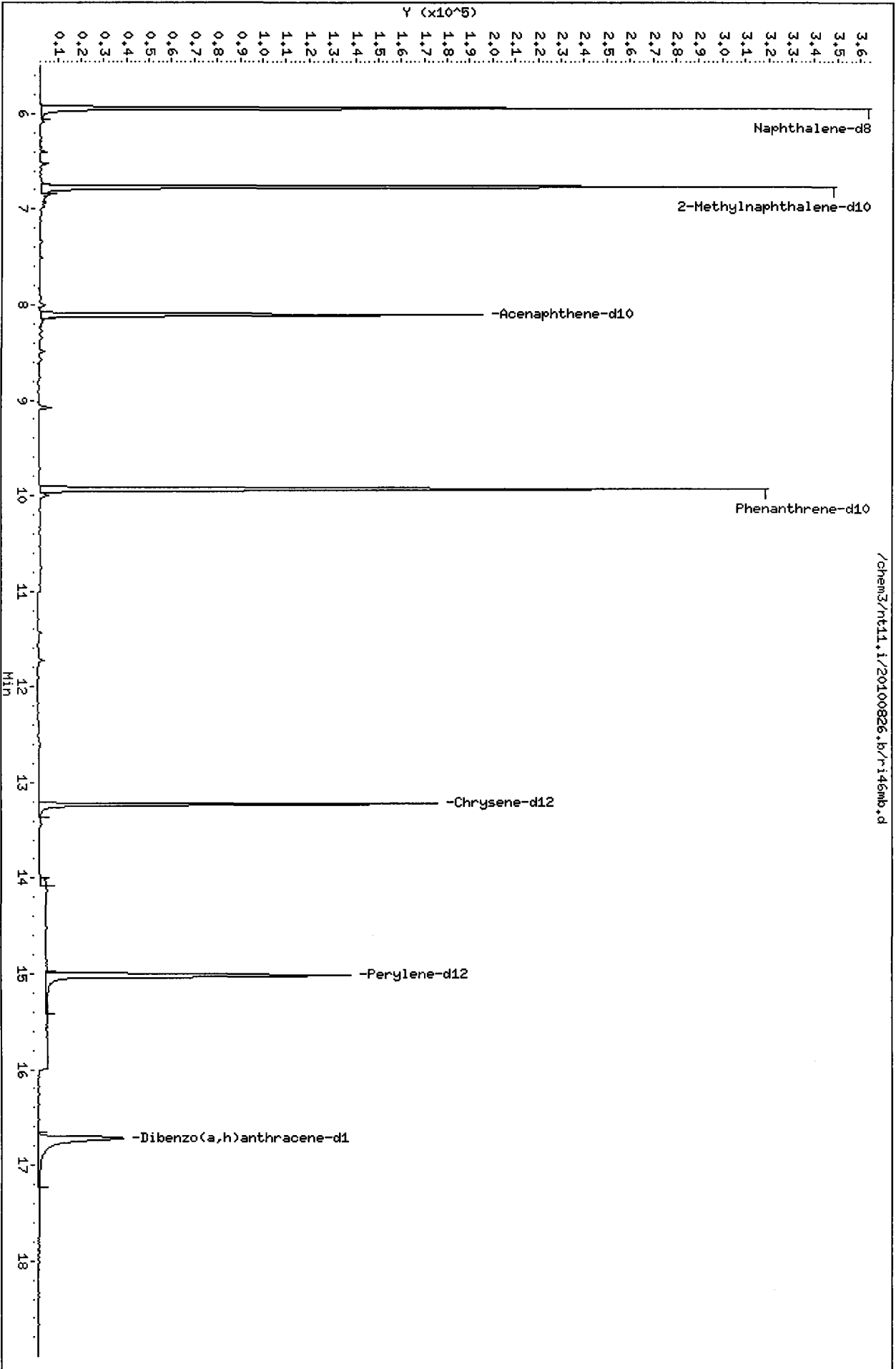
Client Name: Floyd-Snider	Client SDG: RI46
Sample Matrix: LIQUID	Fraction: SV
Lab Smp Id: RI46MBW1	Client Smp ID: RI46MBW1
Level: LOW	Operator: VTS
Data Type: MS DATA	SampleType: BLANK
SpikeList File: waterlcs.spk	Quant Type: ISTD
Sublist File: pnalnm.sub	
Method File: /chem3/nt11.i/20100826.b/lowsim.m	
Misc Info: 10-19678	

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	158	52.68	31-109
\$ 36 Dibenzo(a,h) anthra	300	161	53.81	10-133

Data File: /chem3/nt11.i/20100826.b/r/146mb.d  
Date : 26-AUG-2010 16:38

Client ID: RI46MBM1  
Sample Info: RI46MBM1  
Volume Injected (uL): 2.0  
Column phase: ZB-5msi

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



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100826.b/ri46sb.d  
 Lab Smp Id: RI46LCSW1 Client Smp ID: RI46LCSW1  
 Inj Date : 26-AUG-2010 17:02  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI46LCSW1  
 Misc Info : 10-19678  
 Comment :  
 Method : /chem3/nt11.i/20100826.b/lowsim.m  
 Meth Date : 27-Aug-2010 11:40 van Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 11 QC Sample: LCS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL ( ug/L)
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	495739	200.000	
5 Naphthalene	128	5.962	5.962	(1.004)	412346	164.347	164
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	263847	167.724	168
7 2-Methylnaphthalene	142	6.802	6.802	(1.145)	249787	161.121	161
8 1-Methylnaphthalene	142	6.940	6.928	(1.169)	249464	162.427	162
10 Acenaphthylene	152	7.916	7.916	(0.977)	430348	168.530	169
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	270286	200.000	
12 Acenaphthene	153	8.144	8.143	(1.005)	265981	176.691	177
14 Dibenzofuran	168	8.345	8.345	(1.030)	371918	169.277	169
15 Fluorene	166	8.760	8.760	(1.081)	295715	181.299	181
* 18 Phenanthrene-d10	188	9.927	9.927	(1.000)	451080	200.000	
19 Phenanthrene	178	9.953	9.953	(1.003)	463377	200.397	200
20 Anthracene	178	10.007	10.007	(1.008)	421934	185.857	186
24 Fluoranthene	202	11.442	11.442	(1.153)	535241	219.618	220
25 Pyrene	202	11.723	11.723	(1.181)	573827	227.000	227



Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL ( ug/L)
=====	====	==	=====	=====	=====	=====	=====
28 Benzo(a)anthracene	228	13.212	13.212	(0.999)	421876	214.236	214
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	283892	200.000	
30 Chrysene	228	13.266	13.265	(1.003)	457770	231.173	231
43 Total Benzo(a)fluoranthenes	252	14.533	14.534	(0.968)	762663	430.252	430
34 Benzo(a)pyrene	252	14.935	14.937	(0.995)	284275	194.636	195
* 35 Perylene-d12	264	15.016	15.018	(1.000)	210050	200.000	
37 Indeno(1,2,3-cd)pyrene	276	16.770	16.772	(1.117)	369538	188.982	189
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.730	16.732	(1.114)	212048	192.263	192
38 Dibenzo(a,h)anthracene	278	16.784	16.785	(1.118)	278028	186.528	187
39 Benzo(g,h,i)perylene	276	17.280	17.282	(1.151)	316864	183.703	184

27-10  
LTS



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i	Calibration Date: 26-AUG-2010
Lab File ID: ri46sb.d	Calibration Time: 13:39
Lab Smp Id: RI46LCSW1	Client Smp ID: RI46LCSW1
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Liquid
Operator: VTS	
Method File: /chem3/nt11.i/20100826.b/lowsim.m	
Misc Info: 10-19678	

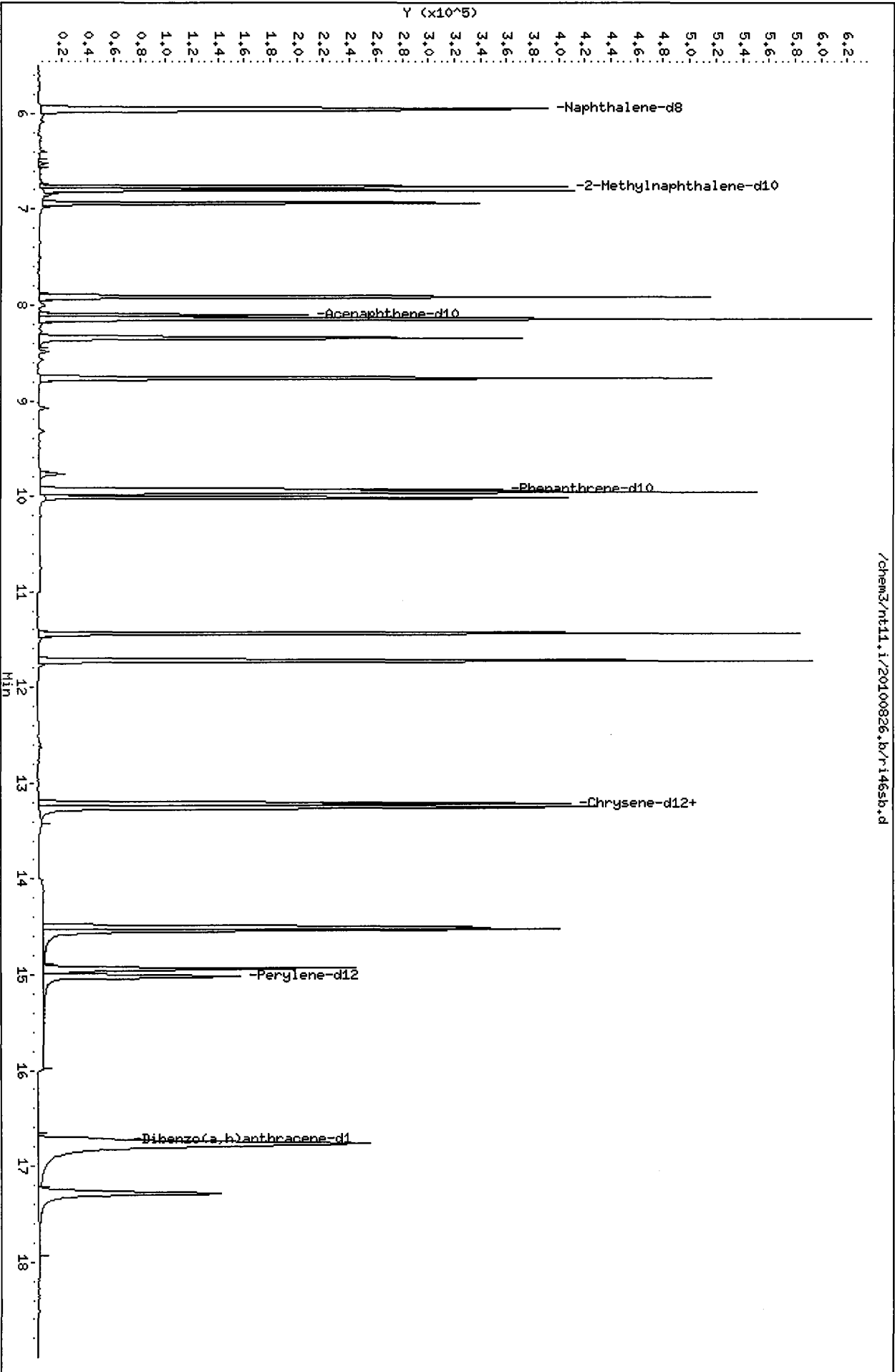
Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	495739	17.32
11 Acenaphthene-d10	241002	120501	482004	270286	12.15
18 Phenanthrene-d10	409999	205000	819998	451080	10.02
29 Chrysene-d12	258429	129214	516858	283892	9.85
35 Perylene-d12	200470	100235	400940	210050	4.78

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

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

/chem3/nt11.i/20100826.b/r146sb.d



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100826.b/ri46sbd.d  
 Lab Smp Id: RI46LCSDW1 Client Smp ID: RI46LCSDW1  
 Inj Date : 26-AUG-2010 17:26  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI46LCSDW1  
 Misc Info : 10-19678  
 Comment :  
 Method : /chem3/nt11.i/20100826.b/lowsim.m  
 Meth Date : 27-Aug-2010 11:40 van Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 12 QC Sample: LCSD  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL (ug/L)
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	489134	200.000	
5 Naphthalene	128	5.962	5.962	(1.004)	406441	164.181	164
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	247469	159.437	159
7 2-Methylnaphthalene	142	6.802	6.802	(1.145)	248594	162.516	163
8 1-Methylnaphthalene	142	6.940	6.928	(1.169)	248422	163.932	164
10 Acenaphthylene	152	7.916	7.916	(0.977)	431101	172.702	173
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	264218	200.000	
12 Acenaphthene	153	8.144	8.143	(1.005)	264801	179.947	180
14 Dibenzofuran	168	8.345	8.345	(1.030)	371630	173.030	173
15 Fluorene	166	8.760	8.760	(1.081)	298285	187.074	187
* 18 Phenanthrene-d10	188	9.927	9.927	(1.000)	447054	200.000	
19 Phenanthrene	178	9.953	9.953	(1.003)	467822	204.141	204
20 Anthracene	178	10.007	10.007	(1.008)	383725	170.549	171
24 Fluoranthene	202	11.442	11.442	(1.153)	549470	227.487	227
25 Pyrene	202	11.723	11.723	(1.181)	562382	224.476	224

Compounds	QUANT SIG			CONCENTRATIONS			
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL ( ug/L)
=====	====	==	=====	=====	=====	=====	=====
28 Benzo(a)anthracene	228	13.212	13.212	(0.999)	420667	216.471	216
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	280156	200.000	
30 Chrysene	228	13.266	13.265	(1.003)	455414	233.050	233
43 Total Benzofluoranthenes	252	14.533	14.534	(0.968)	767769	437.555	438
34 Benzo(a)pyrene	252	14.935	14.937	(0.995)	250031	172.938	173
* 35 Perylene-d12	264	15.016	15.018	(1.000)	207927	200.000	
37 Indeno(1,2,3-cd)pyrene	276	16.770	16.772	(1.117)	370493	191.405	191
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.717	16.732	(1.113)	206663	189.294	189
38 Dibenzo(a,h)anthracene	278	16.784	16.785	(1.118)	282421	191.410	191
39 Benzo(g,h,i)perylene	276	17.280	17.282	(1.151)	319486	187.114	187

UR  
8.27.10

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd-Snider                      Client SDG: RI46  
 Sample Matrix: LIQUID                          Fraction: SV  
 Lab Smp Id: RI46LCSDW1                      Client Smp ID: RI46LCSDW1  
 Level: LOW    Operator: VTS  
 Data Type: MS DATA                          SampleType: LCSD  
 SpikeList File: waterlcs.spk                      Quant Type: ISTD  
 Sublist File: pnalnm.sub  
 Method File: /chem3/nt11.i/20100826.b/lowsim.m  
 Misc Info: 10-19678

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	164	54.73	41-101
7 2-Methylnaphthalen	300	163	54.17	47-100
8 1-Methylnaphthalen	300	164	54.64	30-160
10 Acenaphthylene	300	173	57.57	35-100
12 Acenaphthene	300	180	59.98	43-104
14 Dibenzofuran	300	173	57.68	37-100
15 Fluorene	300	187	62.36	51-103
19 Phenanthrene	300	204	68.05	55-109
20 Anthracene	300	171	56.85	30-101
24 Fluoranthene	300	227	75.83	49-123
25 Pyrene	300	224	74.83	48-120
28 Benzo(a)anthracene	300	216	72.16	43-113
30 Chrysene	300	233	77.68	59-112
43 Total Benzofluoran	600	438	72.93	30-160
34 Benzo(a)pyrene	300	173	57.65	10-100
37 Indeno(1,2,3-cd)py	300	191	63.80	43-112
38 Dibenzo(a,h)anthra	300	191	63.80	42-114
39 Benzo(g,h,i)peryle	300	187	62.37	31-118

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	159	53.15	31-109
\$ 36 Dibenzo(a,h)anthra	300	189	63.10	10-133

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i	Calibration Date: 26-AUG-2010
Lab File ID: ri46sbd.d	Calibration Time: 13:39
Lab Smp Id: RI46LCSDW1	Client Smp ID: RI46LCSDW1
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Liquid
Operator: VTS	
Method File: /chem3/nt11.i/20100826.b/lowsim.m	
Misc Info: 10-19678	

Test Mode:  
 Use Initial Calibration Level 4.

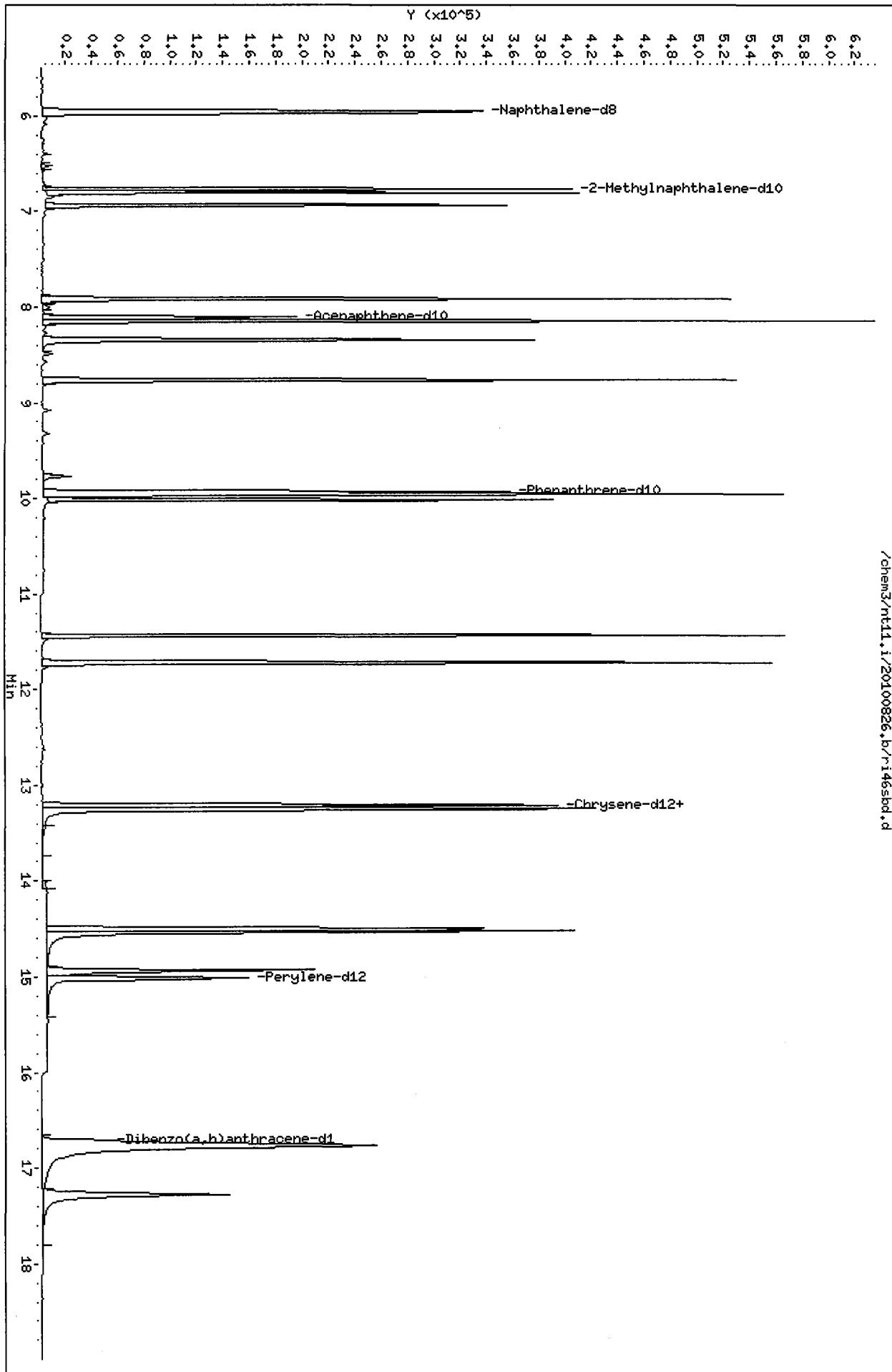
COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	489134	15.76
11 Acenaphthene-d10	241002	120501	482004	264218	9.63
18 Phenanthrene-d10	409999	205000	819998	447054	9.04
29 Chrysene-d12	258429	129214	516858	280156	8.41
35 Perylene-d12	200470	100235	400940	207927	3.72

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

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



/chem3/nt11.i/20100826.b/r146sbd.d



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100826.b/ri46a.d  
 Lab Smp Id: RI46A Client Smp ID: MW-02-081110  
 Inj Date : 26-AUG-2010 17:49  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI46A  
 Misc Info : 10-19678  
 Comment :  
 Method : /chem3/nt11.i/20100826.b/lowsim.m  
 Meth Date : 27-Aug-2010 11:00 van Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 13  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalnm.sub  
 Target Version: 3.50  
 Processing Host: cserv3

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ng/mL)	FINAL (ug/L)	
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	478940	200.000		
5 Naphthalene	128	Compound Not Detected.						
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	254455	167.427	167	
7 2-Methylnaphthalene	142	Compound Not Detected.						
8 1-Methylnaphthalene	142	Compound Not Detected.						
10 Acenaphthylene	152	Compound Not Detected.						
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	251968	200.000		
12 Acenaphthene	153	Compound Not Detected.						
14 Dibenzofuran	168	Compound Not Detected.						
15 Fluorene	166	Compound Not Detected.						
* 18 Phenanthrene-d10	188	9.927	9.927	(1.000)	414033	200.000		
19 Phenanthrene	178	Compound Not Detected.						
20 Anthracene	178	Compound Not Detected.						
24 Fluoranthene	202	Compound Not Detected.						
25 Pyrene	202	Compound Not Detected.						

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL ( ug/L)
=====	----	==	=====	=====	=====	=====	=====
28 Benzo(a)anthracene	228		Compound Not Detected.				
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	250712	200.000	
30 Chrysene	228		Compound Not Detected.				
43 Total Benzofluoranthenes	252		Compound Not Detected.				
34 Benzo(a)pyrene	252		Compound Not Detected.				
* 35 Perylene-d12	264	15.016	15.018	(1.000)	189731	200.000	
37 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.				
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.730	16.732	(1.114)	180312	180.997	181
38 Dibenzo(a,h)anthracene	278		Compound Not Detected.				
39 Benzo(g,h,i)perylene	276		Compound Not Detected.				

V/S  
8.27.10

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

Instrument ID: nt11.i	Calibration Date: 26-AUG-2010
Lab File ID: ri46a.d	Calibration Time: 13:39
Lab Smp Id: RI46A	Client Smp ID: MW-02-081110
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: VTS	
Method File: /chem3/nt11.i/20100826.b/lowsim.m	
Misc Info: 10-19678	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	478940	13.34
11 Acenaphthene-d10	241002	120501	482004	251968	4.55
18 Phenanthrene-d10	409999	205000	819998	414033	0.98
29 Chrysene-d12	258429	129214	516858	250712	-2.99
35 Perylene-d12	200470	100235	400940	189731	-5.36

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

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

Analytical Resources, Inc.

RECOVERY REPORT

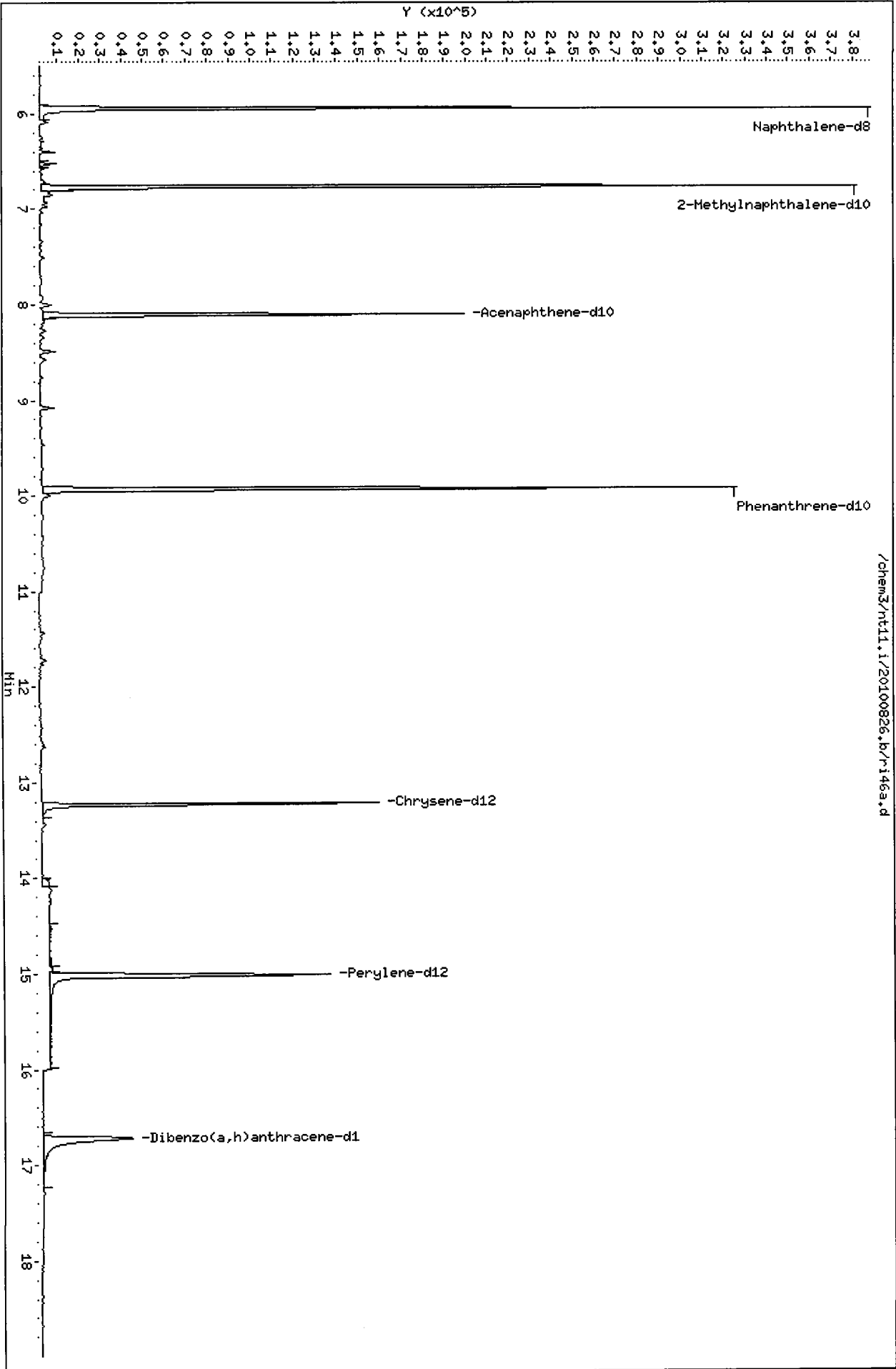
Client Name: Floyd-Snyder  
Sample Matrix: LIQUID  
Lab Smp Id: RI46A  
Level: LOW  
Data Type: MS DATA  
SpikeList File: waterlcs.spk  
Sublist File: pnalnm.sub  
Method File: /chem3/nt11.i/20100826.b/lowsim.m  
Misc Info: 10-19678

Client SDG: RI46  
Fraction: SV  
Client Smp ID: MW-02-081110  
Operator: VTS  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	167	55.81	31-109
\$ 36 Dibenzo(a,h) anthra	300	181	60.33	10-133

Data File: /chem3/nt11.1/20100826.b/r146a.d  
Date: 26-AUG-2010 17:49  
Client ID: MW-02-081110  
Sample Info: R146A  
Volume Injected (uL): 2.0  
Column phase: ZB-5msi

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



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100826.b/ri46b.d  
 Lab Smp Id: RI46B Client Smp ID: MW-03-081110  
 Inj Date : 26-AUG-2010 18:13  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI46B  
 Misc Info : 10-19679  
 Comment :  
 Method : /chem3/nt11.i/20100826.b/lowsim.m  
 Meth Date : 27-Aug-2010 11:00 van Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 14  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ng/mL)	FINAL (ug/L)	
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	482790	200.000		
5 Naphthalene	128	Compound Not Detected.						
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	247239	161.381	161	
7 2-Methylnaphthalene	142	Compound Not Detected.						
8 1-Methylnaphthalene	142	Compound Not Detected.						
10 Acenaphthylene	152	Compound Not Detected.						
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	259776	200.000		
12 Acenaphthene	153	Compound Not Detected.						
14 Dibenzofuran	168	Compound Not Detected.						
15 Fluorene	166	Compound Not Detected.						
* 18 Phenanthrene-d10	188	9.926	9.927	(1.000)	425137	200.000		
19 Phenanthrene	178	Compound Not Detected.						
20 Anthracene	178	Compound Not Detected.						
24 Fluoranthene	202	Compound Not Detected.						
25 Pyrene	202	Compound Not Detected.						

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL ( ug/L)
=====	====	==	=====	=====	=====	=====	=====
28 Benzo(a)anthracene	228		Compound Not Detected.				
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	261582	200.000	
30 Chrysene	228		Compound Not Detected.				
43 Total Benzofluoranthenes	252		Compound Not Detected.				
34 Benzo(a)pyrene	252		Compound Not Detected.				
* 35 Perylene-d12	264	15.018	15.018	(1.000)	194807	200.000	
37 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.				
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.718	16.732	(1.113)	176273	172.332	172
38 Dibenzo(a,h)anthracene	278		Compound Not Detected.				
39 Benzo(g,h,i)perylene	276		Compound Not Detected.				

VJB  
8.27.10



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt11.i  
Lab File ID: ri46b.d  
Lab Smp Id: RI46B  
Analysis Type: SV  
Quant Type: ISTD  
Operator: VTS  
Method File: /chem3/nt11.i/20100826.b/lowsim.m  
Misc Info: 10-19679  
Calibration Date: 26-AUG-2010  
Calibration Time: 13:39  
Client Smp ID: MW-03-081110  
Level: LOW  
Sample Type: Water

Test Mode:  
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	482790	14.26
11 Acenaphthene-d10	241002	120501	482004	259776	7.79
18 Phenanthrene-d10	409999	205000	819998	425137	3.69
29 Chrysene-d12	258429	129214	516858	261582	1.22
35 Perylene-d12	200470	100235	400940	194807	-2.82

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

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

Analytical Resources, Inc.

RECOVERY REPORT

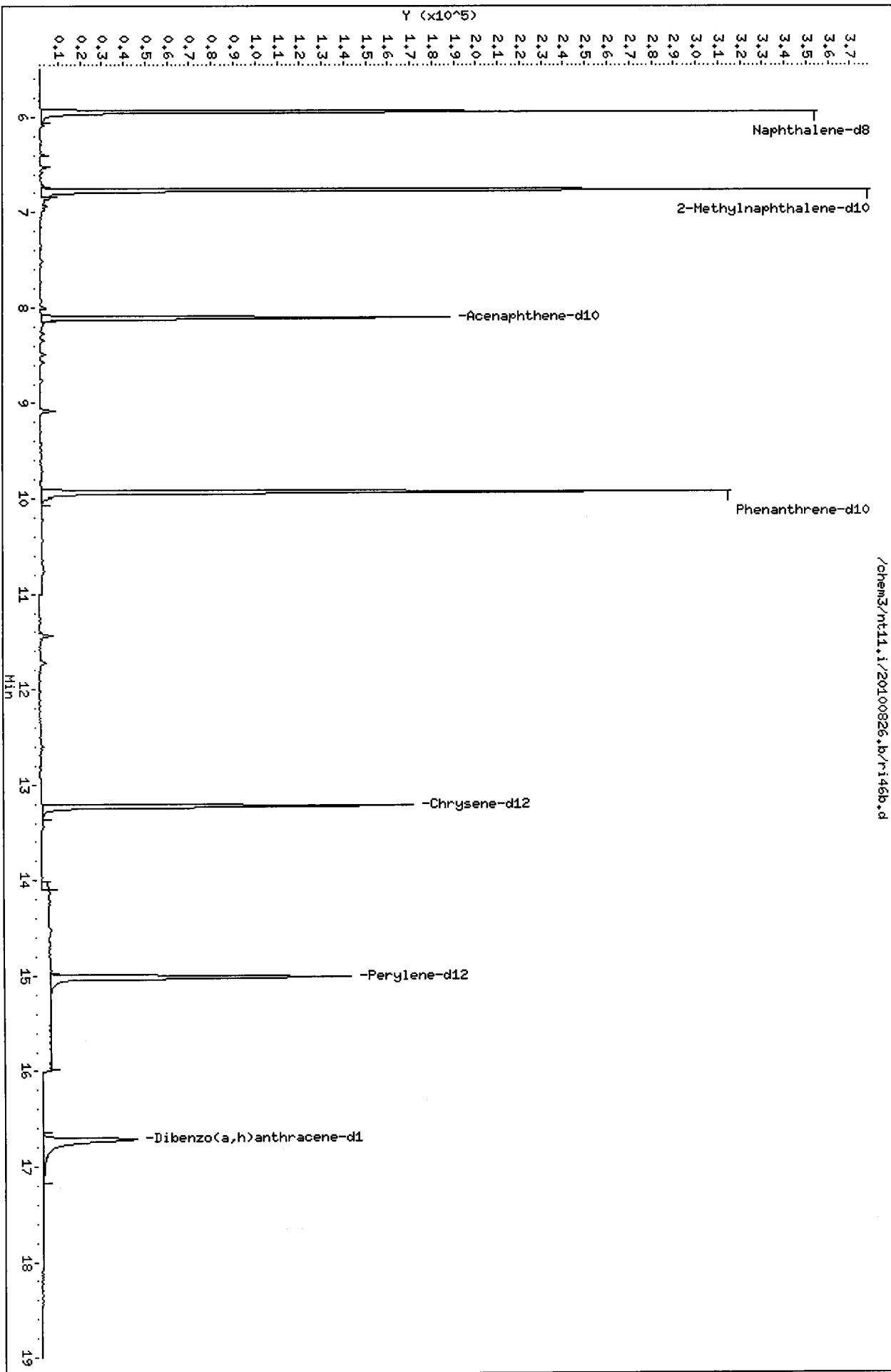
Client Name: Floyd-Snider  
Sample Matrix: LIQUID  
Lab Smp Id: RI46B  
Level: LOW  
Data Type: MS DATA  
SpikeList File: waterlcs.spk  
Sublist File: pnalnm.sub  
Method File: /chem3/nt11.i/20100826.b/lowsim.m  
Misc Info: 10-19679

Client SDG: RI46  
Fraction: SV  
Client Smp ID: MW-03-081110  
Operator: VTS  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	161	53.79	31-109
\$ 36 Dibenzo(a,h) anthra	300	172	57.44	10-133

Data File: /chem3/nt11.i/20100826.b/r146b.d  
Date: 26-AUG-2010 18:13  
Client ID: MW-03-081110  
Sample Info: R146B  
Volume Injected (uL): 2.0  
Column phase: ZB-5ms1

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



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100826.b/ri46c.d  
 Lab Smp Id: RI46C Client Smp ID: MW-03-081110-D  
 Inj Date : 26-AUG-2010 18:37  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI46C  
 Misc Info : 10-19680  
 Comment :  
 Method : /chem3/nt11.i/20100826.b/lowsim.m  
 Meth Date : 27-Aug-2010 11:00 van Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 15  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalnm.sub  
 Target Version: 3.50  
 Processing Host: cserv3

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ng/mL)	FINAL (ug/L)	
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	488297	200.000		
5 Naphthalene	128	Compound Not Detected.						
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	264804	170.897	171	
7 2-Methylnaphthalene	142	Compound Not Detected.						
8 1-Methylnaphthalene	142	Compound Not Detected.						
10 Acenaphthylene	152	Compound Not Detected.						
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	255980	200.000		
12 Acenaphthene	153	Compound Not Detected.						
14 Dibenzofuran	168	Compound Not Detected.						
15 Fluorene	166	Compound Not Detected.						
* 18 Phenanthrene-d10	188	9.927	9.927	(1.000)	422839	200.000		
19 Phenanthrene	178	Compound Not Detected.						
20 Anthracene	178	Compound Not Detected.						
24 Fluoranthene	202	Compound Not Detected.						
25 Pyrene	202	Compound Not Detected.						

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL ( ug/L)
=====	=====	==	=====	=====	=====	=====	=====
28 Benzo(a)anthracene	228				Compound Not Detected.		
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	255213	200.000	
30 Chrysene	228				Compound Not Detected.		
43 Total Benzofluoranthenes	252				Compound Not Detected.		
34 Benzo(a)pyrene	252				Compound Not Detected.		
* 35 Perylene-d12	264	15.016	15.018	(1.000)	195216	200.000	
37 Indeno(1,2,3-cd)pyrene	276				Compound Not Detected.		
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.730	16.732	(1.114)	194239	189.499	189
38 Dibenzo(a,h)anthracene	278				Compound Not Detected.		
39 Benzo(g,h,i)perylene	276				Compound Not Detected.		

27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: ri46c.d  
 Lab Smp Id: RI46C  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem3/nt11.i/20100826.b/lowsim.m  
 Misc Info: 10-19680

Calibration Date: 26-AUG-2010  
 Calibration Time: 13:39  
 Client Smp ID: MW-03-081110-D  
 Level: LOW  
 Sample Type: Water

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	488297	15.56
11 Acenaphthene-d10	241002	120501	482004	255980	6.21
18 Phenanthrene-d10	409999	205000	819998	422839	3.13
29 Chrysene-d12	258429	129214	516858	255213	-1.24
35 Perylene-d12	200470	100235	400940	195216	-2.62

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

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd-Snider

Sample Matrix: LIQUID

Lab Smp Id: RI46C

Level: LOW

Data Type: MS DATA

SpikeList File: waterlcs.spk

Sublist File: pnalnm.sub

Method File: /chem3/nt11.i/20100826.b/lowsim.m

Misc Info: 10-19680

Client SDG: RI46

Fraction: SV

Client Smp ID: MW-03-081110-D

Operator: VTS

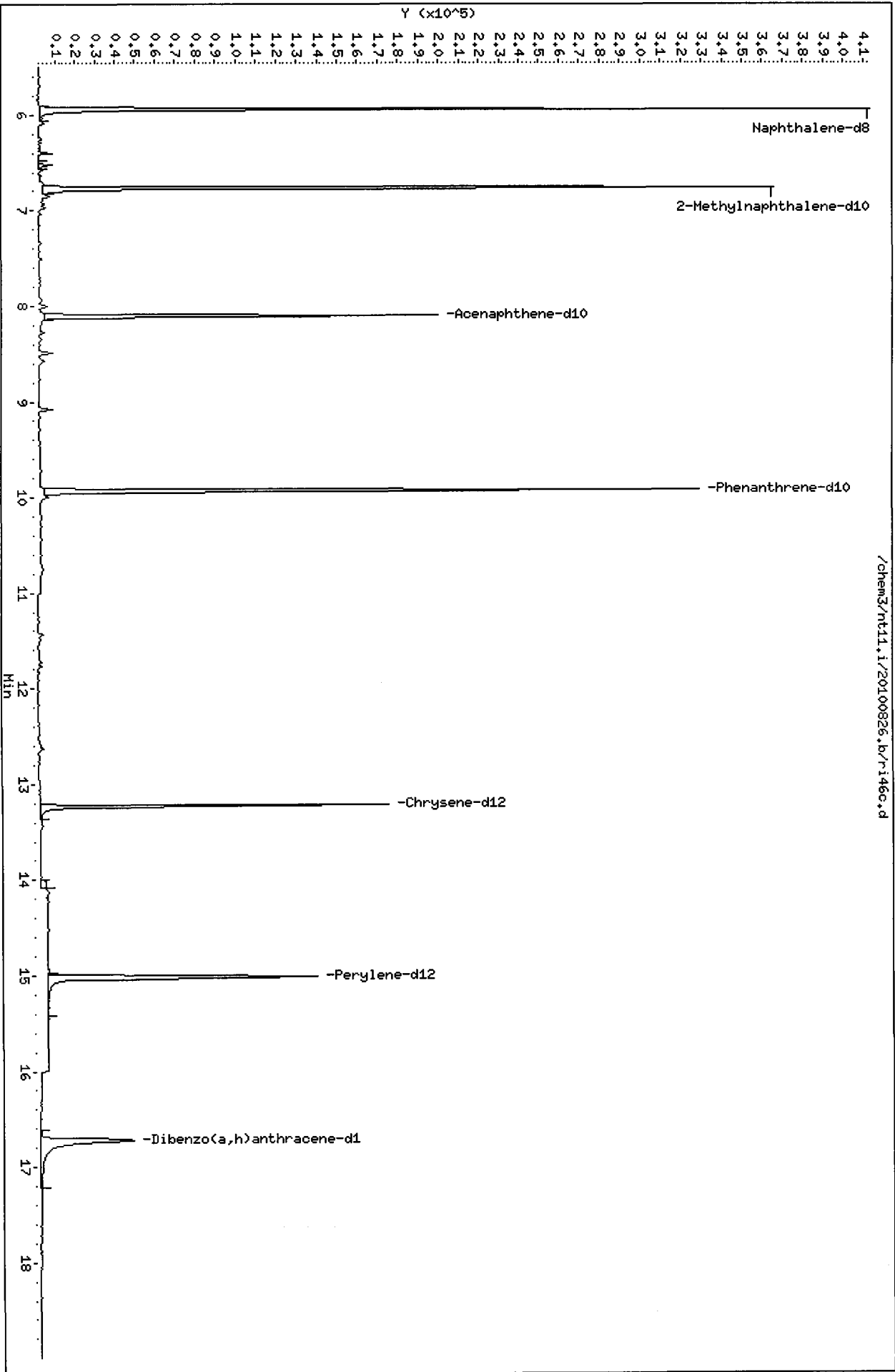
SampleType: SAMPLE

Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	171	56.97	31-109
\$ 36 Dibenzo(a,h) anthra	300	189	63.17	10-133

Data File: /chem3/nt11.i/20100826.b/r146c.d  
Date : 26-AUG-2010 18:37  
Client ID: MW-03-081110-D  
Sample Info: R146C  
Volume Injected (uL): 2.0  
Column phase: ZB-5ms1

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





Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100826.b/ri46d.d  
 Lab Smp Id: RI46D Client Smp ID: MW-04-081110  
 Inj Date : 26-AUG-2010 19:01  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI46D  
 Misc Info : 10-19681  
 Comment :  
 Method : /chem3/nt11.i/20100826.b/lowsim.m  
 Meth Date : 27-Aug-2010 11:00 van Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 16  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalnm.sub  
 Target Version: 3.50  
 Processing Host: cserv3

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ng/mL)	FINAL (ug/L)	
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	496886	200.000		
5 Naphthalene	128	Compound Not Detected.						
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	262893	166.731	167	
7 2-Methylnaphthalene	142	Compound Not Detected.						
8 1-Methylnaphthalene	142	Compound Not Detected.						
10 Acenaphthylene	152	Compound Not Detected.						
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	265093	200.000		
12 Acenaphthene	153	Compound Not Detected.						
14 Dibenzofuran	168	Compound Not Detected.						
15 Fluorene	166	Compound Not Detected.						
* 18 Phenanthrene-d10	188	9.927	9.927	(1.000)	446120	200.000		
19 Phenanthrene	178	Compound Not Detected.						
20 Anthracene	178	Compound Not Detected.						
24 Fluoranthene	202	Compound Not Detected.						
25 Pyrene	202	Compound Not Detected.						

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL ( ug/L)
28 Benzo(a)anthracene	228				Compound Not Detected.		
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	273315	200.000	
30 Chrysene	228				Compound Not Detected.		
43 Total Benzofluoranthenes	252				Compound Not Detected.		
34 Benzo(a)pyrene	252				Compound Not Detected.		
* 35 Perylene-d12	264	15.016	15.018	(1.000)	203061	200.000	
37 Indeno(1,2,3-cd)pyrene	276				Compound Not Detected.		
§ 36 Dibenzo(a,h)anthracene-d14	292	16.730	16.732	(1.114)	197941	185.650	186
38 Dibenzo(a,h)anthracene	278				Compound Not Detected.		
39 Benzo(g,h,i)perylene	276				Compound Not Detected.		

VJS  
8-27-10

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i	Calibration Date: 26-AUG-2010
Lab File ID: ri46d.d	Calibration Time: 13:39
Lab Smp Id: RI46D	Client Smp ID: MW-04-081110
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: VTS	
Method File: /chem3/nt11.i/20100826.b/lowsim.m	
Misc Info: 10-19681	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	496886	17.59
11 Acenaphthene-d10	241002	120501	482004	265093	10.00
18 Phenanthrene-d10	409999	205000	819998	446120	8.81
29 Chrysene-d12	258429	129214	516858	273315	5.76
35 Perylene-d12	200470	100235	400940	203061	1.29

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

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

Analytical Resources, Inc.

RECOVERY REPORT

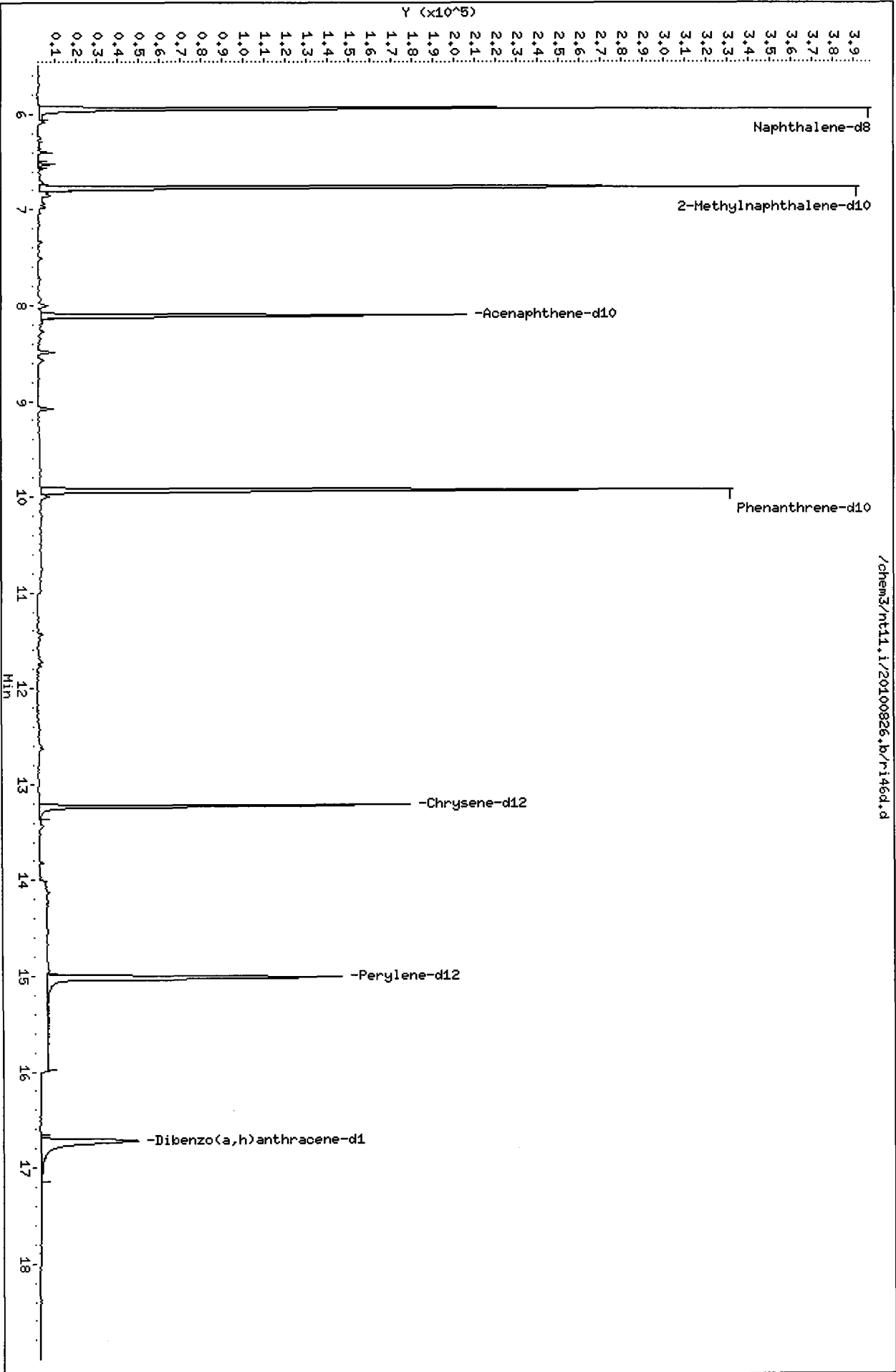
Client Name: Floyd-Snider  
Sample Matrix: LIQUID  
Lab Smp Id: RI46D  
Level: LOW  
Data Type: MS DATA  
SpikeList File: waterlcs.spk  
Sublist File: pnalnm.sub  
Method File: /chem3/nt11.i/20100826.b/lowsim.m  
Misc Info: 10-19681

Client SDG: RI46  
Fraction: SV  
Client Smp ID: MW-04-081110  
Operator: VTS  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	167	55.58	31-109
\$ 36 Dibenzo(a,h) anthra	300	186	61.88	10-133

Data File: /chem3/nt11.i/20100826.b/r146d.d  
Date: 26-AUG-2010 19:01  
Client ID: MW-04-081110  
Sample Info: R146D  
Volume Injected (uL): 2.0  
Column phase: ZB-5msi

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



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100826.b/ri46e.d  
 Lab Smp Id: RI46E Client Smp ID: MW-14-081110  
 Inj Date : 26-AUG-2010 19:25  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI46E  
 Misc Info : 10-19682  
 Comment :  
 Method : /chem3/nt11.i/20100826.b/lowsim.m  
 Meth Date : 27-Aug-2010 11:00 van Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 17  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ng/mL)	FINAL (ug/L)	
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	483836	200.000		
5 Naphthalene	128	Compound Not Detected.						
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	268423	174.830	175	
7 2-Methylnaphthalene	142	Compound Not Detected.						
8 1-Methylnaphthalene	142	Compound Not Detected.						
10 Acenaphthylene	152	Compound Not Detected.						
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	262903	200.000		
12 Acenaphthene	153	Compound Not Detected.						
14 Dibenzofuran	168	Compound Not Detected.						
15 Fluorene	166	Compound Not Detected.						
* 18 Phenanthrene-d10	188	9.927	9.927	(1.000)	444882	200.000		
19 Phenanthrene	178	Compound Not Detected.						
20 Anthracene	178	Compound Not Detected.						
24 Fluoranthene	202	Compound Not Detected.						
25 Pyrene	202	Compound Not Detected.						

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL ( ug/L)
=====	====	==	=====	=====	=====	=====	=====
28 Benzo(a)anthracene	228		Compound Not Detected.				
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	272573	200.000	
30 Chrysene	228		Compound Not Detected.				
43 Total Benzofluoranthenes	252		Compound Not Detected.				
34 Benzo(a)pyrene	252		Compound Not Detected.				
* 35 Perylene-d12	264	15.016	15.018	(1.000)	204432	200.000	
37 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.				
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.730	16.732	(1.114)	200239	186.545	187
38 Dibenzo(a,h)anthracene	278		Compound Not Detected.				
39 Benzo(g,h,i)perylene	276		Compound Not Detected.				

*Handwritten:*  
LTS  
8-27-10

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i	Calibration Date: 26-AUG-2010
Lab File ID: ri46e.d	Calibration Time: 13:39
Lab Smp Id: RI46E	Client Smp ID: MW-14-081110
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: VTS	
Method File: /chem3/nt11.i/20100826.b/lowsim.m	
Misc Info: 10-19682	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	483836	14.50
11 Acenaphthene-d10	241002	120501	482004	262903	9.09
18 Phenanthrene-d10	409999	205000	819998	444882	8.51
29 Chrysene-d12	258429	129214	516858	272573	5.47
35 Perylene-d12	200470	100235	400940	204432	1.98

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

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



Analytical Resources, Inc.

RECOVERY REPORT

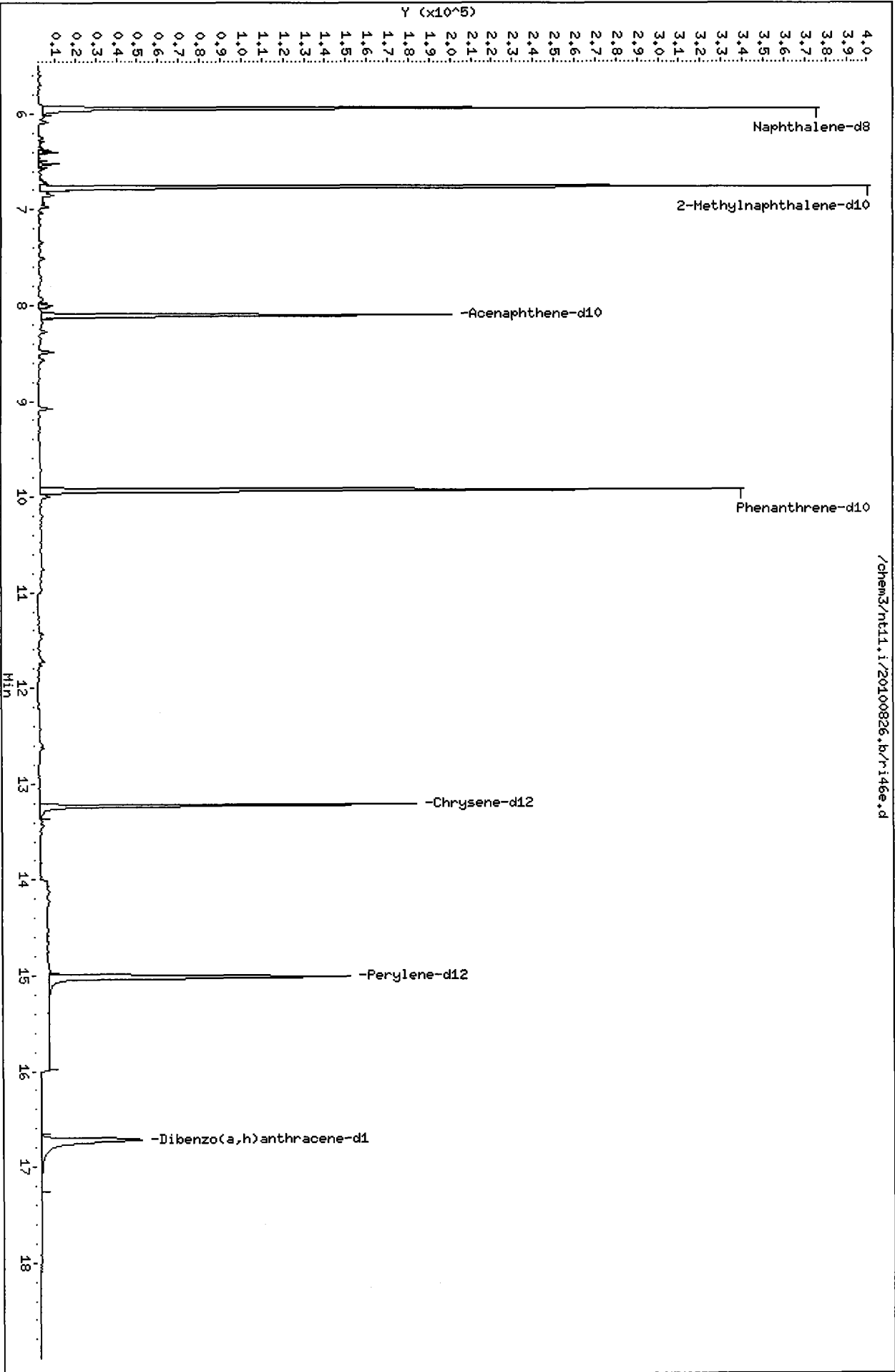
Client Name: Floyd-Snider  
Sample Matrix: LIQUID  
Lab Smp Id: RI46E  
Level: LOW  
Data Type: MS DATA  
SpikeList File: waterlcs.spk  
Sublist File: pnalnm.sub  
Method File: /chem3/nt11.i/20100826.b/lowsim.m  
Misc Info: 10-19682

Client SDG: RI46  
Fraction: SV  
Client Smp ID: MW-14-081110  
Operator: VTS  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	175	58.28	31-109
\$ 36 Dibenzo(a,h) anthra	300	187	62.18	10-133

Data File: /chem3/nt11.i/20100826.b/r146e.d  
Date : 26-AUG-2010 19:25  
Client ID: MW-14-081110  
Sample Info: R146E  
Volume Injected (uL): 2.0  
Column phase: ZB-5msi

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



/chem3/nt11.i/20100826.b/r146e.d

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100826.b/ri46f.d  
 Lab Smp Id: RI46F Client Smp ID: MW-12-081210  
 Inj Date : 26-AUG-2010 19:49  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI46F  
 Misc Info : 10-19683  
 Comment :  
 Method : /chem3/nt11.i/20100826.b/lowsim.m  
 Meth Date : 27-Aug-2010 11:00 van Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 18  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalnm.sub  
 Target Version: 3.50  
 Processing Host: cserv3

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ng/mL)	FINAL (ug/L)	
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	505451	200.000		
5 Naphthalene	128	Compound Not Detected.						
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	244303	152.316	152	
7 2-Methylnaphthalene	142	Compound Not Detected.						
8 1-Methylnaphthalene	142	Compound Not Detected.						
10 Acenaphthylene	152	Compound Not Detected.						
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	274159	200.000		
12 Acenaphthene	153	Compound Not Detected.						
14 Dibenzofuran	168	Compound Not Detected.						
15 Fluorene	166	Compound Not Detected.						
* 18 Phenanthrene-d10	188	9.927	9.927	(1.000)	463875	200.000		
19 Phenanthrene	178	Compound Not Detected.						
20 Anthracene	178	Compound Not Detected.						
24 Fluoranthene	202	Compound Not Detected.						
25 Pyrene	202	Compound Not Detected.						

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL ( ug/L)
28 Benzo(a)anthracene	228				Compound Not Detected.		
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	283489	200.000	
30 Chrysene	228				Compound Not Detected.		
43 Total Benzofluoranthenes	252				Compound Not Detected.		
34 Benzo(a)pyrene	252				Compound Not Detected.		
* 35 Perylene-d12	264	15.016	15.018	(1.000)	210912	200.000	
37 Indeno(1,2,3-cd)pyrene	276				Compound Not Detected.		
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.717	16.732	(1.113)	201140	181.628	182
38 Dibenzo(a,h)anthracene	278				Compound Not Detected.		
39 Benzo(g,h,i)perylene	276				Compound Not Detected.		

VJS  
8.27.10

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i	Calibration Date: 26-AUG-2010
Lab File ID: ri46f.d	Calibration Time: 13:39
Lab Smp Id: RI46F	Client Smp ID: MW-12-081210
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Water
Operator: VTS	
Method File: /chem3/nt11.i/20100826.b/lowsim.m	
Misc Info: 10-19683	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	505451	19.62
11 Acenaphthene-d10	241002	120501	482004	274159	13.76
18 Phenanthrene-d10	409999	205000	819998	463875	13.14
29 Chrysene-d12	258429	129214	516858	283489	9.70
35 Perylene-d12	200470	100235	400940	210912	5.21

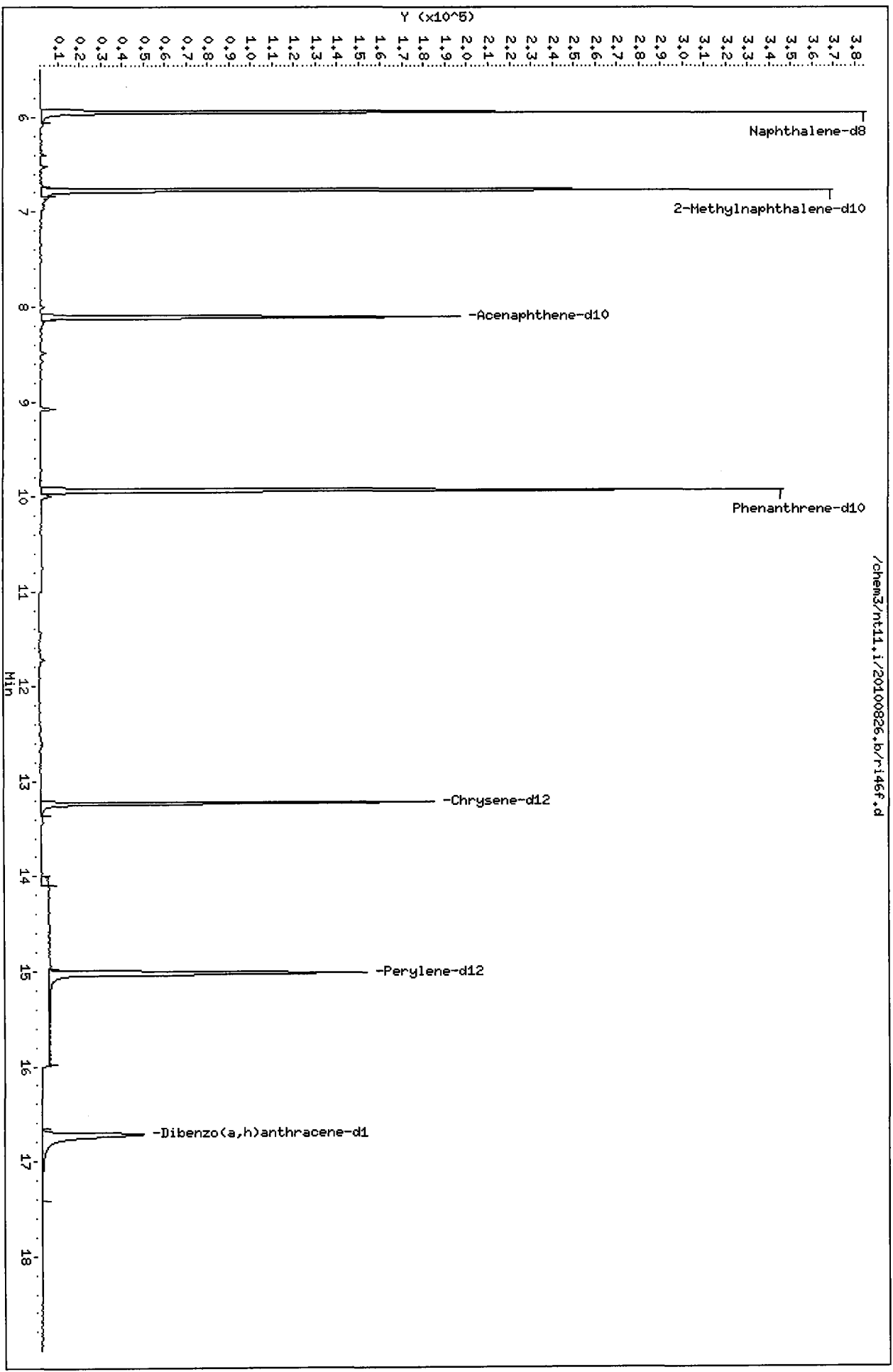
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.93	9.43	10.43	9.93	0.00
29 Chrysene-d12	13.23	12.73	13.73	13.23	0.00
35 Perylene-d12	15.02	14.52	15.52	15.02	-0.01

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



Data File: /chem3/nt11.i/20100826.b/r/146f.d  
Date : 26-AUG-2010 19:49  
Client ID: MM-12-081210  
Sample Info: R146F  
Volume Injected (uL): 2.0  
Column phase: ZB-5msi

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



/chem3/nt11.i/20100826.b/r/146f.d

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100826.b/ri46g.d  
 Lab Smp Id: RI46G Client Smp ID: MW-13-081210  
 Inj Date : 26-AUG-2010 20:13  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI46G  
 Misc Info : 10-19684  
 Comment :  
 Method : /chem3/nt11.i/20100826.b/lowsim.m  
 Meth Date : 27-Aug-2010 11:00 van Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 19  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL (ug/L)
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	502663	200.000	
5 Naphthalene	128				Compound Not Detected.		
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	260085	163.055	163
7 2-Methylnaphthalene	142				Compound Not Detected.		
8 1-Methylnaphthalene	142				Compound Not Detected.		
10 Acenaphthylene	152				Compound Not Detected.		
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	268638	200.000	
12 Acenaphthene	153				Compound Not Detected.		
14 Dibenzofuran	168				Compound Not Detected.		
15 Fluorene	166				Compound Not Detected.		
* 18 Phenanthrene-d10	188	9.927	9.927	(1.000)	438395	200.000	
19 Phenanthrene	178				Compound Not Detected.		
20 Anthracene	178				Compound Not Detected.		
24 Fluoranthene	202				Compound Not Detected.		
25 Pyrene	202				Compound Not Detected.		



Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL ( ug/L)
28 Benzo(a)anthracene	228				Compound Not Detected.		
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	275888	200.000	
30 Chrysene	228				Compound Not Detected.		
43 Total Benzofluoranthenes	252				Compound Not Detected.		
34 Benzo(a)pyrene	252				Compound Not Detected.		
* 35 Perylene-d12	264	15.016	15.018	(1.000)	206305	200.000	
37 Indeno(1,2,3-cd)pyrene	276				Compound Not Detected.		
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.730	16.732	(1.114)	210389	194.222	194
38 Dibenzo(a,h)anthracene	278				Compound Not Detected.		
39 Benzo(g,h,i)perylene	276				Compound Not Detected.		

*Handwritten:*  
LJ  
8.27.10

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

Instrument ID: nt11.i  
Lab File ID: ri46g.d  
Lab Smp Id: RI46G  
Analysis Type: SV  
Quant Type: ISTD  
Operator: VTS  
Method File: /chem3/nt11.i/20100826.b/lowsim.m  
Misc Info: 10-19684  
Calibration Date: 26-AUG-2010  
Calibration Time: 13:39  
Client Smp ID: MW-13-081210  
Level: LOW  
Sample Type: Water

Test Mode:  
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	502663	18.96
11 Acenaphthene-d10	241002	120501	482004	268638	11.47
18 Phenanthrene-d10	409999	205000	819998	438395	6.93
29 Chrysene-d12	258429	129214	516858	275888	6.76
35 Perylene-d12	200470	100235	400940	206305	2.91

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

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

Analytical Resources, Inc.

RECOVERY REPORT

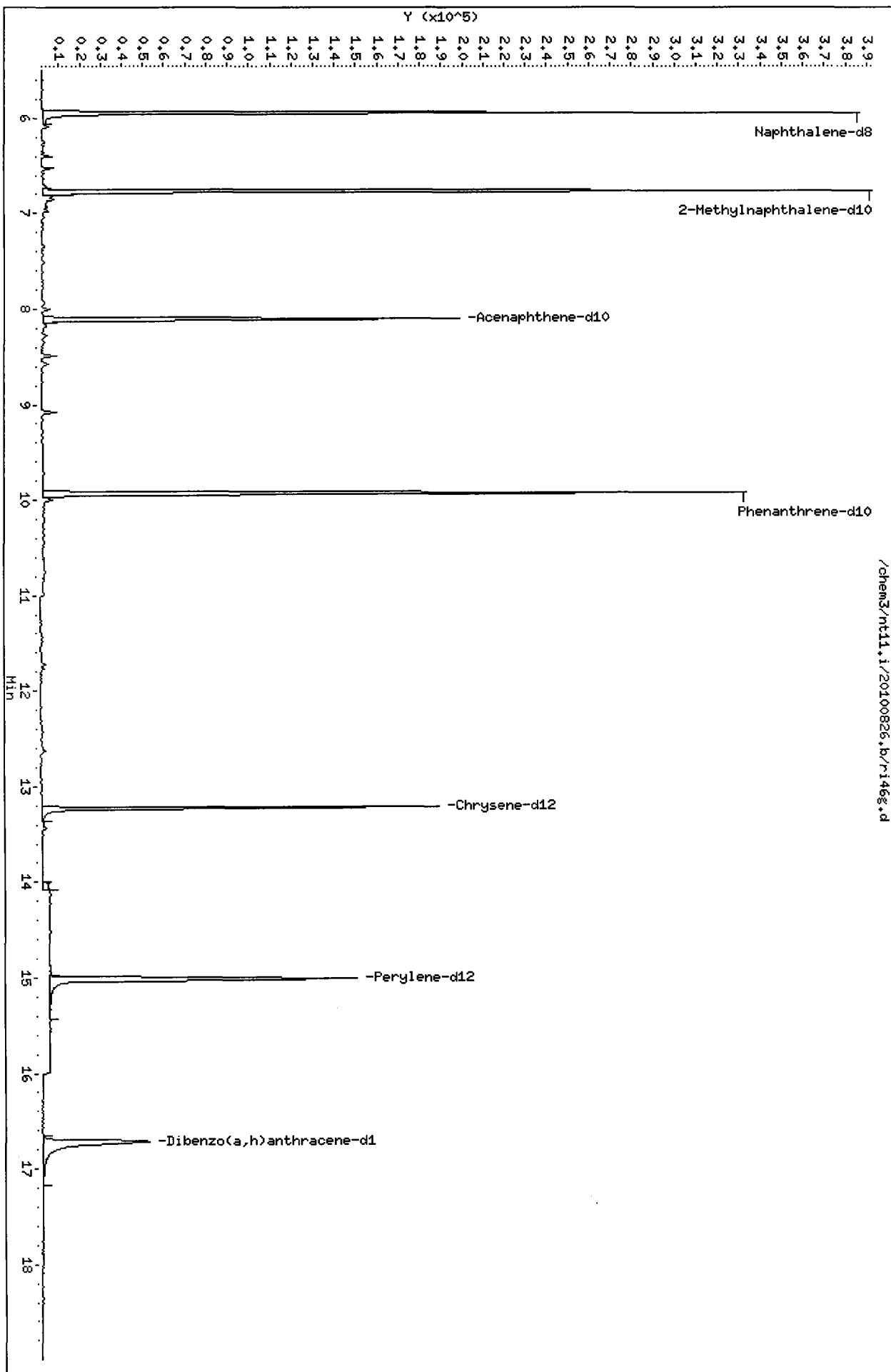
Client Name: Floyd-Snider  
Sample Matrix: LIQUID  
Lab Smp Id: RI46G  
Level: LOW  
Data Type: MS DATA  
SpikeList File: waterlcs.spk  
Sublist File: pnalnm.sub  
Method File: /chem3/nt11.i/20100826.b/lowsim.m  
Misc Info: 10-19684

Client SDG: RI46  
Fraction: SV  
Client Smp ID: MW-13-081210  
Operator: VTS  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	163	54.35	31-109
\$ 36 Dibenzo(a,h) anthra	300	194	64.74	10-133

Data File: /chem3/nt11.i/20100826.b/r146g.d  
Date: 26-AUG-2010 20:13  
Client ID: MW-13-081210  
Sample Info: R146G  
Volume Injected (uL): 2.0  
Column phase: ZB-5msi

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



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100826.b/ri46h.d  
 Lab Smp Id: RI46H Client Smp ID: MW-10-081210  
 Inj Date : 26-AUG-2010 20:36  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI46H  
 Misc Info : 10-19685  
 Comment :  
 Method : /chem3/nt11.i/20100826.b/lowsim.m  
 Meth Date : 27-Aug-2010 11:00 van Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 20  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalnm.sub  
 Target Version: 3.50  
 Processing Host: cserv3

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ng/mL)	FINAL (ug/L)	
* 4 Naphthalene-d8	136	5.939	5.939	(1.000)	502397	200.000		
5 Naphthalene	128	Compound Not Detected.						
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.139)	256740	161.043	161	
7 2-Methylnaphthalene	142	Compound Not Detected.						
8 1-Methylnaphthalene	142	Compound Not Detected.						
10 Acenaphthylene	152	Compound Not Detected.						
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	270078	200.000		
12 Acenaphthene	153	Compound Not Detected.						
14 Dibenzofuran	168	Compound Not Detected.						
15 Fluorene	166	Compound Not Detected.						
* 18 Phenanthrene-d10	188	9.927	9.927	(1.000)	443739	200.000		
19 Phenanthrene	178	Compound Not Detected.						
20 Anthracene	178	Compound Not Detected.						
24 Fluoranthene	202	Compound Not Detected.						
25 Pyrene	202	Compound Not Detected.						

Compounds	QUANT SIG		CONCENTRATIONS						
	MASS		RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL ( ug/L)	
28 Benzo(a)anthracene	228					Compound Not Detected.			
* 29 Chrysene-d12	240		13.225	13.225	(1.000)	273461	200.000		
30 Chrysene	228					Compound Not Detected.			
43 Total Benzofluoranthenes	252					Compound Not Detected.			
34 Benzo(a)pyrene	252					Compound Not Detected.			
* 35 Perylene-d12	264		15.016	15.018	(1.000)	204218	200.000		
37 Indeno(1,2,3-cd)pyrene	276					Compound Not Detected.			
§ 36 Dibenzo(a,h)anthracene-d14	292		16.730	16.732	(1.114)	201075	187.521	188	
38 Dibenzo(a,h)anthracene	278					Compound Not Detected.			
39 Benzo(g,h,i)perylene	276					Compound Not Detected.			

UP  
2.7.10

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: ri46h.d  
 Lab Smp Id: RI46H  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem3/nt11.i/20100826.b/lowsim.m  
 Misc Info: 10-19685

Calibration Date: 26-AUG-2010  
 Calibration Time: 13:39  
 Client Smp ID: MW-10-081210  
 Level: LOW  
 Sample Type: Water

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	502397	18.90
11 Acenaphthene-d10	241002	120501	482004	270078	12.06
18 Phenanthrene-d10	409999	205000	819998	443739	8.23
29 Chrysene-d12	258429	129214	516858	273461	5.82
35 Perylene-d12	200470	100235	400940	204218	1.87

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

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Floyd-Snyder  
Sample Matrix: LIQUID  
Lab Smp Id: RI46H  
Level: LOW  
Data Type: MS DATA  
SpikeList File: waterlcs.spk  
Sublist File: pnalnm.sub  
Method File: /chem3/nt11.i/20100826.b/lowsim.m  
Misc Info: 10-19685

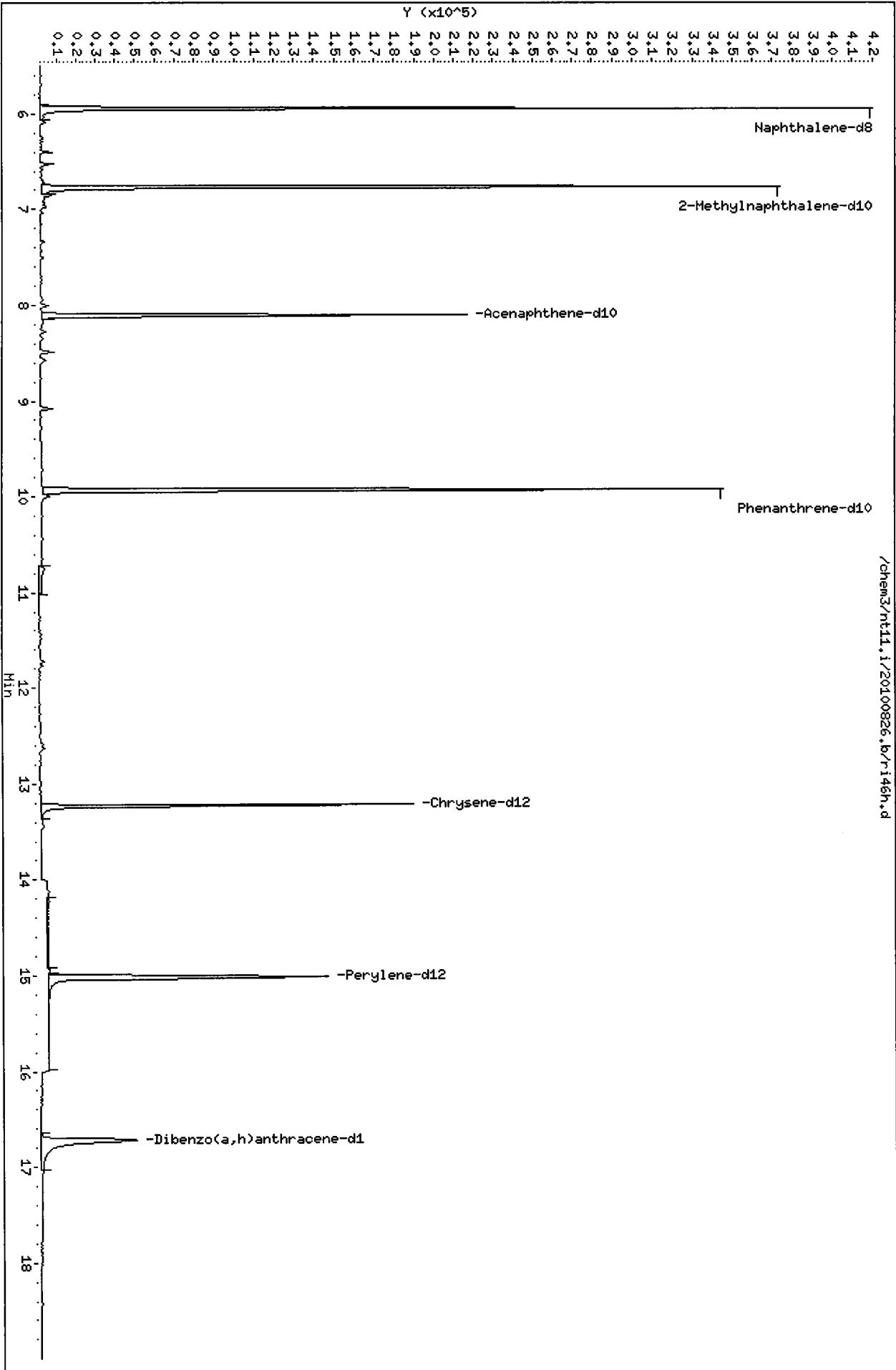
Client SDG: RI46  
Fraction: SV  
Client Smp ID: MW-10-081210  
Operator: VTS  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	161	53.68	31-109
\$ 36 Dibenzo(a,h) anthra	300	188	62.51	10-133



Data File: /chem3/nt11.i/20100826.b/r146h.d  
Date: 26-AUG-2010 20:36  
Client ID: MW-10-081210  
Sample Info: R146H  
Volume Injected (uL): 2.0  
Column phase: ZB-5ms1

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



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20100826.b/ri46i.d  
 Lab Smp Id: RI46I Client Smp ID: MW-11-081210  
 Inj Date : 26-AUG-2010 21:00  
 Operator : VTS Inst ID: nt11.i  
 Smp Info : RI46I  
 Misc Info : 10-19686  
 Comment :  
 Method : /chem3/nt11.i/20100826.b/lowsim.m  
 Meth Date : 27-Aug-2010 11:00 van Quant Type: ISTD  
 Cal Date : 18-AUG-2010 17:39 Cal File: ic0818f.d  
 Als bottle: 21  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnalmn.sub  
 Target Version: 3.50  
 Processing Host: cserv3

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

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

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ng/mL)	FINAL (ug/L)	
* 4 Naphthalene-d8	136	5.950	5.939	(1.000)	492327	200.000		
5 Naphthalene	128	Compound Not Detected.						
\$ 6 2-Methylnaphthalene-d10	152	6.767	6.767	(1.137)	227361	145.532	146	
7 2-Methylnaphthalene	142	Compound Not Detected.						
8 1-Methylnaphthalene	142	Compound Not Detected.						
10 Acenaphthylene	152	Compound Not Detected.						
* 11 Acenaphthene-d10	164	8.103	8.103	(1.000)	260157	200.000		
12 Acenaphthene	153	Compound Not Detected.						
14 Dibenzofuran	168	Compound Not Detected.						
15 Fluorene	166	Compound Not Detected.						
* 18 Phenanthrene-d10	188	9.927	9.927	(1.000)	447500	200.000		
19 Phenanthrene	178	Compound Not Detected.						
20 Anthracene	178	Compound Not Detected.						
24 Fluoranthene	202	Compound Not Detected.						
25 Pyrene	202	Compound Not Detected.						

Compounds	QUANT SIG		CONCENTRATIONS					
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)	FINAL ( ug/L)	
=====	=====	==	=====	=====	=====	=====	=====	
28 Benzo(a)anthracene	228				Compound Not Detected.			
* 29 Chrysene-d12	240	13.225	13.225	(1.000)	267175	200.000		
30 Chrysene	228				Compound Not Detected.			
43 Total Benzofluoranthenes	252				Compound Not Detected.			
34 Benzo(a)pyrene	252				Compound Not Detected.			
* 35 Perylene-d12	264	15.016	15.018	(1.000)	202485	200.000		
37 Indeno(1,2,3-cd)pyrene	276				Compound Not Detected.			
\$ 36 Dibenzo(a,h)anthracene-d14	292	16.717	16.732	(1.113)	210565	198.052	198	
38 Dibenzo(a,h)anthracene	278				Compound Not Detected.			
39 Benzo(g,h,i)perylene	276				Compound Not Detected.			

VJ  
27-8-10

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

Instrument ID: nt11.i  
 Lab File ID: ri46i.d  
 Lab Smp Id: RI46I  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem3/nt11.i/20100826.b/lowsim.m  
 Misc Info: 10-19686

Calibration Date: 26-AUG-2010  
 Calibration Time: 13:39  
 Client Smp ID: MW-11-081210  
 Level: LOW  
 Sample Type: Water

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	422551	211276	845102	492327	16.51
11 Acenaphthene-d10	241002	120501	482004	260157	7.95
18 Phenanthrene-d10	409999	205000	819998	447500	9.15
29 Chrysene-d12	258429	129214	516858	267175	3.38
35 Perylene-d12	200470	100235	400940	202485	1.01

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Naphthalene-d8	5.94	5.44	6.44	5.95	0.20
11 Acenaphthene-d10	8.10	7.60	8.60	8.10	0.00
18 Phenanthrene-d10	9.93	9.43	10.43	9.93	0.00
29 Chrysene-d12	13.23	12.73	13.73	13.23	0.00
35 Perylene-d12	15.02	14.52	15.52	15.02	-0.01

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

Analytical Resources, Inc.

RECOVERY REPORT

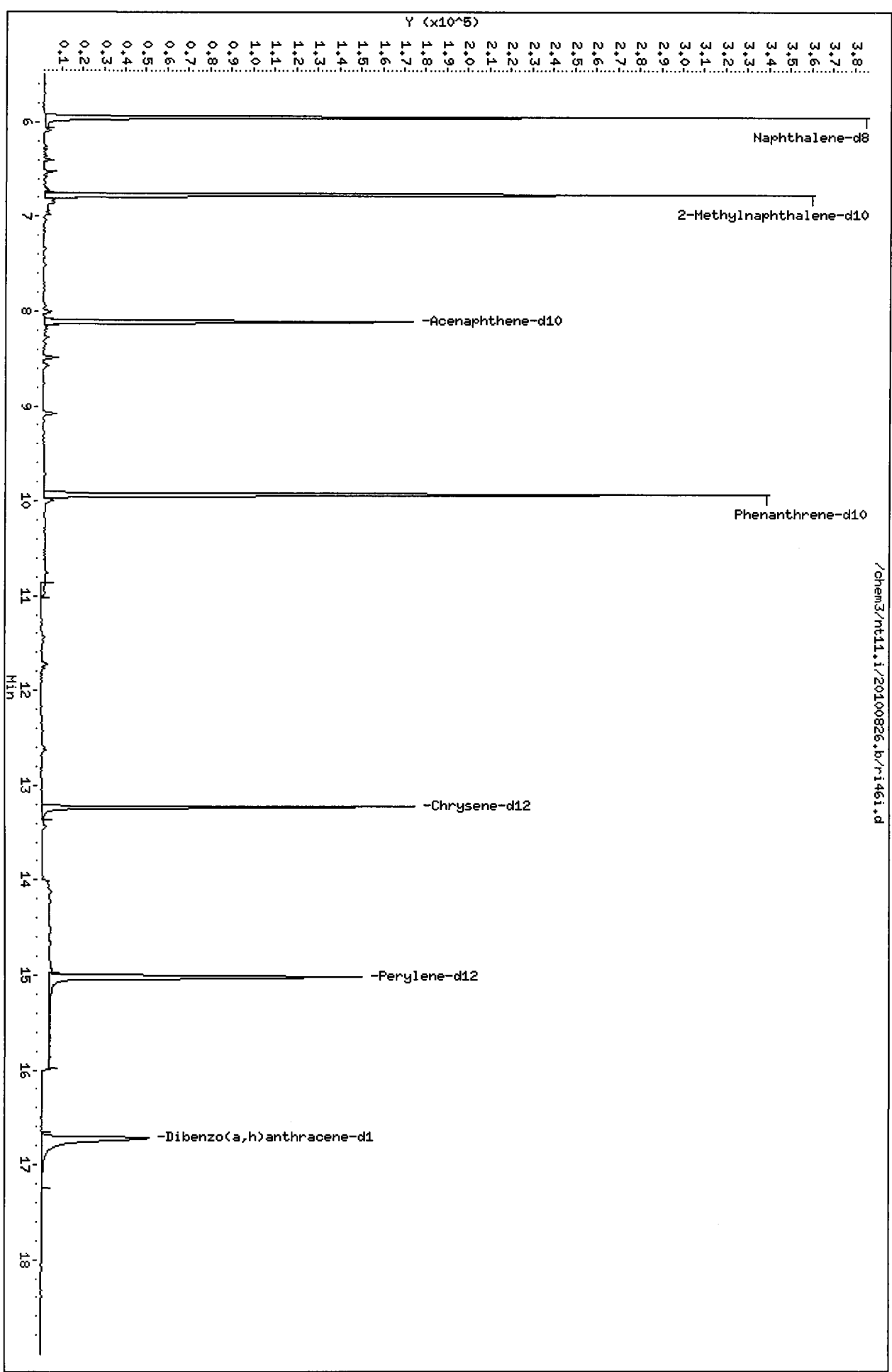
Client Name: Floyd-Snyder  
Sample Matrix: LIQUID  
Lab Smp Id: RI46I  
Level: LOW  
Data Type: MS DATA  
SpikeList File: waterlcs.spk  
Sublist File: pnalnm.sub  
Method File: /chem3/nt11.i/20100826.b/lowsim.m  
Misc Info: 10-19686

Client SDG: RI46  
Fraction: SV  
Client Smp ID: MW-11-081210  
Operator: VTS  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 6 2-Methylnaphthalen	300	146	48.51	31-109
\$ 36 Dibenzo(a,h) anthra	300	198	66.02	10-133

Data File: /chem3/nt11.i/20100826.b/r/1461.d  
Date : 26-AUG-2010 21:00  
Client ID: MW-11-081210  
Sample Info: R1461  
Volume Injected (uL): 2.0  
Column phase: ZB-5msi

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



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

**ARI Job ID: RI46**







Preparation Test PCP # 1

ARI Job No(s) RI46

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

Bottle #	Extraction Requirements	Verify Client ID	Volume Extracted	KD Exchange To Hexane (X 2)	Turbo Vap 1 2 3	Final Effective Volume	Volume to Lab	Derivitize	Comments
	RI46 MB	Date 8/17/10	500mL			50mL	1-2mL		
	SB	↓	↓						
	SB Dup.	↓	↓						
2	A	verified	500mL						
2	B								
2	C								
4	D								
2	E								
4	F								
3	G								
2	H								
4	I								
Analyst/Date: JW 8/17/10				PP/TS 8/23/10					

Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
Surrogate	F 1683-3	100µL 12.5	12/19/10	JW	WW
Spike	6 1702-2	100µL 12.5	2/18/11	JW	WW
Extraction Time: 1429		Derivitized by:		DiazaID ID:	

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

**PCP/Chlorophenols Raw Data  
Initial Calibration**

**ARI Job ID: RI46**



### GC Analyst Notes / Corrective Action Log

ARI Project ID: PCP Curve Client ID: ARI

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

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

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

Dates: Curve: 8/9/2010 Analysis Start: 8/11/2010

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

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

2nd col: Quadratic-forced: 2,4-Dichlorophenol, 2,4,5-Trichlorophenol, 2,3,4-Trichlorophenol  
1st col: Quadratic-forced: 2,4-Dichlorophenol, 2,4,6-TCP, 2,3,6-TCP, 2,3,4,5-Tetrachlorophenol, Pentachlorophenol & 2,4,6-Tribromophenol.

Additional Details on Reverse: Yes / No

Analyst: \_\_\_\_\_ Date: 8/12/2010

Reviewer: CB Date: 8/13/10