

# Analytical Results Summary

Instrument Name: K-PH-01      Analyst: CVECCHITTO      Analysis Lot: 219598      Method/Testcode: SM 2320 B/Alkalinity Tit

Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC? Tier
10785-001	Alkalinity as CaCO3, Total N/A	N/A		Water	792.00 mg/L	30 mL	792 mg/L	1	3.0	9.0			10/5/10 12:20:00	N II
10785-002	Alkalinity as CaCO3, Total N/A	N/A		Water	72.00 mg/L	30 mL	72.0 mg/L	1	3.0	9.0			10/5/10 12:20:00	N II
10785-003	Alkalinity as CaCO3, Total N/A	N/A		Water	98.60 mg/L	30 mL	98.6 mg/L	1	3.0	9.0			10/5/10 12:20:00	N II
10785-004	Alkalinity as CaCO3, Total N/A	N/A		Water	84.00 mg/L	30 mL	84.0 mg/L	1	3.0	9.0			10/5/10 12:20:00	N II
10785-005	Alkalinity as CaCO3, Total N/A	N/A		Water	110.00 mg/L	30 mL	110 mg/L	1	3.0	9.0			10/5/10 12:20:00	N II
10785-006	Alkalinity as CaCO3, Total N/A	N/A		Water	73.50 mg/L	30 mL	73.5 mg/L	1	3.0	9.0			10/5/10 12:20:00	N II
10785-007	Alkalinity as CaCO3, Total N/A	N/A		Water	96.80 mg/L	30 mL	96.8 mg/L	1	3.0	9.0			10/5/10 12:20:00	N II
10790-004	Bicarbonate as CaCO3 N/A	N/A		Water	230.00 mg/L	30 mL	230 mg/L	1	3.0	3.0			10/5/10 12:20:00	N II
10790-004	Carbonate as CaCO3 N/A	N/A		Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/5/10 12:20:00	N II
10790-005	Bicarbonate as CaCO3 N/A	N/A		Water	217.00 mg/L	30 mL	217 mg/L	1	3.0	3.0			10/5/10 12:20:00	N II
10790-005	Carbonate as CaCO3 N/A	N/A		Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/5/10 12:20:00	N II
10790-006	Bicarbonate as CaCO3 N/A	N/A		Water	527.00 mg/L	30 mL	527 mg/L	1	3.0	3.0			10/5/10 12:20:00	N II
10790-006	Carbonate as CaCO3 N/A	N/A		Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/5/10 12:20:00	N II
10790-007	Bicarbonate as CaCO3 N/A	N/A		Water	437.00 mg/L	30 mL	437 mg/L	1	3.0	3.0			10/5/10 12:20:00	N II
10790-007	Carbonate as CaCO3 N/A	N/A		Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/5/10 12:20:00	N II
10790-008	Bicarbonate as CaCO3 N/A	N/A		Water	663.00 mg/L	30 mL	663 mg/L	1	3.0	3.0			10/5/10 12:20:00	N II
10790-008	Carbonate as CaCO3 N/A	N/A		Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/5/10 12:20:00	N II
10892-001	Alkalinity as CaCO3, Total N/A	N/A		Water	40.10 mg/L	30 mL	40.1 mg/L	1	3.0	9.0			10/5/10 12:20:00	N I
10892-001	Bicarbonate as CaCO3 N/A	N/A		Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/5/10 12:20:00	N I
10899-001	Alkalinity as CaCO3, Total N/A	N/A		Water	178.00 mg/L	30 mL	178 mg/L	1	3.0	9.0			10/5/10 12:20:00	N III
10899-001	Bicarbonate as CaCO3 N/A	N/A		Water	178.00 mg/L	30 mL	178 mg/L	1	3.0	3.0			10/5/10 12:20:00	N III
10899-001	Carbonate as CaCO3 N/A	N/A		Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/5/10 12:20:00	N III
10899-001	Hydroxide as CaCO3 N/A	N/A		Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/5/10 12:20:00	N III
10931-005	Alkalinity as CaCO3, Total N/A	N/A		Drinking Water	188.00 mg/L	30 mL	188 mg/L	1	1.0	2.0			10/5/10 12:20:00	N I
10931-005	Bicarbonate Alkalinity as CaCO3 N/A	N/A		Drinking Water	188.00 mg/L	30 mL	188 mg/L	1	1.0	2.0			10/5/10 12:20:00	N I
10931-005	Carbonate Alkalinity as CaCO3 N/A	N/A		Drinking Water	0.00 mg/L	30 mL	2.0 mg/L	U	1.0	2.0			10/5/10 12:20:00	N I
21010808-01	Alkalinity as CaCO3, Total DUP		K1010785-003	Water	98.80 mg/L	30 mL	98.8 mg/L	1	3.0	9.0		<1	10/5/10 12:20:00	N II
21010808-02	Alkalinity as CaCO3, Total MB			Water	5.60 mg/L	30 mL	5.6 mg/L	1	3.0	9.0			10/5/10 12:20:00	N II
21010808-02	Bicarbonate as CaCO3 MB			Water	5.60 mg/L	30 mL	5.6 mg/L	1	3.0	3.0			10/5/10 12:20:00	N II
21010808-02	Carbonate as CaCO3 MB			Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/5/10 12:20:00	N II
21010808-02	Hydroxide as CaCO3 MB			Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/5/10 12:20:00	N II
21010808-03	Alkalinity as CaCO3, Total LCS			Water	101.00 mg/L	30 mL	101 mg/L	1	3.0	9.0		104	10/5/10 12:20:00	N II
21010808-04	Alkalinity as CaCO3, Total MB			Drinking Water	6.28 mg/L	30 mL	6.3 mg/L	1	1.0	2.0			10/5/10 12:20:00	N I
21010808-04	Bicarbonate Alkalinity as CaCO3 MB			Drinking Water	6.28 mg/L	30 mL	6.3 mg/L	1	1.0	2.0			10/5/10 12:20:00	N I
21010808-04	Carbonate Alkalinity as CaCO3 MB			Drinking Water	0.00 mg/L	30 mL	2.0 mg/L	U	1.0	2.0			10/5/10 12:20:00	N I
Q1010808-05	Alkalinity as CaCO3, Total LCS			Drinking Water	96.00 mg/L	30 mL	96.0 mg/L	1	1.0	2.0	99		10/5/10 12:20:00	N I

Indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Printed 10/6/10 10:44

Results Summary

*Rock*  
*10/13/10*

Work Request # (207) 943 842 894  
 Tier: V II I III  
 Date Analyzed: 10/12/10  
 Analyst: CV  
 Analysis: AIK onburnet

**DATA QUALITY REPORT  
INORGANICS**

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

- |     |   |   |
|-----|---|---|
| 1.  | Is the method name and number correct and appropriate?  | <input checked="" type="radio"/> yes/no/NA  |
| 2.  | Holding times met for all analyses and for all samples?   | <input checked="" type="radio"/> yes/no/NA  |
| 3.  | Are calculations correct?   | <input checked="" type="radio"/> yes/no/NA  |
| 4.  | Is the reporting basis correct? (Dry Weight)  | <input checked="" type="radio"/> yes/no/NA  |
| 5.  | All quality control criteria met?   | <input checked="" type="radio"/> yes/no/NA  |
| a.  | Is the calibration curve correlation coefficient $\geq 0.995$ ?   | yes/no/ <del>NA</del>                       |
| b.  | MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?                                      | <input checked="" type="radio"/> yes/no/NA  |
| c.  | Are ICVs, CCVs, and CCBs all within acceptance limits?  | <input checked="" type="radio"/> yes/no/NA  |
| d.  | Are results for methods blanks all ND?  | <input checked="" type="radio"/> yes/no/NA  |
| e.  | Are all QC samples within acceptance criteria?<br>(LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)       | <input checked="" type="radio"/> yes/no/NA  |
| f.  | Are all exceptions explained?   | <input checked="" type="radio"/> yes/no/NA  |
| 6.  | Are all service requests that apply attached?   | <input checked="" type="radio"/> yes/no/NA  |
| 7.  | Are all samples labelled correctly?   | <input checked="" type="radio"/> yes/no/NA  |
| 8.  | Have all instructions on the service request been followed?<br>(e.g. Special MRLs, QC on a specific sample) | <input checked="" type="radio"/> yes/no/NA  |
| 9.  | Are detection limits and units reported correctly?  | <input checked="" type="radio"/> yes/no/NA  |
| 10. | Are proper Analysis/Extraction stickers included on report?   | yes/no/ <del>NA</del>                       |
| 11. | Is the unused space on the benchsheet crossed out?  | <input checked="" type="radio"/> yes/no/NA  |
| 12. | Was analysis turned in by the due date? (n-2) (If not record SR#)   | yes/ <input checked="" type="radio"/> no/NA |

**COMMENTS:**

Final Approved by: BPK Date: 10/14/10 DQREPORT

# Analytical Results Summary

Instrument Name: K-pH-01      Analyst: CVECCHITTO      Analysis Lot: 220596      Method/Testcode: SM 2320 B/Alkalinity Titr

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC? Tier
K1010892-003	Alkalinity as CaCO <sub>3</sub> , Total	N/A	Water	Water	12.00 mg/L	30 mL	12.0 mg/L	1	3.0	9.0			10/12/10 05:20:00	N 1
K1010892-003	Bicarbonate as CaCO <sub>3</sub>	N/A	Water	Water	12.00 mg/L	30 mL	12.0 mg/L	1	3.0	3.0			10/12/10 05:20:00	N 1
K1010892-003	Carbonate as CaCO <sub>3</sub>	N/A	Water	Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/12/10 05:20:00	N 1
K1010899-002	Alkalinity as CaCO <sub>3</sub> , Total	N/A	Water	Water	0.10 mg/L	30 mL	9.0 mg/L	U	3.0	9.0			10/12/10 05:20:00	N III
K1010899-002	Bicarbonate as CaCO <sub>3</sub>	N/A	Water	Water	0.10 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/12/10 05:20:00	N III
K1010899-002	Carbonate as CaCO <sub>3</sub>	N/A	Water	Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/12/10 05:20:00	N III
K1010899-002	Hydroxide as CaCO <sub>3</sub>	N/A	Water	Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/12/10 05:20:00	N III
K1010943-005	Alkalinity as CaCO <sub>3</sub> , Total	N/A	Water	Water	0.10 mg/L	30 mL	9.0 mg/L	U	3.0	9.0			10/12/10 05:20:00	N II
K1011207-001	Alkalinity as CaCO <sub>3</sub> , Total	N/A	Water	Water	0.00 mg/L	30 mL	5.0 mg/L	U	3.0	5.0			10/12/10 05:20:00	N V
KQ1011083-01	Alkalinity as CaCO <sub>3</sub> , Total	LCS	Water	Water	96.00 mg/L	30 mL	96.0 mg/L	1	3.0	9.0	99		10/12/10 05:20:00	N V
KQ1011083-02	Alkalinity as CaCO <sub>3</sub> , Total	DLCS	Water	Water	94.00 mg/L	30 mL	94.0 mg/L	1	3.0	9.0	97	2	10/12/10 05:20:00	N V
KQ1011083-03	Alkalinity as CaCO <sub>3</sub> , Total	MB	Water	Water	0.00 mg/L	30 mL	9.0 mg/L	U	3.0	9.0			10/12/10 05:20:00	N V
KQ1011083-03	Bicarbonate as CaCO <sub>3</sub>	MB	Water	Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/12/10 05:20:00	N V
KQ1011083-03	Carbonate as CaCO <sub>3</sub>	MB	Water	Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/12/10 05:20:00	N V
KQ1011083-03	Hydroxide as CaCO <sub>3</sub>	MB	Water	Water	0.00 mg/L	30 mL	3.0 mg/L	U	3.0	3.0			10/12/10 05:20:00	N V

*Handwritten:* BOD 10/14/10

200710

Analyte: **Alkalinity** Regular Level X High Level           
 Method: **310.1 / SM20 2320 B** Analyst:          cv          Date: 10/12/10  
 Pipette: K-pH-01 Time: 5:20

Buffer Lot #:  
cond/175-m  
cond/177-0  
cond/179-m

pH meter cal:  
 4.0 400  
 7.0 700  
 10.0 1000

Reagents: concentration          Log #          Date           
 HCl: 0.020 N 1002358  
 LCS TV = 97.4 mg/L S164-698

*PDR 10/14/10*

Table 403.1 Alkalinity Relationships

Result of titration	Hydroxide Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Bicarbonate Concentration as CaCO3
P = 0	0.0	0.0	T
P < 1/2T	0.0	2P	T - 2P
P = 1/2T	0.0	2P	0
P > 1/2T	2P - T	2(T - P)	0
P = T	T	0.0	0

P = Phenolphthalein Alkalinity T = Total Alkalinity  
 Phenolphthalein alkalinity = the quantity measured by titration to pH 8.3

Alkalinity, mg CaCO3/L = (A<sub>(mL acid used)</sub> x N<sub>(HCl)</sub> x 50,000) / mL sample

Alkalinity Low level, mg CaCO3/L = ((2A<sub>(mL acid used to pH4.5)</sub> - B<sub>(mL acid used to pH4.2)</sub>) x N<sub>(HCl)</sub> x 50,000) / mL sample

Service Request#	Sample Vol (mL)	pH Initial	Vol to pH 8.3	Vol to pH 4.5	Vol to pH 4.2	Phen. Alk. mg/L	OH- Alk. mg/L	Carb Alk. mg/L	Bicarb Alk. mg/L	Total Alk. mg/L
1 MB-1	100.0	5.94		0.18	0.40			#VALUE!	0.0	-0.4
2 LCS-1	50.0	9.12		4.80						96.0
3 K1011207-001	50.0	3.06								0.0
4 K1010943-005	100.0	5.43		0.15	0.29			#VALUE!	0.0	0.1
5 K1010892-003	75.0	6.02		1.00	1.10			#VALUE!	0.0	12.0
6 K1010899-002	100.0	5.54		0.18	0.35			#VALUE!	0.0	0.1
7 LCS-1d	50.0	9.14		4.70						94.0
8										
9										
10										
11										
12										
13										
14										
15										
16										
16										

*9/10 Rec = 99*  
*9/10 Rec = 97*  
*LCS = 98*  
*RIP = 2*

Tier: IV I III I III

Date Analyzed: 10/5/10

Analyst: KC

Analysis: TDS

### DATA QUALITY REPORT INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

- 1. Is the method name and number correct and appropriate?  yes/no/NA
- 2. Holding times met for all analyses and for all samples?  yes/no/NA
- 3. Are calculations correct?  yes/no/NA
- 4. Is the reporting basis correct? (Dry Weight)  yes/no/NA
- 5. All quality control criteria met?  yes/no/NA
  - a. Is the calibration curve correlation coefficient  $\geq 0.995$ ?  yes/no/NA
  - b. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?  yes/no/NA
  - c. Are ICVs, CCVs, and CCBs all within acceptance limits?  yes/no/NA
  - d. Are results for methods blanks all ND?  yes/no/NA
  - e. Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)  yes/no/NA
  - f. Are all exceptions explained?  yes/no/NA
- 6. Are all service requests that apply attached?  yes/no/NA
- 7. Are all samples labelled correctly?  yes/no/NA
- 8. Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)  yes/no/NA
- 9. Are detection limits and units reported correctly?  yes/no/NA
- 10. Are proper Analysis/Extraction stickers included on report?  yes/no/NA
- 11. Is the unused space on the benchsheet crossed out?  yes/no/NA
- 12. Was analysis turned in by the due date? (n-2) (If not record SR#)  yes/no/NA

**COMMENTS:**

K10734 - sample analyzed past hold.

Final Approved by:  Date: 10/10/10 DQREPORT

# Analytical Results Summary

Instrument Name: K-Balance-31

Analyst: KCUEVAS

Analysis Lot: 219372

Method/Testcode: SM 2540 C/TDS

Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt	Final Result	Dil	MDL	POL	% Rec	% RSD	Date Analyzed	QC? Tier
10734-001	Solids, Total Dissolved	N/A		Water	367.00 mg/L	100 ml	367 mg/L	1	10	30	100		10/5/10 06:00	N V
10734-002	Solids, Total Dissolved	N/A		Water	324.00 mg/L	100 ml	324 mg/L	1	10	20	100		10/5/10 06:00	N V
10817-001	Solids, Total Dissolved	N/A		Water	47.00 mg/L	100 ml	47 mg/L	1	10	10	100		10/5/10 06:00	N I
10817-002	Solids, Total Dissolved	N/A		Water	310.00 mg/L	100 ml	310 mg/L	1	10	10	100		10/5/10 06:00	N I
10817-003	Solids, Total Dissolved	N/A		Water	648.00 mg/L	75 ml	648 mg/L	1	14	14	100		10/5/10 06:00	N I
10830-001	Solids, Total Dissolved	N/A		Water	657.30 mg/L	75 ml	657 mg/L	1	14	14	100		10/5/10 06:00	N III
10830-002	Solids, Total Dissolved	N/A		Water	489.30 mg/L	75 ml	489 mg/L	1	14	14	100		10/5/10 06:00	N III
10830-003	Solids, Total Dissolved	N/A		Water	882.70 mg/L	75 ml	883 mg/L	1	14	14	100		10/5/10 06:00	N III
10830-004	Solids, Total Dissolved	N/A		Water	31.00 mg/L	200 ml	31.0 mg/L	1	5.0	5.0	101		10/5/10 06:00	N III
10892-001	Solids, Total Dissolved	N/A		Water	56.00 mg/L	100 ml	56 mg/L	1	10	10	100		10/5/10 06:00	N I
10892-002	Solids, Total Dissolved	N/A		Water	37.00 mg/L	100 ml	37 mg/L	1	10	10	100		10/5/10 06:00	N I
10892-003	Solids, Total Dissolved	N/A		Water	47.00 mg/L	100 ml	47 mg/L	1	10	10	100		10/5/10 06:00	N I
10892-004	Solids, Total Dissolved	N/A		Water	128.00 mg/L	50 ml	128 mg/L	1	20	20	100		10/5/10 06:00	N I
10892-005	Solids, Total Dissolved	N/A		Water	133.00 mg/L	100 ml	133 mg/L	1	10	10	100		10/5/10 06:00	N I
10892-006	Solids, Total Dissolved	N/A		Water	330.00 mg/L	100 ml	330 mg/L	1	10	10	100		10/5/10 06:00	N I
10892-007	Solids, Total Dissolved	N/A		Water	111.00 mg/L	100 ml	111 mg/L	1	10	10	100		10/5/10 06:00	N I
10892-008	Solids, Total Dissolved	N/A		Water	1718.00 mg/L	50 ml	1720 mg/L	1	20	20	100		10/5/10 06:00	N I
10892-009	Solids, Total Dissolved	N/A		Water	1858.00 mg/L	50 ml	1860 mg/L	1	20	20	100		10/5/10 06:00	N I
10899-001	Solids, Total Dissolved	N/A		Water	1984.00 mg/L	50 ml	1980 mg/L	1	20	20	100		10/5/10 06:00	N III
10899-002	Solids, Total Dissolved	N/A		Water	32.00 mg/L	50 ml	32 mg/L	1	20	20	100		10/5/10 06:00	N III
1010725-01	Solids, Total Dissolved	DUP	K1010850-003	Water	873.30 mg/L	75 ml	873 mg/L	1	14	14	100		10/5/10 06:00	N III
1010725-02	Solids, Total Dissolved	DUP	K1010892-008	Water	1816.00 mg/L	50 ml	1820 mg/L	1	20	20	100	6	10/5/10 06:00	N I
1010725-03	Solids, Total Dissolved	MB		Water	2.00 mg/L	200 ml	5.0 mg/L	1	5.0	5.0	101		10/5/10 06:00	N V
1010725-04	Solids, Total Dissolved	LCS		Water	1100.00 mg/L	50 ml	1100 mg/L	1	20	20	101		10/5/10 06:00	N V

OKC 10/7/10  
MRL - PAR

dicates Final Result is not yet adjusted for Solids because it has not yet been determined.

7372

Work Order #.: \_\_\_\_\_

Method: EPA SM 2540 C

Analysis: Total Dissolved Solids

Sample #	Crucible #	Conductivity	Sample Volume (ml)	Wt, Cru. + Dry sample (1) (g)	Wt, Cru. + Dry sample (2) (g)	Wt, Cru. + Dry sample (3) (g)	Wt. Crucible (g)	Wt. Dry Sample (g)	TDS (mg/L)	TDS (mg/L) reported
MB	[10A]		200	129.0628	129.0625		129.0624	0.0004	2.00	<5
LCS	GIRL		50	71.5690	71.5688		71.5140	0.0550	1100	1100
K1010734-001	48A	752	100	63.9340	63.9342		63.8973	0.0367	367	367
K1010734-002	[47]	585	100	73.0384	73.0389		73.0060	0.0324	324	324
K1010817-001	30Y	227	100	85.3326	85.3326		85.3279	0.0047	47.0	47.0
K1010817-002	38Y	633	100	72.4832	72.4833		72.4522	0.0310	310	310
K1010817-003	IT	1229	75	73.5957	73.5957		73.5471	0.0486	648	648
K1010850-001	DUCK	1163	75	68.6317	68.6320		68.5824	0.0493	657	657
K1010850-002	DUANE	1015	75	75.2747	75.2748		75.2380	0.0367	489	489
K1010850-003	SASSY	1632	75	77.4252	77.4250		77.3590	0.0662	883	883
K1010850-004	[22A]	46	200	130.9836	130.9835		130.9774	0.0062	31.0	31.0
K1010892-001	44Y	182	100	82.4103	82.4100	MUL FIL	82.4047	0.0056	56.0	56.0
K1010892-002	TUBE	204	100	66.2967	66.2969	MUL FIL	66.2930	0.0037	37.0	37.0
K1010892-003	NC2	95	100	86.1032	86.1035	MUL FIL	86.0985	0.0047	47.0	47.0
K1010892-004	MINI	343	50	76.3050	76.3052	MUL FIL	76.2986	0.0064	128	128
K1010892-005	[40]	264	100	74.2248	74.2251		74.2115	0.0133	133	133
K1010892-006	HERBIE	856	100	66.1136	66.1135		66.0806	0.0330	330	330
K1010892-007	U	239	100	73.0645	73.0647		73.0534	0.0111	111	111
K1010892-008	SIMON	4171	50	70.1194	70.1197		70.0335	0.0859	1718	1720
K1010892-009	22A	3493	50	77.9290	77.9289		77.8361	0.0929	1858	1860
K1010899-001	J16	3384	50	75.1866	75.1869		75.0874	0.0992	1984	1980
K1010899-002	42Y	4712	50	71.8492	71.8495		71.8476	0.0016	32.0	32.0
K1010850-003d	21Y	1632	75	75.7038	75.7039		75.6383	0.0655	873	873
K1010892-008d	36A	4171	50	75.1220	75.1221		75.0312	0.0908	1816	1820
X										

Calculation: Dissolved Solids (mg/L) = Wt. Dry Sample (g) x 1000 x 1000 / Volume (ml)

Balance#31

APG #:4033 Lot# 280610 ID# TDS-1-28-N T.V. =1090 % Rec =

Wt (1) Start	7:00	Wt (2) Start	11:00	Wt (3) Start	
Stop	5:00	Stop	05:00	Stop	
Wt (1) Start	180	Wt (2) Start	180	Wt (3) Start	
Temp Stop	180	Temp Stop	180	Temp Stop	

Analyzed By: KC Date Analyzed: 10/5/2010 6:00  
 Reviewed By: *[Signature]* Date Reviewed: *10/5/20*

## **Metals**



Columbia Analytical Services

- Cover Page -  
INORGANIC ANALYSIS DATA PACKAGE

Client: Exponent  
Project Name: Heglar Kronquist  
Project No.: 0907194.000.0601

Service Request: K1010899

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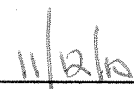
<u>Sample Name:</u>	<u>Lab Code:</u>
<u>Batch QC1D</u>	<u>K1010795-001DDISS</u>
<u>Batch QC1S</u>	<u>K1010795-001SDISS</u>
<u>MW-3</u>	<u>K1010899-001DISS</u>
<u>Equipment Blank</u>	<u>K1010899-002DISS</u>
<u>Method Blank</u>	<u>K1010899-MB</u>

Comments:

Approved By: \_\_\_\_\_



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



**Metals**

- 1 -

**INORGANIC ANALYSIS DATA PACKAGE**

Client: Exponent Service Request: K1010899  
 Project No.: 0907194.000.0601 Date Collected: 10/01/10  
 Project Name: Heglar Kronquist Date Received: 10/02/10  
 Matrix: WATER Units: ug/L  
 Basis: N/A

Sample Name: MW-3 Lab Code: K1010899-001DISS

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.7	50.0	2.0	1.0	10/09/10	11/11/10	2.0	U	
Arsenic	200.8	0.5	0.1	1.0	11/08/10	11/09/10	0.9		
Calcium	200.7	50.0	6.0	1.0	10/09/10	11/11/10	178000		
Iron	200.7	20.0	3.0	1.0	10/09/10	11/11/10	10.4	J	
Magnesium	200.7	20.0	2.0	1.0	10/09/10	11/11/10	51300		
Manganese	200.7	5.00	0.20	1.0	10/09/10	11/11/10	17.5		
Potassium	200.7	400	50	1.0	10/09/10	11/11/10	33400		
Sodium	200.7	300	20	1.0	10/09/10	11/11/10	235000		

% Solids: 0.0

Comments:

**Metals**

- 1 -

**INORGANIC ANALYSIS DATA PACKAGE**

Client: Exponent Service Request: K1010899  
 Project No.: 0907194.000.0601 Date Collected: 10/01/10  
 Project Name: Heglar Kronquist Date Received: 10/02/10  
 Matrix: WATER Units: ug/L  
 Basis: N/A

Sample Name: Equipment Blank Lab Code: K1010899-002DISS

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.7	50.0	2.0	1.0	10/09/10	11/11/10	2.0	U	
Arsenic	200.8	0.5	0.1	1.0	11/08/10	11/09/10	0.1	U	
Calcium	200.7	50.0	6.0	1.0	10/09/10	11/11/10	10.8	J	
Iron	200.7	20.0	3.0	1.0	10/09/10	11/11/10	3.6	J	
Magnesium	200.7	20.0	2.0	1.0	10/09/10	11/11/10	2.6	J	
Manganese	200.7	5.00	0.20	1.0	10/09/10	11/11/10	0.20	U	
Potassium	200.7	400	50	1.0	10/09/10	11/11/10	50	U	
Sodium	200.7	300	20	1.0	10/09/10	11/11/10	564		

% Solids: 0.0

Comments:

**Metals**

- 1 -

**INORGANIC ANALYSIS DATA PACKAGE**

Client: Exponent Service Request: K1010899  
 Project No.: 0907194.000.0601 Date Collected:  
 Project Name: Heglar Kronquist Date Received:  
 Matrix: WATER Units: ug/L  
 Basis: N/A

Sample Name: Method Blank Lab Code: K1010899-MB

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.7	50.0	2.0	1.0	10/09/10	11/11/10	2.0	U	
Arsenic	200.8	0.5	0.1	1.0	11/08/10	11/09/10	0.1	U	
Calcium	200.7	50.0	6.0	1.0	10/09/10	11/11/10	6.0	U	
Iron	200.7	20.0	3.0	1.0	10/09/10	11/11/10	6.2	J	
Magnesium	200.7	20.0	2.0	1.0	10/09/10	11/11/10	2.0	U	
Manganese	200.7	5.00	0.20	1.0	10/09/10	11/11/10	0.20	U	
Potassium	200.7	400	50	1.0	10/09/10	11/11/10	50	U	
Sodium	200.7	300	20	1.0	10/09/10	11/11/10	70	J	

% Solids: 0.0

Comments:

## Metals

- 2a -

## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Hegljar Kronquist

ICV Source: Inorganic Ventures

CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum	5000	4960	99	10000	9760	98	9791	98	200.7
Arsenic	25.0	24.8	99	25.0	25.1	100	25.9	104	200.8
Calcium	12500	12320	99	10000	9596	96	9719	97	200.7
Iron	2500	2491	100	10000	9798	98	10020	100	200.7
Magnesium	12500	12460	100	10000	10070	101	9727	97	200.7
Manganese	1250	1234	99	250	242	97	239	96	200.7
Potassium	12500	12370	99	10000	9834	98	9660	97	200.7
Sodium	12500	12720	102	10000	10070	101	9705	97	200.7

**Metals**

- 2a -

**INITIAL AND CONTINUING CALIBRATION VERIFICATION**

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Hegljar Kronquist

ICV Source: Inorganic Ventures

CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				10000	9627	96	9792	98	200.7
Arsenic				25.0	25.8	103	25.6	102	200.8
Calcium				10000	9651	97	9759	98	200.7
Iron				10000	9784	98	9878	99	200.7
Magnesium				10000	9656	97	10070	101	200.7
Manganese				250	252	101	243	97	200.7
Potassium				10000	9229	92	9680	97	200.7
Sodium				10000	9883	99	9731	97	200.7

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Hegljar Kronquist

ICV Source: Inorganic Ventures

CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				10000	9844	98	9757	98	200.7
Arsenic				25.0	25.9	104			200.8
Calcium				10000	10100	101	9873	99	200.7
Iron				10000	10250	102	10060	101	200.7
Magnesium				10000	10000	100	9547	95	200.7
Manganese				250	242	97	246	98	200.7
Potassium				10000	9454	95	9264	93	200.7
Sodium				10000	9626	96	9186	92	200.7

**Metals**  
- 2b -  
**CRDL STANDARD FOR AA AND ICP**

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglär Kronquist

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	Initial			Final	
				True	Found	%R	Found	%R
Aluminum				50.0	46.0	92		
Arsenic				0.5	0.53	106		
Arsenic				0.5			0.53	106
Calcium				50.0	50.5	101		
Iron				20.0	28.5	142		
Magnesium				20.0	22.4	112		
Manganese				5.0	5.1	102		
Potassium				400.0	351.0	88		
Sodium				200.0	143.9	72		



**Metals**

- 3 -

**BLANKS**

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Hegljar Kronquist

Concentration Units: ug/L

Analyte	Initial Calib. Blank		Continuing Calibration Blank						Method
		C	1	C	2	C	3	C	
Aluminum	2.0	U	2.5	J	2.0	U	2.0	U	200.7
Arsenic	0.10	U	0.10	U	0.10	U	0.10	U	200.8
Calcium	-15.8	J	-7.1	J	6.0	U	6.0	U	200.7
Iron	3.0	J	4.1	J	8.3	J	3.0	U	200.7
Magnesium	2.0	U	2.0	U	2.0	U	2.9	J	200.7
Manganese	0.2	U	0.2	U	0.2	U	0.2	U	200.7
Potassium	50	U	50	U	50	U	-125	J	200.7
Sodium	30.2	J	-59.8	J	-206.4	J	-73.9	J	200.7

**Metals**

- 3 -

**BLANKS**

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglär Kronquist

Concentration Units: ug/L

Analyte	Initial Calib. Blank	Continuing Calibration Blank						Method
		1	C	2	C	3	C	
Aluminum		2.0	U	-2.5	J	2.0	U	200.7
Arsenic		0.10	U	0.10	U			200.8
Calcium		-9.6	J	6.0	U	6.0	U	200.7
Iron		-3.1	J	3.0	U	3.4	J	200.7
Magnesium		3.3	J	2.0	U	6.1	J	200.7
Manganese		0.2	U	0.2	U	0.2	U	200.7
Potassium		-51	J	-156	J	-52	J	200.7
Sodium		20.0	U	20.0	U	79.6	J	200.7

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglar Kronquist

ICP ID Number: K-ICP-AES-03

ICS Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Aluminum	500000	500000	471000	473600	95			
Calcium	500000	500000	464900	465400	93			
Iron	200000	200000	184300	184000	92			
Magnesium	500000	500000	309100	305300	61			
Manganese		500	-3	466	93			
Potassium			-43	39				

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Exponent Service Request: K1010899  
 Project No.: 0907194.000.0601 Units: UG/L  
 Project Name: Heglar Kronquist Basis: N/A  
 Matrix: WATER % Solids: 0.0

Sample Name: Batch QC1S

Lab Code: K1010795-001SDISS

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Aluminum	70 - 130	1960		11.5	J	2000.00	97.4		200.7
Arsenic	70 - 130	22.2		1.7		20.00	102.5		200.8
Calcium		71800		61000		10000.00	108.0		200.7
Iron	70 - 130	1020		35.3		1000.00	98.5		200.7
Magnesium	70 - 130	29100		19100		10000.00	100.0		200.7
Manganese	70 - 130	525		62.9		500.00	92.4		200.7
Potassium	70 - 130	14800		4450		10000.00	103.5		200.7
Sodium	70 - 130	29600		18600		10000.00	110.0		200.7

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 6 -

DUPLICATES

Client: Exponent Service Request: K1010899  
 Project No.: 0907194.000.0601 Units: UG/L  
 Project Name: Heglar Kronquist Basis: N/A  
 Matrix: WATER % Solids: 0.0

Sample Name: Batch QC1D

Lab Code: K1010795-001DDISS

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Aluminum		11.5	J	12.3	J	6.7		200.7
Arsenic		1.7		1.7		0.0		200.8
Calcium	20	61000		61800		1.3		200.7
Iron		35.3		46.0		26.3		200.7
Magnesium	20	19100		19500		2.1		200.7
Manganese	20	62.9		63.9		1.6		200.7
Potassium	20	4450		4640		4.2		200.7
Sodium	20	18600		19000		2.1		200.7

An empty field in the Control Limit column indicates the control limit is not applicable.

**Metals**

- 7 -

**LABORATORY CONTROL SAMPLE**

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Hegljar Kronquist

Aqueous LCS Source: CAS MIXED

Solid LCS Source:

Analyte	Aqueous: ug/L			Solid: mg/kg				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum	5000	4910	98.2					
Arsenic	20	20.0	100.0					
Calcium	12500	12400	99.2					
Iron	2500	2570	102.8					
Magnesium	12500	12100	96.8					
Manganese	1250	1270	101.6					
Potassium	12500	11800	94.4					
Sodium	12500	11800	94.4					

Metals

- 9 -

ICP SERIAL DILUTIONS

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Units: UG/L

Project Name: Heglär Kronquist

Sample Name: Batch QC1L

Lab Code: K1010795-001LDISS

Analyte	Initial Sample Result (I) C	Serial Dilution Result (S) C	% Differ- ence	Q	M
Aluminum	11.5   J	10.0   U	100.0		P
Calcium	61030	64600	5.8		P
Iron	35.3	74.0   J	109.6		P
Magnesium	19090.0	19735.0	3.4		P
Manganese	62.9	67.0	6.5		P
Potassium	4449	3874	12.9	E	P
Sodium	18610	18825	1.2		P

Metals

- 10 -

DETECTION LIMITS

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglär Kronquist

ICP/ICP-MS ID #:

GFAA ID #:

AA ID #:

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Aluminum	394.4		50	2.0	P
Calcium	315.8		50	6.0	P
Iron	259.9		20	3.0	P
Magnesium	285.2		20	2.0	P
Manganese	257.6		5.0	0.2	P
Potassium	766.5		400	50	P
Sodium	589.5		300	20.0	P

Comments:

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Metals

- 10 -

DETECTION LIMITS

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglär Kronquist

ICP/ICP-MS ID #: K-ICP-MS-03

GFAA ID #:

AA ID #:

Analyte	Isotope	Back-ground	MRL ug/L	MDL ug/L	M
Arsenic	75		0.5	0.1	MS

Comments:

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Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglar Kronquist

ICP ID Number: K-ICP-AES-03

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Co
Aluminum	394.401	0.0000000	0.0000880	0.0000000	0.0000000	0.0000000
Antimony	206.833	0.0000290	0.0000000	-0.0001420	0.0000000	0.0000000
Arsenic	189.042	0.0000220	0.0000000	-0.0000580	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000100	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0002330	0.0000000	0.0016240
Cadmium	226.502	0.0000000	0.0000000	0.0000590	0.0000000	0.0000150
Calcium	393.366	0.0000000	0.0000000	0.0000230	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	230.786	0.0000000	0.0000000	-0.0000030	0.0000000	0.0000000
Copper	224.7	0.0000000	0.0000000	0.0001620	0.0000000	0.0006220
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000940	0.0000000	0.0000000	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000130	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0001940
Phosphorus	214.914	-0.0005540	0.0000000	0.0006550	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	-0.0001120	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0014540
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000210	0.0000000	0.0000000	0.0000320
Vanadium	292.402	0.0000000	0.0000000	-0.0000020	0.0000000	0.0000000
Zinc	213.856	0.0000000	0.0000000	0.0001010	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglär Kronquist

ICP ID Number: K-ICP-AES-03

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Cr	Mn	Mo	Ni	P
Aluminum	394.401	0.0000000	0.0000000	0.0004350	0.0003100	0.0000000
Antimony	206.833	0.0173600	-0.0001330	0.0011910	0.0000000	0.0000000
Arsenic	189.042	0.0003470	-0.0001550	0.0005480	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	-0.0000300	-0.0001890	-0.0000190	0.0000000
Boron	249.678	0.0004530	0.0000000	-0.0008670	0.0000000	0.0000000
Cadmium	226.502	0.0000410	0.0000000	-0.0000280	-0.0000170	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0001390	0.0000680	0.0000000	0.0000280
Cobalt	230.786	-0.0000120	0.0000380	0.0011280	-0.0001970	0.0000000
Copper	224.7	0.0000000	0.0000240	0.0025520	-0.0024670	0.0000000
Iron	259.94	0.0000000	0.0000000	-0.0002400	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0001340	-0.0010800	0.0001780	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	-0.0014420	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	-0.0000110	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	-0.0000270	0.0000000	-0.0000310	0.0000000
Nickel	231.604	-0.0000240	0.0000000	-0.0000480	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	-0.0004110	0.0085820	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0006630	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0192220	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000390	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000080	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0002570	0.0008680	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000000	0.0000410	0.0001300	0.0000000
Vanadium	292.402	0.0000000	-0.0027450	-0.0002030	0.0000000	0.0000000
Zinc	213.856	0.0000000	0.0000000	-0.0001050	0.0057510	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglar Kronquist

ICP ID Number: K-ICP-AES-03

Analyte	Wave-length (nm)	Interelement Correction Factors for:		
		Si	Ti	V
Aluminum	394.401	0.0000000	0.0000000	0.0005300
Antimony	206.833	-0.0000210	0.0004780	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000280
Beryllium	234.861	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0001270
Cadmium	226.502	-0.0000020	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000590	-0.0000760
Cobalt	230.786	0.0000000	0.0000000	0.0000000
Copper	224.7	-0.0000060	0.0004820	-0.0000300
Iron	259.94	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0002440	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	-0.0000780	0.0000910
Sodium	589.592	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	-0.0008960	-0.0007350
Tin	189.989	0.0000000	-0.0007490	0.0000000
Titanium	336.121	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0009490	0.0000000
Zinc	213.856	0.0000000	-0.0003230	0.0000000

Comments:

Metals

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglar Kronquist

ICP ID Number: K-ICP-AES-03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Aluminum	15.000	900000	200.7
Calcium	15.000	900000	200.7
Iron	15.000	360000	200.7
Magnesium	15.000	90000	200.7
Manganese	15.000	9000	200.7
Potassium	15.000	900000	200.7
Sodium	15.000	900000	200.7

Comments:

Metals

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglar Kronquist

ICP ID Number: K-ICP-MS-03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Arsenic	15.000	2000	200.8

Comments:

\_\_\_\_\_

\_\_\_\_\_

Metals  
-13-  
PREPARATION LOG

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglar Kronquist

Method: P

Sample ID	Preparation Date	Initial Volume	Final Volume (mL)
K1010795-001DDISS	10/09/10	50.0	50.0
K1010795-001SDISS	10/09/10	50.0	50.0
K1010899-001DISS	10/09/10	50.0	50.0
K1010899-002DISS	10/09/10	50.0	50.0
K1010899-MB	10/09/10	50.0	50.0
LCSW	10/09/10	50.0	50.0

Metals  
-13-  
PREPARATION LOG

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglar Kronquist

Method: MS

Sample ID	Preparation Date	Initial Volume	Final Volume (mL)
K1010795-001DDISS	11/08/10	50.0	50.0
K1010795-001SDISS	11/08/10	50.0	50.0
K1010899-001DISS	11/08/10	50.0	50.0
K1010899-002DISS	11/08/10	50.0	50.0
K1010899-MB	11/08/10	50.0	50.0
LCSW	11/08/10	50.0	50.0



**Metals**  
- 14 -  
**ANALYSIS RUN LOG**

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglur Kronquist

Instrument ID Number: K-ICP-AES-03

Method: P

Start Date: 11/11/10

End Date: 11/11/10

Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
BLK	1	12:52		X					X				X	X	X			X			X										
STD A	1	12:55													X																
STD B	1	12:58		X					X				X	X				X			X										
ICV1	1	13:02		X					X				X	X	X			X			X										
ZZZZZZ	1	13:05																													
ZZZZZZ	1	13:10																													
ICB1	1	13:13		X					X				X	X	X			X			X										
CCV1	1	13:16													X																
CCV1	1	13:20		X					X				X	X				X			X										
CCB1	1	13:26		X					X				X	X	X			X			X										
CRDL1	1	13:29		X					X				X	X	X			X			X										
ZZZZZZ	1	13:32																													
ICSA	1	13:34		X					X				X	X	X			X													
ICSAB	1	13:38		X					X				X	X	X			X													
ZZZZZZ	1	13:42																													
ZZZZZZ	1	13:45																													
ZZZZZZ	1	13:48																													
ZZZZZZ	1	13:51																													
ZZZZZZ	1	13:55																													
ZZZZZZ	1	13:58																													
CCV2	1	14:01																X													
CCV2	1	14:04		X					X				X	X				X			X										
CCB2	1	14:08		X					X				X	X	X			X			X										
ZZZZZZ	1	14:13																													
ZZZZZZ	1	14:16																													
ZZZZZZ	1	14:18																													
ZZZZZZ	1	14:21																													
ZZZZZZ	1	14:24																													
ZZZZZZ	1	14:27																													
ZZZZZZ	1	14:30																													
ZZZZZZ	1	14:33																													
ZZZZZZ	1	14:37																													

\* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

**Metals**  
- 14 -  
**ANALYSIS RUN LOG**

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglur Kronquist

Instrument ID Number: K-ICP-AES-03

Method: P

Start Date: 11/11/10

End Date: 11/11/10

Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
ZZZZZZ	1	14:40																													
CCV3	1	14:43																													
CCV3	1	14:46		X					X				X	X					X			X									
CCB3	1	14:50		X					X				X	X	X				X			X									
ZZZZZZ	1	14:52																													
ZZZZZZ	1	14:56																													
ZZZZZZ	1	14:59																													
ZZZZZZ	1	15:02																													
ZZZZZZ	1	15:06																													
ZZZZZZ	1	15:10																													
ZZZZZZ	1	15:13																													
K1010899-MB	1	15:16		X					X				X	X	X				X			X									
LCSW	1	15:19		X					X				X	X	X				X			X									
ZZZZZZ	1	15:22																													
CCV4	1	15:25																													
CCV4	1	15:28		X					X				X	X					X			X									
CCB4	1	15:32		X					X				X	X	X				X			X									
ZZZZZZ	1	15:35																													
K1010795-001DDISS	1	15:38		X					X				X	X	X				X			X									
K1010795-001LDISS	5	15:42		X					X				X	X	X				X			X									
K1010795-001SDISS	1	15:45		X					X				X	X	X				X			X									
ZZZZZZ	1	15:48																													
ZZZZZZ	1	15:52																													
ZZZZZZ	1	15:54																													
ZZZZZZ	1	15:58																													
ZZZZZZ	1	16:02																													
ZZZZZZ	1	16:05																													
CCV5	1	16:08																													
CCV5	1	16:11		X					X				X	X					X			X									
CCB5	1	16:15		X					X				X	X	X				X			X									
K1010899-001DISS	1	16:18		X					X				X	X	X				X			X									
K1010899-002DISS	1	16:21		X					X				X	X	X				X			X									

\* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals  
- 14 -  
ANALYSIS RUN LOG

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglar Kronquist

Instrument ID Number: K-ICP-AES-03

Method: P

Start Date: 11/11/10

End Date: 11/11/10

Sample No.	D/F	Time	% R	Analytes																							
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N
ZZZZZZ	1	16:24																									
ZZZZZZ	1	16:27																									
ZZZZZZ	1	16:31																									
ZZZZZZ	1	16:34																									
ZZZZZZ	1	16:37																									
ZZZZZZ	1	16:41																									
ZZZZZZ	1	16:44																									
ZZZZZZ	1	16:47																									
CCV6	1	16:51																X									
CCV6	1	16:54		X					X			X	X					X			X						
CCB6	1	16:58		X					X			X	X	X				X			X						

\* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

**Metals**  
- 14 -  
**ANALYSIS RUN LOG**

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglur Kronquist

Instrument ID Number: K-ICP-MS-03

Method: MS

Start Date: 11/09/10

End Date: 11/09/10

Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
Cal. Blk	1	10:58				X																									
Cal. Stn	1	11:03				X																									
ICV1	1	11:14				X																									
CCV1	1	11:24				X																									
ICB1	1	11:45				X																									
CCB1	1	11:52				X																									
CRA	1	11:57				X																									
ZZZZZZ	1	12:07																													
ZZZZZZ	1	12:12																													
ZZZZZZ	1	12:23																													
ZZZZZZ	1	12:32																													
ZZZZZZ	1	12:42																													
ZZZZZZ	1	12:53																													
ZZZZZZ	1	13:03																													
ZZZZZZ	1	13:14																													
ZZZZZZ	1	13:24																													
CCV2	1	13:34				X																									
CCB2	1	13:55				X																									
ZZZZZZ	1	14:01																													
ZZZZZZ	1	14:11																													
ZZZZZZ	1	14:17																													
ZZZZZZ	1	14:24																													
ZZZZZZ	1	14:31																													
ZZZZZZ	1	14:37																													
K1010899-MB	1	14:44				X																									
LCSW	1	14:49				X																									
ZZZZZZ	1	15:00																													
K1010795-001DDISS	1	15:09				X																									
CRA	1	15:17				X																									
CCV3	1	15:27				X																									
CCB3	1	15:37				X																									
K1010795-001SDISS	1	15:45				X																									

\* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

**Metals**  
- 14 -  
**ANALYSIS RUN LOG**

Client: Exponent

Service Request: K1010899

Project No.: 0907194.000.0601

Project Name: Heglar Kronquist

Instrument ID Number: K-ICP-MS-03

Method: MS

Start Date: 11/09/10

End Date: 11/09/10

Sample No.	D/F	Time	% R	Analytes																											
				A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K	S E	A G	N A	T L	V	Z N	C N				
ZZZZZZ	1	15:55																													
ZZZZZZ	1	16:05																													
ZZZZZZ	1	16:10																													
ZZZZZZ	1	16:18																													
ZZZZZZ	1	16:23																													
ZZZZZZ	1	16:29																													
K1010899-001DISS	1	16:34				X																									
K1010899-002DISS	1	16:39				X																									
CCV4	1	16:44				X																									
CCB4	1	16:55				X																									
ZZZZZZ	1	17:00																													
ZZZZZZ	1	17:06																													
ZZZZZZ	1	17:11																													
ZZZZZZ	1	17:21																													
ZZZZZZ	1	17:31																													
ZZZZZZ	1	17:41																													
ZZZZZZ	1	17:52																													
ZZZZZZ	1	18:01																													
ZZZZZZ	1	18:11																													
ZZZZZZ	1	18:21																													
CCV5	1	18:41				X																									
CCB5	1	18:52				X																									

\* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

## Metals

15-IN

## ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Columbia Analytical Services Contract: 0907194.000.0601  
 Lab Code: CAS Case No.: \_\_\_\_\_ NRAS No.: \_\_\_\_\_ SDG NO.: K1010899  
 ICP-MS Instrument ID: K-ICP-MS-03 Start Date: 11/09/2010 End Date: 11/09/2010

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Li_6	Q	Element Sc_45	Q	Element Ga_71	Q	Element Y_89	Q	Element Rh_103	Q	Element In_115	Q
Cal. Blk	Cal. Blk	1058	100				100		100		100		100	
Cal. Stn	Cal. Stn	1103	101				100		100		101		103	
ICV1	ICV1	1114	99				99		99		100		103	
CCV1	CCV1	1124	99				99		100		101		103	
ICB1	ICB1	1145	96				96		96		97		98	
CCB1	CCB1	1152	98				96		97		98		98	
CRA	CRA	1157	98				96		96		97		97	
ZZZZZZ	ZZZZZZ	1207												
ZZZZZZ	ZZZZZZ	1212												
ZZZZZZ	ZZZZZZ	1223												
ZZZZZZ	ZZZZZZ	1232												
ZZZZZZ	ZZZZZZ	1242												
ZZZZZZ	ZZZZZZ	1253												
ZZZZZZ	ZZZZZZ	1303												
ZZZZZZ	ZZZZZZ	1314												
ZZZZZZ	ZZZZZZ	1324												
CCV2	CCV2	1334	93				90		91		92		94	
CCB2	CCB2	1355	92				89		90		91		91	
ZZZZZZ	ZZZZZZ	1401												
ZZZZZZ	ZZZZZZ	1411												
ZZZZZZ	ZZZZZZ	1417												
ZZZZZZ	ZZZZZZ	1424												
ZZZZZZ	ZZZZZZ	1431												
ZZZZZZ	ZZZZZZ	1437												
K1010899-MB	Method Blank	1444	89				86		87		89		90	
LCSW	LCSW	1449	90				87		88		90		91	
ZZZZZZ	ZZZZZZ	1500												
K1010795-001DDIS	Batch QC1D	1509	88				82		85		83		86	
CRA	CRA	1517	87				84		85		87		89	
CCV3	CCV3	1527	85				84		86		88		90	
CCB3	CCB3	1537	84				81		82		84		86	
K1010795-001SDIS	Batch QC1S	1545	81				75		79		78		81	
ZZZZZZ	ZZZZZZ	1555												
ZZZZZZ	ZZZZZZ	1605												
ZZZZZZ	ZZZZZZ	1610												
ZZZZZZ	ZZZZZZ	1618												
ZZZZZZ	ZZZZZZ	1623												
ZZZZZZ	ZZZZZZ	1629												
K1010899-001DISS	MW-3	1634	73				66		72		67		71	
K1010899-002DISS	Equipment Blank	1639	79				73		74		76		77	
CCV4	CCV4	1644	76				71		72		74		77	
CCB4	CCB4	1655	73				67		69		72		73	
ZZZZZZ	ZZZZZZ	1700												
ZZZZZZ	ZZZZZZ	1706												
ZZZZZZ	ZZZZZZ	1711												

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Columbia Analytical Services Contract: 0907194.000.0601

Lab Code: CAS Case No.: \_\_\_\_\_ NRAS No.: \_\_\_\_\_ SDG NO.: K1010899

ICP-MS Instrument ID: K-ICP-MS-03 Start Date: 11/09/2010 End Date: 11/09/2010

Sample No.	Client ID	Time	Internal Standards %RI For:														
			Element Li_6	Q	Element Sc_45	Q	Element Ga_71	Q	Element Y_89	Q	Element Rh_103	Q	Element In_115	Q			
ZZZZZZ	ZZZZZZ	1721															
ZZZZZZ	ZZZZZZ	1731															
ZZZZZZ	ZZZZZZ	1741															
ZZZZZZ	ZZZZZZ	1752															
ZZZZZZ	ZZZZZZ	1801															
ZZZZZZ	ZZZZZZ	1811															
ZZZZZZ	ZZZZZZ	1821															
CCV5	CCV5	1841	69				63		64		67					70	
CCB5	CCB5	1852	68				60		62		65					66	

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Columbia Analytical Services Contract: 0907194.000.0601  
 Lab Code: CAS Case No.: \_\_\_\_\_ NRAS No.: \_\_\_\_\_ SDG NO.: K1010899  
 ICP-MS Instrument ID: K-ICP-MS-03 Start Date: 11/09/2010 End Date: 11/09/2010

Sample No.	Client ID	Time	Internal Standards %RI For:										
			Element Lu_175	Q	Element Th_232	Q	Element	Q	Element	Q			
Cal. Blk	Cal. Blk	1058	100		100								
Cal. Stn	Cal. Stn	1103	102		103								
ICV1	ICV1	1114	103		103								
CCV1	CCV1	1124	102		104								
ICB1	ICB1	1145	99		100								
CCB1	CCB1	1152	99		99								
CRA	CRA	1157	99		100								
ZZZZZZ	ZZZZZZ	1207											
ZZZZZZ	ZZZZZZ	1212											
ZZZZZZ	ZZZZZZ	1223											
ZZZZZZ	ZZZZZZ	1232											
ZZZZZZ	ZZZZZZ	1242											
ZZZZZZ	ZZZZZZ	1253											
ZZZZZZ	ZZZZZZ	1303											
ZZZZZZ	ZZZZZZ	1314											
ZZZZZZ	ZZZZZZ	1324											
CCV2	CCV2	1334	97		100								
CCB2	CCB2	1355	95		97								
ZZZZZZ	ZZZZZZ	1401											
ZZZZZZ	ZZZZZZ	1411											
ZZZZZZ	ZZZZZZ	1417											
ZZZZZZ	ZZZZZZ	1424											
ZZZZZZ	ZZZZZZ	1431											
ZZZZZZ	ZZZZZZ	1437											
K1010899-MB	Method Blank	1444	94		96								
LCSW	LCSW	1449	95		98								
ZZZZZZ	ZZZZZZ	1500											
K1010795-001DDIS	Batch QC1D	1509	93		96								
CRA	CRA	1517	93		96								
CCV3	CCV3	1527	96		100								
CCB3	CCB3	1537	91		94								
K1010795-001SDIS	Batch QC1S	1545	90		95								
ZZZZZZ	ZZZZZZ	1555											
ZZZZZZ	ZZZZZZ	1605											
ZZZZZZ	ZZZZZZ	1610											
ZZZZZZ	ZZZZZZ	1618											
ZZZZZZ	ZZZZZZ	1623											
ZZZZZZ	ZZZZZZ	1629											
K1010899-001DISS	MW-3	1634	82		86								
K1010899-002DISS	Equipment Blank	1639	84		89								
CCV4	CCV4	1644	84		90								
CCB4	CCB4	1655	81		86								
ZZZZZZ	ZZZZZZ	1700											
ZZZZZZ	ZZZZZZ	1706											
ZZZZZZ	ZZZZZZ	1711											



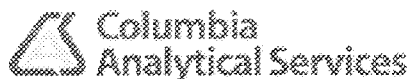
Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Columbia Analytical Services Contract: 0907194.000.0601  
 Lab Code: CAS Case No.: \_\_\_\_\_ NRAS No.: \_\_\_\_\_ SDG NO.: K1010899  
 ICP-MS Instrument ID: K-ICP-MS-03 Start Date: 11/09/2010 End Date: 11/09/2010

Sample No.	Client ID	Time	Internal Standards %RI For:															
			Element Lu_175	Q	Element Th_232	Q	Element	Q	Element	Q	Element	Q						
ZZZZZZ	ZZZZZZ	1721																
ZZZZZZ	ZZZZZZ	1731																
ZZZZZZ	ZZZZZZ	1741																
ZZZZZZ	ZZZZZZ	1752																
ZZZZZZ	ZZZZZZ	1801																
ZZZZZZ	ZZZZZZ	1811																
ZZZZZZ	ZZZZZZ	1821																
CCV5	CCV5	1841	78		84													
CCB5	CCB5	1852	75		79													

 **Preparation Information Benchsheet**

**Prep Run:** 123142      **Prep Workflow:** MetDigAqICP      **Status:** Prepped      **Prep Date:** 11/09/2010  
**Team:** Metals      **Prep Method:** METALS      **Current Step:** Digestion      **Due Date:** 10/29/2010  
**Analyst:** JBAILEY      **Rush/NPDES:** NPDES

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1012168-01	Method Blank		50 mL	50 mL			Metals T	5% HCl
KQ1012168-02	Lab Control Sample		50 mL	50 mL	0.25 mL 0.25 mL 0.25 mL 0.5 mL	18109 20255 20797 23177	Metals T	5% HCl
KQ1012168-07	Lab Control Sample		50 mL	50 mL	0.5 mL	19316	Metals T	5% HCl
K1010795-001	MW-6	.05	50 mL	50 mL			Metals D	5% HCl
K1010795-001: KQ1012168-03	Duplicate	.05	50 mL	50 mL			Metals D	5% HCl
K1010795-001: KQ1012168-04	Matrix Spike	.05	50 mL	50 mL	0.5 mL 0.5 mL 0.5 mL 0.5 mL	20981 21052 22913 23177	Metals D	5% HCl
K1010795-002	MW-5	.05	50 mL	50 mL			Metals D	5% HCl
K1010795-003	EQUIPMENT BLANK	.05	50 mL	50 mL			Metals D	5% HCl
K1010850-001	MW-2	.10	50 mL	50 mL			Metals D	5% HCl
K1010850-002	MW-1	.10	50 mL	50 mL			Metals D	5% HCl
K1010850-003	MW-4	.10	50 mL	50 mL			Metals D	5% HCl
K1010850-004	Equipment Blank	.10	50 mL	50 mL			Metals D	5% HCl
K1010899-001	MW-3	.12	50 mL	50 mL			Metals D	5% HCl
K1010899-002	Equipment Blank	.12	50 mL	50 mL			Metals D	5% HCl
K1011360-001	BA98225	.04	50 mL	50 mL			Metals T	5% HCl
K1011360-001: KQ1012168-05	Duplicate	.04	50 mL	50 mL			Metals T	5% HCl
K1011360-001: KQ1012168-06	Matrix Spike	.04	50 mL	50 mL	0.5 mL 0.5 mL 0.5 mL 0.5 mL	20981 21052 22913 23177	Metals T	5% HCl
K1011360-001: KQ1012168-08	Matrix Spike	.04	50 mL	50 mL	0.5 mL	19316	Metals T	5% HCl
K1011461-001	MW7A	.04	50 mL	50 mL			Metals T	5% HCl
K1011461-002	MW8A	.04	50 mL	50 mL			Metals T	5% HCl
K1011461-003	MW11A	.04	50 mL	50 mL			Metals T	5% HCl

K1011461-004	MW12A	.04	50 mL	50 mL			Metals T	5% HCl
K1011461-005	MW34	.04	50 mL	50 mL			Metals T	5% HCl
K1011461-006	MW35	.04	50 mL	50 mL			Metals T	5% HCl
K1011461-007	MW36	.04	50 mL	50 mL			Metals T	5% HCl
K1011461-008	MW37	.04	50 mL	50 mL			Metals T	5% HCl
K1011461-009	MW38	.04	50 mL	50 mL			Metals T	5% HCl

27 Total Samples consisting of 19 Client Samples, 5 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

**Spiking Solutions**

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET QCP-CICV-1	Spike	18109	6/1/2011	K-MET SS3	Spike	21052	12/31/2010
K-MET QCP-CICV-2	Spike	20797	8/1/2011	K-MET SS4	Spike	23177	5/4/2011
K-MET QCP-CICV-3	Spike	20255	8/1/2011	K-MET SS5	Spike	20981	2/25/2011
K-MET SS1	Spike	22913	5/4/2011	Silicon 1000 ug/mL Si	Spike	19316	10/26/2011

**Preparation Materials**

Step	Name	ID	Step	Name	ID
Digestion	K-MET HNO3	15193	Digestion	K-MET 50ml Centrifuge Tube	22573
Digestion	K-MET HCL	22349			

**Preparation Hardware / Equipment**

Step	Name	Property	Value	
Digestion	K-BlockDigester-06	Temperature	96	deg C

**Preparation Steps**

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	09-NOV-10 09:00	09-NOV-10 11:00	JBAILEY		N	

**Comments**

**Review**


Reviewed by:                          Date: 11/9/10

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mLs Added
K-MET SS1	HNO3	50.0	1000ml	-	0.5
	Al	100*	1000ml	200	
	Ag	100**	1000ml	5	
	Ba	100*	1000ml	200	
	Be	100**	1000ml	5	
	Cd	100**	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100**	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100**	1000ml	50	
Sb	50	1000ml	50		
V	100**	1000ml	50		
Zn	100**	1000ml	50		
K-MET SS2	HNO3	25.0	500ml	-	
	As	2.0	500ml	4	
	Cd	2.0	500ml	4	
	Pb	2.0	500ml	4	
	Se	2.0	500ml	4	
	Tl	2.0	500ml	4	
K-MET SS3	HNO3	25.0	500ml	-	0.5
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	50.0	500ml	100	
K-MET SS4	HNO3	25	500ml	-	0.5
	B	50	500ml	100	
	Mo	50	500ml	100	
K-MET SS5	HNO3	10.0	200ml	-	0.5
	K**	20	200ml	1000	
	Na**	20	200ml	1000	
	Mg**	20	200ml	1000	
	Ca**	20	200ml	1000	

K-MET GFLCSW	HNO3	10.0	1000ml	-	
	As, Pb, Se, Tl	5.0	1000ml	2.5	
	Cd	-	-	1.25	
	Cu	2.5	1000ml	2.5	
K-MET QCP-CICV-1	Co, Mg, Na, K	no dilution	-	2500	0.25
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-2	Sb	no dilution	-	500	0.25
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	0.25
	Cd	no dilution	-	250	

\* Denotes volume of mixed stock standard  
 \*\* Denotes 10,000 ppm individual stock standards.

Standard	mLs of standard	ppm	Logbook #	Exp. Date


**Columbia Analytical Services** Preparation Information Benchsheet

**Prep Run:** 123141      **Prep Workflow:** MetDigAqMS      **Status:** Prepped  
**Team:** Metals      **Prep Method:** METALS      **Current Step:** Digestion      **Prep Date:** 11/08/2010  
**Analyst:** JBAILEY      **Rush/NPDES:** NPDES      **Due Date:** 10/29/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1012167-05	Method Blank		50 mL	50 mL			Metals T	1% HNO3
KQ1012167-06	Lab Control Sample		50 mL	50 mL	1 mL 1 mL	20439 21569	Metals T	1% HNO3
K1010795-001	MW-6	.05	50 mL	50 mL			Metals D	1% HNO3
K1010795-001: KQ1012167-01	Duplicate	.05	50 mL	50 mL			Metals D	1% HNO3
K1010795-001: KQ1012167-02	Matrix Spike	.05	50 mL	50 mL	1 mL 1 mL	20439 21569	Metals D	1% HNO3
K1010795-002	MW-5	.05	50 mL	50 mL			Metals D	1% HNO3
K1010795-003	EQUIPMENT BLANK	.05	50 mL	50 mL			Metals D	1% HNO3
K1010850-001	MW-2	.10	50 mL	50 mL			Metals D	1% HNO3
K1010850-002	MW-1	.10	50 mL	50 mL			Metals D	1% HNO3
K1010850-003	MW-4	.10	50 mL	50 mL			Metals D	1% HNO3
K1010850-004	Equipment Blank	.10	50 mL	50 mL			Metals D	1% HNO3
K1010899-001	MW-3	.12	50 mL	50 mL			Metals D	1% HNO3
K1010899-002	Equipment Blank	.12	50 mL	50 mL			Metals D	1% HNO3
K1011360-001	BA98225	.04	50 mL	50 mL			Metals T	1% HNO3
K1011360-001: KQ1012167-07	Duplicate	.04	50 mL	50 mL			Metals T	1% HNO3
K1011360-001: KQ1012167-08	Matrix Spike	.04	50 mL	50 mL	1 mL 1 mL	20439 21569	Metals T	1% HNO3
K1011461-001	MW7A	.04	50 mL	50 mL			Metals T	1% HNO3
K1011461-002	MW8A	.04	50 mL	50 mL			Metals T	1% HNO3
K1011461-003	MW11A	.04	50 mL	50 mL			Metals T	1% HNO3
K1011461-004	MW12A	.04	50 mL	50 mL			Metals T	1% HNO3
K1011461-005	MW34	.04	50 mL	50 mL			Metals T	1% HNO3
K1011461-006	MW35	.04	50 mL	50 mL			Metals T	1% HNO3
K1011461-007	MW36	.04	50 mL	50 mL			Metals T	1% HNO3

K1011461-008	MW37	.04	50 mL	50 mL			Metals T	1% HNO3
K1011461-009	MW38	.04	50 mL	50 mL			Metals T	1% HNO3

25 Total Samples consisting of 19 Client Samples, 4 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

**Spiking Solutions**

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET 200.8 1000ug/L Stock	Spike	21569	3/21/2011	K-MET Ag 1000 ppb Stock	Spike	20439	4/28/2011

**Preparation Materials**

Step	Name	ID	Step	Name	ID
Digestion	K-MET HNO3 ULTREX	21674	Digestion	K-MET 50ml Centrifuge Tube	22573

**Preparation Hardware / Equipment**


Step	Name	Property	Value
Digestion	K-BlockDigester-05	Temperature	95 deg C

**Preparation Steps**

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	08-NOV-10 16:00	08-NOV-10 19:00	JBAILEY		N	

**Comments**

**Review**

Reviewed by:  Date: 11/9/10

Service Request # K1010899  
Instrument ID# K-ICP-AES-03

## ICP-OES Data Review Form

	Yes	No
1. Standardization completed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. ICV within 10 % of true value	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. ICB below MRL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. CRI standard analyzed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. ICS standards within 20% of true value	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. All preceding CCVs within 10 % of true value	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Following CCV within 10 % of true value	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Bracketing CCBs below MRL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Method Blank below MRL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. MS-MSD or Dup-MS and LCS within CAS control limits	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. All analytes within instrument linear range	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12. Adequate rinse out time allowed between samples to eliminate memory effect	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Comments:

StarLIMS Run # 224778      Saved under 111110BICP03  
200.7 Calibration. NR Cu2247. NR LL Sr.  
Raise LL K MRL to 0.2ppm. *Na MRL = 0.3ppm.*  
Report Cd2265, Cu3273, Zn2062, Al3944, Ca3158, Mg2852.

Primary Review by mmc      Date 11/11/10

Secondary Review by ze      Date 11/11/10

Sample Name: BLK      Acquired: 11/11/2010 12:52:38      Type: Cal

Method: 10C2007(v48)      Mode: IR      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0003	-65.94	8.321	3.629	.0619	-4.4607	42.09
Stddev	.0000	6.28	.637	.062	.0085	6.3790	4.83
%RSD	9.749	9.518	7.654	1.716	13.74	143.00	11.47

#1	.0003	-70.38	7.871	3.585	.0679	.04995	45.50
#2	.0003	-61.50	8.772	3.673	.0559	-8.9713	38.68

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0010	-.0002	.0067	.1258	-.0001	.0003	-.0025
Stddev	.0018	.0003	.0021	.0055	.0001	.0003	.0000
%RSD	177.8	123.0	31.71	4.377	81.57	114.1	1.438

#1	-.0003	-.0004	.0052	.1219	.0000	.0005	-.0024
#2	.0023	.0000	.0082	.1297	-.0002	.0001	-.0025

Elem	Cu3273	Fe2599	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	14.47	-.0006	.0017	-.0007	.0116	6.400	.0004
Stddev	2.63	.0003	.0004	.0001	.0007	.424	.0001
%RSD	18.20	49.20	21.52	18.36	6.370	6.629	25.59

#1	16.33	-.0009	.0014	-.0007	.0121	6.100	.0003
#2	12.61	-.0004	.0019	-.0006	.0111	6.700	.0004

Elem	Mn2605	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0000	.0011	.0004	85.80	2.339	-23.22	421.9
Stddev	.000	.0002	.0003	1.91	.750	3.25	5.2
%RSD	1803.	17.17	77.25	2.225	32.06	13.97	1.241

#1	.0000	.0012	.0002	84.45	2.870	-20.93	418.2
#2	.0000	.0009	.0005	87.15	1.809	-25.52	425.6



Sample Name: BLK      Acquired: 11/11/2010 12:52:38      Type: Cal

Method: 10C2007(v48)      Mode: IR      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0003	.0007	.0024	14.58	8.736	.2091	.0019
Stddev	.0001	.0001	.0001	.56	1.270	1.009	.0001
%RSD	37.18	7.646	5.309	3.817	14.53	482.7	6.426

#1	.0002	.0006	.0023	14.98	9.634	-.5045	.0018
#2	.0003	.0007	.0024	14.19	7.838	.9227	.0020

Elem	Tl1908	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S
Avg	-.0034	24.58	-.00717
Stddev	.0001	7.53	.00426
%RSD	2.876	30.64	59.413

#1	-.0035	19.25	-.00416
#2	-.0034	29.90	-.01018

*cccc*  
*11/11/10*

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5926.5	109080.	1449.5	1444.1
Stddev	.6	2.	8.1	.8
%RSD	.00956	.00209	.55708	.05329

#1	5926.9	109080.	1455.3	1443.6
#2	5926.1	109080.	1443.8	1444.7

Sample Name: STD A      Acquired: 11/11/2010 12:55:47      Type: Cal

Method: 10C2007(v48)      Mode: IR      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B ICP8-21-B

Elem	Al1670	Sb2068	Be2348	B_2496	Cd2144	Cd2265	Ca3933	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.3613	512.1	57535.	3862.	13.49	2.679	14.48	.1294
Stddev	.0024	.2	299.	27.	.11	.019	.08	.0003
%RSD	.6624	.0369	.51884	.6911	.8204	.7134	.5676	.2259

#1	.3596	512.0	57746.	3881.	13.41	2.666	14.42	.1296
#2	.3630	512.3	57324.	3843.	13.57	2.693	14.54	.1292

Elem	Co2307	Cu2247	Cu3273	Pb2203	Mg2795	Mn2576	Mo2020	Ni2216
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.7932	1.927	11430.	.7838	6.469	.6339	.6278	.9549
Stddev	.0050	.019	76.	.0071	.016	.0003	.0048	.0089
%RSD	.6329	1.008	.6663	.9031	.2539	.0494	.7645	.9293

#1	.7897	1.913	11480.	.7788	6.458	.6341	.6244	.9486
#2	.7968	1.941	11380.	.7888	6.481	.6337	.6312	.9612

Elem	Se1960	Ag3280	Sn1899	V_2924	Zn2062	Zn2138	Ti3361	Ti1908
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	409.2	15960.	.5775	.1335	3.549	12520.	.4540	.4419
Stddev	2.8	29.	.0054	.0000	.036	61.	.0006	.0026
%RSD	.6868	.1827	.9395	.0007	1.019	.4872	.1280	.5776

#1	407.2	15980.	.5737	.1335	3.524	12480.	.4536	.4401
#2	411.2	15940.	.5814	.1335	3.575	12570.	.4544	.4437

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5847.3	106630.	1406.7	1429.1
Stddev	17.4	584.	1.5	6.8
%RSD	.29774	.54756	.10786	.47777

#1	5859.6	107040.	1405.7	1434.0
#2	5835.0	106220.	1407.8	1424.3

Sample Name: STD B      Acquired: 11/11/2010 12:58:43      Type: Cal

Method: 10C2007(v48)      Mode: IR      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B ICP8-18-C

Elem	Al3944	As1890	Ba4554	Ca3158	Fe2599	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	R 113200.	1484.	141.0	4.407	6.101	.9155
Stddev	598.	19.	.7	.048	.032	.0037
%RSD	.5279	1.259	.5278	1.097	.5283	.4016

#1	112800.	1498.	141.6	4.441	6.124	.9181
#2	113700.	1471.	140.5	4.373	6.079	.9129

Elem	Mg2852	Mn2605	K_7664	Na5895	P_2149	Si2516
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	R 18730.	.0180	4207.	7363.	12330.	2246.
Stddev	7.	.0000	1.	48.	132.	17.
%RSD	.0376	.1575	.0274	.6489	1.069	.7523

#1	18730.	.0179	4206.	7397.	12420.	2258.
#2	18740.	.0180	4208.	7329.	12240.	2234.

Elem	Li6707	Sr4077
Units	Cts/S	Cts/S
Avg	8894.	30.626
Stddev	29.	.099
%RSD	.3298	.32362

#1	8873.	30.696
#2	8915.	30.555

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5753.8	102480.	1421.5	1402.1
Stddev	116.4	318.	8.1	31.4
%RSD	2.0238	.31053	.56762	2.2381

#1	5671.4	102260.	1415.8	1379.9
#2	5836.1	102710.	1427.2	1424.3

Sample Name: ICV1      Acquired: 11/11/2010 13:02:10      Type: QC

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B ICP8-17-B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.158	4.960	2.465	2.540	4.902	.12637	.0009	1.214
Stddev	.019	.019	.009	.006	.025	.00013	.0005	.006
%RSD	.4484	.3807	.3440	.2541	.5075	.10366	50.67	.4744

#1	4.145	4.974	2.459	2.535	4.919	.12646	.0012	1.210
#2	4.172	4.947	2.471	2.544	4.884	.12628	.0006	1.218

Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.217	12.32	12.17	.5005	1.234	.6167	.6337	2.491
Stddev	.008	.11	.23	.0008	.008	.0041	.0000	.015
%RSD	.6327	.8685	1.869	.1512	.6448	.6600	.0070	.5993

#1	1.212	12.39	12.33	.5000	1.228	.6138	.6337	2.501
#2	1.223	12.24	12.01	.5010	1.239	.6196	.6336	2.480

Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.461	12.38	12.00	12.46	1.234	1.212	1.971	1.223
Stddev	.014	.02	.07	.06	.001	.022	.014	.008
%RSD	.5612	.1673	.5594	.4429	.1172	1.858	.6927	.6791

#1	2.451	12.36	12.05	12.42	1.235	1.196	1.962	1.217
#2	2.471	12.39	11.96	12.50	1.233	1.228	1.981	1.229

Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ICV1      Acquired: 11/11/2010 13:02:10      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B ICP8-17-B

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.37	2.451	.6256	12.72	.0013	1.261	1.225	1.230
Stddev	.15	.002	.0027	.11	.0002	.000	.007	.003
%RSD	1.209	.0681	.4260	.8710	16.91	.0294	.5525	.2632
#1	12.27	2.450	.6275	12.64	.0015	1.261	1.220	1.227
#2	12.48	2.452	.6238	12.80	.0011	1.261	1.229	1.232

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value Range								

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0155	.0125	1.972	2.481	.0057	.00024
Stddev	.0018	.0021	.001	.006	.0013	.00015
%RSD	11.37	16.93	.0242	.2394	23.56	61.670
#1	-.0168	.0140	1.972	2.477	.0067	.00035
#2	-.0143	.0110	1.972	2.485	.0048	.00014

Check ?	None	None	Chk Pass	Chk Pass	None	None
Value Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5837.8	106640.	1427.8	1424.7
Stddev	23.4	231.	18.8	4.0
%RSD	.40026	.21708	1.3197	.28068
#1	5854.3	106800.	1414.5	1427.5
#2	5821.3	106480.	1441.1	1421.9

Sample Name: ICVB1      Acquired: 11/11/2010 13:05:22      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B ICP8-16-F

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9871	.9874	.0001	.0020	.0022	-.00009	2.036	.0003
Stddev	.0034	.0015	.0002	.0021	.0006	.00000	.004	.0000
%RSD	.3418	.1504	400.0	107.0	28.40	1.7332	.2060	2.218

#1	.9847	.9864	-.0001	.0005	.0018	-.00009	2.039	.0003
#2	.9895	.9885	.0002	.0034	.0027	-.00009	2.033	.0003

Check ?	Chk Pass	None	None	None	None	None	Chk Pass	None
Value Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	4.999	4.971	.0008	.0001	.0065	-.0001	9.971
Stddev	.0000	.036	.040	.0004	.0001	.0004	.0010	.087
%RSD	4.333	.7190	.8056	55.36	35.52	5.659	1076.	.8693

#1	.0003	4.973	4.943	.0011	.0001	.0068	.0006	9.910
#2	.0003	5.024	5.000	.0005	.0002	.0063	-.0008	10.03

Check ?	None	None	Chk Pass	None	None	None	None	None
Value Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	4.978	4.929	5.106	9.417	9.753	.0011	.0008
Stddev	.0004	.113	.042	.000	.009	.024	.0003	.0003
%RSD	122.1	2.278	.8549	.0044	.0945	.2415	27.57	30.83

#1	.0000	4.898	4.899	5.106	9.424	9.770	.0013	.0010
#2	-.0006	5.058	4.959	5.106	9.411	9.736	.0009	.0006

Check ?	None	None	Chk Pass	None	None	Chk Pass	None	None
Value Range								

Sample Name: ICVB1      Acquired: 11/11/2010 13:05:22      Type: QC

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B ICP8-16-F

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.0009</b>	<b>-.0006</b>	<b>.0003</b>	<b>.1221</b>	<b>5.030</b>	<b>.0138</b>	<b>.0015</b>	<b>.0015</b>
Stddev	.1098	.0006	.0001	.0305	.028	.0001	.0001	.0001
%RSD	12630.	88.46	32.96	24.95	.5623	.4919	3.593	3.784

#1	.0768	-.0010	.0004	.1437	5.010	.0139	.0015	.0016
#2	-.0785	-.0002	.0002	.1006	5.050	.0138	.0015	.0015

Check ?	None	None	None	None	Chk Pass	None	None	None
Value								
Range								

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>5.212</b>	<b>5.225</b>	<b>.0008</b>	<b>.0073</b>	<b>1.942</b>	<b>1.9722</b>
Stddev	.015	.024	.0002	.0019	.006	.0169
%RSD	.2781	.4579	20.75	26.81	.2868	.85707

#1	5.202	5.242	.0009	.0059	1.939	1.9602
#2	5.222	5.208	.0006	.0086	1.946	1.9841

Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5777.2	108100.	1438.4	1411.4
Stddev	2.2	199.	11.3	3.3
%RSD	.03748	.18454	.78562	.23102

#1	5778.7	107960.	1446.4	1413.7
#2	5775.6	108240.	1430.4	1409.1

Sample Name: ICB Acquired: 11/11/2010 13:10:11 Type: QC

Method: 10C2007(v48) Mode: CONC Corr. Factor: 1.000000

User: admin : : :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-0.0028	-0.0007	.0028	-0.0004	.00005	.0025
Stddev	.0001	.0008	.0011	.0007	.0002	.00010	.0003
%RSD	33.52	29.58	147.6	23.85	38.84	179.54	13.76

#1	.0001	-0.0022	-0.0015	.0033	-0.0005	.00012	.0022
#2	.0002	-0.0033	.0000	.0024	-0.0003	-0.00001	.0027

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0000	-0.0204	.0004	.0002	.0002	.0000
Stddev	.000	.0000	.0160	.0000	.0002	.0001	.0000
%RSD	20.80	93.05	78.74	10.61	120.3	75.82	257.7

#1	.0000	.0001	-0.0090	.0004	.0000	.0001	.0000
#2	.0000	.0000	-0.0317	.0005	.0003	.0003	.0000

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cu3273	Fe2599	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0008	.0093	-0.0007	.0331	-0.0001	-0.0021	.0002
Stddev	.0007	.0050	.0012	.0588	.0002	.0051	.0000
%RSD	91.25	53.97	168.7	177.5	156.3	246.6	28.50

#1	-0.0014	.0057	.0001	.0747	-0.0002	.0015	.0001
#2	-0.0003	.0128	-0.0016	-0.0084	.0000	-0.0057	.0002

Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

*Comment 11/11/10*



Sample Name: ICB      Acquired: 11/11/2010 13:10:11      Type: QC

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Mn2605	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0003	.0001	F -.1213	-.0013	.0003	.0022
Stddev	.0006	.0002	.0001	.0927	.0014	.0003	.0833
%RSD	343.2	63.34	99.96	76.37	108.9	97.06	3756.

#1	.0006	-.0005	.0002	-.0558	-.0022	.0001	.0611
#2	-.0003	-.0002	.0000	-.1869	-.0003	.0006	-.0567

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				.1000			
Low Limit				-.1000			

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.0001	.0001	.0001	-.0044	.0234	.0000
Stddev	.0001	.0001	.0001	.0000	.0037	.0083	.000
%RSD	5.320	135.9	79.71	22.08	85.13	35.54	703.7

#1	.0013	.0000	.0001	.0001	-.0018	.0292	.0000
#2	.0014	.0002	.0000	.0001	-.0070	.0175	.0000

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0017	.0039	F .00042
Stddev	.0007	.0035	.00030
%RSD	44.59	90.69	71.516

*Checked  
11/11/10*

#1	.0011	.0014	.00063
#2	.0022	.0063	.00021

Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.00020
Low Limit			-.00020

Sample Name: ICB      Acquired: 11/11/2010 13:10:11      Type: QC  
Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
User: admin      :      :      :  
Comment: 111110B

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5902.5	109010.	1449.2	1439.9
Stddev	2.9	31.	8.8	4.0
%RSD	.04835	.02837	.60697	.27816
#1	5900.5	109030.	1443.0	1437.1
#2	5904.5	108990.	1455.5	1442.7

*WAVE*  
*11/11/10*

Sample Name: ICB      Acquired: 11/11/2010 13:13:15      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0008	-.0009	.0026	.0004	-.00001	.0016	.0000
Stddev	.0001	.0002	.0003	.0014	.0006	.00004	.0007	.000
%RSD	24.40	32.11	32.34	52.60	151.3	321.49	44.32	270.7
#1	.0003	.0009	-.0007	.0036	.0000	-.00004	.0011	.0000
#2	.0004	.0006	-.0011	.0016	.0008	.00002	.0022	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0158	.0003	.0004	.0000	.0000	-.0001	.0030
Stddev	.000	.0105	.0001	.0002	.0000	.001	.0002	.0106
%RSD	281.7	66.08	20.19	42.20	131.5	1229.	183.3	355.8
#1	.0000	-.0084	.0004	.0006	.0000	-.0004	-.0003	-.0045
#2	.0000	-.0232	.0003	.0003	.0000	.0003	.0000	.0105
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.0390	-.0003	.0019	.0001	.0015	-.0007	.0000
Stddev	.0010	.0114	.0001	.0009	.0000	.0007	.0002	.0002
%RSD	338.0	29.32	53.44	47.11	16.98	47.18	21.73	511.9
#1	-.0010	-.0470	-.0004	.0013	.0002	.0010	-.0006	.0002
#2	.0004	-.0309	-.0002	.0026	.0001	.0019	-.0008	-.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: ICB Acquired: 11/11/2010 13:13:15 Type: QC

Method: 10C2007(v48) Mode: CONC Corr. Factor: 1.000000

User: admin : : :

Comment: 111110B RERUN

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0050	-.0031	-.0001	.0302	.0009	.0000	.0001	.0000
Stddev	.1491	.0010	.0004	.0308	.0003	.000	.0002	.0001
%RSD	2997.	31.30	684.0	102.0	38.25	621.4	123.4	643.0
#1	-.1104	-.0024	-.0004	.0520	.0006	.0001	.0000	.0000
#2	.1005	-.0038	.0002	.0084	.0011	-.0001	.0003	.0000

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0024	.0229	.0000	.0004	.0024	.00010
Stddev	.0069	.0581	.0001	.0007	.0020	.00002
%RSD	293.3	253.7	137.8	156.9	84.25	21.650
#1	.0025	-.0182	.0001	.0000	.0010	.00008
#2	-.0072	.0639	.0000	.0009	.0038	.00011

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5921.2	109090.	1427.8	1446.5
Stddev	8.9	12.	11.0	2.1
%RSD	.14956	.01120	.76861	.14387
#1	5927.4	109100.	1435.6	1448.0
#2	5914.9	109080.	1420.0	1445.0

Sample Name: CCVA1      Acquired: 11/11/2010 13:16:33      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2489	.2350	.2484	.2572	.2418	.24982	.2522	.2474
Stddev	.0036	.0032	.0021	.0018	.0012	.00103	.0016	.0036
%RSD	1.452	1.356	.8258	.7044	.5089	.41087	.6251	1.465
#1	.2462	.2397	.2459	.2558	.2412	.25063	.2503	.2447
#2	.2471	.2345	.2496	.2559	.2425	.24875	.2522	.2463
#3	.2481	.2331	.2476	.2573	.2432	.24913	.2520	.2459
#4	.2542	.2328	.2504	.2597	.2404	.25076	.2541	.2527

Check ?      Chk Pass      None      Chk Pass      None      None      Chk Pass      Chk Pass      Chk Pass  
 Value  
 Range

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2491	.2342	.2494	.2450	.2473	.2459	.2516	.2489
Stddev	.0037	.0072	.0013	.0009	.0039	.0038	.0013	.0085
%RSD	1.478	3.071	.5173	.3723	1.576	1.554	.5152	3.433
#1	.2464	.2332	.2500	.2441	.2439	.2432	.2527	.2474
#2	.2477	.2313	.2509	.2454	.2466	.2449	.2508	.2407
#3	.2478	.2445	.2487	.2444	.2459	.2439	.2502	.2609
#4	.2545	.2280	.2480	.2461	.2529	.2515	.2527	.2465

Check ?      Chk Pass      None      Chk Pass      Chk Pass      Chk Pass      Chk Pass      Chk Pass      None  
 Value  
 Range

Sample Name: CCVA1      Acquired: 11/11/2010 13:16:33      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.2480</b>	<b>.2794</b>	<b>.2449</b>	<b>.2546</b>	<b>.2421</b>	<b>.2419</b>	<b>.2475</b>	<b>.2496</b>
Stddev	.0039	.0357	.0012	.0042	.0011	.0031	.0039	.0039
%RSD	1.562	12.77	.4772	1.653	.4355	1.278	1.557	1.570

#1	.2446	.3133	.2447	.2599	.2418	.2377	.2443	.2467
#2	.2469	.2523	.2464	.2544	.2418	.2430	.2462	.2480
#3	.2470	.3069	.2451	.2547	.2413	.2451	.2464	.2486
#4	.2536	.2450	.2435	.2496	.2437	.2419	.2531	.2554

Check ?      Chk Pass      None      Chk Pass      None      Chk Pass      None      Chk Pass      Chk Pass  
 Value  
 Range

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>2.319</b>	<b>.2456</b>	<b>.2492</b>	<b>.2985</b>	<b>.2466</b>	<b>.2439</b>	<b>.2491</b>	<b>.2489</b>
Stddev	.081	.0022	.0006	.0473	.0031	.0015	.0037	.0015
%RSD	3.503	.8891	.2372	15.84	1.264	.6024	1.491	.5873

#1	2.319	.2441	.2492	.2325	.2441	.2428	.2462	.2480
#2	2.426	.2441	.2487	.3060	.2456	.2444	.2482	.2484
#3	2.230	.2455	.2488	.3448	.2457	.2427	.2474	.2482
#4	2.299	.2487	.2500	.3107	.2512	.2458	.2545	.2511

Check ?      None      Chk Pass      Chk Pass      None      Chk Pass      Chk Pass      Chk Pass      Chk Pass  
 Value  
 Range

Sample Name: CCVA1      Acquired: 11/11/2010 13:16:33      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :  
 Comment: 111110B

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0091</b>	<b>.1506</b>	<b>.2462</b>	<b>.2473</b>	<b>.0028</b>	<b>.00013</b>
Stddev	.0019	.0249	.0007	.0038	.0026	.00037
%RSD	20.92	16.56	.2984	1.521	91.28	283.75

#1	-.0064	.1839	.2457	.2445	.0032	.00057
#2	-.0099	.1546	.2462	.2474	.0058	-.00016
#3	-.0093	.1273	.2456	.2447	.0027	.00031
#4	-.0109	.1365	.2472	.2526	-.0004	-.00019

Check ?	None	None	Chk Pass	Chk Pass	None	None
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>5873.8</b>	<b>108970.</b>	<b>1441.3</b>	<b>1442.0</b>
Stddev	54.7	396.	7.4	13.2
%RSD	.93051	.36353	.51610	.91213

#1	5923.0	109550.	1441.8	1453.6
#2	5888.2	108690.	1432.3	1443.2
#3	5888.5	108730.	1440.8	1447.8
#4	5795.6	108890.	1450.5	1423.3

Sample Name: CCVB1      Acquired: 11/11/2010 13:20:39      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>6.946</b>	<b>9.760</b>	<b>-0.0018</b>	<b>1.020</b>	<b>9.723</b>	<b>.00002</b>	<b>.0020</b>	<b>.0000</b>
Stddev	.065	.022	.0010	.003	.060	.00002	.0007	.0000
%RSD	.9378	.2242	53.06	.2672	.6181	94.497	32.74	77.82

#1	6.908	9.739	-0.0022	1.018	9.725	.00005	.0026	.0000
#2	6.907	9.765	-0.0012	1.018	9.661	.00002	.0012	.0001
#3	6.926	9.749	-0.0009	1.020	9.703	.00003	.0018	.0000
#4	7.043	9.789	-0.0030	1.024	9.804	.00000	.0024	.0000

Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0001</b>	<b>9.596</b>	<b>9.523</b>	<b>.0005</b>	<b>.0001</b>	<b>.0065</b>	<b>-.0003</b>	<b>9.798</b>
Stddev	.0001	.040	.073	.0002	.0002	.0003	.0006	.073
%RSD	67.82	.4180	.7716	51.74	174.2	4.336	169.8	.7420

#1	.0001	9.592	9.443	.0008	.0000	.0062	.0000	9.747
#2	.0002	9.548	9.494	.0005	.0002	.0068	-.0007	9.752
#3	.0000	9.597	9.537	.0002	.0002	.0064	-.0009	9.790
#4	.0001	9.646	9.616	.0004	-.0001	.0066	.0003	9.903

Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value Range								



Sample Name: CCVB1      Acquired: 11/11/2010 13:20:39      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0008</b>	<b>9.643</b>	<b>9.493</b>	<b>10.07</b>	<b>.9858</b>	<b>.9603</b>	<b>-0.0005</b>	<b>-0.0002</b>
Stddev	.0010	.075	.056	.01	.0033	.0076	.0002	.0001
%RSD	117.5	.7801	.5896	.1216	.3374	.7939	51.58	62.21

#1	-0.0009	9.641	9.479	10.07	.9854	.9657	-0.0005	-0.0004
#2	.0001	9.540	9.427	10.05	.9906	.9594	-0.0003	-0.0003
#3	-0.0022	9.678	9.506	10.08	.9830	.9662	-0.0003	-0.0002
#4	-0.0004	9.715	9.561	10.07	.9843	.9498	-0.0008	.0000

Check ?	None	Chk Pass	None	Chk Pass	None	Chk Pass	None	None
Value Range								

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.834</b>	<b>-0.0029</b>	<b>.0003</b>	<b>10.07</b>	<b>.0005</b>	<b>.0016</b>	<b>.0001</b>	<b>.0003</b>
Stddev	.130	.0014	.0003	.09	.0005	.0004	.0001	.0001
%RSD	1.323	48.74	115.6	.8885	91.31	23.21	47.32	29.20

#1	9.642	-0.0049	-0.0001	10.13	.0003	.0018	.0002	.0002
#2	9.926	-0.0024	.0001	10.14	.0009	.0017	.0002	.0004
#3	9.871	-0.0016	.0006	9.947	.0000	.0011	.0001	.0003
#4	9.897	-0.0026	.0004	10.06	.0009	.0019	.0001	.0002

Check ?	Chk Pass	None	None	Chk Pass	None	None	None	None
Value Range								

Sample Name: CCVB1      Acquired: 11/11/2010 13:20:39      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.21	10.24	.0004	.0016	.9686	.96224
Stddev	.03	.05	.0001	.0012	.0045	.00699
%RSD	.2560	.4500	33.05	74.08	.4604	.72649
#1	10.18	10.28	.0004	.0016	.9683	.96291
#2	10.21	10.19	.0006	.0010	.9691	.95330
#3	10.19	10.21	.0004	.0005	.9739	.96238
#4	10.24	10.28	.0002	.0032	.9630	.97037

Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5849.3	107670.	1467.9	1431.5
Stddev	47.9	491.	9.7	13.4
%RSD	.81918	.45603	.66388	.93726
#1	5866.5	107290.	1468.7	1438.3
#2	5883.8	107240.	1477.7	1441.1
#3	5868.3	107890.	1470.7	1434.9
#4	5778.3	108260.	1454.4	1411.7

Sample Name: CCB1      Acquired: 11/11/2010 13:26:07      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0025	-.0025	.0003	-.0008	.00003	.0009
Stddev	.0002	.0043	.0008	.0013	.0011	.00006	.0007
%RSD	56.54	170.8	34.26	372.4	125.8	185.97	82.65

#1	.0002	.0056	-.0019	.0013	-.0001	-.00001	.0014
#2	.0004	-.0005	-.0031	-.0006	-.0016	.00008	.0004

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0001	-.0071	.0007	.0004	-.0003	.0002
Stddev	.000	.0000	.0165	.0000	.0002	.0003	.0002
%RSD	148.9	43.97	230.6	5.475	43.04	103.0	94.55

#1	.0000	.0001	-.0188	.0007	.0003	-.0005	.0001
#2	-.0001	.0001	.0045	.0006	.0006	-.0001	.0003

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cu3273	Fe2599	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0041	-.0005	.0041	.0000	.0017	.0001
Stddev	.0012	.0089	.0004	.0445	.000	.0051	.0000
%RSD	2351.	217.1	85.30	1084.	242.2	293.6	8.463

#1	-.0008	.0104	-.0008	.0356	.0000	.0053	.0001
#2	.0009	-.0022	-.0002	-.0274	-.0001	-.0019	.0001

Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB1      Acquired: 11/11/2010 13:26:07      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Mn2605	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0001	-0.0007	.0001	-0.0411	-0.0019	.0005	-0.0598
Stddev	.0001	.0001	.0002	.1210	.0027	.0007	.0509
%RSD	137.9	14.45	123.5	294.1	140.4	130.8	85.05
#1	-0.0001	-0.0006	.0000	.0444	-0.0038	.0010	-0.0958
#2	.0000	-0.0008	.0003	-0.1267	.0000	.0000	-0.0238
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0003	.0001	-0.0001	.0001	-0.0084	-0.0078	.0000
Stddev	.0005	.0004	.0001	.0000	.0028	.0093	.0002
%RSD	158.1	794.9	117.2	32.94	33.70	119.0	669.4
#1	-0.0007	-0.0002	.0000	.0001	-0.0105	-0.0144	-0.0001
#2	.0000	.0003	-0.0002	.0001	-0.0064	-0.0012	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0000	.0028	F .00023
Stddev	.000	.0000	.00006
%RSD	1554.	1.426	24.737
#1	.0003	.0028	.00027
#2	-0.0003	.0028	.00019
Check ?	Chk Pass	Chk Pass	Chk Fail
High Limit			.00020
Low Limit			-0.00020

Sample Name: CCB1      Acquired: 11/11/2010 13:26:07      Type: QC  
Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
User: admin      :      :      :  
Comment: 111110B

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5948.2	108320.	1421.5	1447.1
Stddev	9.5	399.	5.3	3.0
%RSD	.15912	.36854	.37234	.20748
#1	5941.5	108040.	1425.2	1445.0
#2	5954.8	108600.	1417.7	1449.2

Sample Name: CRI      Acquired: 11/11/2010 13:29:17      Type: QC

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B ICP8-16-C

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0504	.0460	.0486	.1022	.0047	.00521	.0494	.0048
Stddev	.0003	.0007	.0020	.0005	.0005	.00007	.0013	.0000
%RSD	.5076	1.594	4.088	.4411	10.40	1.2994	2.630	.0206

#1	.0502	.0455	.0472	.1018	.0044	.00516	.0503	.0048
#2	.0506	.0465	.0500	.1025	.0051	.00525	.0485	.0048

Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048	.0505	.0517	.0054	.0097	.0099	.0101	.0285
Stddev	.0000	.0042	.0000	.0000	.0000	.0001	.0006	.0041
%RSD	.0950	8.373	.0274	.0268	.2393	1.240	5.528	14.32

#1	.0049	.0535	.0517	.0054	.0098	.0099	.0105	.0314
#2	.0048	.0475	.0517	.0054	.0097	.0098	.0097	.0256

Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0495	.0362	.0202	.0224	.0051	.0061	.0091	.0200
Stddev	.0001	.0206	.0001	.0028	.0000	.0009	.0003	.0002
%RSD	.1156	56.83	.4549	12.30	.9575	14.66	3.667	.9776

#1	.0495	.0508	.0203	.0244	.0051	.0067	.0089	.0198
#2	.0495	.0217	.0201	.0205	.0051	.0054	.0094	.0201

Check ?	Chk Pass	None	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CRI      Acquired: 11/11/2010 13:29:17      Type: QC

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B ICP8-16-C

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3510	.0952	.0097	.1439	.0497	.0100	.0103	.0104
Stddev	.0849	.0000	.0000	.0442	.0003	.0004	.0000	.0001
%RSD	24.20	.0100	.2284	30.73	.5932	3.856	.1568	.7161
#1	.4111	.0952	.0097	.1751	.0499	.0097	.0103	.0103
#2	.2910	.0952	.0097	.1126	.0495	.0102	.0103	.0104

Check ?      Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass  
Value  
Range

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1916	.4293	.0098	.1974	.0150	.01018
Stddev	.0016	.0062	.0001	.0002	.0005	.00016
%RSD	.8471	1.442	1.482	.0900	3.451	1.5585
#1	.1904	.4337	.0097	.1972	.0147	.01030
#2	.1927	.4249	.0099	.1975	.0154	.01007

Check ?      Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass  
Value  
Range

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5871.6	106990.	1393.2	1435.2
Stddev	22.8	143.	9.2	5.0
%RSD	.38847	.13363	.66157	.34954
#1	5887.8	106880.	1386.7	1438.8
#2	5855.5	107090.	1399.7	1431.7

Sample Name: CRI      Acquired: 11/11/2010 13:32:23      Type: QC

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B ICAP ICP8-11-A 0.1/10

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	.0006	.0095	.0119	.0019	.00021	.0099	.0004
Stddev	.0001	.0026	.0020	.0002	.0008	.00002	.0002	.0000
%RSD	5.701	441.7	21.05	1.987	43.51	7.2142	2.042	2.739
#1	.0018	-.0012	.0109	.0117	.0013	.00020	.0100	.0004
#2	.0020	.0024	.0081	.0121	.0025	.00022	.0098	.0005
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.0017	.0046	.0021	.0009	.0021	.0021	.0075
Stddev	.0000	.0067	.0001	.0000	.0001	.0000	.0007	.0019
%RSD	1.081	386.6	2.792	.3078	5.717	.3485	31.09	25.34
#1	.0005	-.0064	.0045	.0021	.0010	.0021	.0026	.0061
#2	.0005	.0030	.0047	.0021	.0009	.0021	.0016	.0088
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0088	.0153	.0015	.0036	.0005	.0026	.0011	.0021
Stddev	.0002	.0312	.0002	.0050	.0000	.0009	.0000	.0000
%RSD	1.839	204.2	13.85	139.2	7.648	34.55	2.030	.9638
#1	.0087	-.0068	.0016	.0071	.0005	.0020	.0011	.0021
#2	.0089	.0374	.0014	.0001	.0006	.0033	.0011	.0021
Check ?	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								



Sample Name: CRI      Acquired: 11/11/2010 13:32:23      Type: QC

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B ICAP ICP8-11-A 0.1/10

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0197	.0169	.0022	.1815	.0096	.0022	.0019	.0020
Stddev	.0202	.0006	.0004	.0282	.0011	.0003	.0001	.0000
%RSD	103.0	3.537	20.20	15.51	11.73	11.20	6.431	1.846

#1	.0053	.0164	.0025	.1616	.0088	.0021	.0020	.0020
#2	.0340	.0173	.0019	.2014	.0104	.0024	.0018	.0021

Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.1000							
Range	-50.00%							

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0133	.0511	.0010	.0095	.0143	.00039
Stddev	.0018	.0093	.0000	.0002	.0000	.00021
%RSD	13.84	18.27	.0713	2.004	.3350	54.297

#1	.0120	.0577	.0010	.0097	.0143	.00024
#2	.0146	.0445	.0010	.0094	.0142	.00054

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5975.1	108580.	1431.0	1455.8
Stddev	27.2	260.	14.1	5.3
%RSD	.45551	.23981	.98482	.36139

#1	5994.4	108760.	1421.0	1459.5
#2	5955.9	108390.	1440.9	1452.1

*\* USE 0.2 ppm K  
MUMK  
11/11/10*

Sample Name: ICSA      Acquired: 11/11/2010 13:34:56      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B ICP8-12-C

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.85	471.0	.0079	-.0013	.0026	-.00027	.0064	.0005
Stddev	.05	.3	.0034	.0024	.0002	.00002	.0006	.0001
%RSD	.2938	.0636	43.03	178.7	5.814	8.6134	9.836	19.31

#1	15.82	470.8	.0103	-.0030	.0025	-.00025	.0060	.0005
#2	15.88	471.2	.0055	.0004	.0027	-.00029	.0069	.0006

Check ?	None	Chk Pass	None	None	None	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	464.9	*****	.0062	-.0040	.1158	-.0018	184.3
Stddev	.0000	.9	----	.0005	.0006	.0022	.0006	.3
%RSD	1.328	.1998	----	7.531	14.25	1.863	33.63	.1819

#1	.0016	465.5	----	.0066	-.0036	.1142	-.0023	184.5
#2	.0016	464.2	----	.0059	-.0044	.1173	-.0014	184.1

Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0018	482.5	200.1	309.1	-.0027	-.0032	-.0009	.0010
Stddev	.0012	2.1	1.2	2.4	.0000	.0021	.0006	.0000
%RSD	66.35	.4272	.6194	.7685	1.815	63.79	66.70	2.888

#1	-.0027	484.0	200.9	307.4	-.0027	-.0018	-.0005	.0011
#2	-.0010	481.1	199.2	310.8	-.0026	-.0047	-.0013	.0010

Check ?	None	Chk Pass	None	None	None	None	None	None
Value								
Range								

Sample Name: ICSA      Acquired: 11/11/2010 13:34:56      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B ICP8-12-C

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.0428</b>	<b>-.0171</b>	<b>-.0005</b>	<b>-.5233</b>	<b>.0007</b>	<b>.0010</b>	<b>.0040</b>	<b>.0047</b>
Stddev	.0222	.0043	.0004	.0575	.0000	.0004	.0000	.0001
%RSD	51.85	25.03	88.03	10.99	.8965	36.74	.9358	3.186
#1	-.0585	-.0202	-.0002	-.4826	.0007	.0008	.0041	.0048
#2	-.0271	-.0141	-.0007	-.5639	.0007	.0013	.0040	.0046
Check ?	None	None	None	None	None	None	None	None
Value Range								

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0138</b>	<b>.0415</b>	<b>.0007</b>	<b>-.0025</b>	<b>.0063</b>	<b>.02645</b>
Stddev	.0056	.0023	.0001	.0007	.0029	.00015
%RSD	40.43	5.507	20.48	28.66	46.75	.57842
#1	.0098	.0431	.0006	-.0020	.0083	.02655
#2	.0177	.0399	.0008	-.0030	.0042	.02634
Check ?	None	None	None	None	None	None
Value Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5296.9	96203.	1360.5	1257.6
Stddev	19.7	27.	8.8	6.8
%RSD	.37180	.02780	.64868	.53885
#1	5310.9	96184.	1354.3	1262.3
#2	5283.0	96222.	1366.7	1252.8

Sample Name: ICSAB      Acquired: 11/11/2010 13:38:24      Type: QC

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B ICP8-16-E

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.14	473.6	.9311	.0003	.4904	.46991	.0048	.9317
Stddev	.05	1.2	.0006	.0004	.0012	.00182	.0003	.0001
%RSD	.2810	.2479	.0631	104.4	.2432	.38772	6.521	.0086

#1	16.11	472.8	.9315	.0006	.4895	.46862	.0051	.9317
#2	16.17	474.4	.9306	.0001	.4912	.47120	.0046	.9316

Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9227	465.4	*****	.4907	.4618	.5859	.4738	184.0
Stddev	.0095	1.8	----	.0027	.0033	.0006	.0044	.1
%RSD	1.032	.3873	----	.5511	.7224	.1089	.9339	.0460

#1	.9160	464.1	----	.4926	.4594	.5854	.4706	184.1
#2	.9294	466.7	----	.4888	.4641	.5863	.4769	184.0

Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9567	486.3	200.7	305.3	.4655	.4808	-.0012	.9050
Stddev	.0029	4.9	1.7	3.2	.0024	.0049	.0000	.0100
%RSD	.2981	.9996	.8718	1.058	.5092	1.027	3.961	1.110

#1	.9547	482.8	199.4	307.5	.4671	.4843	-.0011	.8979
#2	.9587	489.7	201.9	303.0	.4638	.4773	-.0012	.9121

Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: ICSAB      Acquired: 11/11/2010 13:38:24      Type: QC

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B ICP8-16-E

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0386	-.0154	.9378	-.5989	.0027	.5027	.9393	.8838
Stddev	.0014	.0009	.0038	.0319	.0004	.0025	.0045	.0023
%RSD	3.551	5.611	.4030	5.328	14.32	.4889	.4771	.2602
#1	.0377	-.0160	.9352	-.5764	.0029	.5044	.9361	.8821
#2	.0396	-.0148	.9405	-.6215	.0024	.5009	.9425	.8854
Check ?	None	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0147	.0268	.0006	.0032	.0111	.02676
Stddev	.0000	.0014	.0001	.0005	.0028	.00045
%RSD	.0813	5.051	11.92	17.06	25.21	1.6749
#1	.0147	.0278	.0006	.0036	.0131	.02644
#2	.0147	.0259	.0005	.0028	.0091	.02708
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5189.0	95651.	1368.1	1240.4
Stddev	36.7	534.	12.0	1.3
%RSD	.70666	.55776	.87700	.10567
#1	5214.9	95274.	1376.6	1239.4
#2	5163.0	96028.	1359.6	1241.3

Sample Name: RB      Acquired: 11/11/2010 13:42:44      Type: Unk  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0464	.0467	.0009	.0017	F -.0007	.00005	F -.0015	.0001
#1	.0464	.0467	.0013	.0018	-.0003	.00007	-.0021	.0001
#2	.0464	.0466	.0005	.0016	-.0010	.00003	-.0009	.0001
Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0328	.0520	F .0001	-.0001	-.0003	.0003	.0202
#1	.0001	.0239	.0521	.0000	.0001	-.0003	.0007	.0211
#2	.0002	.0418	.0518	.0002	-.0003	-.0003	.0000	.0194
Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.0635	.0748	-.0001	-.0009	.0003	F -.1252	-.0025
#1	-.0001	.0631	.0763	-.0001	-.0010	.0006	-.1165	-.0027
#2	-.0005	.0638	.0733	-.0001	-.0008	.0001	-.1339	-.0023
Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	F -.0201	.0006	.0004	F .0003	F .0001	-.0089	-.0040
#1	.0000	-.0443	.0008	.0006	.0002	.0001	-.0108	.0042
#2	.0001	.0041	.0003	.0002	.0004	.0001	-.0069	-.0121
Elem	Ti3361	Tl1908	Li6707	Sr4077				
Units	ppm	ppm	ppm	ppm				
Avg	.0001	.0016	.0008	.00032				
#1	.0001	.0021	-.0018	.00008				
#2	.0001	.0012	.0035	.00056				
Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	5971.7	109760.	1455.2	1455.5				
#1	6004.9	109620.	1459.4	1463.7				
#2	5938.5	109910.	1451.0	1447.2				

Sample Name: K1010892-MB      Acquired: 11/11/2010 13:45:53      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0042	.0019	-0.0016	.0002	-0.0011	-0.00002	-0.0004	.0000

#1	.0042	.0001	-0.0002	-0.0004	-0.0010	-0.00002	-0.0012	.0000
#2	.0042	.0037	-0.0029	.0007	-0.0012	-0.00003	.0005	.0000

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0004	F .0068	.0004	.0001	.0000	.0000	-0.0010

#1	.0000	.0022	.0065	.0005	.0000	-0.0001	-0.0002	-0.0020
#2	.0000	-0.0014	.0071	.0002	.0002	.0000	.0001	.0001

Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0004	F .0041	F .0106	-0.0001	-0.0009	.0000	F -.1041	-0.0011

#1	.0000	.0039	.0154	.0000	-0.0008	-0.0001	-.1623	-0.0013
#2	-0.0008	.0042	.0059	-0.0001	-0.0009	.0001	-.0459	-0.0008

Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-0.1789	-0.0001	.0002	.0003	.0002	F .1066	-0.0131

#1	.0002	-0.1677	-0.0001	.0007	.0001	.0002	.1060	-0.0085
#2	.0000	-0.1901	-0.0001	-0.0002	.0004	.0002	.1072	-0.0177

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	-0.0001	-0.0002	.0018	.00012

#1	-0.0001	-0.0005	.0048	.00002
#2	-0.0002	.0001	-0.0012	.00022

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5852.0	109020.	1448.8	1426.9

#1	5883.4	109070.	1450.1	1433.0
#2	5820.7	108970.	1447.5	1420.7

*Review  
11/11/10*

Sample Name: LCSW      Acquired: 11/11/2010 13:48:33      Type: Unk  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>4.706</b>	<b>2.363</b>	<b>2.424</b>	<b>4.616</b>	<b>.12012</b>	<b>.9489</b>	<b>1.160</b>	<b>1.170</b>

#1	4.695	2.354	2.414	4.651	.11953	.9445	1.155	1.164
#2	4.717	2.372	2.434	4.580	.12072	.9533	1.165	1.176

Elem	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>11.58</b>	<b>11.28</b>	<b>.4737</b>	<b>1.175</b>	<b>.5855</b>	<b>.6076</b>	<b>2.356</b>	<b>2.376</b>

#1	11.68	11.45	.4738	1.168	.5824	.6074	2.374	2.366
#2	11.48	11.12	.4735	1.181	.5885	.6079	2.337	2.385

Elem	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>11.53</b>	<b>1.162</b>	<b>.9420</b>	<b>1.168</b>	<b>11.63</b>	<b>2.291</b>	<b>.5950</b>	<b>12.67</b>

#1	11.51	1.162	.9362	1.161	11.56	2.282	.5937	12.59
#2	11.54	1.162	.9478	1.175	11.70	2.301	.5963	12.75

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0004</b>	<b>1.187</b>	<b>1.172</b>	<b>1.158</b>	<b>.1342</b>	<b>-.0028</b>	<b>-.0003</b>	<b>2.372</b>

#1	.0002	1.187	1.166	1.155	.1334	.0094	-.0003	2.360
#2	.0005	1.186	1.178	1.161	.1350	-.0151	-.0002	2.384

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	<b>.0012</b>	<b>.00060</b>

#1	.0013	.00064
#2	.0011	.00056

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>5844.5</b>	<b>107760.</b>	<b>1441.8</b>	<b>1426.3</b>

#1	5858.8	107550.	1426.3	1428.3
#2	5830.1	107980.	1457.3	1424.4



Sample Name: LCSW      Acquired: 11/11/2010 13:51:42      Type: Unk  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :  
 Comment: 111110B Si

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	F .0006	-.0009	.0010	F .0006	.00000	F .0007	.0000

#1	.0016	.0005	-.0001	.0018	.0009	-.00003	.0003	.0000
#2	.0016	.0006	-.0016	.0002	.0003	.00003	.0011	.0000

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	F .0027	.0051	F .0005	.0002	.0002	.0003	F -.0008

#1	.0002	.0122	.0056	.0005	.0000	.0003	.0008	-.0037
#2	.0001	-.0068	.0047	.0005	.0005	.0000	-.0002	.0022

Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0010	.0021	F .0065	-.0001	-.0002	-.0003	F -.1312	-.0036

#1	-.0006	.0026	.0076	-.0001	-.0001	-.0003	-.1247	-.0028
#2	-.0013	.0015	.0053	.0000	-.0003	-.0004	-.1376	-.0043

Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	F 16.77	.0002	.0005	F .0005	F .0005	.1306	9.949

#1	-.0007	16.78	-.0002	.0001	.0005	.0005	.1299	9.899
#2	-.0002	16.76	.0006	.0010	.0004	.0005	.1313	9.998

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	.0001	.0007	.0035	.00001

#1	.0001	.0015	.0059	-.00012
#2	.0000	-.0001	.0010	.00013

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5804.4	107450.	1418.5	1430.7

#1	5829.0	107470.	1407.1	1433.7
#2	5779.7	107440.	1429.9	1427.8

Sample Name: K1010892-001      Acquired: 11/11/2010 13:55:01      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B DISS

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	F .0014	-.0023	.0010	.0341	.00005	F .0039	.0000

#1	.0013	-.0001	-.0019	.0003	.0344	.00003	.0044	.0000
#2	.0013	.0029	-.0027	.0017	.0338	.00007	.0035	.0000

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	5.075	5.060	F .0008	.0036	.0027	.0007	3.341

#1	.0001	5.072	5.062	.0005	.0038	.0023	.0000	3.341
#2	.0000	5.078	5.058	.0010	.0035	.0030	.0013	3.341

Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0010	2.391	2.386	.3536	-.0008	.0009	1.054	-.0014

#1	-.0006	2.393	2.383	.3525	-.0008	.0009	1.074	-.0018
#2	-.0014	2.389	2.390	.3548	-.0008	.0009	1.034	-.0011

Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	7.161	.0002	.0006	.0118	.0117	.1565	4.466

#1	.0006	7.170	.0002	.0007	.0118	.0118	.1589	4.511
#2	.0001	7.151	.0003	.0006	.0118	.0117	.1541	4.421

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	-.0001	.0014	-.0001	.03963

#1	-.0001	.0006	-.0013	.03941
#2	-.0001	.0021	.0011	.03986

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5806.1	107510.	1429.1	1433.1

#1	5820.6	107340.	1435.9	1440.5
#2	5791.5	107690.	1422.3	1425.6

Sample Name: K1010892-001D      Acquired: 11/11/2010 13:58:07      Type: Unk  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B DISS

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	F -.0005	-.0033	.0025	.0334	-.00001	F .0031	.0000
#1	.0014	-.0015	-.0030	.0022	.0329	-.00002	.0042	.0000
#2	.0011	.0004	-.0036	.0028	.0339	-.00001	.0020	.0000
Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	5.102	5.057	F .0007	.0034	.0029	.0009	3.352
#1	.0001	5.093	5.048	.0007	.0033	.0032	.0010	3.341
#2	.0001	5.112	5.066	.0007	.0035	.0025	.0009	3.363
Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	2.393	2.420	.3525	-.0007	.0006	1.098	-.0015
#1	-.0013	2.386	2.430	.3516	-.0009	.0007	1.037	-.0023
#2	-.0011	2.400	2.409	.3534	-.0005	.0005	1.160	-.0006
Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	7.286	.0005	.0005	.0120	.0120	.1572	4.524
#1	-.0005	7.281	-.0001	.0005	.0120	.0119	.1590	4.530
#2	-.0002	7.291	.0010	.0006	.0119	.0120	.1555	4.519
Elem	Ti3361	Tl1908	Li6707	Sr4077				
Units	ppm	ppm	ppm	ppm				
Avg	.0000	.0007	.0070	.03965				
#1	.0000	.0011	.0066	.03972				
#2	-.0001	.0003	.0073	.03958				
Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	5884.1	109870.	1443.2	1451.5				
#1	5902.7	109890.	1449.8	1456.0				
#2	5865.5	109860.	1436.6	1447.0				

Sample Name: CCVA2      Acquired: 11/11/2010 14:01:11      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :  
 Comment: 111110b

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2456	.2378	.2492	.2577	.2394	.25284	.2504	.2449
Stddev	.0011	.0030	.0002	.0018	.0009	.00052	.0032	.0004
%RSD	.4319	1.268	.0887	.6888	.3754	.20397	1.290	.1618
#1	.2448	.2357	.2491	.2565	.2400	.25248	.2481	.2446
#2	.2463	.2400	.2494	.2590	.2387	.25321	.2527	.2452
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2469	.2334	.2449	.2415	.2441	.2433	.2547	.2510
Stddev	.0012	.0075	.0006	.0005	.0018	.0005	.0002	.0065
%RSD	.4827	3.201	.2282	.1953	.7247	.1931	.0692	2.587
#1	.2460	.2386	.2445	.2412	.2429	.2436	.2546	.2556
#2	.2477	.2281	.2453	.2418	.2454	.2430	.2548	.2464
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2449	.1959	.2434	.2476	.2389	.2382	.2443	.2474
Stddev	.0002	.0799	.0004	.0039	.0000	.0002	.0016	.0011
%RSD	.0718	40.80	.1464	1.585	.0140	.0786	.6509	.4420
#1	.2448	.2524	.2431	.2504	.2390	.2384	.2432	.2466
#2	.2451	.1393	.2436	.2448	.2389	.2381	.2454	.2481
Check ?	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value Range								

Sample Name: CCVA2      Acquired: 11/11/2010 14:01:11      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110b

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.251	.2457	.2477	.1492	.2429	.2402	.2480	.2497
Stddev	.098	.0004	.0014	.0500	.0008	.0004	.0003	.0015
%RSD	4.368	.1685	.5750	33.51	.3321	.1707	.1051	.5983
#1	2.181	.2460	.2467	.1138	.2423	.2399	.2482	.2486
#2	2.320	.2455	.2487	.1845	.2435	.2405	.2478	.2507

Check ?      None    Chk Pass    Chk Pass      None    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 Value  
 Range

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0082	.1247	.2433	.2431	.0015	.00016
Stddev	.0004	.0221	.0007	.0012	.0010	.00017
%RSD	5.098	17.71	.2676	.5004	68.52	106.27
#1	-.0079	.1091	.2429	.2440	.0007	.00029
#2	-.0085	.1404	.2438	.2423	.0022	.00004

Check ?      None      None    Chk Pass    Chk Pass      None      None  
 Value  
 Range

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5957.2	111250.	1453.3	1459.2
Stddev	1.0	451.	7.6	5.5
%RSD	.01637	.40507	.52621	.37453
#1	5957.9	110930.	1447.9	1455.3
#2	5956.6	111570.	1458.7	1463.0

Sample Name: CCVB2      Acquired: 11/11/2010 14:04:10      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110b

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>6.985</b>	<b>9.791</b>	<b>-0.025</b>	<b>1.021</b>	<b>9.798</b>	<b>.00002</b>	<b>.0009</b>	<b>.0000</b>
Stddev	.033	.003	.0013	.000	.007	.00005	.0004	.0000
%RSD	.4656	.0346	51.40	.0031	.0770	217.80	39.19	172.3
#1	6.962	9.794	-0.034	1.021	9.803	.00006	.0012	.0000
#2	7.008	9.789	-0.016	1.021	9.793	-0.00001	.0007	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0001</b>	<b>9.719</b>	<b>9.791</b>	<b>.0004</b>	<b>.0002</b>	<b>.0058</b>	<b>.0002</b>	<b>10.02</b>
Stddev	.0000	.044	.139	.0000	.0003	.0003	.0007	.04
%RSD	19.54	.4535	1.424	.8248	105.7	5.684	280.4	.3944
#1	.0001	9.750	9.693	.0004	.0001	.0061	.0007	9.996
#2	.0001	9.688	9.890	.0004	.0004	.0056	-.0002	10.05
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-.0001</b>	<b>9.780</b>	<b>9.656</b>	<b>9.727</b>	<b>1.002</b>	<b>.9381</b>	<b>-.0006</b>	<b>-.0002</b>
Stddev	.0009	.072	.004	.018	.002	.0034	.0001	.0002
%RSD	1541.	.7332	.0442	.1831	.2200	.3636	15.43	70.06
#1	.0006	9.729	9.653	9.715	1.004	.9405	-.0006	-.0003
#2	-.0007	9.830	9.659	9.740	1.001	.9357	-.0007	-.0001
Check ?	None	Chk Pass	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Sample Name: CCVB2      Acquired: 11/11/2010 14:04:10      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110b

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.660	-.0012	-.0004	9.705	.0000	.0013	.0002	.0003
Stddev	.025	.0003	.0008	.020	.000	.0001	.0001	.0001
%RSD	.2554	23.09	221.8	.2074	391.7	10.75	77.56	17.38
#1	9.642	-.0014	.0002	9.720	.0001	.0014	.0003	.0003
#2	9.677	-.0010	-.0009	9.691	-.0002	.0012	.0001	.0003
Check ?	Chk Pass	None	None	Chk Pass	None	None	None	None
Value Range								

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.23	10.23	.0004	.0022	.9445	.96534
Stddev	.01	.06	.0000	.0015	.0021	.00112
%RSD	.1438	.5868	5.669	68.42	.2205	.11640
#1	10.22	10.18	.0004	.0011	.9459	.96614
#2	10.24	10.27	.0004	.0032	.9430	.96455
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5823.5	107720.	1424.8	1426.3
Stddev	19.6	22.	1.7	.9
%RSD	.33708	.02037	.12246	.06487
#1	5837.4	107710.	1423.6	1426.9
#2	5809.6	107740.	1426.0	1425.6

Sample Name: CCB2      Acquired: 11/11/2010 14:08:15      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0015	-.0024	.0024	-.0003	.00004	.0002	.0000
Stddev	.0000	.0021	.0010	.0002	.0004	.00000	.0014	.000
%RSD	32.65	138.3	43.03	8.938	132.1	3.4775	882.7	1133.
#1	.0001	.0000	-.0031	.0025	-.0007	.00004	.0012	.0000
#2	.0002	.0030	-.0016	.0022	.0000	.00004	-.0008	.0000

Check ?      Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0041	.0007	.0001	.0001	-.0001	-.0009	.0083
Stddev	.0000	.0044	.0002	.0001	.0000	.0005	.0004	.0031
%RSD	37.48	109.3	25.40	142.0	4.996	634.1	46.38	36.57
#1	.0001	.0009	.0008	.0000	.0001	-.0004	-.0012	.0062
#2	.0001	.0072	.0005	.0001	.0001	.0003	-.0006	.0105

Check ?      Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	-.0269	.0001	.0007	-.0001	-.0016	-.0007	.0002
Stddev	.0006	.0506	.0002	.0017	.0001	.0007	.0004	.0002
%RSD	119.3	187.8	255.0	254.5	67.81	45.73	57.84	84.28
#1	-.0001	.0088	.0002	.0019	-.0001	-.0011	-.0010	.0003
#2	-.0009	-.0627	-.0001	-.0005	.0000	-.0021	-.0004	.0001

Check ?      Chk Pass      None    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit



Sample Name: CCB2      Acquired: 11/11/2010 14:08:15      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :  
 Comment: 111110B

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0056	-0.0019	.0003	F -.2064	.0004	-0.0001	.0001	.0000
Stddev	.0161	.0011	.0000	.0613	.0003	.0005	.0000	.0000
%RSD	289.0	60.06	5.176	29.68	56.75	403.9	54.67	253.2
#1	-0.0170	-0.0027	.0004	-.2497	.0003	.0002	.0000	.0000
#2	.0058	-0.0011	.0003	-.1631	.0006	-0.0005	.0001	.0000

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.2000				
Low Limit				-.2000				

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0030	-0.0061	.0000	.0011	.0015	-0.00006
Stddev	.0002	.0184	.0002	.0001	.0009	.00014
%RSD	7.626	302.9	864.9	7.966	64.13	217.51
#1	-0.0029	.0069	-0.0001	.0011	.0008	-0.00016
#2	-0.0032	-0.0191	.0002	.0012	.0021	.00003

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5873.2	108390.	1400.1	1431.5
Stddev	4.1	188.	2.0	4.2
%RSD	.07020	.17315	.14545	.29099
#1	5870.3	108520.	1398.7	1428.5
#2	5876.1	108260.	1401.6	1434.4

Sample Name: CRI      Acquired: 11/11/2010 14:13:28      Type: QC

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: ICAP RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0010	.0076	.0110	.0018	.00023	.0088
Stddev	.0001	.0004	.0006	.0002	.0005	.00000	.0003
%RSD	3.569	35.93	7.827	1.993	29.22	.15222	3.257

#1	.0019	.0013	.0072	.0112	.0022	.00023	.0090
#2	.0020	.0008	.0081	.0109	.0014	.00023	.0086

Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0005	.0035	.0047	.0024	.0009	.0020
Stddev	.0000	.0001	.0121	.0001	.0001	.0002	.0005
%RSD	3.218	11.48	344.2	2.485	3.649	19.36	24.84

#1	.0004	.0006	.0121	.0046	.0024	.0008	.0016
#2	.0004	.0005	-.0051	.0048	.0023	.0010	.0023

Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cu3273	Fe2599	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0132	.0090	-.0180	.0020	.0053	.0005
Stddev	.0000	.0076	.0001	.0230	.0002	.0039	.0000
%RSD	.0753	57.74	.6910	127.8	9.106	74.24	1.889

#1	.0021	.0078	.0089	-.0017	.0019	.0081	.0005
#2	.0021	.0186	.0090	-.0343	.0021	.0025	.0005

Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass
Value							
Range							

*Carroll  
11/11/10*

Sample Name: CRI      Acquired: 11/11/2010 14:13:28      Type: QC

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: ICAP RERUN

Elem	Mn2605	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	.0013	.0019	F -.0260	.0187	.0018	F .0478
Stddev	.0032	.0000	.0001	.0069	.0004	.0003	.0390
%RSD	168.4	3.422	5.587	26.43	2.071	15.28	81.59

#1	-.0004	.0012	.0020	-.0308	.0185	.0016	.0754
#2	.0042	.0013	.0018	-.0211	.0190	.0020	.0202

Check ?	None	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value				.1000			.2000
Range				-50.00%			-50.00%

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0098	.0023	.0019	.0019	.0106	.0637	.0009
Stddev	.0002	.0007	.0001	.0000	.0006	.0144	.0001
%RSD	1.738	30.94	5.538	1.294	5.752	22.61	14.62

#1	.0099	.0018	.0018	.0019	.0110	.0739	.0008
#2	.0097	.0028	.0020	.0019	.0101	.0535	.0010

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0107	.0148	F .00008
Stddev	.0002	.0009	.00001
%RSD	2.157	5.814	7.2242

#1	.0105	.0142	.00008
#2	.0108	.0154	.00008

Check ?	Chk Pass	Chk Pass	Chk Fail
Value			.00020
Range			-50.000%

*check 11/11/10*

Sample Name: CRI      Acquired: 11/11/2010 14:13:28      Type: QC  
Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
User: admin      :      :      :  
Comment: ICAP RERUN

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5877.7	107060.	1393.8	1432.8
Stddev	35.3	338.	8.7	5.8
%RSD	.60050	.31538	.62095	.40377
#1	5902.6	107300.	1400.0	1436.9
#2	5852.7	106820.	1387.7	1428.7

*average  
11/11/10*

Sample Name: SEM MB      Acquired: 11/11/2010 14:16:00      Type: Unk  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: CHECK

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018	.0000	-.0006	.0009	-.0005	.00002	-.0004	-.0001
#1	.0018	.0022	-.0022	.0009	-.0002	-.00005	.0000	.0000
#2	.0019	-.0022	.0010	.0008	-.0009	.00008	-.0007	-.0001
Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0069	.0085	.0006	.0001	.0005	.0006	.0101
#1	.0001	.0125	.0087	.0008	.0002	.0006	.0005	.0135
#2	.0001	.0014	.0082	.0003	.0000	.0003	.0007	.0067
Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0031	.0057	-.0001	-.0007	.0004	-.0286	-.0003
#1	-.0008	.0030	.0022	-.0001	-.0006	.0004	-.0815	-.0007
#2	.0014	.0033	.0092	-.0001	-.0007	.0004	.0243	.0001
Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.1413	.0003	.0003	.0034	.0035	-.0062	.0044
#1	.0002	-.1846	.0005	.0006	.0035	.0035	-.0065	-.0047
#2	-.0004	-.0980	.0001	-.0001	.0033	.0035	-.0059	.0135
Elem	Ti3361	Tl1908	Li6707	Sr4077				
Units	ppm	ppm	ppm	ppm				
Avg	.0000	.0008	.0022	.00015				
#1	.0001	.0006	.0017	.00035				
#2	-.0001	.0009	.0027	-.00004				
Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	5964.1	108480.	1403.9	1453.5				
#1	5978.5	108640.	1393.5	1455.6				
#2	5949.6	108320.	1414.3	1451.5				

Sample Name: K1010892-MB      Acquired: 11/11/2010 14:18:39      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.0007	-.0016	.0001	.0002	.00004	-.0019	.0000
#1	.0005	-.0001	-.0007	-.0006	.0002	.00004	-.0016	.0000
#2	.0006	-.0014	-.0026	.0008	.0001	.00004	-.0022	-.0001
Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0091	.0026	-.0001	.0000	-.0001	-.0005	.0051
#1	.0001	-.0059	.0029	-.0002	.0000	-.0003	-.0007	-.0002
#2	.0000	-.0124	.0022	.0001	-.0001	.0001	-.0002	.0103
Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	.0003	.0027	-.0001	-.0009	.0002	F -.1107	-.0027
#1	-.0018	.0006	-.0009	-.0001	-.0010	.0003	-.0721	-.0036
#2	.0003	.0001	.0062	-.0001	-.0008	.0000	-.1492	-.0018
Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.1327	.0005	.0002	.0001	.0002	F .1090	.0067
#1	.0000	-.1395	.0006	.0007	.0001	.0002	.1117	.0090
#2	-.0006	-.1260	.0003	-.0003	.0000	.0002	.1063	.0043
Elem	Ti3361	Tl1908	Li6707	Sr4077				
Units	ppm	ppm	ppm	ppm				
Avg	-.0003	-.0007	.0018	.00009				
#1	-.0002	-.0006	.0045	-.00014				
#2	-.0004	-.0007	-.0010	.00032				
Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	5923.2	109280.	1451.3	1442.1				
#1	5944.3	109210.	1451.7	1450.9				
#2	5902.0	109360.	1450.9	1433.3				

Sample Name: K1010892-001S      Acquired: 11/11/2010 14:21:14      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B DISS

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.916</b>	<b>.4857</b>	<b>.9518</b>	<b>1.934</b>	<b>.04870</b>	<b>.9859</b>	<b>.0472</b>	<b>.0474</b>

#1	1.911	.4858	.9522	1.934	.04884	.9851	.0471	.0472
#2	1.921	.4855	.9515	1.934	.04857	.9867	.0474	.0475

Elem	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 15.13</b>	<b>14.56</b>	<b>.1906</b>	<b>.4739</b>	<b>.2353</b>	<b>.2427</b>	<b>4.305</b>	<b>.4779</b>

#1	15.11	14.55	.1907	.4724	.2345	.2415	4.314	.4771
#2	15.14	14.58	.1904	.4755	.2361	.2440	4.296	.4787

Elem	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 12.38</b>	<b>.8228</b>	<b>.9733</b>	<b>.4693</b>	<b>F 11.04</b>	<b>.8939</b>	<b>.0490</b>	<b>F 18.26</b>

#1	12.36	.8224	.9704	.4676	10.98	.8938	.0488	18.21
#2	12.40	.8233	.9761	.4709	11.11	.8939	.0492	18.31

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0006</b>	<b>.4841</b>	<b>.4912</b>	<b>.4864</b>	<b>.1652</b>	<b>4.504</b>	<b>.0001</b>	<b>.8809</b>

#1	.0005	.4839	.4894	.4857	.1629	4.502	.0001	.8784
#2	.0007	.4843	.4929	.4871	.1675	4.507	.0001	.8833

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	<b>.0050</b>	<b>.04007</b>

#1	.0030	.03986
#2	.0070	.04029

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>5843.5</b>	<b>107580.</b>	<b>1427.4</b>	<b>1421.0</b>

#1	5863.8	107480.	1424.1	1426.4
#2	5823.1	107690.	1430.7	1415.5

Sample Name: K1010892-001S      Acquired: 11/11/2010 14:24:23      Type: Unk  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B Si

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018	F .0022	.0004	.0020	.0332	-.00005	F .0047	.0001
#1	.0016	-.0003	.0012	.0006	.0334	-.00004	.0042	.0000
#2	.0020	.0046	-.0004	.0035	.0329	-.00005	.0052	.0001
Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	5.060	5.040	F .0005	.0036	.0022	.0008	3.349
#1	.0001	5.044	5.060	.0007	.0034	.0021	.0009	3.379
#2	.0002	5.077	5.019	.0004	.0037	.0024	.0007	3.319
Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	2.385	2.435	.3514	-.0002	.0005	.9874	-.0005
#1	-.0010	2.392	2.435	.3518	-.0001	.0005	1.016	.0011
#2	-.0015	2.378	2.434	.3509	-.0003	.0004	.9585	-.0022
Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	F 23.65	.0004	.0004	.0123	.0123	.1597	14.60
#1	.0003	23.52	.0008	.0003	.0122	.0123	.1617	14.59
#2	.0005	23.77	.0000	.0004	.0124	.0122	.1578	14.61
Elem	Ti3361	Tl1908	Li6707	Sr4077				
Units	ppm	ppm	ppm	ppm				
Avg	.0001	.0001	.0061	.03954				
#1	.0000	.0007	.0015	.03968				
#2	.0001	-.0005	.0106	.03941				
Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	5859.1	108020.	1436.4	1449.2				
#1	5863.0	107630.	1437.3	1449.4				
#2	5855.1	108400.	1435.6	1448.9				



Sample Name: K1010892-002      Acquired: 11/11/2010 14:27:34      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B DISS

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	F .0066	.0025	-.0006	.0300	-.00008	F .0033	.0000
#1	.0033	.0087	.0012	-.0006	.0300	-.00007	.0028	-.0001
#2	.0035	.0044	.0037	-.0007	.0300	-.00009	.0038	.0000
Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	5.545	5.500	F .0006	.0008	.0139	.0005	F 20.44
#1	.0001	5.540	5.497	.0006	.0009	.0137	.0002	20.40
#2	.0001	5.550	5.503	.0006	.0007	.0141	.0007	20.48
Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	2.297	2.336	.1279	-.0006	-.0001	.9354	-.0032
#1	-.0011	2.298	2.339	.1277	-.0005	.0000	.8534	-.0029
#2	.0006	2.296	2.334	.1281	-.0007	-.0003	1.017	-.0034
Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	7.250	-.0001	.0001	.0115	.0117	.3404	7.332
#1	-.0005	7.235	.0000	.0001	.0115	.0116	.3384	7.388
#2	.0002	7.264	-.0002	.0001	.0116	.0117	.3425	7.276
Elem	Ti3361	Ti1908	Li6707	Sr4077				
Units	ppm	ppm	ppm	ppm				
Avg	.0007	.0009	.0049	.05805				
#1	.0007	.0001	.0027	.05807				
#2	.0008	.0016	.0071	.05803				
Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	5868.9	109190.	1441.6	1446.3				
#1	5892.2	109550.	1442.9	1451.3				
#2	5845.5	108840.	1440.2	1441.2				

Sample Name: K1010892-003      Acquired: 11/11/2010 14:30:49      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B DISS

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049	F .0038	.0001	.0005	.0172	-.00003	F .0041	.0000

#1	.0048	.0014	-.0007	.0003	.0171	-.00002	.0051	.0000
#2	.0049	.0063	.0008	.0008	.0172	-.00004	.0031	.0000

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	1.915	1.882	F .0001	.0014	.0012	.0001	.6198

#1	.0001	1.933	1.880	-.0002	.0015	.0008	.0004	.6276
#2	.0001	1.897	1.883	.0005	.0013	.0016	-.0001	.6120

Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	.8845	.8682	.1713	-.0006	.0004	.5664	-.0025

#1	-.0011	.8846	.8651	.1709	-.0005	.0006	.6054	-.0021
#2	-.0014	.8845	.8713	.1718	-.0006	.0003	.5274	-.0029

Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	4.323	.0009	.0003	.0104	.0103	.1581	7.526

#1	.0000	4.348	.0006	.0005	.0104	.0103	.1550	7.452
#2	-.0002	4.298	.0011	.0002	.0105	.0103	.1612	7.601

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	.0002	.0003	.0058	.01758

#1	.0002	.0006	.0099	.01767
#2	.0002	-.0001	.0016	.01749

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5824.2	107670.	1399.0	1448.0

#1	5827.5	107520.	1393.8	1449.0
#2	5820.9	107810.	1404.1	1446.9

Sample Name: K1010892-004      Acquired: 11/11/2010 14:33:55      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B DISS

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0941	.0946	.0001	.0037	.0691	.00001	F .0039	.0000

#1	.0940	.0950	.0001	.0025	.0684	-.00002	.0032	.0000
#2	.0941	.0942	.0000	.0049	.0698	.00005	.0046	.0000

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	F 20.44	F .0005	.0012	.0084	.0006	F 11.75	-.0021

#1	.0001	20.26	.0007	.0012	.0082	.0007	11.63	-.0019
#2	.0001	20.62	.0002	.0011	.0087	.0005	11.86	-.0024

Elem	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.67	.7902	-.0005	-.0001	1.747	-.0031	-.0001	F 15.34

#1	10.71	.7861	-.0005	-.0003	1.761	-.0017	-.0003	15.36
#2	10.63	.7943	-.0006	.0000	1.733	-.0044	.0000	15.33

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0022	F .0043	F .0043	.1330	20.83	.0071	.0000

#1	.0003	.0018	.0043	.0044	.1321	20.98	.0072	-.0006
#2	.0002	.0026	.0042	.0043	.1340	20.67	.0069	.0006

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	.0100	.10724

#1	.0117	.10616
#2	.0084	.10833

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5765.0	106630.	1402.9	1413.1

#1	5769.6	106550.	1421.6	1412.4
#2	5760.5	106710.	1384.1	1413.8

Sample Name: K1010892-005      Acquired: 11/11/2010 14:37:16      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B DISS

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	F .0023	-.0028	.0002	.0041	.00001	F .0042	.0000

#1	.0017	.0026	-.0035	.0004	.0036	.00001	.0037	-.0001
#2	.0016	.0020	-.0021	-.0001	.0045	.00000	.0047	.0000

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	F 12.81	12.47	F .0004	.0001	.0140	.0160	.0278

#1	.0001	12.77	12.42	.0003	.0001	.0140	.0160	.0236
#2	.0000	12.86	12.51	.0005	.0001	.0140	.0161	.0321

Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0019	5.142	5.115	.0003	-.0007	-.0008	2.255	-.0010

#1	-.0020	5.127	5.100	.0003	-.0005	-.0009	2.272	-.0018
#2	-.0019	5.157	5.130	.0003	-.0009	-.0008	2.239	-.0001

Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	F 11.11	.0006	.0259	.0423	.0420	.3168	31.95

#1	-.0004	11.10	.0006	.0262	.0421	.0420	.3184	31.92
#2	.0004	11.11	.0005	.0256	.0425	.0420	.3153	31.98

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	-.0003	.0001	.0045	.05534

#1	-.0004	-.0001	.0044	.05502
#2	-.0002	.0004	.0046	.05566

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5837.8	107660.	1409.2	1439.2

#1	5861.5	107900.	1413.9	1443.1
#2	5814.1	107420.	1404.5	1435.3

Sample Name: 0.2 ppm K      Acquired: 11/11/2010 14:40:33      Type: Unk  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 0.002/10 MET1-83-D

*LL K MRL = 0.2 ppm*

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	F -.0021	-.0011	.0014	F -.0003	.00004	F -.0007	-.0001
#1	.0006	-.0025	-.0008	.0020	-.0003	.00011	-.0007	.0000
#2	.0007	-.0018	-.0014	.0009	-.0003	-.00003	-.0007	-.0001
Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	F -.0150	.0015	F -.0001	-.0001	.0002	.0009	F .0063
#1	.0001	-.0039	.0015	-.0004	.0000	.0003	.0008	.0116
#2	.0000	-.0260	.0016	.0002	-.0001	.0002	.0010	.0009
Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0004	F .0006	-.0001	-.0007	.0001	F .1296	-.0011
#1	-.0001	.0005	.0028	.0000	-.0008	.0002	.1410	-.0021
#2	.0008	.0003	-.0017	-.0001	-.0006	.0000	.1182	-.0002
Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	F -.2070	.0003	.0001	F .0001	F .0000	-.0023	.0031
#1	.0005	-.1828	-.0003	-.0004	.0002	.0000	.0005	.0085
#2	.0005	-.2312	.0009	.0005	.0000	.0000	-.0051	-.0023
Elem	Ti3361	Tl1908	Li6707	Sr4077				
Units	ppm	ppm	ppm	ppm				
Avg	.0000	-.0002	-.0004	-.00007				
#1	.0001	-.0005	-.0011	-.00021				
#2	-.0001	.0001	.0003	.00007				
Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	5865.9	108370.	1384.2	1433.1				
#1	5867.8	108300.	1389.4	1438.0				
#2	5864.0	108430.	1379.1	1428.2				

Sample Name: CCVA3      Acquired: 11/11/2010 14:43:03      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2595	.2376	.2479	.2584	.2492	.25145	.2492	.2578
Stddev	.0002	.0043	.0016	.0005	.0021	.00080	.0020	.0009
%RSD	.0726	1.821	.6258	.1918	.8358	.31920	.8196	.3410
#1	.2594	.2345	.2490	.2580	.2507	.25088	.2507	.2585
#2	.2596	.2406	.2468	.2587	.2477	.25202	.2478	.2572
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2602	.2580	.2585	.2543	.2578	.2552	.2516	.2615
Stddev	.0005	.0130	.0017	.0008	.0003	.0013	.0004	.0069
%RSD	.1832	5.023	.6673	.3115	.1200	.5034	.1500	2.622
#1	.2599	.2488	.2598	.2548	.2580	.2561	.2519	.2663
#2	.2606	.2672	.2573	.2537	.2575	.2543	.2514	.2566
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2601	.2528	.2555	.2434	.2519	.2446	.2567	.2609
Stddev	.0008	.0282	.0013	.0017	.0010	.0013	.0000	.0002
%RSD	.3218	11.15	.4949	.6976	.4032	.5463	.0038	.0750
#1	.2607	.2329	.2564	.2422	.2512	.2456	.2567	.2608
#2	.2596	.2728	.2546	.2446	.2527	.2437	.2567	.2611
Check ?	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value Range								

Sample Name: CCVA3      Acquired: 11/11/2010 14:43:03      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.226	.2468	.2458	.1494	.2549	.2535	.2615	.2502
Stddev	.042	.0007	.0013	.0070	.0015	.0005	.0010	.0008
%RSD	1.881	.2912	.5446	4.678	.5708	.1956	.3979	.3180
#1	2.256	.2473	.2468	.1543	.2559	.2531	.2622	.2507
#2	2.196	.2463	.2449	.1444	.2538	.2538	.2608	.2496

Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range								

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0108	.1535	.2550	.2550	.0014	.00009
Stddev	.0023	.0029	.0002	.0035	.0008	.00008
%RSD	21.17	1.864	.0936	1.391	62.20	83.422
#1	-.0125	.1515	.2551	.2575	.0020	.00014
#2	-.0092	.1555	.2548	.2525	.0008	.00004

Check ?	None	None	Chk Pass	Chk Pass	None	None
Value Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5672.6	105390.	1346.6	1393.8
Stddev	10.7	3.	11.9	3.1
%RSD	.18798	.00304	.88534	.22551
#1	5680.2	105390.	1338.2	1391.6
#2	5665.1	105390.	1355.0	1396.0

Sample Name: CCVB3      Acquired: 11/11/2010 14:46:00      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110b

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.965	9.627	-0.0015	.9896	9.638	.00003	.0003	.0000
Stddev	.021	.016	.0006	.0044	.012	.00002	.0011	.0000
%RSD	.2972	.1621	41.81	.4457	.1195	69.277	355.9	64.05
#1	6.951	9.616	-0.0019	.9927	9.629	.00002	.0011	.0000
#2	6.980	9.638	-0.0011	.9865	9.646	.00005	-0.0005	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	9.651	9.406	.0001	.0003	.0065	-.0013	9.784
Stddev	.0001	.024	.040	.0000	.0002	.0002	.0000	.011
%RSD	60.74	.2497	.4210	17.34	48.12	3.305	3.946	.1122
#1	.0001	9.634	9.434	.0001	.0002	.0067	-.0012	9.791
#2	.0002	9.668	9.378	.0001	.0005	.0064	-.0013	9.776
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0011	9.909	9.592	9.656	.9691	.9463	-.0005	-.0002
Stddev	.0010	.050	.003	.028	.0048	.0013	.0004	.0000
%RSD	86.21	.5021	.0302	.2930	.4986	.1342	71.50	16.57
#1	-.0004	9.944	9.594	9.636	.9657	.9454	-.0003	-.0002
#2	-.0018	9.874	9.590	9.676	.9725	.9472	-.0008	-.0002
Check ?	None	Chk Pass	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								



Sample Name: CCVB3      Acquired: 11/11/2010 14:46:00      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110b

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.229	-.0031	.0003	9.883	.0002	.0019	.0002	.0003
Stddev	.020	.0014	.0004	.045	.0006	.0003	.0002	.0001
%RSD	.2189	44.55	156.5	.4550	425.6	13.69	72.09	23.83
#1	9.215	-.0021	.0000	9.914	-.0003	.0020	.0001	.0002
#2	9.244	-.0041	.0006	9.851	.0006	.0017	.0003	.0003
Check ?	Chk Pass	None	None	Chk Pass	None	None	None	None
Value Range								

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.972	9.808	.0002	.0019	.9341	.96163
Stddev	.040	.023	.0001	.0001	.0012	.00077
%RSD	.4043	.2357	46.95	5.986	.1328	.08031
#1	10.00	9.791	.0001	.0020	.9350	.96218
#2	9.944	9.824	.0003	.0018	.9332	.96109
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5802.9	106010.	1401.9	1421.1
Stddev	6.9	256.	1.6	5.7
%RSD	.11821	.24176	.11727	.39861
#1	5807.7	105830.	1400.7	1425.1
#2	5798.0	106190.	1403.0	1417.1

Sample Name: CCB3      Acquired: 11/11/2010 14:50:07      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :  
 Comment: 111110b

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0009	-.0006	.0014	.0001	-.00002	-.0021	.0000
Stddev	.0002	.0032	.0023	.0008	.0003	.00002	.0001	.000
%RSD	71.17	343.7	409.9	55.16	246.8	126.71	4.471	340.5
#1	.0001	-.0032	.0011	.0008	-.0001	.00000	-.0020	.0000
#2	.0004	.0013	-.0022	.0019	.0003	-.00003	-.0021	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0034	.0008	.0004	.0000	.0001	-.0007	-.0014
Stddev	.0000	.0042	.0003	.0002	.0001	.0003	.0006	.0002
%RSD	.4303	121.0	36.83	55.11	1408.	292.1	81.25	14.68
#1	.0001	.0005	.0006	.0002	-.0001	.0003	-.0003	-.0016
#2	.0001	.0064	.0009	.0005	.0001	-.0001	-.0012	-.0013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.0078	.0000	.0029	-.0001	-.0005	-.0006	.0002
Stddev	.0003	.0379	.0002	.0060	.0001	.0003	.0002	.0001
%RSD	115.8	483.9	2468.	210.1	88.21	51.47	30.03	70.37
#1	-.0005	-.0190	-.0001	-.0014	.0000	-.0003	-.0007	.0002
#2	.0000	.0347	.0002	.0071	-.0001	-.0007	-.0004	.0001
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB3      Acquired: 11/11/2010 14:50:07      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :  
 Comment: 111110b

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.1248	-.0027	.0005	-.0739	.0009	.0000	.0000	.0000
Stddev	.1107	.0004	.0002	.0052	.0000	.0007	.0001	.000
%RSD	88.65	15.19	45.71	7.032	4.026	1443.	600.9	511.6
#1	-.2031	-.0029	.0006	-.0702	.0009	-.0004	-.0001	.0000
#2	-.0466	-.0024	.0003	-.0776	.0009	.0005	.0001	.0000

Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.1000							
Low Limit	-.1000							

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0048	.0177	.0000	.0004	.0078	-.00005
Stddev	.0020	.0228	.000	.0002	.0025	.00022
%RSD	41.14	128.4	463.7	42.02	32.17	444.54
#1	-.0034	.0016	.0001	.0003	.0096	-.00020
#2	-.0063	.0338	-.0002	.0006	.0060	.00011

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5863.4	106090.	1369.6	1424.1
Stddev	1.1	11.	16.5	1.3
%RSD	.01851	.01060	1.2047	.08902
#1	5864.1	106080.	1381.3	1425.0
#2	5862.6	106100.	1357.9	1423.2

Sample Name: K1010892-006      Acquired: 11/11/2010 14:52:46      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B DISS

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053	F .0067	-.0007	.0011	.0099	-.00001	.0855	-.0001

#1	.0052	.0042	-.0011	.0006	.0095	-.00002	.0844	.0000
#2	.0054	.0092	-.0003	.0017	.0103	.00000	.0866	-.0001

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	F 11.79	11.47	F .0002	.0003	.0035	.0030	1.044

#1	.0001	11.85	11.51	.0003	.0004	.0037	.0031	1.048
#2	.0002	11.74	11.43	.0001	.0002	.0032	.0028	1.040

Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	1.597	1.573	.0299	-.0003	-.0004	6.030	-.0025

#1	-.0006	1.601	1.575	.0300	-.0002	-.0002	5.983	-.0027
#2	.0000	1.593	1.571	.0297	-.0004	-.0006	6.078	-.0022

Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	F 100.6	.0004	.0035	.3106	.3025	.1693	19.27

#1	.0001	101.2	.0003	.0037	.3096	.3024	.1662	19.10
#2	.0005	100.0	.0006	.0032	.3116	.3026	.1723	19.44

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	.0009	-.0008	.0216	.02955

#1	.0008	-.0016	.0190	.02931
#2	.0010	.0000	.0241	.02979

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5809.9	105920.	1380.1	1401.3

#1	5833.7	105350.	1371.9	1404.3
#2	5786.0	106490.	1388.2	1398.4

Sample Name: K1010892-007      Acquired: 11/11/2010 14:56:07      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B DISS

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	F .0016	-.0011	.0027	F .0019	-.00002	F .0027	-.0001
#1	.0016	-.0025	-.0017	.0026	.0019	.00003	.0022	-.0001
#2	.0014	.0058	-.0004	.0028	.0019	-.00007	.0033	.0000
Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	F 12.02	11.63	F .0007	.0006	.0005	.0014	.0613
#1	.0001	11.99	11.60	.0006	.0003	.0006	.0017	.0650
#2	.0001	12.04	11.67	.0008	.0008	.0003	.0011	.0576
Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	5.378	5.514	.0003	-.0007	-.0010	2.295	.0004
#1	-.0007	5.375	5.513	.0003	-.0008	-.0010	2.292	.0004
#2	-.0020	5.382	5.514	.0003	-.0007	-.0011	2.298	.0004
Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	7.746	.0004	.0240	F .0035	F .0035	.3168	29.67
#1	.0004	7.713	.0003	.0240	.0035	.0034	.3206	29.65
#2	.0003	7.778	.0006	.0239	.0035	.0036	.3131	29.69
Elem	Ti3361	Tl1908	Li6707	Sr4077				
Units	ppm	ppm	ppm	ppm				
Avg	-.0002	.0005	.0075	.05515				
#1	-.0002	.0012	.0072	.05513				
#2	-.0001	-.0002	.0078	.05516				
Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	5911.3	108420.	1434.5	1462.2				
#1	5933.0	108290.	1437.5	1468.8				
#2	5889.5	108540.	1431.6	1455.6				

Sample Name: K1010892-008      Acquired: 11/11/2010 14:59:23      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B DISS

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0203	.0217	-.0021	.0028	.1471	.00003	F .0397	.0000

#1	.0202	.0205	-.0029	.0015	.1470	.00002	.0403	.0000
#2	.0204	.0228	-.0013	.0040	.1471	.00005	.0391	.0000

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	F 93.87	.0090	.0128	.0141	.0132	.4541	-.0018

#1	.0000	93.73	.0089	.0127	.0136	.0130	.4568	-.0010
#2	.0001	94.02	.0091	.0128	.0145	.0134	.4514	-.0026

Elem	Mg2790	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	104.9	.6553	.0009	.0100	F 27.63	-.0023	.0001	F 338.4

#1	104.6	.6561	.0007	.0098	27.59	-.0022	.0003	340.6
#2	105.1	.6545	.0010	.0103	27.67	-.0025	.0000	336.1

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0065	.0146	.0133	.2071	18.16	.0039	.0010

#1	.0006	.0063	.0146	.0133	.2053	18.06	.0038	-.0002
#2	.0003	.0067	.0147	.0134	.2089	18.25	.0039	.0022

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	.0110	.45625

#1	.0102	.45585
#2	.0119	.45664

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5472.0	101570.	1388.2	1280.4

#1	5497.5	101650.	1383.3	1288.0
#2	5446.4	101490.	1393.1	1272.8

Sample Name: K1010892-009      Acquired: 11/11/2010 15:02:49      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B DISS

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0222	.0227	-.0040	.0034	.1467	.00003	F .0402	.0000

#1	.0222	.0176	-.0032	.0042	.1476	-.00001	.0404	.0000
#2	.0221	.0278	-.0047	.0027	.1459	.00008	.0399	.0000

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	F 93.45	.0086	.0096	.0098	.0104	.3550	-.0009

#1	.0000	93.71	.0086	.0097	.0100	.0106	.3540	-.0020
#2	.0001	93.20	.0086	.0095	.0097	.0103	.3559	.0003

Elem	Mg2790	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	104.4	.6497	.0008	.0097	F 27.83	-.0019	.0003	F 321.1

#1	104.8	.6487	.0006	.0098	27.78	-.0014	-.0001	321.5
#2	104.1	.6508	.0010	.0097	27.87	-.0024	.0008	320.7

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0055	.0114	.0105	.1816	18.20	.0037	.0014

#1	-.0002	.0056	.0114	.0106	.1838	18.22	.0037	.0001
#2	.0004	.0054	.0114	.0105	.1795	18.19	.0037	.0026

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	.0081	.45480

#1	.0079	.45638
#2	.0083	.45323

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5525.7	102590.	1406.6	1295.1

#1	5541.8	102610.	1407.7	1298.1
#2	5509.6	102570.	1405.6	1292.2

Sample Name: K1012657-002      Acquired: 11/11/2010 15:06:55      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 1/20 SCREEN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	F -.0006	-.0025	.0026	F .0019	.00002	F .0131	.0000

#1	.0014	-.0003	-.0020	.0034	.0010	.00004	.0126	.0000
#2	.0010	-.0009	-.0030	.0018	.0028	.00000	.0135	.0000

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	2.897	2.846	F -.0001	.0000	.0001	-.0002	F .0077

#1	.0000	2.878	2.851	-.0003	-.0001	.0000	-.0005	.0063
#2	.0001	2.917	2.841	.0002	.0001	.0001	.0001	.0091

Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	2.447	2.460	.0165	-.0007	.0001	1.463	-.0015

#1	-.0005	2.449	2.463	.0166	-.0008	-.0001	1.431	-.0010
#2	.0001	2.445	2.458	.0164	-.0007	.0003	1.495	-.0019

Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	F 17.92	.0005	.0003	F .0000	F .0000	.0226	.5600

#1	.0000	17.84	.0000	.0002	.0000	.0000	.0214	.5609
#2	-.0008	18.01	.0009	.0004	.0000	.0001	.0238	.5590

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	.0001	.0013	.0016	.02313

#1	.0002	.0011	-.0005	.02292
#2	.0000	.0015	.0036	.02334

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5934.4	108880.	1426.6	1477.5

#1	5940.9	108690.	1425.6	1478.8
#2	5927.9	109060.	1427.6	1476.3



Sample Name: K1012657-003      Acquired: 11/11/2010 15:10:13      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 1/20 SCREEN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	F .0021	-.0014	.0021	F .0005	.00003	F .0014	.0000

#1	.0008	.0040	-.0015	.0024	.0008	.00004	.0016	.0000
#2	.0007	.0001	-.0013	.0018	.0003	.00001	.0012	-.0001

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.2565	.2640	F .0004	-.0003	.0000	.0000	F .0110

#1	.0000	.2619	.2633	-.0001	-.0001	.0001	.0003	.0151
#2	.0001	.2510	.2648	.0008	-.0005	.0000	-.0002	.0069

Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	.2106	.2029	.0022	-.0007	.0000	.2626	-.0009

#1	-.0011	.2105	.2066	.0022	-.0007	.0001	.3184	-.0012
#2	-.0005	.2107	.1993	.0022	-.0007	-.0001	.2067	-.0006

Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	2.083	-.0001	.0003	F .0001	F .0001	-.0023	.5310

#1	-.0002	2.116	-.0005	.0000	.0000	.0001	-.0045	.5403
#2	-.0001	2.051	.0002	.0005	.0001	.0001	-.0001	.5217

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	.0000	.0010	.0080	.00204

#1	-.0001	.0020	.0083	.00233
#2	.0001	.0000	.0078	.00175

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5892.1	105850.	1364.4	1457.7

#1	5738.9	106010.	1359.4	1423.0
#2	6045.4	105690.	1369.4	1492.4

Sample Name: K1012657-004      Acquired: 11/11/2010 15:13:19      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 1/20 SCREEN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	F .0007	-.0021	.0029	F .0001	.00005	F -.0012	.0000

#1	.0008	-.0001	-.0016	.0019	.0010	.00006	-.0008	-.0001
#2	.0009	.0015	-.0025	.0039	-.0008	.00005	-.0017	.0000

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.1745	.1841	F .0004	.0001	.0005	.0003	F .0007

#1	.0000	.1562	.1838	.0004	.0001	.0006	-.0005	.0016
#2	.0001	.1927	.1843	.0005	.0002	.0004	.0011	-.0003

Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0016	.0154	F .0196	.0000	-.0006	.0005	F -.0231	-.0020

#1	-.0018	.0155	.0232	.0000	-.0005	.0002	-.0565	-.0022
#2	-.0014	.0153	.0160	.0000	-.0006	.0007	.0104	-.0018

Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	F .1790	.0002	-.0002	F .0051	F .0052	-.0016	.0305

#1	-.0007	.1969	.0000	-.0001	.0050	.0052	-.0023	.0399
#2	.0010	.1610	.0003	-.0004	.0053	.0053	-.0009	.0212

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	.0001	.0005	.0015	.00073

#1	.0000	.0008	.0052	.00063
#2	.0002	.0002	-.0021	.00084

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5920.0	108820.	1394.0	1439.5

#1	5939.9	108830.	1389.0	1446.4
#2	5900.1	108800.	1399.1	1432.6

Sample Name: K1010795-MB      Acquired: 11/11/2010 15:16:26      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	-.0044	-.0012	.0009	-.0007	-.00009	-.0007	.0000

#1	.0005	-.0040	-.0008	-.0005	-.0013	-.00007	-.0003	-.0001
#2	.0006	-.0047	-.0016	.0023	-.0002	-.00011	-.0012	.0000

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0182	.0027	.0001	-.0003	.0003	-.0003	.0062

#1	.0001	-.0169	.0025	-.0001	-.0003	.0003	-.0005	.0094
#2	.0001	-.0195	.0030	.0003	-.0003	.0003	-.0001	.0030

Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	-.0001	.0004	-.0001	-.0010	-.0001	-.0248	-.0017

#1	-.0008	-.0002	.0005	-.0001	-.0010	-.0003	-.0192	-.0016
#2	-.0009	.0000	.0003	-.0001	-.0011	.0000	-.0303	-.0019

Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0698	-.0001	-.0001	.0009	.0010	F .0863	.0054

#1	.0001	.0424	.0001	-.0006	.0009	.0010	.0838	-.0084
#2	-.0002	.0972	-.0003	.0003	.0009	.0010	.0887	.0191

Elem	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	.0000	-.0014	.0037	-.00004

#1	-.0001	-.0020	.0033	-.00004
#2	.0001	-.0007	.0042	-.00005

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5920.6	108580.	1384.8	1435.7

#1	5936.1	108800.	1396.8	1440.3
#2	5905.1	108350.	1372.8	1431.1

Sample Name: LCSW      Acquired: 11/11/2010 15:19:06      Type: Unk  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :  
 Comment: 111110B

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>4.906</b>	<b>2.476</b>	<b>2.535</b>	<b>4.892</b>	<b>.12573</b>	<b>.9957</b>	<b>1.249</b>	<b>1.245</b>

#1	4.896	2.474	2.532	4.863	.12527	.9913	1.242	1.237
#2	4.915	2.477	2.537	4.921	.12620	1.0000	1.257	1.254

Elem	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>12.42</b>	<b>12.26</b>	<b>.5134</b>	<b>1.271</b>	<b>.6337</b>	<b>.6330</b>	<b>2.574</b>	<b>2.544</b>

#1	12.39	12.30	.5135	1.264	.6291	.6312	2.550	2.530
#2	12.45	12.21	.5133	1.278	.6384	.6348	2.598	2.558

Elem	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>12.13</b>	<b>1.269</b>	<b>1.028</b>	<b>1.252</b>	<b>11.85</b>	<b>2.374</b>	<b>.6127</b>	<b>11.81</b>

#1	12.09	1.269	1.022	1.245	11.78	2.375	.6109	11.82
#2	12.18	1.268	1.034	1.259	11.92	2.373	.6146	11.79

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0005</b>	<b>1.298</b>	<b>1.250</b>	<b>1.213</b>	<b>.1081</b>	<b>-.0067</b>	<b>.0000</b>	<b>2.561</b>

#1	.0003	1.299	1.241	1.213	.1073	-.0137	.0002	2.544
#2	.0006	1.296	1.258	1.214	.1088	.0004	-.0002	2.577

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	<b>.0022</b>	<b>9.7444</b>

#1	.0016	9.7118
#2	.0029	9.7770

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>5676.2</b>	<b>103930.</b>	<b>1375.5</b>	<b>1378.4</b>

#1	5706.1	103610.	1375.6	1385.8
#2	5646.4	104250.	1375.3	1371.0

Sample Name: LCSW      Acquired: 11/11/2010 15:22:16      Type: Unk  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B Si

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	F .0019	-.0012	.0017	F -.0003	.00003	F .0025	.0000

#1	.0009	.0025	-.0016	.0014	-.0007	.00001	.0024	.0000
#2	.0007	.0013	-.0008	.0019	.0001	.00005	.0027	.0000

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	F -.0113	.0035	F .0002	.0001	.0002	.0004	F .0021

#1	.0001	-.0016	.0033	-.0002	.0001	.0003	.0009	-.0059
#2	.0001	-.0210	.0037	.0005	.0002	.0001	.0000	.0101

Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	.0006	F .0032	-.0001	-.0002	-.0003	F -.0939	-.0004

#1	-.0009	.0006	.0035	-.0001	-.0001	-.0002	-.0507	.0006
#2	-.0010	.0006	.0029	-.0001	-.0002	-.0005	-.1371	-.0014

Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	F 14.87	.0003	.0007	F .0006	F .0005	.1325	9.562

#1	-.0002	14.84	-.0002	.0008	.0006	.0005	.1348	9.566
#2	.0000	14.90	.0008	.0005	.0006	.0005	.1303	9.557

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	.0001	.0015	.0028	.00010

#1	.0002	.0016	.0051	.00007
#2	.0000	.0014	.0004	.00014

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5801.1	105540.	1372.3	1422.8

#1	5812.2	105350.	1371.7	1427.0
#2	5790.1	105730.	1372.9	1418.5

Sample Name: CCVA4      Acquired: 11/11/2010 15:25:37      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2469	.2406	.2518	.2592	.2410	.25130	.2492	.2469
Stddev	.0011	.0013	.0019	.0009	.0013	.00072	.0026	.0016
%RSD	.4625	.5426	.7691	.3556	.5373	.28761	1.037	.6411
#1	.2461	.2415	.2531	.2585	.2401	.25078	.2510	.2457
#2	.2477	.2396	.2504	.2598	.2420	.25181	.2473	.2480
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2474	.2418	.2508	.2457	.2460	.2454	.2520	.2475
Stddev	.0012	.0007	.0006	.0010	.0012	.0013	.0002	.0083
%RSD	.4766	.2784	.2414	.3946	.4788	.5200	.0766	3.358
#1	.2466	.2422	.2504	.2450	.2451	.2445	.2522	.2534
#2	.2482	.2413	.2513	.2464	.2468	.2463	.2519	.2416
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2470	.2269	.2504	.2554	.2433	.2361	.2454	.2480
Stddev	.0025	.0178	.0004	.0020	.0001	.0005	.0011	.0014
%RSD	1.020	7.852	.1633	.7694	.0259	.2171	.4540	.5566
#1	.2452	.2395	.2501	.2540	.2434	.2365	.2447	.2470
#2	.2488	.2143	.2507	.2568	.2433	.2358	.2462	.2490
Check ?	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value Range								

Sample Name: CCVA4      Acquired: 11/11/2010 15:25:37      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :  
 Comment: 111110B

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.213	.2474	.2509	.2696	.2451	.2451	.2480	.2506
Stddev	.003	.0001	.0004	.0693	.0031	.0004	.0015	.0000
%RSD	.1163	.0547	.1658	25.70	1.269	.1476	.5925	.0045
#1	2.215	.2475	.2512	.2206	.2429	.2448	.2470	.2506
#2	2.212	.2473	.2506	.3186	.2473	.2454	.2491	.2506

Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0077	.1288	.2457	.2468	.0037	-.00006
Stddev	.0005	.0279	.0004	.0007	.0004	.00014
%RSD	5.955	21.69	.1634	.2949	11.13	249.48
#1	-.0080	.1486	.2460	.2463	.0039	-.00015
#2	-.0074	.1091	.2454	.2473	.0034	.00004

Check ?	None	None	Chk Pass	Chk Pass	None	None
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5954.3	109190.	1402.5	1455.4
Stddev	18.3	353.	.7	7.3
%RSD	.30695	.32335	.04739	.50148
#1	5967.2	108940.	1403.0	1460.5
#2	5941.3	109440.	1402.1	1450.2

Sample Name: CCVB4      Acquired: 11/11/2010 15:28:35      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.904	9.792	-0.015	1.007	9.713	.00004	.0002	.0001
Stddev	.013	.039	.0019	.000	.046	.00002	.0015	.0000
%RSD	.1867	.3939	122.7	.0200	.4733	41.097	796.0	40.23
#1	6.895	9.765	-0.002	1.007	9.745	.00005	.0012	.0001
#2	6.913	9.820	-0.029	1.007	9.680	.00003	-0.008	.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	9.759	9.458	.0002	.0002	.0065	.0003	9.878
Stddev	.0000	.061	.039	.0004	.0001	.0003	.0008	.073
%RSD	16.07	.6264	.4137	258.5	62.02	4.103	273.6	.7417
#1	.0001	9.802	9.431	-0.001	.0001	.0067	.0008	9.930
#2	.0001	9.715	9.486	.0004	.0003	.0063	-0.003	9.826
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0018	9.832	9.638	10.07	.9707	.9733	-0.0006	-0.0002
Stddev	.0010	.030	.051	.06	.0045	.0113	.0000	.0001
%RSD	54.97	.3007	.5267	.5496	.4608	1.164	3.632	56.26
#1	-0.0011	9.853	9.674	10.11	.9739	.9813	-0.0006	-0.0001
#2	-0.0025	9.811	9.602	10.03	.9676	.9653	-0.0006	-0.0003
Check ?	None	Chk Pass	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								



Sample Name: CCVB4      Acquired: 11/11/2010 15:28:35      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :  
 Comment: 111110B

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.680	-.0021	.0007	9.731	.0004	.0016	.0003	.0003
Stddev	.051	.0011	.0002	.045	.0000	.0007	.0001	.0001
%RSD	.5255	53.65	29.69	.4676	4.417	44.87	27.73	22.76
#1	9.644	-.0013	.0008	9.699	.0004	.0011	.0002	.0003
#2	9.716	-.0029	.0005	9.763	.0004	.0020	.0003	.0002
Check ?	Chk Pass	None	None	Chk Pass	None	None	None	None
Value Range								

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.11	10.04	.0002	.0026	.9642	.97448
Stddev	.01	.05	.0001	.0012	.0023	.00438
%RSD	.1400	.4649	33.87	44.58	.2362	.44958
#1	10.12	10.07	.0003	.0018	.9658	.97758
#2	10.10	10.01	.0002	.0034	.9626	.97139
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5885.1	107020.	1444.7	1444.0
Stddev	14.5	416.	2.6	7.4
%RSD	.24701	.38846	.17797	.51395
#1	5895.3	106730.	1442.9	1449.3
#2	5874.8	107320.	1446.6	1438.8

Sample Name: CCB4      Acquired: 11/11/2010 15:32:40      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.0009	-.0014	.0021	.0006	.00002	-.0007	.0000
Stddev	.0001	.0009	.0009	.0002	.0003	.00000	.0003	.000
%RSD	16.09	91.45	62.03	8.305	41.47	19.622	47.59	732.1
#1	.0006	-.0015	-.0008	.0020	.0005	.00002	-.0005	.0000
#2	.0005	-.0003	-.0021	.0022	.0008	.00002	-.0010	.0000

Check ?    Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass  
 High Limit  
 Low Limit

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0096	.0007	-.0002	-.0001	.0000	.0001	-.0031
Stddev	.0000	.0083	.0001	.0000	.0002	.0001	.0005	.0026
%RSD	295.4	86.26	21.85	14.43	463.0	340.0	681.6	85.06
#1	.0000	-.0037	.0006	-.0002	.0001	-.0001	.0004	-.0049
#2	.0000	-.0155	.0008	-.0001	-.0002	.0001	-.0003	-.0012

Check ?    Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass  
 High Limit  
 Low Limit

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	-.0207	.0000	.0033	-.0001	-.0006	-.0005	.0000
Stddev	.0005	.0246	.000	.0032	.0000	.0008	.0002	.000
%RSD	37.68	118.7	228.6	97.38	14.99	128.8	36.43	312.8
#1	-.0017	-.0381	.0000	.0010	-.0001	-.0011	-.0007	.0000
#2	-.0010	-.0033	.0000	.0055	-.0001	-.0001	-.0004	-.0001

Check ?    Chk Pass      None   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass  
 High Limit  
 Low Limit

Sample Name: CCB4      Acquired: 11/11/2010 15:32:40      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0513	-.0024	.0004	-.0100	.0004	.0000	-.0001	.0000
Stddev	.0341	.0019	.0001	.0031	.0003	.000	.0000	.0000
%RSD	66.53	76.16	26.92	31.44	78.26	1049.	23.26	13.37
#1	-.0755	-.0038	.0004	-.0122	.0005	-.0002	-.0001	.0000
#2	-.0272	-.0011	.0003	-.0078	.0002	.0002	-.0001	.0000

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0052	.0195	.0001	-.0001	.0026	.00013
Stddev	.0024	.0084	.0001	.0001	.0039	.00004
%RSD	45.51	43.28	80.61	115.0	149.8	27.348
#1	-.0035	.0135	.0001	-.0002	.0053	.00016
#2	-.0069	.0255	.0000	.0000	-.0002	.00011

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5923.7	109090.	1402.4	1447.5
Stddev	11.9	563.	27.6	1.1
%RSD	.20113	.51585	1.9715	.07478
#1	5932.1	109480.	1422.0	1448.3
#2	5915.3	108690.	1382.9	1446.7

Sample Name: K1010795-001      Acquired: 11/11/2010 15:35:21      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0132	F .0115	-.0016	.0030	.1086	.00001	F .0083	.0000

#1	.0130	.0122	-.0014	.0033	.1089	.00006	.0084	.0000
#2	.0134	.0109	-.0019	.0027	.1083	-.00003	.0082	.0000

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	F 61.03	F .0036	.0005	.0014	.0009	.0353	-.0015

#1	.0001	61.03	.0036	.0003	.0009	.0007	.0280	-.0007
#2	.0001	61.02	.0036	.0006	.0018	.0011	.0426	-.0022

Elem	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 19.09	.0629	.0020	.0074	4.449	-.0013	.0000	F 18.61

#1	19.11	.0626	.0019	.0073	4.406	-.0002	.0000	18.69
#2	19.06	.0633	.0021	.0075	4.493	-.0023	.0000	18.52

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0029	F .0040	F .0040	.2590	18.67	.0003	-.0007

#1	.0006	.0031	.0041	.0039	.2560	18.69	.0001	-.0007
#2	.0008	.0026	.0039	.0041	.2620	18.64	.0006	-.0007

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	.0119	.21753

#1	.0088	.21727
#2	.0150	.21780

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5804.5	106900.	1410.8	1420.1

#1	5814.4	106860.	1412.2	1425.1
#2	5794.6	106940.	1409.5	1415.0

Sample Name: K1010795-001D      Acquired: 11/11/2010 15:38:38      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0136	F .0123	-.0018	.0050	.1098	.00003	F .0068	.0000

#1	.0136	.0139	-.0004	.0034	.1090	.00004	.0061	.0000
#2	.0135	.0108	-.0032	.0067	.1106	.00001	.0075	.0000

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	F 61.85	F .0037	.0007	.0014	.0022	.0460	-.0014

#1	.0001	61.68	.0039	.0008	.0012	.0022	.0488	-.0011
#2	.0001	62.02	.0034	.0006	.0016	.0023	.0433	-.0017

Elem	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 19.47	.0639	.0022	.0071	4.639	-.0007	.0000	F 19.03

#1	19.42	.0636	.0022	.0070	4.612	-.0016	.0000	19.05
#2	19.52	.0641	.0023	.0072	4.666	.0002	.0000	19.02

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0020	F .0046	F .0046	.2550	19.12	.0005	-.0001

#1	-.0003	.0024	.0045	.0046	.2558	19.17	.0007	.0004
#2	.0002	.0017	.0046	.0046	.2542	19.07	.0004	-.0005

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	.0157	.22043

#1	.0180	.22006
#2	.0134	.22081

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5828.3	107260.	1426.5	1426.4

#1	5844.2	107300.	1426.5	1428.5
#2	5812.4	107220.	1426.5	1424.4

Sample Name: K1010795-001L      Acquired: 11/11/2010 15:42:05      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B 1/5

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	-.0003	-.0004	.0026	.0229	.00006	.0005	.0000

#1	.0031	-.0018	-.0003	.0033	.0220	.00001	.0003	-.0001
#2	.0030	.0012	-.0005	.0020	.0239	.00010	.0008	.0000

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	12.92	12.43	.0009	.0002	.0003	.0001	.0148

#1	.0000	12.95	12.40	.0008	.0003	.0005	.0008	.0150
#2	.0001	12.90	12.47	.0011	.0001	.0001	-.0007	.0146

Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	4.066	3.947	.0134	.0000	.0018	.7747	-.0016

#1	.0000	4.066	3.948	.0134	.0000	.0019	.8318	-.0010
#2	-.0010	4.065	3.946	.0134	.0000	.0017	.7176	-.0021

Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	3.765	.0003	.0006	.0008	.0008	.0483	3.781

#1	.0001	3.804	.0001	.0001	.0009	.0008	.0468	3.780
#2	.0005	3.727	.0005	.0010	.0007	.0008	.0497	3.783

Elem	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	.0001	.0021	.0070	.04543

#1	-.0001	.0023	.0032	.04553
#2	.0003	.0019	.0107	.04533

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5822.6	104990.	1359.1	1436.2

#1	5710.5	104850.	1361.0	1408.2
#2	5934.7	105130.	1357.2	1464.1

Sample Name: K1010795-001S      Acquired: 11/11/2010 15:45:29      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.964</b>	<b>.4833</b>	<b>.9503</b>	<b>2.001</b>	<b>.04861</b>	<b>.9961</b>	<b>.0472</b>	<b>.0476</b>

#1	1.965	.4854	.9488	2.016	.04841	.9946	.0470	.0475
#2	1.963	.4812	.9519	1.986	.04881	.9975	.0474	.0476

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>71.81</b>	<b>.1952</b>	<b>.4679</b>	<b>.2330</b>	<b>.2427</b>	<b>1.018</b>	<b>.4798</b>	<b>29.06</b>

#1	72.19	.1947	.4666	.2325	.2422	1.030	.4783	29.08
#2	71.43	.1956	.4691	.2334	.2432	1.006	.4814	29.03

Elem	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.5249</b>	<b>.9933</b>	<b>.4734</b>	<b>14.84</b>	<b>.8784</b>	<b>.0485</b>	<b>29.64</b>	<b>.0002</b>

#1	.5242	.9902	.4719	14.76	.8764	.0480	29.85	.0000
#2	.5255	.9963	.4748	14.93	.8804	.0489	29.42	.0005

Elem	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Ti1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.4879</b>	<b>.4852</b>	<b>.4708</b>	<b>.2464</b>	<b>19.20</b>	<b>.0007</b>	<b>.9197</b>	<b>.0204</b>

#1	.4887	.4836	.4712	.2475	19.23	.0005	.9181	.0201
#2	.4872	.4868	.4705	.2453	19.17	.0008	.9212	.0206

Elem	Sr4077
Units	ppm
Avg	<b>9.6738</b>

#1	9.7454
#2	9.6023

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>5664.4</b>	<b>105560.</b>	<b>1421.4</b>	<b>1378.2</b>

#1	5687.8	105320.	1412.0	1384.2
#2	5640.9	105800.	1430.9	1372.2

Sample Name: K1010795-002      Acquired: 11/11/2010 15:48:45      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	F -.0002	-.0025	.0030	.0520	.00002	F .0048	.0000

#1	.0043	.0013	-.0019	.0048	.0520	.00010	.0048	-.0001
#2	.0047	-.0017	-.0031	.0012	.0520	-.00006	.0048	.0000

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	F 78.64	F .0017	.0003	.0009	.0016	F .0151	-.0016

#1	.0001	78.53	.0017	.0001	.0010	.0011	.0154	-.0025
#2	.0001	78.76	.0016	.0006	.0007	.0021	.0147	-.0007

Elem	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 31.30	.0374	.0016	.0007	4.674	-.0008	.0000	F 32.10

#1	31.36	.0374	.0016	.0007	4.691	.0000	-.0002	32.03
#2	31.24	.0373	.0015	.0007	4.658	-.0016	.0003	32.16

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.0054	F .0030	F .0032	.2450	21.61	-.0001	.0013

#1	-.0009	.0052	.0029	.0032	.2419	21.73	.0000	.0025
#2	-.0001	.0055	.0030	.0031	.2480	21.49	-.0001	.0002

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	.0096	.39873

#1	.0085	.39789
#2	.0107	.39957

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5683.5	106290.	1418.7	1390.5

#1	5698.6	106300.	1424.5	1393.2
#2	5668.4	106270.	1412.9	1387.8



Sample Name: K1010795-003      Acquired: 11/11/2010 15:52:13      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	-.0021	-.0009	.0020	.0003	.00000	.0005	.0000

#1	.0010	.0009	.0000	.0020	.0004	-.00003	.0015	.0000
#2	.0010	-.0052	-.0019	.0020	.0001	.00002	-.0006	.0000

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0059	.0076	.0004	.0001	.0001	-.0005	.0053

#1	.0000	.0032	.0077	.0005	-.0001	.0004	-.0008	.0083
#2	.0001	.0086	.0075	.0004	.0003	-.0002	-.0003	.0022

Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.0009	-.0010	-.0001	-.0008	.0001	-.1307	-.0016

#1	-.0006	.0010	-.0007	-.0002	-.0010	.0001	-.1005	-.0004
#2	-.0004	.0008	-.0013	-.0001	-.0006	.0001	-.1609	-.0029

Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0455	.0008	.0002	.0003	.0005	.1506	.0119

#1	.0004	.0410	.0005	.0000	.0003	.0005	.1544	.0001
#2	.0007	.0500	.0010	.0004	.0003	.0006	.1467	.0237

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	.0000	.0003	.0025	.00026

#1	-.0001	.0011	-.0025	.00030
#2	.0000	-.0004	.0075	.00021

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5949.0	110330.	1416.3	1453.7

#1	5971.5	110370.	1418.3	1461.9
#2	5926.4	110290.	1414.4	1445.5

Sample Name: K1010850-001      Acquired: 11/11/2010 15:54:50      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0158	F .0164	-.0029	.0036	.1010	.00003	F .0074	.0000

#1	.0157	.0148	-.0046	.0041	.1017	.00003	.0077	.0000
#2	.0160	.0179	-.0011	.0030	.1004	.00003	.0072	-.0001

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	F 128.2	F .0016	.0011	.0008	.0017	.0304	-.0012

#1	.0000	128.1	.0018	.0011	.0009	.0021	.0295	-.0012
#2	.0000	128.3	.0014	.0011	.0007	.0013	.0312	-.0011

Elem	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 40.40	.1338	.0022	.0024	6.713	-.0024	.0001	F 28.96

#1	40.50	.1338	.0023	.0024	6.735	-.0014	-.0006	29.13
#2	40.31	.1339	.0022	.0024	6.691	-.0034	.0008	28.80

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0018	F .0052	F .0054	.2343	17.80	.0005	-.0006

#1	.0000	.0018	.0051	.0054	.2293	17.91	.0006	-.0007
#2	.0003	.0019	.0053	.0053	.2394	17.68	.0005	-.0004

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	.0183	.47350

#1	.0146	.47245
#2	.0220	.47455

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5640.9	104260.	1386.7	1362.6

#1	5660.7	104180.	1393.5	1369.4
#2	5621.1	104330.	1379.8	1355.7

Sample Name: K1010850-002      Acquired: 11/11/2010 15:58:55      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0083	F -.0009	-.0031	.0034	.0908	-.00002	F .0216	.0000

#1	.0082	-.0019	-.0047	.0038	.0909	-.00001	.0219	-.0001
#2	.0084	.0001	-.0015	.0030	.0907	-.00002	.0213	.0000

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	F 45.80	F .0009	.0032	.0005	.0009	.0242	-.0009

#1	.0000	45.69	.0009	.0033	-.0001	.0003	.0255	-.0012
#2	.0001	45.91	.0008	.0032	.0012	.0016	.0228	-.0005

Elem	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 13.25	.0214	-.0001	.0007	F 29.52	-.0017	-.0004	F 84.22

#1	13.29	.0213	-.0003	.0005	29.76	-.0011	-.0002	84.74
#2	13.20	.0214	.0001	.0009	29.28	-.0023	-.0005	83.71

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0051	F .0066	F .0065	.2086	23.80	.0000	.0003

#1	.0005	.0053	.0064	.0066	.2096	24.05	-.0001	-.0009
#2	.0003	.0049	.0067	.0065	.2076	23.55	.0001	.0014

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	.0131	.24622

#1	.0112	.24656
#2	.0150	.24588

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5726.8	105450.	1382.8	1396.2

#1	5746.4	105390.	1393.6	1400.4
#2	5707.2	105520.	1371.9	1391.9

Sample Name: K1010850-003      Acquired: 11/11/2010 16:02:17      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	F -.0008	-.0009	.0026	.0904	-.00003	F .0119	.0000

#1	.0022	-.0019	-.0019	.0021	.0909	-.00001	.0117	-.0001
#2	.0022	.0002	.0001	.0030	.0899	-.00005	.0121	.0000

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	F 117.1	F .0008	.0009	.0005	.0000	F .0045	-.0015

#1	.0001	117.3	.0008	.0009	.0005	.0003	.0014	-.0026
#2	.0002	117.0	.0008	.0010	.0005	-.0003	.0077	-.0005

Elem	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 37.44	.0867	.0003	.0007	F 11.95	-.0024	.0001	F 82.26

#1	37.50	.0866	.0004	.0009	11.92	-.0020	.0003	82.73
#2	37.39	.0868	.0002	.0005	11.98	-.0027	-.0001	81.79

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.0046	.0110	.0105	.1910	23.11	-.0003	-.0007

#1	-.0009	.0048	.0110	.0105	.1893	23.16	-.0004	-.0011
#2	.0000	.0045	.0110	.0105	.1928	23.06	-.0002	-.0002

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	.0168	.63591

#1	.0180	.63703
#2	.0156	.63478

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5470.1	100650.	1332.5	1316.7

#1	5480.3	100560.	1329.7	1317.7
#2	5459.8	100740.	1335.4	1315.8

Sample Name: K1010850-004      Acquired: 11/11/2010 16:05:44      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	F .0006	-.0017	.0003	F -.0007	.00001	F -.0012	.0000
#1	.0012	.0027	-.0013	.0019	-.0011	.00002	-.0012	-.0001
#2	.0012	-.0015	-.0021	-.0012	-.0004	.00001	-.0011	.0000
Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	F .0046	.0084	F .0000	.0001	-.0002	-.0004	F -.0045
#1	.0000	-.0053	.0085	.0003	-.0001	-.0002	-.0004	-.0035
#2	.0000	.0144	.0084	-.0002	.0004	-.0002	-.0004	-.0056
Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0011	.0016	F .0061	-.0001	-.0010	.0002	F -.1181	-.0017
#1	-.0016	.0016	.0038	-.0001	-.0011	.0002	-.1757	-.0028
#2	-.0007	.0015	.0085	-.0001	-.0009	.0001	-.0604	-.0006
Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	F .1515	.0001	.0003	F .0004	F .0004	.2107	.0006
#1	.0000	.1216	.0003	.0003	.0004	.0004	.2117	-.0045
#2	.0002	.1814	.0000	.0003	.0004	.0004	.2098	.0056
Elem	Ti3361	Tl1908	Li6707	Sr4077				
Units	ppm	ppm	ppm	ppm				
Avg	.0000	.0011	.0060	.00028				
#1	.0000	.0015	.0104	.00027				
#2	.0001	.0007	.0016	.00028				
Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	5877.4	108190.	1375.0	1431.4				
#1	5892.3	108310.	1382.6	1434.0				
#2	5862.5	108070.	1367.4	1428.7				

Sample Name: CCVA5      Acquired: 11/11/2010 16:08:22      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2464	.2395	.2460	.2576	.2384	.24970	.2493	.2459
Stddev	.0013	.0025	.0030	.0039	.0005	.00035	.0012	.0015
%RSD	.5083	1.064	1.203	1.519	.1966	.13981	.4834	.6061
#1	.2455	.2377	.2439	.2604	.2387	.24945	.2485	.2448
#2	.2473	.2413	.2481	.2548	.2380	.24995	.2502	.2469
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2478	.2386	.2481	.2447	.2462	.2438	.2506	.2495
Stddev	.0004	.0012	.0008	.0002	.0014	.0017	.0007	.0100
%RSD	.1697	.5215	.3254	.0960	.5831	.7061	.2758	4.009
#1	.2475	.2394	.2487	.2449	.2452	.2426	.2501	.2566
#2	.2481	.2377	.2476	.2445	.2472	.2450	.2511	.2425
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2445	.2382	.2489	.2477	.2417	.2375	.2456	.2485
Stddev	.0002	.0128	.0012	.0020	.0001	.0044	.0015	.0011
%RSD	.0899	5.374	.4965	.8230	.0533	1.852	.6147	.4255
#1	.2444	.2473	.2498	.2462	.2418	.2406	.2445	.2477
#2	.2447	.2292	.2481	.2491	.2416	.2344	.2466	.2492
Check ?	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value Range								

Sample Name: CCVA5      Acquired: 11/11/2010 16:08:22      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :  
 Comment: 111110B

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.245	.2461	.2482	.3206	.2448	.2438	.2479	.2486
Stddev	.059	.0013	.0004	.0517	.0013	.0001	.0007	.0001
%RSD	2.622	.5232	.1624	16.14	.5202	.0246	.2893	.0453
#1	2.203	.2471	.2485	.2840	.2439	.2438	.2474	.2487
#2	2.286	.2452	.2479	.3571	.2457	.2439	.2484	.2485
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0071	.1259	.2455	.2443	.0066	-.00020
Stddev	.0031	.0084	.0005	.0006	.0002	.00001
%RSD	43.09	6.658	.1942	.2531	2.538	6.4058
#1	-.0093	.1200	.2452	.2438	.0065	-.00019
#2	-.0050	.1319	.2459	.2447	.0067	-.00021
Check ?	None	None	Chk Pass	Chk Pass	None	None
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5903.5	108760.	1403.1	1450.6
Stddev	32.8	290.	7.1	7.7
%RSD	.55598	.26618	.50495	.53124
#1	5926.7	108550.	1398.1	1456.1
#2	5880.3	108960.	1408.2	1445.2

Sample Name: CCVB5      Acquired: 11/11/2010 16:11:20      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.205	9.844	-0.0006	1.009	9.986	.00014	.0001	.0000
Stddev	.053	.034	.0014	.006	.046	.00006	.0004	.0000
%RSD	.7364	.3495	219.1	.5606	.4569	45.440	573.4	6.374
#1	7.168	9.820	.0004	1.005	9.954	.00009	-.0002	.0000
#2	7.243	9.869	-.0017	1.013	10.02	.00018	.0003	.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	10.10	9.779	.0001	.0001	.0065	-.0002	10.25
Stddev	.0000	.05	.135	.0001	.0000	.0002	.0001	.04
%RSD	11.61	.4978	1.384	75.55	42.19	2.618	96.06	.3768
#1	.0001	10.06	9.684	.0001	.0000	.0063	-.0003	10.28
#2	.0001	10.13	9.875	.0002	.0001	.0066	.0000	10.23
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0010	10.24	9.982	10.00	1.001	.9995	-.0005	.0001
Stddev	.0005	.14	.053	.06	.003	.0010	.0003	.0000
%RSD	45.87	1.412	.5277	.5734	.2646	.0969	57.82	14.97
#1	-.0007	10.13	9.945	10.04	1.002	.9988	-.0003	.0001
#2	-.0013	10.34	10.02	9.960	.9986	1.000	-.0007	.0001
Check ?	None	Chk Pass	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								



Sample Name: CCVB5      Acquired: 11/11/2010 16:11:20      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>9.454</b>	<b>-.0037</b>	<b>.0003</b>	<b>9.626</b>	<b>-.0001</b>	<b>.0015</b>	<b>.0003</b>	<b>.0003</b>
Stddev	.060	.0019	.0001	.040	.0012	.0002	.0001	.0000
%RSD	.6369	53.14	41.19	.4184	811.8	16.13	21.66	1.789
#1	9.496	-.0050	.0004	9.597	-.0010	.0017	.0003	.0003
#2	9.411	-.0023	.0002	9.654	.0007	.0014	.0002	.0003
Check ?	Chk Pass	None	None	Chk Pass	None	None	None	None
Value								
Range								

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>10.15</b>	<b>10.16</b>	<b>.0004</b>	<b>.0013</b>	<b>.9549</b>	<b>.99552</b>
Stddev	.08	.07	.0000	.0008	.0057	.00327
%RSD	.7904	.7273	.3544	56.69	.5918	.32853
#1	10.09	10.21	.0004	.0008	.9589	.99321
#2	10.21	10.10	.0004	.0019	.9509	.99783
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5630.1	104040.	1391.6	1381.7
Stddev	14.9	37.	11.1	4.6
%RSD	.26463	.03538	.79834	.33258
#1	5640.7	104020.	1399.5	1384.9
#2	5619.6	104070.	1383.8	1378.4

Sample Name: CCB5      Acquired: 11/11/2010 16:15:26      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0025	-.0013	.0017	.0009	.00003	-.0010	.0000
Stddev	.0001	.0033	.0026	.0018	.0005	.00002	.0002	.000
%RSD	31.96	133.0	206.0	108.5	55.78	88.073	17.15	97.05
#1	.0002	-.0048	-.0031	.0004	.0006	.00004	-.0009	.0000
#2	.0002	-.0001	.0006	.0030	.0013	.00001	-.0011	-.0001

Check ?      Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0044	.0003	-.0002	.0001	-.0002	-.0007	-.0016
Stddev	.0000	.0188	.0001	.0001	.0001	.0001	.0001	.0032
%RSD	167.8	425.5	37.98	44.14	193.9	51.93	11.45	199.9
#1	.0000	.0089	.0004	-.0002	.0000	-.0003	-.0008	-.0039
#2	.0000	-.0177	.0002	-.0003	.0001	-.0001	-.0007	.0007

Check ?      Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	-.0167	.0000	.0017	-.0001	.0011	-.0006	-.0001
Stddev	.0003	.0095	.0001	.0040	.0000	.0019	.0001	.0003
%RSD	23.13	56.56	4491.	240.2	17.23	183.2	12.96	552.0
#1	-.0011	-.0100	-.0001	-.0012	-.0001	-.0003	-.0007	.0002
#2	-.0015	-.0234	.0001	.0045	-.0001	.0024	-.0006	-.0003

Check ?      Chk Pass      None    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Sample Name: CCB5      Acquired: 11/11/2010 16:15:26      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.1555	-.0010	-.0005	.0058	.0005	.0000	.0000	.0000
Stddev	.0367	.0004	.0003	.0346	.0001	.000	.000	.0001
%RSD	23.61	44.19	59.88	596.4	15.42	.2657	6.645	3739.
#1	-.1815	-.0013	-.0007	-.0187	.0004	.0000	-.0001	-.0001
#2	-.1296	-.0007	-.0003	.0303	.0006	.0000	.0000	.0001

Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.1000							
Low Limit	-.1000							

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0031	.0097	.0000	.0005	.0051	.00005
Stddev	.0026	.0350	.000	.0004	.0011	.00003
%RSD	83.91	358.6	245.1	79.02	21.47	55.108
#1	-.0050	.0345	-.0001	.0009	.0043	.00007
#2	-.0013	-.0150	.0000	.0002	.0059	.00003

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5864.3	107920.	1377.2	1436.9
Stddev	3.1	60.	2.6	.4
%RSD	.05290	.05559	.19228	.02617
#1	5862.1	107960.	1375.3	1437.2
#2	5866.4	107870.	1379.1	1436.7

Sample Name: K1010899-001      Acquired: 11/11/2010 16:18:06      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	F .0007	-.0007	.0036	.4698	.00003	.0507	.0000

#1	.0032	.0034	-.0007	.0035	.4680	.00008	.0501	.0000
#2	.0030	-.0021	-.0006	.0036	.4716	-.00001	.0513	-.0001

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	F 177.7	F .0012	.0006	.0009	.0026	F .0104	-.0026

#1	.0001	177.2	.0013	.0009	.0005	.0029	.0105	-.0023
#2	.0001	178.2	.0011	.0004	.0014	.0023	.0103	-.0028

Elem	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 51.30	.0175	-.0006	.0009	F 33.36	-.0022	-.0001	F 235.2

#1	51.36	.0175	-.0004	.0008	33.35	-.0030	-.0003	237.2
#2	51.25	.0174	-.0007	.0010	33.37	-.0014	.0001	233.3

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0030	F .0062	F .0057	.2079	23.45	-.0003	-.0001

#1	.0004	.0030	.0062	.0057	.2073	23.55	-.0001	.0001
#2	.0004	.0030	.0061	.0056	.2086	23.35	-.0004	-.0003

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	.0238	.91868

#1	.0231	.91434
#2	.0246	.92302

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5481.3	101950.	1372.0	1300.0

#1	5507.9	101710.	1378.5	1304.7
#2	5454.6	102180.	1365.5	1295.2

Sample Name: K1010899-002      Acquired: 11/11/2010 16:21:32      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	.0013	-.0026	.0032	.0004	.00004	-.0010	.0000

#1	.0018	.0004	-.0027	.0030	.0000	.00008	-.0006	.0000
#2	.0016	.0021	-.0025	.0035	.0007	.00000	-.0015	-.0001

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0108	.0096	.0001	.0002	.0002	.0000	.0036

#1	.0000	.0113	.0098	.0001	.0003	.0001	-.0003	.0053
#2	.0000	.0102	.0094	.0000	.0001	.0004	.0003	.0019

Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.0012	.0026	-.0001	-.0008	.0000	.0118	-.0003

#1	-.0006	.0012	-.0001	-.0001	-.0005	.0000	.0221	.0013
#2	.0001	.0011	.0053	-.0001	-.0010	.0000	.0015	-.0018

Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.5640	.0007	-.0002	.0002	.0002	.2210	.0182

#1	-.0003	.5909	.0010	.0002	.0003	.0002	.2179	.0209
#2	.0001	.5371	.0005	-.0006	.0001	.0002	.2242	.0154

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	-.0001	-.0002	.0013	-.00014

#1	-.0002	-.0012	.0023	.00000
#2	-.0001	.0009	.0003	-.00028

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5777.3	106930.	1391.7	1410.0

#1	5771.4	106570.	1386.9	1411.5
#2	5783.2	107280.	1396.4	1408.4

Sample Name: K1011360-001      Acquired: 11/11/2010 16:24:48      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0197	F .0175	-.0025	.0017	F .0016	-.00002	F -.0007	-.0001
#1	.0197	.0183	-.0034	.0025	.0017	.00000	-.0013	.0000
#2	.0198	.0167	-.0016	.0009	.0015	-.00003	.0000	-.0001
Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	2.150	2.147	F .0006	.0002	.0098	.0097	.1128
#1	.0000	2.169	2.146	.0007	.0003	.0093	.0100	.1084
#2	.0000	2.130	2.147	.0004	.0000	.0104	.0094	.1172
Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	.9008	.9018	.0221	-.0006	.0003	F .1991	-.0018
#1	.0002	.9006	.9000	.0221	-.0006	.0003	.1638	-.0023
#2	-.0010	.9010	.9036	.0220	-.0007	.0002	.2345	-.0013
Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	1.685	.0005	.0007	F .0008	F .0007	.2258	4.943
#1	.0005	1.682	.0002	.0005	.0008	.0008	.2241	4.940
#2	.0000	1.689	.0007	.0009	.0009	.0007	.2275	4.946
Elem	Ti3361	Tl1908	Li6707	Sr4077				
Units	ppm	ppm	ppm	ppm				
Avg	.0001	.0000	.0004	.01850				
#1	.0000	-.0002	.0011	.01830				
#2	.0002	.0002	-.0003	.01869				
Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	5824.6	108810.	1412.6	1440.1				
#1	5853.7	108930.	1412.0	1445.2				
#2	5795.5	108680.	1413.2	1435.1				

Sample Name: K1011360-001D      Acquired: 11/11/2010 16:27:56      Type: Unk  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0191	F .0194	-.0017	.0005	F .0015	-.00003	F .0001	-.0001
#1	.0191	.0187	-.0023	-.0012	.0021	-.00004	.0012	.0000
#2	.0191	.0201	-.0011	.0023	.0009	-.00002	-.0010	-.0001
Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	2.127	2.135	F .0004	.0000	.0094	.0097	.1172
#1	.0000	2.116	2.135	.0004	.0001	.0096	.0092	.1096
#2	.0001	2.138	2.135	.0004	-.0001	.0091	.0102	.1248
Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0015	.8863	.8792	.0220	-.0009	.0001	F .0911	-.0004
#1	-.0014	.8881	.8800	.0220	-.0009	.0000	.0109	-.0010
#2	-.0015	.8845	.8783	.0219	-.0008	.0002	.1712	.0002
Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	1.544	-.0002	.0006	F .0008	F .0007	.2053	4.859
#1	-.0003	1.560	.0001	.0007	.0008	.0008	.2071	4.827
#2	.0002	1.527	-.0006	.0004	.0007	.0007	.2035	4.891
Elem	Ti3361	Tl1908	Li6707	Sr4077				
Units	ppm	ppm	ppm	ppm				
Avg	.0004	.0003	-.0009	.01833				
#1	.0003	-.0002	.0043	.01870				
#2	.0006	.0008	-.0061	.01795				
Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	5869.0	108620.	1400.1	1447.4				
#1	5888.2	108430.	1399.1	1453.3				
#2	5849.7	108810.	1401.1	1441.5				

Sample Name: K1011360-001S      Acquired: 11/11/2010 16:31:05      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>1.964</b>	<b>.4976</b>	<b>.9689</b>	<b>1.932</b>	<b>.05032</b>	<b>.9862</b>	<b>.0489</b>	<b>.0489</b>

#1	1.957	.4975	.9691	1.922	.05030	.9819	.0486	.0486
#2	1.971	.4978	.9687	1.942	.05033	.9905	.0491	.0491

Elem	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 12.39</b>	<b>12.20</b>	<b>.1980</b>	<b>.4884</b>	<b>.2495</b>	<b>.2588</b>	<b>1.135</b>	<b>.4949</b>

#1	12.33	12.15	.1977	.4862	.2481	.2579	1.129	.4915
#2	12.45	12.24	.1983	.4906	.2509	.2598	1.141	.4983

Elem	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>F 10.93</b>	<b>.5107</b>	<b>1.009</b>	<b>.4877</b>	<b>F 9.917</b>	<b>.9038</b>	<b>.0487</b>	<b>F 11.38</b>

#1	10.94	.5112	1.003	.4846	9.903	.9007	.0485	11.39
#2	10.91	.5101	1.015	.4908	9.931	.9069	.0489	11.38

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>.0002</b>	<b>.5032</b>	<b>.4967</b>	<b>.4837</b>	<b>.1856</b>	<b>5.059</b>	<b>.0004</b>	<b>.9454</b>

#1	-.0002	.5026	.4940	.4831	.1868	5.060	.0005	.9443
#2	.0005	.5038	.4993	.4843	.1844	5.057	.0004	.9465

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	<b>.0017</b>	<b>9.6509</b>

#1	.0032	9.6103
#2	.0002	9.6916

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	<b>5725.3</b>	<b>106410.</b>	<b>1384.0</b>	<b>1396.8</b>

#1	5745.7	106070.	1390.9	1400.8
#2	5704.9	106760.	1377.1	1392.9



Sample Name: K1011360-001S      Acquired: 11/11/2010 16:34:14      Type: Unk  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B Si

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0207	.0216	-.0032	.0008	F .0015	-.00002	F .0025	.0000

#1	.0207	.0241	-.0028	-.0002	.0013	.00001	.0034	-.0001
#2	.0208	.0191	-.0037	.0019	.0017	-.00005	.0016	.0000

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	2.199	2.173	F .0003	.0001	.0095	.0102	.1120

#1	.0001	2.197	2.181	.0003	.0003	.0093	.0102	.1112
#2	.0001	2.201	2.166	.0003	-.0001	.0096	.0102	.1129

Elem	Pb2203	Mg2795	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	.9065	.9078	.0223	-.0003	-.0002	F .1934	-.0013

#1	-.0007	.9091	.9193	.0223	-.0001	-.0002	.1084	-.0018
#2	-.0016	.9039	.8962	.0223	-.0005	-.0001	.2785	-.0009

Elem	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	F 17.18	.0010	.0005	F .0010	F .0010	.2024	15.18

#1	-.0001	17.35	.0009	.0006	.0009	.0010	.2040	15.31
#2	.0002	17.02	.0010	.0003	.0010	.0010	.2009	15.05

Elem	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	.0006	.0003	.0031	.01877

#1	.0008	.0009	.0051	.01899
#2	.0005	-.0003	.0011	.01855

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5847.1	107760.	1399.6	1437.2

#1	5866.3	107650.	1408.6	1442.9
#2	5827.9	107870.	1390.5	1431.6

Sample Name: K1011461-001      Acquired: 11/11/2010 16:37:32      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048	F .0049	-.0016	.0014	.3297	.00002	F .0119	.0000

#1	.0049	.0050	-.0022	.0008	.3294	.00002	.0107	.0000
#2	.0047	.0047	-.0010	.0020	.3300	.00001	.0131	.0000

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	F 143.9	F .0002	.0012	.0028	.0036	F .0067	.0004

#1	.0001	143.8	.0000	.0010	.0035	.0030	.0092	-.0002
#2	.0000	143.9	.0004	.0015	.0022	.0042	.0042	.0010

Elem	Mg2790	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	110.5	.0823	.0053	.0075	3.712	-.0030	-.0004	F 67.12

#1	110.3	.0827	.0051	.0075	3.674	-.0036	-.0007	67.06
#2	110.8	.0820	.0054	.0076	3.750	-.0023	-.0001	67.18

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0018	F .0025	F .0026	.1214	11.60	-.0005	-.0004

#1	.0016	.0018	.0025	.0026	.1202	11.66	-.0003	-.0007
#2	.0005	.0019	.0026	.0026	.1226	11.54	-.0006	-.0001

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	.0195	1.3946

#1	.0174	1.3935
#2	.0216	1.3956

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5557.0	102910.	1372.6	1329.2

#1	5585.9	102640.	1372.8	1337.1
#2	5528.1	103180.	1372.4	1321.3

Sample Name: K1011461-002      Acquired: 11/11/2010 16:41:01      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0087	F .0118	-.0037	.0040	.0542	.00002	F .0080	.0000

#1	.0088	.0105	-.0052	.0037	.0546	.00001	.0090	.0000
#2	.0086	.0132	-.0023	.0044	.0538	.00002	.0070	.0000

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	F 175.8	F .0011	.0048	.0018	.0022	F .0174	-.0002

#1	.0002	175.4	.0009	.0048	.0018	.0019	.0228	-.0006
#2	.0002	176.3	.0014	.0048	.0018	.0025	.0121	.0002

Elem	Mg2790	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	124.1	.0007	.0054	.0041	4.627	-.0020	.0004	F 148.3

#1	124.0	.0007	.0053	.0041	4.582	-.0020	.0001	148.7
#2	124.3	.0007	.0056	.0040	4.673	-.0020	.0007	147.9

Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Ti1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0015	F .0010	F .0011	.1573	9.407	.0000	.0006

#1	.0004	.0019	.0009	.0011	.1571	9.419	-.0001	.0005
#2	.0003	.0011	.0010	.0011	.1575	9.394	.0001	.0007

Elem	Li6707	Sr4077
Units	ppm	ppm
Avg	.0186	1.1377

#1	.0178	1.1353
#2	.0195	1.1401

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5357.3	98939.	1313.4	1282.0

#1	5378.3	98717.	1314.5	1288.7
#2	5336.3	99162.	1312.3	1275.3

Sample Name: K1011461-003      Acquired: 11/11/2010 16:44:31      Type: Unk  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0242	.0252	-.0009	.0020	.2053	-.00001	F .0036	.0000
#1	.0242	.0251	-.0013	.0035	.2048	.00001	.0035	.0000
#2	.0242	.0253	-.0004	.0005	.2057	-.00004	.0038	.0000
Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	F 69.39	F .0026	.0001	.0015	.0018	.0320	-.0011
#1	.0001	69.26	.0026	.0001	.0017	.0021	.0288	-.0020
#2	.0002	69.52	.0026	.0000	.0012	.0015	.0352	-.0001
Elem	Mg2790	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	136.5	.0017	.0143	.0007	2.747	.0029	.0000	F 75.08
#1	136.1	.0017	.0141	.0006	2.653	.0027	.0001	74.73
#2	136.9	.0017	.0145	.0007	2.841	.0031	.0000	75.44
Elem	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0017	F .0012	F .0012	.2171	6.907	.0011	.0009
#1	.0004	.0019	.0011	.0013	.2155	6.950	.0010	.0018
#2	.0001	.0015	.0012	.0012	.2186	6.865	.0012	.0000
Elem	Li6707	Sr4077						
Units	ppm	ppm						
Avg	.0147	1.0727						
#1	.0163	1.0707						
#2	.0132	1.0748						
Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306				
Units	Cts/S	Cts/S	Cts/S	Cts/S				
Avg	5609.6	103590.	1368.1	1337.1				
#1	5636.3	103300.	1371.1	1342.1				
#2	5582.9	103890.	1365.1	1332.2				

Sample Name: K1011461-004      Acquired: 11/11/2010 16:47:57      Type: Unk

Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000

User: admin      :      :      :

Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0129	.0129	-.0016	.0013	.5079	.00005	.0073	.0000

#1	.0129	.0124	-.0034	.0007	.5090	.00008	.0078	.0000
#2	.0129	.0135	.0002	.0019	.5067	.00002	.0069	.0000

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	<b>89.38</b>	.0037	.0001	.0006	.0003	.0196	-.0006

#1	.0001	89.50	.0038	-.0002	.0008	-.0004	.0219	.0002
#2	.0001	89.26	.0036	.0004	.0005	.0010	.0174	-.0015

Elem	Mg2790	Mg2852	Mn2576	Mo2020	Ni2216	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>98.70</b>	<b>83.18</b>	.0022	.0036	.0002	<b>2.680</b>	-.0002	-.0003

#1	98.73	83.42	.0021	.0037	.0001	2.724	-.0001	-.0002
#2	98.67	82.94	.0023	.0034	.0002	2.636	-.0002	-.0004

Elem	Na5895	Sn1899	V_2924	Zn2062	Zn2138	P_2149	Si2516	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>71.04</b>	.0006	.0012	.0011	.0012	.2571	<b>8.868</b>	.0003

#1	71.66	.0000	.0012	.0011	.0012	.2592	8.866	.0002
#2	70.41	.0013	.0013	.0011	.0012	.2551	8.870	.0004

Elem	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0001	.0224	1.6572

#1	-.0007	.0214	1.6588
#2	.0010	.0235	1.6557

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5460.1	101310.	1340.2	1305.6

#1	5470.8	101610.	1339.5	1309.5
#2	5449.5	101010.	1340.9	1301.7

Sample Name: CCVA6      Acquired: 11/11/2010 16:51:25      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2550	.2370	.2476	.2559	.2437	.24900	.2505	.2526
Stddev	.0005	.0025	.0005	.0002	.0007	.00043	.0022	.0004
%RSD	.2121	1.074	.2000	.0642	.3058	.17270	.8656	.1464
#1	.2546	.2388	.2473	.2557	.2432	.24930	.2520	.2524
#2	.2553	.2352	.2480	.2560	.2442	.24869	.2490	.2529
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2551	.2514	.2567	.2498	.2528	.2520	.2513	.2519
Stddev	.0004	.0042	.0028	.0007	.0002	.0012	.0014	.0050
%RSD	.1727	1.669	1.082	.2784	.0819	.4656	.5694	1.999
#1	.2548	.2544	.2548	.2493	.2527	.2512	.2523	.2483
#2	.2554	.2485	.2587	.2503	.2529	.2529	.2502	.2555
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2531	.2608	.2587	.2544	.2461	.2461	.2527	.2555
Stddev	.0008	.0104	.0010	.0037	.0013	.0056	.0004	.0002
%RSD	.3086	3.976	.3936	1.470	.5175	2.293	.1770	.0702
#1	.2525	.2682	.2580	.2517	.2452	.2421	.2524	.2556
#2	.2536	.2535	.2594	.2570	.2470	.2501	.2530	.2553
Check ?	Chk Pass	None	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value Range								

Sample Name: CCVA6      Acquired: 11/11/2010 16:51:25      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.311	.2492	.2496	.4646	.2507	.2485	.2545	.2491
Stddev	.140	.0008	.0023	.0050	.0004	.0012	.0006	.0001
%RSD	6.059	.3317	.9307	1.079	.1601	.4923	.2330	.0531
#1	2.212	.2497	.2512	.4681	.2504	.2476	.2541	.2490
#2	2.410	.2486	.2479	.4610	.2510	.2494	.2550	.2492

Check ?      None    Chk Pass    Chk Pass      None    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 Value  
 Range

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0075	.1302	.2503	.2530	.0038	.00029
Stddev	.0011	.0122	.0001	.0001	.0047	.00025
%RSD	14.75	9.397	.0501	.0438	122.8	87.102
#1	-.0067	.1388	.2504	.2529	.0005	.00046
#2	-.0083	.1215	.2502	.2531	.0071	.00011

Check ?      None      None    Chk Pass    Chk Pass      None      None  
 Value  
 Range

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5745.3	106800.	1373.3	1412.7
Stddev	3.7	306.	1.1	.9
%RSD	.06430	.28611	.07800	.06302
#1	5747.9	107020.	1372.6	1413.4
#2	5742.7	106590.	1374.1	1412.1

Sample Name: CCVB6      Acquired: 11/11/2010 16:54:23      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>7.047</b>	<b>9.757</b>	<b>-0.0008</b>	<b>1.004</b>	<b>9.710</b>	<b>.00007</b>	<b>-0.0005</b>	<b>.0001</b>
Stddev	.020	.035	.0009	.003	.046	.00003	.0002	.0001
%RSD	.2804	.3565	111.5	.3050	.4698	40.274	34.47	91.24
#1	7.033	9.781	-0.0002	1.002	9.678	.00005	-0.0006	.0002
#2	7.061	9.732	-0.0015	1.006	9.742	.00009	-0.0004	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	<b>9.873</b>	<b>9.568</b>	<b>.0003</b>	<b>.0002</b>	<b>.0064</b>	<b>-0.0004</b>	<b>10.06</b>
Stddev	.0000	.019	.035	.0001	.0004	.0001	.0007	.00
%RSD	20.31	.1930	.3649	19.40	170.9	1.447	165.6	.0034
#1	.0001	9.859	9.544	.0004	.0005	.0064	.0001	10.06
#2	.0001	9.886	9.593	.0003	.0000	.0063	-0.0010	10.06
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value Range								

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	<b>-0.0007</b>	<b>10.05</b>	<b>9.788</b>	<b>9.547</b>	<b>.9847</b>	<b>.9631</b>	<b>-0.0005</b>	<b>.0000</b>
Stddev	.0006	.12	.027	.009	.0044	.0020	.0003	.0001
%RSD	74.01	1.194	.2737	.0959	.4463	.2042	60.85	302.1
#1	-0.0004	9.968	9.769	9.554	.9815	.9617	-0.0007	.0000
#2	-0.0011	10.14	9.807	9.541	.9878	.9645	-0.0003	.0001
Check ?	None	Chk Pass	None	Chk Pass	None	Chk Pass	None	None
Value Range								



Sample Name: CCVB6      Acquired: 11/11/2010 16:54:23      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.264	-.0015	-.0004	9.186	.0006	.0019	.0003	.0003
Stddev	.079	.0001	.0000	.039	.0004	.0003	.0001	.0000
%RSD	.8469	5.681	5.077	.4224	66.69	14.44	46.16	5.717
#1	9.319	-.0014	-.0004	9.158	.0003	.0017	.0004	.0002
#2	9.208	-.0015	-.0004	9.213	.0009	.0021	.0002	.0003
Check ?	Chk Pass	None	None	Chk Pass	None	None	None	None
Value								
Range								

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.06	9.869	.0003	.0016	.9239	.97301
Stddev	.03	.021	.0001	.0013	.0066	.00550
%RSD	.3017	.2118	51.53	86.37	.7103	.56536
#1	10.04	9.854	.0002	.0006	.9193	.96912
#2	10.08	9.884	.0004	.0025	.9285	.97690
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5719.1	104970.	1374.5	1405.9
Stddev	4.6	330.	1.6	2.6
%RSD	.08041	.31440	.11787	.18336
#1	5722.3	105200.	1375.6	1407.7
#2	5715.8	104730.	1373.3	1404.0

Sample Name: CCB6      Acquired: 11/11/2010 16:58:28      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.0006	-.0008	.0009	.0003	.00005	-.0021	.0000
Stddev	.0000	.0005	.0006	.0006	.0006	.00008	.0005	.000
%RSD	9.876	78.40	70.90	61.97	198.7	171.83	24.61	6.018
#1	.0005	-.0003	-.0012	.0005	.0007	.00010	-.0025	-.0001
#2	.0004	-.0010	-.0004	.0014	-.0001	-.00001	-.0018	.0000

Check ?    Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass  
 High Limit  
 Low Limit

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0003	.0012	-.0001	.0000	-.0003	-.0011	.0034
Stddev	.0000	.0008	.0000	.0002	.000	.0003	.0003	.0037
%RSD	729.9	278.9	1.093	158.8	2484.	128.3	25.43	109.8
#1	.0000	.0003	.0012	.0000	.0001	-.0005	-.0013	.0008
#2	.0000	-.0009	.0011	-.0003	-.0002	.0000	-.0009	.0061

Check ?    Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass  
 High Limit  
 Low Limit

Elem	Pb2203	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	-.0340	.0010	.0061	-.0001	-.0018	-.0008	.0003
Stddev	.0002	.0341	.0001	.0027	.0000	.0013	.0002	.0002
%RSD	27.21	100.1	7.454	44.28	22.36	70.66	28.80	55.96
#1	-.0007	-.0099	.0009	.0081	-.0001	-.0009	-.0006	.0002
#2	-.0005	-.0581	.0010	.0042	-.0002	-.0027	-.0010	.0004

Check ?    Chk Pass      None   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass   Chk Pass  
 High Limit  
 Low Limit

Sample Name: CCB6      Acquired: 11/11/2010 16:58:28      Type: QC  
 Method: 10C2007(v48)      Mode: CONC      Corr. Factor: 1.000000  
 User: admin      :      :      :  
 Comment: 111110B

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_2924	Zn2062	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0523	-0.0013	-0.0001	.0796	.0003	.0000	.0001	.0000
Stddev	.0125	.0010	.0003	.0161	.0005	.000	.0000	.000
%RSD	23.95	72.99	223.1	20.25	176.0	51.77	3.583	97.76
#1	-0.0434	-0.0020	-0.0003	.0682	.0006	.0000	.0001	-0.0001
#2	-0.0612	-0.0006	.0001	.0909	-0.0001	.0000	.0001	.0000

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Elem	P_2149	Si2516	Ti3361	Ti1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-0.0056	-0.0247	.0001	.0000	.0003	.00017
Stddev	.0016	.0045	.0000	.0009	.0005	.00020
%RSD	29.37	18.11	76.94	1818.	165.0	122.68
#1	-0.0044	-0.0278	.0000	-0.0006	.0007	.00031
#2	-0.0068	-0.0215	.0001	.0007	-0.0001	.00002

Check ?    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass    Chk Pass  
 High Limit  
 Low Limit

Int. Std.	Y_2243	Y_3600	Y_3600-2	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5738.8	106810.	1361.1	1404.7
Stddev	60.7	171.	.0	19.0
%RSD	1.0581	.15974	.00026	1.3511
#1	5781.7	106930.	1361.1	1418.1
#2	5695.8	106690.	1361.1	1391.3

Service Request #   K1010899    
 Calibration   110910BMS03    
 QC in calibration   110910BMS03    
 QC Service Request #   K1010795    
 STARLIMS run #   224560  

## ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	<u>  X  </u>	<u>      </u>	<u>      </u>
2. ICV within 10 % of true value	<u>  X  </u>	<u>      </u>	<u>      </u>
3. CCV's in control	<u>  X  </u>	<u>      </u>	<u>      </u>
4. CCB's and/or ICB's below MRL	<u>  X  </u>	<u>      </u>	<u>      </u>
5. Method blank below MRL	<u>  X  </u>	<u>      </u>	<u>      </u>
6. LCS in control	<u>  X  </u>	<u>      </u>	<u>      </u>
7. Spike and duplicate in control	<u>  X  </u>	<u>      </u>	<u>      </u>
8. All analytes within instrument linear range	<u>  X  </u>	<u>      </u>	<u>      </u>
9. Adequate rinse out time allowed	<u>  X  </u>	<u>      </u>	<u>      </u>
10. Internal standards in control	<u>  X  </u>	<u>      </u>	<u>      </u>
11. Interferences checked	<u>  X  </u>	<u>      </u>	<u>      </u>
12. Se over MRL	<u>      </u>	<u>  X  </u>	<u>      </u>
13. CRA run	<u>  X  </u>	<u>      </u>	<u>      </u>
14. Cd Correction Applied	<u>      </u>	<u>  X  </u>	<u>      </u>
15. ICSA and ICSAB in control	<u>      </u>	<u>      </u>	<u>  X  </u>
16. Serial dilution run	<u>      </u>	<u>      </u>	<u>  X  </u>
17. Post spike in control	<u>      </u>	<u>      </u>	<u>  X  </u>

Comments:

Primary Review by   JDB   Date   11/10/10    
 Secondary Review by            Date   11/10/10  

R:\icp\misc\data review forms\icpms review form

### Performance Report

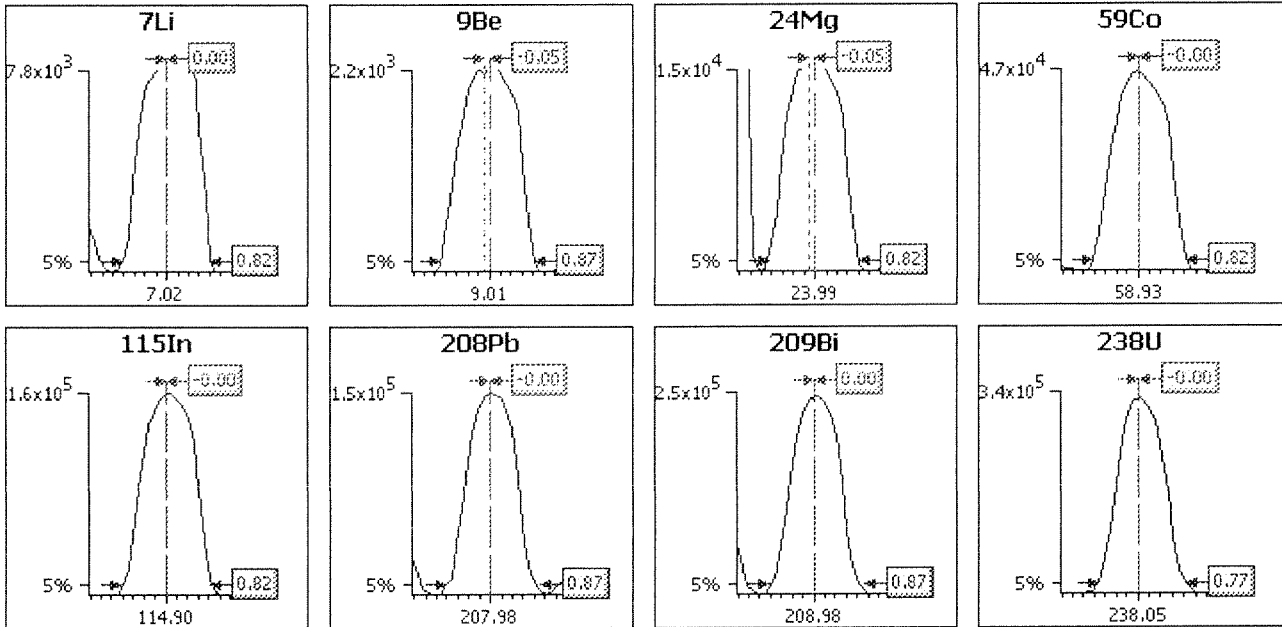
**Sample details**

Acquired at : 11/9/2010 9:38:55 AM  
 Report name : Kelso Performance Report 3 [10/6/2010 2:32:41 PM]

**Mass Calibration verification**

**Acquisition parameters**

Sweeps : 100  
 Dwell : 1.0 mSecs  
 Point spacing : 0.05 amu  
 Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
7Li	0.90	0.60	0.10	0.82	0.00
9Be	0.90	0.60	0.10	0.87	-0.05
24Mg	0.90	0.60	0.10	0.82	-0.05
59Co	0.90	0.60	0.10	0.82	-0.00
115In	0.90	0.60	0.10	0.82	-0.00
208Pb	0.90	0.60	0.10	0.87	-0.00
209Bi	0.90	0.60	0.10	0.87	0.00
238U	0.90	0.60	0.10	0.77	-0.00

**Sample details**

Acquired at : 11/9/2010 9:38:55 AM

Report name : Kelso Performance Report 3 [10/6/2010 2:32:41 PM]

**Tune conditions**

Major		Minor		Global		Add. Gases
Extraction	-149	Lens 2	-18.0	Standard resolution	95	
Lens 1	4.7	Lens 3	-174.9	High resolution	85	
Focus	19.8	Forward power	1247	Analogue Detector	2000	
D1	-40.0	Horizontal	114	PC Detector	4049	
Pole Bias	1.0	Vertical	349			
Hexapole Bias	1.0	D2	-152			
Nebuliser	0.76	DA	-33.7			
Sampling Depth	72	Cool	13.0			
		Auxiliary	0.80			

**Sensitivity and stability results**

**Acquisition parameters**

Sweeps : 400

Run	Time	5Bkg	7Li	9Be	24Mg	59Co	115In	140Ce	156Ce O	208Pb
<b>Dwell (mSecs)</b>		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
<b>Limits</b>	<b>%RSD</b>	-	5.0%	5.0%	5.0%	5.0%	5.0%	-	-	5.0%
	<b>Countrate</b>	-	>1000	>1000	>1000	>1000	>1000	-	-	>1000
1	9:39:26 AM	0.000	8624.339	2035.728	16296.844	46979.074	160288.74	186479.94	1553.883	157996.89
2	9:40:39 AM	0.250	8737.697	2047.981	16298.347	47078.336	160483.89	186779.25	1588.139	157733.12
3	9:41:52 AM	0.500	8707.168	2018.724	16345.932	46788.847	160387.20	186418.71	1569.385	157059.86
4	9:43:05 AM	0.000	8618.083	1986.967	16319.635	46414.435	160026.43	186299.81	1527.378	157192.62
5	9:44:17 AM	0.000	8620.085	1976.465	16106.505	46742.610	159697.21	185353.76	1523.128	156472.10
x		0.150	8661.474	2013.173	16273.453	46800.660	160176.69	186266.29	1552.383	157290.92
σ		0.22	56.73	30.76	95.43	255.74	317.69	539.87	27.62	597.38
%RSD		149.071	0.655	1.528	0.586	0.546	0.198	0.290	1.779	0.380

Run	Time	209Bi	220Bkg	238U
<b>Dwell (mSecs)</b>		10.0	10.0	10.0
<b>Limits</b>	<b>%RSD</b>	5.0%	-	5.0%
	<b>Countrate</b>	>1000	-	>1000
1	9:39:26 AM	245219.02	0.000	334776.18
2	9:40:39 AM	245910.58	0.000	336098.66
3	9:41:52 AM	245089.85	0.000	334557.34
4	9:43:05 AM	244892.90	0.000	334400.48
5	9:44:17 AM	244324.92	0.000	334377.14
x		245087.45	0.000	334841.96
σ		573.18	0.00	720.35
%RSD		0.234	0.000	0.215

**Ratio results**

Run	Time	156Ce O/140Ce
<b>Ratio limits</b>		<0.0200
1	9:39:26 AM	0.008
2	9:40:39 AM	0.009
3	9:41:52 AM	0.008
4	9:43:05 AM	0.008
5	9:44:17 AM	0.008
x		0.0083
σ		0.00
%RSD		1.5598

Result : The performance report passed.

## Sample List

No	Label	Type	Weight	Rack	Row	Col	Height
1	Cal. Blk	Blank	1.000	0	1	1	150
2	Cal. Stn	Fully Quant Standard	1.000	0	1	2	150
3	ICV1	Unknown	1.000	0	1	3	150
4	CCV1	Unknown	1.000	0	1	2	150
5	ICB1	Unknown	1.000	0	1	1	150
6	CCB1	Unknown	1.000	0	1	1	150
7	CRA	Unknown	1.000	0	1	4	150
8	K1011605-MB	Unknown	1.000	1	1	1	150
9	LCSW	Unknown	1.000	1	1	2	150
10	K1011605-001	Unknown	1.000	1	1	3	150
11	K1011605-001S	Unknown	1.000	1	1	4	150
12	K1011605-001SD	Unknown	1.000	1	1	5	150
13	K1011605-001 DISS	Unknown	1.000	1	1	6	150
14	K1011605-001 DISSS	Unknown	1.000	1	1	7	150
15	K1011605-001 DISSD	Unknown	1.000	1	1	8	150
16	K1011103-001	Unknown	1.000	1	1	9	150
17	CCV2	Unknown	1.000	0	1	2	150
18	CCB2	Unknown	1.000	0	1	1	150
19	K1011487-001	Unknown	1.000	1	1	10	150
20	K1012425-001	Unknown	1.000	1	1	11	150
21	K1012425-002	Unknown	1.000	1	1	12	150
22	K1012425-003	Unknown	1.000	1	2	1	150
23	K1012425-004	Unknown	1.000	1	2	2	150
24	K1012462-001	Unknown	1.000	1	2	3	150
25	K1010795-MB	Unknown	1.000	1	2	4	150
26	LCSW	Unknown	1.000	1	2	5	150
27	K1010795-001	Unknown	1.000	1	2	6	150
28	K1010795-001D	Unknown	1.000	1	2	7	150
29	CRA	Unknown	1.000	0	1	4	150
30	CCV3	Unknown	1.000	0	1	2	150
31	CCB3	Unknown	1.000	0	1	1	150
32	K1010795-001S	Unknown	1.000	1	2	8	150
33	K1010795-002	Unknown	1.000	1	2	9	150
34	K1010795-003	Unknown	1.000	1	2	10	150
35	K1010850-001	Unknown	1.000	1	2	11	150
36	K1010850-002	Unknown	1.000	1	2	12	150
37	K1010850-003	Unknown	1.000	1	3	1	150
38	K1010850-004	Unknown	1.000	1	3	2	150
39	K1010899-001	Unknown	1.000	1	3	3	150
40	K1010899-002	Unknown	1.000	1	3	4	150
41	CCV4	Unknown	1.000	0	1	2	150
42	CCB4	Unknown	1.000	0	1	1	150
43	K1011360-001	Unknown	1.000	1	3	5	150
44	K1011360-001D	Unknown	1.000	1	3	6	150
45	K1011360-001S	Unknown	1.000	1	3	7	150
46	K1011461-001	Unknown	1.000	1	3	8	150
47	K1011461-002	Unknown	1.000	1	3	9	150
48	K1011461-003	Unknown	1.000	1	3	10	150
49	K1011461-004	Unknown	1.000	1	3	11	150
50	K1011461-005	Unknown	1.000	1	3	12	150
51	K1011461-006	Unknown	1.000	1	4	1	150
52	K1011461-007	Unknown	1.000	1	4	2	150
53	CCV5	Unknown	1.000	0	1	2	150
54	CCB5	Unknown	1.000	0	1	1	150

**Dilution Corrected Concentrations**

Cal. Blk 11/9/2010 10:58:18 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:58:18	103.0%	-0.0037	0.0203	-0.0318	-0.0025	2.9397	0.0358	0.0013
2	10:59:26	99.1%	-0.0029	-0.0341	0.0202	0.0053	0.1635	-0.0637	0.0069
3	11:00:33	98.0%	0.0066	0.0138	0.0117	-0.0028	-3.1032	0.0279	-0.0081
x		100.0%	-0.0000	0.0000	-0.0000	0.0000	0.0000	-0.0000	0.0000
σ		2.6%	0.0057	0.0297	0.0279	0.0046	3.0247	0.0553	0.0076
%RSD		2.6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:58:18	0.0140	0.0263	-0.0124	0.0015	0.0010	0.0011	0.1950	-0.0148
2	10:59:26	-0.0067	-0.0139	0.0073	0.0034	-0.0019	0.0038	-0.0743	-0.0153
3	11:00:33	-0.0073	-0.0124	0.0051	-0.0049	0.0009	-0.0049	-0.1207	0.0301
x		0.0000	0.0000	0.0000	-0.0000	-0.0000	0.0000	0.0000	0.0000
σ		0.0121	0.0228	0.0108	0.0044	0.0017	0.0045	0.1705	0.0261
%RSD		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:58:18	-0.0046	0.0002	0.0026	-0.0054	-0.0054	101.0%	0.0973	-0.0827
2	10:59:26	0.0073	0.0053	0.0053	0.0182	0.0049	100.5%	-0.0795	0.1047
3	11:00:33	-0.0028	-0.0054	-0.0079	-0.0128	0.0005	98.5%	-0.0178	-0.0220
x		0.0000	-0.0000	0.0000	-0.0000	0.0000	100.0%	-0.0000	-0.0000
σ		0.0064	0.0053	0.0070	0.0162	0.0051	1.3%	0.0897	0.0956
%RSD		0.0000	0.0000	0.0000	0.0000	0.0000	1.3	0.0000	0.0000
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:58:18	-0.3424	0.2810	100.4%	0.0003	-0.0023	0.0018	100.3%	-0.0005
2	10:59:26	0.0880	-0.1995	100.6%	0.0051	0.0053	0.0065	100.1%	0.0009
3	11:00:33	0.2544	-0.0815	99.0%	-0.0054	-0.0030	-0.0083	99.6%	-0.0004
x		0.0000	0.0000	100.0%	0.0000	-0.0000	-0.0000	100.0%	0.0000
σ		0.3079	0.2504	0.9%	0.0053	0.0046	0.0076	0.4%	0.0008
%RSD		0.0000	0.0000	0.9	0.0000	0.0000	0.0000	0.4	0.0000
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:58:18	0.0005	0.0003	-0.0000	-0.0001	100.0%	0.0114	0.0061	0.0098
2	10:59:26	-0.0007	-0.0006	-0.0000	-0.0011	100.1%	-0.0033	0.0001	-0.0081
3	11:00:33	0.0003	0.0003	0.0000	0.0013	99.9%	-0.0081	-0.0062	-0.0017
x		-0.0000	0.0000	0.0000	-0.0000	100.0%	-0.0000	0.0000	0.0000
σ		0.0006	0.0005	0.0000	0.0012	0.1%	0.0101	0.0062	0.0091
%RSD		0.0000	0.0000	0.0000	0.0000	0.1	0.0000	0.0000	0.0000
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:58:18	-0.0005	0.0024	0.0005	0.0020	0.0014	98.3%	0.0016	0.0022
2	10:59:26	0.0002	-0.0010	0.0025	0.0006	0.0001	100.6%	0.0018	-0.0004
3	11:00:33	0.0002	-0.0013	-0.0030	-0.0026	-0.0015	101.2%	-0.0034	-0.0018
x		-0.0000	0.0000	0.0000	-0.0000	-0.0000	100.0%	-0.0000	-0.0000
σ		0.0004	0.0021	0.0028	0.0023	0.0014	1.5%	0.0030	0.0020
%RSD		0.0000	0.0000	0.0000	0.0000	0.0000	1.5	0.0000	0.0000
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:58:18	0.0018	0.0046	0.0019	-0.0018	97.8%	0.0009		
2	10:59:26	0.0001	-0.0004	0.0004	0.0027	100.8%	0.0012		
3	11:00:33	-0.0020	-0.0042	-0.0022	-0.0009	101.4%	-0.0022		
x		-0.0000	0.0000	0.0000	0.0000	100.0%	-0.0000		
σ		0.0019	0.0044	0.0021	0.0024	1.9%	0.0019		
%RSD		0.0000	0.0000	0.0000	0.0000	1.9	0.0000		



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User Pre-dilution: 1.000

Run	Time	6Li ppb	9Be ppb	10B ppb	11B ppb	27Al ppb	46Ti ppb	47Ti ppb	48Ti ppb
1	11:03:52	105.6%	25.2464	24.2254	23.5190	24.9493	26.1208	25.2126	24.9337
2	11:05:00	99.5%	25.0359	25.5571	25.5064	25.1364	27.0361	24.4539	25.0981
3	11:06:07	98.5%	24.7177	25.2175	25.9746	24.9142	21.8431	25.3334	24.9683
x		101.2%	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000
σ		3.9%	0.2662	0.6920	1.3038	0.1195	2.7720	0.4767	0.0867
%RSD		3.8	1.0647	2.7679	5.2151	0.4778	11.0879	1.9070	0.3467
Run	Time	51V ppb	52Cr ppb	53Cr ppb	55Mn ppb	59Co ppb	60Ni ppb	61Ni ppb	62Ni ppb
1	11:03:52	24.7497	25.0113	25.4951	24.9471	25.1344	25.2156	26.0872	24.9850
2	11:05:00	25.1105	25.0696	24.7550	25.1604	24.8843	24.8490	24.8607	24.6880
3	11:06:07	25.1398	24.9191	24.7499	24.8925	24.9813	24.9354	24.0521	25.3270
x		25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000
σ		0.2173	0.0759	0.4288	0.1416	0.1261	0.1917	1.0247	0.3198
%RSD		0.8690	0.3037	1.7152	0.5663	0.5044	0.7666	4.0988	1.2792
Run	Time	63Cu ppb	65Cu ppb	66Zn ppb	67Zn ppb	68Zn ppb	71Ga ppb	75As ppb	77Se ppb
1	11:03:52	25.0360	25.2493	24.7954	25.1466	25.1945	101.5%	25.2816	24.4723
2	11:05:00	25.1169	24.8998	24.9030	25.1801	24.5634	100.0%	24.5927	25.5692
3	11:06:07	24.8471	24.8509	25.3015	24.6734	25.2421	99.2%	25.1257	24.9585
x		25.0000	25.0000	25.0000	25.0000	25.0000	100.2%	25.0000	25.0000
σ		0.1384	0.2173	0.2666	0.2834	0.3789	1.1%	0.3613	0.5496
%RSD		0.5538	0.8691	1.0665	1.1335	1.5155	1.1	1.4451	2.1985
Run	Time	78Se ppb	82Se ppb	89Y ppb	95Mo ppb	97Mo ppb	98Mo ppb	103Rh ppb	107Ag ppb
1	11:03:52	24.8986	25.1878	101.0%	24.2639	24.2910	24.5199	101.6%	24.8176
2	11:05:00	25.1768	24.8603	100.7%	24.9748	24.9065	25.0485	100.9%	25.0788
3	11:06:07	24.9247	24.9519	99.1%	25.7613	25.8025	25.4316	100.6%	25.1037
x		25.0000	25.0000	100.3%	25.0000	25.0000	25.0000	101.0%	25.0000
σ		0.1536	0.1689	1.0%	0.7490	0.7601	0.4578	0.5%	0.1585
%RSD		0.6146	0.6757	1.0	2.9960	3.0402	1.8311	0.5	0.6339
Run	Time	109Ag ppb	111Cd ppb	112Cd ppb	114Cd ppb	115In ppb	116Sn ppb	118Sn ppb	120Sn ppb
1	11:03:52	24.9074	24.8890	24.7817	24.7738	102.2%	24.6978	24.8459	24.7251
2	11:05:00	24.9960	25.0532	25.0243	25.1142	102.8%	25.0918	24.9861	25.1275
3	11:06:07	25.0967	25.0578	25.1940	25.1119	102.4%	25.2103	25.1680	25.1473
x		25.0000	25.0000	25.0000	25.0000	102.5%	25.0000	25.0000	25.0000
σ		0.0947	0.0962	0.2072	0.1959	0.3%	0.2683	0.1615	0.2383
%RSD		0.3789	0.3846	0.8289	0.7835	0.3	1.0733	0.6461	0.9530
Run	Time	121Sb ppb	123Sb ppb	135Ba ppb	137Ba ppb	138Ba ppb	175Lu ppb	203Tl ppb	205Tl ppb
1	11:03:52	24.7898	24.6790	24.7201	24.8508	24.6748	100.4%	24.7856	24.9159
2	11:05:00	25.2081	25.1357	25.3158	24.9799	25.1385	102.6%	25.1570	25.0853
3	11:06:07	25.0021	25.1853	24.9641	25.1693	25.1867	103.3%	25.0574	24.9988
x		25.0000	25.0000	25.0000	25.0000	25.0000	102.1%	25.0000	25.0000
σ		0.2091	0.2791	0.2995	0.1602	0.2827	1.5%	0.1922	0.0847
%RSD		0.8366	1.1163	1.1979	0.6409	1.1307	1.5	0.7690	0.3388
Run	Time	206Pb ppb	207Pb ppb	208Pb ppb	209Bi ppb	232Th ppb	238U ppb		
1	11:03:52	24.8246	24.8225	24.7909	24.8307	100.5%	24.8516		
2	11:05:00	25.1235	25.0859	25.1254	25.0774	104.0%	25.0523		
3	11:06:07	25.0519	25.0916	25.0838	25.0919	105.4%	25.0960		
x		25.0000	25.0000	25.0000	25.0000	103.3%	25.0000		
σ		0.1560	0.1537	0.1823	0.1468	2.5%	0.1303		
%RSD		0.6242	0.6149	0.7293	0.5871	2.4	0.5213		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:14:21	104.9%	2.5227	25.7958	25.3347	99.8338	20.2678	26.3779	26.1779
2	11:15:28	97.0%	2.5275	25.9828	27.0918	100.9996	23.9915	26.4722	26.5969
3	11:16:35	96.3%	2.5221	26.4778	27.1459	99.8939	26.1279	24.5858	26.4161
x		99.4%	2.5241	26.0855	26.5241	100.2424	23.4624	25.8120	26.3970
σ		4.8%	0.0030	0.3524	1.0304	0.6564	2.9657	1.0629	0.2102
%RSD		4.8	0.1169	1.3510	3.8847	0.6548	12.6402	4.1180	0.7961
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:14:21	24.7720	9.8834	10.0011	24.8386	24.8096	24.8529	25.8064	24.9018
2	11:15:28	24.9928	9.9005	10.1657	25.3282	24.9655	24.8755	24.1935	24.6785
3	11:16:35	25.0730	10.0835	10.3404	25.4004	25.2967	24.7357	25.2605	24.4704
x		24.9459	9.9558	10.1691	25.1891	25.0239	24.8214	25.0868	24.6836
σ		0.1559	0.1110	0.1697	0.3057	0.2487	0.0750	0.8204	0.2157
%RSD		0.6249	1.1145	1.6685	1.2135	0.9939	0.3022	3.2702	0.8740
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:14:21	12.4140	12.5847	24.8380	28.5325	27.1853	100.5%	24.5232	25.6735
2	11:15:28	12.3932	12.1881	25.1655	29.3676	27.5197	98.3%	24.9300	24.4837
3	11:16:35	12.6800	12.6020	25.5873	28.0988	27.0611	97.6%	24.9016	25.7440
x		12.4957	12.4583	25.1969	28.6663	27.2554	98.8%	24.7850	25.3004
σ		0.1599	0.2342	0.3757	0.6449	0.2372	1.5%	0.2271	0.7081
%RSD		1.2798	1.8797	1.4909	2.2498	0.8702	1.5	0.9164	2.7989
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:14:21	24.8577	24.3078	100.4%	24.7705	24.8878	24.8070	101.3%	12.3316
2	11:15:28	24.7599	24.0656	98.0%	25.5217	25.7517	25.8556	100.2%	12.4106
3	11:16:35	25.3309	23.7879	98.9%	25.8014	26.1841	26.2320	98.9%	12.5662
x		24.9829	24.0538	99.1%	25.3646	25.6079	25.6316	100.1%	12.4361
σ		0.3054	0.2602	1.2%	0.5331	0.6600	0.7385	1.2%	0.1194
%RSD		1.2224	1.0816	1.2	2.1018	2.5774	2.8810	1.2	0.9598
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:14:21	12.4009	12.6790	13.1087	12.9239	102.1%	21.4028	25.1805	25.1534
2	11:15:28	12.3984	12.6437	13.0820	12.8453	102.7%	21.5187	25.5607	25.0426
3	11:16:35	12.4551	12.6753	13.2106	12.9330	103.1%	21.3645	25.3809	25.1085
x		12.4181	12.6660	13.1337	12.9007	102.6%	21.4287	25.3740	25.1015
σ		0.0320	0.0194	0.0679	0.0482	0.5%	0.0803	0.1902	0.0557
%RSD		0.2579	0.1533	0.5166	0.3739	0.5	0.3747	0.7495	0.2219
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:14:21	24.8229	24.5026	100.5267	100.6821	102.8235	101.0%	25.0916	25.1144
2	11:15:28	24.8268	24.3626	100.8182	101.2055	103.2853	103.0%	24.8831	25.0193
3	11:16:35	25.0796	24.4914	100.3048	101.6209	103.5286	103.7%	25.0541	25.1576
x		24.9097	24.4522	100.5499	101.1695	103.2125	102.6%	25.0096	25.0971
σ		0.1471	0.0778	0.2575	0.4705	0.3581	1.4%	0.1112	0.0708
%RSD		0.5905	0.3183	0.2561	0.4650	0.3470	1.4	0.4445	0.2820
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:14:21	25.9122	24.6667	25.0302	26.1424	100.1%	25.6523		
2	11:15:28	25.6816	24.7265	25.0509	26.1315	103.4%	25.5260		
3	11:16:35	25.9391	24.8617	25.1518	26.3434	104.3%	25.6679		
x		25.8443	24.7516	25.0776	26.2058	102.6%	25.6154		
σ		0.1415	0.0999	0.0651	0.1193	2.2%	0.0778		
%RSD		0.5475	0.4036	0.2594	0.4554	2.2	0.3037		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:49	101.6%	25.6529	26.7798	25.2571	25.4126	35.6273	25.1069	24.8151
2	11:25:56	99.5%	24.8505	24.8258	24.7765	24.5454	25.0384	25.7276	24.7742
3	11:27:03	95.7%	26.1246	26.6295	26.3010	25.1767	43.6651	23.5446	25.2525
X		98.9%	25.5427	26.0784	25.4449	25.0449	34.7769	24.7931	24.9473
σ		3.0%	0.6442	1.0873	0.7794	0.4484	9.3424	1.1249	0.2651
%RSD		3.0	2.5221	4.1694	3.0630	1.7902	26.8637	4.5370	1.0627
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:49	24.7723	24.9209	25.1302	25.0540	25.1146	25.6030	26.2010	24.9075
2	11:25:56	24.1441	24.3656	24.8671	24.5361	24.5583	24.9674	24.7208	24.2169
3	11:27:03	25.1864	25.3589	25.6003	25.3057	25.1061	25.3361	24.0224	24.8296
X		24.7010	24.8818	25.1992	24.9653	24.9263	25.3021	24.9814	24.6513
σ		0.5248	0.4978	0.3714	0.3924	0.3187	0.3191	1.1124	0.3782
%RSD		2.1246	2.0008	1.4739	1.5719	1.2787	1.2612	4.4531	1.5343
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:49	25.1676	25.9737	25.0006	26.1976	25.0187	99.6%	24.9365	25.6424
2	11:25:56	24.6948	24.8294	24.9025	25.1124	24.4524	99.2%	24.9991	23.4622
3	11:27:03	25.0689	25.4560	25.2608	24.9799	25.6307	97.7%	25.4535	25.4935
X		24.9771	25.4197	25.0546	25.4300	25.0339	98.8%	25.1297	24.8661
σ		0.2494	0.5730	0.1852	0.6681	0.5893	1.0%	0.2821	1.2180
%RSD		0.9985	2.2540	0.7392	2.6270	2.3541	1.0	1.1226	4.8984
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:49	24.3142	23.9810	101.3%	24.4141	24.5831	24.7540	101.6%	24.7509
2	11:25:56	24.0112	24.3434	100.2%	24.9409	25.0372	25.0130	100.5%	24.6743
3	11:27:03	26.1705	25.1425	97.4%	25.3124	25.7121	25.6960	99.8%	25.6050
X		24.8320	24.4890	99.6%	24.8891	25.1108	25.1543	100.6%	25.0101
σ		1.1690	0.5943	2.0%	0.4513	0.5681	0.4867	0.9%	0.5166
%RSD		4.7078	2.4268	2.0	1.8134	2.2622	1.9347	0.9	2.0657
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:49	24.6214	24.5102	24.3926	24.7819	101.6%	24.7676	25.0594	24.6465
2	11:25:56	24.6136	24.6045	24.3715	24.4662	104.3%	24.4357	24.7512	24.5205
3	11:27:03	25.3275	25.3375	24.9811	25.2355	101.8%	25.0534	25.2778	25.1879
X		24.8542	24.8174	24.5817	24.8279	102.6%	24.7522	25.0295	24.7850
σ		0.4100	0.4529	0.3460	0.3867	1.5%	0.3091	0.2645	0.3546
%RSD		1.6495	1.8248	1.4075	1.5576	1.5	1.2489	1.0569	1.4308
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:24:49	24.9369	24.9876	24.6998	24.8294	24.9960	99.5%	24.9421	24.9631
2	11:25:56	24.6465	24.3365	24.5070	24.5424	24.3951	103.8%	24.5956	24.7222
3	11:27:03	25.3467	25.3378	24.8646	24.9090	25.0729	102.5%	25.1795	25.1465
X		24.9767	24.8873	24.6905	24.7602	24.8213	101.9%	24.9057	24.9439
σ		0.3518	0.5081	0.1790	0.1928	0.3711	2.2%	0.2936	0.2128
%RSD		1.4085	2.0417	0.7250	0.7786	1.4952	2.1	1.1790	0.8531
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:24:49	25.0946	24.9966	25.0529	25.0795	101.3%	24.9569		
2	11:25:56	24.5433	24.5549	24.5655	24.4747	104.8%	24.6315		
3	11:27:03	25.1688	25.0461	25.0537	25.1674	105.6%	24.9059		
X		24.9356	24.8659	24.8907	24.9072	103.9%	24.8314		
σ		0.3417	0.2704	0.2816	0.3771	2.3%	0.1750		
%RSD		1.3704	1.0876	1.1315	1.5140	2.2	0.7049		

ICB1 11/9/2010 11:45:44 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:44	99.7%	-0.0175	0.0090	-0.0897	-0.0142	-2.8693	0.0740	-0.0041
2	11:46:51	94.7%	0.0019	0.0248	-0.1255	-0.0146	16.7275	0.1283	-0.0141
3	11:47:58	93.4%	-0.0209	-0.1123	-0.1180	-0.0161	-4.2916	0.0039	-0.0020
x		95.9%	-0.0121	-0.0262	-0.1111	-0.0150	3.1889	0.0687	-0.0067
σ		3.3%	0.0123	0.0750	0.0189	0.0010	11.7463	0.0624	0.0065
%RSD		3.5	101.4573	286.6130	16.9827	6.5630	368.3551	90.7355	96.3015
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:44	0.0177	0.0457	-0.0090	0.0009	-0.0101	0.0031	0.1714	0.0060
2	11:46:51	0.0051	0.0047	-0.0085	-0.0031	-0.0086	0.0036	0.1321	0.0378
3	11:47:58	-0.0105	-0.0283	0.0032	-0.0019	-0.0048	-0.0072	0.0987	0.0254
x		0.0041	0.0073	-0.0048	-0.0014	-0.0078	-0.0001	0.1341	0.0231
σ		0.0141	0.0371	0.0069	0.0021	0.0027	0.0061	0.0364	0.0160
%RSD		345.0629	504.4345	145.4518	148.7789	34.9143	4394.4385	27.1460	69.3472
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:44	-0.0098	0.0040	0.0066	0.0037	0.0045	96.7%	0.0933	-0.0953
2	11:46:51	-0.0067	0.0023	-0.0043	-0.0122	0.0284	94.8%	-0.0746	-0.0537
3	11:47:58	-0.0094	0.0074	-0.0019	-0.0123	0.0032	95.7%	-0.0664	0.0641
x		-0.0087	0.0046	0.0001	-0.0069	0.0120	95.8%	-0.0159	-0.0283
σ		0.0017	0.0026	0.0058	0.0092	0.0142	1.0%	0.0946	0.0827
%RSD		19.6298	56.6319	4587.4133	132.8041	117.7817	1.0	595.1045	292.3492
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:44	-0.0570	0.2491	97.0%	0.0059	0.0065	0.0149	99.1%	0.0025
2	11:46:51	0.4557	-0.3223	96.8%	0.0161	0.0246	0.0142	95.9%	0.0003
3	11:47:58	0.4076	-0.1836	95.3%	-0.0018	0.0087	0.0083	97.2%	-0.0005
x		0.2688	-0.0856	96.4%	0.0067	0.0132	0.0124	97.4%	0.0008
σ		0.2831	0.2980	0.9%	0.0090	0.0099	0.0036	1.6%	0.0016
%RSD		105.3455	348.1711	0.9	133.0539	74.7655	29.1013	1.7	210.0067
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:44	0.0013	0.0028	-0.0019	-0.0010	98.4%	0.0350	-0.0078	0.0043
2	11:46:51	-0.0004	-0.0006	-0.0047	0.0001	97.5%	0.0125	0.0225	0.0128
3	11:47:58	0.0012	0.0003	-0.0004	-0.0020	97.1%	-0.0105	-0.0030	-0.0090
x		0.0007	0.0009	-0.0023	-0.0010	97.7%	0.0124	0.0039	0.0027
σ		0.0010	0.0018	0.0022	0.0010	0.7%	0.0228	0.0163	0.0110
%RSD		143.0237	205.0818	92.0070	104.3122	0.7	184.3778	414.1753	402.2253
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:44	0.0013	0.0024	-0.0138	-0.0041	-0.0051	97.4%	-0.0055	-0.0057
2	11:46:51	0.0015	0.0015	-0.0161	-0.0092	-0.0065	99.0%	-0.0077	-0.0067
3	11:47:58	0.0003	0.0006	-0.0149	-0.0079	-0.0082	99.4%	-0.0079	-0.0059
x		0.0010	0.0015	-0.0149	-0.0070	-0.0066	98.6%	-0.0070	-0.0061
σ		0.0007	0.0009	0.0011	0.0026	0.0015	1.1%	0.0013	0.0005
%RSD		63.0448	61.2364	7.5394	37.6838	23.4963	1.1	19.0402	8.6364
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:45:44	-0.0023	-0.0064	-0.0047	-0.0093	97.9%	-0.0061		
2	11:46:51	-0.0028	-0.0075	-0.0070	-0.0103	100.4%	-0.0061		
3	11:47:58	-0.0070	-0.0046	-0.0060	-0.0109	100.6%	-0.0071		
x		-0.0040	-0.0062	-0.0059	-0.0102	99.6%	-0.0064		
σ		0.0026	0.0015	0.0012	0.0008	1.5%	0.0006		
%RSD		63.5088	23.6127	19.8621	7.6527	1.5	9.2337		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:04	102.2%	-0.0088	0.0451	-0.0409	-0.0088	2.5270	-0.0030	-0.0005
2	11:53:11	97.8%	-0.0100	0.0597	-0.0314	0.0077	5.5695	0.0610	-0.0171
3	11:54:19	95.0%	0.0019	-0.0226	-0.0854	-0.0189	5.9448	0.0034	-0.0142
x		98.3%	-0.0056	0.0274	-0.0526	-0.0067	4.6804	0.0205	-0.0106
σ		3.6%	0.0065	0.0439	0.0288	0.0134	1.8744	0.0353	0.0089
%RSD		3.7	115.5996	160.1892	54.8424	200.9783	40.0471	172.3538	83.9788
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:04	0.0095	0.0139	-0.0148	0.0001	-0.0050	-0.0022	0.1665	0.0542
2	11:53:11	-0.0017	-0.0128	-0.0031	-0.0008	-0.0092	-0.0034	-0.1118	0.0584
3	11:54:19	0.0013	-0.0017	-0.0056	-0.0036	-0.0076	-0.0005	0.0999	-0.0013
x		0.0030	-0.0002	-0.0079	-0.0015	-0.0072	-0.0020	0.0515	0.0371
σ		0.0058	0.0134	0.0062	0.0019	0.0021	0.0015	0.1453	0.0333
%RSD		190.3523	7059.4442	78.8336	131.7255	29.1643	72.1258	281.9150	89.8391
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:04	0.0025	-0.0023	-0.0038	-0.0045	0.0130	97.0%	0.1055	-0.0376
2	11:53:11	-0.0082	-0.0011	-0.0074	-0.0043	0.0012	96.4%	0.0633	-0.0560
3	11:54:19	-0.0114	0.0012	0.0100	0.0043	-0.0037	95.2%	-0.0057	-0.0146
x		-0.0057	-0.0007	-0.0004	-0.0015	0.0035	96.2%	0.0544	-0.0361
σ		0.0073	0.0018	0.0092	0.0050	0.0086	0.9%	0.0561	0.0207
%RSD		127.1196	249.1576	2235.8008	329.5765	246.9427	0.9	103.2501	57.5099
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:04	-0.0963	0.3592	97.2%	-0.0146	-0.0123	-0.0072	98.1%	0.0002
2	11:53:11	0.3331	0.1803	96.9%	-0.0125	-0.0179	-0.0116	98.7%	-0.0012
3	11:54:19	-0.2778	-0.0427	96.3%	-0.0091	-0.0073	-0.0084	96.8%	-0.0002
x		-0.0137	0.1656	96.8%	-0.0121	-0.0125	-0.0090	97.9%	-0.0004
σ		0.3137	0.2014	0.5%	0.0027	0.0053	0.0023	1.0%	0.0007
%RSD		2295.9633	121.6124	0.5	22.7551	42.4858	25.2527	1.0	196.8591
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:04	0.0006	0.0012	0.0029	0.0015	97.2%	0.0345	0.0157	0.0184
2	11:53:11	0.0013	0.0011	-0.0023	0.0000	98.3%	-0.0160	0.0146	0.0124
3	11:54:19	-0.0001	0.0011	-0.0035	-0.0017	98.5%	-0.0057	-0.0069	-0.0191
x		0.0006	0.0011	-0.0010	-0.0001	98.0%	0.0043	0.0078	0.0039
σ		0.0007	0.0000	0.0034	0.0016	0.7%	0.0267	0.0127	0.0201
%RSD		114.8720	0.7139	352.1248	1930.8031	0.7	625.8048	162.8565	515.6649
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:04	0.0003	0.0003	-0.0013	-0.0078	-0.0108	97.8%	-0.0091	-0.0074
2	11:53:11	-0.0005	-0.0016	-0.0094	-0.0048	-0.0088	98.8%	-0.0085	-0.0080
3	11:54:19	0.0003	0.0012	-0.0150	-0.0099	-0.0094	99.5%	-0.0079	-0.0062
x		0.0000	-0.0001	-0.0085	-0.0075	-0.0097	98.7%	-0.0085	-0.0072
σ		0.0004	0.0014	0.0069	0.0026	0.0010	0.8%	0.0006	0.0009
%RSD		1237.3150	2275.6758	80.9630	34.3543	10.6198	0.9	7.0505	12.8784
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:52:04	-0.0014	-0.0060	-0.0055	-0.0133	97.1%	-0.0063		
2	11:53:11	-0.0042	-0.0047	-0.0052	-0.0124	100.3%	-0.0067		
3	11:54:19	-0.0056	-0.0069	-0.0054	-0.0127	100.2%	-0.0081		
x		-0.0037	-0.0059	-0.0054	-0.0128	99.2%	-0.0070		
σ		0.0021	0.0011	0.0001	0.0004	1.8%	0.0010		
%RSD		57.1999	18.6676	2.4780	3.4410	1.8	13.8698		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:24	103.8%	0.0101	0.6984	0.3642	1.9650	1.5931	0.1283	0.0867
2	11:58:32	95.1%	0.0246	0.5087	0.3966	2.0361	17.2366	0.0035	0.1071
3	11:59:39	95.2%	0.0113	0.3692	0.4546	1.9815	-4.6666	0.2026	0.0942
X		98.0%	0.0153	0.5255	0.4051	1.9942	4.7210	0.1115	0.0960
σ		5.0%	0.0081	0.1652	0.0458	0.0372	11.2817	0.1006	0.0103
%RSD		5.1	52.4645	31.4442	11.3004	1.8658	238.9651	90.2627	10.7410
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:24	0.2062	0.2379	0.2025	0.0499	0.0089	0.1883	0.4438	0.1895
2	11:58:32	0.1942	0.2176	0.2183	0.0560	0.0137	0.2240	0.0422	0.2083
3	11:59:39	0.1892	0.2090	0.2343	0.0586	0.0065	0.1875	0.2986	0.2351
X		0.1965	0.2215	0.2184	0.0548	0.0097	0.1999	0.2615	0.2109
σ		0.0088	0.0149	0.0159	0.0045	0.0037	0.0208	0.2033	0.0229
%RSD		4.4565	6.7071	7.2761	8.1398	37.6679	10.4097	77.7427	10.8585
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:24	0.1022	0.0899	0.4563	0.4057	0.5213	97.5%	0.5754	0.9290
2	11:58:32	0.1051	0.0974	0.4449	0.5261	0.5211	95.1%	0.4494	1.0878
3	11:59:39	0.0894	0.0923	0.5076	0.4559	0.4674	95.9%	0.5572	0.9872
X		0.0989	0.0932	0.4696	0.4626	0.5033	96.2%	0.5273	1.0013
σ		0.0084	0.0038	0.0334	0.0605	0.0311	1.2%	0.0681	0.0803
%RSD		8.4654	4.1129	7.1096	13.0823	6.1787	1.3	12.9169	8.0238
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:24	1.0144	1.0510	96.8%	0.0383	0.0338	0.0318	98.0%	0.0210
2	11:58:32	1.4195	0.6707	96.6%	0.0217	0.0436	0.0335	96.7%	0.0204
3	11:59:39	0.7232	1.0105	95.4%	0.0335	0.0425	0.0221	97.4%	0.0207
X		1.0524	0.9107	96.3%	0.0312	0.0399	0.0292	97.4%	0.0207
σ		0.3497	0.2088	0.7%	0.0085	0.0054	0.0062	0.7%	0.0003
%RSD		33.2291	22.9297	0.8	27.3837	13.4536	21.0926	0.7	1.3833
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:24	0.0224	0.0140	0.0308	0.0288	97.2%	0.1179	0.2038	0.1856
2	11:58:32	0.0211	0.0175	0.0233	0.0260	97.2%	0.1090	0.1792	0.1692
3	11:59:39	0.0241	0.0192	0.0357	0.0236	96.9%	0.0749	0.1720	0.1512
X		0.0225	0.0169	0.0300	0.0262	97.1%	0.1006	0.1850	0.1687
σ		0.0015	0.0027	0.0062	0.0026	0.1%	0.0227	0.0167	0.0172
%RSD		6.7699	15.7105	20.7257	9.9008	0.1	22.5942	9.0104	10.2240
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:24	0.0617	0.0655	0.0443	0.0537	0.0385	97.7%	0.0166	0.0125
2	11:58:32	0.0595	0.0570	0.0414	0.0505	0.0453	100.1%	0.0166	0.0152
3	11:59:39	0.0644	0.0664	0.0530	0.0495	0.0424	99.6%	0.0150	0.0128
X		0.0619	0.0629	0.0462	0.0512	0.0420	99.1%	0.0161	0.0135
σ		0.0025	0.0052	0.0060	0.0022	0.0034	1.3%	0.0009	0.0015
%RSD		3.9954	8.2241	12.9969	4.3238	8.2038	1.3	5.7324	10.9373
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:57:24	0.0124	0.0156	0.0123	0.0342	98.0%	0.0114		
2	11:58:32	0.0172	0.0153	0.0149	0.0360	100.7%	0.0128		
3	11:59:39	0.0152	0.0094	0.0130	0.0392	101.3%	0.0123		
X		0.0150	0.0134	0.0134	0.0364	100.0%	0.0122		
σ		0.0024	0.0035	0.0014	0.0025	1.8%	0.0007		
%RSD		15.9174	25.8343	10.1861	6.9306	1.8	5.8379		

J3  
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11/10/10

K1011605-MB 11/9/2010 12:07:40 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:07:40	99.2%	-0.0156	-0.0559	-0.1625	0.0579	5.6565	-0.0007	-0.0080
2	12:08:47	95.2%	-0.0134	-0.0462	-0.1813	0.0640	12.2964	-0.1047	-0.0033
3	12:09:55	94.2%	-0.0132	-0.0903	-0.0785	0.0561	14.5229	-0.0582	-0.0020
x		96.2%	-0.0141	-0.0641	-0.1408	0.0593	10.8253	-0.0545	-0.0044
σ		2.6%	0.0013	0.0231	0.0548	0.0041	4.6126	0.0521	0.0031
%RSD		2.7	9.5271	36.0941	38.8979	6.9699	42.6098	95.4442	70.6784
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:07:40	0.0087	0.0166	-0.0090	0.0066	-0.0119	-0.0047	0.2018	0.0303
2	12:08:47	0.0022	-0.0040	-0.0144	0.0089	-0.0066	0.0050	0.3974	0.0229
3	12:09:55	-0.0055	-0.0171	-0.0027	0.0056	-0.0048	0.0009	0.1873	0.0688
x		0.0018	-0.0015	-0.0087	0.0070	-0.0078	0.0004	0.2622	0.0406
σ		0.0071	0.0170	0.0059	0.0017	0.0037	0.0049	0.1174	0.0247
%RSD		387.1411	1143.9763	67.7647	24.3212	47.9396	1257.5171	44.7602	60.6727
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:07:40	0.0058	0.0040	0.0751	0.0200	0.0586	96.6%	0.0201	-0.0373
2	12:08:47	-0.0077	0.0202	0.0697	0.0461	0.0820	94.6%	0.0616	-0.0120
3	12:09:55	0.0105	0.0241	0.0611	0.1116	0.0970	95.4%	0.0383	-0.0739
x		0.0029	0.0161	0.0686	0.0593	0.0792	95.5%	0.0400	-0.0411
σ		0.0094	0.0107	0.0071	0.0472	0.0194	1.0%	0.0208	0.0311
%RSD		330.3909	66.2239	10.3527	79.6224	24.4299	1.1	52.0858	75.7439
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:07:40	0.1349	0.0412	97.7%	-0.0395	-0.0391	-0.0339	97.7%	0.0000
2	12:08:47	0.4939	0.2122	94.6%	-0.0284	-0.0310	-0.0284	97.4%	-0.0002
3	12:09:55	-0.0310	0.0694	96.3%	-0.0329	-0.0299	-0.0337	96.5%	-0.0011
x		0.1992	0.1076	96.2%	-0.0336	-0.0333	-0.0320	97.2%	-0.0004
σ		0.2683	0.0917	1.6%	0.0056	0.0050	0.0031	0.7%	0.0006
%RSD		134.6674	85.2183	1.6	16.6584	15.0877	9.7086	0.7	148.8994
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:07:40	-0.0007	0.0020	-0.0035	0.0007	97.8%	-0.0048	0.0038	0.0050
2	12:08:47	0.0016	0.0012	-0.0030	-0.0010	97.3%	-0.0083	0.0073	-0.0111
3	12:09:55	0.0010	-0.0006	-0.0055	-0.0031	97.0%	-0.0480	-0.0255	-0.0242
x		0.0006	0.0009	-0.0040	-0.0011	97.4%	-0.0203	-0.0048	-0.0101
σ		0.0012	0.0013	0.0013	0.0019	0.4%	0.0240	0.0180	0.0146
%RSD		184.6547	150.2450	33.1870	172.6959	0.4	117.9411	374.4972	144.4207
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:07:40	0.0005	-0.0007	-0.0127	-0.0098	-0.0117	98.7%	-0.0099	-0.0082
2	12:08:47	0.0008	-0.0007	-0.0082	-0.0072	-0.0083	99.0%	-0.0081	-0.0092
3	12:09:55	0.0000	-0.0016	-0.0104	-0.0091	-0.0109	98.9%	-0.0081	-0.0097
x		0.0005	-0.0010	-0.0104	-0.0087	-0.0103	98.8%	-0.0087	-0.0090
σ		0.0004	0.0005	0.0023	0.0013	0.0018	0.2%	0.0010	0.0008
%RSD		82.2557	54.4231	21.8372	15.2532	17.4621	0.2	11.4085	8.6650
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:07:40	-0.0038	-0.0061	-0.0058	-0.0163	97.9%	-0.0092		
2	12:08:47	-0.0042	-0.0065	-0.0069	-0.0150	100.2%	-0.0090		
3	12:09:55	-0.0069	-0.0061	-0.0070	-0.0155	100.6%	-0.0092		
x		-0.0050	-0.0062	-0.0066	-0.0156	99.6%	-0.0091		
σ		0.0017	0.0002	0.0007	0.0006	1.5%	0.0001		
%RSD		34.5626	3.4684	10.5271	4.1474	1.5	1.3896		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:12:43	99.3%	20.4936	19.9168	21.0550	20.3920	22.9284	21.8217	21.1065
2	12:13:51	94.9%	20.9792	21.2576	21.7927	20.2438	23.9399	21.9168	20.7405
3	12:14:58	93.5%	20.4437	21.9767	21.1902	20.2602	27.7806	21.4492	20.7221
x		95.9%	20.6388	21.0504	21.3460	20.2987	24.8830	21.7292	20.8563
σ		3.0%	0.2958	1.0455	0.3927	0.0813	2.5599	0.2472	0.2168
%RSD		3.1	1.4331	4.9665	1.8399	0.4003	10.2878	1.1375	1.0395
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:12:43	20.2007	20.2982	20.1697	20.0376	20.0198	20.1674	20.3166	19.9154
2	12:13:51	19.6478	19.9108	19.8763	20.1091	19.9991	20.3223	19.4185	19.8726
3	12:14:58	19.8660	20.2061	20.9196	20.1819	19.9826	20.4767	19.9321	19.8641
x		19.9048	20.1384	20.3219	20.1096	20.0005	20.3221	19.8891	19.8840
σ		0.2785	0.2024	0.5380	0.0722	0.0187	0.1546	0.4506	0.0275
%RSD		1.3993	1.0049	2.6475	0.3588	0.0933	0.7608	2.2654	0.1385
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:12:43	20.3008	20.5027	20.4013	20.8140	20.1275	97.1%	19.2563	19.2836
2	12:13:51	19.9448	20.3891	20.4873	20.1162	20.7768	94.8%	19.9389	19.5994
3	12:14:58	20.3446	20.5832	21.0634	21.2579	20.8366	93.7%	19.5421	20.4568
x		20.1967	20.4917	20.6507	20.7294	20.5803	95.2%	19.5791	19.7799
σ		0.2193	0.0975	0.3600	0.5755	0.3933	1.7%	0.3428	0.6071
%RSD		1.0858	0.4758	1.7434	2.7765	1.9109	1.8	1.7507	3.0690
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:12:43	19.5525	18.6523	97.7%	19.8173	19.9614	19.7756	98.2%	20.1766
2	12:13:51	19.1238	19.8951	97.0%	20.1145	20.1078	20.3789	97.9%	20.3107
3	12:14:58	19.5320	19.2929	96.4%	20.3156	20.7239	20.6140	97.8%	20.3959
x		19.4028	19.2801	97.0%	20.0824	20.2644	20.2562	98.0%	20.2944
σ		0.2418	0.6215	0.7%	0.2507	0.4046	0.4325	0.2%	0.1105
%RSD		1.2464	3.2234	0.7	1.2483	1.9967	2.1349	0.2	0.5446
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:12:43	20.1480	20.0420	20.0370	19.9876	99.0%	20.3040	20.6235	20.5100
2	12:13:51	20.2495	20.3390	20.0406	19.9793	99.3%	20.2706	20.5558	20.6525
3	12:14:58	20.2596	20.1721	20.0930	20.1393	99.7%	20.2956	20.6107	20.4926
x		20.2191	20.1844	20.0568	20.0354	99.3%	20.2901	20.5967	20.5517
σ		0.0617	0.1489	0.0314	0.0901	0.4%	0.0174	0.0360	0.0877
%RSD		0.3052	0.7375	0.1564	0.4495	0.4	0.0856	0.1747	0.4269
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:12:43	20.1702	19.9479	19.9058	19.6493	19.9075	99.6%	19.9552	19.9078
2	12:13:51	20.0142	19.8456	20.1976	20.0018	20.0736	100.1%	20.0651	20.1003
3	12:14:58	20.2307	20.0677	19.8048	20.1513	19.8589	101.1%	20.2801	20.1599
x		20.1383	19.9537	19.9694	19.9341	19.9467	100.2%	20.1001	20.0560
σ		0.1117	0.1111	0.2039	0.2578	0.1126	0.8%	0.1653	0.1318
%RSD		0.5547	0.5570	1.0213	1.2931	0.5644	0.8	0.8222	0.6571
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:12:43	19.9262	19.8718	19.9149	20.5154	99.5%	20.0112		
2	12:13:51	20.0973	19.9628	20.0640	20.7925	102.5%	20.0558		
3	12:14:58	20.0079	19.9898	20.0259	20.7916	102.6%	20.2557		
x		20.0105	19.9415	20.0016	20.6999	101.5%	20.1075		
σ		0.0856	0.0618	0.0775	0.1597	1.7%	0.1302		
%RSD		0.4277	0.3101	0.3874	0.7716	1.7	0.6477		



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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:11	95.9%	-0.0153	3.5566	3.0367	59.7114	5.5789	2.9521	33.9667
2	12:24:19	89.8%	-0.0026	3.5142	3.3383	58.6057	8.1647	2.8164	34.1118
3	12:25:26	86.8%	0.0064	3.9946	3.6545	60.6659	3.0310	2.6008	35.1964
x		90.9%	-0.0039	3.6884	3.3431	59.6610	5.5915	2.7898	34.4250
σ		4.6%	0.0109	0.2659	0.3089	1.0310	2.5669	0.1771	0.6720
%RSD		5.1	283.2366	7.2102	9.2410	1.7281	45.9073	6.3494	1.9521
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:11	0.2993	0.3453	0.3598	2.2973	0.0153	0.2163	1.7246	0.1978
2	12:24:19	0.2984	0.3411	0.3056	2.2346	0.0212	0.2618	1.4277	0.2258
3	12:25:26	0.3006	0.3518	0.3600	2.3261	0.0205	0.2556	1.4657	0.2154
x		0.2994	0.3461	0.3418	2.2860	0.0190	0.2446	1.5393	0.2130
σ		0.0011	0.0054	0.0314	0.0468	0.0032	0.0247	0.1616	0.0141
%RSD		0.3731	1.5524	9.1835	2.0464	17.0637	10.0897	10.4956	6.6291
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:11	0.7244	0.7044	0.4180	0.7677	0.7193	92.8%	0.6222	0.0326
2	12:24:19	0.7275	0.7182	0.4746	0.8328	0.8211	90.5%	0.5475	0.0384
3	12:25:26	0.7715	0.7378	0.4708	0.9183	0.8051	89.1%	0.5672	-0.0826
x		0.7411	0.7201	0.4545	0.8396	0.7818	90.8%	0.5790	-0.0039
σ		0.0263	0.0168	0.0316	0.0755	0.0547	1.8%	0.0387	0.0682
%RSD		3.5499	2.3362	6.9617	8.9925	7.0000	2.0	6.6865	1769.4264
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:11	-0.3919	0.3594	93.3%	1.2652	1.2742	1.2398	93.4%	0.0006
2	12:24:19	-0.6925	0.1449	92.2%	1.2841	1.3452	1.3002	91.8%	0.0026
3	12:25:26	-0.1873	0.2817	90.2%	1.2858	1.3001	1.3607	90.2%	-0.0014
x		-0.4239	0.2620	91.9%	1.2783	1.3065	1.3002	91.8%	0.0006
σ		0.2541	0.1086	1.6%	0.0114	0.0360	0.0604	1.6%	0.0020
%RSD		59.9415	41.4390	1.7	0.8947	2.7527	4.6467	1.8	323.3393
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:11	0.0009	0.0075	0.0040	0.0029	93.9%	0.0033	0.0009	0.0135
2	12:24:19	0.0029	0.0021	0.0055	0.0051	93.3%	-0.0103	0.0105	-0.0091
3	12:25:26	0.0008	0.0067	0.0037	0.0044	93.7%	-0.0206	-0.0122	-0.0272
x		0.0015	0.0054	0.0044	0.0041	93.6%	-0.0092	-0.0003	-0.0076
σ		0.0012	0.0029	0.0009	0.0012	0.3%	0.0120	0.0114	0.0204
%RSD		77.4481	52.8972	21.5520	27.9117	0.3	130.8780	4254.3983	268.2574
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:11	0.0467	0.0427	9.5896	9.5447	9.6507	96.7%	-0.0034	-0.0059
2	12:24:19	0.0441	0.0416	9.5242	9.8204	9.6840	97.2%	-0.0027	-0.0039
3	12:25:26	0.0459	0.0427	9.6745	9.7166	9.6083	97.4%	-0.0036	-0.0017
x		0.0455	0.0423	9.5961	9.6939	9.6476	97.1%	-0.0032	-0.0038
σ		0.0013	0.0006	0.0754	0.1392	0.0379	0.3%	0.0005	0.0021
%RSD		2.9494	1.5171	0.7855	1.4362	0.3933	0.4	14.0010	54.6170
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:23:11	0.0288	0.0230	0.0226	-0.0152	97.5%	0.0981		
2	12:24:19	0.0295	0.0250	0.0234	-0.0126	99.8%	0.0957		
3	12:25:26	0.0246	0.0235	0.0240	-0.0156	99.8%	0.0981		
x		0.0276	0.0239	0.0234	-0.0145	99.0%	0.0973		
σ		0.0027	0.0010	0.0007	0.0016	1.3%	0.0014		
%RSD		9.6568	4.1912	2.9810	11.0151	1.4	1.4180		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:06	96.8%	21.3724	24.3139	24.7675	79.0436	25.7506	24.7217	55.5704
2	12:33:13	91.0%	20.9743	26.5607	24.4892	80.0829	29.1961	25.4116	55.4388
3	12:34:20	89.9%	21.0325	26.4122	25.7523	78.3148	36.5089	25.1214	55.6169
X		92.6%	21.1264	25.7622	25.0030	79.1471	30.4852	25.0849	55.5421
σ		3.7%	0.2150	1.2565	0.6637	0.8885	5.4938	0.3464	0.0924
%RSD		4.0	1.0179	4.8775	2.6544	1.1226	18.0213	1.3810	0.1663
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:06	19.9936	20.4708	20.8385	22.4533	20.0427	20.5671	21.7626	20.3645
2	12:33:13	20.0024	20.0911	19.9306	22.5857	20.0246	20.4952	20.7481	19.8451
3	12:34:20	19.7374	19.8092	20.3185	22.3098	19.8907	20.1904	21.8072	19.5786
X		19.9111	20.1237	20.3625	22.4496	19.9860	20.4176	21.4393	19.9294
σ		0.1506	0.3320	0.4555	0.1380	0.0830	0.2000	0.5990	0.3997
%RSD		0.7561	1.6498	2.2370	0.6148	0.4155	0.9795	2.7939	2.0054
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:06	20.8215	21.0920	21.1260	21.0882	21.1408	92.6%	21.0765	20.3030
2	12:33:13	20.6994	20.7347	21.1736	21.7307	21.0415	90.2%	21.1936	19.0519
3	12:34:20	20.7871	20.6612	20.6867	22.1116	20.9998	90.7%	20.9653	20.4310
X		20.7693	20.8293	20.9954	21.6435	21.0607	91.2%	21.0785	19.9286
σ		0.0630	0.2305	0.2684	0.5172	0.0725	1.3%	0.1141	0.7620
%RSD		0.3032	1.1066	1.2786	2.3898	0.3441	1.4	0.5414	3.8235
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:06	19.8250	20.0262	93.0%	21.6041	21.4821	21.2492	94.5%	20.4128
2	12:33:13	20.4609	19.6991	91.8%	21.3686	22.0647	21.8174	92.9%	20.3274
3	12:34:20	19.2711	19.9367	91.6%	21.6584	21.9086	21.9580	92.6%	20.4583
X		19.8523	19.8873	92.1%	21.5437	21.8184	21.6749	93.3%	20.3995
σ		0.5954	0.1690	0.8%	0.1541	0.3016	0.3753	1.1%	0.0664
%RSD		2.9991	0.8499	0.8	0.7153	1.3822	1.7313	1.1	0.3257
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:06	20.3324	20.3427	20.3292	20.4139	95.0%	20.7423	20.9531	21.1699
2	12:33:13	20.3437	20.1172	20.3369	20.3751	94.9%	20.8218	21.1276	20.9371
3	12:34:20	20.2680	20.4035	20.4517	20.5183	94.6%	20.8823	21.2377	21.1103
X		20.3147	20.2878	20.3726	20.4358	94.8%	20.8155	21.1061	21.0724
σ		0.0409	0.1508	0.0686	0.0741	0.2%	0.0702	0.1435	0.1209
%RSD		0.2011	0.7435	0.3366	0.3624	0.2	0.3373	0.6798	0.5739
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:06	20.5302	20.3987	29.8646	30.1116	29.9771	97.0%	20.0660	20.1713
2	12:33:13	20.3088	20.2862	29.8733	29.6291	29.8878	98.4%	20.0265	20.0692
3	12:34:20	20.6418	20.4239	29.9489	29.7881	30.0398	97.9%	20.1887	20.2686
X		20.4936	20.3696	29.8956	29.8429	29.9682	97.8%	20.0938	20.1697
σ		0.1695	0.0733	0.0464	0.2459	0.0764	0.7%	0.0846	0.0997
%RSD		0.8269	0.3598	0.1551	0.8238	0.2549	0.7	0.4208	0.4943
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:32:06	20.2073	20.1435	20.1813	21.1513	98.8%	20.3862		
2	12:33:13	20.0037	19.9279	19.9621	20.9817	101.1%	20.3372		
3	12:34:20	20.1220	20.2533	20.1792	21.2337	101.3%	20.4590		
X		20.1110	20.1082	20.1075	21.1222	100.4%	20.3941		
σ		0.1023	0.1655	0.1259	0.1285	1.4%	0.0613		
%RSD		0.5085	0.8231	0.6262	0.6083	1.4	0.3006		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:34	95.0%	20.5916	23.4675	23.7837	82.8069	31.1677	23.8772	56.3397
2	12:43:41	88.8%	20.8251	26.2874	24.6336	83.9024	24.0889	23.0311	56.2738
3	12:44:48	87.6%	20.5191	24.8687	25.1484	80.2710	28.3664	24.1226	54.0948
x		90.4%	20.6453	24.8745	24.5219	82.3268	27.8743	23.6770	55.5694
σ		4.0%	0.1599	1.4099	0.6892	1.8627	3.5650	0.5726	1.2775
%RSD		4.4	0.7744	5.6682	2.8104	2.2625	12.7894	2.4184	2.2989
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:34	20.2531	20.3799	20.3607	22.3682	19.9322	20.8610	22.6318	20.6190
2	12:43:41	19.8551	19.7230	19.6551	22.4733	19.5838	20.7785	21.5734	20.2784
3	12:44:48	19.5626	19.6401	20.1838	22.0517	19.1505	20.2444	21.4579	20.0206
x		19.8902	19.9143	20.0665	22.2977	19.5555	20.6280	21.8877	20.3060
σ		0.3466	0.4053	0.3671	0.2195	0.3916	0.3347	0.6470	0.3002
%RSD		1.7425	2.0354	1.8293	0.9844	2.0024	1.6227	2.9560	1.4782
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:34	21.0371	21.3217	22.2549	22.5151	22.4711	90.4%	20.9251	20.2172
2	12:43:41	20.8305	20.9525	22.4320	21.4176	22.6224	88.2%	20.5182	20.8972
3	12:44:48	20.2689	20.1647	21.9137	22.1302	22.3675	88.9%	20.6189	19.6088
x		20.7122	20.8130	22.2002	22.0210	22.4870	89.1%	20.6874	20.2411
σ		0.3976	0.5910	0.2634	0.5569	0.1282	1.1%	0.2119	0.6445
%RSD		1.9195	2.8395	1.1866	2.5288	0.5701	1.3	1.0243	3.1843
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:34	18.7332	20.4004	91.7%	21.4594	21.6188	21.3915	93.2%	20.4745
2	12:43:41	19.6798	19.1758	91.5%	21.2562	21.5810	21.5646	92.0%	20.2783
3	12:44:48	18.7538	19.9887	89.9%	22.0840	22.4526	22.1119	90.1%	20.2965
x		19.0556	19.8550	91.1%	21.5999	21.8841	21.6894	91.7%	20.3498
σ		0.5407	0.6231	1.0%	0.4314	0.4926	0.3760	1.6%	0.1084
%RSD		2.8375	3.1385	1.1	1.9973	2.2511	1.7338	1.7	0.5327
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:34	20.2310	20.3301	20.1908	20.2962	94.3%	20.7820	20.9554	20.9913
2	12:43:41	20.0298	20.2235	20.1904	20.2184	93.7%	20.5211	20.6740	20.7234
3	12:44:48	20.0852	20.1615	20.2565	20.2762	93.9%	20.3630	20.5887	20.5480
x		20.1153	20.2384	20.2126	20.2636	94.0%	20.5554	20.7394	20.7542
σ		0.1039	0.0853	0.0381	0.0404	0.3%	0.2116	0.1919	0.2232
%RSD		0.5164	0.4215	0.1884	0.1994	0.3	1.0294	0.9254	1.0756
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:34	20.4619	20.3640	29.6701	29.8504	29.8542	96.7%	20.0160	20.1346
2	12:43:41	20.4272	20.3308	29.7982	29.7705	29.7941	98.5%	19.8751	19.8980
3	12:44:48	20.2825	20.3332	29.9420	29.8156	29.7092	98.3%	20.0072	20.0772
x		20.3905	20.3427	29.8034	29.8122	29.7858	97.8%	19.9661	20.0366
σ		0.0952	0.0185	0.1360	0.0400	0.0729	1.0%	0.0789	0.1234
%RSD		0.4667	0.0911	0.4564	0.1343	0.2446	1.0	0.3953	0.6159
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:42:34	20.0372	20.1610	20.1014	20.9398	98.8%	20.4068		
2	12:43:41	19.8669	20.0810	19.8900	20.5592	101.8%	20.0722		
3	12:44:48	19.9105	20.0688	19.9528	20.7352	101.8%	20.2541		
x		19.9382	20.1036	19.9814	20.7447	100.8%	20.2443		
σ		0.0885	0.0501	0.1086	0.1904	1.7%	0.1675		
%RSD		0.4437	0.2491	0.5433	0.9180	1.7	0.8274		

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Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:02	95.2%	-0.0152	3.6351	3.4356	19.2465	7.9801	0.8080	31.9795
2	12:54:09	90.9%	0.0011	3.5753	3.4250	18.6704	8.6052	0.9727	32.1305
3	12:55:16	88.0%	-0.0145	4.1940	3.7074	19.4944	5.1827	1.0895	33.6057
X		91.4%	-0.0095	3.8015	3.5227	19.1371	7.2560	0.9568	32.5719
σ		3.6%	0.0092	0.3413	0.1601	0.4228	1.8225	0.1414	0.8985
%RSD		4.0	96.8092	8.9774	4.5450	2.2091	25.1173	14.7814	2.7585
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:02	0.2258	0.1180	0.1083	0.7625	0.0004	0.1783	1.3526	0.1634
2	12:54:09	0.2355	0.1151	0.0778	0.7763	-0.0002	0.2114	1.9738	0.1455
3	12:55:16	0.2431	0.1472	0.0950	0.7804	0.0043	0.1814	1.0137	0.1769
X		0.2348	0.1267	0.0937	0.7731	0.0015	0.1904	1.4467	0.1619
σ		0.0087	0.0177	0.0153	0.0094	0.0024	0.0183	0.4870	0.0158
%RSD		3.6996	13.9997	16.3013	1.2152	162.0944	9.6048	33.6602	9.7281
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:02	0.7279	0.7629	2.0768	2.2829	2.2637	90.3%	0.4746	0.1245
2	12:54:09	0.7751	0.7831	1.9881	2.4160	2.2344	88.1%	0.5022	-0.0386
3	12:55:16	0.8082	0.7634	2.0089	2.5554	2.2001	87.8%	0.4271	0.0712
X		0.7704	0.7698	2.0246	2.4181	2.2327	88.7%	0.4680	0.0523
σ		0.0403	0.0115	0.0464	0.1363	0.0318	1.4%	0.0380	0.0831
%RSD		5.2359	1.4973	2.2908	5.6362	1.4245	1.6	8.1171	158.8577
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:02	-0.2688	0.2660	90.1%	1.3143	1.3155	1.3586	90.6%	0.0014
2	12:54:09	-0.2324	0.1332	89.8%	1.3258	1.3882	1.3347	91.1%	-0.0005
3	12:55:16	-0.5685	-0.0337	87.4%	1.3684	1.3645	1.3193	90.3%	-0.0001
X		-0.3566	0.1218	89.1%	1.3362	1.3561	1.3375	90.6%	0.0003
σ		0.1844	0.1501	1.5%	0.0285	0.0370	0.0198	0.4%	0.0010
%RSD		51.7242	123.2339	1.6	2.1322	2.7321	1.4831	0.4	373.0431
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:02	0.0006	0.0086	0.0044	0.0057	92.1%	0.0121	0.0411	0.0369
2	12:54:09	-0.0005	0.0086	0.0057	0.0068	91.8%	-0.0241	0.0104	0.0239
3	12:55:16	0.0015	0.0031	0.0028	0.0028	90.8%	-0.0206	0.0103	0.0081
X		0.0005	0.0067	0.0043	0.0051	91.6%	-0.0109	0.0206	0.0230
σ		0.0010	0.0031	0.0015	0.0020	0.7%	0.0200	0.0178	0.0144
%RSD		191.0444	46.4583	34.7243	40.1406	0.8	183.8014	86.3910	62.8034
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:02	0.0499	0.0432	8.9343	9.1634	8.9645	95.2%	-0.0061	-0.0046
2	12:54:09	0.0521	0.0436	9.1294	9.2498	9.0312	96.4%	-0.0042	-0.0063
3	12:55:16	0.0468	0.0451	9.3377	9.1827	9.1369	95.8%	-0.0050	-0.0072
X		0.0496	0.0439	9.1338	9.1986	9.0442	95.8%	-0.0051	-0.0060
σ		0.0027	0.0010	0.2017	0.0454	0.0869	0.6%	0.0010	0.0013
%RSD		5.3533	2.2643	2.2087	0.4931	0.9612	0.6	18.7764	22.0998
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:53:02	0.0125	0.0092	0.0102	-0.0147	96.5%	0.0860		
2	12:54:09	0.0135	0.0112	0.0098	-0.0153	99.3%	0.0888		
3	12:55:16	0.0120	0.0119	0.0131	-0.0155	99.2%	0.0880		
X		0.0126	0.0107	0.0110	-0.0152	98.3%	0.0876		
σ		0.0008	0.0014	0.0018	0.0004	1.6%	0.0015		
%RSD		6.0200	12.8929	16.0643	2.7083	1.6	1.6683		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:30	94.6%	20.7136	24.7209	25.1178	38.3158	30.3972	20.6478	52.5812
2	13:04:38	89.4%	20.7633	25.4588	25.2010	38.2387	23.1555	21.1600	53.5566
3	13:05:45	87.2%	20.9613	25.9174	26.3430	39.6327	27.0223	22.1210	54.4613
X		90.4%	20.8127	25.3657	25.5539	38.7291	26.8583	21.3096	53.5330
σ		3.8%	0.1311	0.6037	0.6846	0.7835	3.6236	0.7479	0.9402
%RSD		4.2	0.6297	2.3798	2.6791	2.0230	13.4916	3.5097	1.7564
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:30	19.0551	19.4207	20.1058	20.1943	19.3856	19.8968	21.4825	19.2180
2	13:04:38	19.4890	19.4946	19.8775	20.6489	19.6208	20.2112	24.5161	19.2525
3	13:05:45	20.1282	19.8816	20.0079	21.2763	19.9360	20.5789	21.8634	19.8319
X		19.5574	19.5990	19.9970	20.7065	19.6475	20.2289	22.6207	19.4341
σ		0.5398	0.2476	0.1145	0.5433	0.2762	0.3414	1.6525	0.3449
%RSD		2.7601	1.2631	0.5727	2.6238	1.4056	1.6877	7.3052	1.7748
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:30	20.5065	20.6644	22.0720	23.2292	21.9257	91.0%	20.2458	20.0772
2	13:04:38	20.8405	20.5317	22.3368	23.1746	22.1892	87.7%	21.0632	19.1182
3	13:05:45	21.1768	21.3975	23.4698	23.3510	23.4662	84.8%	21.2440	21.4230
X		20.8412	20.8645	22.6262	23.2516	22.5270	87.8%	20.8510	20.2061
σ		0.3351	0.4663	0.7425	0.0903	0.8239	3.1%	0.5319	1.1578
%RSD		1.6081	2.2350	3.2815	0.3885	3.6575	3.5	2.5507	5.7300
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:30	19.0185	19.1223	90.8%	21.0114	21.2362	21.3181	91.7%	20.1647
2	13:04:38	20.5530	19.1549	89.5%	21.5470	21.6992	21.7407	90.9%	20.4015
3	13:05:45	21.2740	19.8697	87.6%	21.8012	22.3382	22.1172	89.5%	20.3642
X		20.2819	19.3823	89.3%	21.4532	21.7579	21.7253	90.7%	20.3101
σ		1.1520	0.4224	1.6%	0.4032	0.5534	0.3998	1.1%	0.1273
%RSD		5.6798	2.1793	1.8	1.8793	2.5433	1.8401	1.3	0.6270
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:30	19.9132	19.9236	19.9722	20.0909	93.8%	20.5253	20.5098	20.6242
2	13:04:38	19.9942	20.2947	20.2062	20.0752	93.7%	20.6554	20.8203	20.7798
3	13:05:45	20.3416	20.6195	20.4533	20.5240	92.7%	20.9605	21.2692	21.0398
X		20.0830	20.2793	20.2106	20.2301	93.4%	20.7138	20.8664	20.8146
σ		0.2276	0.3482	0.2405	0.2547	0.6%	0.2234	0.3818	0.2100
%RSD		1.1332	1.7173	1.1902	1.2590	0.6	1.0783	1.8298	1.0087
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:30	20.1755	20.0173	29.0879	28.8783	28.7341	97.3%	19.7544	19.8111
2	13:04:38	20.3804	20.3088	28.9494	28.9727	29.1410	97.4%	20.0853	20.1584
3	13:05:45	20.7564	20.6330	29.6872	29.5717	29.4530	98.0%	20.2037	20.2556
X		20.4374	20.3197	29.2415	29.1409	29.1094	97.6%	20.0145	20.0750
σ		0.2946	0.3080	0.3921	0.3760	0.3605	0.4%	0.2329	0.2337
%RSD		1.4415	1.5158	1.3410	1.2904	1.2383	0.4	1.1637	1.1642
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:03:30	19.5857	19.5575	19.5887	20.4300	98.3%	19.9423		
2	13:04:38	20.1274	20.1393	20.0484	20.7445	99.8%	20.3934		
3	13:05:45	20.2871	20.3087	20.2778	21.1278	100.2%	20.6002		
X		20.0000	20.0018	19.9716	20.7674	99.4%	20.3119		
σ		0.3676	0.3940	0.3509	0.3495	1.0%	0.3364		
%RSD		1.8381	1.9699	1.7571	1.6828	1.0	1.6562		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:00	92.8%	20.8602	25.2159	24.2546	39.4270	23.6989	21.6213	52.5848
2	13:15:07	88.1%	20.5085	25.2102	23.9169	37.8522	22.3158	20.6323	52.0075
3	13:16:14	86.3%	21.1611	26.6103	25.2836	38.0865	25.5535	20.5348	52.9063
x		89.1%	20.8433	25.6788	24.4850	38.4552	23.8561	20.9295	52.4996
σ		3.4%	0.3266	0.8067	0.7119	0.8497	1.6246	0.6012	0.4555
%RSD		3.8	1.5670	3.1416	2.9075	2.2095	6.8098	2.8723	0.8675
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:00	19.5899	19.4081	19.9621	20.3743	19.2917	19.6208	19.4321	19.5561
2	13:15:07	18.8828	19.0806	20.1527	20.0837	18.9447	19.2342	19.4297	18.8947
3	13:16:14	19.6489	19.5438	19.6360	20.3859	19.5059	19.8225	19.3789	19.2505
x		19.3739	19.3442	19.9169	20.2813	19.2474	19.5591	19.4136	19.2338
σ		0.4263	0.2381	0.2613	0.1712	0.2832	0.2990	0.0301	0.3310
%RSD		2.2004	1.2308	1.3120	0.8440	1.4713	1.5285	0.1548	1.7210
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:00	20.2893	20.3860	22.4151	22.0424	22.5961	89.6%	20.7943	19.8251
2	13:15:07	19.9213	20.1485	21.5966	22.0621	22.3428	89.1%	19.8749	20.6298
3	13:16:14	20.4724	20.6966	22.5085	22.7677	22.4769	86.9%	21.1401	18.9302
x		20.2277	20.4103	22.1734	22.2907	22.4719	88.5%	20.6031	19.7950
σ		0.2807	0.2749	0.5017	0.4132	0.1267	1.4%	0.6539	0.8502
%RSD		1.3876	1.3468	2.2626	1.8535	0.5639	1.6	3.1737	4.2950
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:00	20.0992	19.1832	91.7%	21.4665	21.4298	21.2616	90.8%	20.0222
2	13:15:07	18.9416	19.1861	89.2%	21.5079	21.8132	21.6407	90.5%	20.1062
3	13:16:14	20.0855	20.3992	89.0%	22.2825	22.3698	22.1673	88.9%	20.4435
x		19.7088	19.5895	89.9%	21.7523	21.8709	21.6899	90.1%	20.1906
σ		0.6645	0.7012	1.5%	0.4596	0.4726	0.4548	1.0%	0.2230
%RSD		3.3714	3.5795	1.7	2.1129	2.1609	2.0970	1.1	1.1043
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:00	20.1581	20.0702	20.0064	19.9497	93.8%	20.3761	20.5720	20.6472
2	13:15:07	20.0512	20.2234	20.0690	20.1104	93.4%	20.5207	20.7462	20.6692
3	13:16:14	20.2988	20.6255	20.2599	20.2977	93.3%	20.5474	20.8493	20.6872
x		20.1694	20.3064	20.1118	20.1193	93.5%	20.4814	20.7225	20.6679
σ		0.1242	0.2868	0.1320	0.1742	0.3%	0.0922	0.1402	0.0201
%RSD		0.6157	1.4124	0.6565	0.8658	0.3	0.4501	0.6763	0.0971
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:00	20.1682	20.0809	28.7641	28.7400	28.9331	96.7%	19.9562	19.8811
2	13:15:07	20.2903	20.2570	28.7082	29.0328	28.8955	97.9%	19.9486	19.7933
3	13:16:14	20.5088	20.1765	28.9893	28.9795	29.0606	97.8%	20.1546	20.0809
x		20.3225	20.1715	28.8205	28.9175	28.9631	97.5%	20.0198	19.9184
σ		0.1725	0.0882	0.1488	0.1560	0.0865	0.7%	0.1168	0.1474
%RSD		0.8490	0.4370	0.5164	0.5393	0.2986	0.7	0.5834	0.7399
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:14:00	19.8691	19.7652	19.7778	20.5212	99.3%	20.0882		
2	13:15:07	19.8340	19.8567	19.8525	20.4733	101.9%	19.9910		
3	13:16:14	20.0908	20.0657	20.0399	20.7058	100.9%	20.3288		
x		19.9313	19.8958	19.8900	20.5668	100.7%	20.1360		
σ		0.1393	0.1540	0.1350	0.1228	1.3%	0.1739		
%RSD		0.6987	0.7742	0.6789	0.5970	1.3	0.8636		

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Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:29	96.7%	-0.0116	2.5843	2.4086	23.1433	11.7356	4.6042	70.9985
2	13:25:37	91.3%	-0.0009	2.2640	2.6175	22.8485	13.7048	4.8684	71.3357
3	13:26:44	89.6%	-0.0065	2.5884	2.4757	22.7709	10.7180	4.9110	72.9226
X		92.5%	-0.0063	2.4789	2.5006	22.9209	12.0528	4.7945	71.7522
σ		3.7%	0.0053	0.1861	0.1066	0.1965	1.5184	0.1662	1.0275
%RSD		4.0	84.1128	7.5075	4.2638	0.8572	12.5983	3.4660	1.4320
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:29	1.1631	0.6887	0.5415	0.4989	0.3541	2.8318	5.7124	8.0862
2	13:25:37	1.1285	0.7045	0.6623	0.4861	0.3663	2.8611	5.4825	8.7800
3	13:26:44	1.2335	0.7415	0.6761	0.5010	0.3734	2.8194	5.7429	9.8009
X		1.1750	0.7116	0.6266	0.4953	0.3646	2.8374	5.6460	8.8890
σ		0.0535	0.0271	0.0741	0.0080	0.0098	0.0214	0.1424	0.8626
%RSD		4.5545	3.8067	11.8215	1.6229	2.6907	0.7548	2.5218	9.7036
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:29	9.2940	5.3564	40.6222	39.5247	40.4454	86.1%	0.2745	0.0975
2	13:25:37	9.5130	5.6103	41.0413	40.3777	39.5795	83.9%	0.2240	0.0163
3	13:26:44	9.5672	5.5360	42.1642	39.7424	41.2675	80.7%	0.2761	0.1641
X		9.4581	5.5009	41.2759	39.8816	40.4308	83.6%	0.2582	0.0927
σ		0.1446	0.1305	0.7973	0.4432	0.8441	2.7%	0.0296	0.0740
%RSD		1.5290	2.3730	1.9316	1.1114	2.0878	3.3	11.4665	79.8924
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:29	-0.5354	0.1826	87.0%	24.6701	24.9702	25.1299	82.2%	-0.0001
2	13:25:37	0.0519	-0.0831	85.8%	24.7497	25.5641	25.5017	81.4%	-0.0001
3	13:26:44	0.2237	0.2395	83.6%	25.7094	26.0948	26.0409	79.9%	0.0031
X		-0.0866	0.1130	85.5%	25.0431	25.5430	25.5575	81.1%	0.0009
σ		0.3981	0.1722	1.7%	0.5784	0.5626	0.4581	1.2%	0.0019
%RSD		459.8071	152.4015	2.0	2.3097	2.2025	1.7924	1.5	197.7403
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:29	0.0012	0.0436	0.0235	0.0351	83.6%	-0.0425	-0.0154	-0.0431
2	13:25:37	0.0017	0.0217	0.0212	0.0279	83.3%	-0.0551	-0.0383	-0.0450
3	13:26:44	0.0001	0.0333	0.0303	0.0279	82.3%	-0.0517	-0.0462	-0.0464
X		0.0010	0.0329	0.0250	0.0303	83.1%	-0.0498	-0.0333	-0.0449
σ		0.0008	0.0110	0.0047	0.0042	0.7%	0.0065	0.0160	0.0017
%RSD		84.2923	33.4649	18.8189	13.7305	0.8	13.0567	48.1450	3.7293
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:29	0.1591	0.1761	0.7049	0.6843	0.6914	88.6%	0.0037	0.0047
2	13:25:37	0.1586	0.1640	0.7196	0.6889	0.6974	89.0%	0.0062	0.0032
3	13:26:44	0.1583	0.1669	0.7675	0.7068	0.7200	89.1%	0.0028	0.0034
X		0.1586	0.1690	0.7307	0.6933	0.7029	88.9%	0.0042	0.0037
σ		0.0004	0.0064	0.0327	0.0119	0.0151	0.3%	0.0018	0.0009
%RSD		0.2577	3.7598	4.4784	1.7125	2.1417	0.3	42.0574	22.7630
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:24:29	0.3655	0.3353	0.3506	0.0390	90.3%	-0.0096		
2	13:25:37	0.3534	0.3367	0.3478	0.0423	90.6%	-0.0086		
3	13:26:44	0.3746	0.3666	0.3590	0.0410	90.3%	-0.0096		
X		0.3645	0.3462	0.3525	0.0408	90.4%	-0.0093		
σ		0.0106	0.0177	0.0058	0.0017	0.2%	0.0006		
%RSD		2.9149	5.1015	1.6504	4.0868	0.2	5.9527		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:58	97.1%	26.4623	25.3380	25.5775	25.4755	25.1197	25.2222	24.8362
2	13:36:05	92.6%	26.1004	25.5308	25.6051	24.6812	29.9117	24.3604	25.0487
3	13:37:12	89.8%	26.3839	28.1120	26.2358	25.3026	24.3086	26.3041	25.6230
x		93.2%	26.3155	26.3270	25.8061	25.1531	26.4467	25.2956	25.1693
σ		3.7%	0.1904	1.5489	0.3724	0.4177	3.0281	0.9739	0.4070
%RSD		3.9	0.7234	5.8834	1.4429	1.6607	11.4498	3.8501	1.6171
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:58	24.6842	24.7451	25.2566	24.8895	24.7900	25.3785	25.7676	25.4014
2	13:36:05	24.5859	24.7155	25.2211	24.9333	24.8412	24.9599	24.7083	25.3338
3	13:37:12	24.9713	25.1490	25.4055	25.5091	25.0903	25.4584	26.0886	25.9161
x		24.7471	24.8699	25.2944	25.1106	24.9072	25.2656	25.5215	25.5504
σ		0.2003	0.2422	0.0978	0.3458	0.1606	0.2678	0.7223	0.3185
%RSD		0.8093	0.9738	0.3868	1.3771	0.6450	1.0598	2.8302	1.2465
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:58	25.0513	25.5042	25.5215	26.3381	25.8903	91.9%	25.6067	24.4540
2	13:36:05	25.4135	25.2880	25.9824	25.6404	25.8160	89.2%	26.0272	25.3345
3	13:37:12	25.2603	25.4818	26.0348	25.6976	26.4942	88.0%	26.1119	25.8535
x		25.2417	25.4247	25.8462	25.8920	26.0668	89.7%	25.9153	25.2140
σ		0.1818	0.1189	0.2824	0.3874	0.3720	2.0%	0.2705	0.7075
%RSD		0.7202	0.4677	1.0927	1.4961	1.4270	2.2	1.0440	2.8059
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:58	25.0730	24.3070	92.5%	24.8862	25.4216	25.3989	93.1%	25.4997
2	13:36:05	25.4045	26.1139	91.0%	25.5902	25.8731	25.7504	91.5%	25.5423
3	13:37:12	25.8326	25.0426	89.2%	25.8712	26.0462	26.2851	91.7%	25.6563
x		25.4367	25.1545	90.9%	25.4492	25.7803	25.8114	92.1%	25.5661
σ		0.3808	0.9086	1.6%	0.5074	0.3225	0.4463	0.9%	0.0810
%RSD		1.4972	3.6121	1.8	1.9940	1.2508	1.7290	0.9	0.3166
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:58	25.3557	25.6103	25.4259	25.7374	93.9%	25.4363	25.4702	25.4294
2	13:36:05	25.4108	25.5660	25.5565	25.3172	94.4%	25.1800	25.4715	25.2346
3	13:37:12	25.3428	25.6322	25.4813	25.3747	94.8%	25.1076	25.3500	25.0635
x		25.3698	25.6028	25.4879	25.4764	94.4%	25.2413	25.4306	25.2425
σ		0.0361	0.0337	0.0655	0.2278	0.5%	0.1727	0.0698	0.1831
%RSD		0.1424	0.1317	0.2570	0.8941	0.5	0.6842	0.2744	0.7252
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:58	25.7185	25.4007	25.4418	25.2053	25.3147	95.9%	25.2766	25.3607
2	13:36:05	25.4437	25.3977	25.2567	25.2125	25.0257	98.6%	25.1771	25.1594
3	13:37:12	25.6020	25.3253	24.9523	25.0833	24.9919	97.5%	25.2541	25.3698
x		25.5881	25.3746	25.2169	25.1670	25.1108	97.3%	25.2359	25.2967
σ		0.1379	0.0427	0.2471	0.0726	0.1774	1.4%	0.0522	0.1189
%RSD		0.5391	0.1682	0.9800	0.2885	0.7064	1.4	0.2067	0.4701
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:34:58	25.3700	25.3071	25.2999	25.3062	97.8%	25.2555		
2	13:36:05	25.0777	25.1698	25.0470	25.0049	101.3%	25.2115		
3	13:37:12	25.4288	25.4003	25.3977	25.3352	101.2%	25.3726		
x		25.2922	25.2924	25.2482	25.2154	100.1%	25.2799		
σ		0.1880	0.1159	0.1810	0.1829	2.0%	0.0833		
%RSD		0.7435	0.4583	0.7170	0.7254	2.0	0.3294		



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Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:55:53	95.4%	-0.0001	0.0465	-0.1400	-0.0225	4.0753	-0.0551	0.0071
2	13:57:00	90.5%	-0.0108	-0.1300	-0.1662	-0.0227	1.2890	-0.0023	-0.0018
3	13:58:08	88.7%	-0.0186	-0.0274	-0.1766	-0.0305	0.7974	0.0507	-0.0086
x		91.6%	-0.0098	-0.0370	-0.1609	-0.0252	2.0539	-0.0022	-0.0011
σ		3.5%	0.0093	0.0886	0.0188	0.0046	1.7678	0.0529	0.0079
%RSD		3.8	94.6911	239.7495	11.7063	18.0995	86.0692	2369.9592	729.2294
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:55:53	0.0054	0.0073	-0.0049	0.0009	-0.0096	-0.0026	-0.1441	0.3733
2	13:57:00	0.0027	0.0101	0.0051	-0.0018	-0.0102	-0.0137	0.3346	0.4442
3	13:58:08	-0.0112	-0.0303	0.0120	-0.0007	-0.0069	-0.0049	0.2546	0.4339
x		-0.0010	-0.0043	0.0041	-0.0005	-0.0089	-0.0071	0.1484	0.4171
σ		0.0089	0.0225	0.0085	0.0014	0.0017	0.0059	0.2564	0.0383
%RSD		874.8249	525.1179	208.1381	258.6249	19.3490	82.8645	172.8158	9.1880
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:55:53	0.0040	-0.0034	-0.0045	-0.0201	0.0162	90.6%	0.0537	-0.1468
2	13:57:00	0.0043	0.0091	-0.0081	0.0066	-0.0055	88.9%	0.1297	-0.1875
3	13:58:08	0.0060	0.0073	-0.0106	-0.0018	0.0084	87.6%	0.0275	-0.0586
x		0.0047	0.0043	-0.0078	-0.0051	0.0064	89.0%	0.0703	-0.1310
σ		0.0011	0.0068	0.0031	0.0137	0.0110	1.5%	0.0531	0.0659
%RSD		22.9353	156.4650	39.4903	266.5496	173.0806	1.7	75.6022	50.2884
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:55:53	-0.1063	0.0721	90.3%	-0.0042	0.0084	-0.0039	91.6%	0.0003
2	13:57:00	-0.3174	0.2984	89.7%	0.0045	0.0051	-0.0066	91.4%	-0.0012
3	13:58:08	-0.1716	0.0126	89.3%	-0.0028	0.0262	-0.0024	90.2%	-0.0016
x		-0.1984	0.1277	89.8%	-0.0009	0.0133	-0.0043	91.1%	-0.0008
σ		0.1081	0.1508	0.5%	0.0047	0.0114	0.0021	0.7%	0.0010
%RSD		54.4757	118.0907	0.6	545.1492	85.8316	49.4204	0.8	122.9522
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:55:53	0.0006	-0.0006	-0.0005	0.0009	91.2%	-0.0043	-0.0026	0.0153
2	13:57:00	0.0015	-0.0006	-0.0005	0.0027	91.6%	-0.0413	0.0234	0.0023
3	13:58:08	0.0019	-0.0006	-0.0032	0.0013	91.2%	-0.0540	-0.0030	-0.0244
x		0.0013	-0.0006	-0.0014	0.0017	91.3%	-0.0332	0.0059	-0.0023
σ		0.0007	0.0000	0.0015	0.0010	0.3%	0.0259	0.0151	0.0203
%RSD		51.6263	0.0000	108.3360	58.3055	0.3	77.8848	255.2056	894.2867
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:55:53	0.0015	-0.0006	-0.0084	-0.0031	-0.0065	94.8%	-0.0074	-0.0088
2	13:57:00	0.0009	-0.0006	-0.0025	-0.0072	0.0005	95.2%	-0.0078	-0.0071
3	13:58:08	0.0010	0.0001	-0.0000	-0.0085	-0.0052	95.2%	-0.0087	-0.0085
x		0.0011	-0.0004	-0.0037	-0.0063	-0.0037	95.1%	-0.0079	-0.0081
σ		0.0003	0.0004	0.0043	0.0028	0.0037	0.3%	0.0007	0.0009
%RSD		27.5666	108.2057	117.4705	45.0014	100.0882	0.3	8.4793	10.7115
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:55:53	-0.0059	-0.0043	-0.0052	-0.0168	95.3%	-0.0067		
2	13:57:00	-0.0041	-0.0077	-0.0065	-0.0168	97.2%	-0.0085		
3	13:58:08	-0.0063	-0.0055	-0.0056	-0.0164	97.8%	-0.0066		
x		-0.0054	-0.0058	-0.0058	-0.0167	96.7%	-0.0073		
σ		0.0012	0.0017	0.0006	0.0002	1.3%	0.0011		
%RSD		21.6098	29.7859	10.9764	1.3853	1.3	14.4470		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:01:07	95.1%	0.0000	35.2901	36.7061	176.2136	124.1574	55.9414	563.7146
2	14:02:14	90.3%	-0.0147	36.9206	35.3978	171.2014	119.4638	55.8499	554.0719
3	14:03:22	88.0%	-0.0083	38.6832	37.6942	173.9544	127.8580	56.4595	566.2017
X		91.1%	-0.0077	36.9646	36.5994	173.7898	123.8264	56.0836	561.3294
σ		3.7%	0.0074	1.6970	1.1519	2.5102	4.2069	0.3287	6.4070
%RSD		4.0	96.4715	4.5908	3.1473	1.4444	3.3974	0.5861	1.1414
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:01:07	9.9050	1.4073	1.5286	8.3817	0.2230	2.7177	24.0503	2.9544
2	14:02:14	9.6483	1.3587	1.5043	8.2046	0.2276	2.6292	21.1169	2.7925
3	14:03:22	9.8018	1.3753	1.4713	8.4309	0.2270	2.7397	18.4757	2.8707
X		9.7850	1.3804	1.5014	8.3391	0.2259	2.6955	21.2143	2.8726
σ		0.1291	0.0247	0.0288	0.1190	0.0025	0.0584	2.7886	0.0809
%RSD		1.3198	1.7890	1.9171	1.4275	1.0941	2.1683	13.1449	2.8180
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:01:07	21.3275	21.5714	58.7744	65.5355	63.8706	88.1%	2.5175	1.0230
2	14:02:14	21.2132	21.1686	58.3357	63.9934	63.1831	87.2%	2.2511	1.3987
3	14:03:22	21.8147	21.6091	59.3298	65.5039	63.2924	84.1%	2.4593	1.0307
X		21.4518	21.4497	58.8133	65.0110	63.4487	86.5%	2.4093	1.1508
σ		0.3194	0.2441	0.4982	0.8814	0.3695	2.1%	0.1400	0.2147
%RSD		1.4890	1.1382	0.8470	1.3557	0.5823	2.4	5.8120	18.6576
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:01:07	0.4907	1.3685	89.8%	4.8395	4.9121	5.0218	86.8%	0.0027
2	14:02:14	0.3078	1.0763	89.1%	4.8291	4.9301	4.9100	87.1%	0.0032
3	14:03:22	0.4578	1.2131	87.4%	4.9026	5.1546	5.0039	86.2%	0.0043
X		0.4188	1.2193	88.7%	4.8570	4.9989	4.9785	86.7%	0.0034
σ		0.0975	0.1462	1.2%	0.0398	0.1351	0.0600	0.5%	0.0008
%RSD		23.2875	11.9888	1.4	0.8190	2.7025	1.2062	0.5	24.2863
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:01:07	0.0053	0.0411	0.0404	0.0456	89.1%	0.0806	0.1098	0.1005
2	14:02:14	0.0048	0.0362	0.0425	0.0438	89.4%	0.0539	0.0969	0.0859
3	14:03:22	0.0026	0.0364	0.0331	0.0372	89.0%	0.0356	0.0628	0.0661
X		0.0042	0.0379	0.0387	0.0422	89.2%	0.0567	0.0898	0.0841
σ		0.0014	0.0027	0.0050	0.0044	0.3%	0.0227	0.0243	0.0173
%RSD		34.2123	7.2531	12.7986	10.4525	0.3	39.9720	27.0129	20.5351
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:01:07	1.0247	1.0271	207.0954	207.4090	215.3982	94.1%	0.0177	0.0214
2	14:02:14	1.0126	0.9506	204.2172	205.5791	212.8739	95.6%	0.0209	0.0227
3	14:03:22	0.9991	1.0133	204.9552	205.5648	214.6876	95.0%	0.0236	0.0211
X		1.0121	0.9970	205.4226	206.1843	214.3199	94.9%	0.0207	0.0218
σ		0.0128	0.0408	1.4950	1.0607	1.3017	0.7%	0.0030	0.0009
%RSD		1.2642	4.0931	0.7278	0.5144	0.6074	0.8	14.3765	3.9625
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:01:07	0.7044	0.6606	0.6845	-0.0077	96.5%	0.2946		
2	14:02:14	0.7155	0.6502	0.6779	-0.0034	98.1%	0.2812		
3	14:03:22	0.6979	0.6668	0.6800	-0.0081	98.8%	0.2904		
X		0.7059	0.6592	0.6808	-0.0064	97.8%	0.2887		
σ		0.0089	0.0084	0.0033	0.0026	1.2%	0.0069		
%RSD		1.2590	1.2751	0.4896	40.2913	1.2	2.3848		

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Run	Time	6Li ppb	9Be ppb	10B ppb	11B ppb	27Al ppb	46Ti ppb	47Ti ppb	48Ti ppb
1	14:11:37	91.1%	-0.0168	171.9834	166.7794	21.3592	16.3831	2.8559	107.2950
2	14:12:45	85.4%	-0.0099	173.8149	173.1318	21.3163	16.7967	2.9902	110.9457
3	14:13:52	84.3%	-0.0033	177.1271	175.4147	21.4255	26.8854	2.8157	110.4037
x		86.9%	-0.0100	174.3085	171.7753	21.3670	20.0217	2.8873	109.5481
σ		3.7%	0.0068	2.6071	4.4746	0.0550	5.9477	0.0914	1.9700
%RSD		4.2	67.5370	1.4957	2.6049	0.2574	29.7062	3.1647	1.7983
Run	Time	51V ppb	52Cr ppb	53Cr ppb	55Mn ppb	59Co ppb	60Ni ppb	61Ni ppb	62Ni ppb
1	14:11:37	0.8749	0.3709	0.5172	55.0192	0.1638	1.4119	5.9368	1.4560
2	14:12:45	0.8553	0.3555	0.5399	55.9879	0.1769	1.3229	6.0279	1.5386
3	14:13:52	0.9351	0.3540	0.4581	55.2813	0.1574	1.2829	5.5170	1.6254
x		0.8884	0.3601	0.5051	55.4295	0.1660	1.3392	5.8272	1.5400
σ		0.0416	0.0093	0.0422	0.5011	0.0099	0.0661	0.2725	0.0847
%RSD		4.6837	2.5893	8.3622	0.9040	5.9672	4.9331	4.6757	5.5000
Run	Time	63Cu ppb	65Cu ppb	66Zn ppb	67Zn ppb	68Zn ppb	71Ga ppb	75As ppb	77Se ppb
1	14:11:37	13.9050	13.7035	40.7372	39.4038	41.1130	85.0%	1.1424	0.1242
2	14:12:45	13.8990	13.4855	41.3378	39.8759	41.2381	81.6%	1.0054	0.2493
3	14:13:52	13.5516	13.4012	40.8092	39.4705	40.4591	81.3%	1.1487	0.0713
x		13.7852	13.5300	40.9614	39.5834	40.9367	82.7%	1.0988	0.1482
σ		0.2024	0.1560	0.3279	0.2555	0.4183	2.0%	0.0810	0.0914
%RSD		1.4680	1.1531	0.8006	0.6456	1.0219	2.5	7.3672	61.6770
Run	Time	78Se ppb	82Se ppb	89Y ppb	95Mo ppb	97Mo ppb	98Mo ppb	103Rh ppb	107Ag ppb
1	14:11:37	0.1231	0.4515	85.9%	0.8173	0.7678	0.7854	84.6%	0.0377
2	14:12:45	-0.5413	0.2202	85.1%	0.7834	0.8384	0.8286	85.2%	0.0337
3	14:13:52	-1.0161	0.3707	82.7%	0.8320	0.8969	0.8200	82.7%	0.0445
x		-0.4781	0.3475	84.6%	0.8109	0.8344	0.8113	84.2%	0.0386
σ		0.5722	0.1174	1.7%	0.0249	0.0646	0.0229	1.3%	0.0055
%RSD		119.6930	33.7926	2.0	3.0693	7.7468	2.8205	1.6	14.1163
Run	Time	109Ag ppb	111Cd ppb	112Cd ppb	114Cd ppb	115In ppb	116Sn ppb	118Sn ppb	120Sn ppb
1	14:11:37	0.0361	0.0287	0.0349	0.0346	86.2%	0.0925	0.1700	0.1505
2	14:12:45	0.0308	0.0189	0.0286	0.0311	86.1%	0.0748	0.1520	0.1410
3	14:13:52	0.0347	0.0407	0.0270	0.0304	86.1%	0.0735	0.1398	0.1235
x		0.0339	0.0294	0.0302	0.0320	86.1%	0.0803	0.1539	0.1383
σ		0.0027	0.0109	0.0042	0.0023	0.1%	0.0106	0.0152	0.0137
%RSD		8.0631	37.1729	13.7982	7.0920	0.1	13.2350	9.8462	9.8904
Run	Time	121Sb ppb	123Sb ppb	135Ba ppb	137Ba ppb	138Ba ppb	175Lu ppb	203Tl ppb	205Tl ppb
1	14:11:37	0.3145	0.3297	2.0946	2.1692	2.1987	92.5%	-0.0053	-0.0061
2	14:12:45	0.3236	0.2931	2.1503	2.1696	2.1272	92.7%	-0.0047	-0.0063
3	14:13:52	0.3133	0.3255	2.1212	2.1543	2.1369	93.3%	-0.0040	-0.0070
x		0.3171	0.3161	2.1220	2.1644	2.1543	92.8%	-0.0047	-0.0065
σ		0.0056	0.0200	0.0279	0.0087	0.0388	0.4%	0.0006	0.0005
%RSD		1.7727	6.3288	1.3134	0.4020	1.8008	0.4	13.7017	7.5445
Run	Time	206Pb ppb	207Pb ppb	208Pb ppb	209Bi ppb	232Th ppb	238U ppb		
1	14:11:37	0.1422	0.1149	0.1294	0.1116	93.5%	-0.0050		
2	14:12:45	0.1272	0.1278	0.1265	0.1169	95.6%	-0.0043		
3	14:13:52	0.1401	0.1315	0.1260	0.1139	95.8%	-0.0053		
x		0.1365	0.1247	0.1273	0.1141	95.0%	-0.0049		
σ		0.0081	0.0087	0.0019	0.0027	1.3%	0.0005		
%RSD		5.9468	6.9872	1.4657	2.3496	1.3	10.8335		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:56	89.6%	-0.0106	170.3627	168.3766	7.6469	27.5183	2.4906	107.5620
2	14:19:04	83.4%	-0.0182	175.9407	175.0309	7.9806	21.4093	2.7534	110.5806
3	14:20:11	82.8%	-0.0138	175.7309	176.7610	7.7320	15.3915	2.7521	112.4959
x		85.3%	-0.0142	174.0114	173.3895	7.7865	21.4397	2.6654	110.2129
σ		3.7%	0.0038	3.1616	4.4266	0.1734	6.0634	0.1513	2.4874
%RSD		4.4	27.0403	1.8169	2.5530	2.2271	28.2814	5.6783	2.2569
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:56	0.8773	0.4243	0.6221	51.8863	0.1590	1.2977	5.2951	1.3867
2	14:19:04	0.8515	0.3738	0.7070	52.0469	0.1346	1.3594	5.4313	1.4978
3	14:20:11	0.8793	0.3553	0.6174	52.8354	0.1523	1.3846	5.7970	1.4626
x		0.8694	0.3845	0.6488	52.2562	0.1486	1.3472	5.5078	1.4490
σ		0.0155	0.0357	0.0504	0.5080	0.0126	0.0447	0.2595	0.0568
%RSD		1.7878	9.2900	7.7701	0.9722	8.4645	3.3193	4.7119	3.9213
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:56	12.0380	11.8671	38.8528	36.2417	38.5527	83.0%	1.0574	0.1782
2	14:19:04	12.1584	12.0156	39.6348	38.0162	39.6484	79.1%	0.9110	0.2885
3	14:20:11	12.2894	12.0273	40.1081	39.0168	39.7237	77.9%	1.2650	-0.0133
x		12.1620	11.9700	39.5319	37.7582	39.3082	80.0%	1.0778	0.1511
σ		0.1257	0.0893	0.6340	1.4054	0.6554	2.6%	0.1779	0.1527
%RSD		1.0338	0.7461	1.6037	3.7222	1.6674	3.3	16.5036	101.0452
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:56	-0.7901	0.3007	84.1%	0.7891	0.8466	0.8003	83.6%	0.0095
2	14:19:04	-0.2171	-0.3860	82.7%	0.7828	0.8456	0.8077	82.2%	0.0108
3	14:20:11	-0.5621	0.3954	82.0%	0.8319	0.8767	0.8041	81.6%	0.0103
x		-0.5231	0.1034	82.9%	0.8013	0.8563	0.8040	82.5%	0.0102
σ		0.2885	0.4265	1.1%	0.0268	0.0177	0.0037	1.0%	0.0006
%RSD		55.1478	412.5286	1.3	3.3390	2.0636	0.4634	1.2	6.1150
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:56	0.0112	0.0321	0.0298	0.0325	84.8%	0.1275	0.1699	0.1594
2	14:19:04	0.0081	0.0250	0.0285	0.0291	86.3%	0.0891	0.1644	0.1259
3	14:20:11	0.0092	0.0225	0.0284	0.0297	84.0%	0.0609	0.1597	0.1415
x		0.0095	0.0265	0.0289	0.0304	85.0%	0.0925	0.1646	0.1423
σ		0.0016	0.0050	0.0008	0.0018	1.2%	0.0335	0.0051	0.0167
%RSD		16.5384	18.6824	2.7373	5.9146	1.4	36.1674	3.0998	11.7549
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:56	0.3091	0.3051	1.9303	1.7828	1.8827	91.2%	-0.0073	-0.0070
2	14:19:04	0.3129	0.3246	1.9061	1.8153	1.8228	92.6%	-0.0061	-0.0073
3	14:20:11	0.3278	0.3140	1.8766	1.8909	1.8411	92.0%	-0.0062	-0.0081
x		0.3166	0.3145	1.9044	1.8297	1.8489	91.9%	-0.0065	-0.0075
σ		0.0099	0.0098	0.0269	0.0555	0.0307	0.7%	0.0007	0.0005
%RSD		3.1192	3.1053	1.4123	3.0313	1.6605	0.8	10.7178	7.1618
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:17:56	0.0932	0.0963	0.0962	0.0273	93.1%	-0.0073		
2	14:19:04	0.0954	0.0943	0.0946	0.0244	95.5%	-0.0075		
3	14:20:11	0.1048	0.0928	0.0937	0.0280	96.3%	-0.0073		
x		0.0978	0.0945	0.0948	0.0266	95.0%	-0.0074		
σ		0.0062	0.0017	0.0013	0.0019	1.7%	0.0001		
%RSD		6.3090	1.8232	1.3216	7.1744	1.7	1.2142		

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Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:06	88.4%	-0.0063	129.3537	128.2777	540.7682	24.0820	11.0922	121.3879
2	14:25:13	82.1%	-0.0072	134.0882	133.6216	548.4404	21.1757	8.5417	123.2792
3	14:26:20	80.7%	0.0065	137.0241	136.1113	549.0454	26.6748	9.8318	125.8834
X		83.8%	-0.0023	133.4887	132.6702	546.0847	23.9775	9.8219	123.5168
σ		4.1%	0.0077	3.8702	4.0026	4.6141	2.7510	1.2753	2.2571
%RSD		4.9	330.9270	2.8993	3.0169	0.8449	11.4734	12.9844	1.8274
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:06	2.6645	1.4899	1.5250	342.5957	0.4472	2.5240	8.0398	2.7126
2	14:25:13	2.7243	1.4805	1.4847	347.4823	0.4505	2.6376	6.6740	2.7670
3	14:26:20	2.6329	1.5183	1.5760	350.3183	0.4615	2.4585	6.8885	2.9478
X		2.6739	1.4962	1.5286	346.7988	0.4531	2.5400	7.2008	2.8092
σ		0.0464	0.0196	0.0457	3.9064	0.0075	0.0906	0.7345	0.1231
%RSD		1.7360	1.3130	2.9916	1.1264	1.6571	3.5681	10.2008	4.3832
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:06	67.2836	66.7670	112.6138	109.4350	111.4264	85.1%	2.4159	0.4885
2	14:25:13	67.3520	67.0547	115.0722	112.0115	113.9002	82.2%	2.4019	0.2395
3	14:26:20	67.3372	67.6333	115.5401	113.0352	113.2071	82.3%	2.4150	0.3764
X		67.3243	67.1517	114.4087	111.4939	112.8446	83.2%	2.4109	0.3681
σ		0.0360	0.4412	1.5719	1.8551	1.2762	1.7%	0.0078	0.1247
%RSD		0.0534	0.6571	1.3739	1.6638	1.1309	2.0	0.3243	33.8769
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:06	-0.5888	0.3184	89.6%	2.9129	3.0319	2.9263	84.4%	1.0630
2	14:25:13	-0.6724	0.3075	89.4%	2.9300	2.9456	2.9955	82.3%	1.0429
3	14:26:20	-0.4013	0.6401	87.7%	2.9478	3.1453	3.0279	82.8%	1.0495
X		-0.5542	0.4220	88.9%	2.9302	3.0409	2.9832	83.2%	1.0518
σ		0.1388	0.1890	1.0%	0.0175	0.1002	0.0519	1.1%	0.0102
%RSD		25.0443	44.7777	1.2	0.5962	3.2950	1.7404	1.3	0.9704
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:06	1.0290	0.1369	0.1334	0.1316	86.3%	0.1751	0.2604	0.2516
2	14:25:13	1.0301	0.1666	0.1450	0.1477	86.3%	0.1761	0.2594	0.2451
3	14:26:20	1.0372	0.1558	0.1490	0.1366	86.0%	0.1775	0.2097	0.2286
X		1.0321	0.1531	0.1425	0.1386	86.2%	0.1762	0.2432	0.2418
σ		0.0045	0.0150	0.0081	0.0083	0.2%	0.0012	0.0290	0.0119
%RSD		0.4323	9.8127	5.6786	5.9574	0.2	0.6926	11.9226	4.9057
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:06	0.5770	0.5890	22.5211	22.4802	22.5693	91.8%	-0.0025	-0.0025
2	14:25:13	0.5932	0.5685	22.7946	22.7077	22.8158	93.9%	-0.0032	-0.0023
3	14:26:20	0.5961	0.5985	22.7815	22.7983	22.7540	93.9%	0.0001	-0.0019
X		0.5888	0.5853	22.6991	22.6621	22.7131	93.2%	-0.0019	-0.0022
σ		0.0103	0.0154	0.1543	0.1639	0.1282	1.2%	0.0017	0.0003
%RSD		1.7557	2.6248	0.6797	0.7231	0.5646	1.3	91.6884	14.1055
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:24:06	2.8624	2.7550	2.8047	2.9916	94.4%	0.0936		
2	14:25:13	2.8494	2.7626	2.8092	3.0152	97.3%	0.0969		
3	14:26:20	2.8798	2.7480	2.7931	2.9938	97.4%	0.0973		
X		2.8639	2.7552	2.8023	3.0002	96.4%	0.0959		
σ		0.0152	0.0073	0.0083	0.0130	1.7%	0.0020		
%RSD		0.5323	0.2664	0.2977	0.4333	1.8	2.0978		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:31:43	87.1%	0.0147	175.5488	171.6923	781.4987	31.7016	21.4856	125.8220
2	14:32:50	81.2%	0.0197	172.2548	173.4357	766.3845	25.3998	16.4528	126.1885
3	14:33:57	80.1%	0.0090	181.9994	179.4463	768.9420	36.9148	15.9659	126.8428
x		82.8%	0.0145	176.6010	174.8581	772.2751	31.3387	17.9681	126.2844
σ		3.8%	0.0053	4.9568	4.0680	8.0897	5.7661	3.0560	0.5171
%RSD		4.6	36.8391	2.8068	2.3264	1.0475	18.3992	17.0078	0.4095
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:31:43	1.7220	1.6131	1.5878	67.1711	0.3705	2.5831	7.7469	2.9126
2	14:32:50	1.6967	1.6111	1.7280	66.8832	0.3486	2.5241	6.6141	2.6446
3	14:33:57	1.7933	1.6834	1.6430	67.3309	0.3884	2.5102	6.1729	2.9172
x		1.7373	1.6359	1.6529	67.1284	0.3692	2.5391	6.8446	2.8248
σ		0.0501	0.0412	0.0707	0.2269	0.0200	0.0387	0.8119	0.1561
%RSD		2.8832	2.5171	4.2747	0.3380	5.4052	1.5249	11.8626	5.5256
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:31:43	131.6641	132.9481	132.8896	128.8250	130.8938	83.4%	0.9956	0.2152
2	14:32:50	129.2960	129.6083	130.1694	125.9268	127.0814	82.2%	0.9375	0.5139
3	14:33:57	129.6981	130.3854	132.1241	126.4026	130.0982	81.0%	0.9277	0.2730
x		130.2194	130.9806	131.7277	127.0515	129.3578	82.2%	0.9536	0.3341
σ		1.2672	1.7477	1.4028	1.5542	2.0111	1.2%	0.0367	0.1584
%RSD		0.9731	1.3343	1.0649	1.2233	1.5547	1.4	3.8504	47.4183
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:31:43	-0.8790	0.3397	87.8%	0.4910	0.4808	0.5266	84.3%	0.0108
2	14:32:50	-0.3362	0.5813	86.7%	0.4690	0.5526	0.5233	82.5%	0.0156
3	14:33:57	-0.4214	0.2670	86.1%	0.5024	0.5203	0.5169	81.9%	0.0195
x		-0.5455	0.3960	86.9%	0.4875	0.5179	0.5223	82.9%	0.0153
σ		0.2919	0.1645	0.9%	0.0170	0.0360	0.0050	1.2%	0.0044
%RSD		53.5080	41.5400	1.0	3.4805	6.9451	0.9494	1.5	28.4257
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:31:43	0.0317	0.1345	0.2224	0.1782	84.9%	1.2448	1.6559	1.6011
2	14:32:50	0.0150	0.1341	0.2369	0.1875	86.2%	1.1298	1.5695	1.5638
3	14:33:57	0.0182	0.1550	0.2257	0.1870	85.5%	1.1273	1.6089	1.6078
x		0.0216	0.1412	0.2283	0.1843	85.5%	1.1673	1.6114	1.5909
σ		0.0089	0.0119	0.0076	0.0052	0.7%	0.0671	0.0432	0.0237
%RSD		41.1575	8.4513	3.3386	2.8308	0.8	5.7523	2.6833	1.4919
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:31:43	0.2126	0.2222	17.3835	17.3216	17.5032	92.3%	-0.0043	-0.0014
2	14:32:50	0.1971	0.1994	16.9113	17.2074	17.0152	93.2%	-0.0061	-0.0043
3	14:33:57	0.2057	0.2192	17.2124	17.4900	17.3233	92.6%	-0.0024	-0.0026
x		0.2051	0.2136	17.1691	17.3397	17.2806	92.7%	-0.0043	-0.0028
σ		0.0078	0.0124	0.2391	0.1421	0.2468	0.4%	0.0019	0.0015
%RSD		3.7819	5.7954	1.3926	0.8197	1.4281	0.5	44.2745	51.9845
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:31:43	1.5157	1.4546	1.5007	2.9178	93.9%	0.0929		
2	14:32:50	1.5619	1.4738	1.5034	2.9009	96.2%	0.0958		
3	14:33:57	1.4958	1.4926	1.4977	2.9181	96.0%	0.0983		
x		1.5244	1.4736	1.5006	2.9123	95.4%	0.0957		
σ		0.0339	0.0190	0.0028	0.0098	1.3%	0.0027		
%RSD		2.2253	1.2883	0.1888	0.3365	1.3	2.8419		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:37:07	84.4%	1.4823	38.2932	37.0217	375.7629	123.5547	124.8733	124.3237
2	14:38:14	79.7%	1.5401	36.5645	35.5631	365.8037	114.5061	122.3232	122.9356
3	14:39:22	77.0%	1.4680	37.1973	36.2799	371.4797	113.3991	124.2291	121.5202
x		80.4%	1.4968	37.3517	36.2882	371.0154	117.1533	123.8085	122.9265
σ		3.8%	0.0382	0.8746	0.7293	4.9958	5.5714	1.3261	1.4018
%RSD		4.7	2.5504	2.3416	2.0098	1.3465	4.7556	1.0711	1.1403
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:37:07	206.9383	77.7036	81.9261	3.1794	0.5694	11.3045	11.6080	18.6030
2	14:38:14	204.3017	76.7321	81.0944	3.1613	0.5524	11.2508	12.8988	19.1985
3	14:39:22	204.7699	76.6885	81.8778	3.1379	0.5584	11.0583	11.5059	19.2325
x		205.3366	77.0414	81.6328	3.1595	0.5601	11.2045	12.0042	19.0113
σ		1.4067	0.5739	0.4668	0.0208	0.0086	0.1295	0.7764	0.3540
%RSD		0.6851	0.7449	0.5719	0.6578	1.5331	1.1554	6.4674	1.8622
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:37:07	10.2772	2.5872	3.6339	6.5467	4.4529	90.7%	10.8325	3.5961
2	14:38:14	10.3208	2.5930	3.5385	6.1600	4.4976	87.6%	11.0412	3.4314
3	14:39:22	10.2399	2.6493	3.5653	5.7010	4.3207	86.6%	10.7248	3.1567
x		10.2793	2.6098	3.5792	6.1359	4.4237	88.3%	10.8662	3.3947
σ		0.0405	0.0343	0.0492	0.4234	0.0920	2.2%	0.1608	0.2220
%RSD		0.3937	1.3141	1.3750	6.9000	2.0802	2.5	1.4802	6.5389
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:37:07	-3.8932	0.6937	980.9%	4.5824	6.0999	6.6125	78.0%	0.0092
2	14:38:14	-3.2810	0.7361	968.2%	4.6559	6.0700	6.7088	75.9%	0.0114
3	14:39:22	-3.2323	0.5724	953.9%	4.6421	6.1241	6.7065	75.2%	0.0063
x		-3.4688	0.6674	967.7%	4.6268	6.0980	6.6759	76.4%	0.0090
σ		0.3683	0.0850	13.5%	0.0390	0.0271	0.0550	1.5%	0.0026
%RSD		10.6175	12.7335	1.4	0.8440	0.4451	0.8232	1.9	28.6520
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:37:07	0.0090	0.0474	0.0469	0.0461	81.3%	0.2446	-0.0031	0.0044
2	14:38:14	0.0071	0.0542	0.0324	0.0476	81.1%	0.1963	0.0146	0.0072
3	14:39:22	0.0070	0.0436	0.0361	0.0386	78.9%	0.1821	0.0102	0.0010
x		0.0077	0.0484	0.0385	0.0441	80.4%	0.2077	0.0072	0.0042
σ		0.0011	0.0054	0.0075	0.0048	1.3%	0.0328	0.0092	0.0031
%RSD		14.2569	11.1714	19.5161	10.9011	1.7	15.7901	127.6920	73.1052
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:37:07	0.1804	0.1997	29.4254	29.3720	29.5041	97.6%	-0.0065	-0.0054
2	14:38:14	0.1721	0.1836	29.2090	29.3153	29.4233	98.3%	-0.0072	-0.0063
3	14:39:22	0.2003	0.1872	29.5337	29.5553	30.2667	97.7%	-0.0042	-0.0064
x		0.1842	0.1901	29.3894	29.4142	29.7314	97.9%	-0.0060	-0.0060
σ		0.0145	0.0085	0.1653	0.1255	0.4653	0.4%	0.0016	0.0006
%RSD		7.8571	4.4534	0.5625	0.4266	1.5652	0.4	26.2087	9.1613
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:37:07	1.0940	1.0476	1.0414	0.0003	202.4%	2.7250		
2	14:38:14	1.0774	1.0459	1.0365	-0.0024	209.2%	2.6888		
3	14:39:22	1.1087	1.0313	1.0418	-0.0053	211.0%	2.6619		
x		1.0934	1.0416	1.0399	-0.0025	207.5%	2.6919		
σ		0.0157	0.0090	0.0030	0.0028	4.6%	0.0316		
%RSD		1.4363	0.8619	0.2858	111.5496	2.2	1.1754		

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User Pre-dilution: 1.000

Run	Time	6Li ppb	9Be ppb	10B ppb	11B ppb	27Al ppb	46Ti ppb	47Ti ppb	48Ti ppb
1	14:44:26	92.4%	-0.0169	1.1307	1.2909	0.0526	8.0014	-0.0847	0.1053
2	14:45:34	87.0%	-0.0185	1.2428	1.0726	0.1141	5.8228	0.0392	0.1040
3	14:46:41	86.4%	-0.0164	0.6415	0.9058	0.1014	12.9788	-0.0811	0.1141
x		88.6%	-0.0173	1.0050	1.0898	0.0894	8.9343	-0.0422	0.1078
σ		3.3%	0.0011	0.3198	0.1931	0.0325	3.6681	0.0705	0.0055
%RSD		3.7	6.4218	31.8154	17.7192	36.3302	41.0564	167.2188	5.1050
Run	Time	51V ppb	52Cr ppb	53Cr ppb	55Mn ppb	59Co ppb	60Ni ppb	61Ni ppb	62Ni ppb
1	14:44:26	0.0156	0.0008	0.2624	0.0030	-0.0113	0.0093	0.2131	2.5610
2	14:45:34	0.0213	0.0001	0.2292	0.0040	-0.0134	-0.0016	0.2463	2.6139
3	14:46:41	0.0064	-0.0210	0.1794	0.0050	-0.0119	0.0058	0.1771	2.4518
x		0.0144	-0.0067	0.2236	0.0040	-0.0122	0.0045	0.2121	2.5423
σ		0.0075	0.0124	0.0418	0.0010	0.0011	0.0056	0.0346	0.0827
%RSD		52.0811	185.6986	18.6841	25.2446	8.7134	123.9689	16.3103	3.2516
Run	Time	63Cu ppb	65Cu ppb	66Zn ppb	67Zn ppb	68Zn ppb	71Ga ppb	75As ppb	77Se ppb
1	14:44:26	0.1190	0.0138	0.0315	0.0425	0.0099	88.2%	0.0874	0.0270
2	14:45:34	0.0972	0.0021	0.0267	-0.0011	0.0274	85.0%	-0.0221	-0.0749
3	14:46:41	0.1010	0.0113	0.0438	0.0263	0.0388	85.6%	0.0098	0.0340
x		0.1057	0.0091	0.0340	0.0226	0.0254	86.3%	0.0250	-0.0046
σ		0.0117	0.0061	0.0088	0.0220	0.0145	1.7%	0.0563	0.0609
%RSD		11.0306	67.5987	25.9621	97.4065	57.2940	1.9	225.0290	1321.6436
Run	Time	78Se ppb	82Se ppb	89Y ppb	95Mo ppb	97Mo ppb	98Mo ppb	103Rh ppb	107Ag ppb
1	14:44:26	-0.1773	0.3025	87.8%	-0.0265	-0.0294	-0.0179	89.2%	-0.0022
2	14:45:34	-0.4185	-0.2224	86.7%	-0.0208	-0.0244	-0.0173	89.4%	-0.0033
3	14:46:41	0.1586	0.0275	86.4%	-0.0293	-0.0153	-0.0227	87.9%	-0.0026
x		-0.1457	0.0359	87.0%	-0.0255	-0.0231	-0.0193	88.8%	-0.0027
σ		0.2898	0.2626	0.8%	0.0043	0.0071	0.0030	0.8%	0.0006
%RSD		198.8960	732.0343	0.9	16.9774	30.9647	15.3180	0.9	20.4831
Run	Time	109Ag ppb	111Cd ppb	112Cd ppb	114Cd ppb	115In ppb	116Sn ppb	118Sn ppb	120Sn ppb
1	14:44:26	-0.0020	-0.0006	-0.0094	-0.0027	89.2%	-0.0983	-0.1198	-0.1326
2	14:45:34	-0.0023	-0.0006	-0.0076	-0.0039	90.2%	-0.1118	-0.1352	-0.1218
3	14:46:41	-0.0018	0.0004	-0.0072	-0.0039	90.0%	-0.1048	-0.1142	-0.1329
x		-0.0020	-0.0002	-0.0081	-0.0035	89.8%	-0.1049	-0.1231	-0.1291
σ		0.0002	0.0005	0.0012	0.0007	0.5%	0.0067	0.0108	0.0064
%RSD		11.3801	220.0947	14.9189	19.2652	0.6	6.4305	8.8169	4.9223
Run	Time	121Sb ppb	123Sb ppb	135Ba ppb	137Ba ppb	138Ba ppb	175Lu ppb	203Tl ppb	205Tl ppb
1	14:44:26	-0.0014	-0.0016	-0.0093	-0.0062	-0.0104	92.8%	-0.0058	-0.0056
2	14:45:34	-0.0004	-0.0019	-0.0058	-0.0043	-0.0064	94.1%	-0.0070	-0.0077
3	14:46:41	-0.0001	-0.0009	-0.0082	0.0045	-0.0062	94.4%	-0.0079	-0.0074
x		-0.0006	-0.0015	-0.0078	-0.0020	-0.0077	93.8%	-0.0069	-0.0069
σ		0.0007	0.0005	0.0018	0.0057	0.0024	0.9%	0.0010	0.0011
%RSD		113.3230	35.3983	22.7437	289.5608	30.9011	0.9	14.7380	16.2048
Run	Time	206Pb ppb	207Pb ppb	208Pb ppb	209Bi ppb	232Th ppb	238U ppb		
1	14:44:26	-0.0057	-0.0086	-0.0075	-0.0181	94.1%	-0.0089		
2	14:45:34	-0.0047	-0.0072	-0.0079	-0.0194	96.7%	-0.0090		
3	14:46:41	-0.0063	-0.0082	-0.0076	-0.0193	96.6%	-0.0086		
x		-0.0056	-0.0080	-0.0077	-0.0190	95.8%	-0.0088		
σ		0.0008	0.0007	0.0002	0.0008	1.5%	0.0002		
%RSD		14.7725	9.1141	2.5761	3.9778	1.5	2.4942		



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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:36	94.1%	20.6106	2.3960	2.0208	19.6018	0.6290	0.4201	0.0832
2	14:50:44	89.0%	20.6532	2.4945	2.0580	19.7705	2.2309	0.2352	0.0745
3	14:51:51	87.2%	20.9083	2.1194	1.9849	19.5720	1.5703	0.2404	0.0611
x		90.1%	20.7240	2.3366	2.0212	19.6481	1.4767	0.2986	0.0729
σ		3.6%	0.1610	0.1945	0.0365	0.1071	0.8050	0.1053	0.0111
%RSD		4.0	0.7769	8.3238	1.8073	0.5448	54.5125	35.2641	15.2845
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:36	19.5160	19.9947	19.9334	19.9427	19.8190	19.8719	19.4421	21.6274
2	14:50:44	19.3881	19.4318	19.4984	19.8450	19.5922	19.7315	19.2551	21.5230
3	14:51:51	19.4133	19.4740	19.6206	19.7324	19.3572	19.6442	19.6217	21.8006
x		19.4391	19.6335	19.6842	19.8400	19.5895	19.7492	19.4396	21.6503
σ		0.0678	0.3135	0.2244	0.1053	0.2309	0.1149	0.1833	0.1402
%RSD		0.3486	1.5970	1.1398	0.5305	1.1787	0.5817	0.9430	0.6476
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:36	20.0983	20.1098	20.7865	20.7872	20.6248	88.2%	20.6367	18.4195
2	14:50:44	19.7606	20.3630	20.4810	20.4632	20.5331	87.2%	19.8595	19.3109
3	14:51:51	19.8692	20.1329	20.7924	20.6826	20.4863	86.5%	19.5418	19.2901
x		19.9094	20.2019	20.6866	20.6443	20.5481	87.3%	20.0127	19.0068
σ		0.1724	0.1400	0.1781	0.1653	0.0704	0.8%	0.5633	0.5088
%RSD		0.8660	0.6931	0.8609	0.8009	0.3427	1.0	2.8148	2.6768
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:36	19.1257	20.5058	88.5%	20.1812	20.3366	20.4396	90.4%	20.2306
2	14:50:44	19.2465	19.9109	88.1%	20.3385	20.5990	20.3889	90.1%	20.1865
3	14:51:51	19.1192	18.7501	87.9%	20.3988	20.8356	20.7075	89.4%	20.3644
x		19.1638	19.7223	88.2%	20.3062	20.5904	20.5120	90.0%	20.2605
σ		0.0717	0.8929	0.3%	0.1124	0.2496	0.1712	0.5%	0.0926
%RSD		0.3740	4.5275	0.3	0.5533	1.2124	0.8346	0.6	0.4571
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:36	20.2071	20.3466	19.4743	20.0484	90.7%	6.0414	-0.0900	-0.0874
2	14:50:44	20.0100	20.5997	19.0846	19.7889	91.1%	5.9010	-0.0828	-0.0996
3	14:51:51	20.1838	20.4693	19.2681	20.1313	90.4%	5.8595	-0.0999	-0.1007
x		20.1337	20.4718	19.2757	19.9895	90.7%	5.9339	-0.0909	-0.0959
σ		0.1077	0.1265	0.1949	0.1786	0.3%	0.0953	0.0086	0.0074
%RSD		0.5351	0.6181	1.0112	0.8936	0.4	1.6064	9.4117	7.7014
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:36	20.4498	20.0110	20.0052	20.2407	19.9066	94.0%	19.8545	20.0308
2	14:50:44	20.4986	20.1798	19.8270	20.2740	19.9021	95.5%	20.0636	20.1139
3	14:51:51	20.5857	20.3200	20.0360	20.1018	20.0916	96.1%	19.9307	19.9794
x		20.5114	20.1703	19.9561	20.2055	19.9667	95.2%	19.9496	20.0414
σ		0.0689	0.1547	0.1128	0.0913	0.1082	1.1%	0.1058	0.0679
%RSD		0.3357	0.7670	0.5653	0.4521	0.5417	1.1	0.5305	0.3387
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:49:36	19.8312	19.9160	19.9022	-0.0184	97.2%	19.9707		
2	14:50:44	20.1739	20.1432	20.1308	-0.0172	98.3%	20.1749		
3	14:51:51	19.9439	19.9862	19.9500	-0.0168	99.2%	19.9711		
x		19.9830	20.0152	19.9943	-0.0175	98.3%	20.0389		
σ		0.1747	0.1163	0.1206	0.0008	1.0%	0.1178		
%RSD		0.8740	0.5812	0.6032	4.7953	1.0	0.5877		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:06	91.6%	-0.0030	10.5178	9.7131	11.4580	45.6554	1.5323	253.8576
2	15:01:13	85.8%	-0.0100	10.5853	10.2836	11.4770	39.4953	2.2296	255.1514
3	15:02:20	85.4%	-0.0184	10.4116	10.3484	11.4967	42.3922	1.6362	253.9646
x		87.6%	-0.0105	10.5049	10.1151	11.4772	42.5143	1.7994	254.3245
σ		3.5%	0.0077	0.0875	0.3496	0.0193	3.0819	0.3762	0.7181
%RSD		4.0	73.7104	0.8333	3.4561	0.1686	7.2490	20.9074	0.2824
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:06	2.2514	3.0503	3.2072	67.8218	0.3844	7.9782	20.4032	8.9908
2	15:01:13	2.3470	3.0768	3.1259	67.0097	0.3545	7.9387	17.5689	8.9474
3	15:02:20	2.3921	3.1054	3.1574	67.3970	0.3776	7.8349	16.6642	9.1348
x		2.3301	3.0775	3.1635	67.4095	0.3721	7.9173	18.2121	9.0244
σ		0.0719	0.0276	0.0410	0.4062	0.0157	0.0740	1.9507	0.0981
%RSD		3.0839	0.8964	1.2959	0.6026	4.2130	0.9346	10.7110	1.0872
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:06	1.8950	1.7455	4.6590	8.8054	7.7804	85.2%	1.8082	0.2523
2	15:01:13	1.8158	1.6893	4.6663	8.8566	7.6764	82.2%	1.4320	0.3585
3	15:02:20	1.8609	1.7276	4.5871	8.6006	7.3622	80.8%	1.7667	0.2991
x		1.8572	1.7208	4.6375	8.7542	7.6064	82.7%	1.6690	0.3033
σ		0.0398	0.0287	0.0437	0.1354	0.2177	2.3%	0.2063	0.0532
%RSD		2.1405	1.6697	0.9429	1.5471	2.8625	2.7	12.3597	17.5549
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:06	0.0636	0.4302	87.6%	3.1369	3.0988	3.1982	85.5%	-0.0012
2	15:01:13	-0.3807	-0.0679	85.8%	3.1486	3.2926	3.2087	84.1%	-0.0012
3	15:02:20	0.2952	0.5597	84.9%	3.1351	3.1763	3.2555	82.8%	-0.0009
x		-0.0073	0.3073	86.1%	3.1402	3.1892	3.2208	84.1%	-0.0011
σ		0.3435	0.3314	1.4%	0.0073	0.0975	0.0305	1.4%	0.0002
%RSD		4676.1053	107.8189	1.6	0.2321	3.0576	0.9461	1.6	15.0372
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:06	0.0001	0.0379	0.0361	0.0356	87.6%	0.0096	0.0150	0.0276
2	15:01:13	0.0006	0.0444	0.0327	0.0308	86.0%	0.0008	0.0080	0.0134
3	15:02:20	0.0004	0.0337	0.0365	0.0362	86.5%	0.0093	0.0131	0.0129
x		0.0004	0.0387	0.0351	0.0342	86.7%	0.0066	0.0120	0.0180
σ		0.0003	0.0054	0.0021	0.0030	0.8%	0.0050	0.0037	0.0083
%RSD		69.5334	13.9633	6.0205	8.6459	0.9	76.7379	30.3949	46.3937
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:06	0.1827	0.1673	116.8855	118.7982	120.9959	93.1%	0.0062	0.0104
2	15:01:13	0.1754	0.1669	118.8741	118.9108	121.1942	93.9%	0.0100	0.0069
3	15:02:20	0.1595	0.1834	117.8832	118.4020	120.9702	93.6%	0.0092	0.0075
x		0.1725	0.1725	117.8810	118.7037	121.0534	93.5%	0.0085	0.0083
σ		0.0119	0.0094	0.9943	0.2672	0.1226	0.4%	0.0020	0.0019
%RSD		6.8950	5.4677	0.8435	0.2251	0.1013	0.5	23.8695	22.4159
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:00:06	0.3167	0.3082	0.3096	-0.0183	95.3%	4.9734		
2	15:01:13	0.3234	0.2928	0.3034	-0.0170	96.9%	4.9836		
3	15:02:20	0.3167	0.3304	0.3174	-0.0171	97.5%	5.0005		
x		0.3189	0.3104	0.3101	-0.0175	96.6%	4.9858		
σ		0.0039	0.0189	0.0070	0.0007	1.2%	0.0137		
%RSD		1.2177	6.0835	2.2615	4.2906	1.2	0.2742		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:31	91.2%	-0.0168	10.9437	9.7783	11.3974	38.3560	1.7423	254.2186
2	15:10:39	86.4%	-0.0101	10.2622	10.2031	11.1513	38.3694	1.9771	253.5542
3	15:11:46	85.2%	-0.0077	9.2907	10.1937	11.2828	39.0102	2.3592	256.9856
x		87.6%	-0.0115	10.1655	10.0584	11.2772	38.5785	2.0262	254.9195
σ		3.2%	0.0047	0.8307	0.2426	0.1231	0.3739	0.3113	1.8199
%RSD		3.6	40.7758	8.1720	2.4120	1.0920	0.9692	15.3661	0.7139
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:31	2.3244	3.0732	3.2572	66.9664	0.3807	8.0123	20.2793	8.9579
2	15:10:39	2.3325	2.9665	3.0015	65.8717	0.3497	7.7601	16.8386	8.4683
3	15:11:46	2.3422	3.0992	3.1727	67.6586	0.3735	7.9145	17.6538	8.8791
x		2.3330	3.0463	3.1438	66.8322	0.3679	7.8956	18.2572	8.7684
σ		0.0089	0.0703	0.1303	0.9010	0.0162	0.1272	1.7980	0.2629
%RSD		0.3811	2.3076	4.1438	1.3481	4.4074	1.6106	9.8480	2.9984
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:31	1.9323	1.8244	4.0189	8.1419	7.2189	83.7%	1.6759	0.2607
2	15:10:39	1.7700	1.6562	4.0397	8.2664	7.3348	82.3%	1.6338	0.2692
3	15:11:46	1.8898	1.7738	4.2324	8.5278	7.1207	78.7%	1.7095	0.2641
x		1.8640	1.7515	4.0970	8.3120	7.2248	81.6%	1.6731	0.2647
σ		0.0842	0.0863	0.1177	0.1970	0.1072	2.6%	0.0379	0.0043
%RSD		4.5148	4.9283	2.8733	2.3697	1.4832	3.2	2.2662	1.6200
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:31	-0.7812	0.2790	86.4%	3.1390	3.2690	3.1822	84.5%	-0.0016
2	15:10:39	-0.5050	0.3631	85.2%	3.1838	3.1916	3.1760	83.3%	-0.0014
3	15:11:46	-0.7256	0.4047	84.0%	3.1377	3.2858	3.2571	82.4%	-0.0016
x		-0.6706	0.3490	85.2%	3.1535	3.2488	3.2051	83.4%	-0.0015
σ		0.1461	0.0640	1.2%	0.0262	0.0502	0.0451	1.0%	0.0001
%RSD		21.7839	18.3513	1.4	0.8318	1.5462	1.4079	1.2	8.7646
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:31	-0.0008	0.0374	0.0416	0.0310	86.3%	0.0143	0.0145	0.0377
2	15:10:39	-0.0010	0.0376	0.0360	0.0350	86.3%	-0.0003	0.0178	0.0260
3	15:11:46	-0.0024	0.0401	0.0425	0.0396	85.1%	0.0095	0.0318	0.0185
x		-0.0014	0.0384	0.0401	0.0352	85.9%	0.0078	0.0214	0.0274
σ		0.0009	0.0015	0.0035	0.0043	0.7%	0.0074	0.0092	0.0097
%RSD		62.7215	3.8733	8.8050	12.2234	0.8	95.3446	43.1669	35.2762
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:31	0.1822	0.1756	118.3235	118.4022	120.5502	92.1%	0.0029	0.0082
2	15:10:39	0.1687	0.1664	117.9885	118.0529	120.6134	93.7%	0.0065	0.0083
3	15:11:46	0.1779	0.1591	116.3885	117.9075	120.5787	94.1%	0.0073	0.0073
x		0.1763	0.1670	117.5668	118.1209	120.5807	93.3%	0.0056	0.0079
σ		0.0069	0.0083	1.0341	0.2542	0.0317	1.1%	0.0023	0.0005
%RSD		3.9059	4.9663	0.8796	0.2152	0.0263	1.2	42.0201	6.5797
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:09:31	0.3354	0.3131	0.3133	-0.0174	94.7%	4.9806		
2	15:10:39	0.3210	0.3196	0.3124	-0.0182	97.1%	4.9748		
3	15:11:46	0.3036	0.3014	0.3039	-0.0187	96.8%	4.9986		
x		0.3200	0.3114	0.3099	-0.0181	96.2%	4.9847		
σ		0.0159	0.0092	0.0052	0.0006	1.3%	0.0124		
%RSD		4.9838	2.9576	1.6677	3.5070	1.3	0.2493		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:17:11	91.1%	0.0130	0.7647	0.7438	5.8583	4.7864	0.1185	0.1450
2	15:18:18	85.4%	0.0049	1.2709	0.6729	5.5806	-1.5494	-0.0450	0.0997
3	15:19:25	83.1%	0.0078	0.8900	0.6281	5.6281	-1.4001	0.0472	0.1510
x		86.6%	0.0086	0.9752	0.6816	5.6890	0.6123	0.0402	0.1319
σ		4.1%	0.0041	0.2636	0.0583	0.1485	3.6157	0.0820	0.0280
%RSD		4.8	47.9600	27.0340	8.5572	2.6109	590.4672	203.6533	21.2352
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:17:11	0.2145	0.2048	0.1697	0.0564	0.0074	0.1943	0.5549	0.9703
2	15:18:18	0.1470	0.1704	0.2822	0.0536	-0.0010	0.1653	0.4541	1.0985
3	15:19:25	0.1558	0.1796	0.3202	0.0513	0.0105	0.2316	0.0741	1.1753
x		0.1724	0.1850	0.2574	0.0538	0.0057	0.1971	0.3610	1.0814
σ		0.0366	0.0178	0.0783	0.0025	0.0059	0.0333	0.2535	0.1036
%RSD		21.2519	9.6229	30.4116	4.7310	105.0302	16.8834	70.2303	9.5798
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:17:11	0.1292	0.1010	0.5420	0.3645	0.5520	85.8%	0.4835	1.4496
2	15:18:18	0.1373	0.1262	0.5332	0.4576	0.4587	84.1%	0.5528	0.8180
3	15:19:25	0.1225	0.1078	0.5099	0.6317	0.5418	82.2%	0.5531	0.9331
x		0.1297	0.1117	0.5284	0.4846	0.5175	84.0%	0.5298	1.0669
σ		0.0074	0.0131	0.0166	0.1356	0.0512	1.8%	0.0401	0.3364
%RSD		5.7437	11.6899	3.1329	27.9867	9.8911	2.1	7.5656	31.5304
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:17:11	0.4106	1.1573	87.3%	0.0460	0.0432	0.0341	87.7%	0.0188
2	15:18:18	0.7033	1.1672	85.3%	0.0325	0.0422	0.0374	86.8%	0.0179
3	15:19:25	0.7814	0.9821	83.5%	0.0261	0.0250	0.0207	86.9%	0.0124
x		0.6318	1.1022	85.4%	0.0349	0.0368	0.0307	87.1%	0.0164
σ		0.1955	0.1041	1.9%	0.0102	0.0102	0.0088	0.5%	0.0035
%RSD		30.9391	9.4484	2.3	29.2182	27.7521	28.7152	0.6	21.1943
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:17:11	0.0173	0.0192	0.0151	0.0160	89.4%	0.0408	0.0314	0.0423
2	15:18:18	0.0211	0.0269	0.0135	0.0234	88.9%	-0.0005	0.0377	0.0357
3	15:19:25	0.0167	0.0205	0.0067	0.0250	87.5%	0.0069	0.0120	0.0214
x		0.0183	0.0222	0.0118	0.0215	88.6%	0.0157	0.0270	0.0331
σ		0.0024	0.0041	0.0045	0.0048	1.0%	0.0220	0.0134	0.0107
%RSD		13.1202	18.6354	37.9828	22.4883	1.1	140.0515	49.5654	32.1375
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:17:11	0.0485	0.0566	0.0385	0.0449	0.0462	92.1%	0.0135	0.0111
2	15:18:18	0.0558	0.0499	0.0433	0.0406	0.0511	93.9%	0.0114	0.0125
3	15:19:25	0.0630	0.0531	0.0416	0.0593	0.0466	93.8%	0.0045	0.0105
x		0.0558	0.0532	0.0411	0.0483	0.0480	93.3%	0.0098	0.0114
σ		0.0072	0.0034	0.0024	0.0098	0.0027	1.0%	0.0047	0.0010
%RSD		12.9603	6.3518	5.8491	20.3094	5.6339	1.1	48.0435	8.7121
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:17:11	0.0166	0.0106	0.0117	0.0288	94.5%	0.0105		
2	15:18:18	0.0169	0.0137	0.0127	0.0281	96.1%	0.0100		
3	15:19:25	0.0119	0.0127	0.0135	0.0282	96.0%	0.0130		
x		0.0151	0.0123	0.0126	0.0284	95.5%	0.0112		
σ		0.0028	0.0016	0.0009	0.0004	0.9%	0.0016		
%RSD		18.7185	13.0659	7.1849	1.3037	1.0	14.6514		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:23	86.9%	26.0922	27.2170	25.9340	25.4257	20.8794	25.6118	24.9160
2	15:28:30	83.4%	26.6820	26.3778	26.7829	24.9148	21.1285	24.2340	24.7609
3	15:29:37	83.2%	25.8881	25.2980	26.7275	24.4536	23.9207	24.4626	24.5993
x		84.5%	26.2208	26.2976	26.4815	24.9314	21.9762	24.7694	24.7587
σ		2.1%	0.4123	0.9620	0.4749	0.4862	1.6886	0.7384	0.1583
%RSD		2.5	1.5724	3.6582	1.7935	1.9503	7.6837	2.9810	0.6396
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:23	24.9627	24.9724	24.9979	25.1039	24.6899	25.2386	25.8660	25.6115
2	15:28:30	24.6110	24.6896	24.1641	25.0973	24.4974	24.3977	23.9586	25.5744
3	15:29:37	24.2428	24.5474	24.9030	25.1057	24.7763	24.8840	23.8518	25.2855
x		24.6055	24.7364	24.6883	25.1023	24.6545	24.8401	24.5588	25.4905
σ		0.3600	0.2163	0.4564	0.0044	0.1428	0.4222	1.1333	0.1785
%RSD		1.4631	0.8746	1.8488	0.0177	0.5791	1.6997	4.6146	0.7001
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:23	25.5349	25.7761	26.3354	26.3224	26.0049	84.7%	26.4648	26.0771
2	15:28:30	24.9451	25.2480	25.8908	25.2309	25.9803	84.2%	25.1105	26.3711
3	15:29:37	25.2183	25.1648	26.3505	26.5142	26.1396	82.8%	25.7961	26.4017
x		25.2328	25.3963	26.1922	26.0225	26.0416	83.9%	25.7904	26.2833
σ		0.2952	0.3315	0.2612	0.6922	0.0857	1.0%	0.6772	0.1792
%RSD		1.1697	1.3054	0.9972	2.6600	0.3292	1.2	2.6257	0.6818
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:23	25.7256	26.5245	86.5%	25.8763	25.7549	26.0066	89.0%	25.5152
2	15:28:30	24.9962	25.3180	86.5%	25.6758	25.9572	25.8066	87.9%	25.6308
3	15:29:37	25.0733	27.1509	85.2%	26.1698	26.4462	26.1201	85.8%	25.8766
x		25.2650	26.3311	86.1%	25.9073	26.0528	25.9778	87.6%	25.6742
σ		0.4007	0.9316	0.8%	0.2484	0.3554	0.1588	1.6%	0.1845
%RSD		1.5860	3.5380	0.9	0.9590	1.3642	0.6111	1.9	0.7188
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:23	25.4527	25.9108	25.9669	26.0008	89.9%	25.6246	25.6541	25.6827
2	15:28:30	25.4467	25.7093	25.4754	25.6532	90.9%	25.3084	25.4116	25.3014
3	15:29:37	25.5977	26.2822	25.8198	25.5587	90.5%	25.2194	25.3322	25.3315
x		25.4990	25.9674	25.7541	25.7376	90.4%	25.3841	25.4660	25.4385
σ		0.0855	0.2906	0.2523	0.2328	0.5%	0.2130	0.1677	0.2120
%RSD		0.3354	1.1192	0.9796	0.9045	0.5	0.8390	0.6585	0.8334
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:23	26.0292	25.9725	25.4595	25.5339	25.5167	94.4%	25.3447	25.4824
2	15:28:30	25.8909	25.6067	24.9652	25.1467	25.2545	96.3%	25.2679	25.3711
3	15:29:37	25.9958	25.6078	25.4192	25.1401	25.2985	96.4%	25.2731	25.3289
x		25.9720	25.7290	25.2813	25.2735	25.3565	95.7%	25.2952	25.3941
σ		0.0721	0.2109	0.2745	0.2255	0.1404	1.1%	0.0429	0.0793
%RSD		0.2777	0.8197	1.0857	0.8921	0.5538	1.2	0.1696	0.3123
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:27:23	25.4399	25.4741	25.4336	25.2683	98.3%	25.5334		
2	15:28:30	25.3942	25.2205	25.3236	25.1893	100.4%	25.4899		
3	15:29:37	25.4922	25.2871	25.3588	25.3014	101.0%	25.4948		
x		25.4421	25.3272	25.3720	25.2530	99.9%	25.5061		
σ		0.0490	0.1315	0.0562	0.0576	1.5%	0.0238		
%RSD		0.1927	0.5191	0.2215	0.2281	1.5	0.0934		

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Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:37:50	88.1%	-0.0206	-0.0245	0.1169	-0.0120	0.9750	-0.0797	0.0210
2	15:38:57	82.9%	-0.0095	-0.0080	0.2037	-0.0045	5.3657	-0.0763	0.0073
3	15:40:05	81.4%	-0.0048	0.3488	0.1450	0.0064	-1.0329	0.0166	0.0157
X		84.1%	-0.0116	0.1054	0.1552	-0.0033	1.7693	-0.0465	0.0147
σ		3.5%	0.0082	0.2109	0.0443	0.0093	3.2724	0.0546	0.0070
%RSD		4.2	70.1347	200.0645	28.5561	276.7210	184.9573	117.6004	47.3798
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:37:50	-0.0115	-0.0342	0.0271	0.0079	-0.0033	-0.0105	-0.1345	0.8267
2	15:38:57	-0.0162	-0.0600	0.0187	0.0068	-0.0023	-0.0008	0.0183	0.9924
3	15:40:05	-0.0068	-0.0379	0.0052	0.0072	-0.0041	-0.0006	-0.0094	0.9110
X		-0.0115	-0.0440	0.0170	0.0073	-0.0033	-0.0039	-0.0419	0.9101
σ		0.0047	0.0140	0.0110	0.0006	0.0009	0.0056	0.0814	0.0828
%RSD		40.7186	31.6896	64.8127	7.6514	27.1742	143.3149	194.4943	9.1028
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:37:50	0.0238	0.0026	0.0011	0.0092	0.0147	82.6%	0.0102	-0.0016
2	15:38:57	0.0347	0.0069	-0.0010	0.0103	0.0182	80.4%	-0.0248	0.0292
3	15:40:05	0.0318	-0.0016	0.0009	-0.0091	0.0251	79.6%	-0.0830	0.0069
X		0.0301	0.0026	0.0003	0.0035	0.0193	80.9%	-0.0325	0.0115
σ		0.0056	0.0042	0.0012	0.0109	0.0053	1.6%	0.0471	0.0159
%RSD		18.6530	160.6689	363.1154	313.0441	27.1851	1.9	144.7224	138.6204
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:37:50	-0.1711	0.0276	83.9%	0.0118	0.0090	0.0167	85.0%	0.0002
2	15:38:57	-0.3532	-0.0723	81.1%	0.0057	0.0273	0.0113	84.2%	-0.0005
3	15:40:05	-0.1522	-0.3046	81.7%	0.0057	0.0236	0.0055	83.2%	-0.0004
X		-0.2255	-0.1164	82.2%	0.0078	0.0200	0.0112	84.1%	-0.0002
σ		0.1110	0.1704	1.5%	0.0035	0.0097	0.0056	0.9%	0.0004
%RSD		49.2159	146.3838	1.8	45.1161	48.4364	50.1391	1.1	150.7882
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:37:50	0.0006	0.0004	-0.0035	-0.0034	86.3%	-0.0503	-0.0161	-0.0279
2	15:38:57	-0.0005	-0.0006	-0.0059	-0.0010	85.8%	-0.0385	-0.0146	-0.0191
3	15:40:05	-0.0005	0.0004	-0.0014	-0.0001	84.5%	-0.0676	-0.0289	-0.0126
X		-0.0002	0.0001	-0.0036	-0.0015	85.5%	-0.0521	-0.0199	-0.0199
σ		0.0007	0.0006	0.0023	0.0017	1.0%	0.0146	0.0079	0.0077
%RSD		434.8874	576.5491	63.0425	116.7529	1.1	28.0864	39.6405	38.6864
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:37:50	0.0022	0.0006	-0.0088	-0.0079	-0.0090	89.9%	-0.0100	-0.0095
2	15:38:57	0.0025	0.0024	-0.0088	-0.0021	-0.0041	90.5%	-0.0066	-0.0079
3	15:40:05	0.0023	-0.0008	-0.0061	0.0009	-0.0054	91.3%	-0.0073	-0.0078
X		0.0024	0.0007	-0.0079	-0.0030	-0.0062	90.6%	-0.0080	-0.0084
σ		0.0002	0.0016	0.0016	0.0044	0.0025	0.7%	0.0018	0.0010
%RSD		6.6763	224.8461	19.6986	145.4615	41.0726	0.8	22.4918	11.4097
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:37:50	-0.0043	-0.0049	-0.0061	-0.0163	92.2%	-0.0081		
2	15:38:57	-0.0023	-0.0064	-0.0053	-0.0166	94.6%	-0.0094		
3	15:40:05	-0.0064	-0.0079	-0.0059	-0.0164	94.4%	-0.0079		
X		-0.0043	-0.0064	-0.0058	-0.0164	93.7%	-0.0085		
σ		0.0021	0.0015	0.0005	0.0001	1.3%	0.0008		
%RSD		47.6675	23.2974	7.9379	0.8177	1.4	9.5150		

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Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:45:03	84.0%	20.3812	9.2676	10.0212	29.8824	42.2274	1.8625	258.0186
2	15:46:10	80.8%	19.9639	11.5564	10.6015	30.1387	38.3472	1.8968	258.7139
3	15:47:18	77.5%	20.0877	9.6831	10.8652	29.5049	38.8425	1.8255	259.5638
x		80.8%	20.1443	10.1690	10.4960	29.8420	39.8057	1.8616	258.7654
σ		3.2%	0.2143	1.2193	0.4318	0.3188	2.1118	0.0357	0.7739
%RSD		4.0	1.0640	11.9905	4.1139	1.0683	5.3054	1.9153	0.2991
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:45:03	21.3334	22.2587	22.3774	87.2434	19.6267	27.5350	36.7968	28.1004
2	15:46:10	21.9200	22.2432	21.8978	88.2254	19.9897	27.2910	38.6728	27.7049
3	15:47:18	21.4809	22.1351	22.6345	88.7674	19.8429	27.3904	36.9528	27.7998
x		21.5781	22.2123	22.3032	88.0788	19.8198	27.4055	37.4741	27.8684
σ		0.3051	0.0673	0.3739	0.7725	0.1826	0.1227	1.0410	0.2065
%RSD		1.4140	0.3030	1.6764	0.8771	0.9212	0.4476	2.7780	0.7409
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:45:03	21.1646	21.1569	24.0088	28.3046	27.3688	77.5%	22.2911	20.1929
2	15:46:10	20.9662	21.1576	24.1778	27.6024	26.9449	75.0%	22.0464	19.9932
3	15:47:18	21.0773	20.8412	24.2978	28.6002	27.1528	73.0%	22.1538	21.3583
x		21.0694	21.0519	24.1615	28.1691	27.1555	75.1%	22.1638	20.5148
σ		0.0994	0.1825	0.1452	0.5125	0.2120	2.3%	0.1226	0.7373
%RSD		0.4718	0.8668	0.6008	1.8194	0.7807	3.0	0.5534	3.5939
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:45:03	19.9089	19.7798	80.7%	23.6898	24.2539	24.3013	79.3%	19.9948
2	15:46:10	20.5795	19.8356	79.2%	23.6468	24.3978	24.0426	77.6%	20.2076
3	15:47:18	19.3328	20.9864	77.6%	23.5537	24.0971	24.0455	76.0%	20.2589
x		19.9404	20.2006	79.1%	23.6301	24.2496	24.1298	77.6%	20.1538
σ		0.6240	0.6811	1.5%	0.0696	0.1504	0.1486	1.6%	0.1401
%RSD		3.1291	3.3717	2.0	0.2944	0.6202	0.6157	2.1	0.6951
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:45:03	19.8834	20.5044	19.3999	19.6610	82.2%	5.9682	0.0805	0.0612
2	15:46:10	20.0226	20.4497	19.4681	19.7052	81.7%	5.9875	0.0713	0.0571
3	15:47:18	20.0103	20.6073	19.3908	19.7422	80.0%	5.9706	0.0453	0.0434
x		19.9721	20.5205	19.4196	19.7028	81.3%	5.9754	0.0657	0.0539
σ		0.0771	0.0800	0.0422	0.0406	1.1%	0.0105	0.0182	0.0093
%RSD		0.3858	0.3898	0.2175	0.2062	1.4	0.1763	27.7463	17.3276
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:45:03	20.7076	20.5319	139.3360	140.3504	144.6719	89.8%	19.6594	19.6934
2	15:46:10	20.6848	20.4154	140.4996	141.6463	143.8733	90.5%	19.7863	19.6940
3	15:47:18	21.0527	20.5607	140.1982	140.5188	143.4521	89.2%	19.7412	19.7621
x		20.8150	20.5027	140.0112	140.8385	143.9991	89.9%	19.7290	19.7165
σ		0.2062	0.0769	0.6039	0.7046	0.6196	0.6%	0.0644	0.0395
%RSD		0.9904	0.3753	0.4313	0.5003	0.4303	0.7	0.3262	0.2002
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:45:03	19.9799	19.9393	19.8487	-0.0148	93.4%	25.3545		
2	15:46:10	19.7557	19.7939	19.8081	-0.0142	95.2%	25.5629		
3	15:47:18	19.8558	19.9806	19.9063	-0.0141	95.1%	25.4218		
x		19.8638	19.9046	19.8544	-0.0144	94.5%	25.4464		
σ		0.1123	0.0980	0.0494	0.0004	1.0%	0.1063		
%RSD		0.5655	0.4925	0.2487	2.7371	1.1	0.4179		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:33	81.4%	0.0065	5.6223	5.1722	5.3159	46.5377	1.7225	327.0408
2	15:56:40	76.7%	-0.0011	6.0627	5.4901	5.2696	48.4494	1.5249	326.1788
3	15:57:48	73.6%	-0.0125	5.7147	5.7951	5.5665	50.7799	1.3788	329.4118
x		77.2%	-0.0024	5.7999	5.4858	5.3840	48.5890	1.5421	327.5438
σ		3.9%	0.0095	0.2322	0.3115	0.1597	2.1246	0.1725	1.6741
%RSD		5.1	401.0726	4.0040	5.6779	2.9669	4.3726	11.1869	0.5111
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:33	4.7885	1.1816	1.2626	39.4464	0.2823	1.3901	16.0219	1.9098
2	15:56:40	4.8363	1.1466	1.2052	39.5538	0.2682	1.5347	15.6702	2.0688
3	15:57:48	4.7195	1.1742	1.2544	39.6053	0.2837	1.3801	14.1076	2.2204
x		4.7814	1.1675	1.2407	39.5352	0.2781	1.4350	15.2666	2.0663
σ		0.0587	0.0184	0.0311	0.0811	0.0086	0.0865	1.0190	0.1553
%RSD		1.2283	1.5794	2.5044	0.2051	3.0768	6.0287	6.6747	7.5161
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:33	1.2934	1.1349	7.2201	9.1572	8.6649	73.7%	0.9054	0.4529
2	15:56:40	1.3079	1.2354	7.1054	8.8583	8.4595	71.1%	0.7276	0.5004
3	15:57:48	1.3056	1.1228	7.4685	9.0938	8.9710	70.2%	0.8138	0.4827
x		1.3023	1.1644	7.2647	9.0364	8.6985	71.6%	0.8156	0.4787
σ		0.0078	0.0618	0.1856	0.1575	0.2574	1.8%	0.0889	0.0240
%RSD		0.6010	5.3070	2.5550	1.7427	2.9596	2.5	10.9026	5.0211
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:33	-0.4765	0.8768	77.4%	1.9646	1.8861	1.8408	76.1%	-0.0009
2	15:56:40	-0.4624	0.4812	75.9%	1.8459	1.8608	1.9279	74.4%	-0.0000
3	15:57:48	-0.5185	0.5959	75.4%	1.8975	1.9429	1.9286	73.1%	-0.0013
x		-0.4858	0.6513	76.2%	1.9026	1.8966	1.8991	74.5%	-0.0007
σ		0.0292	0.2035	1.1%	0.0595	0.0421	0.0505	1.5%	0.0006
%RSD		6.0085	31.2492	1.4	3.1274	2.2179	2.6590	2.0	87.9940
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:33	0.0002	0.0145	0.0166	0.0136	78.3%	-0.0125	-0.0022	-0.0001
2	15:56:40	0.0000	0.0136	0.0073	0.0142	77.8%	-0.0398	-0.0004	-0.0086
3	15:57:48	-0.0007	0.0271	0.0184	0.0175	77.0%	-0.0456	-0.0183	-0.0102
x		-0.0002	0.0184	0.0141	0.0151	77.7%	-0.0326	-0.0069	-0.0063
σ		0.0005	0.0075	0.0060	0.0021	0.7%	0.0177	0.0098	0.0055
%RSD		319.4644	40.8555	42.2878	14.1512	0.9	54.1925	141.9584	86.4714
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:33	0.0528	0.0547	59.0632	59.2021	60.2932	85.7%	0.0047	0.0045
2	15:56:40	0.0553	0.0561	58.5279	58.6897	59.4950	87.3%	0.0043	0.0065
3	15:57:48	0.0546	0.0544	58.7603	59.1715	60.0413	86.2%	0.0036	0.0076
x		0.0543	0.0551	58.7838	59.0211	59.9431	86.4%	0.0042	0.0062
σ		0.0013	0.0009	0.2685	0.2874	0.4081	0.9%	0.0006	0.0016
%RSD		2.3313	1.6784	0.4567	0.4870	0.6807	1.0	13.1991	25.1351
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:55:33	0.3090	0.3084	0.3018	-0.0186	89.0%	8.8437		
2	15:56:40	0.3018	0.3017	0.2948	-0.0172	91.4%	8.7321		
3	15:57:48	0.3033	0.3028	0.2977	-0.0163	90.8%	8.8471		
x		0.3047	0.3043	0.2981	-0.0174	90.4%	8.8076		
σ		0.0038	0.0036	0.0035	0.0011	1.3%	0.0654		
%RSD		1.2367	1.1901	1.1749	6.5717	1.4	0.7428		



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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:05:20	78.9%	-0.0110	0.2308	0.1186	1.1541	5.8708	0.3914	0.0867
2	16:06:28	74.6%	-0.0029	0.1135	-0.0334	1.1203	2.3298	0.3201	0.0805
3	16:07:35	71.4%	-0.0121	-0.0225	-0.0426	1.1641	2.8736	0.2751	0.0828
X		74.9%	-0.0087	0.1073	0.0142	1.1461	3.6914	0.3289	0.0833
σ		3.8%	0.0050	0.1267	0.0905	0.0229	1.9069	0.0587	0.0031
%RSD		5.0	57.8186	118.1350	636.3125	2.0015	51.6591	17.8351	3.7361
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:05:20	-0.0004	0.0279	0.0584	0.0257	-0.0133	0.0104	0.2073	0.4793
2	16:06:28	0.0124	0.0313	0.0242	0.0284	-0.0114	0.0189	0.0178	0.6205
3	16:07:35	-0.0020	0.0423	0.0702	0.0378	-0.0095	0.0055	0.3595	0.5658
X		0.0033	0.0339	0.0509	0.0306	-0.0114	0.0116	0.1949	0.5552
σ		0.0079	0.0075	0.0239	0.0064	0.0019	0.0068	0.1712	0.0712
%RSD		236.5484	22.2373	46.9561	20.8401	16.9175	58.6142	87.8508	12.8171
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:05:20	0.0831	0.1007	3.2430	3.2963	3.1086	75.1%	0.0505	-0.0758
2	16:06:28	0.0939	0.0930	3.2077	2.9631	3.1301	71.4%	-0.0700	0.0870
3	16:07:35	0.1046	0.0967	3.4009	2.7914	3.3121	69.1%	-0.1120	0.0181
X		0.0939	0.0968	3.2839	3.0169	3.1836	71.9%	-0.0438	0.0098
σ		0.0108	0.0039	0.1029	0.2567	0.1118	3.0%	0.0844	0.0817
%RSD		11.4710	4.0028	3.1331	8.5088	3.5126	4.2	192.5371	835.5006
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:05:20	-1.2411	0.0991	75.6%	-0.0280	-0.0136	-0.0078	77.7%	-0.0012
2	16:06:28	-0.3801	-0.1558	74.5%	-0.0157	-0.0087	-0.0117	76.6%	-0.0016
3	16:07:35	-0.3911	-0.3716	71.7%	-0.0174	-0.0061	-0.0088	74.9%	-0.0011
X		-0.6707	-0.1428	73.9%	-0.0203	-0.0094	-0.0094	76.4%	-0.0013
σ		0.4939	0.2356	2.0%	0.0067	0.0038	0.0020	1.4%	0.0003
%RSD		73.6414	164.9948	2.7	32.8165	40.2857	21.0018	1.8	23.5495
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:05:20	-0.0021	0.0016	-0.0004	-0.0008	78.5%	-0.0283	-0.0252	-0.0215
2	16:06:28	-0.0003	0.0016	-0.0051	0.0005	78.5%	-0.0629	-0.0268	-0.0245
3	16:07:35	-0.0016	0.0005	-0.0007	0.0006	77.5%	-0.0676	-0.0287	-0.0338
X		-0.0013	0.0012	-0.0021	0.0001	78.2%	-0.0530	-0.0269	-0.0266
σ		0.0009	0.0006	0.0026	0.0008	0.6%	0.0215	0.0017	0.0064
%RSD		70.3684	49.1687	125.3696	1279.2896	0.8	40.5670	6.4950	24.0191
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:05:20	0.0026	0.0016	0.7660	0.7660	0.7724	85.5%	-0.0071	-0.0082
2	16:06:28	0.0008	0.0032	0.7738	0.7395	0.7742	86.6%	-0.0069	-0.0086
3	16:07:35	0.0014	-0.0003	0.7589	0.7893	0.7763	86.6%	-0.0088	-0.0092
X		0.0016	0.0015	0.7662	0.7649	0.7743	86.2%	-0.0076	-0.0087
σ		0.0009	0.0017	0.0074	0.0249	0.0020	0.7%	0.0011	0.0005
%RSD		59.0509	116.2363	0.9701	3.2605	0.2572	0.8	13.8104	5.6875
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:05:20	0.0009	-0.0013	-0.0018	-0.0180	89.4%	-0.0083		
2	16:06:28	0.0003	0.0004	-0.0020	-0.0178	90.9%	-0.0082		
3	16:07:35	-0.0040	-0.0030	-0.0027	-0.0184	90.8%	-0.0083		
X		-0.0009	-0.0013	-0.0021	-0.0181	90.4%	-0.0083		
σ		0.0027	0.0017	0.0005	0.0003	0.8%	0.0000		
%RSD		291.4764	136.0744	22.3039	1.6142	0.9	0.4441		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:31	76.5%	-0.0129	8.4562	8.1062	12.4183	73.3257	1.5498	500.9632
2	16:11:39	72.9%	-0.0049	7.2651	8.6434	12.2592	72.9317	1.4852	501.6861
3	16:12:46	72.7%	-0.0098	8.8364	8.1817	11.7345	76.5098	1.0757	503.0562
x		74.0%	-0.0092	8.1859	8.3105	12.1373	74.2557	1.3702	501.9018
σ		2.2%	0.0040	0.8198	0.2908	0.3578	1.9620	0.2571	1.0630
%RSD		2.9	44.0328	10.0146	3.4996	2.9481	2.6422	18.7640	0.2118
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:31	1.4748	1.0691	1.7629	130.0609	0.8350	3.0979	22.0759	3.3072
2	16:11:39	1.5248	1.1429	1.5861	129.4474	0.8117	3.2215	22.3748	3.3310
3	16:12:46	1.4236	1.1257	1.7194	130.8170	0.8206	3.0728	22.0860	3.4568
x		1.4744	1.1126	1.6895	130.1084	0.8224	3.1307	22.1789	3.3650
σ		0.0506	0.0386	0.0921	0.6860	0.0117	0.0796	0.1697	0.0804
%RSD		3.4325	3.4677	5.4533	0.5273	1.4276	2.5433	0.7652	2.3897
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:31	1.1003	1.0407	6.8168	9.8486	9.3143	69.6%	0.9228	0.5143
2	16:11:39	1.1061	0.9093	6.8090	9.9276	9.2818	69.0%	0.9666	0.3631
3	16:12:46	1.0447	0.9565	6.9506	9.7999	9.5052	68.3%	0.9287	0.3410
x		1.0837	0.9688	6.8588	9.8587	9.3671	69.0%	0.9394	0.4061
σ		0.0339	0.0666	0.0796	0.0644	0.1207	0.6%	0.0237	0.0943
%RSD		3.1288	6.8709	1.1601	0.6537	1.2885	0.9	2.5281	23.2315
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:31	-0.8570	0.2859	74.9%	2.9020	2.9494	2.9331	72.6%	-0.0015
2	16:11:39	-0.7799	0.3831	73.7%	2.8674	3.0302	3.0214	70.8%	-0.0004
3	16:12:46	-0.8180	0.1595	73.4%	2.9518	3.0982	3.0589	70.6%	-0.0020
x		-0.8183	0.2762	74.0%	2.9071	3.0259	3.0045	71.3%	-0.0013
σ		0.0386	0.1121	0.8%	0.0424	0.0745	0.0646	1.1%	0.0008
%RSD		4.7121	40.5896	1.1	1.4597	2.4628	2.1491	1.6	65.0479
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:31	-0.0012	0.0130	0.0259	0.0173	74.7%	0.0374	0.0913	0.1145
2	16:11:39	-0.0004	0.0200	0.0179	0.0240	74.2%	0.0208	0.1014	0.1040
3	16:12:46	-0.0018	0.0200	0.0279	0.0225	74.5%	0.0167	0.0883	0.0947
x		-0.0011	0.0177	0.0239	0.0212	74.5%	0.0249	0.0937	0.1044
σ		0.0007	0.0041	0.0053	0.0035	0.2%	0.0110	0.0068	0.0099
%RSD		62.2724	22.9492	22.1930	16.4327	0.3	43.9278	7.2857	9.4647
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:31	0.0837	0.0886	103.5365	103.5536	104.6041	84.4%	0.0073	0.0133
2	16:11:39	0.0961	0.0919	103.8595	103.8162	105.9966	85.2%	0.0111	0.0122
3	16:12:46	0.0961	0.1079	104.8689	104.9529	106.5554	85.2%	0.0148	0.0072
x		0.0920	0.0961	104.0883	104.1076	105.7187	84.9%	0.0111	0.0109
σ		0.0072	0.0103	0.6951	0.7438	1.0049	0.5%	0.0038	0.0032
%RSD		7.7864	10.7338	0.6678	0.7144	0.9505	0.5	34.0766	29.5031
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:10:31	0.3519	0.3560	0.3495	-0.0167	87.8%	9.9561		
2	16:11:39	0.3465	0.3321	0.3383	-0.0162	90.4%	9.9326		
3	16:12:46	0.3510	0.3251	0.3389	-0.0151	90.3%	10.0184		
x		0.3498	0.3377	0.3422	-0.0160	89.5%	9.9690		
σ		0.0029	0.0162	0.0063	0.0008	1.5%	0.0443		
%RSD		0.8232	4.8059	1.8475	4.9305	1.6	0.4447		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:18:01	77.5%	-0.0154	24.2072	23.2283	6.6701	26.9111	2.1802	177.9179
2	16:19:08	72.1%	-0.0097	23.7701	23.9831	7.6089	24.9567	1.6924	182.6297
3	16:20:15	69.7%	-0.0014	24.2745	24.0367	8.7408	26.4920	1.7517	182.9494
X		73.1%	-0.0088	24.0839	23.7493	7.6733	26.1200	1.8748	181.1657
σ		4.0%	0.0070	0.2739	0.4521	1.0368	1.0290	0.2662	2.8172
%RSD		5.5	79.7511	1.1371	1.9035	13.5122	3.9394	14.1988	1.5550
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:18:01	4.2031	0.7793	1.2330	21.0146	3.3148	1.3054	8.6075	1.6958
2	16:19:08	4.2198	0.7555	1.2759	21.7084	3.1808	1.3120	6.8568	1.9278
3	16:20:15	4.2307	0.7477	1.3361	21.4557	3.1655	1.3154	8.0090	1.9615
X		4.2178	0.7608	1.2817	21.3929	3.2204	1.3110	7.8244	1.8617
σ		0.0139	0.0164	0.0518	0.3512	0.0821	0.0051	0.8898	0.1447
%RSD		0.3301	2.1598	4.0437	1.6415	2.5507	0.3904	11.3725	7.7716
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:18:01	1.5106	0.7608	7.9355	11.1259	10.3961	70.2%	0.8309	0.3849
2	16:19:08	1.5315	0.7970	8.3371	10.6993	10.4855	67.1%	0.9562	0.4361
3	16:20:15	1.5514	0.7604	8.1239	11.2164	10.4021	67.5%	0.9502	0.4664
X		1.5312	0.7727	8.1322	11.0139	10.4279	68.3%	0.9124	0.4291
σ		0.0204	0.0210	0.2009	0.2762	0.0500	1.7%	0.0707	0.0412
%RSD		1.3317	2.7224	2.4709	2.5075	0.4791	2.5	7.7458	9.5952
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:18:01	-0.8668	0.2334	72.8%	0.6641	0.7174	0.6783	72.1%	-0.0020
2	16:19:08	-0.8357	0.7217	71.4%	0.6788	0.7362	0.7068	69.9%	-0.0022
3	16:20:15	-0.4556	0.4958	69.8%	0.7023	0.7125	0.6966	68.4%	-0.0033
X		-0.7194	0.4836	71.3%	0.6817	0.7220	0.6939	70.2%	-0.0025
σ		0.2289	0.2444	1.5%	0.0193	0.0125	0.0144	1.9%	0.0007
%RSD		31.8248	50.5285	2.1	2.8270	1.7340	2.0796	2.7	27.5590
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:18:01	-0.0007	0.0108	0.0038	0.0069	74.1%	-0.0543	-0.0206	-0.0369
2	16:19:08	-0.0023	0.0086	0.0033	0.0037	74.1%	-0.0783	-0.0462	-0.0590
3	16:20:15	-0.0017	0.0065	0.0118	0.0096	72.3%	-0.0805	-0.0598	-0.0579
X		-0.0016	0.0087	0.0063	0.0067	73.5%	-0.0710	-0.0422	-0.0513
σ		0.0008	0.0022	0.0048	0.0030	1.0%	0.0146	0.0199	0.0125
%RSD		52.8224	24.9071	75.9215	44.0969	1.4	20.4940	47.2197	24.3298
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:18:01	0.0474	0.0595	94.4707	94.7004	96.0045	82.1%	0.0114	0.0072
2	16:19:08	0.0477	0.0569	94.6487	94.6093	95.2257	83.3%	0.0041	0.0053
3	16:20:15	0.0505	0.0515	95.4212	95.2760	96.9048	83.6%	0.0074	0.0077
X		0.0485	0.0560	94.8469	94.8619	96.0450	83.0%	0.0076	0.0067
σ		0.0017	0.0041	0.5053	0.3615	0.8403	0.8%	0.0036	0.0013
%RSD		3.4573	7.3164	0.5327	0.3810	0.8749	0.9	47.5148	18.7307
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:18:01	0.0854	0.0729	0.0752	-0.0192	86.2%	4.2507		
2	16:19:08	0.0802	0.0778	0.0790	-0.0168	88.1%	4.2470		
3	16:20:15	0.0766	0.0743	0.0718	-0.0180	88.0%	4.2314		
X		0.0807	0.0750	0.0753	-0.0180	87.4%	4.2431		
σ		0.0044	0.0025	0.0036	0.0012	1.0%	0.0102		
%RSD		5.4720	3.3957	4.7332	6.6163	1.2	0.2412		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:23:39	74.4%	-0.0126	14.7825	14.3965	2.2006	65.0079	1.3214	456.9771
2	16:24:47	71.1%	-0.0044	14.7549	14.8865	2.3588	71.6828	1.6317	449.6275
3	16:25:54	68.8%	-0.0037	16.5588	15.3038	2.1654	65.5823	1.2540	464.6538
x		71.5%	-0.0069	15.3654	14.8623	2.2416	67.4243	1.4024	457.0861
σ		2.8%	0.0049	1.0336	0.4541	0.1030	3.6991	0.2015	7.5137
%RSD		4.0	71.8382	6.7269	3.0556	4.5956	5.4863	14.3653	1.6438
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:23:39	3.9836	0.3201	1.2411	86.8444	0.5265	1.5028	20.8685	1.9704
2	16:24:47	3.8182	0.3211	1.1779	85.0193	0.5014	1.4777	17.9326	1.9106
3	16:25:54	4.0187	0.3450	1.1932	85.3586	0.4756	1.3680	16.5086	2.0629
x		3.9402	0.3287	1.2041	85.7408	0.5012	1.4495	18.4366	1.9813
σ		0.1071	0.0141	0.0330	0.9707	0.0254	0.0717	2.2232	0.0767
%RSD		2.7186	4.2912	2.7379	1.1321	5.0769	4.9434	12.0586	3.8734
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:23:39	1.7231	0.9698	13.1668	15.0746	15.0894	68.0%	0.6448	0.5113
2	16:24:47	1.6876	0.9891	13.1455	15.3078	14.9977	66.2%	0.2895	0.8315
3	16:25:54	1.6588	0.9293	12.8961	15.7306	14.9704	64.9%	0.4255	0.6570
x		1.6898	0.9627	13.0695	15.3710	15.0192	66.3%	0.4533	0.6666
σ		0.0322	0.0305	0.1505	0.3325	0.0623	1.5%	0.1793	0.1603
%RSD		1.9077	3.1680	1.1517	2.1633	0.4150	2.3	39.5494	24.0478
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:23:39	-1.1505	0.6594	71.6%	1.0181	1.0769	1.0694	69.3%	-0.0017
2	16:24:47	-0.8019	0.1245	71.3%	1.0620	1.0442	1.0638	68.3%	-0.0022
3	16:25:54	-0.3765	0.3653	69.4%	1.0227	1.1945	1.0154	66.8%	-0.0010
x		-0.7763	0.3831	70.8%	1.0343	1.1052	1.0496	68.1%	-0.0016
σ		0.3876	0.2679	1.2%	0.0241	0.0790	0.0297	1.2%	0.0006
%RSD		49.9334	69.9323	1.7	2.3316	7.1518	2.8274	1.8	36.0685
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:23:39	-0.0023	0.0124	0.0055	0.0173	72.1%	-0.0350	-0.0173	-0.0248
2	16:24:47	-0.0020	0.0101	0.0150	0.0108	71.5%	-0.0466	-0.0196	-0.0226
3	16:25:54	-0.0017	0.0114	0.0057	0.0156	71.5%	-0.0648	-0.0235	-0.0274
x		-0.0020	0.0113	0.0087	0.0145	71.7%	-0.0488	-0.0201	-0.0249
σ		0.0003	0.0011	0.0054	0.0034	0.3%	0.0150	0.0031	0.0024
%RSD		15.0455	9.9294	62.0917	23.1281	0.5	30.7515	15.6085	9.5870
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:23:39	0.0367	0.0311	92.7333	92.3096	93.7470	81.4%	0.0066	0.0060
2	16:24:47	0.0366	0.0308	92.5229	92.4333	93.8456	83.8%	0.0068	0.0086
3	16:25:54	0.0420	0.0347	91.2330	92.9929	93.5661	82.6%	0.0082	0.0079
x		0.0384	0.0322	92.1631	92.5786	93.7196	82.6%	0.0072	0.0075
σ		0.0031	0.0021	0.8123	0.3641	0.1418	1.2%	0.0009	0.0014
%RSD		8.0177	6.6756	0.8814	0.3933	0.1513	1.4	12.3899	18.3618
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:23:39	0.1562	0.1475	0.1543	-0.0159	85.6%	5.2533		
2	16:24:47	0.1585	0.1692	0.1589	-0.0156	86.9%	5.3000		
3	16:25:54	0.1624	0.1593	0.1552	-0.0158	87.8%	5.3271		
x		0.1590	0.1587	0.1561	-0.0158	86.8%	5.2935		
σ		0.0031	0.0109	0.0024	0.0002	1.1%	0.0374		
%RSD		1.9690	6.8503	1.5593	1.0049	1.3	0.7059		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:29:27	76.6%	-0.0129	0.3632	0.2428	0.6770	0.4865	0.3989	1.6891
2	16:30:34	71.9%	-0.0222	0.4054	0.1188	0.6487	0.2663	0.4037	1.7082
3	16:31:42	69.8%	-0.0118	0.4881	0.0455	0.6797	-0.3692	0.3681	1.7368
X		72.7%	-0.0156	0.4189	0.1357	0.6685	0.1278	0.3902	1.7114
σ		3.5%	0.0057	0.0636	0.0997	0.0172	0.4443	0.0193	0.0240
%RSD		4.8	36.6065	15.1753	73.5130	2.5679	347.5729	4.9519	1.4022
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:29:27	0.0090	0.0453	0.1326	0.0180	-0.0106	0.0030	0.2137	0.5624
2	16:30:34	0.0104	0.0363	0.0828	0.0253	-0.0121	0.0075	0.2459	0.5301
3	16:31:42	0.0180	0.0341	0.0676	0.0139	-0.0108	-0.0035	0.0082	0.6405
X		0.0124	0.0386	0.0943	0.0191	-0.0112	0.0023	0.1559	0.5777
σ		0.0049	0.0059	0.0340	0.0058	0.0008	0.0055	0.1289	0.0568
%RSD		39.1095	15.3912	35.9954	30.2440	7.0674	237.4689	82.7024	9.8246
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:29:27	0.0203	0.0197	0.3538	0.4029	0.3499	70.8%	0.0562	-0.0667
2	16:30:34	0.0295	0.0182	0.3445	0.3384	0.3564	68.4%	0.1276	-0.1141
3	16:31:42	0.0256	0.0213	0.3281	0.3517	0.3259	68.2%	-0.0137	-0.0321
X		0.0251	0.0197	0.3421	0.3643	0.3441	69.2%	0.0567	-0.0709
σ		0.0046	0.0015	0.0130	0.0340	0.0160	1.5%	0.0706	0.0412
%RSD		18.2392	7.8525	3.7966	9.3410	4.6586	2.1	124.5105	58.0295
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:29:27	-1.5728	0.1394	73.0%	-0.0242	-0.0269	-0.0214	74.3%	-0.0026
2	16:30:34	-1.0601	0.3385	69.6%	-0.0261	-0.0077	-0.0264	72.5%	-0.0026
3	16:31:42	-0.8808	-0.0884	70.1%	-0.0291	-0.0261	-0.0275	72.1%	-0.0031
X		-1.1713	0.1298	70.9%	-0.0265	-0.0203	-0.0251	73.0%	-0.0027
σ		0.3592	0.2136	1.8%	0.0025	0.0109	0.0032	1.2%	0.0003
%RSD		30.6645	164.5397	2.6	9.2821	53.5551	12.8635	1.6	10.6509
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:29:27	-0.0023	0.0017	-0.0043	0.0012	75.8%	-0.0412	0.0082	-0.0016
2	16:30:34	-0.0010	-0.0006	-0.0047	0.0017	74.8%	-0.0598	-0.0071	-0.0232
3	16:31:42	-0.0018	0.0006	-0.0001	0.0005	73.5%	-0.0498	-0.0278	-0.0292
X		-0.0017	0.0006	-0.0030	0.0011	74.7%	-0.0503	-0.0089	-0.0180
σ		0.0007	0.0011	0.0026	0.0006	1.2%	0.0093	0.0181	0.0145
%RSD		40.9256	196.7555	84.7923	54.4443	1.5	18.5787	203.6307	80.8671
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:29:27	-0.0004	-0.0011	0.3465	0.3309	0.3274	82.8%	-0.0079	-0.0089
2	16:30:34	-0.0001	-0.0002	0.2874	0.3328	0.3419	83.5%	-0.0082	-0.0081
3	16:31:42	0.0019	-0.0006	0.3255	0.3510	0.3384	83.9%	-0.0097	-0.0091
X		0.0005	-0.0006	0.3198	0.3382	0.3359	83.4%	-0.0086	-0.0087
σ		0.0013	0.0004	0.0300	0.0111	0.0075	0.6%	0.0010	0.0005
%RSD		274.6227	65.1310	9.3732	3.2833	2.2468	0.7	11.1439	5.5810
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:29:27	0.0030	-0.0010	0.0031	-0.0178		87.5%		-0.0074
2	16:30:34	0.0082	0.0049	0.0066	-0.0178		88.5%		-0.0075
3	16:31:42	0.0083	0.0043	0.0044	-0.0182		89.1%		-0.0098
X		0.0065	0.0027	0.0047	-0.0180		88.3%		-0.0082
σ		0.0030	0.0033	0.0018	0.0002		0.8%		0.0013
%RSD		46.2479	119.2313	37.6843	1.3169		0.9		16.3020

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:31	73.5%	-0.0099	51.2944	54.1345	2.4722	113.7170	1.5609	734.7089
2	16:35:39	72.8%	-0.0048	53.7937	53.1920	2.4992	108.7813	1.6117	738.8386
3	16:36:46	73.0%	-0.0098	51.1304	52.8040	2.3389	107.3954	1.8978	738.8359
x		73.1%	-0.0082	52.0728	53.3768	2.4368	109.9646	1.6901	737.4611
σ		0.4%	0.0029	1.4925	0.6842	0.0858	3.3228	0.1816	2.3835
%RSD		0.5	35.9116	2.8662	1.2819	3.5212	3.0217	10.7466	0.3232
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:31	2.6069	0.8904	3.0916	17.7638	0.2819	1.8679	30.7410	2.4808
2	16:35:39	2.7014	0.9198	2.9886	18.0802	0.2588	2.0689	28.7378	2.5490
3	16:36:46	2.6939	0.8650	2.8454	18.0800	0.2596	1.8577	28.7763	2.8736
x		2.6674	0.8917	2.9752	17.9747	0.2668	1.9315	29.4184	2.6345
σ		0.0525	0.0274	0.1236	0.1826	0.0131	0.1191	1.1456	0.2099
%RSD		1.9691	3.0734	4.1554	1.0160	4.9187	6.1648	3.8941	7.9669
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:31	4.4326	1.9284	6.9989	22.8769	18.6099	66.6%	0.9576	1.7952
2	16:35:39	4.5232	1.9967	7.0846	23.2007	18.8368	65.3%	0.8536	1.1711
3	16:36:46	4.3906	2.0055	6.8497	22.4072	18.5573	66.0%	0.8345	2.2385
x		4.4488	1.9769	6.9777	22.8283	18.6680	66.0%	0.8819	1.7349
σ		0.0677	0.0422	0.1189	0.3990	0.1486	0.7%	0.0662	0.5363
%RSD		1.5226	2.1347	1.7033	1.7477	0.7958	1.0	7.5091	30.9102
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:31	-0.1706	1.2290	71.1%	0.2417	0.3065	0.2601	66.6%	-0.0007
2	16:35:39	0.2578	0.1628	72.4%	0.2731	0.2749	0.2920	67.4%	-0.0025
3	16:36:46	-0.6552	0.9317	72.5%	0.2917	0.3112	0.2844	67.8%	-0.0002
x		-0.1894	0.7745	72.0%	0.2688	0.2975	0.2788	67.3%	-0.0011
σ		0.4568	0.5502	0.7%	0.0253	0.0197	0.0167	0.6%	0.0012
%RSD		241.2342	71.0381	1.0	9.4077	6.6292	5.9881	0.9	104.8783
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:31	0.0022	0.0310	0.0061	0.0229	69.9%	-0.1023	-0.0973	-0.1010
2	16:35:39	-0.0002	0.0317	0.0093	0.0186	71.1%	-0.1460	-0.1077	-0.1032
3	16:36:46	-0.0014	0.0172	0.0137	0.0168	72.1%	-0.1246	-0.1105	-0.1204
x		0.0002	0.0266	0.0097	0.0195	71.0%	-0.1243	-0.1052	-0.1082
σ		0.0018	0.0082	0.0038	0.0031	1.1%	0.0218	0.0069	0.0106
%RSD		1122.1312	30.7937	39.2457	16.1769	1.6	17.5429	6.6077	9.8398
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:31	0.0523	0.0464	500.0742	505.3300	521.7947	80.8%	0.0100	0.0085
2	16:35:39	0.0604	0.0553	496.6192	505.2785	512.9684	82.7%	0.0093	0.0095
3	16:36:46	0.0473	0.0525	498.6705	502.5107	512.2303	83.1%	0.0119	0.0065
x		0.0533	0.0514	498.4546	504.3731	515.6645	82.2%	0.0104	0.0082
σ		0.0066	0.0046	1.7376	1.6130	5.3217	1.3%	0.0014	0.0016
%RSD		12.4577	8.8883	0.3486	0.3198	1.0320	1.5	13.0162	19.0345
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:34:31	0.2030	0.2020	0.2008	0.0022	83.9%	5.3470		
2	16:35:39	0.1989	0.1903	0.1983	0.0019	86.8%	5.2856		
3	16:36:46	0.2131	0.1848	0.2017	-0.0010	87.7%	5.2669		
x		0.2050	0.1924	0.2003	0.0011	86.1%	5.2998		
σ		0.0073	0.0088	0.0018	0.0018	2.0%	0.0419		
%RSD		3.5743	4.5549	0.8791	165.4755	2.3	0.7913		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:39	83.4%	-0.0095	1.3980	1.2766	1.1637	-3.5076	0.4403	0.2406
2	16:40:47	77.8%	-0.0038	1.2307	0.9246	1.1171	-2.4771	0.2849	0.4654
3	16:41:54	76.3%	-0.0224	0.9439	0.6493	1.1368	-1.6538	0.4159	0.2948
X		79.2%	-0.0119	1.1909	0.9502	1.1392	-2.5462	0.3804	0.3336
σ		3.8%	0.0095	0.2297	0.3145	0.0234	0.9288	0.0835	0.1173
%RSD		4.8	79.9611	19.2859	33.0946	2.0540	36.4790	21.9643	35.1697
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:39	-0.0023	0.0286	0.4043	0.0368	-0.0077	0.0508	0.4265	0.8499
2	16:40:47	0.0097	0.0244	0.2782	0.0437	-0.0120	0.0731	0.0377	0.8125
3	16:41:54	0.0152	0.0403	0.2276	0.0252	-0.0103	0.0806	0.1298	0.7648
X		0.0075	0.0311	0.3034	0.0352	-0.0100	0.0682	0.1980	0.8091
σ		0.0090	0.0082	0.0910	0.0094	0.0022	0.0155	0.2032	0.0427
%RSD		119.0941	26.3834	29.9876	26.5555	21.5906	22.7462	102.6248	5.2761
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:39	0.1128	0.0997	5.1102	4.3606	4.9310	74.5%	-0.1586	0.0506
2	16:40:47	0.1028	0.0886	4.7825	4.8076	4.7276	73.4%	0.0249	0.0572
3	16:41:54	0.0980	0.0952	4.9892	4.9028	4.9912	71.6%	-0.1417	0.0112
X		0.1045	0.0945	4.9606	4.6904	4.8833	73.2%	-0.0918	0.0397
σ		0.0075	0.0056	0.1657	0.2895	0.1381	1.5%	0.1014	0.0249
%RSD		7.1944	5.9085	3.3402	6.1718	2.8283	2.0	110.4784	62.6893
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:39	-1.0126	-0.6863	75.7%	-0.0317	-0.0250	-0.0304	77.8%	-0.0032
2	16:40:47	-0.8377	0.0641	73.2%	-0.0309	-0.0270	-0.0267	74.5%	-0.0021
3	16:41:54	-0.9361	-0.5324	72.2%	-0.0298	-0.0284	-0.0306	74.9%	-0.0026
X		-0.9288	-0.3849	73.7%	-0.0308	-0.0268	-0.0292	75.7%	-0.0026
σ		0.0877	0.3964	1.8%	0.0009	0.0017	0.0022	1.8%	0.0005
%RSD		9.4404	102.9851	2.4	2.9801	6.3929	7.5900	2.4	20.4440
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:39	-0.0024	0.0016	0.0050	0.0023	77.2%	-0.0454	-0.0108	-0.0075
2	16:40:47	-0.0013	0.0016	-0.0006	0.0020	76.7%	-0.0201	-0.0107	-0.0209
3	16:41:54	-0.0023	0.0005	0.0005	0.0007	76.4%	-0.0607	-0.0126	-0.0123
X		-0.0020	0.0013	0.0016	0.0017	76.8%	-0.0420	-0.0113	-0.0136
σ		0.0006	0.0006	0.0030	0.0009	0.4%	0.0205	0.0011	0.0068
%RSD		30.9714	49.3574	182.1079	52.9574	0.6	48.7855	9.2774	50.3261
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:39:39	0.0011	-0.0011	0.1712	0.1798	0.1653	84.1%	-0.0082	-0.0070
2	16:40:47	0.0014	-0.0003	0.2591	0.2533	0.2454	85.4%	-0.0064	-0.0074
3	16:41:54	-0.0004	-0.0011	0.1491	0.1967	0.1819	83.5%	-0.0094	-0.0083
X		0.0007	-0.0008	0.1932	0.2099	0.1975	84.3%	-0.0080	-0.0076
σ		0.0010	0.0005	0.0582	0.0385	0.0423	1.0%	0.0015	0.0006
%RSD		142.7502	56.5888	30.1172	18.3335	21.3982	1.2	19.0418	8.2904
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:39:39	-0.0003	-0.0023	-0.0018	-0.0193	87.6%	-0.0077		
2	16:40:47	0.0005	-0.0022	-0.0009	-0.0170	88.4%	-0.0061		
3	16:41:54	-0.0003	-0.0006	-0.0012	-0.0185	89.4%	-0.0084		
X		-0.0000	-0.0017	-0.0013	-0.0183	88.5%	-0.0074		
σ		0.0004	0.0010	0.0005	0.0012	0.9%	0.0012		
%RSD		1209.2988	55.4729	37.0712	6.3454	1.0	15.6482		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:47	79.3%	26.5351	26.3548	24.9900	24.0963	25.6945	23.9820	23.9117
2	16:45:54	75.4%	26.3883	27.7193	25.5214	23.8406	19.8513	24.4880	24.7340
3	16:47:02	73.1%	27.1114	27.8198	27.4602	24.4921	24.6232	23.3001	25.0046
x		75.9%	26.6783	27.2980	25.9905	24.1430	23.3897	23.9233	24.5501
$\sigma$		3.1%	0.3822	0.8183	1.3002	0.3282	3.1108	0.5961	0.5692
%RSD		4.1	1.4327	2.9977	5.0026	1.3595	13.2998	2.4918	2.3184
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:47	24.1649	24.5569	25.2706	24.8707	24.8217	25.3760	26.1004	25.1589
2	16:45:54	24.2810	24.6374	24.7757	24.9835	24.8391	24.8987	23.5191	25.4990
3	16:47:02	24.3156	24.7699	25.5692	25.2278	24.9609	25.5043	26.8370	25.5286
x		24.2538	24.6547	25.2052	25.0273	24.8739	25.2597	25.4855	25.3955
$\sigma$		0.0790	0.1076	0.4008	0.1825	0.0758	0.3191	1.7423	0.2055
%RSD		0.3256	0.4363	1.5902	0.7293	0.3049	1.2633	6.8365	0.8091
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:47	25.4140	25.5579	25.8278	26.4164	26.5663	73.0%	25.4310	26.7902
2	16:45:54	25.5033	25.4427	26.4773	27.2530	26.2475	70.2%	25.7465	24.5364
3	16:47:02	25.2108	25.6170	26.2254	25.6351	25.9989	69.8%	25.7478	25.6314
x		25.3760	25.5392	26.1768	26.4348	26.2709	71.0%	25.6418	25.6527
$\sigma$		0.1499	0.0887	0.3275	0.8091	0.2844	1.7%	0.1825	1.1271
%RSD		0.5906	0.3472	1.2509	3.0606	1.0826	2.4	0.7118	4.3936
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:47	24.7696	25.3446	73.4%	25.9819	26.0375	25.6546	76.1%	25.6298
2	16:45:54	25.1316	26.1017	73.0%	26.1722	26.7828	26.2336	73.6%	25.9849
3	16:47:02	25.7720	25.4551	70.8%	26.6749	26.4901	26.2652	73.5%	25.9428
x		25.2244	25.6338	72.4%	26.2763	26.4368	26.0511	74.4%	25.8525
$\sigma$		0.5076	0.4090	1.4%	0.3580	0.3755	0.3438	1.5%	0.1940
%RSD		2.0124	1.5955	1.9	1.3625	1.4203	1.3196	2.0	0.7506
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:47	25.7288	26.5819	25.9044	25.6738	77.7%	25.3863	25.5056	25.4935
2	16:45:54	25.8796	26.0111	26.1885	26.0309	77.5%	25.4993	25.5847	25.4969
3	16:47:02	25.6227	26.0699	26.3000	26.0698	77.1%	25.6526	25.7512	25.5239
x		25.7437	26.2210	26.1309	25.9248	77.4%	25.5127	25.6138	25.5048
$\sigma$		0.1291	0.3139	0.2040	0.2183	0.3%	0.1337	0.1253	0.0167
%RSD		0.5016	1.1973	0.7807	0.8419	0.4	0.5239	0.4894	0.0653
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:44:47	25.8214	25.6610	24.6716	25.0048	25.0979	84.1%	25.2495	25.0545
2	16:45:54	25.9953	25.9488	25.3404	25.3599	25.1004	84.4%	25.4170	25.4505
3	16:47:02	26.0770	25.9643	25.0652	25.3568	25.1375	84.5%	25.5372	25.5904
x		25.9646	25.8580	25.0257	25.2405	25.1119	84.3%	25.4013	25.3651
$\sigma$		0.1306	0.1708	0.3361	0.2041	0.0222	0.2%	0.1445	0.2780
%RSD		0.5029	0.6607	1.3432	0.8086	0.0884	0.2	0.5688	1.0959
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:44:47	25.2612	25.2293	25.2750	25.2861	88.9%	25.5202		
2	16:45:54	25.3870	25.5816	25.4929	25.4464	90.3%	25.7001		
3	16:47:02	25.6058	25.7073	25.6279	25.5999	90.8%	25.7469		
x		25.4180	25.5061	25.4652	25.4441	90.0%	25.6557		
$\sigma$		0.1744	0.2478	0.1781	0.1569	1.0%	0.1197		
%RSD		0.6860	0.9715	0.6992	0.6166	1.1	0.4664		



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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	27Al	46Ti	47Ti	48Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:14	76.0%	-0.0128	0.0201	0.0364	-0.0061	6.8444	-0.0221	-0.0056
2	16:56:22	72.1%	-0.0071	0.5272	0.1064	0.0082	-4.1363	-0.0162	0.0122
3	16:57:29	70.6%	-0.0094	-0.0501	-0.0195	-0.0083	1.7793	0.1157	-0.0025
x		72.9%	-0.0098	0.1657	0.0411	-0.0021	1.4958	0.0258	0.0014
σ		2.8%	0.0029	0.3150	0.0631	0.0090	5.4959	0.0779	0.0095
%RSD		3.8	29.2179	190.0656	153.5453	437.3939	367.4204	302.3616	682.4866
Run	Time	51V	52Cr	53Cr	55Mn	59Co	60Ni	61Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:14	-0.0347	-0.0381	0.1325	-0.0014	-0.0107	-0.0056	0.3956	0.5071
2	16:56:22	-0.0185	-0.0473	0.0810	0.0006	-0.0146	-0.0128	-0.0226	0.4709
3	16:57:29	-0.0255	-0.0742	0.0736	0.0011	-0.0094	-0.0013	0.1894	0.5324
x		-0.0262	-0.0532	0.0957	0.0001	-0.0116	-0.0066	0.1875	0.5035
σ		0.0081	0.0188	0.0321	0.0014	0.0027	0.0058	0.2091	0.0309
%RSD		30.9626	35.2691	33.5589	1279.2801	23.5407	88.4838	111.5311	6.1352
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	71Ga	75As	77Se
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:14	0.0184	0.0007	-0.0140	0.0168	0.0046	68.7%	0.0127	-0.0601
2	16:56:22	0.0180	0.0042	0.0166	-0.0170	0.0235	66.5%	0.0368	-0.0824
3	16:57:29	0.0220	0.0029	0.0187	-0.0051	0.0086	66.2%	0.0316	0.1428
x		0.0195	0.0026	0.0071	-0.0018	0.0122	67.1%	0.0270	0.0001
σ		0.0022	0.0018	0.0183	0.0171	0.0100	1.4%	0.0126	0.1241
%RSD		11.3482	69.2818	257.2641	962.9619	81.5421	2.1	46.7570	127082.0500
Run	Time	78Se	82Se	89Y	95Mo	97Mo	98Mo	103Rh	107Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:14	-0.9332	-0.0111	69.8%	0.0122	0.0062	0.0158	72.0%	-0.0015
2	16:56:22	-0.4662	0.0474	68.2%	0.0291	0.0193	0.0183	71.8%	-0.0012
3	16:57:29	-0.8423	0.2065	68.5%	0.0232	0.0398	0.0257	71.3%	-0.0020
x		-0.7473	0.0810	68.8%	0.0215	0.0218	0.0199	71.7%	-0.0015
σ		0.2476	0.1126	0.9%	0.0086	0.0169	0.0052	0.4%	0.0004
%RSD		33.1372	139.0498	1.3	39.9463	77.7720	25.9755	0.6	25.5100
Run	Time	109Ag	111Cd	112Cd	114Cd	115In	116Sn	118Sn	120Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:14	-0.0001	0.0006	-0.0012	-0.0023	73.2%	-0.0415	-0.0180	-0.0385
2	16:56:22	0.0026	0.0017	-0.0035	0.0023	73.8%	-0.0567	-0.0461	-0.0248
3	16:57:29	0.0030	0.0018	-0.0090	-0.0022	71.7%	-0.0658	-0.0363	-0.0377
x		0.0019	0.0014	-0.0045	-0.0007	72.9%	-0.0547	-0.0335	-0.0337
σ		0.0017	0.0007	0.0040	0.0026	1.0%	0.0122	0.0143	0.0077
%RSD		92.0454	49.1977	88.5512	372.9766	1.4	22.4039	42.7387	22.8523
Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:14	0.0036	0.0007	-0.0093	-0.0068	-0.0077	80.1%	-0.0090	-0.0081
2	16:56:22	0.0025	0.0023	-0.0051	0.0004	-0.0018	81.6%	-0.0058	-0.0075
3	16:57:29	0.0013	0.0020	0.0012	-0.0058	-0.0040	81.6%	-0.0091	-0.0055
x		0.0025	0.0016	-0.0044	-0.0041	-0.0045	81.1%	-0.0080	-0.0070
σ		0.0011	0.0009	0.0053	0.0039	0.0030	0.8%	0.0019	0.0013
%RSD		45.6502	52.9067	119.8593	96.4616	66.9599	1.0	23.8972	19.0061
Run	Time	206Pb	207Pb	208Pb	209Bi	232Th	238U		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:55:14	-0.0059	-0.0082	-0.0073	-0.0176		84.9%		-0.0082
2	16:56:22	-0.0063	-0.0046	-0.0053	-0.0140		85.9%		-0.0061
3	16:57:29	-0.0063	-0.0084	-0.0066	-0.0156		85.9%		-0.0073
x		-0.0062	-0.0071	-0.0064	-0.0157		85.6%		-0.0072
σ		0.0002	0.0021	0.0010	0.0018		0.6%		0.0011
%RSD		3.4187	29.6737	15.6846	11.7359		0.7		14.6602

## **Volatile Organic Compounds**

Organic Analysis:  
Volatile Organic Compounds

Summary Package

Sample and QC Results

Client: Exponent  
Project: Heglar Kronquist/0907194.000.0601

Service Request: K1010899

Cover Page - Organic Analysis Data Package  
Volatile Organic Compounds

Sample Name	Lab Code	Date Collected	Date Received
MW-3	K1010899-001	10/01/2010	10/02/2010
Equipment Blank	K1010899-002	10/01/2010	10/02/2010

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Klauson

Name: Klauson

Date: 11/4/10

Title: Scientist

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: Exponent  
 Project: Heglar Kronquist/0907194.000.0601  
 Sample Matrix: Water

Service Request: K1010899  
 Date Collected: 10/01/2010  
 Date Received: 10/02/2010

## Volatile Organic Compounds

Sample Name: MW-3  
 Lab Code: K1010899-001  
 Extraction Method: METHOD  
 Analysis Method: 624

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	5.0	0.23	1	10/12/10	10/12/10	KWG1011029	
Vinyl Chloride	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Bromomethane	ND	U	5.0	0.28	1	10/12/10	10/12/10	KWG1011029	
Chloroethane	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Trichlorofluoromethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Methylene Chloride	0.15	J	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
trans-1,2-Dichloroethene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Chloroform	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1,1-Trichloroethane (TCA)	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Carbon Tetrachloride	ND	U	5.0	0.047	1	10/12/10	10/12/10	KWG1011029	
Benzene	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloroethane (EDC)	ND	U	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
Trichloroethene (TCE)	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloropropane	ND	U	5.0	0.17	1	10/12/10	10/12/10	KWG1011029	
Bromodichloromethane	ND	U	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
2-Chloroethyl Vinyl Ether	ND	U	10	0.29	1	10/12/10	10/12/10	KWG1011029	
trans-1,3-Dichloropropene	ND	U	5.0	0.10	1	10/12/10	10/12/10	KWG1011029	
Toluene	0.22	J	5.0	0.18	1	10/12/10	10/12/10	KWG1011029	
cis-1,3-Dichloropropene	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,1,2-Trichloroethane	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Tetrachloroethene (PCE)	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Dibromochloromethane	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Chlorobenzene	ND	U	5.0	0.098	1	10/12/10	10/12/10	KWG1011029	
Ethylbenzene	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Bromoform	ND	U	5.0	0.37	1	10/12/10	10/12/10	KWG1011029	
1,1,2,2-Tetrachloroethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,3-Dichlorobenzene	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
1,4-Dichlorobenzene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichlorobenzene	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
Acrolein†	ND	U	50	3.3	1	10/12/10	10/12/10	KWG1011029	
Acrylonitrile†	ND	U	10	0.61	1	10/12/10	10/12/10	KWG1011029	

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** 10/01/2010  
**Date Received:** 10/02/2010

**Volatile Organic Compounds**

**Sample Name:** MW-3  
**Lab Code:** K1010899-001

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Toluene-d8	88	84-115	10/12/10	Acceptable
4-Bromofluorobenzene	88	83-113	10/12/10	Acceptable
Dibromofluoromethane	85	71-115	10/12/10	Acceptable

† Analyte Comments

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

**Comments:** \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** 10/01/2010  
**Date Received:** 10/02/2010

## Volatile Organic Compounds

**Sample Name:** Equipment Blank  
**Lab Code:** K1010899-002  
**Extraction Method:** METHOD  
**Analysis Method:** 624

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	5.0	0.23	1	10/12/10	10/12/10	KWG1011029	
Vinyl Chloride	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Bromomethane	ND	U	5.0	0.28	1	10/12/10	10/12/10	KWG1011029	
Chloroethane	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Trichlorofluoromethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Methylene Chloride	1.1	J	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
trans-1,2-Dichloroethene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Chloroform	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1,1-Trichloroethane (TCA)	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Carbon Tetrachloride	ND	U	5.0	0.047	1	10/12/10	10/12/10	KWG1011029	
Benzene	0.31	J	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloroethane (EDC)	ND	U	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
Trichloroethene (TCE)	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloropropane	ND	U	5.0	0.17	1	10/12/10	10/12/10	KWG1011029	
Bromodichloromethane	ND	U	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
2-Chloroethyl Vinyl Ether	ND	U	10	0.29	1	10/12/10	10/12/10	KWG1011029	
trans-1,3-Dichloropropene	ND	U	5.0	0.10	1	10/12/10	10/12/10	KWG1011029	
Toluene	1.2	J	5.0	0.18	1	10/12/10	10/12/10	KWG1011029	
cis-1,3-Dichloropropene	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,1,2-Trichloroethane	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Tetrachloroethene (PCE)	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Dibromochloromethane	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Chlorobenzene	ND	U	5.0	0.098	1	10/12/10	10/12/10	KWG1011029	
Ethylbenzene	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Bromoform	ND	U	5.0	0.37	1	10/12/10	10/12/10	KWG1011029	
1,1,2,2-Tetrachloroethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,3-Dichlorobenzene	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
1,4-Dichlorobenzene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichlorobenzene	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
Acrolein†	ND	U	50	3.3	1	10/12/10	10/12/10	KWG1011029	
Acrylonitrile†	ND	U	10	0.61	1	10/12/10	10/12/10	KWG1011029	

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** 10/01/2010  
**Date Received:** 10/02/2010

**Volatile Organic Compounds**

**Sample Name:** Equipment Blank  
**Lab Code:** K1010899-002

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Toluene-d8	89	84-115	10/12/10	Acceptable
4-Bromofluorobenzene	85	83-113	10/12/10	Acceptable
Dibromofluoromethane	84	71-115	10/12/10	Acceptable

† Analyte Comments

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

**Comments:** \_\_\_\_\_



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

## Volatile Organic Compounds

**Sample Name:** Method Blank  
**Lab Code:** KWG1011029-2

**Units:** ug/L  
**Basis:** NA

**Extraction Method:** METHOD  
**Analysis Method:** 624

**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	5.0	0.23	1	10/12/10	10/12/10	KWG1011029	
Vinyl Chloride	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Bromomethane	0.30	J	5.0	0.28	1	10/12/10	10/12/10	KWG1011029	
Chloroethane	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Trichlorofluoromethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Methylene Chloride	0.16	J	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
trans-1,2-Dichloroethene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Chloroform	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1,1-Trichloroethane (TCA)	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Carbon Tetrachloride	ND	U	5.0	0.047	1	10/12/10	10/12/10	KWG1011029	
Benzene	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloroethane (EDC)	ND	U	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
Trichloroethene (TCE)	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloropropane	ND	U	5.0	0.17	1	10/12/10	10/12/10	KWG1011029	
Bromodichloromethane	ND	U	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
2-Chloroethyl Vinyl Ether	ND	U	10	0.29	1	10/12/10	10/12/10	KWG1011029	
trans-1,3-Dichloropropene	ND	U	5.0	0.10	1	10/12/10	10/12/10	KWG1011029	
Toluene	ND	U	5.0	0.18	1	10/12/10	10/12/10	KWG1011029	
cis-1,3-Dichloropropene	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,1,2-Trichloroethane	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Tetrachloroethene (PCE)	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Dibromochloromethane	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Chlorobenzene	ND	U	5.0	0.098	1	10/12/10	10/12/10	KWG1011029	
Ethylbenzene	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Bromoform	ND	U	5.0	0.37	1	10/12/10	10/12/10	KWG1011029	
1,1,2,2-Tetrachloroethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,3-Dichlorobenzene	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
1,4-Dichlorobenzene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichlorobenzene	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
Acrolein†	ND	U	50	3.3	1	10/12/10	10/12/10	KWG1011029	
Acrylonitrile†	ND	U	10	0.61	1	10/12/10	10/12/10	KWG1011029	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

**Volatile Organic Compounds**

**Sample Name:** Method Blank  
**Lab Code:** KWG1011029-2

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Toluene-d8	88	84-115	10/12/10	Acceptable
4-Bromofluorobenzene	87	83-113	10/12/10	Acceptable
Dibromofluoromethane	83	71-115	10/12/10	Acceptable

† Analyte Comments

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

**Comments:** \_\_\_\_\_

Client: Exponent  
 Project: Heglar Kronquist/0907194.000.0601  
 Sample Matrix: Water

Service Request: K1010899

**Surrogate Recovery Summary  
 Volatile Organic Compounds**

Extraction Method: METHOD  
 Analysis Method: 624

Units: PERCENT  
 Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>
Batch QC	K1010898-002	88	87	85
MW-3	K1010899-001	88	88	85
Equipment Blank	K1010899-002	89	85	84
Method Blank	KWG1011029-2	88	87	83
Batch QCMS	KWG1011029-3	90	87	87
Batch QCDMS	KWG1011029-4	93	88	85
Lab Control Sample	KWG1011029-1	90	86	88

**Surrogate Recovery Control Limits (%)**

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Sur1 = Toluene-d8	84-115
Sur2 = 4-Bromofluorobenzene	83-113
Sur3 = Dibromofluoromethane	71-115

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Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Exponent  
 Project: Heglar Kronquist/0907194.000.0601

Service Request: K1010899  
 Date Analyzed: 10/12/2010  
 Time Analyzed: 14:51

Internal Standard Area and RT Summary  
 Volatile Organic Compounds

File ID: J:\MS23\DATA\101210\1012F011.D  
 Instrument ID: MS23  
 Analysis Method: 624

Lab Code: KWG1011024-2  
 Analysis Lot: KWG1011024

	Fluorobenzene		1,4-Dichlorobenzene-d4		Chlorobenzene-d5		
	Area	RT	Area	RT	Area	RT	
Results ==>	463,008	5.89	216,563	11.72	194,705	9.31	
Upper Limit ==>	926,016	6.39	433,126	12.22	389,410	9.81	
Lower Limit ==>	231,504	5.39	108,282	11.22	97,353	8.81	
ICAL Result ==>	471,913	5.90	213,999	11.73	194,845	9.31	
<b>Associated Analyses</b>							
Batch QCMS	KWG1011029-3	478,550	5.89	218,865	11.73	200,801	9.31
Batch QCDMS	KWG1011029-4	484,068	5.90	220,910	11.73	199,882	9.32
Lab Control Sample	KWG1011029-1	480,881	5.90	223,470	11.73	202,217	9.31
Method Blank	KWG1011029-2	471,130	5.89	206,769	11.72	191,257	9.31
Batch QC	K1010898-002	466,705	5.89	213,361	11.72	193,043	9.31
MW-3	K1010899-001	439,839	5.89	198,176	11.72	178,132	9.31
Equipment Blank	K1010899-002	438,390	5.89	196,355	11.72	182,920	9.31

Results flagged with an asterisk (\*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/12/2010  
**Date Analyzed:** 10/12/2010

**Matrix Spike/Duplicate Matrix Spike Summary**  
**Volatile Organic Compounds**

**Sample Name:** Batch QC  
**Lab Code:** K1010898-002  
**Extraction Method:** METHOD  
**Analysis Method:** 624

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** KWG1011029

Analyte Name	Sample Result	Batch QCMS KWG1011029-3 Matrix Spike			Batch QCDMS KWG1011029-4 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
1,1-Dichloroethene	ND	10.7	10.0	107	9.35	10.0	94	63-153	14	30
Benzene	ND	10.8	10.0	108	10.3	10.0	103	69-128	5	30
Trichloroethene (TCE)	ND	10.2	10.0	102	9.33	10.0	93	33-174	9	30
Toluene	ND	10.7	10.0	107	9.91	10.0	99	62-132	8	30
Chlorobenzene	ND	10.6	10.0	106	10.1	10.0	101	71-120	4	30
1,2-Dichlorobenzene	ND	11.4	10.0	114	10.9	10.0	109	72-117	4	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/12/2010  
**Date Analyzed:** 10/12/2010

**Lab Control Spike Summary  
Volatile Organic Compounds**

**Extraction Method:** METHOD  
**Analysis Method:** 624

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** KWG1011029

Analyte Name	Lab Control Sample KWG1011029-1 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
Chloromethane	11.4	10.0	114	45-137
Vinyl Chloride	11.3	10.0	113	54-145
Bromomethane	11.0	10.0	110	20-175
Chloroethane	11.0	10.0	110	56-137
Trichlorofluoromethane	10.4	10.0	104	50-135
1,1-Dichloroethene	12.4	10.0	124	74-139
Methylene Chloride	10.6	10.0	106	76-120
trans-1,2-Dichloroethene	11.7	10.0	117	76-125
1,1-Dichloroethane	11.4	10.0	114	68-127
Chloroform	11.5	10.0	115	69-126
1,1,1-Trichloroethane (TCA)	11.6	10.0	116	61-135
Carbon Tetrachloride	11.5	10.0	115	54-142
Benzene	11.7	10.0	117	73-122
1,2-Dichloroethane (EDC)	11.5	10.0	115	66-132
Trichloroethene (TCE)	11.2	10.0	112	70-123
1,2-Dichloropropane	11.4	10.0	114	73-122
Bromodichloromethane	11.2	10.0	112	68-136
2-Chloroethyl Vinyl Ether	9.45	10.0	95	30-155
trans-1,3-Dichloropropane	10.4	10.0	104	56-121
Toluene	11.5	10.0	115	71-124
cis-1,3-Dichloropropene	11.5	10.0	115	64-131
1,1,2-Trichloroethane	11.1	10.0	111	75-118
Tetrachloroethene (PCE)	11.3	10.0	113	65-125
Dibromochloromethane	10.6	10.0	106	65-132
Chlorobenzene	11.0	10.0	110	77-115
Ethylbenzene	11.1	10.0	111	72-123
Bromoform	10.1	10.0	101	51-145
1,1,2,2-Tetrachloroethane	11.6	10.0	116	62-135
1,3-Dichlorobenzene	11.4	10.0	114	74-116
1,4-Dichlorobenzene	11.3	10.0	113	74-114
1,2-Dichlorobenzene	11.2	10.0	112	76-113
Acrolein	120	100	120	10-185
Acrylonitrile	11.6	10.0	116	63-138

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/12/2010  
**Date Analyzed:** 10/12/2010  
**Time Analyzed:** 17:52

**Method Blank Summary  
 Volatile Organic Compounds**

**Sample Name:** Method Blank  
**Lab Code:** KWG1011029-2  
**Extraction Method:** METHOD  
**Analysis Method:** 624

**File ID:** J:\MS23\DATA\101210\1012F016.D  
**Instrument ID:** MS23  
**Level:** Low  
**Extraction Lot:** KWG1011029

This Method Blank applies to the following analyses:

<b>Sample Name</b>	<b>Lab Code</b>	<b>File ID</b>	<b>Date Analyzed</b>	<b>Time Analyzed</b>
Batch QCMS	KWG1011029-3	J:\MS23\DATA\101210\1012F013.D	10/12/10	15:57
Batch QCDMS	KWG1011029-4	J:\MS23\DATA\101210\1012F014.D	10/12/10	16:26
Lab Control Sample	KWG1011029-1	J:\MS23\DATA\101210\1012F100.D	10/12/10	17:24
Batch QC	K1010898-002	J:\MS23\DATA\101210\1012F017.D	10/12/10	18:21
MW-3	K1010899-001	J:\MS23\DATA\101210\1012F026.D	10/12/10	22:40
Equipment Blank	K1010899-002	J:\MS23\DATA\101210\1012F027.D	10/12/10	23:09

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/12/2010  
**Date Analyzed:** 10/12/2010  
**Time Analyzed:** 17:24

**Lab Control Sample Summary**  
**Volatile Organic Compounds**

**Sample Name:** Lab Control Sample  
**Lab Code:** KWG1011029-1  
**Extraction Method:** METHOD  
**Analysis Method:** 624  
**File ID:** J:\MS23\DATA\101210\1012F100.D  
**Instrument ID:** MS23  
**Level:** Low  
**Extraction Lot:** KWG1011029

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Batch QCMS	KWG1011029-3	J:\MS23\DATA\101210\1012F013.D	10/12/10	15:57
Batch QCDMS	KWG1011029-4	J:\MS23\DATA\101210\1012F014.D	10/12/10	16:26
Method Blank	KWG1011029-2	J:\MS23\DATA\101210\1012F016.D	10/12/10	17:52
Batch QC	K1010898-002	J:\MS23\DATA\101210\1012F017.D	10/12/10	18:21
MW-3	K1010899-001	J:\MS23\DATA\101210\1012F026.D	10/12/10	22:40
Equipment Blank	K1010899-002	J:\MS23\DATA\101210\1012F027.D	10/12/10	23:09



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Date Analyzed:** 10/12/2010  
**Time Analyzed:** 14:22

**Tune Summary  
 Volatile Organic Compounds**

**File ID:** J:\MS23\DATA\101210\1012F010.D  
**Instrument ID:** MS23  
**Column:**

**Analysis Method:** 624  
**Analysis Lot:** KWG1011024

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	28.4	16456	PASS
75	95	30	60	57.2	33201	PASS
95	95	100	100	100.0	58016	PASS
96	95	5	9	6.6	3838	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	103.7	60152	PASS
175	174	5	9	6.7	4043	PASS
176	174	95	101	99.0	59552	PASS
177	176	5	9	6.8	4071	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1011024-2	J:\MS23\DATA\101210\1012F011.D	10/12/2010	14:51	
Batch QCMS	KWG1011029-3	J:\MS23\DATA\101210\1012F013.D	10/12/2010	15:57	
Batch QCDMS	KWG1011029-4	J:\MS23\DATA\101210\1012F014.D	10/12/2010	16:26	
Lab Control Sample	KWG1011029-1	J:\MS23\DATA\101210\1012F100.D	10/12/2010	17:24	
Method Blank	KWG1011029-2	J:\MS23\DATA\101210\1012F016.D	10/12/2010	17:52	
Batch QC	K1010898-002	J:\MS23\DATA\101210\1012F017.D	10/12/2010	18:21	
MW-3	K1010899-001	J:\MS23\DATA\101210\1012F026.D	10/12/2010	22:40	
Equipment Blank	K1010899-002	J:\MS23\DATA\101210\1012F027.D	10/12/2010	23:09	

Results flagged with an asterisk (\*) indicate the analysis performed outside specified tune window

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 10/11/2010

**Initial Calibration Summary  
 Volatile Organic Compounds**

**Calibration ID:** CAL9945  
**Instrument ID:** MS23

**Column:** MS

<b>Level ID</b>	<b>File ID</b>	<b>Level ID</b>	<b>File ID</b>
A	J:\MS23\DATA\101110\1011F008.D	E	J:\MS23\DATA\101110\1011F012.D
B	J:\MS23\DATA\101110\1011F009.D	F	J:\MS23\DATA\101110\1011F013.D
C	J:\MS23\DATA\101110\1011F010.D	G	J:\MS23\DATA\101110\1011F014.D
D	J:\MS23\DATA\101110\1011F011.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Chloromethane	A	0.50	0.301	B	1.0	0.312	C	5.0	0.301	D	10	0.312	E	40	0.328
	F	80	0.346	G	120	0.310									
Vinyl Chloride	A	0.50	0.294	B	1.0	0.343	C	5.0	0.340	D	10	0.346	E	40	0.362
	F	80	0.369	G	120	0.289									
Bromomethane	A	0.50	0.179	B	1.0	0.167	C	5.0	0.132	D	10	0.148	E	40	0.177
	F	80	0.182	G	120	0.160									
Chloroethane	A	0.50	0.0516	B	1.0	0.0616	C	5.0	0.0588	D	10	0.0592	E	40	0.0588
	F	80	0.0602	G	120	0.0512									
Trichlorofluoromethane	A	0.50	0.455	B	1.0	0.597	C	5.0	0.550	D	10	0.581	E	40	0.572
	F	80	0.562	G	120	0.413									
1,1-Dichloroethene	A	0.50	0.203	B	1.0	0.241	C	5.0	0.229	D	10	0.238	E	40	0.236
	F	80	0.246	G	120	0.202									
Methylene Chloride	A	0.50	0.407	B	1.0	0.344	C	5.0	0.250	D	10	0.257	E	40	0.252
	F	80	0.259	G	120	0.248									
trans-1,2-Dichloroethene	A	0.50	0.304	B	1.0	0.299	C	5.0	0.278	D	10	0.285	E	40	0.290
	F	80	0.296	G	120	0.268									
1,1-Dichloroethane	A	0.50	0.493	B	1.0	0.544	C	5.0	0.480	D	10	0.513	E	40	0.526
	F	80	0.541	G	120	0.497									
Chloroform	A	0.50	0.515	B	1.0	0.540	C	5.0	0.499	D	10	0.538	E	40	0.542
	F	80	0.557	G	120	0.519									
1,1,1-Trichloroethane (TCA)	A	0.50	0.402	B	1.0	0.469	C	5.0	0.460	D	10	0.488	E	40	0.513
	F	80	0.538	G	120	0.462									
Carbon Tetrachloride	A	0.50	0.280	B	1.0	0.347	C	5.0	0.353	D	10	0.387	E	40	0.424
	F	80	0.447	G	120	0.380									
Benzene	A	0.50	1.04	B	1.0	1.11	C	5.0	1.03	D	10	1.07	E	40	1.10
	F	80	1.12	G	120	1.04									
1,2-Dichloroethane (EDC)	A	0.50	0.409	B	1.0	0.430	C	5.0	0.419	D	10	0.428	E	40	0.434
	F	80	0.442	G	120	0.414									
Trichloroethene (TCE)	A	0.50	0.303	B	1.0	0.329	C	5.0	0.287	D	10	0.310	E	40	0.305
	F	80	0.314	G	120	0.279									

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 10/11/2010

**Initial Calibration Summary  
 Volatile Organic Compounds**

**Calibration ID:** CAL9945  
**Instrument ID:** MS23

**Column:** MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
1,2-Dichloropropane	A	0.50	0.240	B	1.0	0.263	C	5.0	0.234	D	10	0.252	E	40	0.256
	F	80	0.267	G	120	0.258									
Bromodichloromethane	A	0.50	0.301	B	1.0	0.311	C	5.0	0.302	D	10	0.345	E	40	0.374
	F	80	0.396	G	120	0.379									
2-Chloroethyl Vinyl Ether	A	0.50	0.0991	B	1.0	0.0988	C	5.0	0.100	D	10	0.117	E	40	0.128
	F	80	0.136	G	120	0.131									
trans-1,3-Dichloropropene	A	0.50	0.656	B	1.0	0.710	C	5.0	0.703	D	10	0.798	E	40	0.924
	F	80	0.992	G	120	0.979									
Toluene	A	0.50	0.699	B	1.0	0.747	C	5.0	0.681	D	10	0.726	E	40	0.733
	F	80	0.761	G	120	0.696									
cis-1,3-Dichloropropene	A	0.50	0.336	B	1.0	0.334	C	5.0	0.349	D	10	0.399	E	40	0.435
	F	80	0.464	G	120	0.441									
1,1,2-Trichloroethane	A	0.50	0.380	B	1.0	0.391	C	5.0	0.354	D	10	0.381	E	40	0.387
	F	80	0.397	G	120	0.392									
Tetrachloroethene (PCE)	A	0.50	0.618	B	1.0	0.754	C	5.0	0.693	D	10	0.722	E	40	0.747
	F	80	0.762	G	120	0.679									
Dibromochloromethane	A	0.50	0.397	B	1.0	0.444	C	5.0	0.458	D	10	0.517	E	40	0.593
	F	80	0.645	G	120	0.635									
Chlorobenzene	A	0.50	1.99	B	1.0	2.06	C	5.0	1.94	D	10	1.97	E	40	2.04
	F	80	2.09	G	120	1.99									
Ethylbenzene	A	0.50	0.857	B	1.0	0.995	C	5.0	1.01	D	10	1.05	E	40	1.10
	F	80	1.16	G	120	1.08									
Bromoform	A	0.50	0.203	B	1.0	0.220	C	5.0	0.227	D	10	0.257	E	40	0.329
	F	80	0.365	G	120	0.362									
1,1,2,2-Tetrachloroethane	A	0.50	0.333	B	1.0	0.357	C	5.0	0.352	D	10	0.374	E	40	0.392
	F	80	0.398	G	120	0.394									
1,3-Dichlorobenzene	A	0.50	1.32	B	1.0	1.46	C	5.0	1.40	D	10	1.50	E	40	1.51
	F	80	1.55	G	120	1.48									
1,4-Dichlorobenzene	A	0.50	1.46	B	1.0	1.46	C	5.0	1.44	D	10	1.51	E	40	1.52
	F	80	1.54	G	120	1.49									
1,2-Dichlorobenzene	A	0.50	1.24	B	1.0	1.30	C	5.0	1.27	D	10	1.36	E	40	1.36
	F	80	1.38	G	120	1.33									
Acrolein	A	10	0.0259	B	20	0.0268	C	100	0.0249	D	200	0.0257	E	800	0.0247
	F	1600	0.0243	G	2400	0.0225									
Acrylonitrile	A	1.0	0.0504	B	2.0	0.0489	C	10	0.0465	D	20	0.0504	E	80	0.0499
	F	160	0.0520	G	240	0.0506									

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 10/11/2010

**Initial Calibration Summary  
 Volatile Organic Compounds**

**Calibration ID:** CAL9945  
**Instrument ID:** MS23

**Column:** MS

Analyte Name	Level			Level			Level			Level					
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF			
Toluene-d8	A	4.0	0.955	B	6.0	1.06	C	8.0	1.09	D	10	1.10	E	20	1.16
	F	40	1.12	G	120	1.06									
4-Bromofluorobenzene	A	4.0	0.858	B	6.0	0.957	C	8.0	0.969	D	10	0.998	E	20	1.05
	F	40	1.03	G	120	0.988									
Dibromofluoromethane	A	4.0	0.251	B	6.0	0.280	C	8.0	0.291	D	10	0.292	E	20	0.309
	F	40	0.306	G	120	0.294									

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† SPCC Compound

‡ CCC Compound

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 10/11/2010

**Initial Calibration Summary  
 Volatile Organic Compounds**

**Calibration ID:** CAL9945  
**Instrument ID:** MS23

**Column:** MS

Analyte Name	Compound Type	Calibration Evaluation				RRF Evaluation		
		Fit Type	Eval.	Result	Q	Control Criteria	Average RRF	Q
Chloromethane	TRG	AverageRF	% RSD	5.1	≤35		0.316	0.01
Vinyl Chloride	TRG	AverageRF	% RSD	9.4	≤35		0.335	0.01
Bromomethane	TRG	AverageRF	% RSD	11.2	≤35		0.164	0.01
Chloroethane	TRG	AverageRF	% RSD	7.3	≤35		0.0574	0.01
Trichlorofluoromethane	TRG	AverageRF	% RSD	13.2	≤35		0.533	0.01
1,1-Dichloroethene	MS	AverageRF	% RSD	7.9	≤35		0.228	0.01
Methylene Chloride	TRG	AverageRF	% RSD	21.7	≤35		0.288	0.01
trans-1,2-Dichloroethene	TRG	AverageRF	% RSD	4.5	≤35		0.289	0.01
1,1-Dichloroethane	TRG	AverageRF	% RSD	4.8	≤35		0.513	0.01
Chloroform	TRG	AverageRF	% RSD	3.8	≤35		0.530	0.01
1,1,1-Trichloroethane (TCA)	TRG	AverageRF	% RSD	9.1	≤35		0.476	0.01
Carbon Tetrachloride	TRG	AverageRF	% RSD	14.7	≤35		0.374	0.01
Benzene	MS	AverageRF	% RSD	3.7	≤35		1.07	0.01
1,2-Dichloroethane (EDC)	TRG	AverageRF	% RSD	2.7	≤35		0.425	0.01
Trichloroethene (TCE)	MS	AverageRF	% RSD	5.5	≤35		0.304	0.01
1,2-Dichloropropane	TRG	AverageRF	% RSD	4.8	≤35		0.253	0.01
Bromodichloromethane	TRG	AverageRF	% RSD	11.6	≤35		0.344	0.01
2-Chloroethyl Vinyl Ether	TRG	AverageRF	% RSD	14.1	≤35		0.116	0.01
trans-1,3-Dichloropropene	TRG	AverageRF	% RSD	17.1	≤35		0.823	0.01
Toluene	MS	AverageRF	% RSD	4.1	≤35		0.720	0.01
cis-1,3-Dichloropropene	TRG	AverageRF	% RSD	13.8	≤35		0.394	0.01
1,1,2-Trichloroethane	TRG	AverageRF	% RSD	3.7	≤35		0.383	0.01
Tetrachloroethene (PCE)	TRG	AverageRF	% RSD	7.2	≤35		0.711	0.01
Dibromochloromethane	TRG	AverageRF	% RSD	18.7	≤35		0.527	0.01
Chlorobenzene	MS	AverageRF	% RSD	2.7	≤35		2.01	0.01
Ethylbenzene	TRG	AverageRF	% RSD	9.2	≤35		1.04	0.01
Bromoform	TRG	AverageRF	% RSD	24.9	≤35		0.280	0.01
1,1,2,2-Tetrachloroethane	TRG	AverageRF	% RSD	6.6	≤35		0.371	0.01
1,3-Dichlorobenzene	TRG	AverageRF	% RSD	5.3	≤35		1.46	0.01
1,4-Dichlorobenzene	TRG	AverageRF	% RSD	2.6	≤35		1.49	0.01
1,2-Dichlorobenzene	MS	AverageRF	% RSD	3.8	≤35		1.32	0.01
Acrolein	TRG	AverageRF	% RSD	5.5	≤35		0.0250	0.01
Acrylonitrile	TRG	AverageRF	% RSD	3.5	≤35		0.0498	0.01
Toluene-d8	SURR	AverageRF	% RSD	6.0	≤35		1.08	0.01
4-Bromofluorobenzene	SURR	AverageRF	% RSD	6.4	≤35		0.979	0.01
Dibromofluoromethane	SURR	AverageRF	% RSD	6.7	≤35		0.289	0.01

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Exponent  
 Project: Heglar Kronquist/0907194.000.0601

Service Request: K1010899  
 Calibration Date: 10/11/2010  
 Date Analyzed: 10/12/2010

Second Source Calibration Verification  
 Volatile Organic Compounds

Calibration Type: Internal Standard  
 Analysis Method: 624

Calibration ID: CAL9945  
 Units: PPB

File ID: J:\MS23\DATA\101210\1012F005.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Chloromethane	10	11	0.316	0.362	15	NA	± 104 %	AverageRF
Vinyl Chloride	10	11	0.335	0.389	16	NA	± 96 %	AverageRF
Bromomethane	10	12	0.164	0.198	21	NA	± 86 %	AverageRF
Chloroethane	10	10	0.0574	0.0628	9	NA	± 62 %	AverageRF
Trichlorofluoromethane	10	10	0.533	0.572	7	NA	± 52 %	AverageRF
1,1-Dichloroethene	10	13	0.228	0.295	29	NA	± 49 %	AverageRF
Methylene Chloride	10	12	0.288	0.308	7	NA	± 39 %	AverageRF
trans-1,2-Dichloroethene	10	12	0.289	0.339	18	NA	± 30 %	AverageRF
1,1-Dichloroethane	10	12	0.513	0.608	19	NA	± 27 %	AverageRF
Chloroform	10	12	0.530	0.622	17	NA	± 32 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	12	0.476	0.577	21	NA	± 25 %	AverageRF
Carbon Tetrachloride	10	12	0.374	0.448	20	NA	± 27 %	AverageRF
Benzene	10	12	1.07	1.28	19	NA	± 36 %	AverageRF
1,2-Dichloroethane (EDC)	10	12	0.425	0.501	18	NA	± 32 %	AverageRF
Trichloroethene (TCE)	10	12	0.304	0.352	16	NA	± 33 %	AverageRF
1,2-Dichloropropane	10	12	0.253	0.294	16	NA	± 66 %	AverageRF
Bromodichloromethane	10	12	0.344	0.407	18	NA	± 34 %	AverageRF
2-Chloroethyl Vinyl Ether	10	10	0.116	0.108	-7	NA	± 124 %	AverageRF
trans-1,3-Dichloropropene	10	12	0.823	0.884	7	NA	± 50 %	AverageRF
Toluene	10	12	0.720	0.835	16	NA	± 25 %	AverageRF
cis-1,3-Dichloropropene	10	12	0.394	0.468	19	NA	± 76 %	AverageRF
1,1,2-Trichloroethane	10	12	0.383	0.438	14	NA	± 29 %	AverageRF
Tetrachloroethene (PCE)	10	12	0.711	0.823	16	NA	± 26 %	AverageRF
Dibromochloromethane	10	13	0.527	0.606	15	NA	± 32 %	AverageRF
Chlorobenzene	10	12	2.01	2.24	12	NA	± 34 %	AverageRF
Ethylbenzene	10	12	1.04	1.19	15	NA	± 41 %	AverageRF
Bromoform	10	12	0.280	0.317	13	NA	± 29 %	AverageRF
1,1,2,2-Tetrachloroethane	10	13	0.371	0.446	20	NA	± 39 %	AverageRF
1,3-Dichlorobenzene	10	13	1.46	1.70	16	NA	± 27 %	AverageRF
1,4-Dichlorobenzene	10	13	1.49	1.72	15	NA	± 37 %	AverageRF
1,2-Dichlorobenzene	10	13	1.32	1.51	15	NA	± 37 %	AverageRF
Acrolein	100	120	0.0250	0.0299	20	NA	± 80 %	AverageRF
Acrylonitrile	10	11	0.0498	0.0552	11	NA	± 40 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Date Analyzed:** 10/12/2010

**Continuing Calibration Verification Summary  
 Volatile Organic Compounds**

**Calibration Type:** Internal Standard  
**Analysis Method:** 624

**Calibration Date:** 10/11/2010  
**Calibration ID:** CAL9945  
**Analysis Lot:** KWG1011024  
**Units:** PPB

**File ID:** J:\MS23\DATA\101210\1012F011.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Chloromethane	10	11	0.01	0.316	0.335	6	NA	± 104 %	AverageRF
Vinyl Chloride	10	12	0.01	0.335	0.398	19	NA	± 96 %	AverageRF
Bromomethane	10	10	0.01	0.164	0.169	4	NA	± 86 %	AverageRF
Chloroethane	10	11	0.01	0.0574	0.0617	8	NA	± 62 %	AverageRF
Trichlorofluoromethane	10	12	0.01	0.533	0.620	16	NA	± 52 %	AverageRF
1,1-Dichloroethene	10	11	0.01	0.228	0.261	14	NA	± 49 %	AverageRF
Methylene Chloride	10	9.8	0.01	0.288	0.282	-2	NA	± 39 %	AverageRF
trans-1,2-Dichloroethene	10	11	0.01	0.289	0.315	9	NA	± 30 %	AverageRF
1,1-Dichloroethane	10	11	0.01	0.513	0.561	9	NA	± 27 %	AverageRF
Chloroform	10	11	0.01	0.530	0.586	11	NA	± 32 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	11	0.01	0.476	0.537	13	NA	± 25 %	AverageRF
Carbon Tetrachloride	10	11	0.01	0.374	0.411	10	NA	± 27 %	AverageRF
Benzene	10	11	0.01	1.07	1.18	10	NA	± 36 %	AverageRF
1,2-Dichloroethane (EDC)	10	11	0.01	0.425	0.476	12	NA	± 32 %	AverageRF
Trichloroethene (TCE)	10	11	0.01	0.304	0.330	8	NA	± 33 %	AverageRF
1,2-Dichloropropane	10	11	0.01	0.253	0.272	7	NA	± 66 %	AverageRF
Bromodichloromethane	10	11	0.01	0.344	0.365	6	NA	± 34 %	AverageRF
2-Chloroethyl Vinyl Ether	10	11	0.01	0.116	0.125	8	NA	± 124 %	AverageRF
trans-1,3-Dichloropropene	10	10	0.01	0.823	0.856	4	NA	± 50 %	AverageRF
Toluene	10	11	0.01	0.720	0.783	9	NA	± 25 %	AverageRF
cis-1,3-Dichloropropene	10	11	0.01	0.394	0.435	10	NA	± 76 %	AverageRF
1,1,2-Trichloroethane	10	10	0.01	0.383	0.392	2	NA	± 29 %	AverageRF
Tetrachloroethene (PCE)	10	11	0.01	0.711	0.761	7	NA	± 26 %	AverageRF
Dibromochloromethane	10	10	0.01	0.527	0.536	2	NA	± 32 %	AverageRF
Chlorobenzene	10	11	0.01	2.01	2.15	7	NA	± 34 %	AverageRF
Ethylbenzene	10	11	0.01	1.04	1.11	7	NA	± 41 %	AverageRF
Bromoform	10	9.9	0.01	0.280	0.278	-1	NA	± 29 %	AverageRF
1,1,2,2-Tetrachloroethane	10	11	0.01	0.371	0.397	7	NA	± 39 %	AverageRF
1,3-Dichlorobenzene	10	11	0.01	1.46	1.56	7	NA	± 27 %	AverageRF
1,4-Dichlorobenzene	10	10	0.01	1.49	1.55	4	NA	± 37 %	AverageRF
1,2-Dichlorobenzene	10	11	0.01	1.32	1.39	6	NA	± 37 %	AverageRF
Acrolein	200	210	0.01	0.0250	0.0259	4	NA	± 80 %	AverageRF
Acrylonitrile	20	22	0.01	0.0498	0.0540	8	NA	± 40 %	AverageRF
Toluene-d8	10	9.2	0.01	1.08	0.993	-8	NA	± 30 %	AverageRF
4-Bromofluorobenzene	10	8.9	0.01	0.979	0.873	-11	NA	± 30 %	AverageRF
Dibromofluoromethane	10	8.8	0.01	0.289	0.256	-12	NA	± 30 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Exponent  
 Project: Heglar Kronquist/0907194.000.0601

Service Request: K1010899

Analysis Run Log  
 Volatile Organic Compounds

Analysis Method: 624

Analysis Lot: KWG1011024  
 Instrument ID: MS23

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1012F010.D	GC/MS Tuning - Bromofluorobenzene	KWG1011024-1	10/12/2010	14:22		10/12/2010	14:37
1012F011.D	Continuing Calibration Verification	KWG1011024-2	10/12/2010	14:51		10/12/2010	15:06
1012F013.D	Batch QCMS	KWG1011029-3	10/12/2010	15:57		10/12/2010	16:12
1012F014.D	Batch QCDMS	KWG1011029-4	10/12/2010	16:26		10/12/2010	16:41
1012F100.D	Lab Control Sample	KWG1011029-1	10/12/2010	17:24		10/12/2010	17:39
1012F016.D	Method Blank	KWG1011029-2	10/12/2010	17:52		10/12/2010	18:07
1012F017.D	Batch QC	K1010898-002	10/12/2010	18:21		10/12/2010	18:36
1012F018.D	ZZZZZZ	ZZZZZZ	10/12/2010	18:50		10/12/2010	19:05
1012F019.D	ZZZZZZ	ZZZZZZ	10/12/2010	19:19		10/12/2010	19:34
1012F020.D	ZZZZZZ	ZZZZZZ	10/12/2010	19:47		10/12/2010	20:02
1012F021.D	ZZZZZZ	ZZZZZZ	10/12/2010	20:16		10/12/2010	20:31
1012F022.D	ZZZZZZ	ZZZZZZ	10/12/2010	20:45		10/12/2010	21:00
1012F023.D	ZZZZZZ	ZZZZZZ	10/12/2010	21:14		10/12/2010	21:29
1012F024.D	ZZZZZZ	ZZZZZZ	10/12/2010	21:42		10/12/2010	21:57
1012F025.D	ZZZZZZ	ZZZZZZ	10/12/2010	22:11		10/12/2010	22:26
1012F026.D	MW-3	K1010899-001	10/12/2010	22:40		10/12/2010	22:55
1012F027.D	Equipment Blank	K1010899-002	10/12/2010	23:09		10/12/2010	23:24
1012F028.D	ZZZZZZ	ZZZZZZ	10/12/2010	23:37		10/12/2010	23:52
1012F029.D	ZZZZZZ	ZZZZZZ	10/13/2010	00:06		10/13/2010	00:21
1012F030.D	ZZZZZZ	ZZZZZZ	10/13/2010	00:35		10/13/2010	00:50
1012F031.D	ZZZZZZ	ZZZZZZ	10/13/2010	01:03		10/13/2010	01:18
1012F032.D	ZZZZZZ	ZZZZZZ	10/13/2010	01:32		10/13/2010	01:47
1012F033.D	ZZZZZZ	ZZZZZZ	10/13/2010	02:01		10/13/2010	02:16

Results flagged with an asterisk (\*) indicate the holding time was exceeded for the analysis



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/12/2010

**Extraction Prep Log  
 Volatile Organic Compounds**

**Extraction Method:** METHOD  
**Analysis Method:** 624

**Extraction Lot:** KWG1011029  
**Level:** Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
MW-3	K1010899-001	10/01/10	10/02/10	10ml	10ml	NA	
Equipment Blank	K1010899-002	10/01/10	10/02/10	10ml	10ml	NA	
Method Blank	KWG1011029-2	NA	NA	10ml	10ml	NA	
Batch QC	K1010898-002	NA	NA	10ml	10ml	NA	
Batch QCMS	KWG1011029-3	NA	NA	10ml	10ml	NA	
Batch QCDMS	KWG1011029-4	NA	NA	10ml	10ml	NA	
Lab Control Sample	KWG1011029-1	NA	NA	10ml	10ml	NA	

Results flagged with an asterisk (\*) indicate the holding time was exceeded for the analysis

Organic Analysis:  
Volatile Organic Compounds

Validation Package

Organic Analysis:  
Volatile Organic Compounds

Validation Package

QC Reports

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899

**Surrogate Recovery Summary  
 Volatile Organic Compounds**

**Extraction Method:** METHOD  
**Analysis Method:** 624

**Units:** PERCENT  
**Level:** Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>
Batch QC	K1010898-002	88	87	85
MW-3	K1010899-001	88	88	85
Equipment Blank	K1010899-002	89	85	84
Method Blank	KWG1011029-2	88	87	83
Batch QCMS	KWG1011029-3	90	87	87
Batch QCDMS	KWG1011029-4	93	88	85
Lab Control Sample	KWG1011029-1	90	86	88

**Surrogate Recovery Control Limits (%)**

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Sur1 = Toluene-d8	84-115
Sur2 = 4-Bromofluorobenzene	83-113
Sur3 = Dibromofluoromethane	71-115

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Results flagged with an asterisk (\*) indicate values outside control criteria.  
 Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Exponent  
 Project: Heglar Kronquist/0907194.000.0601

Service Request: K1010899  
 Date Analyzed: 10/12/2010  
 Time Analyzed: 14:51

Internal Standard Area and RT Summary  
 Volatile Organic Compounds

File ID: J:\MS23\DATA\101210\1012F011.D  
 Instrument ID: MS23  
 Analysis Method: 624

Lab Code: KWG1011024-2  
 Analysis Lot: KWG1011024

	Fluorobenzene		1,4-Dichlorobenzene-d4		Chlorobenzene-d5		
	Area	RT	Area	RT	Area	RT	
Results ==>	463,008	5.89	216,563	11.72	194,705	9.31	
Upper Limit ==>	926,016	6.39	433,126	12.22	389,410	9.81	
Lower Limit ==>	231,504	5.39	108,282	11.22	97,353	8.81	
ICAL Result ==>	471,913	5.90	213,999	11.73	194,845	9.31	
<i>Associated Analyses</i>							
Batch QCMS	KWG1011029-3	478,550	5.89	218,865	11.73	200,801	9.31
Batch QCDMS	KWG1011029-4	484,068	5.90	220,910	11.73	199,882	9.32
Lab Control Sample	KWG1011029-1	480,881	5.90	223,470	11.73	202,217	9.31
Method Blank	KWG1011029-2	471,130	5.89	206,769	11.72	191,257	9.31
Batch QC	K1010898-002	466,705	5.89	213,361	11.72	193,043	9.31
MW-3	K1010899-001	439,839	5.89	198,176	11.72	178,132	9.31
Equipment Blank	K1010899-002	438,390	5.89	196,355	11.72	182,920	9.31

Results flagged with an asterisk (\*) indicate values outside control criteria.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/12/2010  
**Date Analyzed:** 10/12/2010

**Matrix Spike/Duplicate Matrix Spike Summary  
 Volatile Organic Compounds**

**Sample Name:** Batch QC  
**Lab Code:** K1010898-002  
**Extraction Method:** METHOD  
**Analysis Method:** 624

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** KWG1011029

Analyte Name	Sample Result	Batch QCMS KWG1011029-3 Matrix Spike			Batch QCDMS KWG1011029-4 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
1,1-Dichloroethene	ND	10.7	10.0	107	9.35	10.0	94	63-153	14	30
Benzene	ND	10.8	10.0	108	10.3	10.0	103	69-128	5	30
Trichloroethene (TCE)	ND	10.2	10.0	102	9.33	10.0	93	33-174	9	30
Toluene	ND	10.7	10.0	107	9.91	10.0	99	62-132	8	30
Chlorobenzene	ND	10.6	10.0	106	10.1	10.0	101	71-120	4	30
1,2-Dichlorobenzene	ND	11.4	10.0	114	10.9	10.0	109	72-117	4	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Exponent  
 Project: Heglar Kronquist/0907194.000.0601  
 Sample Matrix: Water

Service Request: K1010899  
 Date Extracted: 10/12/2010  
 Date Analyzed: 10/12/2010

Lab Control Spike Summary  
 Volatile Organic Compounds

Extraction Method: METHOD  
 Analysis Method: 624

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: KWG1011029

Analyte Name	Lab Control Sample KWG1011029-1 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
Chloromethane	11.4	10.0	114	45-137
Vinyl Chloride	11.3	10.0	113	54-145
Bromomethane	11.0	10.0	110	20-175
Chloroethane	11.0	10.0	110	56-137
Trichlorofluoromethane	10.4	10.0	104	50-135
1,1-Dichloroethene	12.4	10.0	124	74-139
Methylene Chloride	10.6	10.0	106	76-120
trans-1,2-Dichloroethene	11.7	10.0	117	76-125
1,1-Dichloroethane	11.4	10.0	114	68-127
Chloroform	11.5	10.0	115	69-126
1,1,1-Trichloroethane (TCA)	11.6	10.0	116	61-135
Carbon Tetrachloride	11.5	10.0	115	54-142
Benzene	11.7	10.0	117	73-122
1,2-Dichloroethane (EDC)	11.5	10.0	115	66-132
Trichloroethene (TCE)	11.2	10.0	112	70-123
1,2-Dichloropropane	11.4	10.0	114	73-122
Bromodichloromethane	11.2	10.0	112	68-136
2-Chloroethyl Vinyl Ether	9.45	10.0	95	30-155
trans-1,3-Dichloropropene	10.4	10.0	104	56-121
Toluene	11.5	10.0	115	71-124
cis-1,3-Dichloropropene	11.5	10.0	115	64-131
1,1,2-Trichloroethane	11.1	10.0	111	75-118
Tetrachloroethene (PCE)	11.3	10.0	113	65-125
Dibromochloromethane	10.6	10.0	106	65-132
Chlorobenzene	11.0	10.0	110	77-115
Ethylbenzene	11.1	10.0	111	72-123
Bromoform	10.1	10.0	101	51-145
1,1,2,2-Tetrachloroethane	11.6	10.0	116	62-135
1,3-Dichlorobenzene	11.4	10.0	114	74-116
1,4-Dichlorobenzene	11.3	10.0	113	74-114
1,2-Dichlorobenzene	11.2	10.0	112	76-113
Acrolein	120	100	120	10-185
Acrylonitrile	11.6	10.0	116	63-138

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/12/2010  
**Date Analyzed:** 10/12/2010  
**Time Analyzed:** 17:52

**Method Blank Summary  
 Volatile Organic Compounds**

**Sample Name:** Method Blank  
**Lab Code:** KWG1011029-2  
**Extraction Method:** METHOD  
**Analysis Method:** 624

**File ID:** J:\MS23\DATA\101210\1012F016.D  
**Instrument ID:** MS23  
**Level:** Low  
**Extraction Lot:** KWG1011029

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Batch QCMS	KWG1011029-3	J:\MS23\DATA\101210\1012F013.D	10/12/10	15:57
Batch QCDMS	KWG1011029-4	J:\MS23\DATA\101210\1012F014.D	10/12/10	16:26
Lab Control Sample	KWG1011029-1	J:\MS23\DATA\101210\1012F100.D	10/12/10	17:24
Batch QC	K1010898-002	J:\MS23\DATA\101210\1012F017.D	10/12/10	18:21
MW-3	K1010899-001	J:\MS23\DATA\101210\1012F026.D	10/12/10	22:40
Equipment Blank	K1010899-002	J:\MS23\DATA\101210\1012F027.D	10/12/10	23:09



**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/12/2010  
**Date Analyzed:** 10/12/2010  
**Time Analyzed:** 17:24

**Lab Control Sample Summary**  
**Volatile Organic Compounds**

**Sample Name:** Lab Control Sample **File ID:** J:\MS23\DATA\101210\1012F100.D  
**Lab Code:** KWG1011029-1 **Instrument ID:** MS23  
**Extraction Method:** METHOD **Level:** Low  
**Analysis Method:** 624 **Extraction Lot:** KWG1011029

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Batch QCMS	KWG1011029-3	J:\MS23\DATA\101210\1012F013.D	10/12/10	15:57
Batch QCDMS	KWG1011029-4	J:\MS23\DATA\101210\1012F014.D	10/12/10	16:26
Method Blank	KWG1011029-2	J:\MS23\DATA\101210\1012F016.D	10/12/10	17:52
Batch QC	K1010898-002	J:\MS23\DATA\101210\1012F017.D	10/12/10	18:21
MW-3	K1010899-001	J:\MS23\DATA\101210\1012F026.D	10/12/10	22:40
Equipment Blank	K1010899-002	J:\MS23\DATA\101210\1012F027.D	10/12/10	23:09

Organic Analysis:  
Volatile Organic Compounds

Validation Package

Raw Data

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: Exponent  
 Project: Heglar Kronquist/0907194.000.0601  
 Sample Matrix: Water

Service Request: K1010899  
 Date Collected: 10/01/2010  
 Date Received: 10/02/2010

## Volatile Organic Compounds

Sample Name: MW-3  
 Lab Code: K1010899-001  
 Extraction Method: METHOD  
 Analysis Method: 624

Units: ug/L  
 Basis: NA  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	5.0	0.23	1	10/12/10	10/12/10	KWG1011029	
Vinyl Chloride	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Bromomethane	ND	U	5.0	0.28	1	10/12/10	10/12/10	KWG1011029	
Chloroethane	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Trichlorofluoromethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Methylene Chloride	0.15	J	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
trans-1,2-Dichloroethene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Chloroform	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1,1-Trichloroethane (TCA)	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Carbon Tetrachloride	ND	U	5.0	0.047	1	10/12/10	10/12/10	KWG1011029	
Benzene	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloroethane (EDC)	ND	U	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
Trichloroethene (TCE)	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloropropane	ND	U	5.0	0.17	1	10/12/10	10/12/10	KWG1011029	
Bromodichloromethane	ND	U	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
2-Chloroethyl Vinyl Ether	ND	U	10	0.29	1	10/12/10	10/12/10	KWG1011029	
trans-1,3-Dichloropropene	ND	U	5.0	0.10	1	10/12/10	10/12/10	KWG1011029	
Toluene	0.22	J	5.0	0.18	1	10/12/10	10/12/10	KWG1011029	
cis-1,3-Dichloropropene	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,1,2-Trichloroethane	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Tetrachloroethene (PCE)	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Dibromochloromethane	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Chlorobenzene	ND	U	5.0	0.098	1	10/12/10	10/12/10	KWG1011029	
Ethylbenzene	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Bromoform	ND	U	5.0	0.37	1	10/12/10	10/12/10	KWG1011029	
1,1,2,2-Tetrachloroethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,3-Dichlorobenzene	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
1,4-Dichlorobenzene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichlorobenzene	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
Acrolein†	ND	U	50	3.3	1	10/12/10	10/12/10	KWG1011029	
Acrylonitrile†	ND	U	10	0.61	1	10/12/10	10/12/10	KWG1011029	

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** 10/01/2010  
**Date Received:** 10/02/2010

**Volatile Organic Compounds**

**Sample Name:** MW-3  
**Lab Code:** K1010899-001

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Toluene-d8	88	84-115	10/12/10	Acceptable
4-Bromofluorobenzene	88	83-113	10/12/10	Acceptable
Dibromofluoromethane	85	71-115	10/12/10	Acceptable

† Analyte Comments

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

**Comments:** \_\_\_\_\_

## Exception Report

**Data File:** J:\MS23\DATA\101210\1012F026.D  
**Lab ID:** K1010899-001  
**RunType:** SMPL  
**Matrix:** WATER

**Date Acquired:** 10/12/2010 22:40  
**Date Quantitated:** 10/13/2010 13:31  
**Batch ID:** KWG1011024  
**Analysis Method:** 624  
**ListJoinID:** LJ7858  
#B10-14-10  
5789

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: Ka 10/13/10

Secondary Review: HB 10-14-10

# Quantitation Report

<b>Bottle ID:</b>		<b>Tier:</b>	III	<b>Matrix:</b>	WATER
<b>Prod Code:</b>	624 VOC_FP	<b>Collect Date:</b>	10/01/2010	<b>Receive Date:</b>	10/02/2010

<b>Analysis Lot:</b>	KWG1011024	<b>Prep Lot:</b>	KWG1011029	<b>Report Group:</b>	K1010899
<b>Analysis Method:</b>	624	<b>Prep Method:</b>	METHOD		
<b>Prep Ref:</b>	966859	<b>Prep Date:</b>	10/12/2010		

<b>Quant Method:</b>	J:\MS23\METHODS\101110624.M	<b>Calibration ID:</b>	CAL9945
<b>Title:</b>	Volatile Organic Compounds	<b>Report List ID:</b>	LJ5789
<b>Tune Ref:</b>	J:\MS23\DATA\101210\1012F010.D	<b>Method ID:</b>	MJ158
<b>MB Ref:</b>	J:\MS23\DATA\101210\1012F016.D	<b>Quant based on Report List</b>	

<b>Data File:</b>	J:\MS23\DATA\101210\1012F026.D	<b>Instrument:</b>	MS23
<b>Acqu Date:</b>	10/12/2010 22:40	<b>Quant Date:</b>	10/13/2010 13:31
<b>Run Type:</b>	SMPL	<b>Vial:</b>	17
<b>Lab ID:</b>	K1010899-001	<b>Dilution:</b>	1.0
		<b>Soln Conc. Units:</b>	PPB

## Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	5.89	0.00	96	439839	10.00	OK
2	Chlorobenzene-d5	9.31	0.00	82	178132	10.00	OK
3	1,4-Dichlorobenzene-d4	11.72	0.00	152	198176	10.00	OK

## Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Dibromofluoromethane	5.05	0.00	0.00	113	107503	8.46	85	71-115	OK
1	Toluene-d8	7.74	0.00	0.00	98	419168	8.83	88	84-115	OK
2	4-Bromofluorobenzene	10.55	0.00	0.00	95	153123	8.78	88	83-113	OK

## Target Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane	1.28		0.00	50	737	0.0500	0.23	U	
1	Vinyl Chloride				62	0		0.16	U	
1	Bromomethane	1.63		0.00	96	1163	0.1600	0.28	U	
1	Chloroethane				49	0		0.16	U	
1	Trichlorofluoromethane				101	0		0.11	U	
1	Acrolein				56	0		3.3	U	
1	1,1-Dichloroethene				96	0		0.15	U	
1	Methylene Chloride	2.90		0.00	84	1949	0.1500	0.15	J	
1	Acrylonitrile				53	0		0.61	U	
1	trans-1,2-Dichloroethene				96	0		0.15	U	
1	1,1-Dichloroethane				63	0		0.11	U	
1	Chloroform				83	0		0.11	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.14	U	
1	Carbon Tetrachloride				117	0		0.047	U	
1	Benzene				78	0		0.14	U	

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICA  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICA  
 c: check for co-elution

<b>Data File:</b>	J:\MS23\DATA\101210\1012F026.D	<b>Instrument:</b>	MS23
<b>Acqu Date:</b>	10/12/2010 22:40	<b>Quant Date:</b>	10/13/2010 13:31
<b>Run Type:</b>	SMPL	<b>Vial:</b>	17
<b>Lab ID:</b>	K1010899-001	<b>Dilution:</b>	1.0
		<b>Soln Conc. Units:</b>	PPB

**Target Compounds**

						Final Conc. Units: ug/L				
IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	1,2-Dichloroethane (EDC)				62	0		0.12	U	
1	Trichloroethene (TCE)				95	0		0.13	U	
1	1,2-Dichloropropane				63	0		0.17	U	
1	Bromodichloromethane				83	0		0.12	U	
1	2-Chloroethyl Vinyl Ether				63	0		0.29	U	
1	cis-1,3-Dichloropropene				75	0		0.13	U	
1	Toluene	7.81		0.00	92	7040	0.2200	0.22	J	
2	trans-1,3-Dichloropropene				75	0		0.10	U	
2	1,1,2-Trichloroethane				83	0		0.16	U	
2	Tetrachloroethene (PCE)				164	0		0.14	U	
2	Dibromochloromethane				129	0		0.15	U	
2	Chlorobenzene				112	0		0.098	U	
2	Ethylbenzene				106	0		0.11	U	
2	Bromoform				173	0		0.37	U	
3	1,1,2,2-Tetrachloroethane				83	0		0.11	U	
3	1,3-Dichlorobenzene				146	0		0.16	U	
3	1,4-Dichlorobenzene				146	0		0.15	U	
3	1,2-Dichlorobenzene				146	0		0.13	U	

**Prep Amount:** 10 ml      **Dilution:** 1.0  
**Prep Final Vol:** 10 ml      **Unit Factor:** 1

**Final Concentration** = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL  
J: Analyte detected above MDL, but below MRL  
B: Hit above MRL also found in Method Blank  
E: Analyte concentration above high point of ICAL  
N: Presumptive evidence of compound

D: Result from dilution  
m: Manual integration performed  
d: Compound manually deleted  
NR: Analyte not reported from this analysis

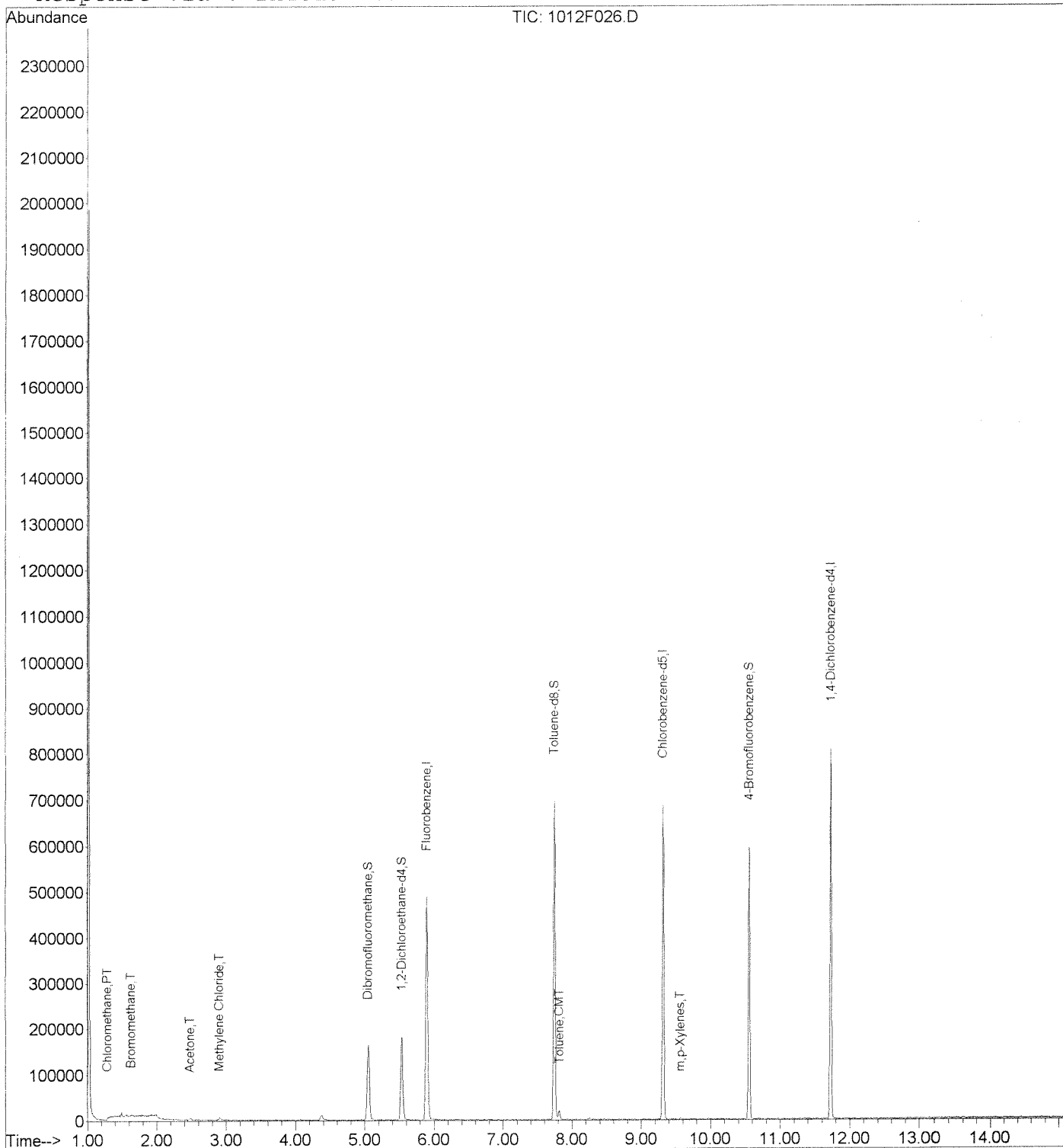
\*: Result fails acceptance criteria  
#: Acceptance criteria not applicable  
?: Insufficient information to determine acceptance  
e: Result >= MRL, but MRL less than low point of ICAL  
c: check for co-elution

Data File : J:\MS23\DATA\101210\1012F026.D  
Acq On : 12 Oct 2010 10:40 pm  
Sample : K10899-001  
Misc :  
MS Integration Params: rteint.p  
Quant Time: Oct 13 13:31 2010

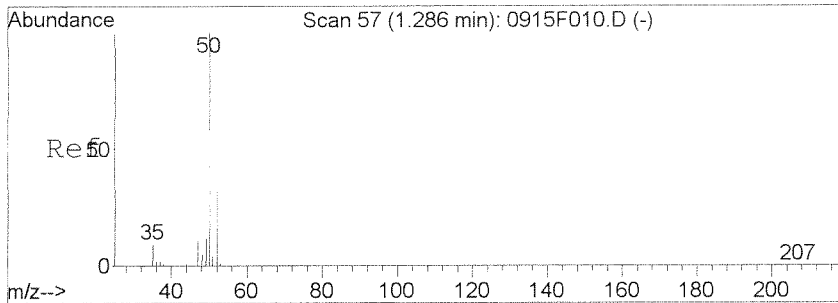
Vial: 17  
Operator: KR  
Inst : MS23  
Multiplr: 1.00

Quant Results File: 101110624.RE

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
Title : VOA MS23 EPA Method 624  
Last Update : Tue Oct 12 15:11:44 2010  
Response via : Initial Calibration

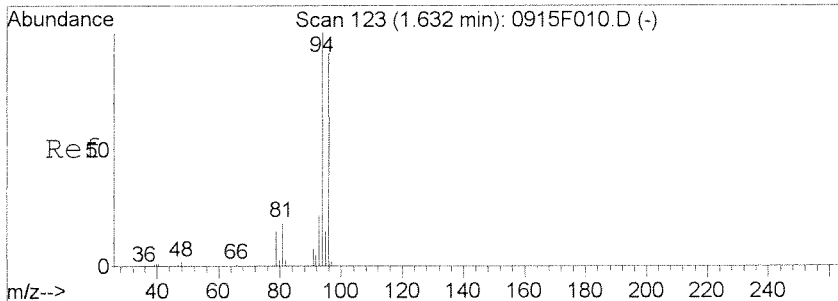
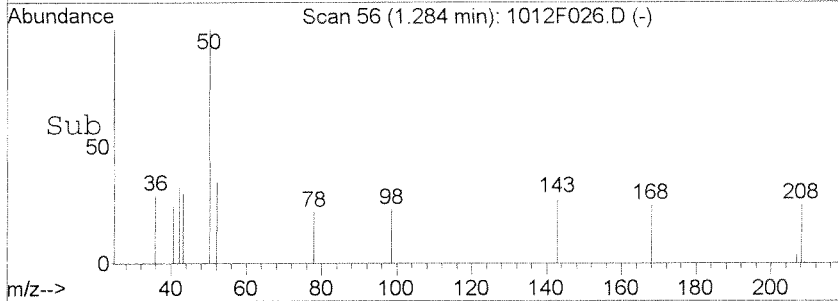
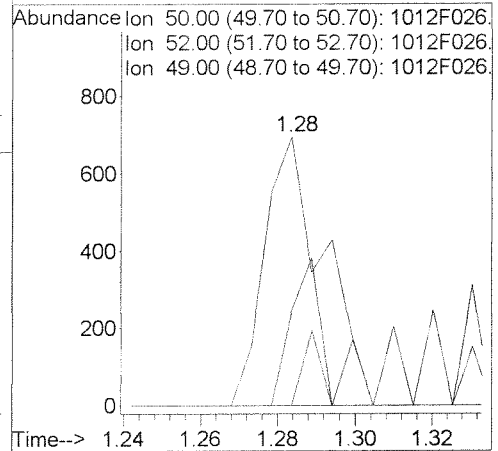
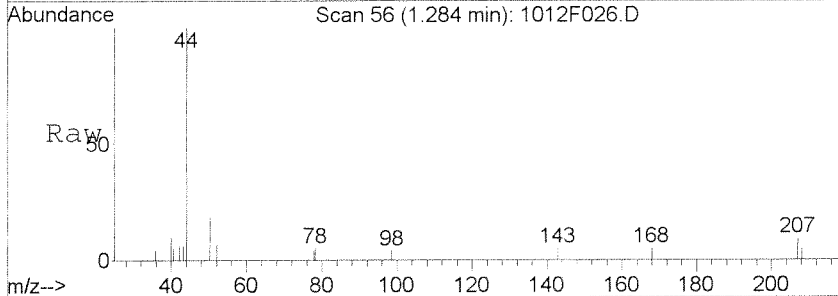






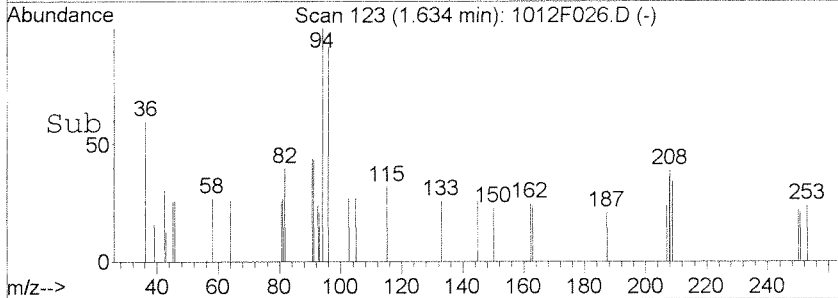
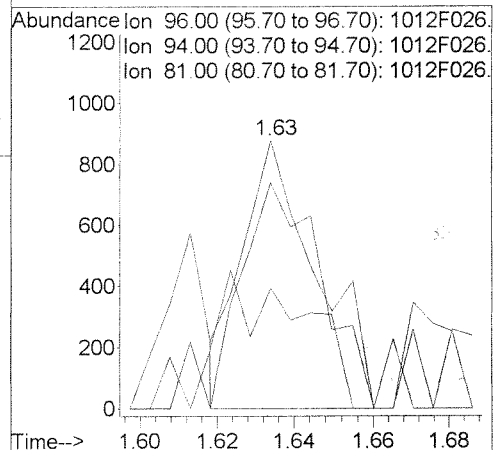
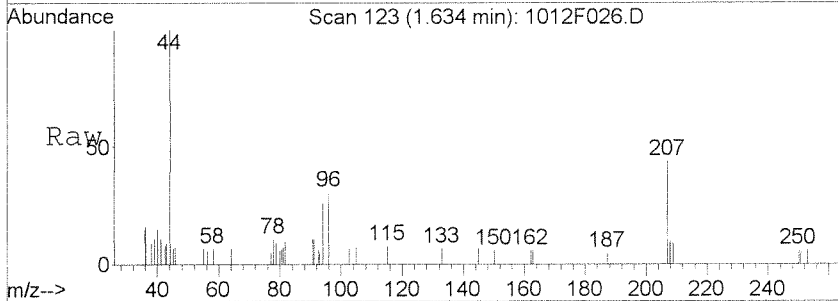
#3  
 Chloromethane  
 Concen: 0.05 PPB  
 RT: 1.28 min Scan# 56  
 Delta R.T. -0.00 min  
 Lab File: 1012F026.D  
 Acq: 12 Oct 2010 10:40 pm

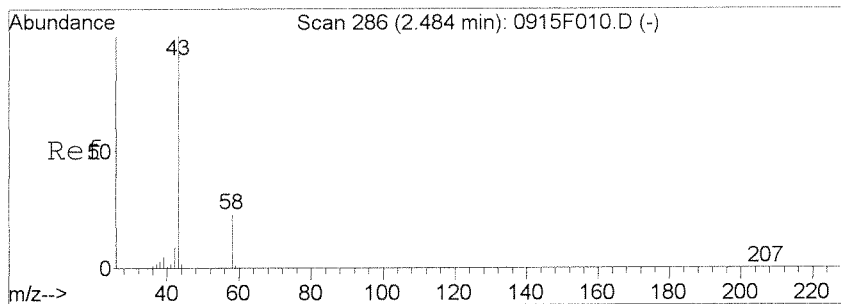
Tgt Ion	Resp	Lower	Upper
50	100		
52	35.3	2.9	62.9
49	0.0	0.0	41.7



#5  
 Bromomethane  
 Concen: 0.16 PPB  
 RT: 1.63 min Scan# 123  
 Delta R.T. 0.00 min  
 Lab File: 1012F026.D  
 Acq: 12 Oct 2010 10:40 pm

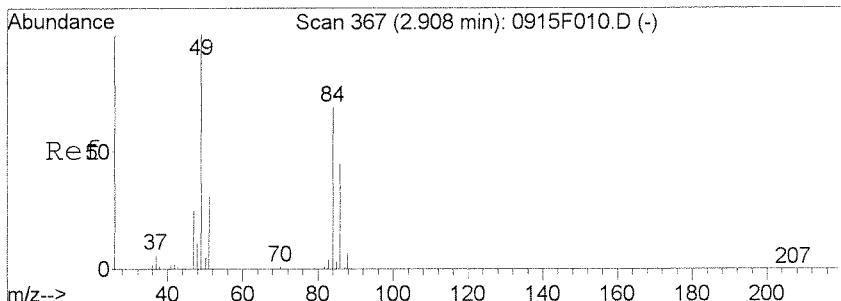
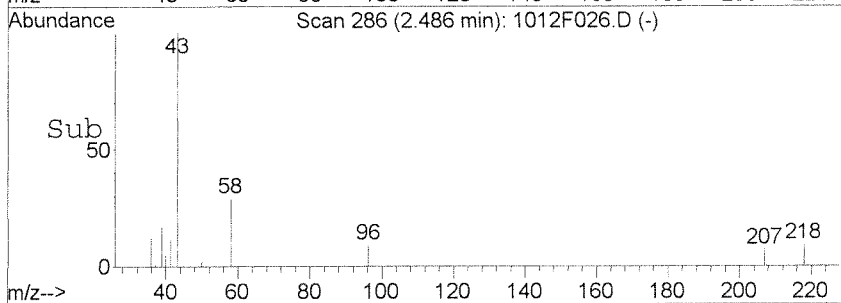
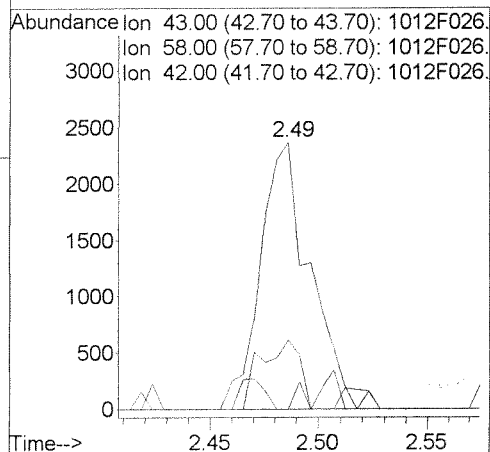
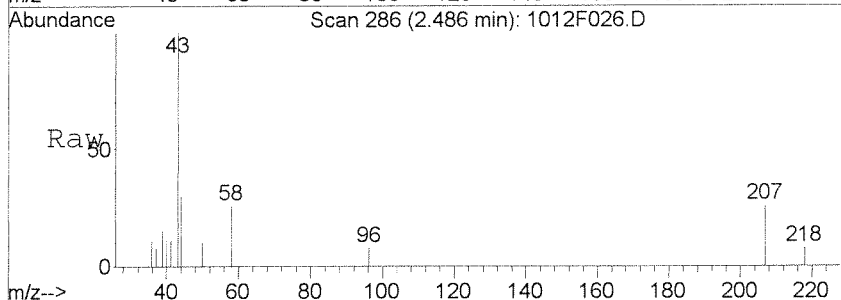
Tgt Ion	Resp	Lower	Upper
96	100		
94	84.4	78.8	138.8
81	44.9	0.0	44.5#





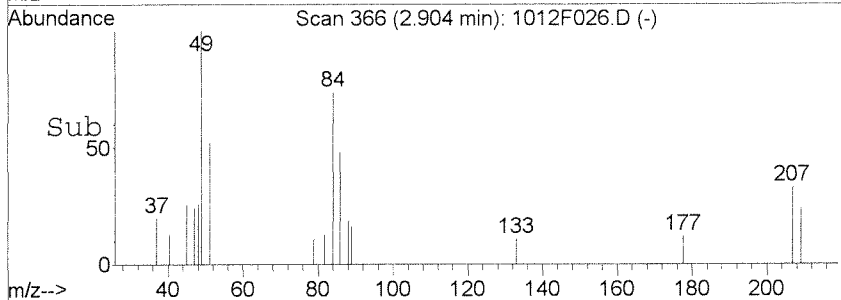
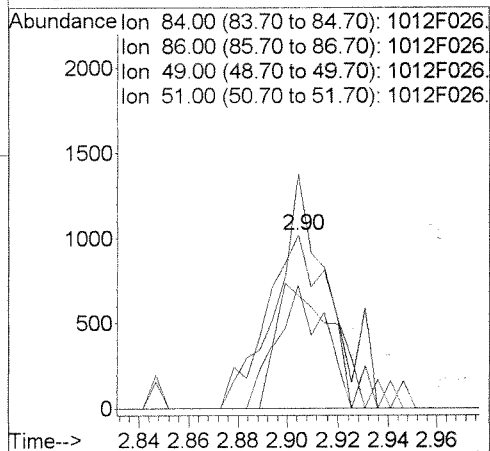
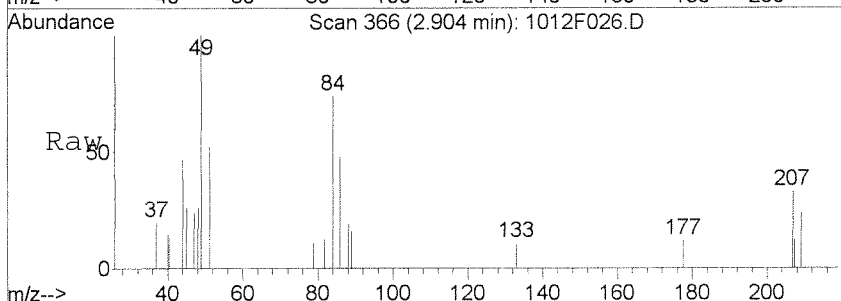
#11  
 Acetone  
 Concen: 1.97 PPB  
 RT: 2.49 min Scan# 286#  
 Delta R.T. 0.00 min  
 Lab File: 1012F026.D  
 Acq: 12 Oct 2010 10:40 pm

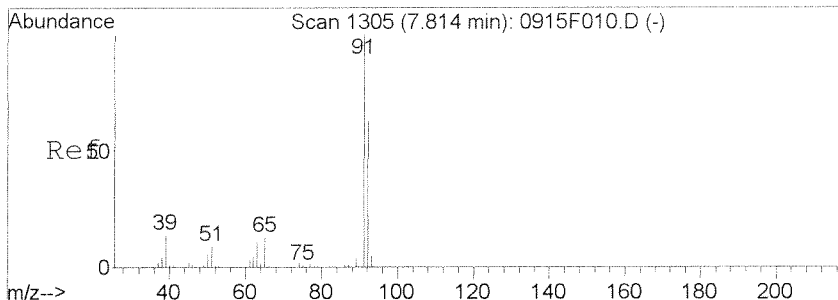
Tgt Ion	Resp	Lower	Upper
43	3840		
58	25.8	0.0	57.1
42	0.0	0.0	37.4



#13  
 Methylene Chloride  
 Concen: 0.15 PPB  
 RT: 2.90 min Scan# 366#  
 Delta R.T. -0.00 min  
 Lab File: 1012F026.D  
 Acq: 12 Oct 2010 10:40 pm

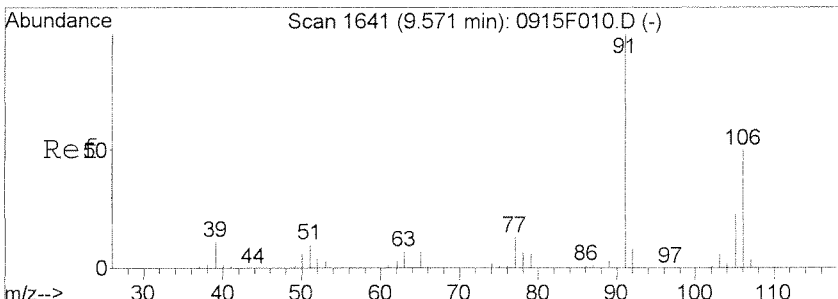
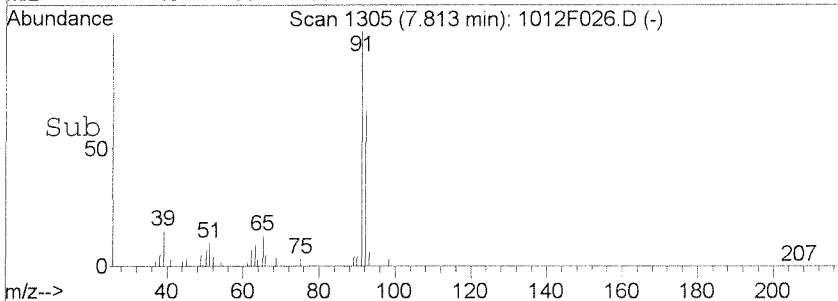
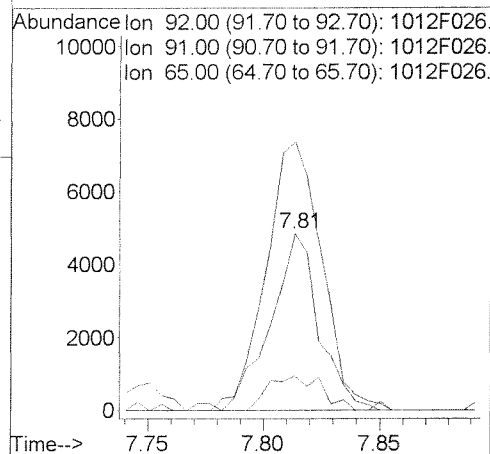
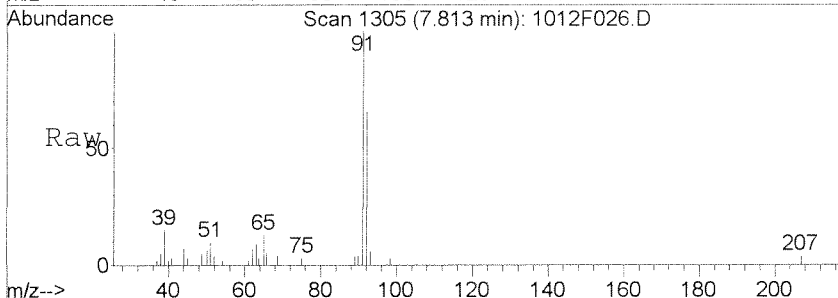
Tgt Ion	Resp	Lower	Upper
84	1949		
86	65.1	34.3	94.3
49	135.0	100.9	160.9
51	70.8	10.3	70.3#





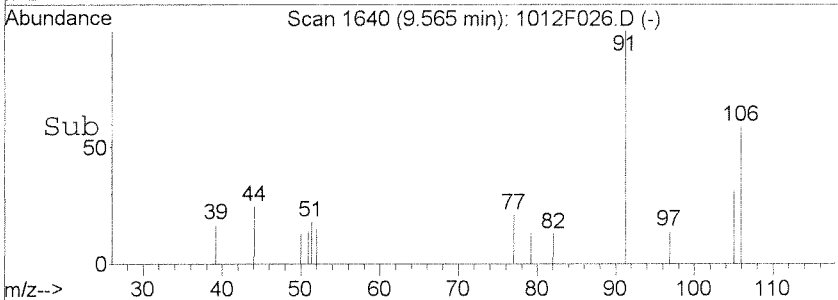
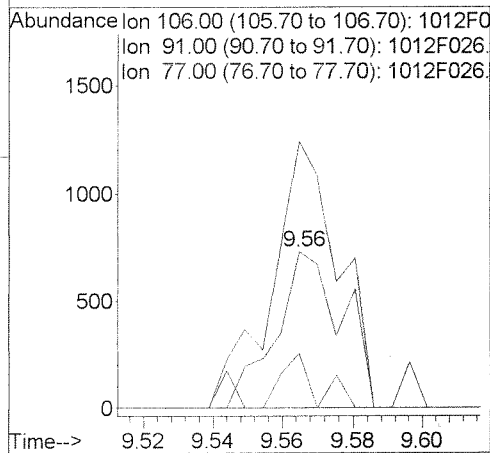
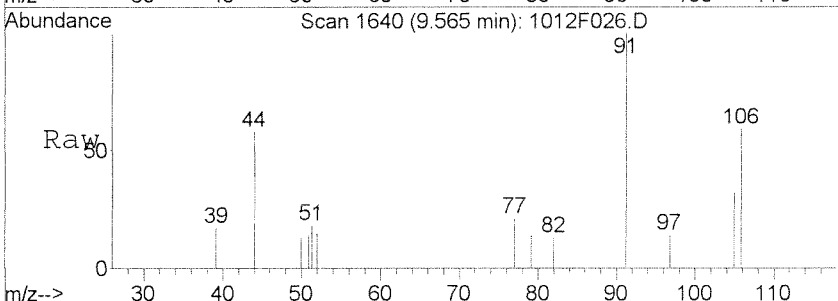
#34  
 Toluene  
 Concen: 0.22 PPB  
 RT: 7.81 min Scan# 1305  
 Delta R.T. -0.00 min  
 Lab File: 1012F026.D  
 Acq: 12 Oct 2010 10:40 pm

Tgt Ion	Resp	Lower	Upper
92	7040		
91	152.1	132.4	192.4
65	19.6	0.0	48.7



#43  
 m,p-Xylenes  
 Concen: 0.04 PPB  
 RT: 9.56 min Scan# 1640  
 Delta R.T. -0.01 min  
 Lab File: 1012F026.D  
 Acq: 12 Oct 2010 10:40 pm

Tgt Ion	Resp	Lower	Upper
106	963		
91	170.0	166.8	226.8
77	35.0	0.0	56.0



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** 10/01/2010  
**Date Received:** 10/02/2010

## Volatile Organic Compounds

**Sample Name:** Equipment Blank  
**Lab Code:** K1010899-002  
**Extraction Method:** METHOD  
**Analysis Method:** 624

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	5.0	0.23	1	10/12/10	10/12/10	KWG1011029	
Vinyl Chloride	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Bromomethane	ND	U	5.0	0.28	1	10/12/10	10/12/10	KWG1011029	
Chloroethane	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Trichlorofluoromethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Methylene Chloride	1.1	J	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
trans-1,2-Dichloroethene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Chloroform	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1,1-Trichloroethane (TCA)	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Carbon Tetrachloride	ND	U	5.0	0.047	1	10/12/10	10/12/10	KWG1011029	
Benzene	0.31	J	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloroethane (EDC)	ND	U	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
Trichloroethene (TCE)	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloropropane	ND	U	5.0	0.17	1	10/12/10	10/12/10	KWG1011029	
Bromodichloromethane	ND	U	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
2-Chloroethyl Vinyl Ether	ND	U	10	0.29	1	10/12/10	10/12/10	KWG1011029	
trans-1,3-Dichloropropene	ND	U	5.0	0.10	1	10/12/10	10/12/10	KWG1011029	
Toluene	1.2	J	5.0	0.18	1	10/12/10	10/12/10	KWG1011029	
cis-1,3-Dichloropropene	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,1,2-Trichloroethane	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Tetrachloroethene (PCE)	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Dibromochloromethane	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Chlorobenzene	ND	U	5.0	0.098	1	10/12/10	10/12/10	KWG1011029	
Ethylbenzene	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Bromoform	ND	U	5.0	0.37	1	10/12/10	10/12/10	KWG1011029	
1,1,2,2-Tetrachloroethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,3-Dichlorobenzene	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
1,4-Dichlorobenzene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichlorobenzene	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
Acrolein†	ND	U	50	3.3	1	10/12/10	10/12/10	KWG1011029	
Acrylonitrile†	ND	U	10	0.61	1	10/12/10	10/12/10	KWG1011029	

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** 10/01/2010  
**Date Received:** 10/02/2010

**Volatile Organic Compounds**

**Sample Name:** Equipment Blank  
**Lab Code:** K1010899-002

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Toluene-d8	89	84-115	10/12/10	Acceptable
4-Bromofluorobenzene	85	83-113	10/12/10	Acceptable
Dibromofluoromethane	84	71-115	10/12/10	Acceptable

† Analyte Comments

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

**Comments:** \_\_\_\_\_

## Exception Report

**Data File:** J:\MS23\DATA\101210\1012F027.D  
**Lab ID:** K1010899-002  
**RunType:** SMPL  
**Matrix:** WATER

**Date Acquired:** 10/12/2010 23:09  
**Date Quantitated:** 10/13/2010 13:32  
**Batch ID:** KWG1011024  
**Analysis Method:** 624  
**ListJoinID:** LJ7858 HB10-14-10  
5789

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KA 10/13/10

Secondary Review: HB10-14-10

# Quantitation Report

<b>Bottle ID:</b>		<b>Tier:</b>	III	<b>Matrix:</b>	WATER
<b>Prod Code:</b>	624 VOC_FP	<b>Collect Date:</b>	10/01/2010	<b>Receive Date:</b>	10/02/2010

<b>Analysis Lot:</b>	KWG1011024	<b>Prep Lot:</b>	KWG1011029	<b>Report Group:</b>	K1010899
<b>Analysis Method:</b>	624	<b>Prep Method:</b>	METHOD		
<b>Prep Ref:</b>	966860	<b>Prep Date:</b>	10/12/2010		

<b>Quant Method:</b>	J:\MS23\METHODS\101110624.M	<b>Calibration ID:</b>	CAL9945
<b>Title:</b>	Volatile Organic Compounds	<b>Report List ID:</b>	LJ5789
<b>Tune Ref:</b>	J:\MS23\DATA\101210\1012F010.D	<b>Method ID:</b>	MJ158
<b>MB Ref:</b>	J:\MS23\DATA\101210\1012F016.D	<b>Quant based on Report List</b>	

<b>Data File:</b>	J:\MS23\DATA\101210\1012F027.D	<b>Instrument:</b>	MS23
<b>Acqu Date:</b>	10/12/2010 23:09	<b>Quant Date:</b>	10/13/2010 13:32
<b>Run Type:</b>	SMPL	<b>Vial:</b>	18
<b>Lab ID:</b>	K1010899-002	<b>Dilution:</b>	1.0
		<b>Soln Conc. Units:</b>	PPB

## Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	5.89	0.00	96	438390	10.00	OK
2	Chlorobenzene-d5	9.31	0.00	82	182920	10.00	OK
3	1,4-Dichlorobenzene-d4	11.72	0.00	152	196355	10.00	OK

## Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Dibromofluoromethane	5.05	0.00	0.00	113	106681	8.42	84	71-115	OK
1	Toluene-d8	7.74	0.00	0.00	98	419614	8.87	89	84-115	OK
2	4-Bromofluorobenzene	10.55	0.00	0.00	95	152943	8.54	85	83-113	OK

## Target Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Chloromethane	1.28		0.00	50	631	0.0500	0.23	U	
1	Vinyl Chloride				62	0		0.16	U	
1	Bromomethane				96	0d		0.28	U	
1	Chloroethane				49	0		0.16	U	
1	Trichlorofluoromethane				101	0		0.11	U	
1	Acrolein				56	0		3.3	U	
1	1,1-Dichloroethene				96	0		0.15	U	
1	Methylene Chloride	2.90		0.00	84	13290	1.05	1.1	J	
1	Acrylonitrile				53	0d		0.61	U	
1	trans-1,2-Dichloroethene				96	0		0.15	U	
1	1,1-Dichloroethane				63	0		0.11	U	
1	Chloroform	4.81	-0.01	0.00	83	1341	0.0600	0.11	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.14	U	
1	Carbon Tetrachloride				117	0		0.047	U	
1	Benzene	5.49		0.00	78	14693	0.3100	0.31	J	

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

<b>Data File:</b>	J:\MS23\DATA\101210\1012F027.D	<b>Instrument:</b>	MS23
<b>Acqu Date:</b>	10/12/2010 23:09	<b>Quant Date:</b>	10/13/2010 13:32
<b>Run Type:</b>	SMPL	<b>Vial:</b>	18
<b>Lab ID:</b>	K1010899-002	<b>Dilution:</b>	1.0
		<b>Soln Conc. Units:</b>	PPB

**Target Compounds**

**Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	1,2-Dichloroethane (EDC)				62	0		0.12	U	
1	Trichloroethene (TCE)				95	0		0.13	U	
1	1,2-Dichloropropane				63	0		0.17	U	
1	Bromodichloromethane				83	0		0.12	U	
1	2-Chloroethyl Vinyl Ether				63	0		0.29	U	
1	cis-1,3-Dichloropropene				75	0		0.13	U	
1	Toluene	7.81		0.00	92	36587	1.16	1.2	J	
2	trans-1,3-Dichloropropene				75	0		0.10	U	
2	1,1,2-Trichloroethane				83	0		0.16	U	
2	Tetrachloroethene (PCE)				164	0		0.14	U	
2	Dibromochloromethane				129	0		0.15	U	
2	Chlorobenzene	9.34		0.00	112	2086	0.0600	0.098	U	
2	Ethylbenzene	9.43	-0.01	0.00	106	1819	0.1000	0.11	U	
2	Bromoform				173	0		0.37	U	
3	1,1,2,2-Tetrachloroethane				83	0		0.11	U	
3	1,3-Dichlorobenzene				146	0		0.16	U	
3	1,4-Dichlorobenzene				146	0		0.15	U	
3	1,2-Dichlorobenzene				146	0		0.13	U	

**Prep Amount:** 10 ml      **Dilution:** 1.0  
**Prep Final Vol:** 10 ml      **Unit Factor:** 1

**Final Concentration =** ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL  
J: Analyte detected above MDL, but below MRL  
B: Hit above MRL also found in Method Blank  
E: Analyte concentration above high point of ICAL  
N: Presumptive evidence of compound

D: Result from dilution  
m: Manual integration performed  
d: Compound manually deleted  
NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
#: Acceptance criteria not applicable  
?: Insufficient information to determine acceptance  
e: Result >= MRL, but MRL less than low point of ICAL  
c: check for co-elution

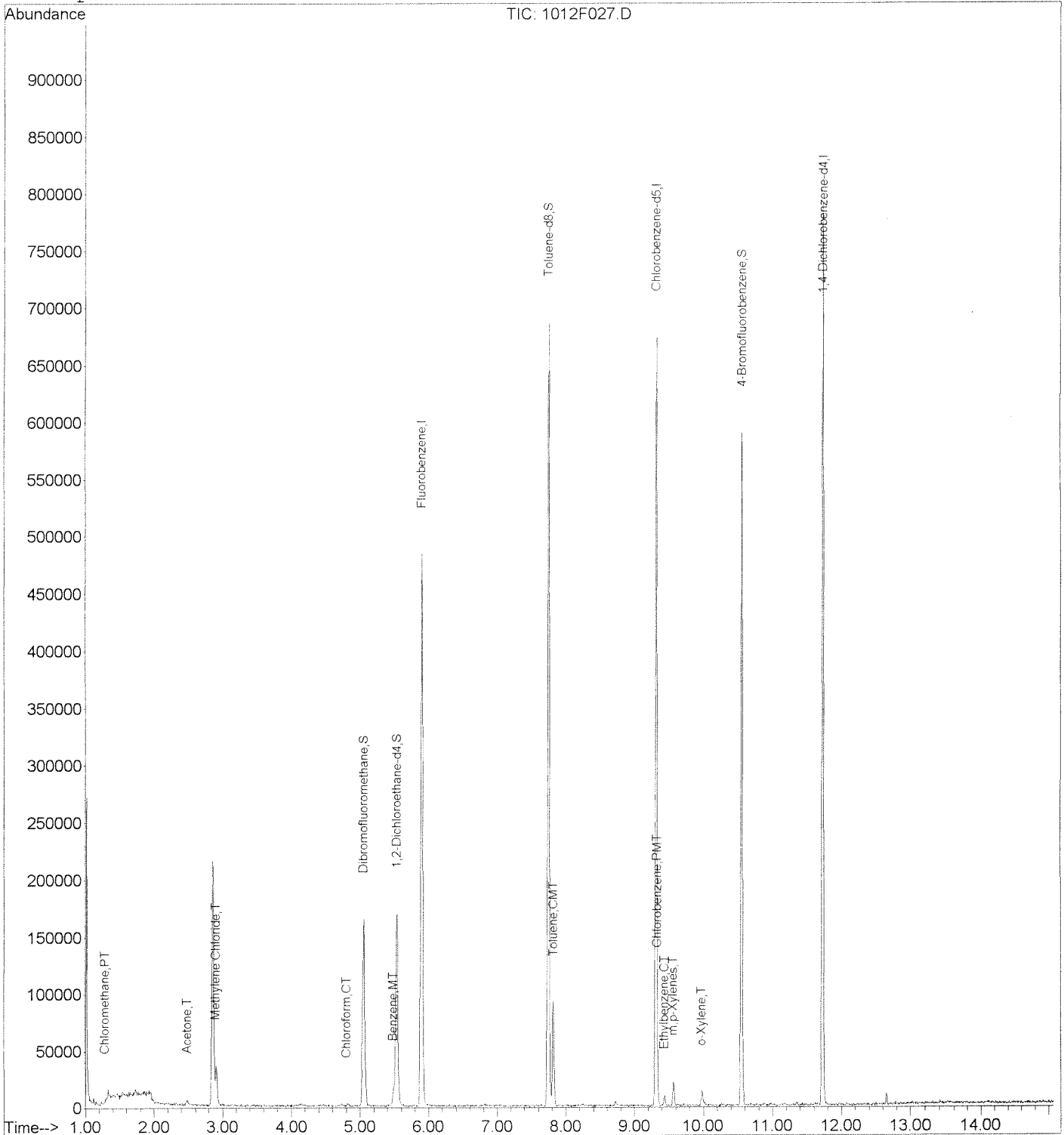


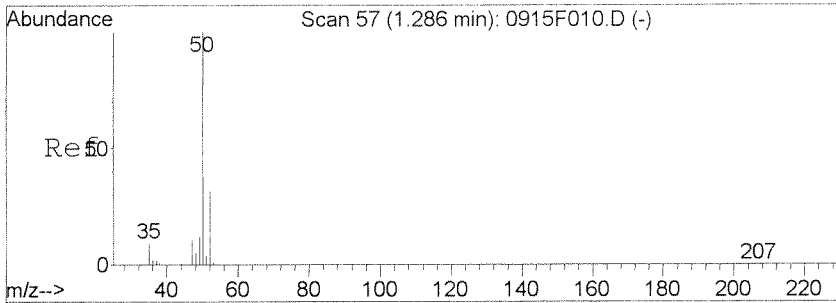
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 Acq On : 12 Oct 2010 11:09 pm  
 Sample : K10899-002  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 13 13:32 2010

Vial: 18  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RE

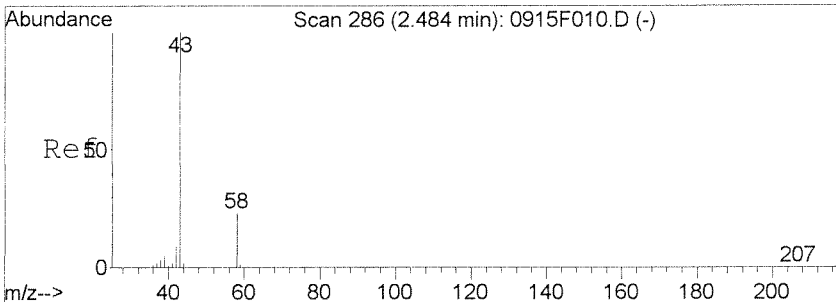
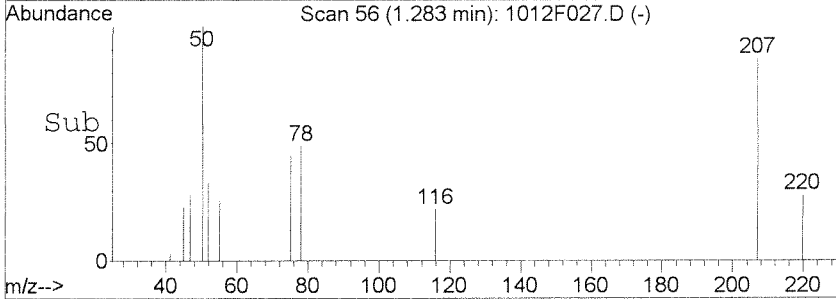
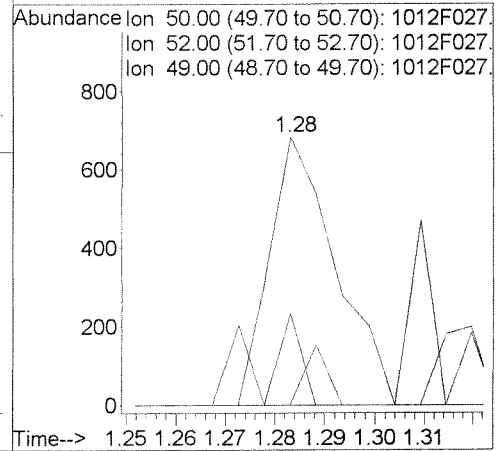
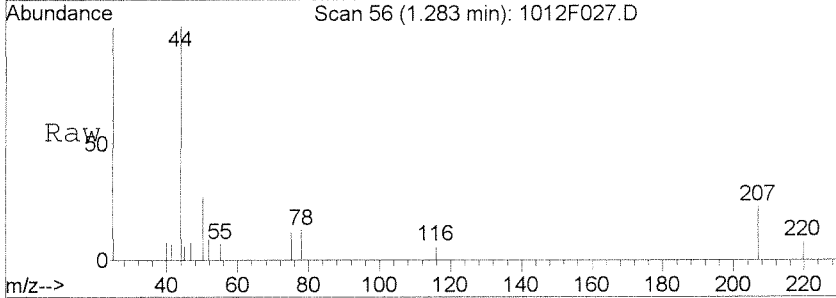
Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 15:11:44 2010  
 Response via : Initial Calibration





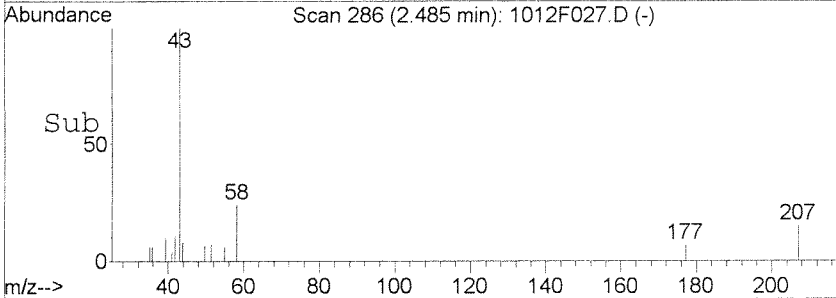
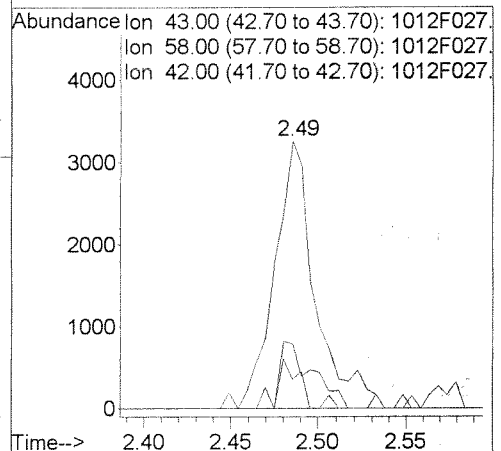
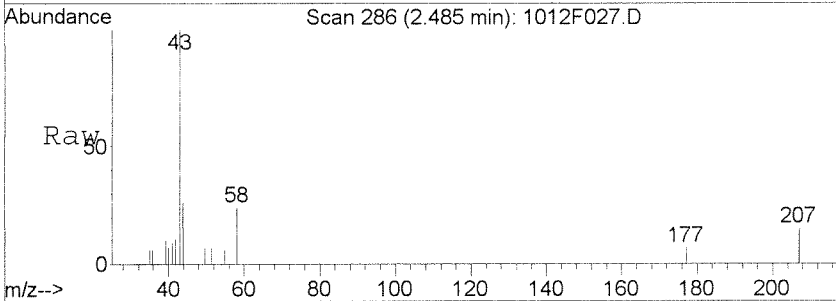
#3  
 Chloromethane  
 Concen: 0.05 PPB  
 RT: 1.28 min Scan# 56  
 Delta R.T. -0.00 min  
 Lab File: 1012F027.D  
 Acq: 12 Oct 2010 11:09 pm

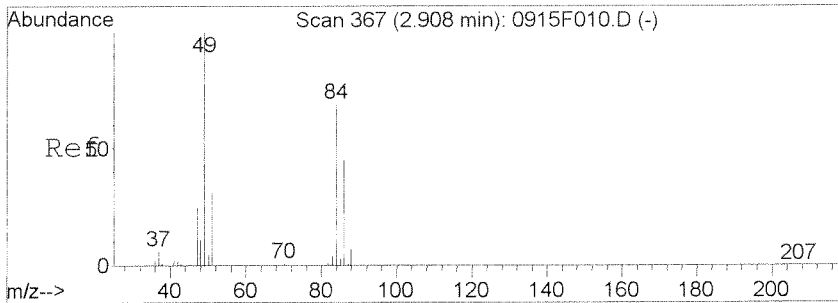
Tgt Ion	Ratio	Lower	Upper
50	100		
52	34.1	2.9	62.9
49	0.0	0.0	41.7



#11  
 Acetone  
 Concen: 2.74 PPB  
 RT: 2.49 min Scan# 286  
 Delta R.T. 0.00 min  
 Lab File: 1012F027.D  
 Acq: 12 Oct 2010 11:09 pm

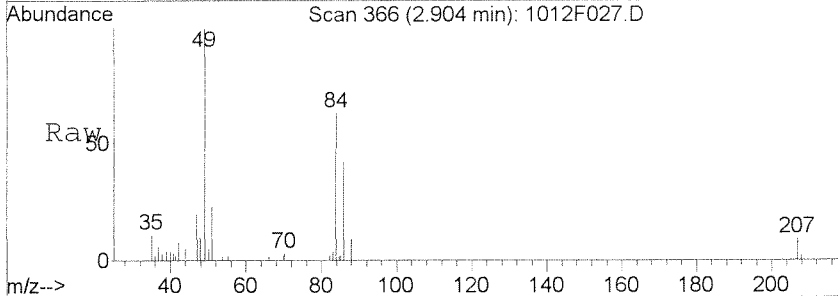
Tgt Ion	Ratio	Lower	Upper
43	100		
58	24.1	0.0	57.1
42	11.0	0.0	37.4



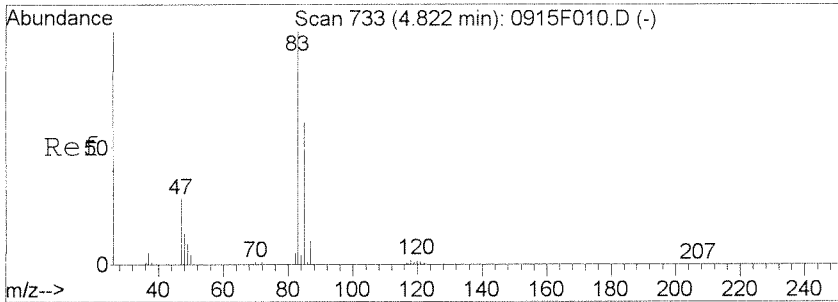
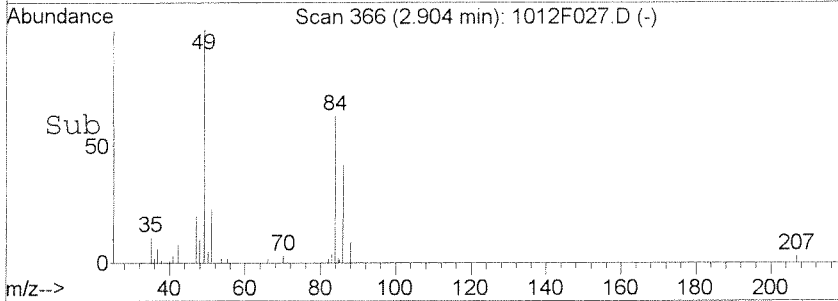
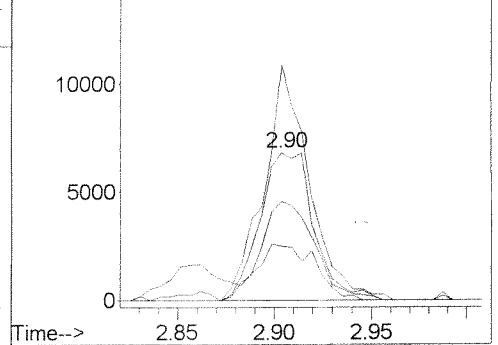


#13  
 Methylene Chloride  
 Concen: 1.05 PPB  
 RT: 2.90 min Scan# 366  
 Delta R.T. -0.00 min  
 Lab File: 1012F027.D  
 Acq: 12 Oct 2010 11:09 pm

Tgt Ion	Resp	Lower	Upper
84	13290		
84	100		
86	65.0	34.3	94.3
49	154.6	100.9	160.9
51	35.5	10.3	70.3

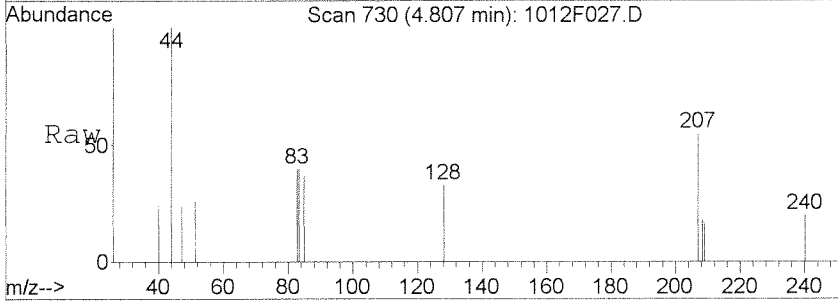


Abundance  
 Ion 84.00 (83.70 to 84.70): 1012F027  
 Ion 86.00 (85.70 to 86.70): 1012F027  
 Ion 49.00 (48.70 to 49.70): 1012F027  
 Ion 51.00 (50.70 to 51.70): 1012F027

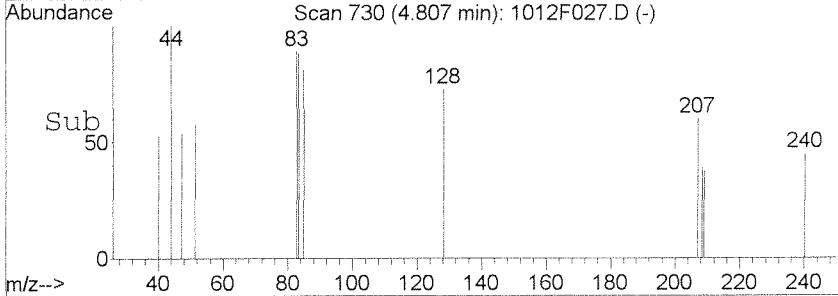
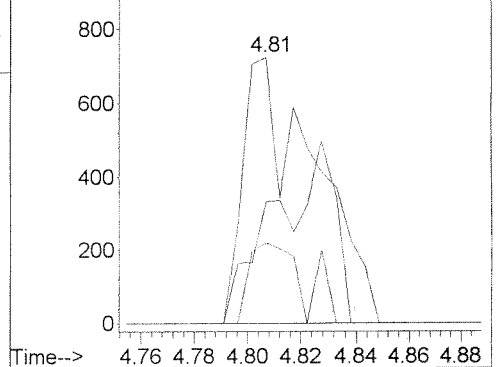


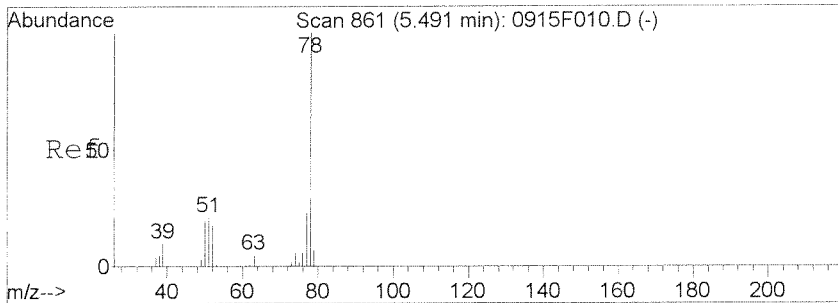
#20  
 Chloroform  
 Concen: 0.06 PPB  
 RT: 4.81 min Scan# 730  
 Delta R.T. -0.02 min  
 Lab File: 1012F027.D  
 Acq: 12 Oct 2010 11:09 pm

Tgt Ion	Resp	Lower	Upper
83	1341		
83	100		
85	45.9	37.7	97.7
47	30.4	0.0	56.6



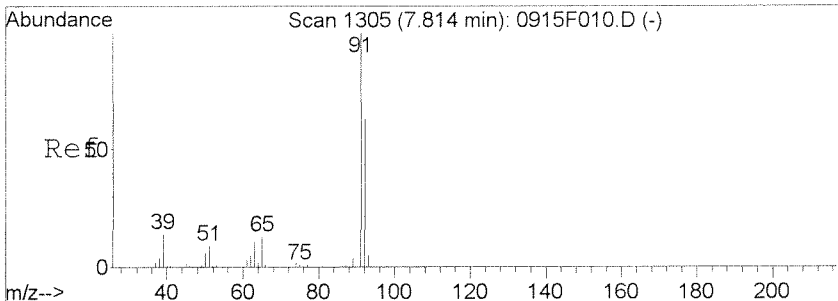
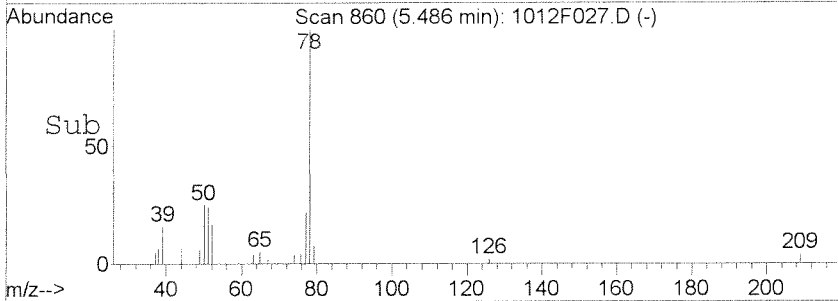
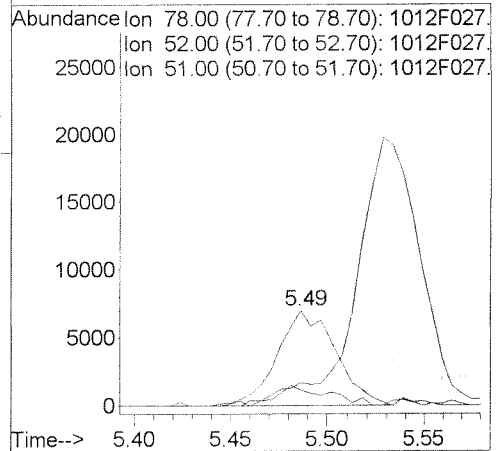
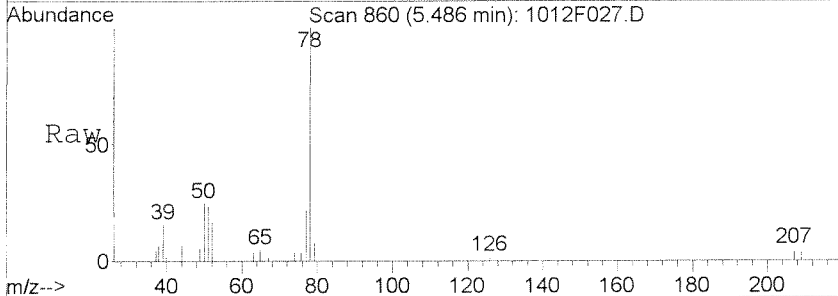
Abundance  
 Ion 83.00 (82.70 to 83.70): 1012F027  
 Ion 85.00 (84.70 to 85.70): 1012F027  
 Ion 47.00 (46.70 to 47.70): 1012F027





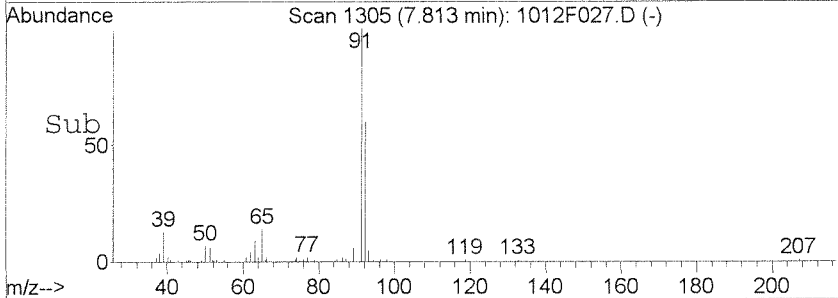
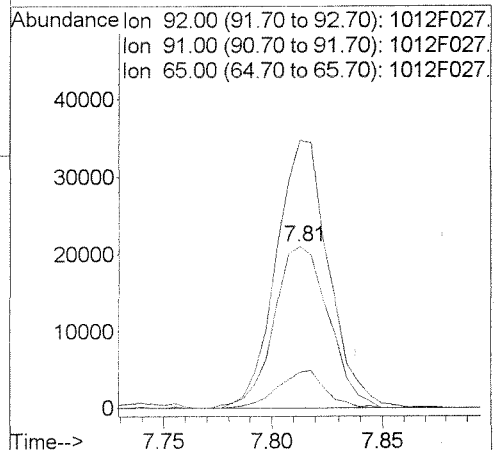
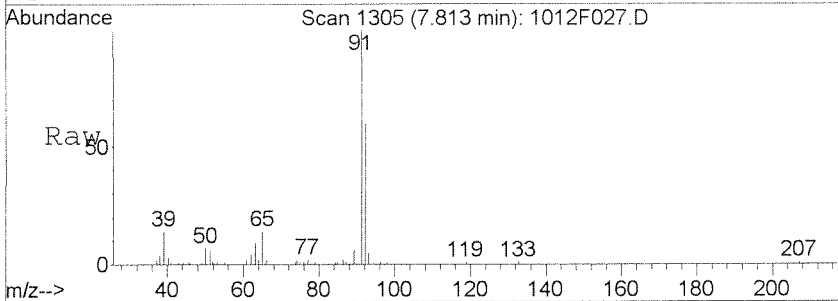
#25  
Benzene  
Concen: 0.31 PPB  
RT: 5.49 min Scan# 860  
Delta R.T. -0.01 min  
Lab File: 1012F027.D  
Acq: 12 Oct 2010 11:09 pm

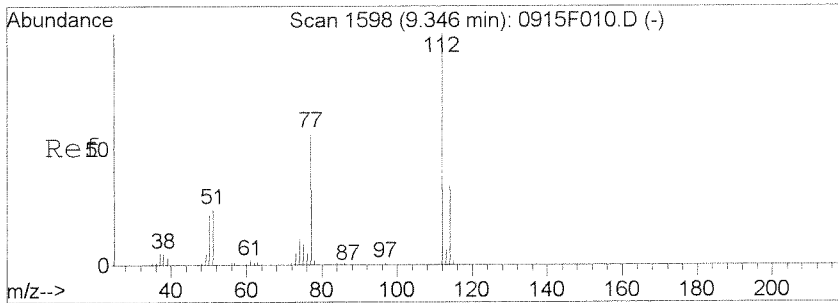
Tgt Ion	Resp	Lower	Upper
78	14693		
52	16.6	0.0	46.8
51	24.3	0.0	48.8



#34  
Toluene  
Concen: 1.16 PPB  
RT: 7.81 min Scan# 1305  
Delta R.T. -0.00 min  
Lab File: 1012F027.D  
Acq: 12 Oct 2010 11:09 pm

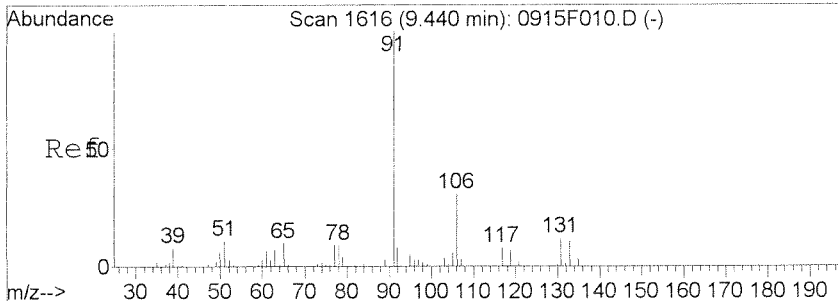
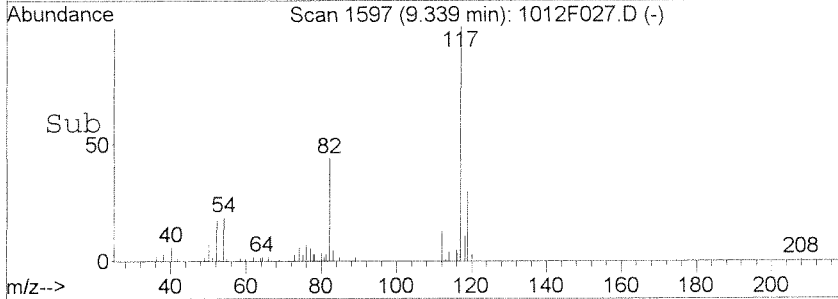
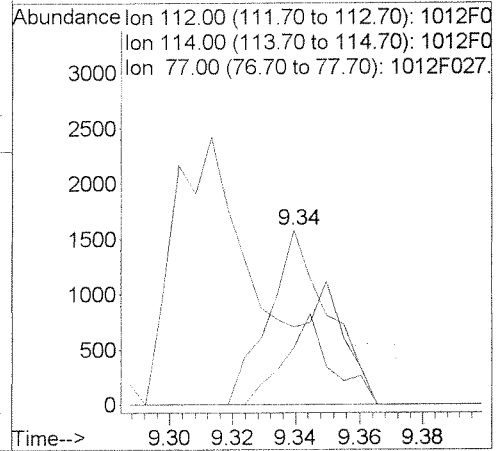
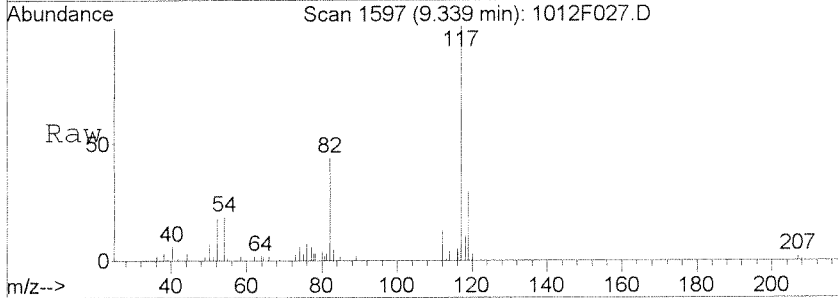
Tgt Ion	Resp	Lower	Upper
92	36587		
91	165.5	132.4	192.4
65	22.4	0.0	48.7





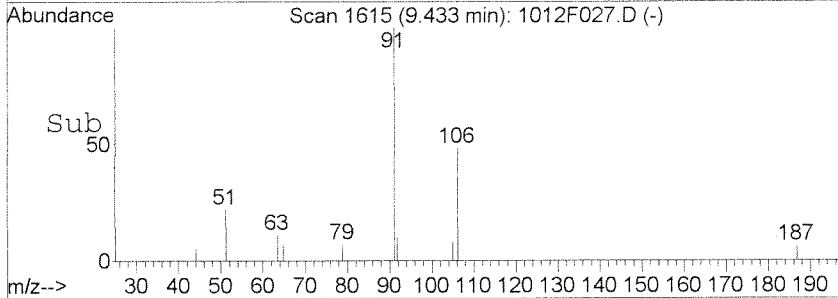
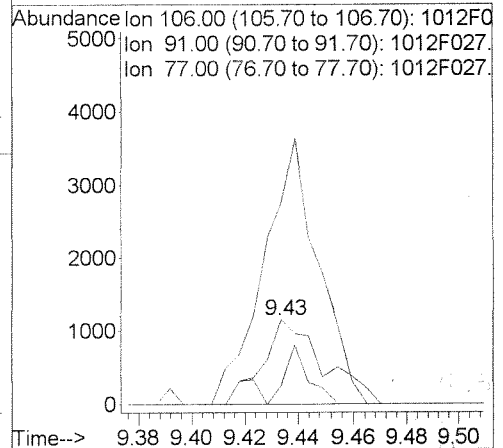
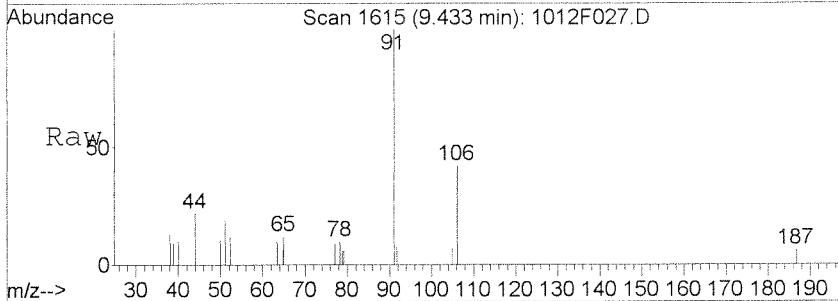
#41  
 Chlorobenzene  
 Concen: 0.06 PPB  
 RT: 9.34 min Scan# 1597  
 Delta R.T. -0.01 min  
 Lab File: 1012F027.D  
 Acq: 12 Oct 2010 11:09 pm

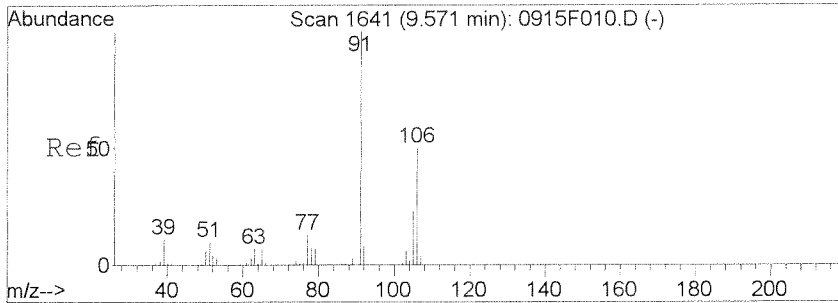
Tgt Ion	Resp	Lower	Upper
112	2086		
114	33.1	2.0	62.0
77	44.4	27.6	87.6



#42  
 Ethylbenzene  
 Concen: 0.10 PPB  
 RT: 9.43 min Scan# 1615  
 Delta R.T. -0.01 min  
 Lab File: 1012F027.D  
 Acq: 12 Oct 2010 11:09 pm

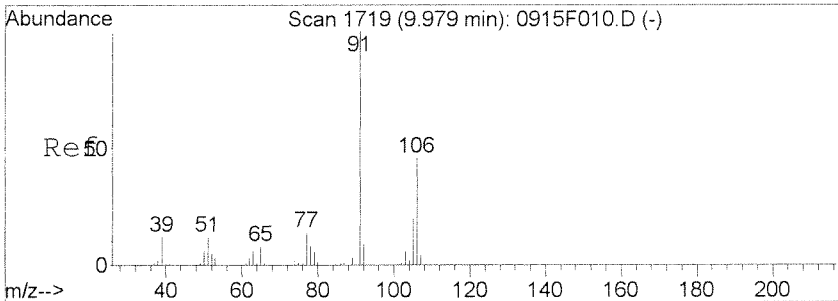
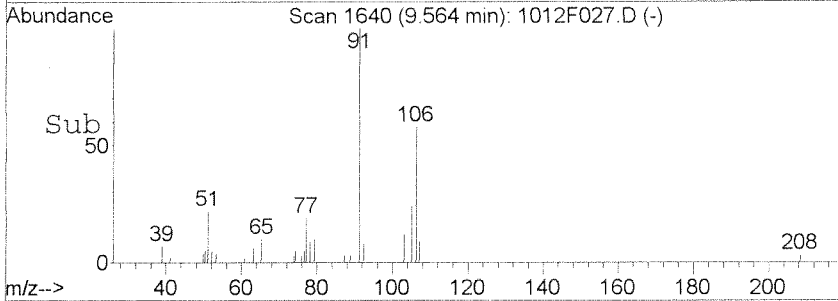
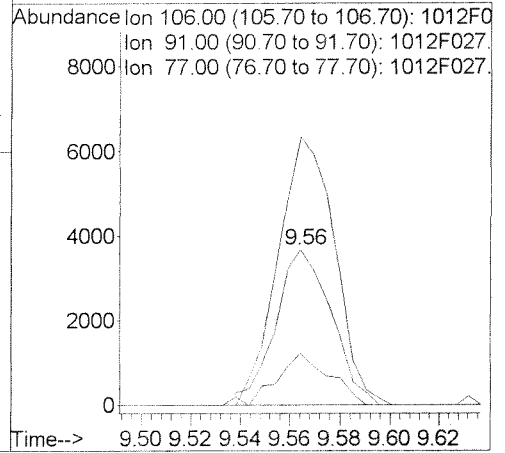
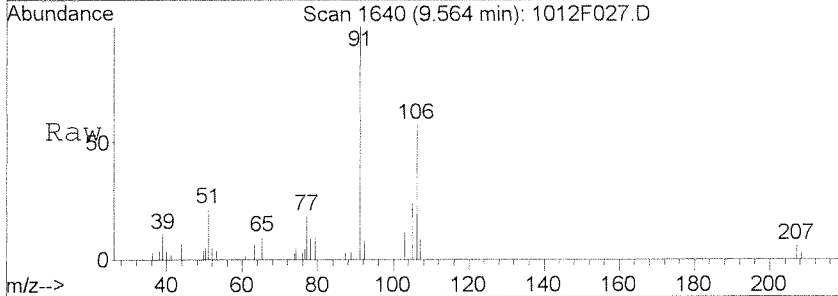
Tgt Ion	Resp	Lower	Upper
106	1819		
91	240.0	285.9	345.9#
77	22.4	0.0	56.0





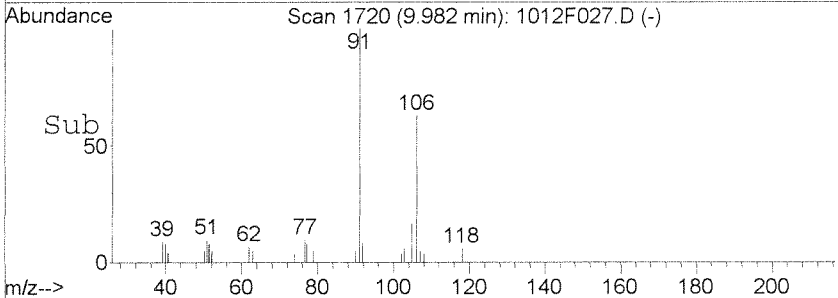
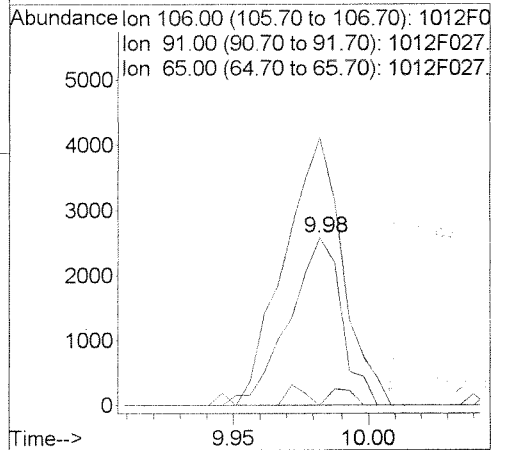
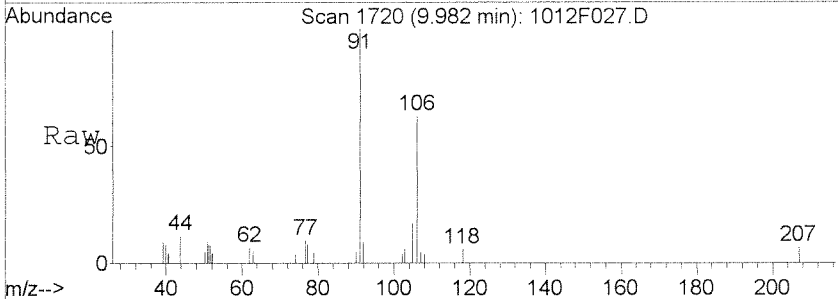
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 m,p-Xylenes  
 Concen: 0.25 PPB  
 RT: 9.56 min Scan# 1640  
 Delta R.T. -0.01 min  
 Lab File: 1012F027.D  
 Acq: 12 Oct 2010 11:09 pm

Tgt Ion	Resp	Lower	Upper
106	5797		
91	172.6	166.8	226.8
77	33.4	0.0	56.0



#44  
 o-Xylene  
 Concen: 0.15 PPB  
 RT: 9.98 min Scan# 1720  
 Delta R.T. 0.00 min  
 Lab File: 1012F027.D  
 Acq: 12 Oct 2010 11:09 pm

Tgt Ion	Resp	Lower	Upper
106	3452		
91	159.1	177.8	237.8#
65	0.0	0.0	44.5



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

## Volatile Organic Compounds

**Sample Name:** Method Blank  
**Lab Code:** KWG1011029-2  
**Extraction Method:** METHOD  
**Analysis Method:** 624

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	5.0	0.23	1	10/12/10	10/12/10	KWG1011029	
Vinyl Chloride	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Bromomethane	0.30	J	5.0	0.28	1	10/12/10	10/12/10	KWG1011029	
Chloroethane	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Trichlorofluoromethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Methylene Chloride	0.16	J	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
trans-1,2-Dichloroethene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Chloroform	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1,1-Trichloroethane (TCA)	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Carbon Tetrachloride	ND	U	5.0	0.047	1	10/12/10	10/12/10	KWG1011029	
Benzene	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloroethane (EDC)	ND	U	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
Trichloroethene (TCE)	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloropropane	ND	U	5.0	0.17	1	10/12/10	10/12/10	KWG1011029	
Bromodichloromethane	ND	U	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
2-Chloroethyl Vinyl Ether	ND	U	10	0.29	1	10/12/10	10/12/10	KWG1011029	
trans-1,3-Dichloropropene	ND	U	5.0	0.10	1	10/12/10	10/12/10	KWG1011029	
Toluene	ND	U	5.0	0.18	1	10/12/10	10/12/10	KWG1011029	
cis-1,3-Dichloropropene	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,1,2-Trichloroethane	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Tetrachloroethene (PCE)	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Dibromochloromethane	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Chlorobenzene	ND	U	5.0	0.098	1	10/12/10	10/12/10	KWG1011029	
Ethylbenzene	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Bromoform	ND	U	5.0	0.37	1	10/12/10	10/12/10	KWG1011029	
1,1,2,2-Tetrachloroethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,3-Dichlorobenzene	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
1,4-Dichlorobenzene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichlorobenzene	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
Acrolein†	ND	U	50	3.3	1	10/12/10	10/12/10	KWG1011029	
Acrylonitrile†	ND	U	10	0.61	1	10/12/10	10/12/10	KWG1011029	

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

**Volatile Organic Compounds**

**Sample Name:** Method Blank  
**Lab Code:** KWG1011029-2

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Toluene-d8	88	84-115	10/12/10	Acceptable
4-Bromofluorobenzene	87	83-113	10/12/10	Acceptable
Dibromofluoromethane	83	71-115	10/12/10	Acceptable

† Analyte Comments

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

**Comments:** \_\_\_\_\_



# Exception Report

**Data File:** J:\MS23\DATA\101210\1012F016.D  
**Lab ID:** KWG1011029-2  
**Run Type:** MB  
**Matrix:** WATER

**Date Acquired:** 10/12/2010 17:52  
**Date Quantitated:** 10/13/2010 08:28  
**Batch ID:** KWG1011024  
**Analysis Method:** 624  
**MethodJoinID:** MJ158

## Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

10/13/2010  
 08:28:28  
 KWG1011024

Primary Review: KA 10/14/10  
 Secondary Review: HB 10.14.10

# Quantitation Report

Bottle ID:	Tier:	Matrix:	WATER
Prod Code: 624 VOC_FP	Collect Date:	Receive Date:	10/12/2010

Analysis Lot: KWG1011024	Prep Lot: KWG1011029	Report Group:
Analysis Method: 624	Prep Method: METHOD	
Prep Ref: 966514	Prep Date: 10/06/2010	

Quant Method: J:\MS23\METHODS\101110624.M	Calibration ID: CAL9945
Title:	
Tune Ref: J:\MS23\DATA\101210\1012F010.D	Method ID: MJ158
MB Ref:	Quant based on Method

Data File: J:\MS23\DATA\101210\1012F016.D	Instrument: MS23
Acqu Date: 10/12/2010 17:52	Quant Date: 10/13/2010 08:28
Run Type: MB	Vial: 7
Lab ID: KWG1011029-2	Dilution: 1.0
	Soln Conc. Units: PPB

## Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	5.89	0.00	96	471130	10.00	OK
2	Chlorobenzene-d5	9.31	0.00	82	191257	10.00	OK
3	1,4-Dichlorobenzene-d4	11.72	0.00	152	206769	10.00	OK

## Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Dibromofluoromethane	5.05	0.00	0.00	113	113071	8.30	83	71-115	OK
1	1,2-Dichloroethane-d4	5.53	0.00	0.00	65	148037	8.26	83	69-116	OK
1	Toluene-d8	7.74	0.00	0.00	98	446784	8.79	88	84-115	OK
2	4-Bromofluorobenzene	10.55	0.00	0.00	95	162840	8.70	87	83-113	OK

## Target Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane				85	0		0.19	U	
1	Chloromethane				50	0d		0.23	U	
1	Vinyl Chloride				62	0		0.16	U	
1	Bromomethane	1.64	0.01	0.00	96	2312	0.3000	0.300	J	
1	Chloroethane				49	0d		0.16	U	
1	Trichlorofluoromethane				101	0		0.11	U	
1	Acrolein				56	0		3.3	U	
1	Trichlorotrifluoroethane				151	0		0.13	U	
1	1,1-Dichloroethene				96	0		0.15	U	
1	Acetone	2.49	0.01	0.00	43	1533	0.7300	2.1	U	
1	Carbon Disulfide				76	0d		0.13	U	
1	Methylene Chloride	2.92	0.02	0.00	84	2118m	0.1600	0.160	J	
1	Acrylonitrile				53	0		0.61	U	
1	trans-1,2-Dichloroethene				96	0		0.15	U	

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

<b>Data File:</b>	J:\MS23\DATA\101210\1012F016.D	<b>Instrument:</b>	MS23
<b>Acqu Date:</b>	10/12/2010 17:52	<b>Quant Date:</b>	10/13/2010 08:28
<b>Run Type:</b>	MB	<b>Vial:</b>	7
<b>Lab ID:</b>	KWG1011029-2	<b>Dilution:</b>	1.0
		<b>Soln Conc. Units:</b>	PPB

**Target Compounds**

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	1,1-Dichloroethane				63	0		0.11	U	
1	Vinyl Acetate				86	0		0.57	U	
1	cis-1,2-Dichloroethene				96	0		0.15	U	
1	2-Butanone (MEK)				72	0		2.6	U	
1	Chloroform				83	0		0.11	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.14	U	
1	Carbon Tetrachloride				117	0		0.047	U	
1	Benzene				78	0		0.14	U	
1	1,2-Dichloroethane (EDC)				62	0		0.12	U	
1	Trichloroethene (TCE)				95	0		0.13	U	
1	1,2-Dichloropropane				63	0		0.17	U	
1	Bromodichloromethane				83	0		0.12	U	
1	2-Chloroethyl Vinyl Ether				63	0		0.29	U	
1	cis-1,3-Dichloropropene				75	0		0.13	U	
1	4-Methyl-2-pentanone (MIBK)				58	0		2.5	U	
1	Toluene	7.81		0.00	92	1007	0.0300	0.18	U	
2	trans-1,3-Dichloropropene				75	0		0.10	U	
2	1,1,2-Trichloroethane				83	0		0.16	U	
2	Tetrachloroethene (PCE)				164	0		0.14	U	
2	2-Hexanone				43	0		2.4	U	
2	Dibromochloromethane				129	0		0.15	U	
2	Chlorobenzene	9.33	-0.01	0.00	112	595	0.0200	0.098	U	
2	Ethylbenzene				106	0		0.11	U	
2	m,p-Xylenes	9.57	0.01	0.00	106	531	0.0200	0.26	U	
2	o-Xylene				106	0		0.13	U	
2	Styrene				103	0		0.14	U	
2	Bromoform				173	0		0.37	U	
3	1,1,2,2-Tetrachloroethane				83	0		0.11	U	
3	1,3-Dichlorobenzene	11.64	-0.01	0.00	146	964	0.0300	0.16	U	
3	1,4-Dichlorobenzene	11.75		0.00	146	1361	0.0400	0.15	U	
3	1,2-Dichlorobenzene	12.13	0.01	0.00	146	947	0.0300	0.13	U	
	Isopropyl Acetate				0	0		10	U	NR
	Ethyl Acetate				0	0		10	U	NR
	Bis(chloromethyl) Ether				0	0		10	U	NR
	Amyl Acetate				0	0		10	U	NR

Prep Amount: 10 ml      Dilution: 1.0  
 Prep Final Vol: 10 ml      Unit Factor: 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

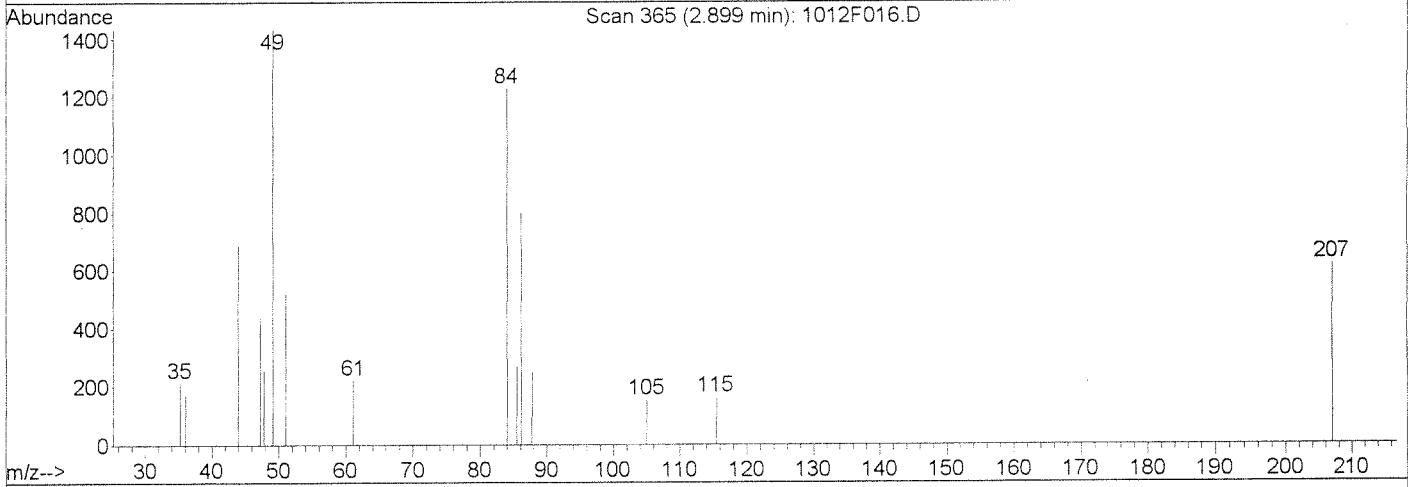
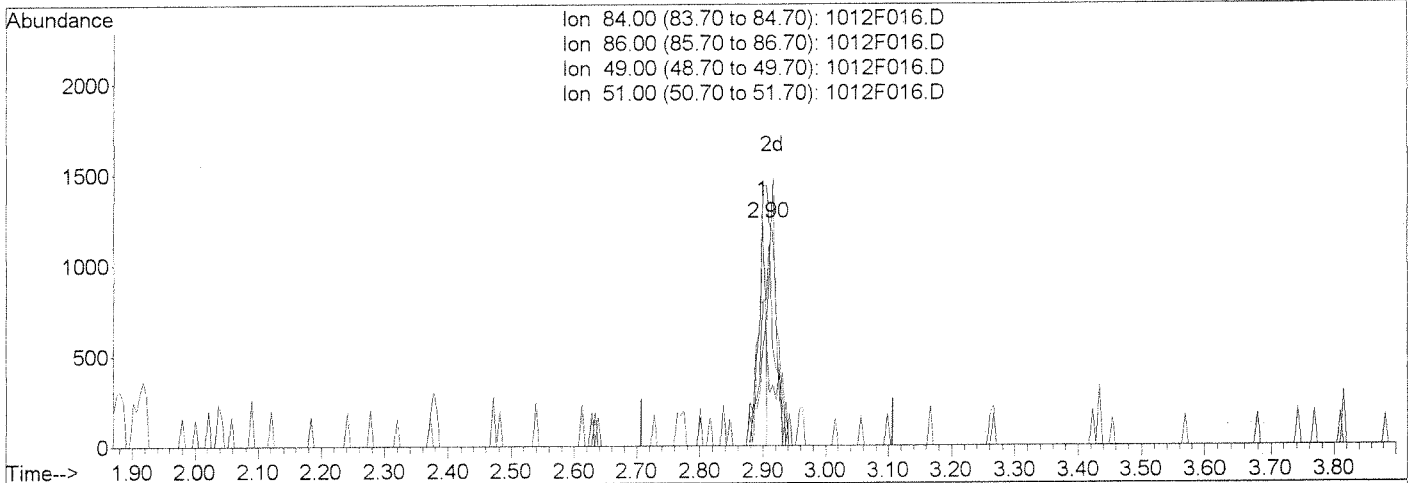
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101210\1012F016.D  
 Acq On : 12 Oct 2010 5:52 pm  
 Sample : MB  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 13 8:28 2010

Vial: 7  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 15:11:44 2010  
 Response via : Multiple Level Calibration



TIC: 1012F016.D

(13) Methylene Chloride (T)  
 2.90min 0.07PPB  
 response 990

Ion	Exp%	Act%
84.00	100	100
86.00	64.30	65.26
49.00	130.90	116.76
51.00	40.30	42.88

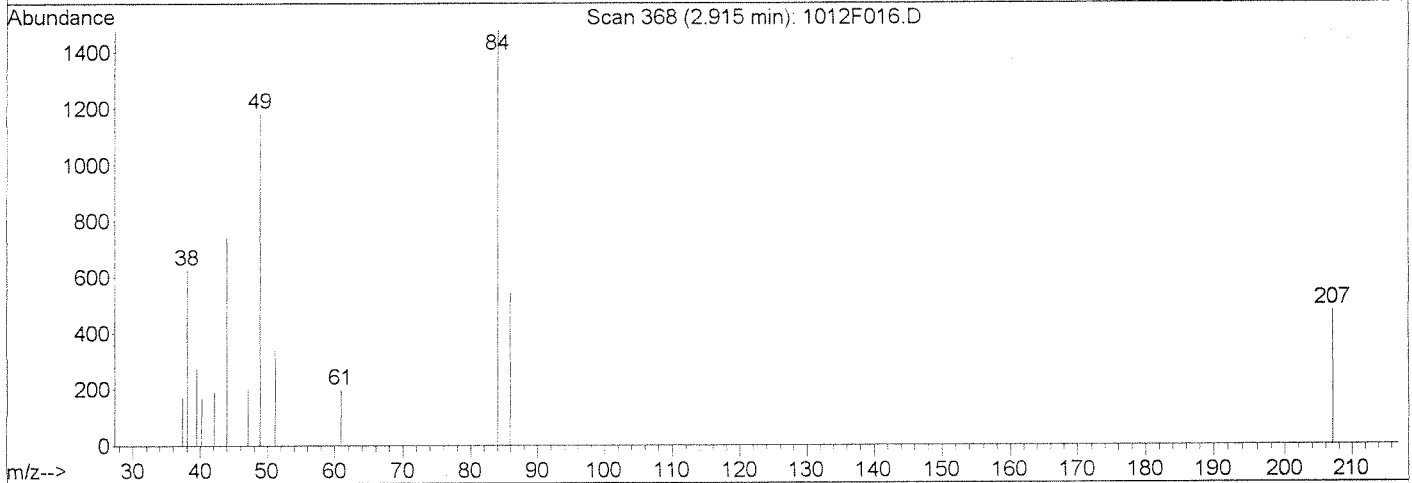
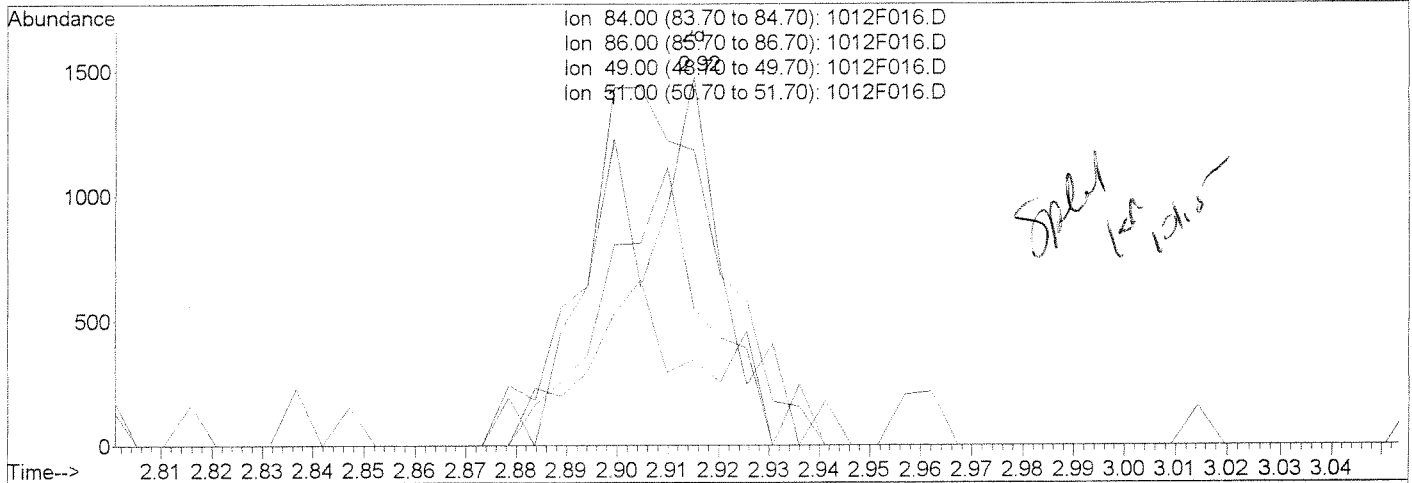
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101210\1012F016.D  
 Acq On : 12 Oct 2010 5:52 pm  
 Sample : MB  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 13 8:28 2010

Vial: 7  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 15:11:44 2010  
 Response via : Multiple Level Calibration



TIC: 1012F016.D

(13) Methylene Chloride (T)  
 2.92min 0.16PPB m  
 response 2118

Ion	Exp%	Act%
84.00	100	100
86.00	64.30	36.98
49.00	130.90	79.92#
51.00	40.30	22.99

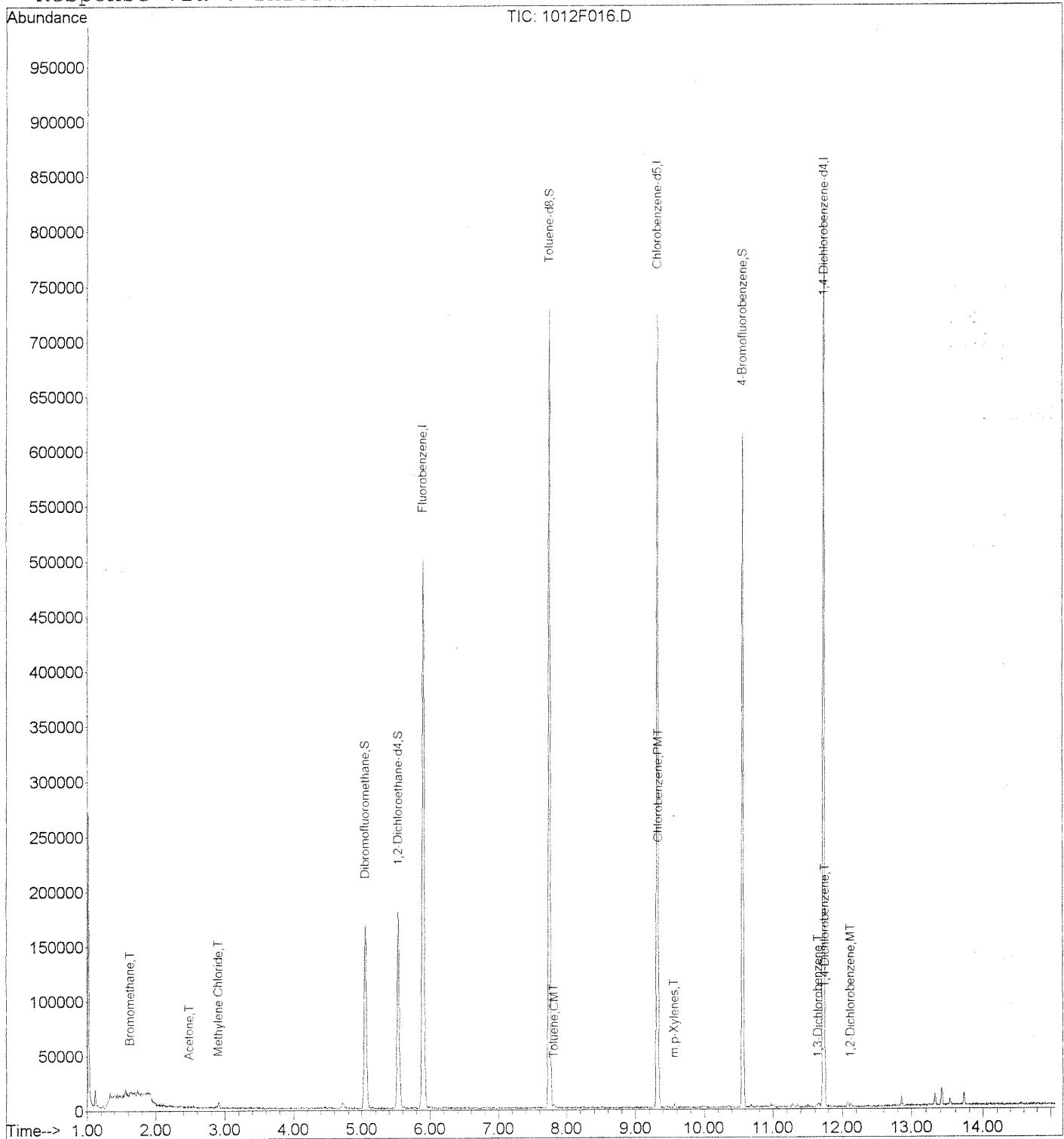
Handwritten note: *HB10:14:10*

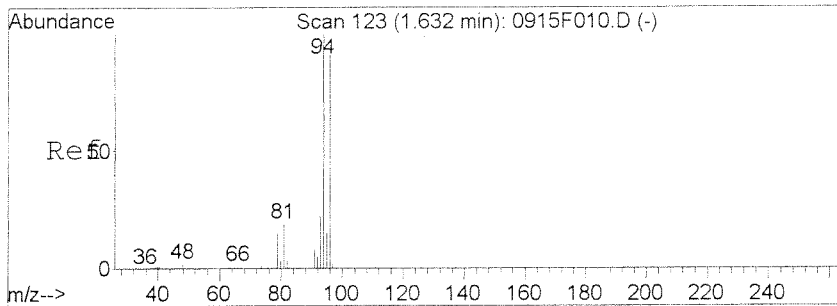
Data File : J:\MS23\DATA\101210\1012F016.D  
 Acq On : 12 Oct 2010 5:52 pm  
 Sample : MB  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 13 8:28 2010

Vial: 7  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RE

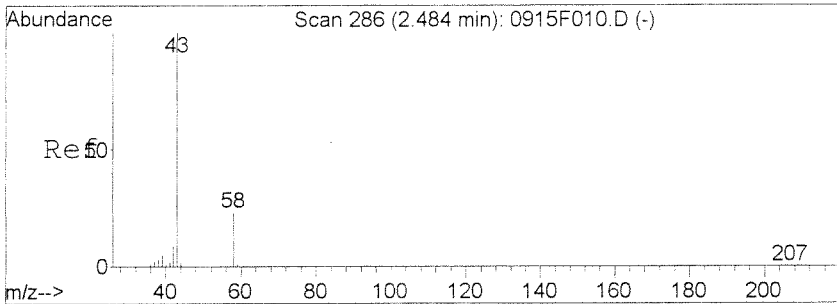
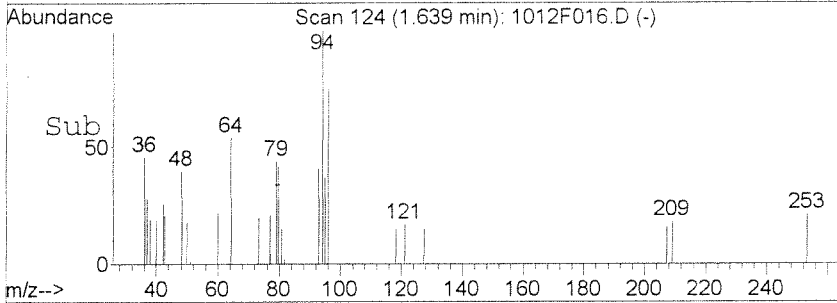
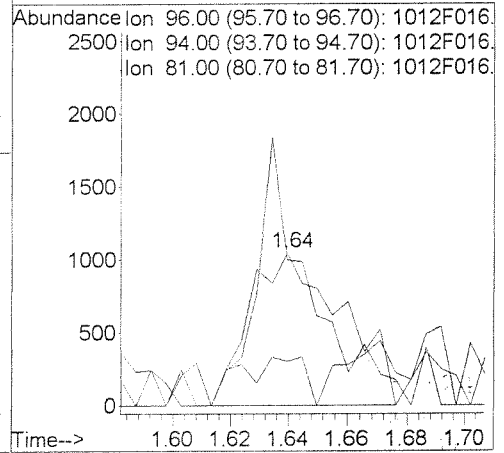
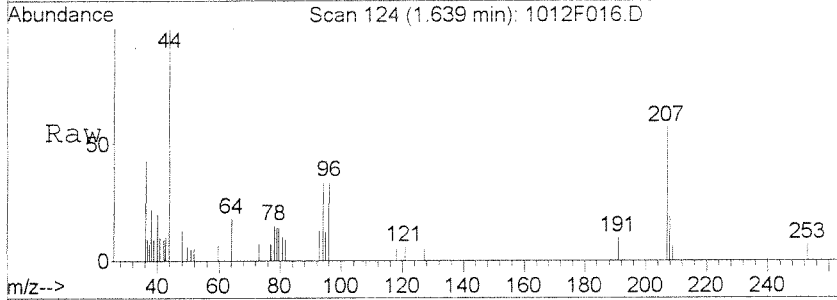
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 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 15:11:44 2010  
 Response via : Initial Calibration





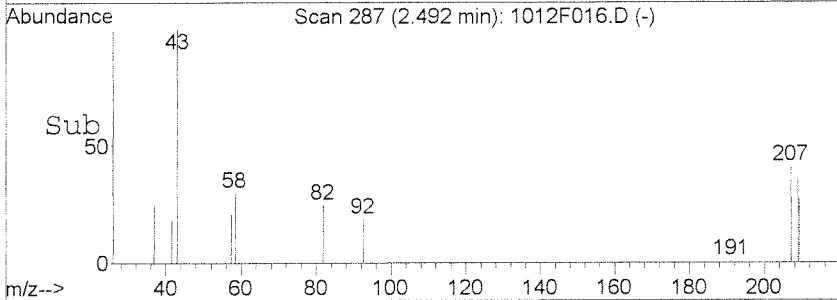
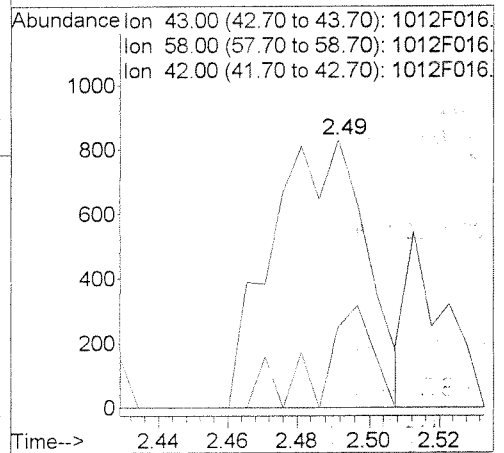
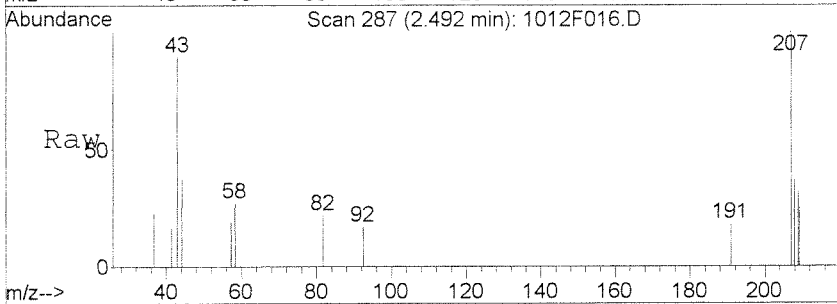
#5  
 Bromomethane  
 Concen: 0.30 PPB  
 RT: 1.64 min Scan# 124  
 Delta R.T. 0.01 min  
 Lab File: 1012F016.D  
 Acq: 12 Oct 2010 5:52 pm

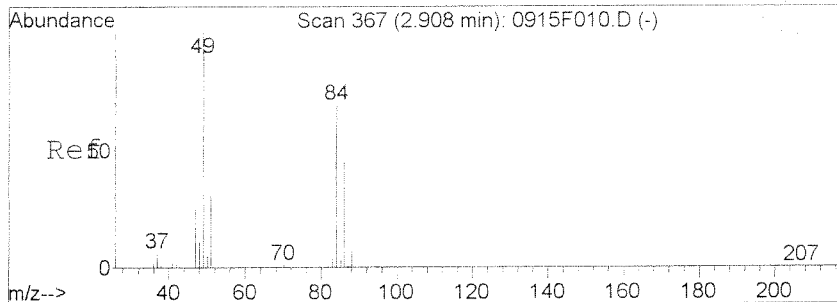
Tgt Ion	Resp	Lower	Upper
96	2312		
96	100		
94	95.5	78.8	138.8
81	7.7	0.0	44.5



#11  
 Acetone  
 Concen: 0.73 PPB  
 RT: 2.49 min Scan# 287  
 Delta R.T. 0.01 min  
 Lab File: 1012F016.D  
 Acq: 12 Oct 2010 5:52 pm

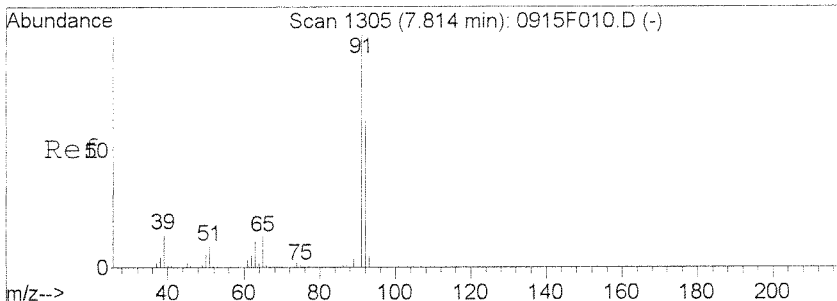
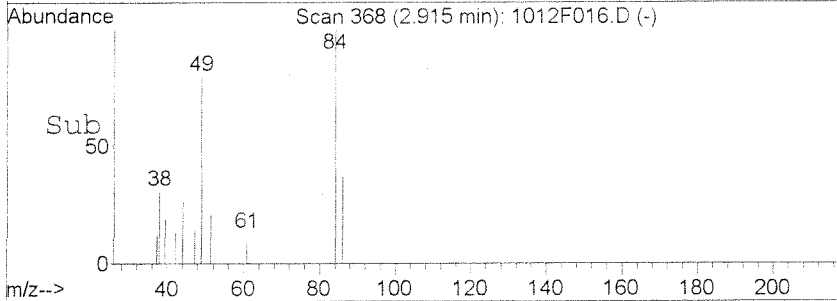
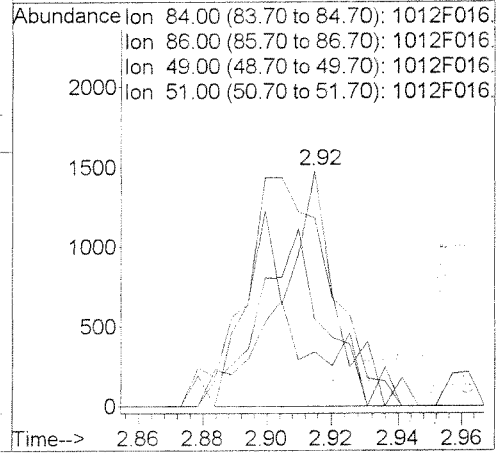
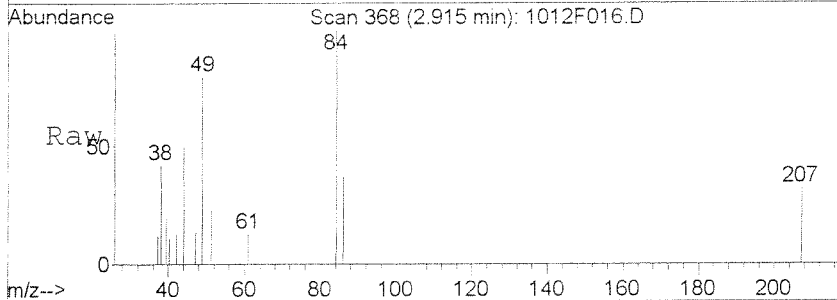
Tgt Ion	Resp	Lower	Upper
43	1533		
43	100		
58	30.0	0.0	57.1
42	0.0	0.0	37.4





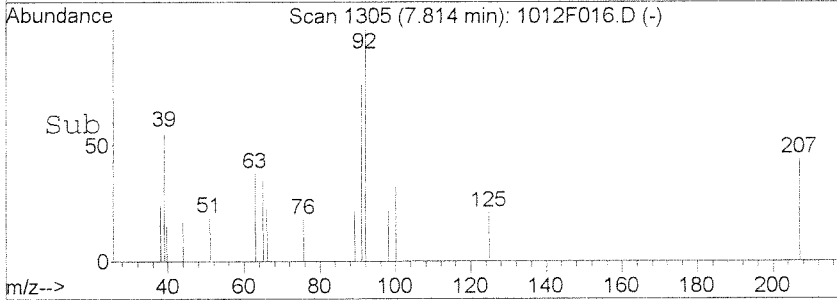
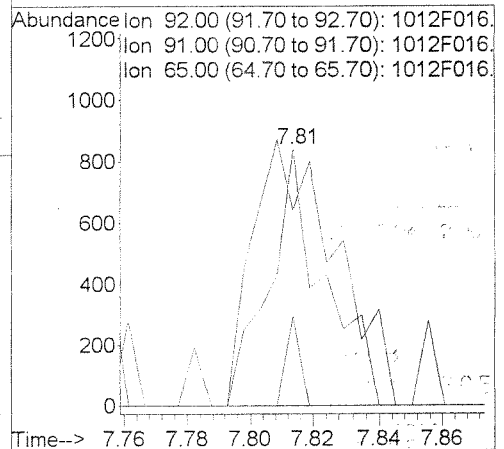
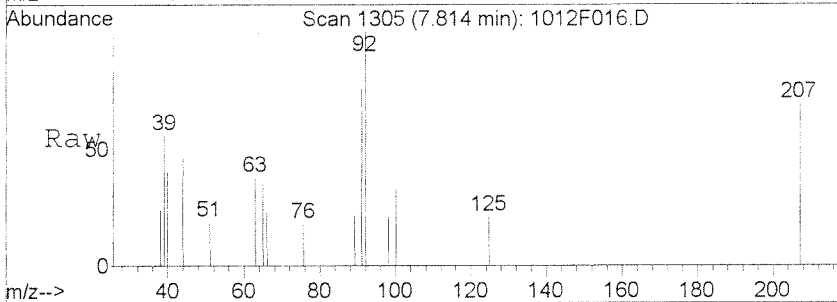
#13  
 Methylene Chloride  
 Concen: 0.16 PPB m  
 RT: 2.92 min Scan# 368  
 Delta R.T. 0.01 min  
 Lab File: 1012F016.D  
 Acq: 12 Oct 2010 5:52 pm

Tgt Ion	Resp	Lower	Upper
84	2118		
86	37.0	34.3	94.3
49	79.9	100.9	160.9#
51	23.0	10.3	70.3

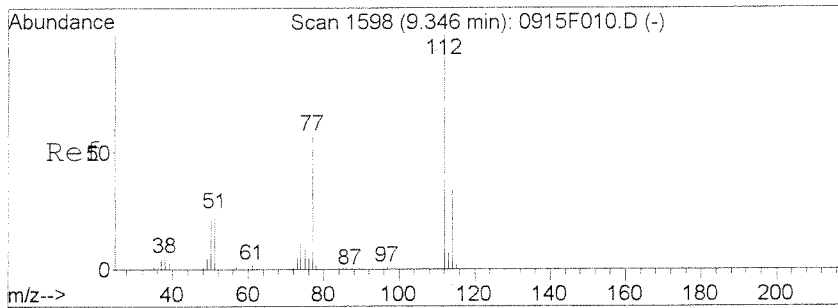


#34  
 Toluene  
 Concen: 0.03 PPB  
 RT: 7.81 min Scan# 1305  
 Delta R.T. 0.00 min  
 Lab File: 1012F016.D  
 Acq: 12 Oct 2010 5:52 pm

Tgt Ion	Resp	Lower	Upper
92	1007		
91	76.3	132.4	192.4#
65	35.0	0.0	48.7

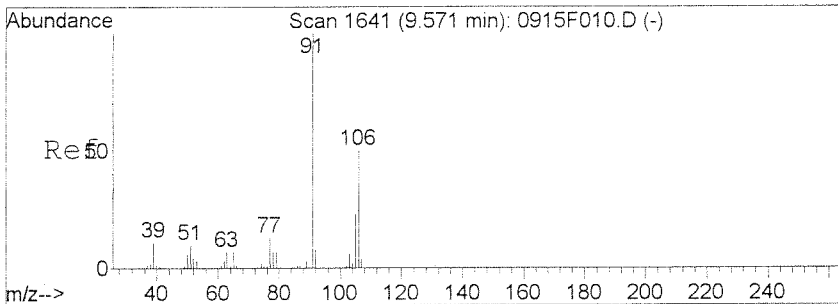
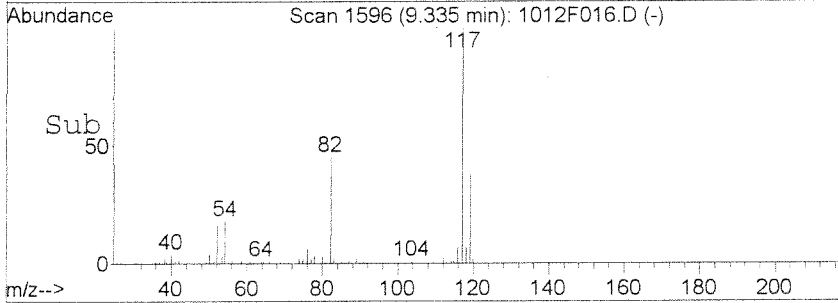
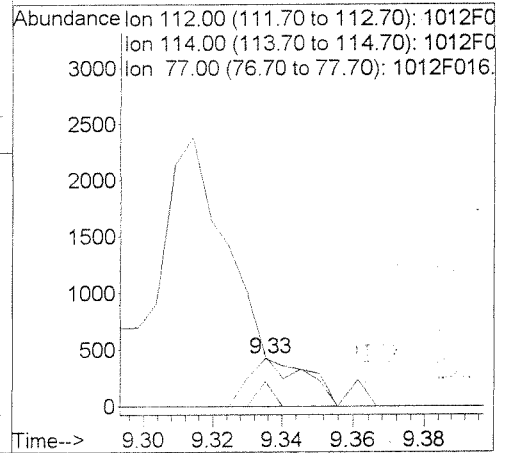
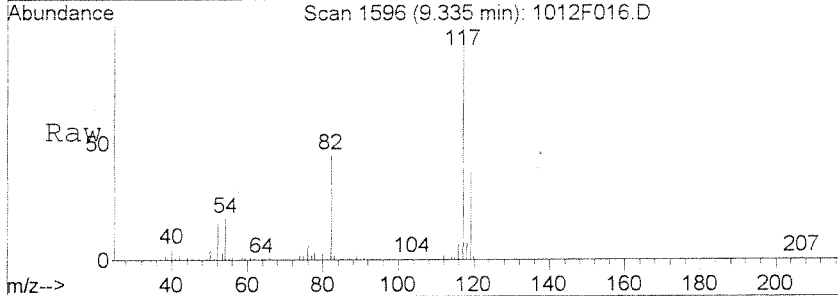






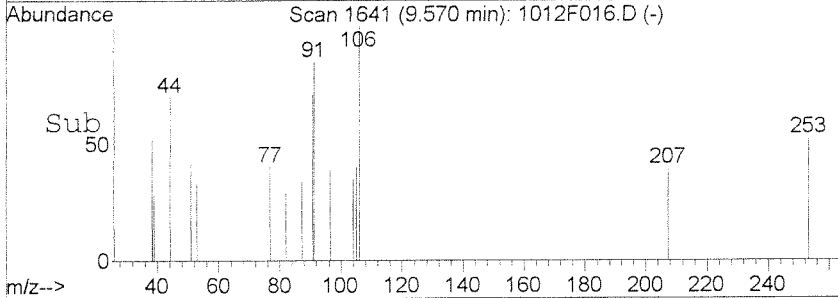
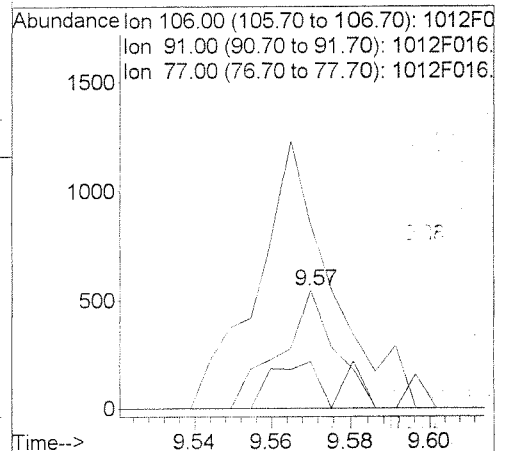
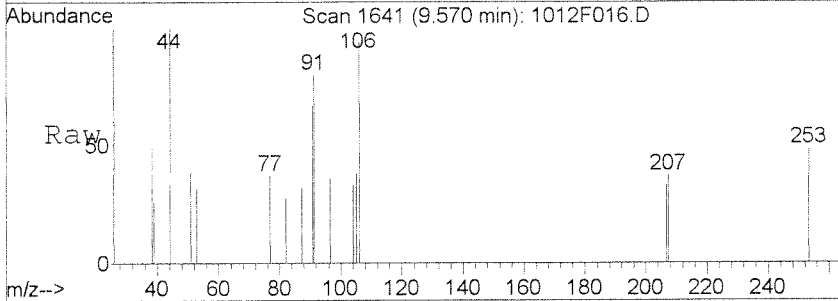
#41  
 Chlorobenzene  
 Concen: 0.02 PPB  
 RT: 9.33 min Scan# 1596  
 Delta R.T. -0.01 min  
 Lab File: 1012F016.D  
 Acq: 12 Oct 2010 5:52 pm

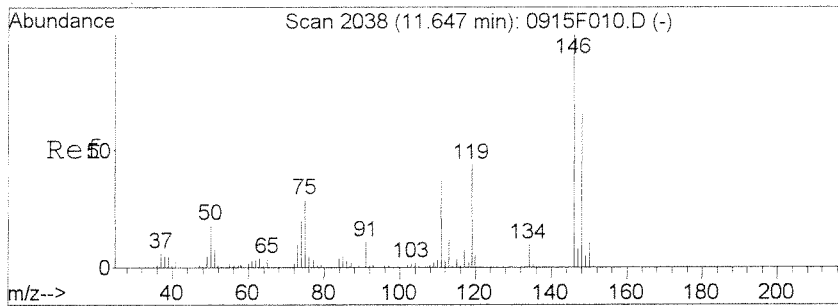
Tgt Ion	Resp	Lower	Upper
112	595		
114	52.3	2.0	62.0
77	104.9	27.6	87.6#



#43  
 m,p-Xylenes  
 Concen: 0.02 PPB  
 RT: 9.57 min Scan# 1641  
 Delta R.T. 0.00 min  
 Lab File: 1012F016.D  
 Acq: 12 Oct 2010 5:52 pm

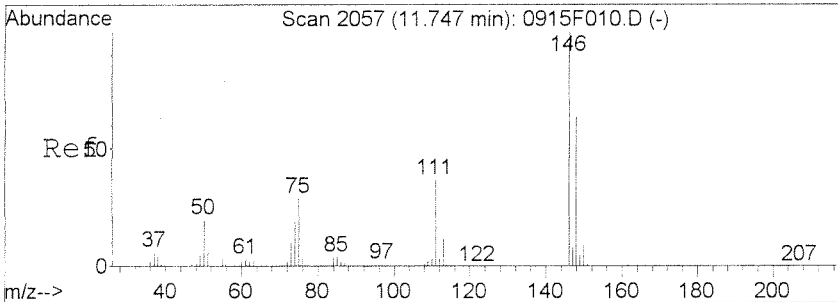
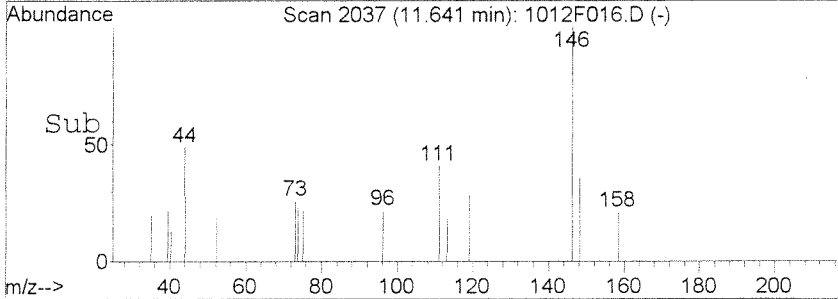
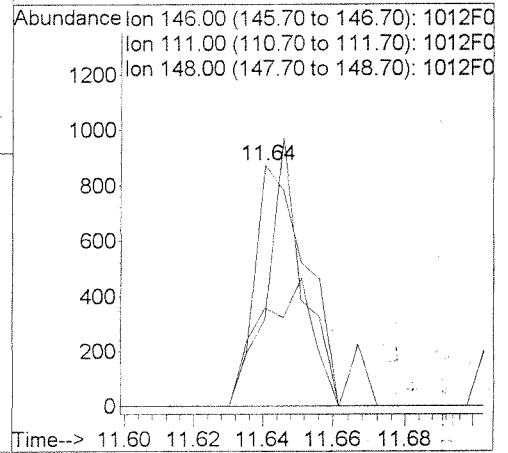
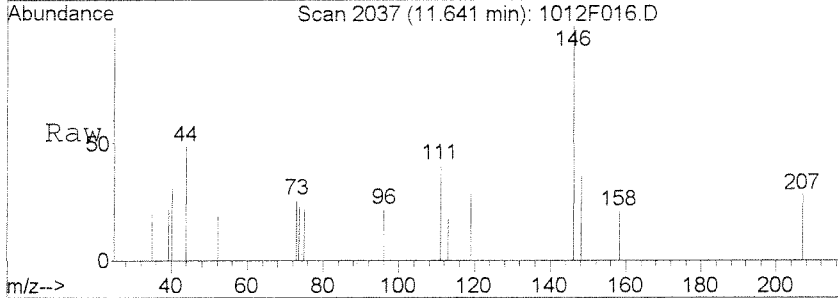
Tgt Ion	Resp	Lower	Upper
106	531		
91	114.9	166.8	226.8#
77	39.8	0.0	56.0





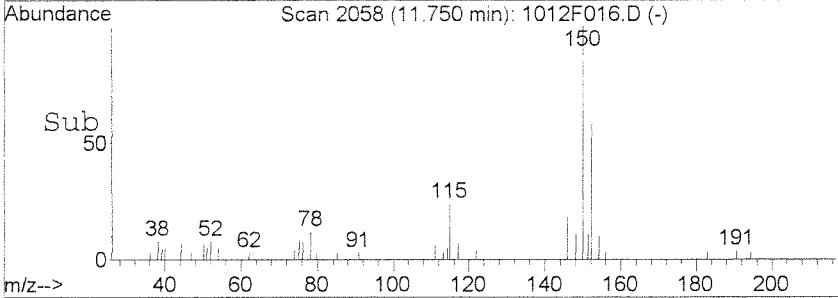
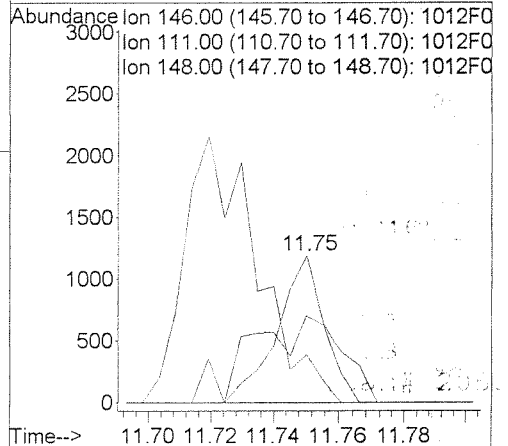
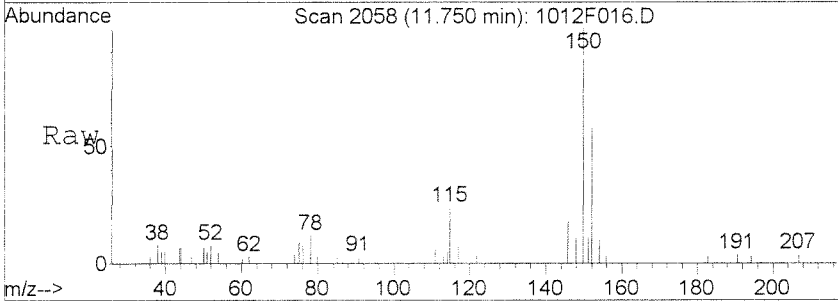
#51  
 1,3-Dichlorobenzene  
 Concen: 0.03 PPB  
 RT: 11.64 min Scan# 2037  
 Delta R.T. -0.01 min  
 Lab File: 1012F016.D  
 Acq: 12 Oct 2010 5:52 pm

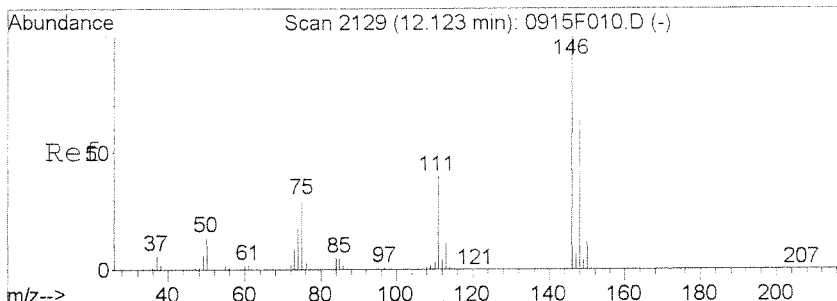
Tgt Ion	Resp	Lower	Upper
146	100		
111	40.9	6.9	66.9
148	36.3	33.5	93.5



#52  
 1,4-Dichlorobenzene  
 Concen: 0.04 PPB  
 RT: 11.75 min Scan# 2058  
 Delta R.T. 0.00 min  
 Lab File: 1012F016.D  
 Acq: 12 Oct 2010 5:52 pm

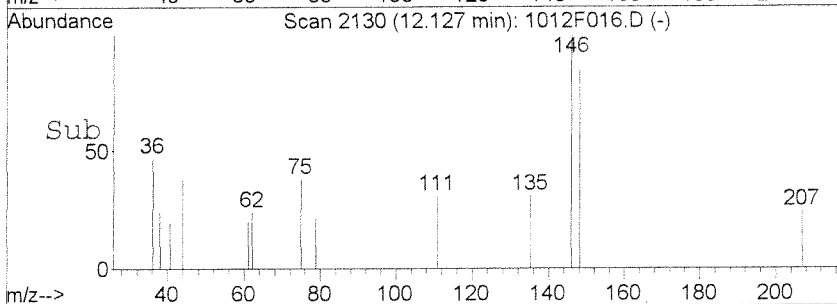
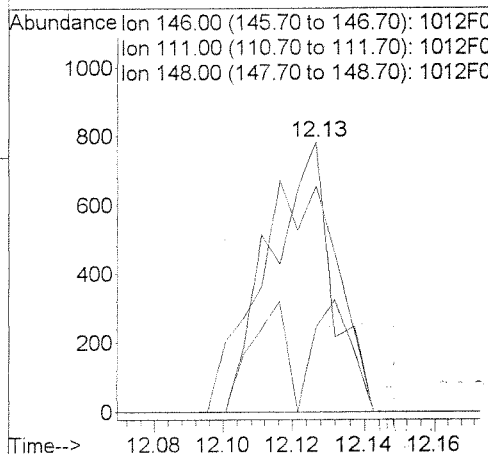
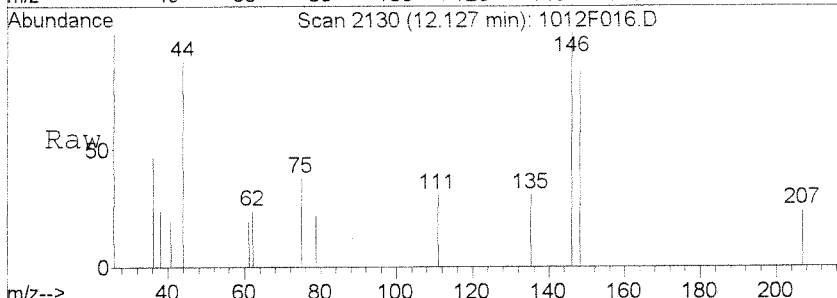
Tgt Ion	Resp	Lower	Upper
146	100		
111	32.6	7.4	67.4
148	59.0	33.5	93.5





#53  
 1,2-Dichlorobenzene  
 Concen: 0.03 PPB  
 RT: 12.13 min Scan# 2130  
 Delta R.T. 0.00 min  
 Lab File: 1012F016.D  
 Acq: 12 Oct 2010 5:52 pm

Tgt Ion	Resp	Lower	Upper
146	100		
111	31.2	9.6	69.6
148	83.6	34.1	94.1



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

## Volatile Organic Compounds

**Sample Name:** Batch QC  
**Lab Code:** K1010898-002  
**Extraction Method:** METHOD  
**Analysis Method:** 624

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	ND	U	5.0	0.23	1	10/12/10	10/12/10	KWG1011029	
Vinyl Chloride	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Bromomethane	0.30	J	5.0	0.28	1	10/12/10	10/12/10	KWG1011029	
Chloroethane	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Trichlorofluoromethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Methylene Chloride	ND	U	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
trans-1,2-Dichloroethene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Chloroform	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1,1-Trichloroethane (TCA)	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Carbon Tetrachloride	ND	U	5.0	0.047	1	10/12/10	10/12/10	KWG1011029	
Benzene	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloroethane (EDC)	ND	U	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
Trichloroethene (TCE)	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloropropane	ND	U	5.0	0.17	1	10/12/10	10/12/10	KWG1011029	
Bromodichloromethane	ND	U	5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
2-Chloroethyl Vinyl Ether	ND	U	10	0.29	1	10/12/10	10/12/10	KWG1011029	
trans-1,3-Dichloropropene	ND	U	5.0	0.10	1	10/12/10	10/12/10	KWG1011029	
Toluene	ND	U	5.0	0.18	1	10/12/10	10/12/10	KWG1011029	
cis-1,3-Dichloropropene	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,1,2-Trichloroethane	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Tetrachloroethene (PCE)	ND	U	5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Dibromochloromethane	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Chlorobenzene	ND	U	5.0	0.098	1	10/12/10	10/12/10	KWG1011029	
Ethylbenzene	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Bromoform	ND	U	5.0	0.37	1	10/12/10	10/12/10	KWG1011029	
1,1,2,2-Tetrachloroethane	ND	U	5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,3-Dichlorobenzene	ND	U	5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
1,4-Dichlorobenzene	ND	U	5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichlorobenzene	ND	U	5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
Acrolein†	ND	U	50	3.3	1	10/12/10	10/12/10	KWG1011029	
Acrylonitrile†	ND	U	10	0.61	1	10/12/10	10/12/10	KWG1011029	

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

**Volatile Organic Compounds**

**Sample Name:** Batch QC  
**Lab Code:** K1010898-002

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Toluene-d8	88	84-115	10/12/10	Acceptable
4-Bromofluorobenzene	87	83-113	10/12/10	Acceptable
Dibromofluoromethane	85	71-115	10/12/10	Acceptable

† **Analyte Comments**

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

**Comments:** \_\_\_\_\_

## Exception Report

**Data File:** J:\MS23\DATA\101210\1012F017.D  
**Lab ID:** K1010898-002  
**RunType:** SMPL  
**Matrix:** WATER

**Date Acquired:** 10/12/2010 18:21  
**Date Quantitated:** 10/13/2010 08:42  
**Batch ID:** KWG1011024  
**Analysis Method:** 624  
**ListJoinID:** LJ8352

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KA 10/13/10  
 Secondary Review: HTB 10-14-10

# Quantitation Report

<b>Bottle ID:</b>		<b>Tier:</b>	V	<b>Matrix:</b>	WATER
<b>Prod Code:</b>	624 VOC_FP	<b>Collect Date:</b>	10/01/2010	<b>Receive Date:</b>	10/02/2010

<b>Analysis Lot:</b>	KWG1011024	<b>Prep Lot:</b>	KWG1011029	<b>Report Group:</b>	K1010898
<b>Analysis Method:</b>	624	<b>Prep Method:</b>	METHOD		
<b>Prep Ref:</b>	966855	<b>Prep Date:</b>	10/12/2010		

<b>Quant Method:</b>	J:\MS23\METHODS\101110624.M	<b>Calibration ID:</b>	CAL9945
<b>Title:</b>	Volatile Organic Compounds	<b>Report List ID:</b>	LJ8352
<b>Tune Ref:</b>	J:\MS23\DATA\101210\1012F010.D	<b>Method ID:</b>	MJ158
<b>MB Ref:</b>	J:\MS23\DATA\101210\1012F016.D	<b>Quant based on Report List</b>	

<b>Data File:</b>	J:\MS23\DATA\101210\1012F017.D	<b>Instrument:</b>	MS23
<b>Acqu Date:</b>	10/12/2010 18:21	<b>Quant Date:</b>	10/13/2010 08:42
<b>Run Type:</b>	SMPL	<b>Vial:</b>	8
<b>Lab ID:</b>	K1010898-002	<b>Dilution:</b>	1.0
		<b>Soln Conc. Units:</b>	PPB

## Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	5.89	0.00	96	466705	10.00	OK
2	Chlorobenzene-d5	9.31	0.00	82	193043	10.00	OK
3	1,4-Dichlorobenzene-d4	11.72	0.00	152	213361	10.00	OK

## Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Dibromofluoromethane	5.05	0.00	0.00	113	114737	8.51	85	71-115	OK
1	Toluene-d8	7.74	0.00	0.00	98	444174	8.82	88	84-115	OK
2	4-Bromofluorobenzene	10.55	0.00	0.00	95	163400	8.65	87	83-113	OK

## Target Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane				85	0		0.19	U	
1	Chloromethane	1.28		0.00	50	1259	0.0900	0.23	U	
1	Vinyl Chloride				62	0		0.16	U	
1	Bromomethane	1.63		0.00	96	2296	0.3000	0.30	J	
1	Chloroethane				49	0		0.16	U	
1	Trichlorofluoromethane				101	0		0.11	U	
1	Acrolein				56	0		3.3	U	
1	Trichlorotrifluoroethane				151	0		0.13	U	
1	1,1-Dichloroethene				96	0		0.15	U	
1	Acetone	2.49	0.01	0.00	43	9685	4.67	4.7	J	
1	Carbon Disulfide				76	0		0.13	U	
1	Methylene Chloride	2.90		0.00	84	1127	0.0800	0.12	U	
1	Acrylonitrile				53	0		0.61	U	
1	trans-1,2-Dichloroethene				96	0		0.15	U	
1	1,1-Dichloroethane				63	0		0.11	U	

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

<b>Data File:</b>	J:\MS23\DATA\101210\1012F017.D	<b>Instrument:</b>	MS23
<b>Acqu Date:</b>	10/12/2010 18:21	<b>Quant Date:</b>	10/13/2010 08:42
<b>Run Type:</b>	SMPL	<b>Vial:</b>	8
<b>Lab ID:</b>	K1010898-002	<b>Dilution:</b>	1.0
		<b>Soln Conc. Units:</b>	PPB

**Target Compounds**

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Vinyl Acetate				86	0		0.57	U	
1	cis-1,2-Dichloroethene				96	0		0.15	U	
1	2-Butanone (MEK)				72	0		2.6	U	
1	Chloroform				83	0		0.11	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.14	U	
1	Carbon Tetrachloride				117	0		0.047	U	
1	Benzene				78	0d		0.14	U	
1	1,2-Dichloroethane (EDC)				62	0		0.12	U	
1	Trichloroethene (TCE)				95	0		0.13	U	
1	1,2-Dichloropropane				63	0		0.17	U	
1	Bromodichloromethane				83	0		0.12	U	
1	2-Chloroethyl Vinyl Ether				63	0		0.29	U	
1	cis-1,3-Dichloropropene				75	0		0.13	U	
1	4-Methyl-2-pentanone (MIBK)				58	0		2.5	U	
1	Toluene	7.81		0.00	92	2847	0.0800	0.18	U	
2	trans-1,3-Dichloropropene				75	0		0.10	U	
2	1,1,2-Trichloroethane				83	0		0.16	U	
2	Tetrachloroethene (PCE)				164	0		0.14	U	
2	2-Hexanone				43	0		2.4	U	
2	Dibromochloromethane				129	0		0.15	U	
2	Chlorobenzene				112	0		0.098	U	
2	Ethylbenzene				106	0		0.11	U	
2	m,p-Xylenes	9.56		0.00	106	1449	0.0600	0.26	U	
2	o-Xylene	9.98		0.00	106	746	0.0300	0.13	U	
2	Styrene				103	0		0.14	U	
2	Bromoform				173	0		0.37	U	
3	1,1,2,2-Tetrachloroethane				83	0		0.11	U	
3	1,3-Dichlorobenzene				146	0		0.16	U	
3	1,4-Dichlorobenzene				146	0		0.15	U	
3	1,2-Dichlorobenzene				146	0		0.13	U	

Prep Amount: 10 ml                      Dilution: 1.0  
 Prep Final Vol: 10 ml                    Unit Factor: 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ? : Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

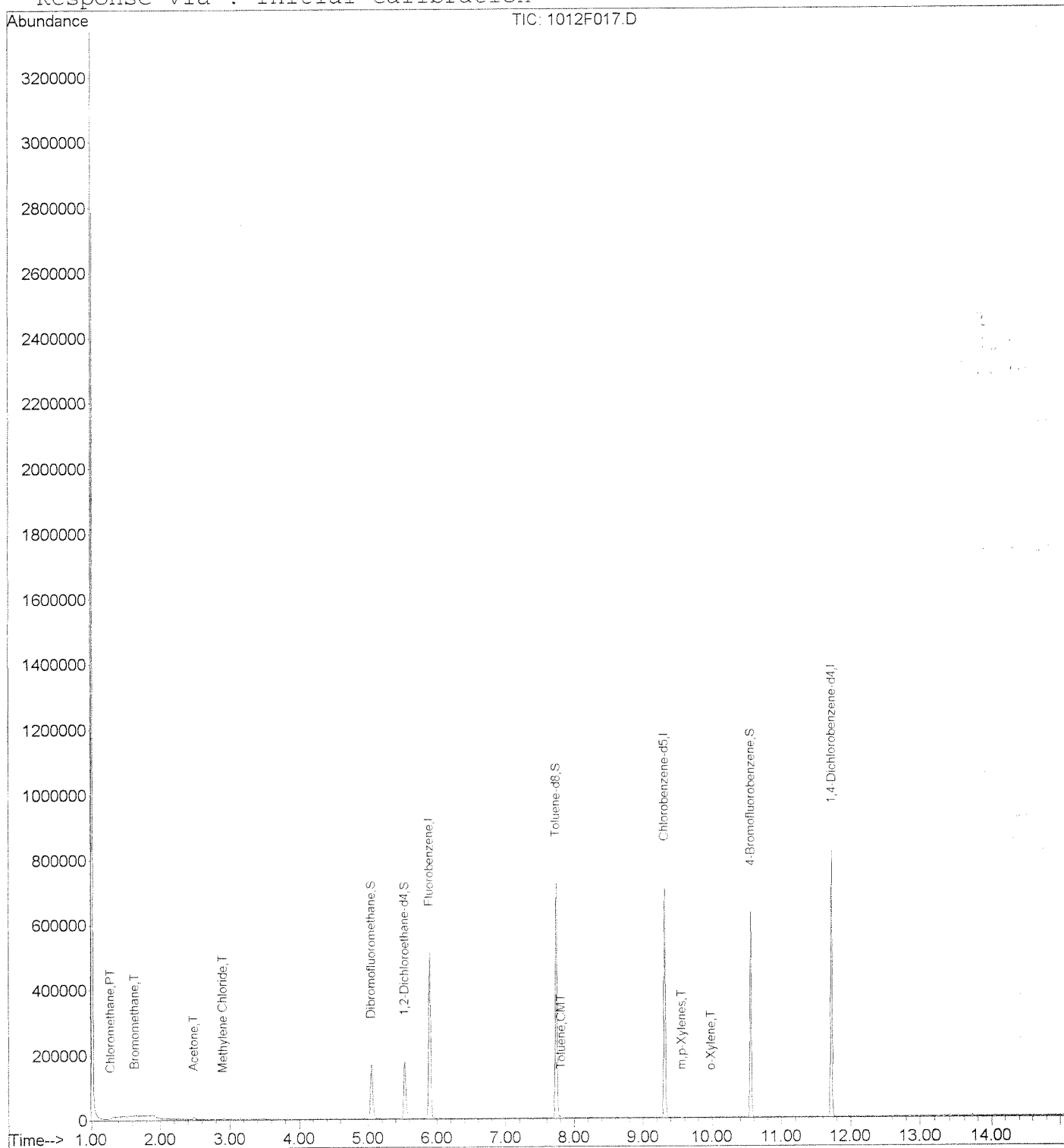


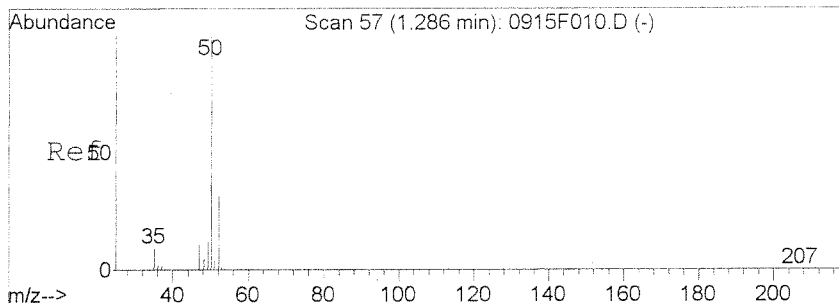
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 Sample : K10898-002  
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 MS Integration Params: rteint.p  
 Quant Time: Oct 13 8:42 2010

Vial: 8  
 Operator: KR  
 Inst : MS23age  
 Multiplr: 1.00

Quant Results File: 101110624.RE

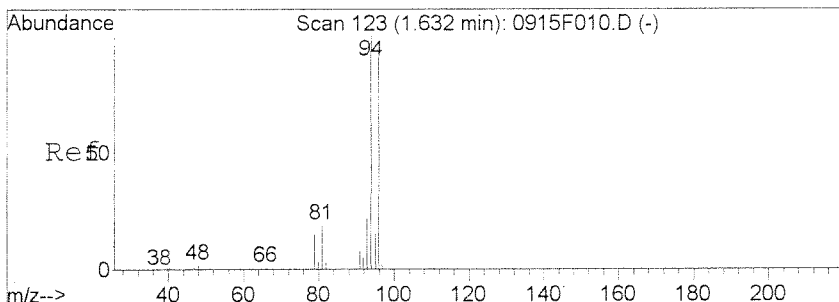
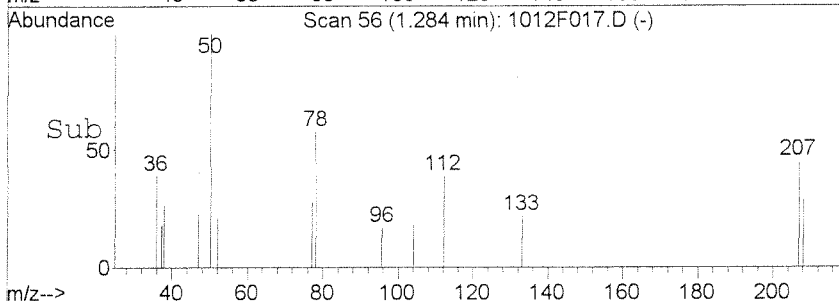
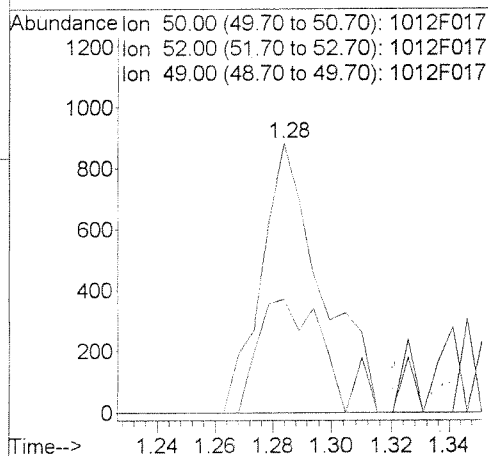
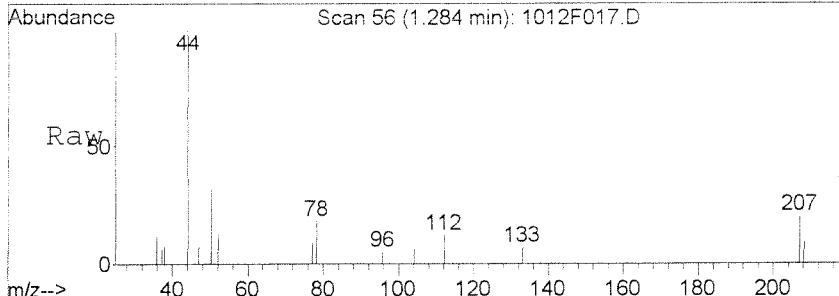
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 Last Update : Tue Oct 12 15:11:44 2010  
 Response via : Initial Calibration





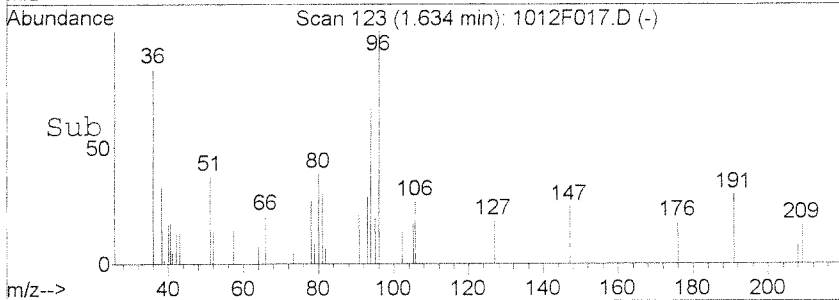
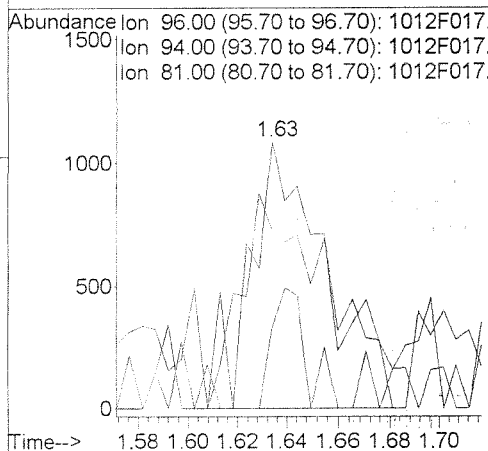
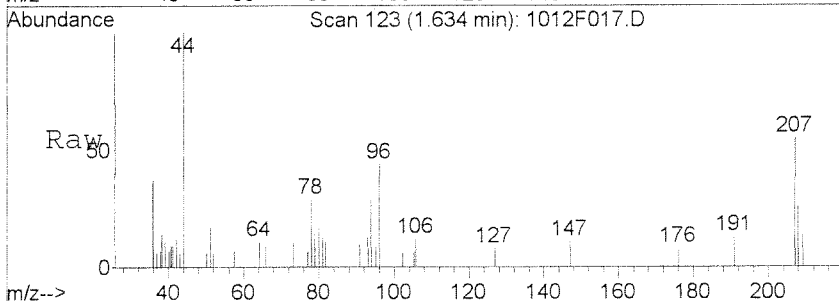
#3  
 Chloromethane  
 Concen: 0.09 PPB  
 RT: 1.28 min Scan# 56  
 Delta R.T. -0.00 min  
 Lab File: 1012F017.D  
 Acq: 12 Oct 2010 6:21 pm

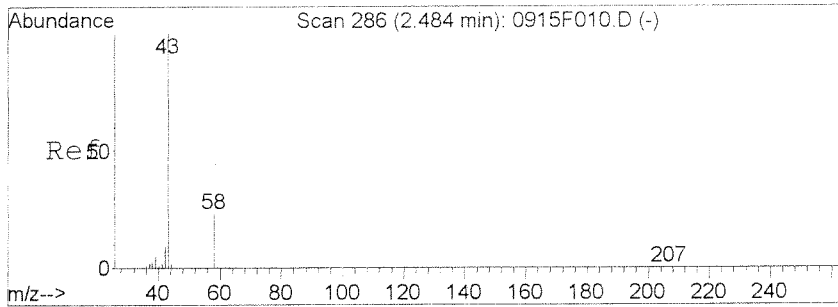
Tgt Ion	Resp	Lower	Upper
50	1259		
52	42.1	2.9	62.9
49	0.0	0.0	41.7



#5  
 Bromomethane  
 Concen: 0.30 PPB  
 RT: 1.63 min Scan# 123  
 Delta R.T. 0.00 min  
 Lab File: 1012F017.D  
 Acq: 12 Oct 2010 6:21 pm

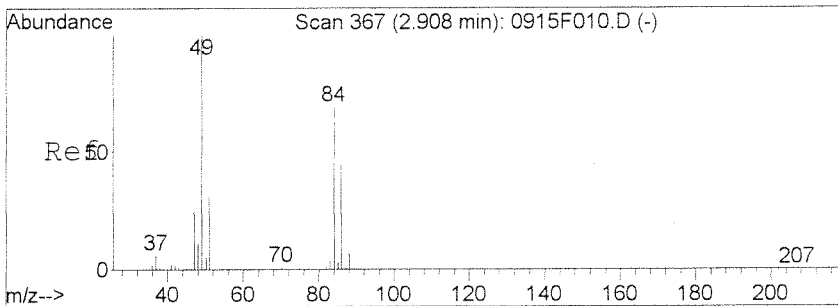
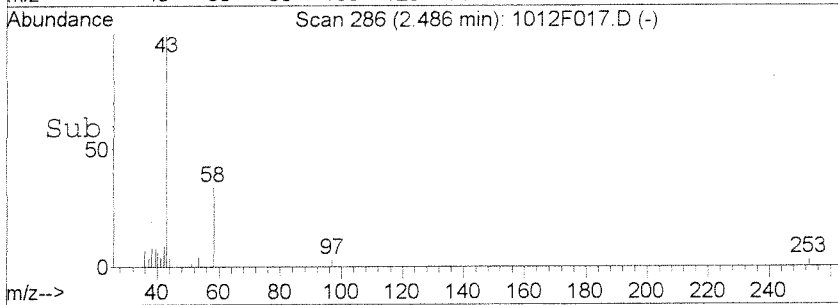
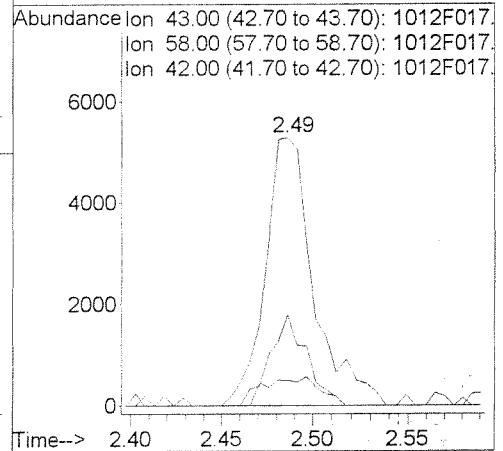
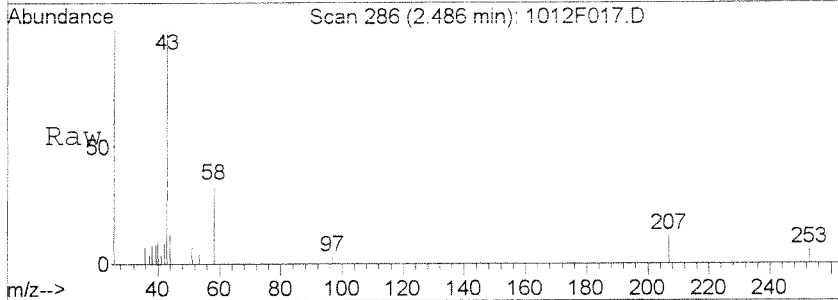
Tgt Ion	Resp	Lower	Upper
96	2296		
94	67.5	78.8	138.8#
81	15.8	0.0	44.5





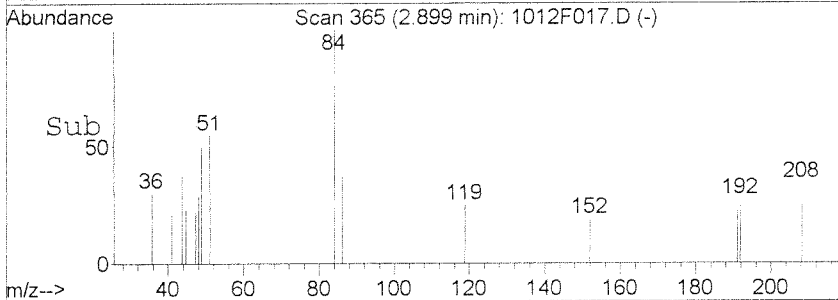
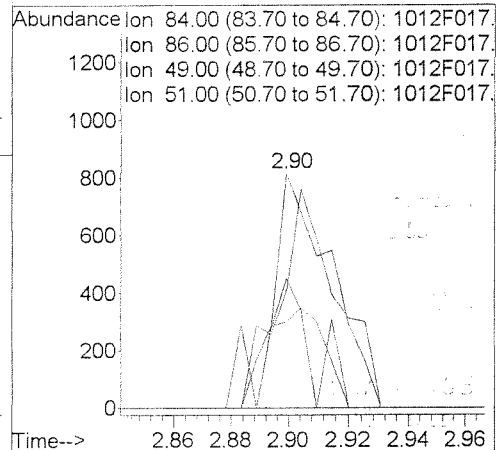
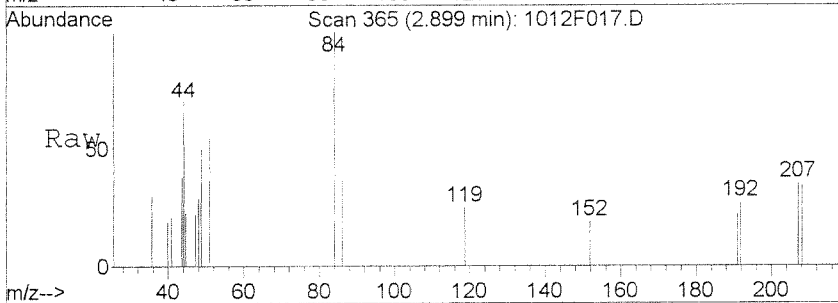
#11  
 Acetone  
 Concen: 4.67 PPB  
 RT: 2.49 min Scan# 286  
 Delta R.T. 0.00 min  
 Lab File: 1012F017.D  
 Acq: 12 Oct 2010 6:21 pm

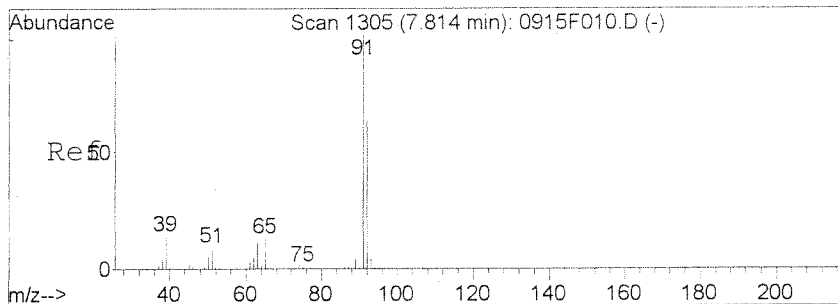
Tgt Ion	Resp	Lower	Upper
43	100		
58	33.8	0.0	57.1
42	9.4	0.0	37.4



#13  
 Methylene Chloride  
 Concen: 0.08 PPB  
 RT: 2.90 min Scan# 365  
 Delta R.T. -0.01 min  
 Lab File: 1012F017.D  
 Acq: 12 Oct 2010 6:21 pm

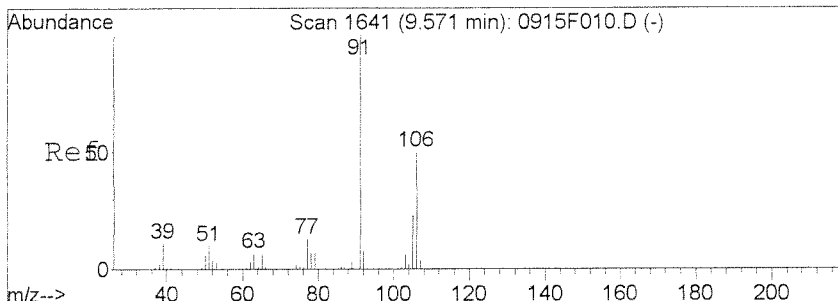
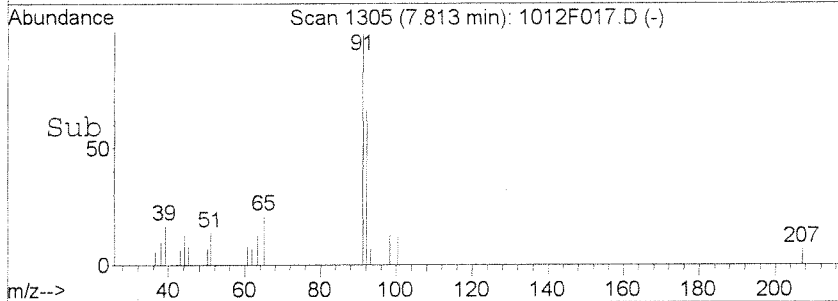
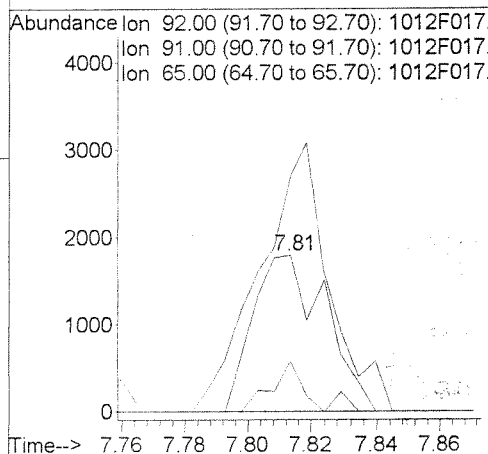
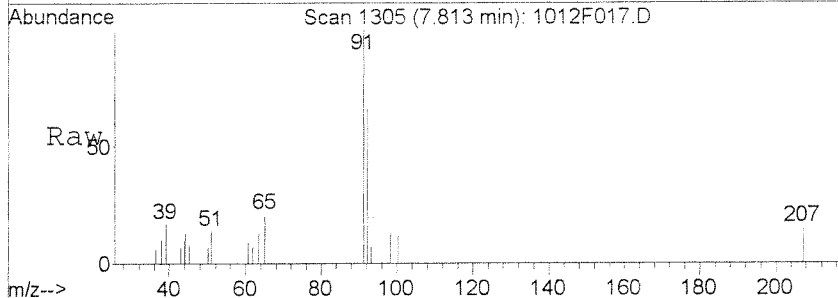
Tgt Ion	Resp	Lower	Upper
84	100		
86	36.6	34.3	94.3
49	49.6	100.9	160.9#
51	55.3	10.3	70.3





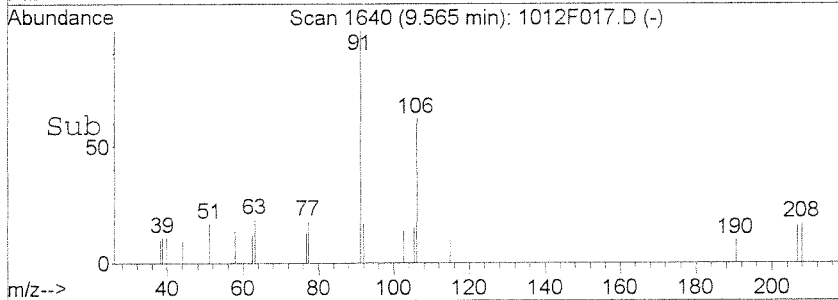
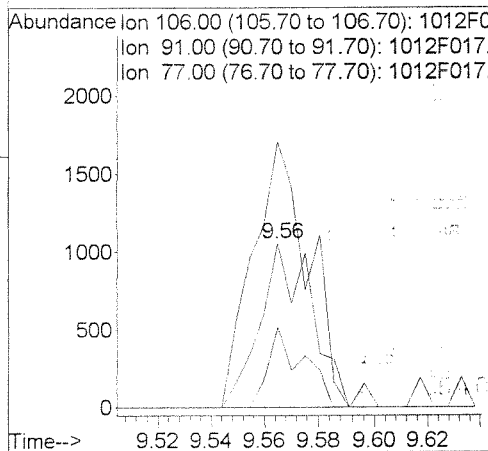
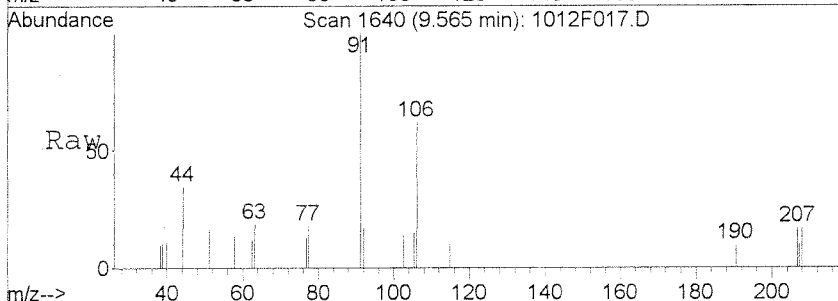
#34  
 Toluene  
 Concen: 0.08 PPB  
 RT: 7.81 min Scan# 1305  
 Delta R.T. -0.00 min  
 Lab File: 1012F017.D  
 Acq: 12 Oct 2010 6:21 pm

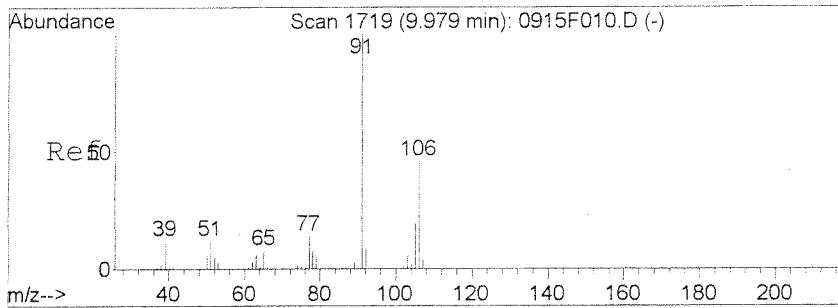
Tgt Ion	Resp	Lower	Upper
92	2847		
91	150.7	132.4	192.4
65	32.4	0.0	48.7



#43  
 m,p-Xylenes  
 Concen: 0.06 PPB  
 RT: 9.56 min Scan# 1640  
 Delta R.T. -0.01 min  
 Lab File: 1012F017.D  
 Acq: 12 Oct 2010 6:21 pm

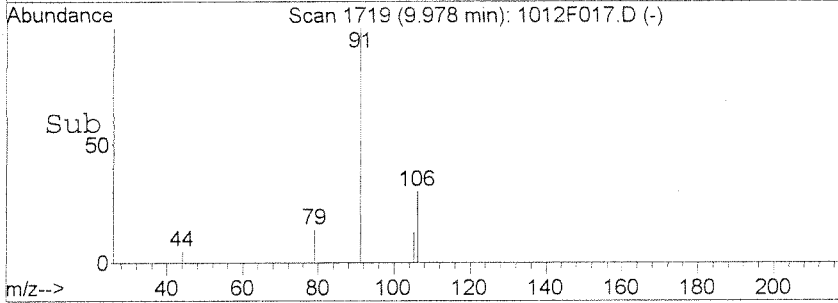
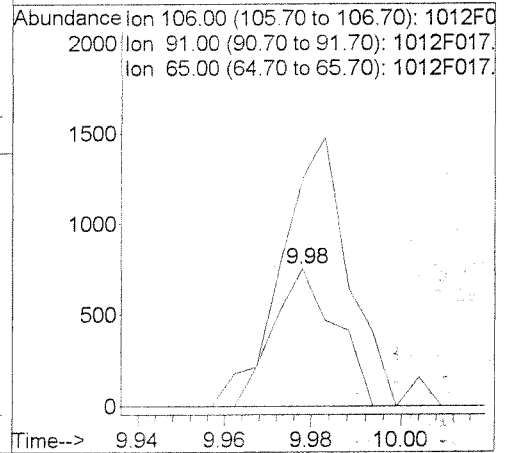
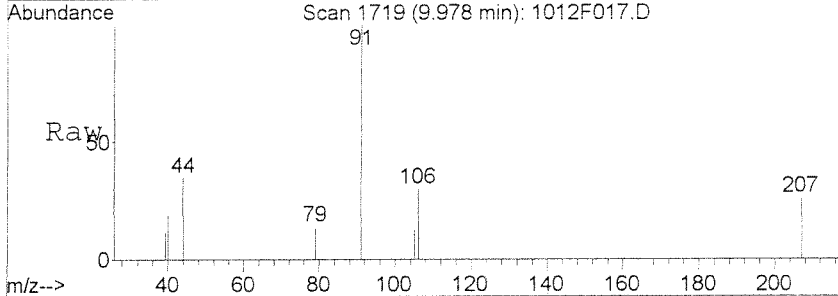
Tgt Ion	Resp	Lower	Upper
106	1449		
91	161.8	166.8	226.8#
77	49.0	0.0	56.0





#44  
 o-Xylene  
 Concen: 0.03 PPB  
 RT: 9.98 min Scan# 1719  
 Delta R.T. -0.00 min  
 Lab File: 1012F017.D  
 Acq: 12 Oct 2010 6:21 pm

Tgt Ion	Resp	Lower	Upper
106	100		
91	165.9	177.8	237.8#
65	0.0	0.0	44.5



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

**Volatile Organic Compounds**

**Sample Name:** Batch QCMS  
**Lab Code:** KWG1011029-3  
**Extraction Method:** METHOD  
**Analysis Method:** 624

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	10.3		5.0	0.23	1	10/12/10	10/12/10	KWG1011029	
Vinyl Chloride	9.27		5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Bromomethane	9.96		5.0	0.28	1	10/12/10	10/12/10	KWG1011029	
Chloroethane	9.52		5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Trichlorofluoromethane	8.34		5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethene	10.7		5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Methylene Chloride	10.4		5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
trans-1,2-Dichloroethene	10.2		5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethane	10.7		5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Chloroform	11.3		5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1,1-Trichloroethane (TCA)	9.94		5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Carbon Tetrachloride	9.43		5.0	0.047	1	10/12/10	10/12/10	KWG1011029	
Benzene	10.8		5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloroethane (EDC)	11.6		5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
Trichloroethene (TCE)	10.2		5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloropropane	11.0		5.0	0.17	1	10/12/10	10/12/10	KWG1011029	
Bromodichloromethane	11.2		5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
2-Chloroethyl Vinyl Ether	0.670	J	10	0.29	1	10/12/10	10/12/10	KWG1011029	
trans-1,3-Dichloropropene	10.2		5.0	0.10	1	10/12/10	10/12/10	KWG1011029	
Toluene	10.7		5.0	0.18	1	10/12/10	10/12/10	KWG1011029	
cis-1,3-Dichloropropene	11.3		5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,1,2-Trichloroethane	11.3		5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Tetrachloroethene (PCE)	9.62		5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Dibromochloromethane	10.7		5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Chlorobenzene	10.6		5.0	0.098	1	10/12/10	10/12/10	KWG1011029	
Ethylbenzene	10.3		5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Bromoform	10.5		5.0	0.37	1	10/12/10	10/12/10	KWG1011029	
1,1,2,2-Tetrachloroethane	11.3		5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,3-Dichlorobenzene	11.3		5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
1,4-Dichlorobenzene	11.3		5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichlorobenzene	11.4		5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
Acrolein†	117		50	3.3	1	10/12/10	10/12/10	KWG1011029	
Acrylonitrile†	11.4		10	0.61	1	10/12/10	10/12/10	KWG1011029	

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

**Volatile Organic Compounds**

**Sample Name:** Batch QCMS  
**Lab Code:** KWG1011029-3

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Toluene-d8	90	84-115	10/12/10	Acceptable
4-Bromofluorobenzene	87	83-113	10/12/10	Acceptable
Dibromofluoromethane	87	71-115	10/12/10	Acceptable

† Analyte Comments

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

**Comments:** \_\_\_\_\_

## Exception Report

**Data File:** J:\MS23\DATA\101210\1012F013.D  
**Lab ID:** KWG1011029-3 -- K1010898-002MS  
**RunType:** MS  
**Matrix:** WATER

**Date Acquired:** 10/12/2010 15:57  
**Date Quantitated:** 10/13/2010 14:28  
**Batch ID:** KWG1011024  
**Analysis Method:** 624  
**MethodJoinID:** MJ158

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 20 10/13/10  
 Secondary Review: HB 10-14-10



# Quantitation Report

Bottle ID:	Tier:	Matrix:	WATER
Prod Code: 624 VOC_FP	Collect Date:	Receive Date:	10/13/2010

Analysis Lot: KWG1011024	Prep Lot: KWG1011029	Report Group:
Analysis Method: 624	Prep Method: METHOD	
Prep Ref: 966867	Prep Date: 10/12/2010	

Quant Method: J:\MS23\METHODS\101110624.M	Calibration ID: CAL9945
Title:	
Tune Ref: J:\MS23\DATA\101210\1012F010.D	Method ID: MJ158
MB Ref: J:\MS23\DATA\101210\1012F016.D	Quant based on Method

Data File: J:\MS23\DATA\101210\1012F013.D	Instrument: MS23
Acqu Date: 10/12/2010 15:57	Quant Date: 10/13/2010 14:28
Run Type: MS	Vial: 5
Lab ID: KWG1011029-3 -- K1010898-002MS	Dilution: 1.0
	Soln Conc. Units: PPB

## Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	5.89	0.00	96	478550	10.00	OK
2	Chlorobenzene-d5	9.31	0.00	82	200801	10.00	OK
3	1,4-Dichlorobenzene-d4	11.73	0.01	152	218865	10.00	OK

## Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Dibromofluoromethane	5.05	0.00	0.00	113	119591	8.65	87	71-115	OK
1	1,2-Dichloroethane-d4	5.53	0.00	0.00	65	149119	8.19	82	69-116	OK
1	Toluene-d8	7.74	0.00	0.00	98	464928	9.01	90	84-115	OK
2	4-Bromofluorobenzene	10.55	0.00	0.00	95	170669	8.68	87	83-113	OK

## Target Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.13	-0.01	0.00	85	166040	7.89	7.89		
1	Chloromethane	1.28		0.00	50	156054	10.33	10.3		
1	Vinyl Chloride	1.36		0.00	62	148400	9.27	9.27		
1	Bromomethane	1.63		0.00	96	77930	9.96	9.96		
1	Chloroethane	1.71		0.00	49	26116	9.52	9.52		
1	Trichlorofluoromethane	1.89		0.00	101	212594	8.34	8.34		
1	Acrolein	2.34		0.00	56	139387	116.66	117		
1	Trichlorotrifluoroethane	2.33		0.00	151	98570	8.23	8.23		
1	1,1-Dichloroethene	2.37		0.00	96	117077	10.73	10.7		
1	Acetone	2.48		0.00	43	130634	61.49	61.5		
1	Carbon Disulfide	2.56		0.00	76	614303	17.43	17.4		
1	Methylene Chloride	2.91	0.01	0.00	84	143774	10.43	10.4		
1	Acrylonitrile	3.25	0.01	0.00	53	27194	11.41	11.4		
1	trans-1,2-Dichloroethene	3.14	0.01	0.00	96	140883	10.20	10.2		

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

<b>Data File:</b>	J:\MS23\DATA\101210\1012F013.D	<b>Instrument:</b>	MS23
<b>Acqu Date:</b>	10/12/2010 15:57	<b>Quant Date:</b>	10/13/2010 14:28
<b>Run Type:</b>	MS	<b>Vial:</b>	5
<b>Lab ID:</b>	KWG1011029-3 -- K1010898-002MS	<b>Dilution:</b>	1.0
		<b>Soln Conc. Units:</b>	PPB

**Target Compounds** Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	1,1-Dichloroethane	3.66		0.00	63	263281	10.72	10.7		
1	Vinyl Acetate	3.72		0.00	86	37747	20.47	20.5		
1	cis-1,2-Dichloroethene	4.39		0.00	96	161369	10.91	10.9		
1	2-Butanone (MEK)	4.45		0.00	72	40669	57.99	58.0		
1	Chloroform	4.82		0.00	83	285326	11.25	11.3		
1	1,1,1-Trichloroethane (TCA)	4.99	0.01	0.00	97	226492	9.94	9.94		
1	Carbon Tetrachloride	5.15		0.00	117	168720	9.43	9.43		
1	Benzene	5.49		0.00	78	554122	10.79	10.8		
1	1,2-Dichloroethane (EDC)	5.63		0.00	62	235543	11.58	11.6		
1	Trichloroethene (TCE)	6.33		0.00	95	148614	10.22	10.2		
1	1,2-Dichloropropane	6.66		0.00	63	133095	11.00	11.0		
1	Bromodichloromethane	6.99		0.00	83	184256	11.20	11.2		
1	2-Chloroethyl Vinyl Ether	7.39	0.01	0.00	63	3699	0.6700	0.670	J	
1	cis-1,3-Dichloropropene	7.51	-0.01	0.00	75	212875	11.29	11.3		
1	4-Methyl-2-pentanone (MIBK)	8.62		0.00	58	107597	52.80	52.8		
1	Toluene	7.81		0.00	92	370065	10.73	10.7		
2	trans-1,3-Dichloropropene	8.17		0.00	75	169277	10.24	10.2		
2	1,1,2-Trichloroethane	8.35	-0.01	0.00	83	86628	11.26	11.3		
2	Tetrachloroethene (PCE)	8.36	-0.01	0.00	164	137345	9.62	9.62		
2	2-Hexanone	8.62		0.00	43	218843	51.26	51.3		
2	Dibromochloromethane	8.73		0.00	129	112991	10.68	10.7		
2	Chlorobenzene	9.34		0.00	112	426856	10.57	10.6		
2	Ethylbenzene	9.44		0.00	106	214523	10.30	10.3		
2	m,p-Xylenes	9.57	0.01	0.00	106	540774	20.84	20.8		
2	o-Xylene	9.98		0.00	106	261007	10.54	10.5		
2	Styrene	10.01		0.00	103	194482m	10.56	10.6		
2	Bromoform	10.22	0.01	0.00	173	58960	10.47	10.5		
3	1,1,2,2-Tetrachloroethane	10.75		0.00	83	92147	11.34	11.3		
3	1,3-Dichlorobenzene	11.65		0.00	146	361288	11.29	11.3		
3	1,4-Dichlorobenzene	11.75		0.00	146	369267	11.34	11.3		
3	1,2-Dichlorobenzene	12.12		0.00	146	328003	11.36	11.4		
	Isopropyl Acetate				0	0		10	U	NR
	Ethyl Acetate				0	0		10	U	NR
	Bis(chloromethyl) Ether				0	0		10	U	NR
	Amyl Acetate				0	0		10	U	NR

**Prep Amount:** 10 ml      **Dilution:** 1.0  
**Prep Final Vol:** 10 ml      **Unit Factor:** 1

**Final Concentration** = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL  
J: Analyte detected above MDL, but below MRL  
B: Hit above MRL, also found in Method Blank  
E: Analyte concentration above high point of ICAL  
N: Presumptive evidence of compound  
D: Result from dilution  
m: Manual integration performed  
d: Compound manually deleted  
NR: Analyte not reported from this analysis  
\*: Result fails acceptance criteria  
#: Acceptance criteria not applicable  
?: Insufficient information to determine acceptance  
e: Result >= MRL, but MRL less than low point of ICAL  
c: check for co-elution

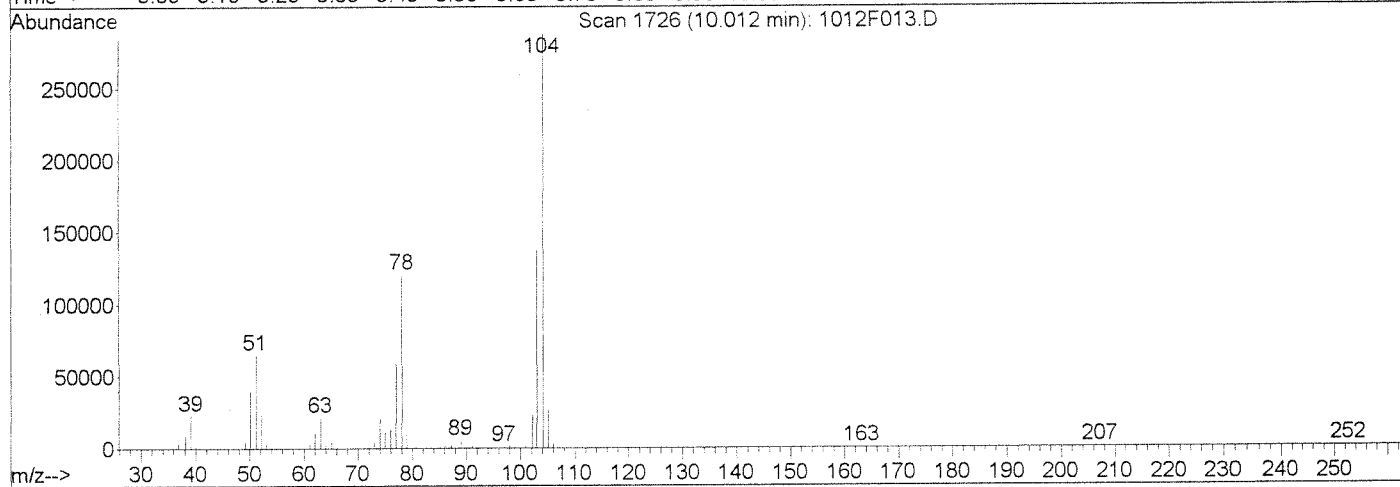
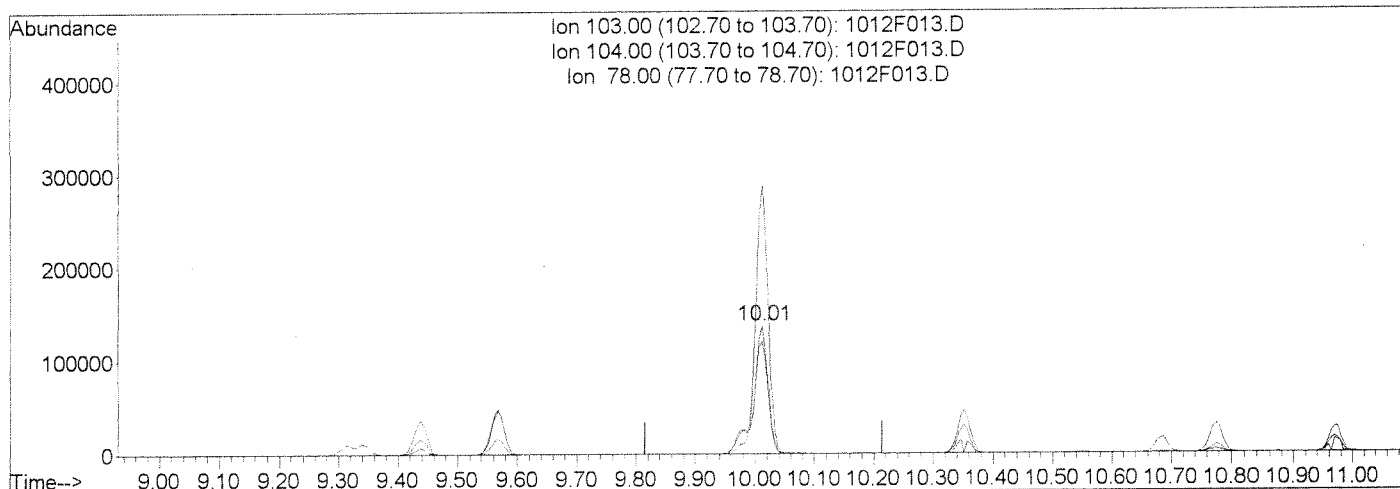
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101210\1012F013.D  
 Acq On : 12 Oct 2010 3:57 pm  
 Sample : K10898-002MS  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 13 14:27 2010

Vial: 5  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 15:11:44 2010  
 Response via : Multiple Level Calibration



TIC: 1012F013.D

(45) Styrene (T)

10.01min 12.75PPB

response 234911

Ion	Exp%	Act%
103.00	100	100
104.00	210.20	210.11
78.00	91.20	87.79
0.00	0.00	0.00

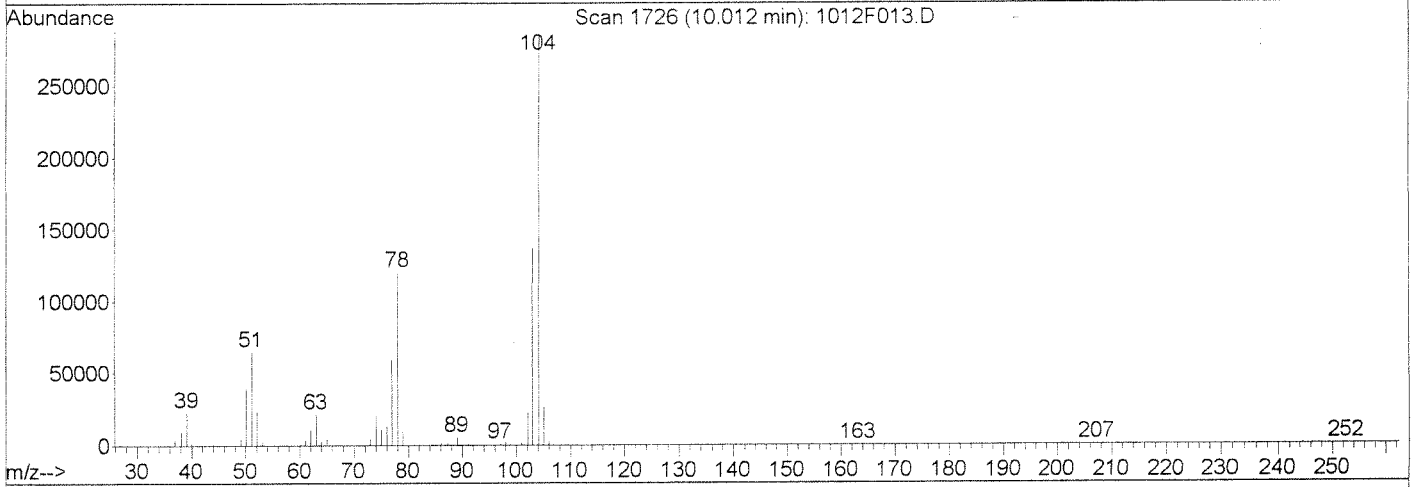
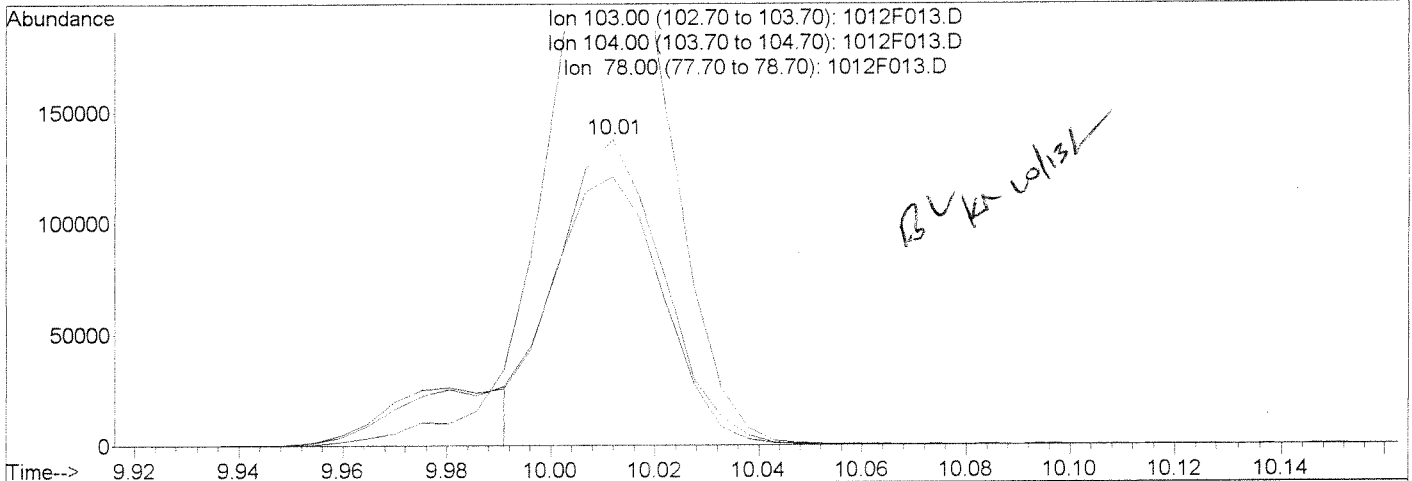
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101210\1012F013.D  
Acq On : 12 Oct 2010 3:57 pm  
Sample : K10898-002MS  
Misc :  
MS Integration Params: rteint.p  
Quant Time: Oct 13 14:28 2010

Vial: 5  
Operator: KR  
Inst : MS23  
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
Title : VOA MS23 EPA Method 624  
Last Update : Tue Oct 12 15:11:44 2010  
Response via : Multiple Level Calibration



TIC: 1012F013.D

(45) Styrene (T)		
10.01min	10.56PPB m	
response	194482	
Ion	Exp%	Act%
103.00	100	100
104.00	210.20	210.11
78.00	91.20	87.79
0.00	0.00	0.00

HB 10.14.10

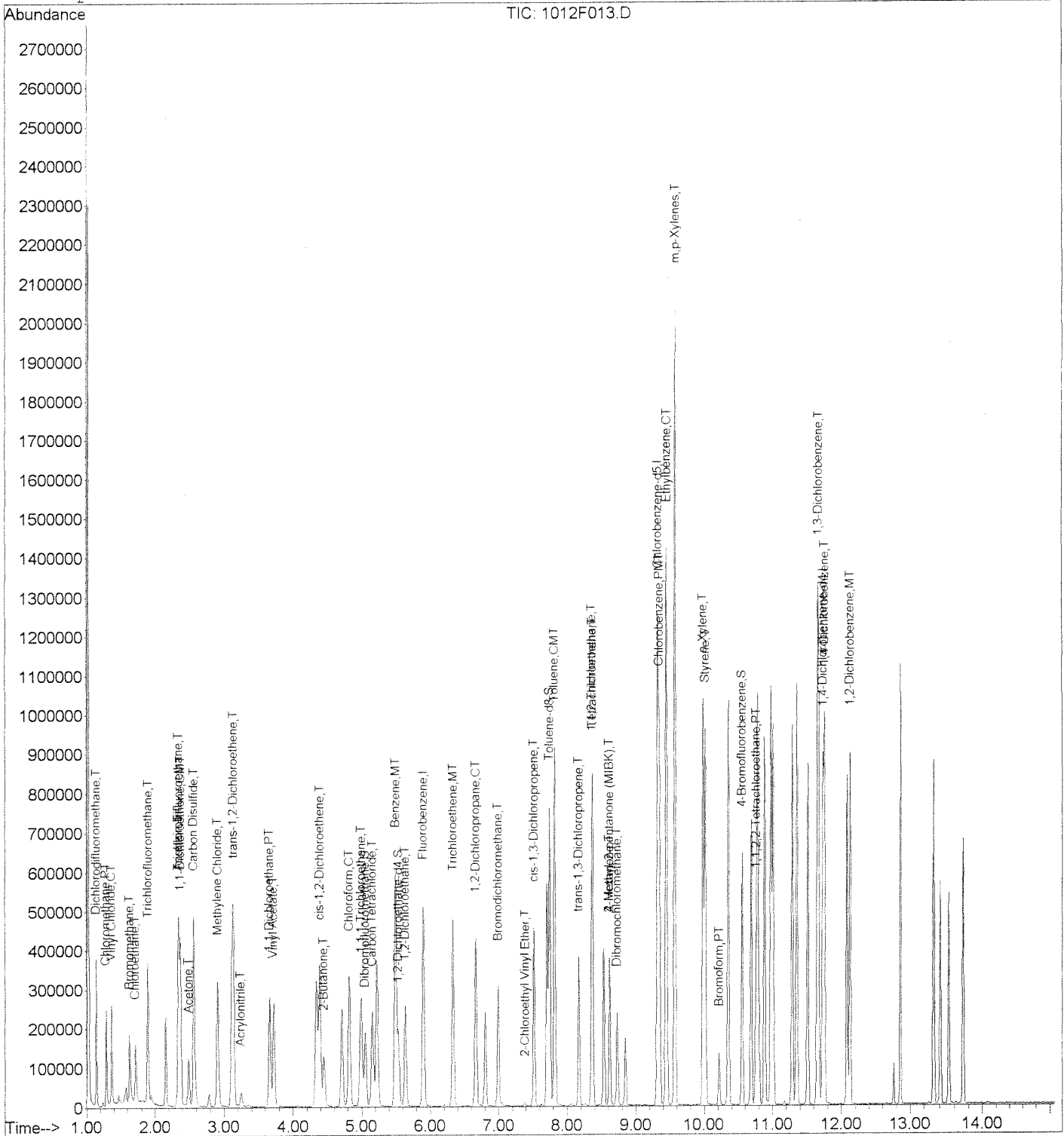
Quantitation Report (QT Reviewed)

Data File : J:\MS23\DATA\101210\1012F013.D  
 Acq On : 12 Oct 2010 3:57 pm  
 Sample : K10898-002MS  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 13 14:28 2010

Vial: 5  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RE

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 15:11:44 2010  
 Response via : Initial Calibration



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

**Volatile Organic Compounds**

**Sample Name:** Batch QCDMS  
**Lab Code:** KWG1011029-4

**Units:** ug/L  
**Basis:** NA

**Extraction Method:** METHOD  
**Analysis Method:** 624

**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	9.69		5.0	0.23	1	10/12/10	10/12/10	KWG1011029	
Vinyl Chloride	8.68		5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Bromomethane	9.18		5.0	0.28	1	10/12/10	10/12/10	KWG1011029	
Chloroethane	8.95		5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Trichlorofluoromethane	7.51		5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethene	9.35		5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Methylene Chloride	9.82		5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
trans-1,2-Dichloroethene	9.61		5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethane	10.1		5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Chloroform	10.5		5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1,1-Trichloroethane (TCA)	9.30		5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Carbon Tetrachloride	9.02		5.0	0.047	1	10/12/10	10/12/10	KWG1011029	
Benzene	10.3		5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloroethane (EDC)	11.1		5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
Trichloroethene (TCE)	9.33		5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloropropane	10.4		5.0	0.17	1	10/12/10	10/12/10	KWG1011029	
Bromodichloromethane	10.8		5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
2-Chloroethyl Vinyl Ether	0.210	J	10	0.29	1	10/12/10	10/12/10	KWG1011029	
trans-1,3-Dichloropropene	10.2		5.0	0.10	1	10/12/10	10/12/10	KWG1011029	
Toluene	9.91		5.0	0.18	1	10/12/10	10/12/10	KWG1011029	
cis-1,3-Dichloropropene	10.5		5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,1,2-Trichloroethane	11.2		5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Tetrachloroethene (PCE)	9.26		5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Dibromochloromethane	10.5		5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Chlorobenzene	10.1		5.0	0.098	1	10/12/10	10/12/10	KWG1011029	
Ethylbenzene	9.86		5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Bromoform	10.3		5.0	0.37	1	10/12/10	10/12/10	KWG1011029	
1,1,2,2-Tetrachloroethane	11.0		5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,3-Dichlorobenzene	10.7		5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
1,4-Dichlorobenzene	10.7		5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichlorobenzene	10.9		5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
Acrolein†	113		50	3.3	1	10/12/10	10/12/10	KWG1011029	
Acrylonitrile†	11.3		10	0.61	1	10/12/10	10/12/10	KWG1011029	

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

**Volatile Organic Compounds**

**Sample Name:** Batch QCDMS  
**Lab Code:** KWG1011029-4

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Toluene-d8	93	84-115	10/12/10	Acceptable
4-Bromofluorobenzene	88	83-113	10/12/10	Acceptable
Dibromofluoromethane	85	71-115	10/12/10	Acceptable

† **Analyte Comments**

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

**Comments:** \_\_\_\_\_

## Exception Report

**Data File:** J:\MS23\DATA\101210\1012F014.D  
**Lab ID:** KWG1011029-4 -- K1010898-002DMS  
**RunType:** DMS  
**Matrix:** WATER

**Date Acquired:** 10/12/2010 16:26  
**Date Quantitated:** 10/13/2010 08:29  
**Batch ID:** KWG1011024  
**Analysis Method:** 624  
**MethodJoinID:** MJ158

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: Ka 10/13/10  
 Secondary Review: HTB 10-14-10



# Quantitation Report

Bottle ID:	Tier:	Matrix:	WATER
Prod Code: 624 VOC_FP	Collect Date:	Receive Date:	10/13/2010

Analysis Lot: KWG1011024	Prep Lot: KWG1011029	Report Group:
Analysis Method: 624	Prep Method: METHOD	
Prep Ref: 966868	Prep Date: 10/12/2010	

Quant Method: J:\MS23\METHODS\101110624.M	Calibration ID: CAL9945
Title:	
Tune Ref: J:\MS23\DATA\101210\1012F010.D	Method ID: MJ158
MB Ref: J:\MS23\DATA\101210\1012F016.D	Quant based on Method

Data File: J:\MS23\DATA\101210\1012F014.D	Instrument: MS23
Acqu Date: 10/12/2010 16:26	Quant Date: 10/13/2010 08:29
Run Type: DMS	Vial: 5
Lab ID: KWG1011029-4 -- K1010898-002DMS	Dilution: 1.0
	Soln Conc. Units: PPB

## Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	5.90	0.01	96	484068	10.00	OK
2	Chlorobenzene-d5	9.32	0.01	82	199882	10.00	OK
3	1,4-Dichlorobenzene-d4	11.73	0.01	152	220910	10.00	OK

## Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Dibromofluoromethane	5.05	0.00	0.00	113	118499	8.47	85	71-115	OK
1	1,2-Dichloroethane-d4	5.54	0.01	0.00	65	153525	8.34	83	69-116	OK
1	Toluene-d8	7.74	0.00	0.00	98	483365	9.26	93	84-115	OK
2	4-Bromofluorobenzene	10.55	0.00	0.00	95	171720	8.78	88	83-113	OK

## Target Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.13	-0.01	0.00	85	156919	7.37	7.37		
1	Chloromethane	1.28		0.00	50	148087	9.69	9.69		
1	Vinyl Chloride	1.36		0.00	62	140602	8.68	8.68		
1	Bromomethane	1.63		0.00	96	72698	9.18	9.18		
1	Chloroethane	1.71		0.00	49	24835	8.95	8.95		
1	Trichlorofluoromethane	1.89		0.00	101	193697	7.51	7.51		
1	Acrolein	2.34		0.00	56	137078	113.42	113		
1	Trichlorotrifluoroethane	2.34	0.01	0.00	151	91321	7.54	7.54		
1	1,1-Dichloroethene	2.37		0.00	96	103192	9.35	9.35		
1	Acetone	2.48		0.00	43	132487	61.65	61.7		
1	Carbon Disulfide	2.56		0.00	76	574850	16.13	16.1		
1	Methylene Chloride	2.90		0.00	84	136985	9.82	9.82		
1	Acrylonitrile	3.25	0.01	0.00	53	27318	11.33	11.3		
1	trans-1,2-Dichloroethene	3.14	0.01	0.00	96	134192	9.61	9.61		

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ? : Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

Data File: J:\MS23\DATA\101210\1012F014.D  
 Acqu Date: 10/12/2010 16:26  
 Run Type: DMS  
 Lab ID: KWG1011029-4 -- K1010898-002DMS

Quant Date: 10/13/2010 08:29

Instrument: MS23  
 Vial: 5  
 Dilution: 1.0  
 Soln Conc. Units: PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	1,1-Dichloroethane	3.66		0.00	63	251130	10.11	10.1		
1	Vinyl Acetate	3.72		0.00	86	37815	20.27	20.3		
1	cis-1,2-Dichloroethene	4.39		0.00	96	152340	10.18	10.2		
1	2-Butanone (MEK)	4.45		0.00	72	40046	56.45	56.5		
1	Chloroform	4.82		0.00	83	268020	10.45	10.5		
1	1,1,1-Trichloroethane (TCA)	4.99	0.01	0.00	97	214388	9.30	9.30		
1	Carbon Tetrachloride	5.15		0.00	117	163211	9.02	9.02		
1	Benzene	5.49		0.00	78	534101	10.28	10.3		
1	1,2-Dichloroethane (EDC)	5.64	0.01	0.00	62	228473	11.11	11.1		
1	Trichloroethene (TCE)	6.33		0.00	95	137297	9.33	9.33		
1	1,2-Dichloropropane	6.66		0.00	63	127576	10.43	10.4		
1	Bromodichloromethane	6.99		0.00	83	179144	10.76	10.8		
1	2-Chloroethyl Vinyl Ether	7.51	0.13	0.02	63	1184	0.2100	0.210	J	
1	cis-1,3-Dichloropropene	7.51	-0.01	0.00	75	200781	10.53	10.5		
1	4-Methyl-2-pentanone (MIBK)	8.62		0.00	58	108148	52.47	52.5		
1	Toluene	7.82	0.01	0.00	92	345676	9.91	9.91		
2	trans-1,3-Dichloropropene	8.17		0.00	75	167745	10.19	10.2		
2	1,1,2-Trichloroethane	8.35	-0.01	0.00	83	85401	11.15	11.2		
2	Tetrachloroethene (PCE)	8.37		0.00	164	131499	9.26	9.26		
2	2-Hexanone	8.62		0.00	43	221096	52.03	52.0		
2	Dibromochloromethane	8.73		0.00	129	110081	10.45	10.5		
2	Chlorobenzene	9.34		0.00	112	406746	10.12	10.1		
2	Ethylbenzene	9.44		0.00	106	204301	9.86	9.86		
2	m,p-Xylenes	9.57	0.01	0.00	106	507139	19.63	19.6		
2	o-Xylene	9.98		0.00	106	244885	9.94	9.94		
2	Styrene	10.01		0.00	103	194025m	10.58	10.6		
2	Bromoform	10.21		0.00	173	57783	10.31	10.3		
3	1,1,2,2-Tetrachloroethane	10.75		0.00	83	90443	11.03	11.0		
3	1,3-Dichlorobenzene	11.65		0.00	146	344471	10.67	10.7		
3	1,4-Dichlorobenzene	11.75		0.00	146	351579	10.70	10.7		
3	1,2-Dichlorobenzene	12.12		0.00	146	318042	10.92	10.9		
	Isopropyl Acetate				0	0		10	U	NR
	Ethyl Acetate				0	0		10	U	NR
	Bis(chloromethyl) Ether				0	0		10	U	NR
	Amyl Acetate				0	0		10	U	NR

Prep Amount: 10 ml Dilution: 1.0  
 Prep Final Vol: 10 ml Unit Factor: 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

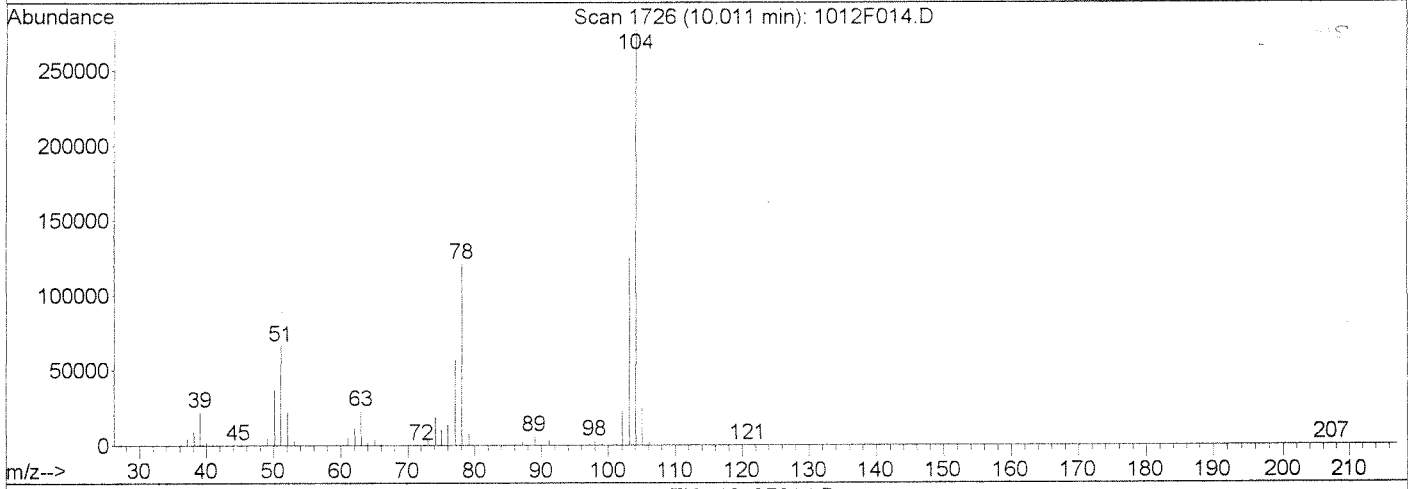
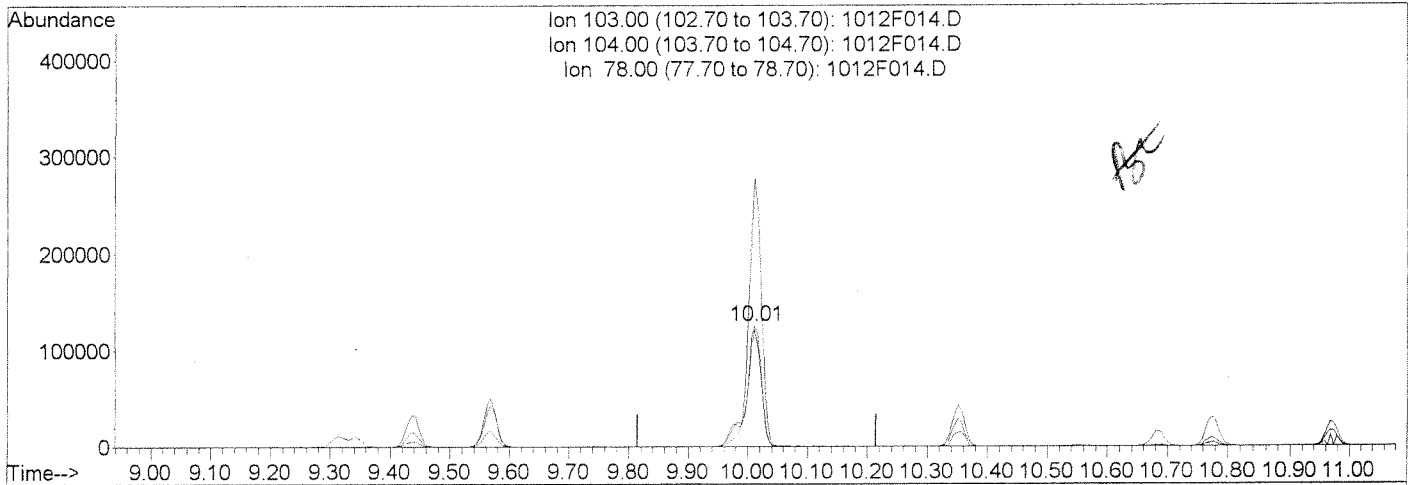
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101210\1012F014.D  
 Acq On : 12 Oct 2010 4:26 pm  
 Sample : K10898-002DMS  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 13 8:29 2010

Vial: 5  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 15:11:44 2010  
 Response via : Multiple Level Calibration



(45) Styrene (T)

10.01min 12.02PPB

response 220317

Ion	Exp%	Act%
103.00	100	100
104.00	210.20	222.03
78.00	91.20	96.68
0.00	0.00	0.00

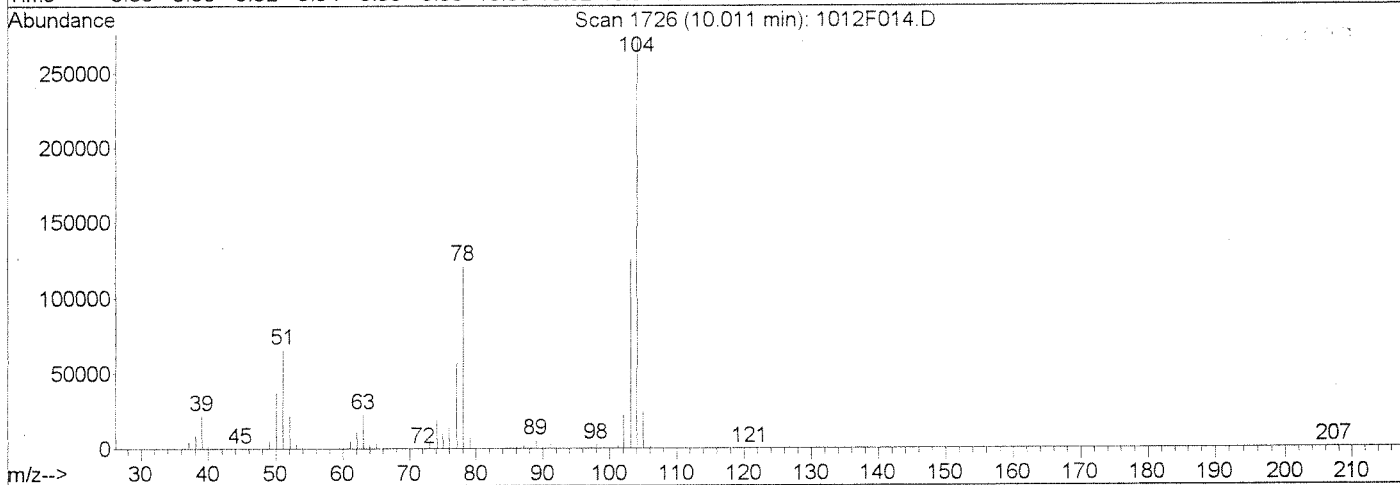
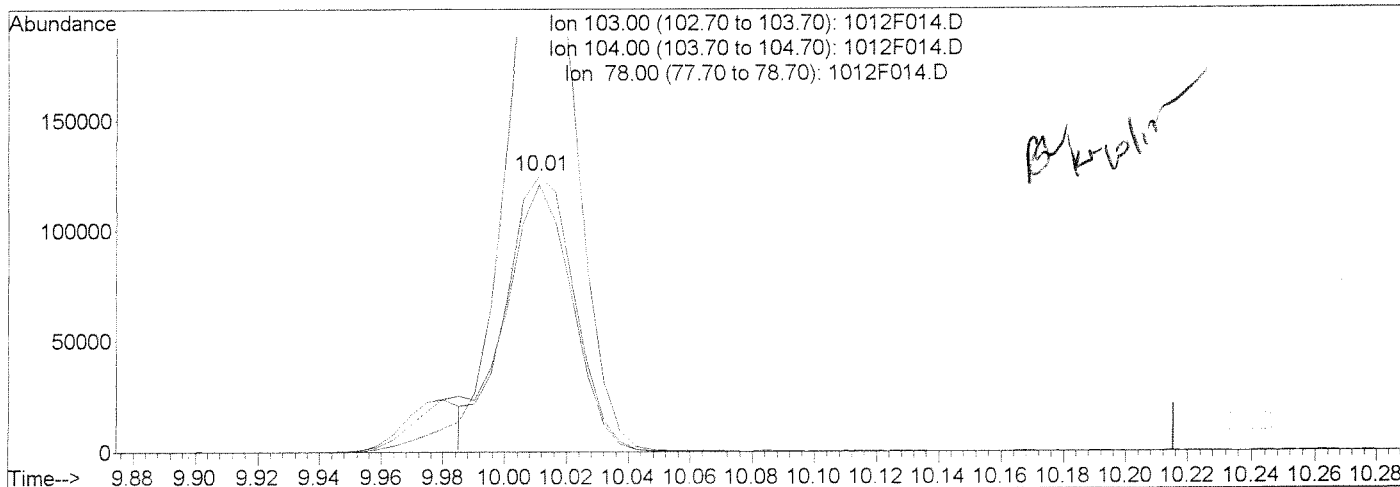
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101210\1012F014.D  
 Acq On : 12 Oct 2010 4:26 pm  
 Sample : K10898-002DMS  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 13 8:29 2010

Vial: 5  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 15:11:44 2010  
 Response via : Multiple Level Calibration



TIC: 1012F014.D

(45) Styrene (T)		
10.01min	10.58PPB m	
response	194025	
Ion	Exp%	Act%
103.00	100	100
104.00	210.20	222.03
78.00	91.20	96.68
0.00	0.00	0.00

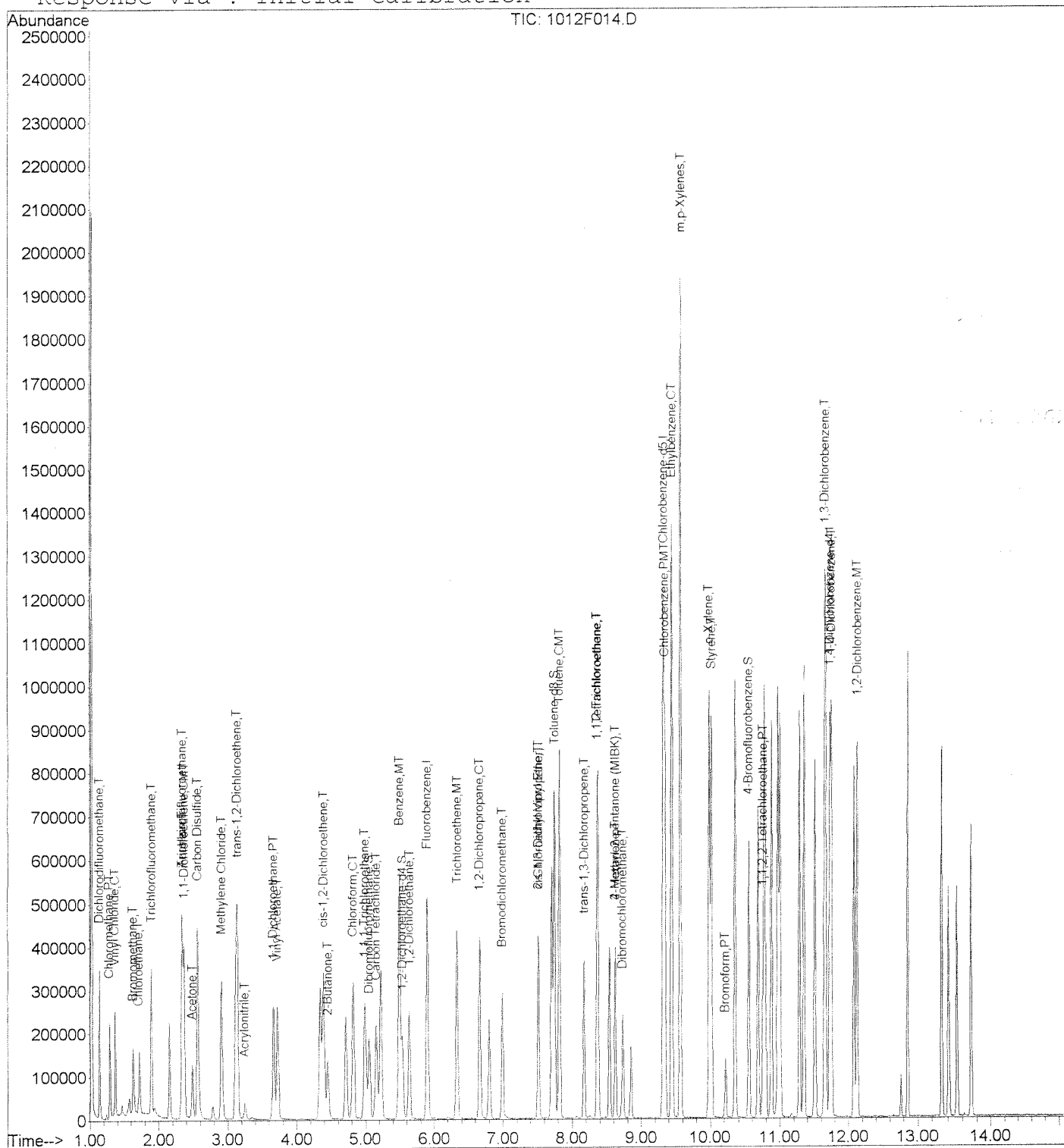
HB 10-14-10

Data File : J:\MS23\DATA\101210\1012F014.D  
 Acq On : 12 Oct 2010 4:26 pm  
 Sample : K10898-002DMS  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 13 8:29 2010

Vial: 5  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RE

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 15:11:44 2010  
 Response via : Initial Calibration



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

## Volatile Organic Compounds

**Sample Name:** Lab Control Sample  
**Lab Code:** KWG1011029-1  
**Extraction Method:** METHOD  
**Analysis Method:** 624

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloromethane	11.4		5.0	0.23	1	10/12/10	10/12/10	KWG1011029	
Vinyl Chloride	11.3		5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Bromomethane	11.0		5.0	0.28	1	10/12/10	10/12/10	KWG1011029	
Chloroethane	11.0		5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Trichlorofluoromethane	10.4		5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethene	12.4		5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Methylene Chloride	10.6		5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
trans-1,2-Dichloroethene	11.7		5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,1-Dichloroethane	11.4		5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Chloroform	11.5		5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,1,1-Trichloroethane (TCA)	11.6		5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Carbon Tetrachloride	11.5		5.0	0.047	1	10/12/10	10/12/10	KWG1011029	
Benzene	11.7		5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloroethane (EDC)	11.5		5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
Trichloroethene (TCE)	11.2		5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichloropropane	11.4		5.0	0.17	1	10/12/10	10/12/10	KWG1011029	
Bromodichloromethane	11.2		5.0	0.12	1	10/12/10	10/12/10	KWG1011029	
2-Chloroethyl Vinyl Ether	9.45	J	10	0.29	1	10/12/10	10/12/10	KWG1011029	
trans-1,3-Dichloropropene	10.4		5.0	0.10	1	10/12/10	10/12/10	KWG1011029	
Toluene	11.5		5.0	0.18	1	10/12/10	10/12/10	KWG1011029	
cis-1,3-Dichloropropene	11.5		5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
1,1,2-Trichloroethane	11.1		5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
Tetrachloroethene (PCE)	11.3		5.0	0.14	1	10/12/10	10/12/10	KWG1011029	
Dibromochloromethane	10.6		5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
Chlorobenzene	11.0		5.0	0.098	1	10/12/10	10/12/10	KWG1011029	
Ethylbenzene	11.1		5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
Bromoform	10.1		5.0	0.37	1	10/12/10	10/12/10	KWG1011029	
1,1,2,2-Tetrachloroethane	11.6		5.0	0.11	1	10/12/10	10/12/10	KWG1011029	
1,3-Dichlorobenzene	11.4		5.0	0.16	1	10/12/10	10/12/10	KWG1011029	
1,4-Dichlorobenzene	11.3		5.0	0.15	1	10/12/10	10/12/10	KWG1011029	
1,2-Dichlorobenzene	11.2		5.0	0.13	1	10/12/10	10/12/10	KWG1011029	
Acrolein†	120		50	3.3	1	10/12/10	10/12/10	KWG1011029	
Acrylonitrile†	11.6		10	0.61	1	10/12/10	10/12/10	KWG1011029	

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

**Volatile Organic Compounds**

**Sample Name:** Lab Control Sample  
**Lab Code:** KWG1011029-1

**Units:** ug/L  
**Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Toluene-d8	90	84-115	10/12/10	Acceptable
4-Bromofluorobenzene	86	83-113	10/12/10	Acceptable
Dibromofluoromethane	88	71-115	10/12/10	Acceptable

† Analyte Comments

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

**Comments:** \_\_\_\_\_

# Exception Report

**Data File:** J:\MS23\DATA\101210\1012F100.D  
**Lab ID:** KWG1011029-1  
**RunType:** LCS  
**Matrix:** WATER

**Date Acquired:** 10/12/2010 17:24  
**Date Quantitated:** 10/13/2010 08:38  
**Batch ID:** KWG1011024  
**Analysis Method:** 624  
**MethodJoinID:** MJ158

## Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KL 10/13/10

Secondary Review: HB 10/14/10



# Quantitation Report

Bottle ID:	Tier:	Matrix:	WATER
Prod Code: 624 VOC_FP	Collect Date:	Receive Date:	10/12/2010

Analysis Lot: KWG1011024	Prep Lot: KWG1011029	Report Group:
Analysis Method: 624	Prep Method: METHOD	
Prep Ref: 966513	Prep Date: 10/06/2010	

Quant Method: JAMS23\METHODS\101110624.M	Calibration ID: CAL9945
Title:	
Tune Ref: JAMS23\DATA\101210\1012F010.D	Method ID: MJ158
MB Ref: JAMS23\DATA\101210\1012F016.D	Quant based on Method

Data File: JAMS23\DATA\101210\1012F100.D	Instrument: MS23
Acqu Date: 10/12/2010 17:24	Quant Date: 10/13/2010 08:38
Run Type: LCS	Vial: 7
Lab ID: KWG1011029-1	Dilution: 1.0
	Soln Conc. Units: PPB

## Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	5.90	0.01	96	480881	10.00	OK
2	Chlorobenzene-d5	9.31	0.00	82	202217	10.00	OK
3	1,4-Dichlorobenzene-d4	11.73	0.01	152	223470	10.00	OK

## Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Dibromofluoromethane	5.05	0.00	0.00	113	121999	8.78	88	71-115	OK
1	1,2-Dichloroethane-d4	5.54	0.01	0.00	65	152728	8.35	84	69-116	OK
1	Toluene-d8	7.74	0.00	0.00	98	469151	9.04	90	84-115	OK
2	4-Bromofluorobenzene	10.55	0.00	0.00	95	170139	8.60	86	83-113	OK

## Target Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.13	-0.01	0.00	85	219262	10.37	10.4		
1	Chloromethane	1.28		0.00	50	172252	11.35	11.4		
1	Vinyl Chloride	1.36		0.00	62	181409	11.27	11.3		
1	Bromomethane	1.63		0.00	96	86395	10.99	11.0		
1	Chloroethane	1.71		0.00	49	30321	10.99	11.0		
1	Trichlorofluoromethane	1.89		0.00	101	267192	10.43	10.4		
1	Acrolein	2.34		0.00	56	144450	120.31	120		
1	Trichlorotrifluoroethane	2.34	0.01	0.00	151	122205	10.15	10.2		
1	1,1-Dichloroethene	2.37		0.00	96	136038	12.41	12.4		
1	Acetone	2.48		0.00	43	127116	59.55	59.6		
1	Carbon Disulfide	2.56		0.00	76	731420	20.66	20.7		
1	Methylene Chloride	2.91	0.01	0.00	84	146600	10.58	10.6		
1	Acrylonitrile	3.25	0.01	0.00	53	27797	11.61	11.6		
1	trans-1,2-Dichloroethene	3.13		0.00	96	162174	11.69	11.7		

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\* Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

<b>Data File:</b>	J:\MS23\DATA\101210\1012F100.D	<b>Instrument:</b>	MS23
<b>Acqu Date:</b>	10/12/2010 17:24	<b>Quant Date:</b>	10/13/2010 08:38
<b>Run Type:</b>	LCS	<b>Vial:</b>	7
<b>Lab ID:</b>	KWG1011029-1	<b>Dilution:</b>	1.0
		<b>Soln Conc. Units:</b>	PPB

<b>Target Compounds</b>						<b>Final Conc. Units: ug/L</b>				
IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	1,1-Dichloroethane	3.66		0.00	63	280088	11.35	11.4		
1	Vinyl Acetate	3.72		0.00	86	38750	20.91	20.9		
1	cis-1,2-Dichloroethene	4.39		0.00	96	168776	11.36	11.4		
1	2-Butanone (MEK)	4.44	-0.01	0.00	72	41351	58.67	58.7		
1	Chloroform	4.82		0.00	83	293152	11.50	11.5		
1	1,1,1-Trichloroethane (TCA)	4.99	0.01	0.00	97	265078	11.58	11.6		
1	Carbon Tetrachloride	5.15		0.00	117	206537	11.49	11.5		
1	Benzene	5.49		0.00	78	603753	11.69	11.7		
1	1,2-Dichloroethane (EDC)	5.64	0.01	0.00	62	235221	11.51	11.5		
1	Trichloroethene (TCE)	6.33		0.00	95	163567	11.19	11.2		
1	1,2-Dichloropropane	6.66		0.00	63	137994	11.35	11.4		
1	Bromodichloromethane	6.99		0.00	83	184336	11.15	11.2		
1	2-Chloroethyl Vinyl Ether	7.38		0.00	63	52548	9.45	9.45	J	
1	cis-1,3-Dichloropropene	7.51	-0.01	0.00	75	217855	11.50	11.5		
1	4-Methyl-2-pentanone (MIBK)	8.62		0.00	58	106698	52.11	52.1		
1	Toluene	7.82	0.01	0.00	92	399505	11.53	11.5		
2	trans-1,3-Dichloropropene	8.17		0.00	75	173120	10.40	10.4		
2	1,1,2-Trichloroethane	8.35	-0.01	0.00	83	86098	11.12	11.1		
2	Tetrachloroethene (PCE)	8.37		0.00	164	161720	11.25	11.3		
2	2-Hexanone	8.62		0.00	43	219069	50.96	51.0		
2	Dibromochloromethane	8.73		0.00	129	112789	10.58	10.6		
2	Chlorobenzene	9.34		0.00	112	448312	11.02	11.0		
2	Ethylbenzene	9.44		0.00	106	233092	11.12	11.1		
2	m,p-Xylenes	9.57	0.01	0.00	106	579593	22.18	22.2		
2	o-Xylene	9.98		0.00	106	276617	11.10	11.1		
2	Styrene	10.01		0.00	103	203493m	10.97	11.0		
2	Bromoform	10.22	0.01	0.00	173	57202	10.09	10.1		
3	1,1,2,2-Tetrachloroethane	10.75		0.00	83	95830	11.55	11.6		
3	1,3-Dichlorobenzene	11.65		0.00	146	371367	11.37	11.4		
3	1,4-Dichlorobenzene	11.75		0.00	146	374108	11.26	11.3		
3	1,2-Dichlorobenzene	12.12		0.00	146	331360	11.24	11.2		
	Isopropyl Acetate				0	0		10	U	NR
	Ethyl Acetate				0	0		10	U	NR
	Bis(chloromethyl) Ether				0	0		10	U	NR
	Amyl Acetate				0	0		10	U	NR

Prep Amount: 10 ml      Dilution: 1.0  
 Prep Final Vol: 10 ml      Unit Factor: 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

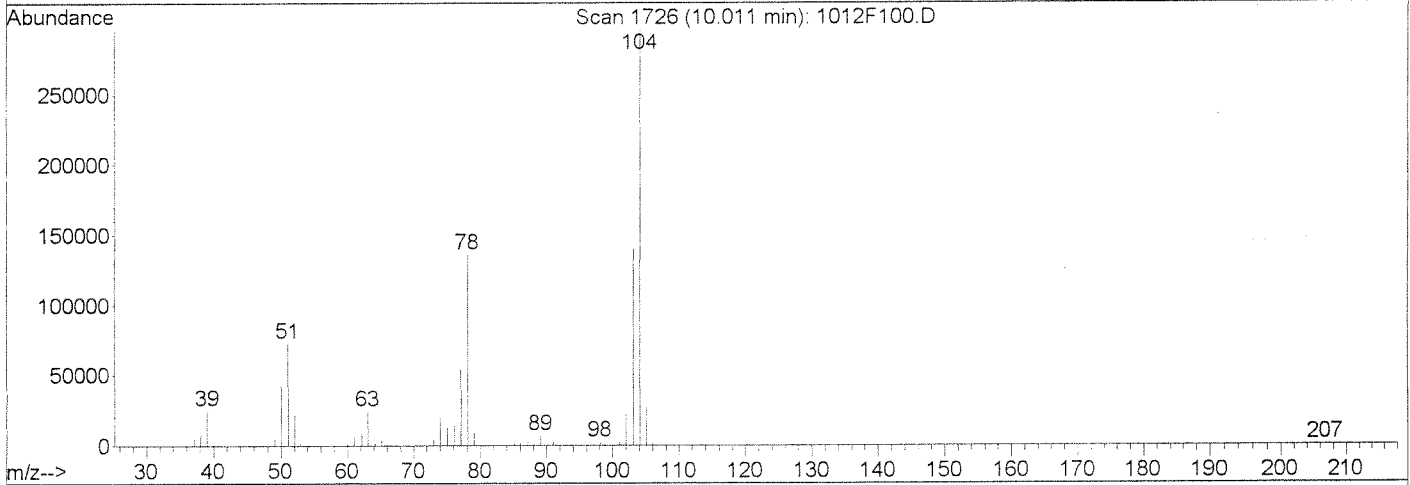
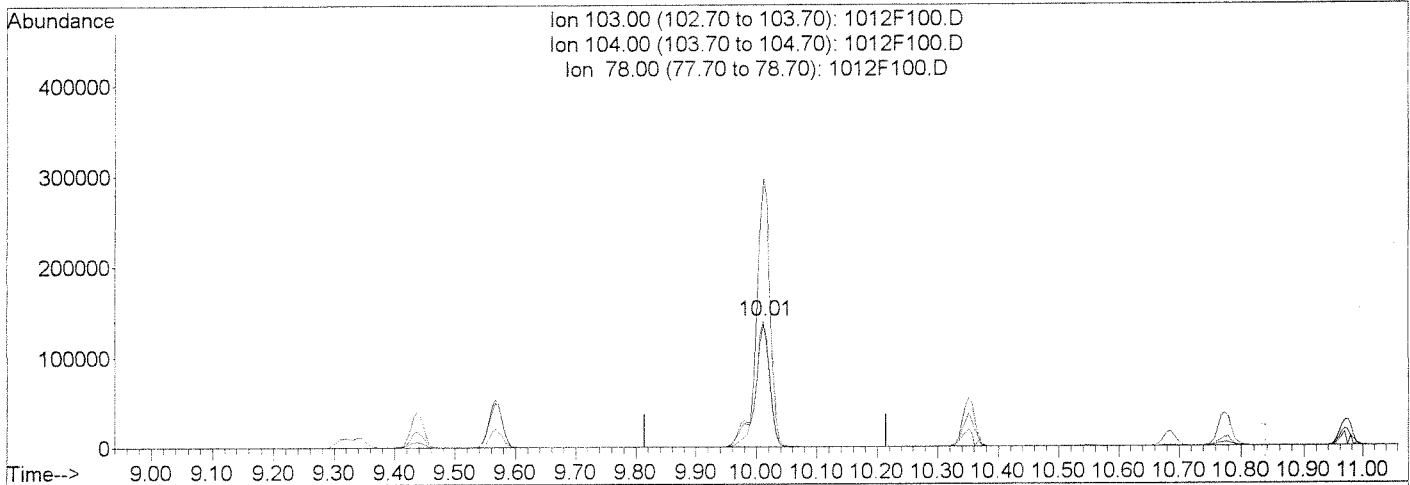
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101210\1012F100.D  
 Acq On : 12 Oct 2010 5:24 pm  
 Sample : LCS (R)  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 13 8:37 2010

Vial: 7  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 15:11:44 2010  
 Response via : Multiple Level Calibration



TIC: 1012F100.D

(45) Styrene (T)

10.01min 13.06PPB

response 242306

Ion	Exp%	Act%
103.00	100	100
104.00	210.20	212.09
78.00	91.20	97.44
0.00	0.00	0.00

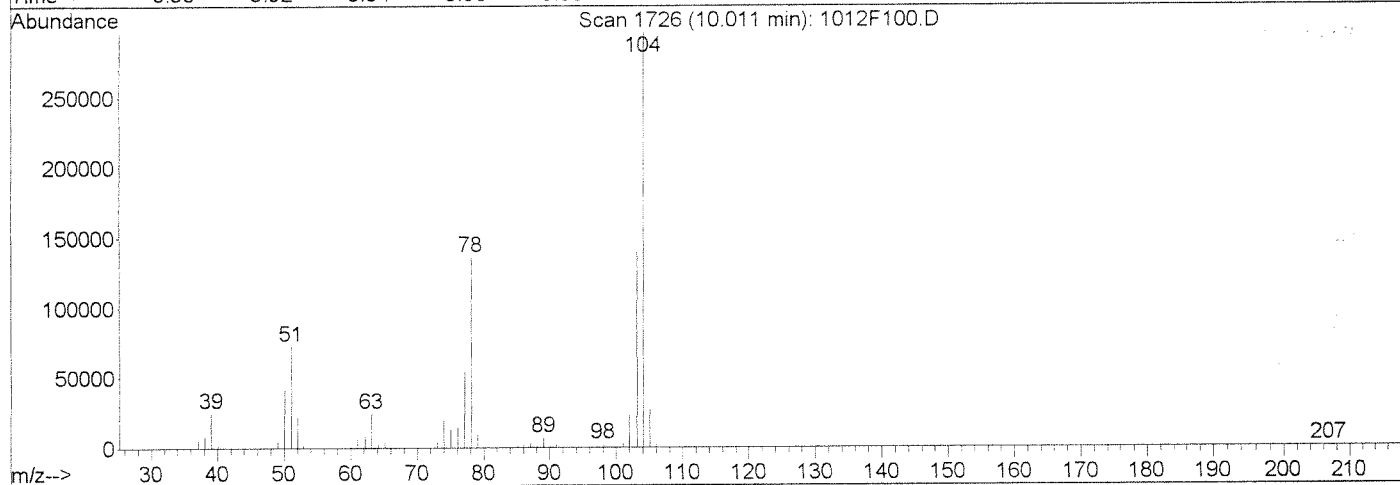
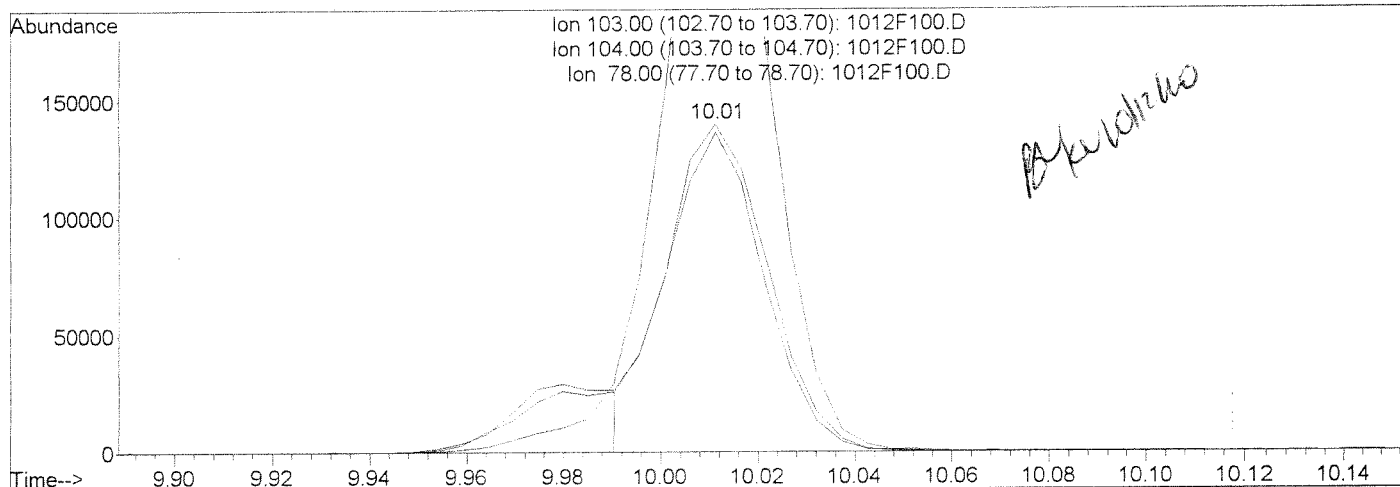
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101210\1012F100.D  
 Acq On : 12 Oct 2010 5:24 pm  
 Sample : LCS (R)  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 13 8:38 2010

Vial: 7  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 15:11:44 2010  
 Response via : Multiple Level Calibration



TIC: 1012F100.D

(45) Styrene (T)		
10.01min	10.97PPB m	
response	203493	
Ion	Exp%	Act%
103.00	100	100
104.00	210.20	212.09
78.00	91.20	97.44
0.00	0.00	0.00

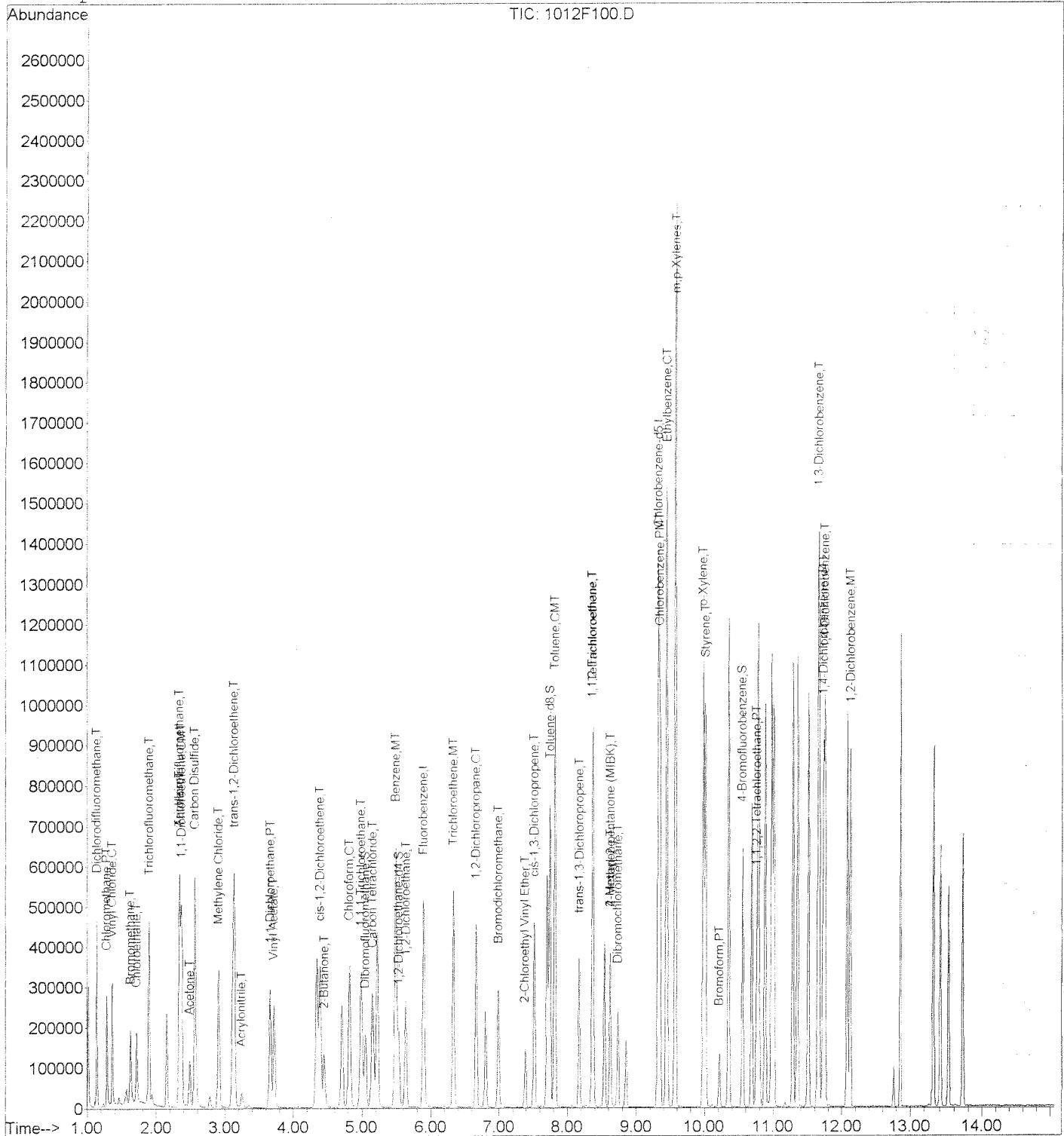
Handwritten signature: HB 10-14-10

Data File : J:\MS23\DATA\101210\1012F100.D  
 Acq On : 12 Oct 2010 5:24 pm  
 Sample : LCS (R)  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 13 8:38 2010

Vial: 7  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RE

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 15:11:44 2010  
 Response via : Initial Calibration



Organic Analysis:  
Volatile Organic Compounds

Validation Package

Standards Data

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Date Analyzed:** 10/12/2010  
**Time Analyzed:** 14:22

**Tune Summary  
 Volatile Organic Compounds**

**File ID:** J:\MS23\DATA\101210\1012F010.D  
**Instrument ID:** MS23  
**Column:**

**Analysis Method:** 624  
**Analysis Lot:** KWG1011024

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	28.4	16456	PASS
75	95	30	60	57.2	33201	PASS
95	95	100	100	100.0	58016	PASS
96	95	5	9	6.6	3838	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	103.7	60152	PASS
175	174	5	9	6.7	4043	PASS
176	174	95	101	99.0	59552	PASS
177	176	5	9	6.8	4071	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1011024-2	J:\MS23\DATA\101210\1012F011.D	10/12/2010	14:51	
Batch QCMS	KWG1011029-3	J:\MS23\DATA\101210\1012F013.D	10/12/2010	15:57	
Batch QCDMS	KWG1011029-4	J:\MS23\DATA\101210\1012F014.D	10/12/2010	16:26	
Lab Control Sample	KWG1011029-1	J:\MS23\DATA\101210\1012F100.D	10/12/2010	17:24	
Method Blank	KWG1011029-2	J:\MS23\DATA\101210\1012F016.D	10/12/2010	17:52	
Batch QC	K1010898-002	J:\MS23\DATA\101210\1012F017.D	10/12/2010	18:21	
MW-3	K1010899-001	J:\MS23\DATA\101210\1012F026.D	10/12/2010	22:40	
Equipment Blank	K1010899-002	J:\MS23\DATA\101210\1012F027.D	10/12/2010	23:09	

Results flagged with an asterisk (\*) indicate the analysis performed outside specified tune window

# Exception Report

Data File: J:\MS23\DATA\101210\1012F010.D  
Lab ID: KWG1011024-1  
RunType: BFB  
Matrix: WATER

Date Acquired: 10/12/2010 14:22  
Date Quantitated:  
Batch ID: KWG1011024  
Analysis Method: 624  
MethodJoinID: MJ158

## Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: Ka Mada  
Secondary Review: HTB 10-14-10



# Quantitation Report

Bottle ID:	Tier:	Matrix:	WATER
Prod Code: 624	Collect Date:	Receive Date:	10/12/2010
Analysis Lot: KWG1011024		Prep Lot:	Report Group:
Analysis Method: BFB		Prep Method:	
Prep Ref:		Prep Date:	
Quant Method: J:\MS23\METHODS\101110624.M		Calibration ID:	CAL9945
Title: GC/MS Tuning Evaluation		Report List ID:	LJ774
Tune Ref:		Method ID:	MJ159
MB Ref:		Quant based on Report List	
Data File: J:\MS23\DATA\101210\1012F010.D	Instrument:		MS23
Acqu Date: 10/12/2010 14:22	Quant Date:	Vial:	2
Run Type: BFB		Dilution:	1.0
Lab ID: KWG1011024-1		Soln Conc. Units:	

## Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	28.4	16456	Pass
75	95	30	60	57.2	33201	Pass
95	95	100	100	100.0	58016	Pass
96	95	5	9	6.6	3838	Pass
173	174	0	2	0.0	0	Pass
174	95	50	120	103.7	60152	Pass
175	174	5	9	6.7	4043	Pass
176	174	95	101	99.0	59552	Pass
177	176	5	9	6.8	4071	Pass

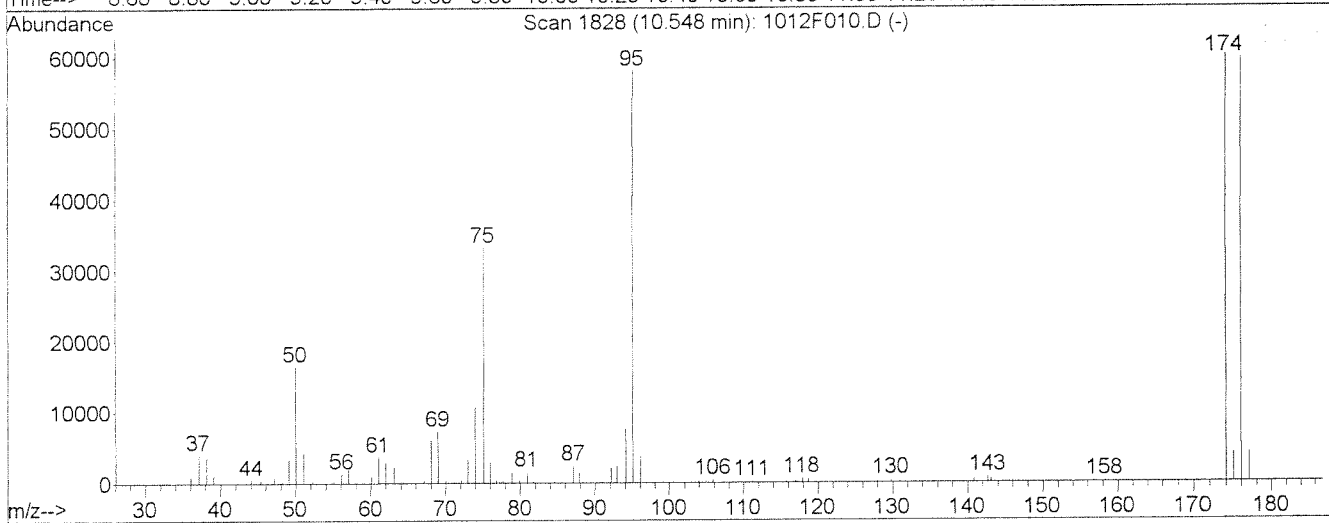
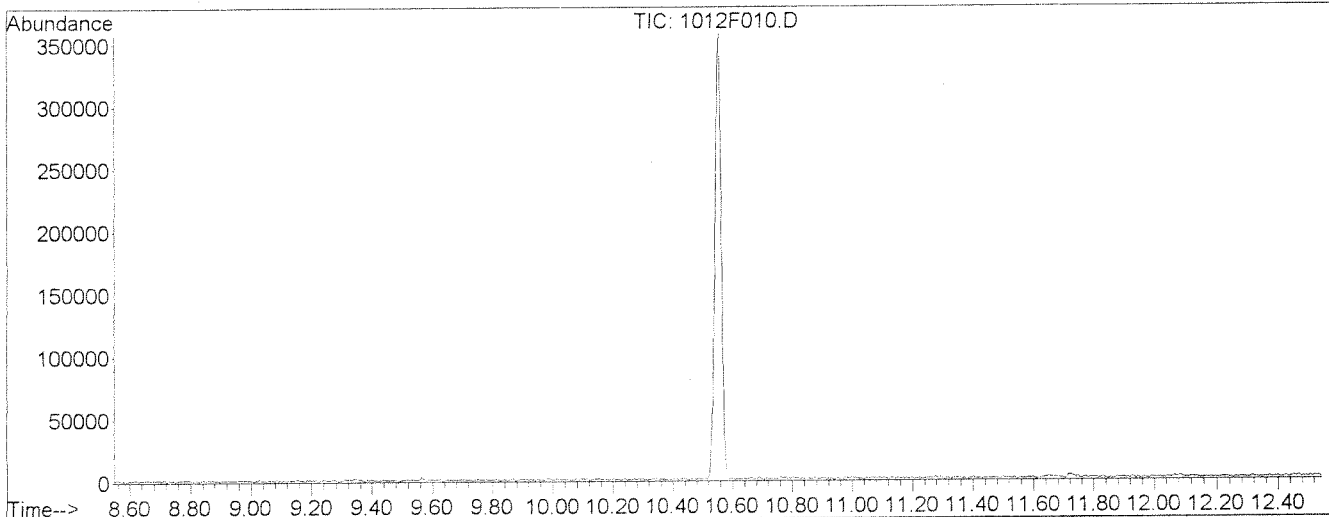
U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
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 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

Data File : J:\MS23\DATA\101210\1012F010.D  
 Acq On : 12 Oct 2010 2:22 pm  
 Sample : 624 BFB  
 Misc :  
 MS Integration Params: rteint.p  
 Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624

Vial: 2  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00



Spectrum Information: Scan 1828 *left - 1821 Scan KR 10/12/10*

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	28.4	16456	PASS
75	95	30	60	57.2	33201	PASS
95	95	100	100	100.0	58016	PASS
96	95	5	9	6.6	3838	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	103.7	60152	PASS
175	174	5	9	6.7	4043	PASS
176	174	95	101	99.0	59552	PASS
177	176	5	9	6.8	4071	PASS

*HB 10.14.10*

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 10/11/2010

**Initial Calibration Summary  
 Volatile Organic Compounds**

**Calibration ID:** CAL9945  
**Instrument ID:** MS23

**Column:** MS

<b>Level ID</b>	<b>File ID</b>	<b>Level ID</b>	<b>File ID</b>
A	J:\MS23\DATA\101110\1011F008.D	E	J:\MS23\DATA\101110\1011F012.D
B	J:\MS23\DATA\101110\1011F009.D	F	J:\MS23\DATA\101110\1011F013.D
C	J:\MS23\DATA\101110\1011F010.D	G	J:\MS23\DATA\101110\1011F014.D
D	J:\MS23\DATA\101110\1011F011.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Chloromethane	A	0.50	0.301	B	1.0	0.312	C	5.0	0.301	D	10	0.312	E	40	0.328
	F	80	0.346	G	120	0.310									
Vinyl Chloride	A	0.50	0.294	B	1.0	0.343	C	5.0	0.340	D	10	0.346	E	40	0.362
	F	80	0.369	G	120	0.289									
Bromomethane	A	0.50	0.179	B	1.0	0.167	C	5.0	0.132	D	10	0.148	E	40	0.177
	F	80	0.182	G	120	0.160									
Chloroethane	A	0.50	0.0516	B	1.0	0.0616	C	5.0	0.0588	D	10	0.0592	E	40	0.0588
	F	80	0.0602	G	120	0.0512									
Trichlorofluoromethane	A	0.50	0.455	B	1.0	0.597	C	5.0	0.550	D	10	0.581	E	40	0.572
	F	80	0.562	G	120	0.413									
1,1-Dichloroethene	A	0.50	0.203	B	1.0	0.241	C	5.0	0.229	D	10	0.238	E	40	0.236
	F	80	0.246	G	120	0.202									
Methylene Chloride	A	0.50	0.407	B	1.0	0.344	C	5.0	0.250	D	10	0.257	E	40	0.252
	F	80	0.259	G	120	0.248									
trans-1,2-Dichloroethene	A	0.50	0.304	B	1.0	0.299	C	5.0	0.278	D	10	0.285	E	40	0.290
	F	80	0.296	G	120	0.268									
1,1-Dichloroethane	A	0.50	0.493	B	1.0	0.544	C	5.0	0.480	D	10	0.513	E	40	0.526
	F	80	0.541	G	120	0.497									
Chloroform	A	0.50	0.515	B	1.0	0.540	C	5.0	0.499	D	10	0.538	E	40	0.542
	F	80	0.557	G	120	0.519									
1,1,1-Trichloroethane (TCA)	A	0.50	0.402	B	1.0	0.469	C	5.0	0.460	D	10	0.488	E	40	0.513
	F	80	0.538	G	120	0.462									
Carbon Tetrachloride	A	0.50	0.280	B	1.0	0.347	C	5.0	0.353	D	10	0.387	E	40	0.424
	F	80	0.447	G	120	0.380									
Benzene	A	0.50	1.04	B	1.0	1.11	C	5.0	1.03	D	10	1.07	E	40	1.10
	F	80	1.12	G	120	1.04									
1,2-Dichloroethane (EDC)	A	0.50	0.409	B	1.0	0.430	C	5.0	0.419	D	10	0.428	E	40	0.434
	F	80	0.442	G	120	0.414									
Trichloroethene (TCE)	A	0.50	0.303	B	1.0	0.329	C	5.0	0.287	D	10	0.310	E	40	0.305
	F	80	0.314	G	120	0.279									

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Exponent  
 Project: Heglar Kronquist/0907194.000.0601

Service Request: K1010899  
 Calibration Date: 10/11/2010

Initial Calibration Summary  
 Volatile Organic Compounds

Calibration ID: CAL9945  
 Instrument ID: MS23

Column: MS

Analyte Name	Level			Level			Level			Level					
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF			
1,2-Dichloropropane	A	0.50	0.240	B	1.0	0.263	C	5.0	0.234	D	10	0.252	E	40	0.256
	F	80	0.267	G	120	0.258									
Bromodichloromethane	A	0.50	0.301	B	1.0	0.311	C	5.0	0.302	D	10	0.345	E	40	0.374
	F	80	0.396	G	120	0.379									
2-Chloroethyl Vinyl Ether	A	0.50	0.0991	B	1.0	0.0988	C	5.0	0.100	D	10	0.117	E	40	0.128
	F	80	0.136	G	120	0.131									
trans-1,3-Dichloropropene	A	0.50	0.656	B	1.0	0.710	C	5.0	0.703	D	10	0.798	E	40	0.924
	F	80	0.992	G	120	0.979									
Toluene	A	0.50	0.699	B	1.0	0.747	C	5.0	0.681	D	10	0.726	E	40	0.733
	F	80	0.761	G	120	0.696									
cis-1,3-Dichloropropene	A	0.50	0.336	B	1.0	0.334	C	5.0	0.349	D	10	0.399	E	40	0.435
	F	80	0.464	G	120	0.441									
1,1,2-Trichloroethane	A	0.50	0.380	B	1.0	0.391	C	5.0	0.354	D	10	0.381	E	40	0.387
	F	80	0.397	G	120	0.392									
Tetrachloroethene (PCE)	A	0.50	0.618	B	1.0	0.754	C	5.0	0.693	D	10	0.722	E	40	0.747
	F	80	0.762	G	120	0.679									
Dibromochloromethane	A	0.50	0.397	B	1.0	0.444	C	5.0	0.458	D	10	0.517	E	40	0.593
	F	80	0.645	G	120	0.635									
Chlorobenzene	A	0.50	1.99	B	1.0	2.06	C	5.0	1.94	D	10	1.97	E	40	2.04
	F	80	2.09	G	120	1.99									
Ethylbenzene	A	0.50	0.857	B	1.0	0.995	C	5.0	1.01	D	10	1.05	E	40	1.10
	F	80	1.16	G	120	1.08									
Bromoform	A	0.50	0.203	B	1.0	0.220	C	5.0	0.227	D	10	0.257	E	40	0.329
	F	80	0.365	G	120	0.362									
1,1,2,2-Tetrachloroethane	A	0.50	0.333	B	1.0	0.357	C	5.0	0.352	D	10	0.374	E	40	0.392
	F	80	0.398	G	120	0.394									
1,3-Dichlorobenzene	A	0.50	1.32	B	1.0	1.46	C	5.0	1.40	D	10	1.50	E	40	1.51
	F	80	1.55	G	120	1.48									
1,4-Dichlorobenzene	A	0.50	1.46	B	1.0	1.46	C	5.0	1.44	D	10	1.51	E	40	1.52
	F	80	1.54	G	120	1.49									
1,2-Dichlorobenzene	A	0.50	1.24	B	1.0	1.30	C	5.0	1.27	D	10	1.36	E	40	1.36
	F	80	1.38	G	120	1.33									
Acrolein	A	10	0.0259	B	20	0.0268	C	100	0.0249	D	200	0.0257	E	800	0.0247
	F	1600	0.0243	G	2400	0.0225									
Acrylonitrile	A	1.0	0.0504	B	2.0	0.0489	C	10	0.0465	D	20	0.0504	E	80	0.0499
	F	160	0.0520	G	240	0.0506									

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 10/11/2010

**Initial Calibration Summary  
 Volatile Organic Compounds**

**Calibration ID:** CAL9945  
**Instrument ID:** MS23

**Column:** MS

Analyte Name	Level			Level			Level			Level					
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF			
Toluene-d8	A	4.0	0.955	B	6.0	1.06	C	8.0	1.09	D	10	1.10	E	20	1.16
	F	40	1.12	G	120	1.06									
4-Bromofluorobenzene	A	4.0	0.858	B	6.0	0.957	C	8.0	0.969	D	10	0.998	E	20	1.05
	F	40	1.03	G	120	0.988									
Dibromofluoromethane	A	4.0	0.251	B	6.0	0.280	C	8.0	0.291	D	10	0.292	E	20	0.309
	F	40	0.306	G	120	0.294									

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Exponent  
 Project: Heglar Kronquist/0907194.000.0601

Service Request: K1010899  
 Calibration Date: 10/11/2010

Initial Calibration Summary  
 Volatile Organic Compounds

Calibration ID: CAL9945  
 Instrument ID: MS23

Column: MS

Analyte Name	Compound Type	Calibration Evaluation				RRF Evaluation			
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Chloromethane	TRG	AverageRF	% RSD	5.1		≤35	0.316		0.01
Vinyl Chloride	TRG	AverageRF	% RSD	9.4		≤35	0.335		0.01
Bromomethane	TRG	AverageRF	% RSD	11.2		≤35	0.164		0.01
Chloroethane	TRG	AverageRF	% RSD	7.3		≤35	0.0574		0.01
Trichlorofluoromethane	TRG	AverageRF	% RSD	13.2		≤35	0.533		0.01
1,1-Dichloroethene	MS	AverageRF	% RSD	7.9		≤35	0.228		0.01
Methylene Chloride	TRG	AverageRF	% RSD	21.7		≤35	0.288		0.01
trans-1,2-Dichloroethene	TRG	AverageRF	% RSD	4.5		≤35	0.289		0.01
1,1-Dichloroethane	TRG	AverageRF	% RSD	4.8		≤35	0.513		0.01
Chloroform	TRG	AverageRF	% RSD	3.8		≤35	0.530		0.01
1,1,1-Trichloroethane (TCA)	TRG	AverageRF	% RSD	9.1		≤35	0.476		0.01
Carbon Tetrachloride	TRG	AverageRF	% RSD	14.7		≤35	0.374		0.01
Benzene	MS	AverageRF	% RSD	3.7		≤35	1.07		0.01
1,2-Dichloroethane (EDC)	TRG	AverageRF	% RSD	2.7		≤35	0.425		0.01
Trichloroethene (TCE)	MS	AverageRF	% RSD	5.5		≤35	0.304		0.01
1,2-Dichloropropane	TRG	AverageRF	% RSD	4.8		≤35	0.253		0.01
Bromodichloromethane	TRG	AverageRF	% RSD	11.6		≤35	0.344		0.01
2-Chloroethyl Vinyl Ether	TRG	AverageRF	% RSD	14.1		≤35	0.116		0.01
trans-1,3-Dichloropropene	TRG	AverageRF	% RSD	17.1		≤35	0.823		0.01
Toluene	MS	AverageRF	% RSD	4.1		≤35	0.720		0.01
cis-1,3-Dichloropropene	TRG	AverageRF	% RSD	13.8		≤35	0.394		0.01
1,1,2-Trichloroethane	TRG	AverageRF	% RSD	3.7		≤35	0.383		0.01
Tetrachloroethene (PCE)	TRG	AverageRF	% RSD	7.2		≤35	0.711		0.01
Dibromochloromethane	TRG	AverageRF	% RSD	18.7		≤35	0.527		0.01
Chlorobenzene	MS	AverageRF	% RSD	2.7		≤35	2.01		0.01
Ethylbenzene	TRG	AverageRF	% RSD	9.2		≤35	1.04		0.01
Bromoform	TRG	AverageRF	% RSD	24.9		≤35	0.280		0.01
1,1,2,2-Tetrachloroethane	TRG	AverageRF	% RSD	6.6		≤35	0.371		0.01
1,3-Dichlorobenzene	TRG	AverageRF	% RSD	5.3		≤35	1.46		0.01
1,4-Dichlorobenzene	TRG	AverageRF	% RSD	2.6		≤35	1.49		0.01
1,2-Dichlorobenzene	MS	AverageRF	% RSD	3.8		≤35	1.32		0.01
Acrolein	TRG	AverageRF	% RSD	5.5		≤35	0.0250		0.01
Acrylonitrile	TRG	AverageRF	% RSD	3.5		≤35	0.0498		0.01
Toluene-d8	SURR	AverageRF	% RSD	6.0		≤35	1.08		0.01
4-Bromofluorobenzene	SURR	AverageRF	% RSD	6.4		≤35	0.979		0.01
Dibromofluoromethane	SURR	AverageRF	% RSD	6.7		≤35	0.289		0.01

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Exponent  
Project: Heglar Kronquist/0907194.000.0601

Service Request: K1010899  
Calibration Date: 10/11/2010  
Date Analyzed: 10/12/2010

Second Source Calibration Verification  
Volatile Organic Compounds

Calibration Type: Internal Standard  
Analysis Method: 624

Calibration ID: CAL9945  
Units: PPB

File ID: J:\MS23\DATA\101210\1012F005.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Chloromethane	10	11	0.316	0.362	15	NA	± 104 %	AverageRF
Vinyl Chloride	10	11	0.335	0.389	16	NA	± 96 %	AverageRF
Bromomethane	10	12	0.164	0.198	21	NA	± 86 %	AverageRF
Chloroethane	10	10	0.0574	0.0628	9	NA	± 62 %	AverageRF
Trichlorofluoromethane	10	10	0.533	0.572	7	NA	± 52 %	AverageRF
1,1-Dichloroethene	10	13	0.228	0.295	29	NA	± 49 %	AverageRF
Methylene Chloride	10	12	0.288	0.308	7	NA	± 39 %	AverageRF
trans-1,2-Dichloroethene	10	12	0.289	0.339	18	NA	± 30 %	AverageRF
1,1-Dichloroethane	10	12	0.513	0.608	19	NA	± 27 %	AverageRF
Chloroform	10	12	0.530	0.622	17	NA	± 32 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	12	0.476	0.577	21	NA	± 25 %	AverageRF
Carbon Tetrachloride	10	12	0.374	0.448	20	NA	± 27 %	AverageRF
Benzene	10	12	1.07	1.28	19	NA	± 36 %	AverageRF
1,2-Dichloroethane (EDC)	10	12	0.425	0.501	18	NA	± 32 %	AverageRF
Trichloroethene (TCE)	10	12	0.304	0.352	16	NA	± 33 %	AverageRF
1,2-Dichloropropane	10	12	0.253	0.294	16	NA	± 66 %	AverageRF
Bromodichloromethane	10	12	0.344	0.407	18	NA	± 34 %	AverageRF
2-Chloroethyl Vinyl Ether	10	10	0.116	0.108	-7	NA	± 124 %	AverageRF
trans-1,3-Dichloropropene	10	12	0.823	0.884	7	NA	± 50 %	AverageRF
Toluene	10	12	0.720	0.835	16	NA	± 25 %	AverageRF
cis-1,3-Dichloropropene	10	12	0.394	0.468	19	NA	± 76 %	AverageRF
1,1,2-Trichloroethane	10	12	0.383	0.438	14	NA	± 29 %	AverageRF
Tetrachloroethene (PCE)	10	12	0.711	0.823	16	NA	± 26 %	AverageRF
Dibromochloromethane	10	13	0.527	0.606	15	NA	± 32 %	AverageRF
Chlorobenzene	10	12	2.01	2.24	12	NA	± 34 %	AverageRF
Ethylbenzene	10	12	1.04	1.19	15	NA	± 41 %	AverageRF
Bromoform	10	12	0.280	0.317	13	NA	± 29 %	AverageRF
1,1,2,2-Tetrachloroethane	10	13	0.371	0.446	20	NA	± 39 %	AverageRF
1,3-Dichlorobenzene	10	13	1.46	1.70	16	NA	± 27 %	AverageRF
1,4-Dichlorobenzene	10	13	1.49	1.72	15	NA	± 37 %	AverageRF
1,2-Dichlorobenzene	10	13	1.32	1.51	15	NA	± 37 %	AverageRF
Acrolein	100	120	0.0250	0.0299	20	NA	± 80 %	AverageRF
Acrylonitrile	10	11	0.0498	0.0552	11	NA	± 40 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Date: 10/11/13

Columbia Analytical Services, Inc.

Tune File: BFB4

By: KL

Injection Log

New Tune: NO

IS/SS Std. ID: 507A-30B

MS23 - Agilent 5973

RUN #: \_\_\_\_\_

CCV Std ID: ~~507A~~ see prep sheet

ICAL Date: 10/11/13 Cal 9945

MS/DMS/LCS/ICV Std ID: ~~507A~~ ↓

Second RV: HB10-1410

BFB Std. ID: 507A-166

LIMS ID: \_\_\_\_\_

	Sample Name	File Name	Method	Dilution	pH	R	Comments
1	BFB	1011F006	BFB.M	4.7µl-174µl			
2	1B	↓	↓				
3	124 1µl 0.5	↓	↓				
4	↓ 1	↓	↓				
5	↓ 5	↓	↓				
6	↓ 10	↓	↓				
7	↓ 40	↓	↓				
8	↓ 80	↓	↓				
9	↓ 120	↓	↓				
10	1B	↓	↓				
11	1B	↓	↓				
12	ICV	↓	↓				(NR)
13	1B	1012F001	BFB.M				
14	BFB	↓	↓	4.7µl-174µl			
15	<del>ICV</del> 1B	↓	↓				
16	ICV	↓	↓				(NR) No Surv.
17	ICV	↓	↓				
18	1B	↓	↓				
19	100 0.25	↓	↓				
20	↓ 0.5/10	↓	↓				
21	↓ 1	↓	↓				
22							
23							
24							
25							
26							
27							



Date 10/11/10  
 Prepared By KR

Analysis: 624  
 Instrument: M523  
 Matrix: Water

Stock Solution #1 SBWA-31B  
 Stock Solution #2 I 31A  
 Stock Solution #3 I 25A

Analytes: Surrogates 100ppm  
 Analytes: 624 50ppm  
 Analytes: Ketones 2000ppm

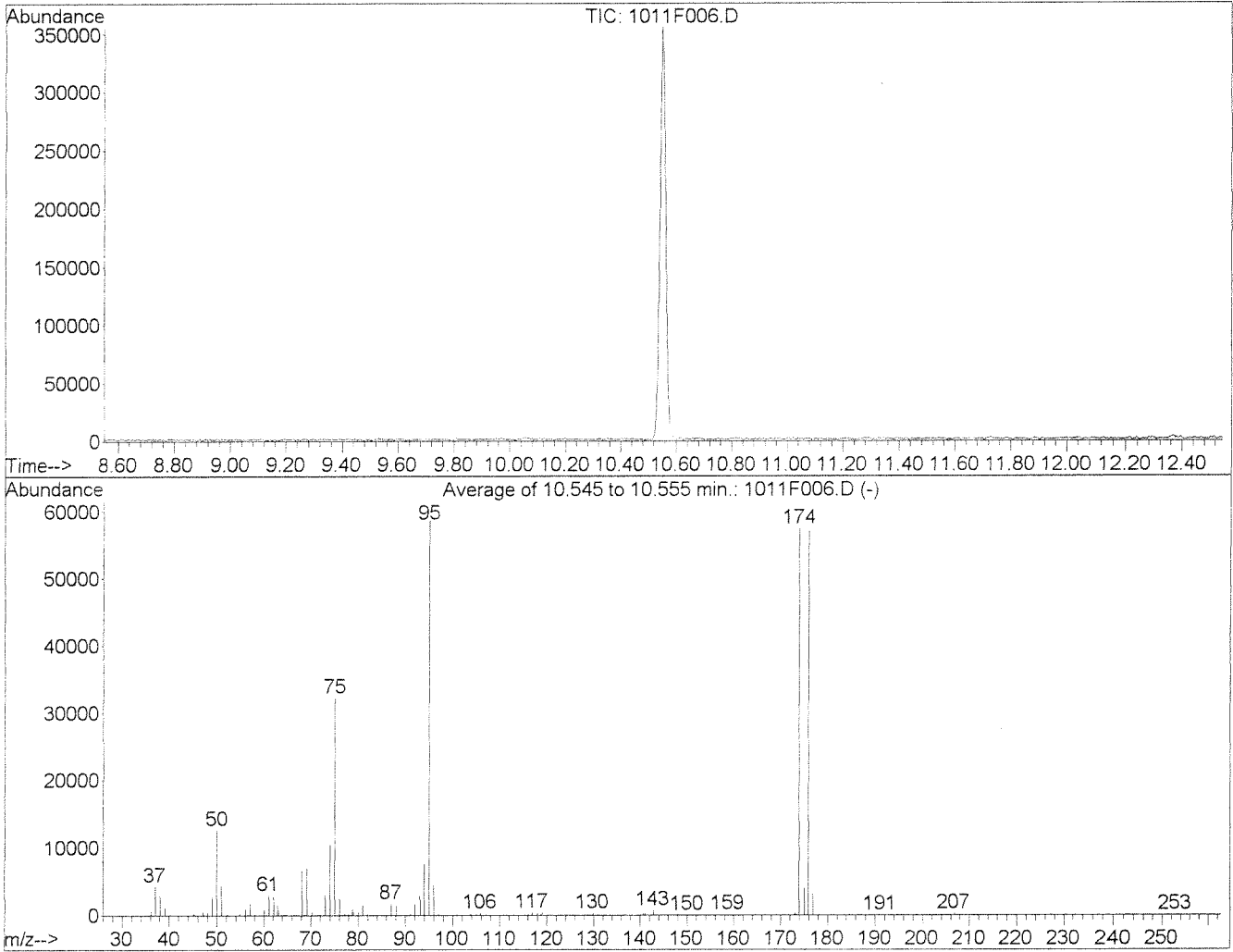
Aliquot of Stock Solution #1 (µL)	Final Conc. of #1 (µg/L)	Aliquot of Stock Solution #2 (µL)	Final Conc. of #2 (µg/L)	Aliquot of Stock Solution #3 (µL)	Final Conc. of #3 (µg/L)	Final Volume (mL)
2.0	4.0	0.5	0.5	0.5	20	50
3.0	6.0	1	1	2	80	50
4.0	8.0	5.0	5	5	200	50
5.0	10.0	10	10	10	400	50
10.0	20	40	40	20	800	50
20	40	80	80	40	1600	50
60	120	120	120	60	2400	50

624 ICV: 20uL of 50/250ppm Accustd ICV ( SBWA 25C ) + 50uL of 100ppm Acrolein ICV ( SBWA- 25C )

BFB

Data File : J:\MS23\DATA\101110\1011F006.D  
Acq On : 11 Oct 2010 12:31 pm  
Sample : BFB  
Misc :  
MS Integration Params: rteint.p  
Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
Title : VOA MS23 EPA Method 624

Vial: 2  
Operator: KR  
Inst : MS23  
Multiplr: 1.00



AutoFind: Scans 1828, 1829, 1830; Background Corrected with Scan 1820

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.5	12622	PASS
75	95	30	60	54.9	32168	PASS
95	95	100	100	100.0	58576	PASS
96	95	5	9	7.6	4468	PASS
173	174	0.00	2	0.7	409	PASS
174	95	50	120	97.9	57320	PASS
175	174	5	9	7.1	4079	PASS
176	174	95	101	99.4	56989	PASS
177	176	5	9	5.8	3309	PASS

*KR*  
*HB 11/4*

Data File : J:\MS23\DATA\101110\1011F007.D  
 Acq On : 11 Oct 2010 12:59 pm  
 Sample : IB  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 13:23:28 2010

Vial: 3  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	5.90	96	469623	10.00	PPB	0.00
35) Chlorobenzene-d5	9.31	82	187545	10.00	PPB	0.00
48) 1,4-Dichlorobenzene-d4	11.72	152	199849	10.00	PPB	0.00
System Monitoring Compounds						
22) Dibromofluoromethane	0.00	113	0	0.00	PPB	
Spiked Amount	10.000		Recovery	=	0.00%	
24) 1,2-Dichloroethane-d4	0.00	65	0	0.00	PPB	
Spiked Amount	10.000		Recovery	=	0.00%	
33) Toluene-d8	0.00	98	0	0.00	PPB	
Spiked Amount	10.000		Recovery	=	0.00%	
47) 4-Bromofluorobenzene	0.00	95	0	0.00	PPB	
Spiked Amount	10.000		Recovery	=	0.00%	
Target Compounds						Qvalue
11) Acetone	2.49	43	2341	1.07	PPB	56
13) Methylene Chloride	2.90	84	2052	0.17	PPB	88
34) Toluene	7.81	92	621	0.02	PPB	# 49

*KR 10/11/10*

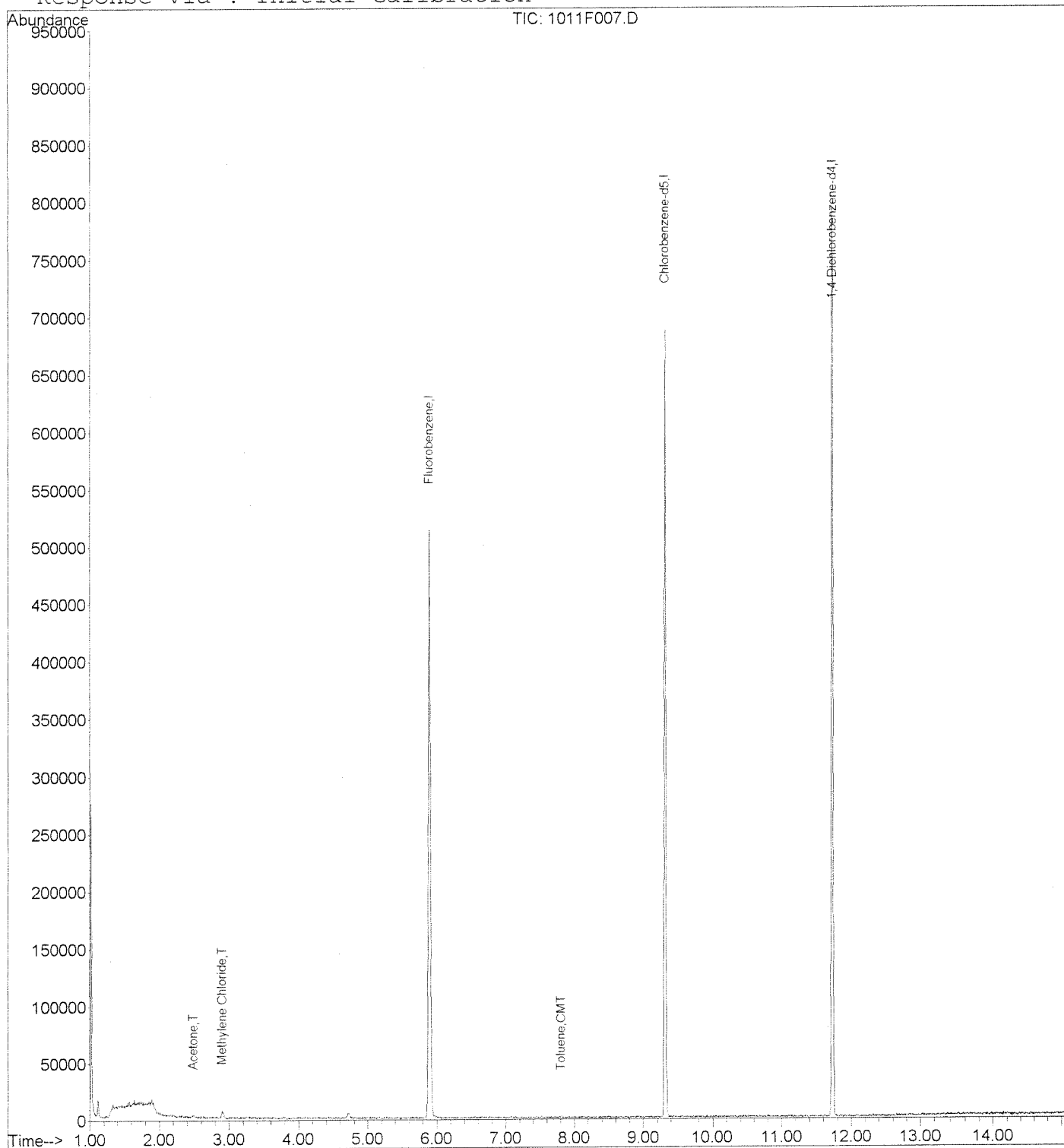
*HB 10/5/14/10*  
*HB 10/14/10*  
 Page 1

Data File : J:\MS23\DATA\101110\1011F007.D  
Acq On : 11 Oct 2010 12:59 pm  
Sample : IB  
Misc :  
MS Integration Params: rteint.p  
Quant Time: Oct 11 13:23 2010

Vial: 3  
Operator: KR  
Inst : MS23  
Multiplr: 1.00

Quant Results File: 101110624.RE

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
Title : VOA MS23 EPA Method 624  
Last Update : Mon Oct 11 12:20:44 2010  
Response via : Initial Calibration



Data File : J:\MS23\DATA\101110\1011F008.D  
 Acq On : 11 Oct 2010 1:28 pm  
 Sample : 624 ICAL 0.5  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 13:46:43 2010

Vial: 4  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

*KR*  
*10/11/10*

Internal Standards	R.T.	QI on	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	5.90	96	465400	10.00	PPB	0.00
35) Chlorobenzene-d5	9.32	82	188877	10.00	PPB	0.00
48) 1,4-Dichlorobenzene-d4	11.72	152	203904	10.00	PPB	0.00

System Monitoring Compounds	R.T.	QI on	Response	Conc	Units	Dev (Min)
22) Dibromofluoromethane	5.05	113	46737	3.33	PPB	0.00
Spiked Amount	10.000		Recovery	=	33.30%	
24) 1,2-Dichloroethane-d4	5.54	65	67084	3.64	PPB	0.00
Spiked Amount	10.000		Recovery	=	36.40%	
33) Toluene-d8	7.74	98	177835	3.39	PPB	0.00
Spiked Amount	10.000		Recovery	=	33.90%	
47) 4-Bromofluorobenzene	10.56	95	64794	3.61	PPB	0.00
Spiked Amount	10.000		Recovery	=	36.10%	

Target Compounds	R.T.	QI on	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.14	85	7212	0.34	PPB	89
3) Chloromethane	1.28	50	6997	0.47	PPB	80
4) Vinyl Chloride	1.36	62	6831	0.42	PPB	94
5) Bromomethane	1.63	96	4158	0.54	PPB	# 63
6) Chloroethane	1.71	49	1200	0.43	PPB	# 63
7) Trichlorofluoromethane	1.89	101	10593	0.42	PPB	98
8) Acrolein	2.34	56	12042	10.79	PPB	97
9) Trichlorotrifluoroethane	2.34	151	5060	0.42	PPB	84
10) 1,1-Dichloroethene	2.37	96	4728	0.43	PPB	97
11) Acetone	2.48	43	34338	15.85	PPB	98
12) Carbon Disulfide	2.56	76	14622	0.41	PPB	93
13) Methylene Chloride	2.91	84	9469	0.78	PPB	81
14) Acrylonitrile	3.25	53	2344	0.99	PPB	77
15) trans-1,2-Dichloroethene	3.14	96	7085	0.53	PPB	# 73
16) 1,1-Dichloroethane	3.66	63	11465	0.48	PPB	94
17) Vinyl Acetate	3.72	86	1660	1.00	PPB	# 11
18) cis-1,2-Dichloroethene	4.39	96	7136	0.50	PPB	# 70
19) 2-Butanone	4.45	72	9875	13.72	PPB	94
20) Chloroform	4.82	83	11993	0.49	PPB	84
21) 1,1,1-Trichloroethane	4.99	97	9357	0.42	PPB	94
23) Carbon Tetrachloride	5.15	117	6512	0.37	PPB	# 71
25) Benzene	5.49	78	24088	0.48	PPB	91
26) 1,2-Dichloroethane	5.63	62	9521	0.47	PPB	91
27) Trichloroethene	6.32	95	7055	0.51	PPB	74
28) 1,2-Dichloropropane	6.66	63	5580	0.49	PPB	91
29) Bromodichloromethane	6.99	83	6996	0.44	PPB	80
30) 2-Chloroethyl Vinyl Ether	7.39	63	2307	0.46	PPB	85

(#) = qualifier out of range (m) = manual integration  
 1011F008.D 101110624.M Mon Oct 11 13:47:48 2010

*HB10.14.10*  
 Page 1

Data File : J:\MS23\DATA\101110\1011F008.D  
 Acq On : 11 Oct 2010 1:28 pm  
 Sample : 624 ICAL 0.5  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 13:46:43 2010

Vial: 4  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31) cis-1,3-Dichloropropene	7.52	75	7830	0.43	PPB	91
32) 4-Methyl-2-pentanone (MIBK)	8.62	58	25322	12.15	PPB	91
34) Toluene	7.82	92	16257	0.49	PPB	95
36) trans-1,3-Dichloropropene	8.17	75	6192	0.43	PPB	72
37) 1,1,2-Trichloroethane	8.36	83	3593	0.53	PPB	92
38) Tetrachloroethene	8.37	164	5838	0.46	PPB	92
39) 2-Hexanone	8.62	43	53852	13.75	PPB	98
40) Dibromochloromethane	8.74	129	3753	0.41	PPB	88
41) Chlorobenzene	9.34	112	18786	0.53	PPB	96
42) Ethylbenzene	9.44	106	8097	0.44	PPB	# 61
43) m,p-Xylenes	9.57	106	20818	0.92	PPB	84
44) o-Xylene	9.99	106	10174	0.47	PPB	# 70
45) Styrene	10.01	103	7198	0.45	PPB	96
46) Bromoform	10.22	173	1919	0.40	PPB	85
49) 1,1,2,2-Tetrachloroethane	10.75	83	3399	0.49	PPB	# 64
51) 1,3-Dichlorobenzene	11.65	146	13470	0.49	PPB	95
52) 1,4-Dichlorobenzene	11.75	146	14875	0.54	PPB	91
53) 1,2-Dichlorobenzene	12.12	146	12662	0.52	PPB	92

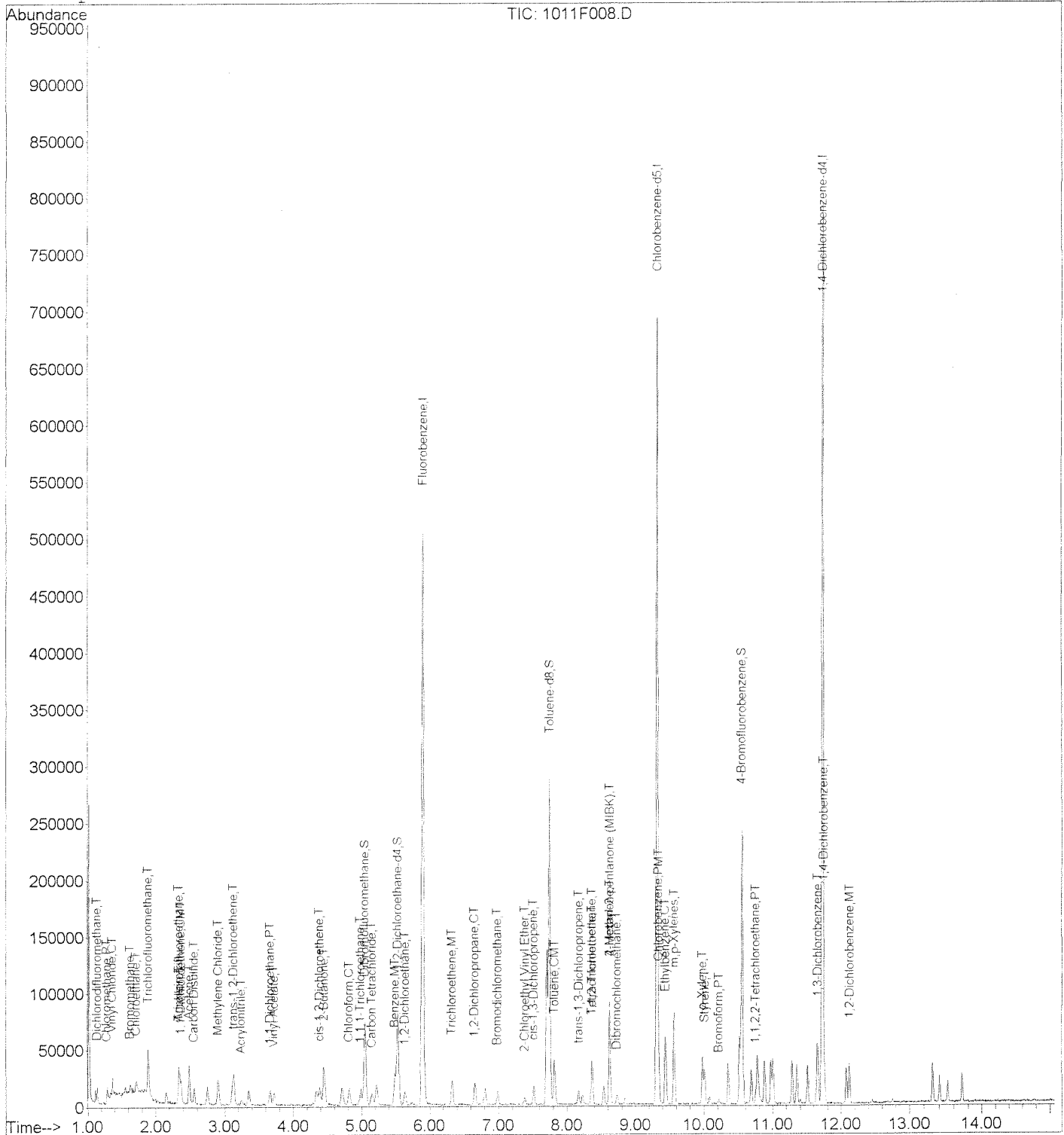
(#) = qualifier out of range (m) = manual integration  
 1011F008.D 101110624.M Mon Oct 11 13:47:49 2010

Data File : J:\MS23\DATA\101110\1011F008.D  
 Acq On : 11 Oct 2010 1:28 pm  
 Sample : 624 ICAL 0.5  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 13:46 2010

Vial: 4  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RE

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration



Data File : J:\MS23\DATA\101110\1011F009.D  
 Acq On : 11 Oct 2010 1:57 pm  
 Sample : 624 ICAL 1  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 14:19:32 2010

Vial: 5  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

*kn 10/11/10*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	5.90	96	472217	10.00	PPB	0.00
35) Chlorobenzene-d5	9.31	82	189920	10.00	PPB	0.00
48) 1,4-Dichlorobenzene-d4	11.72	152	207568	10.00	PPB	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
22) Dibromofluoromethane	5.05	113	79313	5.56	PPB	0.00
Spiked Amount	10.000		Recovery	=	55.60%	
24) 1,2-Dichloroethane-d4	5.53	65	110175	5.89	PPB	0.00
Spiked Amount	10.000		Recovery	=	58.90%	
33) Toluene-d8	7.74	98	300592	5.65	PPB	0.00
Spiked Amount	10.000		Recovery	=	56.50%	
47) 4-Bromofluorobenzene	10.55	95	109033	6.04	PPB	0.00
Spiked Amount	10.000		Recovery	=	60.40%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.13	85	22767	1.05	PPB	97
3) Chloromethane	1.28	50	14710	0.98	PPB	87
4) Vinyl Chloride	1.36	62	16174	0.98	PPB	91
5) Bromomethane	1.63	96	7896	1.01	PPB	83
6) Chloroethane	1.72	49	2909	1.03	PPB	91
7) Trichlorofluoromethane	1.89	101	28197	1.09	PPB	99
8) Acrolein	2.34	56	25297	22.33	PPB	96
9) Trichlorotrifluoroethane	2.34	151	13032	1.08	PPB	90
10) 1,1-Dichloroethene	2.36	96	11382	1.02	PPB	92
11) Acetone	2.48	43	152850	69.55	PPB	96
12) Carbon Disulfide	2.56	76	36206	1.00	PPB	92
13) Methylene Chloride	2.91	84	16260	1.31	PPB	98
14) Acrylonitrile	3.25	53	4622	1.92	PPB	92
15) trans-1,2-Dichloroethene	3.14	96	14098	1.03	PPB	88
16) 1,1-Dichloroethane	3.67	63	25665	1.06	PPB	95
17) Vinyl Acetate	3.72	86	3491	2.08	PPB	# 14
18) cis-1,2-Dichloroethene	4.39	96	14698	1.02	PPB	81
19) 2-Butanone	4.45	72	48840	66.90	PPB	92
20) Chloroform	4.82	83	25482	1.03	PPB	83
21) 1,1,1-Trichloroethane	4.99	97	22148	0.99	PPB	95
23) Carbon Tetrachloride	5.16	117	16379	0.92	PPB	87
25) Benzene	5.49	78	52612	1.04	PPB	98
26) 1,2-Dichloroethane	5.64	62	20283	1.00	PPB	91
27) Trichloroethene	6.33	95	15537	1.12	PPB	86
28) 1,2-Dichloropropane	6.66	63	12408	1.07	PPB	87
29) Bromodichloromethane	6.98	83	14708	0.91	PPB	89
30) 2-Chloroethyl Vinyl Ether	7.39	63	4667	0.92	PPB	90

(#) = qualifier out of range (m) = manual integration  
 1011F009.D 101110624.M Mon Oct 11 14:20:07 2010

*HB 10-14-10*  
 Page 1



Data File : J:\MS23\DATA\101110\1011F009.D  
 Acq On : 11 Oct 2010 1:57 pm  
 Sample : 624 ICAL 1  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 14:19:32 2010

Vial: 5  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31) cis-1,3-Dichloropropene	7.51	75	15758	0.85	PPB	89
32) 4-Methyl-2-pentanone (MIBK)	8.62	58	130330	61.61	PPB	93
34) Toluene	7.81	92	35288	1.05	PPB	94
36) trans-1,3-Dichloropropene	8.17	75	13479	0.94	PPB	82
37) 1,1,2-Trichloroethane	8.35	83	7425	1.09	PPB	94
38) Tetrachloroethene	8.37	164	14325	1.13	PPB	94
39) 2-Hexanone	8.62	43	266154	67.57	PPB	96
40) Dibromochloromethane	8.73	129	8434	0.92	PPB	90
41) Chlorobenzene	9.34	112	39160	1.10	PPB	98
42) Ethylbenzene	9.44	106	18904	1.02	PPB	89
43) m,p-Xylenes	9.57	106	46986	2.06	PPB	97
44) o-Xylene	9.98	106	21769	1.00	PPB	96
45) Styrene	10.01	103	14090	0.87	PPB	93
46) Bromoform	10.22	173	4173	0.86	PPB	85
49) 1,1,2,2-Tetrachloroethane	10.75	83	7407	1.04	PPB	92
51) 1,3-Dichlorobenzene	11.65	146	30348	1.09	PPB	95
52) 1,4-Dichlorobenzene	11.75	146	30224	1.07	PPB	97
53) 1,2-Dichlorobenzene	12.12	146	27083	1.10	PPB	87



Data File : J:\MS23\DATA\101110\1011F010.D  
 Acq On : 11 Oct 2010 2:26 pm  
 Sample : 624 ICAL 5  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 14:54:39 2010

Vial: 6  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

*KR 10/11/10*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	5.89	96	467291	10.00	PPB	0.00
35) Chlorobenzene-d5	9.31	82	188413	10.00	PPB	0.00
48) 1,4-Dichlorobenzene-d4	11.72	152	211883	10.00	PPB	0.00

System Monitoring Compounds

22) Dibromofluoromethane	5.05	113	108937	7.72	PPB	0.00
Spiked Amount	10.000		Recovery	=	77.20%	
24) 1,2-Dichloroethane-d4	5.53	65	141886	7.67	PPB	0.00
Spiked Amount	10.000		Recovery	=	76.70%	
33) Toluene-d8	7.74	98	407222	7.74	PPB	0.00
Spiked Amount	10.000		Recovery	=	77.40%	
47) 4-Bromofluorobenzene	10.55	95	146059	8.15	PPB	0.00
Spiked Amount	10.000		Recovery	=	81.50%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.14	85	105268	4.93	PPB	97
3) Chloromethane	1.28	50	70358	4.72	PPB	97
4) Vinyl Chloride	1.36	62	79537	4.86	PPB	94
5) Bromomethane	1.63	96	30820	3.99	PPB	97
6) Chloroethane	1.71	49	13744	4.89	PPB	# 81
7) Trichlorofluoromethane	1.89	101	128502	5.02	PPB	97
8) Acrolein	2.34	56	116263	103.73	PPB	97
9) Trichlorotrifluoroethane	2.34	151	60718	5.07	PPB	90
10) 1,1-Dichloroethene	2.37	96	53586	4.87	PPB	89
11) Acetone	2.48	43	462541	212.68	PPB	94
12) Carbon Disulfide	2.56	76	169967	4.72	PPB	100
13) Methylene Chloride	2.90	84	58412	4.77	PPB	98
14) Acrylonitrile	3.25	53	21713	9.13	PPB	95
15) trans-1,2-Dichloroethene	3.14	96	64838	4.79	PPB	95
16) 1,1-Dichloroethane	3.66	63	112039	4.68	PPB	96
17) Vinyl Acetate	3.72	86	15592	9.39	PPB	95
18) cis-1,2-Dichloroethene	4.39	96	67772	4.74	PPB	90
19) 2-Butanone	4.44	72	149070	206.33	PPB	98
20) Chloroform	4.82	83	116498	4.74	PPB	95
21) 1,1,1-Trichloroethane	4.98	97	107510	4.83	PPB	96
23) Carbon Tetrachloride	5.16	117	82438	4.66	PPB	98
25) Benzene	5.49	78	241371	4.82	PPB	98
26) 1,2-Dichloroethane	5.64	62	97834	4.86	PPB	96
27) Trichloroethene	6.33	95	66990	4.86	PPB	96
28) 1,2-Dichloropropane	6.66	63	54626	4.77	PPB	88
29) Bromodichloromethane	6.99	83	70463	4.41	PPB	94
30) 2-Chloroethyl Vinyl Ether	7.38	63	23390	4.65	PPB	95

(#) = qualifier out of range (m) = manual integration  
 1011F010.D 101110624.M Mon Oct 11 14:55:21 2010

*HB10-14-10*  
 Page 1

Data File : J:\MS23\DATA\101110\1011F010.D  
 Acq On : 11 Oct 2010 2:26 pm  
 Sample : 624 ICAL 5  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 14:54:39 2010

Vial: 6  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31) cis-1,3-Dichloropropene	7.51	75	81434	4.46	PPB	90
32) 4-Methyl-2-pentanone (MIBK)	8.62	58	445632	212.88	PPB	90
34) Toluene	7.81	92	159217	4.78	PPB	94
36) trans-1,3-Dichloropropene	8.17	75	66273	4.66	PPB	90
37) 1,1,2-Trichloroethane	8.36	83	33318	4.93	PPB	98
38) Tetrachloroethene	8.37	164	65288	5.19	PPB	96
39) 2-Hexanone	8.62	43	908649	232.51	PPB	99
40) Dibromochloromethane	8.73	129	43179	4.76	PPB	94
41) Chlorobenzene	9.34	112	182641	5.16	PPB	97
42) Ethylbenzene	9.44	106	95528	5.18	PPB	100
43) m,p-Xylenes	9.57	106	236399	10.47	PPB	96
44) o-Xylene	9.98	106	108930	5.04	PPB	99
45) Styrene	10.01	103	81770m	5.10	PPB	
46) Bromoform	10.22	173	21397	4.47	PPB	97
49) 1,1,2,2-Tetrachloroethane	10.75	83	37295	5.13	PPB	97
51) 1,3-Dichlorobenzene	11.64	146	148279	5.23	PPB	97
52) 1,4-Dichlorobenzene	11.75	146	152155	5.27	PPB	97
53) 1,2-Dichlorobenzene	12.12	146	134142	5.33	PPB	95

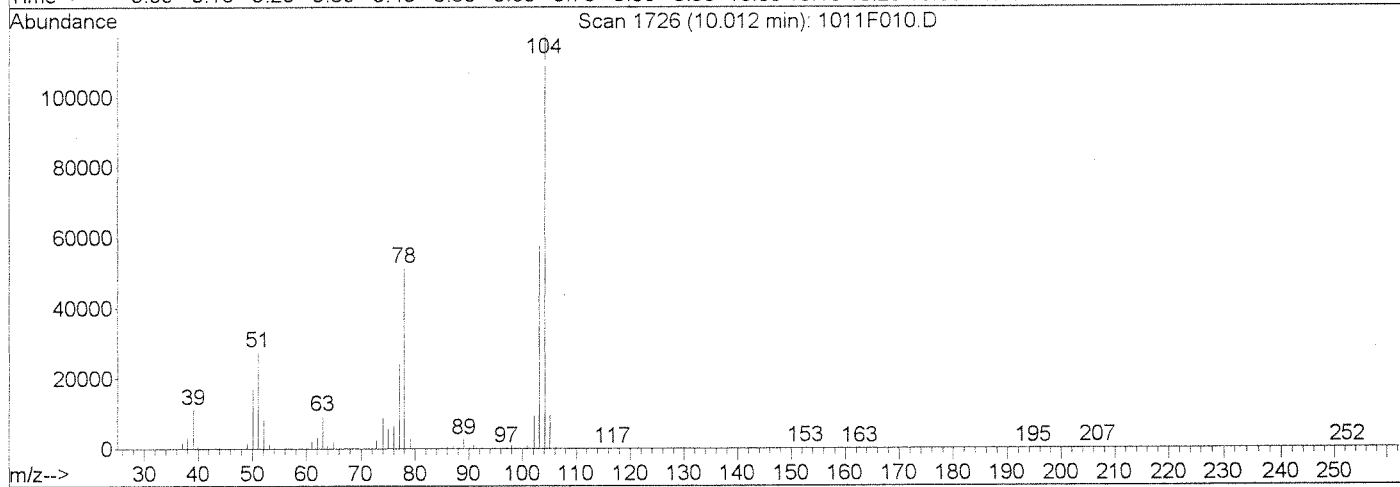
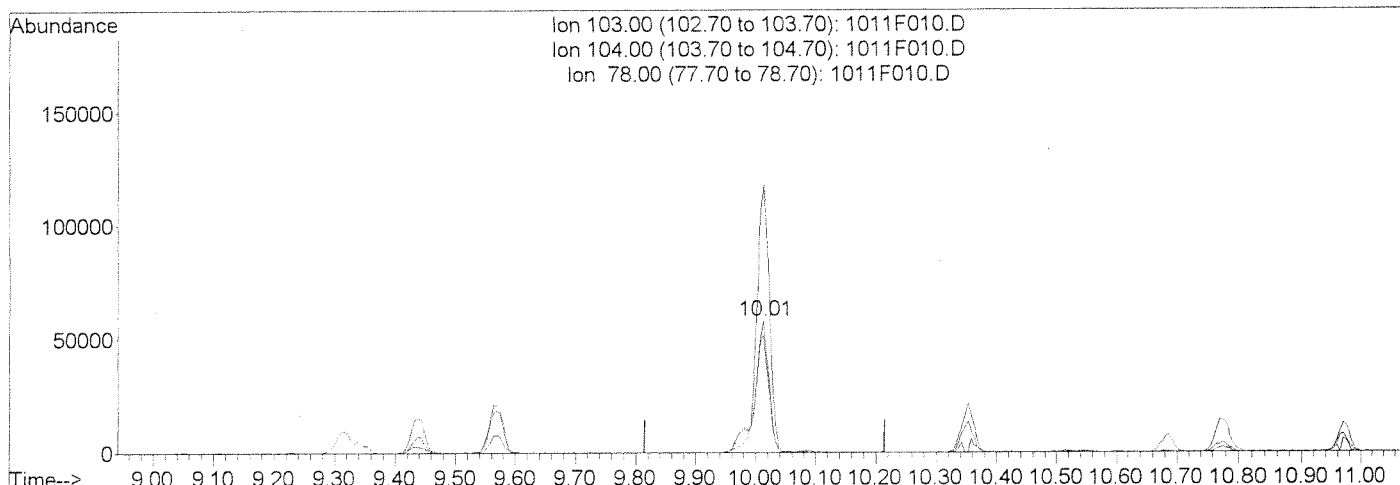
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101110\1011F010.D  
 Acq On : 11 Oct 2010 2:26 pm  
 Sample : 624 ICAL 5  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 14:54 2010

Vial: 6  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Multiple Level Calibration



TIC: 1011F010.D

(45) Styrene (T)  
 10.01min 5.95PPB  
 response 95399

Ion	Exp%	Act%
103.00	100	100
104.00	210.20	205.43
78.00	91.20	89.16
0.00	0.00	0.00

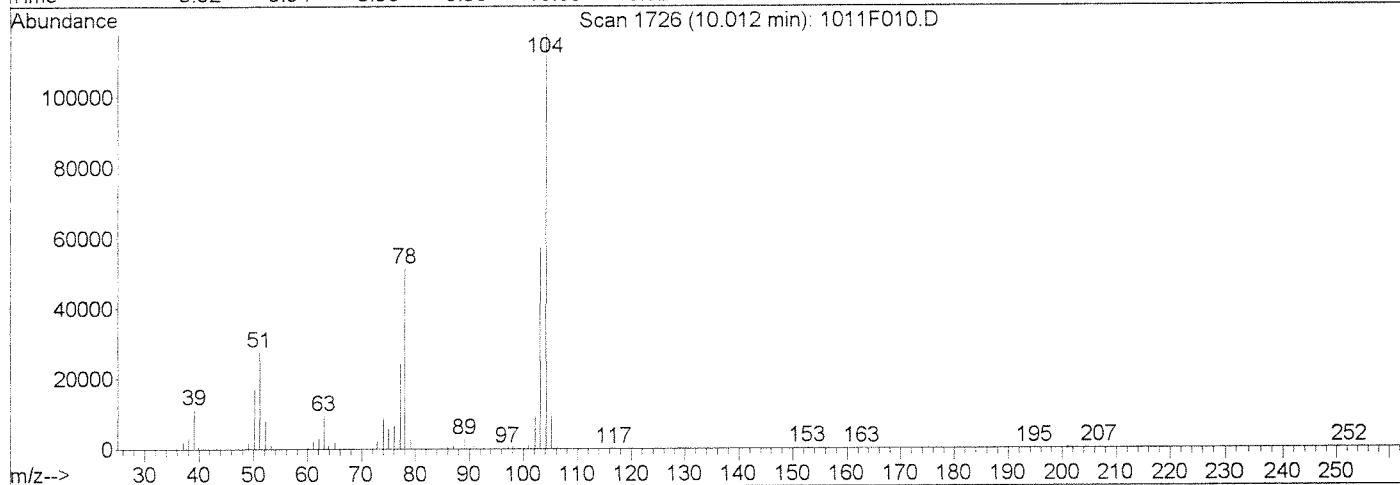
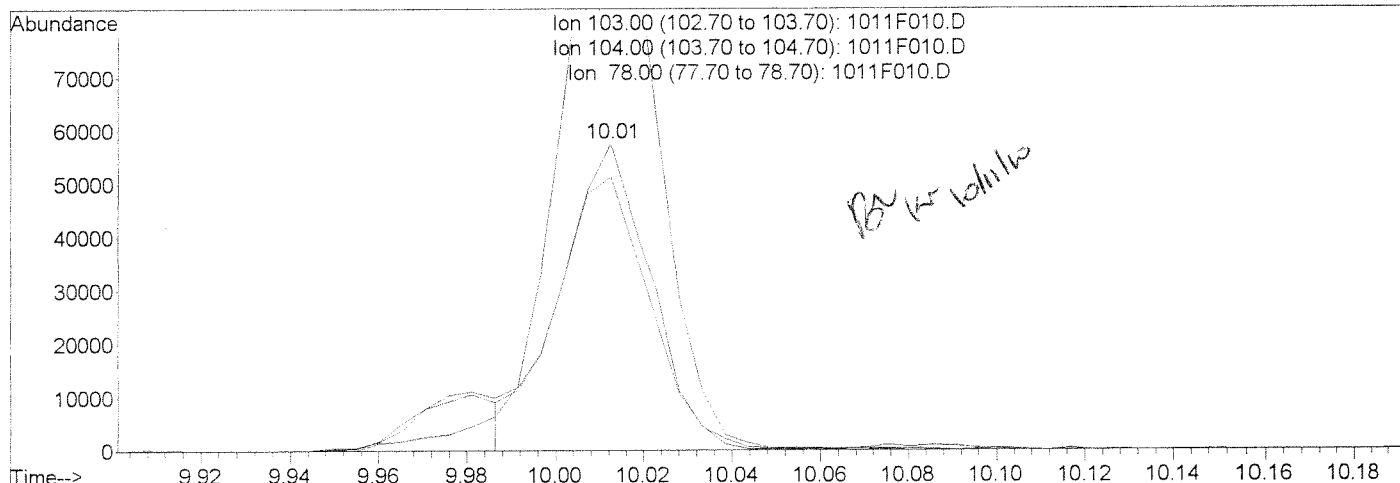
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101110\1011F010.D  
 Acq On : 11 Oct 2010 2:26 pm  
 Sample : 624 ICAL 5  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 14:55 2010

Vial: 6  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Multiple Level Calibration



TIC: 1011F010.D

(45) Styrene (T)  
 10.01min 5.10PPB m  
 response 81770

Ion	Exp%	Act%
103.00	100	100
104.00	210.20	205.43
78.00	91.20	89.16
0.00	0.00	0.00

HB 10.14.10

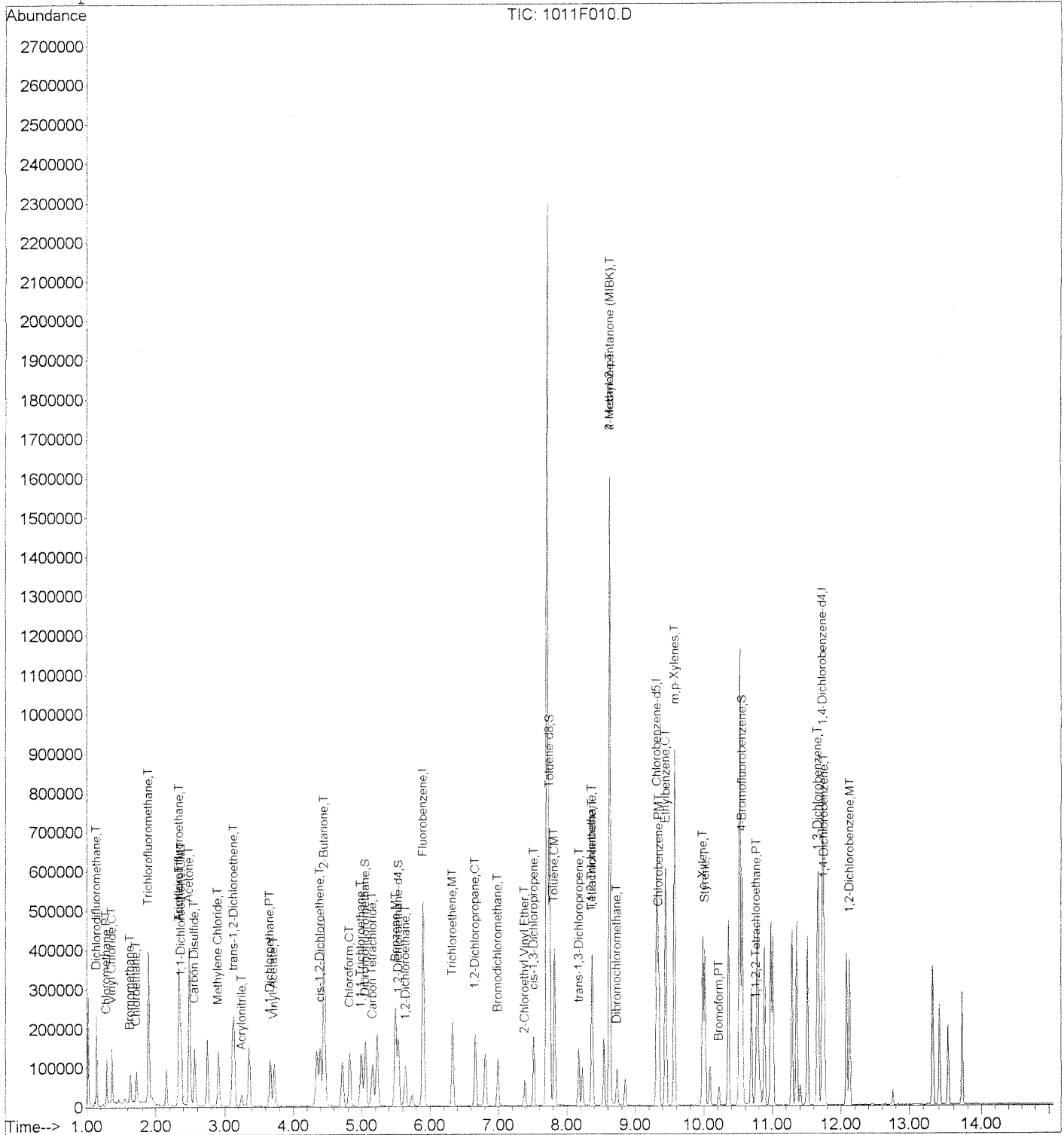
Quantitation Report (QT Reviewed)

Data File : J:\MS23\DATA\101110\1011F010.D  
 Acq On : 11 Oct 2010 2:26 pm  
 Sample : 624 ICAL 5  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 14:55 2010

Vial: 6  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RE

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration



Data File : J:\MS23\DATA\101110\1011F011.D  
 Acq On : 11 Oct 2010 2:54 pm  
 Sample : 624 ICAL 10  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 16:09:45 2010

Vial: 7  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

*for p/11/10*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	5.90	96	471913	10.00	PPB	0.00
35) Chlorobenzene-d5	9.31	82	194845	10.00	PPB	0.00
48) 1,4-Dichlorobenzene-d4	11.73	152	213999	10.00	PPB	0.00

System Monitoring Compounds

22) Dibromofluoromethane	5.05	113	138034	9.69	PPB	0.00
Spiked Amount	10.000		Recovery	=	96.90%	
24) 1,2-Dichloroethane-d4	5.53	65	183395	9.81	PPB	0.00
Spiked Amount	10.000		Recovery	=	98.10%	
33) Toluene-d8	7.74	98	520946	9.81	PPB	0.00
Spiked Amount	10.000		Recovery	=	98.10%	
47) 4-Bromofluorobenzene	10.55	95	194412	10.49	PPB	0.00
Spiked Amount	10.000		Recovery	=	104.90%	

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.14	85	221027	10.24	PPB	99
3) Chloromethane	1.28	50	147284	9.78	PPB	96
4) Vinyl Chloride	1.36	62	163324	9.87	PPB	99
5) Bromomethane	1.63	96	69938	8.97	PPB	98
6) Chloroethane	1.71	49	27937	9.85	PPB	92
7) Trichlorofluoromethane	1.89	101	274005	10.60	PPB	96
8) Acrolein	2.34	56	242671	214.39	PPB	99
9) Trichlorotrifluoroethane	2.34	151	123707	10.22	PPB	90
10) 1,1-Dichloroethene	2.37	96	112324	10.11	PPB	96
11) Acetone	2.48	43	864643	393.67	PPB	92
12) Carbon Disulfide	2.56	76	359837	9.90	PPB	99
13) Methylene Chloride	2.91	84	121277	9.80	PPB	93
14) Acrylonitrile	3.25	53	47558	19.79	PPB	93
15) trans-1,2-Dichloroethene	3.14	96	134594	9.84	PPB	95
16) 1,1-Dichloroethane	3.66	63	241959	10.01	PPB	99
17) Vinyl Acetate	3.72	86	34567	20.61	PPB	# 91
18) cis-1,2-Dichloroethene	4.39	96	147991	10.26	PPB	95
19) 2-Butanone	4.44	72	290077	397.57	PPB	93
20) Chloroform	4.82	83	254097	10.23	PPB	95
21) 1,1,1-Trichloroethane	4.99	97	230267	10.25	PPB	91
23) Carbon Tetrachloride	5.16	117	182562	10.21	PPB	99
25) Benzene	5.49	78	507085	10.03	PPB	99
26) 1,2-Dichloroethane	5.64	62	202134	9.93	PPB	98
27) Trichloroethene	6.33	95	146343	10.51	PPB	99
28) 1,2-Dichloropropane	6.66	63	118859	10.29	PPB	89
29) Bromodichloromethane	6.99	83	162614	10.08	PPB	99
30) 2-Chloroethyl Vinyl Ether	7.38	63	55011	10.83	PPB	95

(#) = qualifier out of range (m) = manual integration  
 1011F011.D 101110624.M Mon Oct 11 16:40:25 2010

*HB 10.14.10*  
 Page 1



Data File : J:\MS23\DATA\101110\1011F011.D  
 Acq On : 11 Oct 2010 2:54 pm  
 Sample : 624 ICAL 10  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 16:09:45 2010

Vial: 7  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31) cis-1,3-Dichloropropene	7.51	75	188290	10.22	PPB	93
32) 4-Methyl-2-pentanone (MIBK)	8.62	58	864900	409.12	PPB	91
34) Toluene	7.81	92	342805	10.19	PPB	99
36) trans-1,3-Dichloropropene	8.17	75	155535	10.58	PPB	92
37) 1,1,2-Trichloroethane	8.35	83	74189	10.61	PPB	93
38) Tetrachloroethene	8.37	164	140693	10.82	PPB	97
39) 2-Hexanone	8.62	43	1777233	439.76	PPB	99
40) Dibromochloromethane	8.73	129	100702	10.73	PPB	96
41) Chlorobenzene	9.34	112	382946	10.46	PPB	98
42) Ethylbenzene	9.44	106	205332	10.77	PPB	98
43) m,p-Xylenes	9.57	106	515338	22.06	PPB	99
44) o-Xylene	9.98	106	242297	10.84	PPB	99
45) Styrene	10.01	103	187057m	11.28	PPB	
46) Bromoform	10.22	173	50083	10.11	PPB	95
49) 1,1,2,2-Tetrachloroethane	10.75	83	79997	10.90	PPB	91
51) 1,3-Dichlorobenzene	11.65	146	321391	11.21	PPB	97
52) 1,4-Dichlorobenzene	11.75	146	323339	11.08	PPB	96
53) 1,2-Dichlorobenzene	12.12	146	290281	11.42	PPB	96

(#) = qualifier out of range (m) = manual integration  
 1011F011.D 101110624.M Mon Oct 11 16:40:25 2010

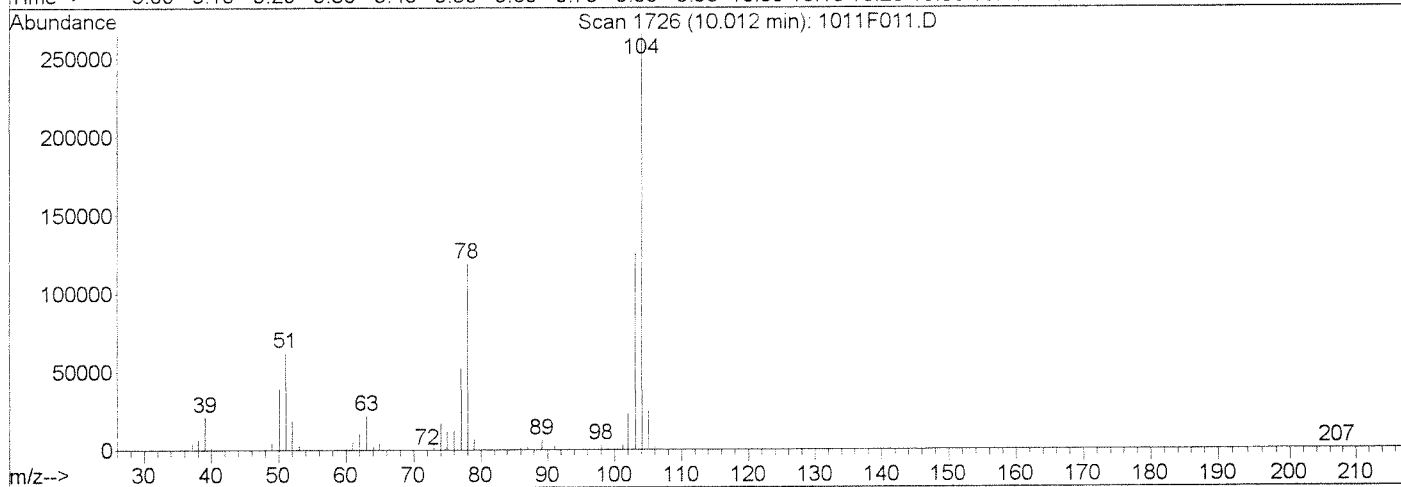
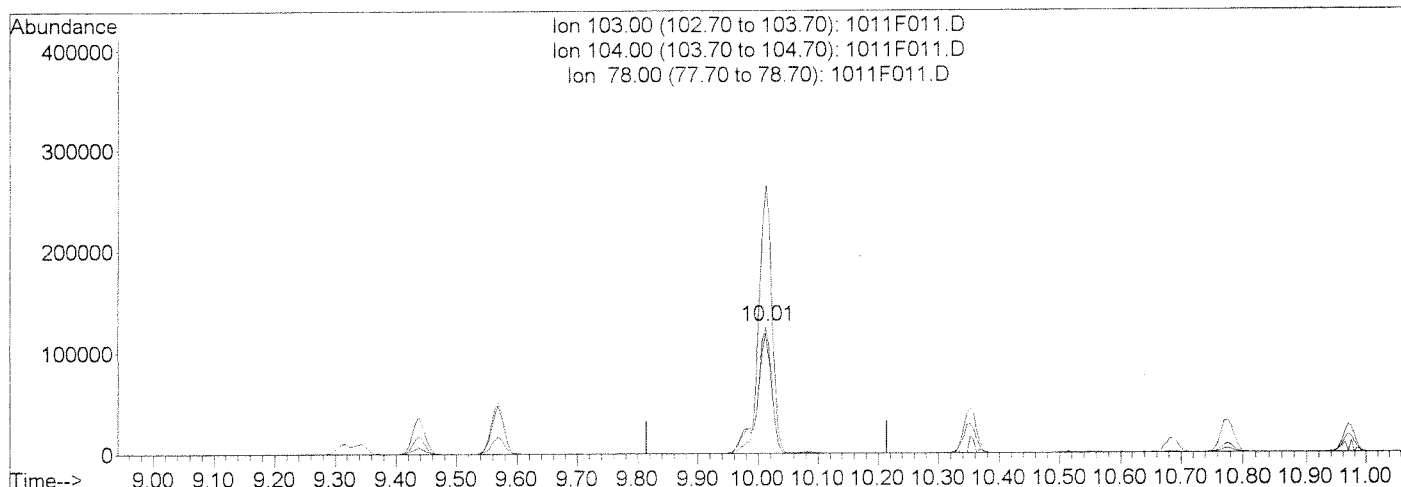
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101110\1011F011.D  
Acq On : 11 Oct 2010 2:54 pm  
Sample : 624 ICAL 10  
Misc :  
MS Integration Params: rteint.p  
Quant Time: Oct 11 16:09 2010

Vial: 7  
Operator: KR  
Inst : MS23  
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
Title : VOA MS23 EPA Method 624  
Last Update : Mon Oct 11 12:20:44 2010  
Response via : Multiple Level Calibration



TIC: 1011F011.D

(45) Styrene (T)  
10.01min 12.97PPB  
response 215092

Ion	Exp%	Act%
103.00	100	100
104.00	210.20	211.57
78.00	91.20	95.04
0.00	0.00	0.00

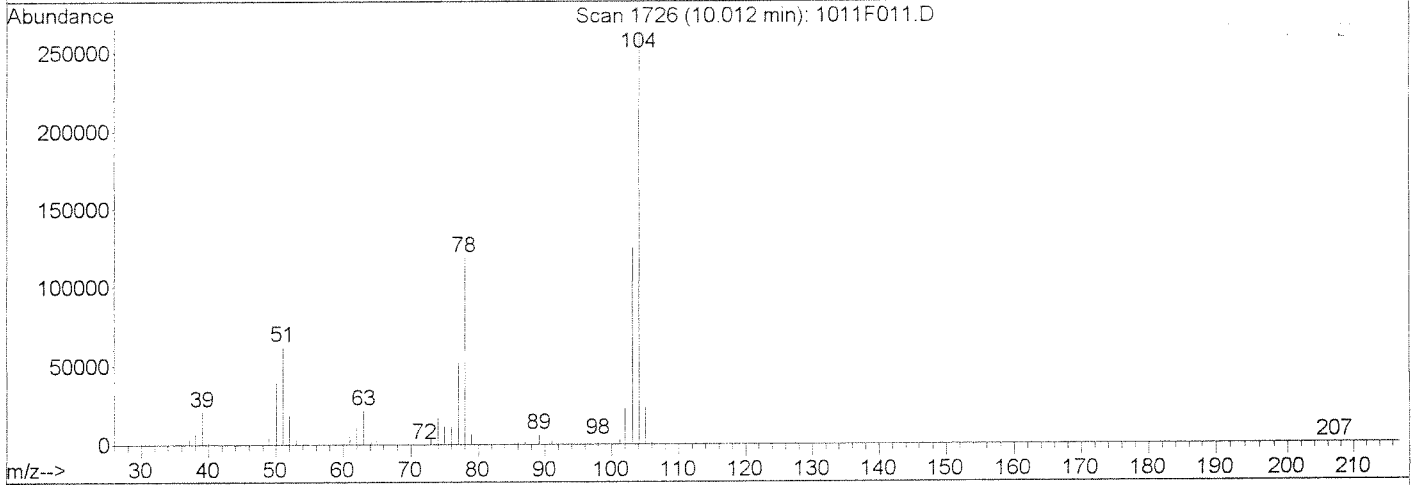
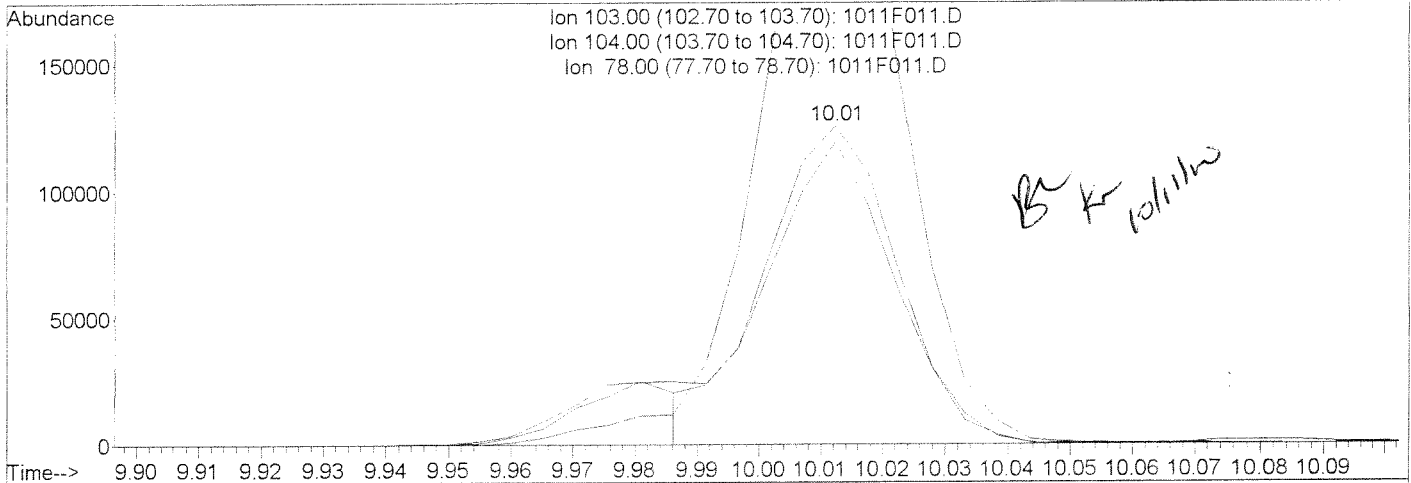
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101110\1011F011.D  
Acq On : 11 Oct 2010 2:54 pm  
Sample : 624 ICAL 10  
Misc :  
MS Integration Params: rteint.p  
Quant Time: Oct 11 16:40 2010

Vial: 7  
Operator: KR  
Inst : MS23  
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
Title : VOA MS23 EPA Method 624  
Last Update : Mon Oct 11 12:20:44 2010  
Response via : Multiple Level Calibration



TIC: 1011F011.D

(45) Styrene (T)  
10.01min 11.28PPB m  
response 187057

Ion	Exp%	Act%
103.00	100	100
104.00	210.20	211.57
78.00	91.20	95.04
0.00	0.00	0.00

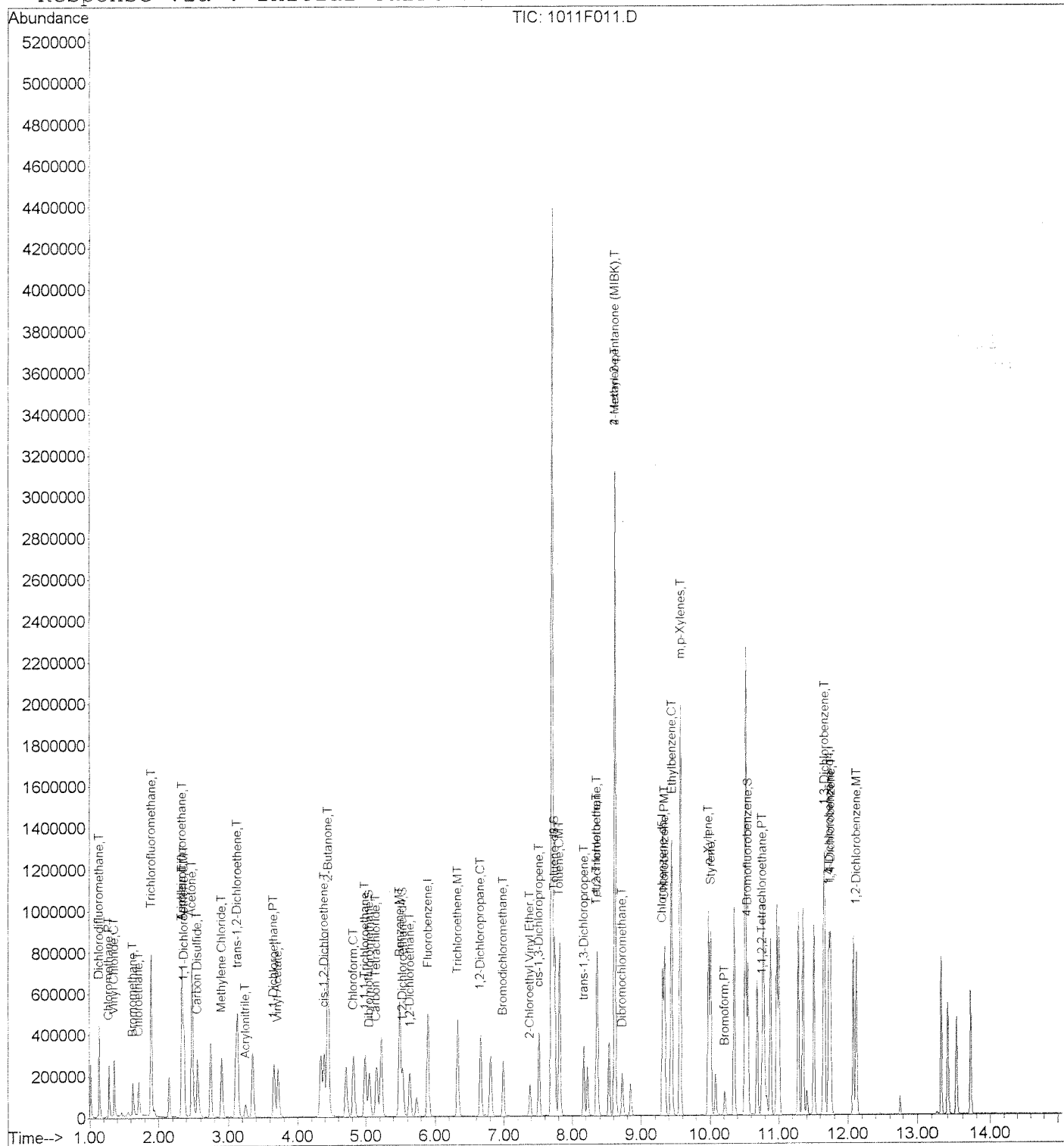
HB 10.14.10

Data File : J:\MS23\DATA\101110\1011F011.D  
 Acq On : 11 Oct 2010 2:54 pm  
 Sample : 624 ICAL 10  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 16:40 2010

Vial: 7  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RE

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration



Data File : J:\MS23\DATA\101110\1011F012.D  
 Acq On : 11 Oct 2010 3:23 pm  
 Sample : 624 ICAL 40  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 16:40:38 2010

Vial: 8  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

*Kr 10/11/10*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	5.89	96	488528	10.00	PPB	0.00
35) Chlorobenzene-d5	9.31	82	198338	10.00	PPB	0.00
48) 1,4-Dichlorobenzene-d4	11.72	152	222513	10.00	PPB	0.00

System Monitoring Compounds

22) Dibromofluoromethane	5.05	113	301726	20.46	PPB	0.00
Spiked Amount	10.000		Recovery	=	204.60%	
24) 1,2-Dichloroethane-d4	5.53	65	389584	20.13	PPB	0.00
Spiked Amount	10.000		Recovery	=	201.30%	
33) Toluene-d8	7.74	98	1134726	20.63	PPB	0.00
Spiked Amount	10.000		Recovery	=	206.30%	
47) 4-Bromofluorobenzene	10.55	95	418309	22.18	PPB	0.00
Spiked Amount	10.000		Recovery	=	221.80%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.14	85	907491	40.62	PPB	97
3) Chloromethane	1.28	50	641351	41.12	PPB	99
4) Vinyl Chloride	1.36	62	707637	41.32	PPB	98
5) Bromomethane	1.63	96	345233	42.78	PPB	98
6) Chloroethane	1.71	49	114972	39.16	PPB	91
7) Trichlorofluoromethane	1.89	101	1118483	41.78	PPB	99
8) Acrolein	2.34	56	965172	823.69	PPB	99
9) Trichlorotrifluoroethane	2.34	151	513933	41.03	PPB	96
10) 1,1-Dichloroethene	2.37	96	461184	40.10	PPB	93
11) Acetone	2.48	43	1844937	811.42	PPB	95
12) Carbon Disulfide	2.56	76	1519755	40.38	PPB	100
13) Methylene Chloride	2.90	84	491586	38.36	PPB	98
14) Acrylonitrile	3.25	53	194904	78.35	PPB	94
15) trans-1,2-Dichloroethene	3.13	96	566217	39.98	PPB	97
16) 1,1-Dichloroethane	3.66	63	1028297	41.10	PPB	99
17) Vinyl Acetate	3.72	86	157417	90.65	PPB	# 86
18) cis-1,2-Dichloroethene	4.39	96	614065	41.11	PPB	97
19) 2-Butanone	4.45	72	628184	831.68	PPB	96
20) Chloroform	4.82	83	1059093	41.20	PPB	96
21) 1,1,1-Trichloroethane	4.99	97	1003278	43.14	PPB	95
23) Carbon Tetrachloride	5.16	117	827823	44.74	PPB	98
25) Benzene	5.49	78	2143612	40.97	PPB	98
26) 1,2-Dichloroethane	5.63	62	847365	40.23	PPB	96
27) Trichloroethene	6.33	95	595136	41.30	PPB	97
28) 1,2-Dichloropropane	6.66	63	500458	41.84	PPB	91
29) Bromodichloromethane	6.99	83	730225	43.73	PPB	99
30) 2-Chloroethyl Vinyl Ether	7.38	63	249237	47.42	PPB	99

(#) = qualifier out of range (m) = manual integration  
 1011F012.D 101110624.M Mon Oct 11 16:42:58 2010

*HB 10-14-10*  
 Page 1

Data File : J:\MS23\DATA\101110\1011F012.D  
 Acq On : 11 Oct 2010 3:23 pm  
 Sample : 624 ICAL 40  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 16:40:38 2010

Vial: 8  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31) cis-1,3-Dichloropropene	7.51	75	849515	44.55	PPB	94
32) 4-Methyl-2-pentanone (MIBK)	8.62	58	1903710	869.88	PPB	96
34) Toluene	7.81	92	1431743	41.11	PPB	97
36) trans-1,3-Dichloropropene	8.17	75	733110	48.99	PPB	94
37) 1,1,2-Trichloroethane	8.36	83	306915	43.12	PPB	97
38) Tetrachloroethene	8.37	164	592582	44.79	PPB	97
39) 2-Hexanone	8.62	43	3847007	935.14	PPB	98
40) Dibromochloromethane	8.73	129	470830	49.29	PPB	99
41) Chlorobenzene	9.34	112	1620309	43.50	PPB	98
42) Ethylbenzene	9.44	106	875135	45.11	PPB	98
43) m,p-Xylenes	9.57	106	2184926	91.89	PPB	99
44) o-Xylene	9.98	106	1046650	45.98	PPB	99
45) Styrene	10.01	103	819125m	48.52	PPB	
46) Bromoform	10.22	173	260695	51.72	PPB	99
49) 1,1,2,2-Tetrachloroethane	10.75	83	348723	45.71	PPB	97
51) 1,3-Dichlorobenzene	11.64	146	1344402	45.11	PPB	99
52) 1,4-Dichlorobenzene	11.75	146	1350058	44.51	PPB	98
53) 1,2-Dichlorobenzene	12.12	146	1208483	45.71	PPB	99

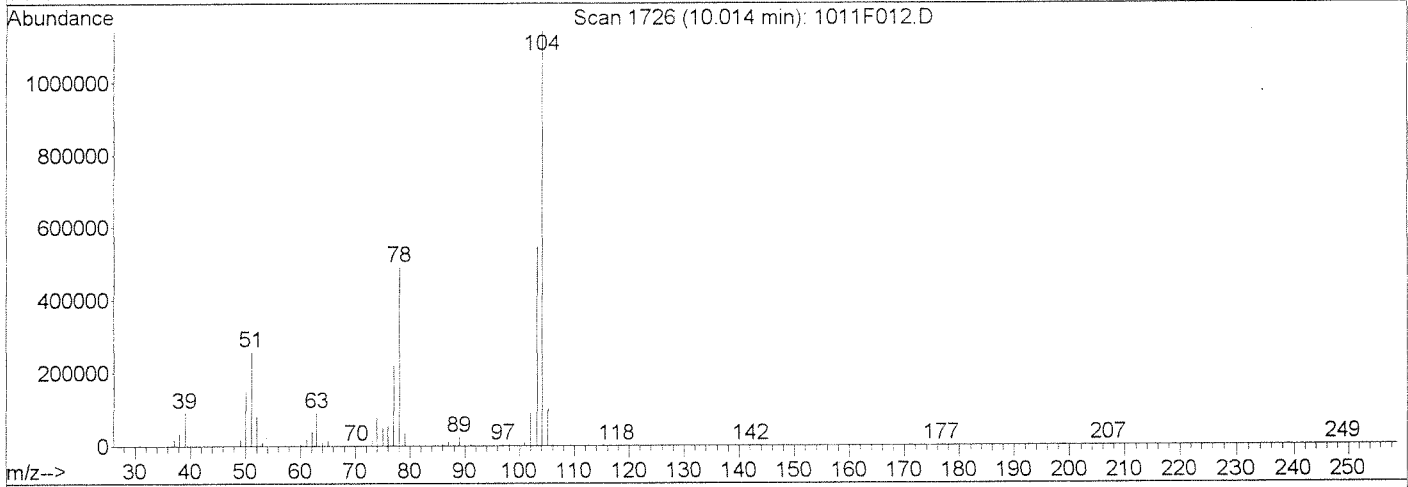
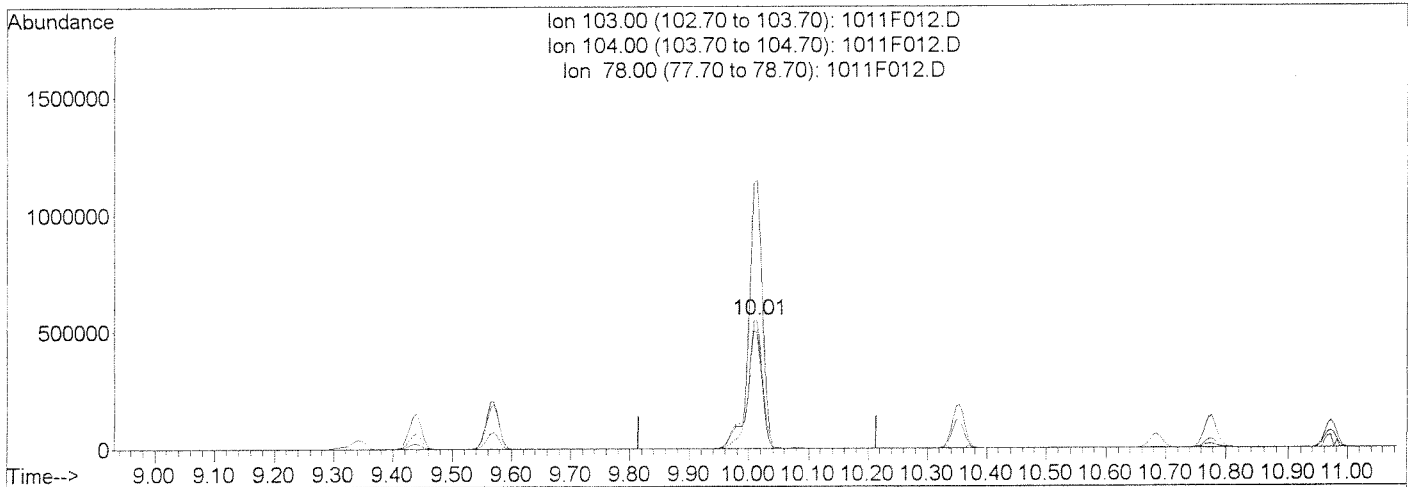
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101110\1011F012.D  
 Acq On : 11 Oct 2010 3:23 pm  
 Sample : 624 ICAL 40  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 16:40 2010

Vial: 8  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Multiple Level Calibration



TIC: 1011F012.D

(45) Styrene (T)

10.01min 56.21PPB

response 948959

Ion	Exp%	Act%
103.00	100	100
104.00	210.20	209.34
78.00	91.20	89.85
0.00	0.00	0.00

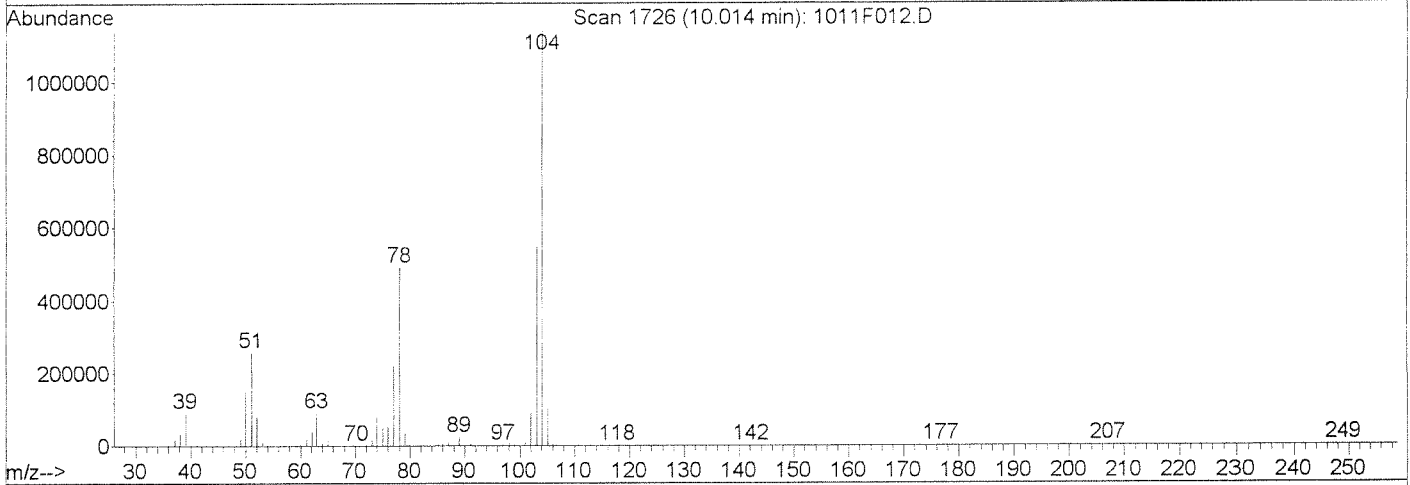
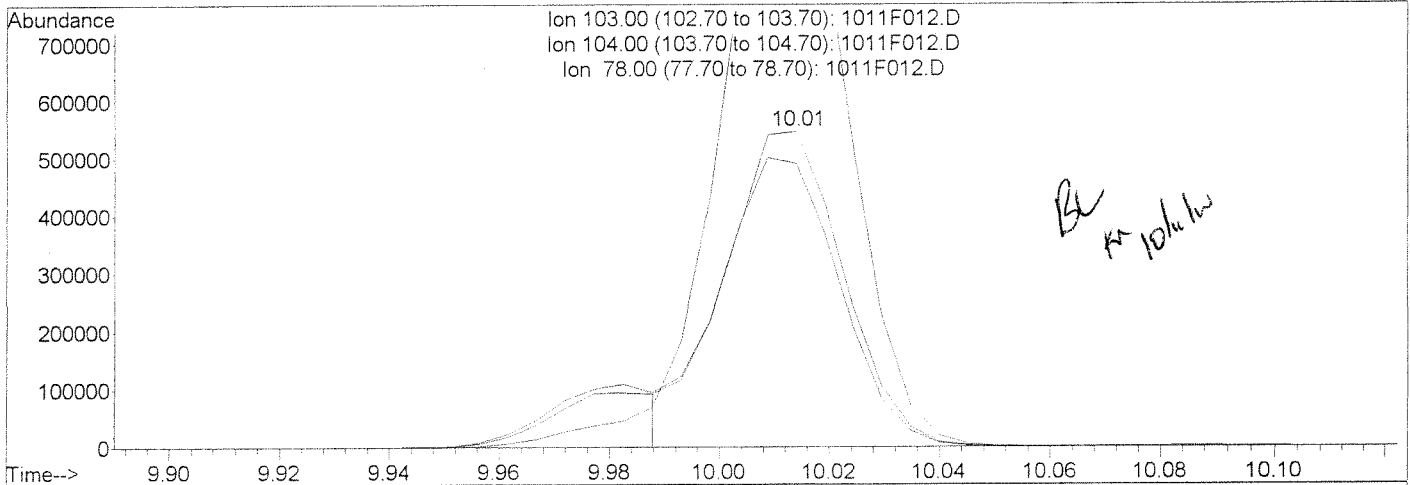
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101110\1011F012.D  
Acq On : 11 Oct 2010 3:23 pm  
Sample : 624 ICAL 40  
Misc :  
MS Integration Params: rteint.p  
Quant Time: Oct 11 16:42 2010

Vial: 8  
Operator: KR  
Inst : MS23  
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
Title : VOA MS23 EPA Method 624  
Last Update : Mon Oct 11 12:20:44 2010  
Response via : Multiple Level Calibration



TIC: 1011F012.D

(45) Styrene (T)		
10.01min	48.52PPB m	
response	819125	
Ion	Exp%	Act%
103.00	100	100
104.00	210.20	209.34
78.00	91.20	89.85
0.00	0.00	0.00

Handwritten note: 10/14/10

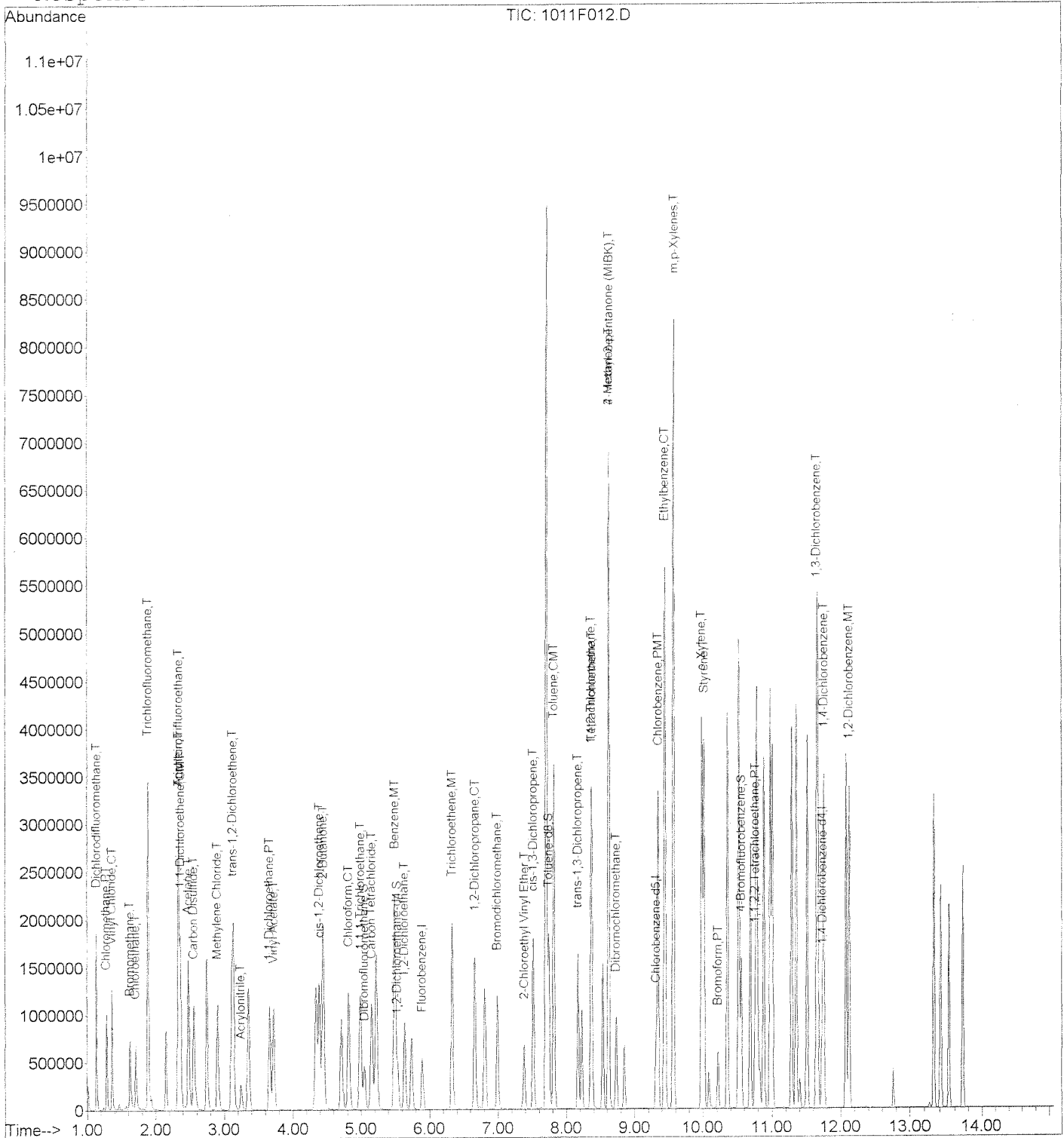


Data File : J:\MS23\DATA\101110\1011F012.D
Acq On : 11 Oct 2010 3:23 pm
Sample : 624 ICAL 40
Misc :
MS Integration Params: rteint.p
Quant Time: Oct 11 16:42 2010

Vial: 8
Operator: KR
Inst : MS23
Multiplr: 1.00

Quant Results File: 101110624.RE

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)
Title : VOA MS23 EPA Method 624
Last Update : Mon Oct 11 12:20:44 2010
Response via : Initial Calibration



Data File : J:\MS23\DATA\101110\1011F013.D  
 Acq On : 11 Oct 2010 3:52 pm  
 Sample : 624 ICAL 80  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 16:43:08 2010

Vial: 9  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

*KR 10/11/10*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	5.89	96	507887	10.00	PPB	0.00
35) Chlorobenzene-d5	9.31	82	204954	10.00	PPB	0.00
48) 1,4-Dichlorobenzene-d4	11.72	152	229329	10.00	PPB	0.00

System Monitoring Compounds

22) Dibromofluoromethane	5.05	113	621255	40.51	PPB	0.00
Spiked Amount	10.000		Recovery	=	405.10%	
24) 1,2-Dichloroethane-d4	5.53	65	778747	38.71	PPB	0.00
Spiked Amount	10.000		Recovery	=	387.10%	
33) Toluene-d8	7.74	98	2273304	39.76	PPB	0.00
Spiked Amount	10.000		Recovery	=	397.60%	
47) 4-Bromofluorobenzene	10.55	95	841681	43.19	PPB	0.00
Spiked Amount	10.000		Recovery	=	431.90%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.13	85	1877642	80.85	PPB	97
3) Chloromethane	1.28	50	1403931	86.59	PPB	99
4) Vinyl Chloride	1.36	62	1499577	84.23	PPB	98
5) Bromomethane	1.62	96	740888	88.31	PPB	96
6) Chloroethane	1.71	49	244774	80.20	PPB	91
7) Trichlorofluoromethane	1.89	101	2281456	81.98	PPB	98
8) Acrolein	2.34	56	1977651	1623.42	PPB	97
9) Trichlorotrifluoroethane	2.34	151	1106510	84.96	PPB	98
10) 1,1-Dichloroethene	2.36	96	1000205	83.66	PPB	94
11) Acetone	2.48	43	3765249	1592.88	PPB	95
12) Carbon Disulfide	2.56	76	3269591	83.56	PPB	99
13) Methylene Chloride	2.91	84	1050813	78.88	PPB	97
14) Acrylonitrile	3.25	53	422255	163.28	PPB	94
15) trans-1,2-Dichloroethene	3.14	96	1204563	81.81	PPB	97
16) 1,1-Dichloroethane	3.66	63	2197226	84.48	PPB	99
17) Vinyl Acetate	3.72	86	339284	187.93	PPB	98
18) cis-1,2-Dichloroethene	4.39	96	1322198	85.14	PPB	97
19) 2-Butanone	4.44	72	1312888	1671.95	PPB	98
20) Chloroform	4.82	83	2264311	84.73	PPB	96
21) 1,1,1-Trichloroethane	4.99	97	2185642	90.41	PPB	94
23) Carbon Tetrachloride	5.16	117	1816083	94.41	PPB	98
25) Benzene	5.49	78	4568283	83.97	PPB	98
26) 1,2-Dichloroethane	5.64	62	1794306	81.94	PPB	98
27) Trichloroethene	6.33	95	1275142	85.11	PPB	99
28) 1,2-Dichloropropane	6.66	63	1086303	87.36	PPB	92
29) Bromodichloromethane	6.99	83	1607144	92.58	PPB	99
30) 2-Chloroethyl Vinyl Ether	7.38	63	551500	100.92	PPB	98

(#) = qualifier out of range (m) = manual integration  
 1011F013.D 101110624.M Mon Oct 11 16:43:50 2010

*HB10-14-10*  
 Page 1

Data File : J:\MS23\DATA\101110\1011F013.D  
 Acq On : 11 Oct 2010 3:52 pm  
 Sample : 624 ICAL 80  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 16:43:08 2010

Vial: 9  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31) cis-1,3-Dichloropropene	7.51	75	1883278	95.00	PPB	94
32) 4-Methyl-2-pentanone (MIBK)	8.62	58	3953512	1737.67	PPB	99
34) Toluene	7.82	92	3090701	85.36	PPB	99
36) trans-1,3-Dichloropropene	8.17	75	1626928	105.20	PPB	94
37) 1,1,2-Trichloroethane	8.35	83	650149	88.39	PPB	94
38) Tetrachloroethene	8.37	164	1248595	91.33	PPB	97
39) 2-Hexanone	8.62	43	7768179	1827.36	PPB	96
40) Dibromochloromethane	8.73	129	1056932	107.08	PPB	98
41) Chlorobenzene	9.34	112	3427146	89.03	PPB	99
42) Ethylbenzene	9.44	106	1895715	94.55	PPB	93
43) m,p-Xylenes	9.57	106	4675301	190.28	PPB	96
44) o-Xylene	9.98	106	2260052	96.08	PPB	98
45) Styrene	10.01	103	1720964m	98.65	PPB	
46) Bromoform	10.22	173	599032	115.00	PPB	98
49) 1,1,2,2-Tetrachloroethane	10.75	83	729928	92.84	PPB	97
51) 1,3-Dichlorobenzene	11.65	146	2849529	92.78	PPB	98
52) 1,4-Dichlorobenzene	11.75	146	2831612	90.57	PPB	98
53) 1,2-Dichlorobenzene	12.12	146	2522655	92.59	PPB	98

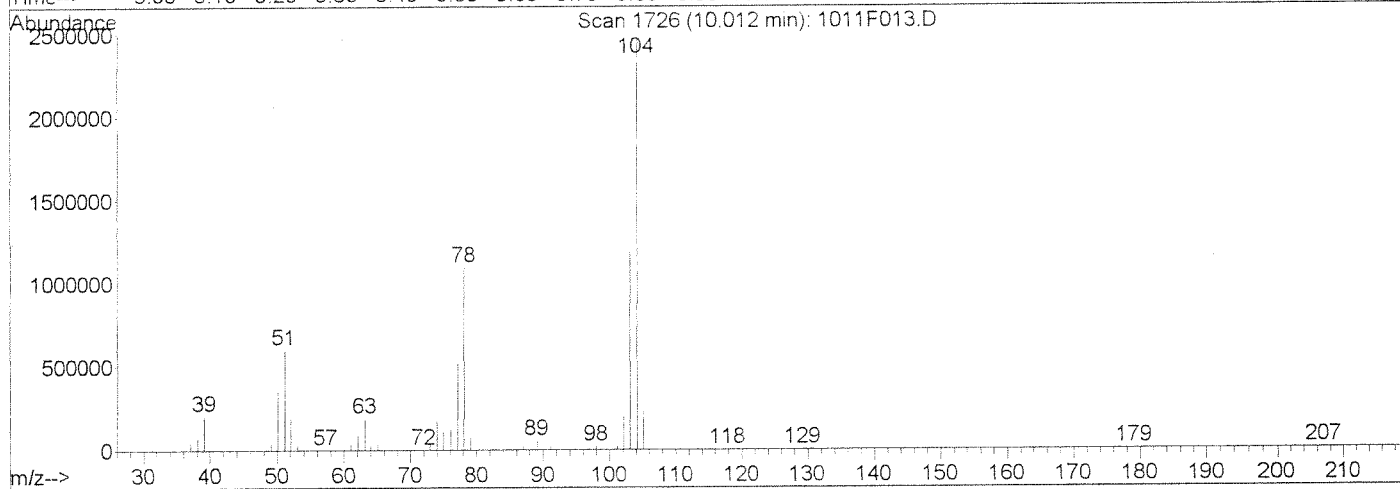
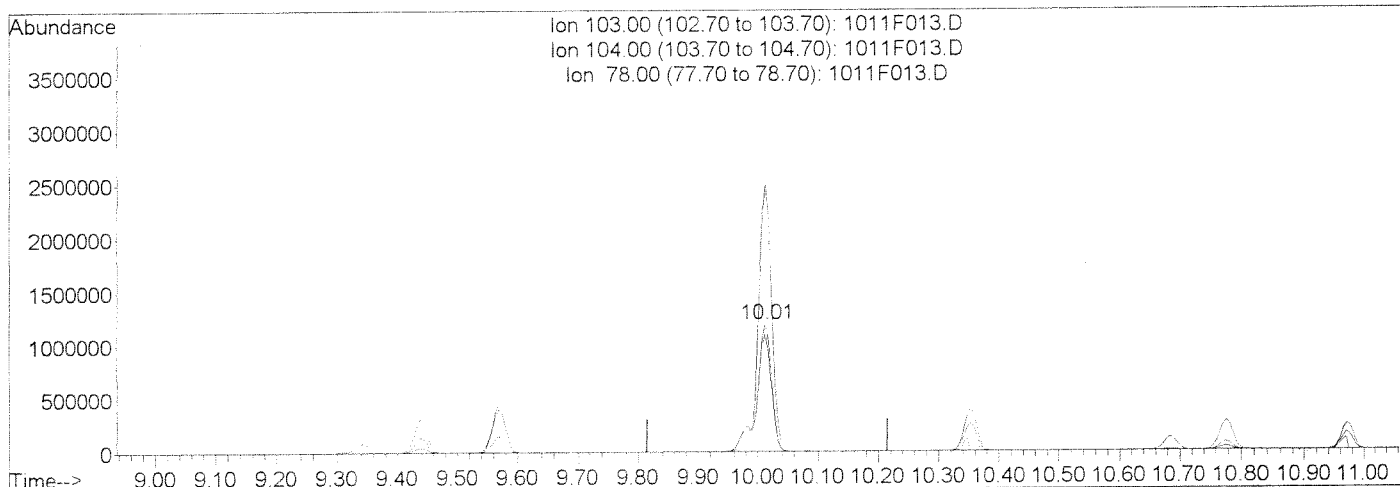
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101110\1011F013.D  
 Acq On : 11 Oct 2010 3:52 pm  
 Sample : 624 ICAL 80  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 16:43 2010

Vial: 9  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Multiple Level Calibration



TIC: 1011F013.D

(45) Styrene (T)

10.01min 116.90PPB

response 2039386

Ion	Exp%	Act%
103.00	100	100
104.00	210.20	209.70
78.00	91.20	91.93
0.00	0.00	0.00

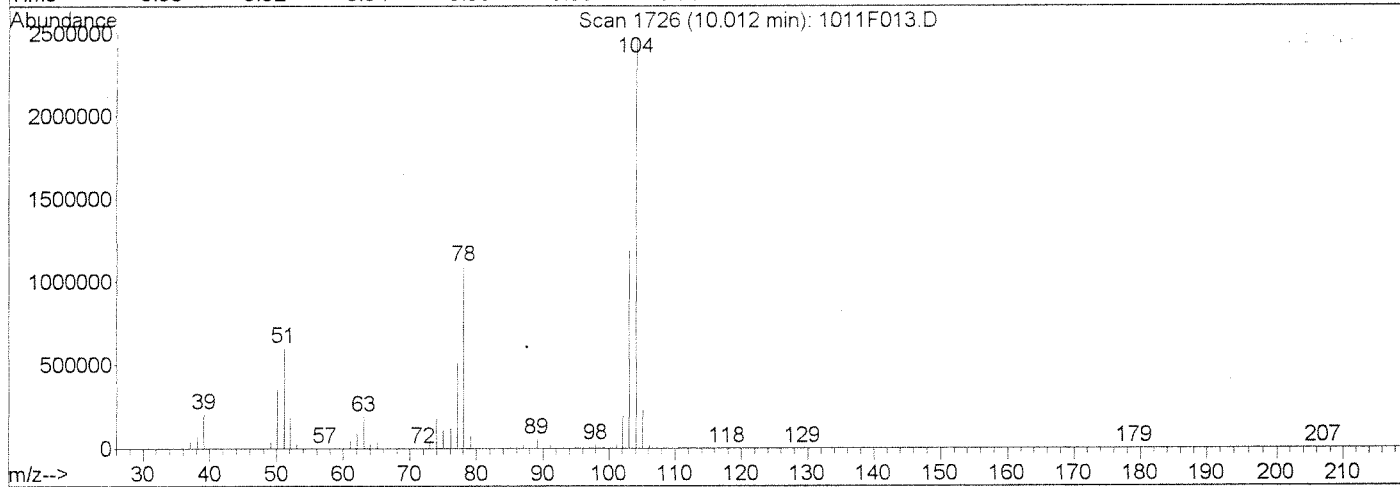
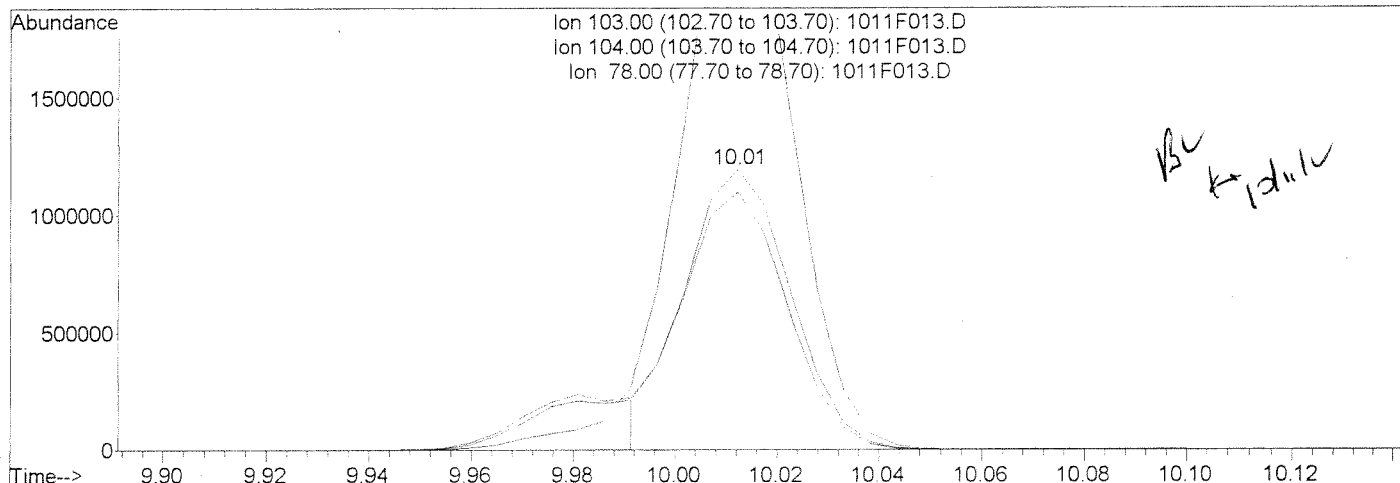
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101110\1011F013.D  
 Acq On : 11 Oct 2010 3:52 pm  
 Sample : 624 ICAL 80  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 16:43 2010

Vial: 9  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Multiple Level Calibration



TIC: 1011F013.D

(45) Styrene (T)  
 10.01min 98.65PPB m  
 response 1720964

Ion	Exp%	Act%
103.00	100	100
104.00	210.20	209.70
78.00	91.20	91.93
0.00	0.00	0.00

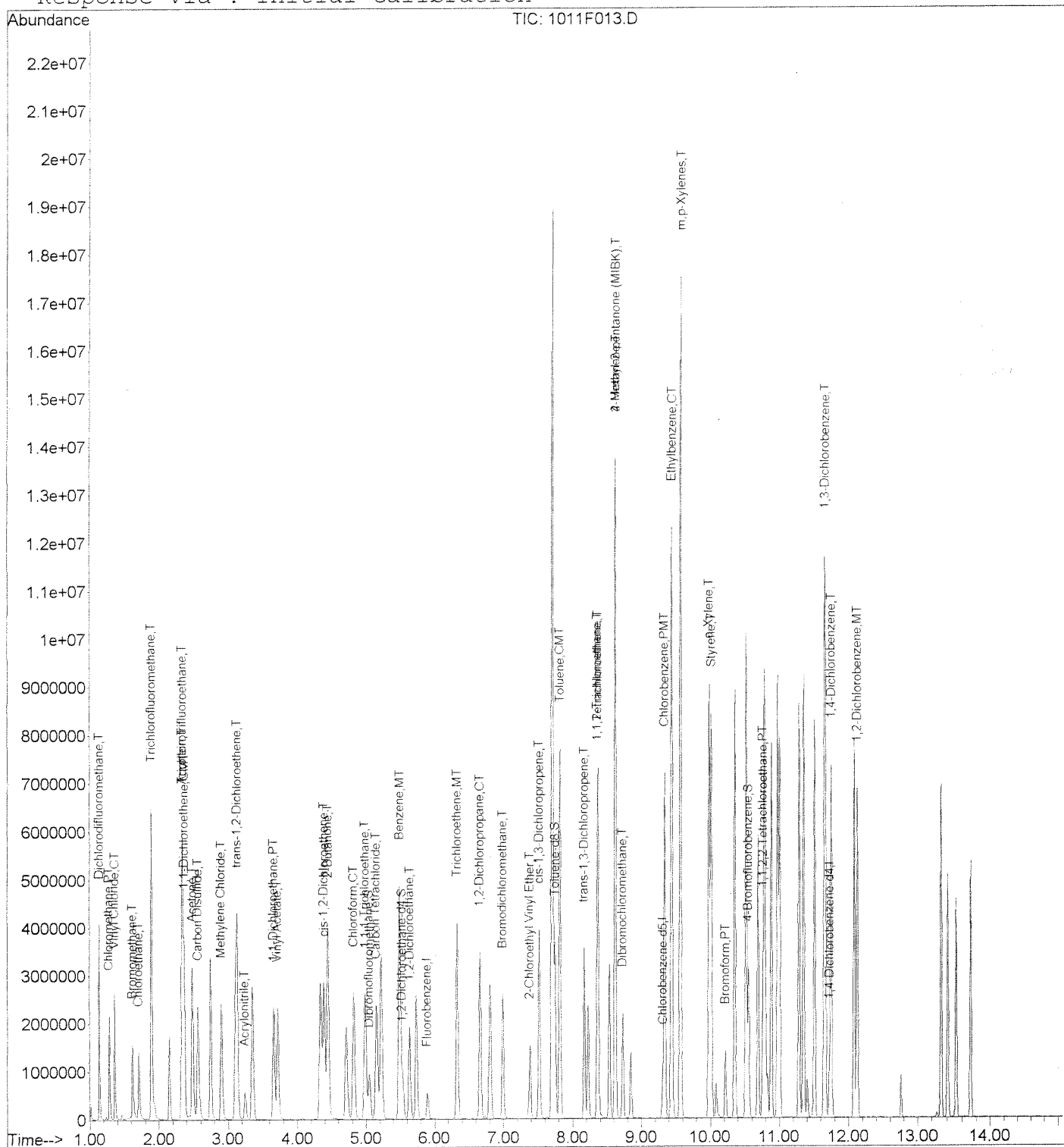
Handwritten notes 'KLU' and '10-14-10' are present in the lower right area of the table.

Data File : J:\MS23\DATA\101110\1011F013.D  
 Acq On : 11 Oct 2010 3:52 pm  
 Sample : 624 ICAL 80  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 16:43 2010

Vial: 9  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RE

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration



Data File : J:\MS23\DATA\101110\1011F014.D  
 Acq On : 11 Oct 2010 4:21 pm  
 Sample : 624 ICAL 120  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 16:43:59 2010

Vial: 10  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

*KR 10/11/10*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	5.90	96	539411	10.00	PPB	0.00
35) Chlorobenzene-d5	9.31	82	211785	10.00	PPB	0.00
48) 1,4-Dichlorobenzene-d4	11.73	152	235360	10.00	PPB	0.00

System Monitoring Compounds

22) Dibromofluoromethane	5.05	113	1901387	116.75	PPB	0.00	
Spiked Amount	10.000						Recovery = 1167.50%
24) 1,2-Dichloroethane-d4	5.53	65	2349350	109.97	PPB	0.00	
Spiked Amount	10.000						Recovery = 1099.70%
33) Toluene-d8	7.74	98	6869537	113.12	PPB	0.00	
Spiked Amount	10.000						Recovery = 1131.20%
47) 4-Bromofluorobenzene	10.55	95	2511980	124.76	PPB	0.00	
Spiked Amount	10.000						Recovery = 1247.60%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.14	85	1864462	75.59	PPB	98
3) Chloromethane	1.28	50	2007170	116.56	PPB	99
4) Vinyl Chloride	1.36	62	1871486	98.98	PPB	97
5) Bromomethane	1.61	96	1034064	116.05	PPB	96
6) Chloroethane	1.70	49	331307	102.20	PPB	90
7) Trichlorofluoromethane	1.89	101	2670163	90.34	PPB	99
8) Acrolein	2.34	56	2911005	2249.94	PPB	98
9) Trichlorotrifluoroethane	2.34	151	1303169	94.22	PPB	97
10) 1,1-Dichloroethene	2.36	96	1306342	102.88	PPB	92
11) Acetone	2.48	43	5768840	2297.87	PPB	96
12) Carbon Disulfide	2.56	76	4444951	106.96	PPB	100
13) Methylene Chloride	2.90	84	1606387	113.54	PPB	99
14) Acrylonitrile	3.25	53	655534	238.67	PPB	94
15) trans-1,2-Dichloroethene	3.13	96	1732166	110.77	PPB	99
16) 1,1-Dichloroethane	3.66	63	3217810	116.49	PPB	99
17) Vinyl Acetate	3.72	86	583348	304.23	PPB	# 92
18) cis-1,2-Dichloroethene	4.39	96	1955191	118.54	PPB	98
19) 2-Butanone	4.44	72	2007156	2406.70	PPB	96
20) Chloroform	4.82	83	3358830	118.34	PPB	96
21) 1,1,1-Trichloroethane	4.99	97	2990664	116.48	PPB	94
23) Carbon Tetrachloride	5.16	117	2456834	120.26	PPB	96
25) Benzene	5.49	78	6713514	116.20	PPB	98
26) 1,2-Dichloroethane	5.64	62	2678312	115.16	PPB	99
27) Trichloroethene	6.33	95	1808877	113.68	PPB	98
28) 1,2-Dichloropropane	6.66	63	1667514	126.26	PPB	94
29) Bromodichloromethane	6.99	83	2454667	133.13	PPB	100
30) 2-Chloroethyl Vinyl Ether	7.38	63	850585	146.56	PPB	98

(#) = qualifier out of range (m) = manual integration  
 1011F014.D 101110624.M Mon Oct 11 16:44:52 2010

*HB10-14-10*  
 Page 1

Data File : J:\MS23\DATA\101110\1011F014.D  
 Acq On : 11 Oct 2010 4:21 pm  
 Sample : 624 ICAL 120  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 16:43:59 2010

Vial: 10  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31) cis-1,3-Dichloropropene	7.51	75	2854490	135.58	PPB	95
32) 4-Methyl-2-pentanone (MIBK)	8.62	58	5890656	2437.78	PPB	94
34) Toluene	7.82	92	4506233	117.18	PPB	100
36) trans-1,3-Dichloropropene	8.17	75	2487649	155.67	PPB	94
37) 1,1,2-Trichloroethane	8.35	83	996593	131.13	PPB	95
38) Tetrachloroethene	8.37	164	1726447	122.21	PPB	99
39) 2-Hexanone	8.62	43	11279060	2567.67	PPB	94
40) Dibromochloromethane	8.73	129	1613799	158.23	PPB	98
41) Chlorobenzene	9.34	112	5062990	127.29	PPB	99
42) Ethylbenzene	9.44	106	2737617	132.14	PPB	92
43) m,p-Xylenes	9.57	106	6748860	265.81	PPB	89
44) o-Xylene	9.98	106	3324702	136.78	PPB	97
45) Styrene	10.01	103	2559834m	142.00	PPB	
46) Bromoform	10.22	173	918760	170.69	PPB	98
49) 1,1,2,2-Tetrachloroethane	10.75	83	1111753	137.78	PPB	99
51) 1,3-Dichlorobenzene	11.65	146	4186117	132.80	PPB	98
52) 1,4-Dichlorobenzene	11.75	146	4205856	131.08	PPB	98
53) 1,2-Dichlorobenzene	12.12	146	3757684	134.38	PPB	98

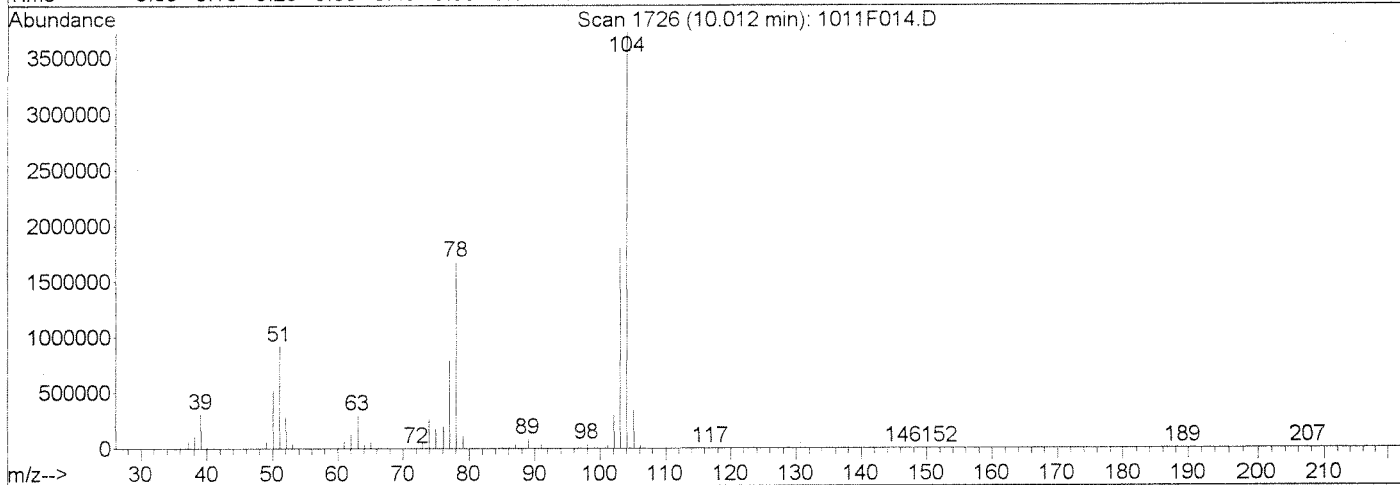
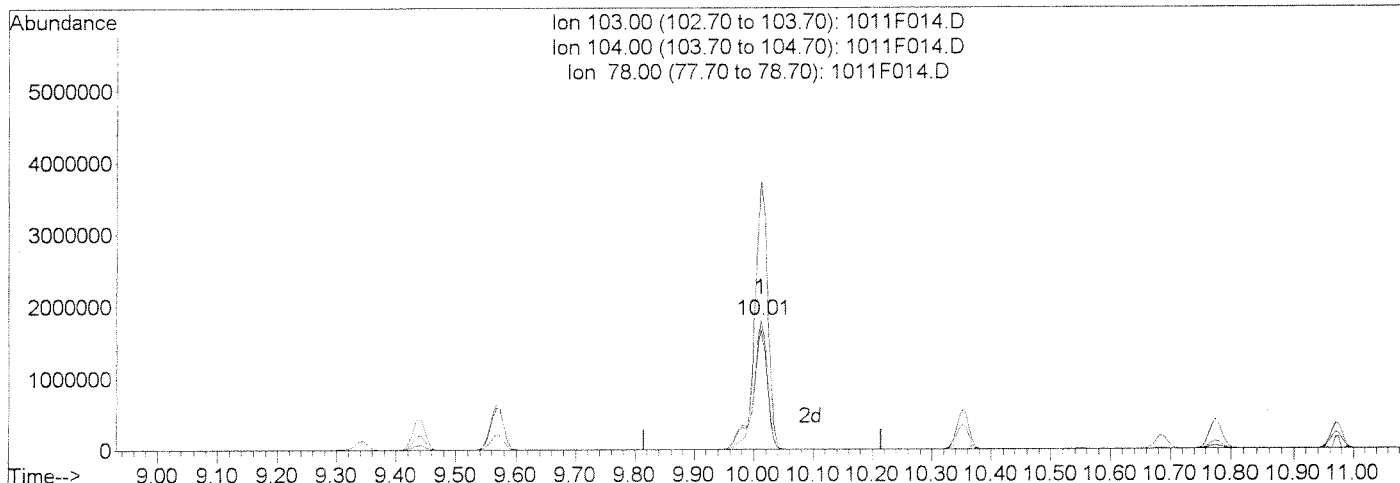


Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101110\1011F014.D  
 Acq On : 11 Oct 2010 4:21 pm  
 Sample : 624 ICAL 120  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 16:43 2010

Vial: 10  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00  
 Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Multiple Level Calibration



TIC: 1011F014.D

(45) Styrene (T)		
10.01min	168.62PPB	
response	3039687	
Ion	Exp%	Act%
103.00	100	100
104.00	210.20	207.34
78.00	91.20	93.07
0.00	0.00	0.00

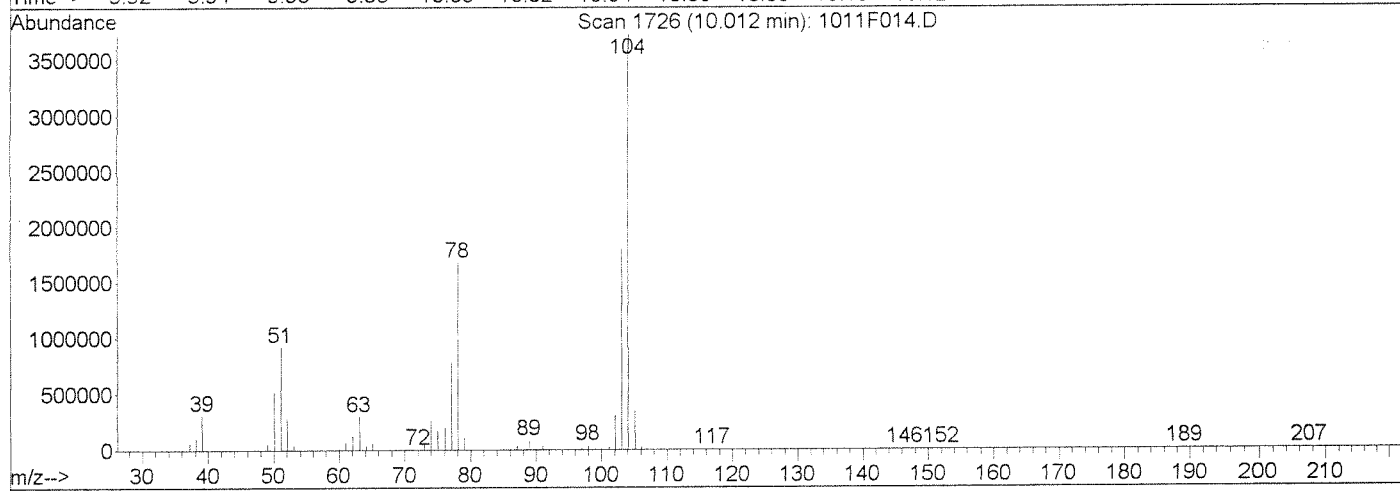
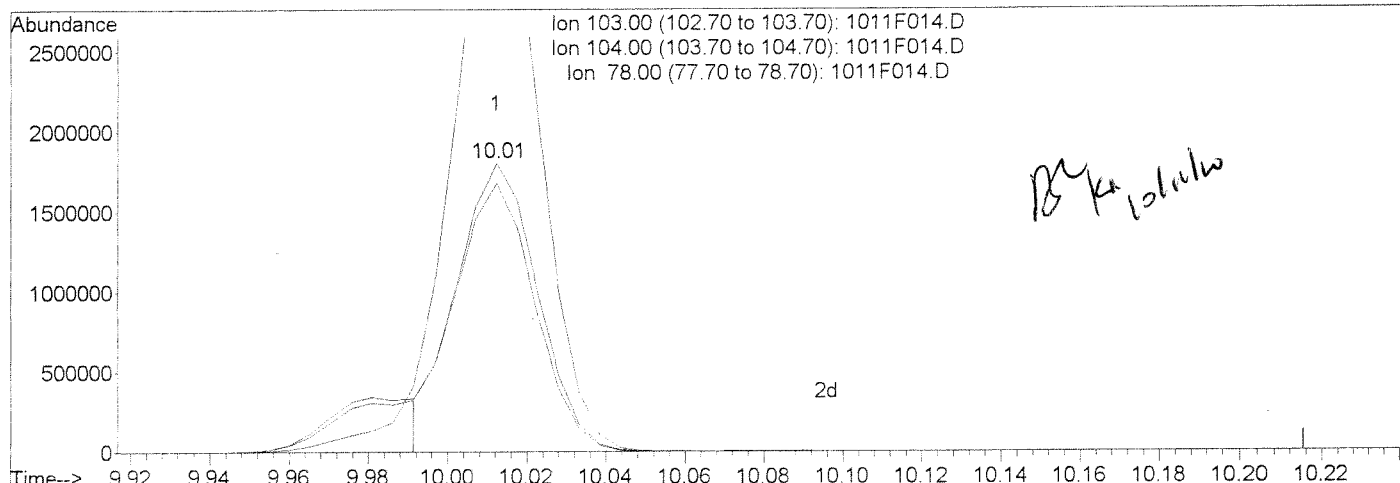
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101110\1011F014.D  
Acq On : 11 Oct 2010 4:21 pm  
Sample : 624 ICAL 120  
Misc :  
MS Integration Params: rteint.p  
Quant Time: Oct 11 16:44 2010

Vial: 10  
Operator: KR  
Inst : MS23  
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
Title : VOA MS23 EPA Method 624  
Last Update : Mon Oct 11 12:20:44 2010  
Response via : Multiple Level Calibration



(45) Styrene (T)  
10.01min 142.00PPB m  
response 2559834

Ion	Exp%	Act%
103.00	100	100
104.00	210.20	207.34
78.00	91.20	93.09
0.00	0.00	0.00

HB10-14-10

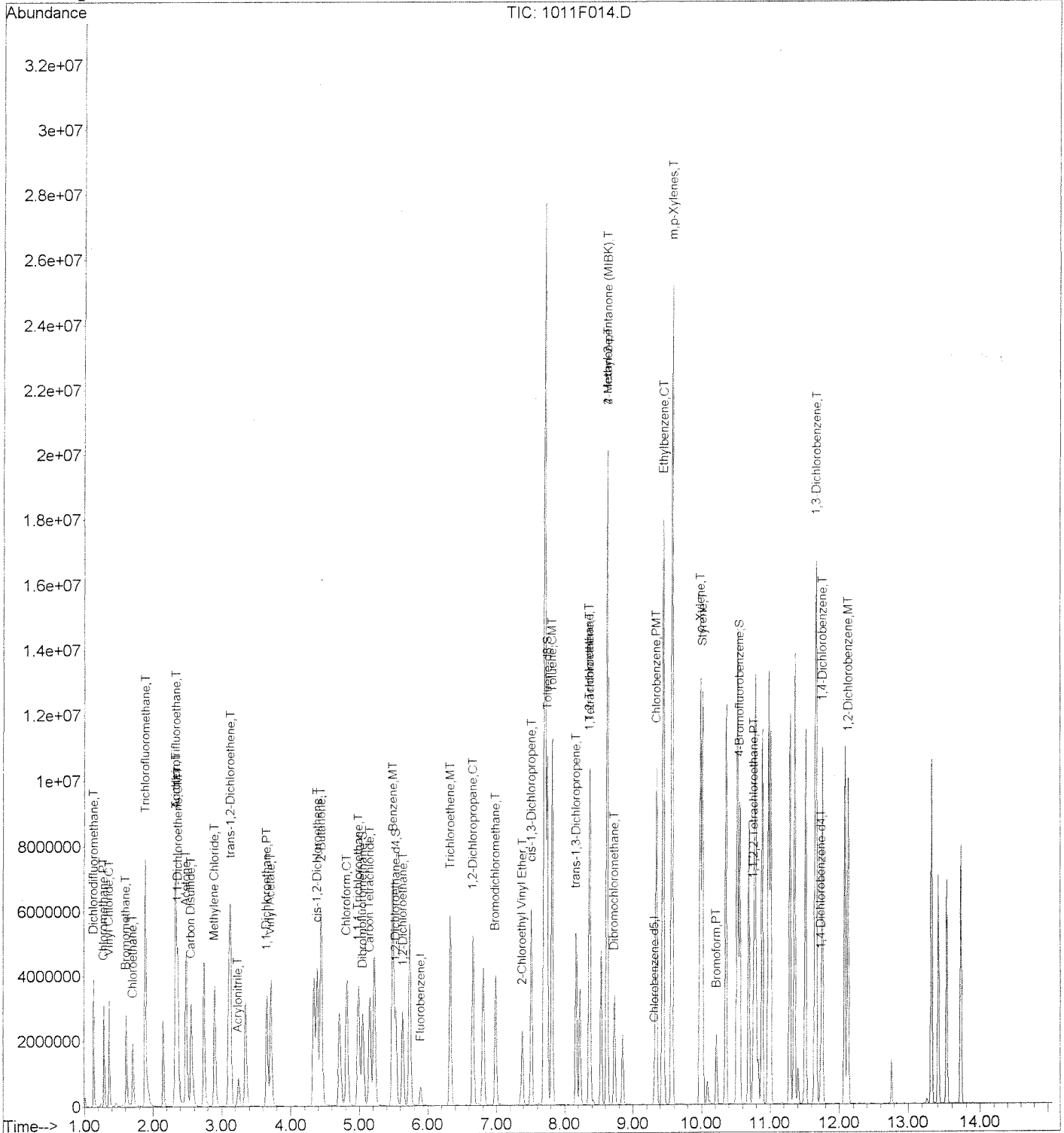
Quantitation Report (QT Reviewed)

Data File : J:\MS23\DATA\101110\1011F014.D  
 Acq On : 11 Oct 2010 4:21 pm  
 Sample : 624 ICAL 120  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 11 16:44 2010

Vial: 10  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RE

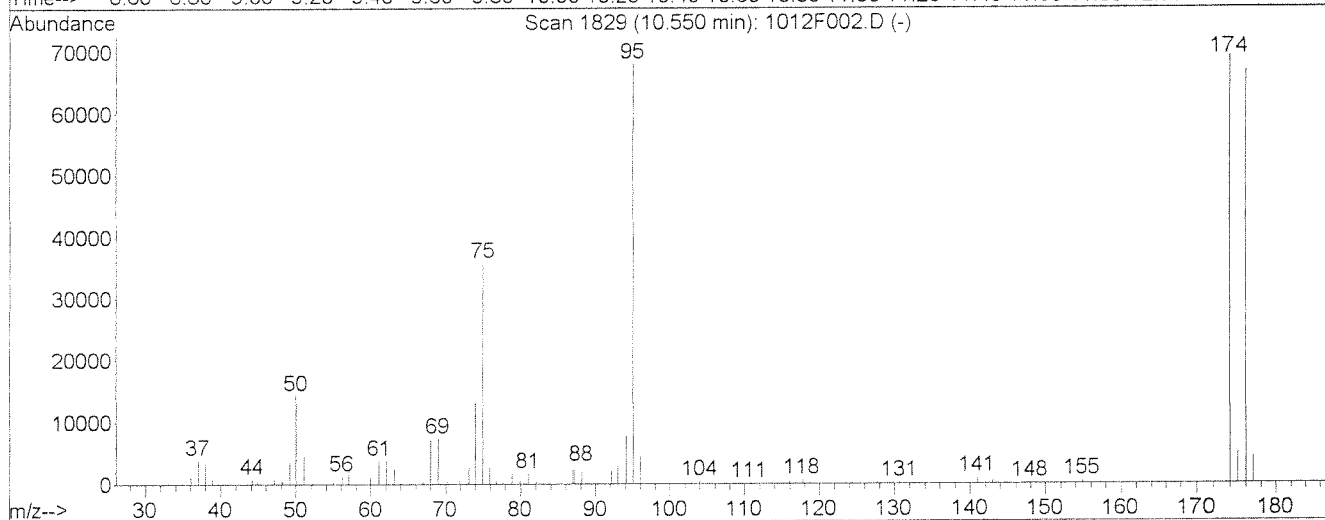
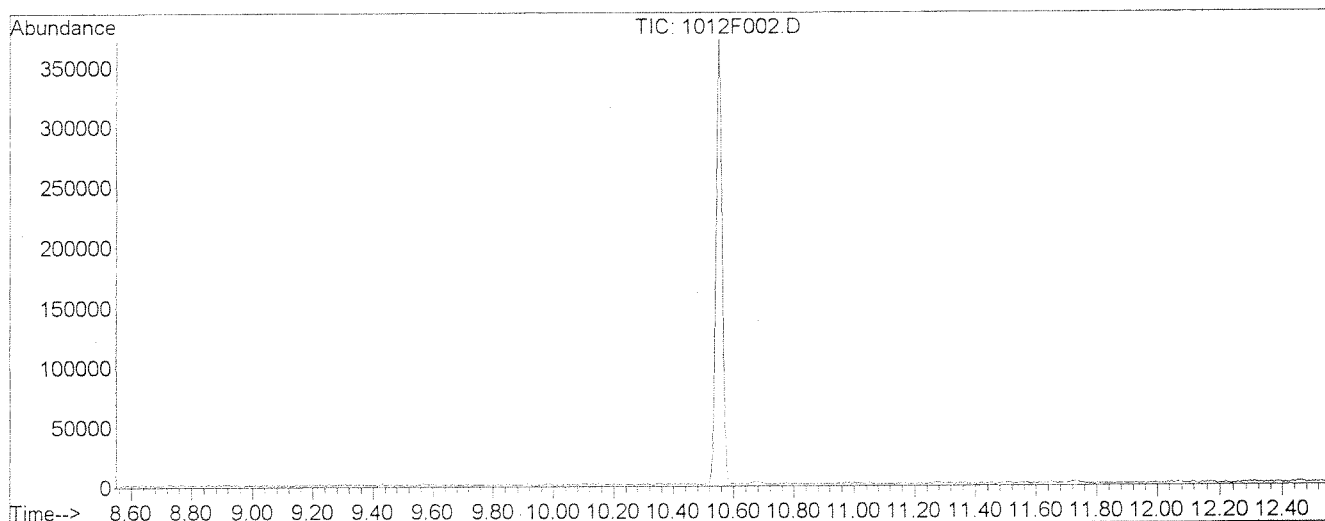
Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Mon Oct 11 12:20:44 2010  
 Response via : Initial Calibration



BFB

Data File : J:\MS23\DATA\101210\1012F002.D  
Acq On : 12 Oct 2010 8:40 am  
Sample : BFB  
Misc :  
MS Integration Params: rteint.p  
Method : J:\MS23\METHODS\100710624.M (RTE Integrator)  
Title : VOA MS23 EPA Method 624

Vial: 2  
Operator: KR  
Inst : MS23  
Multiplr: 1.00



Spectrum Information: Scan 1829 *Apex - 1022 scan KR 10/12/10*

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.1	14317	PASS
75	95	30	60	52.6	35736	PASS
95	95	100	100	100.0	67960	PASS
96	95	5	9	6.6	4472	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	101.8	69208	PASS
175	174	5	9	7.3	5071	PASS
176	174	95	101	96.5	66800	PASS
177	176	5	9	6.6	4381	PASS

Data File : J:\MS23\DATA\101210\1012F005.D  
 Acq On : 12 Oct 2010 10:32 am  
 Sample : 624 ICV  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 12 11:44:08 2010

Vial: 5  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 11:43:25 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

*KR 10/12/10*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	5.89	96	483599	10.00	PPB	0.00
35) Chlorobenzene-d5	9.31	82	199402	10.00	PPB	0.00
48) 1,4-Dichlorobenzene-d4	11.72	152	221241	10.00	PPB	0.00

System Monitoring Compounds

22) Dibromofluoromethane	5.05	113	120329	8.61	PPB	0.00
Spiked Amount	10.000		Recovery	=	86.10%	
24) 1,2-Dichloroethane-d4	5.53	65	152619	8.30	PPB	0.00
Spiked Amount	10.000		Recovery	=	83.00%	
33) Toluene-d8	7.74	98	469416	9.00	PPB	0.00
Spiked Amount	10.000		Recovery	=	90.00%	
47) 4-Bromofluorobenzene	10.55	95	177829	9.11	PPB	0.00
Spiked Amount	10.000		Recovery	=	91.10%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.14	85	220052	10.35	PPB	96
3) Chloromethane	1.28	50	175165	11.48	PPB	98
4) Vinyl Chloride	1.36	62	188151	11.62	PPB	98
5) Bromomethane	1.63	96	95839	12.12	PPB	98
6) Chloroethane	1.71	49	30360	10.95	PPB	97
7) Trichlorofluoromethane	1.89	101	276718	10.74	PPB	95
8) Acrolein	2.34	56	144552	119.72	PPB	96
9) Trichlorotrifluoroethane	2.34	151	129175	10.67	PPB	97
10) 1,1-Dichloroethene	2.36	96	142597	12.94	PPB	95
11) Acetone	2.48	43	126575	58.96	PPB	96
12) Carbon Disulfide	2.56	76	757334	21.27	PPB	99
13) Methylene Chloride	2.90	84	149134	10.70	PPB	95
14) Acrylonitrile	3.25	53	26701	11.09	PPB	88
15) trans-1,2-Dichloroethene	3.14	96	164012	11.76	PPB	94
16) 1,1-Dichloroethane	3.66	63	294260	11.86	PPB	99
17) Vinyl Acetate	3.72	86	38505	20.66	PPB	# 88
18) cis-1,2-Dichloroethene	4.39	96	173680	11.62	PPB	96
19) 2-Butanone	4.45	72	42399	59.82	PPB	# 81
20) Chloroform	4.82	83	300648	11.73	PPB	95
21) 1,1,1-Trichloroethane	4.99	97	279126	12.12	PPB	97
23) Carbon Tetrachloride	5.15	117	216437	11.97	PPB	98
25) Benzene	5.49	78	618408	11.91	PPB	97
26) 1,2-Dichloroethane	5.63	62	242394	11.79	PPB	98
27) Trichloroethene	6.33	95	170024	11.57	PPB	98
28) 1,2-Dichloropropane	6.66	63	142184	11.63	PPB	94
29) Bromodichloromethane	6.99	83	196761	11.83	PPB	97
30) 2-Chloroethyl Vinyl Ether	7.38	63	52136	9.32	PPB	98

(#) = qualifier out of range (m) = manual integration  
 1012F005.D 101110624.M Tue Oct 12 11:44:28 2010

*HB10:14:10*  
 Page 1

Data File : J:\MS23\DATA\101210\1012F005.D  
 Acq On : 12 Oct 2010 10:32 am  
 Sample : 624 ICV  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 12 11:44:08 2010

Vial: 5  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RES

Quant Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 11:43:25 2010  
 Response via : Initial Calibration  
 DataAcq Meth : 8260

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
31) cis-1,3-Dichloropropene	7.51	75	226317	11.88	PPB	97
32) 4-Methyl-2-pentanone (MIBK)	8.62	58	111533	54.16	PPB	98
34) Toluene	7.81	92	403992	11.60	PPB	99
36) trans-1,3-Dichloropropene	8.17	75	176241	10.74	PPB	94
37) 1,1,2-Trichloroethane	8.36	83	87246	11.42	PPB	93
38) Tetrachloroethene	8.37	164	164126	11.58	PPB	97
39) 2-Hexanone	8.62	43	226303	53.38	PPB	99
40) Dibromochloromethane	8.73	129	120751	11.49	PPB	97
41) Chlorobenzene	9.34	112	447494	11.16	PPB	99
42) Ethylbenzene	9.44	106	237077	11.47	PPB	95
43) m,p-Xylenes	9.57	106	588086	22.82	PPB	98
44) o-Xylene	9.98	106	277652	11.30	PPB	96
45) Styrene	10.01	103	209098m	11.43	PPB	
46) Bromoform	10.22	173	63152	11.30	PPB	94
49) 1,1,2,2-Tetrachloroethane	10.75	83	98760	12.02	PPB	95
51) 1,3-Dichlorobenzene	11.64	146	375036	11.60	PPB	99
52) 1,4-Dichlorobenzene	11.75	146	379729	11.54	PPB	97
53) 1,2-Dichlorobenzene	12.12	146	334897	11.48	PPB	99

(#) = qualifier out of range (m) = manual integration  
 1012F005.D 101110624.M Tue Oct 12 11:44:29 2010

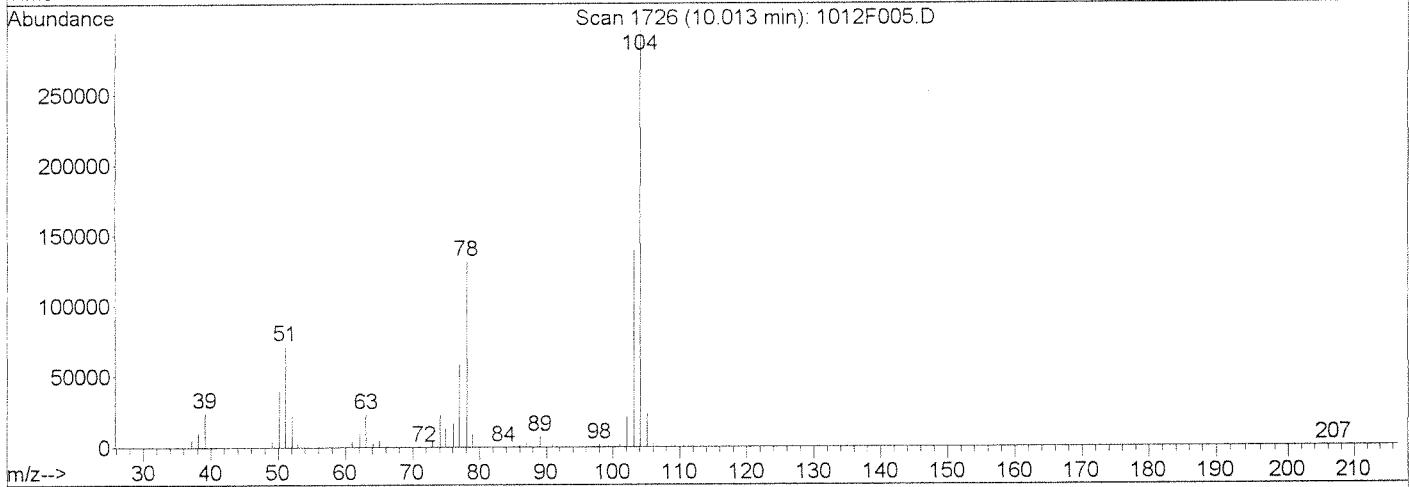
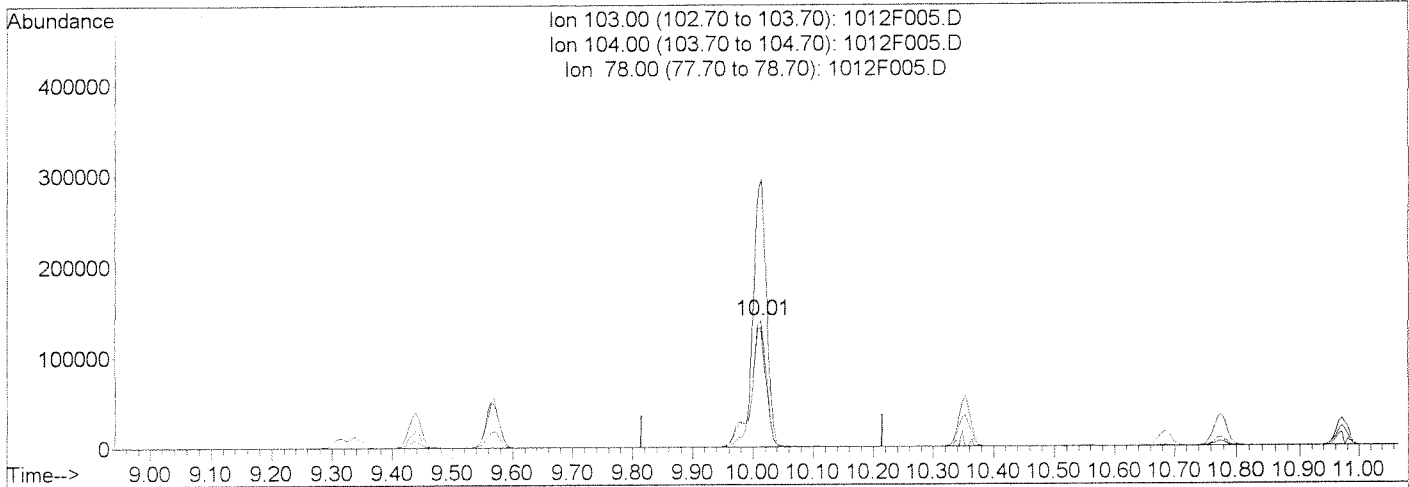
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101210\1012F005.D  
 Acq On : 12 Oct 2010 10:32 am  
 Sample : 624 ICV  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 12 11:44 2010

Vial: 5  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 11:43:25 2010  
 Response via : Multiple Level Calibration



TIC: 1012F005.D

(45) Styrene (T)

10.01min 13.32PPB

response 243611

Ion	Exp%	Act%
103.00	100	100
104.00	210.20	211.78
78.00	91.20	94.31
0.00	0.00	0.00

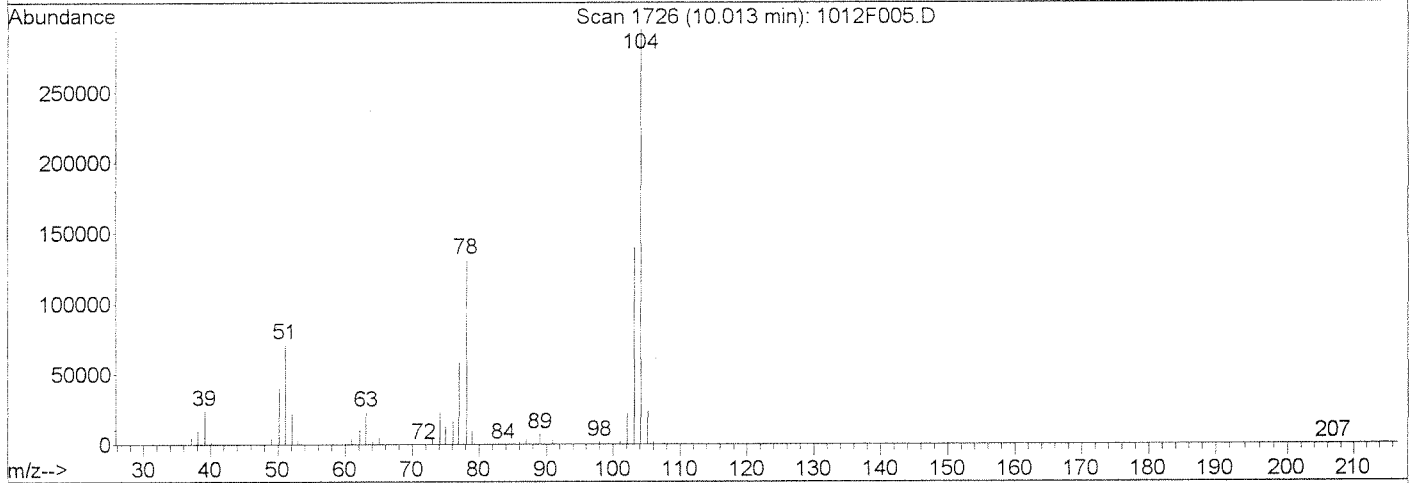
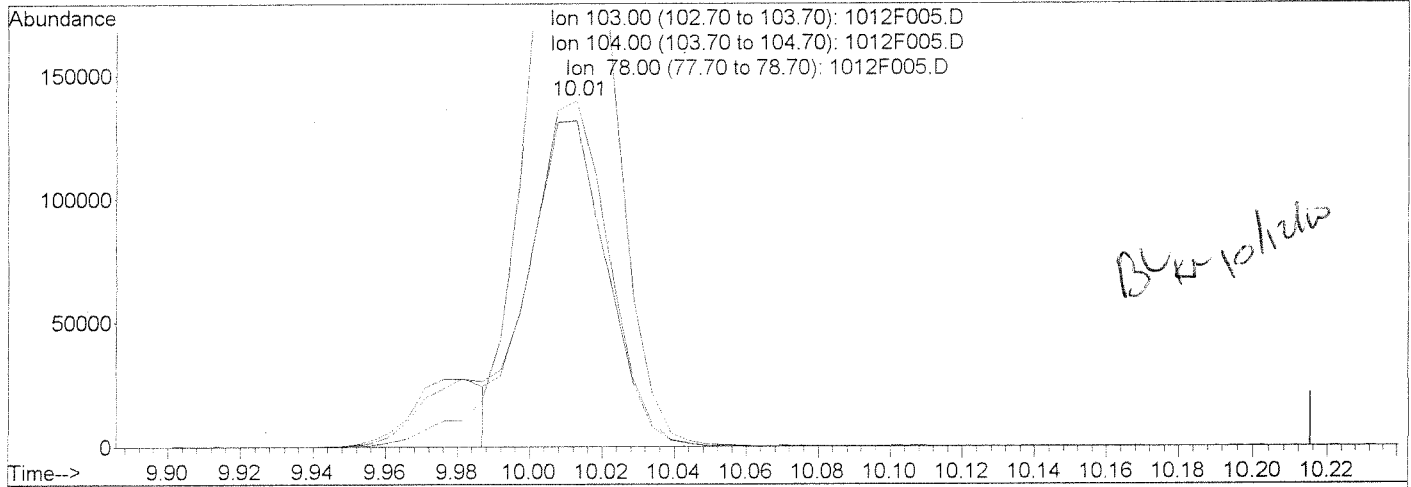
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101210\1012F005.D  
 Acq On : 12 Oct 2010 10:32 am  
 Sample : 624 ICV  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 12 11:44 2010

Vial: 5  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 11:43:25 2010  
 Response via : Multiple Level Calibration



TIC: 1012F005.D

(45) Styrene (T)

10.01min 11.43PPB m

response 209098

Ion	Exp%	Act%
103.00	100	100
104.00	210.20	211.78
78.00	91.20	94.31
0.00	0.00	0.00

Handwritten note: HB 10-14-10

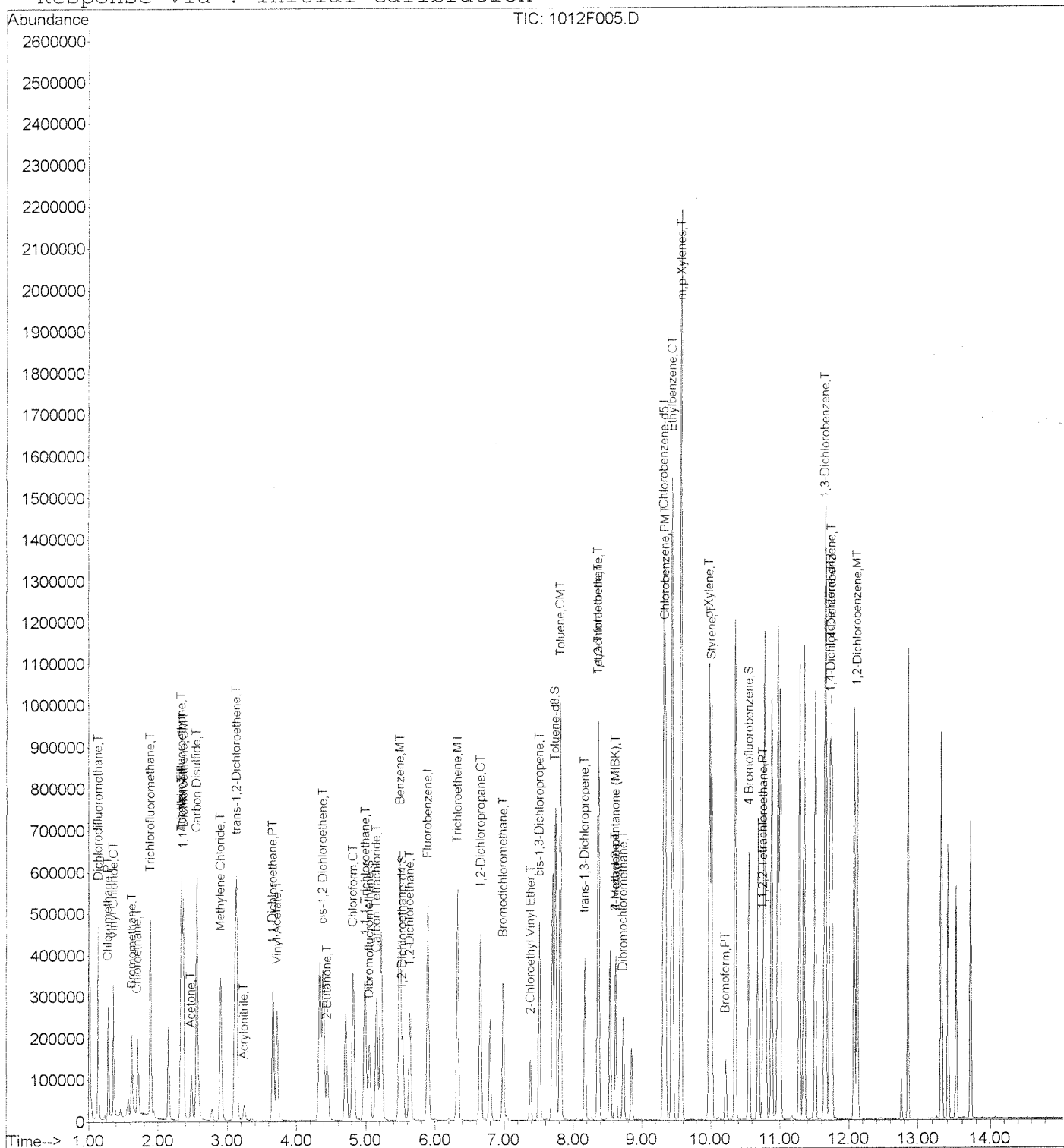


Data File : J:\MS23\DATA\101210\1012F005.D  
 Acq On : 12 Oct 2010 10:32 am  
 Sample : 624 ICV  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 12 11:44 2010

Vial: 5  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RE

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 11:43:25 2010  
 Response via : Initial Calibration



## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Exponent  
 Project: Heglar Kronquist/0907194.000.0601

Service Request: K1010899  
 Date Analyzed: 10/12/2010

Continuing Calibration Verification Summary  
 Volatile Organic Compounds

Calibration Type: Internal Standard  
 Analysis Method: 624

Calibration Date: 10/11/2010  
 Calibration ID: CAL9945  
 Analysis Lot: KWG1011024  
 Units: PPB

File ID: J:\MS23\DATA\101210\1012F011.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Chloromethane	10	11	0.01	0.316	0.335	6	NA	± 104 %	AverageRF
Vinyl Chloride	10	12	0.01	0.335	0.398	19	NA	± 96 %	AverageRF
Bromomethane	10	10	0.01	0.164	0.169	4	NA	± 86 %	AverageRF
Chloroethane	10	11	0.01	0.0574	0.0617	8	NA	± 62 %	AverageRF
Trichlorofluoromethane	10	12	0.01	0.533	0.620	16	NA	± 52 %	AverageRF
1,1-Dichloroethene	10	11	0.01	0.228	0.261	14	NA	± 49 %	AverageRF
Methylene Chloride	10	9.8	0.01	0.288	0.282	-2	NA	± 39 %	AverageRF
trans-1,2-Dichloroethene	10	11	0.01	0.289	0.315	9	NA	± 30 %	AverageRF
1,1-Dichloroethane	10	11	0.01	0.513	0.561	9	NA	± 27 %	AverageRF
Chloroform	10	11	0.01	0.530	0.586	11	NA	± 32 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	11	0.01	0.476	0.537	13	NA	± 25 %	AverageRF
Carbon Tetrachloride	10	11	0.01	0.374	0.411	10	NA	± 27 %	AverageRF
Benzene	10	11	0.01	1.07	1.18	10	NA	± 36 %	AverageRF
1,2-Dichloroethane (EDC)	10	11	0.01	0.425	0.476	12	NA	± 32 %	AverageRF
Trichloroethene (TCE)	10	11	0.01	0.304	0.330	8	NA	± 33 %	AverageRF
1,2-Dichloropropane	10	11	0.01	0.253	0.272	7	NA	± 66 %	AverageRF
Bromodichloromethane	10	11	0.01	0.344	0.365	6	NA	± 34 %	AverageRF
2-Chloroethyl Vinyl Ether	10	11	0.01	0.116	0.125	8	NA	± 124 %	AverageRF
trans-1,3-Dichloropropene	10	10	0.01	0.823	0.856	4	NA	± 50 %	AverageRF
Toluene	10	11	0.01	0.720	0.783	9	NA	± 25 %	AverageRF
cis-1,3-Dichloropropene	10	11	0.01	0.394	0.435	10	NA	± 76 %	AverageRF
1,1,2-Trichloroethane	10	10	0.01	0.383	0.392	2	NA	± 29 %	AverageRF
Tetrachloroethene (PCE)	10	11	0.01	0.711	0.761	7	NA	± 26 %	AverageRF
Dibromochloromethane	10	10	0.01	0.527	0.536	2	NA	± 32 %	AverageRF
Chlorobenzene	10	11	0.01	2.01	2.15	7	NA	± 34 %	AverageRF
Ethylbenzene	10	11	0.01	1.04	1.11	7	NA	± 41 %	AverageRF
Bromoform	10	9.9	0.01	0.280	0.278	-1	NA	± 29 %	AverageRF
1,1,2,2-Tetrachloroethane	10	11	0.01	0.371	0.397	7	NA	± 39 %	AverageRF
1,3-Dichlorobenzene	10	11	0.01	1.46	1.56	7	NA	± 27 %	AverageRF
1,4-Dichlorobenzene	10	10	0.01	1.49	1.55	4	NA	± 37 %	AverageRF
1,2-Dichlorobenzene	10	11	0.01	1.32	1.39	6	NA	± 37 %	AverageRF
Acrolein	200	210	0.01	0.0250	0.0259	4	NA	± 80 %	AverageRF
Acrylonitrile	20	22	0.01	0.0498	0.0540	8	NA	± 40 %	AverageRF
Toluene-d8	10	9.2	0.01	1.08	0.993	-8	NA	± 30 %	AverageRF
4-Bromofluorobenzene	10	8.9	0.01	0.979	0.873	-11	NA	± 30 %	AverageRF
Dibromofluoromethane	10	8.8	0.01	0.289	0.256	-12	NA	± 30 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

# Exception Report

Data File: J:\MS23\DATA\101210\1012F011.D  
Lab ID: KWG1011024-2  
RunType: CCV  
Matrix: WATER

Date Acquired: 10/12/2010 14:51  
Date Quantitated: 10/12/2010 15:10  
Batch ID: KWG1011024  
Analysis Method: 624  
MethodJoinID: MJ158

## Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: Ka lololo

Secondary Review: HB 10.14.10

# Quantitation Report

Bottle ID:	Tier:	Matrix:	WATER
Prod Code: 624	Collect Date:	Receive Date:	10/12/2010

Analysis Lot: KWG1011024	Prep Lot:	Report Group:
Analysis Method: 624	Prep Method:	
Prep Ref:	Prep Date:	

Quant Method: J:\MS23\METHODS\101110624.M	Calibration ID: CAL9945
Title:	
Tune Ref: J:\MS23\DATA\101210\1012F010.D	Method ID: MJ158
MB Ref:	Quant based on Method

Data File: J:\MS23\DATA\101210\1012F011.D	Instrument: MS23
Acqu Date: 10/12/2010 14:51	Quant Date: 10/12/2010 15:10
Run Type: CCV	Vial: 3
Lab ID: KWG1011024-2	Dilution: 1.0
	Soln Conc. Units: PPB

### Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	5.89	0.00	96	463008	10.00	OK
2	Chlorobenzene-d5	9.31	0.00	82	194705	10.00	OK
3	1,4-Dichlorobenzene-d4	11.72	0.00	152	216563	10.00	OK

### Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	Dibromofluoromethane	5.05			113	118352	8.84		71-115	NA
1	1,2-Dichloroethane-d4	5.53			65	149650	8.50		69-116	NA
1	Toluene-d8	7.74			98	459612	9.20		84-115	NA
2	4-Bromofluorobenzene	10.55			95	169945	8.92		83-113	NA

### Target Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.14			85	229839	11.29			
1	Chloromethane	1.28			50	154949	10.60			
1	Vinyl Chloride	1.36			62	184199	11.89			
1	Bromomethane	1.63			96	78411	10.36			
1	Chloroethane	1.71			49	28584	10.76			
1	Trichlorofluoromethane	1.89			101	286993	11.63			
1	Acrolein	2.34			56	240001	207.61			
1	Trichlorotrifluoroethane	2.33			151	137554	11.87			
1	1,1-Dichloroethene	2.37			96	120784	11.44			
1	Acetone	2.48			43	451434	219.63			
1	Carbon Disulfide	2.56			76	384595	11.28			
1	Methylene Chloride	2.90			84	130742	9.80			
1	Acrylonitrile	3.24			53	49965	21.67			
1	trans-1,2-Dichloroethene	3.13			96	145707	10.91			

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

Data File: J:\MS23\DATA\101210\1012F011.D  
 Acqu Date: 10/12/2010 14:51  
 Run Type: CCV  
 Lab ID: KWG1011024-2

Quant Date: 10/12/2010 15:10

Instrument: MS23  
 Vial: 3  
 Dilution: 1.0  
 Soln Conc. Units: PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	1,1-Dichloroethane	3.66			63	259972	10.94			
1	Vinyl Acetate	3.72			86	37403	20.97			
1	cis-1,2-Dichloroethene	4.39			96	160345	11.21			
1	2-Butanone (MEK)	4.45			72	146665	216.14			
1	Chloroform	4.82			83	271313	11.06			
1	1,1,1-Trichloroethane (TCA)	4.98			97	248604	11.28			
1	Carbon Tetrachloride	5.15			117	190409	11.00			
1	Benzene	5.49			78	548357	11.03			
1	1,2-Dichloroethane (EDC)	5.63			62	220225	11.19			
1	Trichloroethene (TCE)	6.33			95	152572	10.85			
1	1,2-Dichloropropane	6.66			63	125730	10.74			
1	Bromodichloromethane	6.99			83	169102	10.62			
1	2-Chloroethyl Vinyl Ether	7.38			63	57666	10.77			
1	cis-1,3-Dichloropropene	7.52			75	201248	11.04			
1	4-Methyl-2-pentanone (MIBK)	8.62			58	438801	222.57			
1	Toluene	7.81			92	362472	10.87			
2	trans-1,3-Dichloropropene	8.17			75	166650	10.40			
2	1,1,2-Trichloroethane	8.36			83	76339	10.24			
2	Tetrachloroethene (PCE)	8.37			164	148127	10.70			
2	2-Hexanone	8.62			43	903641	218.31			
2	Dibromochloromethane	8.73			129	104285	10.16			
2	Chlorobenzene	9.34			112	417661	10.66			
2	Ethylbenzene	9.44			106	215599	10.68			
2	m,p-Xylenes	9.56			106	544392	21.63			
2	o-Xylene	9.98			106	258312	10.76			
2	Styrene	10.01			103	194798m	10.91			
2	Bromoform	10.21			173	54093	9.91			
3	1,1,2,2-Tetrachloroethane	10.75			83	85936	10.69			
3	1,3-Dichlorobenzene	11.65			146	338437	10.69			
3	1,4-Dichlorobenzene	11.75			146	336574	10.45			
3	1,2-Dichlorobenzene	12.12			146	301394	10.55			

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

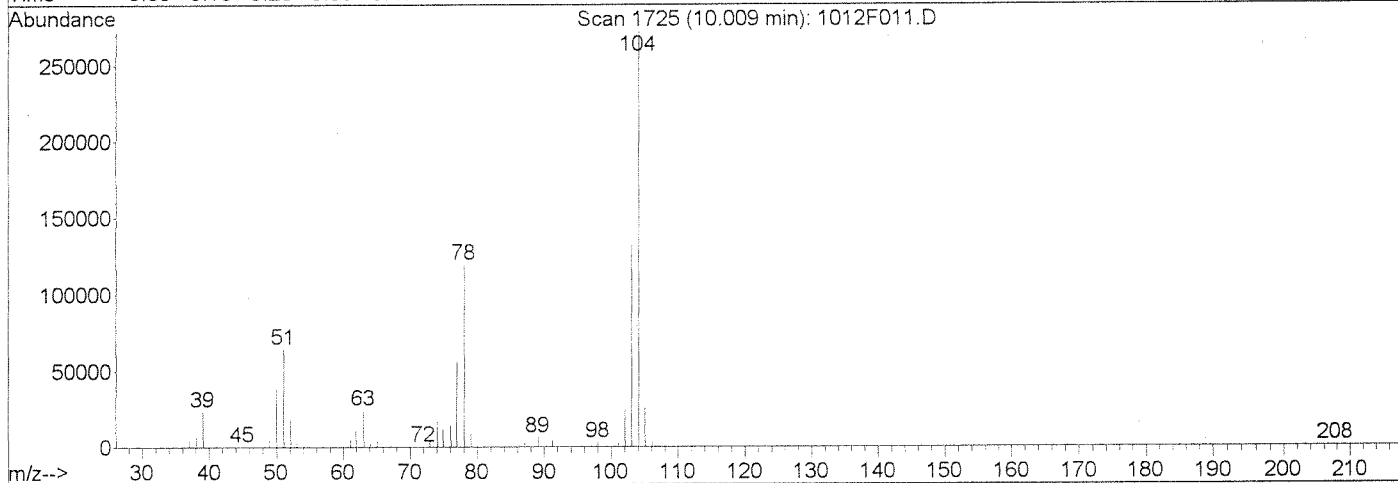
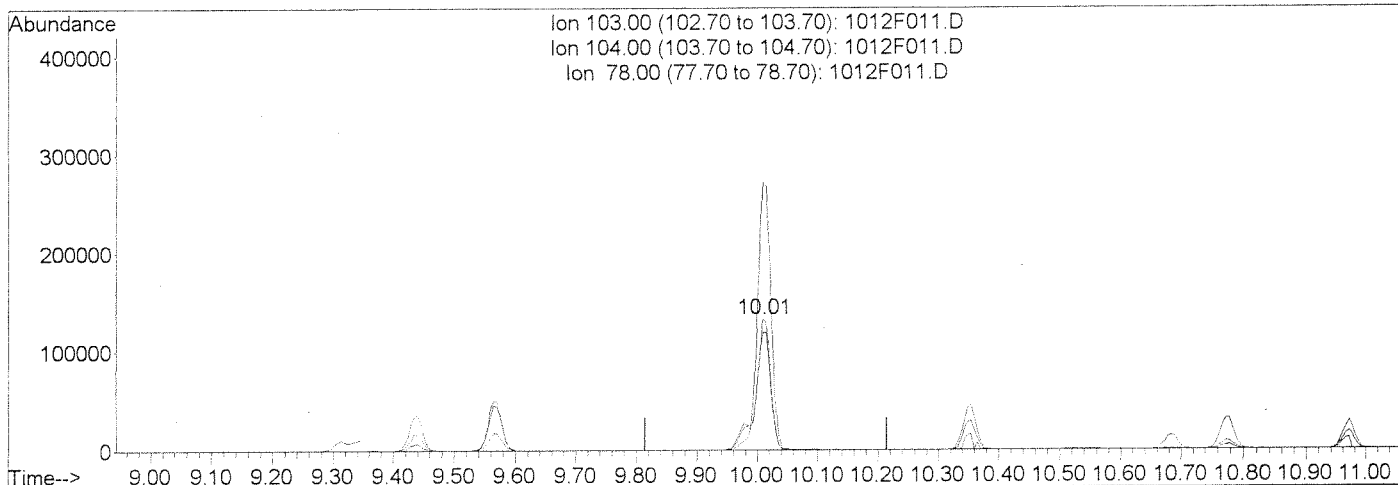
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101210\1012F011.D  
 Acq On : 12 Oct 2010 2:51 pm  
 Sample : 624 CCV  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 12 15:09 2010

Vial: 3  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 11:43:25 2010  
 Response via : Multiple Level Calibration



TIC: 1012F011.D

(45) Styrene (T)

10.01min 12.70PPB

response 226805

Ion	Exp%	Act%
103.00	100	100
104.00	210.20	206.30
78.00	91.20	90.18
0.00	0.00	0.00

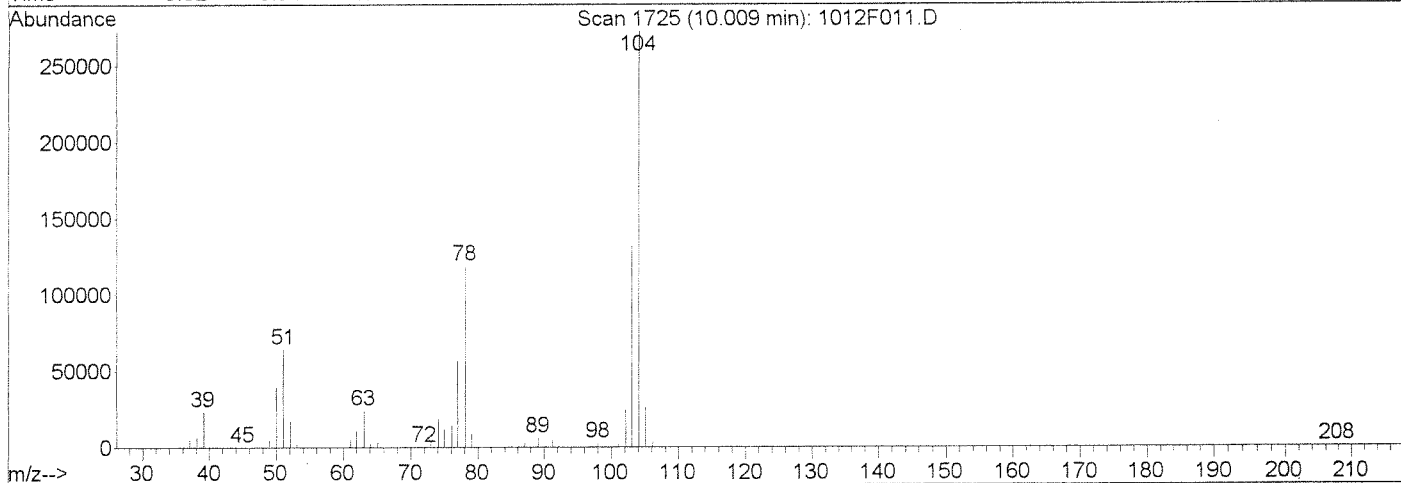
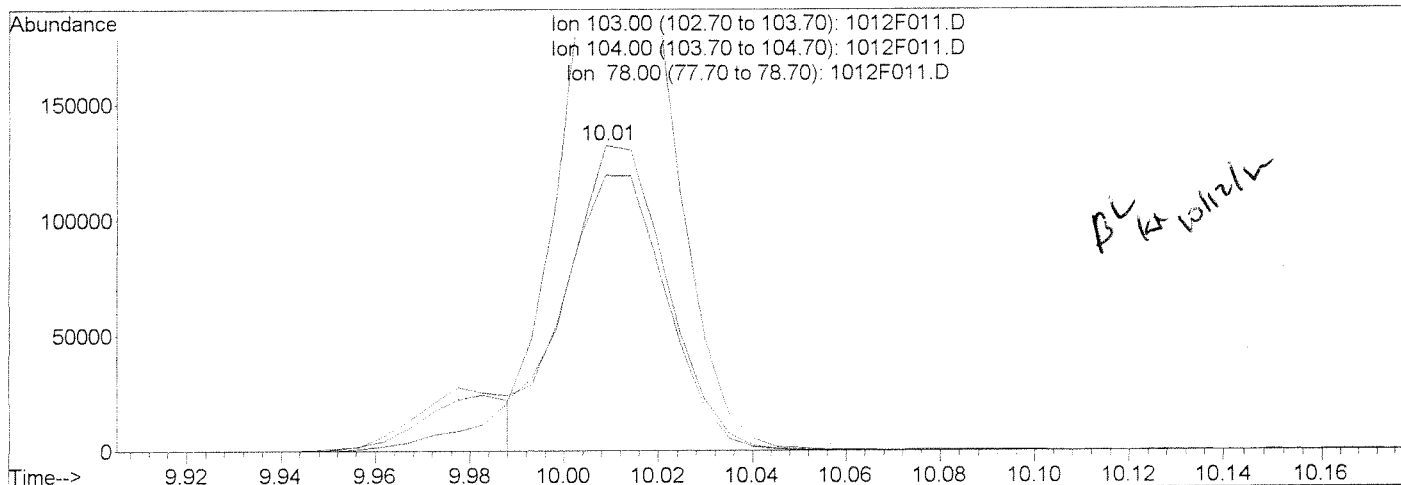
Quantitation Report (Qedit)

Data File : J:\MS23\DATA\101210\1012F011.D  
 Acq On : 12 Oct 2010 2:51 pm  
 Sample : 624 CCV  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 12 15:10 2010

Vial: 3  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 11:43:25 2010  
 Response via : Multiple Level Calibration



TIC: 1012F011.D

(45) Styrene (T)

10.01min 10.91PPB m

response 194798

Ion	Exp%	Act%
103.00	100	100
104.00	210.20	206.30
78.00	91.20	90.18
0.00	0.00	0.00

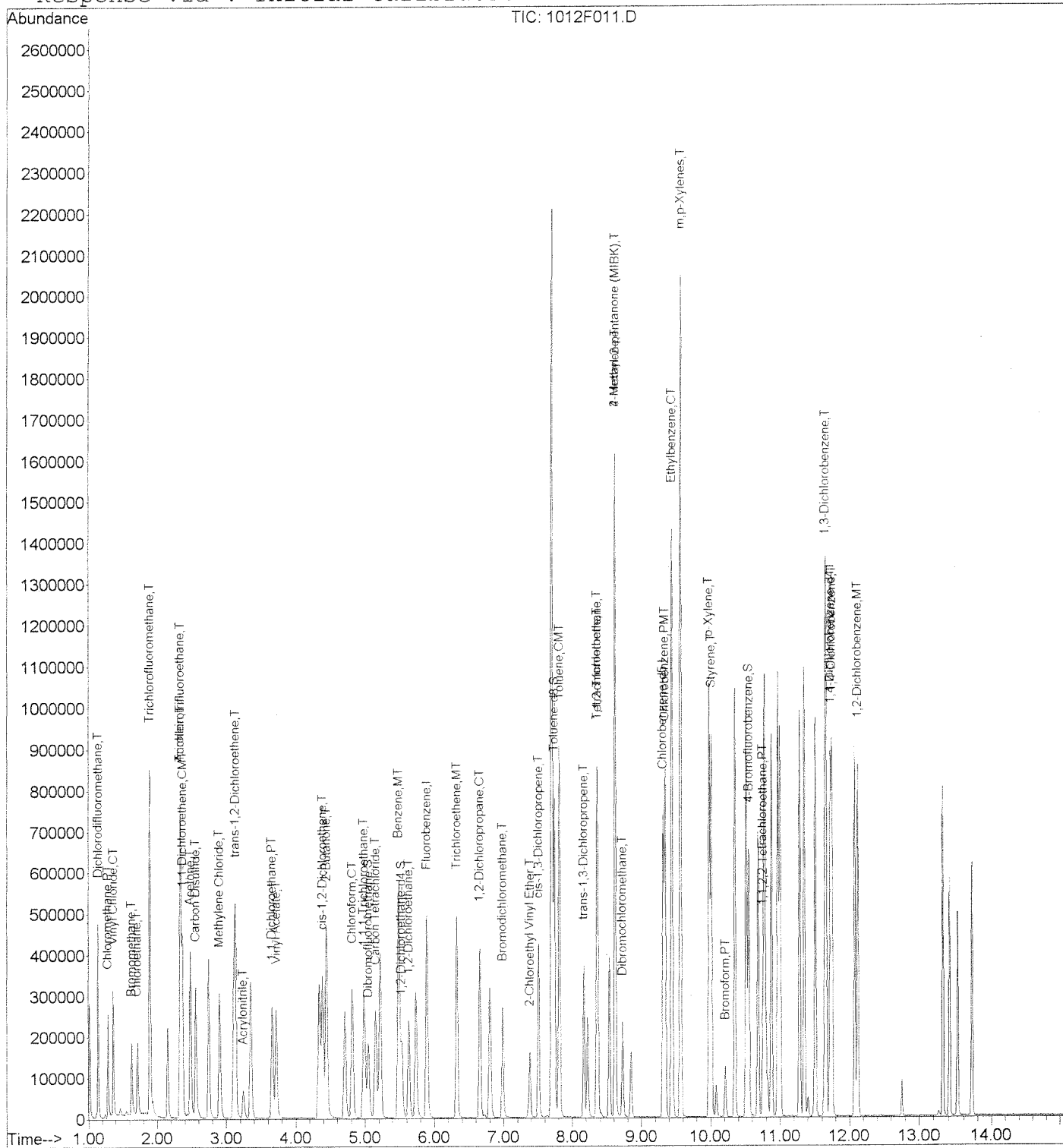
HB 10.14.10

Data File : J:\MS23\DATA\101210\1012F011.D  
 Acq On : 12 Oct 2010 2:51 pm  
 Sample : 624 CCV  
 Misc :  
 MS Integration Params: rteint.p  
 Quant Time: Oct 12 15:10 2010

Vial: 3  
 Operator: KR  
 Inst : MS23  
 Multiplr: 1.00

Quant Results File: 101110624.RE

Method : J:\MS23\METHODS\101110624.M (RTE Integrator)  
 Title : VOA MS23 EPA Method 624  
 Last Update : Tue Oct 12 11:43:25 2010  
 Response via : Initial Calibration





Organic Analysis:  
Volatile Organic Compounds

Validation Package

Sample Prep and Screen Data

Date: 10/12/10

Columbia Analytical Services, Inc. Tune File: BFB

By: KA

Injection Log

New Tune: NO

IS/SS Std. ID: 5800A - 280

MS23 - Agilent 5973

RUN #: 220432

CCV Std ID: 5800A. 31A/25A

ICAL Date: 10/11/10 Cal 9945

MS/DMS/LCS/ICV Std ID: 5800A - 33A/292

Second RV: HB10-14-10

BFB Std. ID: 5800A-166

LIMS ID: KWT011024 / 11029

	Sample Name	File Name	Method	Dilution	pH	R	Comments
1	BFB	1012F010	820.M	4.4µl - 44µl			
2	124 CCV	11		1015µl + 50µl			
3	1 LY	12		1215µl - 150µl			
4	K10098-2MS	13		8/40µl + 40µl	12		
5	1 20ms	14		1	1		
6	16/LCS(R)	15/100		10/5µl + 50µl			
7	MB	16					
8	K10098-2	17			12		
9	K10954-5B Base	18		10µl + 50µl	17	12	
10	1 59	19			12	12	
11	1 60	20			12	12	
12	1 61	21			12	12	
13	K10098-1	22			12		
14	1 3	23					
15	1 4	24					
16	1 5	25					TB 41774
17	K10099-1	26					
18	1 2	27					
19	K11051-5	28			12		
20	1 10	29			12		
21	K11152-3	30					
22	1 4	31					
23	1 3ms	32		8/40µl + 40µl			
24	1 30ms	33		1			
25							
26							
27							

All neg. tests. Clean.

## **Polychlorinated Biphenyls**

Organic Analysis:  
Polychlorinated Biphenyls (PCBs)

Summary Package

Sample and QC Results

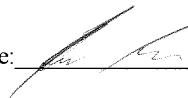
**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899

**Cover Page - Organic Analysis Data Package  
 Polychlorinated Biphenyls (PCBs)**

Sample Name	Lab Code	Date Collected	Date Received
MW-3	K1010899-001	10/01/2010	10/02/2010
Equipment Blank	K1010899-002	10/01/2010	10/02/2010

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature:   
 Date: 10/15/10

Name: Agilla Kromer  
 Title: SVB Manager

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** 10/01/2010  
**Date Received:** 10/02/2010

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** MW-3  
**Lab Code:** K1010899-001  
**Extraction Method:** EPA 3535A  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1221	ND	U	0.039	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1232	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1242	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1248	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1254	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1260	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	85	36-113	10/11/10	Acceptable

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** 10/01/2010  
**Date Received:** 10/02/2010

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** Equipment Blank  
**Lab Code:** K1010899-002  
**Extraction Method:** EPA 3535A  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1221	ND	U	0.039	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1232	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1242	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1248	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1254	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1260	<b>0.0014</b>	J	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	87	36-113	10/11/10	Acceptable

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** Method Blank  
**Lab Code:** KWG1010912-3  
**Extraction Method:** EPA 3535A  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1221	ND	U	0.039	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1232	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1242	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1248	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1254	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1260	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	81	36-113	10/11/10	Acceptable

**Comments:** \_\_\_\_\_



Client: Exponent  
Project: Heglar Kronquist/0907194.000.0601  
Sample Matrix: Water

Service Request: K1010899

**Surrogate Recovery Summary  
Polychlorinated Biphenyls (PCBs)**

Extraction Method: EPA 3535A  
Analysis Method: 8082

Units: PERCENT  
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
MW-3	K1010899-001	85 D
Equipment Blank	K1010899-002	87 D
Method Blank	KWG1010912-3	81 D
Lab Control Sample	KWG1010912-1	74 D
Duplicate Lab Control Sample	KWG1010912-2	73 D

**Surrogate Recovery Control Limits (%)**

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Sur1 = Decachlorobiphenyl 36-113

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Results flagged with an asterisk (\*) indicate values outside control criteria.  
Results flagged with a pound (#) indicate the control criteria is not applicable.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/04/2010  
**Date Analyzed:** 10/11/2010

**Lab Control Spike/Duplicate Lab Control Spike Summary  
 Polychlorinated Biphenyls (PCBs)**

**Extraction Method:** EPA 3535A  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** KWG1010912

Analyte Name	Lab Control Sample KWG1010912-1 Lab Control Spike			Duplicate Lab Control Sample KWG1010912-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Expected	%Rec	Result	Expected	%Rec			
Aroclor 1016	1.27	2.00	63	1.20	2.00	60	41-113	6	30
Aroclor 1260	1.38	2.00	69	1.36	2.00	68	47-117	1	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/04/2010  
**Date Analyzed:** 10/11/2010  
**Time Analyzed:** 17:57

**Method Blank Summary**  
**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** Method Blank  
**Lab Code:** KWG1010912-3  
**Extraction Method:** EPA 3535A  
**Analysis Method:** 8082

**File ID:** J:\GC22\DATA\101110.B\1011F006.D  
**Instrument ID:** GC22.i  
**Level:** Low  
**Extraction Lot:** KWG1010912

This Method Blank applies to the following analyses:

<b>Sample Name</b>	<b>Lab Code</b>	<b>File ID</b>	<b>Date Analyzed</b>	<b>Time Analyzed</b>
MW-3	K1010899-001	J:\GC22\DATA\101110.B\1011F009.D	10/11/10	19:09

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/04/2010  
**Date Analyzed:** 10/11/2010  
**Time Analyzed:** 19:58

**Method Blank Summary  
 Polychlorinated Biphenyls (PCBs)**

<b>Sample Name:</b> Method Blank	<b>File ID:</b> J:\GC22\DATA\101110.B\1011F011.D
<b>Lab Code:</b> KWG1010912-3	<b>Instrument ID:</b> GC22.i
<b>Extraction Method:</b> EPA 3535A	<b>Level:</b> Low
<b>Analysis Method:</b> 8082	<b>Extraction Lot:</b> KWG1010912

This Method Blank applies to the following analyses:

<b>Sample Name</b>	<b>Lab Code</b>	<b>File ID</b>	<b>Date Analyzed</b>	<b>Time Analyzed</b>
Equipment Blank	K1010899-002	J:\GC22\DATA\101110.B\1011F010.D	10/11/10	19:34
Lab Control Sample	KWG1010912-1	J:\GC22\DATA\101110.B\1011F012.D	10/11/10	20:23
Duplicate Lab Control Sample	KWG1010912-2	J:\GC22\DATA\101110.B\1011F013.D	10/11/10	20:47
MW-3	K1010899-001	J:\GC22\DATA\101110.B\1011F014.D	10/11/10	21:11
Equipment Blank	K1010899-002	J:\GC22\DATA\101110.B\1011F015.D	10/11/10	21:36

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Exponent  
**Project:** Heglur Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/04/2010  
**Date Analyzed:** 10/11/2010  
**Time Analyzed:** 20:23

**Lab Control Sample Summary  
 Polychlorinated Biphenyls (PCBs)**

<b>Sample Name:</b> Lab Control Sample	<b>File ID:</b> J:\GC22\DATA\101110.B\1011F012.D
<b>Lab Code:</b> KWG1010912-1	<b>Instrument ID:</b> GC22.i
<b>Extraction Method:</b> EPA 3535A	<b>Level:</b> Low
<b>Analysis Method:</b> 8082	<b>Extraction Lot:</b> KWG1010912

This Lab Control Sample applies to the following analyses:

<b>Sample Name</b>	<b>Lab Code</b>	<b>File ID</b>	<b>Date Analyzed</b>	<b>Time Analyzed</b>
Method Blank	KWG1010912-3	J:\GC22\DATA\101110.B\1011F006.D	10/11/10	17:57
MW-3	K1010899-001	J:\GC22\DATA\101110.B\1011F009.D	10/11/10	19:09
Equipment Blank	K1010899-002	J:\GC22\DATA\101110.B\1011F010.D	10/11/10	19:34
Method Blank	KWG1010912-3	J:\GC22\DATA\101110.B\1011F011.D	10/11/10	19:58
MW-3	K1010899-001	J:\GC22\DATA\101110.B\1011F014.D	10/11/10	21:11
Equipment Blank	K1010899-002	J:\GC22\DATA\101110.B\1011F015.D	10/11/10	21:36

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 07/09/2010

**Initial Calibration Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration ID:** CAL9635  
**Instrument ID:** GC22.i

**Column:** DB-35MS

Level ID	File ID	Level ID	File ID
A	\\Cash1\Acqudata\GC22\data\070910.b\0709F003.D	Q	\\Cash1\Acqudata\GC22\data\070910.b\0709F019.D
B	\\Cash1\Acqudata\GC22\data\070910.b\0709F004.D	R	\\Cash1\Acqudata\GC22\data\070910.b\0709F020.D
C	\\Cash1\Acqudata\GC22\data\070910.b\0709F005.D	S	\\Cash1\Acqudata\GC22\data\070910.b\0709F021.D
D	\\Cash1\Acqudata\GC22\data\070910.b\0709F006.D	T	\\Cash1\Acqudata\GC22\data\070910.b\0709F022.D
E	\\Cash1\Acqudata\GC22\data\070910.b\0709F007.D	U	\\Cash1\Acqudata\GC22\data\070910.b\0709F023.D
F	\\Cash1\Acqudata\GC22\data\070910.b\0709F008.D	V	\\Cash1\Acqudata\GC22\data\070910.b\0709F024.D
G	\\Cash1\Acqudata\GC22\data\070910.b\0709F009.D	W	\\Cash1\Acqudata\GC22\data\070910.b\0709F025.D
H	\\Cash1\Acqudata\GC22\data\070910.b\0709F010.D	X	\\Cash1\Acqudata\GC22\data\070910.b\0709F026.D
I	\\Cash1\Acqudata\GC22\data\070910.b\0709F011.D	Y	\\Cash1\Acqudata\GC22\data\070910.b\0709F027.D
J	\\Cash1\Acqudata\GC22\data\070910.b\0709F012.D	Z	\\Cash1\Acqudata\GC22\data\070910.b\0709F028.D
K	\\Cash1\Acqudata\GC22\data\070910.b\0709F013.D	AA	\\Cash1\Acqudata\GC22\data\070910.b\0709F029.D
L	\\Cash1\Acqudata\GC22\data\070910.b\0709F014.D	AB	\\Cash1\Acqudata\GC22\data\070910.b\0709F030.D
M	\\Cash1\Acqudata\GC22\data\070910.b\0709F015.D	AC	\\Cash1\Acqudata\GC22\data\070910.b\0709F031.D
N	\\Cash1\Acqudata\GC22\data\070910.b\0709F016.D	AD	\\Cash1\Acqudata\GC22\data\070910.b\0709F032.D
O	\\Cash1\Acqudata\GC22\data\070910.b\0709F017.D		
P	\\Cash1\Acqudata\GC22\data\070910.b\0709F018.D		

Analyte Name	Level ID			Level ID			Level ID			Level ID			Level ID		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
Decachlorobiphenyl	A	0.25	2.53E+6	B	0.50	2.41E+6	C	5.0	2.35E+6	D	10	2.28E+6	E	20	2.20E+6
	F	50	2.17E+6												
Aroclor 1016 {1}	A	2.5	1.19E+5	B	5.0	1.19E+5	C	50	1.15E+5	D	100	1.06E+5	E	200	1.05E+5
	F	500	1.01E+5												
Aroclor 1016 {2}	A	2.5	56100	B	5.0	70800	C	50	72100	D	100	68200	E	200	64600
	F	500	62400												
Aroclor 1016 {3}	A	2.5	57900	B	5.0	55300	C	50	60800	D	100	56100	E	200	51900
	F	500	48500												
Aroclor 1016 {4}	A	2.5	56400	B	5.0	54500	C	50	56700	D	100	55000	E	200	51400
	F	500	49600												
Aroclor 1016 {5}	A	2.5	39300	B	5.0	41400	C	50	43800	D	100	41900	E	200	38800
	F	500	37900												
Aroclor 1260 {1}	A	2.5	1.22E+5	B	5.0	1.22E+5	C	50	1.15E+5	D	100	1.09E+5	E	200	1.04E+5
	F	500	1.01E+5												
Aroclor 1260 {2}	A	2.5	1.52E+5	B	5.0	1.51E+5	C	50	1.43E+5	D	100	1.37E+5	E	200	1.32E+5
	F	500	1.29E+5												
Aroclor 1260 {3}	A	2.5	1.01E+5	B	5.0	99300	C	50	98500	D	100	94000	E	200	91100
	F	500	89300												
Aroclor 1260 {4}	A	2.5	2.23E+5	B	5.0	2.16E+5	C	50	2.26E+5	D	100	2.21E+5	E	200	2.20E+5
	F	500	2.23E+5												

Results flagged with an asterisk (\*) indicate values outside control criteria.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 07/09/2010

**Initial Calibration Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration ID:** CAL9635  
**Instrument ID:** GC22.i

**Column:** DB-35MS

Analyte Name	Level			Level			Level			Level					
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF			
Aroclor 1260 {5}	A	2.5	1.79E+5	B	5.0	1.75E+5	C	50	1.78E+5	D	100	1.71E+5	E	200	1.67E+5
	F	500	1.68E+5												

Results flagged with an asterisk (\*) indicate values outside control criteria.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 07/09/2010

**Initial Calibration Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration ID:** CAL9635  
**Instrument ID:** GC22.i

**Column:** DB-35MS

Analyte Name	Compound Type	Calibration Evaluation				Control Criteria
		Fit Type	Eval.	Eval. Result	Q	
Decachlorobiphenyl	SURR	AverageRF	% RSD	5.8		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	6.9		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	9.1		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	7.9		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	5.3		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	5.5		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	8.2		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	6.8		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	4.9		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	1.6		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	2.9		≤ 20

Results flagged with an asterisk (\*) indicate values outside control criteria.



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 07/09/2010  
**Date Analyzed:** 07/10/2010

**Second Source Calibration Verification  
 Polychlorinated Biphenyls (PCBs)**

**Calibration Type:** External Standard  
**Analysis Method:** 8082

**Calibration ID:** CAL9635  
**Units:** ng/mL

**File ID:** \\Cash1\Acqudata\GC22\data\070910.b\0709F033.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F034.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F035.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F036.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F037.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F038.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F039.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F040.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F041.D

**Column ID:** DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016	100	91	NA	NA	NA	-9	± 20 %	NA
Aroclor 1016 {1}	100	86	111000	95500	-14	NA	± 100 %	AverageRF
Aroclor 1016 {2}	100	92	65700	60600	-8	NA	± 100 %	AverageRF
Aroclor 1016 {3}	100	86	55100	47300	-14	NA	± 100 %	AverageRF
Aroclor 1016 {4}	100	91	53900	48800	-9	NA	± 100 %	AverageRF
Aroclor 1016 {5}	100	100	40500	41600	3	NA	± 100 %	AverageRF
Aroclor 1260	100	100	NA	NA	NA	3	± 20 %	NA
Aroclor 1260 {1}	100	92	112000	104000	-8	NA	± 100 %	AverageRF
Aroclor 1260 {2}	100	96	141000	134000	-4	NA	± 100 %	AverageRF
Aroclor 1260 {3}	100	110	95500	104000	9	NA	± 100 %	AverageRF
Aroclor 1260 {4}	100	110	222000	248000	12	NA	± 100 %	AverageRF
Aroclor 1260 {5}	100	110	173000	185000	7	NA	± 100 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 07/09/2010

**Initial Calibration Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration ID:** CAL9635  
**Instrument ID:** GC22.i

**Column:** DB-XLB

Level ID	File ID	Level ID	File ID
A	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F003.D	Q	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F019.D
B	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F004.D	R	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F020.D
C	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F005.D	S	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F021.D
D	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F006.D	T	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F022.D
E	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F007.D	U	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F023.D
F	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F008.D	V	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F024.D
G	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F009.D	W	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F025.D
H	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F010.D	X	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F026.D
I	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F011.D	Y	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F027.D
J	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F012.D	Z	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F028.D
K	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F013.D	AA	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F029.D
L	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F014.D	AB	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F030.D
M	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F015.D	AC	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F031.D
N	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F016.D	AD	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F032.D
O	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F017.D		
P	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F018.D		

Analyte Name	Level			Level			Level			Level					
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF			
Decachlorobiphenyl	A	0.25	5.62E+6	B	0.50	5.41E+6	C	5.0	4.91E+6	D	10	4.70E+6	E	20	4.51E+6
	F		50	4.39E+6											
Aroclor 1016 {1}	A	2.5	1.74E+5	B	5.0	1.55E+5	C	50	1.37E+5	D	100	1.30E+5	E	200	1.22E+5
	F		500	1.12E+5											
Aroclor 1016 {2}	A	2.5	2.59E+5	B	5.0	2.47E+5	C	50	2.27E+5	D	100	2.18E+5	E	200	2.21E+5
	F		500	2.14E+5											
Aroclor 1016 {3}	A	2.5	1.31E+5	B	5.0	1.21E+5	C	50	1.12E+5	D	100	1.06E+5	E	200	1.01E+5
	F		500	93800											
Aroclor 1016 {4}	A	2.5	1.58E+5	B	5.0	1.43E+5	C	50	1.26E+5	D	100	1.18E+5	E	200	1.13E+5
	F		500	1.06E+5											
Aroclor 1016 {5}	A	2.5	1.31E+5	B	5.0	1.28E+5	C	50	1.22E+5	D	100	1.16E+5	E	200	1.13E+5
	F		500	1.06E+5											
Aroclor 1260 {1}	A	2.5	3.09E+5	B	5.0	3.03E+5	C	50	2.72E+5	D	100	2.61E+5	E	200	2.50E+5
	F		500	2.40E+5											
Aroclor 1260 {2}	A	2.5	4.10E+5	B	5.0	4.03E+5	C	50	3.73E+5	D	100	3.63E+5	E	200	3.57E+5
	F		500	3.52E+5											
Aroclor 1260 {3}	A	2.5	2.21E+5	B	5.0	2.27E+5	C	50	2.28E+5	D	100	2.20E+5	E	200	2.12E+5
	F		500	2.04E+5											
Aroclor 1260 {4}	A	2.5	5.74E+5	B	5.0	5.19E+5	C	50	4.92E+5	D	100	4.82E+5	E	200	4.80E+5
	F		500	4.82E+5											

Results flagged with an asterisk (\*) indicate values outside control criteria.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 07/09/2010

**Initial Calibration Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration ID:** CAL9635  
**Instrument ID:** GC22.i

**Column:** DB-XLB

Analyte Name	Level			Level			Level			Level					
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF			
Aroclor 1260 {5}	A	2.5	3.08E+5	B	5.0	3.08E+5	C	50	3.04E+5	D	100	2.97E+5	E	200	2.93E+5
	F	500	2.90E+5												

Results flagged with an asterisk (\*) indicate values outside control criteria.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 07/09/2010

**Initial Calibration Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration ID:** CAL9635  
**Instrument ID:** GC22.i

**Column:** DB-XLB

Analyte Name	Compound Type	Calibration Evaluation				Control Criteria
		Fit Type	Eval.	Eval. Result	Q	
Decachlorobiphenyl	SURR	AverageRF	% RSD	10.0		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	16.3		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	7.8		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	12.3		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	15.6		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	7.8		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	10.3		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	6.6		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	4.1		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	7.3		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	2.6		≤ 20

Results flagged with an asterisk (\*) indicate values outside control criteria.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 07/09/2010  
**Date Analyzed:** 07/10/2010

**Second Source Calibration Verification  
 Polychlorinated Biphenyls (PCBs)**

**Calibration Type:** External Standard  
**Analysis Method:** 8082

**Calibration ID:** CAL9635  
**Units:** ng/mL

**File ID:** \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F033.D  
 \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F034.D  
 \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F035.D  
 \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F036.D  
 \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F037.D  
 \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F038.D  
 \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F039.D  
 \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F040.D  
 \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F041.D

**Column ID:** DB-XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016	100	91	NA	NA	NA	-9	± 20 %	NA
Aroclor 1016 {1}	100	88	138000	121000	-12	NA	± 100 %	AverageRF
Aroclor 1016 {2}	100	95	231000	218000	-5	NA	± 100 %	AverageRF
Aroclor 1016 {3}	100	88	111000	97400	-12	NA	± 100 %	AverageRF
Aroclor 1016 {4}	100	89	127000	113000	-11	NA	± 100 %	AverageRF
Aroclor 1016 {5}	100	95	119000	114000	-5	NA	± 100 %	AverageRF
Aroclor 1260	100	110	NA	NA	NA	8	± 20 %	NA
Aroclor 1260 {1}	100	96	273000	263000	-4	NA	± 100 %	AverageRF
Aroclor 1260 {2}	100	93	376000	349000	-7	NA	± 100 %	AverageRF
Aroclor 1260 {3}	100	120	219000	266000	22	NA	± 100 %	AverageRF
Aroclor 1260 {4}	100	110	505000	574000	14	NA	± 100 %	AverageRF
Aroclor 1260 {5}	100	110	300000	342000	14	NA	± 100 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Date Analyzed:** 10/11/2010

**Continuing Calibration Verification Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration Type:** External Standard  
**Analysis Method:** 8082

**Calibration Date:** 07/09/2010  
**Calibration ID:** CAL9635  
**Analysis Lot:** KWG1010997  
**Units:** ng/mL  
**Column ID:** DB-35MS

**File ID:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\1011F005.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	10	6.8	2320000	1580000	-32 *	NA	± 20 %	AverageRF
Aroclor 1016	100	83	NA	NA	NA	-17	± 20 %	NA
Aroclor 1016 {1}	100	78	111000	86900	-22	NA	± 100 %	AverageRF
Aroclor 1016 {2}	100	84	65700	55000	-16	NA	± 100 %	AverageRF
Aroclor 1016 {3}	100	82	55100	45400	-18	NA	± 100 %	AverageRF
Aroclor 1016 {4}	100	84	53900	45200	-16	NA	± 100 %	AverageRF
Aroclor 1016 {5}	100	85	40500	34300	-15	NA	± 100 %	AverageRF
Aroclor 1260	100	84	NA	NA	NA	-16	± 20 %	NA
Aroclor 1260 {1}	100	85	112000	95200	-15	NA	± 100 %	AverageRF
Aroclor 1260 {2}	100	94	141000	132000	-6	NA	± 100 %	AverageRF
Aroclor 1260 {3}	100	80	95500	76400	-20	NA	± 100 %	AverageRF
Aroclor 1260 {4}	100	83	222000	184000	-17	NA	± 100 %	AverageRF
Aroclor 1260 {5}	100	77	173000	133000	-23	NA	± 100 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Date Analyzed:** 10/11/2010

**Continuing Calibration Verification Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration Type:** External Standard  
**Analysis Method:** 8082

**Calibration Date:** 07/09/2010  
**Calibration ID:** CAL9635  
**Analysis Lot:** KWG1010997  
**Units:** ng/mL  
**Column ID:** DB-XLB

**File ID:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110\_R.B\1011F005.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	10	10	4920000	5030000	2	NA	± 20 %	AverageRF
Aroclor 1016	100	100	NA	NA	NA	0	± 20 %	NA
Aroclor 1016 {1}	100	95	138000	131000	-5	NA	± 100 %	AverageRF
Aroclor 1016 {2}	100	110	231000	247000	7	NA	± 100 %	AverageRF
Aroclor 1016 {3}	100	99	111000	109000	-1	NA	± 100 %	AverageRF
Aroclor 1016 {4}	100	97	127000	123000	-3	NA	± 100 %	AverageRF
Aroclor 1016 {5}	100	100	119000	122000	2	NA	± 100 %	AverageRF
Aroclor 1260	100	110	NA	NA	NA	7	± 20 %	NA
Aroclor 1260 {1}	100	100	273000	279000	2	NA	± 100 %	AverageRF
Aroclor 1260 {2}	100	110	376000	398000	6	NA	± 100 %	AverageRF
Aroclor 1260 {3}	100	110	219000	236000	8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	100	110	505000	538000	7	NA	± 100 %	AverageRF
Aroclor 1260 {5}	100	110	300000	330000	10	NA	± 100 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Date Analyzed:** 10/11/2010

**Continuing Calibration Verification Summary**  
**Polychlorinated Biphenyls (PCBs)**

**Calibration Type:** External Standard  
**Analysis Method:** 8082

**Calibration Date:** 07/09/2010  
**Calibration ID:** CAL9635  
**Analysis Lot:** KWG1010997  
**Units:** ng/mL  
**Column ID:** DB-35MS

**File ID:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\1011F017.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	10	7.1	2320000	1650000	-29 *	NA	± 20 %	AverageRF
Aroclor 1016	100	84	NA	NA	NA	-16	± 20 %	NA
Aroclor 1016 {1}	100	82	111000	90500	-18	NA	± 100 %	AverageRF
Aroclor 1016 {2}	100	84	65700	55500	-16	NA	± 100 %	AverageRF
Aroclor 1016 {3}	100	82	55100	45400	-18	NA	± 100 %	AverageRF
Aroclor 1016 {4}	100	86	53900	46200	-14	NA	± 100 %	AverageRF
Aroclor 1016 {5}	100	85	40500	34500	-15	NA	± 100 %	AverageRF
Aroclor 1260	100	86	NA	NA	NA	-14	± 20 %	NA
Aroclor 1260 {1}	100	87	112000	98000	-13	NA	± 100 %	AverageRF
Aroclor 1260 {2}	100	97	141000	136000	-3	NA	± 100 %	AverageRF
Aroclor 1260 {3}	100	83	95500	78900	-17	NA	± 100 %	AverageRF
Aroclor 1260 {4}	100	87	222000	192000	-13	NA	± 100 %	AverageRF
Aroclor 1260 {5}	100	79	173000	136000	-21	NA	± 100 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Date Analyzed:** 10/11/2010

**Continuing Calibration Verification Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration Type:** External Standard  
**Analysis Method:** 8082

**Calibration Date:** 07/09/2010  
**Calibration ID:** CAL9635  
**Analysis Lot:** KWG1010997  
**Units:** ng/mL  
**Column ID:** DB-XLB

**File ID:** \\CASHKELSO\ACQU\DATA\GC22\DATA\101110\_R.B\1011F017.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	10	11	4920000	5180000	5	NA	± 20 %	AverageRF
Aroclor 1016	100	100	NA	NA	NA	1	± 20 %	NA
Aroclor 1016 {1}	100	95	138000	131000	-5	NA	± 100 %	AverageRF
Aroclor 1016 {2}	100	110	231000	245000	6	NA	± 100 %	AverageRF
Aroclor 1016 {3}	100	100	111000	112000	2	NA	± 100 %	AverageRF
Aroclor 1016 {4}	100	100	127000	127000	0	NA	± 100 %	AverageRF
Aroclor 1016 {5}	100	110	119000	125000	5	NA	± 100 %	AverageRF
Aroclor 1260	100	110	NA	NA	NA	8	± 20 %	NA
Aroclor 1260 {1}	100	100	273000	281000	3	NA	± 100 %	AverageRF
Aroclor 1260 {2}	100	110	376000	405000	8	NA	± 100 %	AverageRF
Aroclor 1260 {3}	100	110	219000	239000	9	NA	± 100 %	AverageRF
Aroclor 1260 {4}	100	110	505000	551000	9	NA	± 100 %	AverageRF
Aroclor 1260 {5}	100	110	300000	338000	13	NA	± 100 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899

**Analysis Run Log  
 Polychlorinated Biphenyls (PCBs)**

**Analysis Method:** 8082

**Analysis Lot:** KWG1010997  
**Instrument ID:** GC22.i  
**Column:** DB-35MS

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1011F004.D	Instrument Blank	KWG1010997-1	10/11/2010	17:08		10/11/2010	17:08
1011F005.D	Continuing Calibration Verification	KWG1010997-2	10/11/2010	17:32		10/11/2010	17:32
1011F006.D	Method Blank	KWG1010912-3	10/11/2010	17:57		10/11/2010	17:57
1011F009.D	MW-3	K1010899-001	10/11/2010	19:09		10/11/2010	19:09
1011F010.D	Equipment Blank	K1010899-002	10/11/2010	19:34		10/11/2010	19:34
1011F011.D	Method Blank	KWG1010912-3	10/11/2010	19:58		10/11/2010	19:58
1011F012.D	Lab Control Sample	KWG1010912-1	10/11/2010	20:23		10/11/2010	20:23
1011F013.D	Duplicate Lab Control Sample	KWG1010912-2	10/11/2010	20:47		10/11/2010	20:47
1011F014.D	MW-3	K1010899-001	10/11/2010	21:11		10/11/2010	21:11
1011F015.D	Equipment Blank	K1010899-002	10/11/2010	21:36		10/11/2010	21:36
1011F016.D	Instrument Blank	KWG1010997-3	10/11/2010	22:00		10/11/2010	22:00
1011F017.D	Continuing Calibration Verification	KWG1010997-4	10/11/2010	22:24		10/11/2010	22:24

Results flagged with an asterisk (\*) indicate the holding time was exceeded for the analysis

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/04/2010

**Extraction Prep Log  
 Polychlorinated Biphenyls (PCBs)**

**Extraction Method:** EPA 3535A  
**Analysis Method:** 8082

**Extraction Lot:** KWG1010912  
**Level:** Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
MW-3DL	K1010899-001	10/01/10	10/02/10	1050mL	2mL	NA	
MW-3	K1010899-001	10/01/10	10/02/10	1050mL	2mL	NA	
Equipment BlankDL	K1010899-002	10/01/10	10/02/10	1050mL	2mL	NA	
Equipment Blank	K1010899-002	10/01/10	10/02/10	1050mL	2mL	NA	
Method Blank	KWG1010912-3	NA	NA	1050mL	2mL	NA	
Lab Control Sample	KWG1010912-1	NA	NA	1000mL	2mL	NA	
Duplicate Lab Control Sample	KWG1010912-2	NA	NA	1000mL	2mL	NA	

Results flagged with an asterisk (\*) indicate the holding time was exceeded for the analysis

COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** 10/01/2010  
**Date Received:** 10/02/2010  
**Date Extracted:** 10/04/2010

Polychlorinated Biphenyls (PCBs)

**Sample Name:** Equipment Blank  
**Lab Code:** K1010899-002  
**Extraction Method:** EPA 3535A  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1260	0.020	0.00096	0.0014	0.0015	6.9	J	1	10/11/10

Organic Analysis:  
Polychlorinated Biphenyls (PCBs)

Validation Package

Organic Analysis:  
Polychlorinated Biphenyls (PCBs)

Validation Package

QC Reports

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Exponent  
Project: Heglar Kronquist/0907194.000.0601  
Sample Matrix: Water

Service Request: K1010899

Surrogate Recovery Summary  
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3535A  
Analysis Method: 8082

Units: PERCENT  
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
MW-3	K1010899-001	85 D
Equipment Blank	K1010899-002	87 D
Method Blank	KWG1010912-3	81 D
Lab Control Sample	KWG1010912-1	74 D
Duplicate Lab Control Sample	KWG1010912-2	73 D

Surrogate Recovery Control Limits (%)

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Sur1 = Decachlorobiphenyl 36-113

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Results flagged with an asterisk (\*) indicate values outside control criteria.  
Results flagged with a pound (#) indicate the control criteria is not applicable.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/04/2010  
**Date Analyzed:** 10/11/2010

**Lab Control Spike/Duplicate Lab Control Spike Summary  
 Polychlorinated Biphenyls (PCBs)**

**Extraction Method:** EPA 3535A  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** KWG1010912

Analyte Name	Lab Control Sample KWG1010912-1 Lab Control Spike			Duplicate Lab Control Sample KWG1010912-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Expected	%Rec	Result	Expected	%Rec			
Aroclor 1016	1.27	2.00	63	1.20	2.00	60	41-113	6	30
Aroclor 1260	1.38	2.00	69	1.36	2.00	68	47-117	1	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/04/2010  
**Date Analyzed:** 10/11/2010  
**Time Analyzed:** 17:57

**Method Blank Summary**  
**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** Method Blank **File ID:** J:\GC22\DATA\101110.B\1011F006.D  
**Lab Code:** KWG1010912-3 **Instrument ID:** GC22.i  
**Extraction Method:** EPA 3535A **Level:** Low  
**Analysis Method:** 8082 **Extraction Lot:** KWG1010912

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
MW-3	K1010899-001	J:\GC22\DATA\101110.B\1011F009.D	10/11/10	19:09

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Exponent  
Project: Heglar Kronquist/0907194.000.0601  
Sample Matrix: Water

Service Request: K1010899  
Date Extracted: 10/04/2010  
Date Analyzed: 10/11/2010  
Time Analyzed: 19:58

Method Blank Summary  
Polychlorinated Biphenyls (PCBs)

Sample Name: Method Blank  
Lab Code: KWG1010912-3  
Extraction Method: EPA 3535A  
Analysis Method: 8082  
File ID: J:\GC22\DATA\101110.B\1011F011.D  
Instrument ID: GC22.i  
Level: Low  
Extraction Lot: KWG1010912

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Equipment Blank	K1010899-002	J:\GC22\DATA\101110.B\1011F010.D	10/11/10	19:34
Lab Control Sample	KWG1010912-1	J:\GC22\DATA\101110.B\1011F012.D	10/11/10	20:23
Duplicate Lab Control Sample	KWG1010912-2	J:\GC22\DATA\101110.B\1011F013.D	10/11/10	20:47
MW-3	K1010899-001	J:\GC22\DATA\101110.B\1011F014.D	10/11/10	21:11
Equipment Blank	K1010899-002	J:\GC22\DATA\101110.B\1011F015.D	10/11/10	21:36

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Extracted:** 10/04/2010  
**Date Analyzed:** 10/11/2010  
**Time Analyzed:** 20:23

**Lab Control Sample Summary  
Polychlorinated Biphenyls (PCBs)**

**Sample Name:** Lab Control Sample  
**Lab Code:** KWG1010912-1  
**Extraction Method:** EPA 3535A  
**Analysis Method:** 8082

**File ID:** J:\GC22\DATA\101110.B\1011F012.D  
**Instrument ID:** GC22.i  
**Level:** Low  
**Extraction Lot:** KWG1010912

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1010912-3	JAGC22\DATA\101110.B\1011F006.D	10/11/10	17:57
MW-3	K1010899-001	JAGC22\DATA\101110.B\1011F009.D	10/11/10	19:09
Equipment Blank	K1010899-002	JAGC22\DATA\101110.B\1011F010.D	10/11/10	19:34
Method Blank	KWG1010912-3	JAGC22\DATA\101110.B\1011F011.D	10/11/10	19:58
MW-3	K1010899-001	JAGC22\DATA\101110.B\1011F014.D	10/11/10	21:11
Equipment Blank	K1010899-002	JAGC22\DATA\101110.B\1011F015.D	10/11/10	21:36

Organic Analysis:  
Polychlorinated Biphenyls (PCBs)

Validation Package

Raw Data

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** 10/01/2010  
**Date Received:** 10/02/2010

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** MW-3  
**Lab Code:** K1010899-001  
**Extraction Method:** EPA 3535A  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1221	ND	U	0.039	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1232	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1242	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1248	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1254	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1260	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	85	36-113	10/11/10	Acceptable

**Comments:** \_\_\_\_\_

## Exception Report

**Data File:** \\CASHKELSO\ACQU\DATA\GC22\DATA\101110.B\1011F009.D  
**Lab ID:** K1010899-001  
**RunType:** SMPL  
**Matrix:** WATER

**Date Acquired:** 10/11/2010 19:09  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

### Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Decachlorobiphenyl	-32.0	NA	20	ko
Continuing Calibration Recovery (Closing)	Decachlorobiphenyl	-28.8	NA	20	ko
Above Highest ICAL Level	Decachlorobiphenyl	68.13	NA	50	ko di

Primary Review: WDRW

Secondary Review: 10/13/10

## Exception Report

**Data File:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110\_R.B\1011F009.  
**Lab ID:** K1010899-001  
**RunType:** SMPL  
**Matrix:** WATER

**Date Acquired:** 10/11/2010 19:09  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

### Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Decachlorobiphenyl	89.97	NA	50	<i>dit</i>

Primary Review: *[Signature]*

Secondary Review: *[Signature]* 10/13/10

# Quantitation Report

<b>Bottle ID:</b>		<b>Tier:</b>	III	<b>Matrix:</b>	WATER
<b>Prod Code:</b>	8082 PCB_LL	<b>Collect Date:</b>	10/01/2010	<b>Receive Date:</b>	10/02/2010

<b>Analysis Lot:</b>	KWG1010997	<b>Prep Lot:</b>	KWG1010912	<b>Report Group:</b>	K1010899
<b>Analysis Method:</b>	8082	<b>Prep Method:</b>	EPA 3535A		
<b>Prep Ref:</b>	965902	<b>Prep Date:</b>	10/04/2010		

<b>Quant Method:</b>	\\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\070910UL_F.M	<b>Calibration ID:</b>	CAL9635
<b>Title:</b>	Polychlorinated Biphenyls (PCBs)	<b>Report List ID:</b>	LJ6227
<b>MB Ref:</b>	J:\GC22\DATA\101110.B\1011F006.D	<b>Method ID:</b>	MJ706
<b>Quant based on Report List</b>			

<b>Data File #1:</b>	J:\GC22\DATA\101110.B\1011F009.D	<b>Instrument:</b>	GC22.i
<b>Data File #2:</b>	\\CASH\kelso\acquadata\GC22\data\101110_r.b\1011F009.D	<b>Vial:</b>	6
<b>Acqu Date:</b>	10/11/2010 19:09	<b>Quant Date:</b>	10/12/2010 11:24
<b>Run Type:</b>	SMPL	<b>Dilution:</b>	1.0
<b>Lab ID:</b>	K1010899-001	<b>Soln Conc. Units:</b>	ng/mL
<b>Signal #1:</b>	DB-35MS	<b>Signal #2:</b>	DB-XLB

## Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2	Rpt
Decachlorobiphenyl	13.51 <sup>+0.00</sup>	14.57 <sup>+0.00</sup>	158282923	442874420	68.13 <sup>CCV</sup>	89.97	NR
%Recovery =					68OK	90OK	Limits = 36-113

## Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:				Rpt
					ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	
Aroclor 1016			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution



<b>Data File #1:</b>	J:\GC22\DATA\101110.B\1011F009.D	<b>Instrument:</b>	GC22.i
<b>Data File #2:</b>	\\CASH\kelso\acquadata\GC22\data\101110_r.b\1011F009.D	<b>Vial:</b>	6
<b>Acqu Date:</b>	10/11/2010 19:09	<b>Quant Date:</b>	10/12/2010 11:24
<b>Run Type:</b>	SMPL	<b>Dilution:</b>	1.0
<b>Lab ID:</b>	K1010899-001	<b>Soln Conc. Units:</b>	ng/mL
<b>Signal #1:</b>	DB-35MS	<b>Signal #2:</b>	DB-XLB

**Target Compounds**

**Final Conc. Units:** ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1260 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	

The +/- after Retention Time symbolize the direction of the RT shift

**Prep Amount:** 1050 mL      **Dilution:** 1.0  
**Prep Final Vol:** 2 mL      **Unit Factor:** 1

**Final Concentration** = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL  
J: Analyte detected above MDL, but below MRL  
B: Hit above MRL also found in Method Blank  
E: Analyte concentration above high point of ICAL  
N: Presumptive evidence of compound

D: Result from dilution  
m: Manual integration performed  
d: Compound manually deleted  
NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
#: Acceptance criteria not applicable  
?: Insufficient information to determine acceptance  
e: Result >= MRL, but MRL less than low point of ICAL  
c: check for co-elution

Data File: \\CASH\kelso\acqdata\GC22\data\101110.b\1011F009.D  
Report Date: 12-Oct-2010 11:24

Laboratory Name

Sample #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\1011F009.D  
Sample #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\1011F009.D  
Inj Date : 11-OCT-2010 19:09  
Sample Info: K1010899-001 | MW-3  
Misc Info :  
Cal Date : 12-OCT-2010 09:01  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

Method #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\070910ul\_f.m  
Method #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\070910ul\_r.m  
Sub List #1 : ALL.SUB  
Sub List #2 : ALL.SUB  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.389	5.975	122640198	346002648	57.1	68.6		100.00 (R)
Decachlorobiphenyl	13.509	14.575	158282923	442874420	68.1	90.0		100.00 (R)

QC Flag Legend

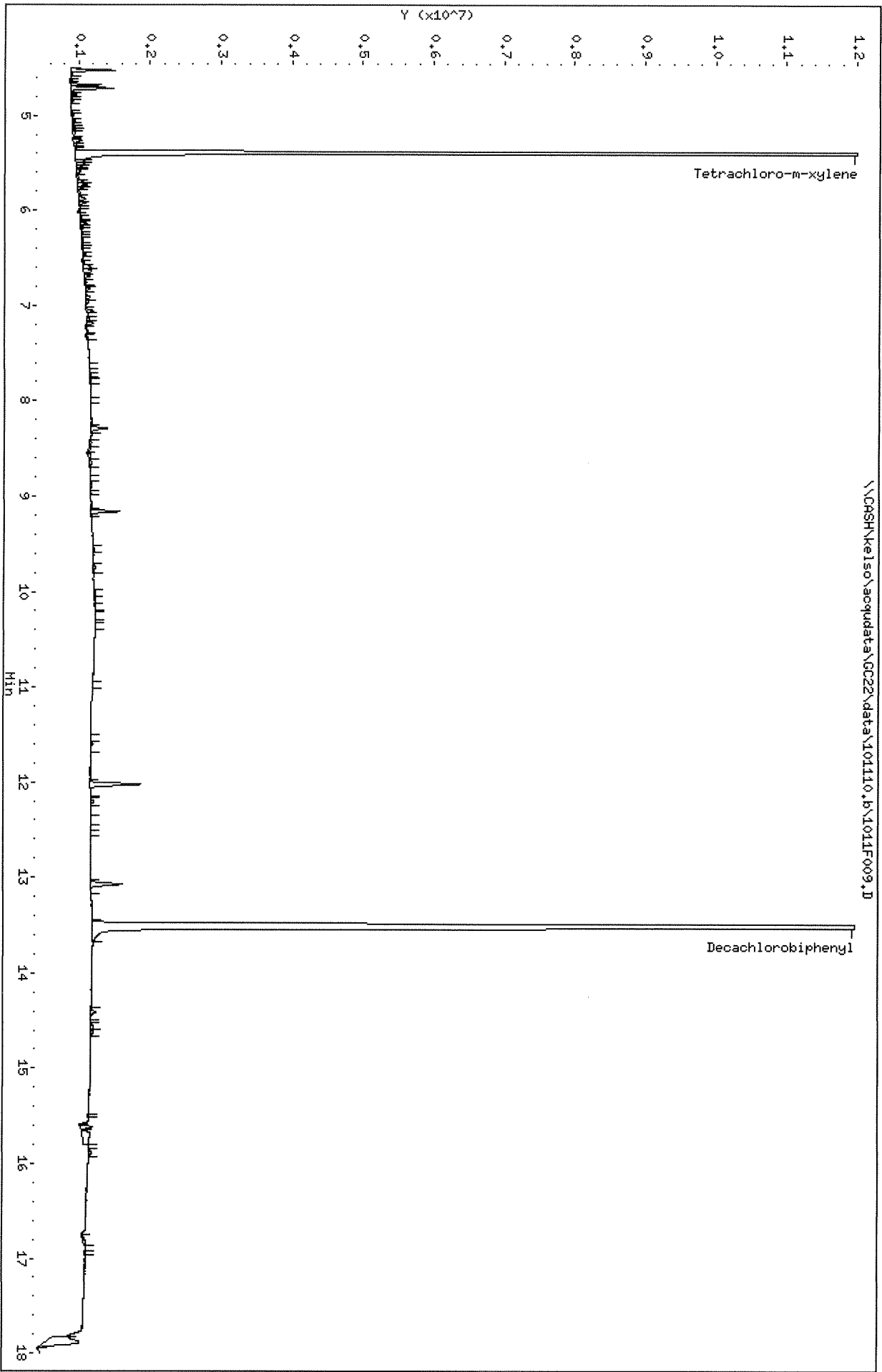
R - Spike/Surrogate failed recovery limits.

Data File: \\CASH\keiso\acq\data\GC22\data\101110.b\1011F009.D  
Date: 11-OCT-2010 19:09

Client ID:  
Sample Info: K1010899-001 | MM-3

Column phase: DB-35MS

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32



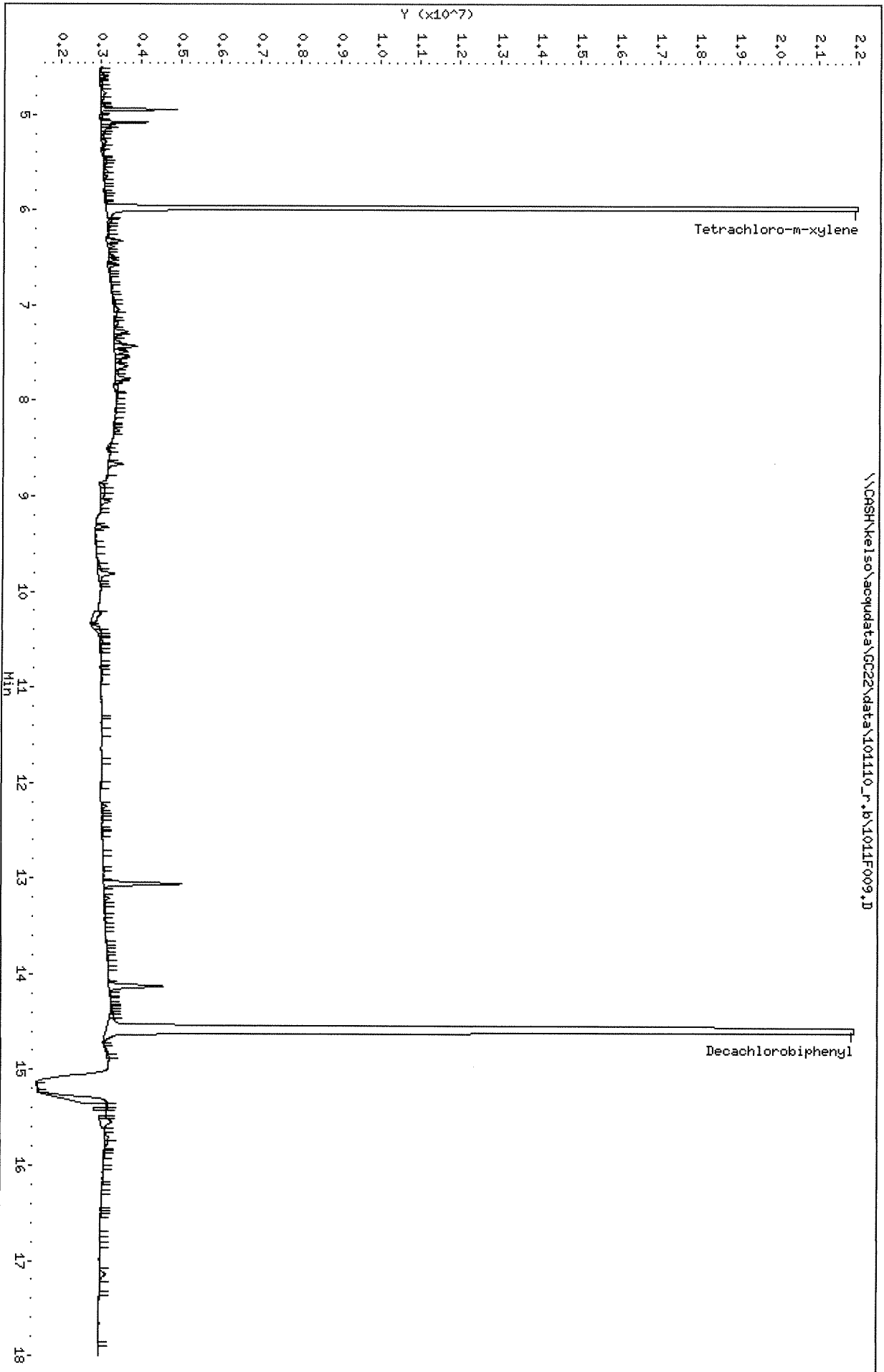
Data File: \\CASH\ke1so\acqdata\GC22\data\101110\_r.b\1011F009.D  
Date: 11-OCT-2010 19:09

Client ID:  
Sample Info: K1010899-001 | MM-3

Column phase: DB-XLB

Instrument: GC22.i

Operator: LHarris  
Column diameter: 0.32



## Exception Report

**Data File:** \\CASHKELSO\ACQUADATA\GC22\DATA\101110.B\1011F014.D  
**Lab ID:** K1010899-001  
**RunType:** SMPL  
**Matrix:** WATER

**Date Acquired:** 10/11/2010 21:11  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

### Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Decachlorobiphenyl	-32.0	NA	20	DO 3/6
Continuing Calibration Recovery (Closing)	Decachlorobiphenyl	-28.8	NA	20	

Primary Review: MMWLD  
 Secondary Review: 10/13/10

## Exception Report

**Data File:** \\CASHKELSO\ACQU\DATA\GC22\DATA\101110\_R.B\1011F014.  
**Lab ID:** K1010899-001  
**RunType:** SMPL  
**Matrix:** WATER

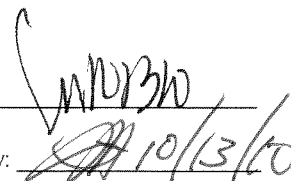
**Date Acquired:** 10/11/2010 21:11  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: \_\_\_\_\_

Secondary Review: \_\_\_\_\_

  
 10/13/10

# Quantitation Report

Bottle ID:	Tier: III	Matrix: WATER
Prod Code: 8082 PCB_LL	Collect Date: 10/01/2010	Receive Date: 10/02/2010

Analysis Lot: KWG1010997	Prep Lot: KWG1010912	Report Group: K1010899
Analysis Method: 8082	Prep Method: EPA 3535A	
Prep Ref: 965902	Prep Date: 10/04/2010	

Quant Method: \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\070910UL_F.M	Calibration ID: CAL9635
Title: Polychlorinated Biphenyls (PCBs)	Report List ID: LJ6227
MB Ref: J:\GC22\DATA\101110.B\1011F011.D	Method ID: MJ706
<b>Quant based on Report List</b>	

Data File #1: J:\GC22\DATA\101110.B\1011F014.D	Instrument: GC22.i
Data File #2: \\CASH\kelso\acqu\data\GC22\data\101110_r.b\1011F014.D	Vial: 11
Acqu Date: 10/11/2010 21:11	Quant Date: 10/12/2010 11:24
Run Type: SMPL	Dilution: 10.0
Lab ID: K1010899-001	Soln Conc. Units: ng/mL
Signal #1: DB-35MS	Signal #2: DB-XLB

## Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2	Rpt
Decachlorobiphenyl	13.51 <sup>+0.00</sup>	14.57 <sup>+0.00</sup>	13576363	41746999	5.84 <sup>CCV</sup>	8.48	85OK
%Recovery =					58OK	85OK	Limits = 36-113

## Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units: ug/L				Rpt
					ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	
Aroclor 1016			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1242 {1}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242 {2}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242 {3}			0	0d	0.0000	0.0000	0.0096U	0.0096U	

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

<b>Data File #1:</b>	J:\GC22\DATA\101110.B\1011F014.D	<b>Instrument:</b>	GC22.i
<b>Data File #2:</b>	\\CASH\kelso\acqdata\GC22\data\101110_r.b\1011F014.D	<b>Vial:</b>	11
<b>Acqu Date:</b>	10/11/2010 21:11	<b>Quant Date:</b>	10/12/2010 11:24
<b>Run Type:</b>	SMPL	<b>Dilution:</b>	10.0
<b>Lab ID:</b>	K1010899-001	<b>Soln Conc. Units:</b>	ng/mL
<b>Signal #1:</b>	DB-35MS	<b>Signal #2:</b>	DB-XLB

**Target Compounds**

**Final Conc. Units:** ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {4}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242 {5}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1248 {1}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {2}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {3}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {4}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {5}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1254 {1}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {2}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {3}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {4}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {5}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1260 {1}			0	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260 {2}			0	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260 {3}			0	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260 {4}			0	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260 {5}			0	0	0.0000	0.0000	0.0096U	0.0096U	

The +/- after Retention Time symbolize the direction of the RT shift

**Prep Amount:** 1050 mL      **Dilution:** 10.0  
**Prep Final Vol:** 2 mL      **Unit Factor:** 1

**Final Concentration =** ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL  
J: Analyte detected above MDL, but below MRL  
B: Hit above MRL also found in Method Blank  
E: Analyte concentration above high point of ICAL  
N: Presumptive evidence of compound

D: Result from dilution  
m: Manual integration performed  
d: Compound manually deleted  
NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
#: Acceptance criteria not applicable  
?: Insufficient information to determine acceptance  
e: Result >= MRL, but MRL less than low point of ICAL  
c: check for co-elution



Data File: \\CASH\kelso\acqdata\GC22\data\101110.b\1011F014.D  
Report Date: 12-Oct-2010 11:24

Laboratory Name

Sample #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\1011F014.D  
Sample #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\1011F014.D  
Inj Date : 11-OCT-2010 21:11  
Sample Info: K1010899-001 | MW-3 @10X  
Misc Info :  
Cal Date : 12-OCT-2010 09:01  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

Method #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\070910ul\_f.m  
Method #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\070910ul\_r.m  
Sub List #1 : ALL.SUB  
Sub List #2 : ALL.SUB  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.385	5.969	10975147	31283888	5.11	6.20		100.00 (R)
Decachlorobiphenyl	13.509	14.575	13576363	41746999	5.84	8.48		100.00 (R)

QC Flag Legend

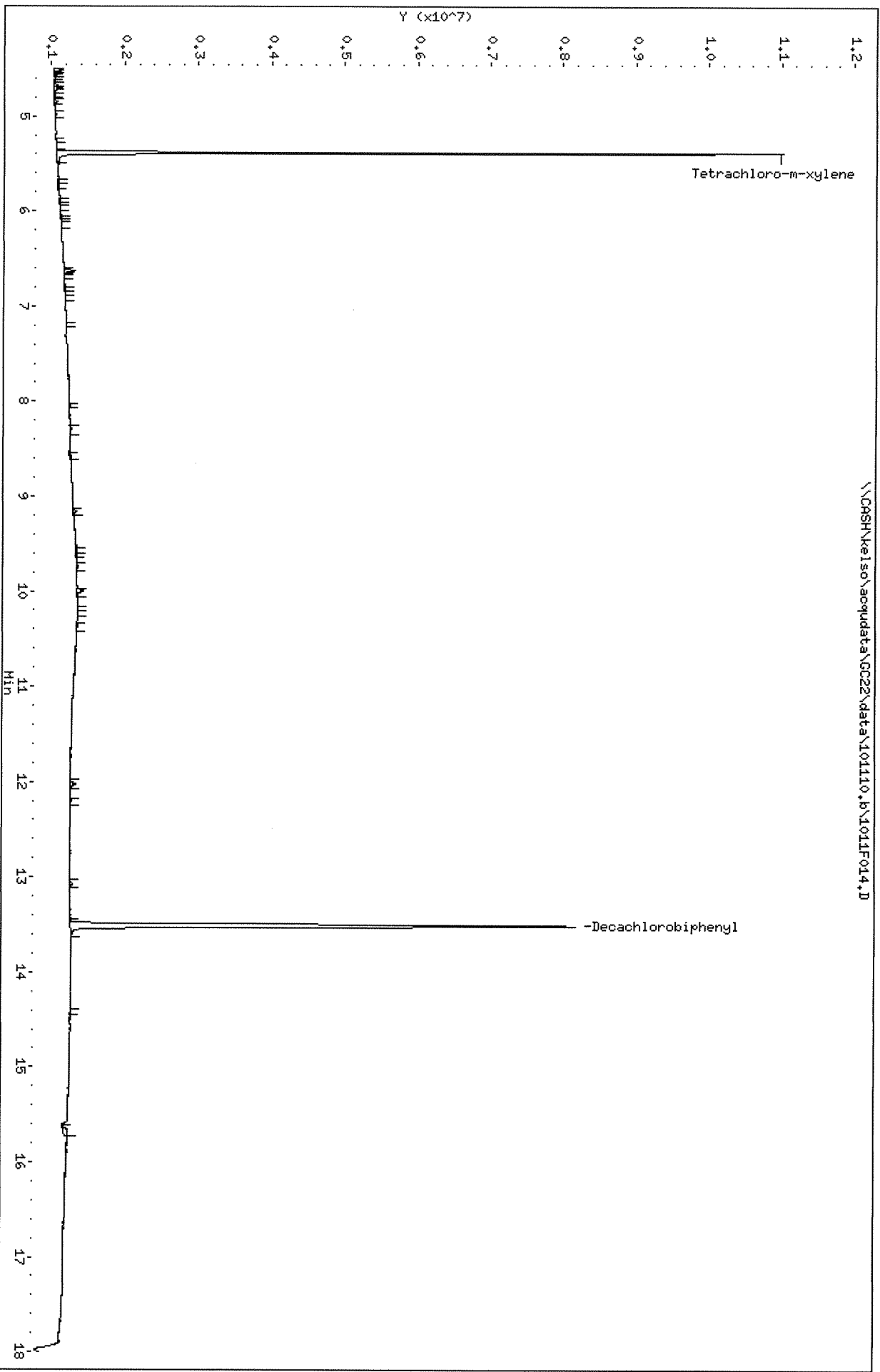
R - Spike/Surrogate failed recovery limits.

Data File: \\CASHK\k150\acq\data\GC22\data\101110,101110\F014.D  
Date: 11-OCT-2010 21:11

Client ID:  
Sample Info: K1010899-001 | MW-3 @10X

Column phase: DB-35MS

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32

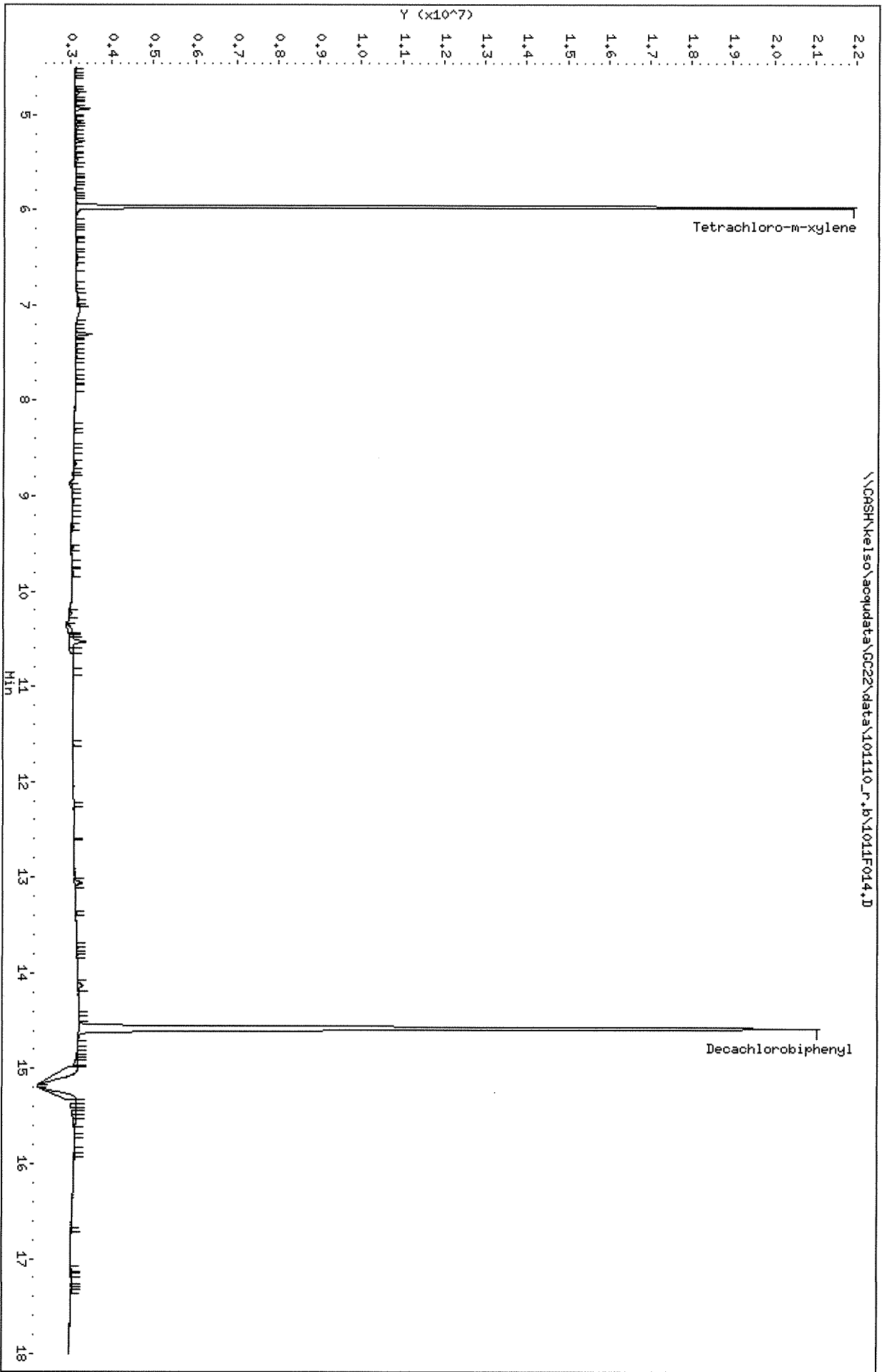


Data File: \\CRASH\keiso\acq\data\GC22\data\101110\_r.b\1011F014.D  
Date: 11-OCT-2010 21:11

Client ID:  
Sample Info: K1010899-001 | MM-3 @10X

Column phase: DB-XLB

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** 10/01/2010  
**Date Received:** 10/02/2010

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** Equipment Blank  
**Lab Code:** K1010899-002  
**Extraction Method:** EPA 3535A  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1221	ND	U	0.039	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1232	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1242	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1248	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1254	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1260	<b>0.0014</b>	J	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	87	36-113	10/11/10	Acceptable

**Comments:** \_\_\_\_\_

## Exception Report

**Data File:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\1011F010.D  
**Lab ID:** K1010899-002  
**RunType:** SMPL  
**Matrix:** WATER

**Date Acquired:** 10/11/2010 19:34  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

### Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Decachlorobiphenyl	-32.0	NA	20	8/2
Continuing Calibration Recovery (Closing)	Decachlorobiphenyl	-28.8	NA	20	8/2
Above Highest ICAL Level	Decachlorobiphenyl	70.33	NA	50	8/11

Primary Review: Wmqud

Secondary Review: 10/13/10

## Exception Report

**Data File:** \\CASHKELSO\ACQU\DATA\GC22\DATA\101110\_R.B\1011F010.  
**Lab ID:** K1010899-002  
**RunType:** SMPL  
**Matrix:** WATER

**Date Acquired:** 10/11/2010 19:34  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

### Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Decachlorobiphenyl	90.73	NA	50	<i>di</i>

Primary Review: *WVW/10/12/10*  
 Secondary Review: *20110/13/10*

# Quantitation Report

<b>Bottle ID:</b>		<b>Tier:</b>	III	<b>Matrix:</b>	WATER
<b>Prod Code:</b>	8082 PCB_LL	<b>Collect Date:</b>	10/01/2010	<b>Receive Date:</b>	10/02/2010

<b>Analysis Lot:</b>	KWG1010997	<b>Prep Lot:</b>	KWG1010912	<b>Report Group:</b>	K1010899
<b>Analysis Method:</b>	8082	<b>Prep Method:</b>	EPA 3535A		
<b>Prep Ref:</b>	965903	<b>Prep Date:</b>	10/04/2010		

<b>Quant Method:</b>	\\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\070910UL_F.M	<b>Calibration ID:</b>	CAL9635
<b>Title:</b>	Polychlorinated Biphenyls (PCBs)	<b>Report List ID:</b>	LJ6227
<b>MB Ref:</b>	J:\GC22\DATA\101110.B\1011F011.D	<b>Method ID:</b>	MJ706
<b>Quant based on Report List</b>			

<b>Data File #1:</b>	J:\GC22\DATA\101110.B\1011F010.D	<b>Instrument:</b>	GC22.i
<b>Data File #2:</b>	\\CASH\kelso\acqu\data\GC22\data\101110_r_b\1011F010.D	<b>Vial:</b>	7
<b>Acqu Date:</b>	10/11/2010 19:34	<b>Quant Date:</b>	10/12/2010 11:24
<b>Run Type:</b>	SMPL	<b>Dilution:</b>	1.0
<b>Lab ID:</b>	K1010899-002	<b>Soln Conc. Units:</b>	ng/mL
<b>Signal #1:</b>	DB-35MS	<b>Signal #2:</b>	DB-XLB

## Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	13.51 <sup>+0.00</sup>	14.58 <sup>+0.00</sup>	163389281	446608305	70.33 <sup>CCV</sup>	90.73			NR
<b>%Recovery =</b>					70OK	91OK	<b>Limits =</b>	36-113	

## Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:				Rpt
					ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	
Aroclor 1016			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

Data File #1:	J:\GC22\DATA\101110.B\1011F010.D	Instrument:	GC22.i
Data File #2:	\\CASH\kelso\acqdata\GC22\data\101110_r.b\1011F010.D	Vial:	7
Acqu Date:	10/11/2010 19:34	Quant Date:	10/12/2010 11:24
Run Type:	SMPL	Dilution:	1.0
Lab ID:	K1010899-002	Soln Conc. Units:	ng/mL
Signal #1:	DB-35MS	Signal #2:	DB-XLB

Parameter Name	RT		Resp		ng/mL		ug/L		Rpt
	#1	#2	#1	#2	#1	#2	#1	#2	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260			0	0	0.7382	0.7986	0.0014J	0.0015J	<b>0.0014J</b>
Aroclor 1260 {1}	9.12 <sup>0.00</sup>	9.97 <sup>0.00</sup>	44759	176229m	0.3990	0.6470	0.00096U	0.0012J	
Aroclor 1260 {2}	9.40 <sup>+0.00</sup>	10.92 <sup>+0.00</sup>	111586	320299m	0.7940	0.8510	0.0015J	0.0016J	
Aroclor 1260 {3}	10.57 <sup>+0.00</sup>	11.08 <sup>0.00</sup>	83735	143739m	0.8770	0.6570	0.0017J	0.0013J	
Aroclor 1260 {4}	10.97 <sup>0.00</sup>	12.02 <sup>0.00</sup>	146769	504249m	0.6620	0.9990	0.0013J	0.0019J	
Aroclor 1260 {5}	11.63 <sup>+0.00</sup>	12.54 <sup>+0.00</sup>	166024	251795m	0.9590	0.8390	0.0018J	0.0016J	

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 1050 mL      Dilution: 1.0  
 Prep Final Vol: 2 mL      Unit Factor: 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution



Data File: \\CASH\kelso\acqdata\GC22\data\101110.b\1011F010.D  
 Report Date: 12-Oct-2010 11:24

Laboratory Name

Sample #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\1011F010.D  
 Sample #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\1011F010.D  
 Inj Date : 11-OCT-2010 19:34  
 Sample Info: K1010899-002 | Equipment Blank  
 Misc Info :  
 Cal Date : 12-OCT-2010 09:01  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\070910ul\_f.m  
 Method #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\070910ul\_r.m  
 Sub List #1 : ALL.SUB  
 Sub List #2 : ALL.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.387	5.974	138368052	379683651	64.5	75.3		100.00 (R)
Aroclor 1260	9.120	9.970	44759	176229	0.399	0.647	80.00- 120.00	100.00 (H)
	9.404	10.924	111586	320299	0.794	0.851	110.81- 166.21	249.30 (H)
	10.570	11.077	83735	143739	0.877	0.657	64.43- 96.65	187.08 (H)
	10.967	12.017	146769	504249	0.662	0.999	156.72- 235.09	327.91 (H)
	11.627	12.540	166024	251795	0.959	0.839	111.40- 167.09	370.93 (H)
	Average of Peak Amounts =				0.738	0.799		
Decachlorobiphenyl	13.510	14.577	163389281	446608305	70.3	90.7		100.00 (R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.  
 H - Operator selected an alternate compound hit.

Data File: \\CASH\ke150\acqdata\GC22\data\101110.b\1011F010.D  
Date: 11-OCT-2010 19:34

Client ID:

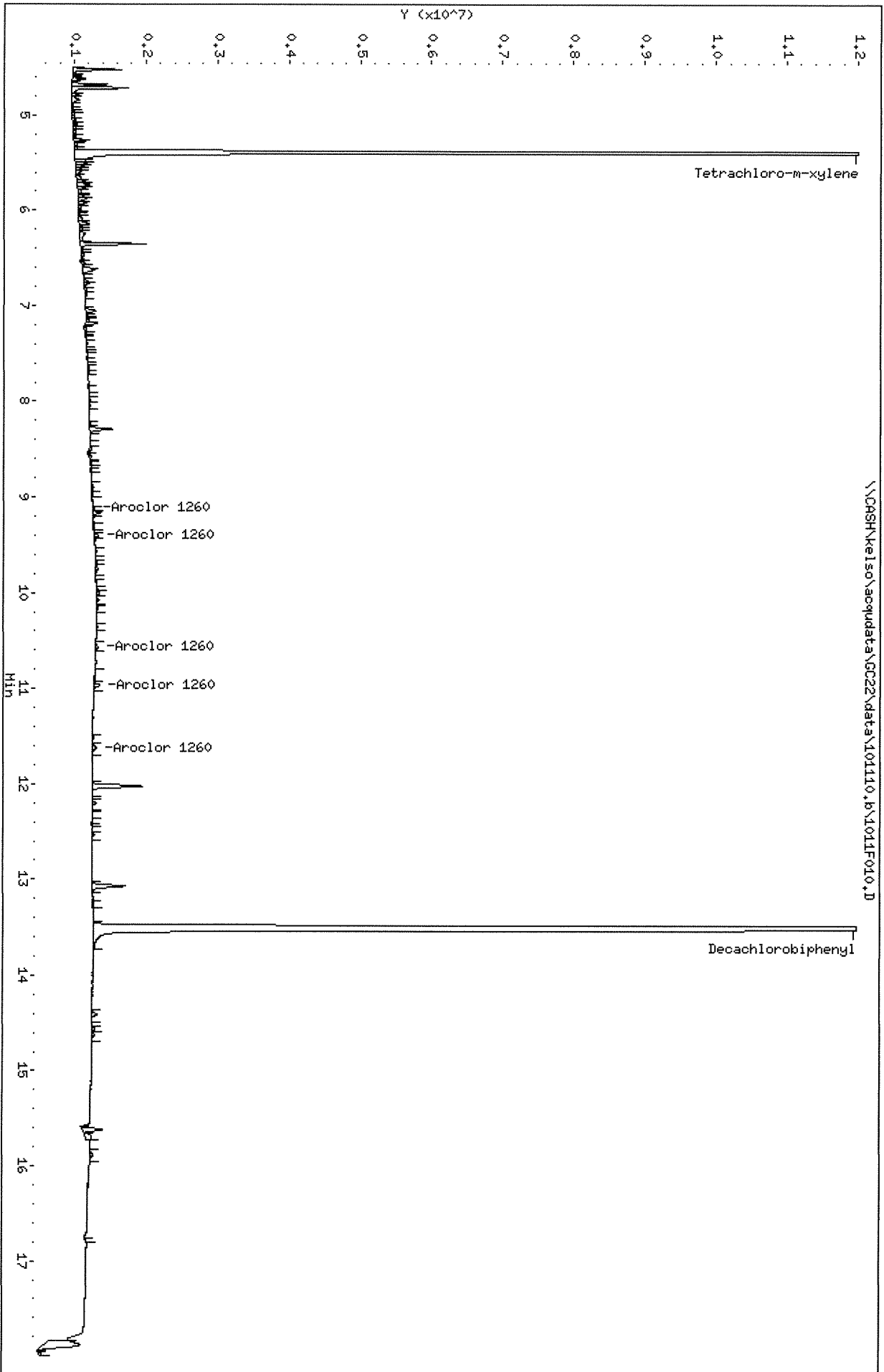
Sample Info: K1010899-002 | Equipment Blank

Column phase: DB-35MS

Instrument: GC22.i

Operator: LHarris

Column diameter: 0.32

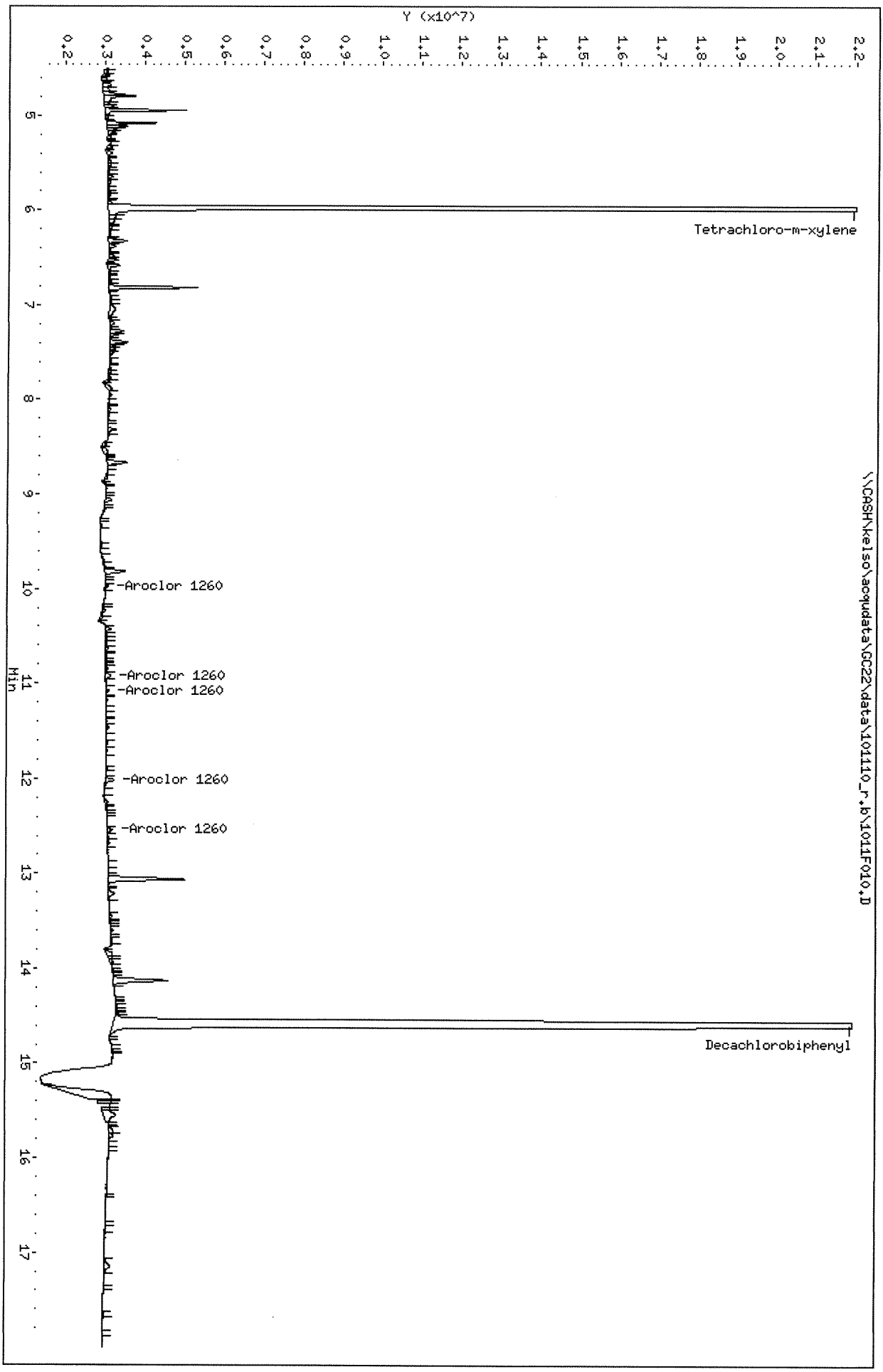


Data File: \\CASH\kels\acq\data\GC22\data\101110\_r.b\1011F010.D  
Date: 11-OCT-2010 19:34

Client ID:  
Sample Info: K1010899-002 | Equipment Blank

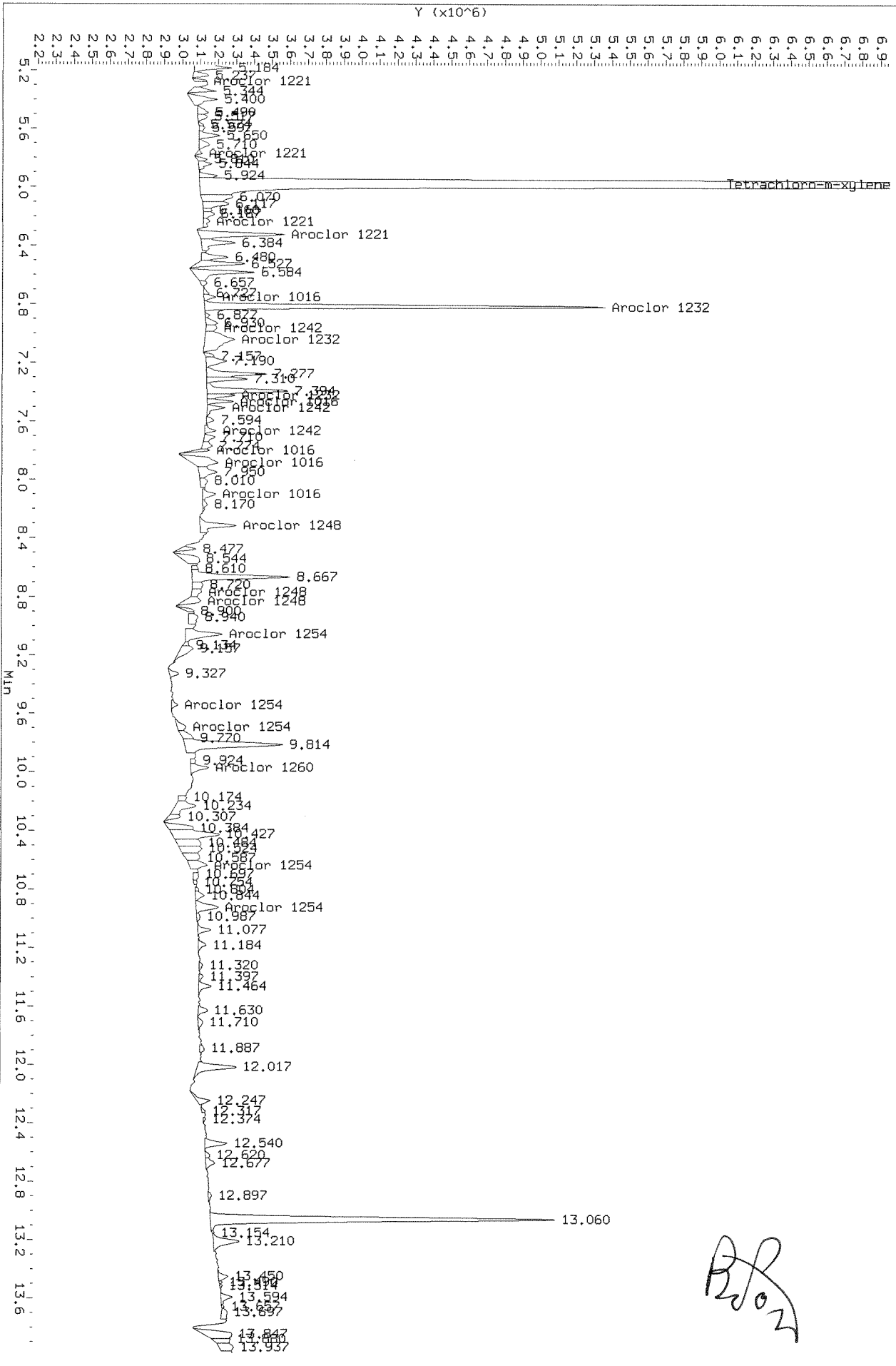
Column phase: DB-XLB

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32



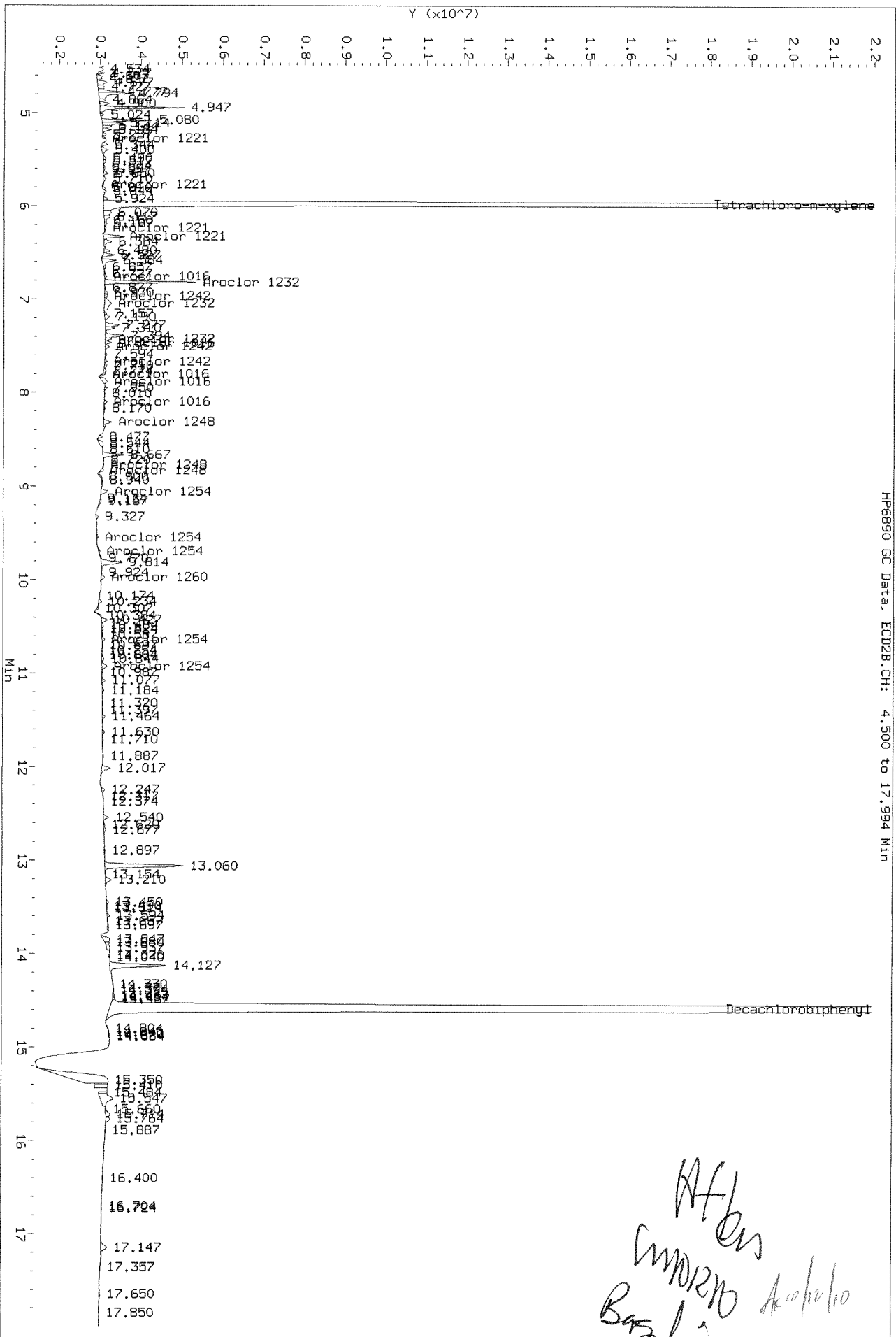
Data File: \\DASH\kelso\acq\data\GC22\data\101110\_r.b\1011f010.D  
 Injection Date: 11-OCT-2010 19:34  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data, ECD2B.CH: 5.169 to 13.973 Min



*Handwritten signature*

HP6890 GC Data, ECD2B.CH: 4.500 to 17.994 Min



*Handwritten notes:*  
AFI  
Caminero  
Basilio

## Exception Report


**Data File:** \\CASHKELSO\ACQU\DATA\GC22\DATA\101110.B\1011F015.D  
**Lab ID:** K1010899-002  
**RunType:** SMPL  
**Matrix:** WATER

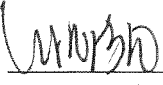
**Date Acquired:** 10/11/2010 21:36  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

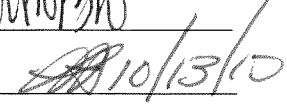
### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

### Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Decachlorobiphenyl	-32.0	NA	20	
Continuing Calibration Recovery (Closing)	Decachlorobiphenyl	-28.8	NA	20	

Primary Review: 

Secondary Review: 

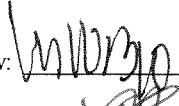
## Exception Report


**Data File:** \\CASHKELSO\ACQUDATA\GC22\DATA\101110\_R.B\1011F015.  
**Lab ID:** K1010899-002  
**RunType:** SMPL  
**Matrix:** WATER

**Date Acquired:** 10/11/2010 21:36  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: 

Secondary Review:  10/13/10

# Quantitation Report

<b>Bottle ID:</b>		<b>Tier:</b>	III	<b>Matrix:</b>	WATER
<b>Prod Code:</b>	8082 PCB_LL	<b>Collect Date:</b>	10/01/2010	<b>Receive Date:</b>	10/02/2010

<b>Analysis Lot:</b>	KWG1010997	<b>Prep Lot:</b>	KWG1010912	<b>Report Group:</b>	K1010899
<b>Analysis Method:</b>	8082	<b>Prep Method:</b>	EPA 3535A		
<b>Prep Ref:</b>	965903	<b>Prep Date:</b>	10/04/2010		

<b>Quant Method:</b>	\\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\070910UL_F.M	<b>Calibration ID:</b>	CAL9635
<b>Title:</b>	Polychlorinated Biphenyls (PCBs)	<b>Report List ID:</b>	LJ6227
<b>MB Ref:</b>	J:\GC22\DATA\101110.B\1011F011.D	<b>Method ID:</b>	MJ706
<b>Quant based on Report List</b>			

<b>Data File #1:</b>	J:\GC22\DATA\101110.B\1011F015.D	<b>Instrument:</b>	GC22.i
<b>Data File #2:</b>	\\CASH\kelso\acquadata\GC22\data\101110_r.b\1011F015.D	<b>Vial:</b>	12
<b>Acqu Date:</b>	10/11/2010 21:36	<b>Quant Date:</b>	10/12/2010 11:24
<b>Run Type:</b>	SMPL	<b>Dilution:</b>	10.0
<b>Lab ID:</b>	K1010899-002	<b>Soln Conc. Units:</b>	ng/mL
<b>Signal #1:</b>	DB-35MS	<b>Signal #2:</b>	DB-XLB

## Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2	Final Conc. Units: ug/L		Rpt	
Decachlorobiphenyl	13.51 <sup>+0.00</sup>	14.58 <sup>+0.01</sup>	13821305	42839401	5.95 <sup>CCV</sup>	8.70	59OK	87OK	Limits = 36-113	87OK
%Recovery =					59OK	87OK				

## Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1232 {1}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232 {2}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232 {3}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232 {4}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution



<b>Data File #1:</b>	J:\GC22\DATA\101110.B\1011F015.D	<b>Instrument:</b>	GC22.i
<b>Data File #2:</b>	\\CASH\kelso\acquadata\GC22\data\101110_r.b\1011F015.D	<b>Vial:</b>	12
<b>Acqu Date:</b>	10/11/2010 21:36	<b>Quant Date:</b>	10/12/2010 11:24
<b>Run Type:</b>	SMPL	<b>Dilution:</b>	10.0
<b>Lab ID:</b>	K1010899-002	<b>Soln Conc. Units:</b>	ng/mL
<b>Signal #1:</b>	DB-35MS	<b>Signal #2:</b>	DB-XLB

**Target Compounds**

**Final Conc. Units:** ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1248 {1}			0d	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {2}			0d	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {3}			0d	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {4}			0d	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {5}			0d	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1254 {1}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {2}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {3}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {4}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {5}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1260 {1}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260 {2}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260 {3}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260 {4}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260 {5}			0	0d	0.0000	0.0000	0.0096U	0.0096U	

The +/- after Retention Time symbolize the direction of the RT shift

**Prep Amount:** 1050 mL      **Dilution:** 10.0  
**Prep Final Vol:** 2 mL      **Unit Factor:** 1

**Final Concentration =** ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL  
J: Analyte detected above MDL, but below MRL  
B: Hit above MRL also found in Method Blank  
E: Analyte concentration above high point of ICAL  
N: Presumptive evidence of compound

D: Result from dilution  
m: Manual integration performed  
d: Compound manually deleted  
NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
#: Acceptance criteria not applicable  
?: Insufficient information to determine acceptance  
e: Result >= MRL, but MRL less than low point of ICAL  
c: check for co-elution

Data File: \\CASH\kelso\acqdata\GC22\data\101110.b\1011F015.D  
Report Date: 12-Oct-2010 11:24

Laboratory Name

Sample #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\1011F015.D  
Sample #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\1011F015.D  
Inj Date : 11-OCT-2010 21:36  
Sample Info: K1010899-002 | Equipment Blank @10X  
Misc Info :  
Cal Date : 12-OCT-2010 09:01  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

Method #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\070910ul\_f.m  
Method #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\070910ul\_r.m  
Sub List #1 : ALL.SUB  
Sub List #2 : ALL.SUB  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.385	5.969	12222271	34880962	5.69	6.92		100.00 (R)
Decachlorobiphenyl	13.509	14.579	13821305	42839401	5.95	8.70		100.00 (R)

QC Flag Legend

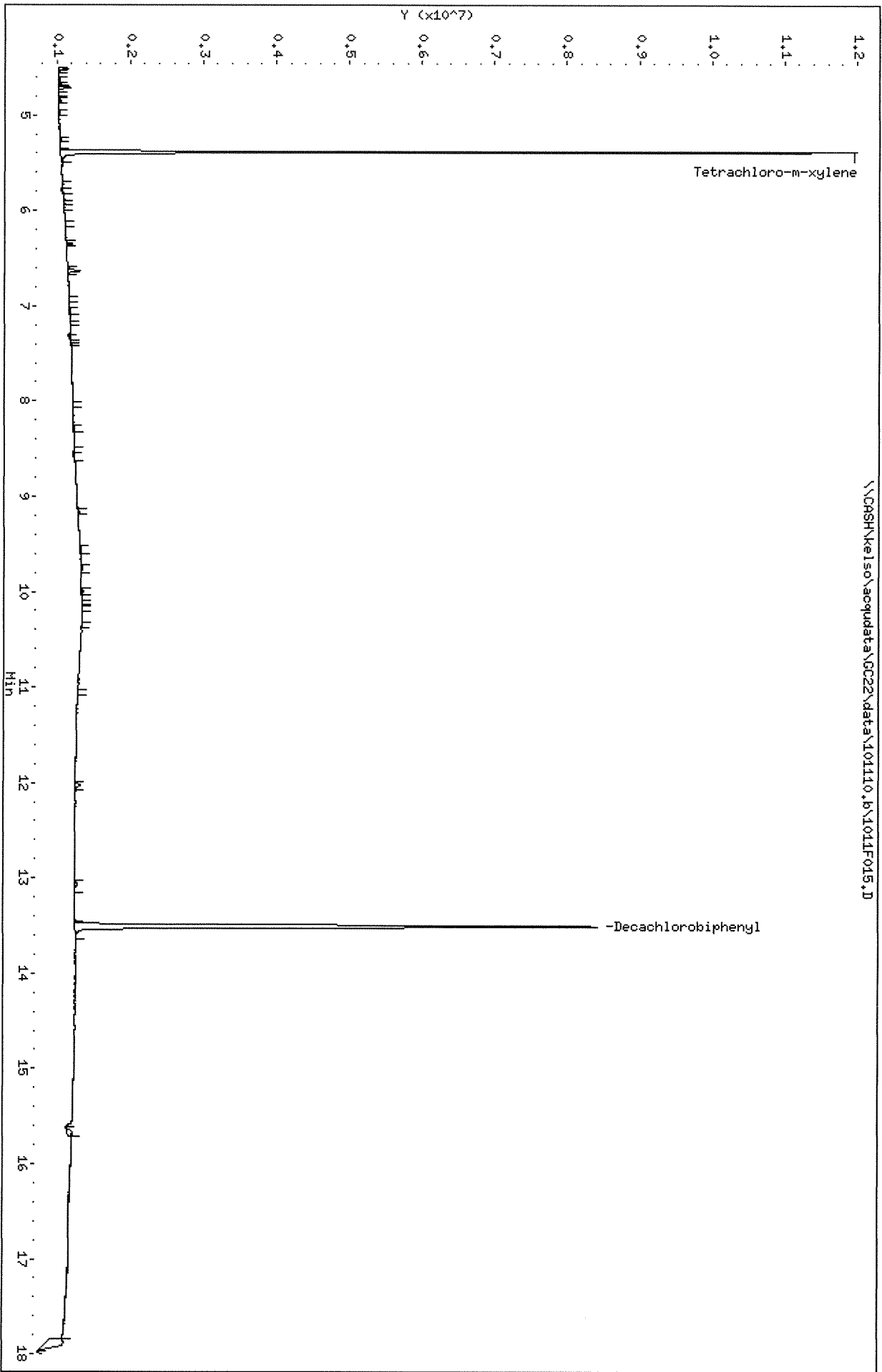
R - Spike/Surrogate failed recovery limits.

Data File: \\CASH\keiso\acqdata\GC22\data\101110.b\1011F015.D  
Date: 11-OCT-2010 21:36

Client ID:  
Sample Info: K1010899-002 | Equipment Blank @10X

Column phase: DB-35MS

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32

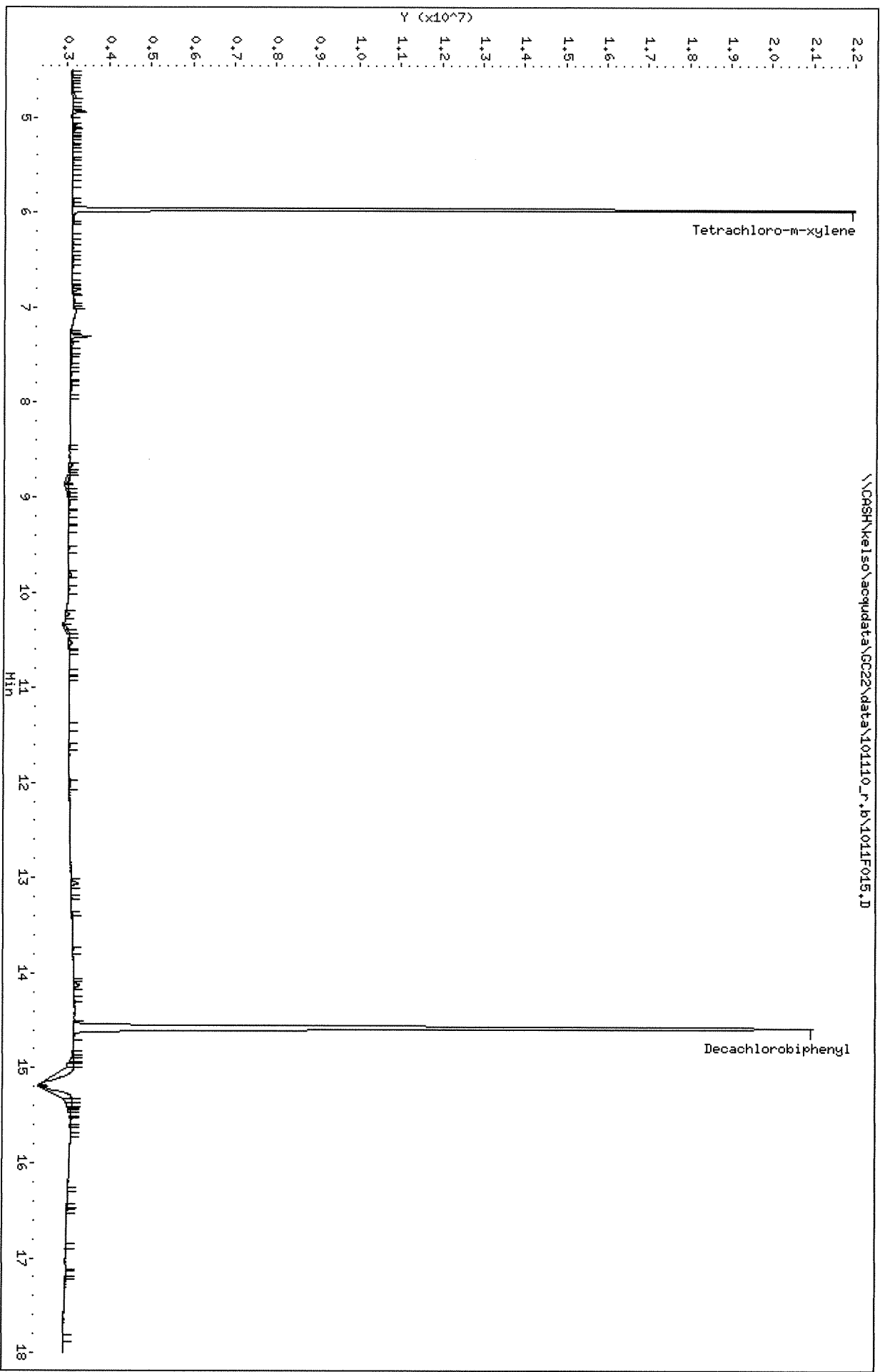


Data File: \\CASH\keiso\acq\data\GC22\data\101110\_r.b\1011F015.D  
Date: 11-OCT-2010 21:36

Client ID:  
Sample Info: K1010899-002 | Equipment Blank @10X

Column phase: DB-XLB

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** Method Blank  
**Lab Code:** KWG1010912-3  
**Extraction Method:** EPA 3535A  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1221	ND	U	0.039	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1232	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1242	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1248	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1254	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	
Aroclor 1260	ND	U	0.020	0.00096	1	10/04/10	10/11/10	KWG1010912	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	81	36-113	10/11/10	Acceptable

**Comments:** \_\_\_\_\_

## Exception Report

**Data File:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\1011F006.D  
**Lab ID:** KWG1010912-3  
**RunType:** MB  
**Matrix:** WATER

**Date Acquired:** 10/11/2010 17:57  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

### Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Decachlorobiphenyl	-32.0	NA	20	RO
	Tetrachloro-m-xylene	-23.3	NA	20	
Continuing Calibration Recovery (Closing)	Decachlorobiphenyl	-28.8	NA	20	
	Tetrachloro-m-xylene	-22.1	NA	20	
Surrogates	Tetrachloro-m-xylene	1147	21	114	
Above Highest ICAL Level	Decachlorobiphenyl	60.87	NA	50	NR
	Tetrachloro-m-xylene	57.35	NA	50	dil p 6

Primary Review: W 10/11/10

Secondary Review: AA 10/13/10

## Exception Report

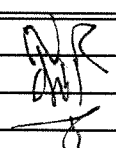
**Data File:** \\CASHKELSO\ACQU\DATA\GC22\DATA\101110\_R.B\1011F006.  
**Lab ID:** KWG1010912-3  
**RunType:** MB  
**Matrix:** WATER

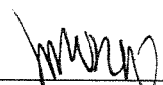
**Date Acquired:** 10/11/2010 17:57  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

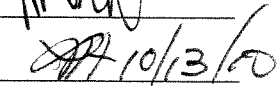
### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

### Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Tetrachloro-m-xylene	1350	21	114	
Above Highest ICAL Level	Decachlorobiphenyl	81.47	NA	50	
	Tetrachloro-m-xylene	67.52	NA	50	

Primary Review: 

Secondary Review: 

# Quantitation Report

Bottle ID:	Tier:	Matrix:
Prod Code: 8082 PCB_LL	Collect Date:	WATER
		Receive Date: 10/08/2010

Analysis Lot: KWG1010997	Prep Lot: KWG1010912	Report Group:
Analysis Method: 8082	Prep Method: EPA 3535A	
Prep Ref: 965906	Prep Date: 10/04/2010	

Quant Method: \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\070910UL_F.M	Calibration ID: CAL9635
Title:	
MB Ref:	Method ID: MJ706
	Quant based on Method

Data File #1: J:\GC22\DATA\101110.B\1011F006.D	Instrument: GC22.i
Data File #2: \\CASH\kelso\acquadata\GC22\data\101110_r.b\1011F006.D	Vial: 3
Acqu Date: 10/11/2010 17:57	Quant Date: 10/12/2010 11:24
Run Type: MB	Dilution: 1.0
Lab ID: KWG1010912-3	Soln Conc. Units: ng/mL
Signal #1: DB-35MS	Signal #2: DB-XLB

## Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2	Final Conc. Units: ug/L		Rpt
Tetrachloro-m-xylene	5.39 <sup>0.00</sup>	5.98 <sup>0.00</sup>	123103927	340549529	57.35 <sup>CCV</sup>	67.52	1147*	1350*	1350*
			%Recovery =				Limits =	21-114	
Decachlorobiphenyl	13.51 <sup>+0.00</sup>	14.58 <sup>+0.00</sup>	141415779	401028851	60.87 <sup>CCV</sup>	81.47	61OK	81OK	NR
			%Recovery =				Limits =	36-113	

## Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL, also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution



Data File #1:	J:\GC22\DATA\101110.B\1011F006.D	Instrument:	GC22.i
Data File #2:	\\CASH\kelso\acquadata\GC22\data\101110_r_b\1011F006.D	Vial:	3
Acqu Date:	10/11/2010 17:57	Quant Date:	10/12/2010 11:24
Run Type:	MB	Dilution:	1.0
Lab ID:	KWG1010912-3	Soln Conc. Units:	ng/mL
Signal #1:	DB-35MS	Signal #2:	DB-XLB

**Target Compounds**

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units: ug/L				Rpt
					ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1260 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1260 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1262 {1}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {2}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {3}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {4}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1262 {5}			0d	0	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268			0	0	0.0000	0.0000	0.00096U	0.00096U	0.00096U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.00096U	0.00096U	

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 1050 mL Dilution: 1.0  
 Prep Final Vol: 2 mL Unit Factor: 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

Data File: \\CASH\kelso\acqdata\GC22\data\101110.b\1011F006.D  
Report Date: 12-Oct-2010 11:24

Laboratory Name

Sample #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\1011F006.D  
Sample #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\1011F006.D  
Inj Date : 11-OCT-2010 17:57  
Sample Info: KWG1010912-3 | MB | 8082 PCB LL | WATER  
Misc Info :  
Cal Date : 12-OCT-2010 09:01  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

Method #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\070910ul\_f.m  
Method #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\070910ul\_r.m  
Sub List #1 : ALL.SUB  
Sub List #2 : ALL.SUB  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.389	5.976	123103927	340549529	57.4	67.5		100.00(R)
Decachlorobiphenyl	13.509	14.576	141415779	401028851	60.9	81.5		100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\CASH\ke1so\acq\data\GC22\data\101110.b\10111F006.D

Date: 11-OCT-2010 17:57

Client ID:

Sample Info: KMG1010912-3 | HB | 8082 PCB LL | WATER

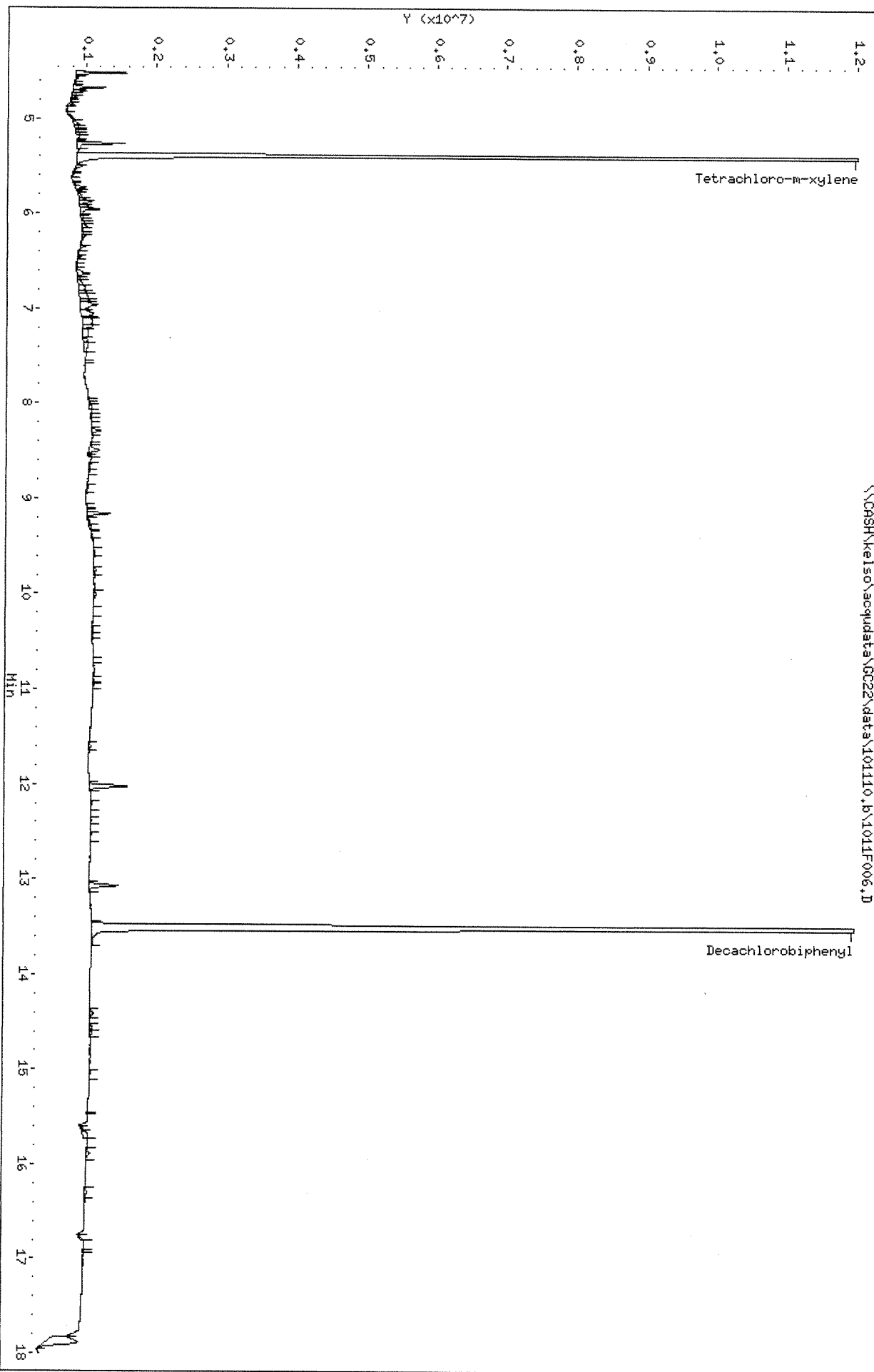
Column phase: DB-35MS

Instrument: GC22.1

Operator: LHarris

Column diameter: 0.32

\\CASH\ke1so\acq\data\GC22\data\101110.b\10111F006.D

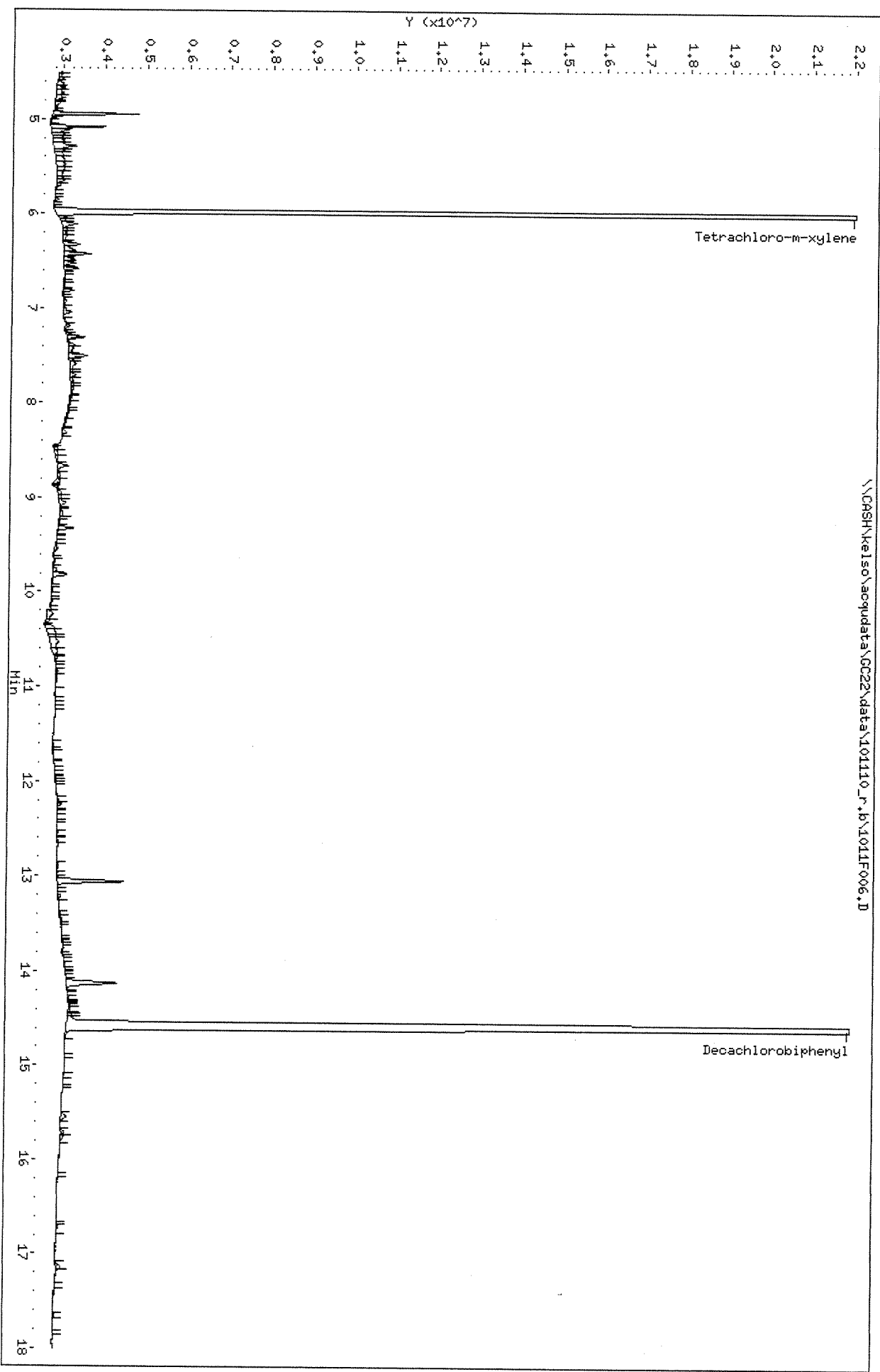


Data File: \\CRASH\kelsos\acqdata\GC22\data\101110\_r\_b\1011F006.D  
Date: 11-OCT-2010 17:57

Client ID:  
Sample Info: KMG1010912-3 | MB | 8082 PCB LL | WATER

Column phase: DB-XLB

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32



## Exception Report

**Data File:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\1011F011.D  
**Lab ID:** KWG1010912-3  
**RunType:** MB  
**Matrix:** WATER

**Date Acquired:** 10/11/2010 19:58  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

### Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Decachlorobiphenyl	-32.0	NA	20	10
	Tetrachloro-m-xylene	-23.3	NA	20	
Continuing Calibration Recovery (Closing)	Decachlorobiphenyl	-28.8	NA	20	3
	Tetrachloro-m-xylene	-22.1	NA	20	
Surrogates	Tetrachloro-m-xylene	1073	21	114	WR 10/13/10

Primary Review: WMO

Secondary Review: 10/13/10

## Exception Report

**Data File:** \\CASHKELSO\ACQU\DATA\GC22\DATA\101110\_R.B\1011F011.  
**Lab ID:** KWG1010912-3  
**RunType:** MB  
**Matrix:** WATER

**Date Acquired:** 10/11/2010 19:58  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

### Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Tetrachloro-m-xylene	1274	21	114	WIP

Primary Review: WIP

Secondary Review: WIP 10/13/10

# Quantitation Report

Bottle ID:	Tier:	Matrix:
Prod Code: 8082 PCB_LL	Collect Date:	WATER
		Receive Date: 10/08/2010

Analysis Lot: KWG1010997	Prep Lot: KWG1010912	Report Group:
Analysis Method: 8082	Prep Method: EPA 3535A	
Prep Ref: 965906	Prep Date: 10/04/2010	

Quant Method: \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\070910UL_F.M	Calibration ID: CAL9635
Title:	
MB Ref:	Method ID: MJ706
	Quant based on Method

Data File #1: J:\GC22\DATA\101110.B\1011F011.D	Instrument: GC22.i
Data File #2: \\CASH\kelso\acquadata\GC22\data\101110_r.b\1011F011.D	Vial: 8
Acqu Date: 10/11/2010 19:58	Quant Date: 10/12/2010 11:24
Run Type: MB	Dilution: 10.0
Lab ID: KWG1010912-3	Soln Conc. Units: ng/mL
Signal #1: DB-35MS	Signal #2: DB-XLB

## Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	5.39 <sup>0.00</sup>	5.97 <sup>-0.01</sup>	11515960	32130798	5.37 <sup>CCV</sup>	6.37			1274*
			%Recovery =		1073*	1274*	Limits =	21-114	
Decachlorobiphenyl	13.51 <sup>+0.00</sup>	14.57 <sup>+0.00</sup>	12848298	39715460	5.53 <sup>CCV</sup>	8.07			81OK
			%Recovery =		55OK	81OK	Limits =	36-113	

## Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units: ug/L				Rpt
					ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	
Aroclor 1016			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1016 {1}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1016 {2}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1016 {3}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1016 {4}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1016 {5}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1232 {1}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232 {2}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232 {3}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232 {4}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1242 {1}			0	0d	0.0000	0.0000	0.0096U	0.0096U	

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

Data File #1:	J:\GC22\DATA\101110.B\1011F011.D	Instrument:	GC22.i
Data File #2:	\\CASH\kelso\acqdata\GC22\data\101110_r.b\1011F011.D	Vial:	8
Acqu Date:	10/11/2010 19:58	Quant Date:	10/12/2010 11:24
Run Type:	MB	Dilution:	10.0
Lab ID:	KWG1010912-3	Soln Conc. Units:	ng/mL
Signal #1:	DB-35MS	Signal #2:	DB-XLB

**Target Compounds** Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {2}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242 {3}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242 {4}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242 {5}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1248 {1}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {2}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {3}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {4}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {5}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1254 {1}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {2}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {3}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {4}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {5}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260			0	0	0.0000	0.0000	0.0096U	0.0096U	NR
Aroclor 1260 {1}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260 {2}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260 {3}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260 {4}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260 {5}			0	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1262			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1262 {1}			0d	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1262 {2}			0d	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1262 {3}			0d	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1262 {4}			0d	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1262 {5}			0d	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1268			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1268 {1}			0d	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1268 {2}			0d	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1268 {3}			0d	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1268 {4}			0d	0	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1268 {5}			0d	0	0.0000	0.0000	0.0096U	0.0096U	

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 1050 mL      Dilution: 10.0  
 Prep Final Vol: 2 mL      Unit Factor: 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

- U: Undetected at or above MDL
- J: Analyte detected above MDL, but below MRL
- B: Hit above MRL also found in Method Blank
- E: Analyte concentration above high point of ICAL
- N: Presumptive evidence of compound
- D: Result from dilution
- m: Manual integration performed
- d: Compound manually deleted
- NR: Analyte not reported from this analysis
- \*: Result fails acceptance criteria
- #: Acceptance criteria not applicable
- ?: Insufficient information to determine acceptance
- e: Result >= MRL, but MRL less than low point of ICAL
- c: check for co-elution



Data File: \\CASH\kelso\acqdata\GC22\data\101110.b\1011F011.D  
Report Date: 12-Oct-2010 11:24

Laboratory Name

Sample #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\1011F011.D  
Sample #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\1011F011.D  
Inj Date : 11-OCT-2010 19:58  
Sample Info: KWG1010912-3 | MB @10X  
Misc Info :  
Cal Date : 12-OCT-2010 09:01  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

Method #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\070910ul\_f.m  
Method #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\070910ul\_r.m  
Sub List #1 : ALL.SUB  
Sub List #2 : ALL.SUB  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.389	5.972	11515960	32130798	5.36	6.37		100.00(R)
Decachlorobiphenyl	13.509	14.575	12848298	39715460	5.53	8.07		100.00(R)

QC Flag Legend

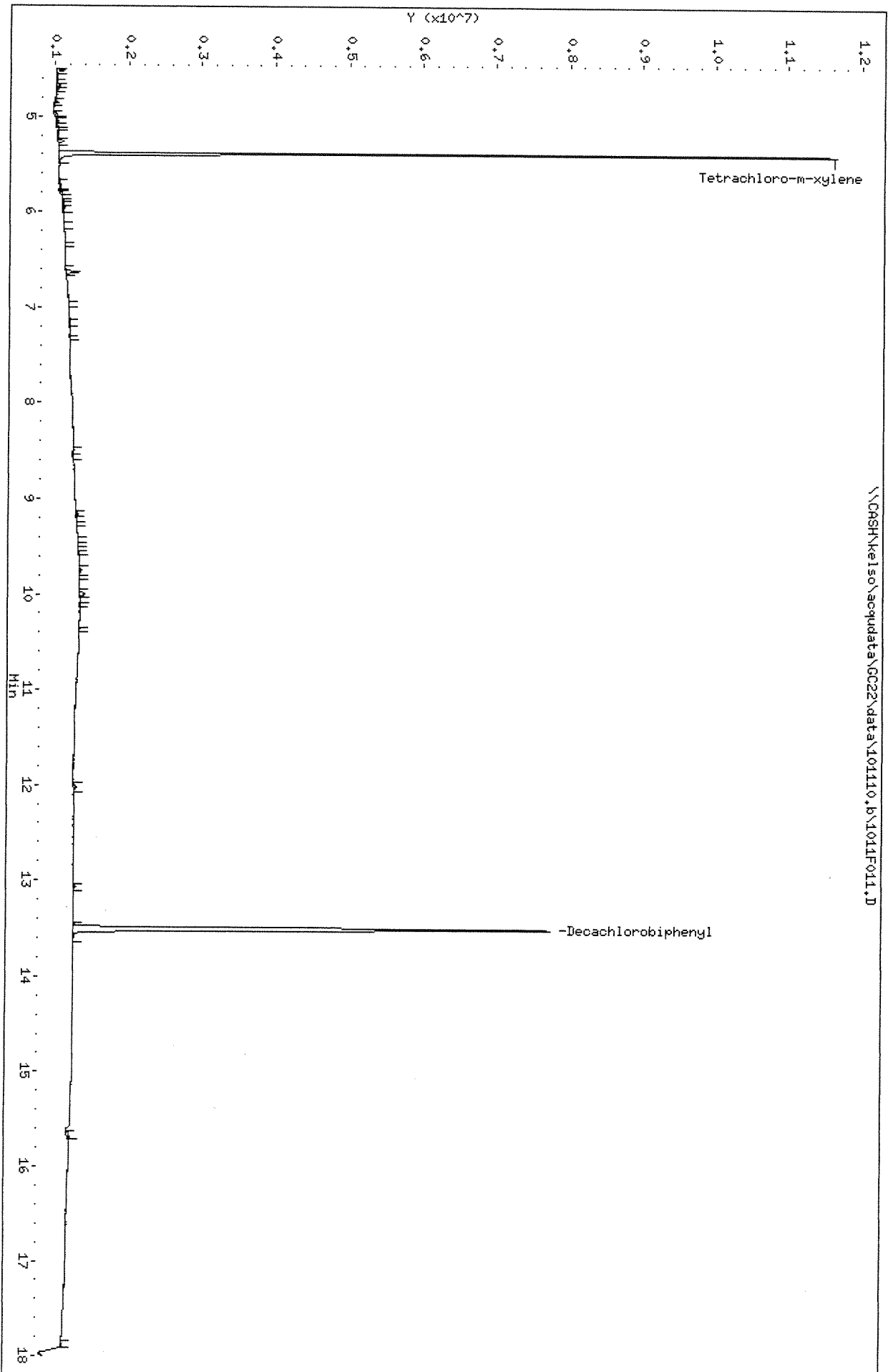
R - Spike/Surrogate failed recovery limits.

Data File: \\DASH\keliiso\acqdata\GC22\data\101110.b\1011F011.D  
Date : 11-OCT-2010 19:58

Client ID:  
Sample Info: KMG1010912-3 | HB @10X

Column phase: DB-35MS

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32



Data File: \\CASH\keiso\acq\data\GC22\data\101110\_r.b\1011F011.D

Date: 11-OCT-2010 19:58

Client ID:

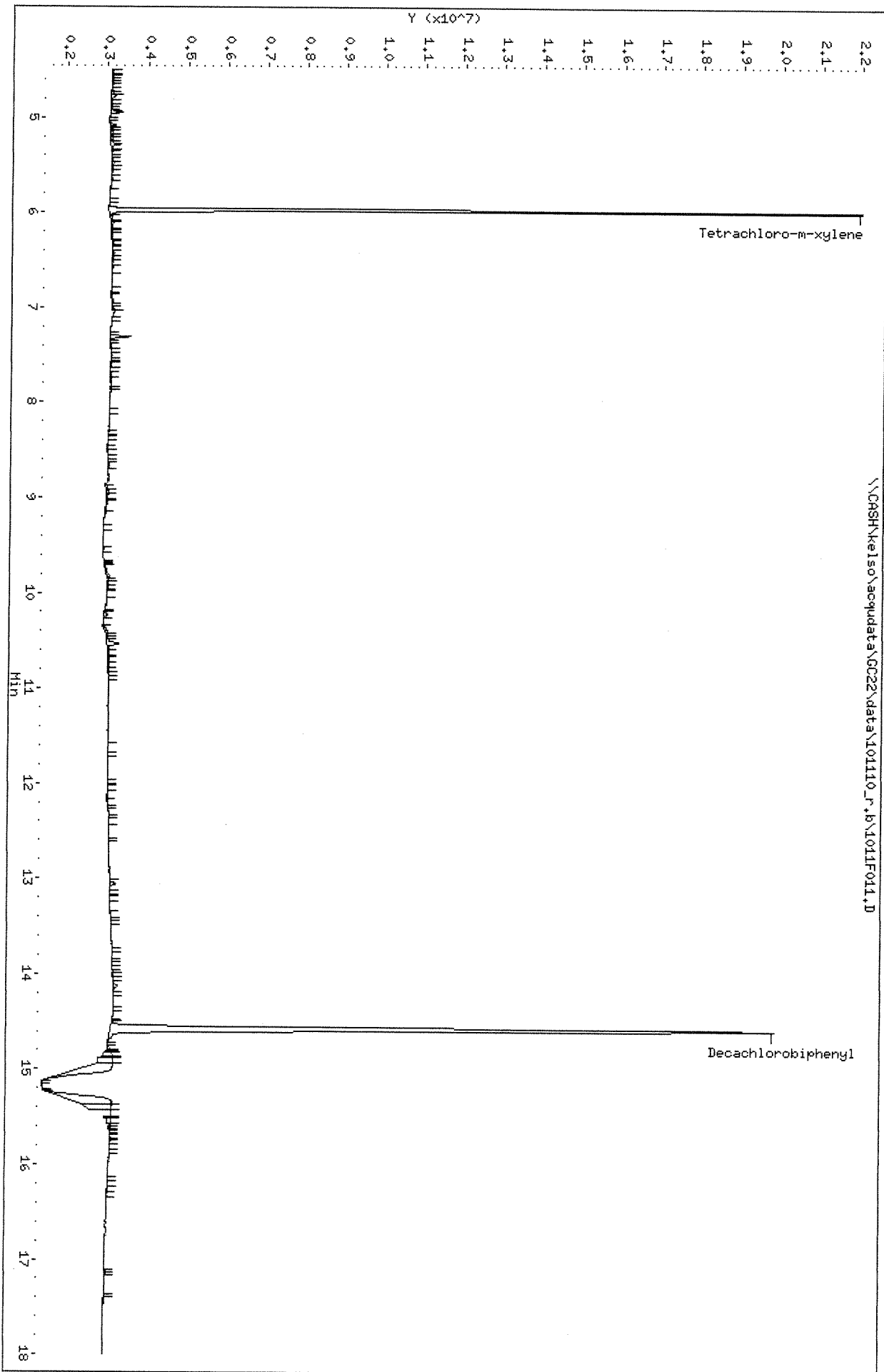
Sample Info: KMD1010912-3 | MB @10X

Column phase: DB-XLB

Instrument: GC22.i

Operator: LHarris

Column diameter: 0.32



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** Lab Control Sample  
**Lab Code:** KWG1010912-1  
**Extraction Method:** EPA 3535A  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	1.27	D	0.20	0.0096	10	10/04/10	10/11/10	KWG1010912	
Aroclor 1221	ND	U	0.40	0.0096	10	10/04/10	10/11/10	KWG1010912	
Aroclor 1232	ND	U	0.20	0.0096	10	10/04/10	10/11/10	KWG1010912	
Aroclor 1242	ND	U	0.20	0.0096	10	10/04/10	10/11/10	KWG1010912	
Aroclor 1248	ND	U	0.20	0.0096	10	10/04/10	10/11/10	KWG1010912	
Aroclor 1254	ND	U	0.20	0.0096	10	10/04/10	10/11/10	KWG1010912	
Aroclor 1260	1.38	D	0.20	0.0096	10	10/04/10	10/11/10	KWG1010912	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	74	36-113	10/11/10	Acceptable

**Comments:** \_\_\_\_\_

## Exception Report

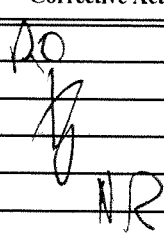
**Data File:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\1011F012.D  
**Lab ID:** KWG1010912-1  
**RunType:** LCS  
**Matrix:** WATER

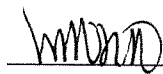
**Date Acquired:** 10/11/2010 20:23  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

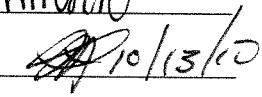
### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

### Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Decachlorobiphenyl	-32.0	NA	20	
	Tetrachloro-m-xylene	-23.3	NA	20	
Continuing Calibration Recovery (Closing)	Decachlorobiphenyl	-28.8	NA	20	
	Tetrachloro-m-xylene	-22.1	NA	20	
Surrogates	Tetrachloro-m-xylene	995	21	114	NR

Primary Review: 

Secondary Review: 

## Exception Report

**Data File:** \\CASHKELSO\ACQU\DATA\GC22\DATA\101110\_R.B\1011F012.  
**Lab ID:** KWG1010912-1  
**RunType:** LCS  
**Matrix:** WATER

**Date Acquired:** 10/11/2010 20:23  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

### Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Tetrachloro-m-xylene	1204	21	114	<i>NR</i>

Primary Review: *[Signature]*

Secondary Review: *[Signature]*

# Quantitation Report

Bottle ID:	Tier:	Matrix:
Prod Code: 8082 PCB_LL	Collect Date:	WATER
		Receive Date: 10/08/2010

Analysis Lot: KWG1010997	Prep Lot: KWG1010912	Report Group:
Analysis Method: 8082	Prep Method: EPA 3535A	
Prep Ref: 965904	Prep Date: 10/04/2010	

Quant Method: \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\070910UL_F.M	Calibration ID: CAL9635
Title:	
MB Ref: J:\GC22\DATA\101110.B\1011F011.D	Method ID: MJ706
	Quant based on Method

Data File #1: J:\GC22\DATA\101110.B\1011F012.D	Instrument: GC22.i
Data File #2: \\CASH\kelso\acqu\data\GC22\data\101110_r.b\1011F012.D	Vial: 9
Acqu Date: 10/11/2010 20:23	Quant Date: 10/12/2010 11:24
Run Type: LCS	Dilution: 10.0
Lab ID: KWG1010912-1	Soln Conc. Units: ng/mL
Signal #1: DB-35MS	Signal #2: DB-XLB

## Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	5.39 <sup>0.00</sup>	5.97 <sup>-0.01</sup>	10678555	30355697	4.98 <sup>CCV</sup>	6.02			1204*
			%Recovery =		995*	1204*	Limits =	21-114	
Decachlorobiphenyl	13.51 <sup>+0.00</sup>	14.58 <sup>+0.00</sup>	11852159	36401559	5.10 <sup>CCV</sup>	7.40			74OK
			%Recovery =		51OK	74OK	Limits =	36-113	

## Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	Final Conc. Units:		ug/L		Rpt
					ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	
Aroclor 1016			0	0	63.33	70.83	1.27D	1.42D	1.27D
Aroclor 1016 {1}	6.76 <sup>-0.01</sup>	6.75 <sup>-0.01</sup>	6158005	9147452	55.58	66.22	1.11D	1.32D	
Aroclor 1016 {2}	6.88 <sup>0.00</sup>	7.46 <sup>0.00</sup>	4079046	16545719	62.08	71.68	1.24D	1.43D	
Aroclor 1016 {3}	7.10 <sup>-0.01</sup>	7.81 <sup>0.00</sup>	3411371	7797297	61.95	70.42	1.24D	1.41D	
Aroclor 1016 {4}	7.44 <sup>0.00</sup>	7.88	3488243	8877555	64.68	69.92	1.29D	1.40D	
Aroclor 1016 {5}	7.64 <sup>0.00</sup>	8.10 <sup>0.00</sup>	2933574	9050828	72.36	75.90	1.45D	1.52D	
Aroclor 1221			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

Data File #1:	J:\GC22\DATA\101110.B\1011F012.D	Instrument:	GC22.i
Data File #2:	\\CASH\kelso\acqudata\GC22\data\101110_r.b\1011F012.D	Vial:	9
Acqu Date:	10/11/2010 20:23	Quant Date:	10/12/2010 11:24
Run Type:	LCS	Dilution:	10.0
Lab ID:	KWG1010912-1	Soln Conc. Units:	ng/mL
Signal #1:	DB-35MS	Signal #2:	DB-XLB

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260			0	0	69.00	83.28	1.38D	1.67D	1.38D
Aroclor 1260 {1}	9.12 <sup>0.00</sup>	9.97 <sup>0.00</sup>	7241174	20010257	64.51	73.43	1.29D	1.47D	
Aroclor 1260 {2}	9.40 <sup>0.00</sup>	10.92 <sup>+0.00</sup>	9976469	26871715	70.98	71.40	1.42D	1.43D	
Aroclor 1260 {3}	10.57 <sup>+0.00</sup>	11.08 <sup>0.00</sup>	6847424	20699736	71.70	94.68	1.43D	1.89D	
Aroclor 1260 {4}	10.97 <sup>0.00</sup>	12.02 <sup>+0.00</sup>	16002764	44499782	72.22	88.17	1.44D	1.76D	
Aroclor 1260 {5}	11.63 <sup>+0.00</sup>	12.54 <sup>+0.00</sup>	11353690	26612144	65.57	88.70	1.31D	1.77D	
Aroclor 1262			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1268			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 1000 mL Dilution: 10.0  
 Prep Final Vol: 2 mL Unit Factor: 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution



Laboratory Name

Sample #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\1011F012.D  
 Sample #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\1011F012.D  
 Inj Date : 11-OCT-2010 20:23  
 Sample Info: KWG1010912-1 | LCS @10X  
 Misc Info :  
 Cal Date : 12-OCT-2010 09:01  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\070910ul\_f.m  
 Method #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\070910ul\_r.m  
 Sub List #1 : ALL.SUB  
 Sub List #2 : ALL.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.387	5.970	10678555	30355697	4.97	6.02		100.00 (R)
Aroclor 1016	6.760	6.750	6158005	9147452	55.6	66.2	80.00- 120.00	100.00
	6.877	7.464	4079046	16545719	62.1	71.7	49.06- 73.59	66.24
	7.097	7.807	3411371	7797297	62.0	70.4	40.15- 60.22	55.40
	7.440	7.884	3488243	8877555	64.7	69.9	40.83- 61.25	56.65
	7.644	8.097	2933574	9050828	72.4	75.9	30.52- 45.77	47.64
	Average of Peak Amounts =				63.4	70.8		
Aroclor 1260	9.117	9.970	7241174	20010257	64.5	73.4	80.00- 120.00	100.00
	9.400	10.924	9976469	26871715	71.0	71.4	110.81- 166.21	137.77
	10.570	11.077	6847424	20699736	71.7	94.7	64.43- 96.65	94.56
	10.967	12.020	16002764	44499782	72.2	88.2	156.72- 235.09	221.00
	11.627	12.540	11353690	26612144	65.6	88.7	111.40- 167.09	156.79
	Average of Peak Amounts =				69.0	83.3		
Decachlorobiphenyl	13.510	14.577	11852159	36401559	5.10	7.40		100.00 (R)

QC Flag Legend

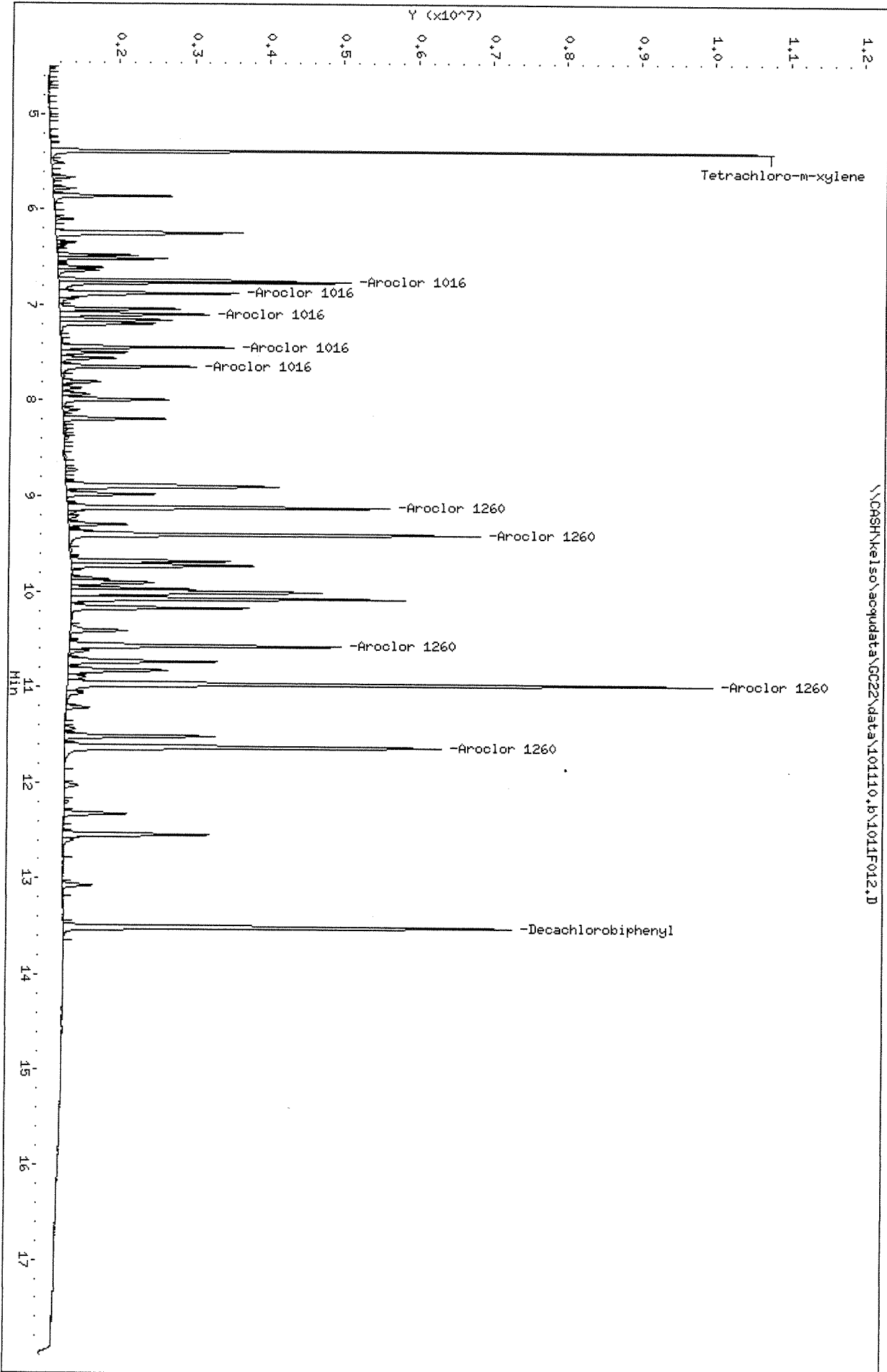
R - Spike/Surrogate failed recovery limits.

Data File: \\CRASH\keliso\acq\data\GC22\data\101110.b\1011F012.D  
Date: 11-OCT-2010 20:23

Client ID:  
Sample Info: KWG1010912-1 | LCS 010X

Column phase: DB-35MS

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32



Data File: \\CRASH\kelsos\acq\data\GC22\data\101110\_r,b\1011F012.D

Date: 11-OCT-2010 20:23

Client ID:

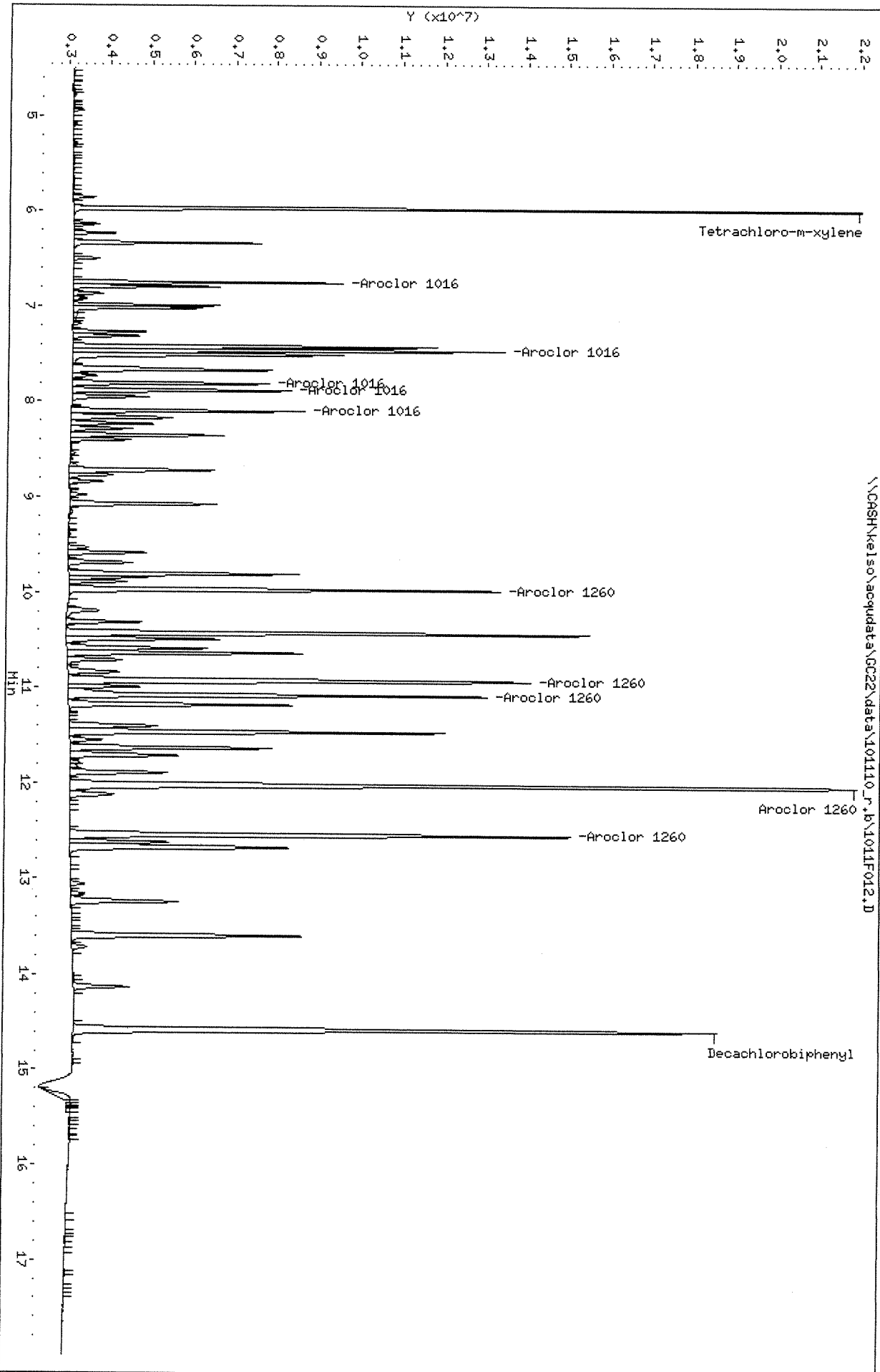
Sample Info: KMG1010912-1 | LCS @10X

Column phase: DB-XLB

Instrument: GC22.i

Operator: LHarris

Column diameter: 0.32



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601  
**Sample Matrix:** Water

**Service Request:** K1010899  
**Date Collected:** NA  
**Date Received:** NA

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** Duplicate Lab Control Sample  
**Lab Code:** KWG1010912-2  
**Extraction Method:** EPA 3535A  
**Analysis Method:** 8082

**Units:** ug/L  
**Basis:** NA  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	1.20	D	0.20	0.0096	10	10/04/10	10/11/10	KWG1010912	
Aroclor 1221	ND	U	0.40	0.0096	10	10/04/10	10/11/10	KWG1010912	
Aroclor 1232	ND	U	0.20	0.0096	10	10/04/10	10/11/10	KWG1010912	
Aroclor 1242	ND	U	0.20	0.0096	10	10/04/10	10/11/10	KWG1010912	
Aroclor 1248	ND	U	0.20	0.0096	10	10/04/10	10/11/10	KWG1010912	
Aroclor 1254	ND	U	0.20	0.0096	10	10/04/10	10/11/10	KWG1010912	
Aroclor 1260	1.36	D	0.20	0.0096	10	10/04/10	10/11/10	KWG1010912	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	73	36-113	10/11/10	Acceptable

**Comments:** \_\_\_\_\_

## Exception Report

**Data File:** \\CASHKELSO\ACQU\DATA\GC22\DATA\101110.B\1011F013.D  
**Lab ID:** KWG1010912-2  
**RunType:** DLCS  
**Matrix:** WATER

**Date Acquired:** 10/11/2010 20:47  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

### Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Decachlorobiphenyl	-32.0	NA	20	NR
	Tetrachloro-m-xylene	-23.3	NA	20	
Continuing Calibration Recovery (Closing)	Decachlorobiphenyl	-28.8	NA	20	
	Tetrachloro-m-xylene	-22.1	NA	20	
Surrogates	Tetrachloro-m-xylene	869	21	114	NR

Primary Review:                     

Secondary Review:

## Exception Report

**Data File:** \\CASHKELSO\ACQU\DATA\GC22\DATA\101110\_R.B\1011F013.  
**Lab ID:** KWG1010912-2  
**RunType:** DLCS  
**Matrix:** WATER

**Date Acquired:** 10/11/2010 20:47  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**ListJoinID:** LJ6227

### Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

### Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Tetrachloro-m-xylene	1053	21	114	WR

Primary Review: WUWMD

Secondary Review: 10/13/10

# Quantitation Report

Bottle ID:	Tier:	Matrix:
Prod Code: 8082 PCB_LL	Collect Date:	WATER
		Receive Date: 10/08/2010

Analysis Lot: KWG1010997	Prep Lot: KWG1010912	Report Group:
Analysis Method: 8082	Prep Method: EPA 3535A	
Prep Ref: 965905	Prep Date: 10/04/2010	

Quant Method: \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\070910UL_F.M	Calibration ID: CAL9635
Title:	
MB Ref: J:\GC22\DATA\101110.B\1011F011.D	Method ID: MJ706
	Quant based on Method

Data File #1: J:\GC22\DATA\101110.B\1011F013.D	Instrument: GC22.i
Data File #2: \\CASH\kelso\acquadata\GC22\data\101110_r.b\1011F013.D	Vial: 10
Acqu Date: 10/11/2010 20:47	Quant Date: 10/12/2010 11:24
Run Type: DLCS	Dilution: 10.0
Lab ID: KWG1010912-2	Soln Conc. Units: ng/mL
Signal #1: DB-35MS	Signal #2: DB-XLB

## Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	5.38 <sup>-0.01</sup>	5.97 <sup>-0.01</sup>	9326074	26547040	4.35 <sup>CCV</sup>	5.26			1053*
			%Recovery =		869*	1053*	Limits =	21-114	
Decachlorobiphenyl	13.51	14.57	11818380	35967141	5.09 <sup>CCV</sup>	7.31			73OK
			%Recovery =		51OK	73OK	Limits =	36-113	

## Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL		Final Conc. Units: ug/L		Rpt
					#1	#2	#1	#2	
Aroclor 1016			0	0	59.81	67.95	1.20D	1.36D	1.20D
Aroclor 1016 {1}	6.76 <sup>-0.01</sup>	6.75 <sup>-0.01</sup>	5976051	8517875	53.94	61.66	1.08D	1.23D	
Aroclor 1016 {2}	6.87 <sup>-0.01</sup>	7.46 <sup>-0.01</sup>	3830875	15679214	58.30	67.92	1.17D	1.36D	
Aroclor 1016 {3}	7.10 <sup>-0.01</sup>	7.81 <sup>0.00</sup>	3178490	7501277	57.72	67.75	1.15D	1.35D	
Aroclor 1016 {4}	7.44 <sup>0.00</sup>	7.88 <sup>0.00</sup>	3299127	8596188	61.17	67.70	1.22D	1.35D	
Aroclor 1016 {5}	7.64 <sup>0.00</sup>	8.09 <sup>0.00</sup>	2753401	8911443	67.92	74.73	1.36D	1.49D	
Aroclor 1221			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

Data File #1:	J:\GC22\DATA\101110.B\1011F013.D	Instrument:	GC22.i
Data File #2:	\\CASH\kelso\acqdata\GC22\data\101110_r.b\1011F013.D	Vial:	10
Acqu Date:	10/11/2010 20:47	Quant Date:	10/12/2010 11:24
Run Type:	DLCS	Dilution:	10.0
Lab ID:	KWG1010912-2	Soln Conc. Units:	ng/mL
Signal #1:	DB-35MS	Signal #2:	DB-XLB

**Target Compounds**

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1260			0	0	68.12	82.39	1.36D	1.65D	1.36D
Aroclor 1260 {1}	9.12 <sup>0.00</sup>	9.97	7141742	19757431	63.63	72.50	1.27D	1.45D	
Aroclor 1260 {2}	9.40 <sup>0.00</sup>	10.92	9816089	26574816	69.84	70.61	1.40D	1.41D	
Aroclor 1260 {3}	10.57	11.08	6767848	20617926	70.87	94.30	1.42D	1.89D	
Aroclor 1260 {4}	10.96 <sup>0.00</sup>	12.02	15869460	43976775	71.62	87.13	1.43D	1.74D	
Aroclor 1260 {5}	11.63 <sup>+0.00</sup>	12.54 <sup>+0.00</sup>	11195011	26217114	64.66	87.38	1.29D	1.75D	
Aroclor 1262			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1268			0	0	0.0000	0.0000	0.0096U	0.0096U	0.0096U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.0096U	0.0096U	

The +/- after Retention Time symbolize the direction of the RT shift

Prep Amount: 1000 mL Dilution: 10.0  
 Prep Final Vol: 2 mL Unit Factor: 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution



Laboratory Name

Sample #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\1011F013.D  
 Sample #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\1011F013.D  
 Inj Date : 11-OCT-2010 20:47  
 Sample Info: KWG1010912-2 | DLCS @10X  
 Misc Info :  
 Cal Date : 12-OCT-2010 09:01  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\070910ul\_f.m  
 Method #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\070910ul\_r.m  
 Sub List #1 : ALL.SUB  
 Sub List #2 : ALL.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.384	5.968	9326074	26547040	4.34	5.26		100.00 (R)
Aroclor 1016	6.761	6.751	5976051	8517875	53.9	61.6	80.00- 120.00	100.00
	6.874	7.461	3830875	15679214	58.3	67.9	49.06- 73.59	64.10
	7.098	7.808	3178490	7501277	57.7	67.7	40.15- 60.22	53.19
	7.441	7.881	3299127	8596188	61.2	67.7	40.83- 61.25	55.21
	7.644	8.094	2753401	8911443	67.9	74.7	30.52- 45.77	46.07
	Average of Peak Amounts =				59.8	67.9		
Aroclor 1260	9.118	9.971	7141742	19757431	63.6	72.5	80.00- 120.00	100.00
	9.398	10.921	9816089	26574816	69.8	70.6	110.81- 166.21	137.45
	10.568	11.078	6767848	20617926	70.9	94.3	64.43- 96.65	94.76
	10.964	12.018	15869460	43976775	71.6	87.1	156.72- 235.09	222.21
	11.628	12.541	11195011	26217114	64.6	87.4	111.40- 167.09	156.75
	Average of Peak Amounts =				68.1	82.4		
Decachlorobiphenyl	13.508	14.574	11818380	35967141	5.09	7.31		100.00 (R)

QC Flag Legend

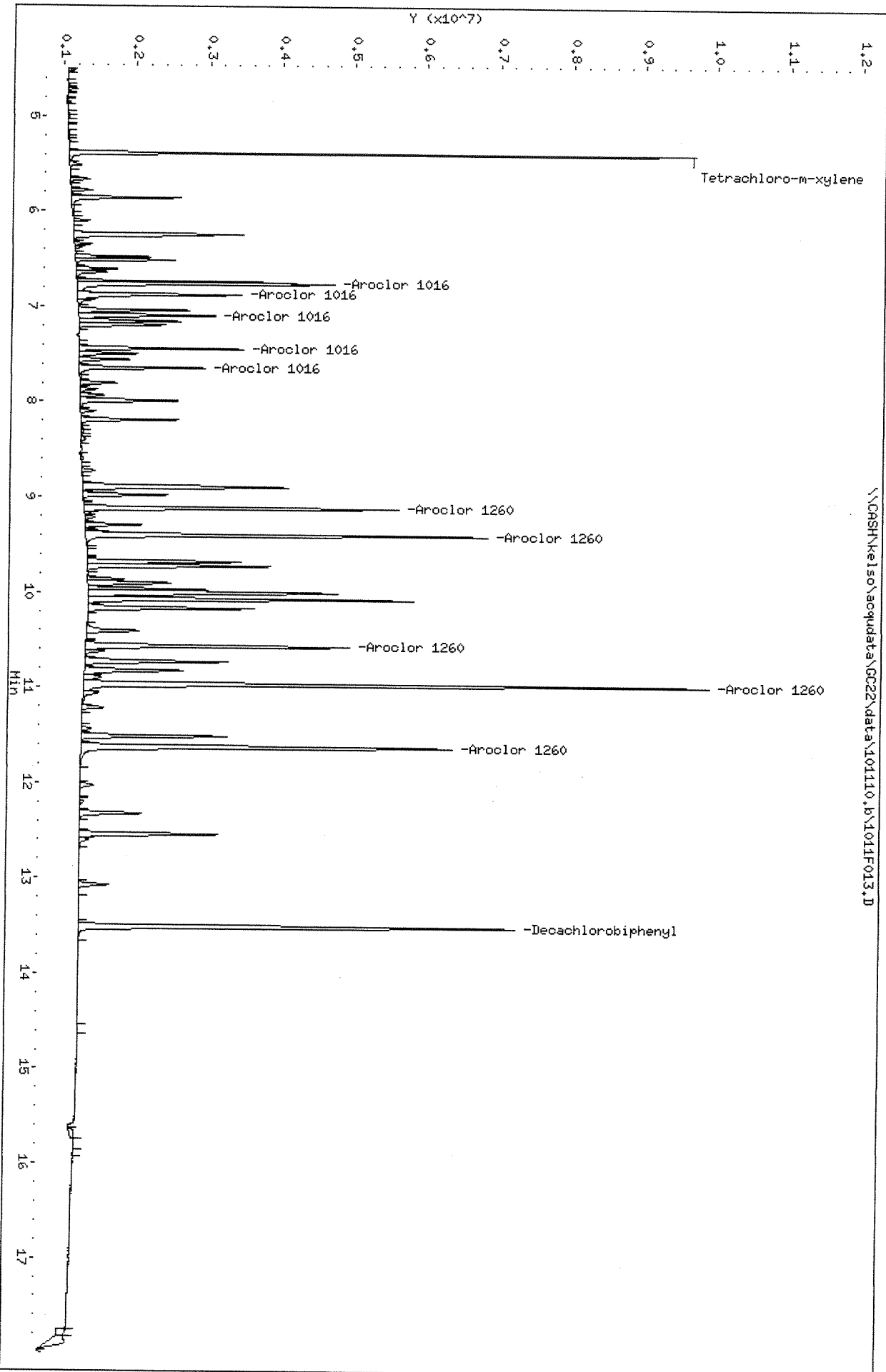
R - Spike/Surrogate failed recovery limits.

Data File: \\CASH\kelso\acq\data\GC22\data\101110.b\10111013.D  
Date: 11-OCT-2010 20:47

Client ID:  
Sample Info: KMG1010912-2 | DLCS @10X

Column phase: DB-35MS

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32



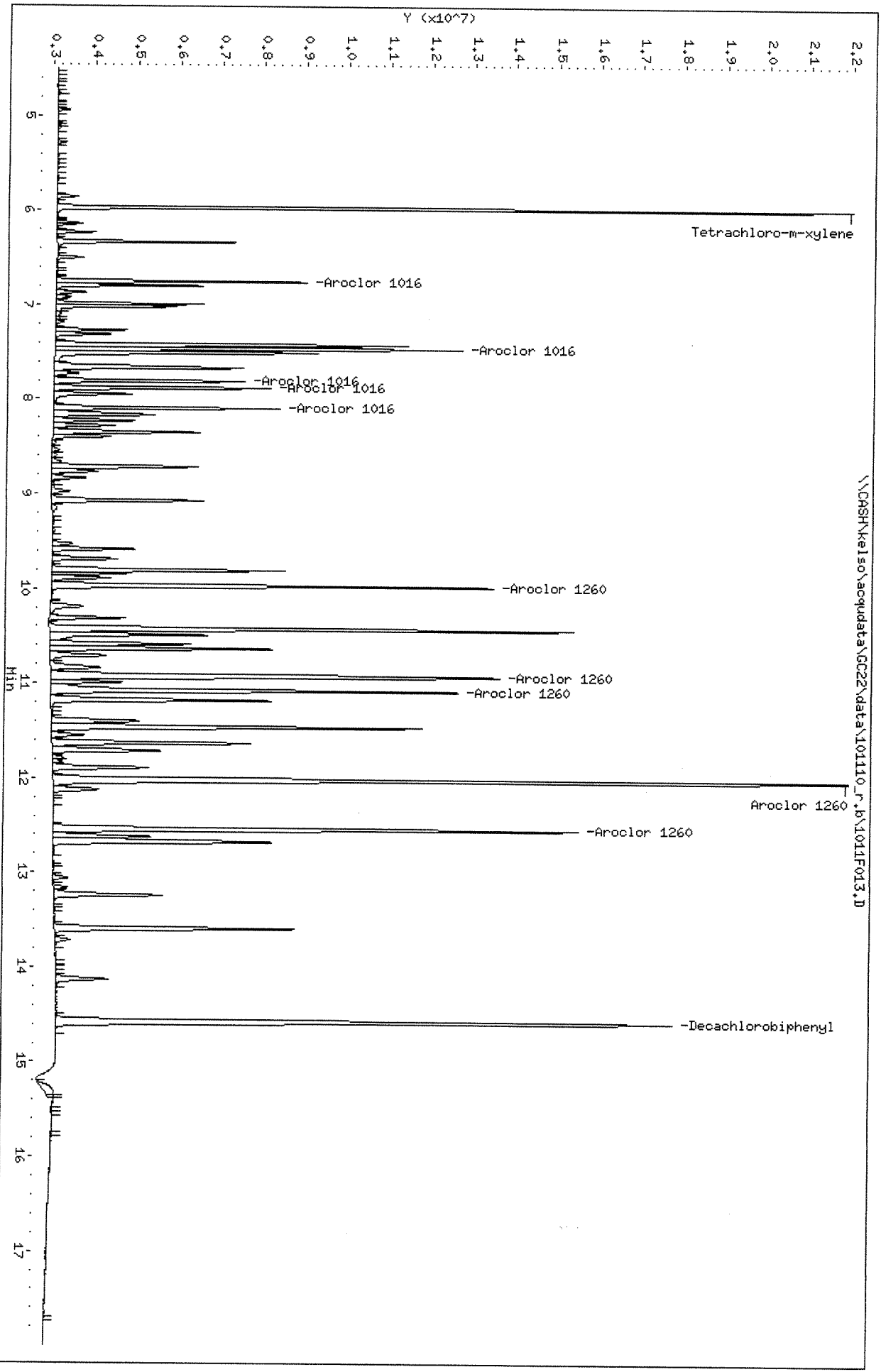
Data File: \\CASH\keiso\acq\data\GC22\data\101110\_r\_b\1011F013.D  
Date: 11-OCT-2010 20:47

Client ID:  
Sample Info: KMG1010912-2 | DLCS 010X

Column phase: DB-XLB

Instrument: GC22.i

Operator: LHarris  
Column diameter: 0.32



Organic Analysis:  
Polychlorinated Biphenyls (PCBs)

Validation Package

Standards Data

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Exponent  
 Project: Heglar Kronquist/0907194.000.0601

Service Request: K1010899  
 Calibration Date: 07/09/2010

Initial Calibration Summary  
 Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL9635  
 Instrument ID: GC22.i

Column: DB-35MS

Level ID	File ID	Level ID	File ID
A	\\Cash1\Acqudata\GC22\data\070910.b\0709F003.D	Q	\\Cash1\Acqudata\GC22\data\070910.b\0709F019.D
B	\\Cash1\Acqudata\GC22\data\070910.b\0709F004.D	R	\\Cash1\Acqudata\GC22\data\070910.b\0709F020.D
C	\\Cash1\Acqudata\GC22\data\070910.b\0709F005.D	S	\\Cash1\Acqudata\GC22\data\070910.b\0709F021.D
D	\\Cash1\Acqudata\GC22\data\070910.b\0709F006.D	T	\\Cash1\Acqudata\GC22\data\070910.b\0709F022.D
E	\\Cash1\Acqudata\GC22\data\070910.b\0709F007.D	U	\\Cash1\Acqudata\GC22\data\070910.b\0709F023.D
F	\\Cash1\Acqudata\GC22\data\070910.b\0709F008.D	V	\\Cash1\Acqudata\GC22\data\070910.b\0709F024.D
G	\\Cash1\Acqudata\GC22\data\070910.b\0709F009.D	W	\\Cash1\Acqudata\GC22\data\070910.b\0709F025.D
H	\\Cash1\Acqudata\GC22\data\070910.b\0709F010.D	X	\\Cash1\Acqudata\GC22\data\070910.b\0709F026.D
I	\\Cash1\Acqudata\GC22\data\070910.b\0709F011.D	Y	\\Cash1\Acqudata\GC22\data\070910.b\0709F027.D
J	\\Cash1\Acqudata\GC22\data\070910.b\0709F012.D	Z	\\Cash1\Acqudata\GC22\data\070910.b\0709F028.D
K	\\Cash1\Acqudata\GC22\data\070910.b\0709F013.D	AA	\\Cash1\Acqudata\GC22\data\070910.b\0709F029.D
L	\\Cash1\Acqudata\GC22\data\070910.b\0709F014.D	AB	\\Cash1\Acqudata\GC22\data\070910.b\0709F030.D
M	\\Cash1\Acqudata\GC22\data\070910.b\0709F015.D	AC	\\Cash1\Acqudata\GC22\data\070910.b\0709F031.D
N	\\Cash1\Acqudata\GC22\data\070910.b\0709F016.D	AD	\\Cash1\Acqudata\GC22\data\070910.b\0709F032.D
O	\\Cash1\Acqudata\GC22\data\070910.b\0709F017.D		
P	\\Cash1\Acqudata\GC22\data\070910.b\0709F018.D		

Analyte Name	Level ID			Level ID			Level ID			Level ID					
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF			
Decachlorobiphenyl	A	0.25	2.53E+6	B	0.50	2.41E+6	C	5.0	2.35E+6	D	10	2.28E+6	E	20	2.20E+6
	F	500	2.17E+6												
Aroclor 1016 {1}	A	2.5	1.19E+5	B	5.0	1.19E+5	C	50	1.15E+5	D	100	1.06E+5	E	200	1.05E+5
	F	500	1.01E+5												
Aroclor 1016 {2}	A	2.5	56100	B	5.0	70800	C	50	72100	D	100	68200	E	200	64600
	F	500	62400												
Aroclor 1016 {3}	A	2.5	57900	B	5.0	55300	C	50	60800	D	100	56100	E	200	51900
	F	500	48500												
Aroclor 1016 {4}	A	2.5	56400	B	5.0	54500	C	50	56700	D	100	55000	E	200	51400
	F	500	49600												
Aroclor 1016 {5}	A	2.5	39300	B	5.0	41400	C	50	43800	D	100	41900	E	200	38800
	F	500	37900												
Aroclor 1260 {1}	A	2.5	1.22E+5	B	5.0	1.22E+5	C	50	1.15E+5	D	100	1.09E+5	E	200	1.04E+5
	F	500	1.01E+5												
Aroclor 1260 {2}	A	2.5	1.52E+5	B	5.0	1.51E+5	C	50	1.43E+5	D	100	1.37E+5	E	200	1.32E+5
	F	500	1.29E+5												
Aroclor 1260 {3}	A	2.5	1.01E+5	B	5.0	99300	C	50	98500	D	100	94000	E	200	91100
	F	500	89300												
Aroclor 1260 {4}	A	2.5	2.23E+5	B	5.0	2.16E+5	C	50	2.26E+5	D	100	2.21E+5	E	200	2.20E+5
	F	500	2.23E+5												

Results flagged with an asterisk (\*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Exponent  
 Project: Heglar Kronquist/0907194.000.0601

Service Request: K1010899  
 Calibration Date: 07/09/2010

Initial Calibration Summary  
 Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL9635  
 Instrument ID: GC22.i

Column: DB-35MS

Analyte Name	Level			Level			Level			Level					
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF			
Aroclor 1260 {5}	A	2.5	1.79E+5	B	5.0	1.75E+5	C	50	1.78E+5	D	100	1.71E+5	E	200	1.67E+5
	F	500	1.68E+5												

Results flagged with an asterisk (\*) indicate values outside control criteria.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 07/09/2010

**Initial Calibration Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration ID:** CAL9635  
**Instrument ID:** GC22.i

**Column:** DB-35MS

Analyte Name	Compound Type	Calibration Evaluation				Control Criteria
		Fit Type	Eval.	Eval. Result	Q	
Decachlorobiphenyl	SURR	AverageRF	% RSD	5.8		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	6.9		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	9.1		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	7.9		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	5.3		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	5.5		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	8.2		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	6.8		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	4.9		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	1.6		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	2.9		≤ 20

Results flagged with an asterisk (\*) indicate values outside control criteria.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 07/09/2010  
**Date Analyzed:** 07/10/2010

**Second Source Calibration Verification  
 Polychlorinated Biphenyls (PCBs)**

**Calibration Type:** External Standard  
**Analysis Method:** 8082

**Calibration ID:** CAL9635  
**Units:** ng/mL

**File ID:** \\Cash1\Acqudata\GC22\data\070910.b\0709F033.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F034.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F035.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F036.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F037.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F038.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F039.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F040.D  
 \\Cash1\Acqudata\GC22\data\070910.b\0709F041.D

**Column ID:** DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016	100	91	NA	NA	NA	-9	± 20 %	NA
Aroclor 1016 {1}	100	86	111000	95500	-14	NA	± 100 %	AverageRF
Aroclor 1016 {2}	100	92	65700	60600	-8	NA	± 100 %	AverageRF
Aroclor 1016 {3}	100	86	55100	47300	-14	NA	± 100 %	AverageRF
Aroclor 1016 {4}	100	91	53900	48800	-9	NA	± 100 %	AverageRF
Aroclor 1016 {5}	100	100	40500	41600	3	NA	± 100 %	AverageRF
Aroclor 1260	100	100	NA	NA	NA	3	± 20 %	NA
Aroclor 1260 {1}	100	92	112000	104000	-8	NA	± 100 %	AverageRF
Aroclor 1260 {2}	100	96	141000	134000	-4	NA	± 100 %	AverageRF
Aroclor 1260 {3}	100	110	95500	104000	9	NA	± 100 %	AverageRF
Aroclor 1260 {4}	100	110	222000	248000	12	NA	± 100 %	AverageRF
Aroclor 1260 {5}	100	110	173000	185000	7	NA	± 100 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 07/09/2010

**Initial Calibration Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration ID:** CAL9635  
**Instrument ID:** GC22.i

**Column:** DB-XLB

Level ID	File ID	Level ID	File ID
A	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F003.D	Q	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F019.D
B	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F004.D	R	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F020.D
C	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F005.D	S	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F021.D
D	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F006.D	T	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F022.D
E	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F007.D	U	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F023.D
F	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F008.D	V	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F024.D
G	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F009.D	W	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F025.D
H	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F010.D	X	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F026.D
I	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F011.D	Y	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F027.D
J	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F012.D	Z	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F028.D
K	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F013.D	AA	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F029.D
L	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F014.D	AB	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F030.D
M	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F015.D	AC	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F031.D
N	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F016.D	AD	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F032.D
O	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F017.D		
P	\\Cash1\Acqudata\GC22\data\070910_r.b\0709F018.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
Decachlorobiphenyl	A	0.25	5.62E+6	B	0.50	5.41E+6	C	5.0	4.91E+6	D	10	4.70E+6	E	20	4.51E+6
	F		50	4.39E+6											
Aroclor 1016 {1}	A	2.5	1.74E+5	B	5.0	1.55E+5	C	50	1.37E+5	D	100	1.30E+5	E	200	1.22E+5
	F		500	1.12E+5											
Aroclor 1016 {2}	A	2.5	2.59E+5	B	5.0	2.47E+5	C	50	2.27E+5	D	100	2.18E+5	E	200	2.21E+5
	F		500	2.14E+5											
Aroclor 1016 {3}	A	2.5	1.31E+5	B	5.0	1.21E+5	C	50	1.12E+5	D	100	1.06E+5	E	200	1.01E+5
	F		500	93800											
Aroclor 1016 {4}	A	2.5	1.58E+5	B	5.0	1.43E+5	C	50	1.26E+5	D	100	1.18E+5	E	200	1.13E+5
	F		500	1.06E+5											
Aroclor 1016 {5}	A	2.5	1.31E+5	B	5.0	1.28E+5	C	50	1.22E+5	D	100	1.16E+5	E	200	1.13E+5
	F		500	1.06E+5											
Aroclor 1260 {1}	A	2.5	3.09E+5	B	5.0	3.03E+5	C	50	2.72E+5	D	100	2.61E+5	E	200	2.50E+5
	F		500	2.40E+5											
Aroclor 1260 {2}	A	2.5	4.10E+5	B	5.0	4.03E+5	C	50	3.73E+5	D	100	3.63E+5	E	200	3.57E+5
	F		500	3.52E+5											
Aroclor 1260 {3}	A	2.5	2.21E+5	B	5.0	2.27E+5	C	50	2.28E+5	D	100	2.20E+5	E	200	2.12E+5
	F		500	2.04E+5											
Aroclor 1260 {4}	A	2.5	5.74E+5	B	5.0	5.19E+5	C	50	4.92E+5	D	100	4.82E+5	E	200	4.80E+5
	F		500	4.82E+5											

Results flagged with an asterisk (\*) indicate values outside control criteria.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 07/09/2010

**Initial Calibration Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration ID:** CAL9635  
**Instrument ID:** GC22.i

**Column:** DB-XLB

Analyte Name	Level			Level			Level			Level					
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF			
Aroclor 1260 {5}	A	2.5	3.08E+5	B	5.0	3.08E+5	C	50	3.04E+5	D	100	2.97E+5	E	200	2.93E+5
	F	500	2.90E+5												

Results flagged with an asterisk (\*) indicate values outside control criteria.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Hcglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 07/09/2010

**Initial Calibration Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration ID:** CAL9635  
**Instrument ID:** GC22.i

**Column:** DB-XLB

Analyte Name	Compound Type	Calibration Evaluation				Control Criteria
		Fit Type	Eval.	Eval. Result	Q	
Decachlorobiphenyl	SURR	AverageRF	% RSD	10.0		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	16.3		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	7.8		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	12.3		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	15.6		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	7.8		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	10.3		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	6.6		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	4.1		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	7.3		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	2.6		≤ 20

Results flagged with an asterisk (\*) indicate values outside control criteria.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Calibration Date:** 07/09/2010  
**Date Analyzed:** 07/10/2010

**Second Source Calibration Verification  
 Polychlorinated Biphenyls (PCBs)**

**Calibration Type:** External Standard  
**Analysis Method:** 8082

**Calibration ID:** CAL9635  
**Units:** ng/mL

**File ID:** \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F033.D  
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 \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F038.D  
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 \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F040.D  
 \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F041.D

**Column ID:** DB-XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016	100	91	NA	NA	NA	-9	± 20 %	NA
Aroclor 1016 {1}	100	88	138000	121000	-12	NA	± 100 %	AverageRF
Aroclor 1016 {2}	100	95	231000	218000	-5	NA	± 100 %	AverageRF
Aroclor 1016 {3}	100	88	111000	97400	-12	NA	± 100 %	AverageRF
Aroclor 1016 {4}	100	89	127000	113000	-11	NA	± 100 %	AverageRF
Aroclor 1016 {5}	100	95	119000	114000	-5	NA	± 100 %	AverageRF
Aroclor 1260	100	110	NA	NA	NA	8	± 20 %	NA
Aroclor 1260 {1}	100	96	273000	263000	-4	NA	± 100 %	AverageRF
Aroclor 1260 {2}	100	93	376000	349000	-7	NA	± 100 %	AverageRF
Aroclor 1260 {3}	100	120	219000	266000	22	NA	± 100 %	AverageRF
Aroclor 1260 {4}	100	110	505000	574000	14	NA	± 100 %	AverageRF
Aroclor 1260 {5}	100	110	300000	342000	14	NA	± 100 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Sequence Name: C:\GC22\SEQUENCE\070910.S  
 Comment: PCB Aroclors by EPA 8082  
 Operator: LHarris  
 Data Path: C:\GC22\DATA\070910\  
 Pre-Seq Cmd:  
 Post-Seq Cmd:

Method Sections To Run      On A Barcode Mismatch  
 (X) Full Method              (X) Inject Anyway  
 ( ) Reprocessing Only        ( ) Don't Inject

Line Type	Vial	DataFile	Method	Sample Name
1	IB	0709F001	PCB_UL	IB
2	IB	0709F002	PCB_UL	KWG1006746-2   IB
3	ICAL	0709F003	PCB_UL	1660 @ 0.25-2.5ppb   8082 PCB
4	ICAL	0709F004	PCB_UL	1660 @ 0.50-5.0ppb   PCB5-62A
5	ICAL	0709F005	PCB_UL	1660 @ 5.0-50ppb   PCB5-62B
6	ICAL	0709F006	PCB_UL	1660 @ 10-100ppb   PCB5-62C
7	ICAL	0709F007	PCB_UL	1660 @ 20-200ppb   PCB5-56F
8	ICAL	0709F008	PCB_UL	1660 @ 50-500ppb   PCB5-62D
9	ICAL	0709F009	PCB_UL	1221/1254 @ 5.0-2.5ppb   PCB5-62E
10	ICAL	0709F010	PCB_UL	1221/1254 @ 10-5.0ppb   PCB5-
11	ICAL	0709F011	PCB_UL	1221/1254 @ 100-50ppb   PCB5-
12	ICAL	0709F012	PCB_UL	1221/1254 @ 200-100ppb   PCB5-
13	ICAL	0709F013	PCB_UL	1221/1254 @ 400-200ppb   PCB5
14	ICAL	0709F014	PCB_UL	1221/1254 @ 1000-500ppb   PCB
15	ICAL	0709F015	PCB_UL	1232/1262 @ 2.5ppb   PCB5-61B
16	ICAL	0709F016	PCB_UL	1232/1262 @ 5.0ppb   PCB5-61C
17	ICAL	0709F017	PCB_UL	1232/1262 @ 50ppb   PCB5-61D
18	ICAL	0709F018	PCB_UL	1232/1262 @ 100ppb   PCB5-61E
19	ICAL	0709F019	PCB_UL	1232/1262 @ 200ppb   PCB5-61F
20	ICAL	0709F020	PCB_UL	1232/1262 @ 500ppb   PCB5-61G
21	ICAL	0709F021	PCB_UL	1242/1268 @ 2.5ppb   PCB5-61H
22	ICAL	0709F022	PCB_UL	1242/1268 @ 5.0ppb   PCB5-61I
23	ICAL	0709F023	PCB_UL	1242/1268 @ 50ppb   PCB5-61J
24	ICAL	0709F024	PCB_UL	1242/1268 @ 100ppb   PCB5-61K
25	ICAL	0709F025	PCB_UL	1242/1268 @ 200ppb   PCB5-61L
26	ICAL	0709F026	PCB_UL	1242/1268 @ 500ppb   PCB5-61M
27	ICAL	0709F027	PCB_UL	1248 @ 2.5ppb   PCB5-61N   KW
28	ICAL	0709F028	PCB_UL	1248 @ 5.0ppb   PCB5-61O   KW
29	ICAL	0709F029	PCB_UL	1248 @ 50ppb   PCB5-61P   KWG
30	ICAL	0709F030	PCB_UL	1248 @ 100ppb   PCB5-61Q   KW
31	ICAL	0709F031	PCB_UL	1248 @ 200ppb   PCB5-61R   KW
32	ICAL	0709F032	PCB_UL	1248 @ 500ppb   PCB5-61S   KW
33	ICV	0709F033	PCB_UL	1016 @ 100ppb   PCB5-62F   KW
34	ICV	0709F034	PCB_UL	1221 @ 100ppb   PCB5-62G   KW
35	ICV	0709F035	PCB_UL	1232 @ 100ppb   PCB5-62H   KW
36	ICV	0709F036	PCB_UL	1242 @ 100ppb   PCB5-62I   KW
37	ICV	0709F037	PCB_UL	1248 @ 100ppb   PCB5-62J   KW
38	ICV	0709F038	PCB_UL	1254 @ 100ppb   PCB5-62K   KW
39	ICV	0709F039	PCB_UL	1260 @ 100ppb   PCB5-62L   KW
40	ICV	0709F040	PCB_UL	1262 @ 100ppb   PCB5-62M   KW
41	ICV	0709F041	PCB_UL	1268 @ 100ppb   PCB5-62N   KW

ICAL 9635  
 ultra low level

Data File: \\Cash1\Acqdata\GC22\data\070910.b\0709F002.D  
Report Date: 12-Jul-2010 12:42

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F002.D  
Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F002.D  
Inj Date : 09-JUL-2010 19:16  
Sample Info: KWG1006746-2 | IB | 8082 PCB\_ULL  
Misc Info :  
Cal Date : 12-JUL-2010 10:36  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
Sub List #1 : ALL.SUB  
Sub List #2 : ALL.SUB  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
----------	------	------	--------	--------	--------	--------	--------------	-------

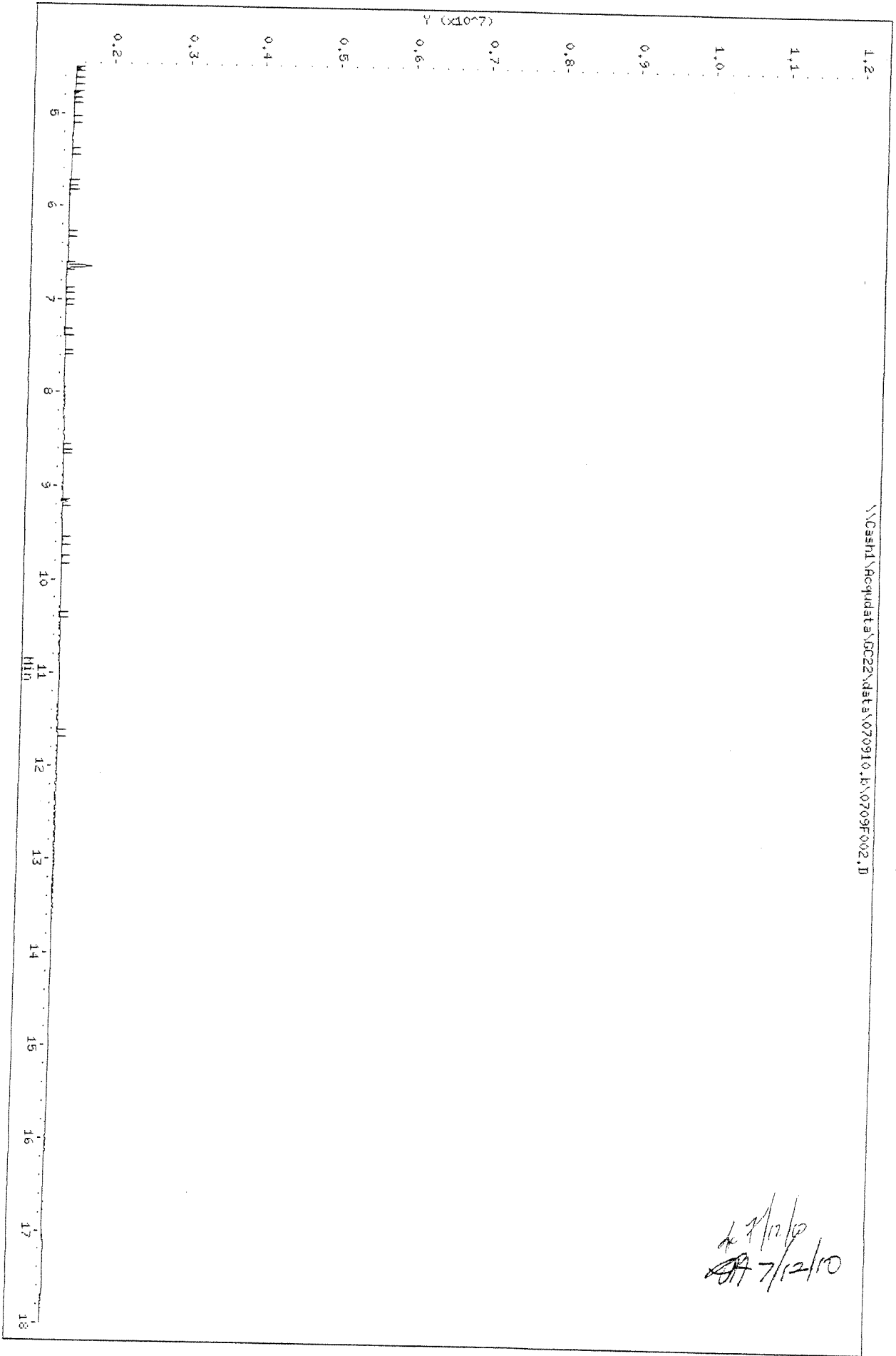
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7/12/10  
7/12/10

Data File: \CASH1\Acqudata\GC22\data\070910.L\0709F002.D  
Date : 09-JUL-2010 19:16  
Client ID:  
Sample Info: KMG1006746-2 | IB | 8082 PCB LUL  
Column phase: DB-35MS

Instrument: GC22.1  
Operator: L Harris  
Column diameter: 0.32

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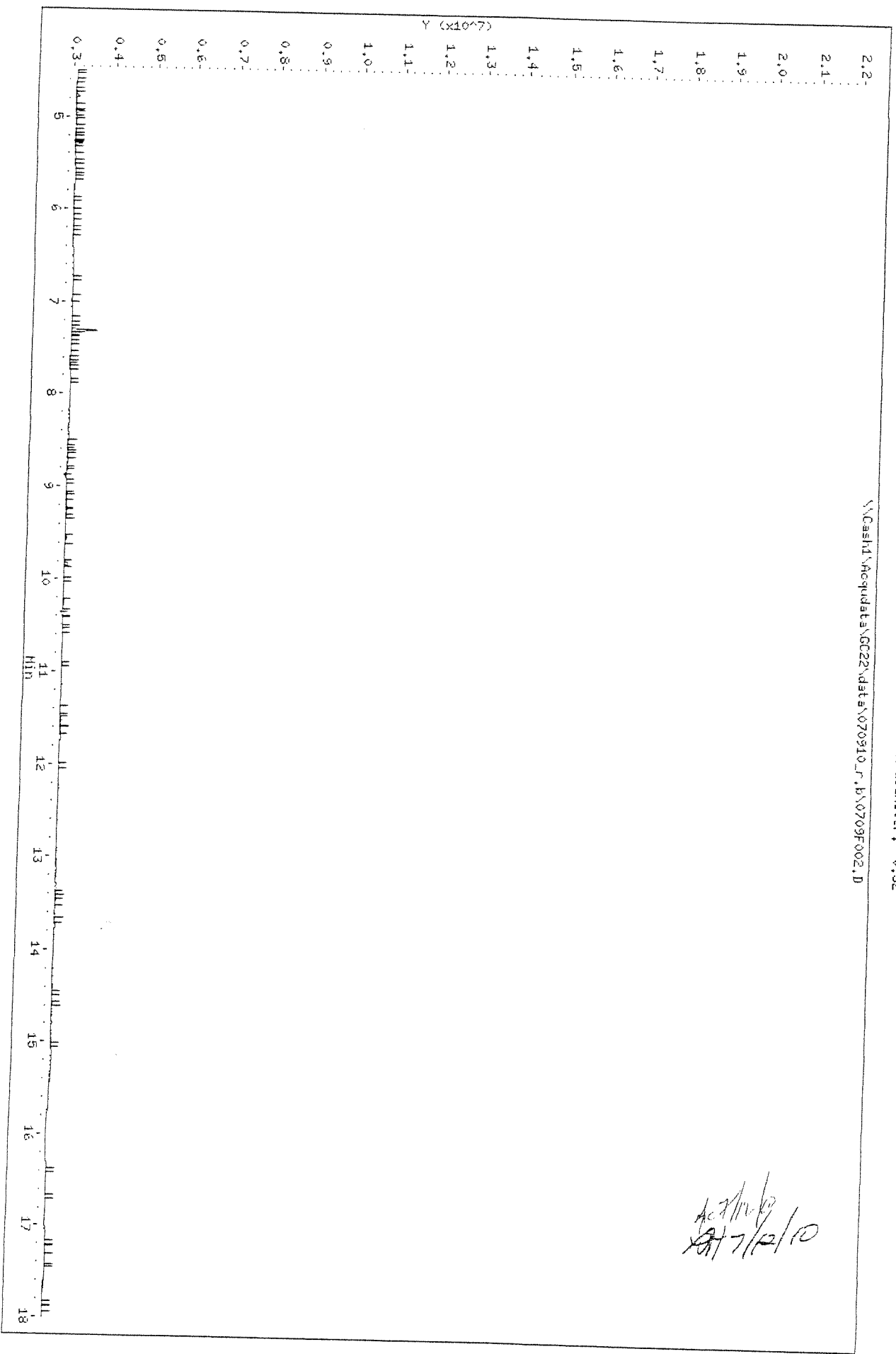
*de 7/12/10*  
*SA 7/12/10*



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Date: 09-JUL-2010 19:16  
Client ID:  
Sample Info: KMG1006746-2 | IB | 8082 PCB\_UL1  
Column Phase: DB-XLB

Instrument: GC22.1  
Operator: Harris  
Column diameter: 0.32

\\Cash1\Acqudata\GC22\data\070910\_r\_b\0709F002.D





Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F003.D  
 Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F003.D  
 Inj Date : 09-JUL-2010 19:40  
 Sample Info: 1660 @ 0.25-2.5ppb | PCB5-62A | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:52  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : AR1660.SUB  
 Sub List #2 : AR1660.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.386	5.970	574987	1297664	0.268	0.258		100.00 (M)
Aroclor 1016	6.766	6.750	297118	433783	2.74	3.14	80.00- 120.00	100.00 (M)
	6.879	7.466	140178	647619	2.12	2.82	49.25- 73.87	47.18 (M)
	7.099	7.813	144706	326487	2.54	2.93	38.26- 57.39	48.70 (M)
	7.446	7.883	141090	392977	2.58	3.09	39.13- 58.70	47.49 (M)
	7.649	8.100	98363	327410	2.38	2.74	29.91- 44.86	35.53 (M)
	Average of Peak Amounts =				2.47	2.94		
Aroclor 1260	9.126	9.980	305669	772565	2.72	2.83	80.00- 120.00	100.00 (M)
	9.406	10.930	379539	1026067	2.70	2.73	102.38- 153.58	124.17 (M)
	10.576	11.086	252056	553103	2.64	2.53	71.08- 106.62	82.46 (M)
	10.972	12.026	558164	1434822	2.52	2.84	177.38- 266.06	182.60 (M)
	11.636	12.550	447494	769572	2.56	2.56	133.94- 200.91	146.40 (M)
	Average of Peak Amounts =				2.63	2.70		
Decachlorobiphenyl	13.519	14.590	632175	1403966	0.272	0.284		100.00

QC Flag Legend

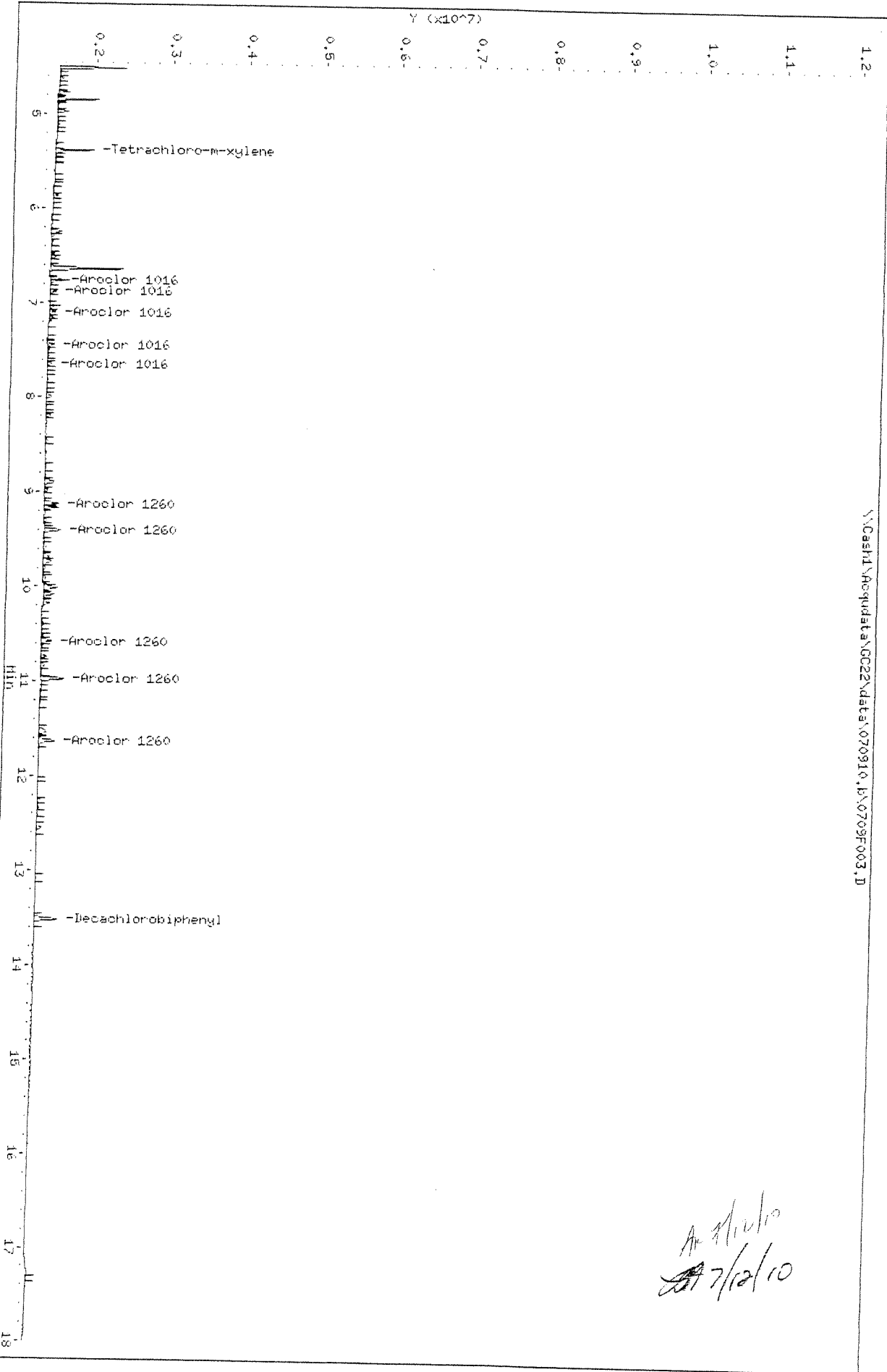
M - Compound response manually integrated.

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 7/12/10

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Date: 09-JUL-2010 19:40  
Client ID:  
Sample Info: 1660 @ 0.25-2.5ppb | PCB5-624 | KJ01006746-3  
Column phase: DB-35MS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

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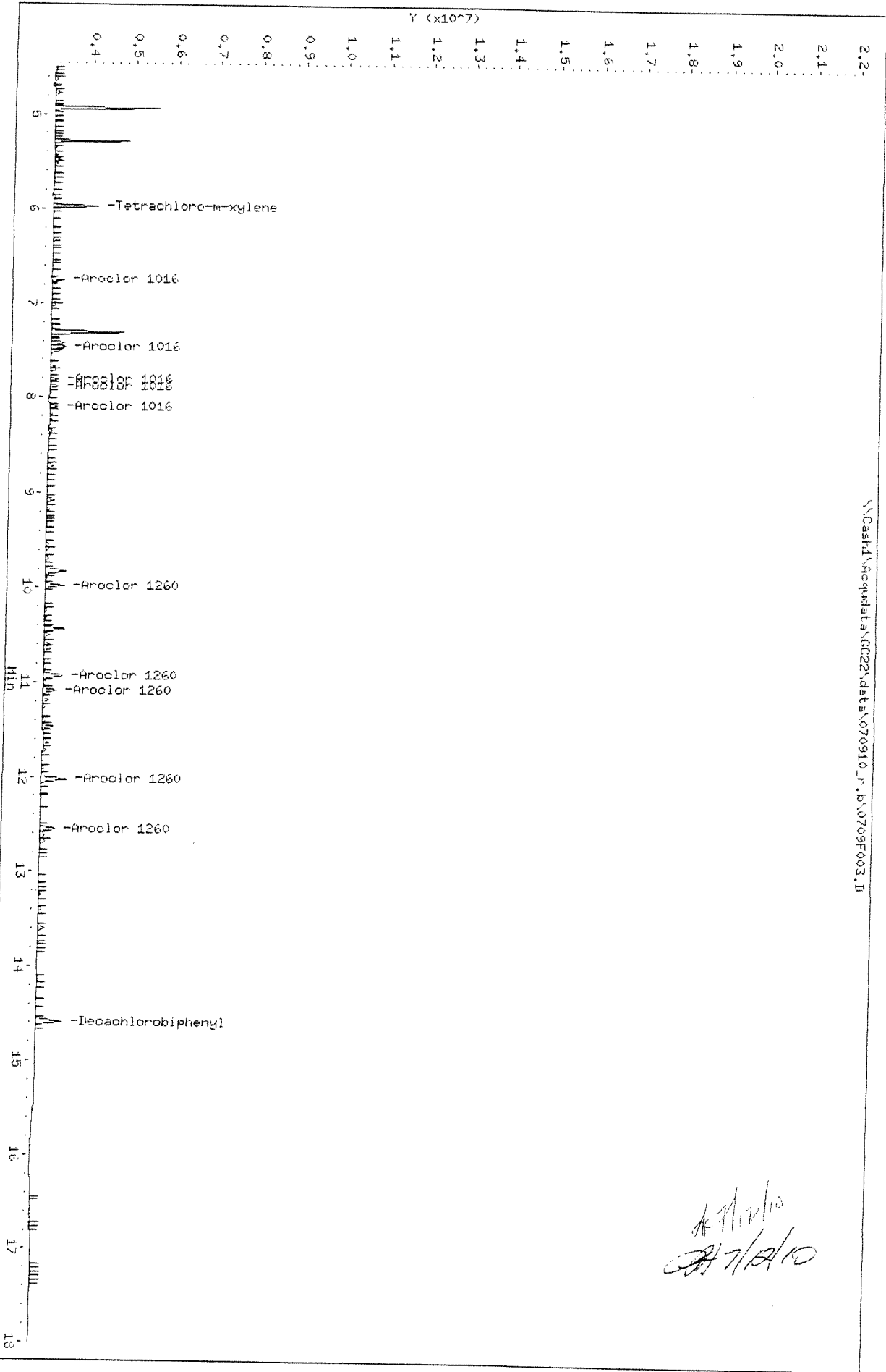
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Date: 09-JUL-2010 19:40

Client ID:  
Sample Info: 1660 @ 0.25-2.5ppb | PCB5-62A | KMS1006746-3

Column Phase: DB-XLB

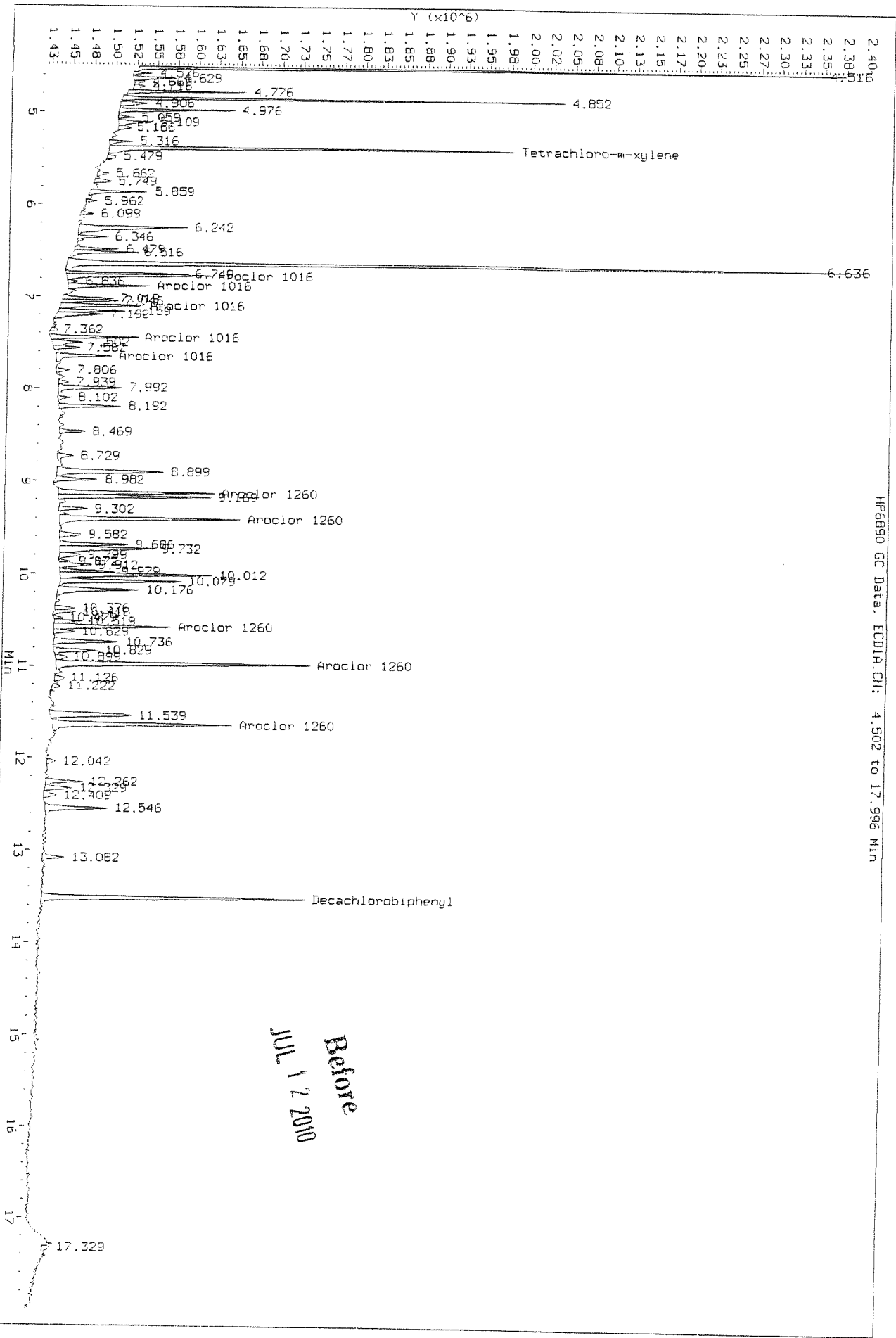
Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32

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*Handwritten signature and date:*  
7/21/10

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 Injection Date: 09-JUL-2010 19:40  
 Instrument: GC22.1  
 Client Sample ID:

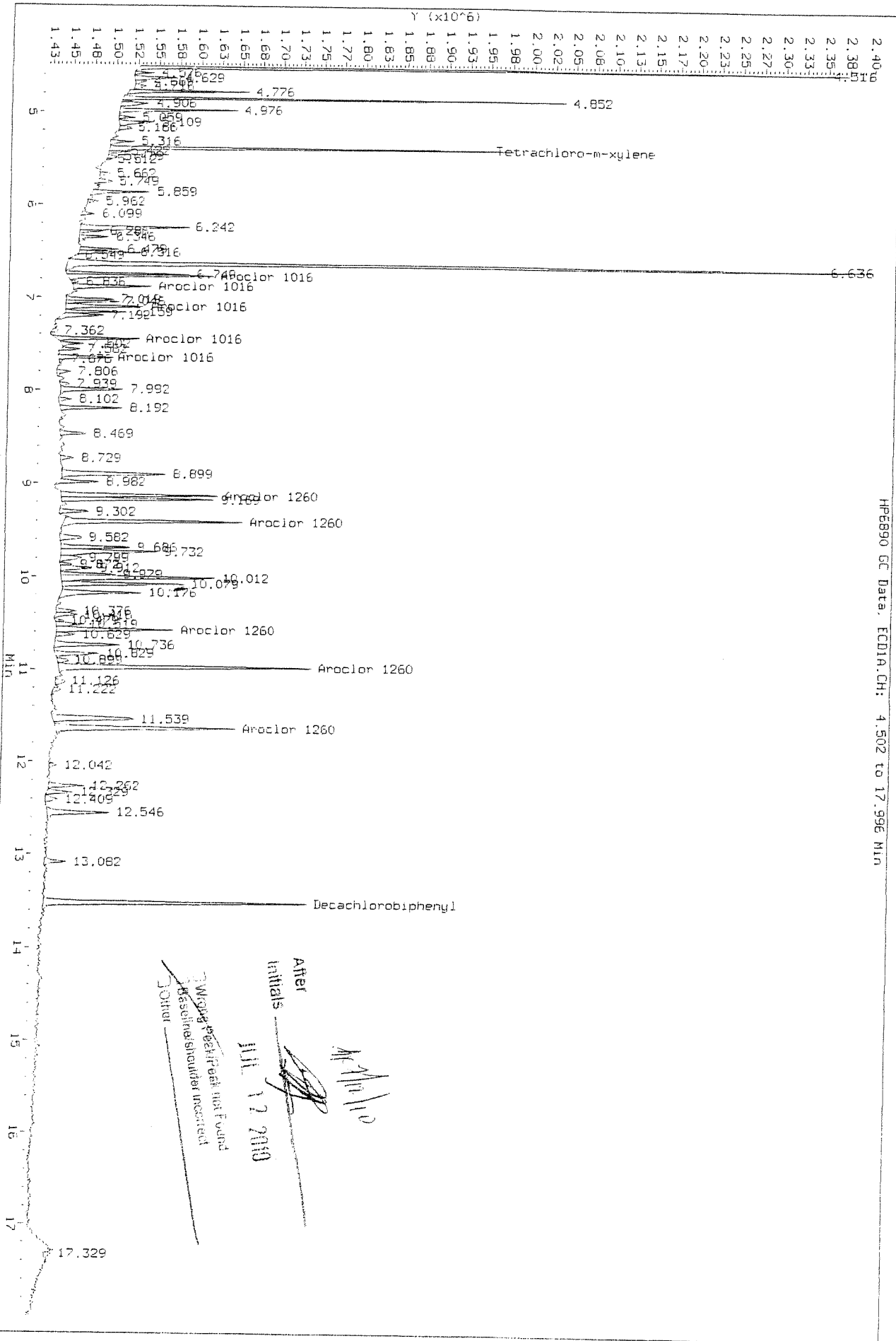


Before  
 JUL 12 2010

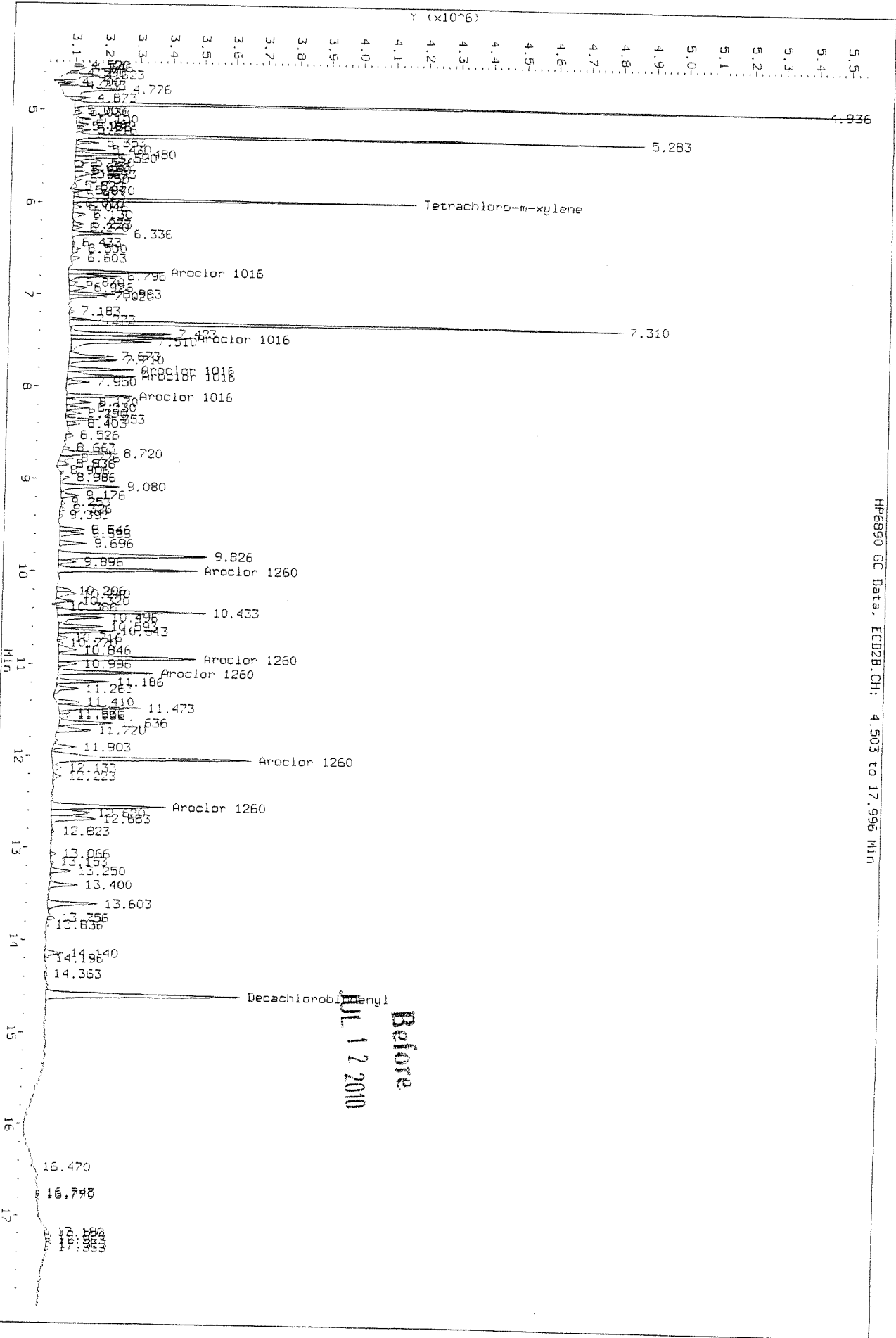
HP6890 GC Data, ECD1A.CH: 4.502 to 17.996 MIN

Data File: \\Casha1\accq\data\GC22\data\070910\_b\07091003.D  
 Injection Date: 09-JUL-2010 19:40  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data, ECD1A.CH: 4.502 to 17.996 Min



Data File: \\Cash1\Acqudata\GC22\data\070910\_r.b\0709f003.D  
Injection Date: 09-JUL-2010 19:40  
Instrument: GC22.1  
Client Sample ID:

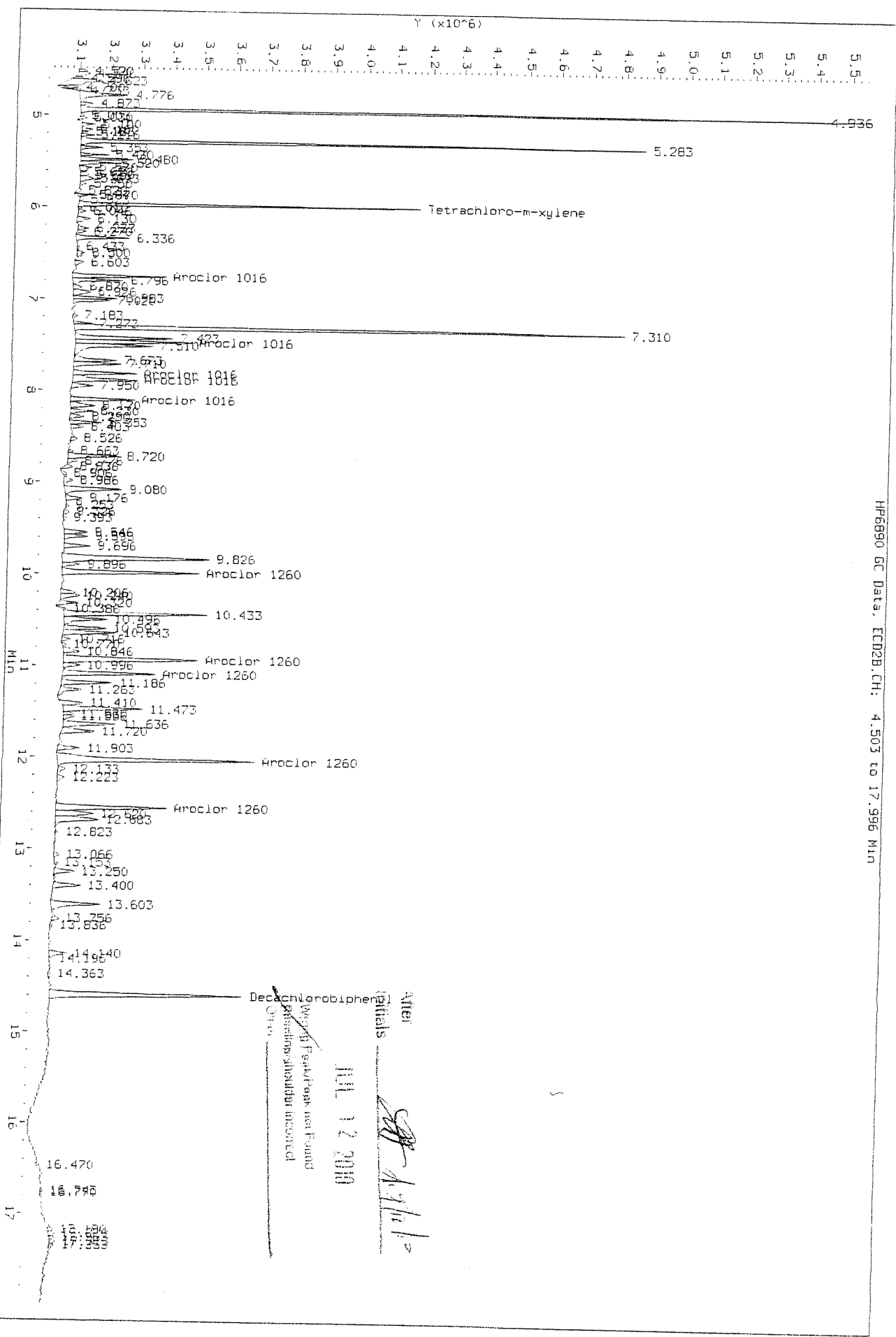


HP6890 GC Data, ECD2B.CH: 4.503 to 17.996 Min

Before  
JUL 12 2010

Data File: \\CASH1\qc\data\GC22\data\070910.r.b\0709F003.D  
 Injection Date: 09-JUL-2010 19:40  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data, ECD2B.CH: 4.503 to 17.996 Min



Alter  
 initials  
 JUL 12 2010  
 Weight Percent Peaks not Found  
 Percent Standard Incorrect  
 Data

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F004.D  
 Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F004.D  
 Inj Date : 09-JUL-2010 20:05  
 Sample Info: 1660 @ 0.50-5.0ppb | PCB5-62B | KWG1006746-3  
 Misc Info :  
 Date : 12-JUL-2010 09:52  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : AR1660.SUB  
 Sub List #2 : AR1660.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.389	5.974	1046196	2516866	0.487	0.499		100.00
Aroclor 1016	6.769	6.757	593347	773005	5.40	5.60	80.00- 120.00	100.00 (M)
	6.883	7.470	353978	1233014	5.39	5.34	49.25- 73.87	59.66 (M)
	7.103	7.814	276347	607061	5.01	5.48	38.26- 57.39	46.57 (M)
	7.446	7.887	272733	715083	5.02	5.63	39.13- 58.70	45.97 (M)
	7.653	8.100	207069	639395	5.04	5.36	29.91- 44.86	34.90 (M)
	Average of Peak Amounts =				5.17	5.48		
Aroclor 1260	9.126	9.980	612141	1514474	5.46	5.56	80.00- 120.00	100.00 (M)
	9.406	10.930	754480	2014833	5.39	5.35	102.38- 153.58	123.25 (M)
	10.576	11.087	496431	1133632	5.21	5.18	71.08- 106.62	81.10 (M)
	10.973	12.027	1080082	2592746	4.89	5.14	177.38- 266.06	176.44 (M)
	11.633	12.550	875963	1542167	5.06	5.14	133.94- 200.91	147.49 (M)
	Average of Peak Amounts =				5.20	5.27		
Decachlorobiphenyl	13.516	14.590	1205455	2702745	0.519	0.549		100.00

QC Flag Legend

M - Compound response manually integrated.

*Handwritten signature/initials*

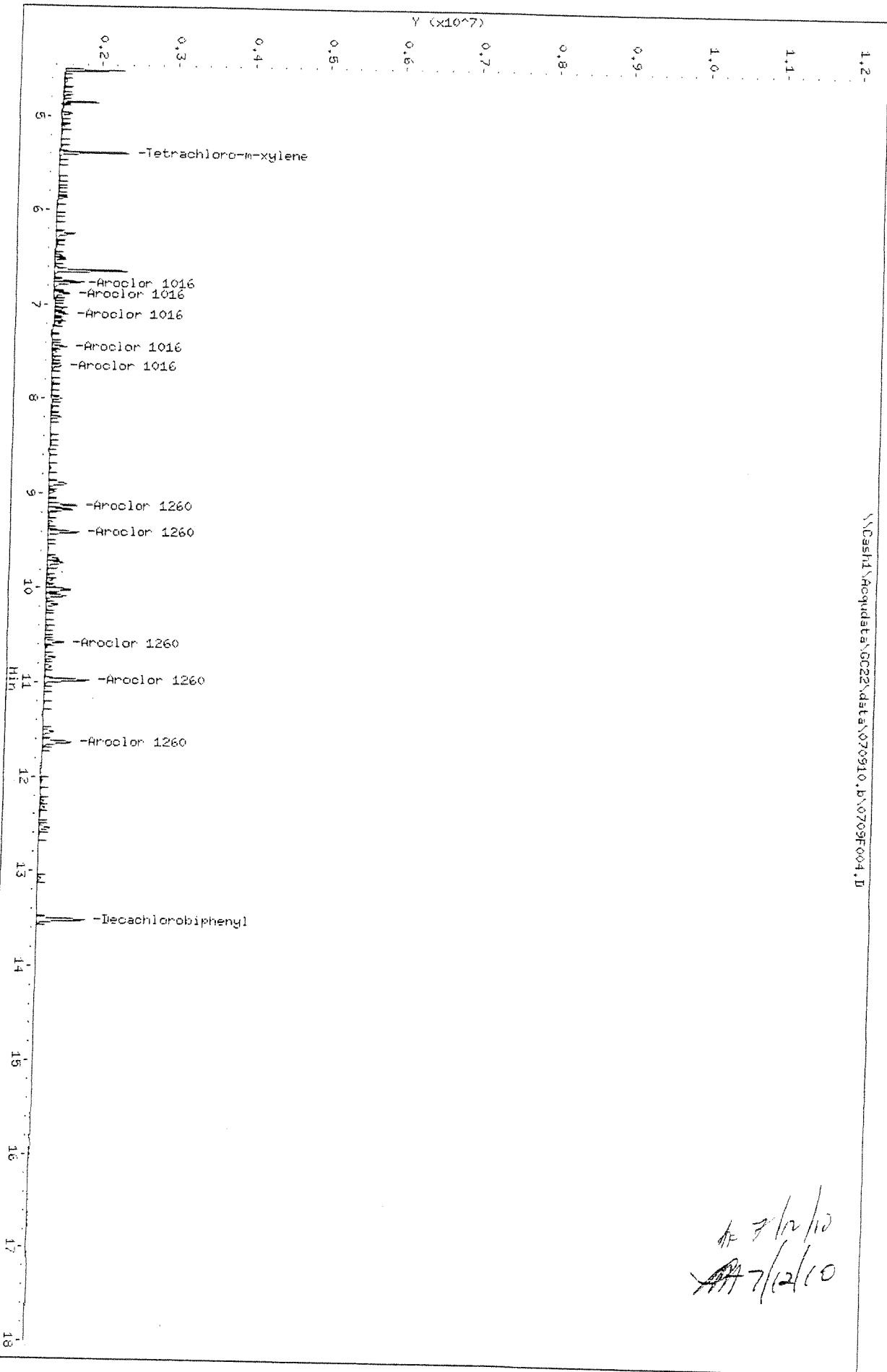


Data File: \\Cashtd\Acqudata\GC22\data\070910.B\0709F004.D  
Date: 09-JUL-2010 20:05  
Client ID:  
Sample Info: 1660 @ 0.50-5.0ppb | PCB5-62B | KMG10062746-3

Column Phase: DB-35HS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

\\Cashtd\Acqudata\GC22\data\070910.B\0709F004.D

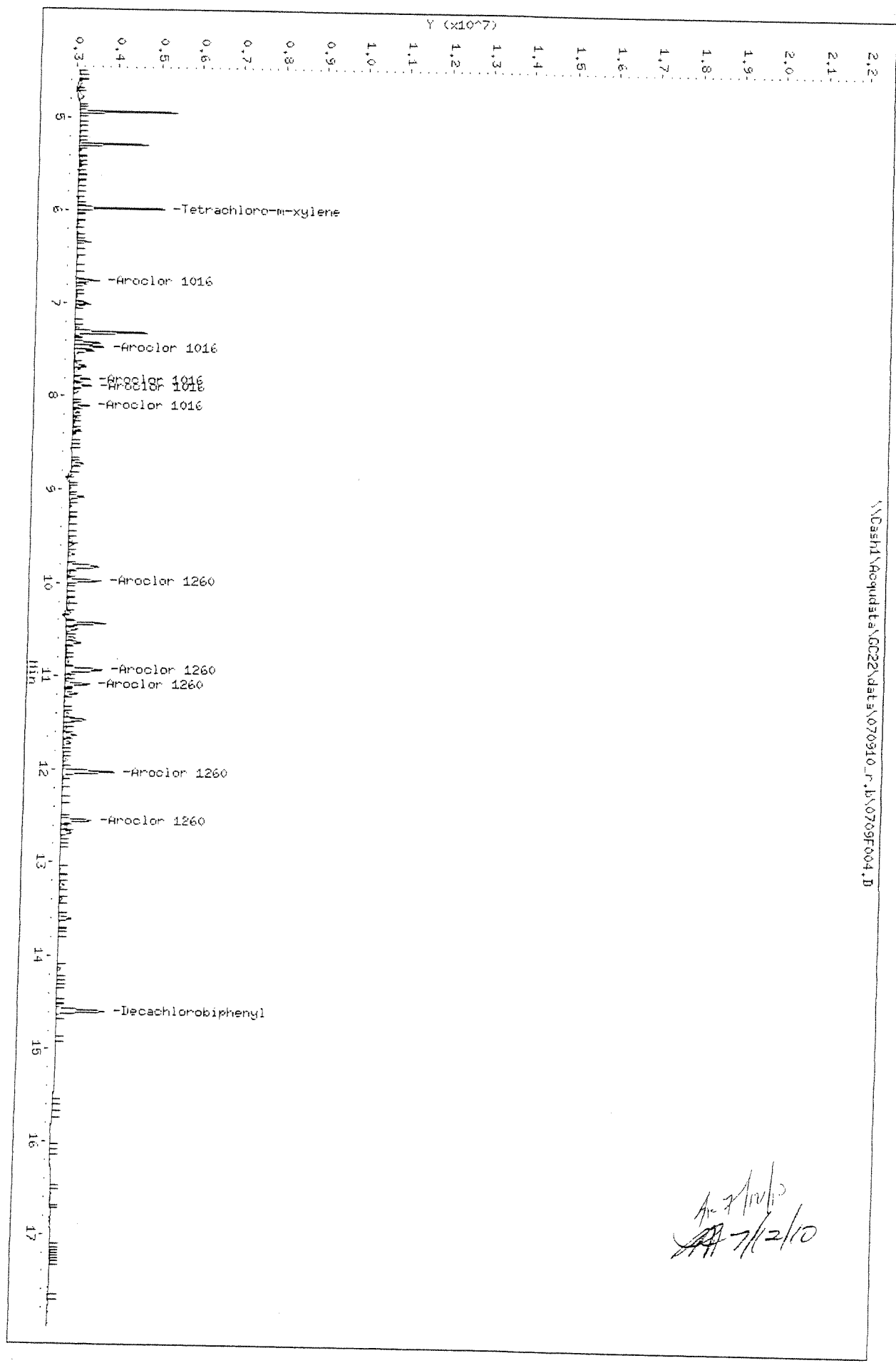


Data File: \\Dash1\Acqudata\GC22\data\070910\_r.b\0709F004.D  
Date: 09-JUL-2010 20:05  
Client ID:  
Sample Info: 1660 @ 0.50-5.0ppb | PCBs-62B | KJG1006746-3  
Column Phase: DB-MLB

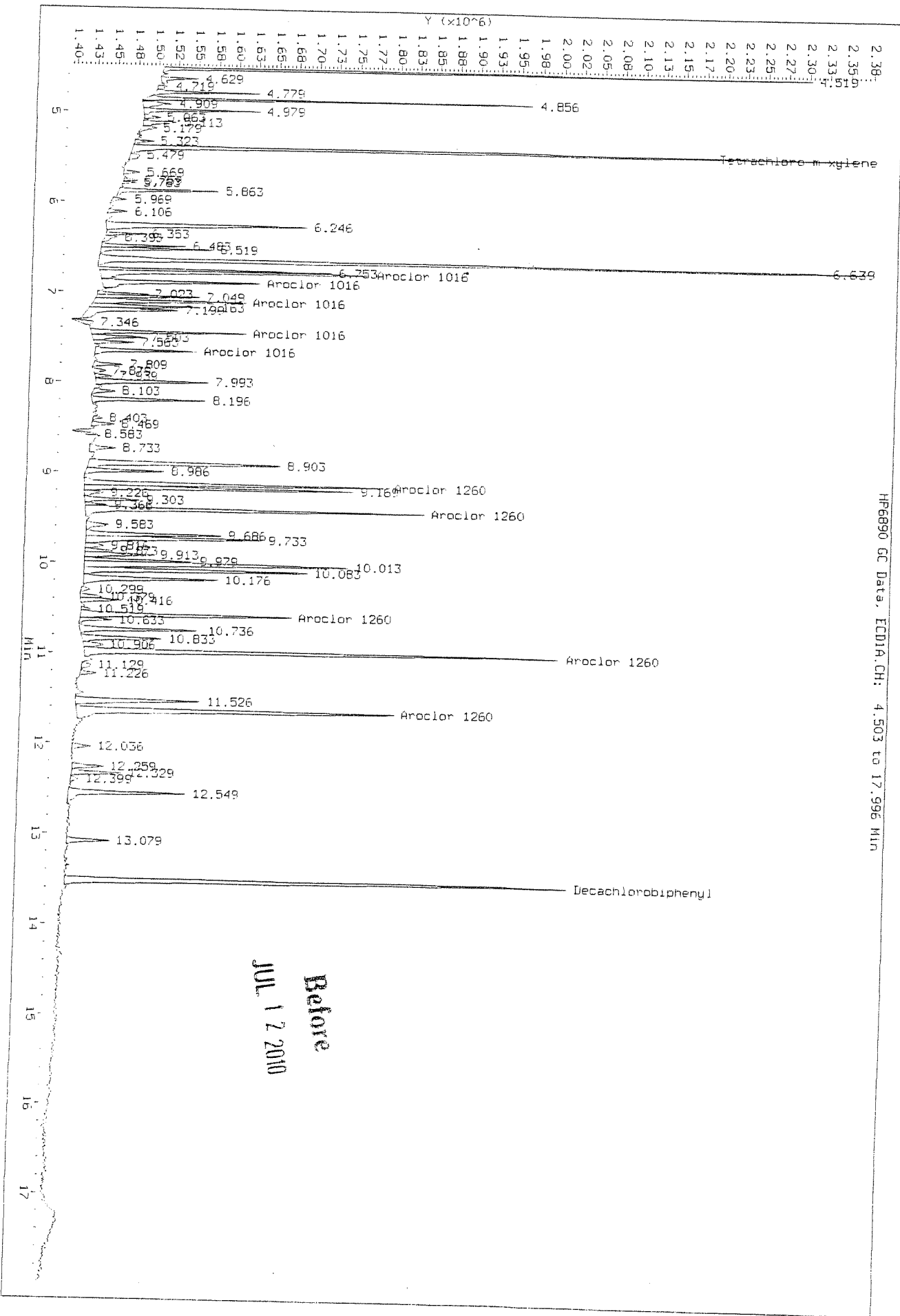
Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

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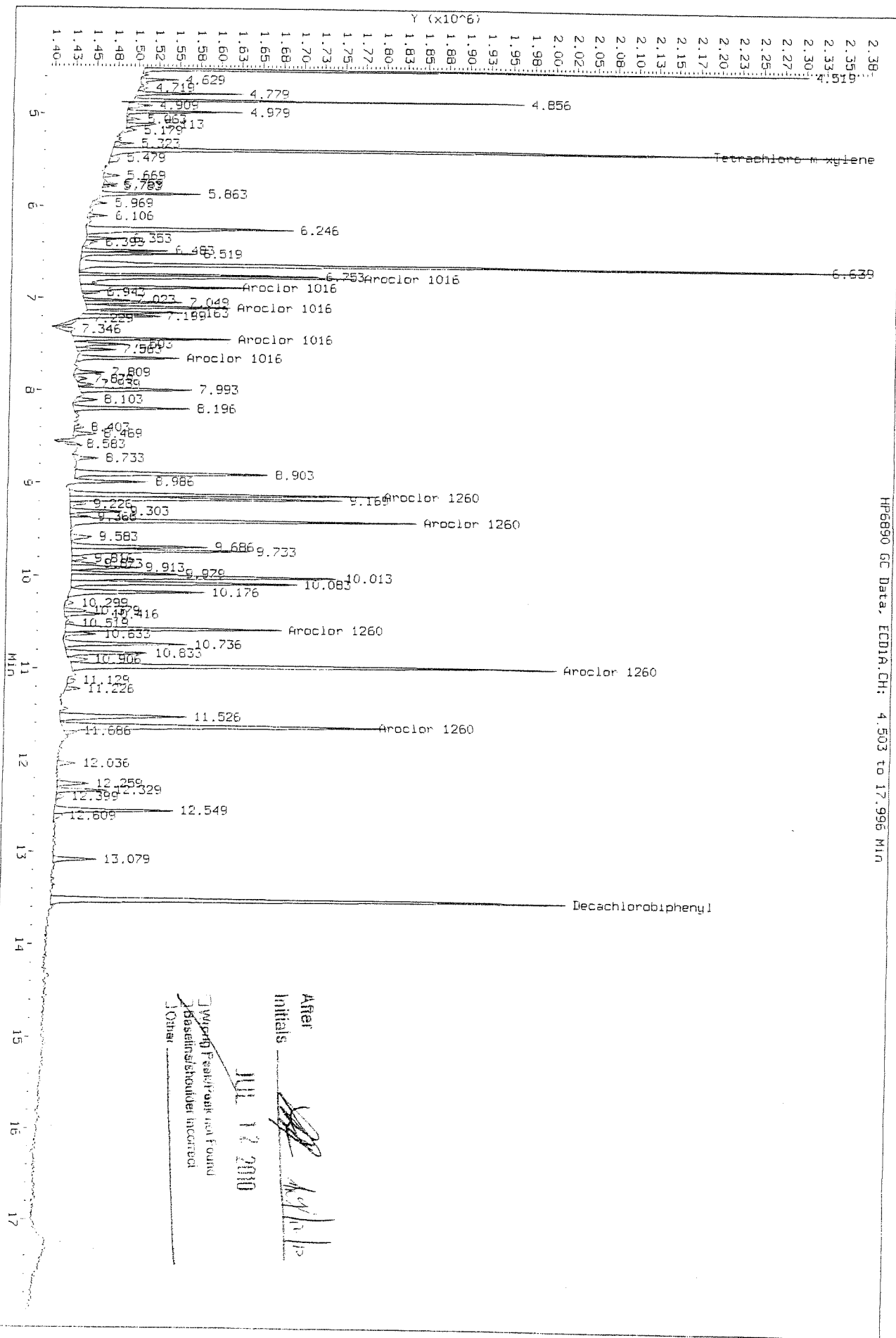
*Handwritten:*  
7/12/10



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 Injection Date: 09-JUL-2010 20:05  
 Instrument: GC22.1  
 Client Sample ID:



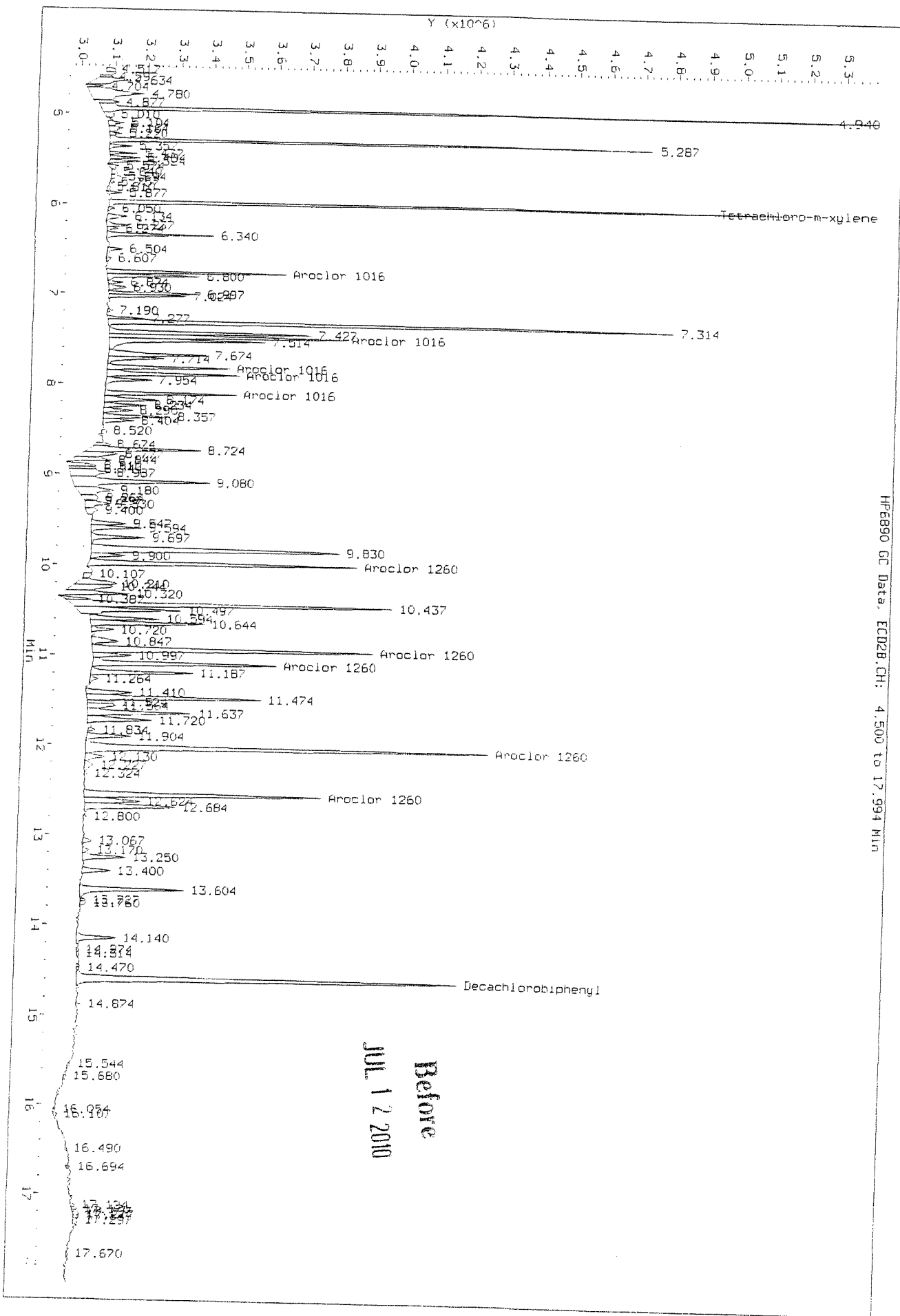
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 Injection Date: 09-JUL-2010 20:05  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data, ECD1A.CH: 4.503 to 17.996 Min

After Initials: *[Signature]*  
 JUL 12 2010  
 Verified Peak/Ret. and Found  
 Baseline/shoulder corrected  
 Other

Data File: \\Casht1\Acqudata\GC22\data\070910\_r\_b\0709f004.D  
 Injection Date: 09-JUL-2010 20:05  
 Instrument: GC22.1  
 Client Sample ID:

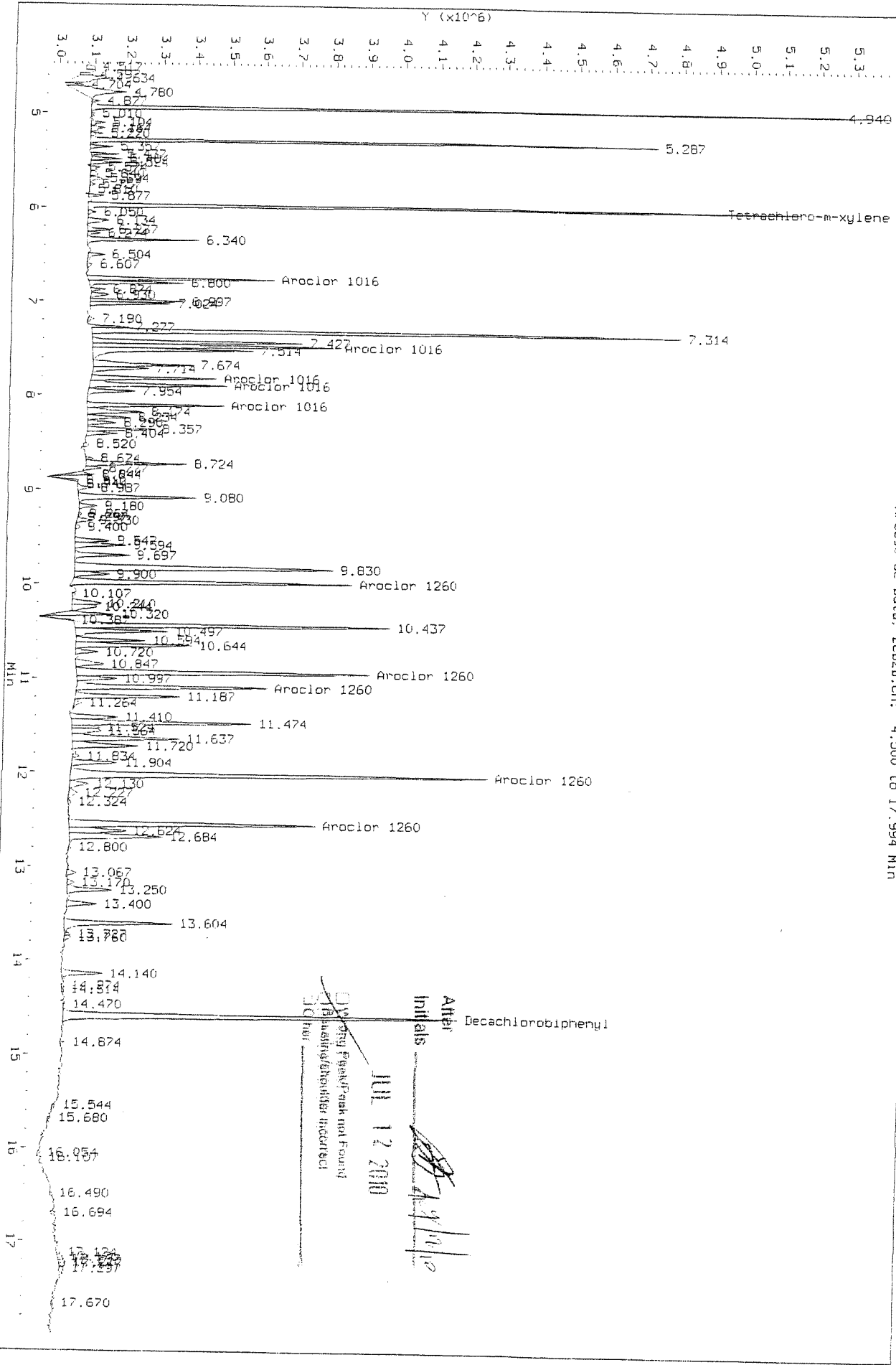


HF6890 GC Data, ECD2B.CH: 4.500 to 17.994 Min

Before  
 JUL 12 2010

Data File: \\Casha1\acq\data\GC22\data\070910\_r\_b\0709f004.D  
 Injection Date: 09-JUL-2010 20:05  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data: FCD2B.CH: 4.500 to 17.994 Min



Alter Initials  
 Decachlorobiphenyl  
 JUL 12 2010  
 O.P. Singh  
 Analyst  
 10/10/10

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F005.D  
 Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F005.D  
 Inj Date : 09-JUL-2010 20:30  
 Sample Info: 1660 @ 5.0-50ppb | PCB5-62C | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:52  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : AR1660.SUB  
 Sub List #2 : AR1660.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.383	5.970	10591219	24967283	4.93	5.44		100.00
Aroclor 1016	6.763	6.754	5759227	6847880	52.0	54.0	80.00- 120.00	100.00 (M)
	6.879	7.467	3605853	11328205	54.9	52.3	49.25- 73.87	62.61 (M)
	7.099	7.810	3039673	5612379	55.2	54.0	38.26- 57.39	52.78 (M)
	7.443	7.884	2834015	6277483	52.5	52.5	39.13- 58.70	49.21 (M)
	7.649	8.100	2190526	6082563	54.0	55.0	29.91- 44.86	38.04 (M)
	Average of Peak Amounts =				53.7	53.6		
Aroclor 1260	9.123	9.977	5747145	13619642	51.2	53.0	80.00- 120.00	100.00 (M)
	9.406	10.927	7138173	18660041	50.9	51.9	102.38- 153.58	124.20 (M)
	10.573	11.087	4923939	11385299	51.6	55.8	71.08- 106.62	85.68 (M)
	10.973	12.027	11308706	24589519	51.1	50.8	177.38- 266.06	196.77 (M)
	11.633	12.550	8898077	15208244	51.4	53.3	133.94- 200.91	154.83 (M)
	Average of Peak Amounts =				51.2	53.0		
Decachlorobiphenyl	13.516	14.590	11731033	24562739	5.05	5.33		100.00

QC Flag Legend

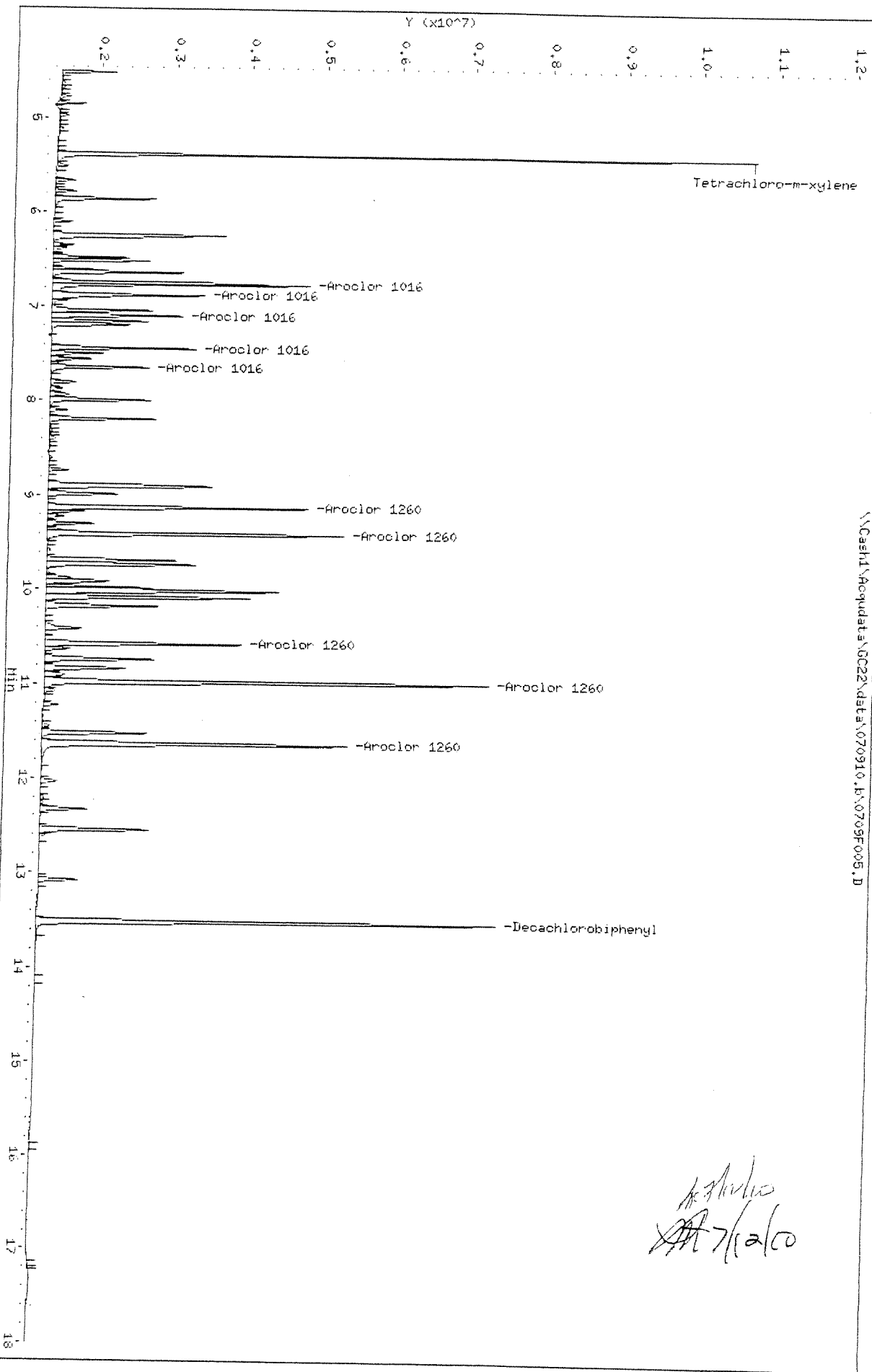
M - Compound response manually integrated.

*Handwritten signature and date:*  
 7/12/10

Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F005.D  
Date: 09-JUL-2010 20:30  
Client ID:  
Sample Info: 1660 @ 5.0-50ppb | PCBs-E2C | KMG1006246-3  
Column Phase: DB-35MS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

\\Cash1\Acqudata\GC22\data\070910.b\0709F005.D

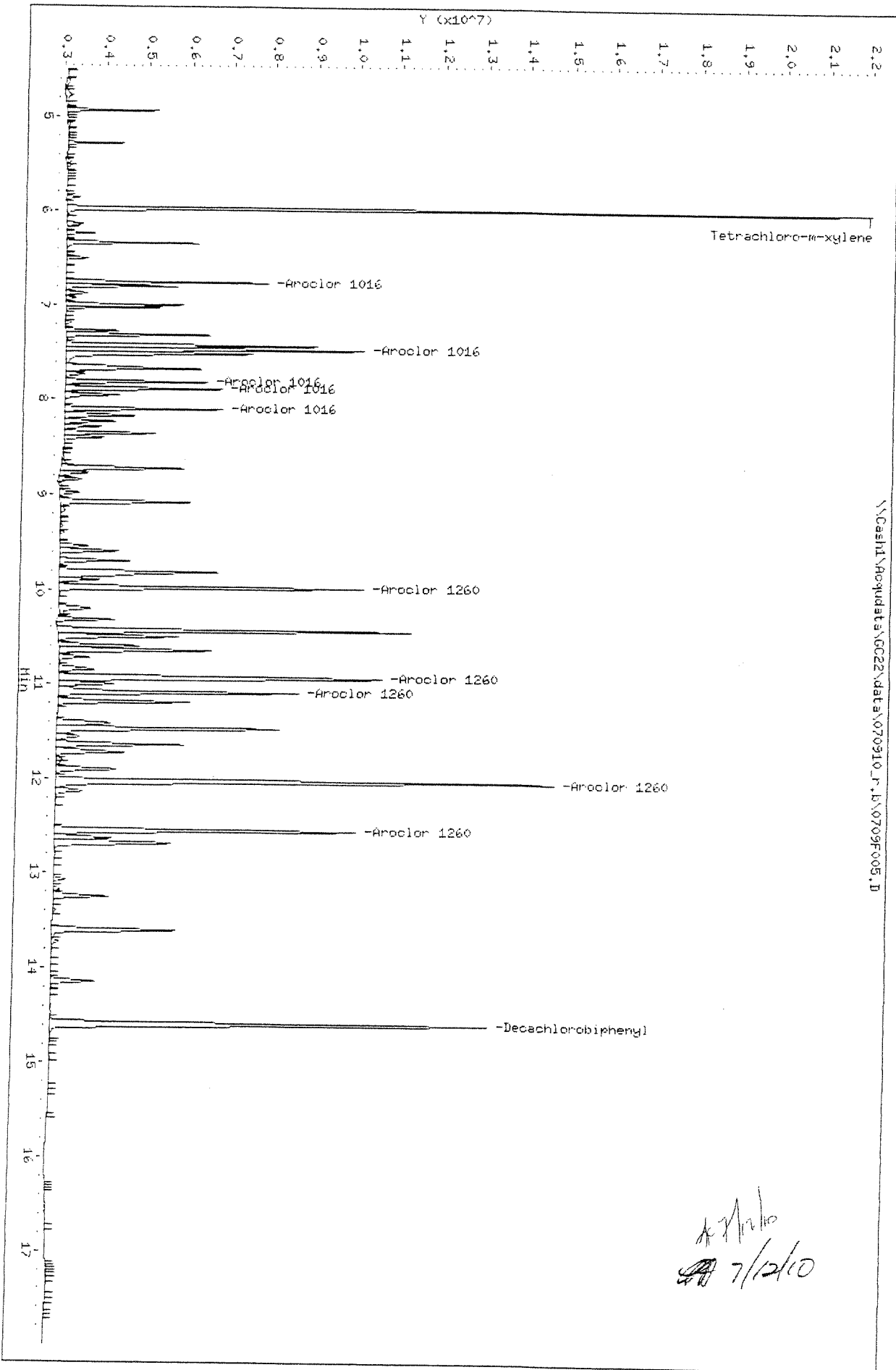


*LHarris*  
*7/12/10*

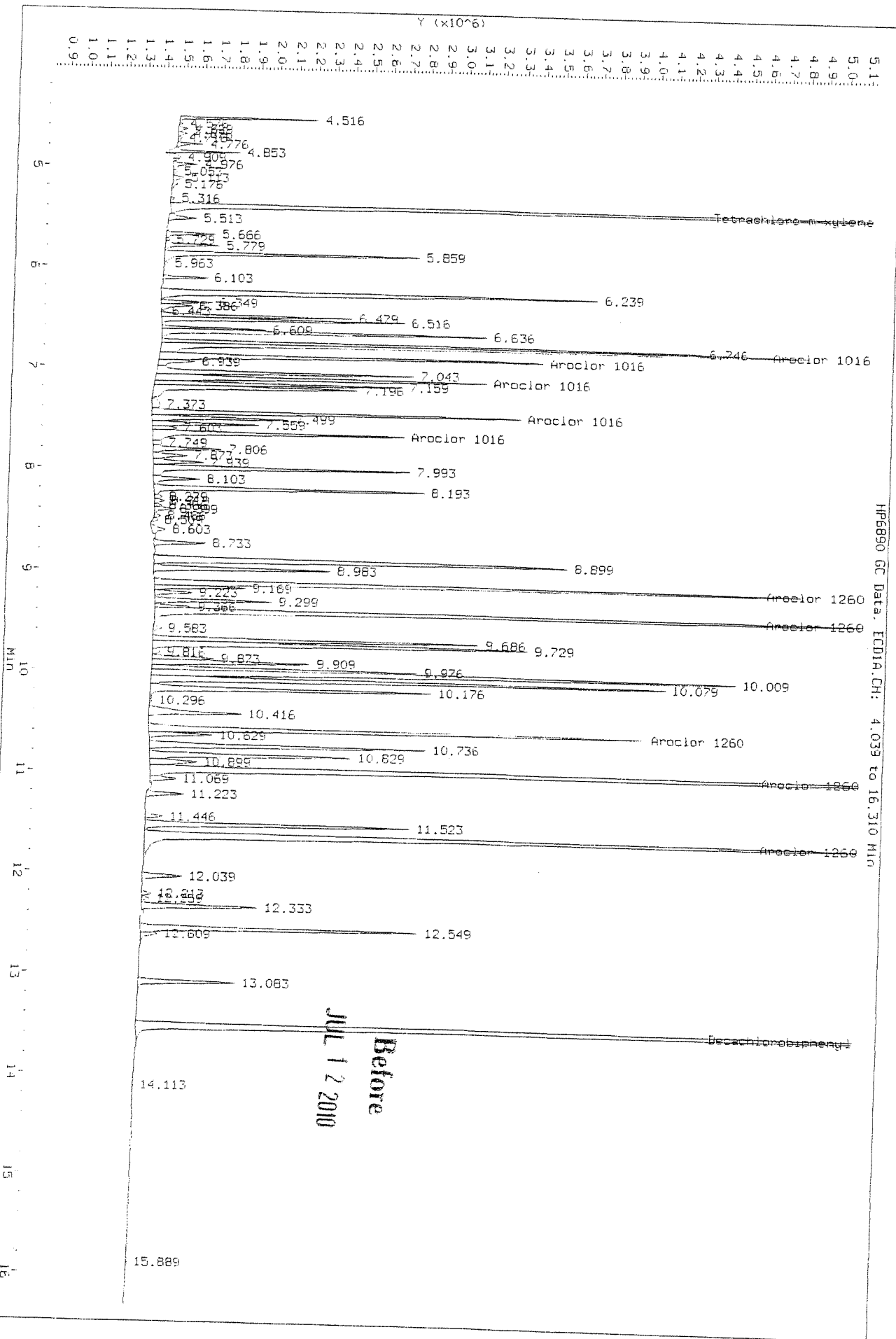


Data File: \\Cash1\Proqudata\GC22\data\070910\_r.b\0709F005.D  
Date: 09-JUL-2010 20:30  
Client ID:  
Sample Info: 1660 @ 5.0-50ppb | PCB5-e2C | K101006746-3  
Column phase: DB-XLB

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32

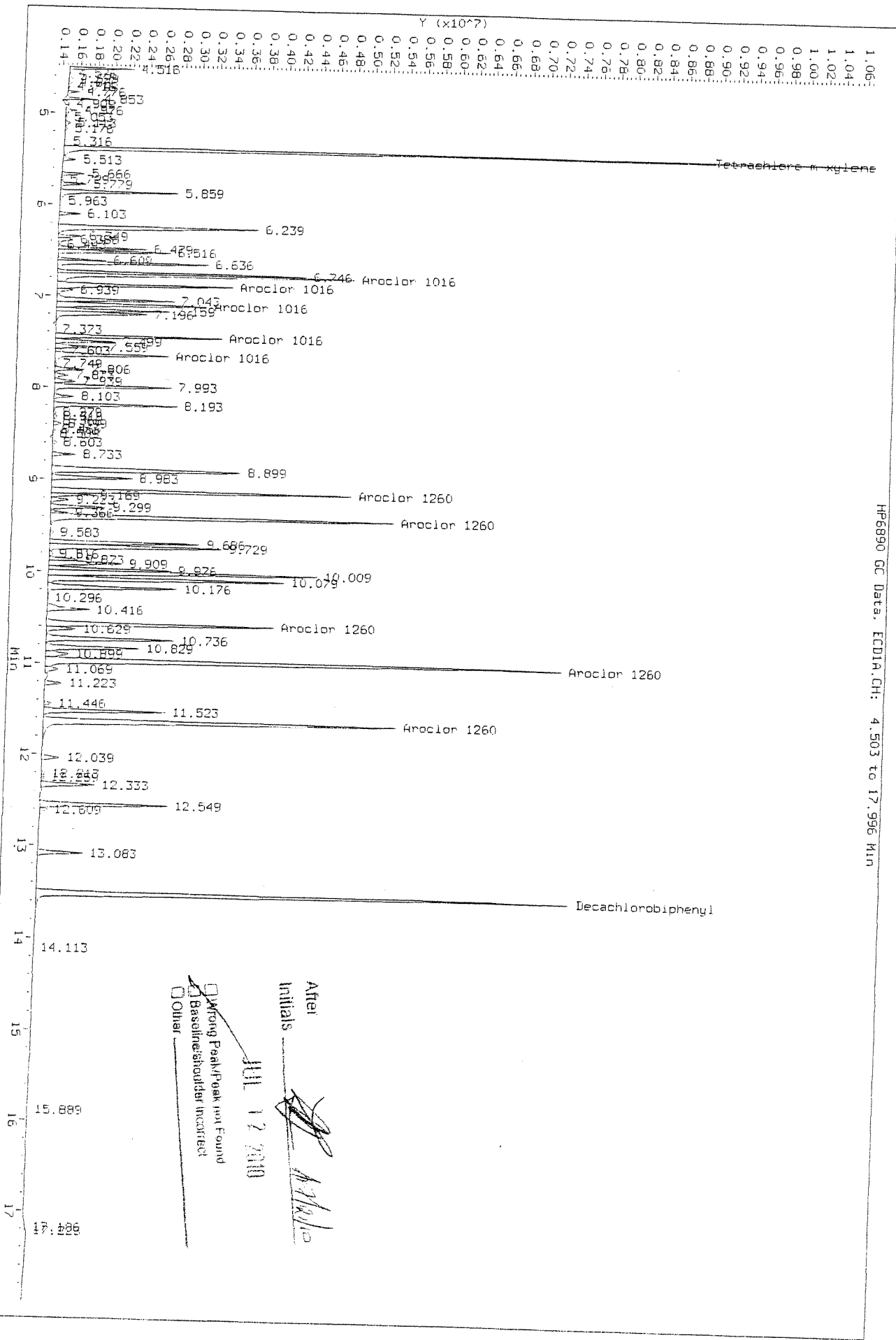


Data File: \\Cash1\Acqudata\GC22\data\070910\_b\0709F005.D  
 Injection Date: 09-JUL-2010 20:30  
 Instrument: GC22.1  
 Client Sample ID:



Data File: \\Cash1\Acq\data\GC22\data\070910\_b\0709F005.D  
 Injection Date: 09-JUL-2010 20:30  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data, ECD1A.CH: 4.503 to 17.996 Min



After Initials: *[Signature]*  
 JUL 12 2010  
 Missing Peak/Peak not Found  
 Baseline/shoulder incorrect  
 Other

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F006.D  
 Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F006.D  
 Inj Date : 09-JUL-2010 20:54  
 Sample Info: 1660 @ 10-100ppb | PCB5-56F | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:52  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

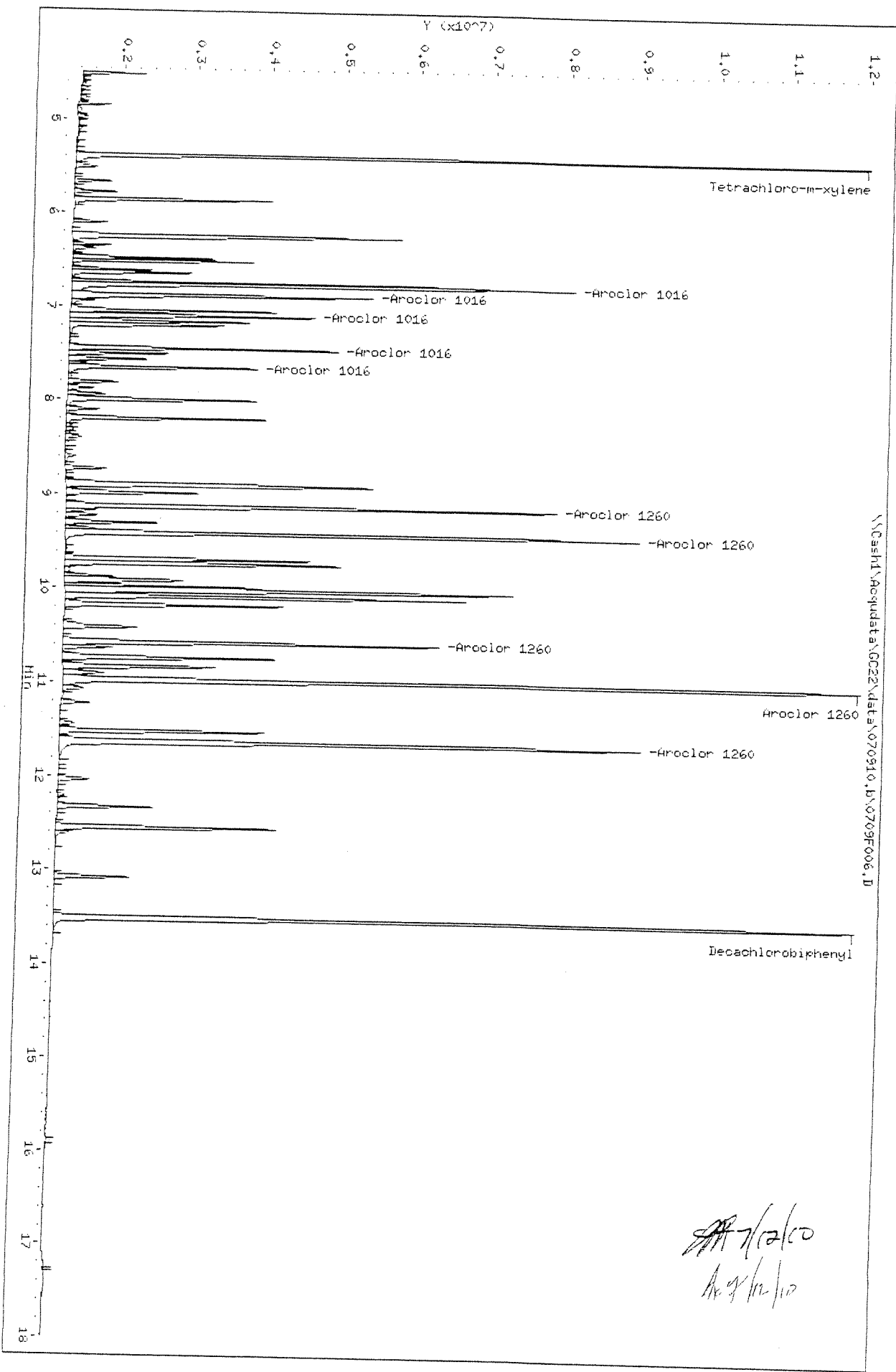
Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : AR1660.SUB  
 Sub List #2 : AR1660.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.383	5.967	21282235	50289894	10.4	10.5		100.00
Aroclor 1016	6.763	6.751	10575055	12989804	104	98.6	80.00- 120.00	100.00
	6.876	7.464	6824257	21790160	107	98.6	49.25- 73.87	64.53
	7.096	7.811	5607910	10565221	102	98.4	38.26- 57.39	53.03
	7.443	7.884	5496033	11752301	104	95.3	39.13- 58.70	51.97
	7.646	8.097	4193958	11595909	104	101	29.91- 44.86	39.66
	Average of Peak Amounts =				104	98.4		
Aroclor 1260	9.123	9.977	10900750	26121382	101	99.2	80.00- 120.00	100.00
	9.403	10.927	13690613	36262257	101	98.8	102.38- 153.58	125.59
	10.573	11.084	9398037	21999862	103	105	71.08- 106.62	86.21
	10.970	12.027	22131281	48239992	105	97.6	177.38- 266.06	203.03
	11.633	12.551	17090086	29691036	102	102	133.94- 200.91	156.78
	Average of Peak Amounts =				102	100		
Decachlorobiphenyl	13.516	14.591	22771282	47021147	10.3	9.93		100.00

*Handwritten signature and date:*  
 7/12/10  
 K. Harris

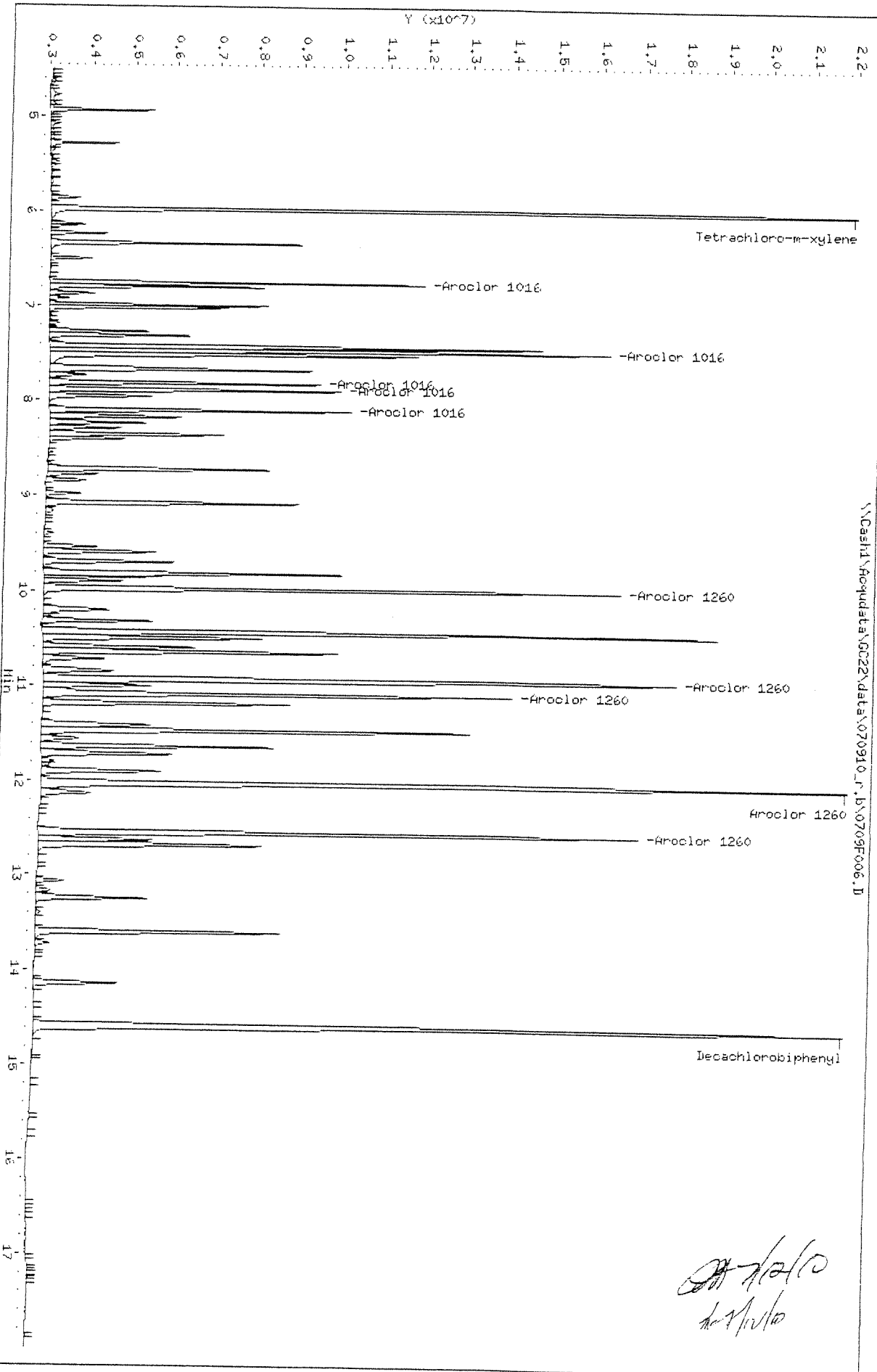
Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F006.D  
Date: 09-JUL-2010 20:54  
Client ID:  
Sample Info: 1660 @ 10-100ppb | PCBs-56F | KMG1006746-3  
Column phase: DB-35HS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



Data File: \\Cash1\Acqudata\GC22\data\070910\_r\_b\0709F006.D  
Date: 09-JUL-2010 20:54  
Client ID:  
Sample Info: 1660 @ 10-100ppb | PCB5-5aF | KMG10006746-3  
Column phase: DB-XLB

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



Data File: \\Cash1\Acqdata\GC22\data\070910.b\0709F007.D  
 Report Date: 12-Jul-2010 12:43

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F007.D  
 Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F007.D  
 Inj Date : 09-JUL-2010 21:19  
 Sample Info: 1660 @ 20-200ppb | PCB5-62D | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:52  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

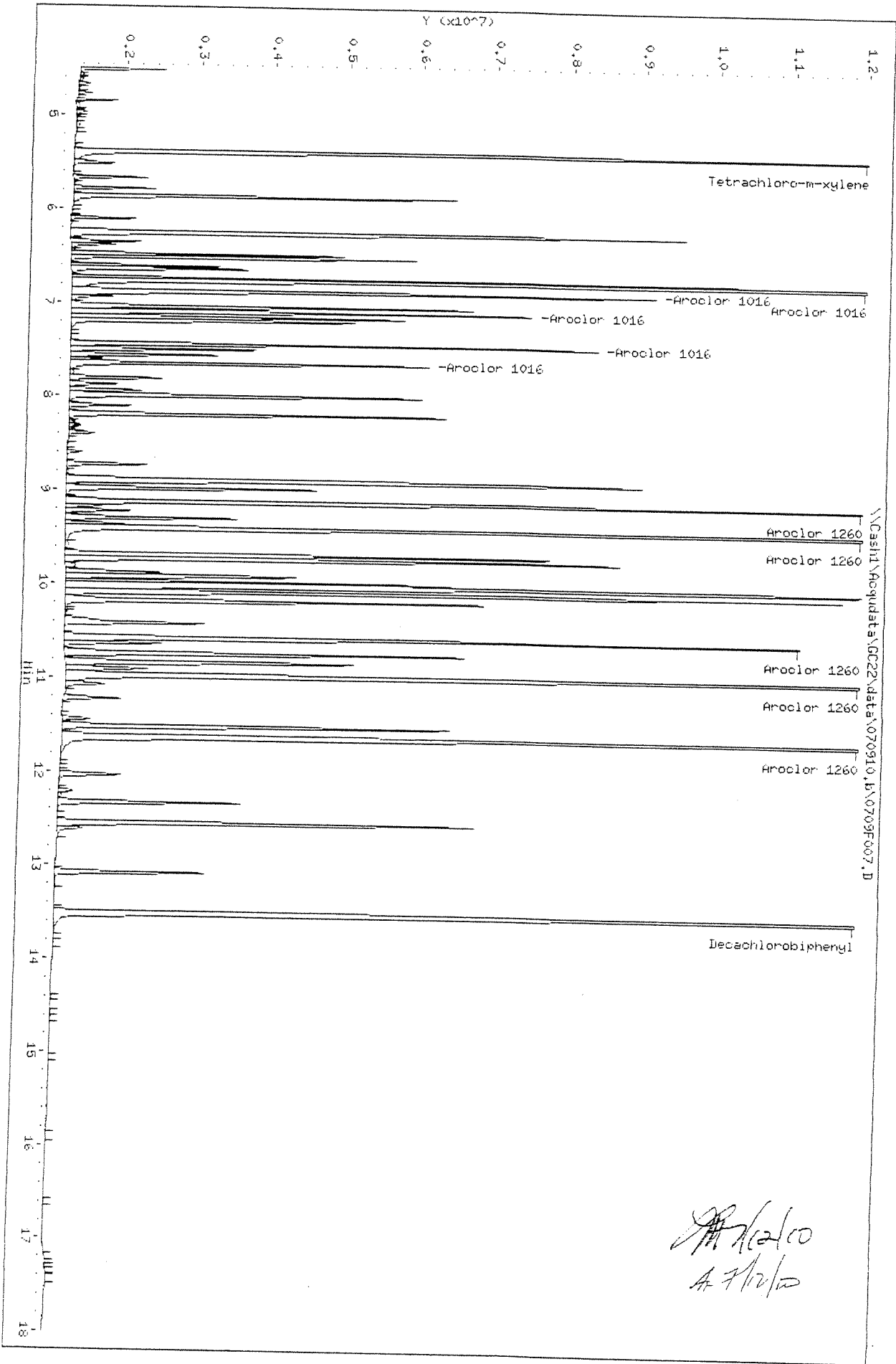
Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : AR1660.SUB  
 Sub List #2 : AR1660.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.382	5.970	42521742	100417252	20.1	20.4		100.00
Aroclor 1016	6.762	6.753	20987997	24314883	198	179	80.00- 120.00	100.00
	6.876	7.467	12920845	44162784	196	195	49.25- 73.87	61.56
	7.099	7.810	10374066	20124951	182	182	38.26- 57.39	49.43
	7.442	7.883	10275440	22516168	188	178	39.13- 58.70	48.96
	7.649	8.097	7766776	22508497	186	192	29.91- 44.86	37.01
	Average of Peak Amounts =				190	185		
Aroclor 1260	9.122	9.977	20856804	49928204	188	186	80.00- 120.00	100.00
	9.406	10.930	26452426	71358034	189	191	102.38- 153.56	126.83
	10.572	11.083	18224041	42334534	194	196	71.08- 106.62	87.38
	10.972	12.027	43969172	95962092	202	191	177.38- 266.06	210.81
	11.632	12.550	33497094	58543468	194	197	133.94- 200.91	160.61
	Average of Peak Amounts =				193	192		
Decachlorobiphenyl	13.516	14.590	44076683	90258987	19.3	18.6		100.00

*Handwritten signature and date:*  
 7/12/10  
 7/12/10

Data File: \\CASH1\Acqudata\GC2\data\070910.P\0709F007.D  
Date: 09-JUL-2010 21:19  
Client ID:  
Sample Info: 1660 @ 20-200ppb | PCBs-62U | KHC1006746-3  
Column phase: DB-35HS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



*Handwritten signature*  
A 7/10/10



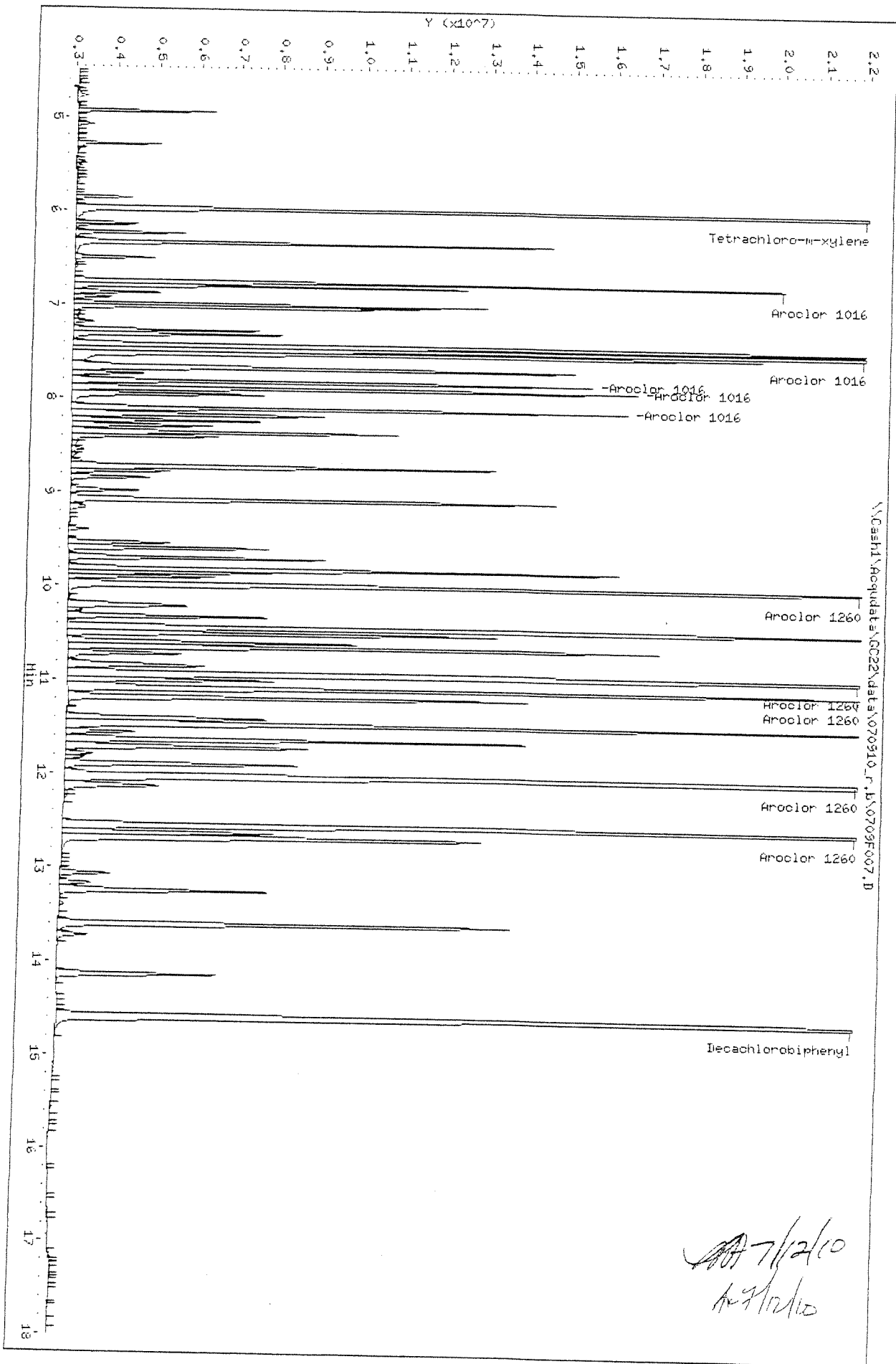
Data File: \\CASH1\Acqudata\GC22\data\070910\_r\_b\0709F007.D  
Date : 09-JUL-2010 21:19

Client ID:  
Sample Info: 1660 @ 20-200ppb | PCB5-62D | KMG10002746-3

Column phase: DB-XLB

Instrument: GC22.i

Operator: LHarris  
Column diameter: 0.32



Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F008.D  
 Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F008.D  
 Inj Date : 09-JUL-2010 21:43  
 Sample Info: 1660 @ 50-500ppb | PCB5-62E | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:53  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : AR1660.SUB  
 Sub List #2 : AR1660.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.380	5.968	105693774	249687122	49.2	49.5		100.00
Aroclor 1016	6.760	6.751	50691250	56169609	458	406	80.00- 120.00	100.00
	6.874	7.465	31206740	107052849	475	468	49.25- 73.87	61.56
	7.097	7.808	24242887	46917070	440	418	38.26- 57.39	47.82
	7.444	7.881	24795065	52800613	460	411	39.13- 58.70	48.91
	7.647	8.098	18949460	53240669	467	446	29.91- 44.86	37.38
			Average of Peak Amounts =		460	430		
Aroclor 1260	9.120	9.978	50266875	119957178	448	439	80.00- 120.00	100.00 (M)
	9.404	10.928	64331864	176032314	458	466	102.38- 153.58	127.98 (M)
	10.574	11.085	44662353	102242892	468	467	71.08- 106.62	88.85 (M)
	10.970	12.025	111451477	240885026	503	474	177.38- 266.06	221.72 (M)
	11.630	12.548	84157831	145034497	486	481	133.94- 200.91	167.42 (M)
			Average of Peak Amounts =		473	465		
Decachlorobiphenyl	13.517	14.588	108596684	219258986	46.7	44.4		100.00

QC Flag Legend

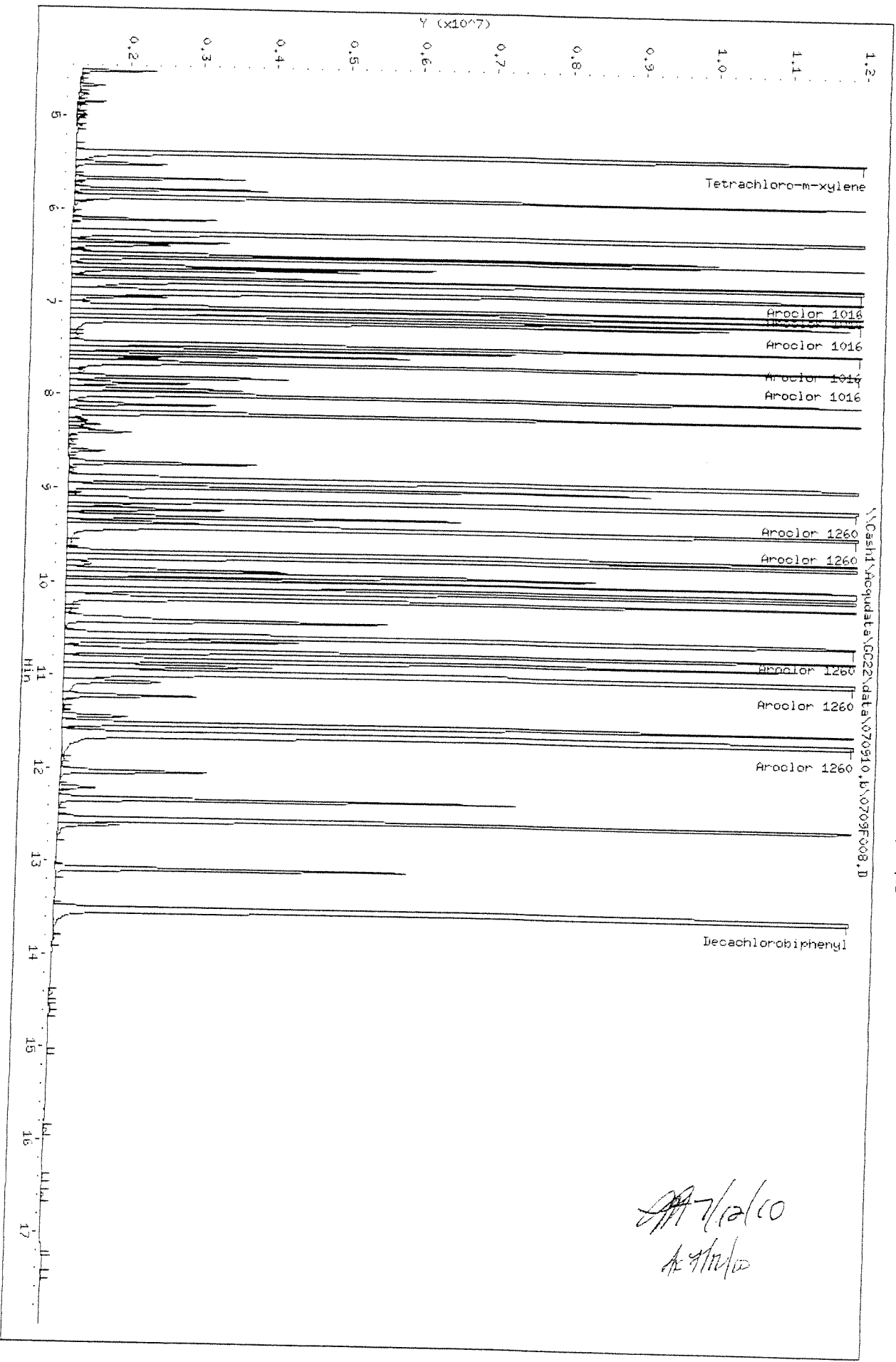
M - Compound response manually integrated.

*Handwritten signature and date:*  
 AR 7/12/10  
 Ac 7/12/10

Data File: \\CASH1\Acqudata\GC22\data\070910.B\0709F008.D  
Date: 09-JUL-2010 21:43  
Client ID:  
Sample Info: 1660 @ 50-500ppb | PCB5-e2E | KHC1006746-3

Column Phase: DB-35HS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



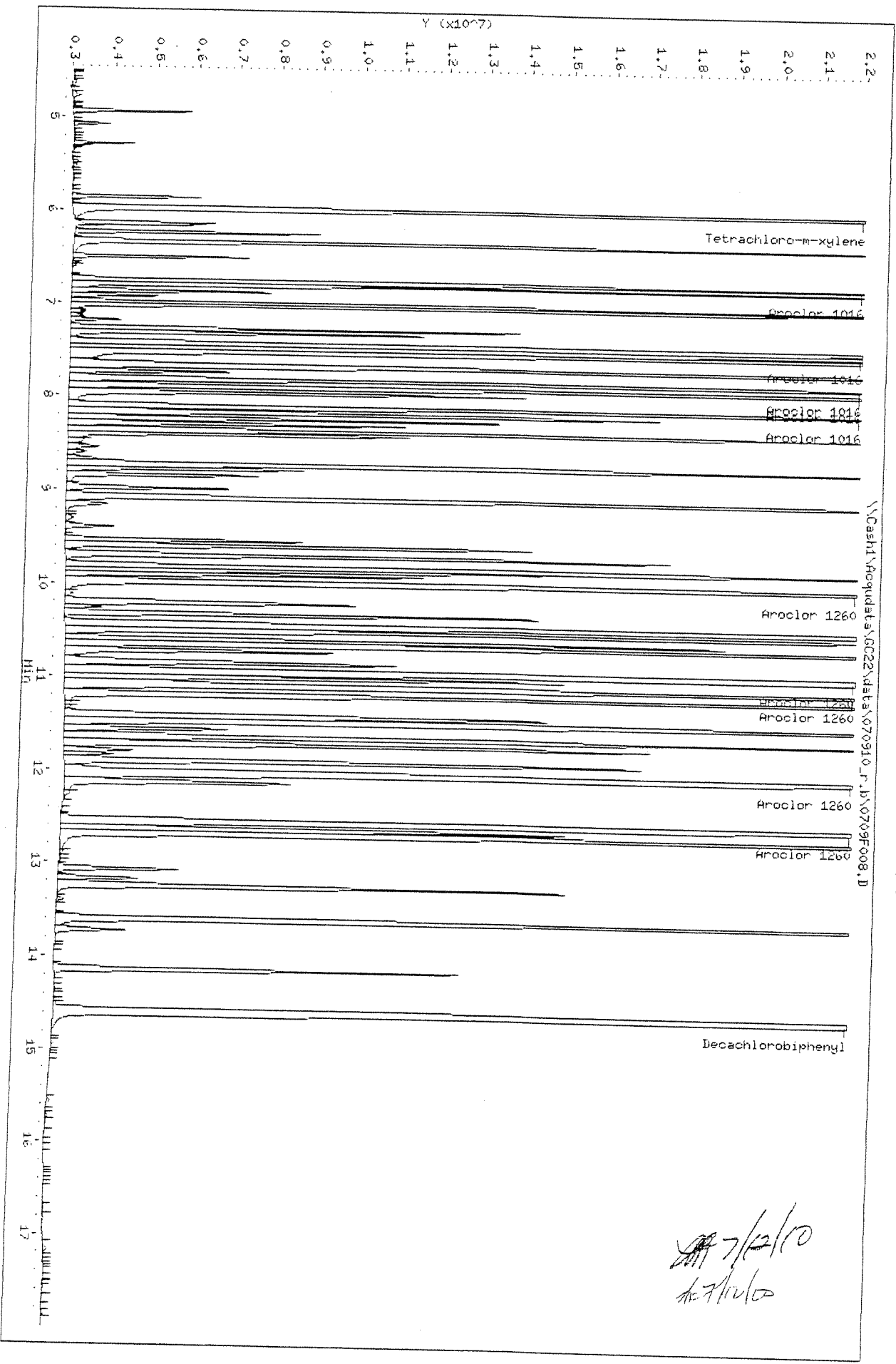
*Handwritten signature/initials*  
7/2/10  
A. Harris

Data File: \\CASH1\Proqudata\GC22\data\070910\_r.j\0709F008.D  
Date: 09-JUL-2010 21:43  
Client ID:

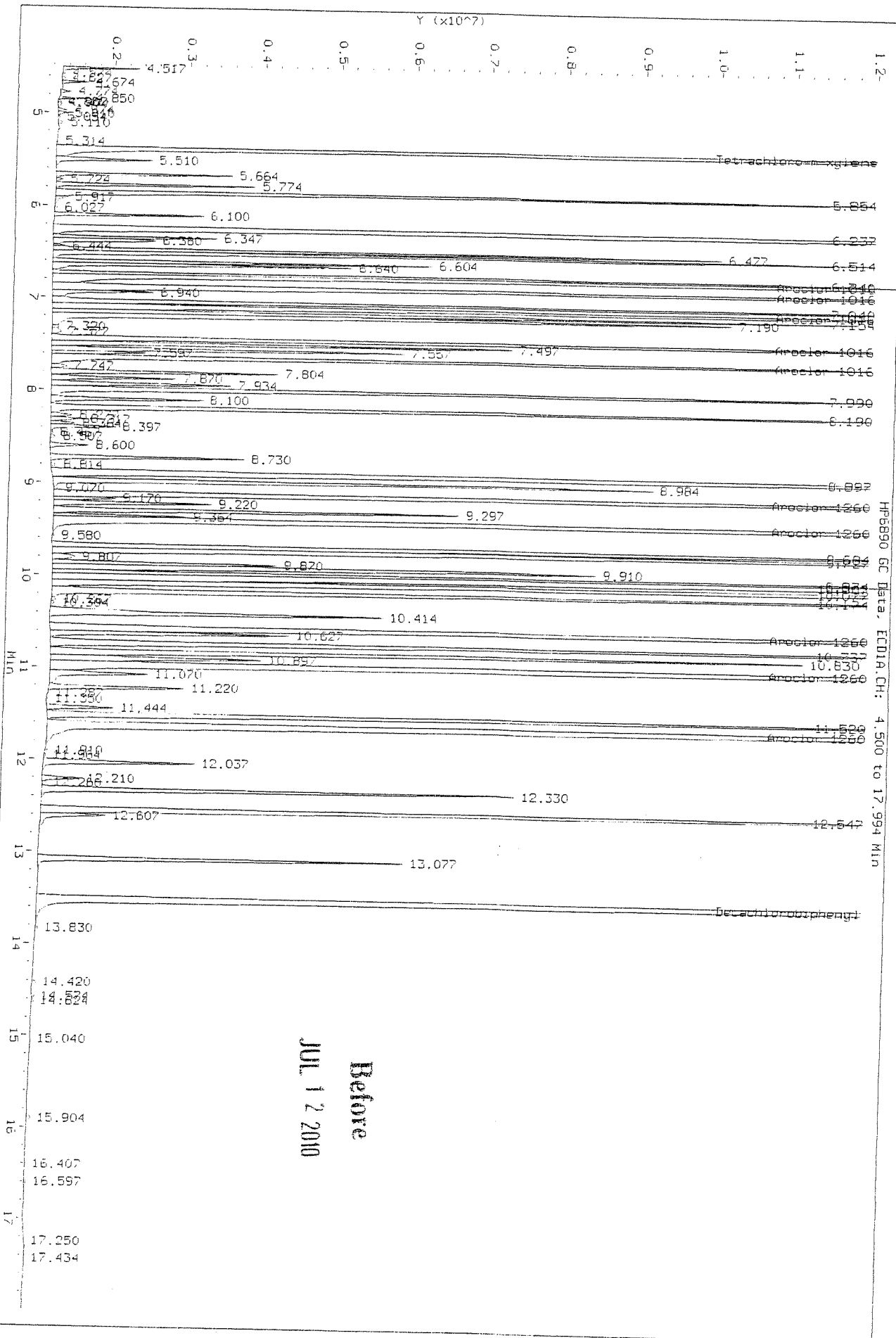
Sample Info: 1660 @ 50-500ppb | PCBs-62E | KUC1006746-3

Column phase: DB-XLB

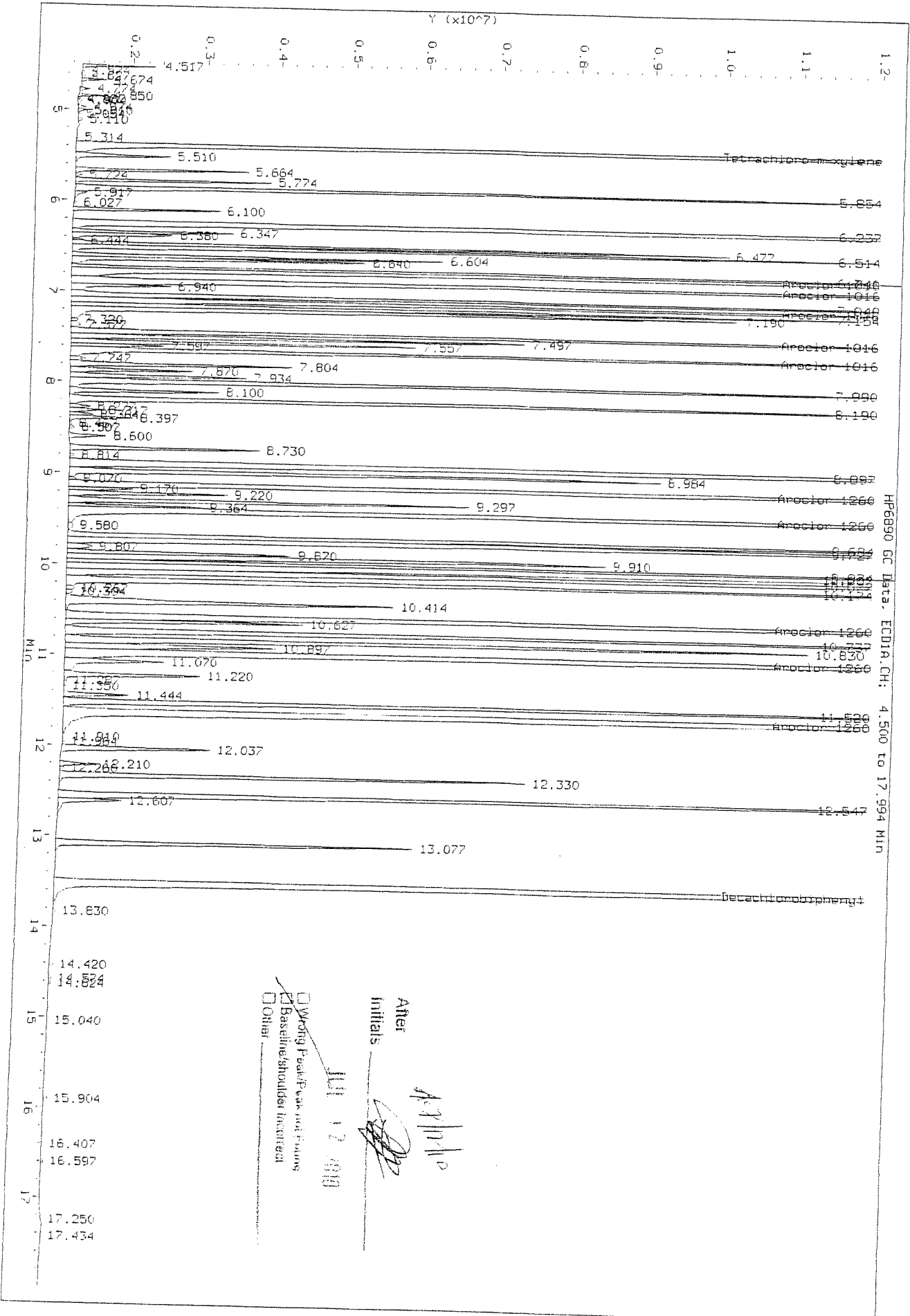
Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32



Data File: \\Gashi\Acq\data\GC22\data\070910.B\07091008.B  
Injection Date: 09-JUL-2010 21:43  
Instrument: GC22.1  
Client Sample ID:



**Before**  
**JUL 12 2010**



Wrong Peak  
 Missing Peak  
 Baseline/shoulder incorrect  
 Other

After  
 Initials  
*[Signature]*  
 11/12/2010

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F009.D  
 Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F009.D  
 Inj Date : 09-JUL-2010 22:08  
 Sample Info: 1221/1254 @ 5.0-2.5ppb | PCB5-60J | KWG100674  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:53  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1221+1254.sub  
 Sub List #2 : 1221+1254.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	5.012	5.310	77261	191062	5.56	5.53	80.00- 120.00	100.00 (M)
	5.496	5.756	36169	57294	5.09	5.84	42.79- 64.19	46.81 (M)
	5.666	6.230	113974	205615	5.48	8.15	127.99- 191.99	147.52 (M)
	5.779	6.333	60521	764551	4.67	11.0	80.74- 121.11	78.33 (M)
	Average of Peak Amounts =				5.20	7.63		
Aroclor 1254	8.192	9.076	300344	1115357	3.07	3.18	80.00- 120.00	100.00 (M)
	8.729	9.540	222205	633735	2.92	3.36	61.67- 92.50	73.98 (M)
	8.886	9.693	445079	1015365	2.88	2.93	122.37- 183.56	151.94 (M)
	9.222	10.663	238147	455704	2.73	2.60	67.68- 101.52	79.29 (M)
	9.406	10.923	183652	923546	2.82	3.17	52.06- 78.09	61.15 (M)
Average of Peak Amounts =				2.88	3.05			

QC Flag Legend

M - Compound response manually integrated.

*Handwritten signature and date:*  
 7/12/10  
 7/12/10

Data File: \\Cash1\Acqudata\GC22\data\070910.H\0709F009.D  
Date: 09-JUL-2010 22:08

Client ID:

Sample Info: 1221/1254 @ 5.0-2.5ppb | PCB8-603 | KMS100674

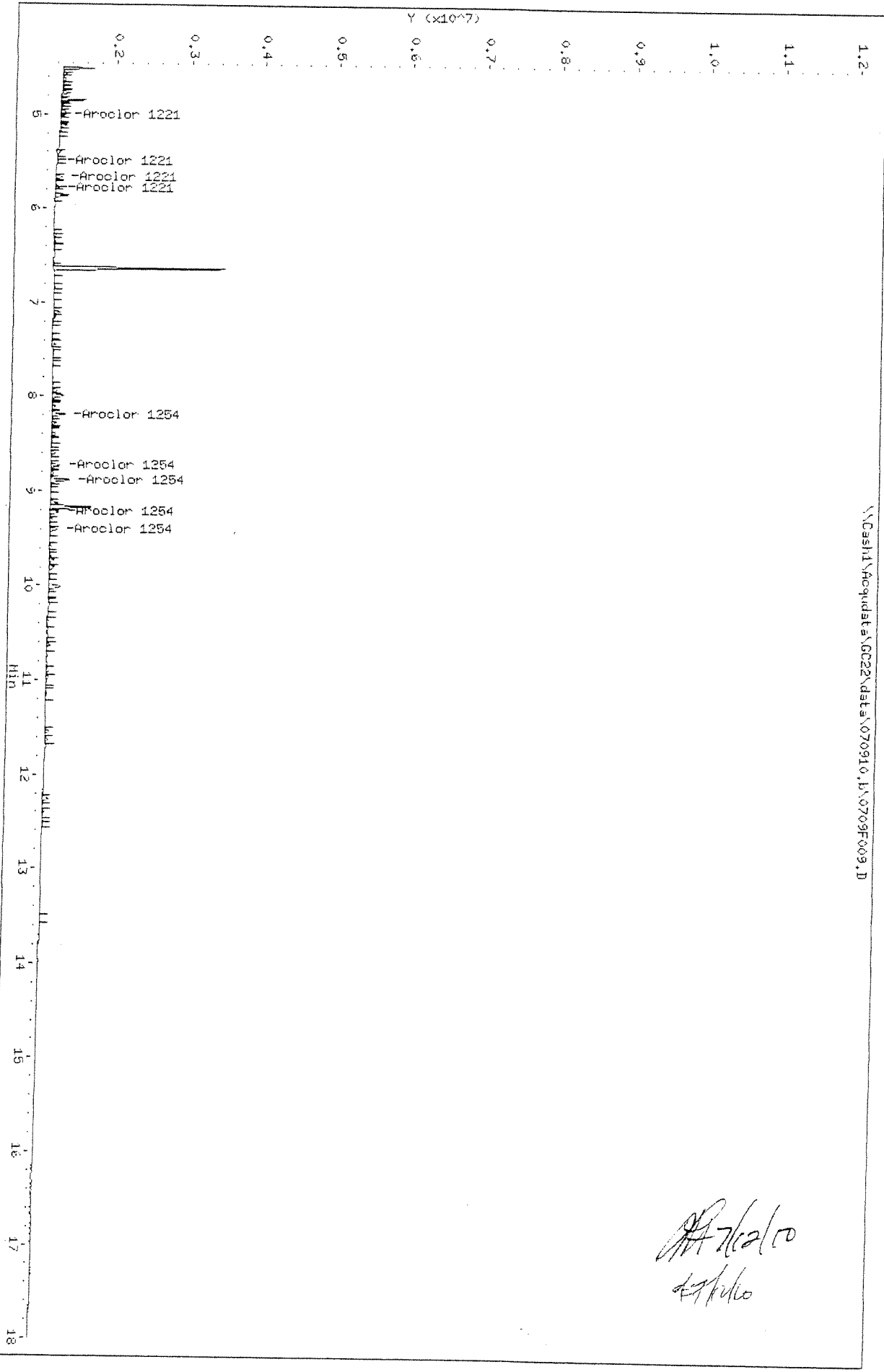
Column phase: DB-35HS

Instrument: GC22.i

Operator: LHarris

Column diameter: 0.32

\\Cash1\Acqudata\GC22\data\070910.H\0709F009.D



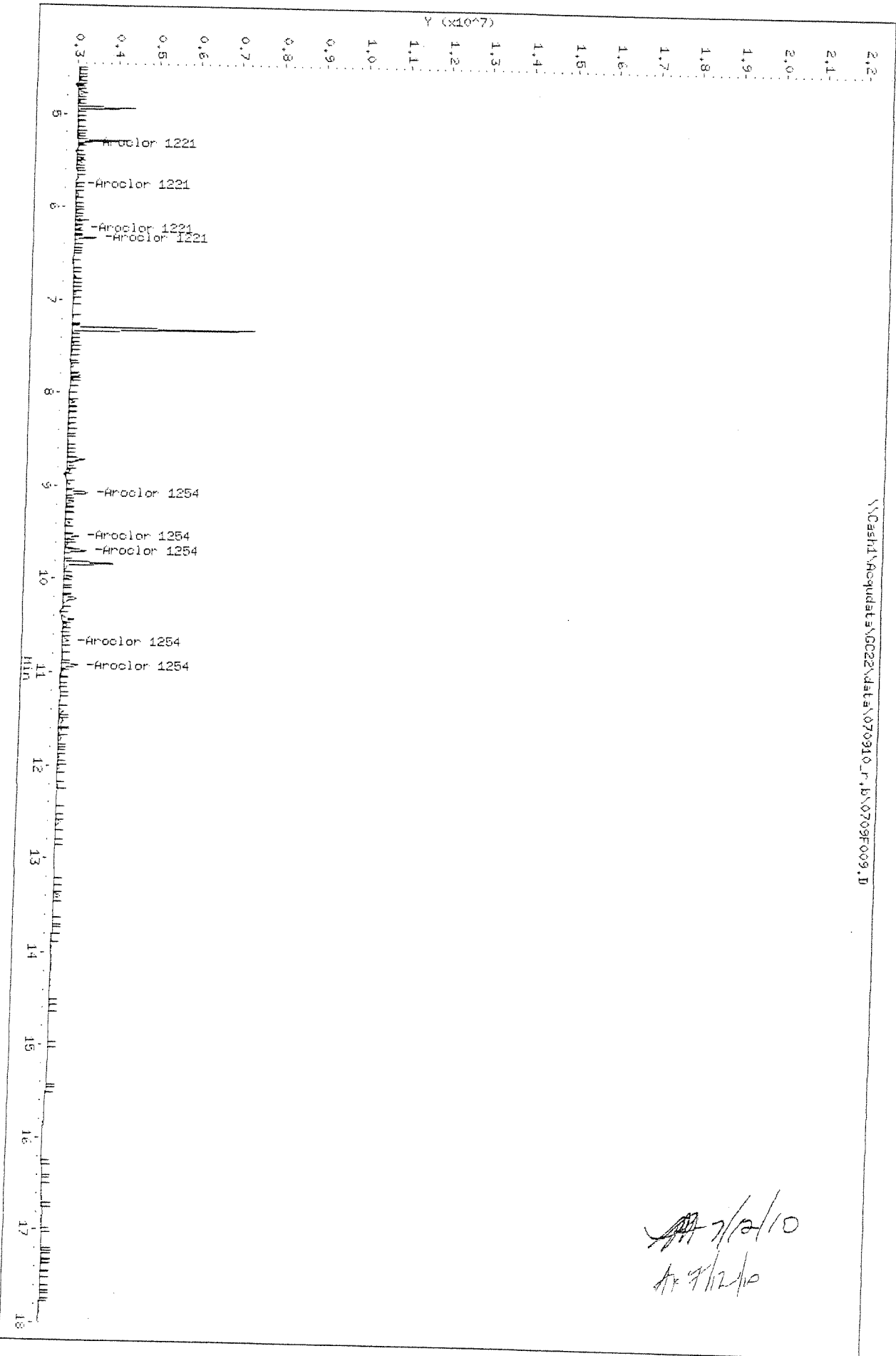
*LHarris*  
*LHarris*



Data File: \\Cashd\Acq\data\GC22\data\070910\_r\_b\0709F009.D  
 Date: 09-JUL-2010 22:08  
 Client ID:  
 Sample Info: 1221/1254 @ 5.0-2.5ppb | PCB5-603 | K1100674  
 Column Phase: DB-NLB

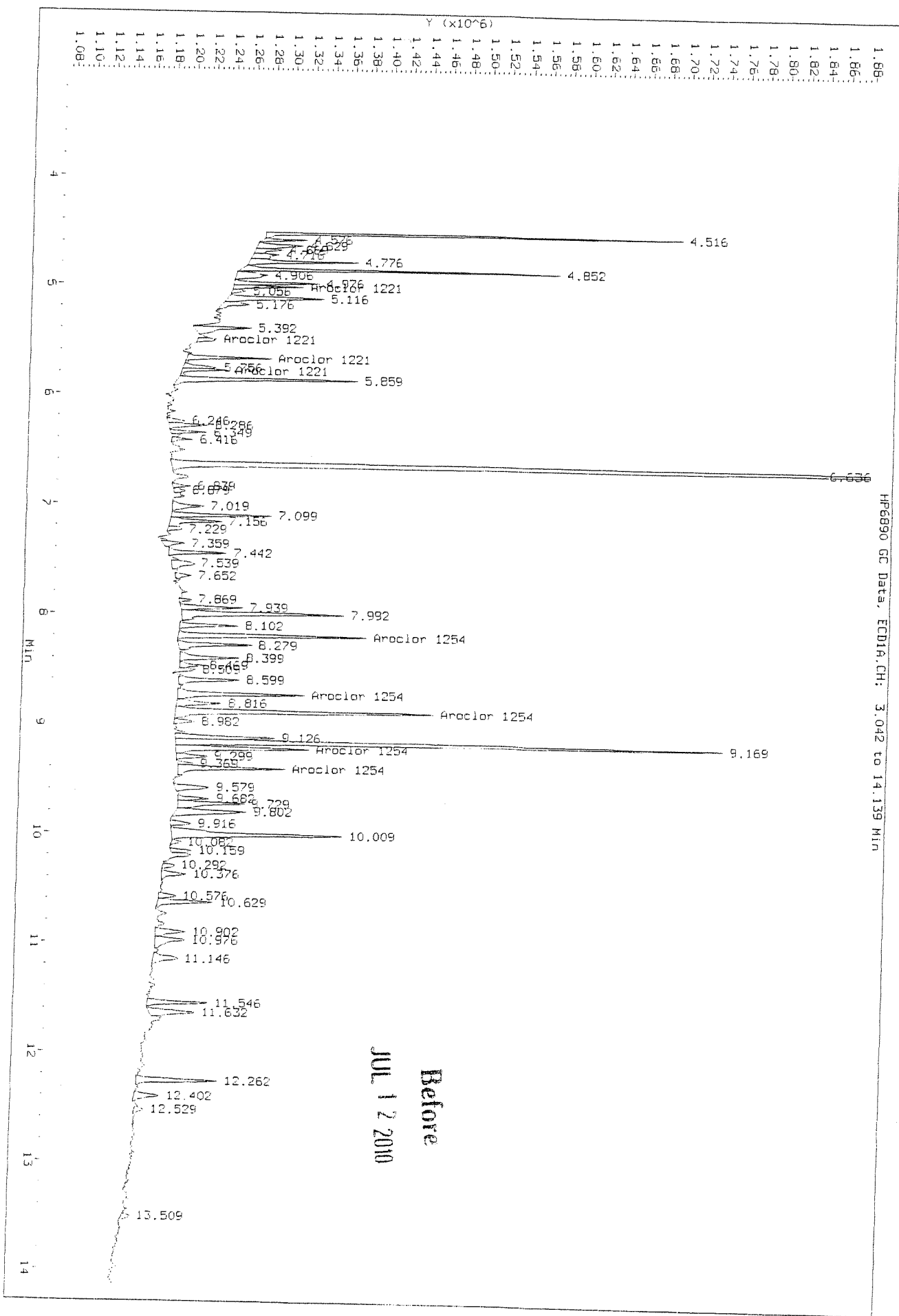
Instrument: GC22.i  
 Operator: LHarris  
 Column diameter: 0.32

\\Cashd\Acq\data\GC22\data\070910\_r\_b\0709F009.D

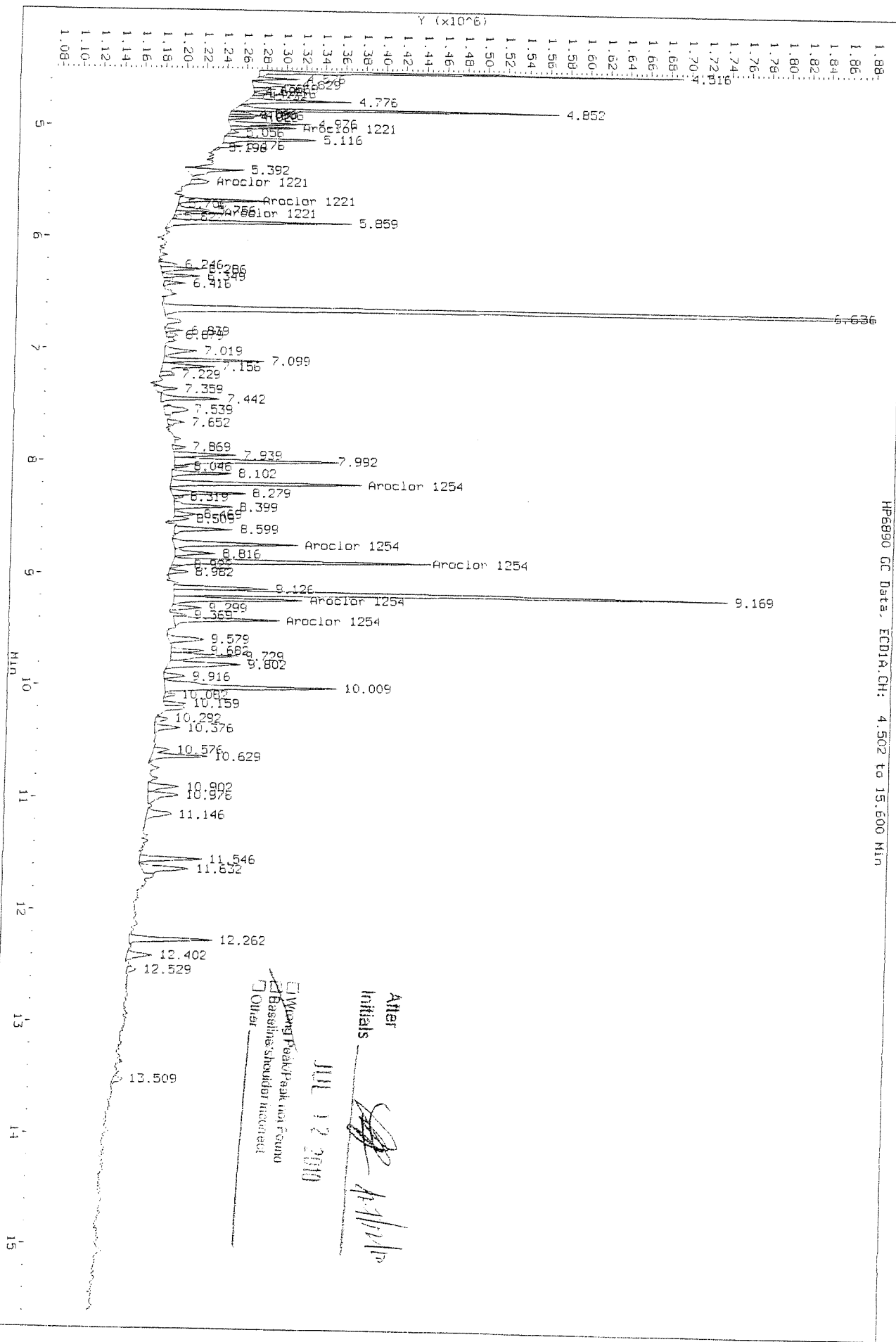


*Handwritten notes:*  
 7/12/10  
 7/12/10

Data File: \\Cash1\Acquadata\GC22\data\070910.b\0709f009.D  
 Injection Date: 09-JUL-2010 23:09  
 Instrument: GC22.1  
 Client Sample ID:



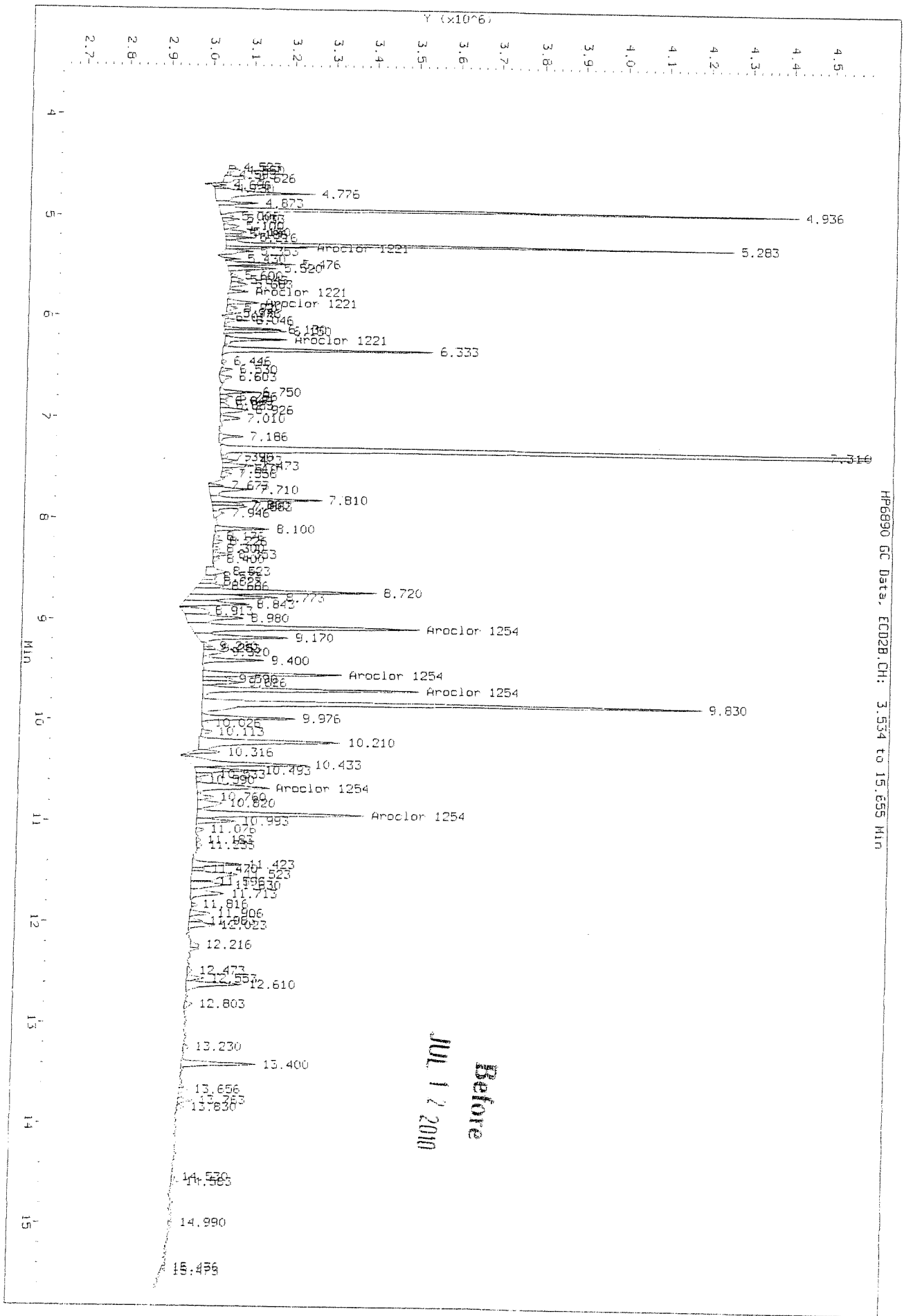
Data File: \\Cash1\Acqdata\GC22\data\070910.b\0709F009.D  
 Injection Date: 09-JUL-2010 22:08  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data, ECD1A.CH: 4.502 to 15.600 Min

Alter Initials \_\_\_\_\_  
 Wuang Peak/Pak not found  
 Baseline Shoulder detected  
 Other \_\_\_\_\_  
 JUL 12 2010  
 [Signature]

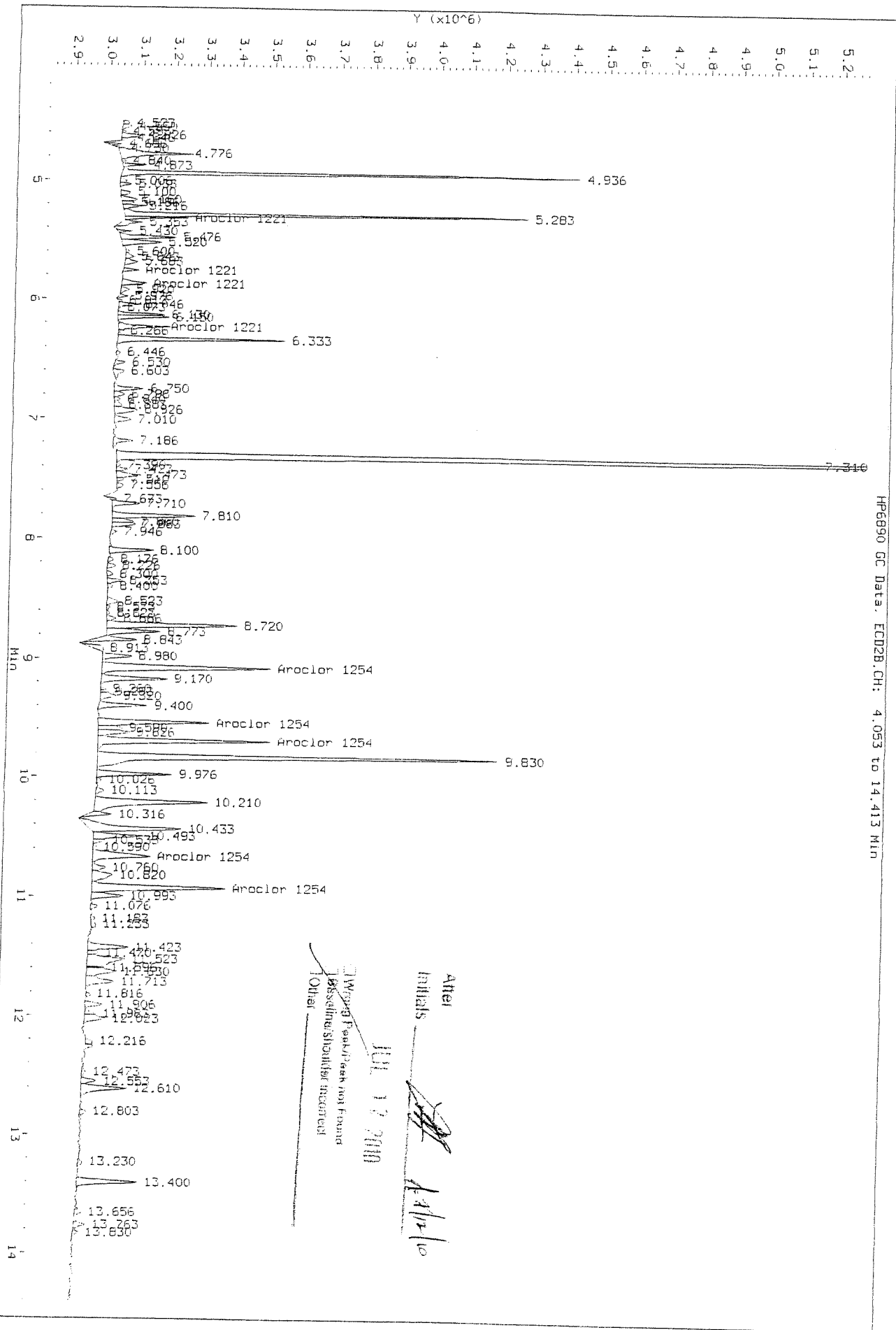
Data File: \\Cash1\Acq\data\GC22\data\070910\_r\_b\0709f009.D  
 Injection Date: 09-JUL-2010 22:08  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data: ECD2B.CH: 3.534 to 15.655 Min

Before  
 JUL 12 2010

Data File: \\Cash1\Acqdata\GC22\data\070910\_r\_b\0709F009.D  
 Injection Date: 09-JUL-2010 22:08  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data, ECD2B.CH: 4.053 to 14.413 MIN

Alter Initials *[Signature]*  
 JUL 17 2010  
 Weigh Peak/Peak not Found  
 Baseline Shift/Not Incident!  
 Other

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F010.D  
 Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F010.D  
 Inj Date : 09-JUL-2010 22:32  
 Sample Info: 1221/1254 @ 10-5.0ppb | PCB5-60K | KWG1006746  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:53  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1221+1254.sub  
 Sub List #2 : 1221+1254.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	5.011	5.308	136391	438455	10.3	12.7	80.00- 120.00	100.00 (M)
	5.507	5.755	72953	102030	10.3	10.4	42.79- 64.19	53.49 (M)
	5.664	6.226	218213	400315	10.5	14.4	127.99- 191.99	159.99 (M)
	5.777	6.332	137649	1472367	10.6	16.9	80.74- 121.11	100.92 (M)
	Average of Peak Amounts =				10.4	13.6		
Aroclor 1254	8.191	9.075	537684	2008097	5.49	5.73	80.00- 120.00	100.00 (M)
	8.727	9.538	414471	998777	5.45	5.30	61.67- 92.50	77.08 (M)
	8.884	9.695	822480	1856843	5.34	5.36	122.37- 183.56	152.97 (M)
	9.224	10.662	454865	840827	5.22	4.79	67.68 101.52	84.60 (M)
	9.404	10.925	349896	1556449	5.42	5.35	52.06- 78.09	67.78 (M)
Average of Peak Amounts =				5.38	5.31			

QC Flag Legend

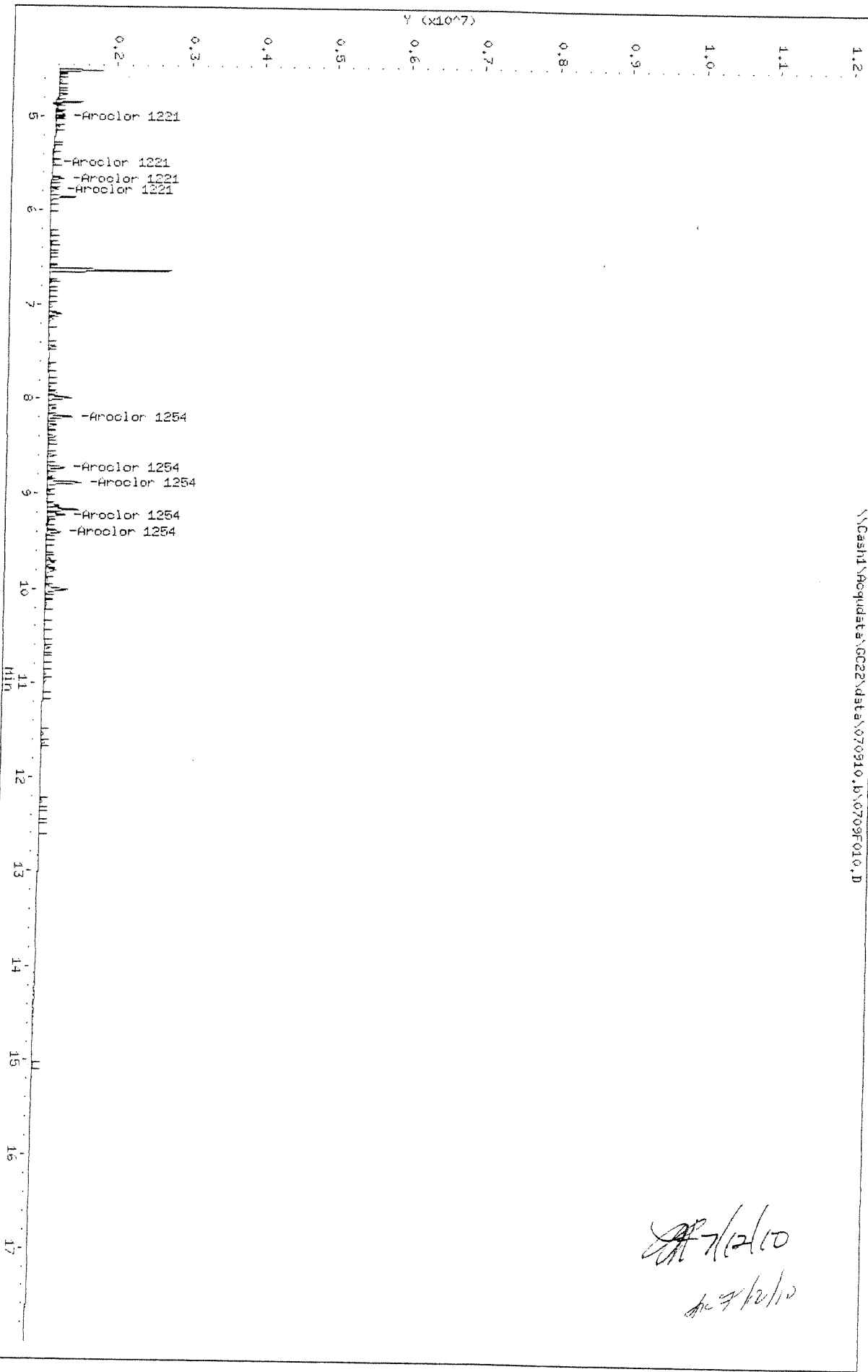
M - Compound response manually integrated.

*Handwritten signature and date: 7/12/10*

Data File: \\Cash1\Requdata\GC22\data\070910.b\0709F010.D  
Date: 09-JUL-2010 22:32  
Client ID:  
Sample Info: 1221/1254 @ 10-5.0ppb | PCB5-60K | KMG10006746  
Column phase: DB-39HS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

\\Cash1\Requdata\GC22\data\070910.b\0709F010.D

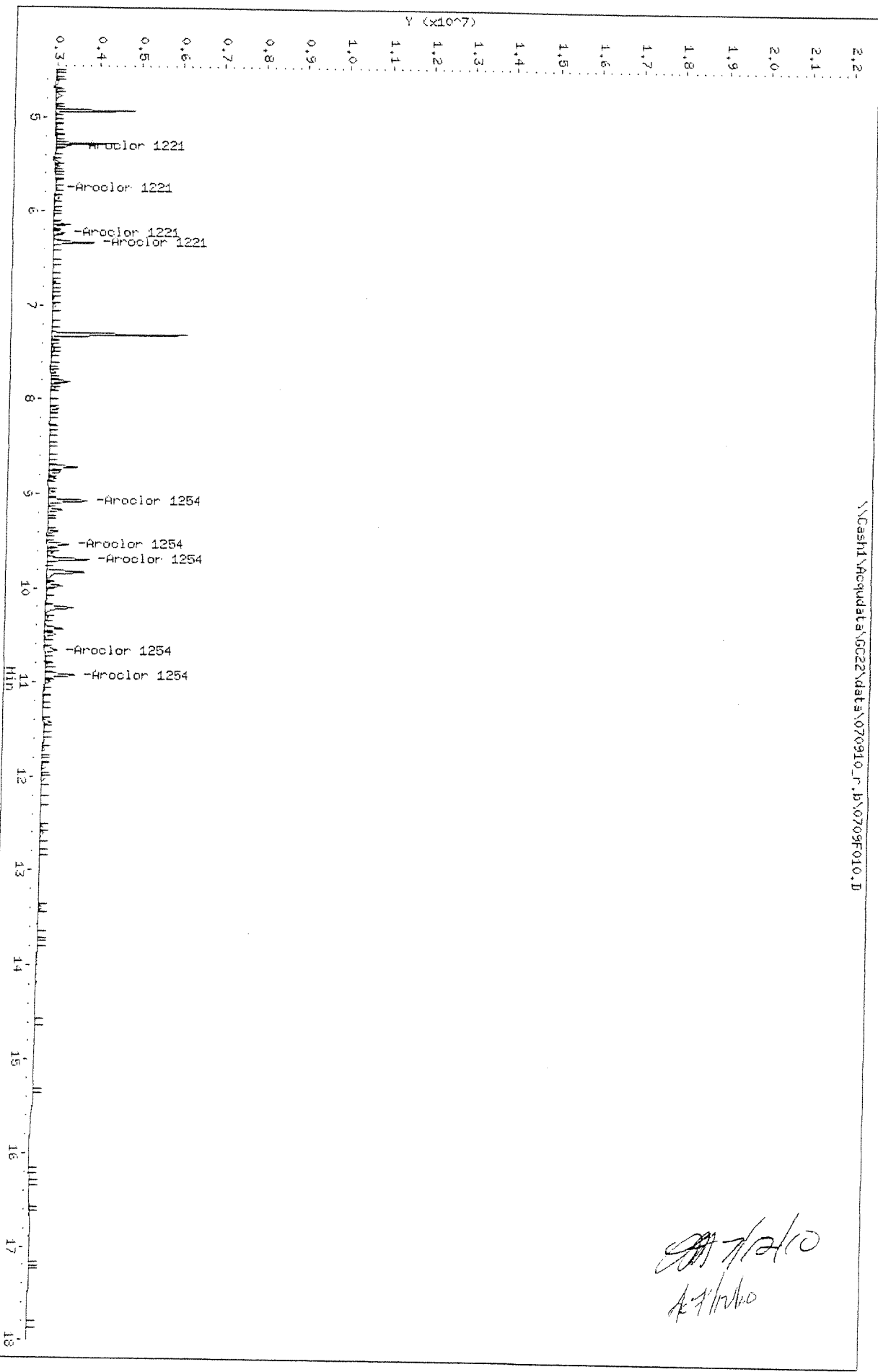


*Handwritten signature and date:*  
7/12/10  
7/12/10

Data File: \\CASHI\Acqudata\GC22\data\070910\_r.j\0709F010.D  
Date: 09-JUL-2010 22:32  
Client ID:  
Sample Info: 1221/1254 @ 10-6.oppb | PCB5-60K | KMG1006746  
Column Phase: DB-XLB

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

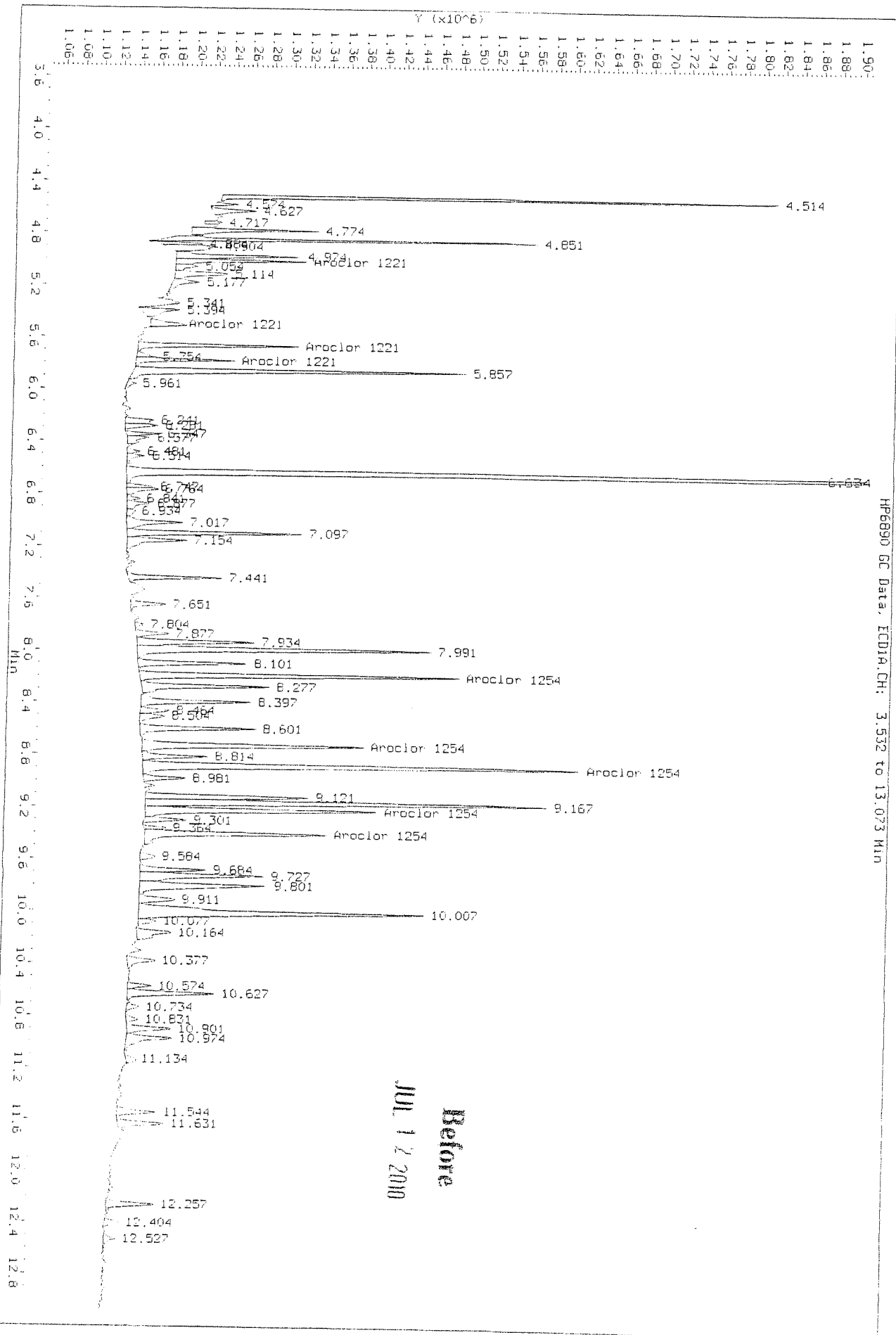
\\CASHI\Acqudata\GC22\data\070910\_r.j\0709F010.D



*Handwritten signature and date:*  
7/2/10  
A. Harris

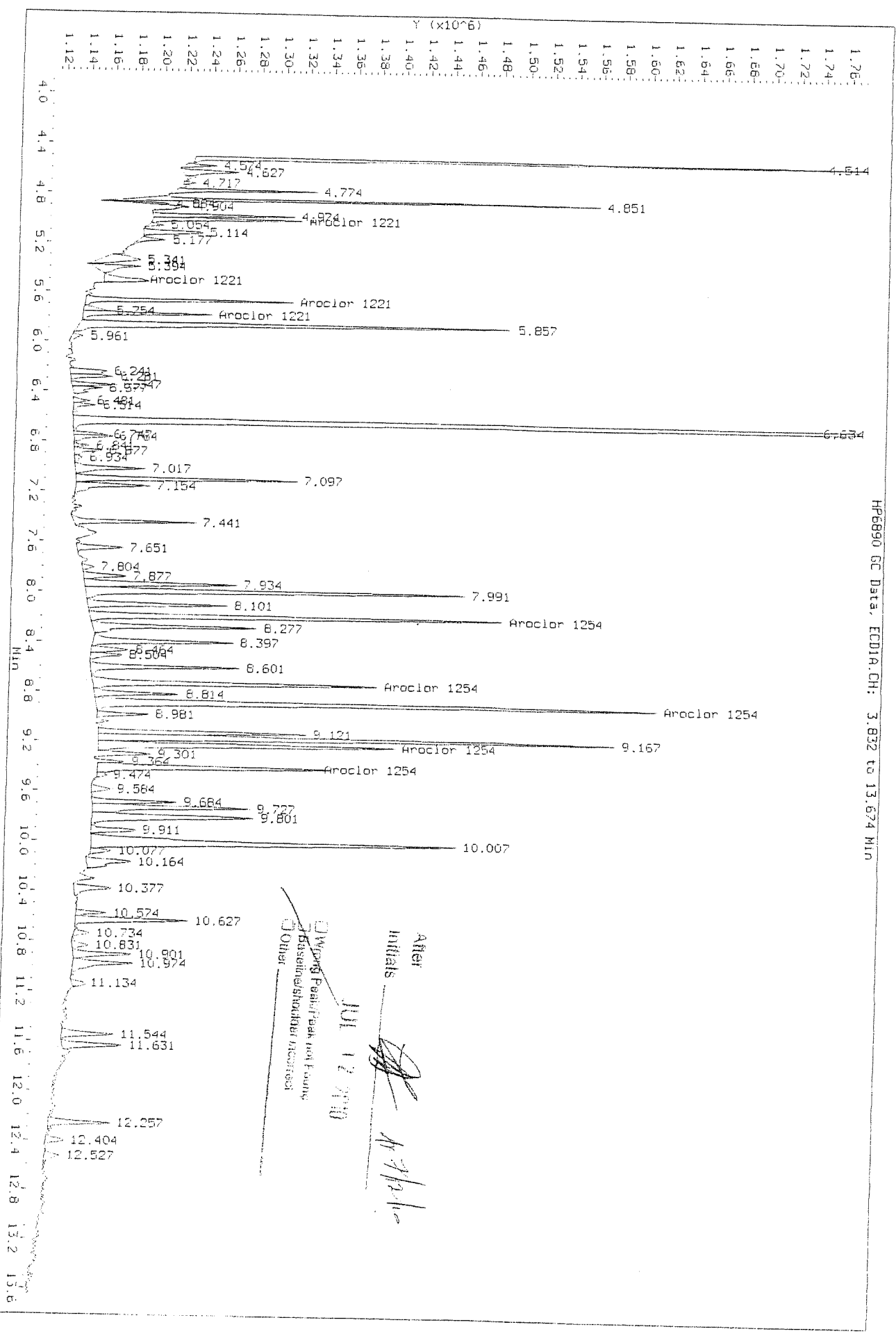


Data File: \\Cash1\Acq\data\GC22\data\070910.B\0709F010.D  
 Injection Date: 09-JUL-2010 22:32  
 Instrument: GC22.1  
 Client Sample ID:



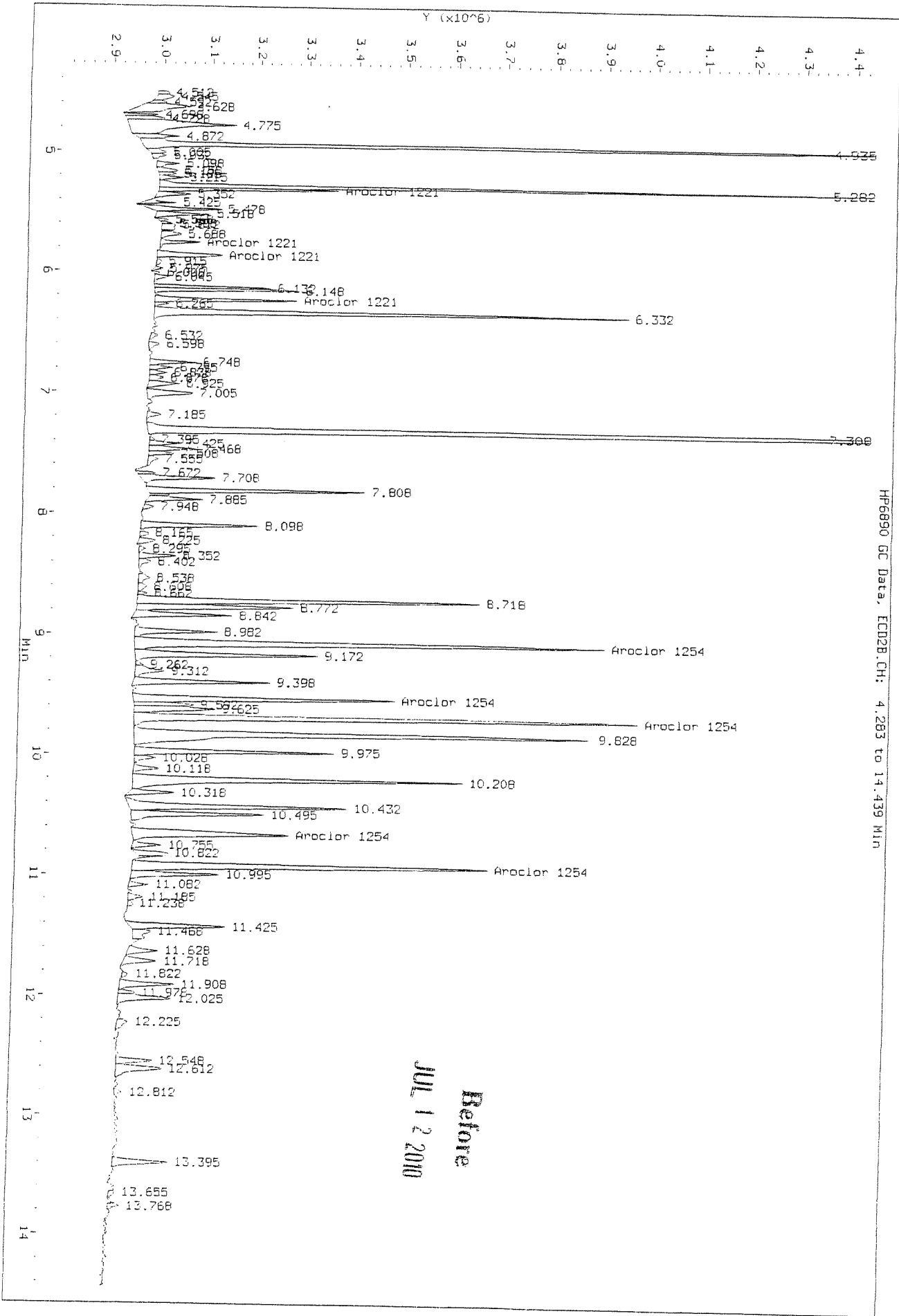
Data File: \\Cash1\Acq\data\GC22\data\070910.D\070910.D  
 Injection Date: 09-JUL-2010 22:32  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data: ECD1A.CH: 3.832 to 13.674 MIN



Major Peak Found  
 Baseline/shoulder incorrect  
 Other  
 Initials: *[Signature]*  
 Date: JUL 12 2010

Data File: \\Cash1\Acqudata\GC22\data\070910\_r.p\0709f010.D  
Injection Date: 09-JUL-2010 22:32  
Instrument: GC22.1  
Client Sample ID:

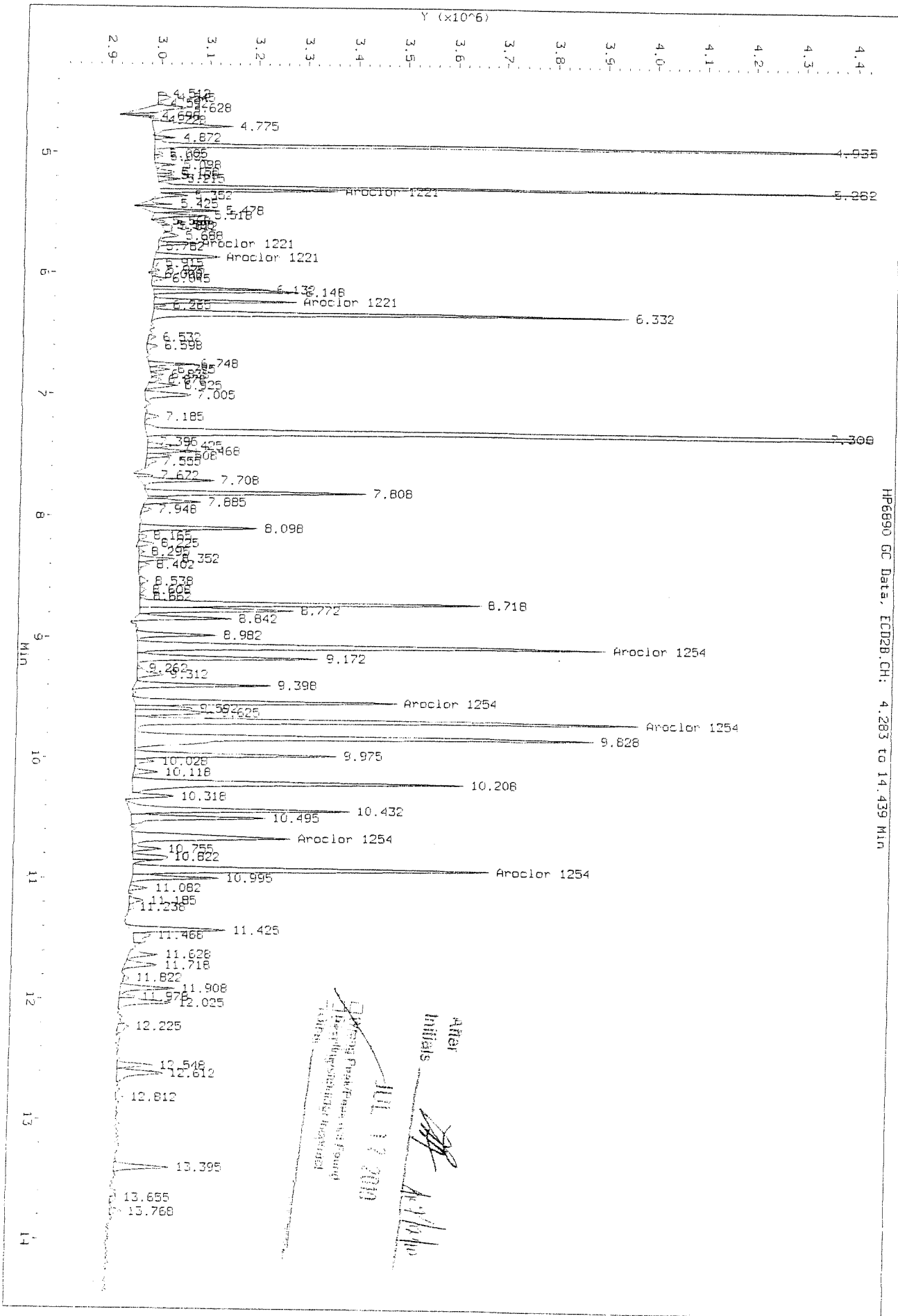


Before  
JUL 12 2010

HP6890 GC Data, ECD2B.CH: 4.283 to 14.439 Min

Data File: \\Caahu\gcdata\GC22\data\070910\_r.b\0709F010.D  
 Injection Date: 09-JUL-2010 22:32  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data, ECD2B.CH: 4.283 to 14.439 Min



After Initials  
 JUL 17 2010  
 [Signature]

Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F011.D  
Report Date: 12-Jul-2010 12:44

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F011.D  
Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F011.D  
Inj Date : 09-JUL-2010 22:57  
Sample Info: 1221/1254 @ 100-50ppb | PCB5-60L | KWG1006746  
Misc Info :  
Cal Date : 12-JUL-2010 09:53  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
Sub List #1 : 1221+1254.sub  
Sub List #2 : 1221+1254.sub  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target	Range	Ratio
Aroclor 1221	5.007	5.308	1340527	3333853	87.7	96.6	80.00-	120.00	100.00
	5.507	5.751	709713	977856	97.4	99.7	42.79-	64.19	52.94
	5.660	6.228	1955528	3505667	91.2	126	127.99-	191.99	145.88
	5.774	6.328	1300151	12244285	97.3	140	80.74-	121.11	96.99
	Average of Peak Amounts =					93.4	116		
Aroclor 1254	8.187	9.071	4477786	15859146	43.6	45.2	80.00-	120.00	100.00
	8.727	9.534	3440634	8385802	42.9	44.5	61.67-	92.50	76.84
	8.880	9.691	6973155	15880827	42.9	45.8	122.37-	183.56	155.73
	9.220	10.661	4043803	8339541	44.8	47.5	67.68-	101.52	90.31
	9.400	10.921	3008675	12938129	43.4	44.4	52.06-	78.09	67.19
Average of Peak Amounts =					43.5	45.5			

*Handwritten signature and date:*  
7/12/10  
12/12/10

Data File: \\Cash1\Acq\data\GC22\data\070910.B\0709F011.D  
Date: 09-JUL-2010 22:57

Client ID:

Sample Info: 1221/1254 @ 100-50ppb | PCB5-6OL | KM31006746

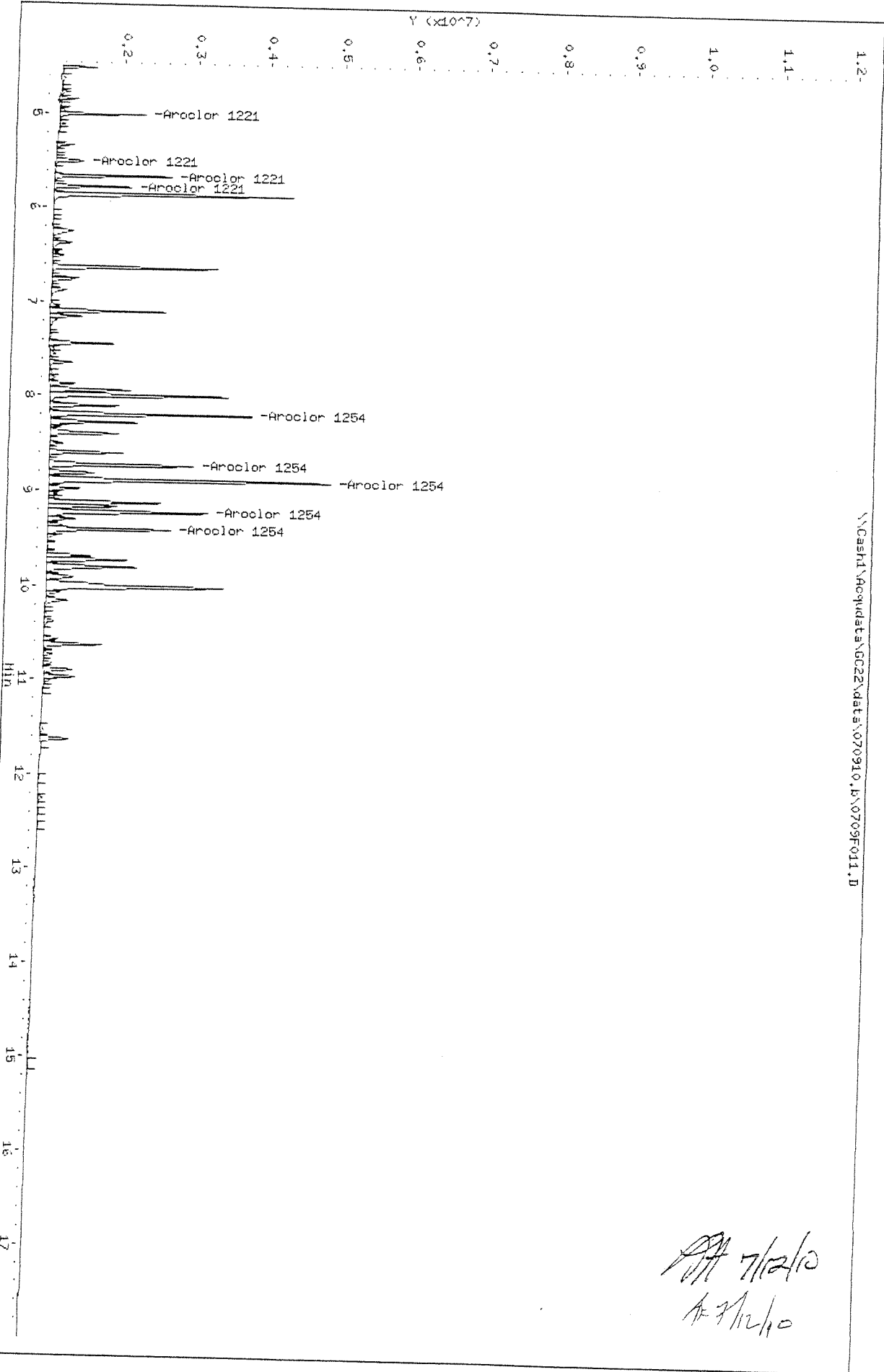
Column Phase: DB-35MS

Instrument: GC22.1

Operator: LHarris

Column diameter: 0.32

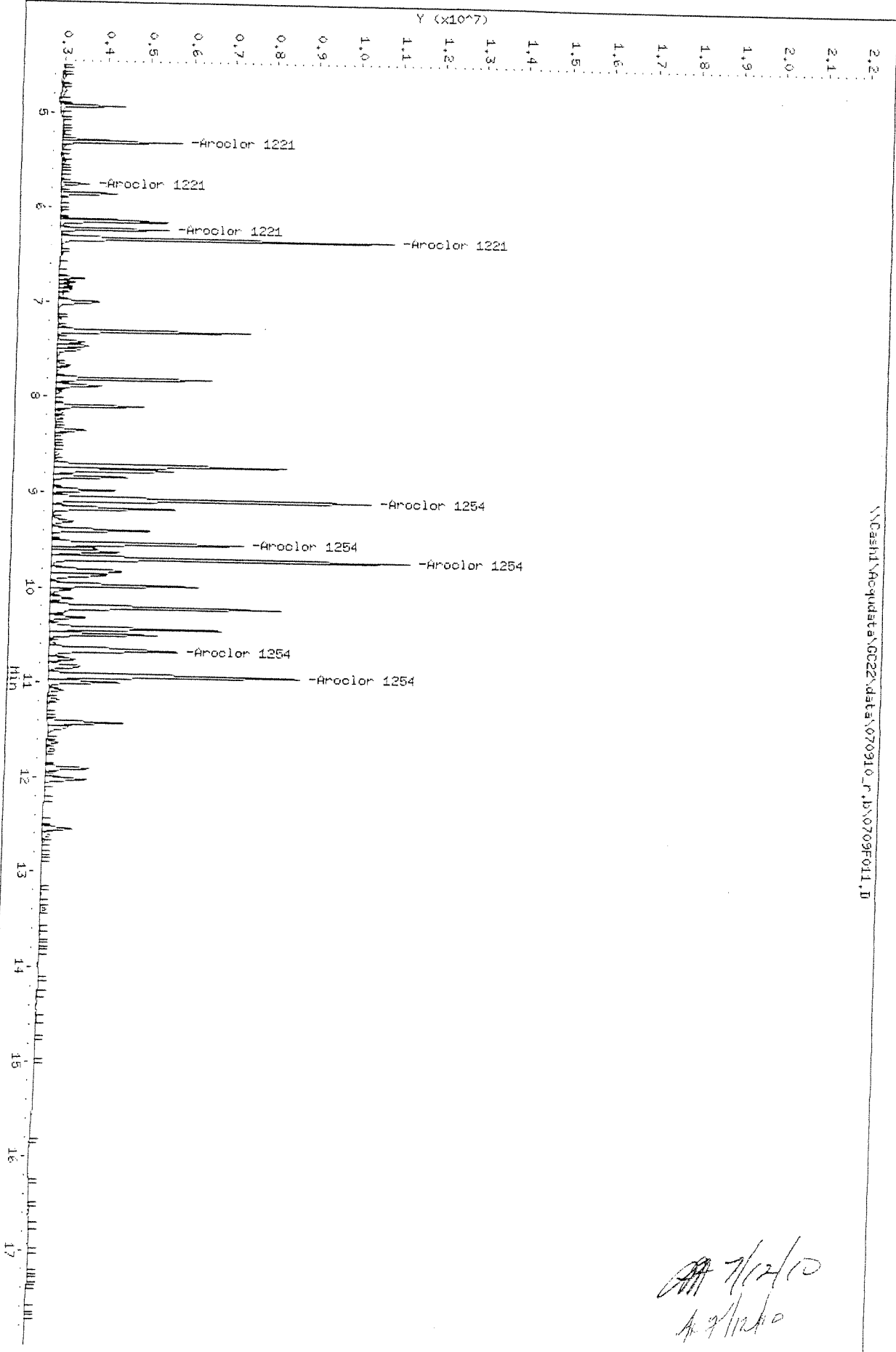
\\Cash1\Acq\data\GC22\data\070910.B\0709F011.D



Data File: \\Cash1\Noqudata\GC22\data\070910\_r.j\0709F011.D  
Date: 09-JUL-2010 22:57  
Client ID:  
Sample Info: 1221/1254 @ 100-50ppb | PCB5-60L | KMG1002746  
Column phase: DB-ALB

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32

\\Cash1\Noqudata\GC22\data\070910\_r.j\0709F011.D



*Handwritten signature and date:*  
7/12/10  
A. Harris

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F012.D  
 Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F012.D  
 Inj Date : 09-JUL-2010 23:21  
 Sample Info: 1221/1254 @ 200-100ppb | PCB5-60M | KWG100674  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:53  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1221+1254.sub  
 Sub List #2 : 1221+1254.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	5.005	5.306	2694925	6720452	176	195	80.00- 120.00	100.00
	5.508	5.749	1492110	2040977	205	208	42.79- 64.19	55.37
	5.661	6.226	4179034	7201365	195	234	127.99- 191.99	155.07
	5.775	6.329	2747690	25404964	206	248	80.74- 121.11	101.96
	Average of Peak Amounts =					196	221	
Aroclor 1254	8.191	9.072	9397127	32759975	91.4	93.4	80.00- 120.00	100.00
	8.728	9.536	7397359	17504233	92.2	92.8	61.67- 92.50	78.72
	8.881	9.692	15036754	33559529	92.6	96.9	122.37- 183.56	160.01
	9.218	10.662	8723380	18070214	96.7	103	67.68- 101.52	92.83
	9.401	10.922	6417631	27613696	92.6	94.9	52.06- 78.09	68.29
Average of Peak Amounts =					93.1	96.2		

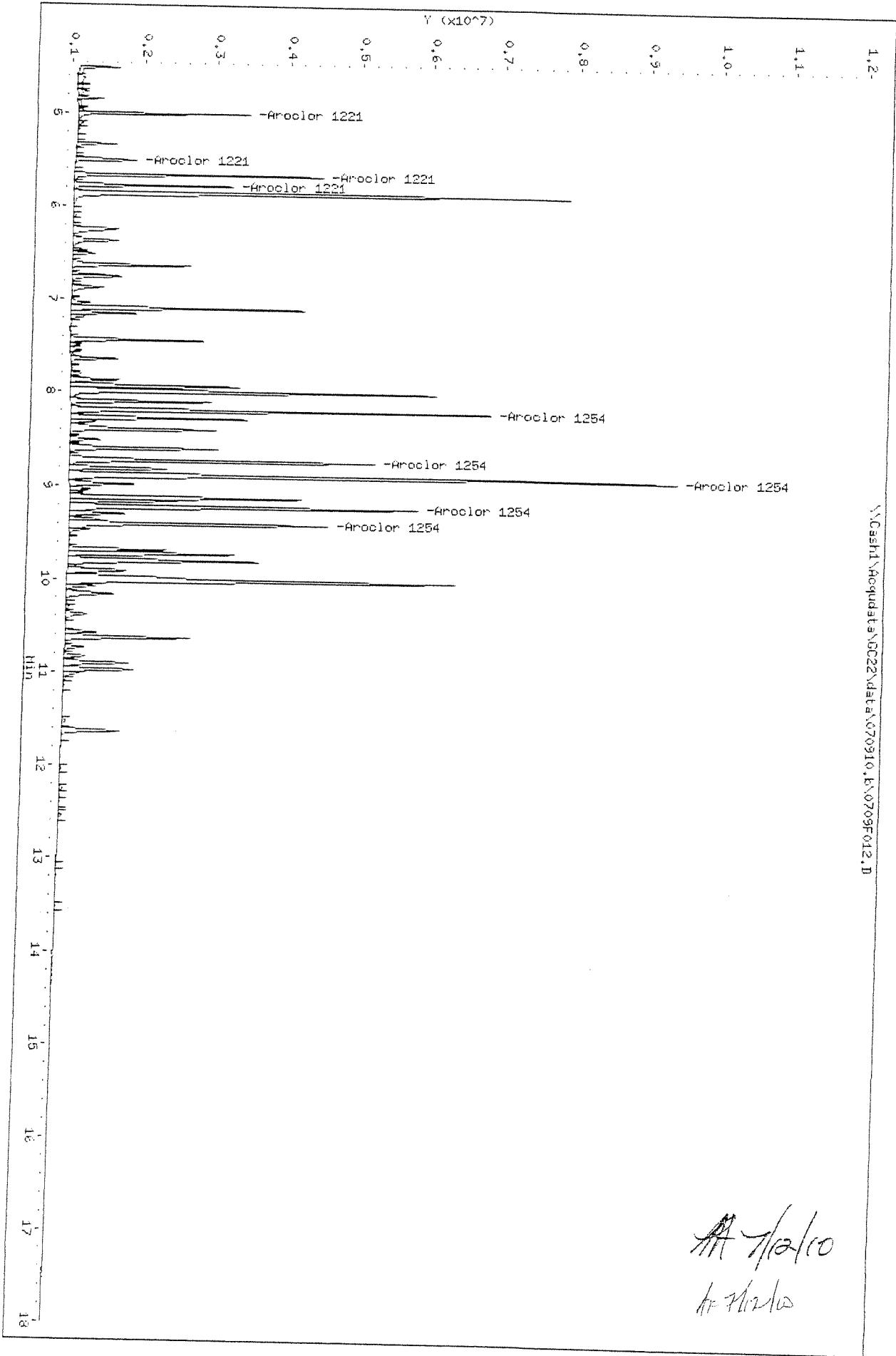
*Handwritten signature and date:*  
 7/12/10  
 AC 7/12/10



Data File: \\CASH1\Acqudata\GC22\data\070910.B\0709F012.D  
Date: 09-JUL-2010 23:21  
Client ID:  
Sample Info: 1221/1254 @ 200-100ppb | PCBs-601 | KMG100674  
Column Phase: DB-35MS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

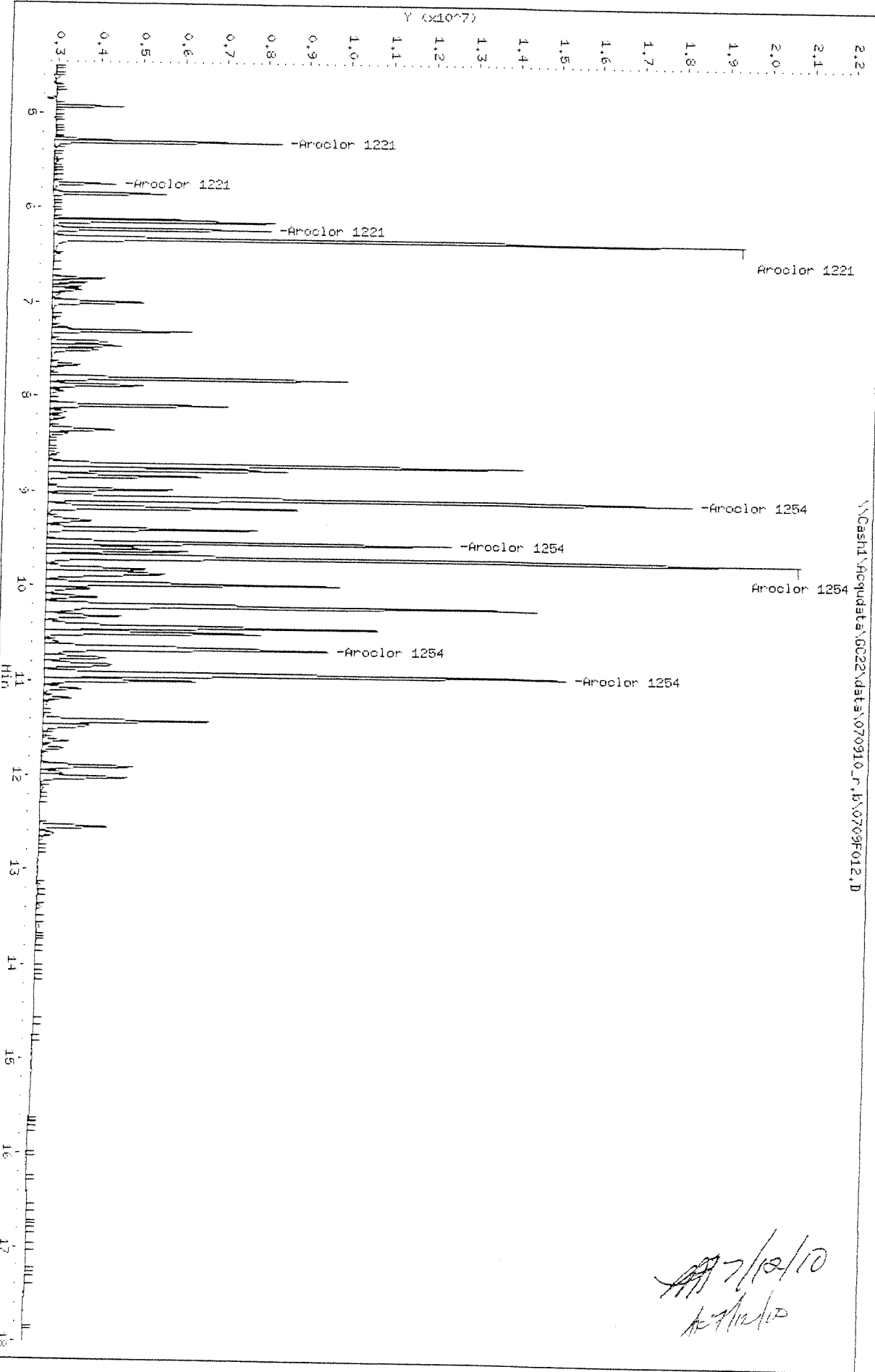
\\CASH1\Acqudata\GC22\data\070910.B\0709F012.D



*Handwritten signature:*  
A Harris  
L Harris

Data File: \\Cash1\Acqudata\GC22\data\070910\_r\_1\0709F012.D  
Date: 09-JUL-2010 23:21  
Client ID:  
Sample Info: 1221/1254 @ 200-100ppb | PCBs-eoh | KMG100674  
Column phase: DB-XLB

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F013.D  
 Report Date: 12-Jul-2010 12:44

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F013.D  
 Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F013.D  
 Inj Date : 09-JUL-2010 23:45  
 Sample Info: 1221/1254 @ 400-200ppb | PCB5-60N | KWG100674  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:53  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

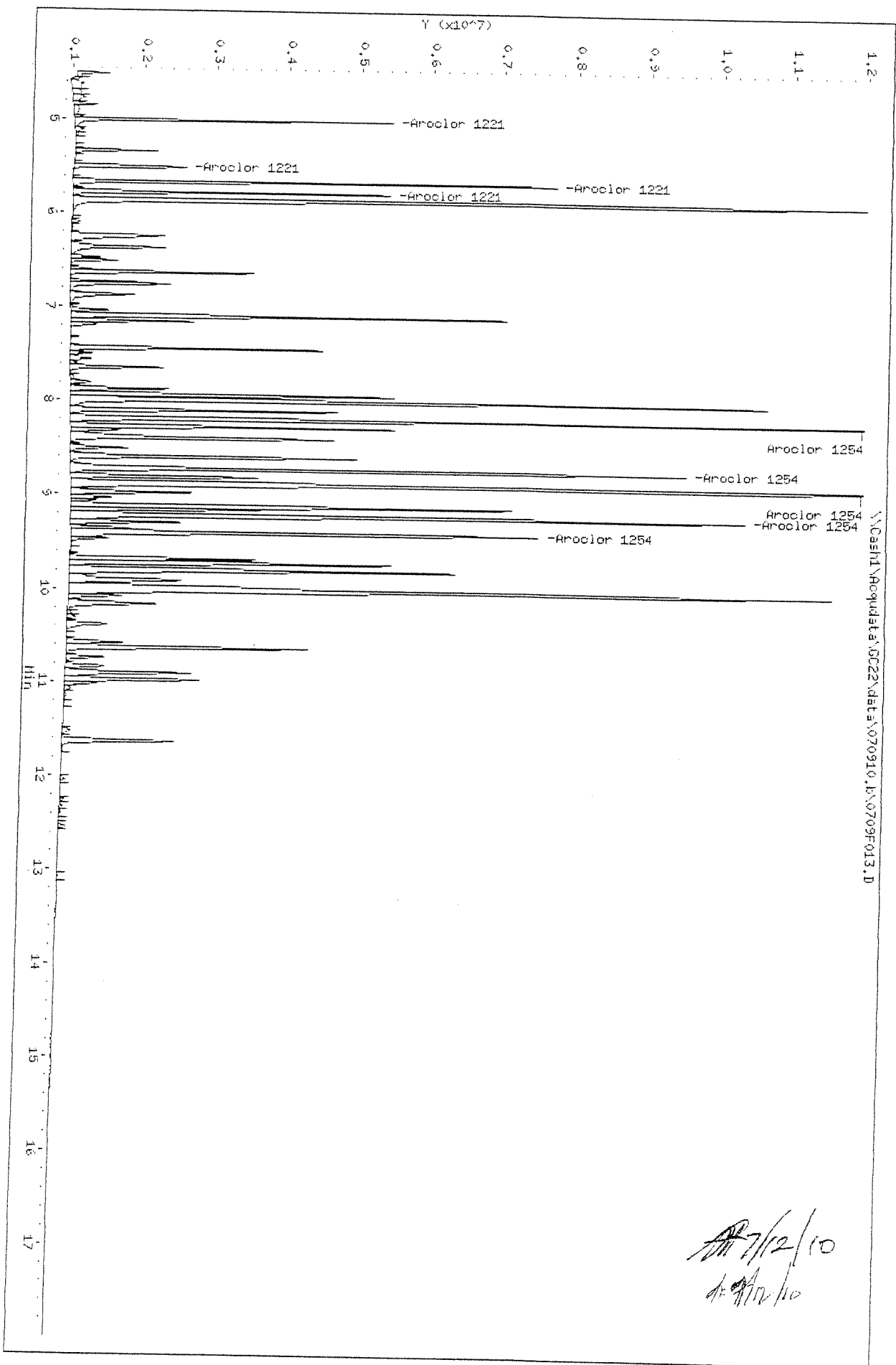
Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1221+1254.sub  
 Sub List #2 : 1221+1254.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	5.007	5.304	5103926	12239916	345	354	80.00- 120.00	100.00
	5.507	5.748	2793672	3685762	387	376	42.79- 64.19	54.74
	5.660	6.224	8111877	13512859	383	404	127.99- 191.99	158.93
	5.774	6.326	5237762	48163488	394	412	80.74- 121.11	102.62
	Average of Peak Amounts =					377	386	
Aroclor 1254	8.187	9.071	17952402	62411915	179	178	80.00- 120.00	100.00
	8.727	9.534	14349312	33710889	183	179	61.67- 92.50	79.93
	8.880	9.691	29411098	65179136	184	188	122.37- 183.56	163.83
	9.217	10.661	16874092	35375333	190	202	67.68- 101.52	93.99
	9.400	10.921	12223415	53309814	181	183	52.06- 78.09	68.09
Average of Peak Amounts =					183	186		

*Handwritten signature and date:*  
 7/12/10  
 KWG

Data File: \\Cashtl\Acqudata\GC22\data\070910.P\0709F013.D  
Date: 09-JUL-2010 23:45  
Client ID:  
Sample Info: 1221/1254 @ 400-200Pp | PCBs-60N | KHC1006274  
Column Phase: DB-35MS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



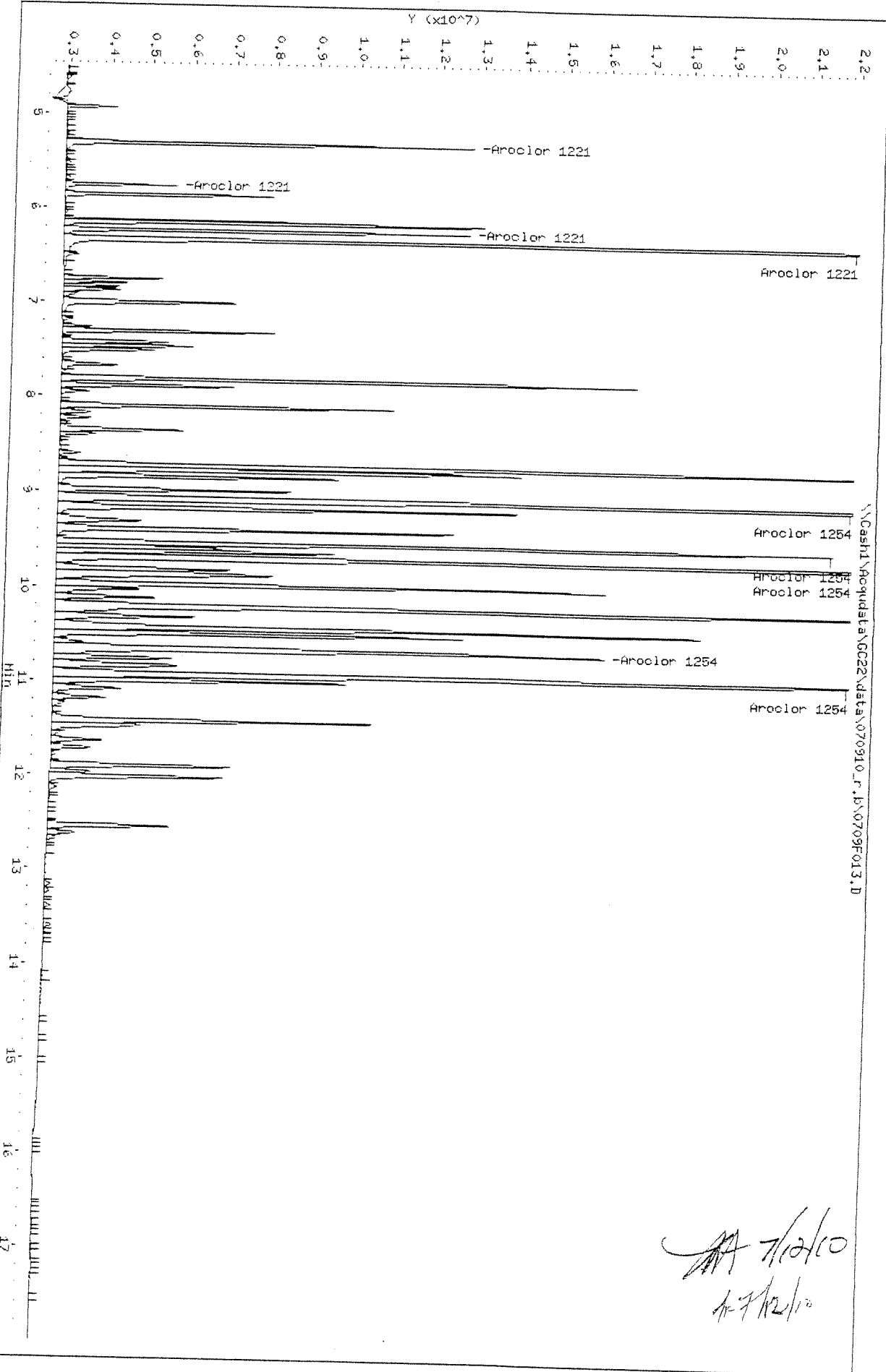
Data File: \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F013.D  
Date: 09-JUL-2010 23:45

Client ID:  
Sample Info: 1221/1254 @ 400-200ppb | PCBs-60N | KUC1000674

Column Phase: DB-XLB

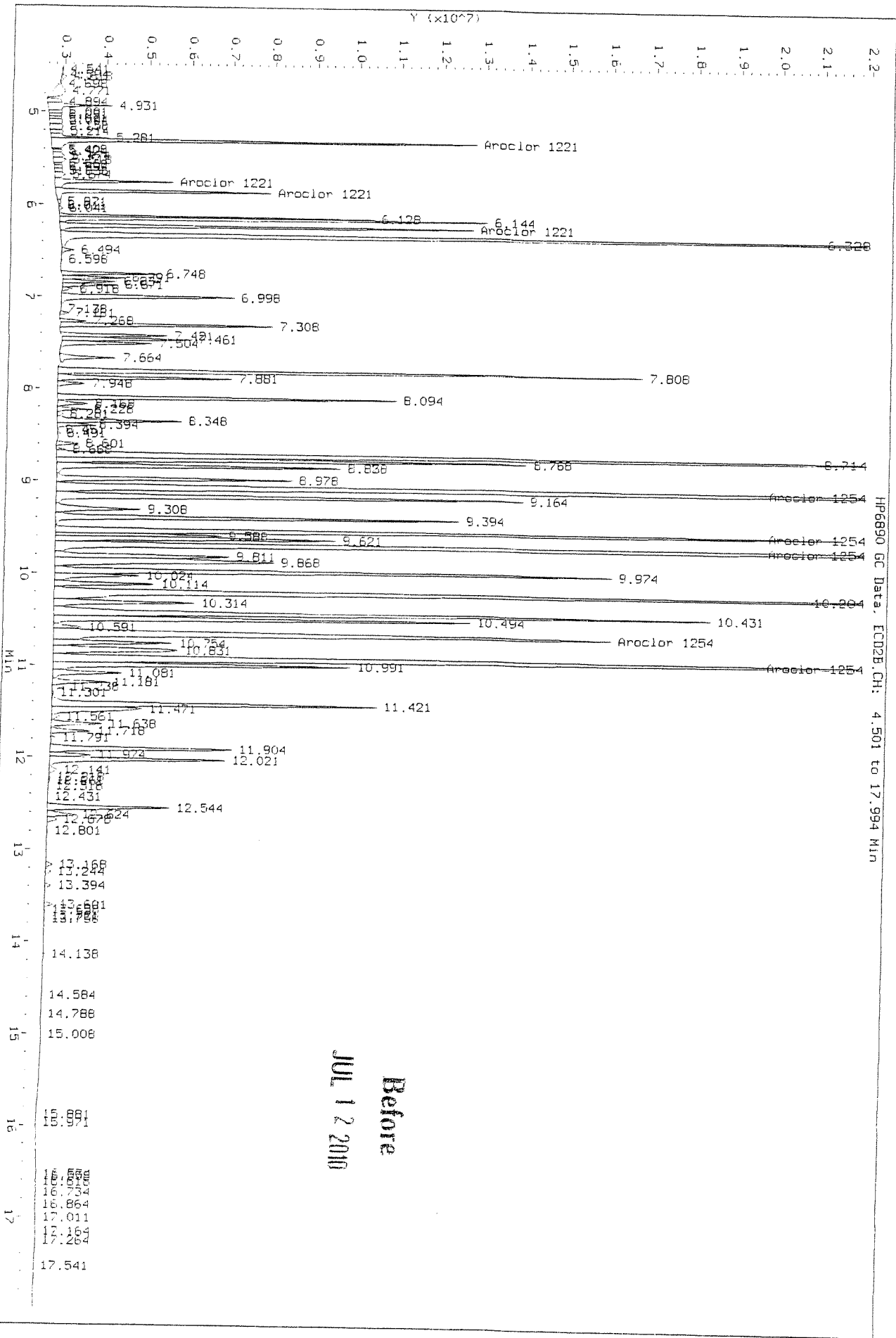
Instrument: GC22.i

Operator: LHarris  
Column diameter: 0.32



*Handwritten signature and date:*  
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7/12/10

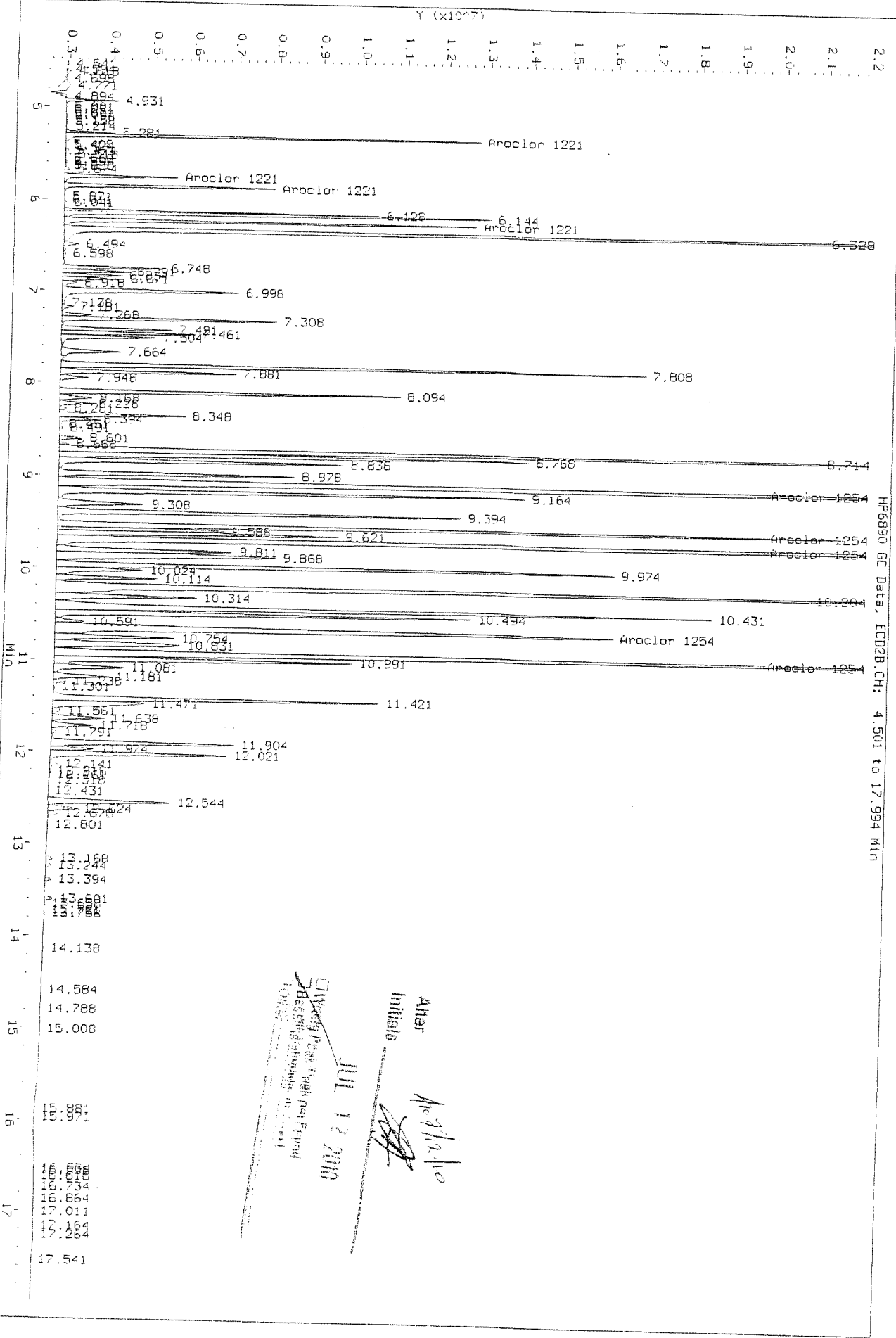
Data File: \\Cash1\Agdata\GC22\data\070910\_r\_b\0709f013.D  
 Injection Date: 09-JUL-2010 23:45  
 Instrument: GC22.1  
 Client Sample ID:



Before  
 JUL 12 2010

HP6890 GC Data, ECD2B.CH: 4.501 to 17.994 MIN

Data File: \Cash1\Acqdata\GC22\data\070910.r.b\0709F013.D  
 Injection Date: 09-JUL-2010 23:45  
 Instrument: GC22.1  
 Client Sample ID:



Weigh  
 Injected  
 Checked  
 Analyzed  
 Released  
 Other

Initials: *[Signature]*  
 Date: JUL 12 2010

HF6890 GC Data, ECD2B.CH: 4.501 to 17.994 Min

Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F014.D  
 Report Date: 12-Jul-2010 12:44

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F014.D  
 Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F014.D  
 Inj Date : 10-JUL-2010 00:10  
 Sample Info: 1221/1254 @ 1000-500ppb | PCB5-61A | KWG10067  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:53  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1221+1254.sub  
 Sub List #2 : 1221+1254.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

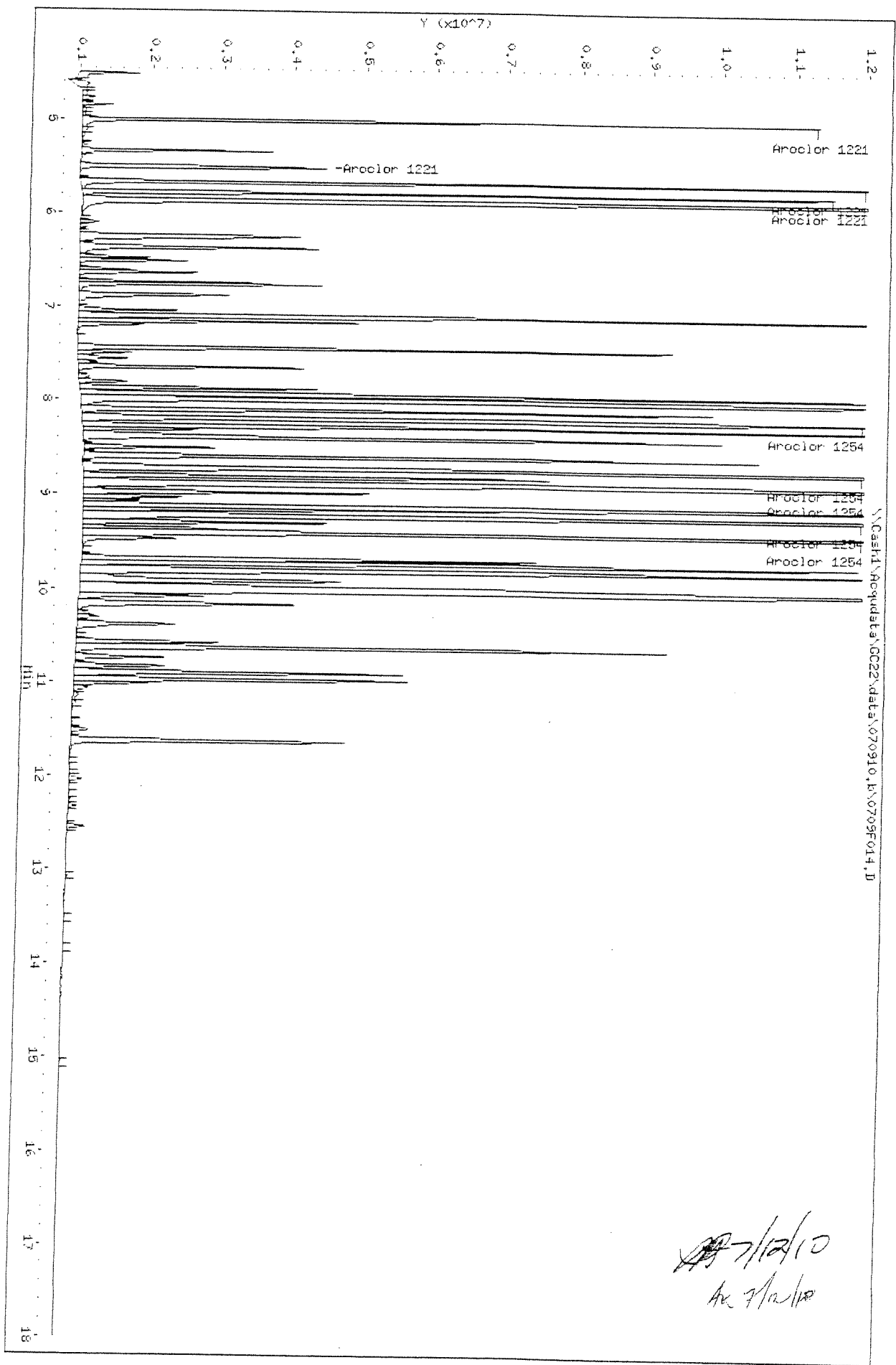
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	5.005	5.306	11003372	27550017	778	798	80.00- 120.00	100.00
	5.508	5.749	6302499	8005167	891	816	42.79- 64.19	57.28
	5.661	6.226	19413219	30521285	929	846	127.99- 191.99	176.43
	5.771	6.329	12020258	110027608	918	846	80.74- 121.11	109.24
	Average of Peak Amounts =				879	826		
Aroclor 1254	8.188	9.072	43201206	149624151	441	427	80.00- 120.00	100.00
	8.725	9.536	35133896	83281157	455	442	61.67- 92.50	81.33
	8.881	9.689	72716197	160570796	463	464	122.37- 183.56	168.32
	9.218	10.659	42129735	89117023	477	508	67.68- 101.52	97.52
	9.401	10.922	29253752	132087340	442	454	52.06- 78.09	67.72
Average of Peak Amounts =				456	459			

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Data File: \\Cashd\Requdata\GC22\data\070910.D  
Date: 10-JUL-2010 00:10  
Client ID:  
Sample Info: 1221/1254 @ 1000-500ppb | PCBs-61A | KMS10067  
Column phase: DB-35MS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

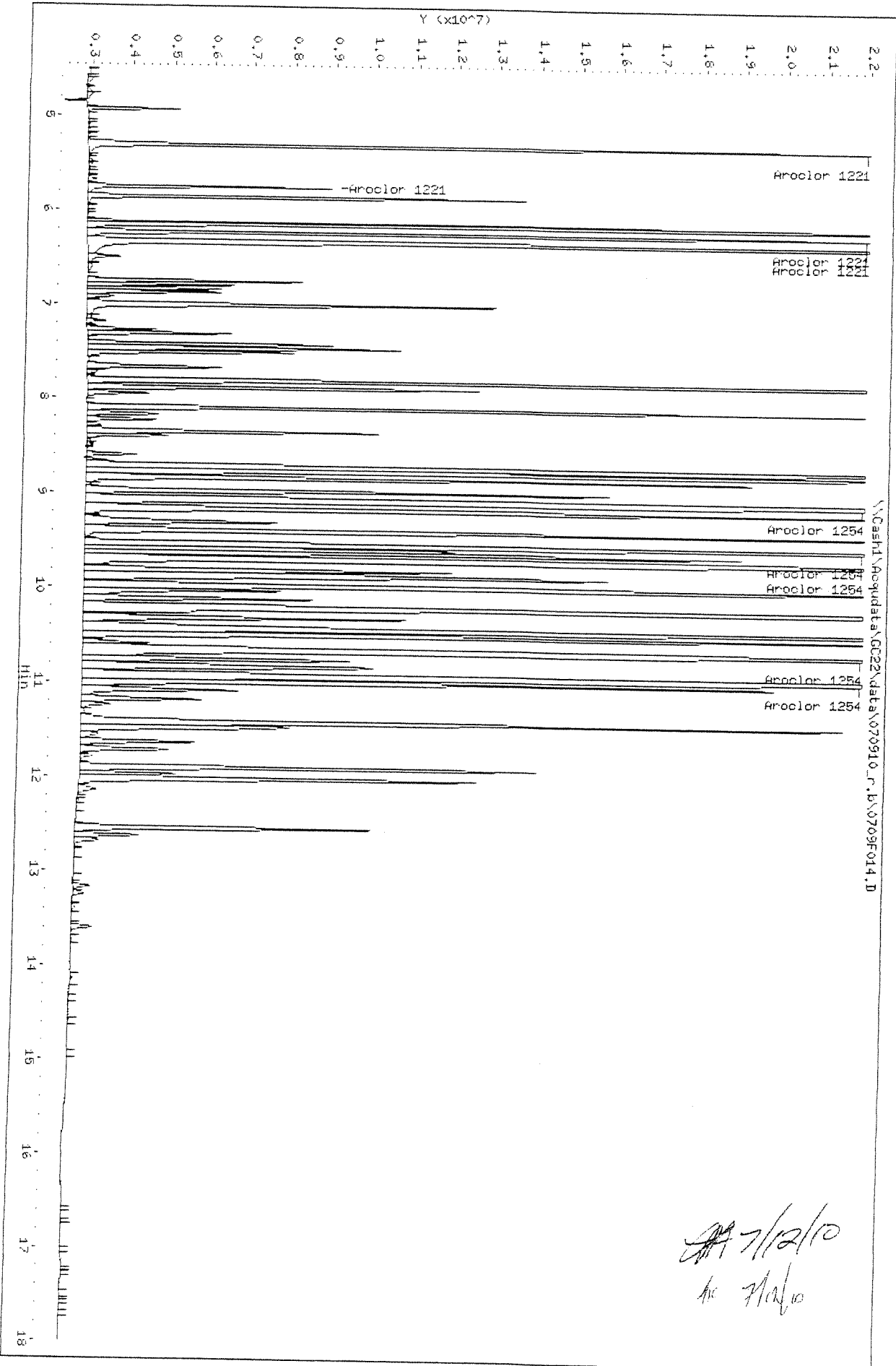


*Handwritten signature and date:*  
7/12/10  
LHarris

Data File: \\Cashd\Acq\data\CC22\data\070910\_r.b\0709F014.D  
Date: 10-JUL-2010 00:10  
Client ID:  
Sample Info: 1221/1254 @ 1000-500ppb | PCB5-61A | KINC10067

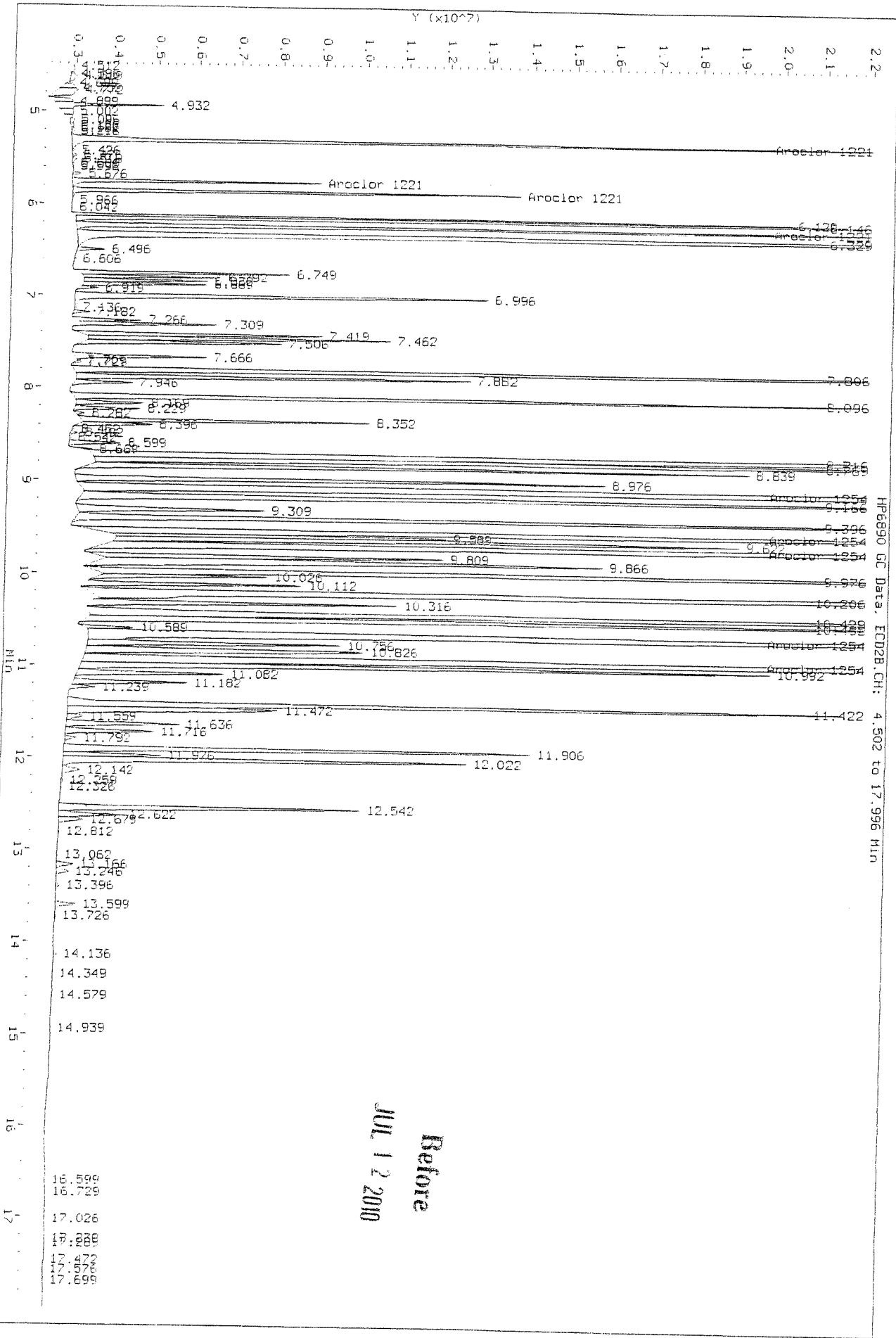
Column Phase: DB-XLB

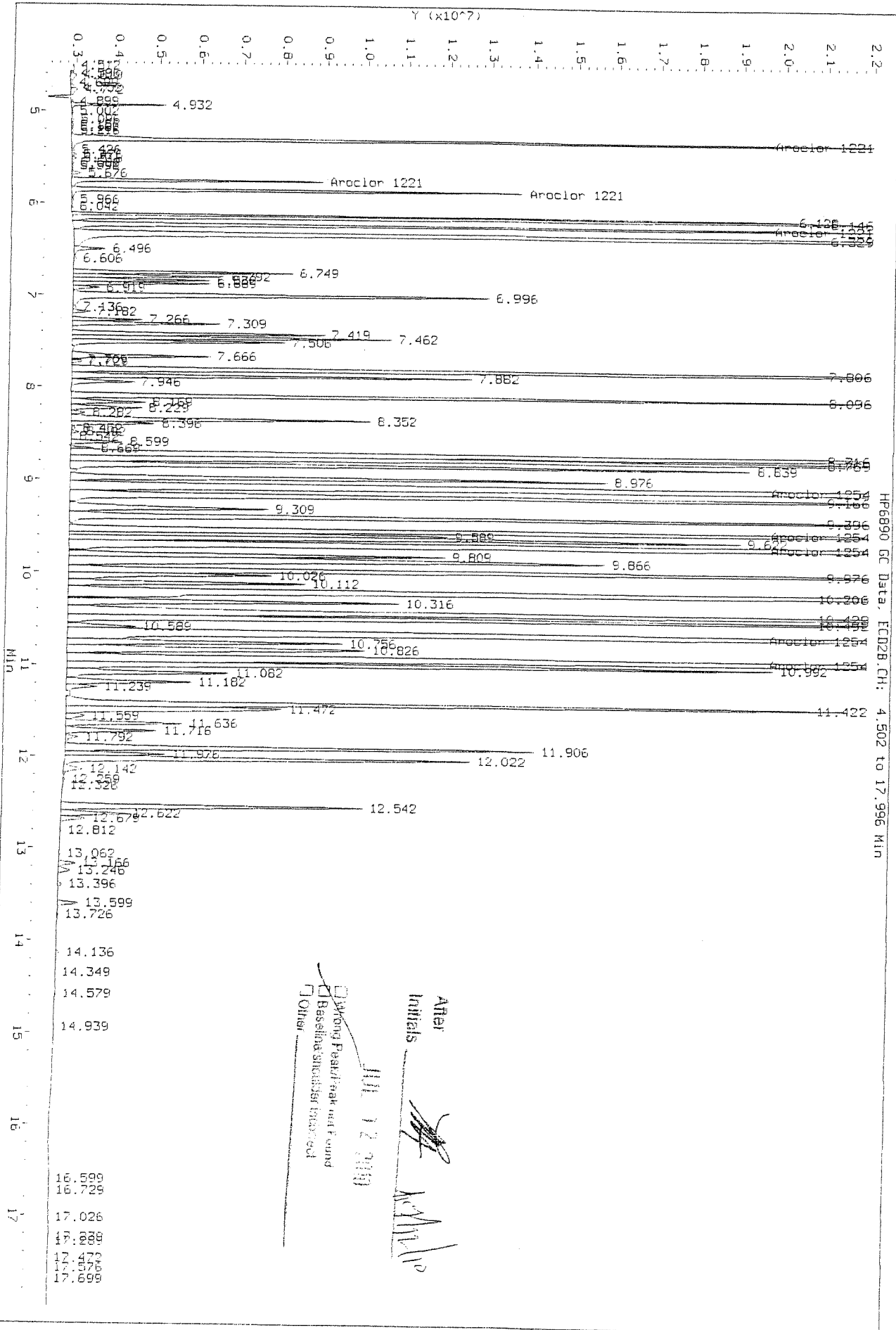
Instrument: CC22.1  
Operator: LHarris  
Column diameter: 0.32



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to 7/12/10

Data File: \\Cash1\Acq\data\GC22\data\070910\_r.b\0709F014.D  
 Injection Date: 10-JUL-2010 00:10  
 Instrument: GC22.1  
 Client Sample ID:





After Initials  
 JUL 12 2010  
 Strong Peak/ Peak not Found  
 Baseline Shift/ Not Evaluated  
 Other

HP6890 GC Data, FID2B.CH: 4.502 to 17.996 Min

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F015.D  
 Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F015.D  
 Inj Date : 10-JUL-2010 00:34  
 Sample Info: 1232/1262 @ 2.5ppb | PCB5-61B | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:54  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1232+1262.sub  
 Sub List #2 : 1232+1262.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	5.855	6.329	101757	310724	2.44	2.74	80.00- 120.00	100.00 (M)
	6.238	6.792	95738	91575	2.54	1.71	68.66- 102.99	94.09 (M)
	6.512	7.016	43723	93614	2.97	2.88	26.81- 40.21	42.97 (M)
	6.758	7.422	120811	217229	2.71	2.46	91.83- 137.74	118.73 (M)
	Average of Peak Amounts =				2.66	2.45		
Aroclor 1262	10.075	11.082	387704	946029	2.75	2.65	80.00- 120.00	100.00 (M)
	10.572	11.466	354689	698413	2.88	2.68	69.82- 104.73	91.48 (M)
	10.968	12.026	632484	1575687	2.58	2.65	152.17- 228.25	163.14 (M)
	11.518	12.549	373241	1070716	3.20	2.64	63.79- 95.68	96.27 (M)
	11.632	12.679	536178	772691	2.72	2.67	116.50- 174.75	143.87 (M)
Average of Peak Amounts =				2.83	2.66			

QC Flag Legend

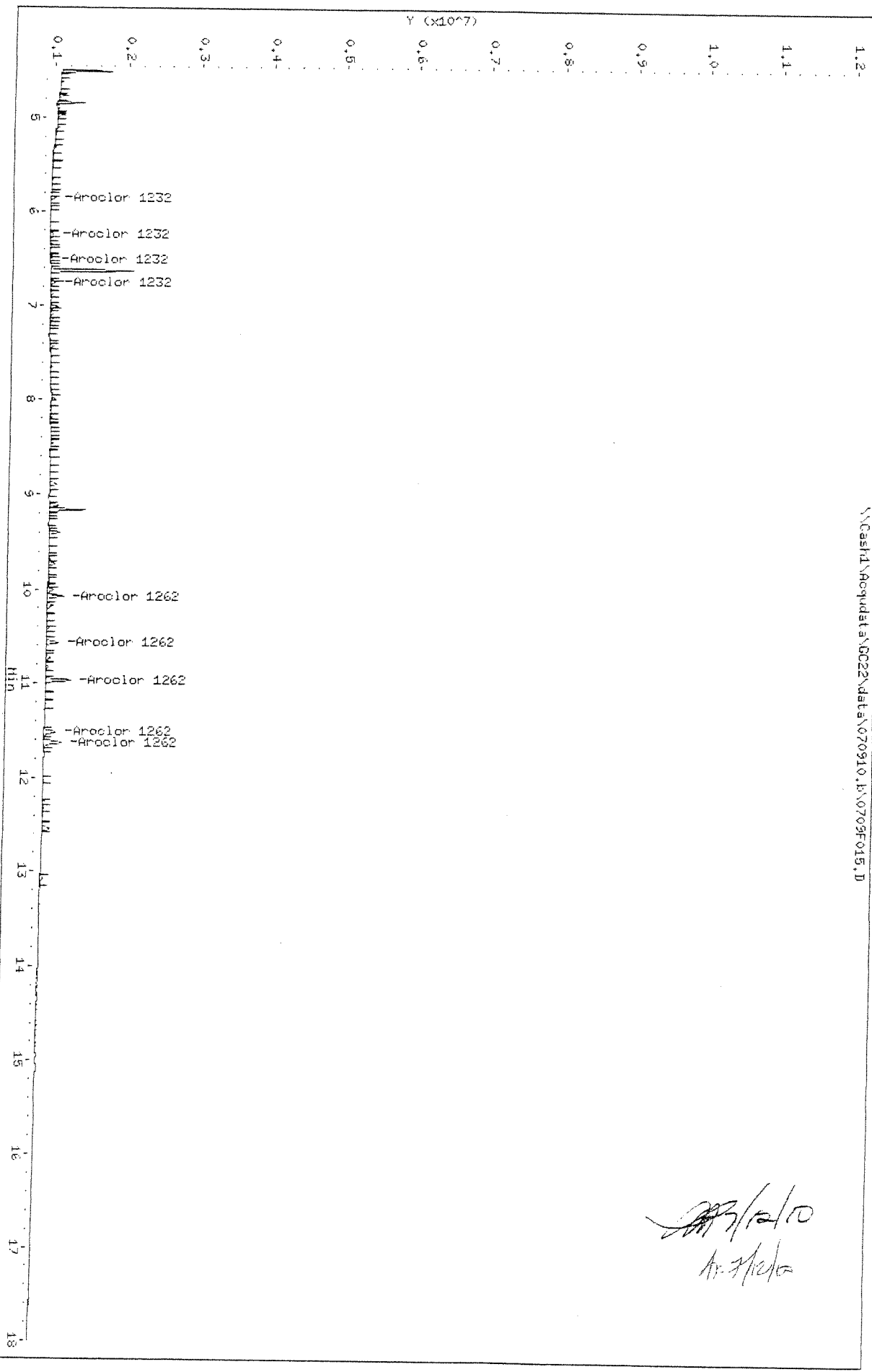
M - Compound response manually integrated.

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 7/12/10

Data File: \\Casht1\Acqudata\0022\data\070910\_1\0709F015.D  
Date: 10-JUL-2010 00:34  
Client ID:  
Sample Info: 1232/1262 @ 2.5µpb | PCB5-61B | KMS1006746-3  
Column phase: DB-35HS

Instrument: 0022.1  
Operator: LHarris  
Column diameter: 0.32

\\Casht1\Acqudata\0022\data\070910\_1\0709F015.D

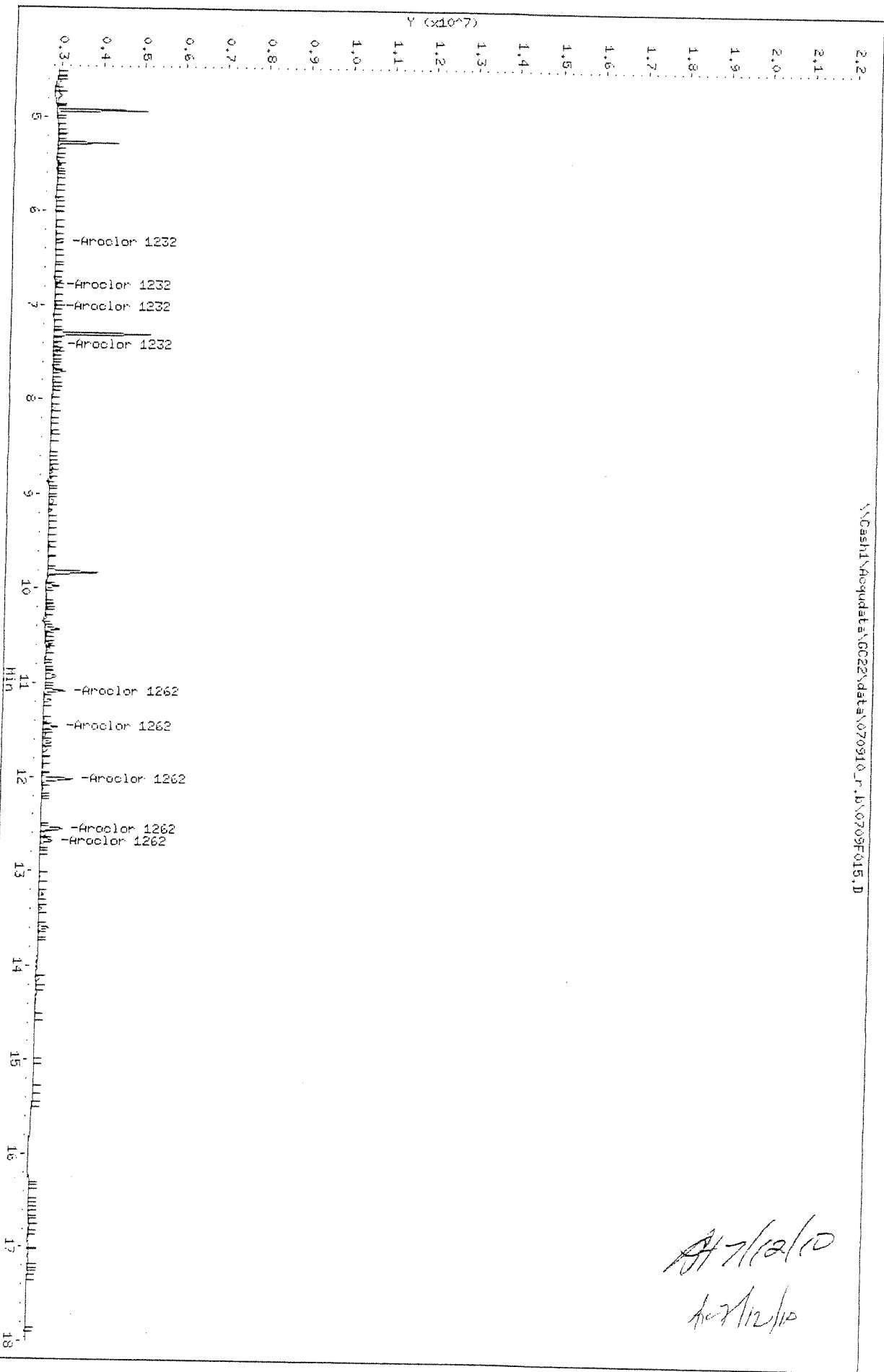


*Handwritten signature and date:*  
7/12/10  
LHarris

Data File: \NCash1\Acqudata\GC22\data\070910\_r.j\0709F015.D  
 Date: 10-JUL-2010 00:34  
 Client ID:  
 Sample Info: 1232/1262 @ 2.5ppb | PCB5-41B | KMG1005746-3  
 Column phase: DB-XLB

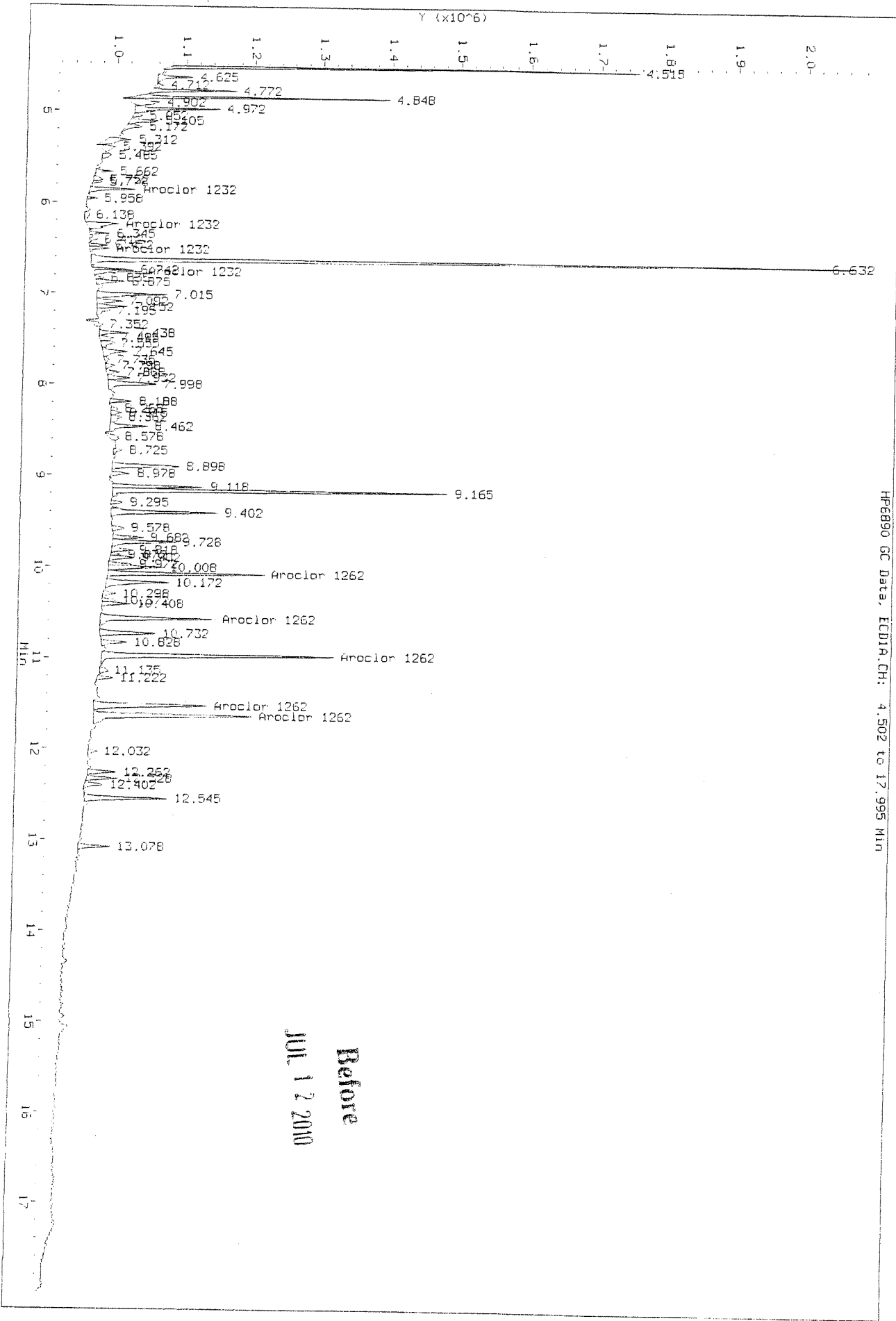
Instrument: GC22.1  
 Operator: LHarris  
 Column diameter: 0.32

\NCash1\Acqudata\GC22\data\070910\_r.j\0709F015.D



Data File: \\Cash1\Acq\data\GC22\data\070910.b\07091015.D  
 Injection Date: 10-JUL-2010 00:34  
 Instrument: GC22.1  
 Client Sample ID:

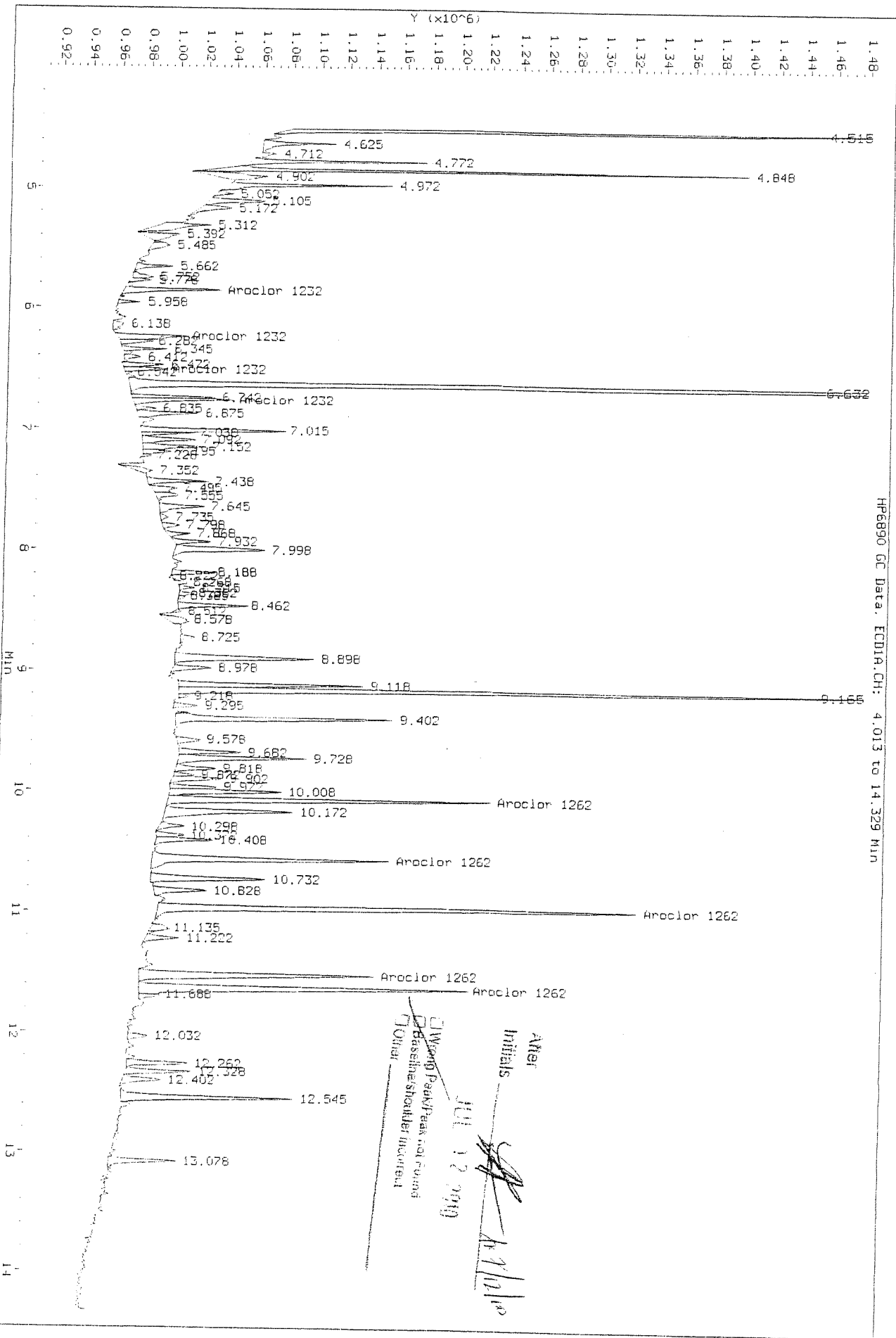
HF6890 GC Data, ECD1A.CH: 4.502 to 17.995 Min



Before  
 JUL 12 2010



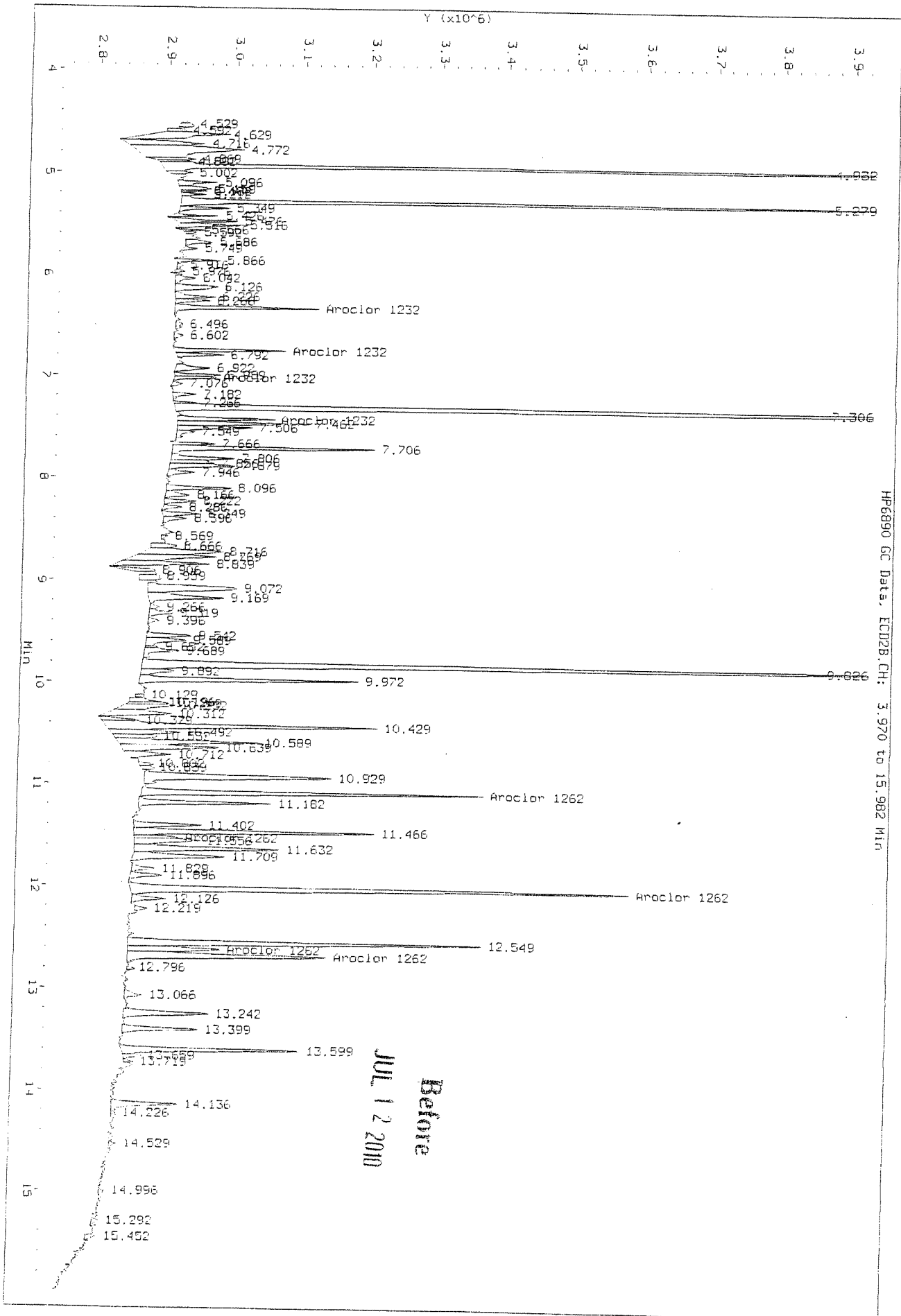
Data File: \\Cash1\Acqudata\GC22\data\070910.P\07091015.D  
 Injection Date: 10-JUL-2010 00:34  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data: ECD1A.CH: 4.013 to 14.329 Min

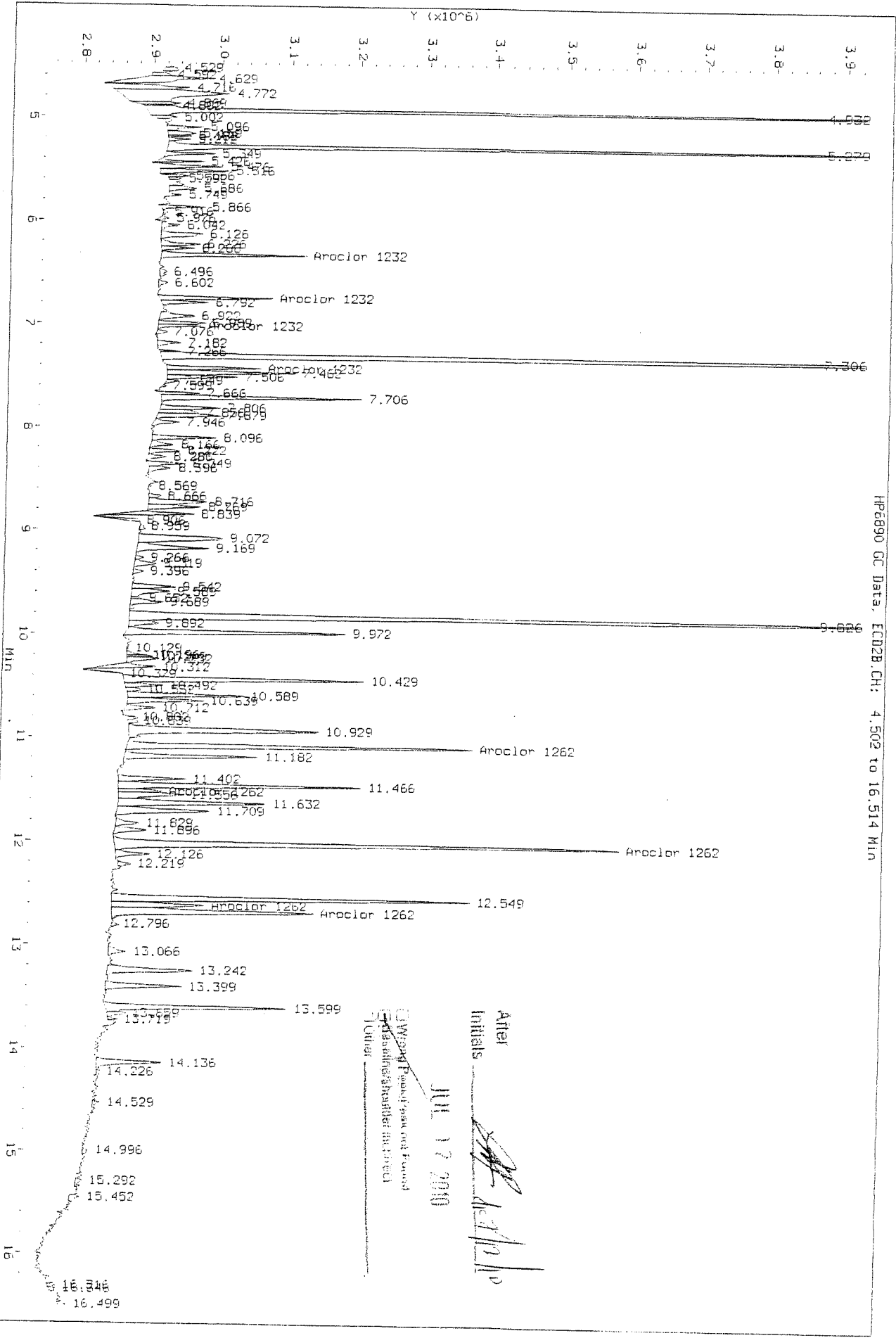
Wrong Peak/Peak not Found  
 Baseline/shoulder incorrect  
 Other  
 Initials: *[Signature]*  
 Date: JUL 12 2010  
 Time: 11:12 AM

Data File: \NCS\sh1\Acq\data\GC22\data\070910\_r\_b\0709F015.D  
 Injection Date: 10-JUL-2010 00:34  
 Instrument: GC22.1  
 Client Sample ID:



Before  
 JUL 12 2010

Data File: \\Cash1\Acqudata\GC22\data\070910\_r\_b\0709f015.D  
 Injection Date: 10-JUL-2010 00:34  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data, ECD2B.CH: 4.502 to 16.514 Min

Area: \_\_\_\_\_  
 Initials: \_\_\_\_\_  
 JUL 17 2010  
 Method Foundry used for Foundry  
 This station is handled by the Foundry  
 Other: \_\_\_\_\_

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F016.D  
 Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F016.D  
 Inj Date : 10-JUL-2010 00:58  
 Sample Info: 1232/1262 @ 5.0ppb | PCB5-61C | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:54  
 Operator : LHarris  
 Inst ID : GC22.1  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1232+1262.sub  
 Sub List #2 : 1232+1262.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	5.857	6.331	201728	657627	4.95	5.79	80.00- 120.00	100.00 (M)
	6.237	6.795	190400	195176	5.18	4.14	68.66- 102.99	63.41 (M)
	6.510	7.015	79539	184234	5.40	5.67	26.81- 40.21	39.43 (M)
	6.760	7.421	234545	497824	5.19	5.64	91.83- 137.74	116.27 (M)
	Average of Peak Amounts =				5.18	5.31		
Aroclor 1262	10.077	11.081	782042	1999433	5.54	5.61	80.00- 120.00	100.00 (M)
	10.570	11.468	654857	1424886	5.33	5.47	69.82- 104.73	83.74 (M)
	10.967	12.021	1244758	3196148	5.08	5.38	152.17- 228.25	159.17 (M)
	11.517	12.551	648847	2222158	5.56	5.49	63.79- 95.68	82.97 (M)
	11.630	12.681	1088645	1582515	5.52	5.48	116.50- 174.75	139.21 (M)
Average of Peak Amounts =				5.41	5.49			

QC Flag Legend

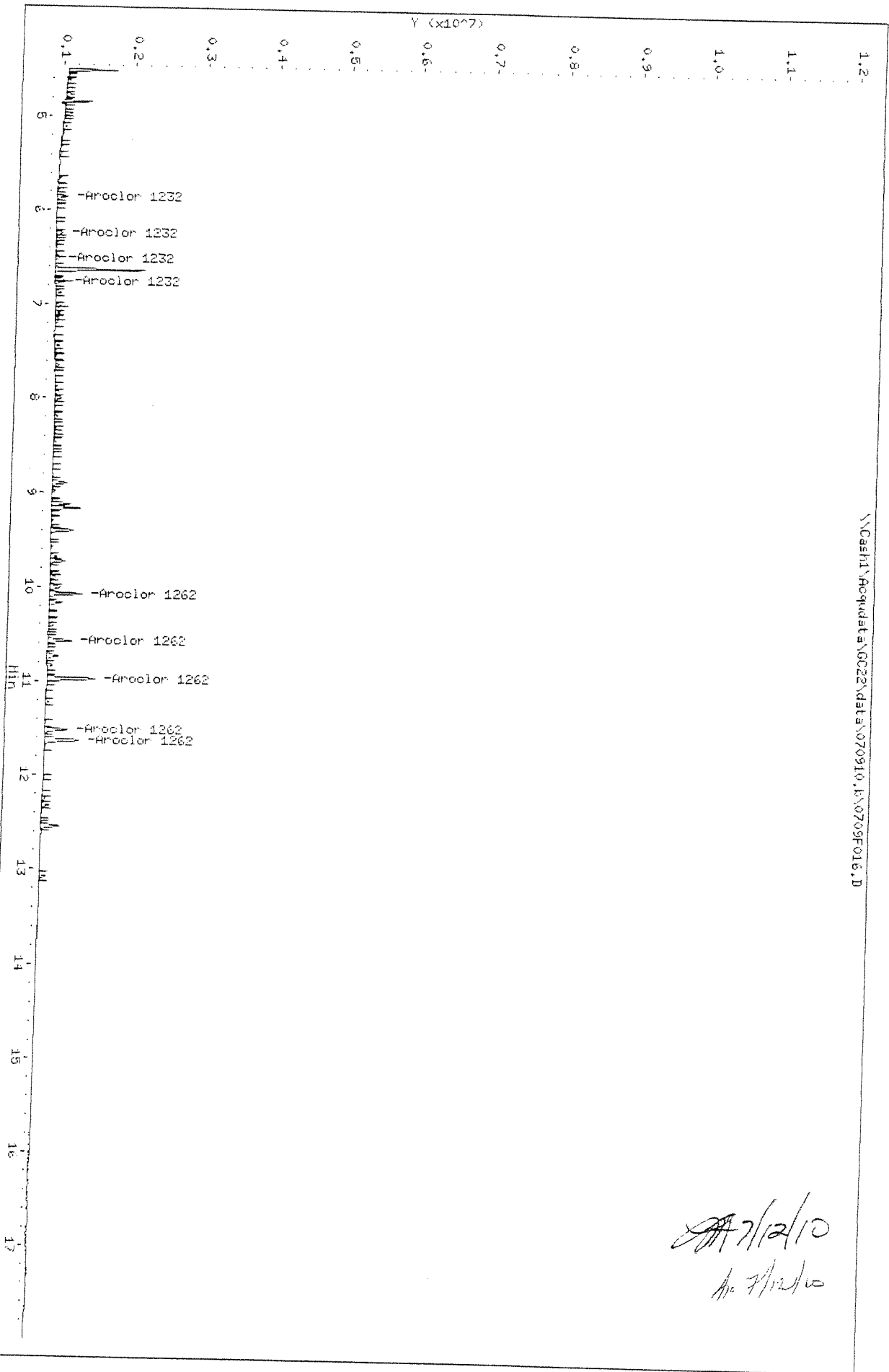
M - Compound response manually integrated.

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 AC 7/12/10

Data File: \\Cash1\Acqudata\GC22\data\070910\_1\0709F016.D  
Date: 10-JUL-2010 00:58  
Client ID:  
Sample Info: 1232/1262 @ 5.0ppb | PCB5-61C | KNC1006746-3  
Column phase: DB-35MS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

\\Cash1\Acqudata\GC22\data\070910\_1\0709F016.D

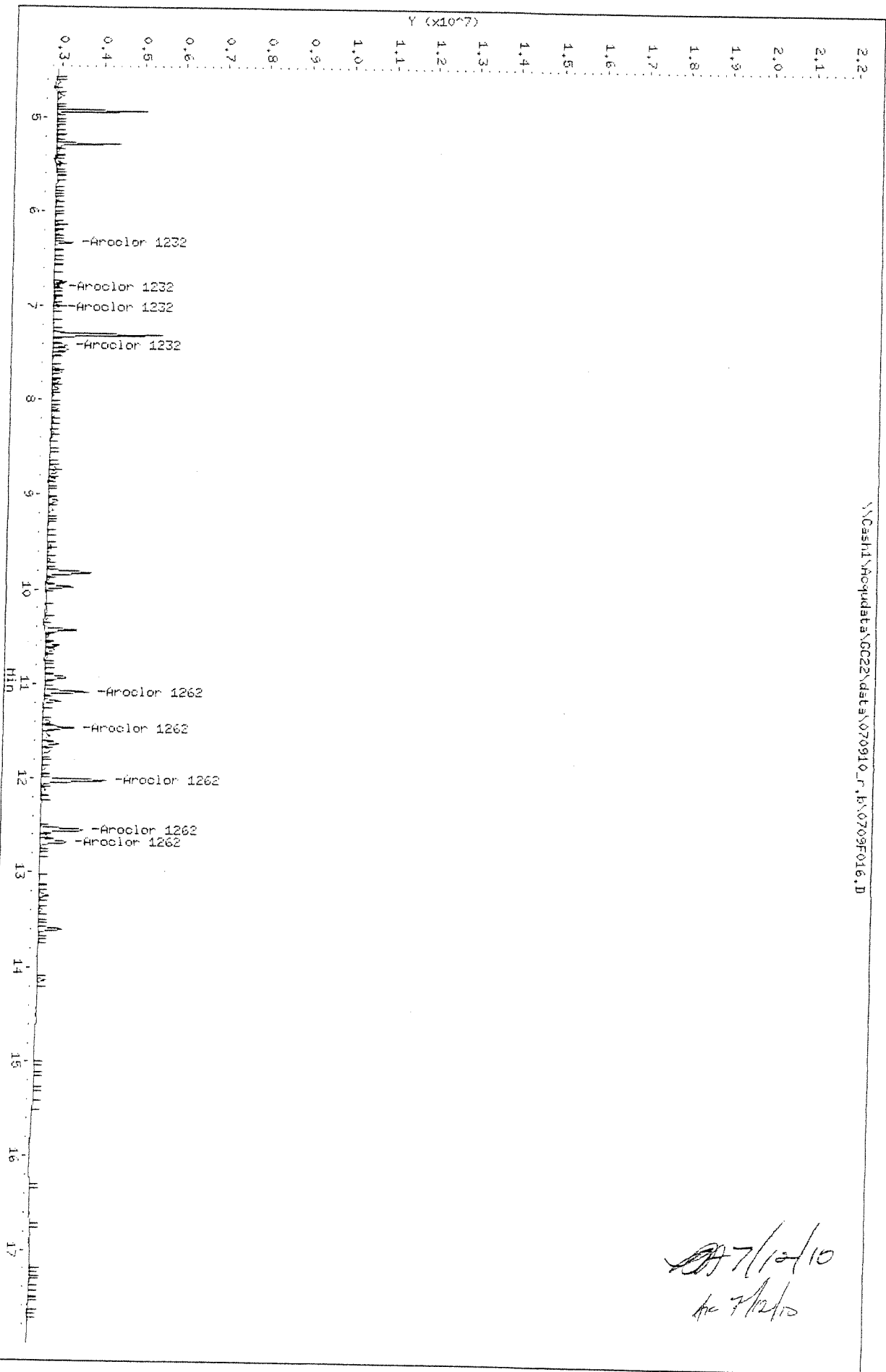


*Handwritten signature and date: 7/12/10*

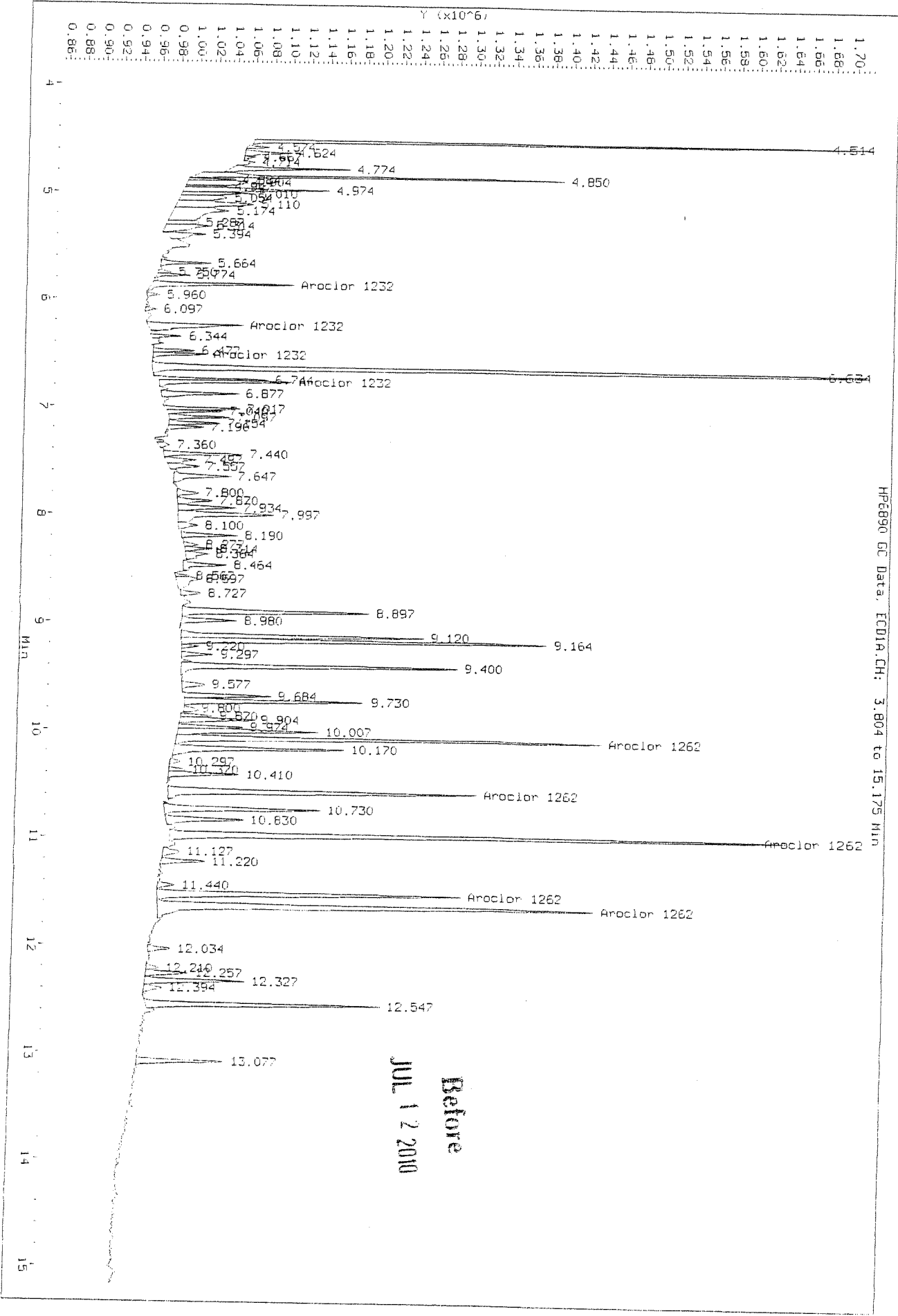
Data File: \\Cash1\hpc\qdata\GC22\data\070910\_r.b\0709F016.D  
Date: 10-JUL-2010 00:58  
Client ID:  
Sample Info: 1232/1262 @ 5.0ppb | PCB5-61C | KMG1006746-3  
Column phase: DB-ALB

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

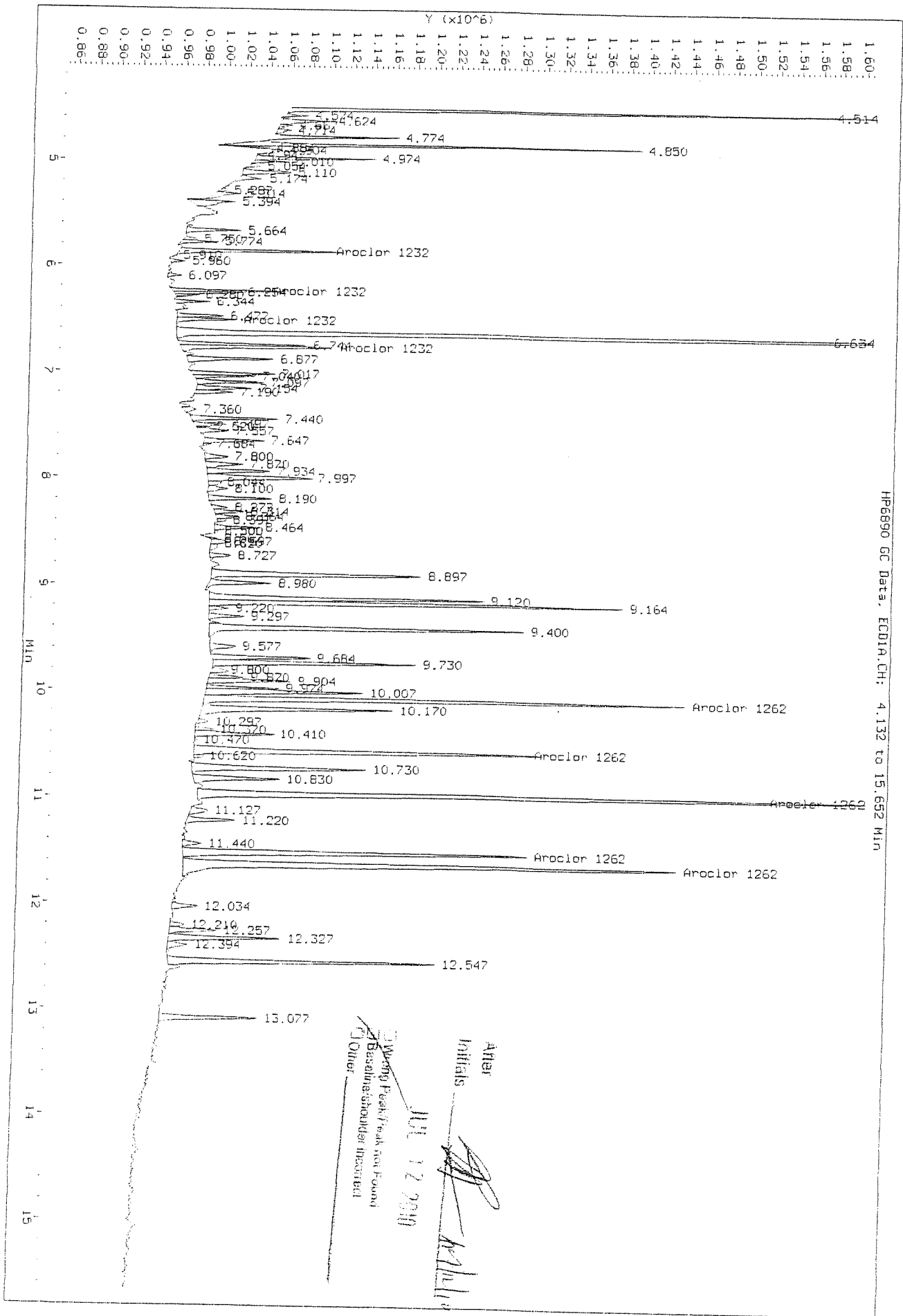
\\Cash1\hpc\qdata\GC22\data\070910\_r.b\0709F016.D



Data File: \\Cash1\Acqudata\GC22\data\070910\_b\0709F016.D  
 Injection date: 10-JUL-2010 00:58  
 Instrument: GC22.1  
 Client Sample ID:



Data File: \\Cash1\Acqudata\GC22\data\070910.B\0709F016.D  
 Injection Date: 10-JUL-2010 00:58  
 Instrument: GC22.1  
 Client Sample ID:



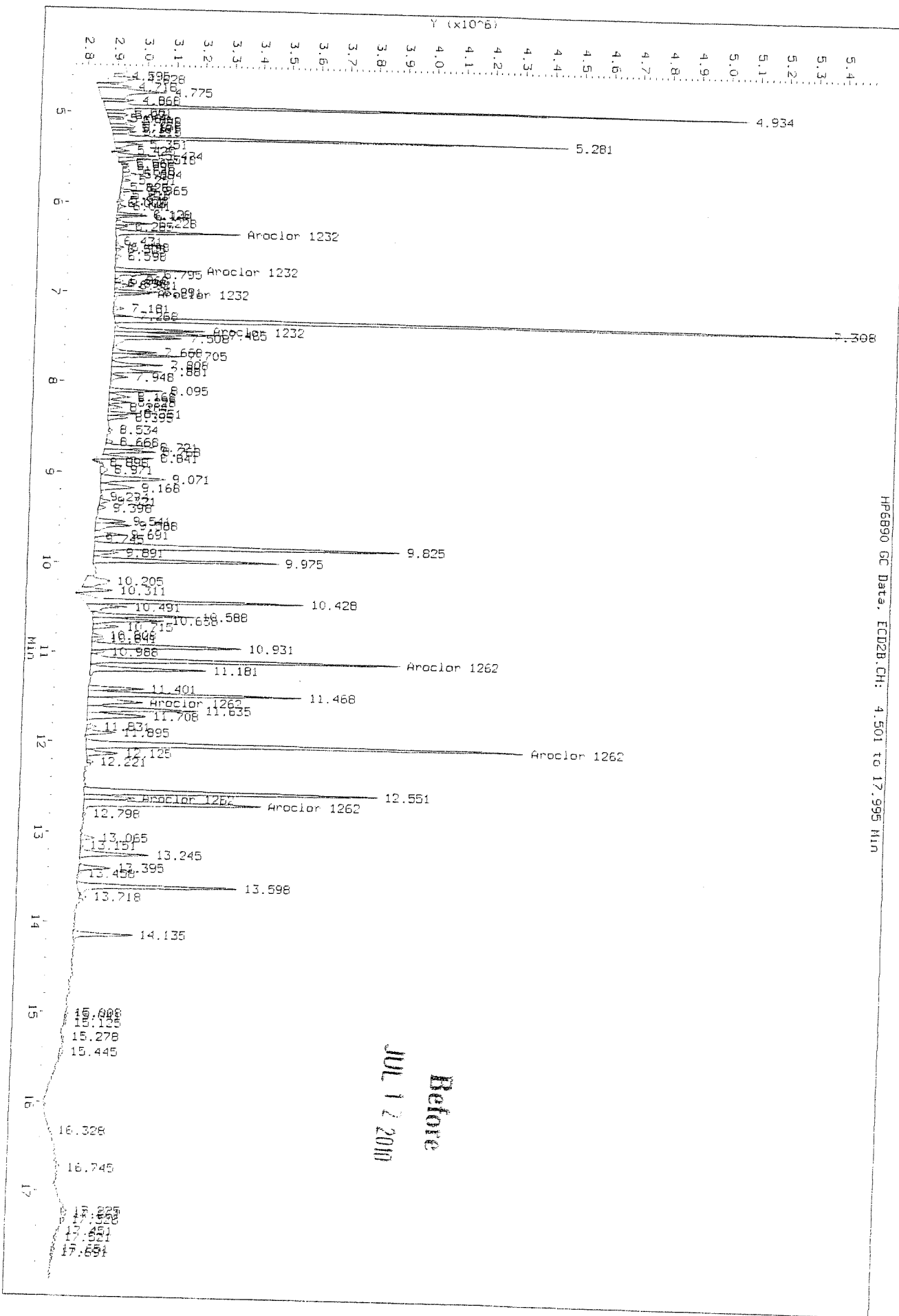
HP6890 GC Data, ECD1A.CH: 4.132 to 15.652 MIN

Working Peak  
 Peak Not Found  
 Baseline Shoulder  
 Interfered  
 Other

Initials: *[Signature]*  
 Date: JUL 12 2010  
 Name: *[Signature]*



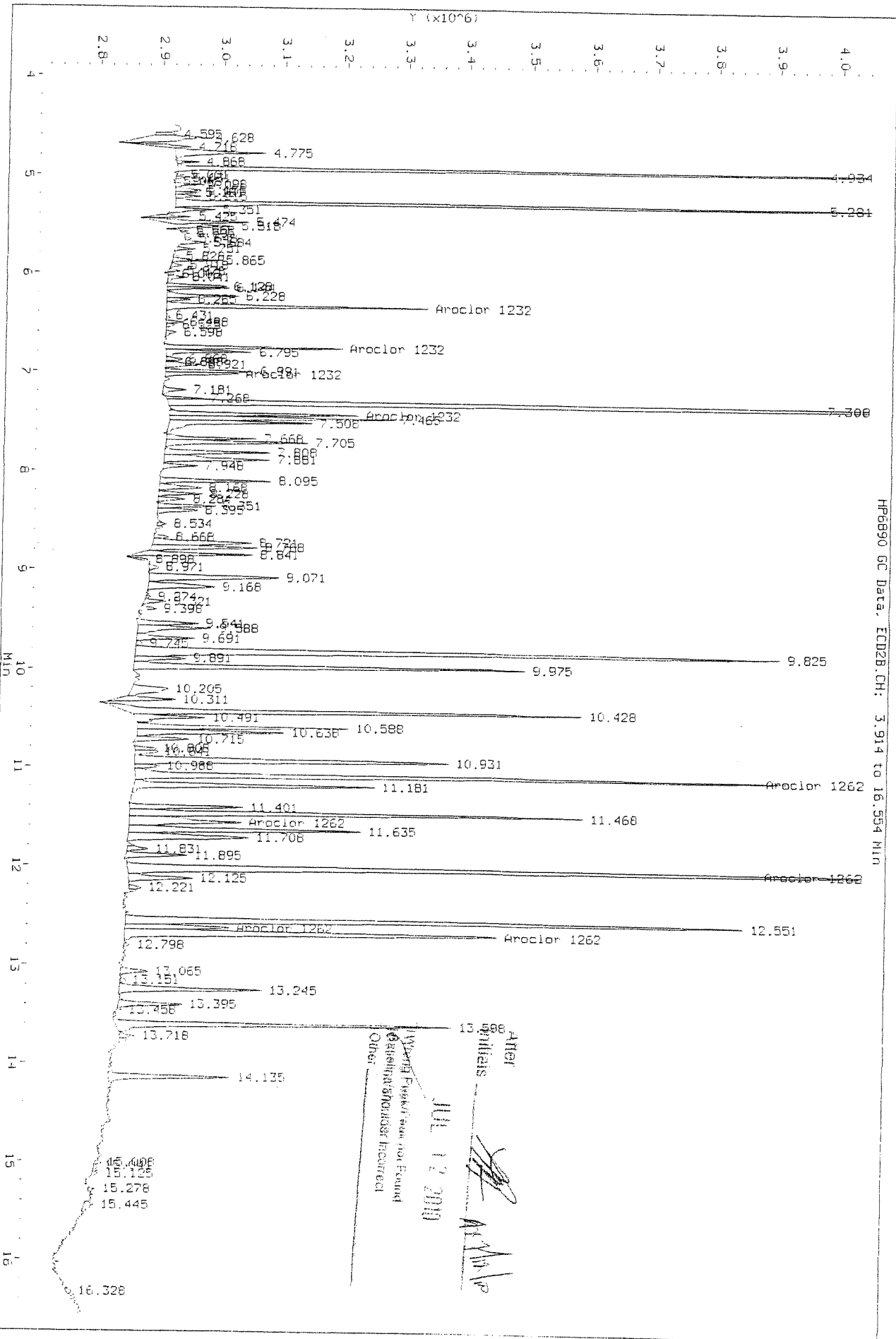
Data File: \\Cash1\Acq\data\GC22\data\070910\_r\_b\0709F016.D  
Injection Date: 10-JUL-2010 00:58  
Instrument: GC22.1  
Client Sample ID:



Before  
JUL 17 2010

HP6890 GC Data, ECD2B.CH: 4.501 to 17.995 MIN

Data File: \\Casht\Acqudata\GC22\data\070910\_r\_b\07091016.D  
 Injection Date: 10-JUL-2010 00:58  
 Instrument: GC22.1  
 Client Sample ID:



After Analysis  
 JUL 12 2010  
 Working Peak(s) not Found  
 Target(s) not Found  
 Other

HP6890 GC Data, ECD2B.CH: 3.914 to 16.554 MIN

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F017.D  
 Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F017.D  
 Inj Date : 10-JUL-2010 01:22  
 Sample Info: 1232/1262 @ 50ppb | PCB5-61D | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:54  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1232+1262.sub  
 Sub List #2 : 1232+1262.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

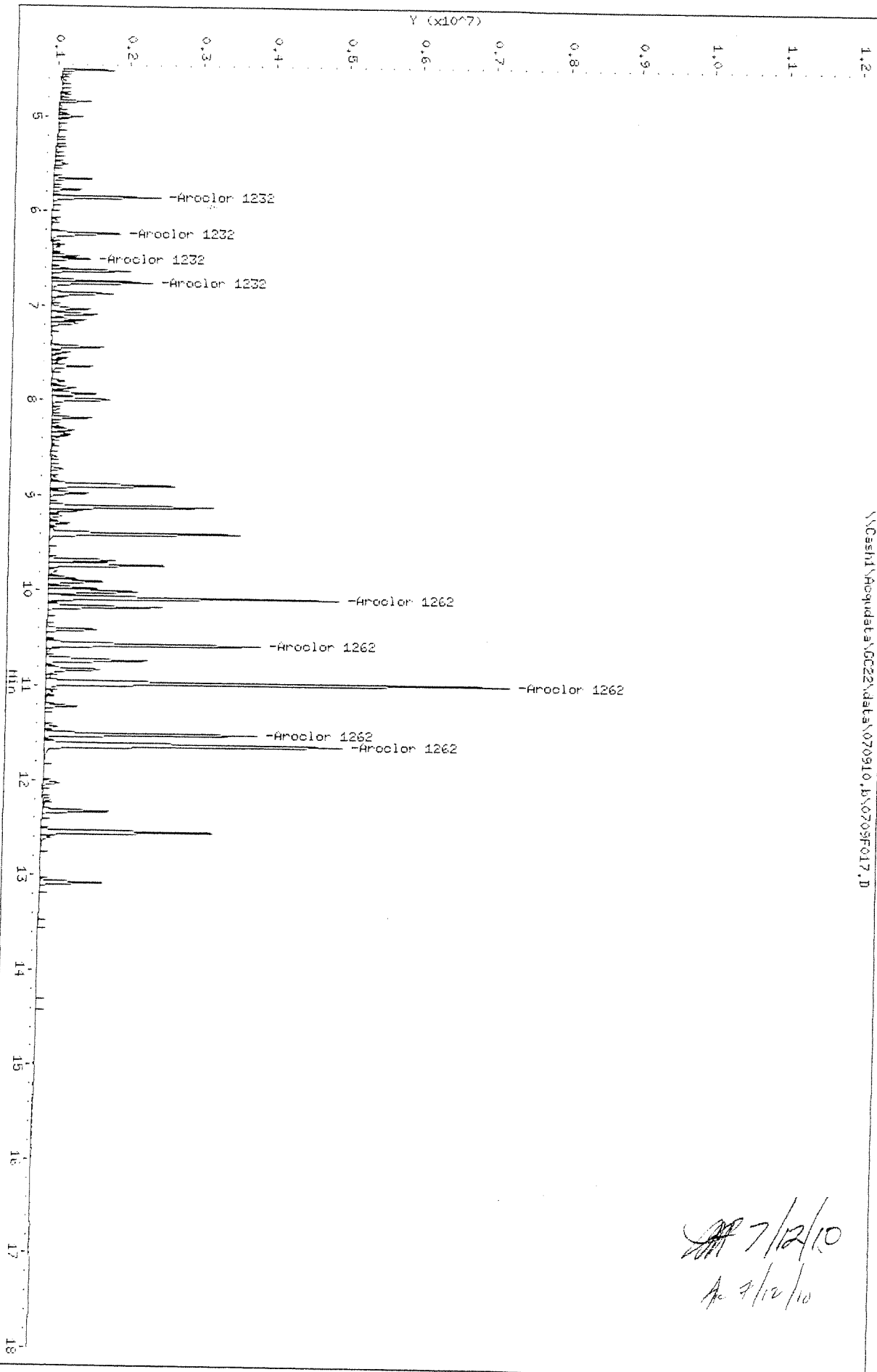
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	5.853	6.327	2062453	5604483	48.7	49.4	80.00- 120.00	100.00
	6.236	6.790	1875412	1782435	45.2	37.8	68.66- 102.99	90.93
	6.509	7.013	692187	1527845	44.1	47.0	26.81- 40.21	33.56
	6.759	7.417	2276093	4453796	51.1	50.4	91.83- 137.74	110.36
	Average of Peak Amounts =				47.3	46.2		
Aroclor 1262	10.076	11.080	6763243	17461677	46.5	49.0	80.00- 120.00	100.00
	10.569	11.467	5840699	12766365	45.9	49.0	69.82- 104.73	86.36
	10.969	12.023	11701566	28286566	47.8	47.6	152.17- 228.25	173.02
	11.519	12.550	5315712	19661288	43.2	48.5	63.79- 95.68	78.60
	11.629	12.677	9297543	14260159	45.6	49.3	116.50- 174.75	137.47
Average of Peak Amounts =				45.8	48.7			

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 7/12/10  
 Mr. Harris

Data File: \\CASH1\Acqudata\GC22\data\070910.B\0709F017.D  
Date: 10-JUL-2010 01:22  
Client ID:  
Sample Info: 1232/1262 @ 50ppb | PCB5-61D | KUC1006746-3  
Column phase: DB-35MS

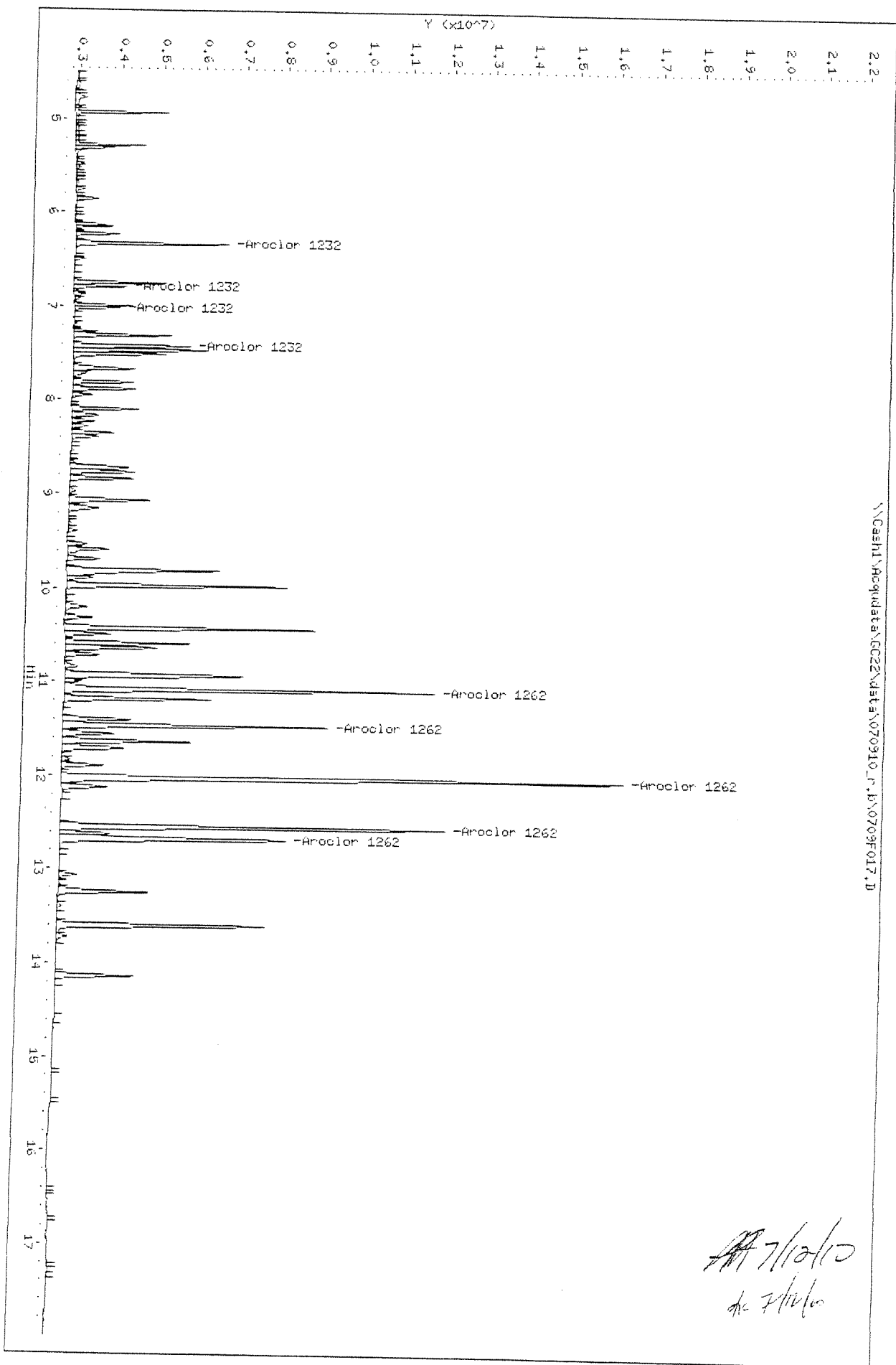
Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

\\CASH1\Acqudata\GC22\data\070910.B\0709F017.D



Data File: \\CashI\Acq\data\GC22\data\070910\_L.P\0709F017.D  
Date: 10-JUL-2010 01:22  
Client ID:  
Sample Info: 1232/1262 @ 50ppb | PCB5-61D | KMS1006746-3  
Column phase: DB-XLB

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



7/12/10  
LHarris

Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F018.D  
 Report Date: 12-Jul-2010 12:45

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F018.D  
 Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F018.D  
 Inj Date : 10-JUL-2010 01:47  
 Sample Info: 1232/1262 @ 100ppb | PCB5-61E | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:54  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

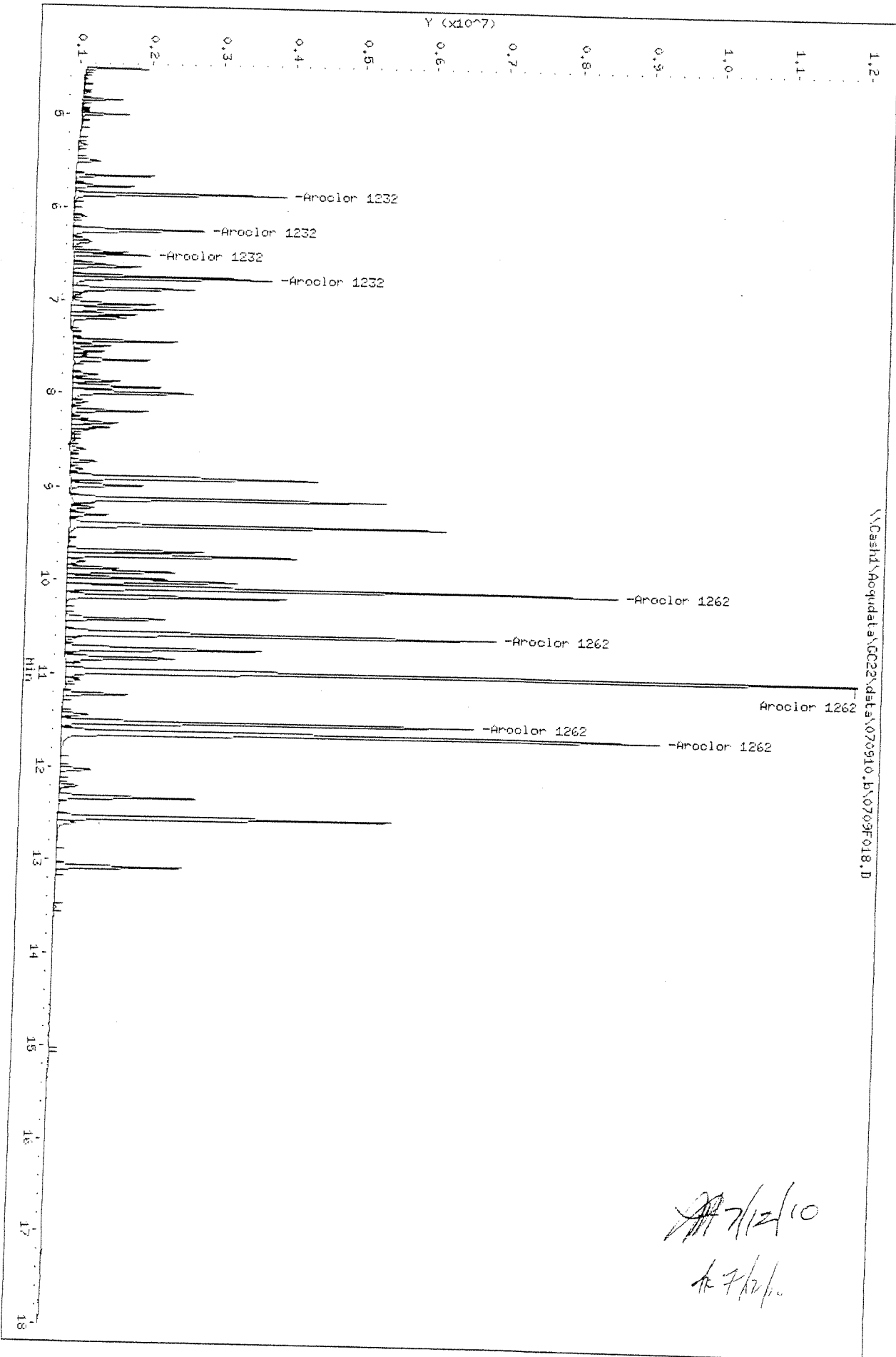
Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1232+1262.sub  
 Sub List #2 : 1232+1262.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	5.853	6.327	4202633	10896907	99.2	96.0	80.00- 120.00	100.00
	6.236	6.790	3697719	3517837	89.2	82.0	68.66- 102.99	87.99
	6.509	7.013	1405938	3259533	89.5	100	26.81- 40.21	33.45
	6.756	7.417	4471302	8851892	100	100	91.83- 137.74	106.39
	Average of Peak Amounts =				94.5	94.5		
Aroclor 1262	10.076	11.080	13446640	34889935	92.4	97.9	80.00- 120.00	100.00
	10.569	11.467	11658564	25394172	91.6	97.4	69.82- 104.73	86.70
	10.969	12.023	23936309	57434631	97.7	96.6	152.17- 228.25	178.01
	11.519	12.550	10639155	39201731	86.4	96.8	63.79- 95.68	79.12
	11.629	12.680	18866412	27788914	92.5	96.2	116.50- 174.75	140.31
Average of Peak Amounts =				92.1	97.0			

*[Handwritten signature]*  
 7/12/10

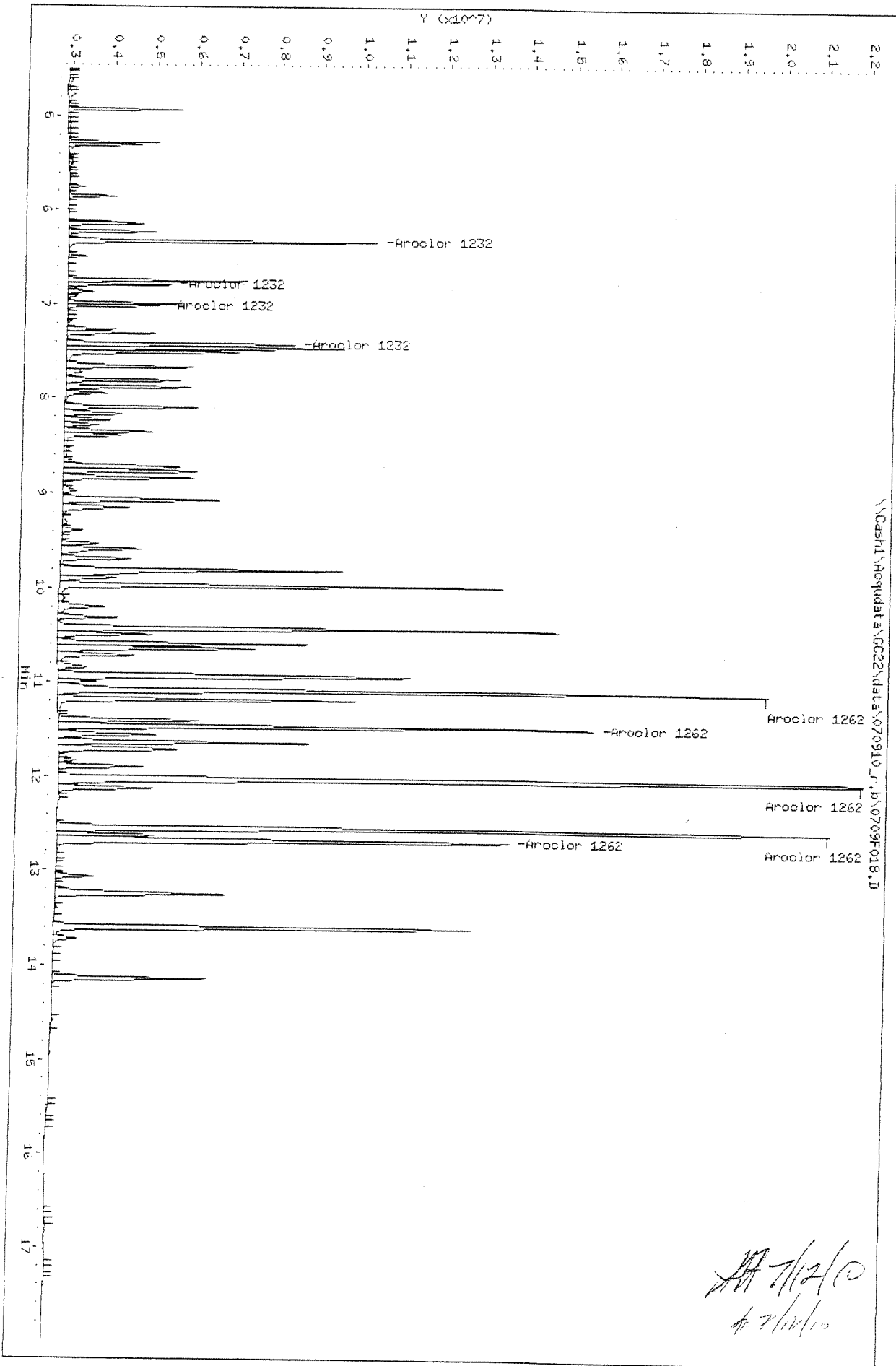
Data File: \\Cashd\Aocqudata\GC22\data\070910.B\0709F018.D  
Date: 10-JUL-2010 01:47  
Client ID:  
Sample Infol: 1232/1262 @ 100ppb | PCB5-61E | KNC1006746-3  
Column phase: DB-35MS

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32



Data File: \GASH1\Acq\data\GC22\data\070910\_r\_b\0709F018.D  
Date: 10-JUL-2010 01:47  
Client ID:  
Sample Info: 1232/1262 @ 100ppb | PCB5-6LE | K1G1006746-3  
Column Phase: DB-XLB

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



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Data File: \\Cash1\Acqdata\GC22\data\070910.b\0709F019.D  
 Report Date: 12-Jul-2010 12:45

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F019.D  
 Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F019.D  
 Inj Date : 10-JUL-2010 02:11  
 Sample Info: 1232/1262 @ 200ppb | PCB5-61F | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:54  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1232+1262.sub  
 Sub List #2 : 1232+1262.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	5.849	6.327	8221920	21229732	201	187	80.00- 120.00	100.00 (M)
	6.233	6.790	7089438	6679195	193	172	68.66- 102.99	86.23 (M)
	6.509	7.014	2813115	5919814	190	182	26.81- 40.21	34.21 (M)
	6.756	7.417	8415122	17155133	186	194	91.83- 137.74	102.35 (M)
	Average of Peak Amounts =				192	184		
Aroclor 1262	10.076	11.080	26621049	66819454	189	187	80.00- 120.00	100.00 (M)
	10.569	11.467	22981482	49123142	187	188	69.82- 104.73	86.33 (M)
	10.966	12.020	48872598	114664650	199	193	152.17- 228.25	183.59 (M)
	11.516	12.547	20792270	77425151	178	191	63.79- 95.68	78.10 (M)
	11.629	12.677	37147145	55082126	188	191	116.50- 174.75	139.54 (M)
Average of Peak Amounts =				188	190			

QC Flag Legend

M - Compound response manually integrated.

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 7/12/10  
 7/12/10



Data File: \\Cash1\hpc\data\GC22\data\070910\_r\_b\0709f019.D  
Date: 10-JUL-2010 02:11

Client ID:

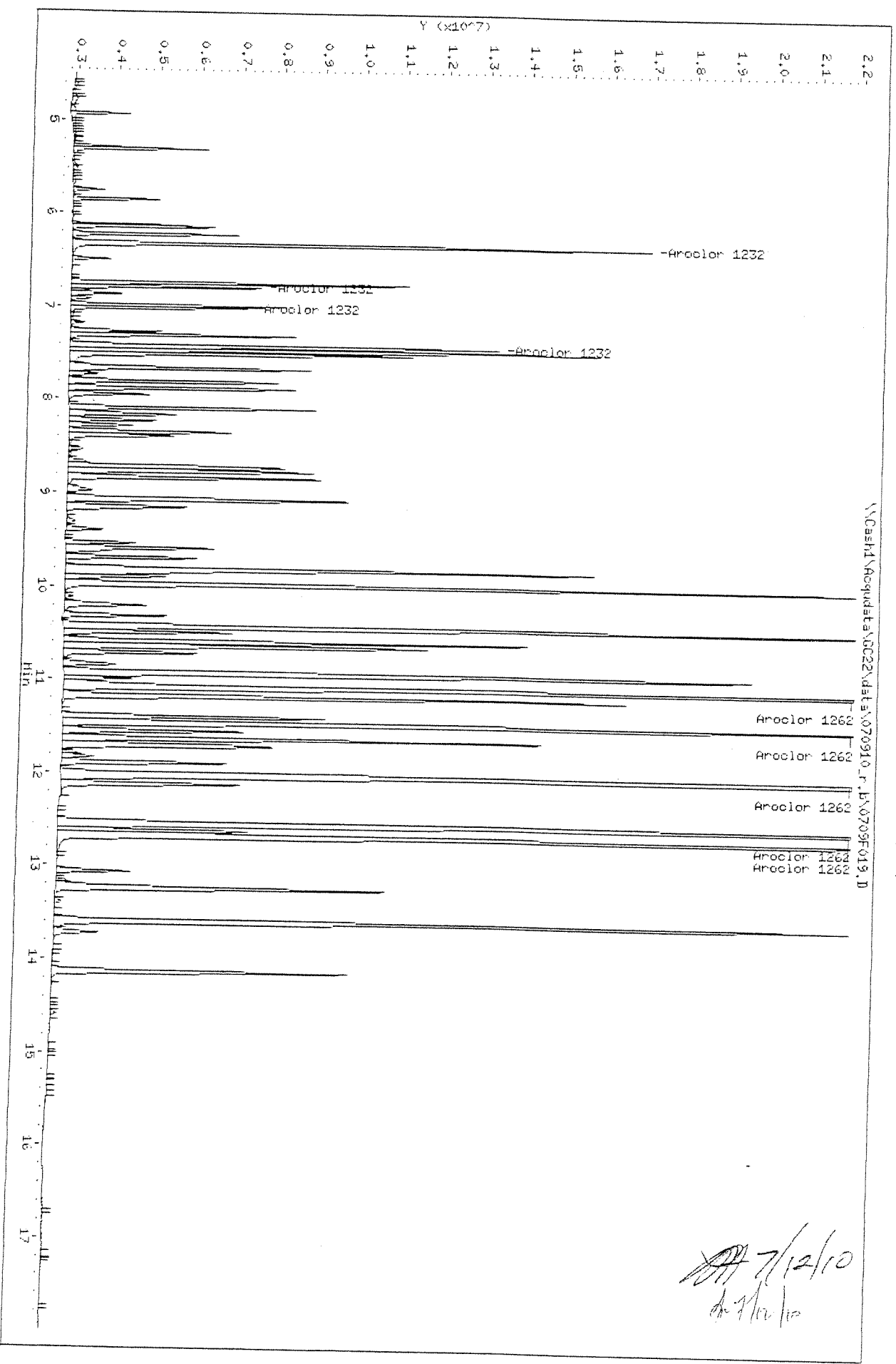
Sample Info: 1232/1262 @ 200ppb | PCBs-61F | KUC1006746-3

Column phase: DB-XLB

Instrument: GC22.i

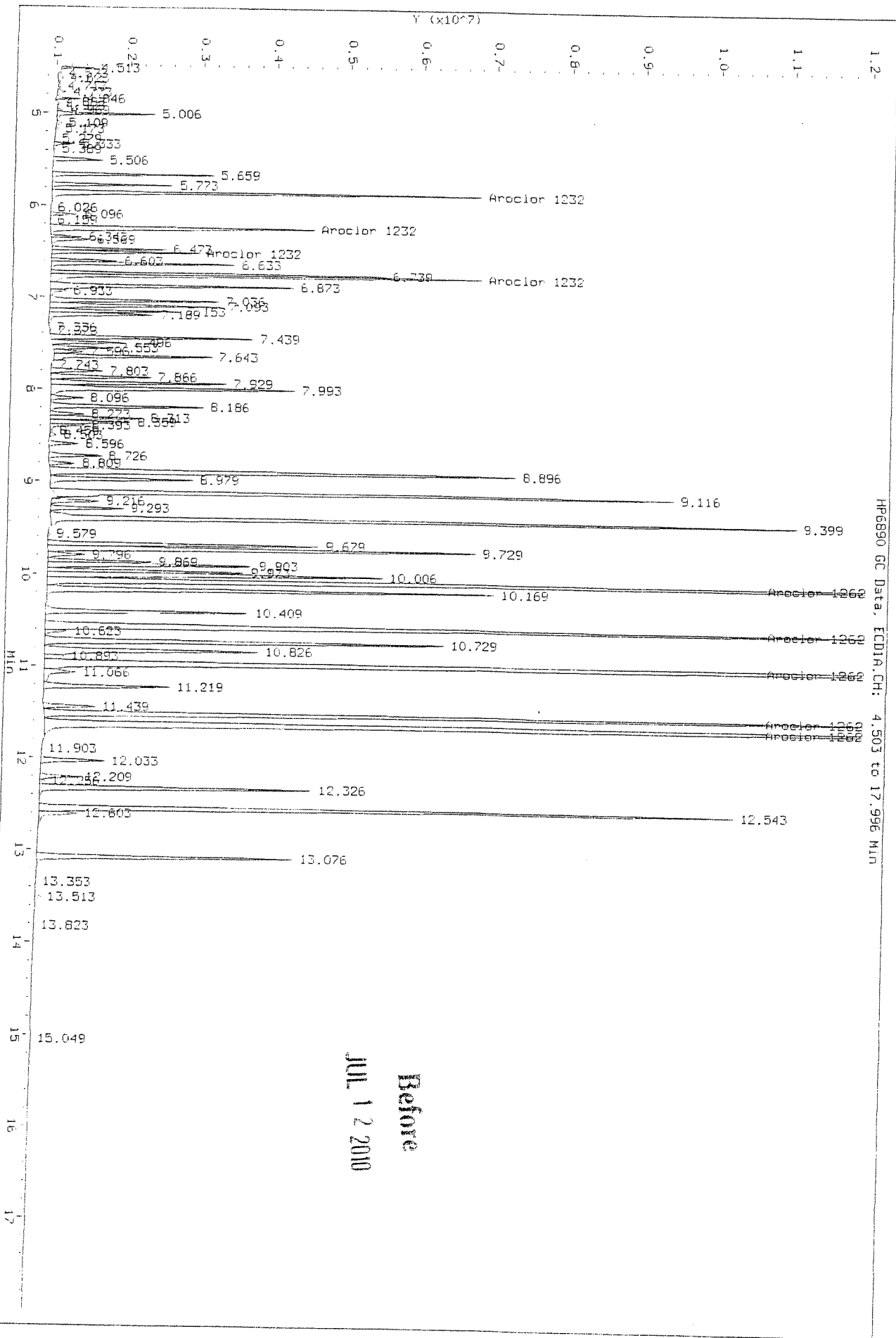
Operator: LHarris

Column diameter: 0.32



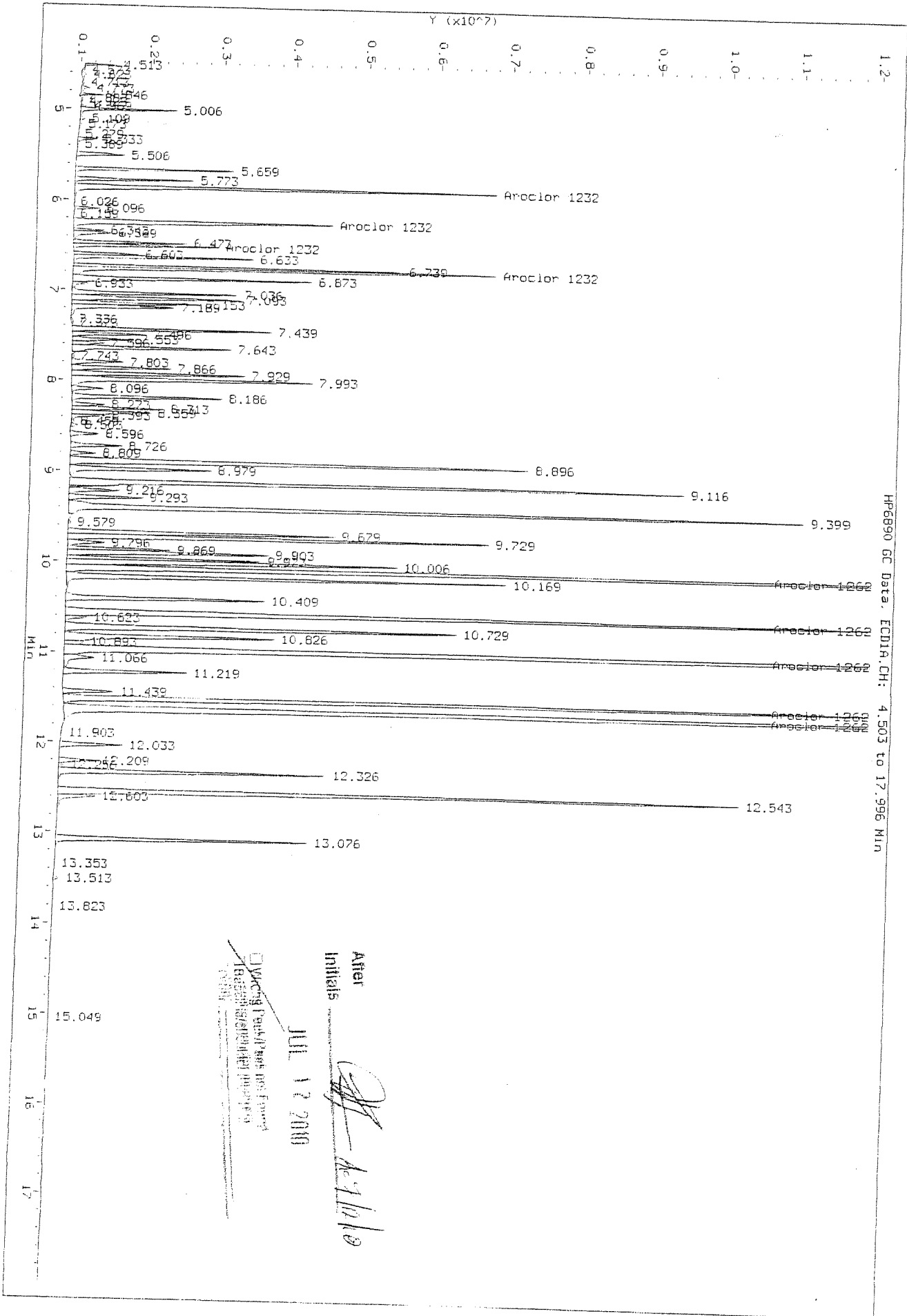
*Handwritten signature and date:*  
7/12/10  
de 7/12/10

Data File: \\Caspi\Acqudata\GC22\data\070910\_b\0709F019.D  
 Injection Date: 10-JUL-2010 02:11  
 Instrument: GC22.1  
 Client Sample ID:



Before  
 JUL 12 2010

Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F019.D  
 Injection Date: 10-JUL-2010 02:11  
 Instrument: GC22.1  
 Client Sample ID:



After  
 Initials  
 JUL 17 2010  
 Working Peak/Not for Entry  
 Reason:   
 [Signature]

Data File: \\Cash1\Acqdata\GC22\data\070910.b\0709F020.D  
Report Date: 12-Jul-2010 12:45

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F020.D  
Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F020.D  
Inj Date : 10-JUL-2010 02:35  
Sample Info: 1232/1262 @ 500ppb | PCB5-61G | KWG1006746-3  
Misc Info :  
Cal Date : 12-JUL-2010 09:54  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
Sub List #1 : 1232+1262.sub  
Sub List #2 : 1232+1262.sub  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	5.848	6.325	19805545	49085093	485	432	80.00- 120.00	100.00 (M)
	6.231	6.789	16997425	15613877	463	444	68.66- 102.99	85.82 (M)
	6.508	7.009	6637086	14023539	449	431	26.81- 40.21	33.51 (M)
	6.755	7.415	22733715	40092998	500	454	92.83- 137.74	114.78 (M)
	Average of Peak Amounts =				474	440		
Aroclor 1262	10.075	11.079	65903562	164292761	467	461	80.00- 120.00	100.00 (M)
	10.568	11.465	57515841	122169423	469	469	69.82- 104.73	87.27 (M)
	10.968	12.019	125356434	291183553	512	490	152.17- 228.25	190.21 (M)
	11.515	12.549	52546074	192598866	450	475	63.79- 95.68	79.73 (M)
	11.628	12.679	95972745	134917664	486	467	116.50- 174.75	145.63 (M)
	Average of Peak Amounts =				477	472		

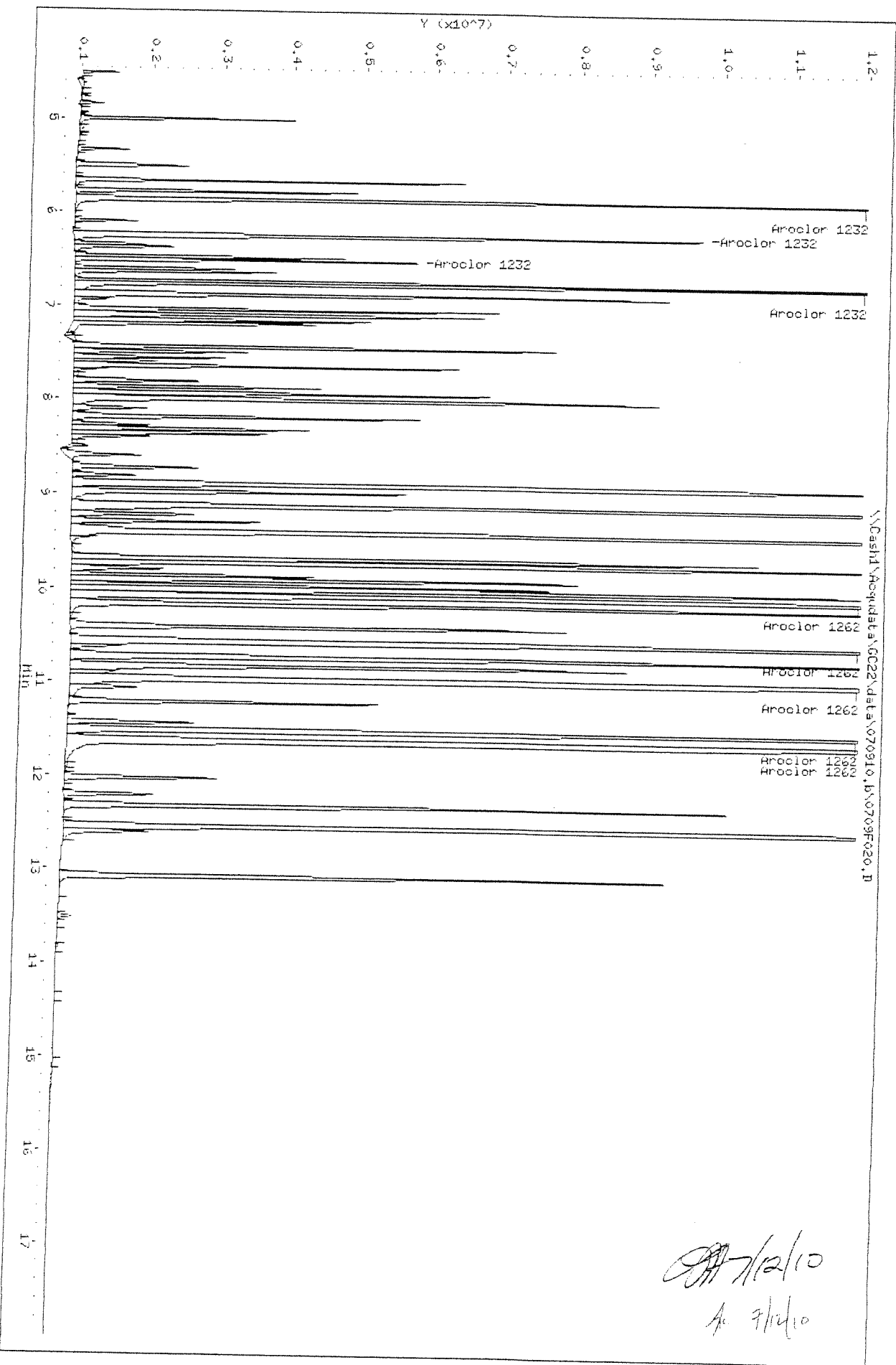
QC Flag Legend

M - Compound response manually integrated.

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Ac 7/12/10

Data File: \\Casha1\Acquidat\GC22\data\070910\_1\0709F020.D  
Date: 10-JUL-2010 02:35  
Client ID:  
Sample Info: 1232/1262 @ 500ppb | PCB5-61G | KMS10006746-3  
Column Phase: DB-35MS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



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A. 7/12/10

Data File: \\Cash1\Acq\data\GC22\data\070910\_r\_b\0709F020.D  
Date: 10-JUL-2010 02:35

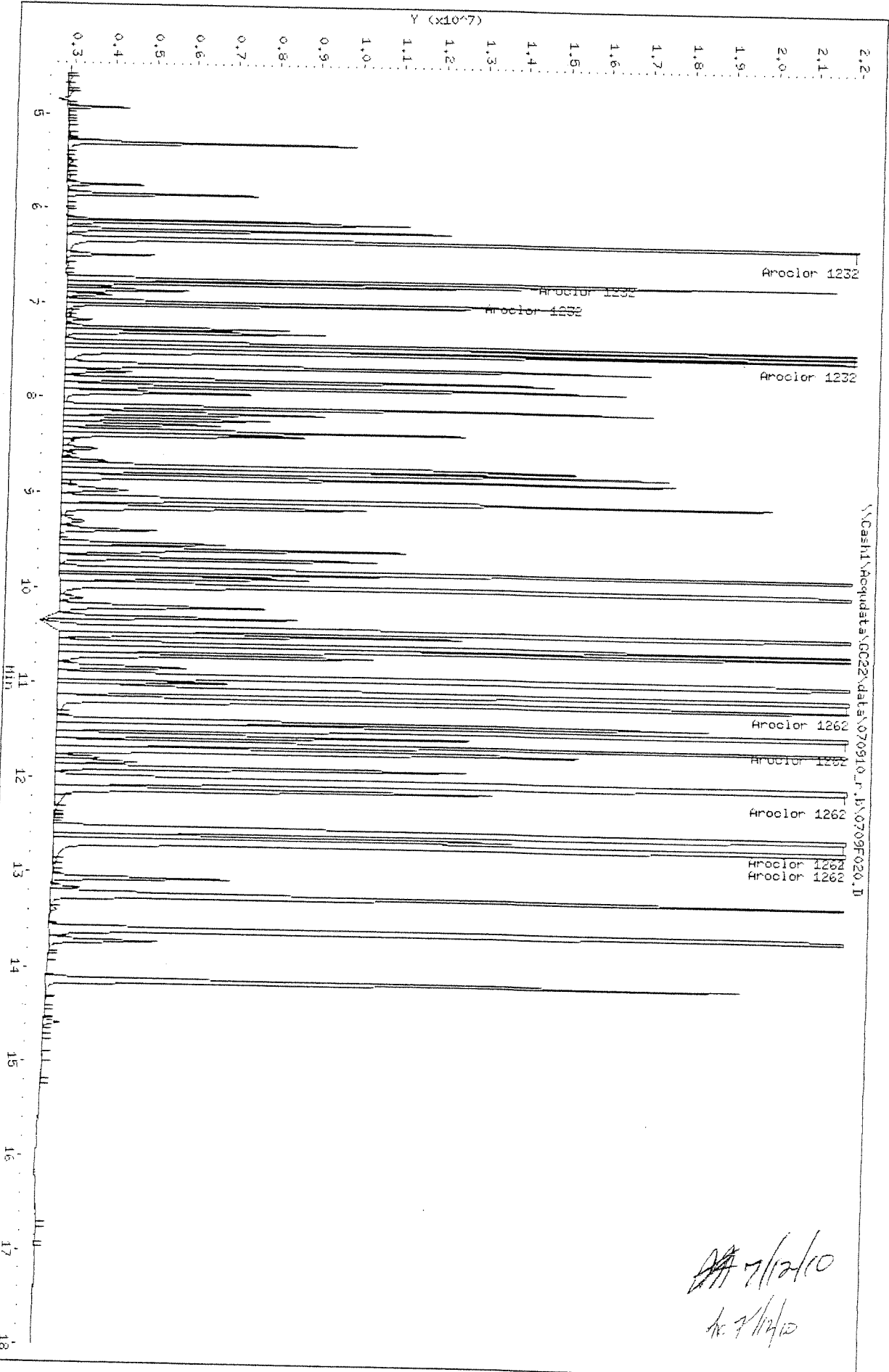
Client ID:  
Sample Info: 1232/1262 @ 500ppb | PCBs-610 | KMC1006748-3

Column phase: DB-XLB

Instrument: GC22.i

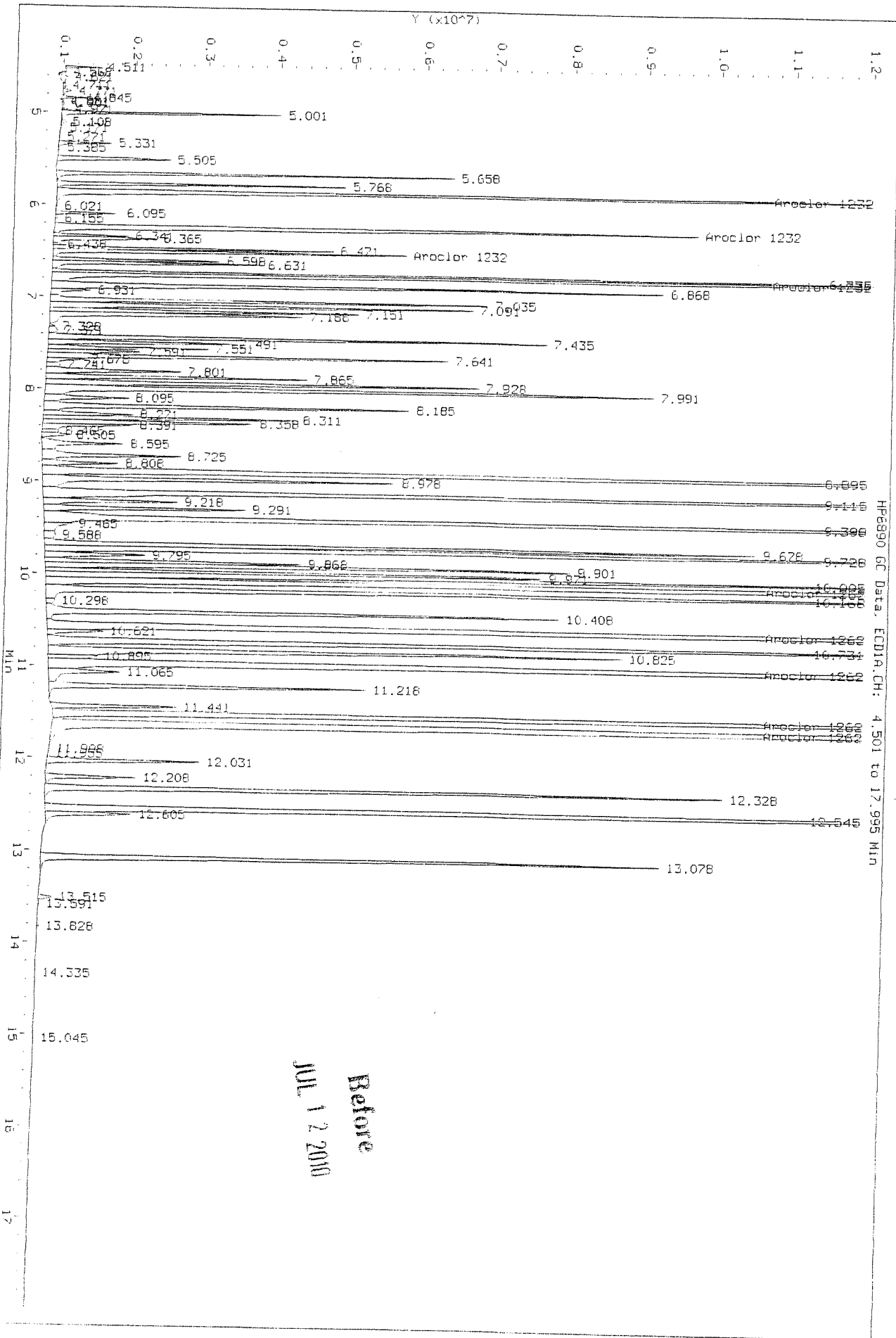
Operator: LHarris

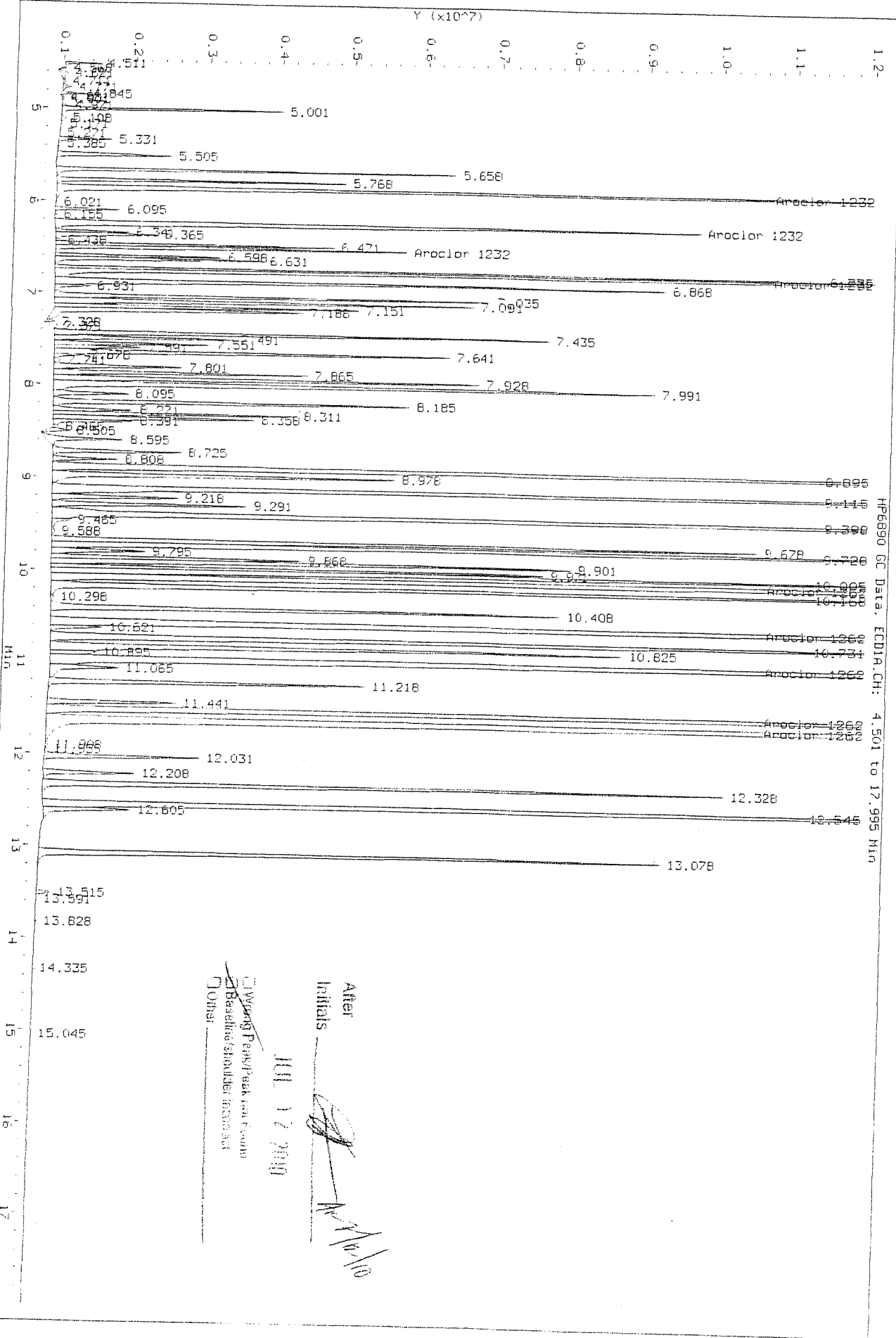
Column diameter: 0.32





Data File: \\Cash1\Acqudata\GC22\data\070910\_b\0709f020.D  
 Injection Date: 10-JUL-2010 02:35  
 Instrument: GC22.1  
 Client Sample ID:

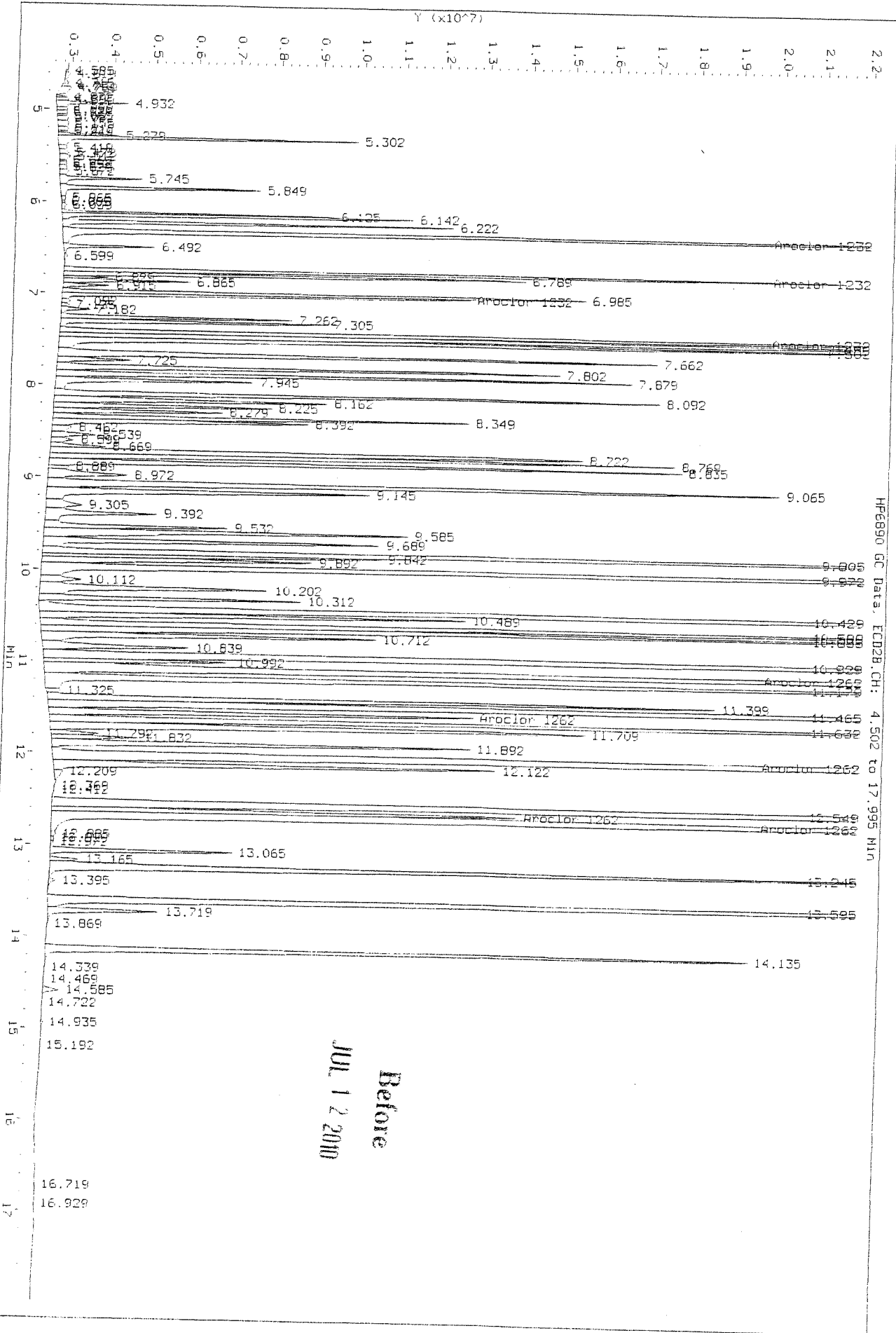




HP6890 GC Data, ECD1A.CH: 4.501 to 17.995 Min

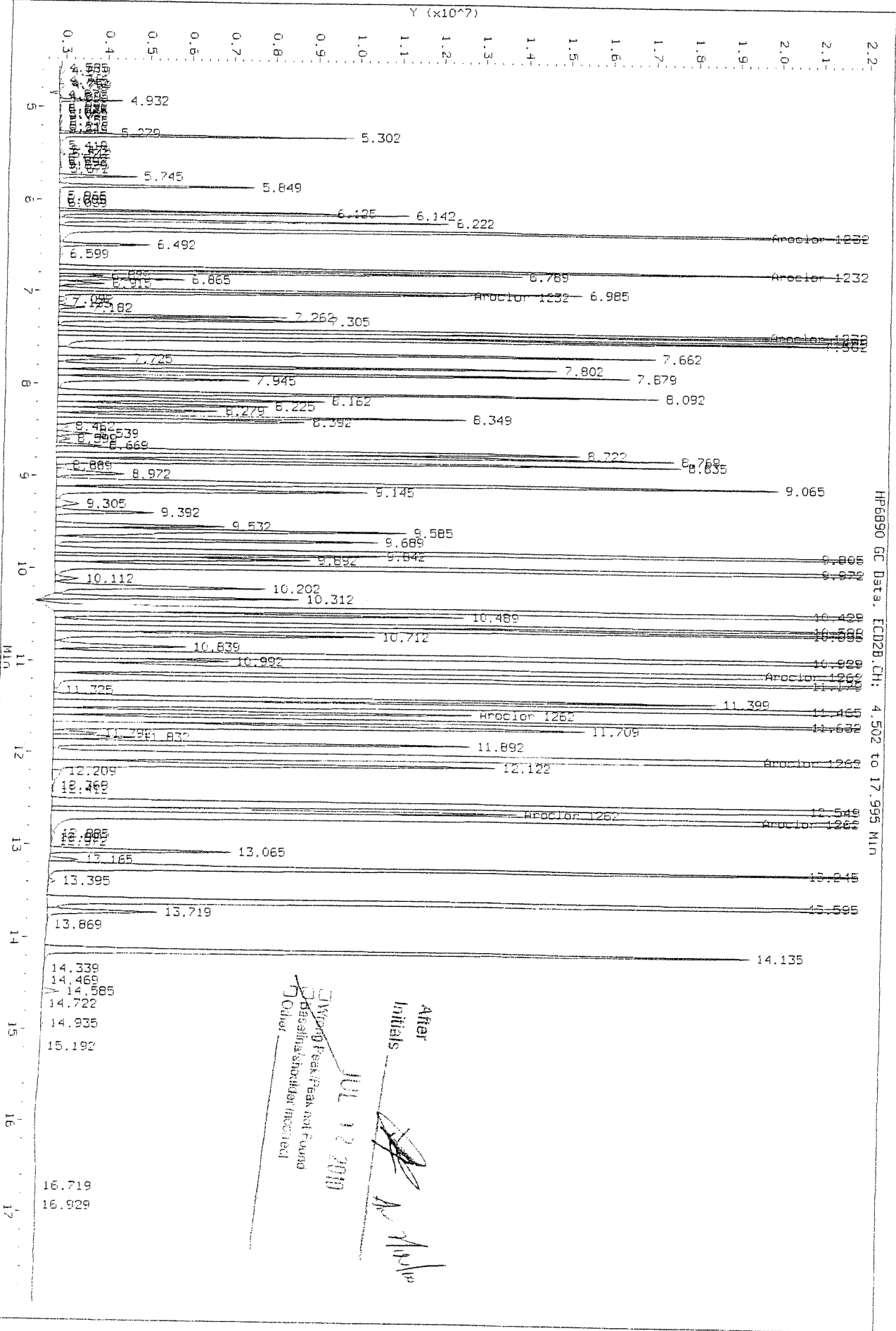
After  
 Initials  
 JUL 17 2010  
 Verify Peak from Form  
 Baseline/Stalder from sat  
 Other

Data File: \\Cash1\Acq\data\GC22\data\070910\_r.b\07091020.D  
 Injection Date: 10-JUL-2010 02:35  
 Instrument: GC22.1  
 Client Sample ID:



Before  
 JUL 12 2010

Data File: \\Cash1\Acq\data\GC22\data\070910\_r.D\0709F020.D  
 Injection Date: 10-JUL-2010 02:39  
 Instrument: GC22.1  
 Client Sample ID:



Data File: \\Cash1\Acqdata\GC22\data\070910.b\0709F021.D  
 Report Date: 12-Jul-2010 12:45

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F021.D  
 Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F021.D  
 Inj Date : 10-JUL-2010 02:59  
 Sample Info: 1242/1268 @ 2.5ppb | PCB5-61H | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:54  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1242+1268.sub  
 Sub List #2 : 1242+1268.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	6.509	6.989	76973	176965	2.83	2.76	80.00- 120.00	100.00 (M)
	6.759	7.463	218001	573561	2.58	2.85	274.61- 411.91	283.22 (M)
	7.039	7.503	71804	306132	2.18	2.25	104.82- 157.23	93.29 (M)
	7.152	7.666	92173	229295	3.00	2.23	83.37- 125.05	119.75 (M)
	7.435	8.093	115806	304780	2.52	2.89	137.75- 206.62	150.45 (M)
	Average of Peak Amounts =					2.62	2.60	
Aroclor 1268	11.519	12.553	1088869	2522394	2.69	2.78	80.00- 120.00	100.00 (M)
	11.625	12.683	936612	2249506	2.61	2.72	73.14- 109.70	86.02 (M)
	12.029	13.066	739761	1848935	2.53	2.77	59.19- 88.79	67.94 (M)
	12.545	13.596	288776	674345	2.55	2.69	23.16- 34.74	26.52 (M)
	13.075	14.136	1958356	4902327	2.38	2.75	170.02- 255.03	179.85 (M)
	Average of Peak Amounts =					2.55	2.74	

QC Flag Legend

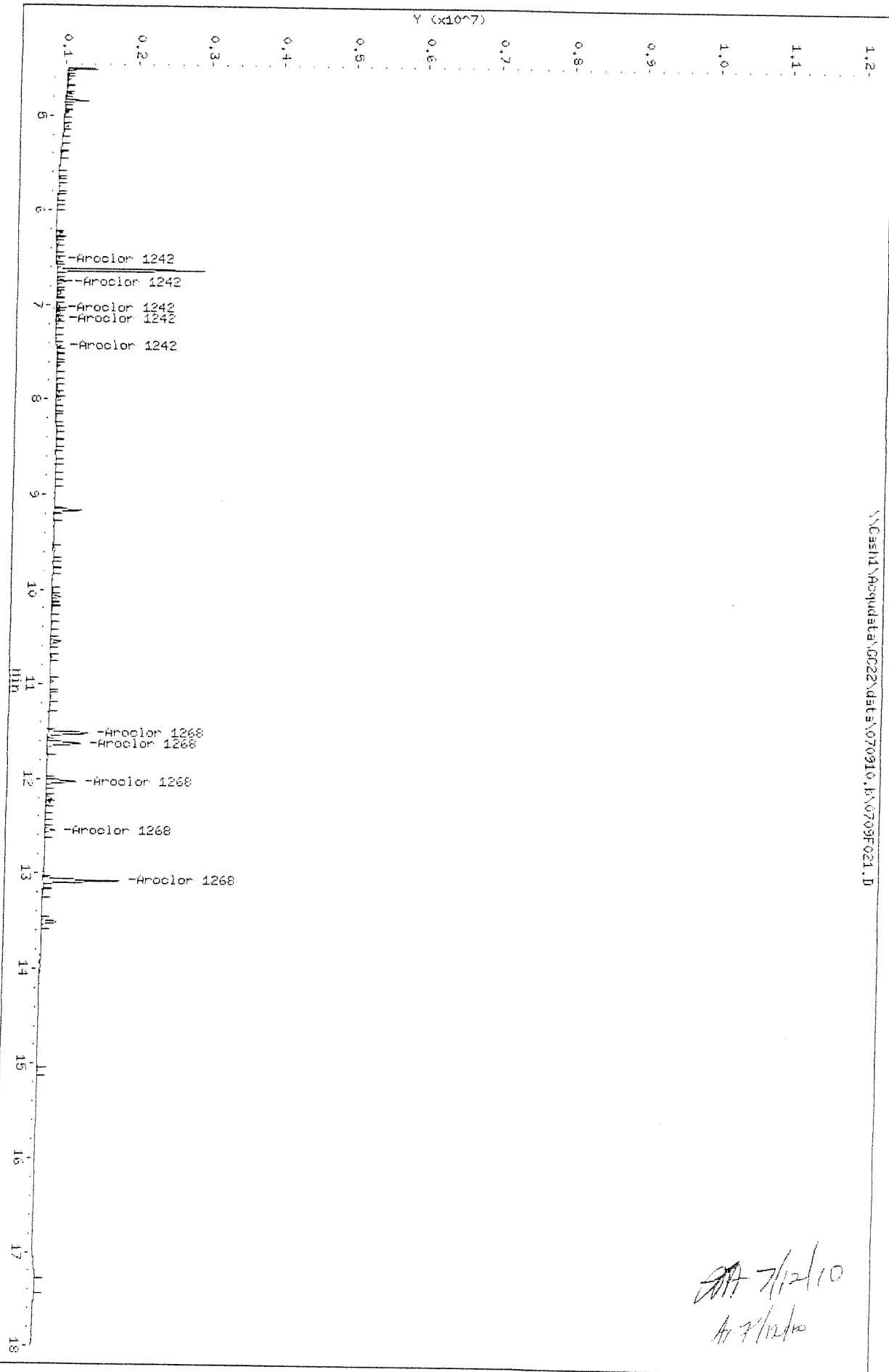
M - Compound response manually integrated.

*Handwritten signature and date:*  
 7/12/10  
 A. Harris

Data File: \NCSH1\Acqudata\GC22\data\070910\_18\0709F021.D  
Date: 10-JUL-2010 02:59  
Client ID:  
Sample Info: 1242/1268 @ 2.5ppb | PCBs-61H | K101006746-3  
Column phase: DB-35MS

Instrument: GC22.1  
Operator: LHarri  
Column diameter: 0.32

\NCSH1\Acqudata\GC22\data\070910\_18\0709F021.D

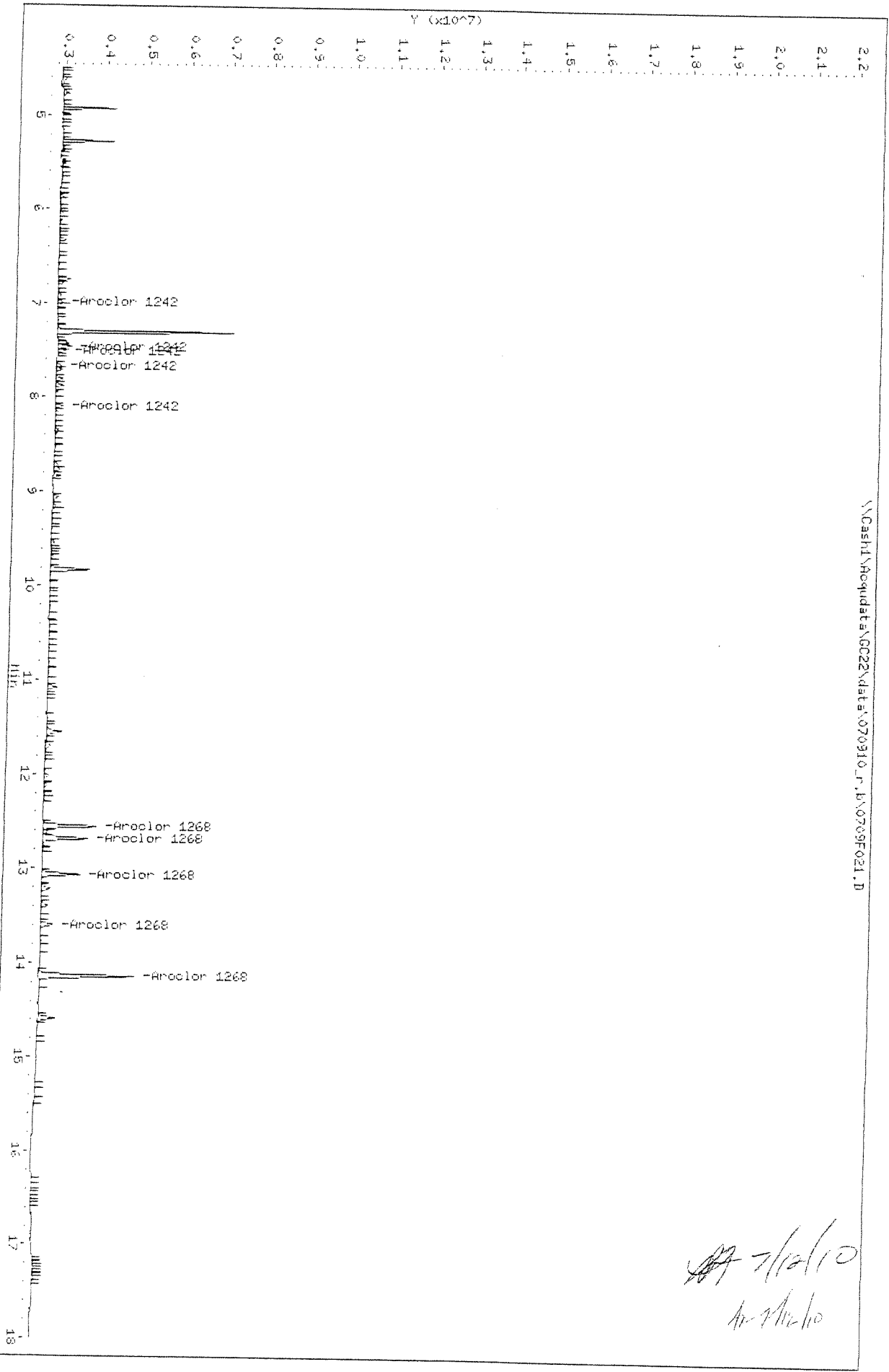


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7/12/10  
A 7/12/10

Data File: \\CASH1\Acqudata\GC22\data\070910\_r.b\0709F021.D  
 Date: 10-JUL-2010 02:59  
 Client ID:  
 Sample Info: 1242/1268 @ 2.0ppm | PCB5-63H | KMG1006746-3  
 Column Phase: DB-RLB

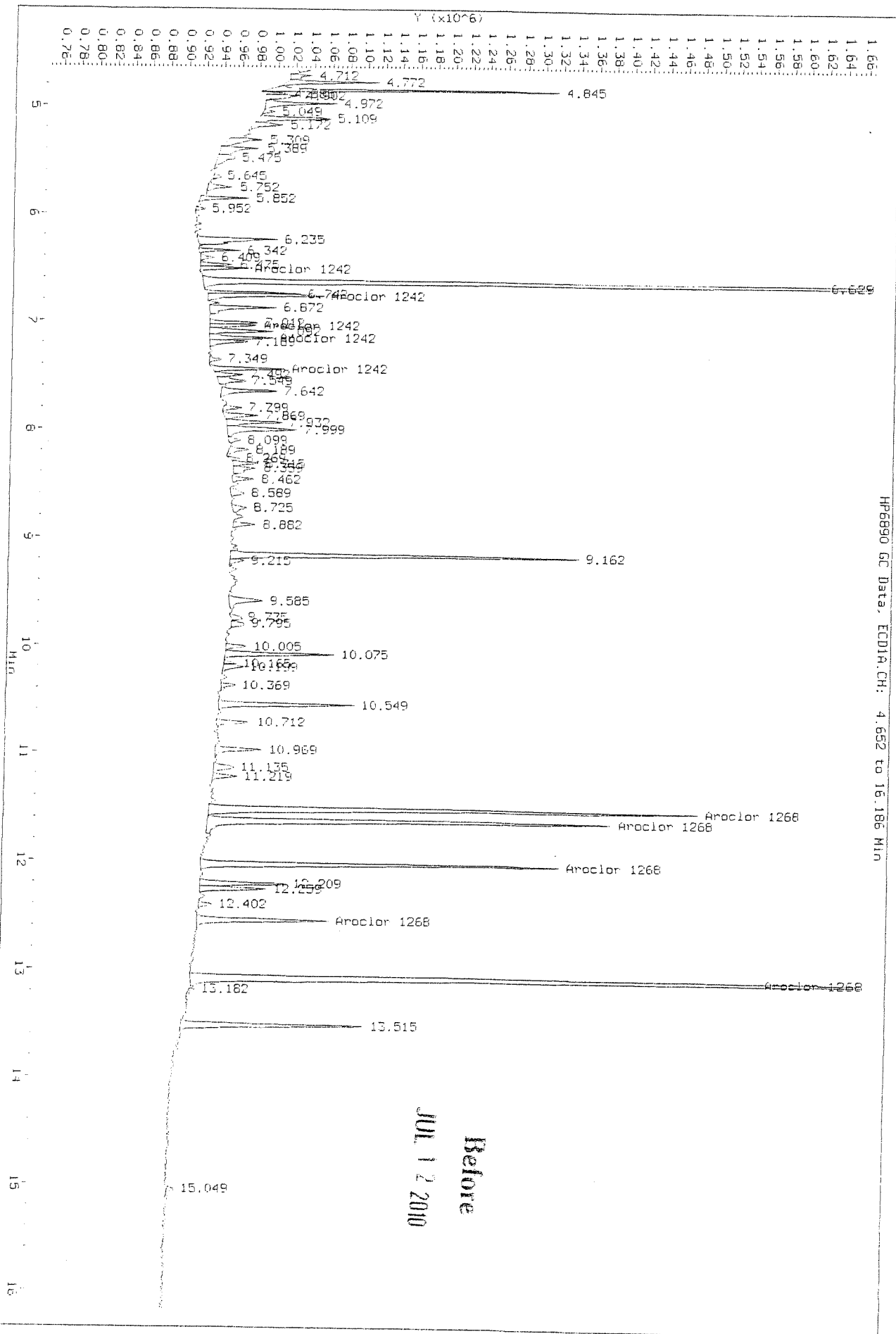
Instrument: GC22.1  
 Operator: LHarris  
 Column diameter: 0.32

\\CASH1\Acqudata\GC22\data\070910\_r.b\0709F021.D



*Handwritten signature:* [Signature]  
 [Signature]

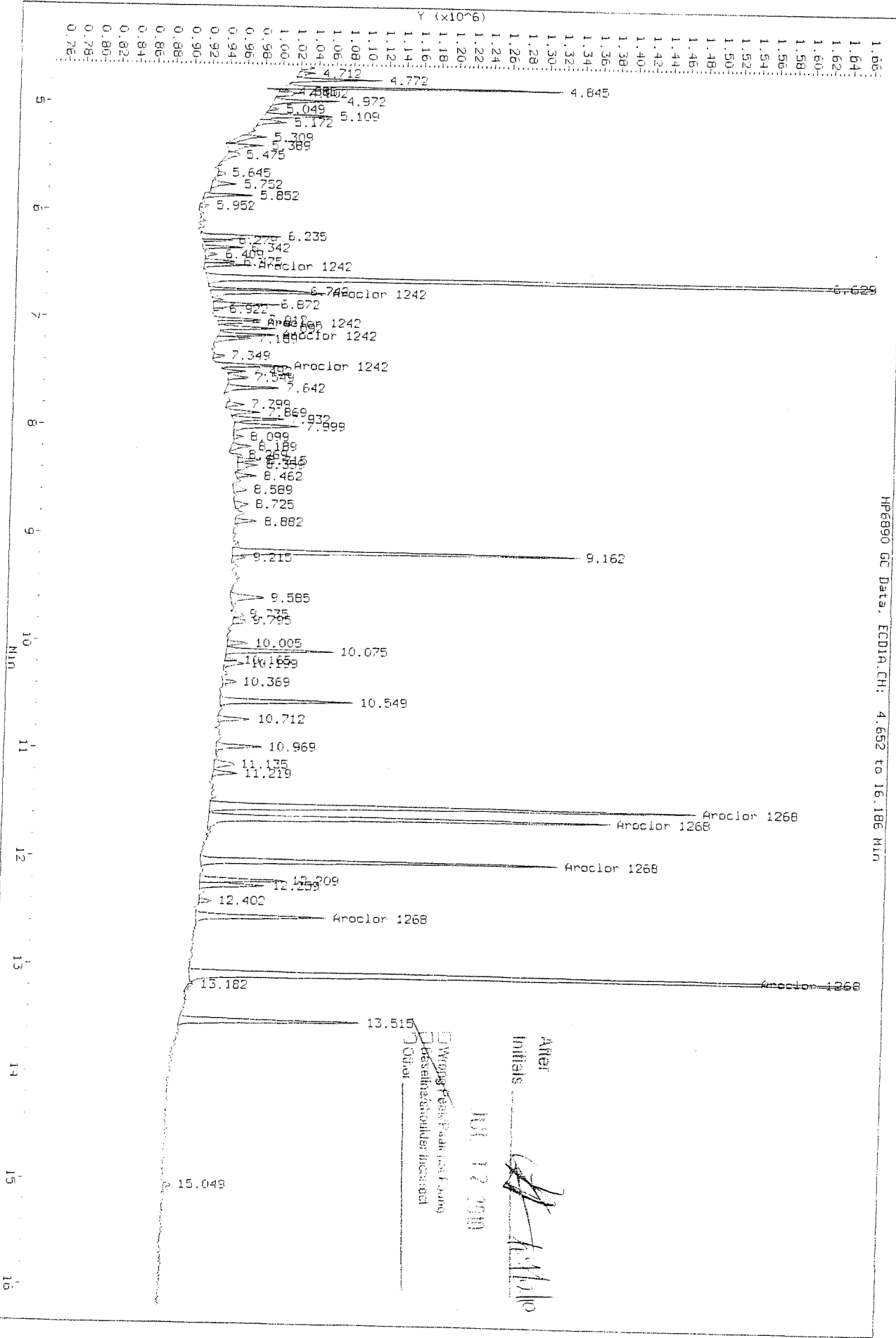
Date File: \\Ceshti\Acq\data\GC22\data\070910.D\07091021.D  
 Injection Date: 10-JUL-2010 02:59  
 Instrument: GC22.1  
 Client Sample ID:



Before  
 JUL 12 2010

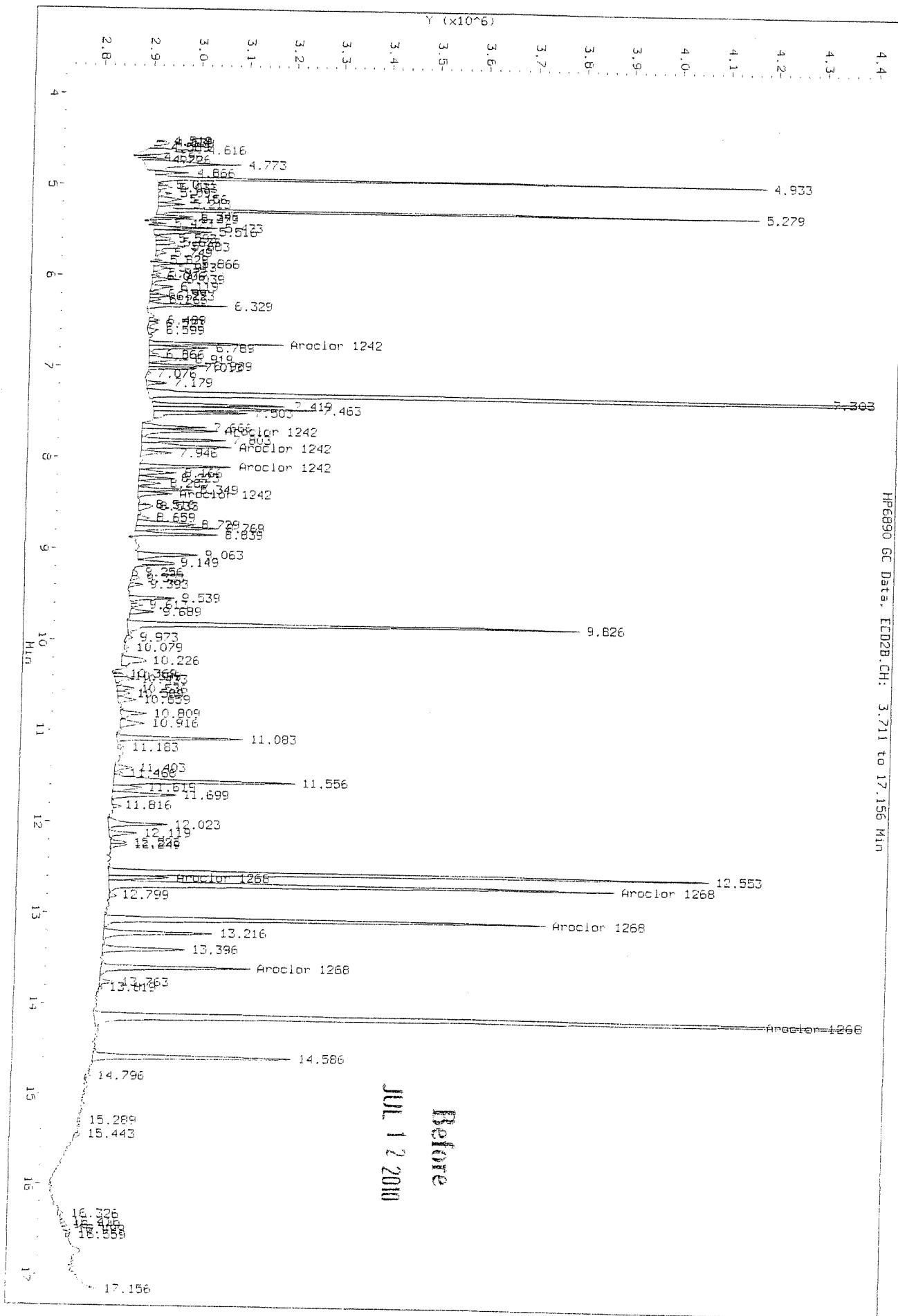


Data File: \\Casht\Acqdata\GC22\data\070910\_b\0709F021.D  
 Injection Date: 10-JUL-2010 02:59  
 Instrument: GC22.1  
 Client Sample ID:



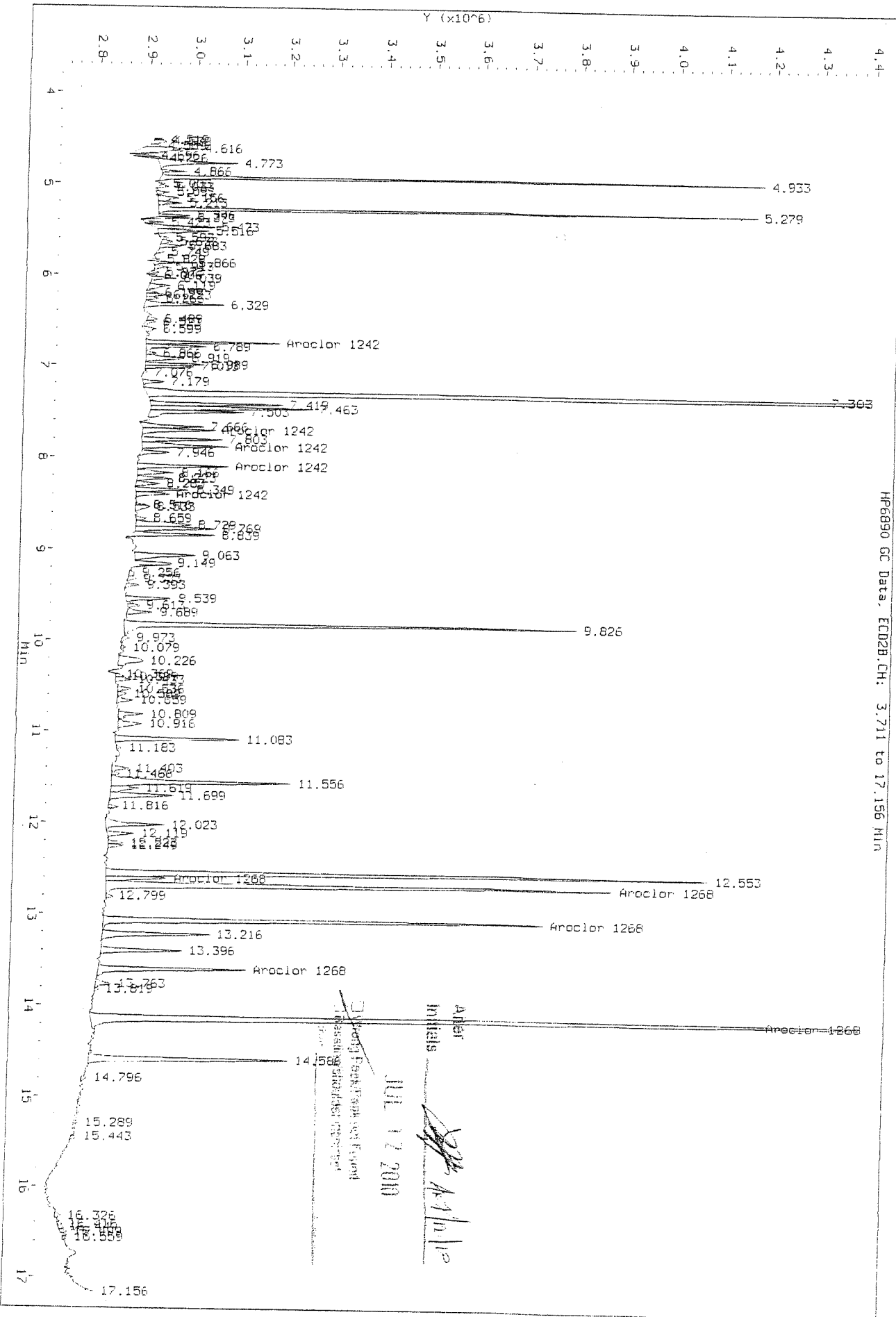
HP6890 GC Data, ECD1A.CH: 4.652 to 16.186 Min

Wrong Peak Found  
 Residuals/Shoulder Inclusion  
 Other  
 Initials: *[Signature]*  
 Date: 12/29/10



Before  
 JUL 12 2010

Data File: \\Cash1\Acqudata\GC22\data\070910\_r\_bv0709f021.D  
Injection Date: 10-JUL-2010 02:59  
Instrument: GC22.1  
Client Sample ID:



HP6890 GC Data, ECD2B.CH: 3.711 to 17.156 Min

ANALYST: [Signature]  
INITIALS: [Signature]  
DATE: JUL 17 2010  
TIME: 10:10:10  
LABORATORY: [Signature]

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F022.D  
 Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F022.D  
 Inj Date : 10-JUL-2010 03:24  
 Sample Info: 1242/1268 @ 5.0ppb | PCB5-61I | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:55  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1242+1268.sub  
 Sub List #2 : 1242+1268.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	6.509	6.986	142283	372179	5.22	5.74	80.00- 120.00	100.00 (M)
	6.759	7.459	423862	1132694	4.99	5.63	274.61- 411.91	297.90 (M)
	7.039	7.503	151972	777458	4.72	5.71	104.82- 157.23	106.81 (M)
	7.152	7.666	141517	491228	4.66	4.78	83.37- 125.05	99.46 (M)
	7.435	8.093	239529	581610	5.32	5.51	137.75- 206.62	168.35 (M)
	Average of Peak Amounts =				5.02	5.47		
Aroclor 1268	11.515	12.553	2031276	4948809	5.02	5.44	80.00- 120.00	100.00 (M)
	11.625	12.683	1775927	4462670	4.95	5.40	73.14- 109.70	87.43 (M)
	12.029	13.063	1451934	3654674	4.97	5.47	59.19- 88.79	71.48 (M)
	12.542	13.596	562446	1322701	4.96	5.28	23.16- 34.74	27.69 (M)
	13.075	14.136	3978985	9510397	4.82	5.33	170.02- 255.03	195.89 (M)
	Average of Peak Amounts =				4.94	5.38		

QC Flag Legend

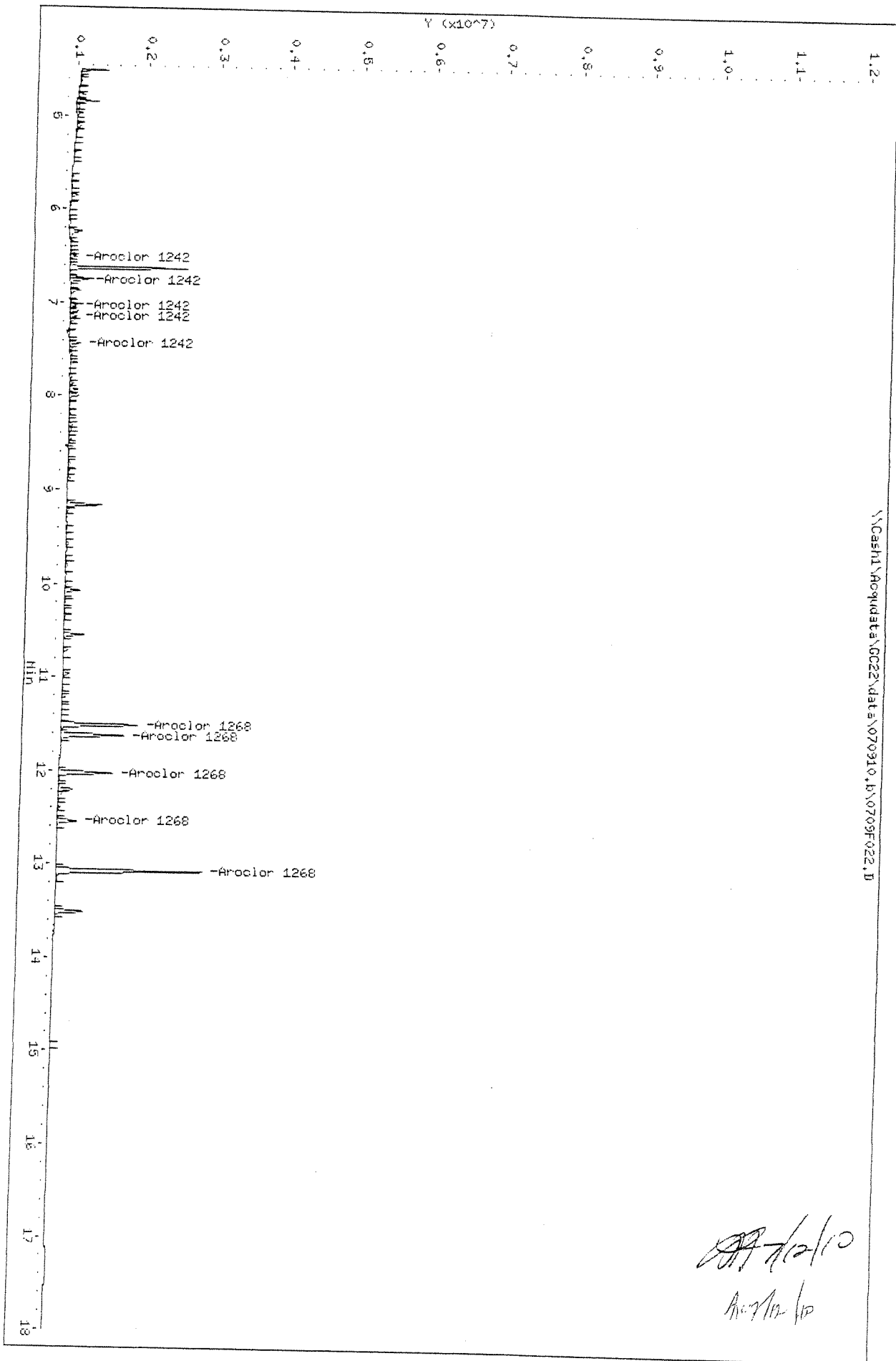
M - Compound response manually integrated.

*Handwritten signature and date: 7/12/10*

Data File: \\Cash1\Acq\data\GC22\data\070910.B\0709F022.D  
Date: 10-JUL-2010 03:24  
Client ID:  
Sample Info: 1242/1268 @ 5.0ppb | PCB5-611 | KH01006746-3  
Column phaset: DB-35HS

Instrument: GC22.i  
Operator: Lharris  
Column diameter: 0.32

\\Cash1\Acq\data\GC22\data\070910.B\0709F022.D

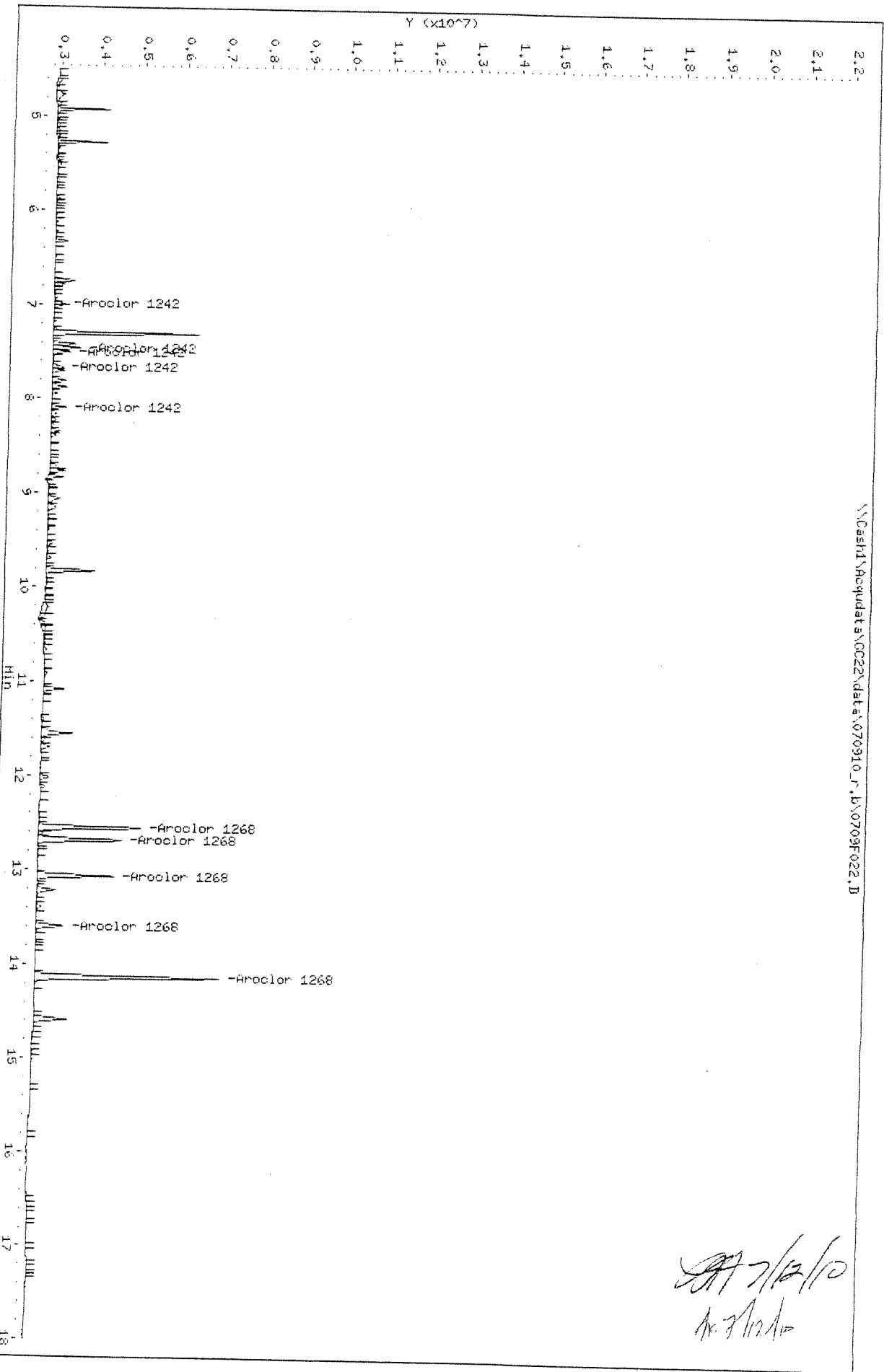


*Handwritten signature and date: 7/12/10*

Data File: \\Cash1\Acqudata\GC22\data\070910\_r\_b\0709F022.D  
Date: 10-JUL-2010 03:24  
Client ID:  
Sample Info: 1242/1268 @ 5.0ppb | PCB5-611 | KHS1006746-3  
Column phase: DB-XLB

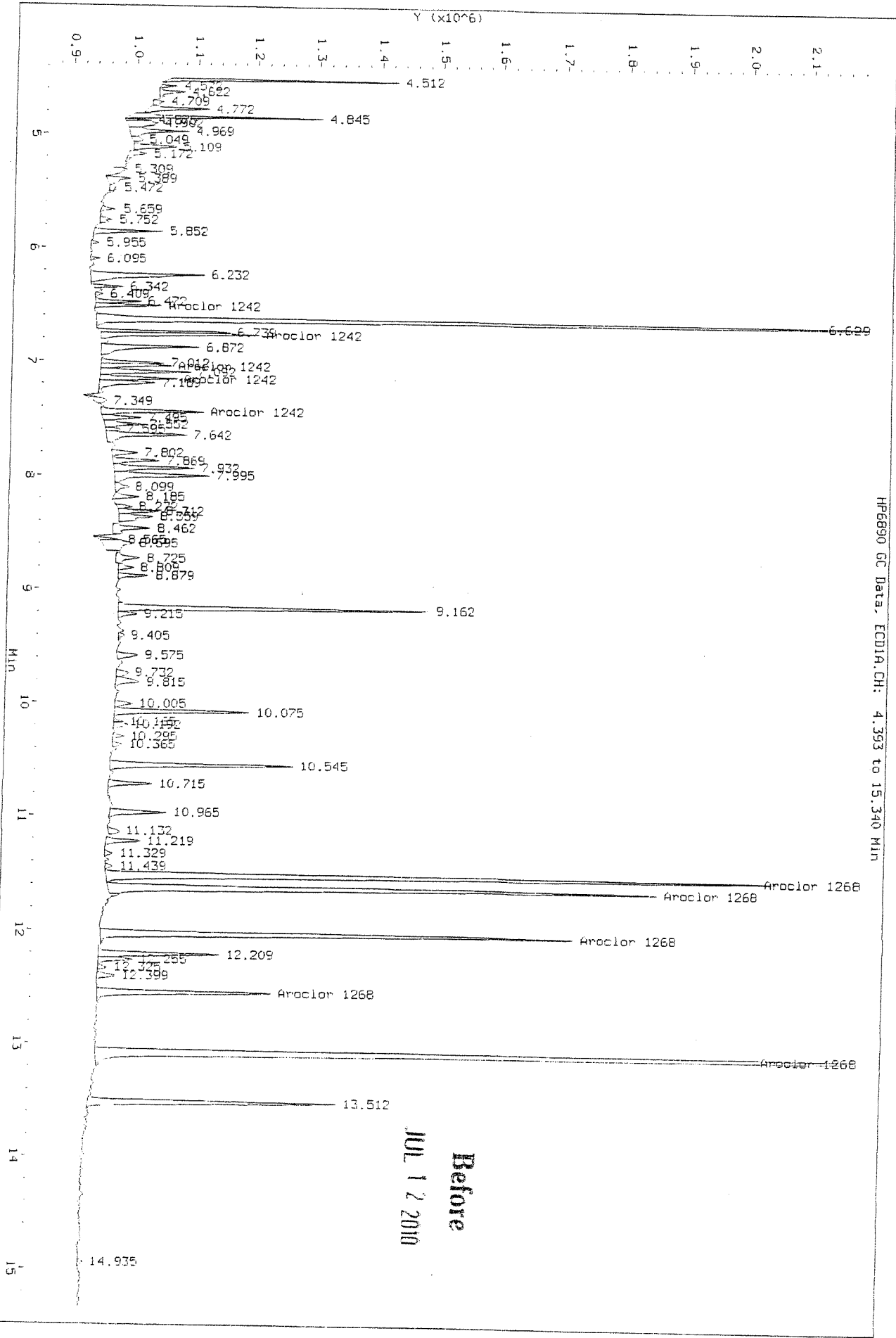
Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

\\Cash1\Acqudata\GC22\data\070910\_r\_b\0709F022.D



*Handwritten signature and date:*  
7/12/10  
LHarris

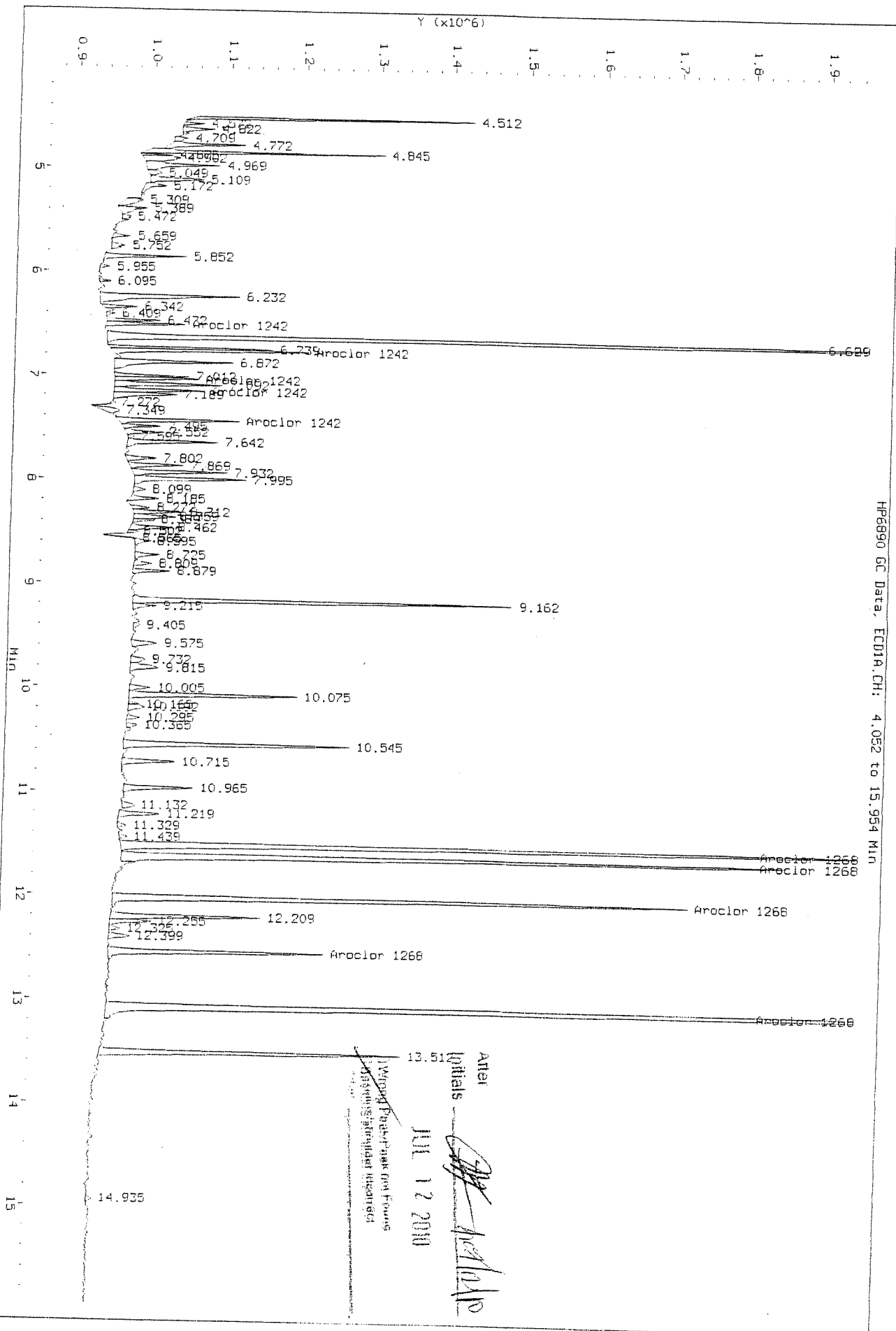
Data File: \\Casht\Acqudata\GC2\data\070910.D\0709F022.D  
Injection Date: 10-JUL-2010 03:24  
Instrument: GC22.1  
Client Sample ID:



HP6890 GC Data, ECD1A.CH: 4.393 to 15.340 Min

Before  
JUL 12 2010

Data File: \\Cash1\Acqudata\GC22\data\070910.D\07091022.D  
 Injection Date: 10-JUL-2010 03:24  
 Instrument: GC22.1  
 Client Sample ID:





Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F023.D  
 Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F023.D  
 Inj Date : 10-JUL-2010 03:48  
 Sample Info: 1242/1268 @ 50ppb | PCB5-61J | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:55  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

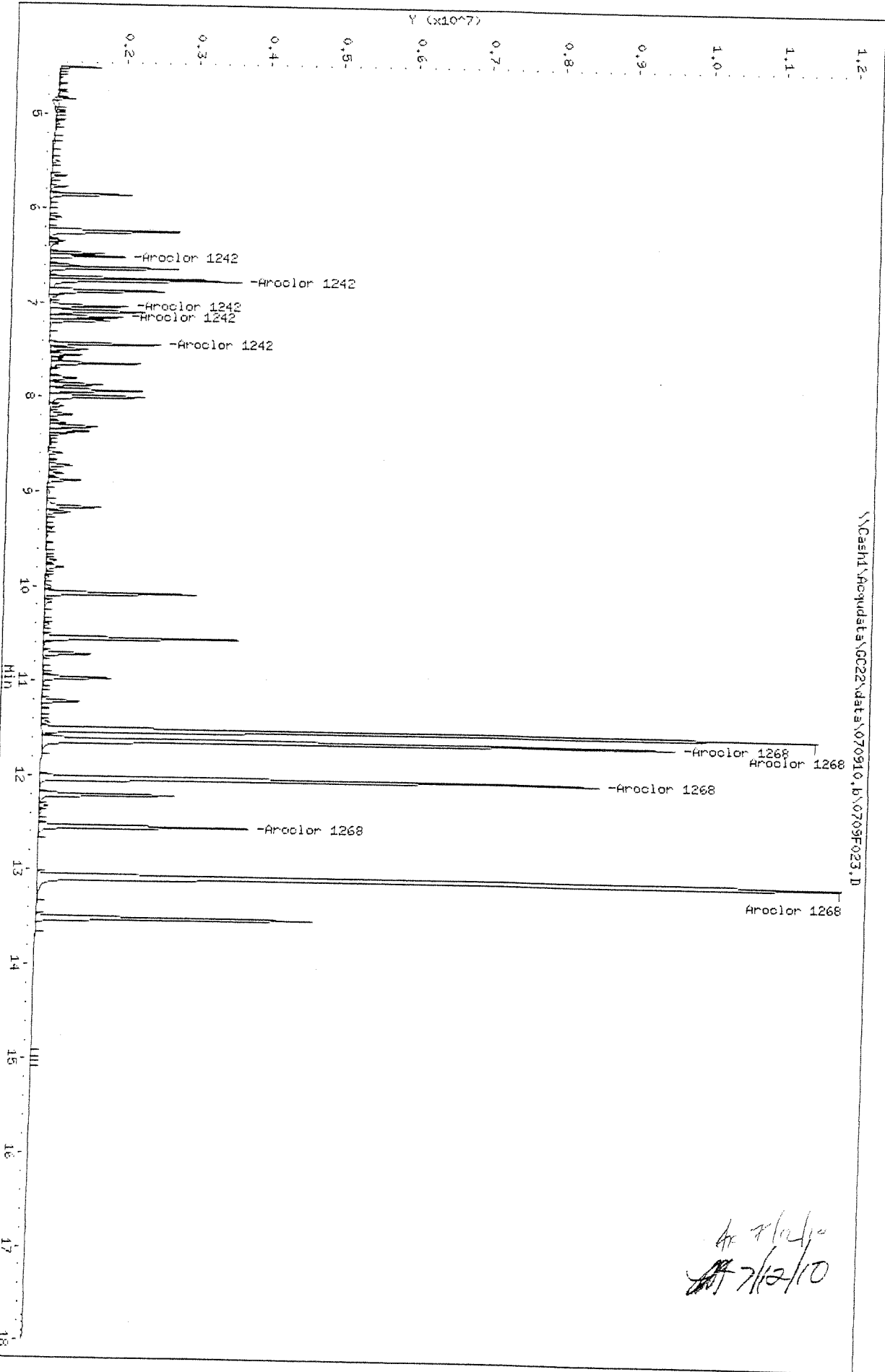
Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1242+1268.sub  
 Sub List #2 : 1242+1268.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	6.508	6.986	1331880	3441524	47.6	53.0	80.00- 120.00	100.00
	6.755	7.459	4116094	9592516	49.4	47.7	274.61- 411.91	309.04
	7.035	7.502	1733020	7240891	51.7	53.2	104.82- 157.23	130.12
	7.151	7.662	1420691	5474626	41.0	53.3	83.37- 125.05	106.67
	7.438	8.092	2205530	5191245	45.6	49.2	137.75- 206.62	165.60
	Average of Peak Amounts =					47.1	51.3	
Aroclor 1268	11.518	12.552	19099916	44156605	47.0	48.6	80.00- 120.00	100.00
	11.625	12.682	16950180	40195049	47.6	48.6	73.14- 109.70	88.74
	12.028	13.066	14048910	32485884	48.6	48.6	59.19- 88.79	73.55
	12.545	13.599	5429362	12557969	48.6	50.1	23.16- 34.74	28.43
	13.075	14.132	40155547	85746355	49.9	48.0	170.02- 255.03	210.24
	Average of Peak Amounts =					48.3	48.8	

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 JH Harris  
 7/12/10

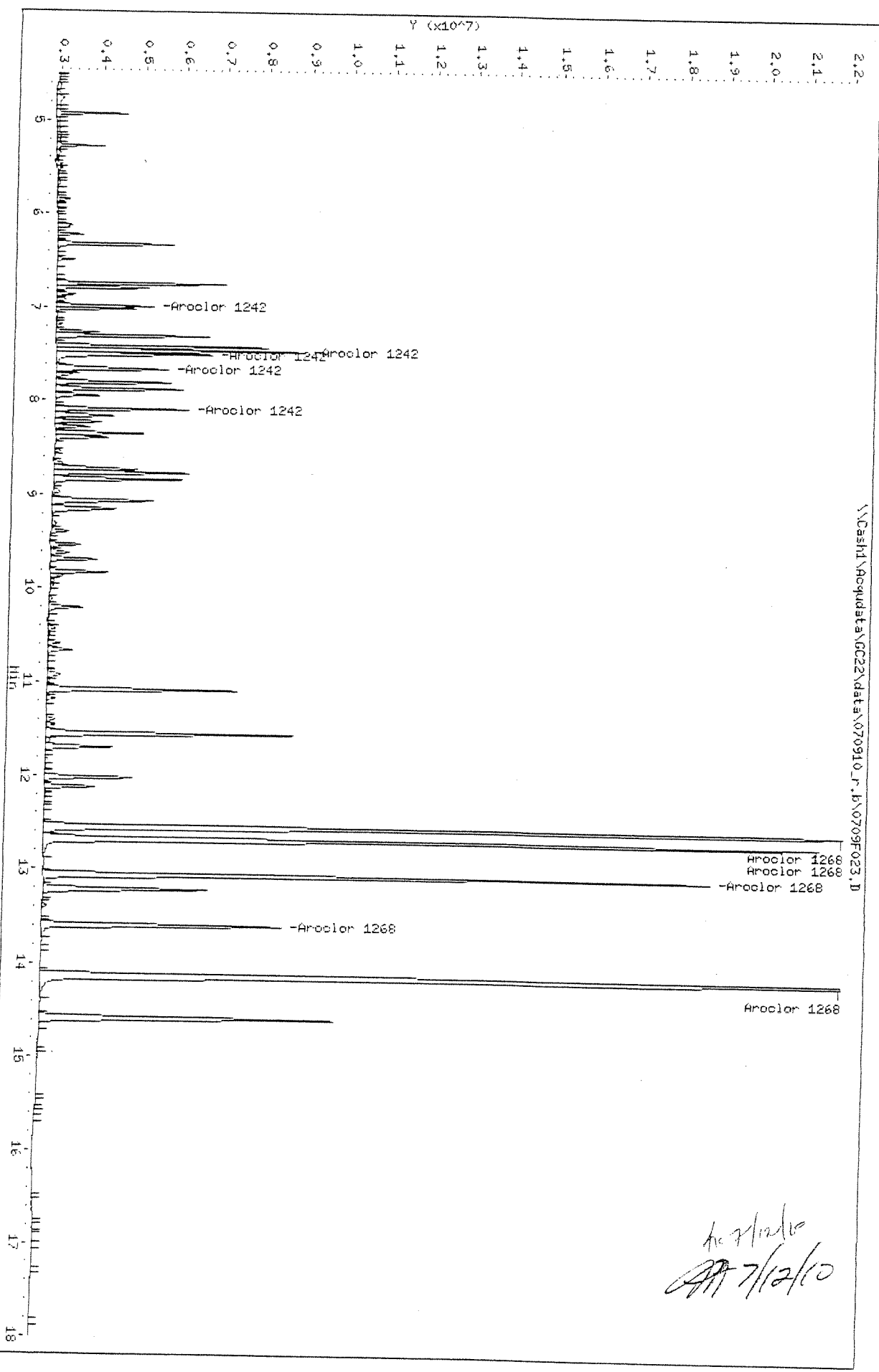
Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F023.D  
Date: 10-JUL-2010 03:48  
Client ID:  
Sample Info: 1242/1268 @ 50ppb | PCBs-611 | KMG1006746-3  
Column Phase: DB-35MS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



Data File: \\Cash1\Acq\data\GC22\data\070910\_L1.B\0709F023.D  
Date: 10-JUL-2010 03:48  
Client ID:  
Sample Info: 1242/1268 @ 50ppb | PCBs-613 | KMS1006746-3  
Column Phase: DB-XLB

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32



*to 7/12/10*  
*7/12/10*

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F024.D  
 Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F024.D  
 Inj Date : 10-JUL-2010 04:13  
 Sample Info: 1242/1268 @ 100ppb | PCB5-61K | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:55  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1242+1268.sub  
 Sub List #2 : 1242+1268.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	6.512	6.990	2624329	6253741	96.3	96.2	80.00- 120.00	100.00 (M)
	6.759	7.460	9268341	18669052	108	92.8	274.61- 411.91	353.17 (M)
	7.039	7.503	3398617	14182569	105	104	104.82- 157.23	129.50 (M)
	7.152	7.667	2918698	10980866	99.1	107	83.37- 125.05	111.22 (M)
	7.439	8.097	4465850	10199691	98.9	96.6	137.75- 206.62	170.17 (M)
	Average of Peak Amounts =				101	99.3		
Aroclor 1268	11.519	12.553	39448473	86472741	97.5	95.2	80.00- 120.00	100.00
	11.626	12.683	35294644	79134152	98.4	95.8	73.14- 109.70	89.47
	12.032	13.063	28954533	63714395	99.1	95.3	59.19- 88.79	73.40
	12.546	13.600	11160385	24264813	98.4	96.9	23.16- 34.74	28.29
	13.076	14.137	83939919	169753399	102	95.1	170.02- 255.03	212.78
	Average of Peak Amounts =				99.1	95.7		

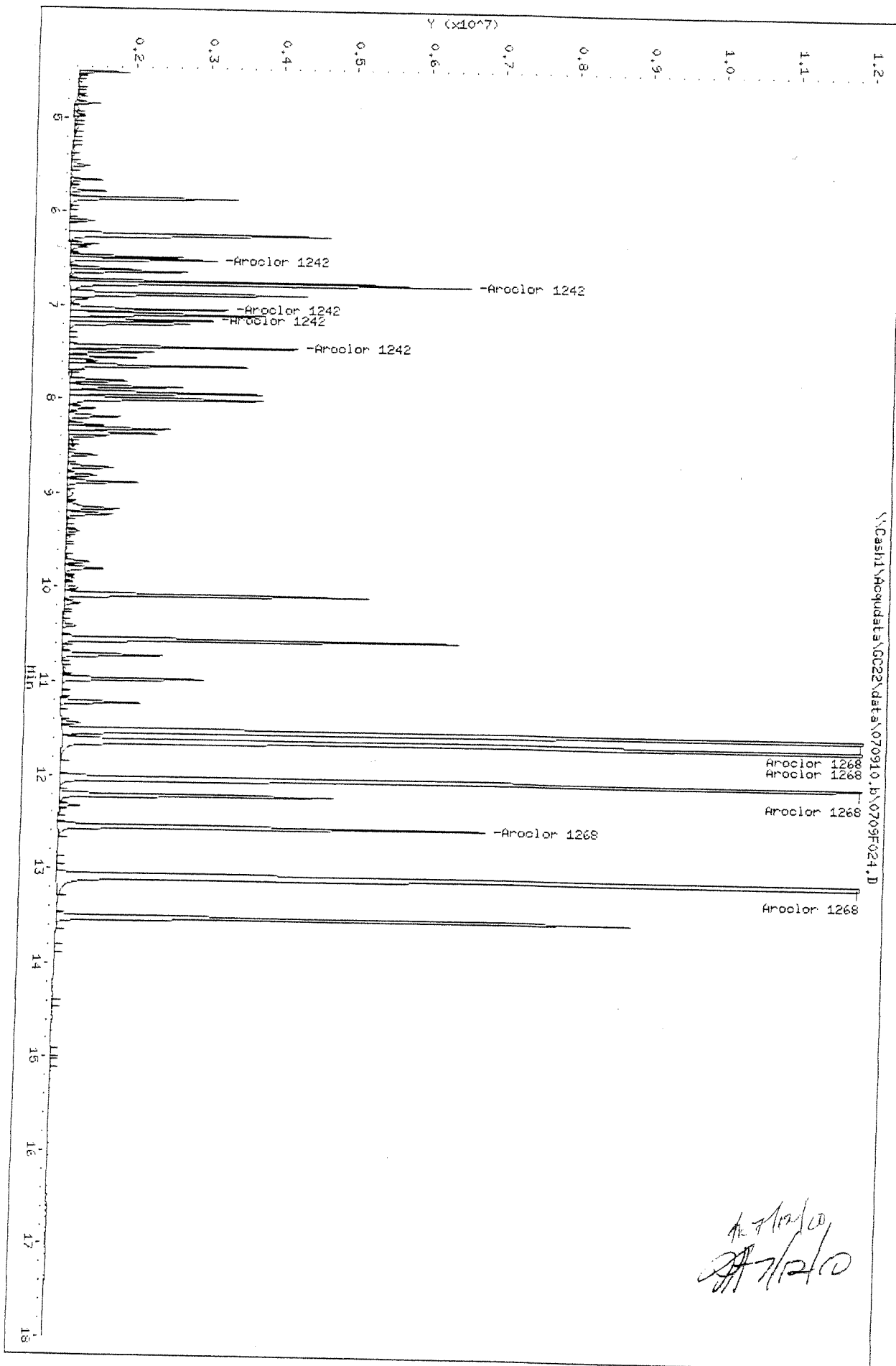
QC Flag Legend

M - Compound response manually integrated.

*Handwritten signature and date: 7/12/10*

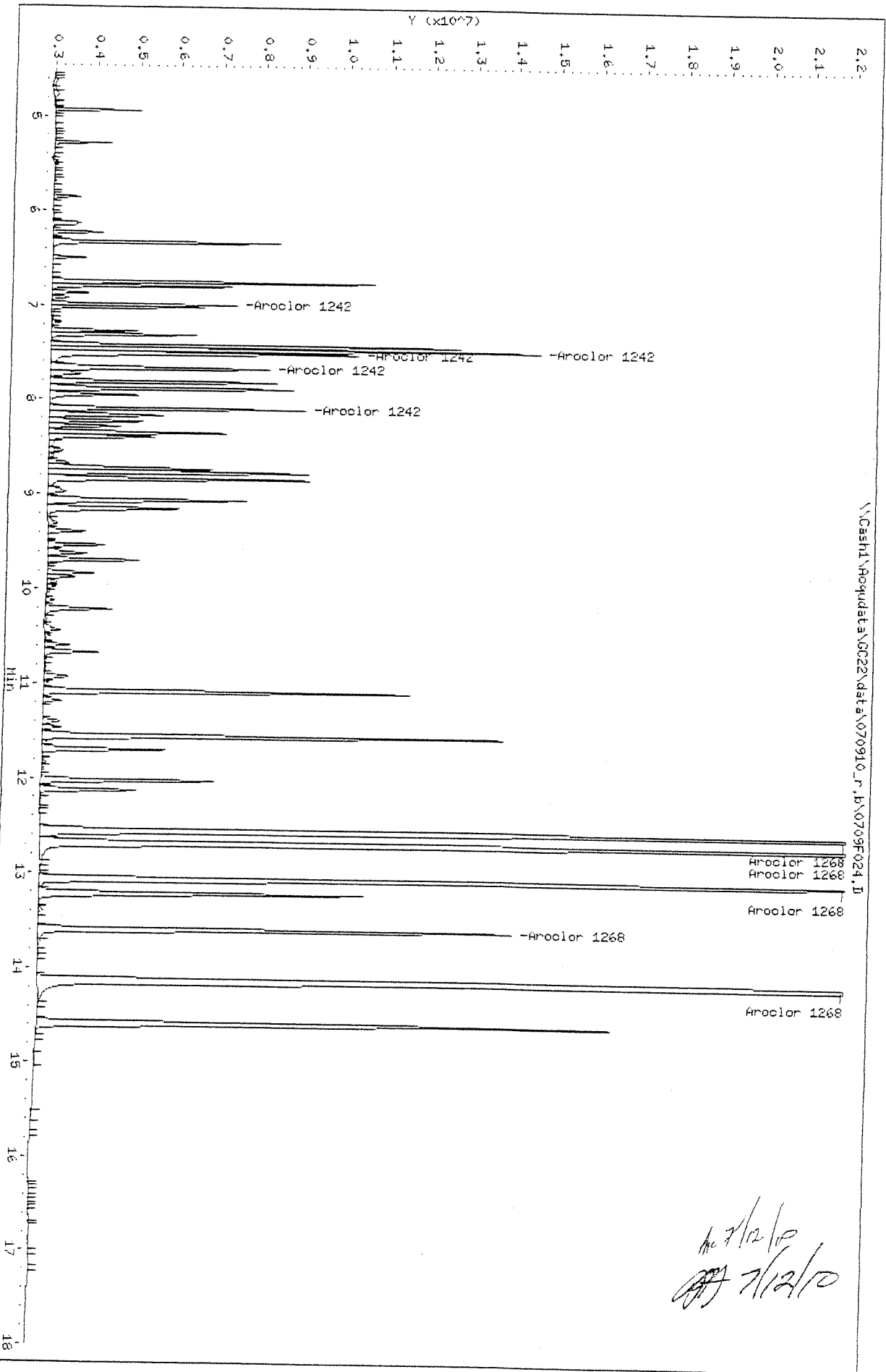
Data File: \\CASH1\Acq\data\GC22\data\070910.B\0709F024.D  
Date: 10-JUL-2010 04:13  
Client ID:  
Sample Info: 1242/1268 @ 100ppb | PCB5-6IK | KMC1006746-3  
Column phase: DB-35HS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



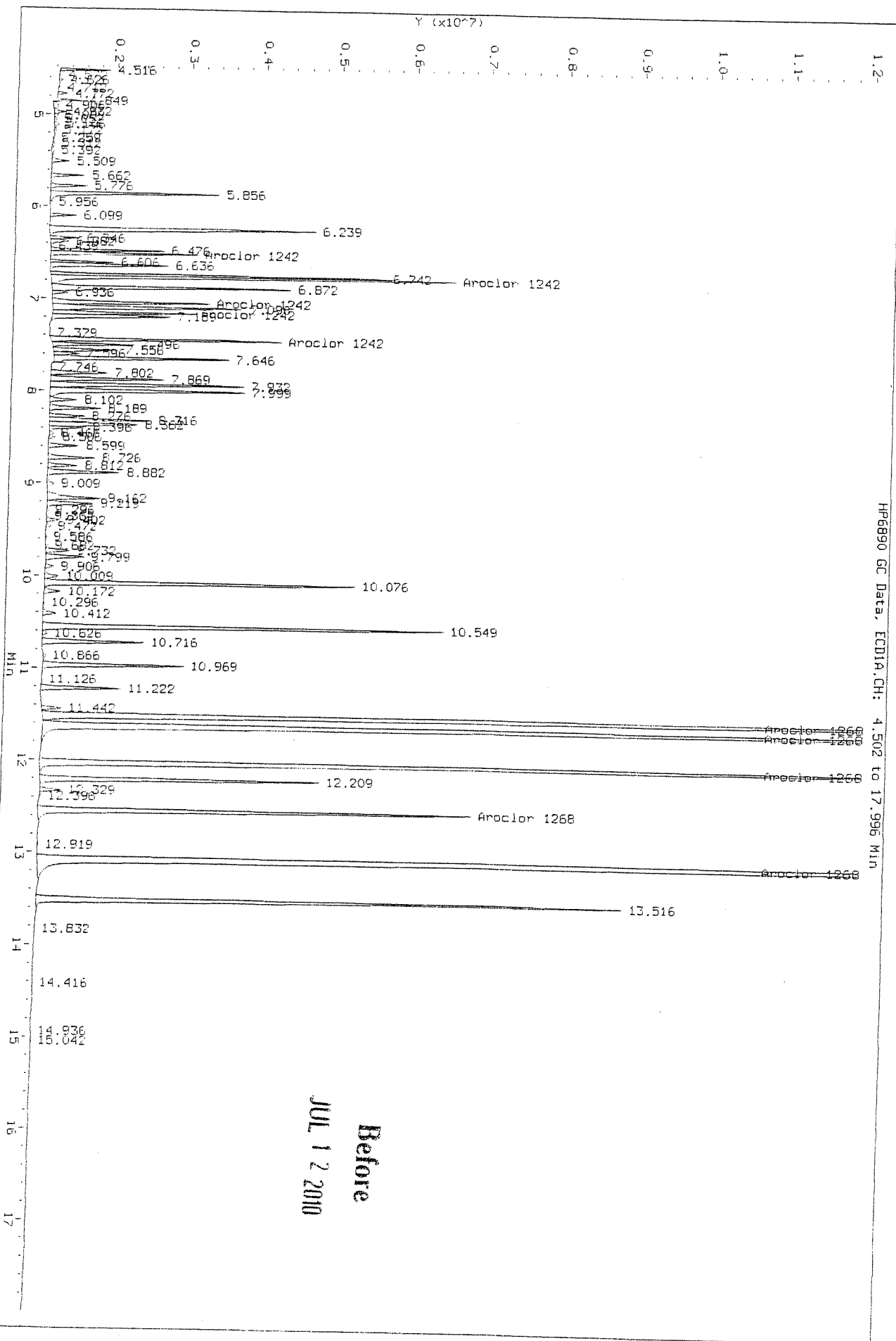
Data File: \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F024.D  
Date: 10-JUL-2010 04:13  
Client ID:  
Sample Info: 1242/1268 @ 100ppb | PCB5-61K | KMG1006746-3  
Column phase: DB-XLB

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



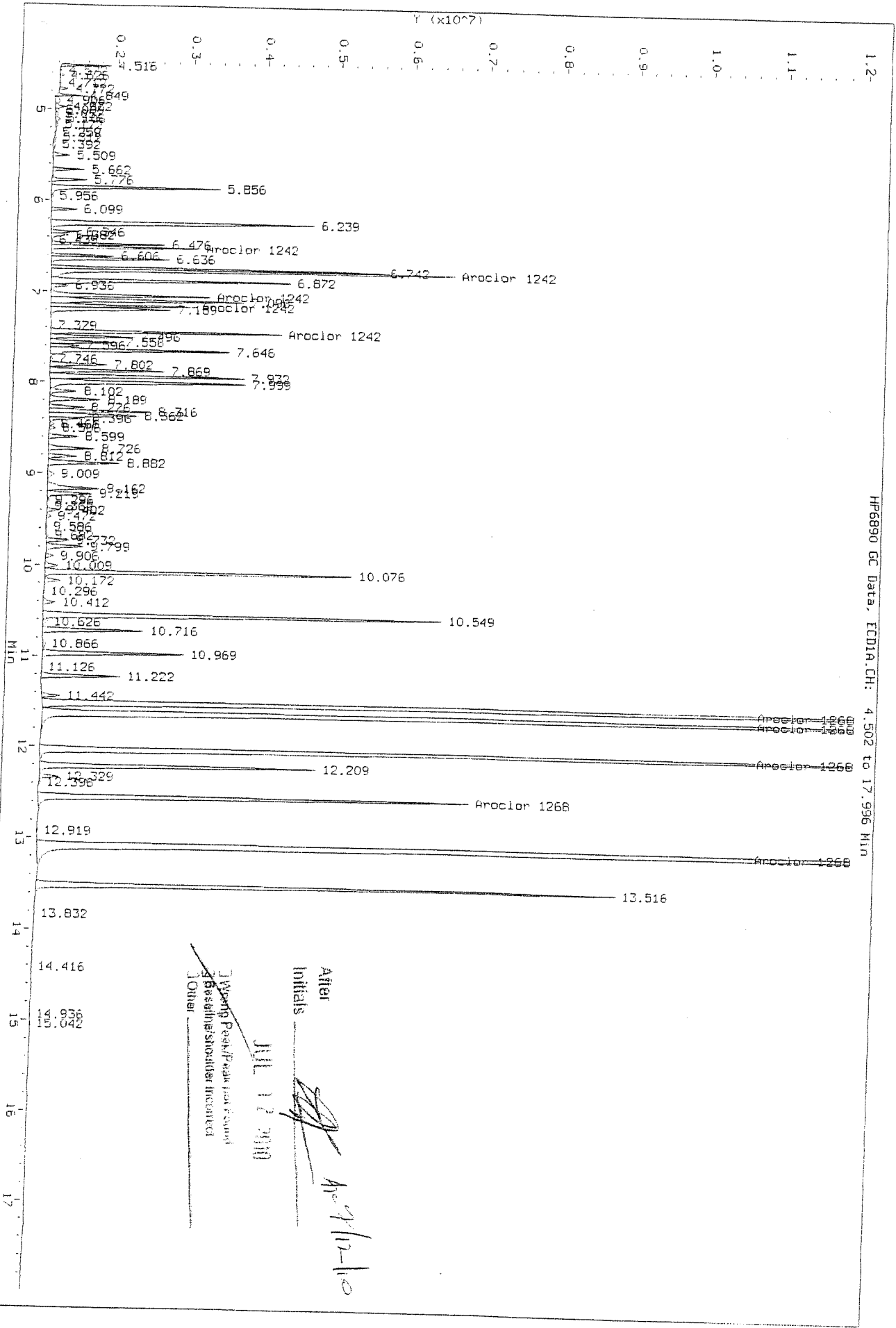
7/12/10  
7/12/10

Data File: \\Cash1\Acqudata\GC22\data\070910.b\07091024.D  
Injection Date: 10-JUL-2010 04:13  
Instrument: GC22.1  
Client Sample ID:



Before  
JUL 12 2010

Data File: \\Dash1\Acqudata\GC22\data\070910\_b\0709F024.D  
 Injection Date: 10-JUL-2010 04:13  
 Instrument: GC22.1  
 Client Sample ID:

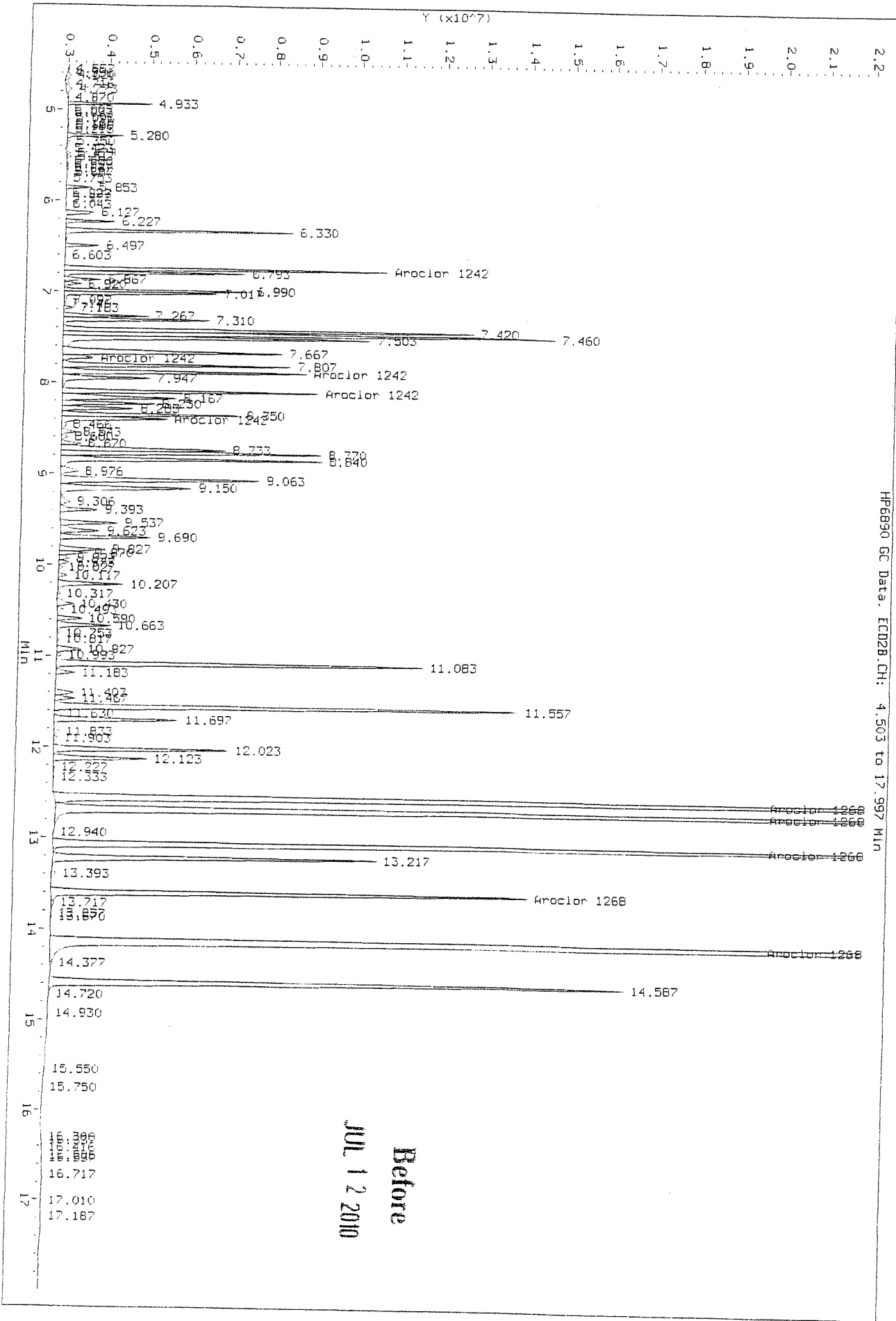


After Initials  
 JUL 17 2010  
 Ac 9/12/10

Working Peak/Peak not Found  
 Baseline/Shoulder Incorrect  
 Other



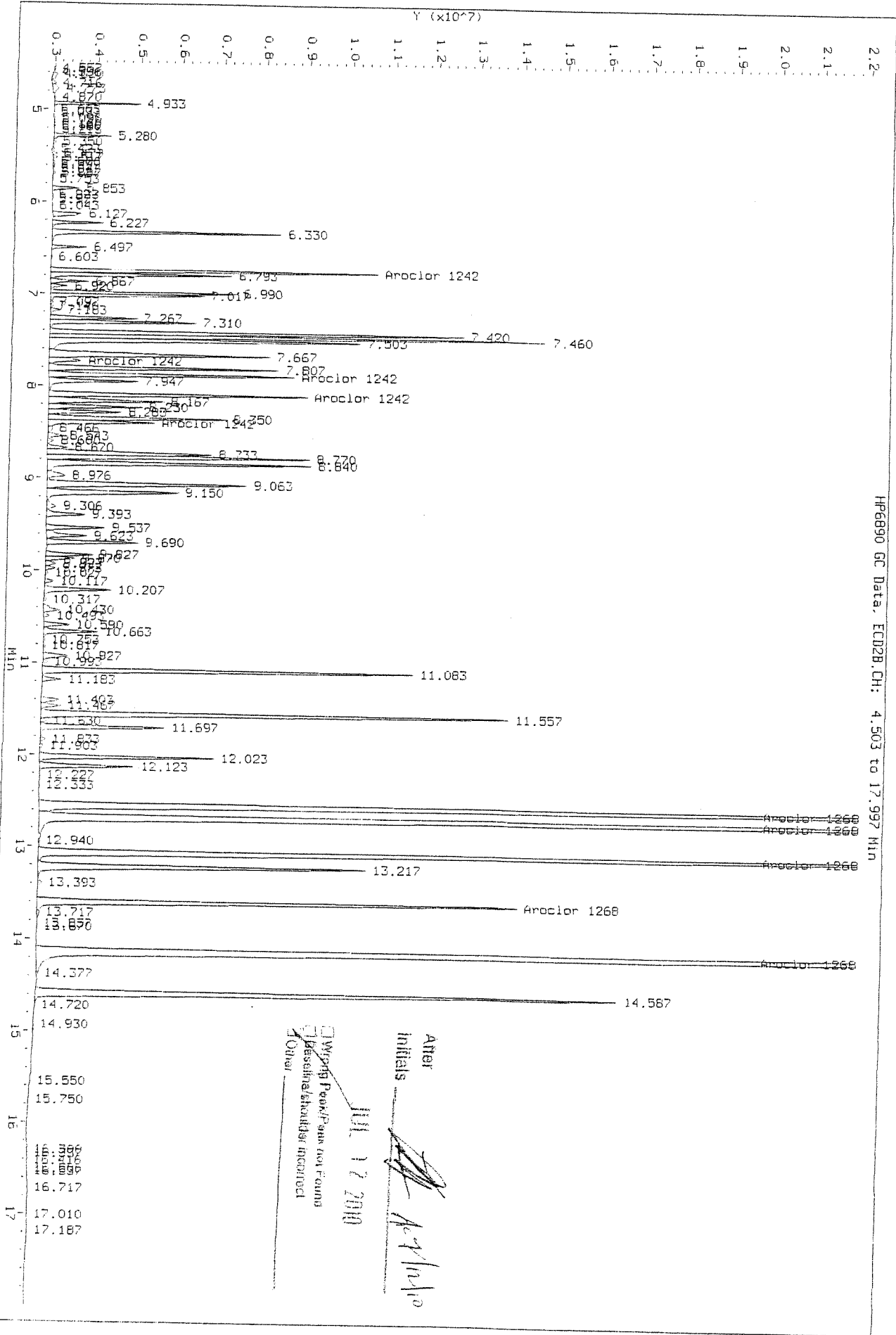
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 Injection Date: 10-JUL-2010 04:13  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data, ECD2B.CH: 4.503 to 17.997 MIN

Before  
 JUL 12 2010

Data File: \\Cash1\acq\data\6622\data\070910\_r\_b\0709F024.D  
 Injection Date: 10-Jul-2010 04:13  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data: ECD2B.CH: 4.503 to 17.997 Min

ANER  
 Initials *[Signature]*  
 JUL 17 2010  
 Missing Peak/Sum not Found  
 Baseline/Shoulder Incorrect  
 Other

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F025.D  
 Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F025.D  
 Inj Date : 10-JUL-2010 04:38  
 Sample Info: 1242/1268 @ 200ppb | PCB5-61L | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:55  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1242+1268.sub  
 Sub List #2 : 1242+1268.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	6.513	6.991	5236510	12898292	192	196	80.00- 120.00	100.00
	6.760	7.464	16365611	37306209	191	186	274.61- 411.91	312.53
	7.040	7.507	6829817	25905296	210	190	104.82- 157.23	130.43
	7.156	7.667	5543470	21150436	188	206	83.37- 125.05	105.86
	7.440	8.097	8924124	19388011	198	184	137.75- 206.62	170.42
	Average of Peak Amounts =					196	192	
Aroclor 1268	11.520	12.554	81723987	171010080	202	188	80.00- 120.00	100.00 (M)
	11.626	12.684	73984071	157228399	206	190	73.14- 109.70	90.53 (M)
	12.030	13.067	60055187	125709709	205	188	59.19- 88.79	73.49 (M)
	12.546	13.601	23158819	47600978	204	190	23.16- 34.74	28.34 (M)
	13.076	14.137	174188898	340980057	211	191	170.02- 255.03	213.14 (M)
	Average of Peak Amounts =					206	189	

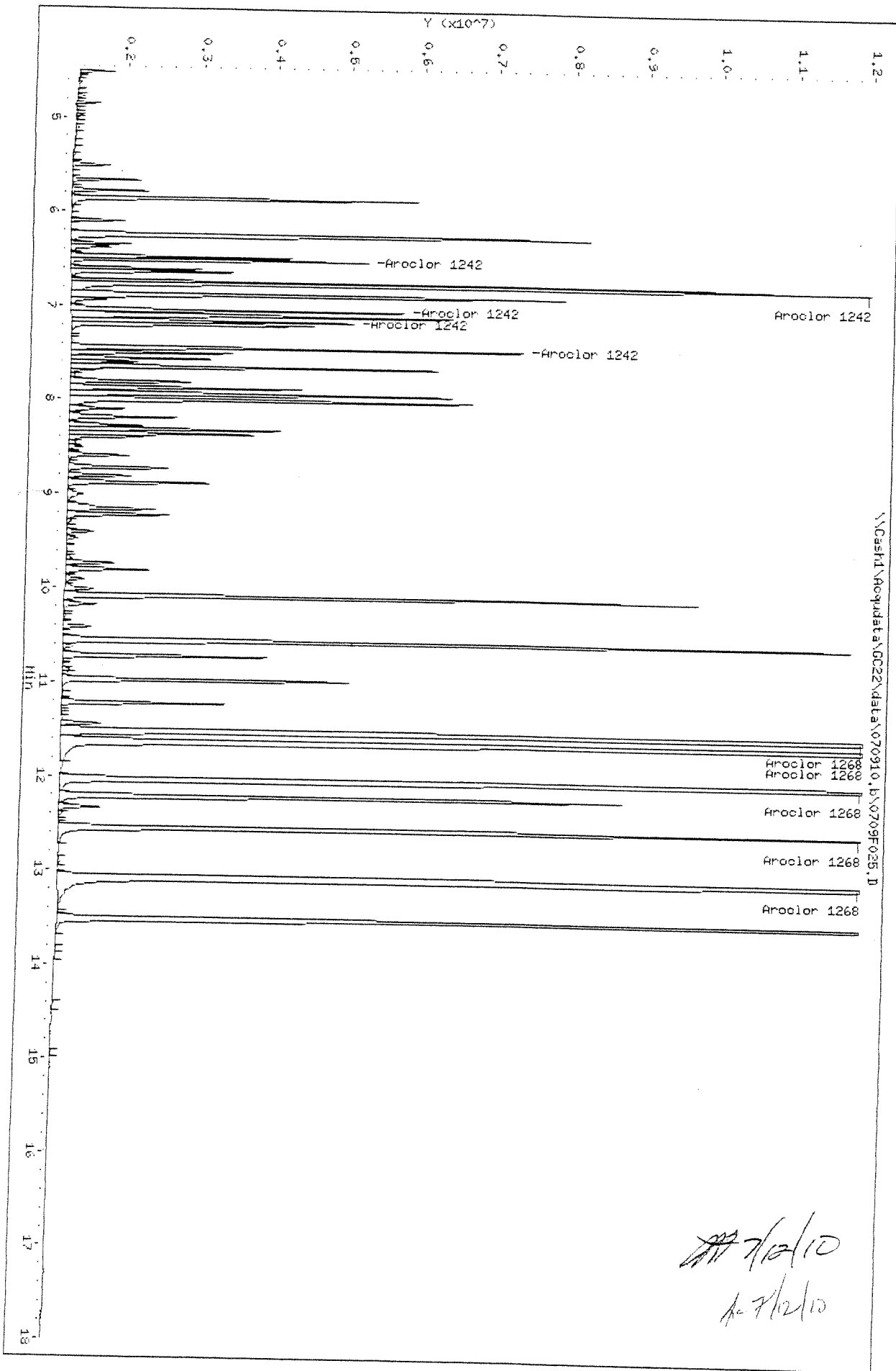
QC Flag Legend

M - Compound response manually integrated.

*[Handwritten signature]*  
 7/12/10  
 LHarris

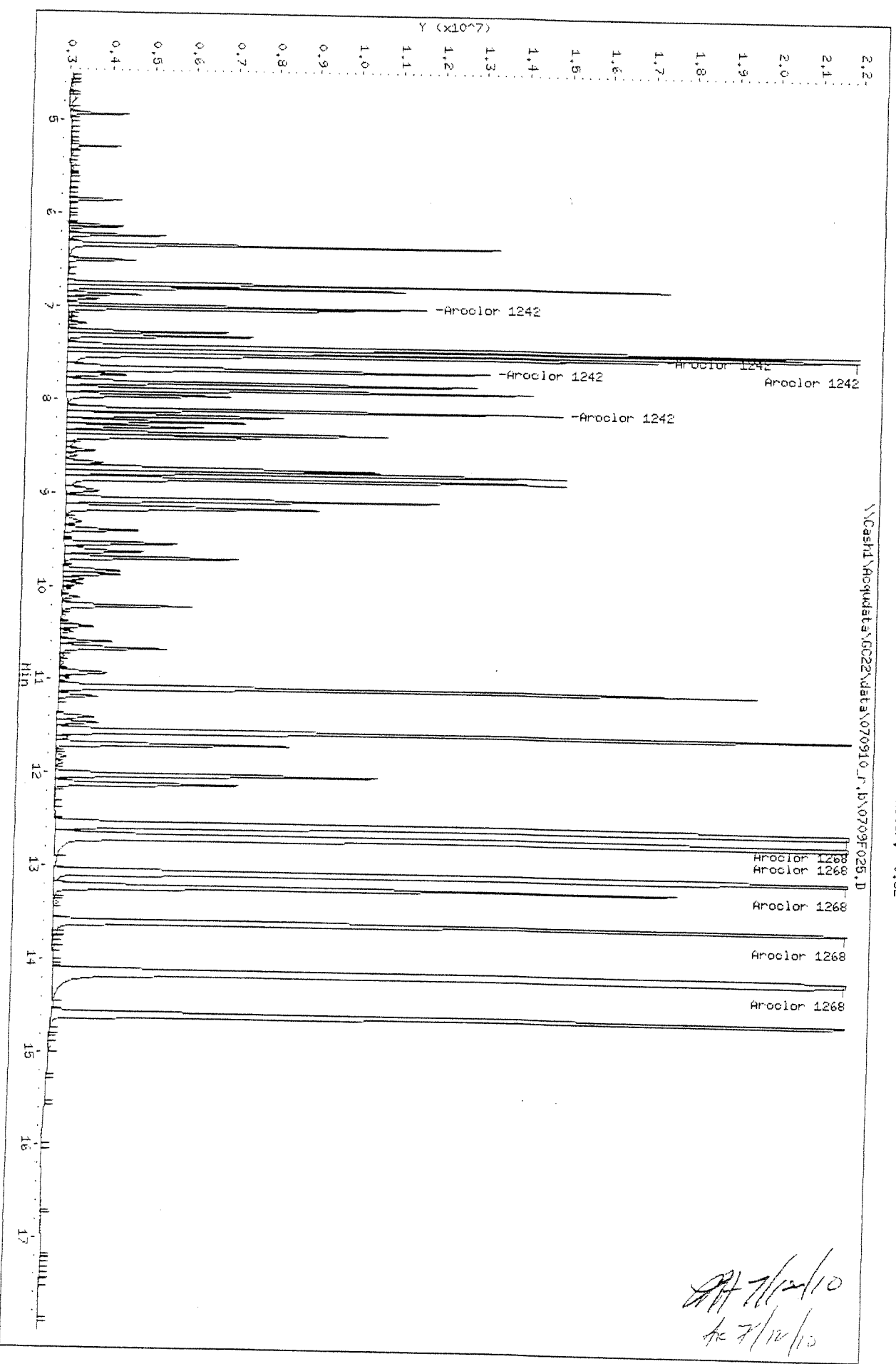
Data File: \\Cash1\Acq\data\GC22\data\070910.b\0709F025.D  
Date: 10-JUL-2010 04:38  
Client ID:  
Sample Info: 1242/1268 @ 200ppb | PCB6-61L | KMG1005746-3  
Column phase: DB-35HS

Instrument: GC22.i  
Operator: LHarvis  
Column diameter: 0.32

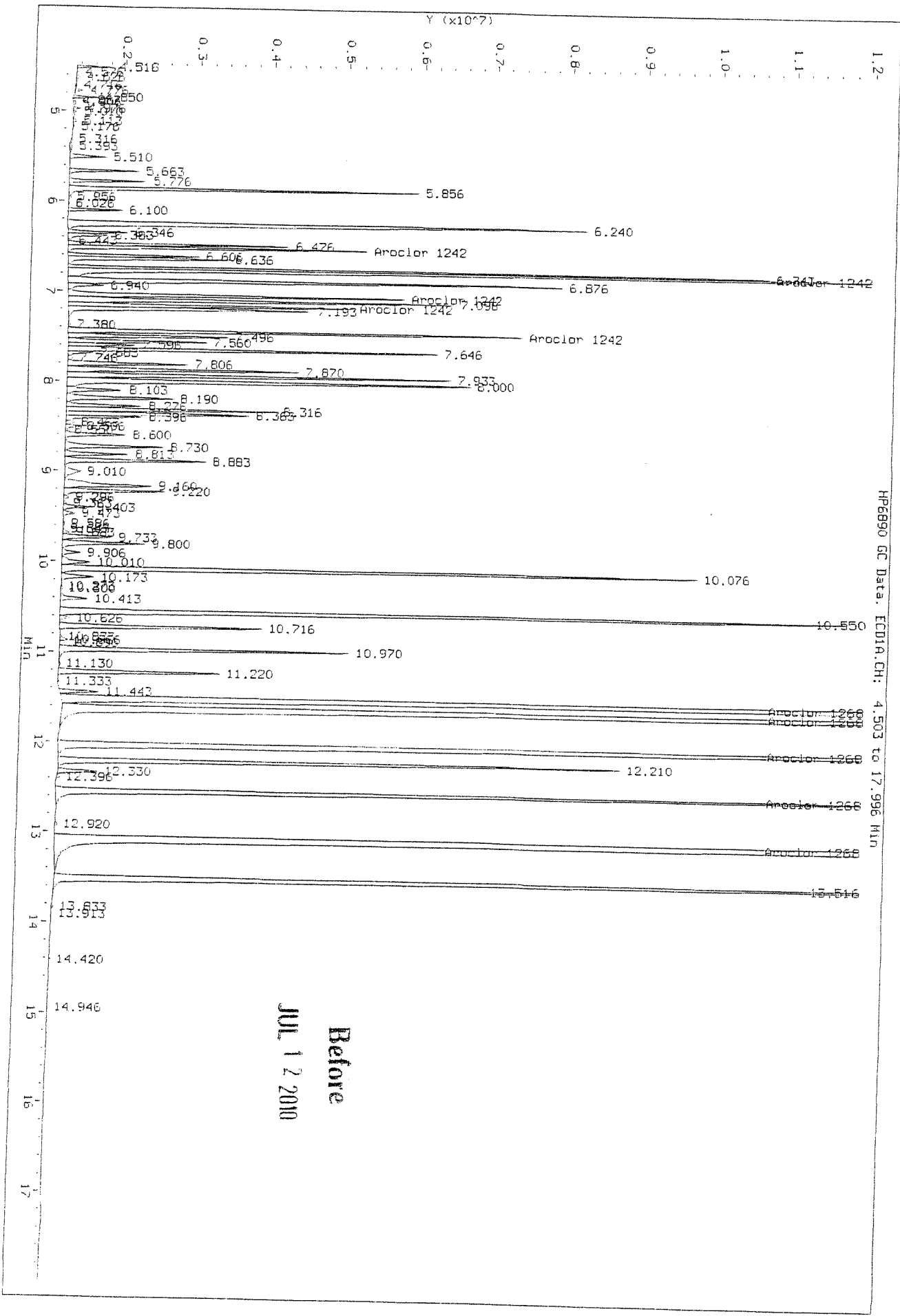


Data File: \\Cash1\Acq\data\GC22\data\070910\_r\_b\0709F026.D  
Date: 10-JUL-2010 04:38  
Client ID:  
Sample Info: 1242/1268 @ 200ppb | PCB5-61L | KMG1006746-3  
Column phase: DB-XLB

Instrument: GC22.1  
Operator: Harris  
Column diameter: 0.32

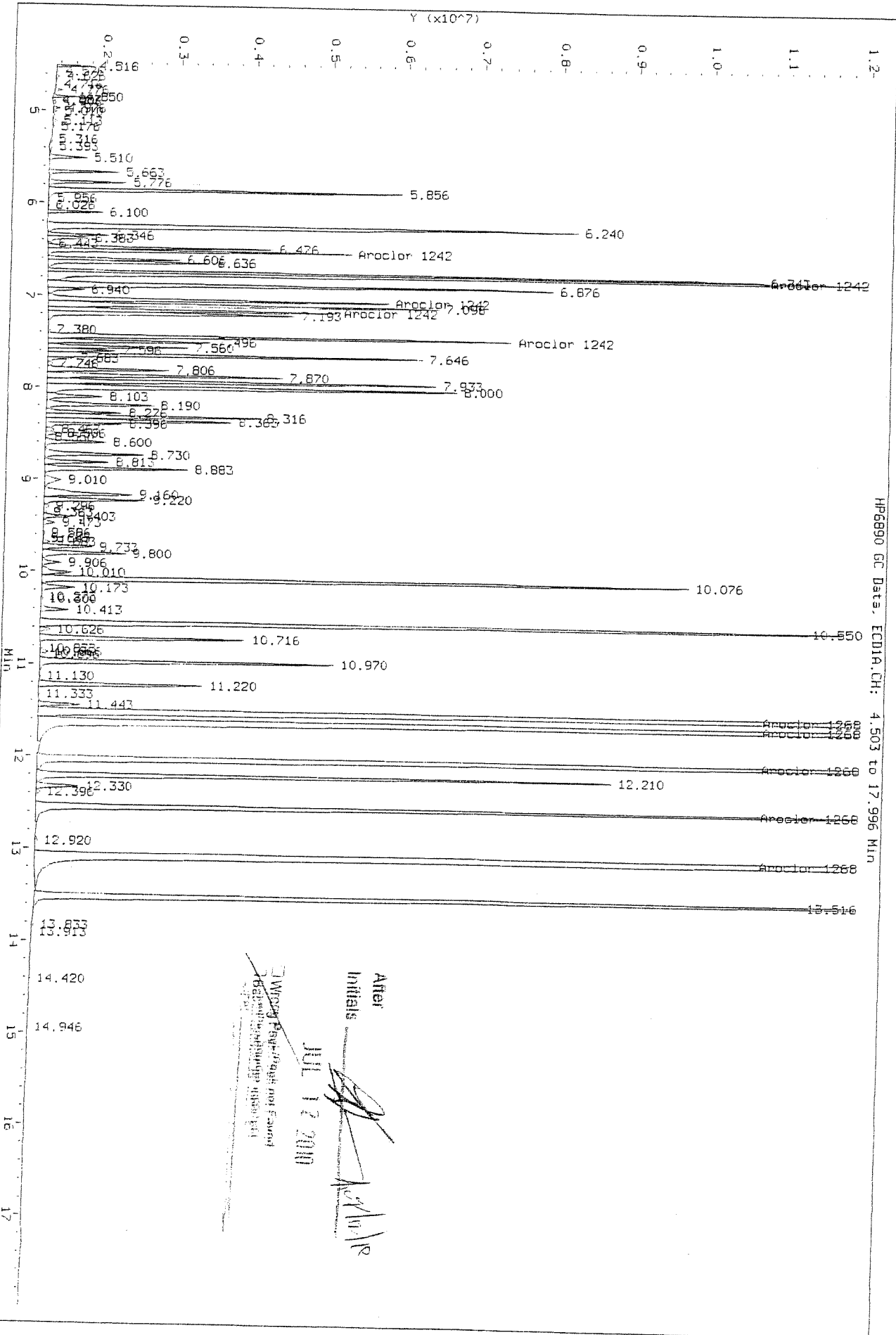


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7/12/10  
7/12/10



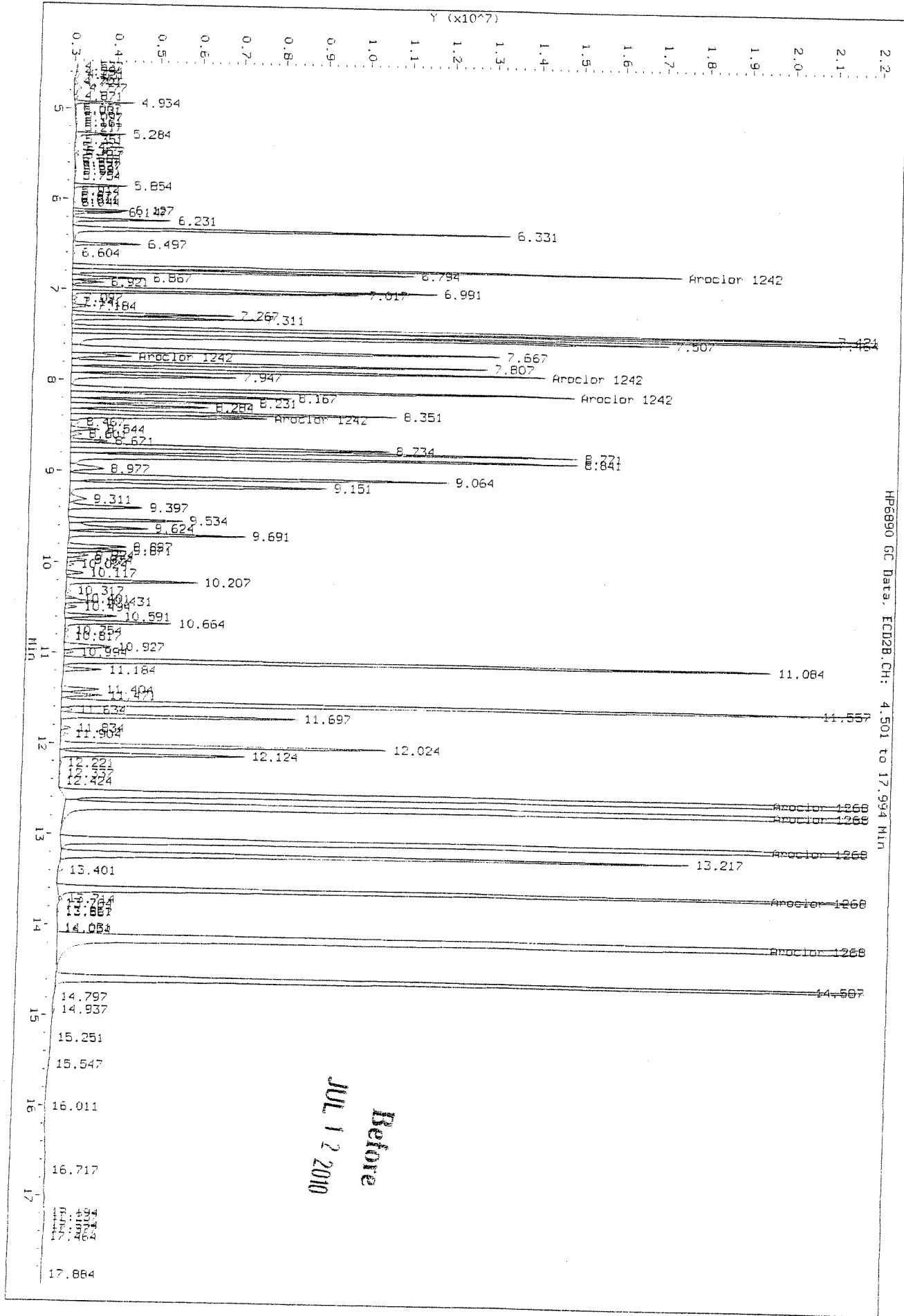
Before  
JUL 12 2010

Data File: \\Cash1\pcdata\data\GC22\data\070910.b\07091025.D  
 Injection Date: 10-JUL-2010 04:38  
 Instrument: GC22.1  
 Client Sample ID:



After  
 Initials  
 JUL 12 2010  
 [Signature]

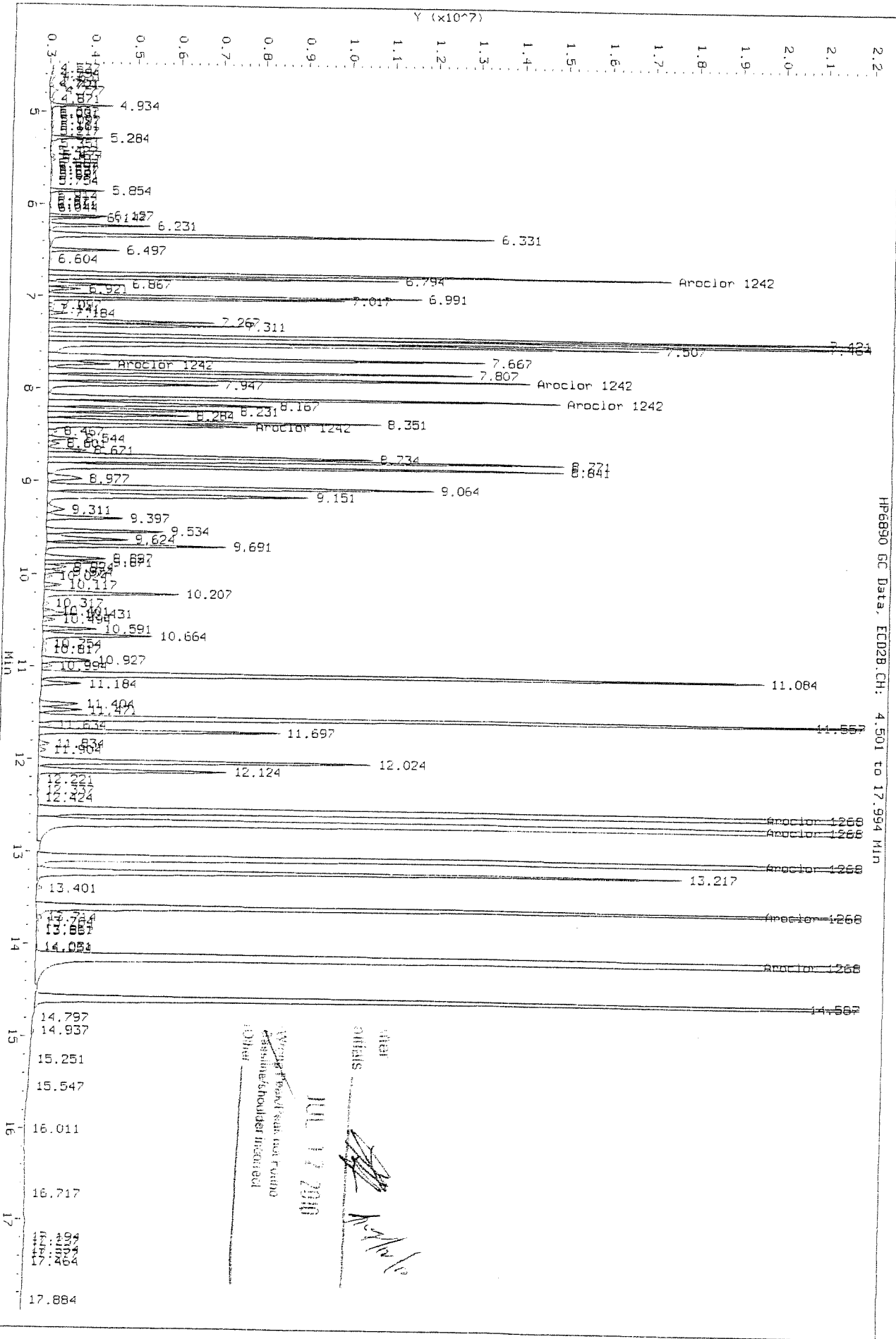
Data File: \\C:\Data\Acqudata\GC22\data\070910\_r\_b\0709f025.D  
 Injection Date: 10-JUL-2010 04:58  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data, ECD2B.CH: 4.501 to 17.994 Min



Data File: \\Casha\Acqudata\GC22\data\070910\_r\_b\0709F025.D  
 Injection Date: 10-JUL-2010 04:38  
 Instrument: GC22.1  
 Client Sample ID:



HP5890 GC Data, EC028.CH: 4.501 to 17.984 MIN

ANALYST: *[Signature]*  
 DATE: JUL 17 2010  
 WORKING COPY FOR FUTURE USE  
 ORIGINAL HOLDER IDENTIFIED  
 OTHER:

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F026.D  
 Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F026.D  
 Inj Date : 10-JUL-2010 05:02  
 Sample Info: 1242/1268 @ 500ppb | PCB5-61M | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 09:55  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : 1242+1268.sub  
 Sub List #2 : 1242+1268.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
=====								
Aroclor 1242	6.512	6.990	12569350	30946342	461	461	80.00- 120.00	100.00
	6.759	7.463	43145516	92641528	502	461	274.61- 411.91	343.26
	7.039	7.506	16469318	61447496	507	451	104.82- 157.23	131.03
	7.155	7.666	13098540	50626357	445	493	83.37- 125.05	104.21
	7.439	8.096	21642513	46128695	479	437	137.75- 206.62	172.18
	Average of Peak Amounts =				479	461		
Aroclor 1268	11.519	12.553	201380670	425488078	497	468	80.00- 120.00	100.00 (M)
	11.625	12.683	184100434	391952926	511	474	73.14- 109.70	91.42 (M)
	12.029	13.066	149006873	311915532	509	467	59.19- 88.79	73.99 (M)
	12.545	13.600	58298684	118351031	514	472	23.16- 34.74	28.95 (M)
	13.075	14.136	427991637	862905940	519	484	170.02- 255.03	212.53 (M)
	Average of Peak Amounts =				510	473		

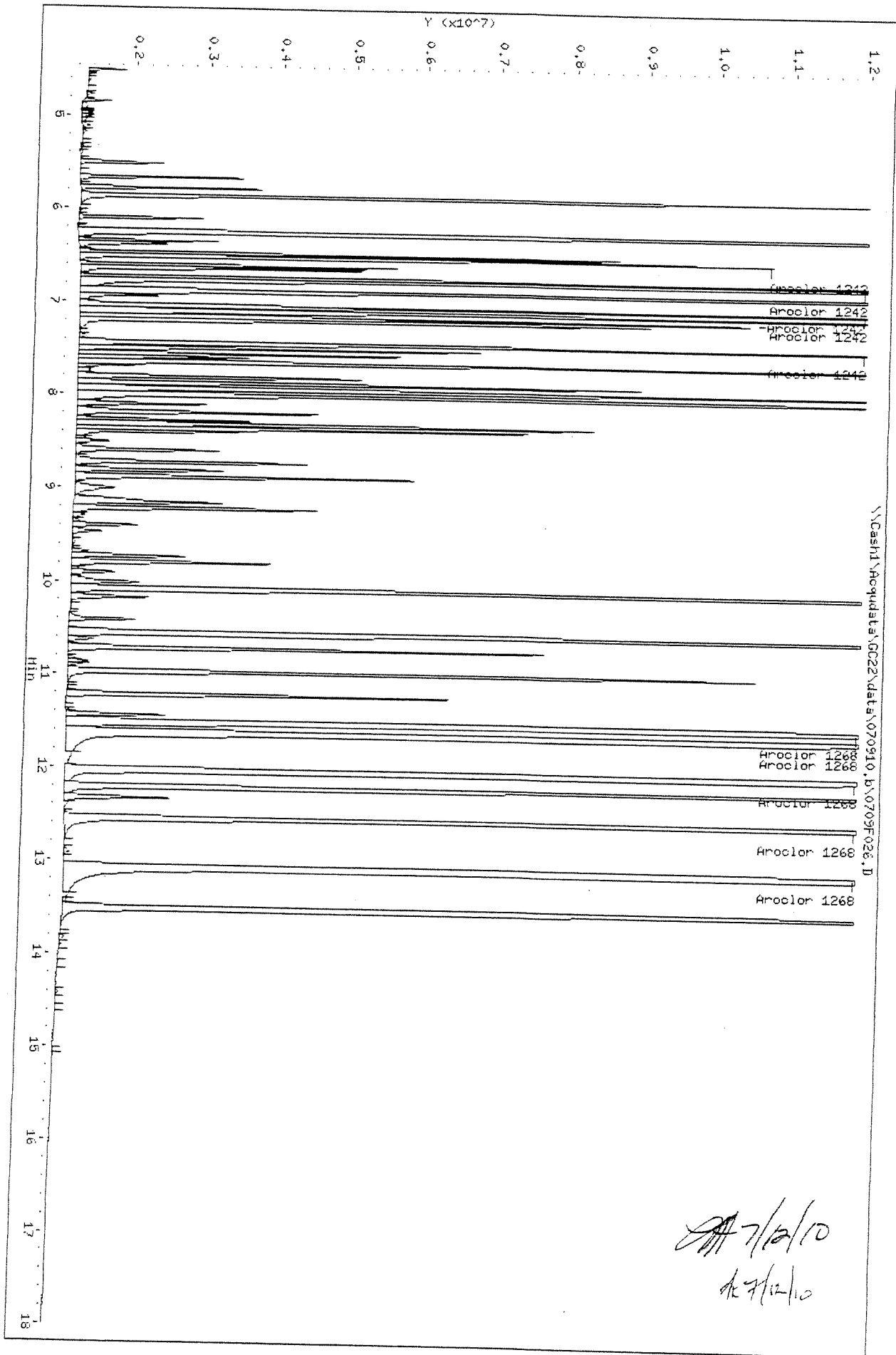
QC Flag Legend

M - Compound response manually integrated.

*[Handwritten signature]*  
 7/12/10

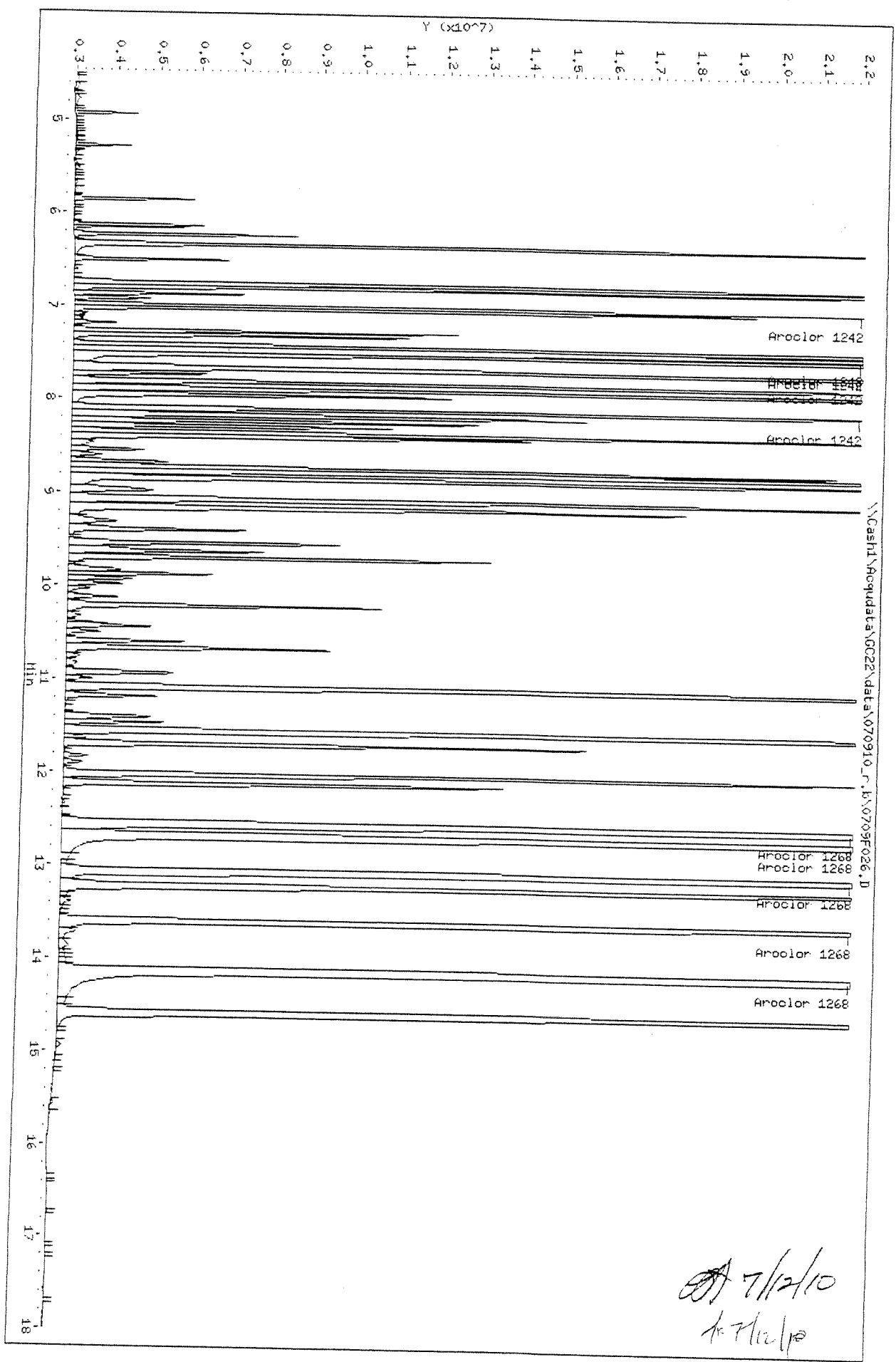
Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F026.D  
Date: 10-JUL-2010 05:02  
Client ID:  
Sample Info: 1242/1268 @ 500ppb | PCB5-61H | KNC1006746-3  
Column Phase: DB-35HS

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32



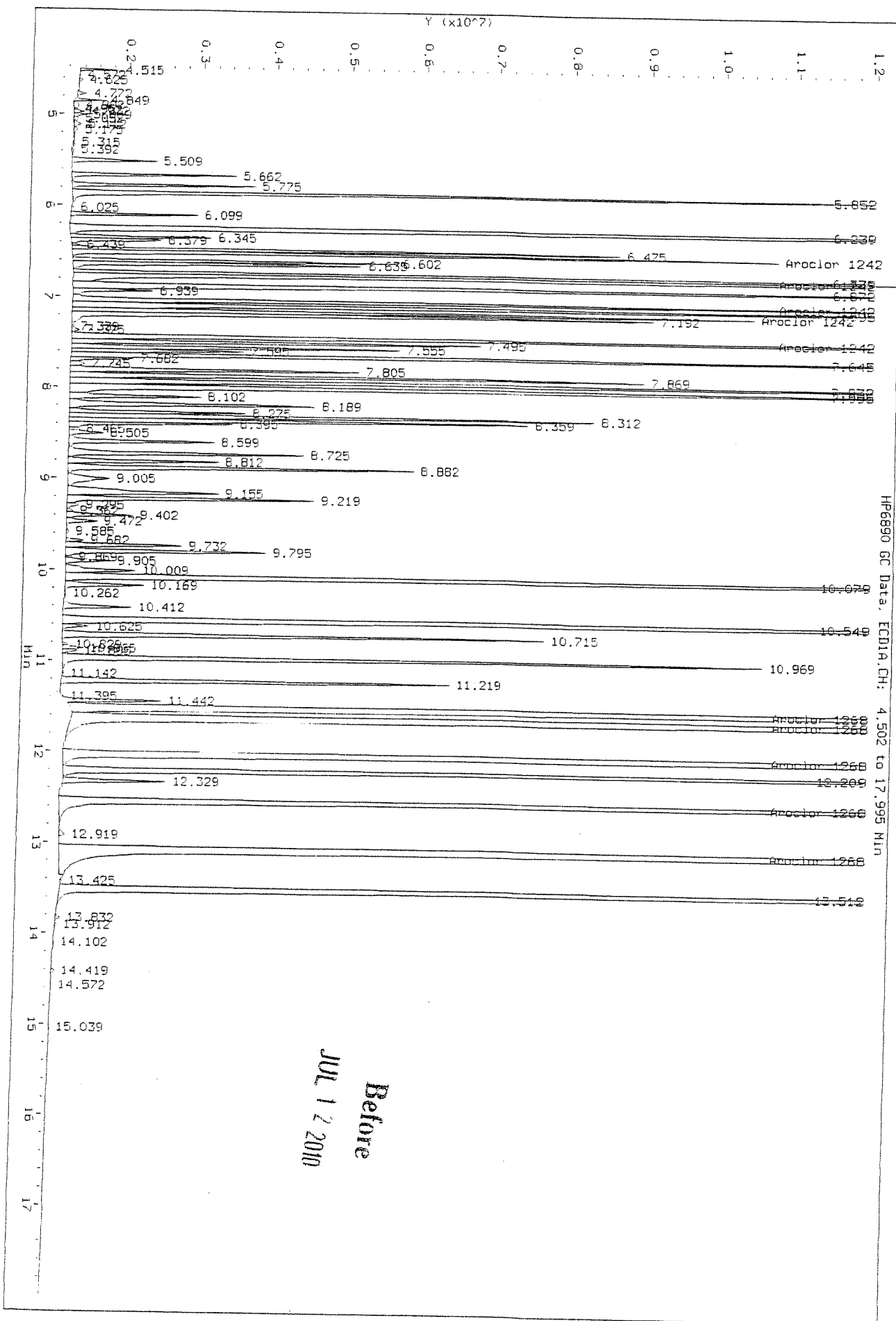
Data File: \\Cash1\Noqudata\GC22\data\070910\_r\_b\0709F026.D  
Date: 10-JUL-2010 09:02  
Client ID:  
Sample Info: 1242/1268 @ 500ppb | PCBs-61H | KJ010002746-3  
Column phase: DB-XLB

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32



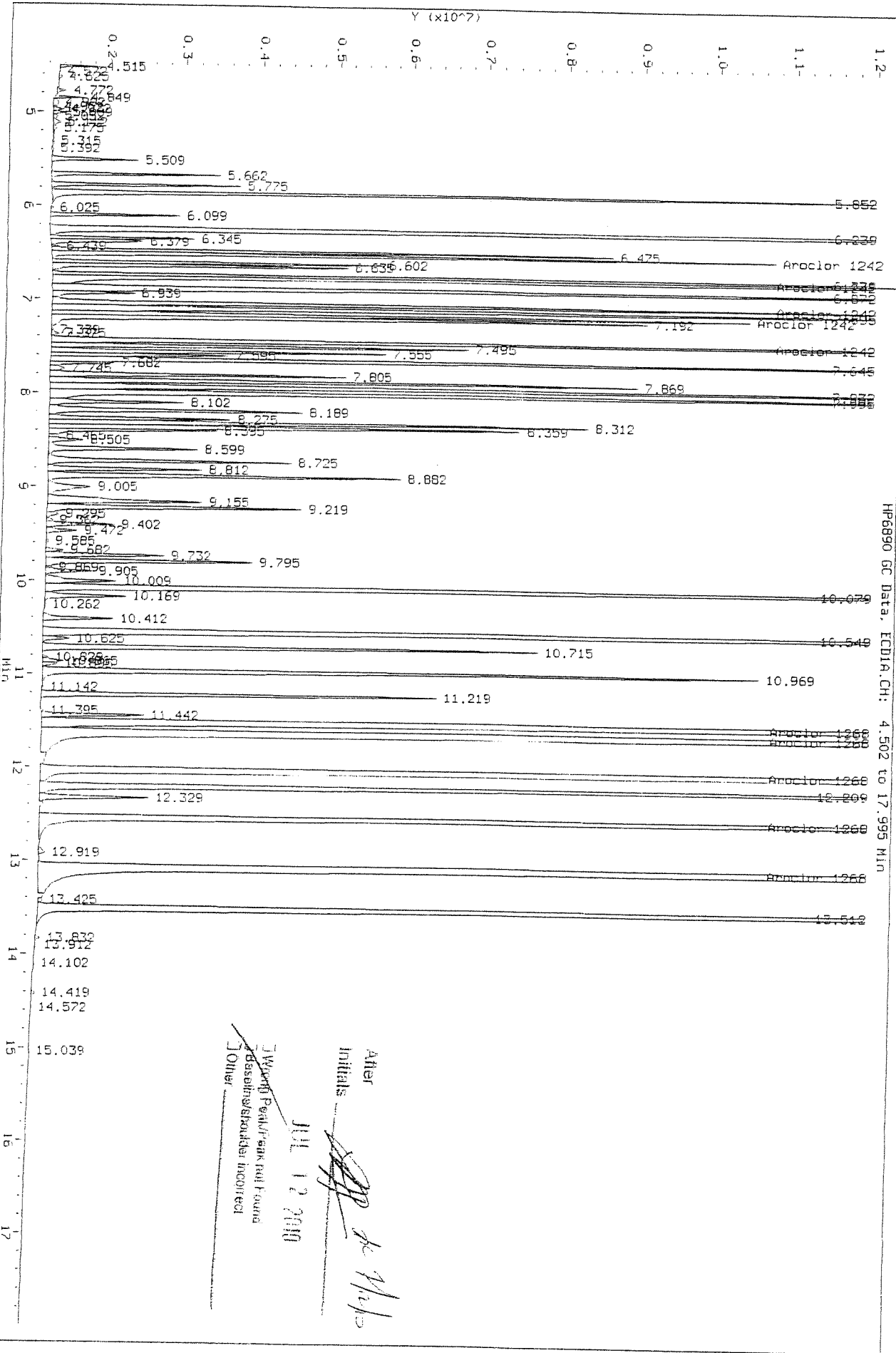
7/12/10  
7/12/10

Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F026.D  
 Injection Date: 10-JUL-2010 05:02  
 Instrument: GC22.1  
 Client Sample ID:



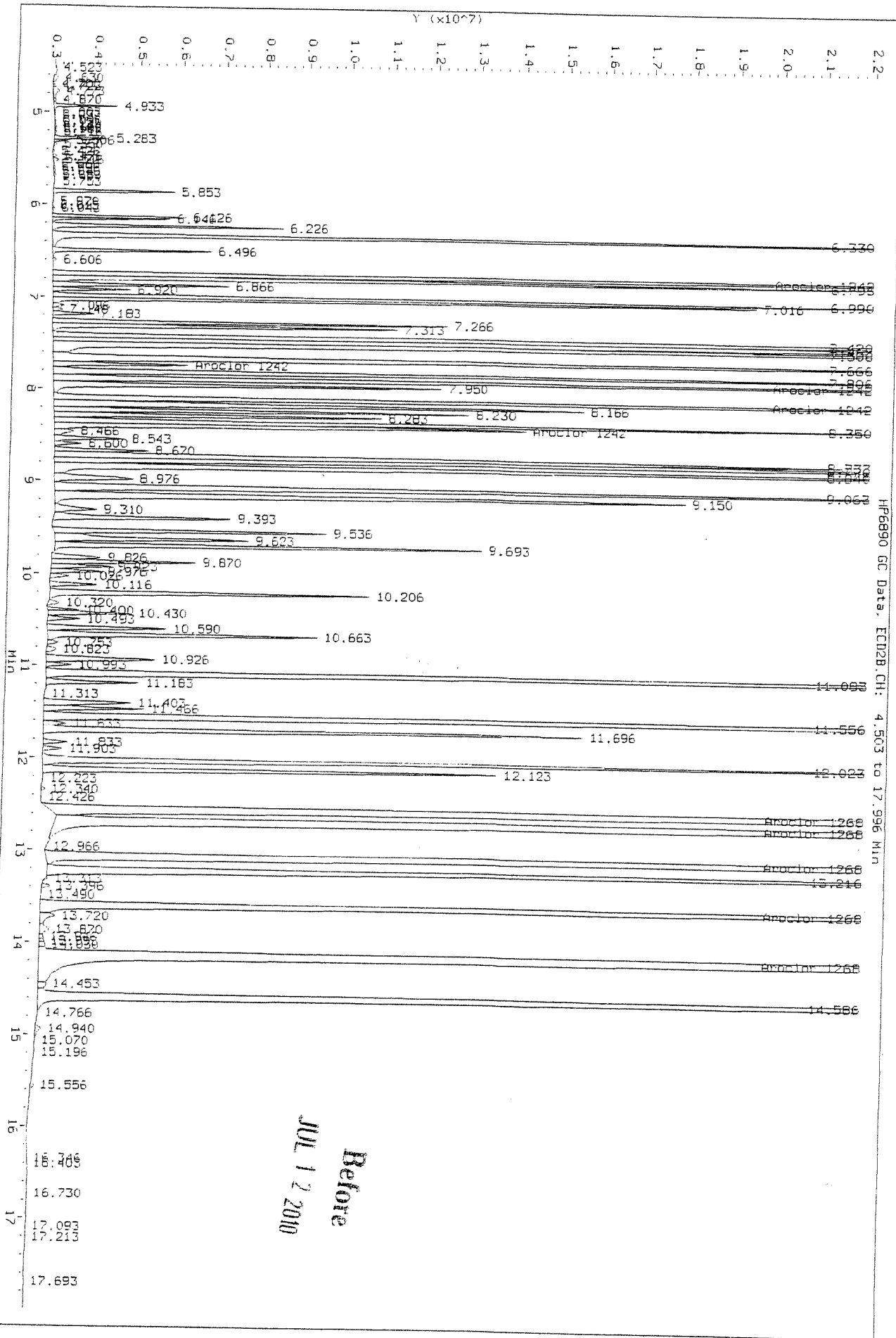
Before  
 JUL 12 2010

Data File: \\Cash1\Acquadata\GC2\data\070910.D\0709F026.D  
 Injection Date: 10-JUL-2010 05:02  
 Instrument: GC22.1  
 Client Sample ID:

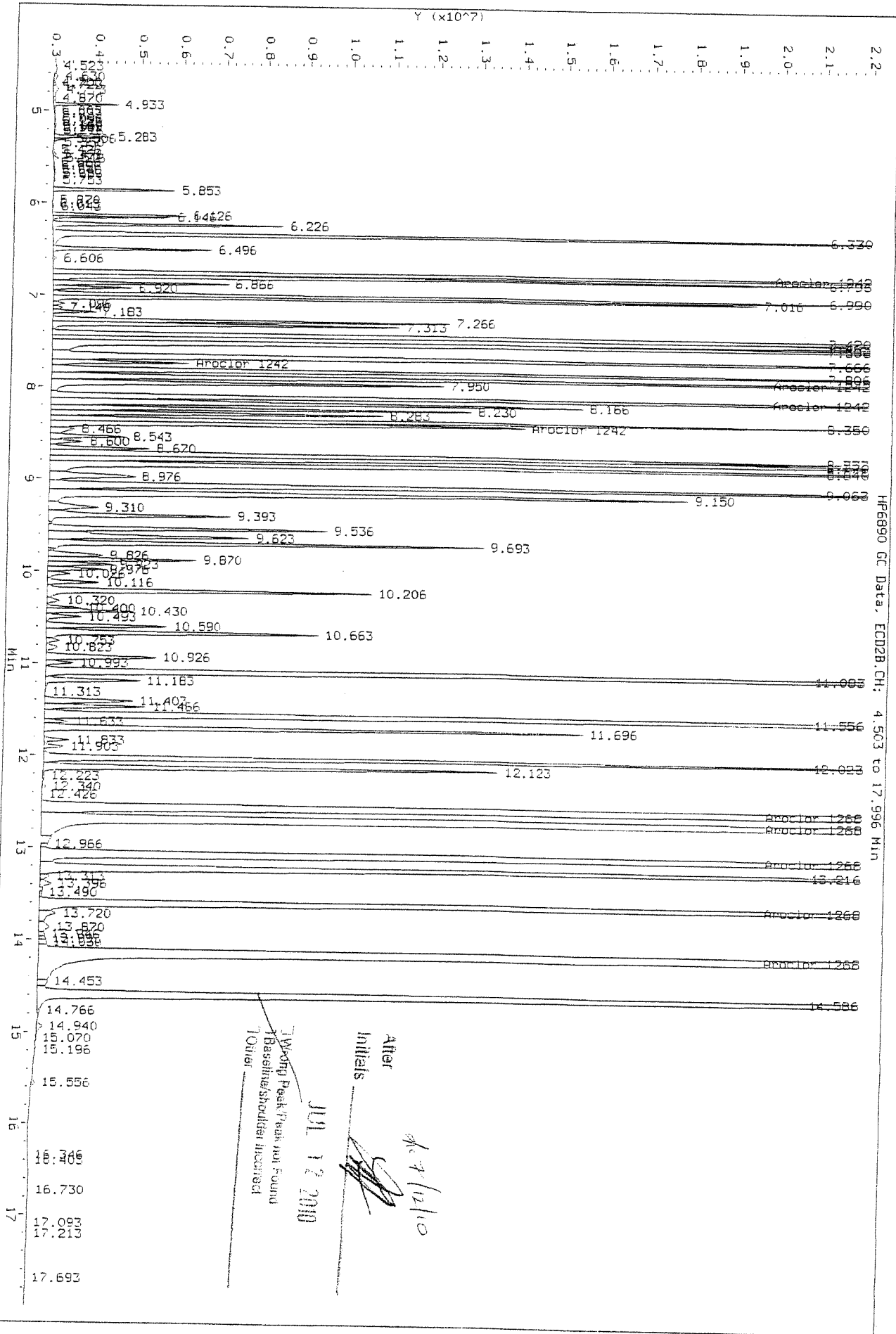


HP6890 GC Data, ECD1A.CH: 4.502 to 17.995 Min

After Initials  
 JUL 12 2010  
 Wrong Peak/ Peak not Found  
 Baseline/Standard Incorrect  
 Other



Data File: \\Casht\Acqudata\GC22\data\070910\_r\_b\0709f026.D  
 Injection Date: 10-JUL-2010 05:02  
 Instrument: GC22.1  
 Client Sample ID:





Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F027.D  
Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F027.D  
Inj Date : 10-JUL-2010 05:26  
Sample Info: 1248 @ 2.5ppb | PCB5-61N | KWG1006746-3  
Misc Info :  
Cal Date : 12-JUL-2010 10:32  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

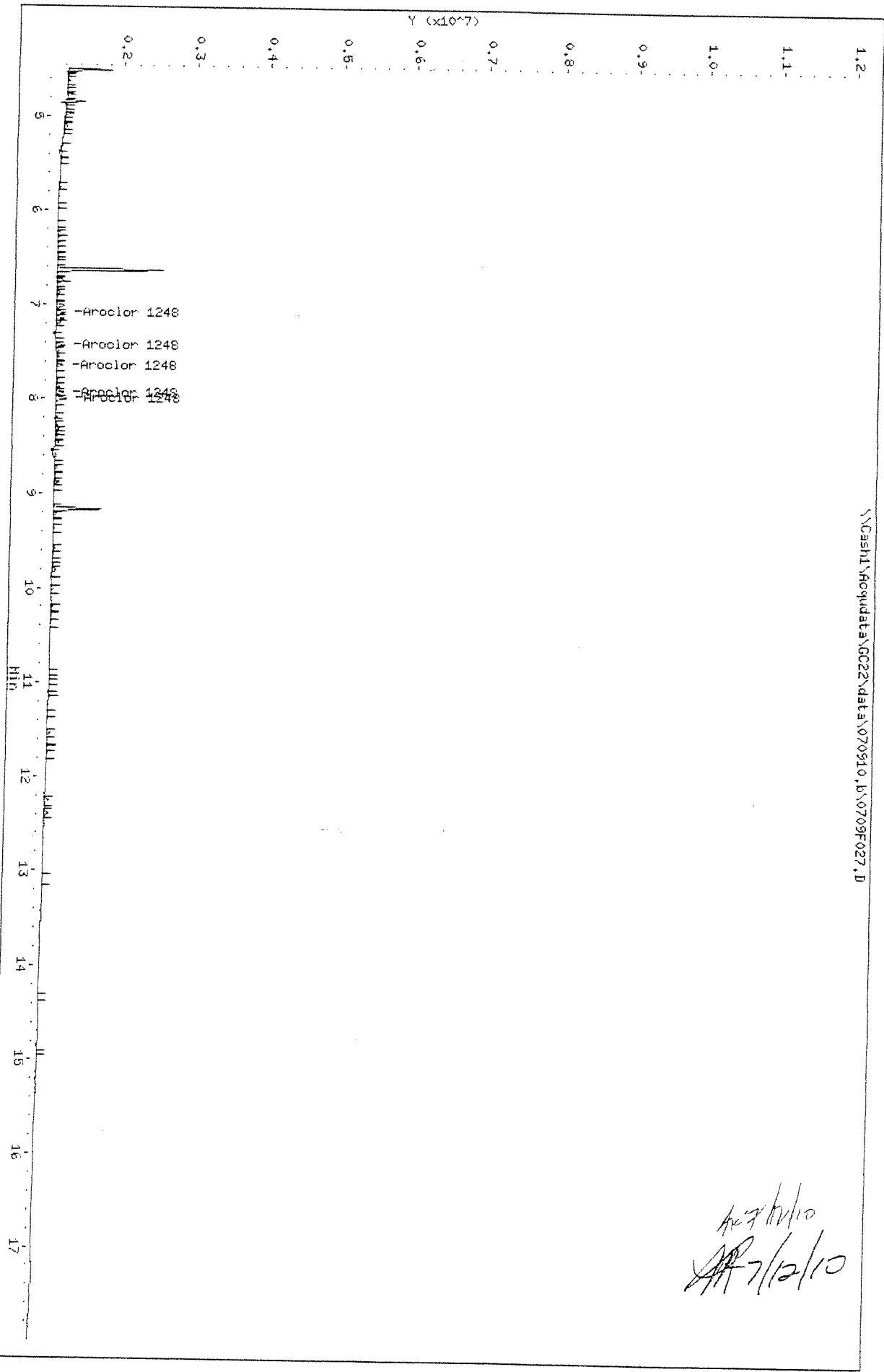
Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
Sub List #1 : AR1248.SUB  
Sub List #2 : AR1248.SUB  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	7.094	7.879	198803	507626	3.80	3.28	80.00- 120.00	100.00
	7.438	8.095	190546	491956	2.76	2.87	84.83- 127.25	95.85
	7.644	8.352	162309	298382	2.90	2.61	70.48- 105.72	81.64
	7.931	8.769	191110	606047	2.60	2.84	93.94- 140.91	96.13
	7.998	8.839	288341	577174	3.12	3.00	109.13- 163.69	145.04
	Average of Peak Amounts =				3.04	2.92		

*Handwritten signature and date:*  
7/12/10  
7/12/10

Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F027.D  
Date: 10-JUL-2010 05:26  
Client ID:  
Sample Info: 1248 @ 2.5ppb | PCB5-64H | KUC1006746-3  
Column Phase: DB-39HS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



*Handwritten signature and date:*  
AR 7/12/10

Data File: \Ncashi\Acqudata\GC22\data\070910\_r.b\0709F027.D

Date: 10-JUL-2010 06:26

Client ID:

Sample Info: 1248 @ 2.5ppb | PCB5-61N | KMG1006246-3

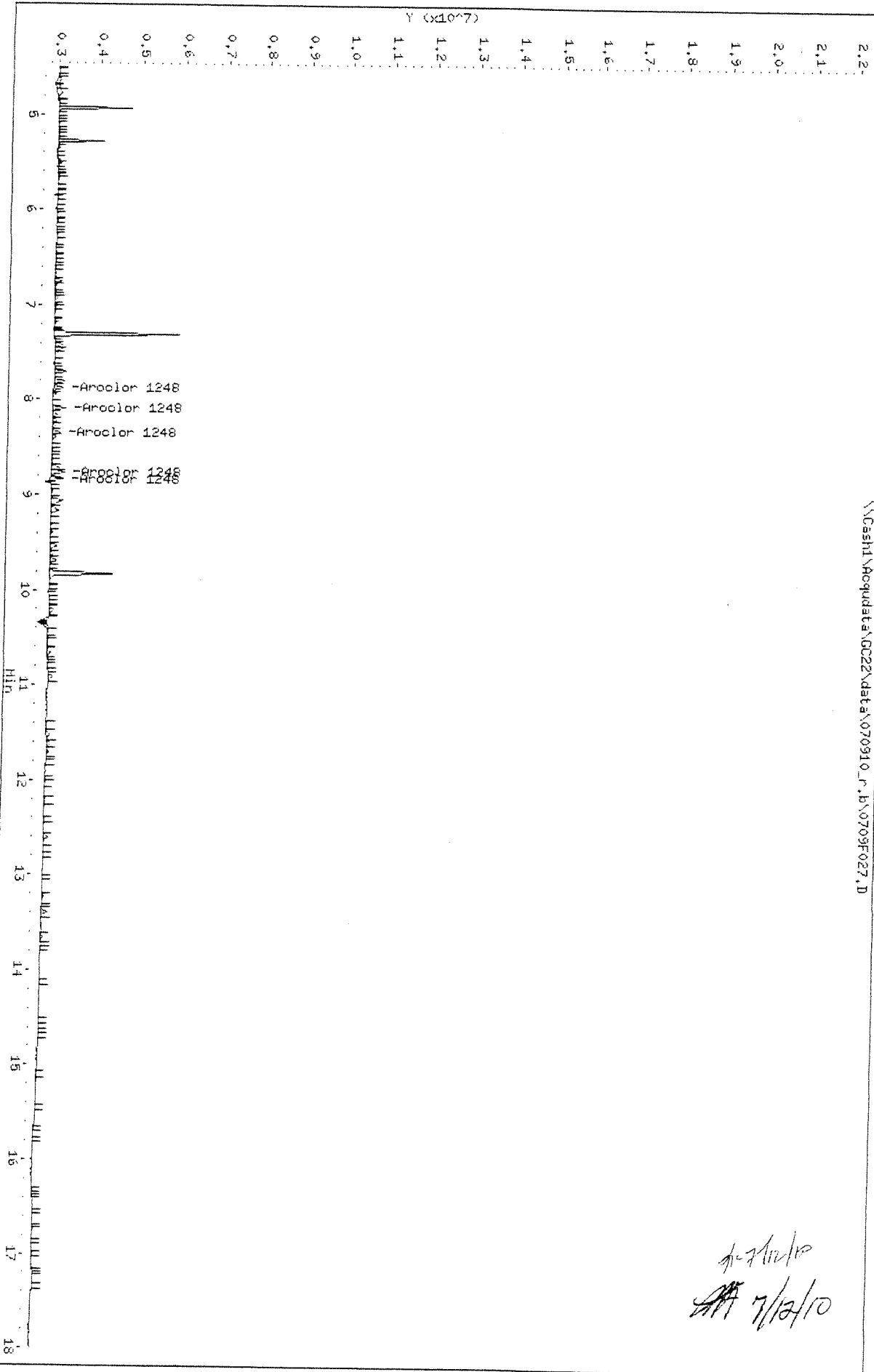
Column phase: DB-XLB

Instrument: GC22.1

Operator: LHarris

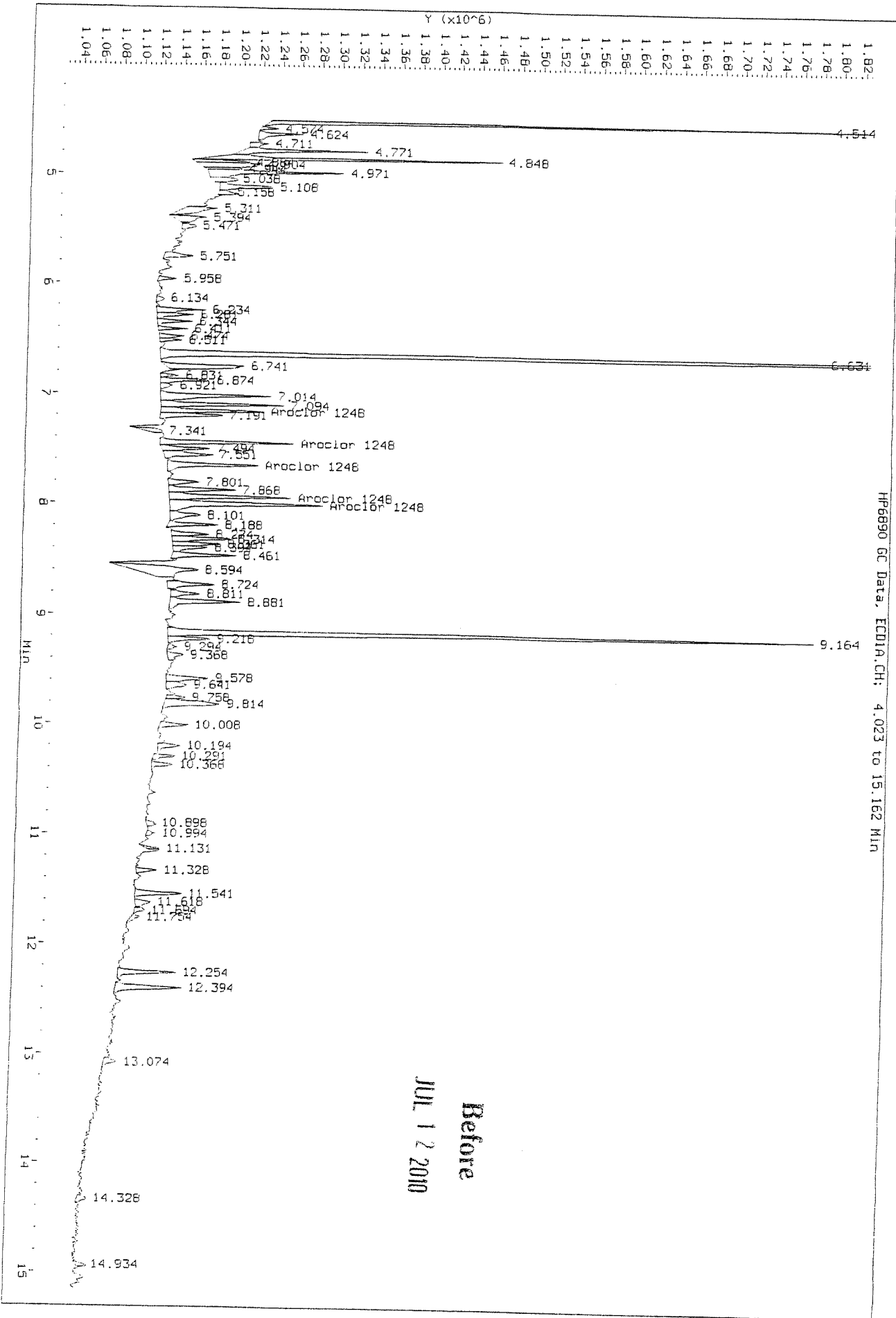
Column diameter: 0.32

\Ncashi\Acqudata\GC22\data\070910\_r.b\0709F027.D

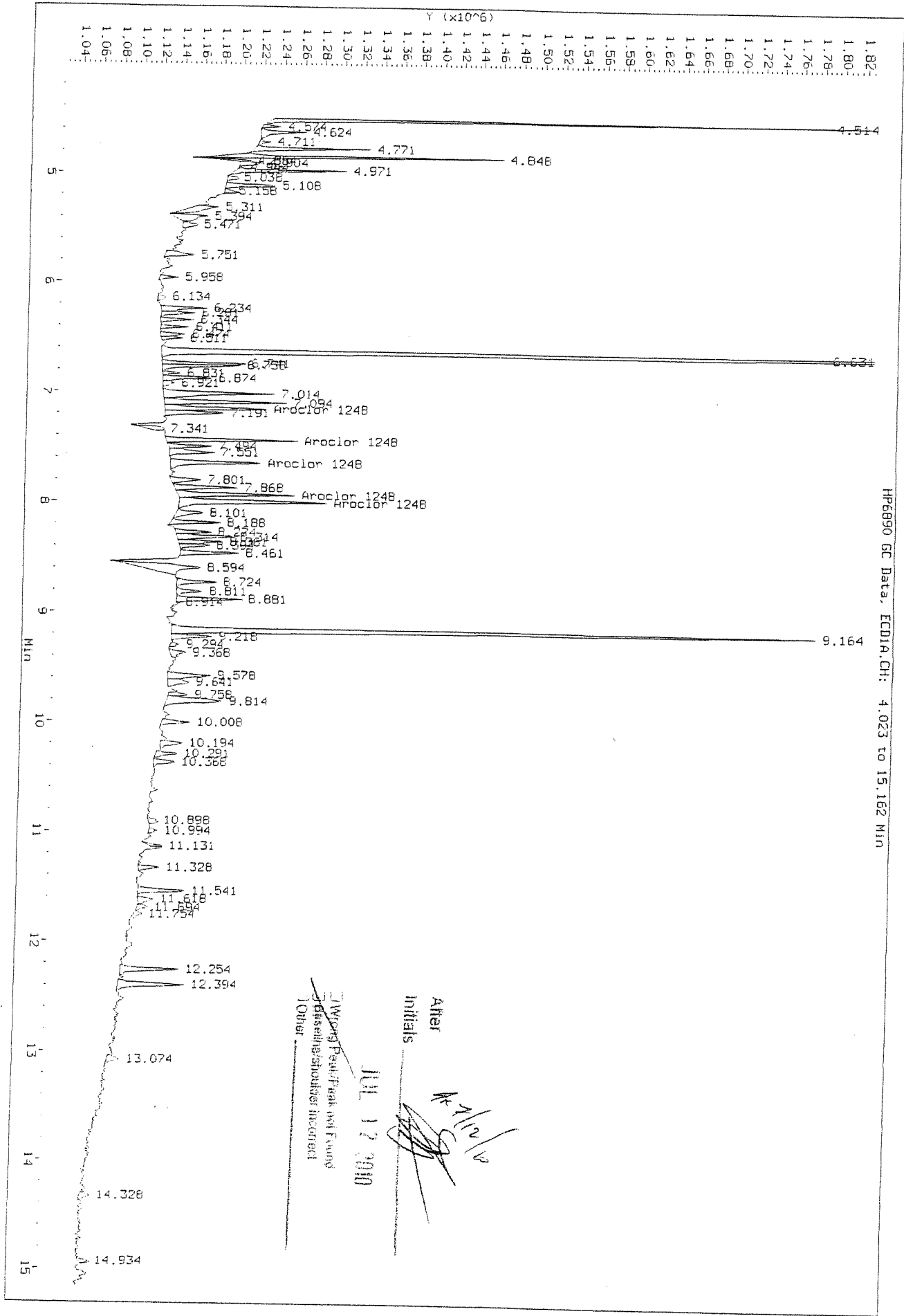


*Handwritten notes:*  
7/12/10  
LHarris

Data File: \\Cash1\pcgdata\GC22\data\070910.B\0709F027.D  
 Injection Date: 10-Jul-2010 05:25  
 Instrument: GC22.1  
 Client Sample ID:

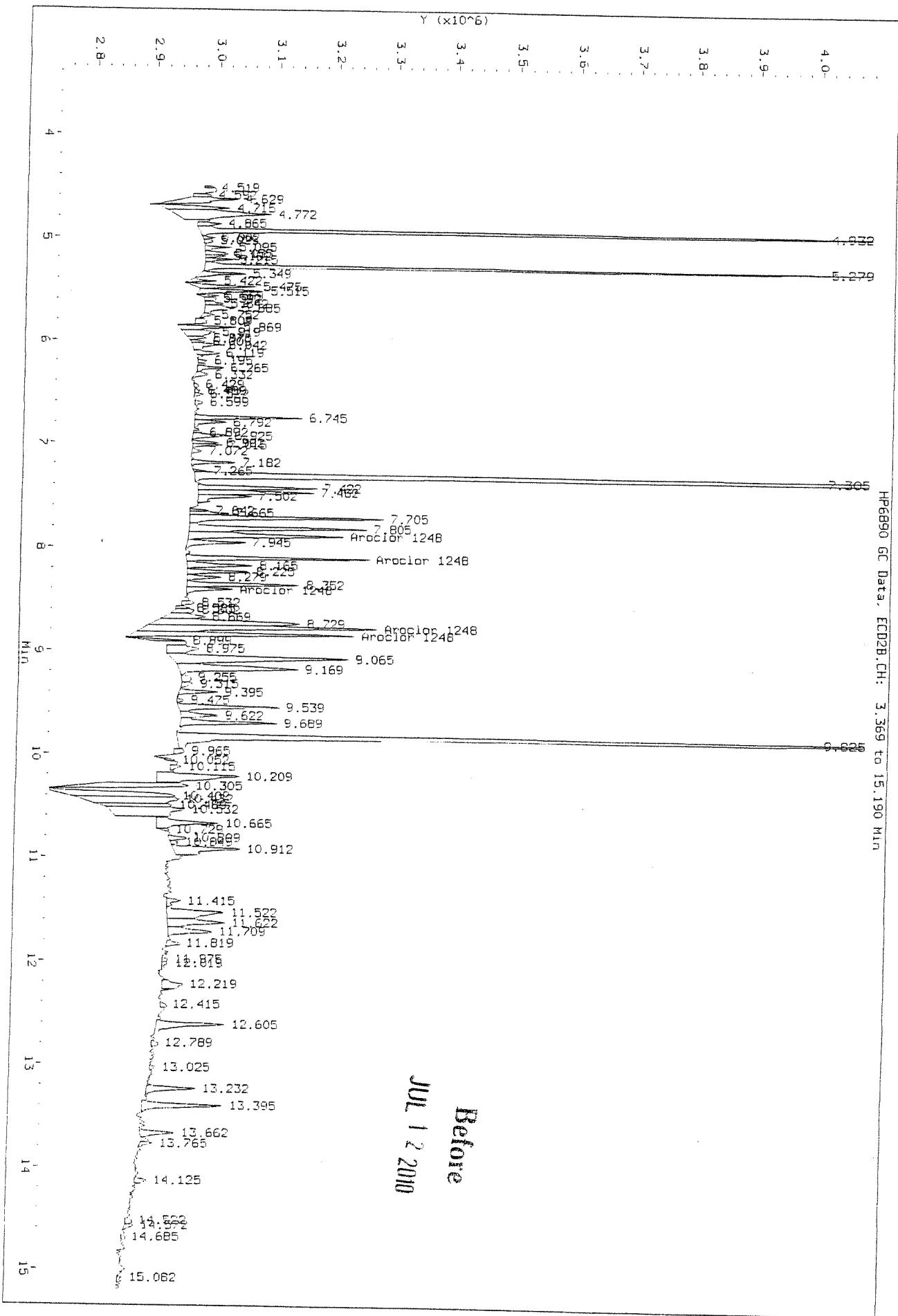


Data File: \\Cash1\Regdata\GC22\data\070910.D\0709F022.D  
 Injection Date: 10-JUL-2010 05:26  
 Instrument: GC22.1  
 Client Sample ID:

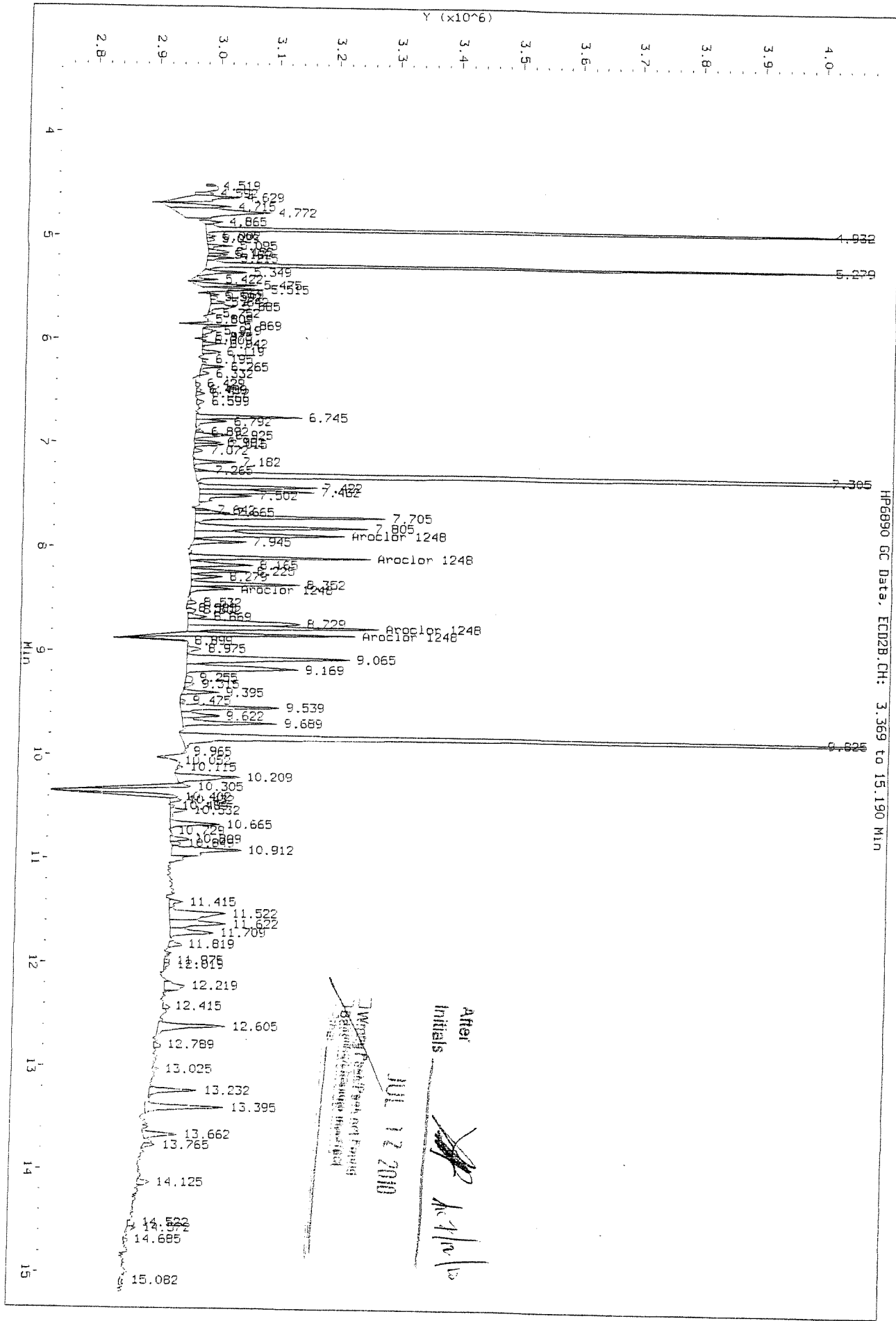


After Initials  
 JUL 12 2010  
 Wrong Peak/Peak not Found  
 Baseline/Stability incorrect  
 Other

Data File: \\Cash1\Acqudata\GC22\data\070910\_r\_b\0709F022.D  
 Injection Date: 10-JUL-2010 06:26  
 Instrument: GC22.1  
 Client Sample ID:



Data File: \\Cash1\ncgdata\GC22\data\070910\_r.b\0709f027.D  
 Injection Date: 10-JUL-2010 05:26  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data, ECD2B.CH: 3.369 to 15.190 MIN

After  
 Initials  
 JUL 12 2010  
 [Signature]

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F028.D  
Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F028.D  
Inj Date : 10-JUL-2010 05:51  
Sample Info: 1248 @ 5.0ppb | PCB5-610 | KWG1006746-3  
Misc Info :  
Cal Date : 12-JUL-2010 10:32  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
Sub List #1 : AR1248.SUB  
Sub List #2 : AR1248.SUB  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	7.097	7.882	359704	906463	6.48	5.86	80.00- 120.00	100.00
	7.441	8.095	388730	967086	5.64	5.63	84.83- 127.25	108.07
	7.647	8.352	283782	611683	5.07	5.36	70.48- 105.72	78.89
	7.934	8.772	391634	1234947	5.32	5.78	93.94- 140.91	108.88
	7.997	8.842	506738	954785	5.48	4.96	109.13- 163.69	140.88
Average of Peak Amounts =					5.60	5.52		

*Handwritten signature and date:*  
7/2/10  
7/2/10



Data File: \\Cashd\Acqudata\GC22\data\070910.B\0709F028.D

Date: 10-JUL-2010 05:51

Client ID:

Sample Inlet: 1248 @ 5.0ppb | PCBs-610 | KMG10002746-3

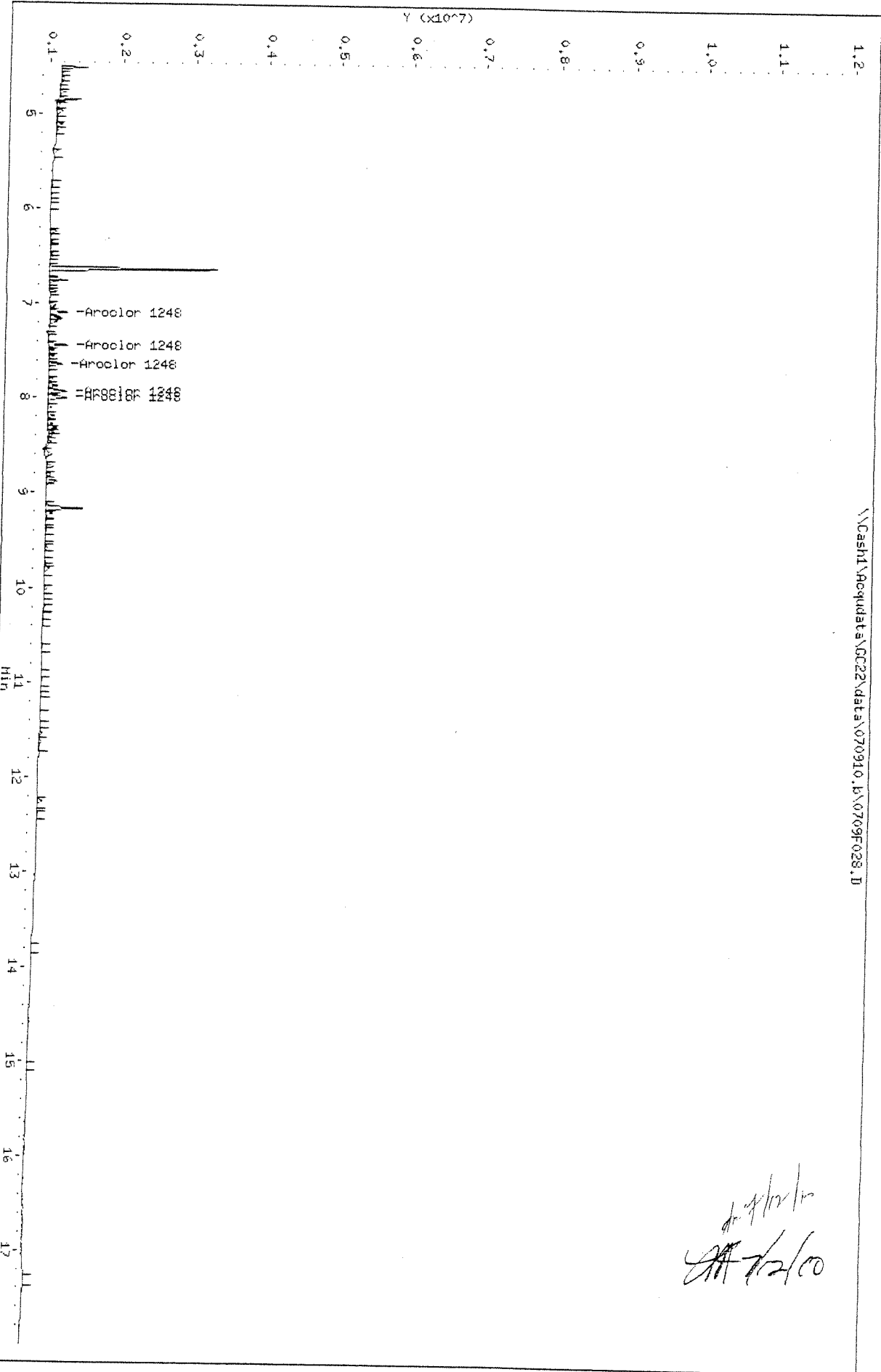
Column Phase: DB-35MS

Instrument: GC22.i

Operator: LHarris

Column diameter: 0.32

\\Cashd\Acqudata\GC22\data\070910.B\0709F028.D



*Handwritten signature and date: 7/2/10*

Data File: \\Cash1\Acquidat\GC22\data\070910\_r.j\0709F028.D

Date: 10-JUL-2010 06:51

Client ID:

Sample Info: 1248 @ 5.0ppb | PCB6-610 | KMG1006746-3

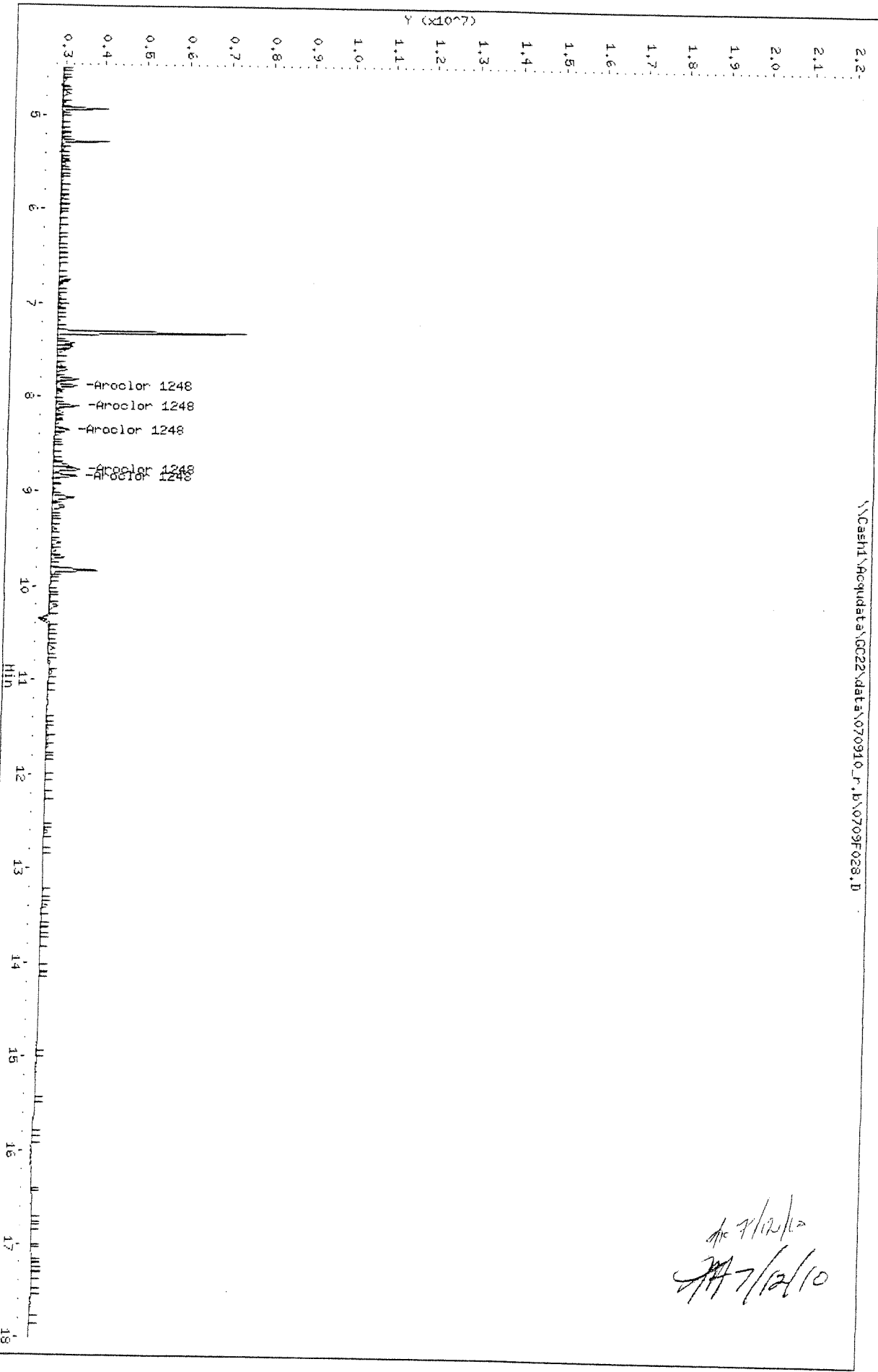
Column Phase: DB-XLB

Instrument: GC22.1

Operator: LHarris

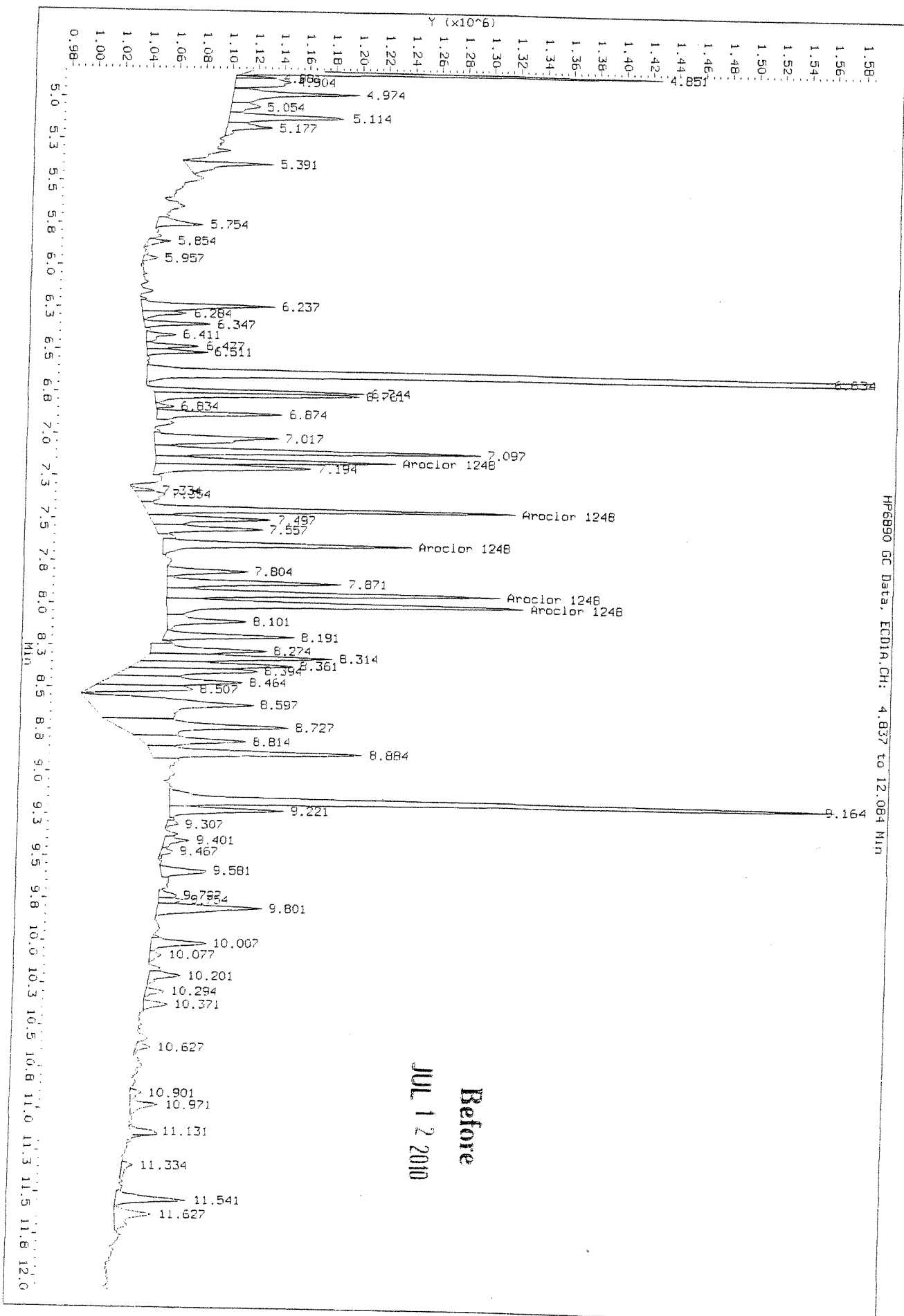
Column diameter: 0.32

\\Cash1\Acquidat\GC22\data\070910\_r.j\0709F028.D

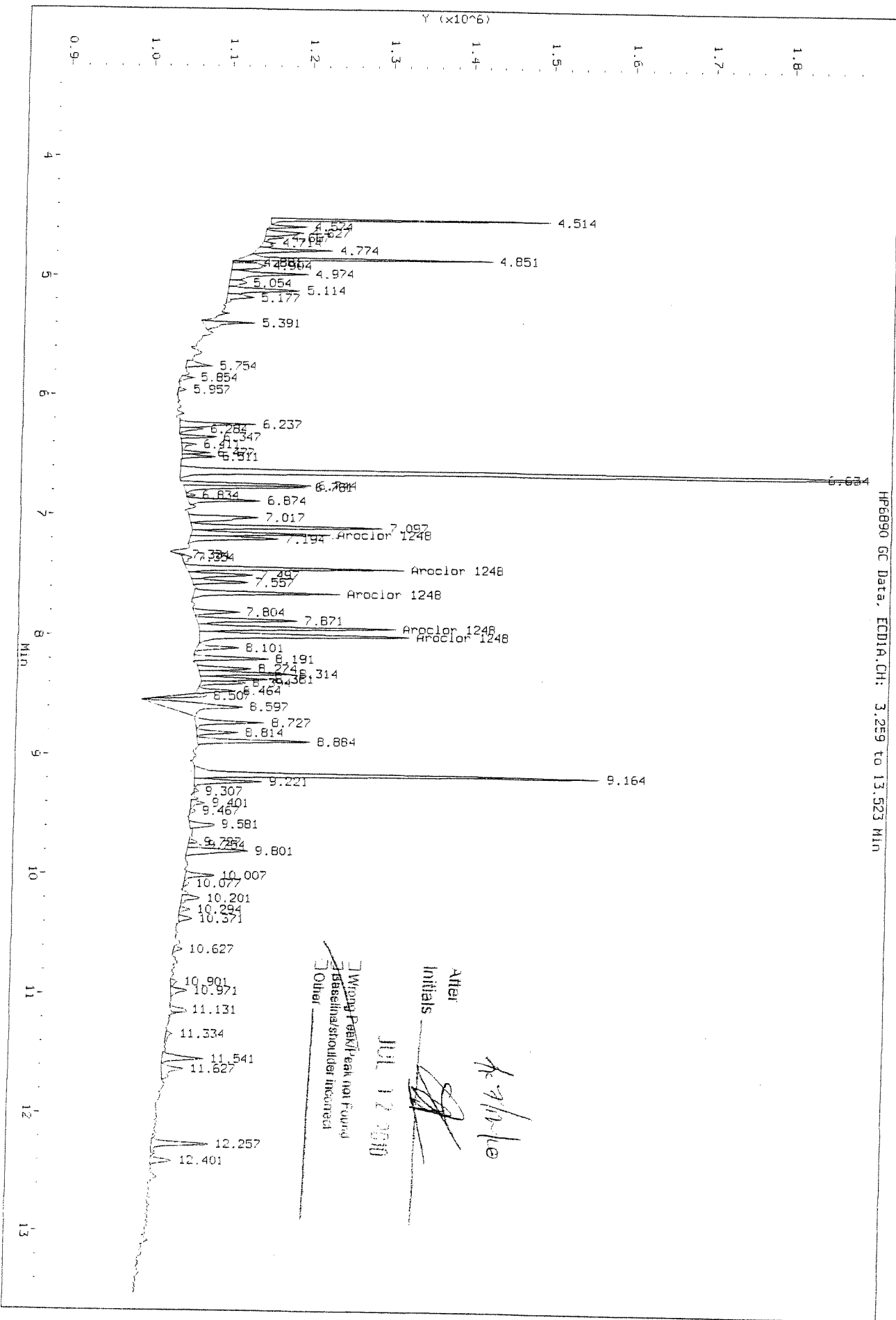


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7/12/10  
7/12/10

Data File: \\Cash1\Acqudata\GC22\data\070910\_b\0709F028.D  
 Injection Date: 10-JUL-2010 05:51  
 Instrument: GC22.1  
 Client Sample ID:



Data File: \\Cash1\Acqudata\GC22\data\070910.lv\0709F028.D  
 Injection Date: 10-JUL-2010 05:51  
 Instrument: GC22.1  
 Client Sample ID:

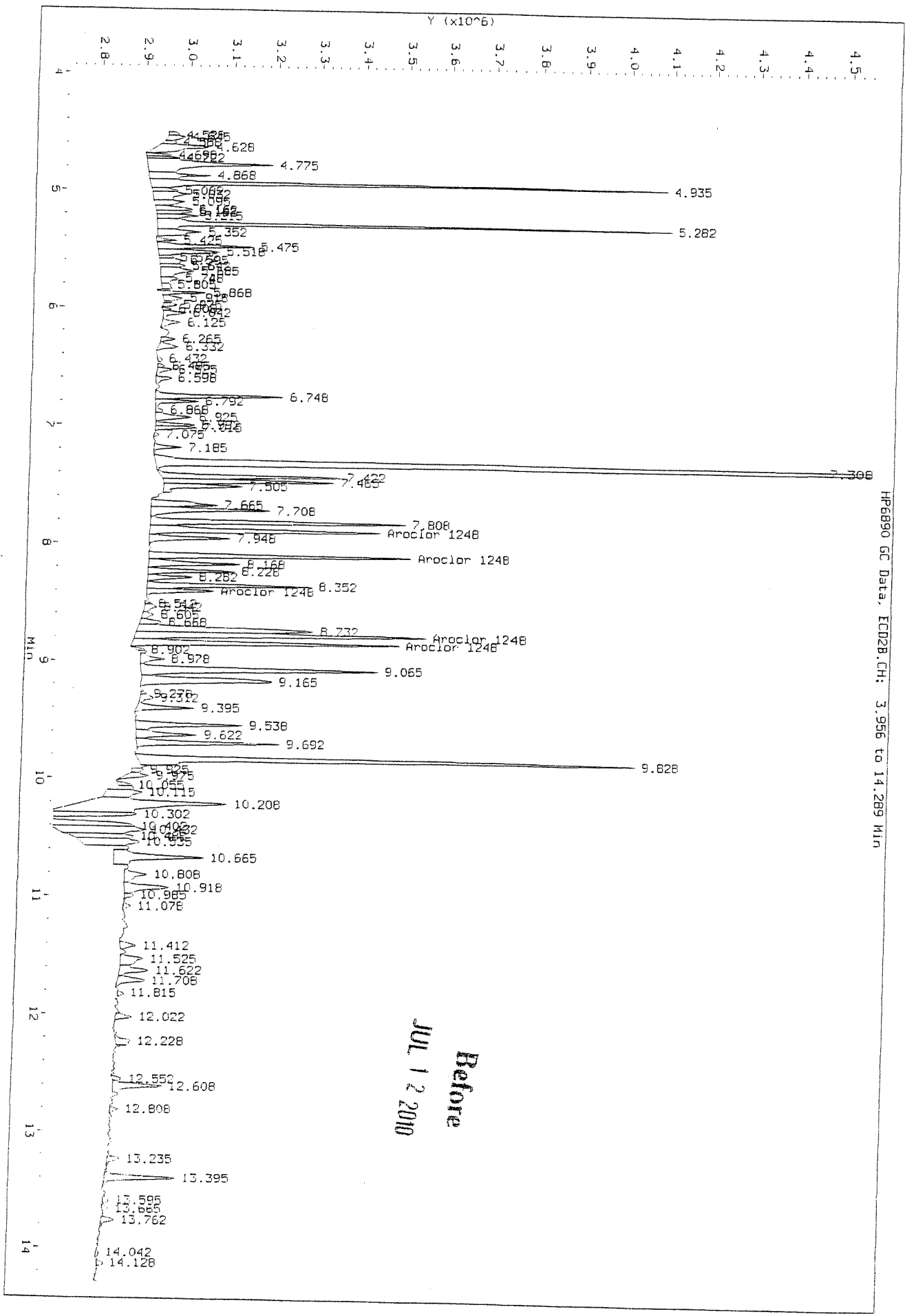


HP6890 GC Data, ECD1A.CH: 3.259 to 13.523 MIN

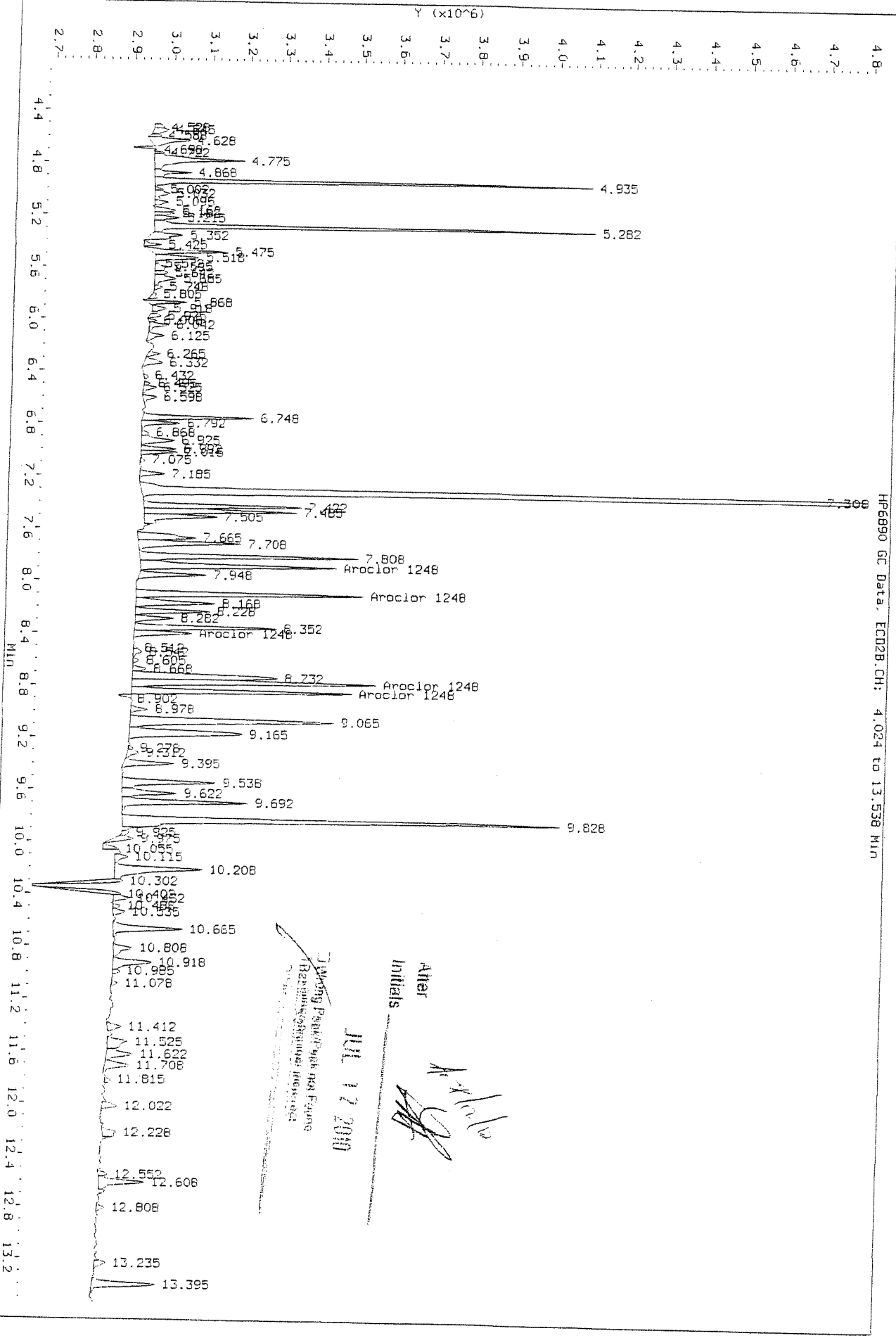
Wrong Peak  
 Peak not Found  
 Baseline/shoulder incorrect  
 Other

Alter: \_\_\_\_\_  
 Initials: *[Signature]*  
 JUL 12 2010

Data File: \\Casht1\Acqdata\GC22\data\070910\_r.b\0709F028.D  
 Injection Date: 10-JUL-2010 05:51  
 Instrument: GC22.1  
 Client Sample ID:



Data File: \\Cash1\Acq\data\GC22\data\070910\_r.b\0709F028.D  
 Injection Date: 10-JUL-2010 05:51  
 Instrument: GC22.1  
 Client Sample ID:



Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F029.D  
 Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F029.D  
 Inj Date : 10-JUL-2010 06:15  
 Sample Info: 1248 @ 50ppb | PCB5-61P | KWG1006746-3  
 Misc Info :  
 Cal Date : 12-JUL-2010 10:32  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : AR1248.SUB  
 Sub List #2 : AR1248.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

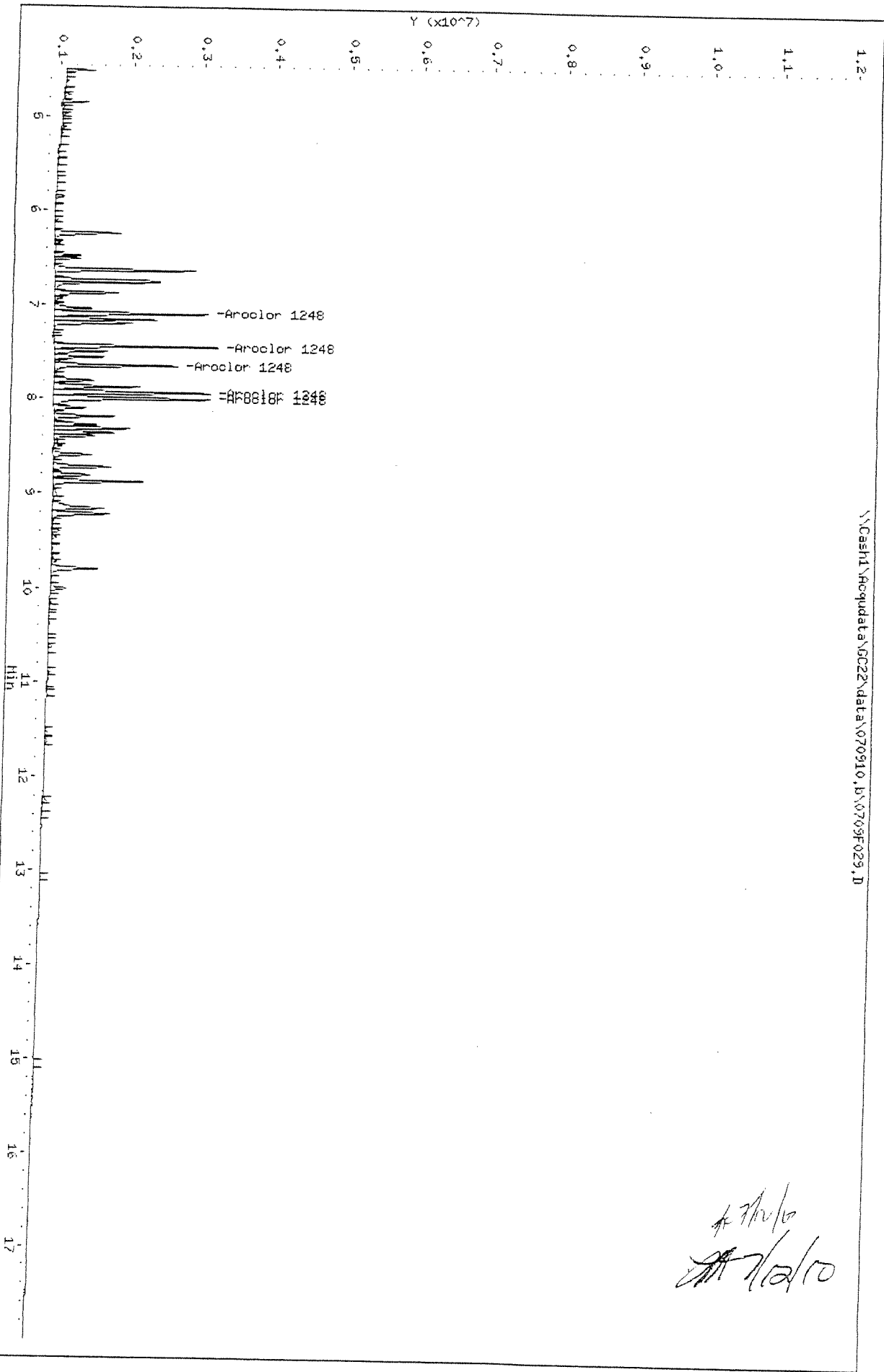
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	7.094	7.879	3325623	7362300	59.9	47.5	80.00- 120.00	100.00
	7.441	8.095	3367912	8504932	48.8	49.5	84.83- 127.25	101.27
	7.644	8.352	2751057	5784274	49.2	50.5	70.48- 105.72	82.72
	7.931	8.769	3709848	10871452	50.4	50.6	93.94- 140.91	111.55
	7.998	8.839	4434427	9697078	48.0	50.1	109.13- 163.69	133.34
	Average of Peak Amounts =					51.3	49.6	

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 + 7/12/10  
 [Signature] 7/12/10

Data File: \\Cash1\Acqudata\GC22\data\070910\_b\0709f029.D  
Date: 10-JUL-2010 06:15  
Client ID:  
Sample Info: 1248 @ 50ppb | PCB5-6TP | KMG1006746-3  
Column phase: DB-35HS

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32

\\Cash1\Acqudata\GC22\data\070910\_b\0709f029.D



*Handwritten signature/initials*

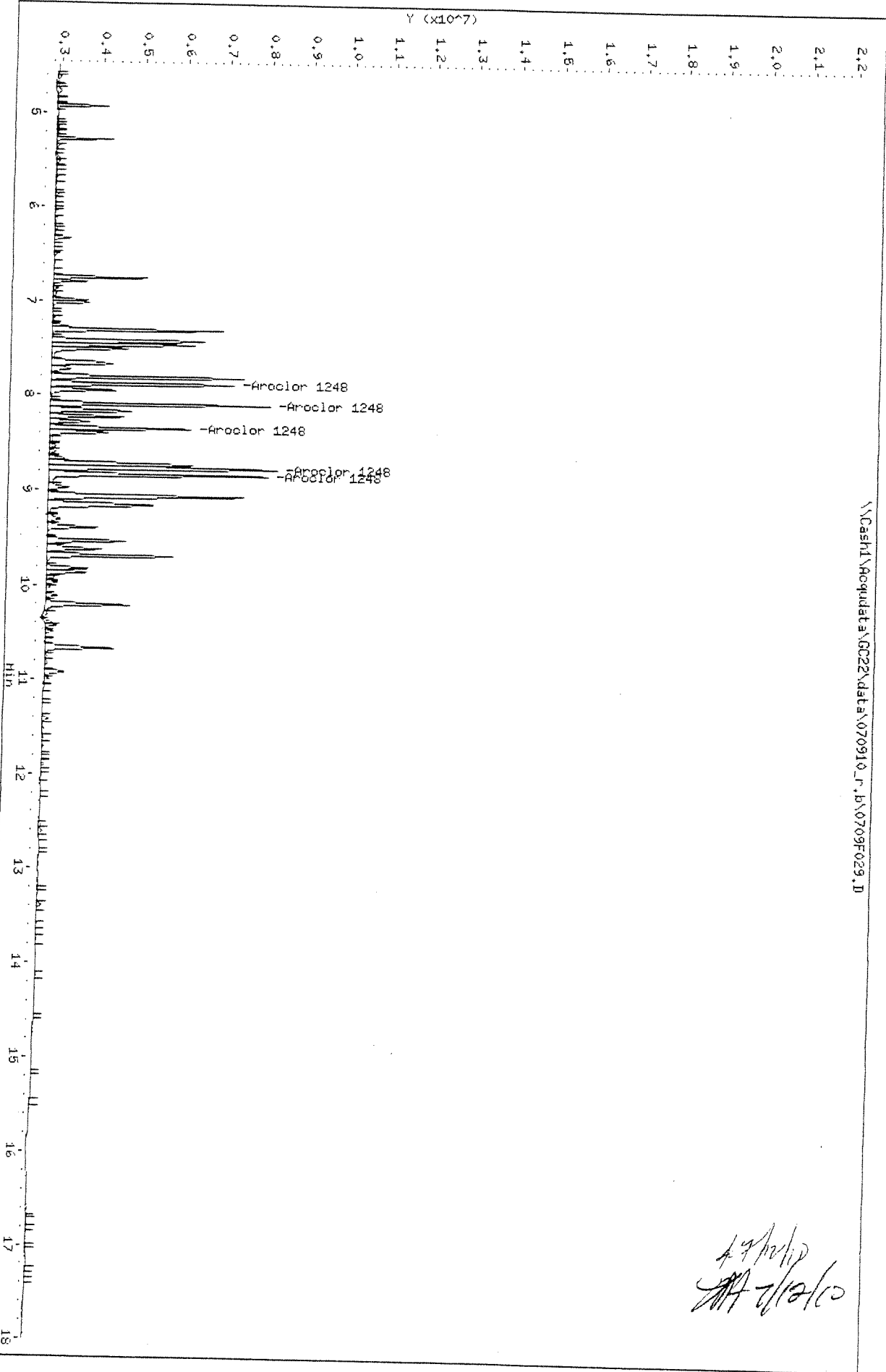


Data File: \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F029.D  
Date: 10-JUL-2010 06:15  
Client ID:  
Sample Info: 1248 @ 50ppb | PCB5-61P | KMG1006746-3  
Column Phase: DB-XLB

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32

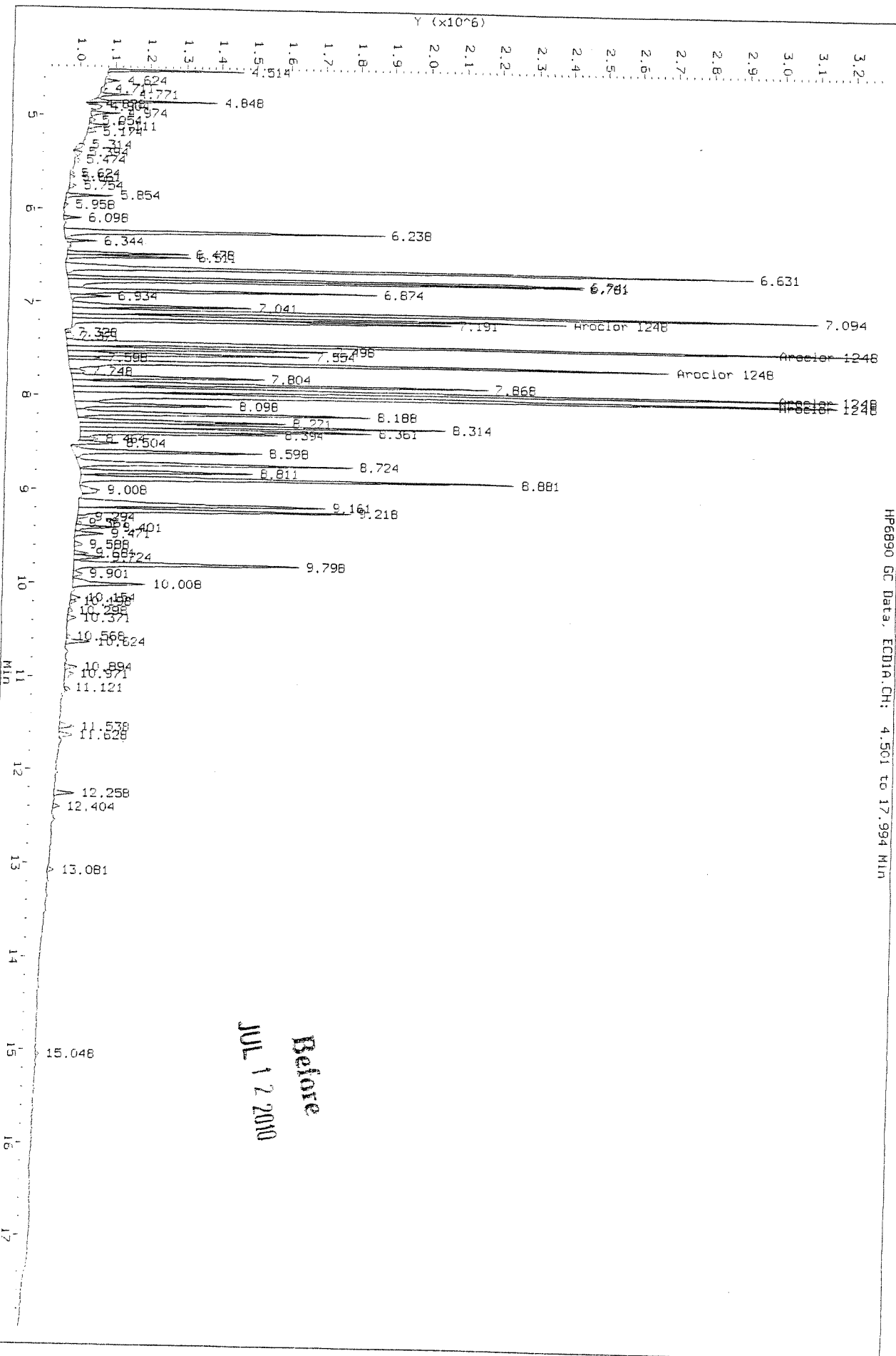
\\Cash1\Acqudata\GC22\data\070910\_r.b\0709F029.D

*Handwritten signature and date:*  
7/12/10  
LHarris

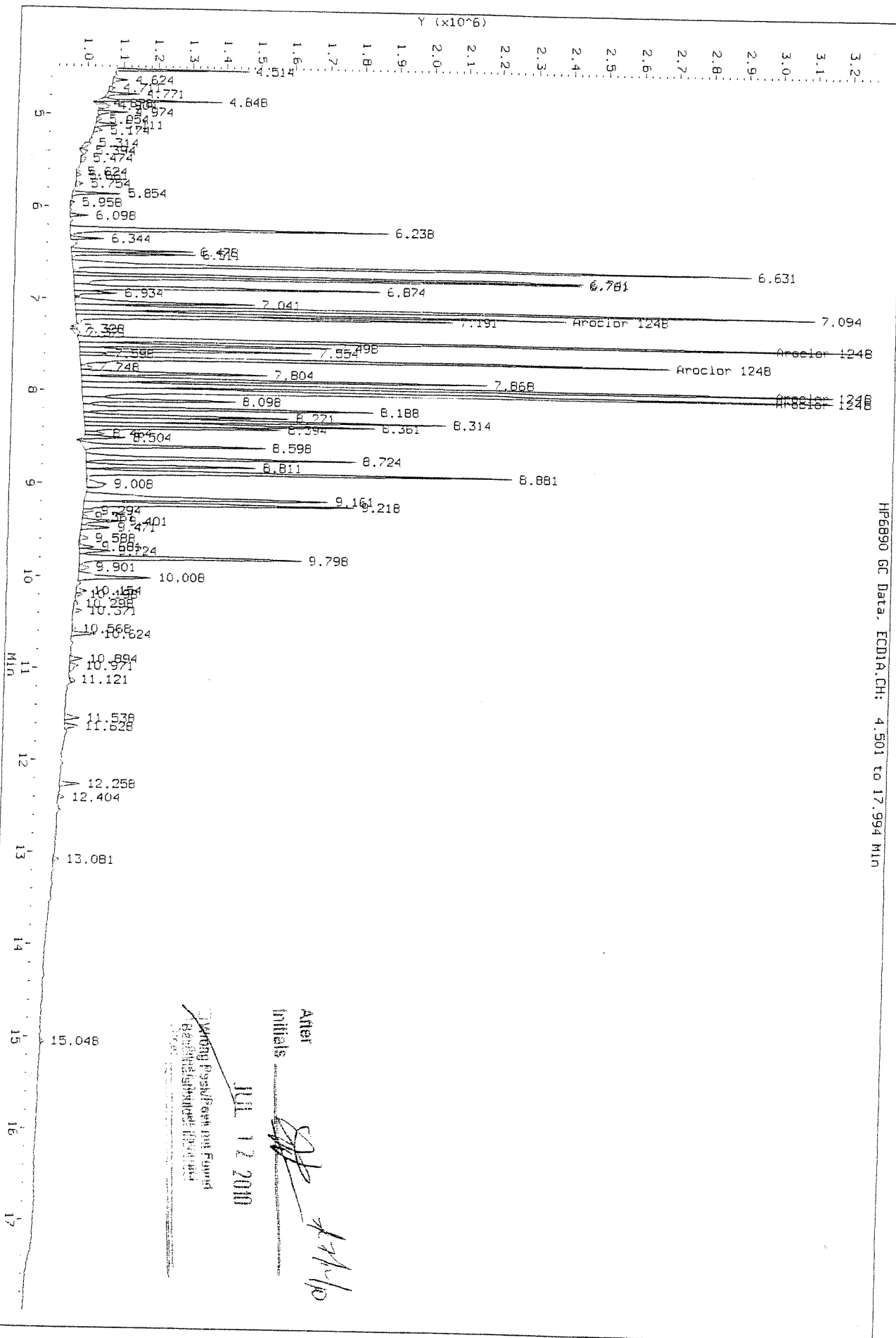


Data File: \\Cash1\Acq\data\GC22\data\070910.D\0709F029.D  
 Injection Date: 10-JUL-2010 06:15  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data: ECD1A.CH: 4.501 to 17.994 MIN



Data File: \\Cash1\Acqudata\GC22\data\070910.b\07091029.D  
 Injection Date: 10-JUL-2010 06:15  
 Instrument: GC22.1  
 Client Sample ID:

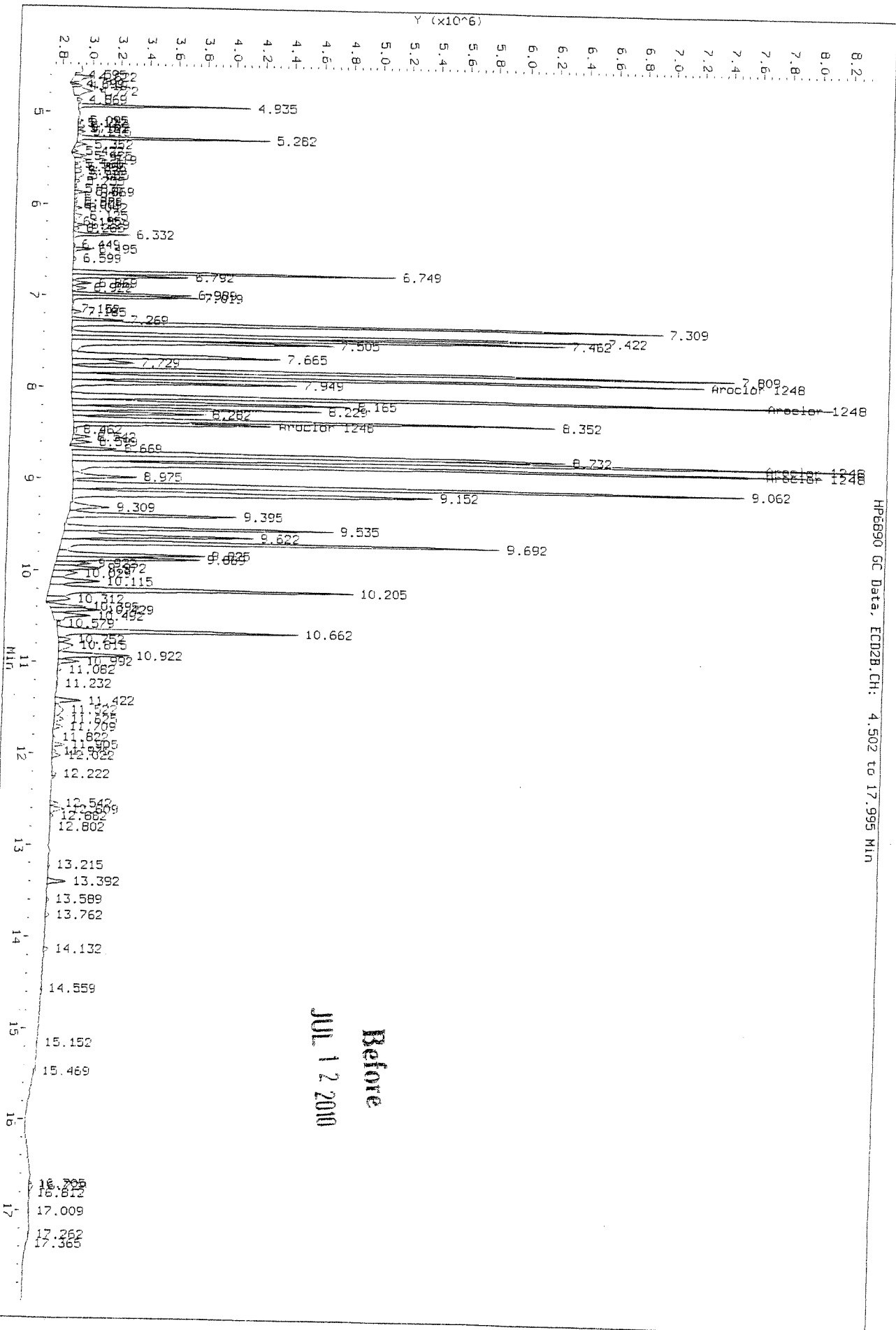


HP6890 GC Data, ECD1A.CH: 4.501 to 17.994 MIN

After  
 Initials  
 JUL 12 2010  
 Working Past/From not Found  
 Ben H. Smith  
 11/10

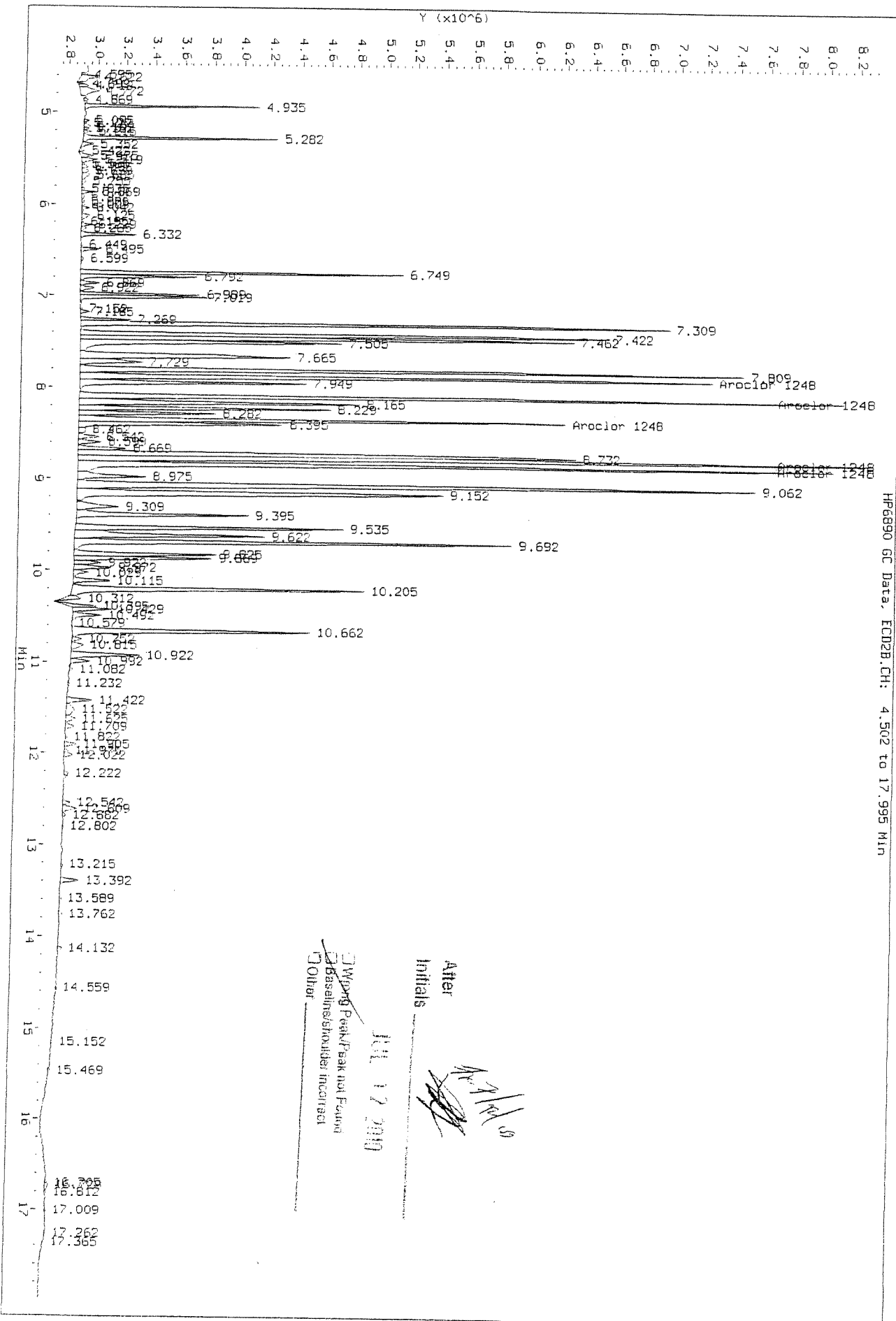
Data File: \\Cash1\6cqudata\GC22\data\070910\_r.b\07091029.D  
 Injection Date: 10-JUL-2010 06:15  
 Instrument: GC22.1  
 Client Sample ID:

HP5890 GC Data, ECD2B.CH: 4.502 to 17.995 MIN



Data File: \\Cash1\pcgdata\GC22\data\070910\_r\_b\0709f029.D  
 Injection Date: 10-JUL-2010 06:15  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data, FID2B.CH: 4.502 to 17.995 Min



Working Peak/ Peak not Found  
 Baseline/ Shoulder/ Inconsistent  
 Other

After Initials  
 JUL 12 2010  
*[Handwritten Signature]*

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F030.D  
Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F030.D  
Inj Date : 10-JUL-2010 06:39  
Sample Info: 1248 @ 100ppb | PCB5-61Q | KWG1006746-3  
Misc Info :  
Cal Date : 12-JUL-2010 10:32  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
Sub List #1 : AR1248.SUB  
Sub List #2 : AR1248.SUB  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	7.097	7.881	6332220	13984008	107	89.9	80.00- 120.00	100.00
	7.440	8.094	6503740	16345772	94.3	95.2	84.83- 127.25	102.71
	7.647	8.351	5308876	11327422	94.9	122	70.48- 105.72	83.84
	7.933	8.768	7132116	19840198	97.0	92.9	93.94- 140.91	112.63
	7.997	8.838	8449854	18772373	91.4	97.4	109.13- 163.69	133.44
			Average of Peak Amounts =		96.9	99.5		

*Handwritten signature:* AH 7/12/10  
to Harris

Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F030.D

Date: 10-JUL-2010 06:39

Client ID:

Sample Info: 1248 @ 100ppb | PCB5-61Q | KMD1006746-3

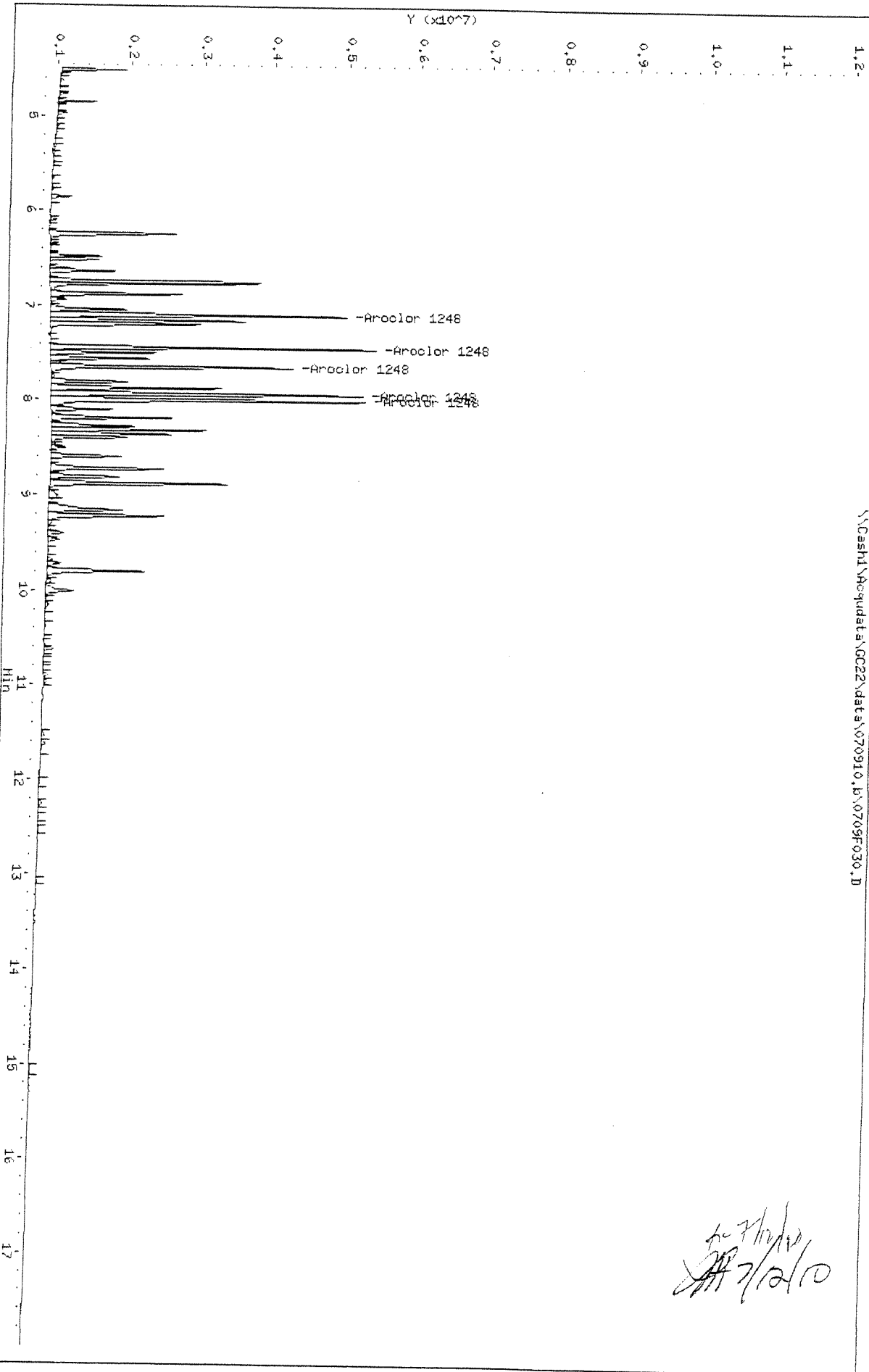
Column phase: DB-35HS

Instrument: GC22.1

Operator: LHarvis

Column diameter: 0.32

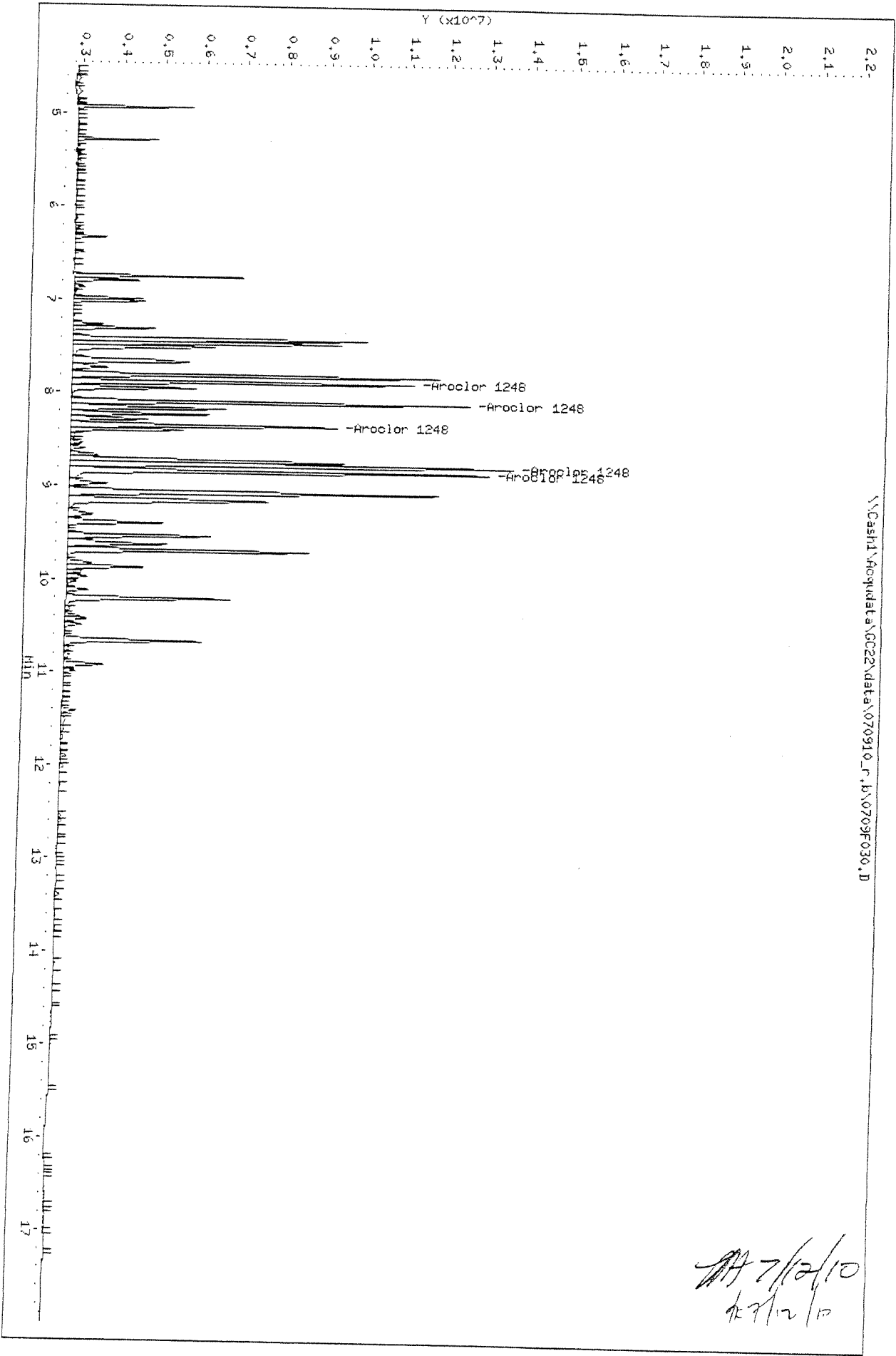
\\Cash1\Acqudata\GC22\data\070910.b\0709F030.D



*Handwritten signature and date: 7/10/10*

Data File: \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F030.D  
Date: 10-JUL-2010 06:39  
Client ID:  
Sample Info: 1248 @ 100ppb | PCB5-61Q | KMG1006746-3  
Column phase: DB-MLB

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

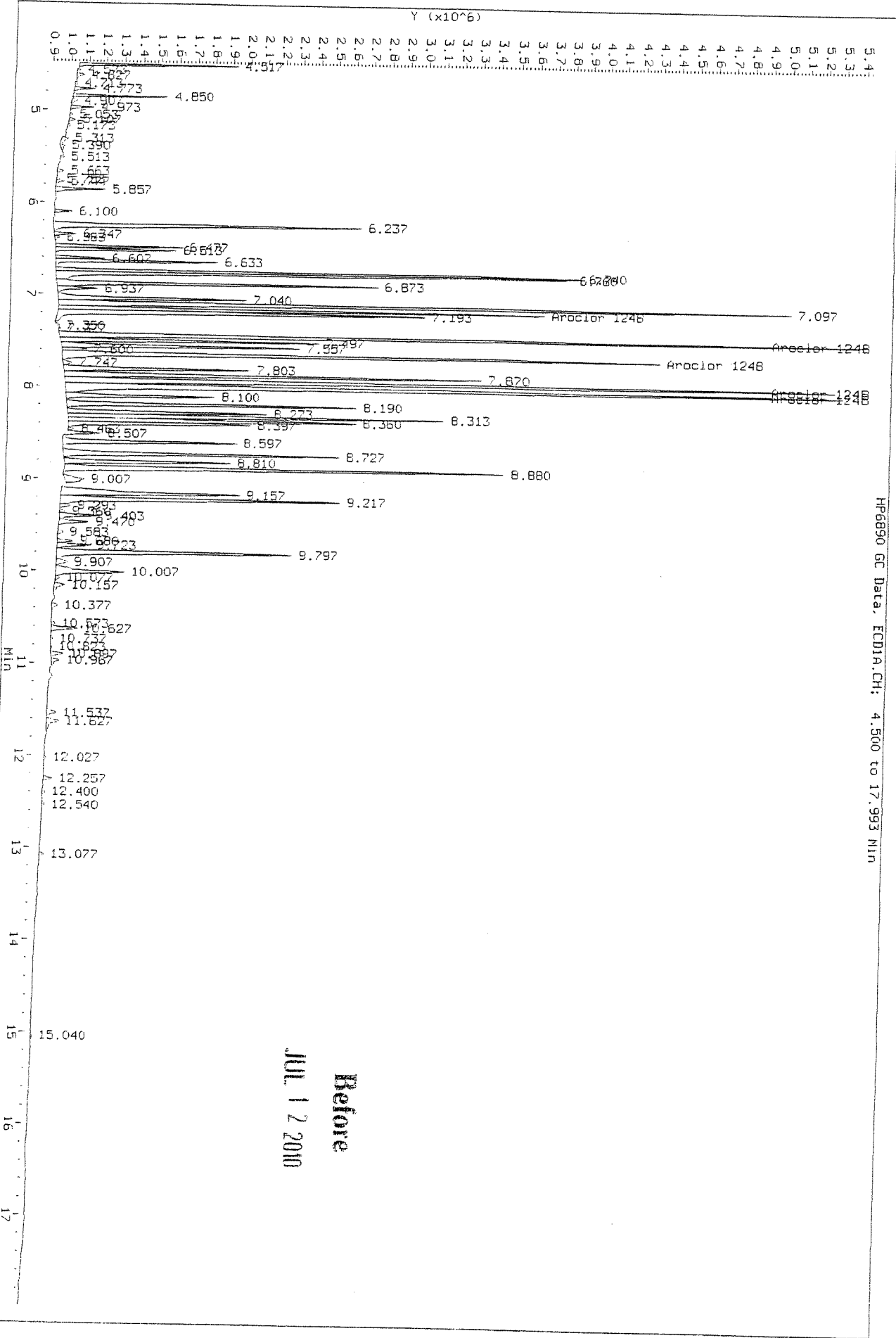


*Handwritten signature and date:*  
7/2/10  
7/12/10



Data File: \\Cash1\Acq\data\GC22\data\070910.P\0709F030.D  
 Injection Date: 10-JUL-2010 08:39  
 Instrument: GC22.1  
 Client Sample ID:

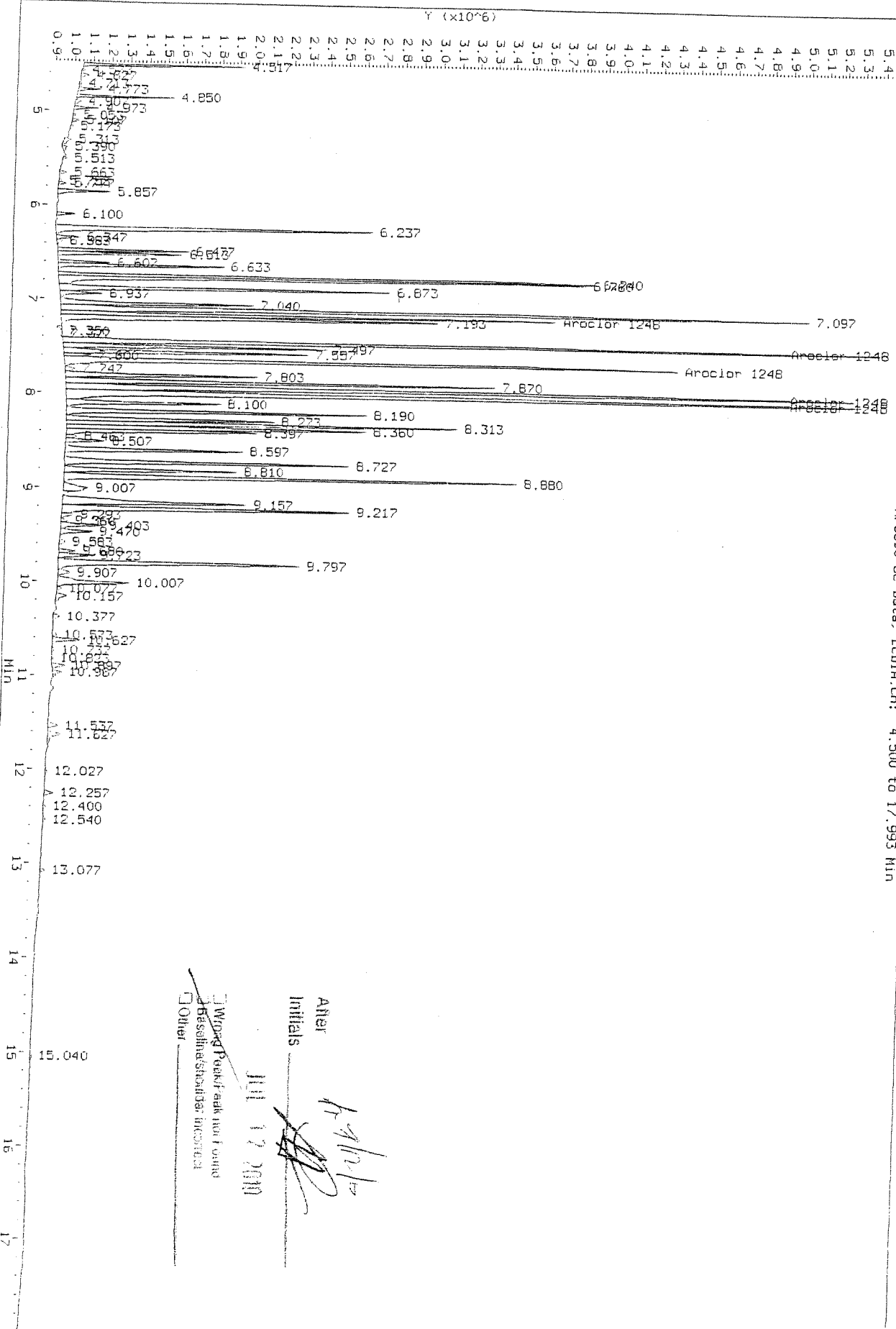
HP6890 GC Data, ECD1A.CH: 4.500 to 17.993 Min



Before  
 JUL 12 2010

Data File: \\Cash1\Acqudata\GC22\data\070910.B\0709F030.D  
 Injection Date: 10-JUL-2010 06:39  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data, ECD1A.CH: 4.500 to 17.993 Min



Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F031.D  
Report Date: 12-Jul-2010 12:47

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F031.D  
Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F031.D  
Inj Date : 10-JUL-2010 07:03  
Sample Info: 1248 @ 200ppb | PCB5-61R | KWG1006746-3  
Misc Info :  
Cal Date : 12-JUL-2010 10:32  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
Sub List #1 : AR1248.SUB  
Sub List #2 : AR1248.SUB  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

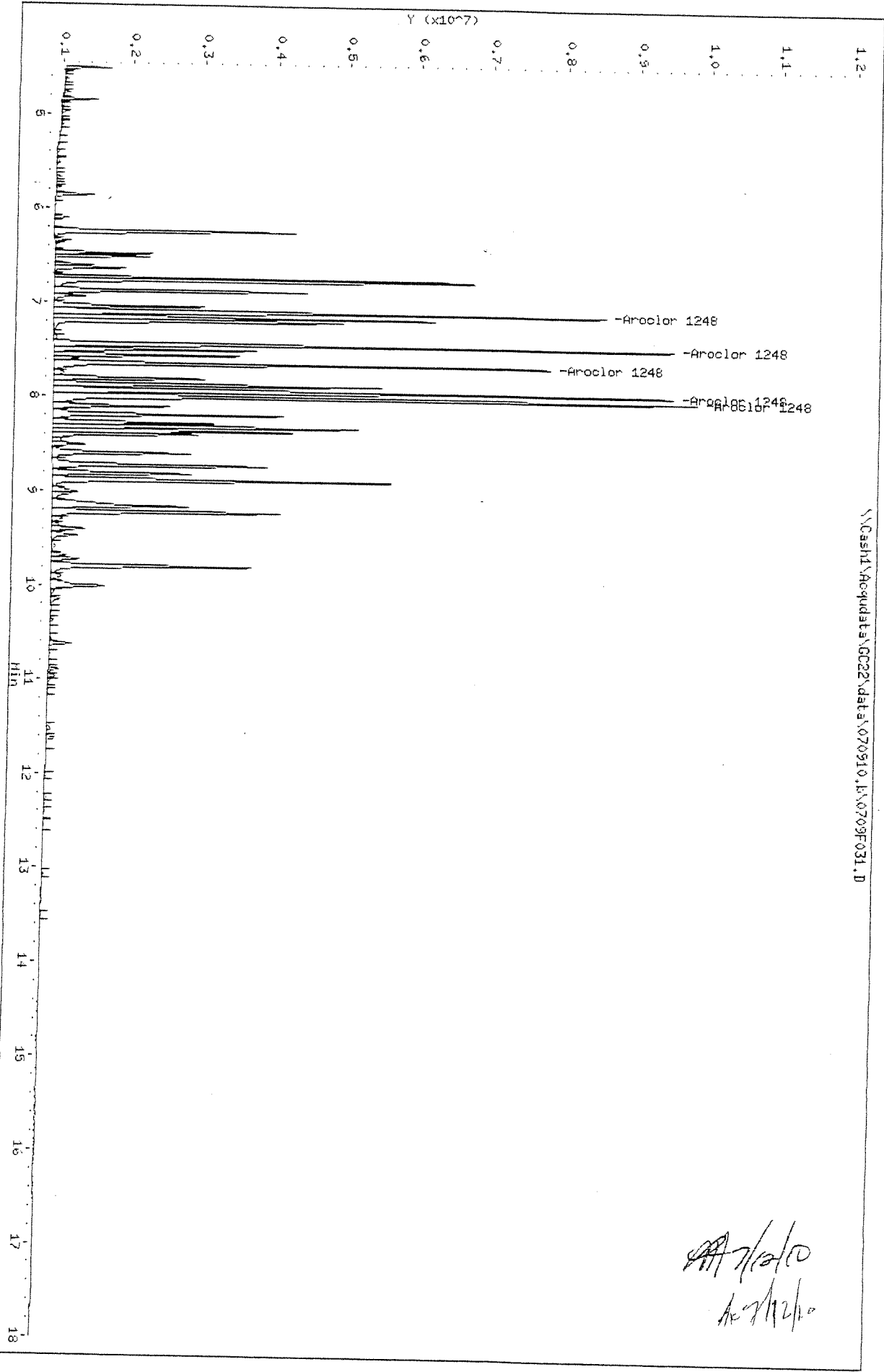
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	7.095	7.883	12082309	26245487	191	169	80.00- 120.00	100.00
	7.439	8.096	12750633	31182594	185	182	84.83- 127.25	105.53
	7.645	8.350	10589332	21742143	189	210	70.48- 105.72	87.64
	7.932	8.770	14061814	39120129	191	183	93.94- 140.91	116.38
	7.995	8.840	16564282	35894386	179	186	109.13- 163.69	137.10
			Average of Peak Amounts =		187	186		

*JA 7/2/10*  
*dr. 7/2/10*

Data File: \\Cash1\Acqudata\GC22\data\070910.L\0709F031.D  
Date: 10-JUL-2010 07:03  
Client ID:  
Sample Info: 1248 @ 200ppb | PCBs-61R | KJG1006746-3  
Column phase: DB-35MS

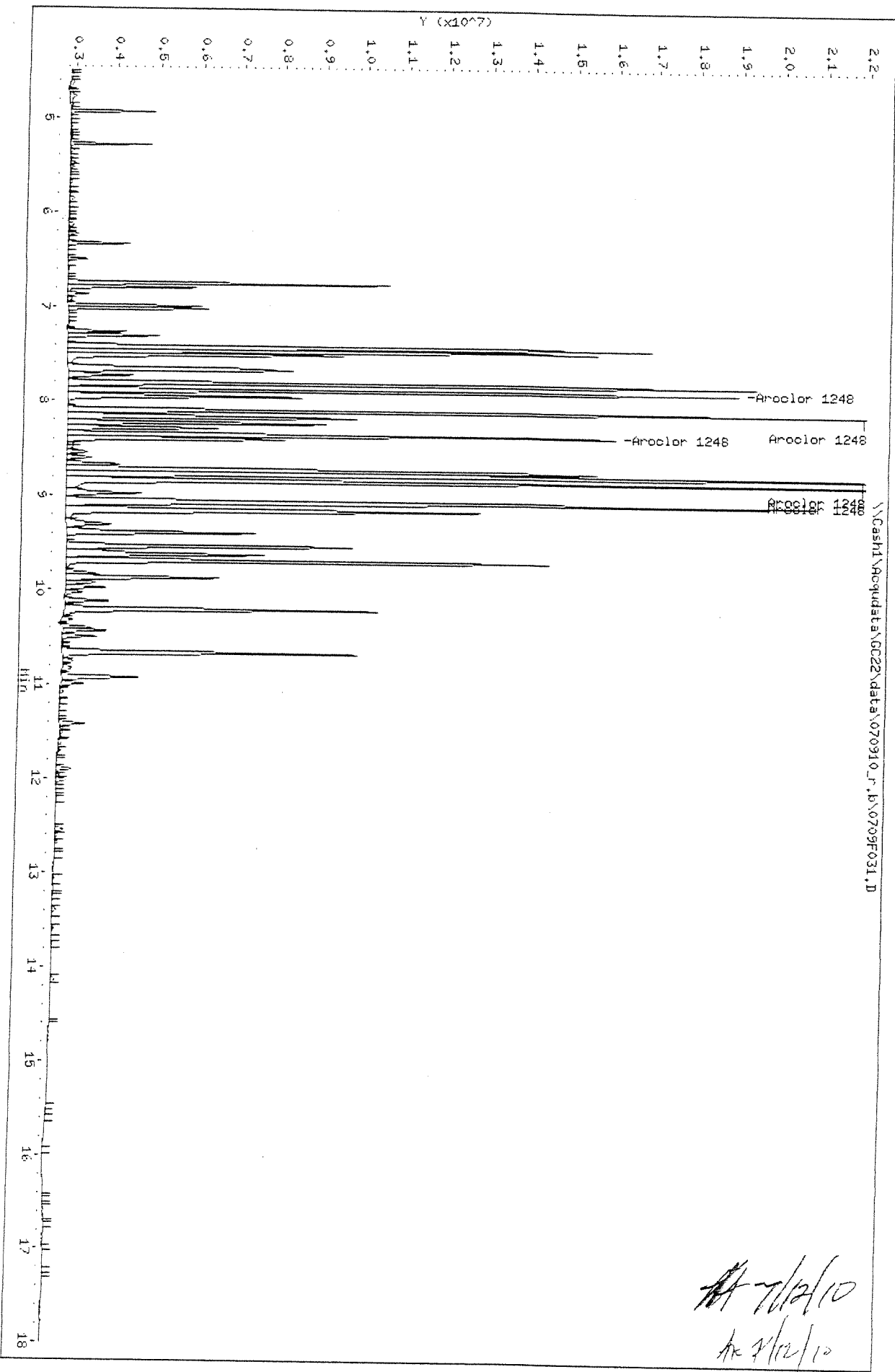
Instrument: GC22.1  
Operator: L Harris  
Column diameter: 0.32

\\Cash1\Acqudata\GC22\data\070910.L\0709F031.D



Data File: \\Cashd\Aoqudata\GC22\data\070910\_r.b\0709F031.D  
 Date: 10-JUL-2010 07:03  
 Client ID:  
 Sample Info: 1248 @ 200ppb | PCBs-GLR | KMS1006746-3  
 Column phase: DB-MLB

Instrument: GC22.1  
 Operator: LHarris  
 Column diameter: 0.32



*Handwritten signature and date:*  
 7/12/10  
 7/12/10

Data File: \\Cash1\Acqdata\GC22\data\070910.b\0709F032.D  
Report Date: 12-Jul-2010 12:47

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F032.D  
Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F032.D  
Inj Date : 10-JUL-2010 07:28  
Sample Info: 1248 @ 500ppb | PCB5-61S | KWG1006746-3  
Misc Info :  
Cal Date : 12-JUL-2010 10:32  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

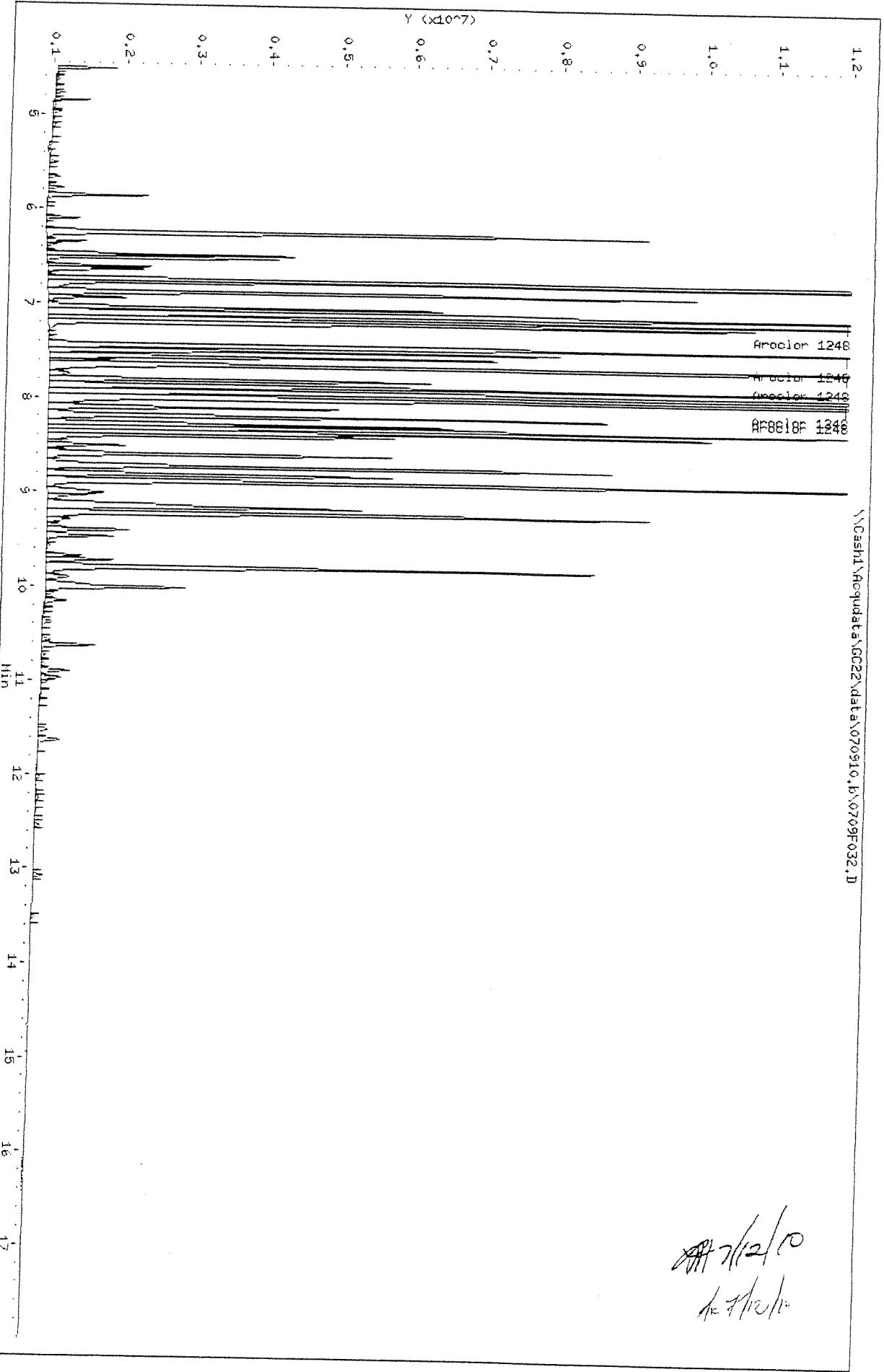
Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
Sub List #1 : AR1248.SUB  
Sub List #2 : AR1248.SUB  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	7.097	7.881	30072617	63240348	449	406	80.00- 120.00	100.00
	7.440	8.094	31889361	75634911	462	441	84.83- 127.25	106.04
	7.643	8.351	26493691	54204401	473	475	70.48- 105.72	88.10
	7.930	8.768	35311563	94260051	480	441	93.94- 140.91	117.42
	7.993	8.838	41022325	88774031	444	461	109.13- 163.69	136.41
			Average of Peak Amounts =		462	445		

*Handwritten signature and date:*  
7/12/10  
7/12/10

Data File: \\Cash1\Hocquada\GC22\data\070910.B\0709F032.D  
Date: 10-JUL-2010 07:28  
Client ID:  
Sample Info: 1248 @ 500ppb | PCBs-GIS | KMG1008746-3  
Column phase: DB-35MS

Instrument: GC22.i  
Operator: L Harris  
Column diameter: 0.32



*Handwritten signature and date: 7/12/10*

Data File: \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F032.D  
Date: 10-JUL-2010 07:28

Client ID:

Sample Info: 1248 @ 500ppb | PCB5-61S | KJG1006746-3

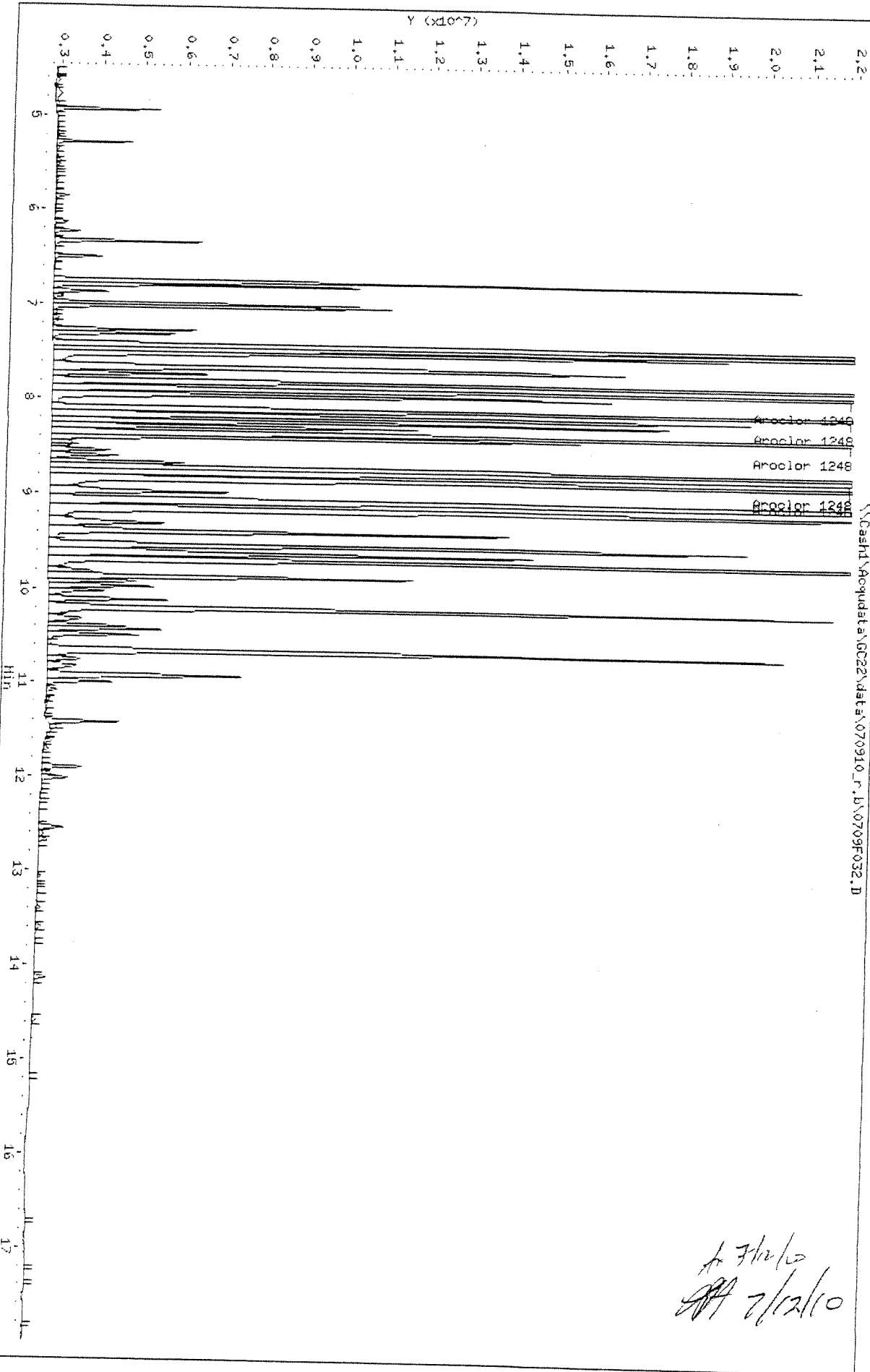
Column phase: DB-XLB

Instrument: GC22.1

Operator: LHarris

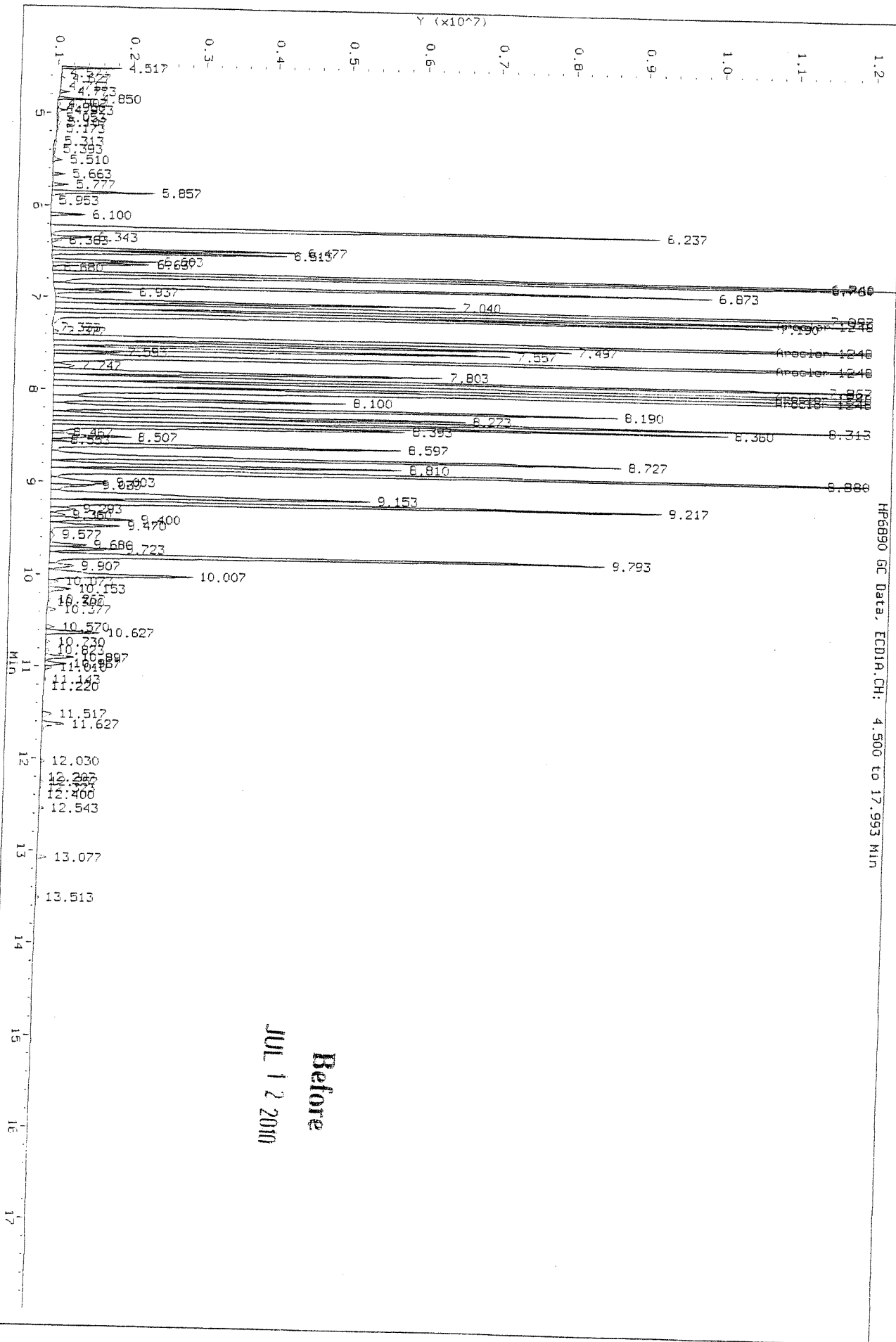
Column diameter: 0.32

\\Cash1\Acqudata\GC22\data\070910\_r.b\0709F032.D



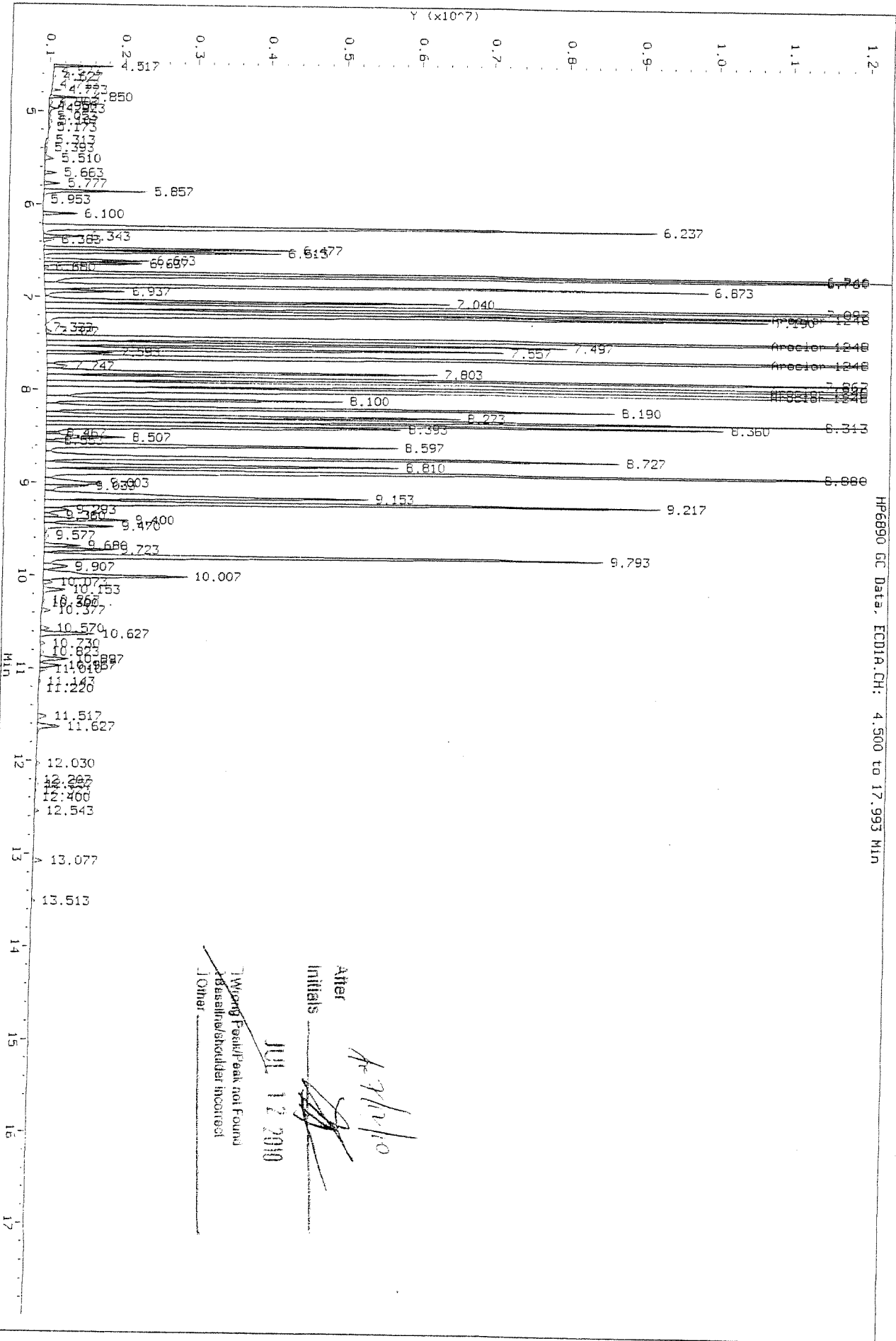


Data File: \\Cash1\Acqudata\GC22\data\070910.b\07091032.D  
Injection Date: 10-JUL-2010 07:28  
Instrument: GC22.1  
Client Sample ID:



Before  
JUL 12 2010

Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F032.D  
 Injection Date: 10-JUL-2010 07:28  
 Instrument: GC22.1  
 Client Sample ID:



After Initials *[Signature]*  
 JUL 12 2010  
 Wrong Peak/Peak not Found  
 Baseline/shoulder incorrect  
 Other

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F033.D  
 Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F033.D  
 Inj Date : 10-JUL-2010 07:52  
 Sample Info: 1016 @ 100ppb | PCB5-62F | KWG1006746-4  
 Misc Info :  
 Cal Date : 12-JUL-2010 10:36  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : AR1016.sub  
 Sub List #2 : AR1016.sub  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

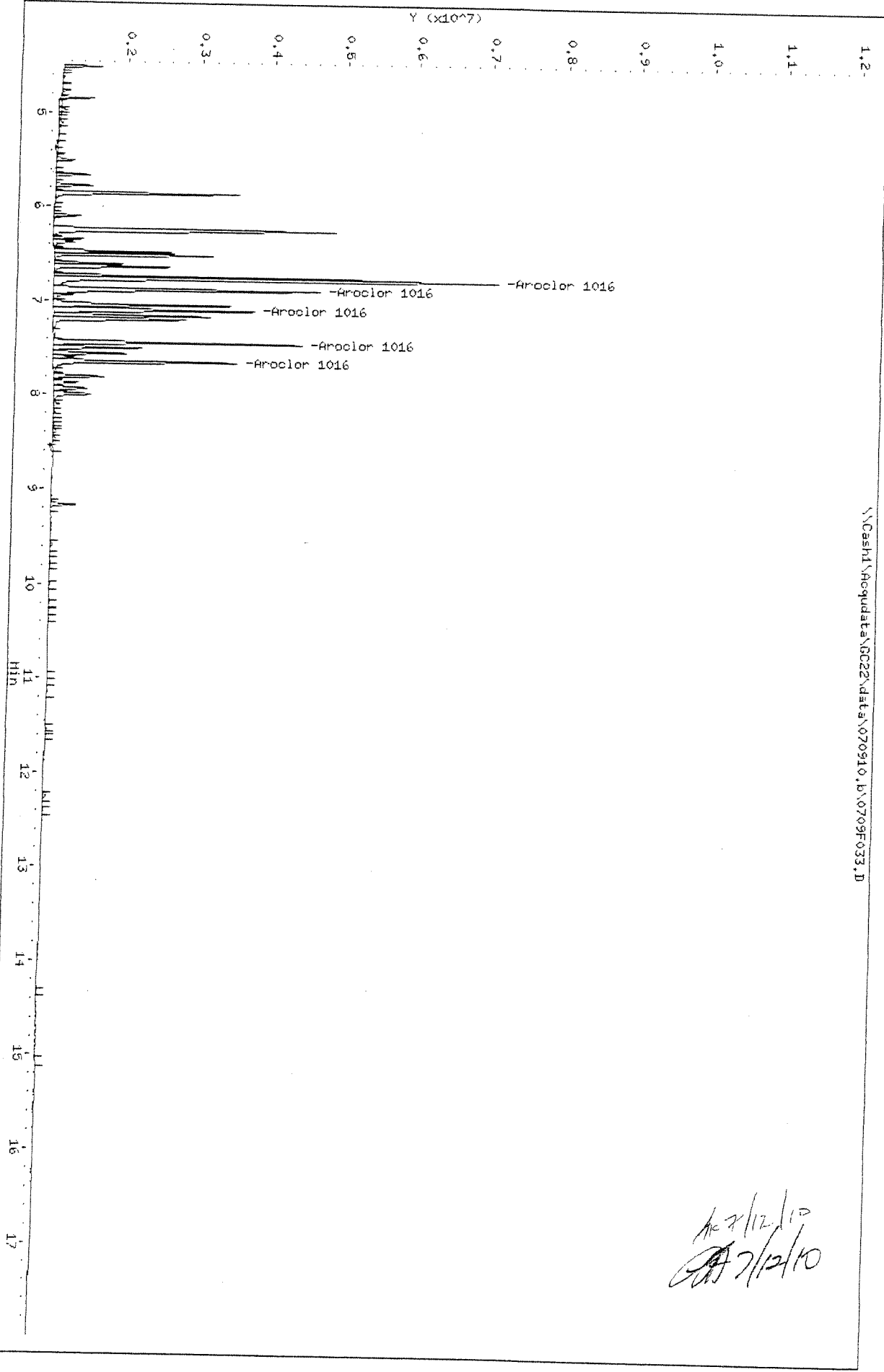
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1016	6.760	6.748	9547537	12100832	86.2	87.6	80.00- 120.00	100.00
	6.874	7.461	6058591	21816350	92.2	94.5	49.25- 73.87	63.46
	7.094	7.808	4725537	9744942	85.8	88.0	38.26- 57.39	49.49
	7.440	7.881	4880841	11263864	90.5	88.7	39.13- 58.70	51.12
	7.644	8.095	4161317	11367479	103	95.3	29.91- 44.86	43.59
	Average of Peak Amounts =				91.5	90.8		

*Handwritten:*  
 7/12/10  
 7/12/10

Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F033.D  
Date: 10-JUL-2010 07:52  
Client ID:  
Sample Info: 1016 @ 100ppb | PCB5-62F | KMG1006746-4  
Column Phase: DB-35HS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

\\Cash1\Acqudata\GC22\data\070910.b\0709F033.D



Data File: \\Cash1\Acqudata\GC22\data\070910\_r\_b\0709F033.D  
Date: 10-JUL-2010 07:52

Client ID:

Sample Info: 1016 @ 100ppb | PCB5-62F | KMG1006746-4

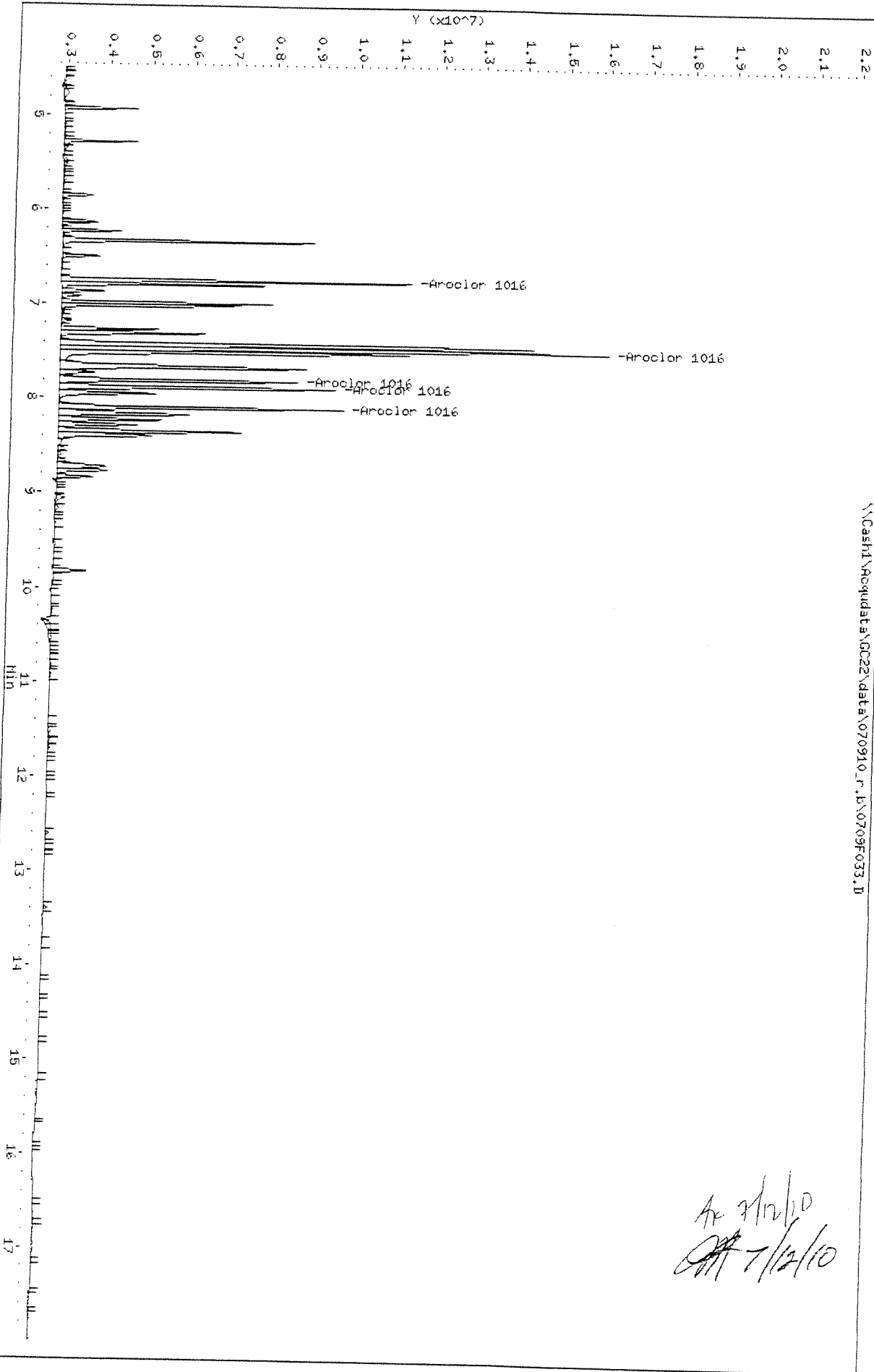
Column Phase: DB-MLB

Instrument: GC22.1

Operator: LHarris

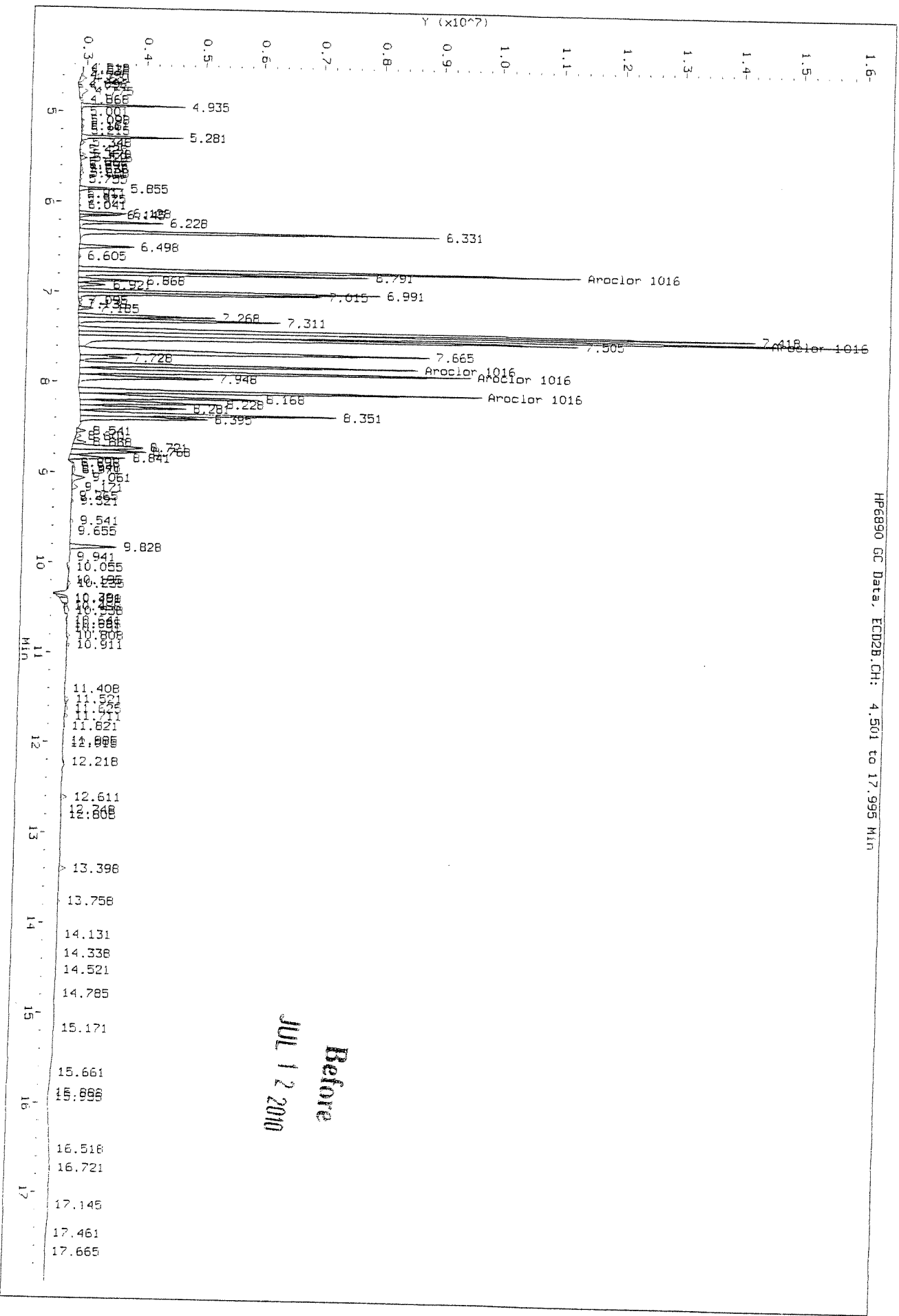
Column diameter: 0.32

\\Cash1\Acqudata\GC22\data\070910\_r\_b\0709F033.D



Data File: \\Cash1\Acqudata\GC22\data\070910\_r\_b\0709F033.D  
 Injection Date: 10-JUL-2010 07:52  
 Instrument: GC22.1  
 Client Sample ID:

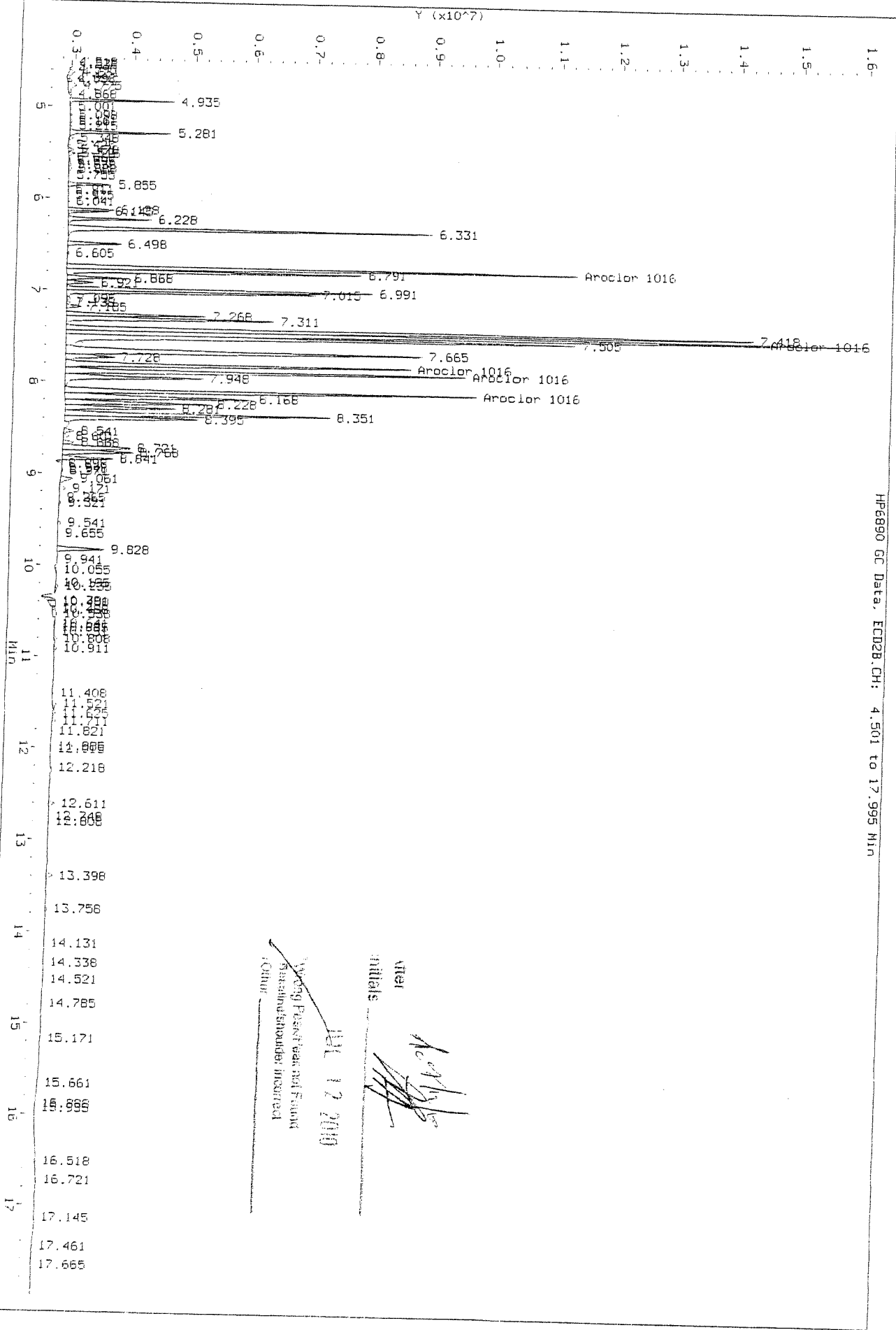
HP6890 GC Data, FID2B.CH: 4.501 to 17.995 Min



Before  
 JUL 12 2010

Data File: \\Cash1\Acqudata\GC22\data\070910\_r\_b\0709f033.D  
 Injection Date: 10-JUL-2010 07:32  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data, ECD2B.CH: 4.501 to 17.995 Min



Data File: \\Cash1\Acqdata\GC22\data\070910.b\0709F034.D  
 Report Date: 12-Jul-2010 12:47

Columbia Analytical Services

Sample #1 : \\Cash1\Acqdata\GC22\data\070910.b\0709F034.D  
 Sample #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\0709F034.D  
 Inj Date : 10-JUL-2010 08:17  
 Sample Info: 1221 @ 100ppb | PCB5-62G | KWG1006746-4  
 Misc Info :  
 Cal Date : 12-JUL-2010 10:36  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqdata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqdata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : AR1221.SUB  
 Sub List #2 : AR1221.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	5.007	5.308	1380782	3444213	104	99.8	80.00- 120.00	100.00 (M)
	5.507	5.751	769088	1030158	109	105	42.79- 64.19	55.70 (M)
	5.664	6.228	2089747	3751614	100	104	127.99- 191.99	151.35 (M)
	5.774	6.331	1350436	13055331	104	100	80.74- 121.11	97.80 (M)
Average of Peak Amounts =					104	102		

QC Flag Legend

M - Compound response manually integrated.

*Handwritten signature and date:*  
 7/12/10  
 7/12/10



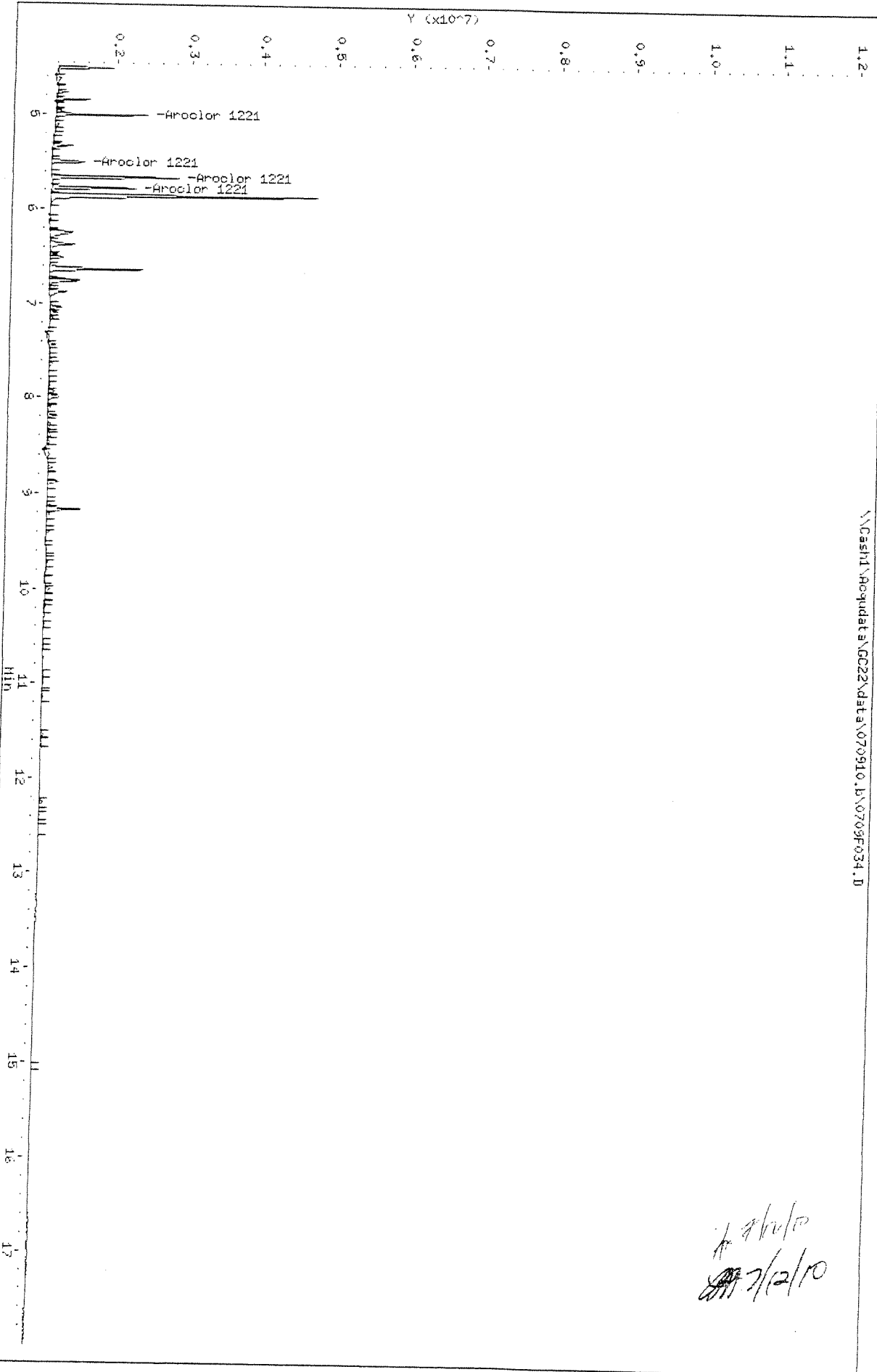
Data File: \\Cashtl\Acq\data\GC22\data\070910.B\0709F034.D  
Date: 10-JUL-2010 08:17

Client ID:  
Sample Info: 1221 @ 100ppb | PCB6-62G | KMS1006746-4

Column phase: DB-35MS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

\\Cashtl\Acq\data\GC22\data\070910.B\0709F034.D

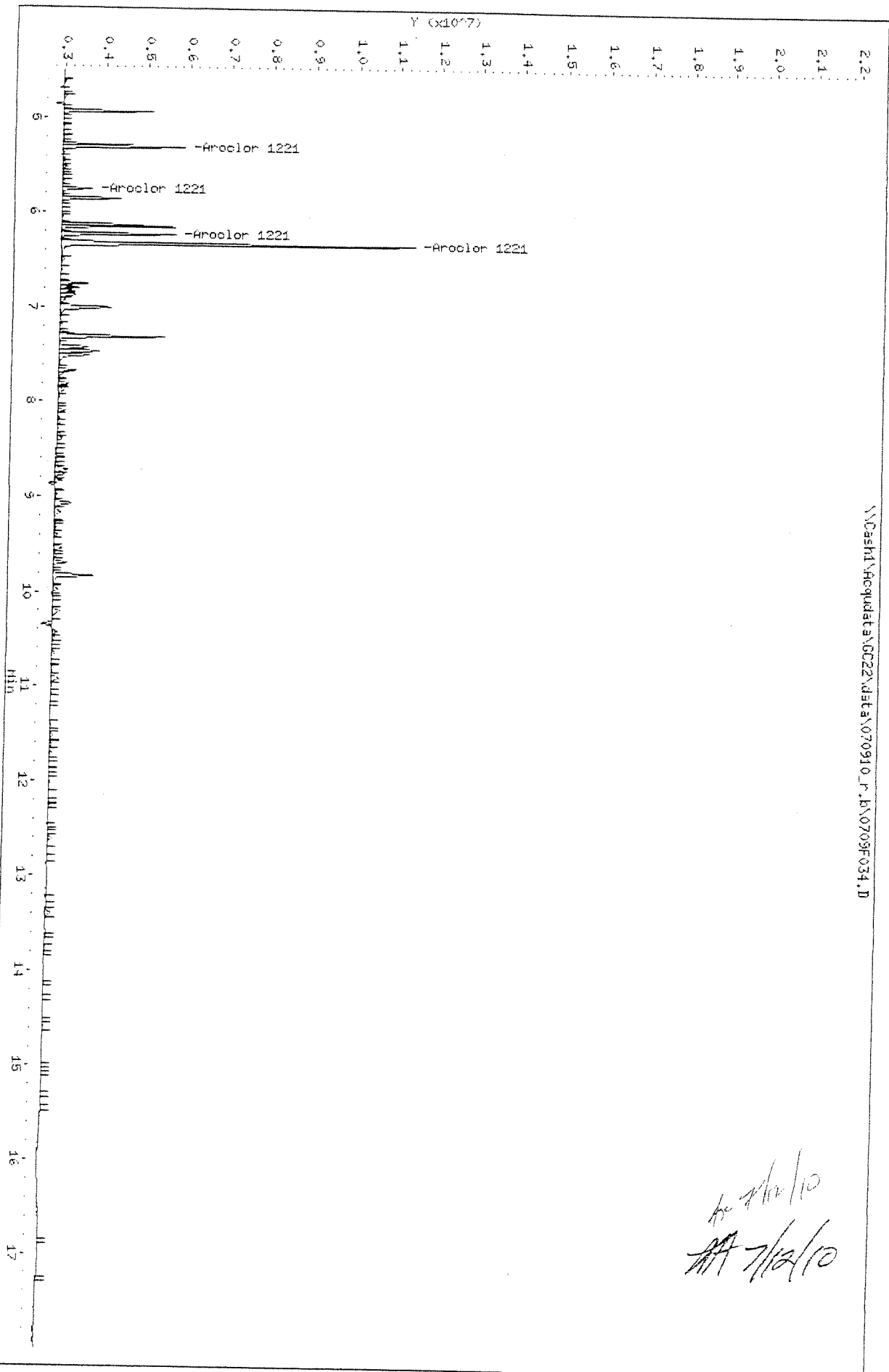


*Handwritten signature and date:*  
7/12/10

Data File: \\CASH1\Acqudata\GC22\data\070910\_r.b\0709F034.D  
Date: 10-JUL-2010 08:17  
Client ID:  
Sample Info: 1221 @ 100ppb | POB5-62G | KMG1005746-4  
Column phase: DB-XLB

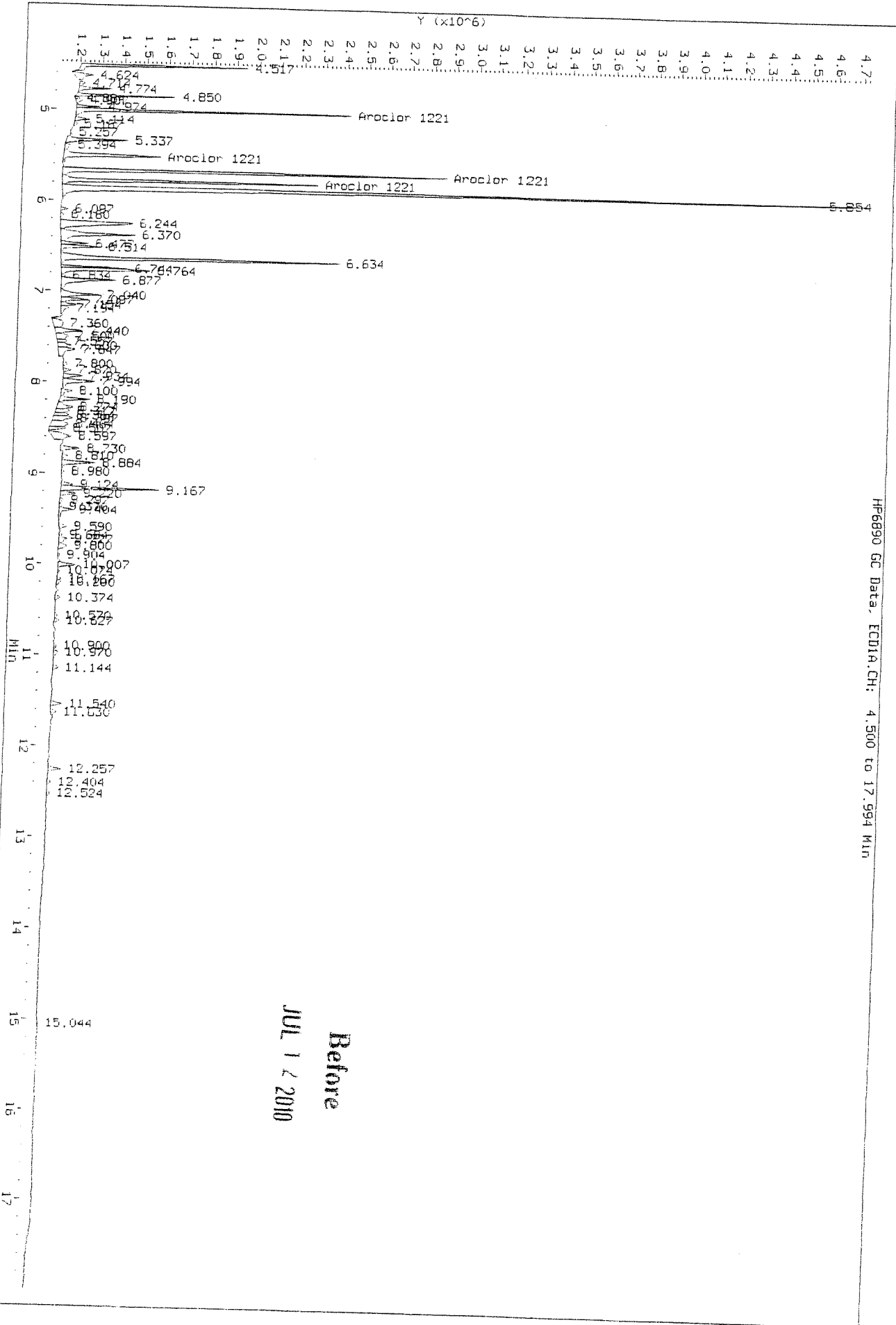
Instrument: GC22.1  
Operator: L Harris  
Column diameter: 0.32

\\CASH1\Acqudata\GC22\data\070910\_r.b\0709F034.D



Data File: \\Mesh1\Acqudata\GC22\data\070910\_b\07091034.D  
 Injection Date: 10-JUL-2010 08:17  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data, ECD1A.CH: 4.500 to 17.994 Min

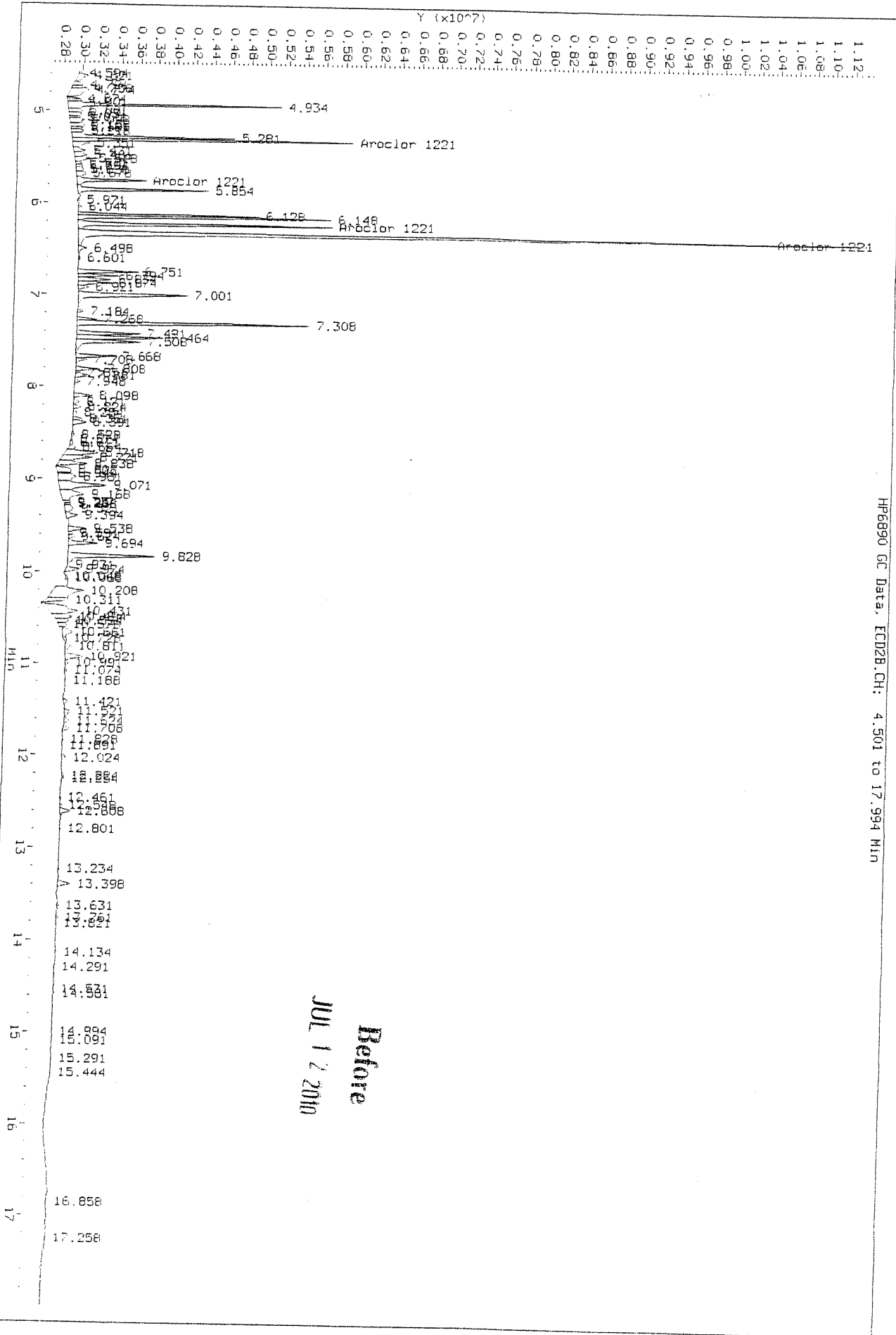


Before  
 JUL 1 2 2010



Data File: \\Cash1\Acq\data\GC22\data\070910\_r.b\0709F034.D  
Injection Date: 10-JUL-2010 08:17  
Instrument: GC22.1  
Client Sample ID:

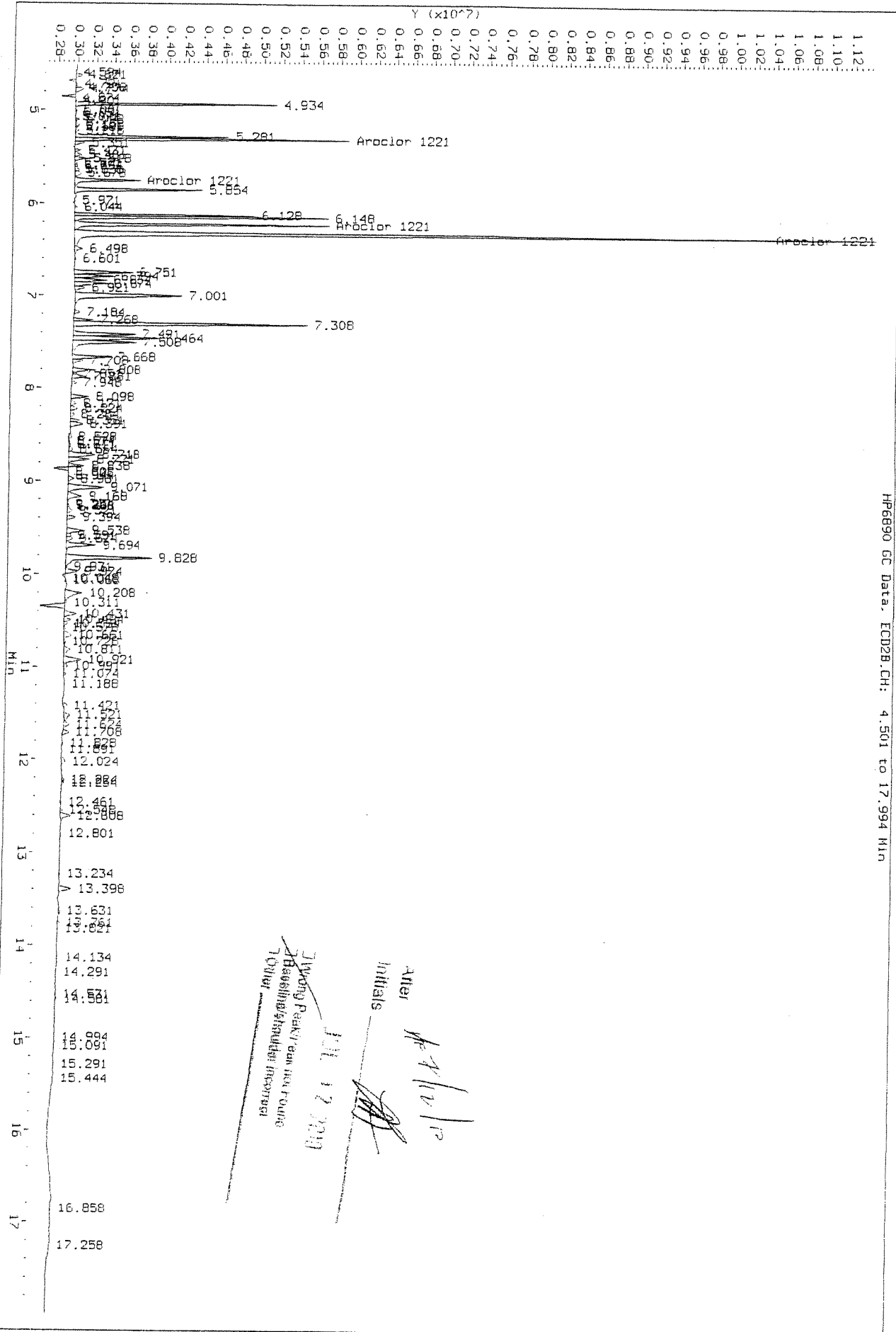
HP6890 GC Data, ECD28.CH: 4.501 to 17.994 Min



Before  
JUL 12 2010

Data File: \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F034.D  
 Injection Date: 10-JUL-2010 09:17  
 Instrument: GC22-1  
 Client Sample ID:

HP6890 GC Data, FID28.CH: 4.501 to 17.994 Min



Along Peaks can not find  
 Baseline/should increase  
 Other  
 Initials  
 Date: JUL 12 2010  
*[Signature]*

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F035.D  
 Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F035.D  
 Inj Date : 10-JUL-2010 08:41  
 Sample Info: 1232 @ 100ppb | PCB5-62H | KWG1006746-4  
 Misc Info :  
 Cal Date : 12-JUL-2010 10:36  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : AR1232.SUB  
 Sub List #2 : AR1232.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	5.854	6.331	4168251	10080005	102	88.8	80.00- 120.00	100.00 (M)
	6.237	6.795	3987211	3354370	108	95.3	68.66- 102.99	95.66 (M)
	6.510	7.015	1536740	2768041	104	85.1	26.81- 40.21	36.87 (M)
	6.760	7.421	5069923	8793736	111	99.5	91.83- 137.74	121.63 (M)
	Average of Peak Amounts =				106	92.2		

QC Flag Legend

M - Compound response manually integrated.

*Handwritten:*  
 7/12/10  
 7/12/10

Data File: \\Cashd\hpc\data\GC22\data\070910.B\0709F035.D  
Date: 10-JUL-2010 08:41

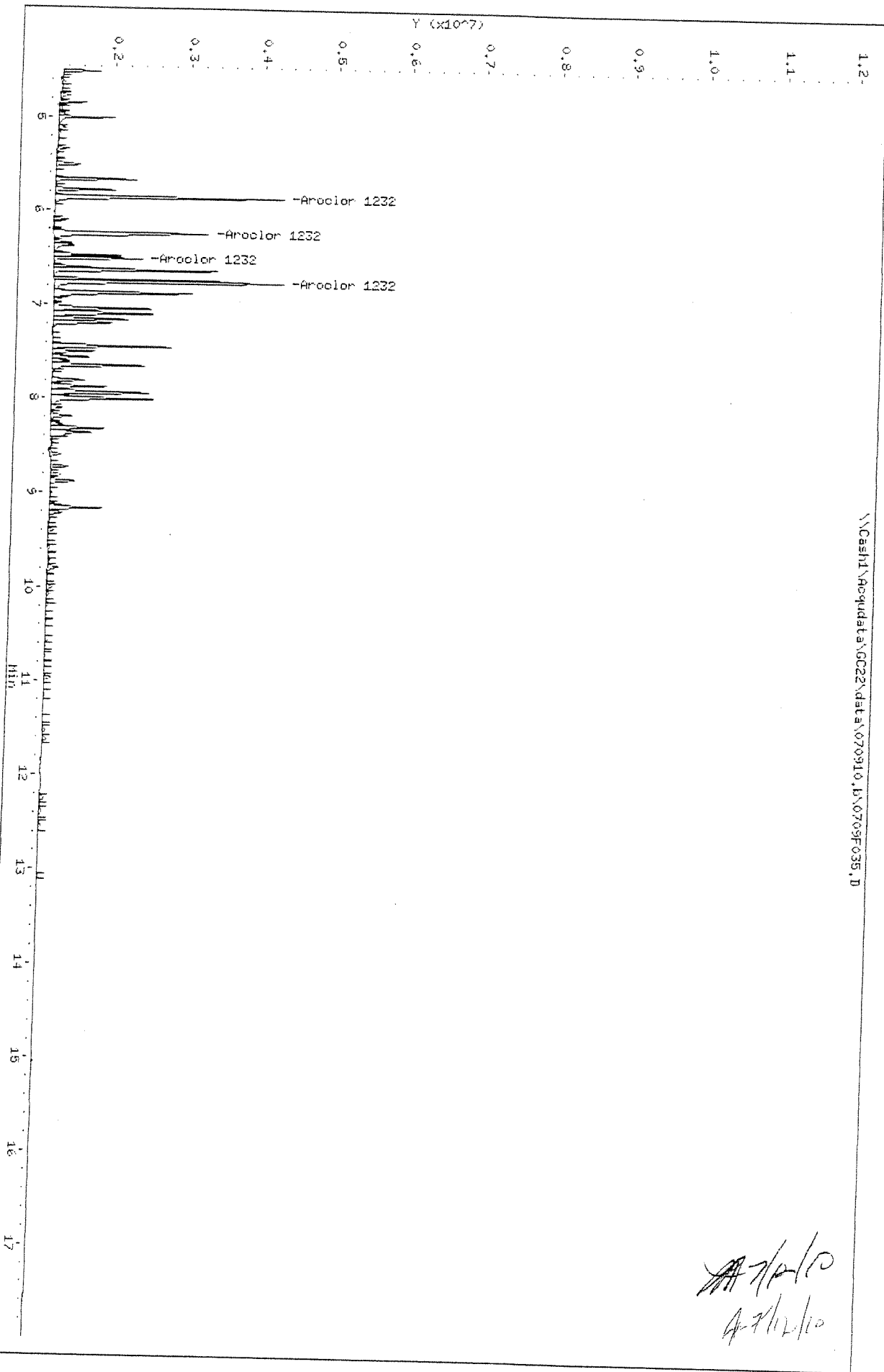
Client ID:  
Sample Info: 1232 @ 100ppb | PCB5-62H | KMC1006746-4

Column phase: DB-35MS

Instrument: GC22.1

Operator: LHarris  
Column diameter: 0.32

\\Cashd\hpc\data\GC22\data\070910.B\0709F035.D



*Handwritten signature*  
7/12/10



Data File: \\CASH1\Acqudata\GC22\data\070910\_r.p\0709F035.D  
Date: 10-JUL-2010 08:41

Client ID:  
Sample Info: 1232 @ 100ppb | PCBs-62H | KJ01006746-4

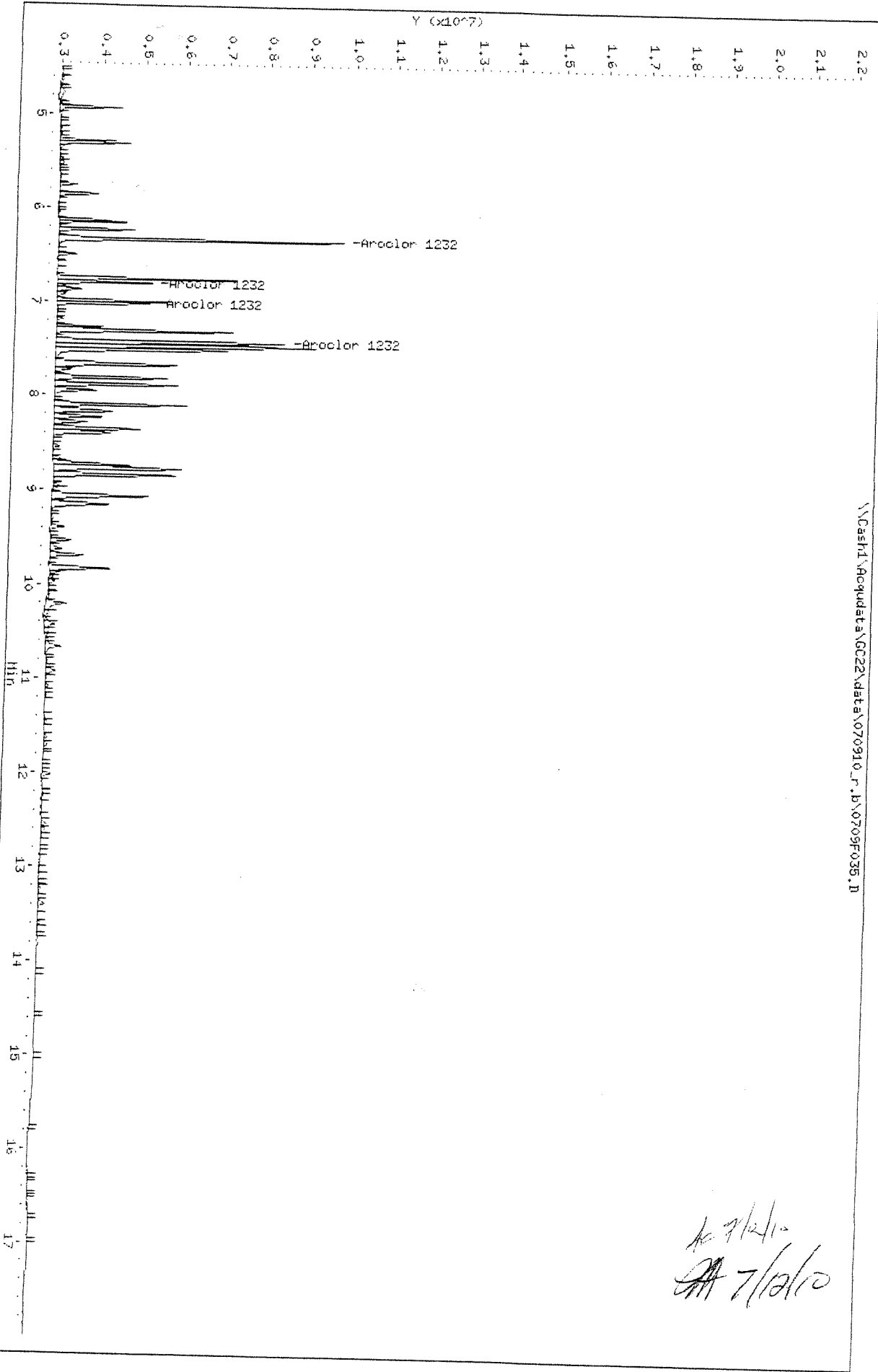
Column Phase: DB-XLB

Instrument: GC22.1

Operator: LHarris

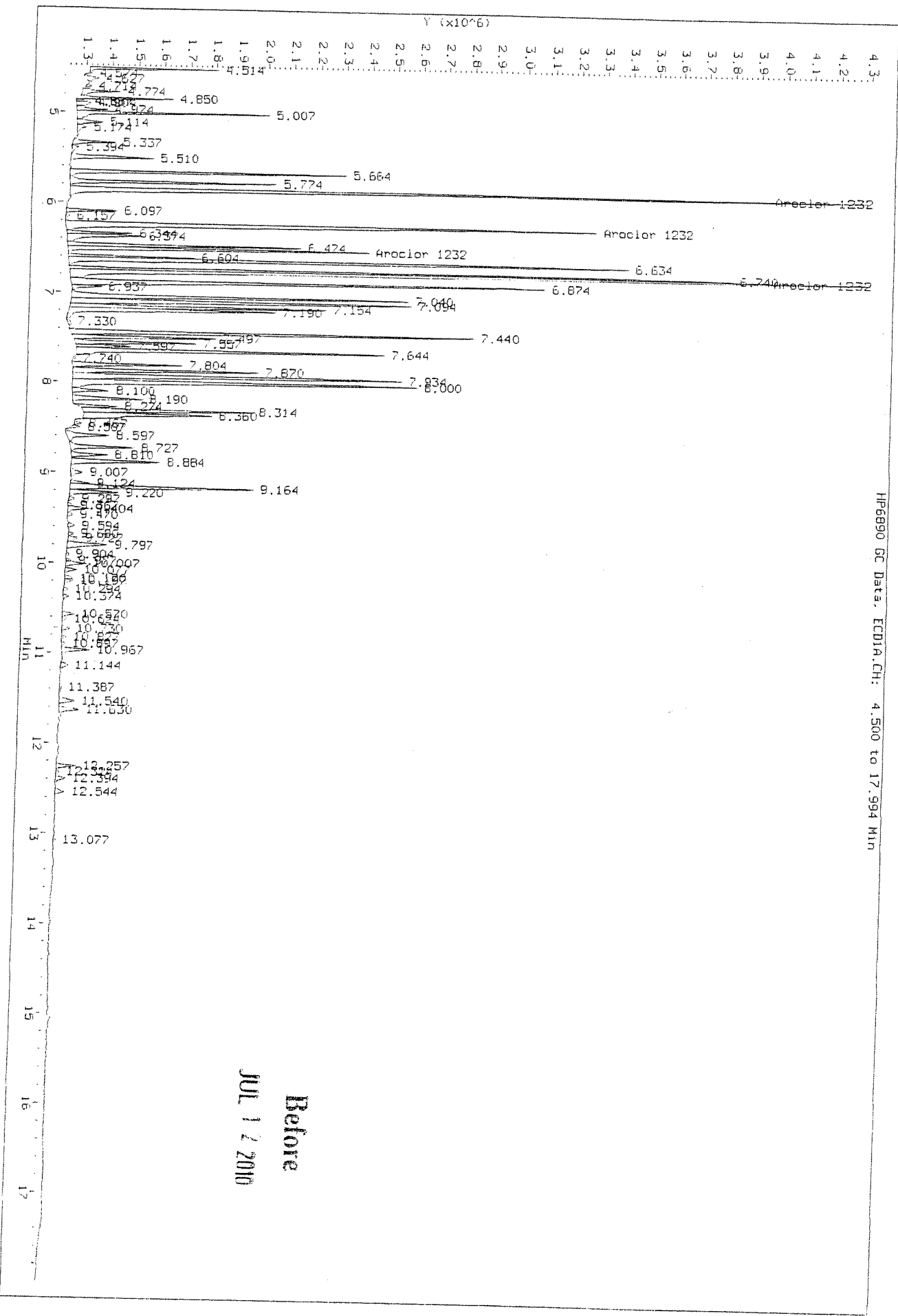
Column diameter: 0.32

\\CASH1\Acqudata\GC22\data\070910\_r.p\0709F035.D



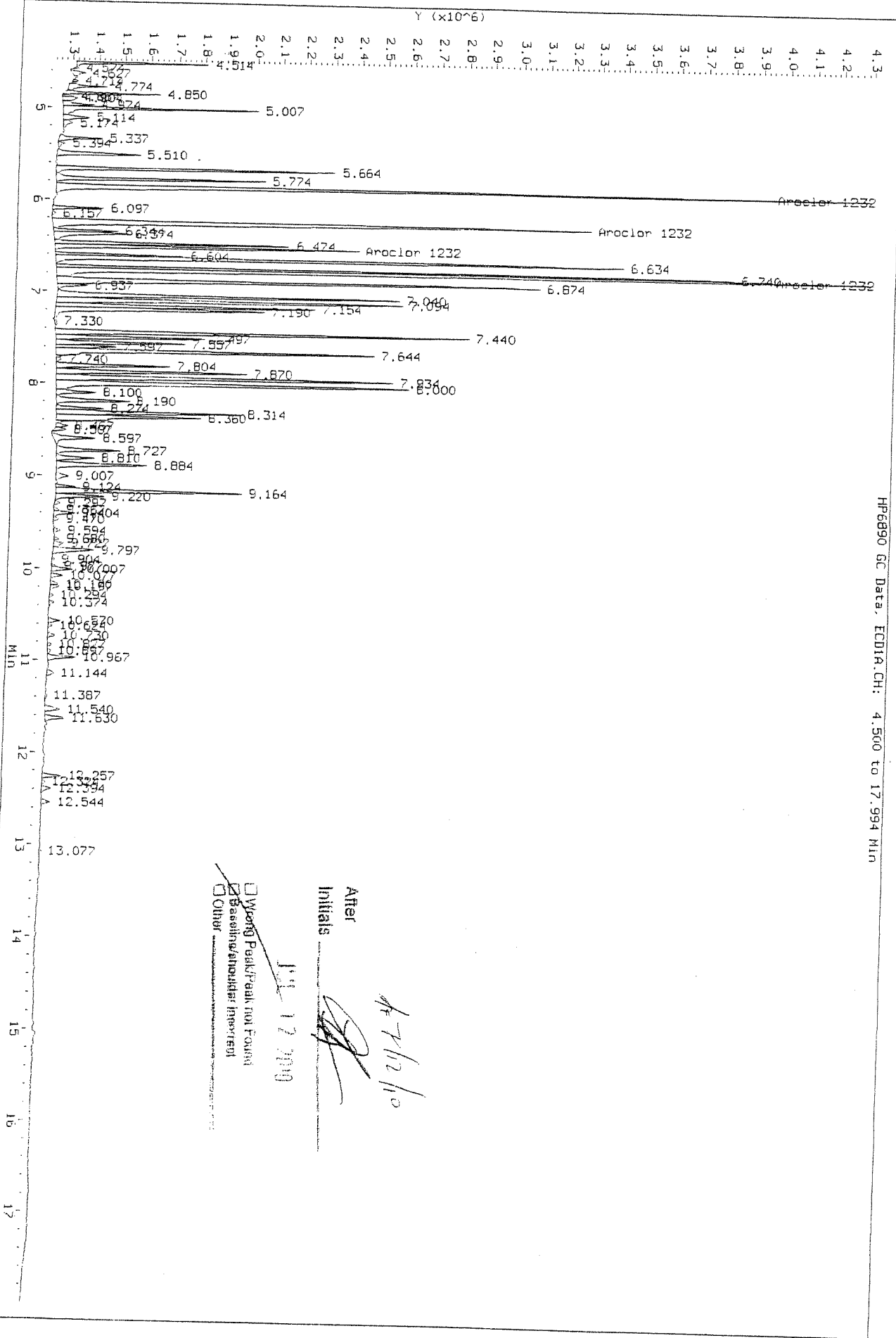
Data File: \\Cash1\ncq\data\GC22\data\070910.b\0709f035.D  
 Injection Date: 10-Jul-2010 08:41  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data: FID1A.CH: 4.500 to 17.994 Min



Before  
 JUL 12 2010

Data File: \\Cash1\Acqudata\GC22\data\070910\_b\0709F035.D  
 Injection Date: 10-JUL-2010 08:41  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data, ECD1A.CH: 4.500 to 17.994 Min

After \_\_\_\_\_  
 Initials \_\_\_\_\_  
 J.J. 12 2010  
 Missing Peak/Peak not Found  
 Baseline/shoulder imported  
 Other \_\_\_\_\_

Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F036.D  
Report Date: 12-Jul-2010 12:48

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F036.D  
Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F036.D  
Inj Date : 10-JUL-2010 09:06  
Sample Info: 1242 @ 100ppb | PCB5-62I | KWG1006746-4  
Misc Info :  
Cal Date : 12-JUL-2010 10:36  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
Sub List #1 : AR1242.SUB  
Sub List #2 : AR1242.SUB  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	6.513	6.990	2799135	6594554	103	98.2	80.00- 120.00	100.00 (M)
	6.763	7.464	9389088	18762469	109	93.3	274.61- 411.91	335.43 (M)
	7.043	7.507	3533600	13971400	109	103	104.82- 157.23	126.24 (M)
	7.156	7.667	3023544	11027277	103	107	83.37- 125.05	108.02 (M)
	7.443	8.097	4852679	10576244	107	100	137.75- 206.62	173.36 (M)
			Average of Peak Amounts =		106	100		

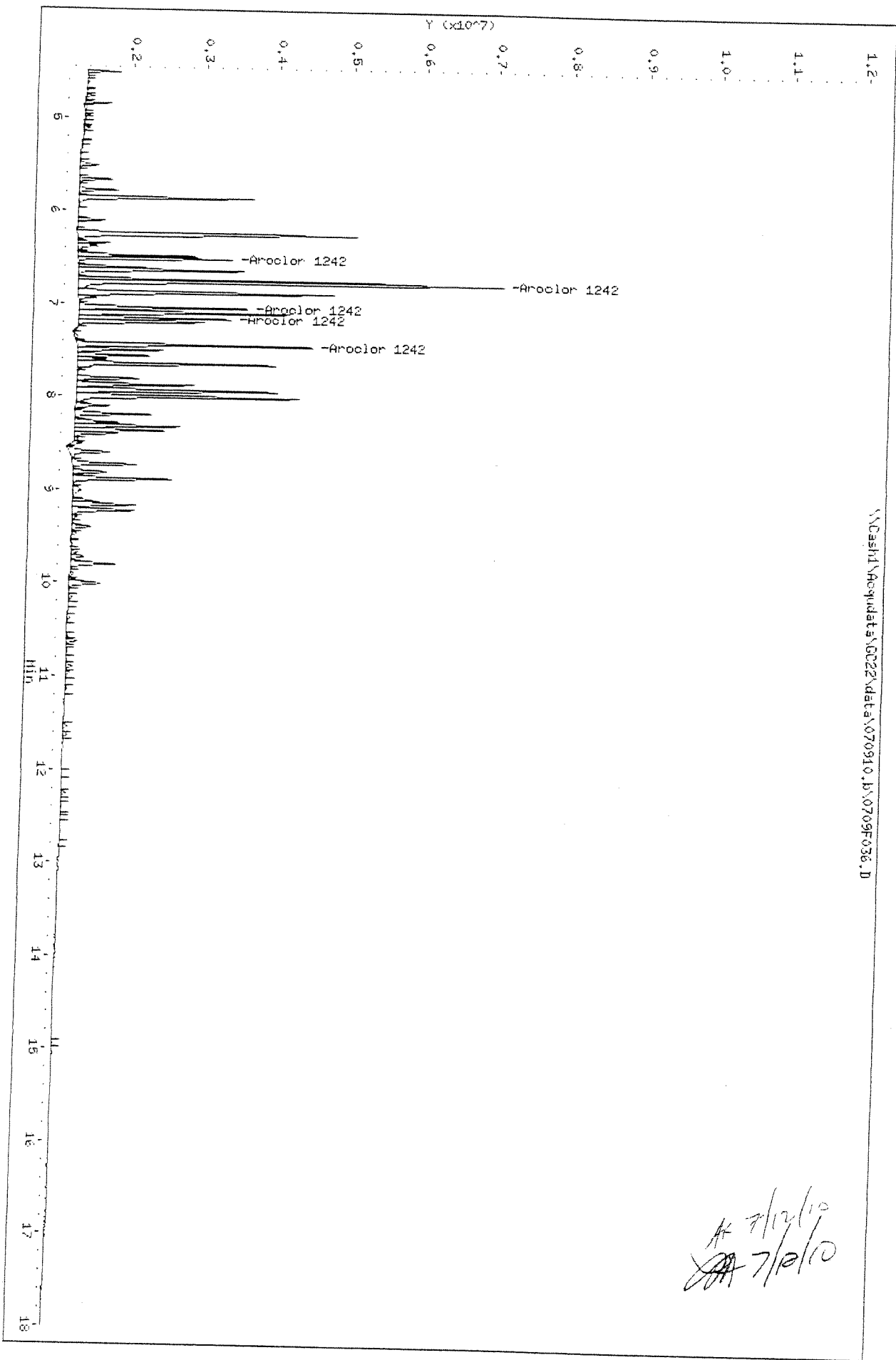
QC Flag Legend

M - Compound response manually integrated.

*Handwritten signature and date:*  
7/12/10  
7/12/10

Data File: \\Cash1\Noopdata\GC22\data\070910.1\0709F036.D  
Date: 10-JUL-2010 09:06  
Client ID:  
Sample Info: 1242 @ 100ppb | PCB5-621 | KMG1006746-4  
Column Phase: DB-35HS

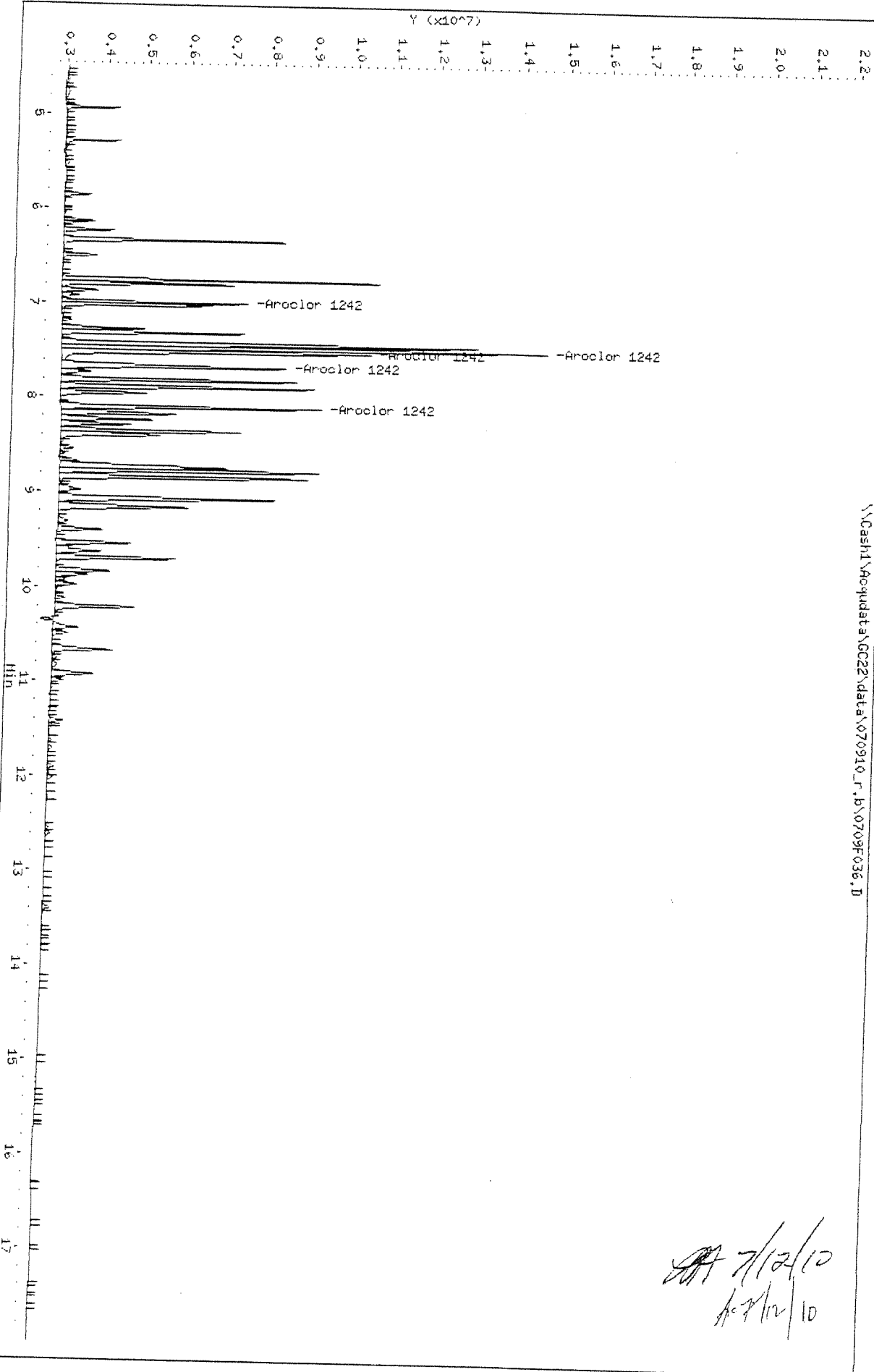
Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



Data File: \\Cash1\Acqudata\GC22\data\070910\_r\_b\0709F036.D  
Date: 10-JUL-2010 09:06  
Client ID:  
Sample Info: 1242 @ 100ppb | PCB5-621 | KM51006746-4  
Column phase: DB-XLB

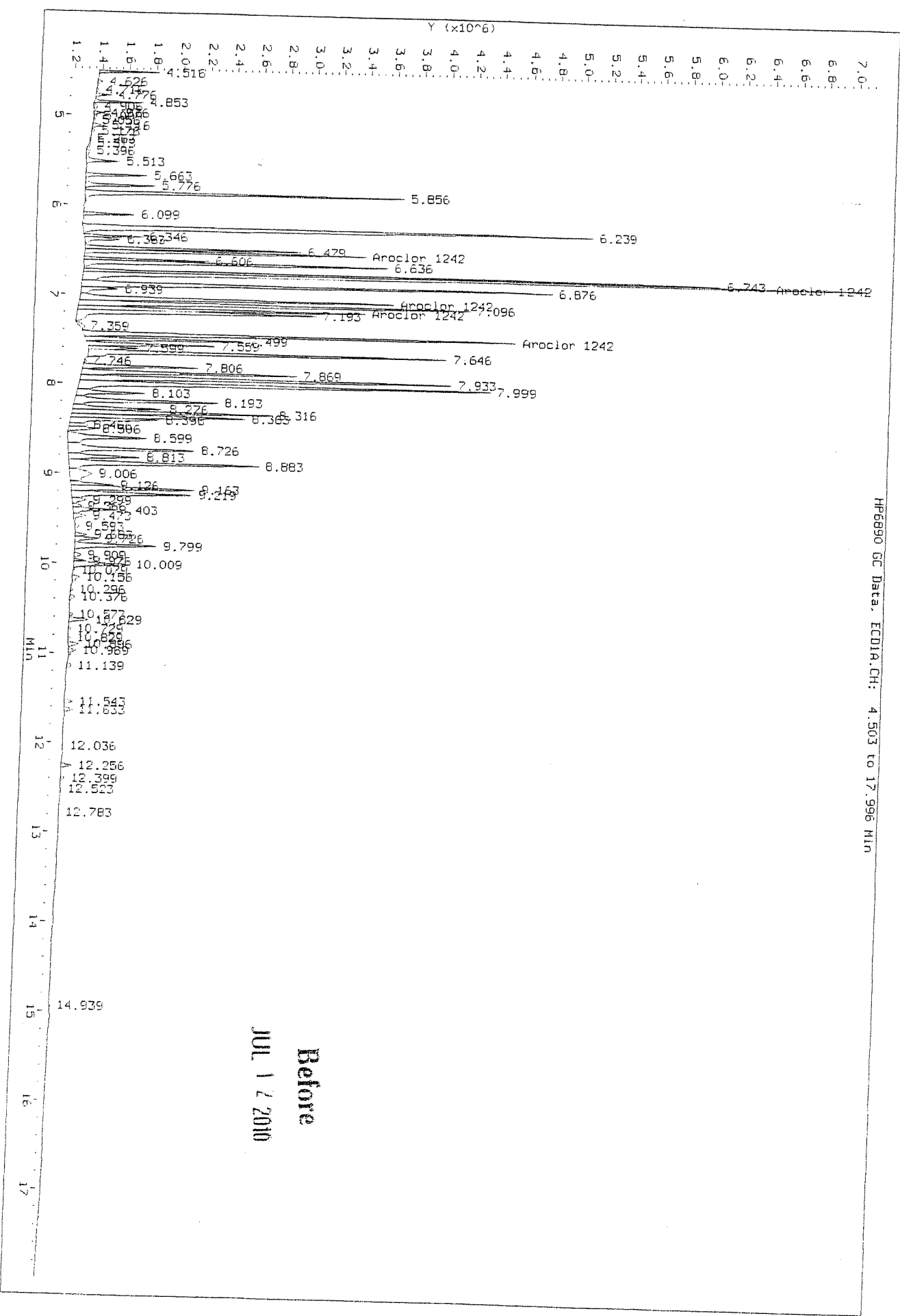
Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32

\\Cash1\Acqudata\GC22\data\070910\_r\_b\0709F036.D



Data File: \\Cash1\Acqudata\GC22\data\070910\_b\0709F036.D  
 Injection Date: 10-JUL-2010 09:06  
 Instrument: GC22.1  
 Client Sample ID:

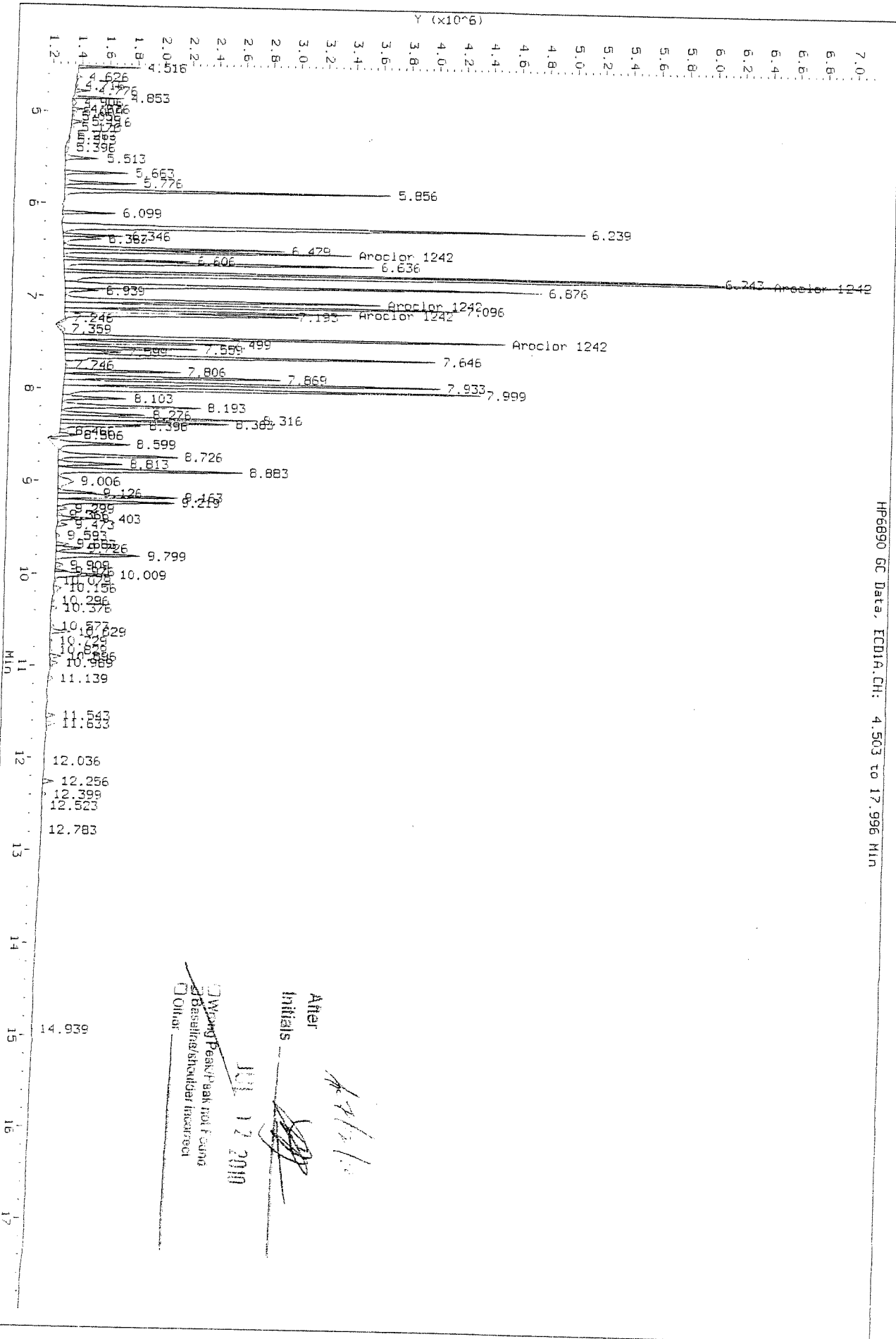
HF6890 GC Data, ECDIA.CH: 4.503 to 17.996 Min



Before  
 JUL 12 2010

Data File: \\Cash1\Acqudata\GC22\data\070910.B\0709F036.D  
 Injection Date: 10-JUL-2010 09:06  
 Instrument: GC22.1  
 Client Sample ID:

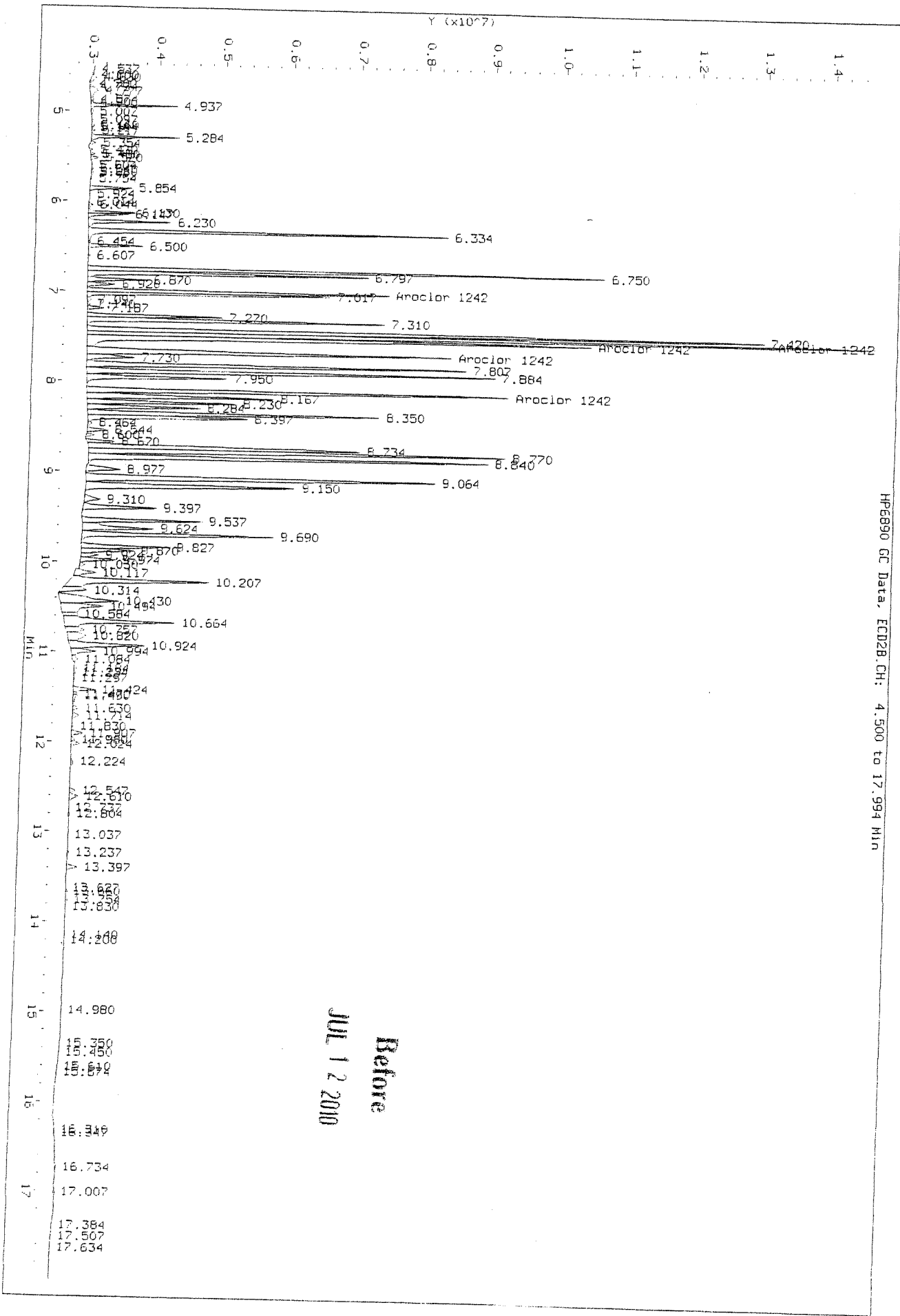
HP6890 GC Data, ECD1A.CH: 4.503 to 17.996 Min



Alter  
 Initials  
 JUL 17 2010  
 Working Peak not found  
 Baseline should be checked  
 Other



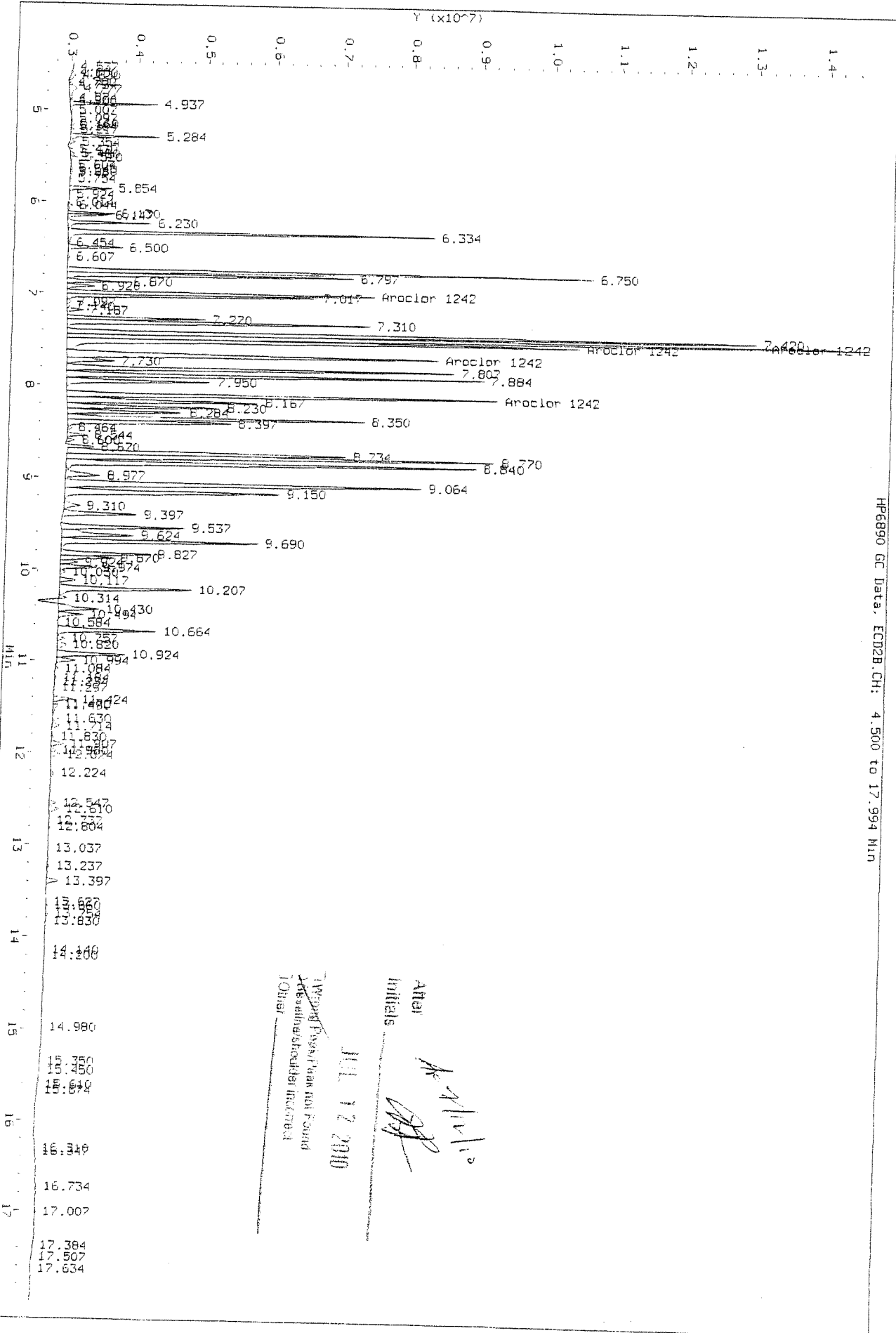
Data File: \\Casht1\Acq\data\GC22\data\070910\_r\_b\0709F036.D  
 Injection Date: 10-JUL-2010 09:05  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data, ECD2B.CH: 4.500 to 17.994 MIN

Data File: \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F036.D  
 Injection Date: 10-JUL-2010 09:06  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data, ECD2B.CH: 4.500 to 17.994 MIN



Anai  
 Initials  
 JUL 12 2010  
 I would prefer that not found  
 baseline/shoulder included  
 Jones

Data File: \\Cash1\Acqudata\GC22\data\070910.b\0709F037.D  
Report Date: 12-Jul-2010 12:48

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F037.D  
Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F037.D  
Inj Date : 10-JUL-2010 09:30  
Sample Info: 1248 @ 100ppb | PCB5-62J | KWG1006746-4  
Misc Info :  
Cal Date : 12-JUL-2010 10:36  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
Sub List #1 : AR1248.SUB  
Sub List #2 : AR1248.SUB  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	7.099	7.883	6947538	13832775	104	89.3	80.00- 120.00	100.00 (M)
	7.442	8.096	7054880	16376293	102	95.3	84.83- 127.25	101.55 (M)
	7.646	8.353	5572555	11147370	99.6	97.2	70.48- 105.72	80.21 (M)
	7.936	8.770	7434068	19762967	101	92.0	93.94- 140.91	107.00 (M)
	7.999	8.840	8811059	16926457	95.3	87.5	109.13- 163.69	126.82 (M)
Average of Peak Amounts =					100	92.3		

QC Flag Legend

M - Compound response manually integrated.

*Handwritten signature and date:*  
7/12/10  
7/12/10

Data File: \\Cash1\Acqudata\GC22\data\070910.B\0709F037.D  
Date: 10-JUL-2010 09:30

Client ID:

Sample Info: 1248 @ 100ppb | PCB5-62J | KMG10006746-4

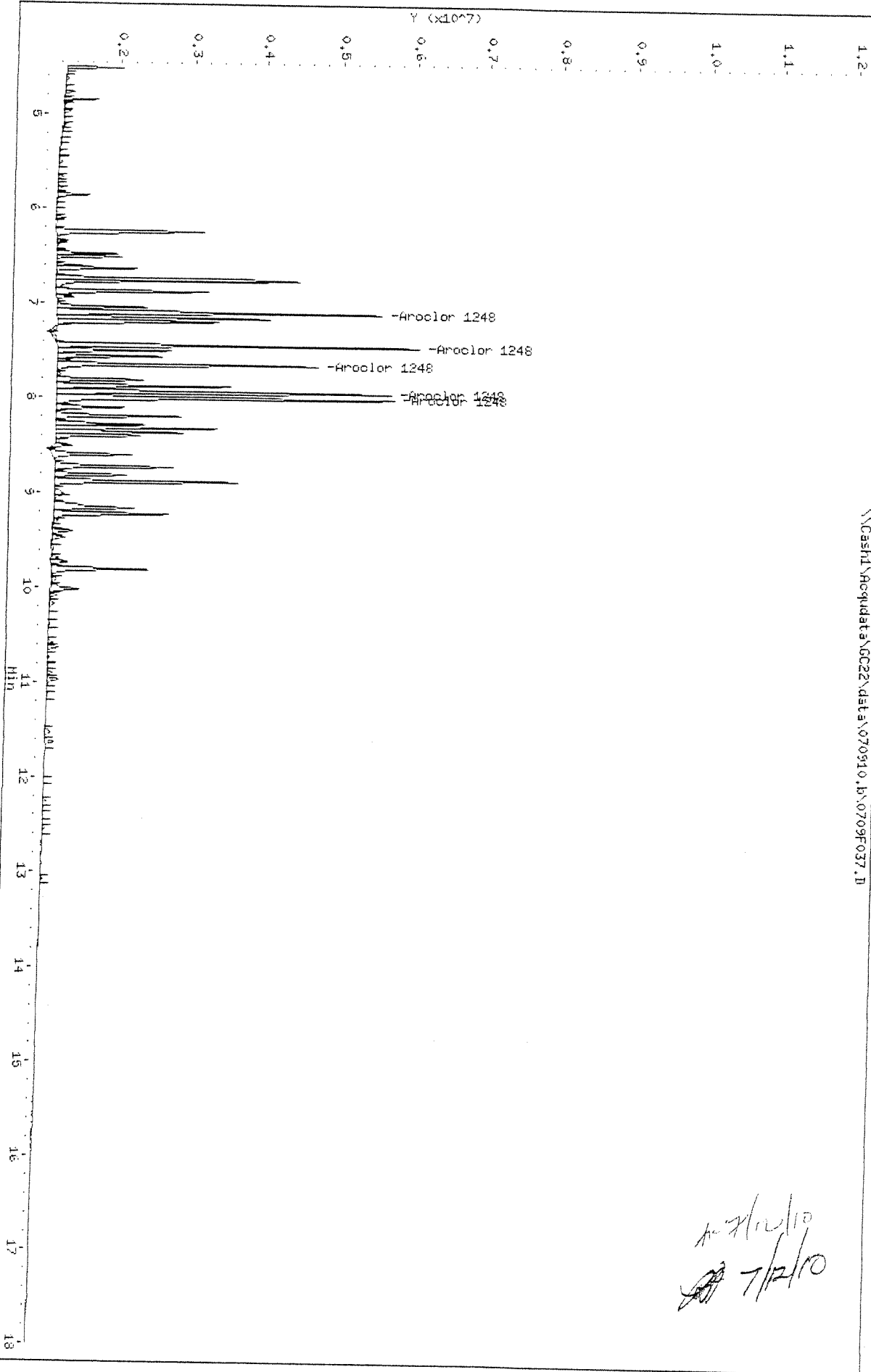
Column Phase: DB-35MS

Instrument: GC22.i

Operator: LHarris

Column diameter: 0.32

\\Cash1\Acqudata\GC22\data\070910.B\0709F037.D



*Handwritten notes:*  
7/12/10  
7/12/10

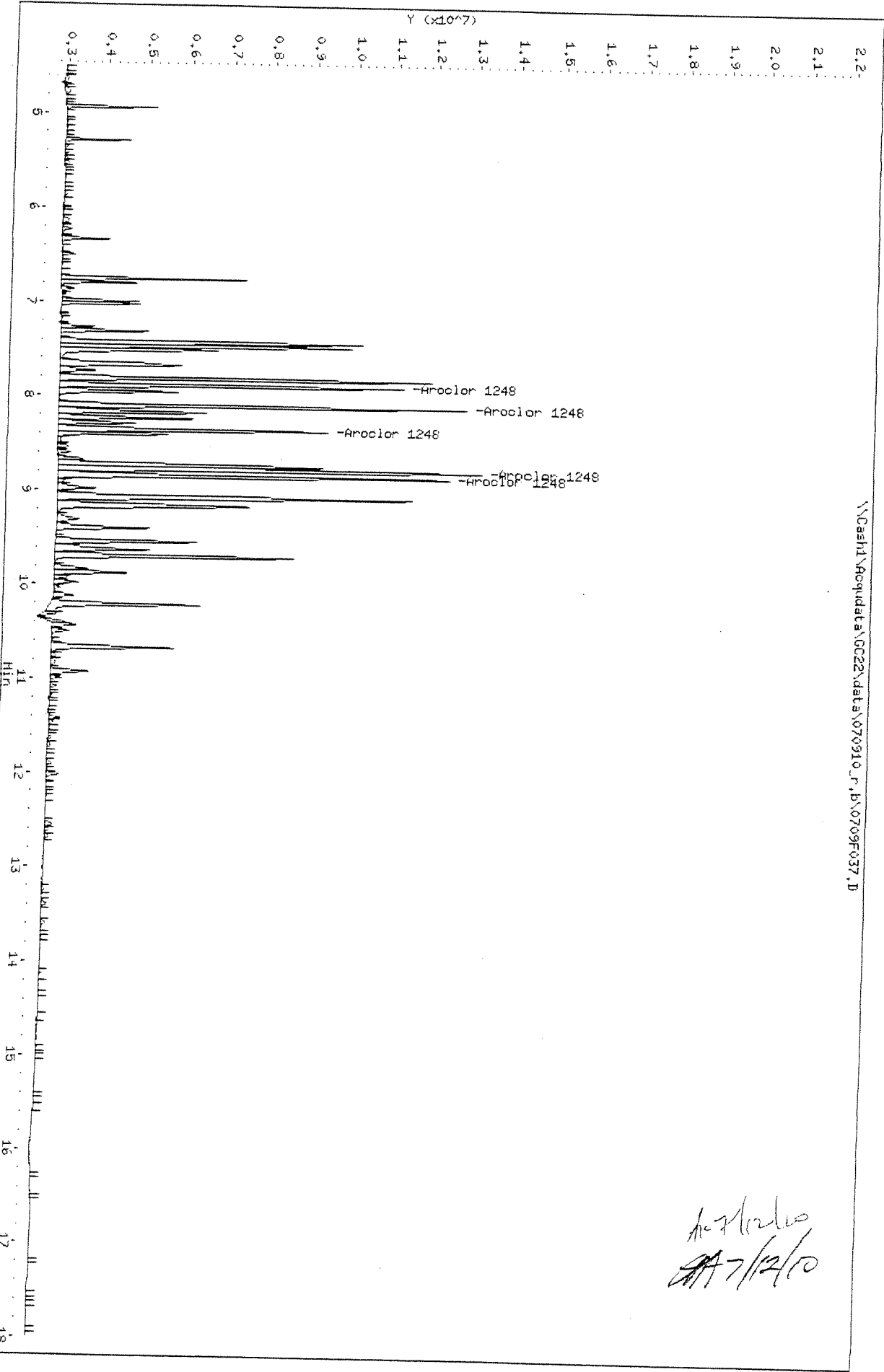
Data File: \\Cash1\Acqudata\GC22\data\070910\_r\_1\0709F037.D  
Date: 10-JUL-2010 09:30

Client ID:  
Sample Info: 1248 @ 100ppb | PCBs-62J | KMC1006246-4

Column Phase: DB-XLB

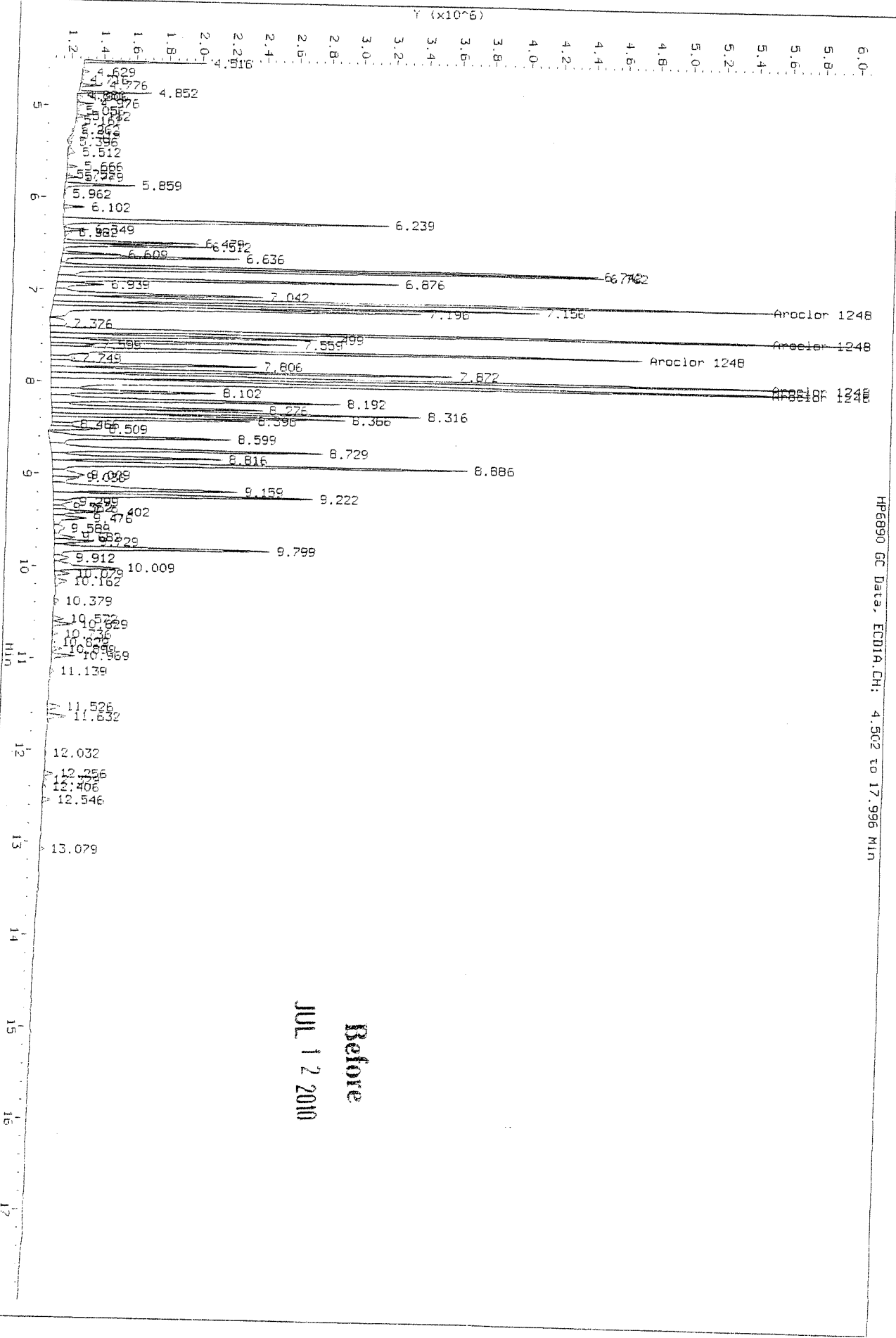
Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

\\Cash1\Acqudata\GC22\data\070910\_r\_1\0709F037.D



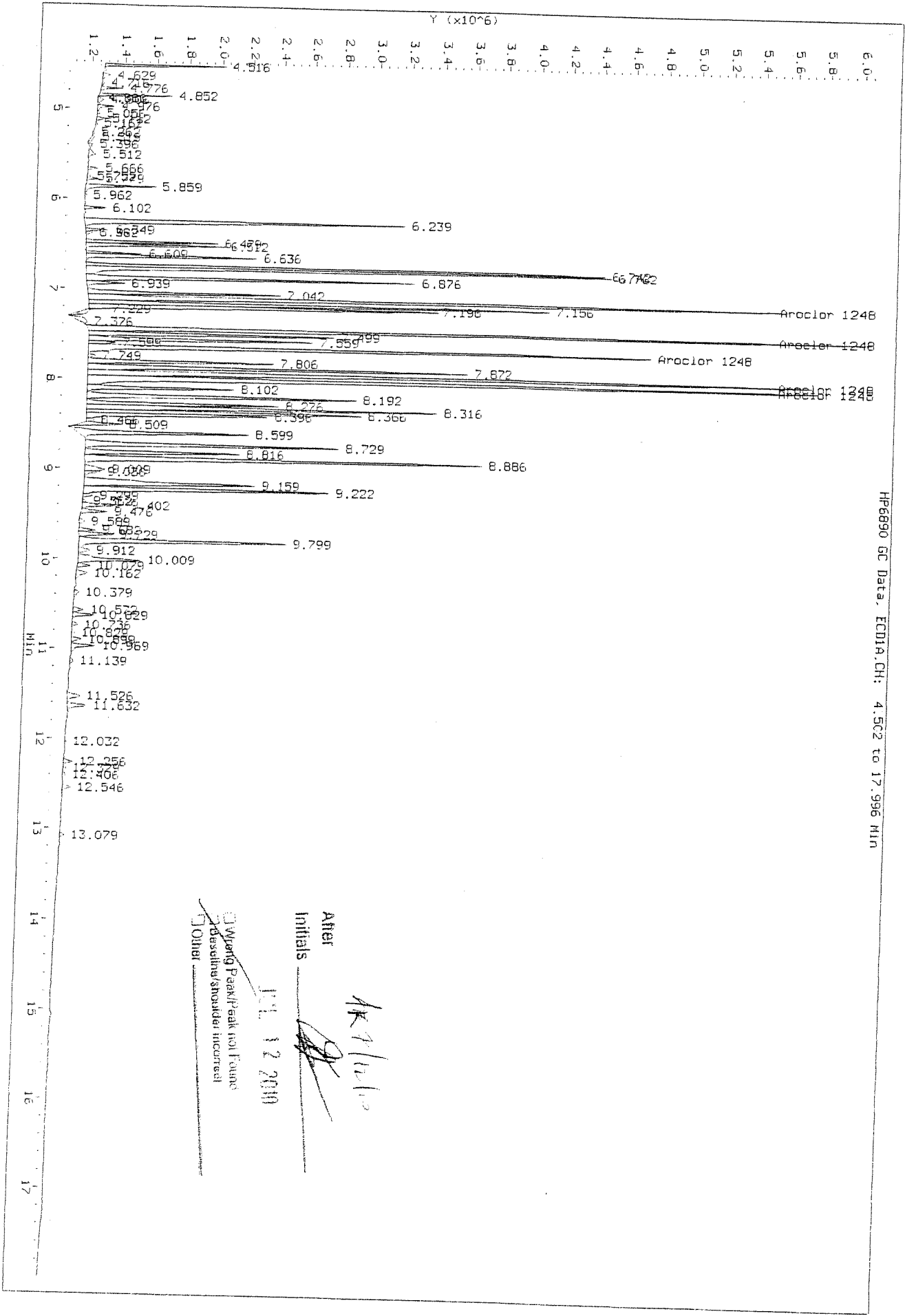
Data File: \\Casht\Procdata\GC22\data\070910.b\07091037.D  
 Injection Date: 10-JUL-2010 09:30  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data, ECD1A.CH: 4.502 to 17.996 MIN



Before  
 JUL 12 2010

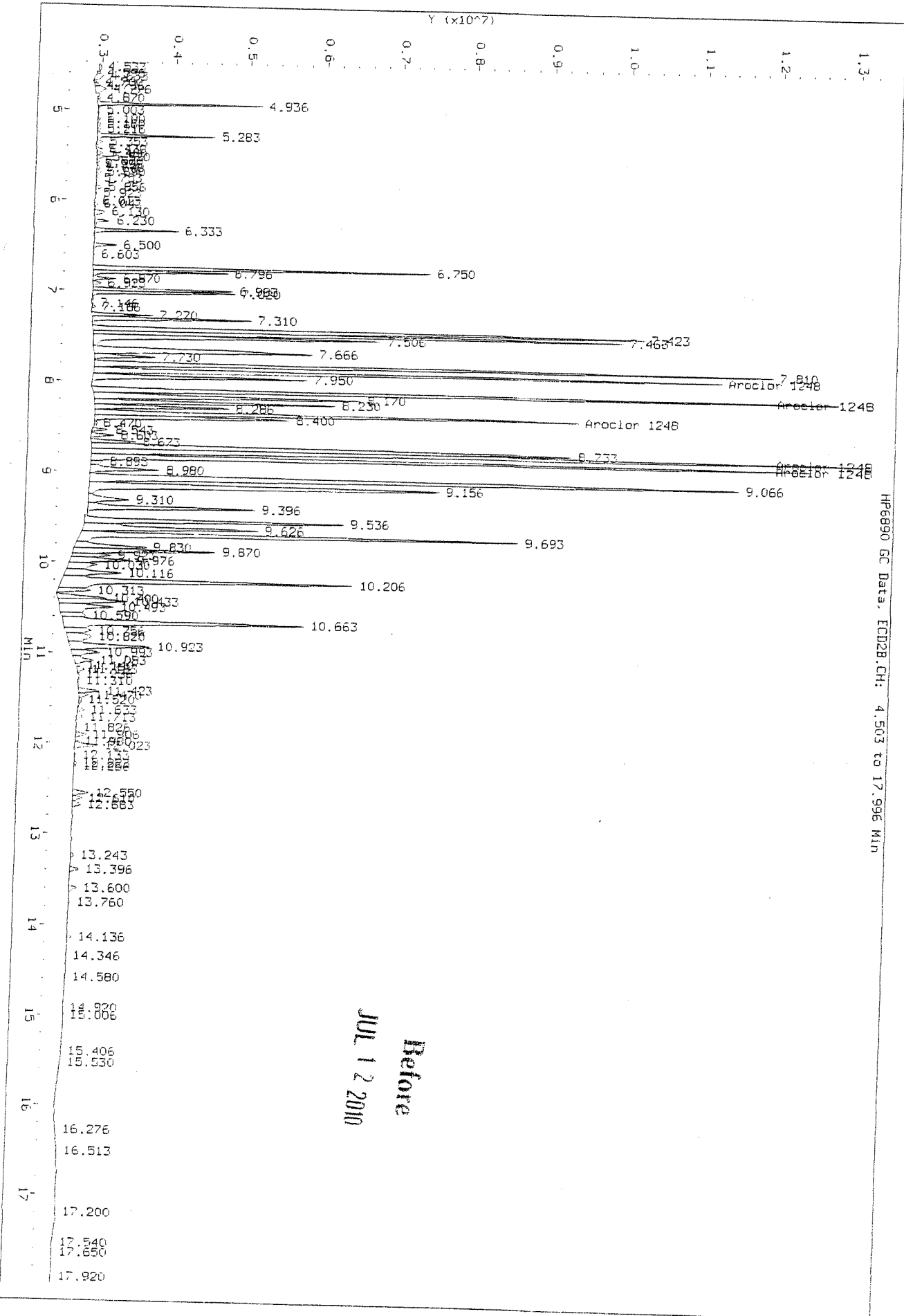
Data File: \\Cash1\Acq\data\GC22\data\070910.b\0709F037.D  
 Injection Date: 10/20/2010 09:30  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data, ECD1A.CH: 4.562 to 17.996 MIN

Alter Initials AK7/12/10  
 Date 12.12.2010  
 Wiping Peak/Peak not Found  
 Residual/Should not occur  
 Other

Data File: \\Cash1\gcq\data\GC22\data\070910\_r\_b\0709F037.D  
 Injection Date: 10-JUL-2010 09:30  
 Instrument: GC22.1  
 Client Sample ID:



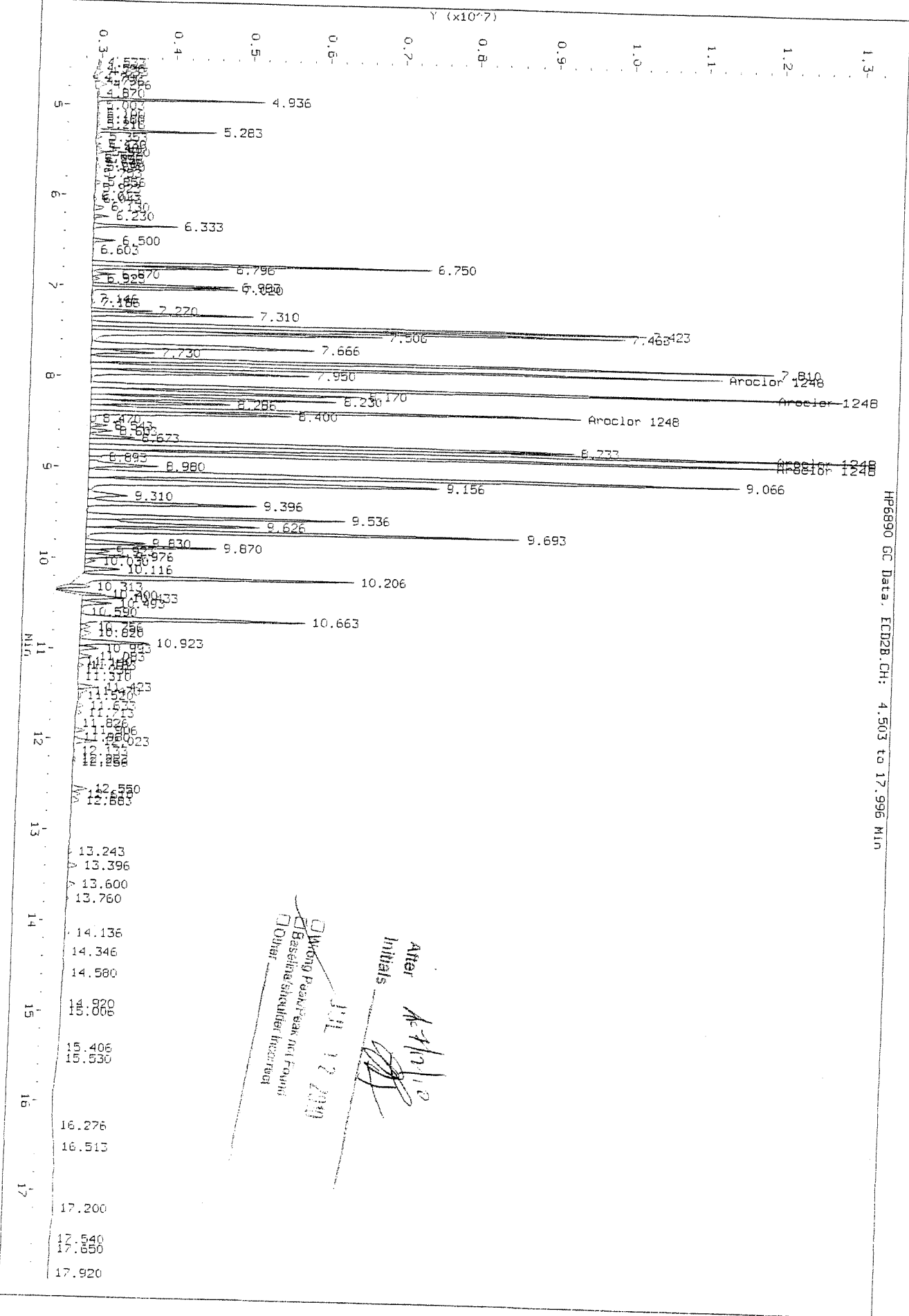
HP6890 GC Data, ECD2B.CH: 4.503 to 17.996 Min

Before  
 JUL 12 2010



Data File: \\Casht1\Acqudata\GC22\data\070910\_r.h\07091037.D  
 Injection Date: 10-JUL-2010 09:50  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data, ECD2B.CH: 4.503 to 17.996 MIN



Wrong Peak/ Peak not Found  
 Baseline/ Shoulder Interference  
 Other  
 After Initials  
 JUL 12 2010  
*[Signature]*

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F038.D  
 Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F038.D  
 Inj Date : 10-JUL-2010 09:55  
 Sample Info: 1254 @ 100ppb | PCB5-62K | KWG1006746-4  
 Misc Info :  
 Cal Date : 12-JUL-2010 10:36  
 Operator : LHarris  
 Inst ID : GC22.1  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : AR1254.SUB  
 Sub List #2 : AR1254.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1254	8.191	9.072	8556027	28977442	87.4	82.6	80.00- 120.00	100.00 (M)
	8.728	9.536	6684344	15584033	87.8	82.7	61.67- 92.50	78.12 (M)
	8.881	9.692	13621850	29481965	88.4	85.1	122.37- 183.56	159.21 (M)
	9.221	10.659	7967900	17135155	91.4	97.6	67.68- 101.52	93.13 (M)
	9.405	10.922	6702650	28181330	104	96.8	52.06- 78.09	78.34 (M)
	Average of Peak Amounts =				91.8	89.0		

QC Flag Legend

M - Compound response manually integrated.

*Handwritten signature and date:*  
 7/12/10

Data File: \\CASH1\Acqudata\GC22\data\070910\_1\0709F038.D  
Date: 10-JUL-2010 09:55

Client ID:

Sample Info: 1254 @ 100ppb | PCB5-62K | KMG10002746-4

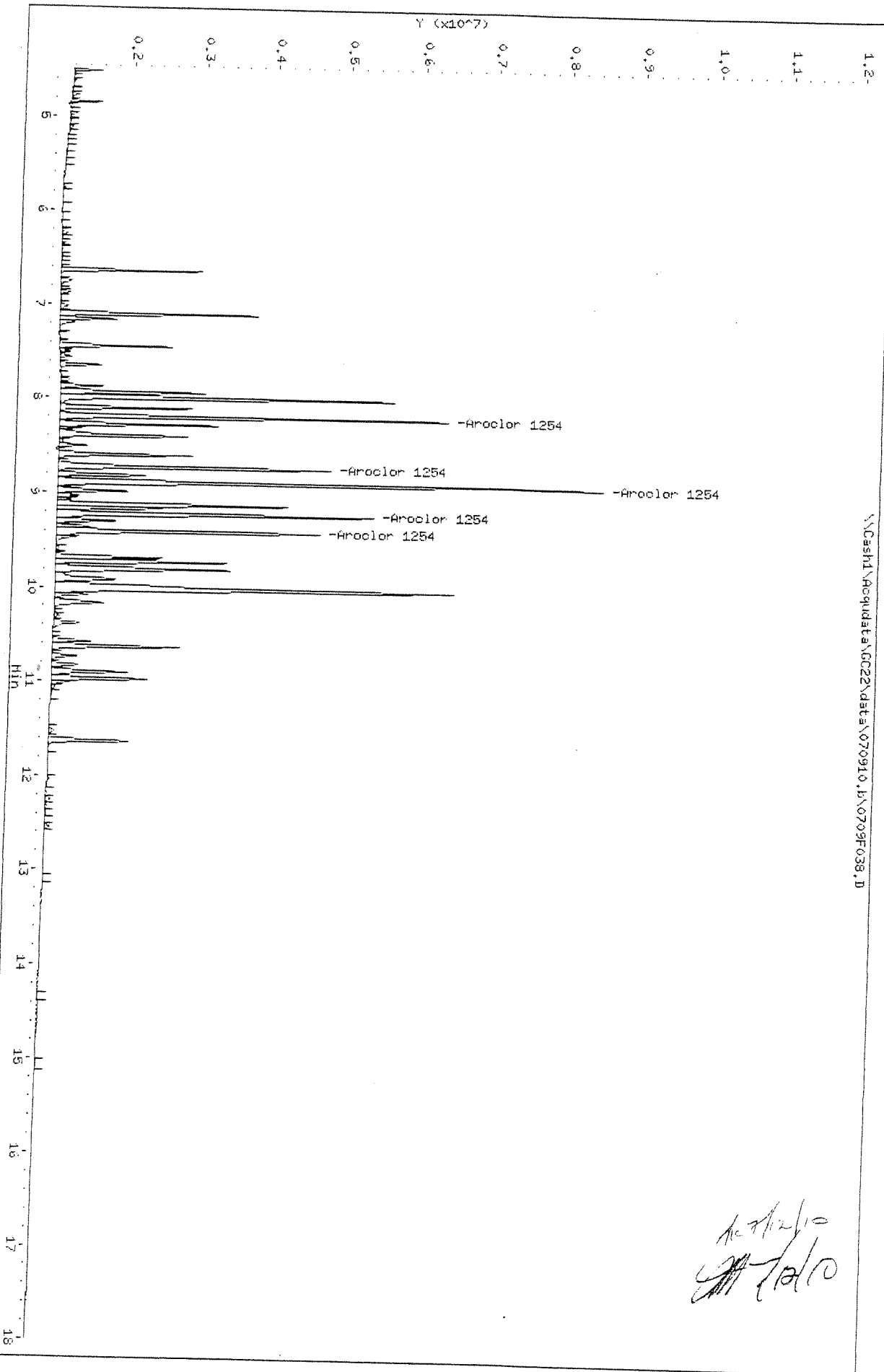
Column Phase: DB-35MS

Instrument: GC22.i

Operator: LHarris

Column diameter: 0.32

\\CASH1\Acqudata\GC22\data\070910\_1\0709F038.D

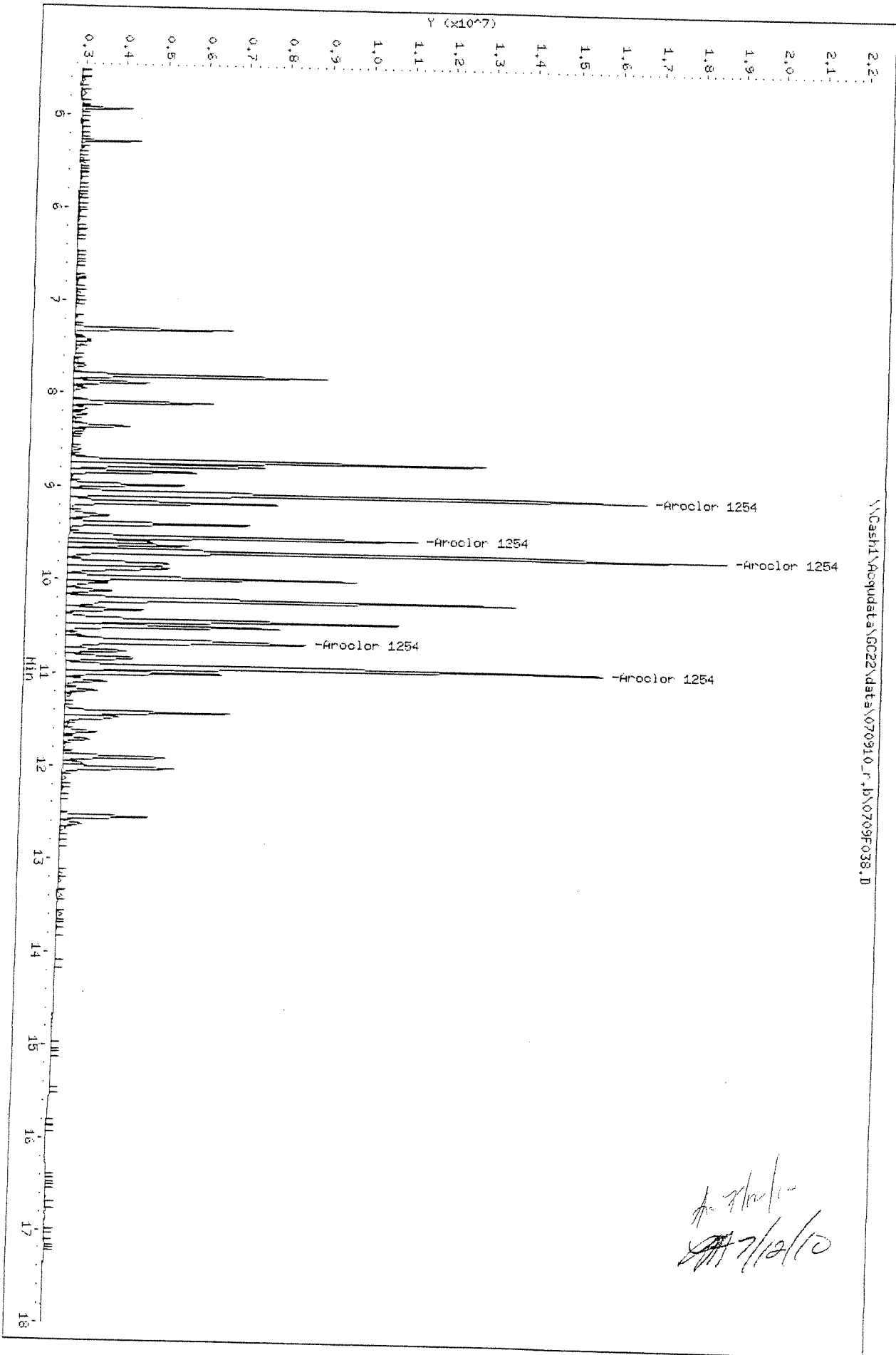


*Handwritten signature/initials*

Data File: \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F038.D  
Date: 10-JUL-2010 09:55  
Client ID:  
Sample Info: 1254 @ 100ppb | PCB5-6EK | KMG1006745-4

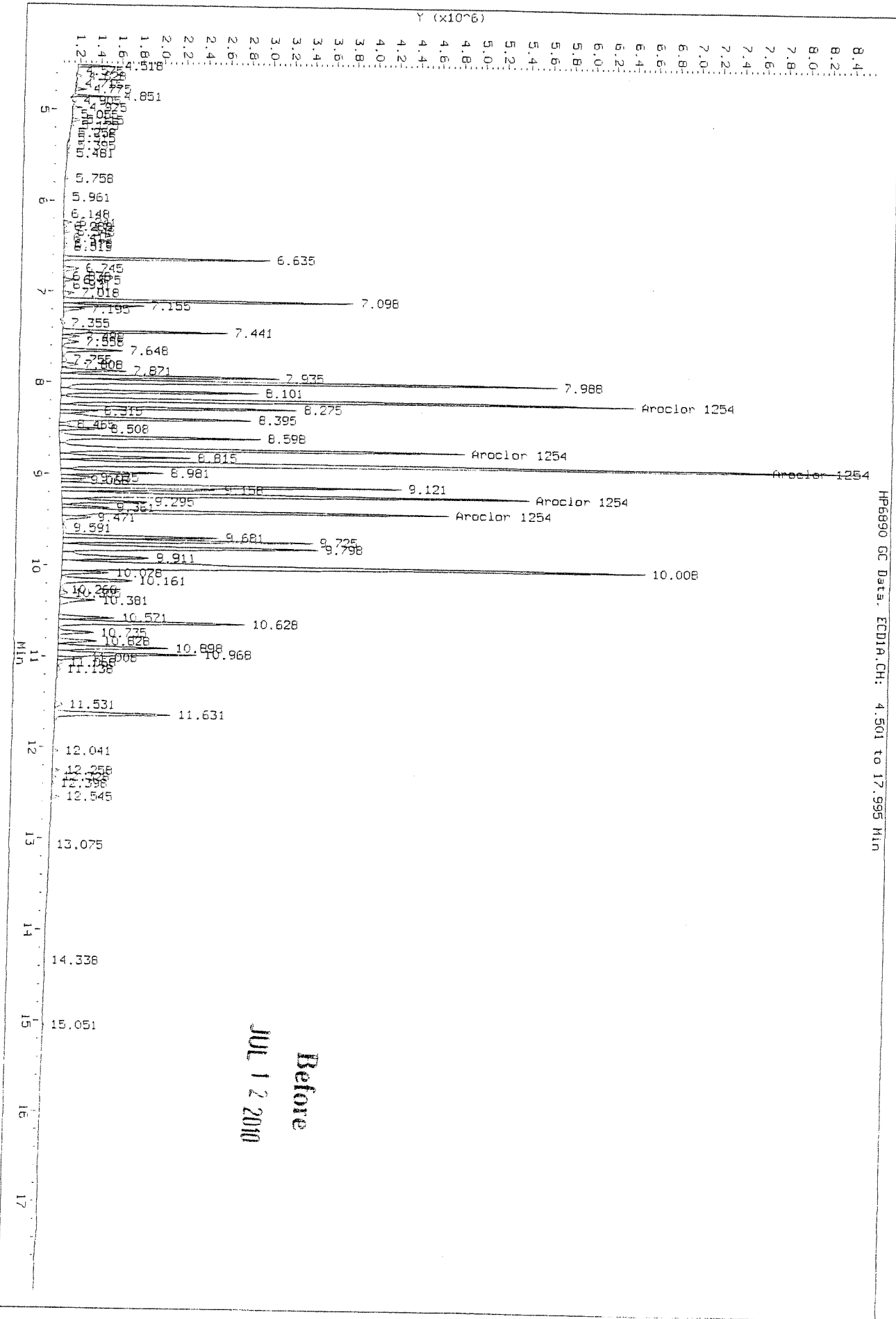
Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

Column Phase: DB-MLB



*Handwritten signature and date:*  
7/12/10

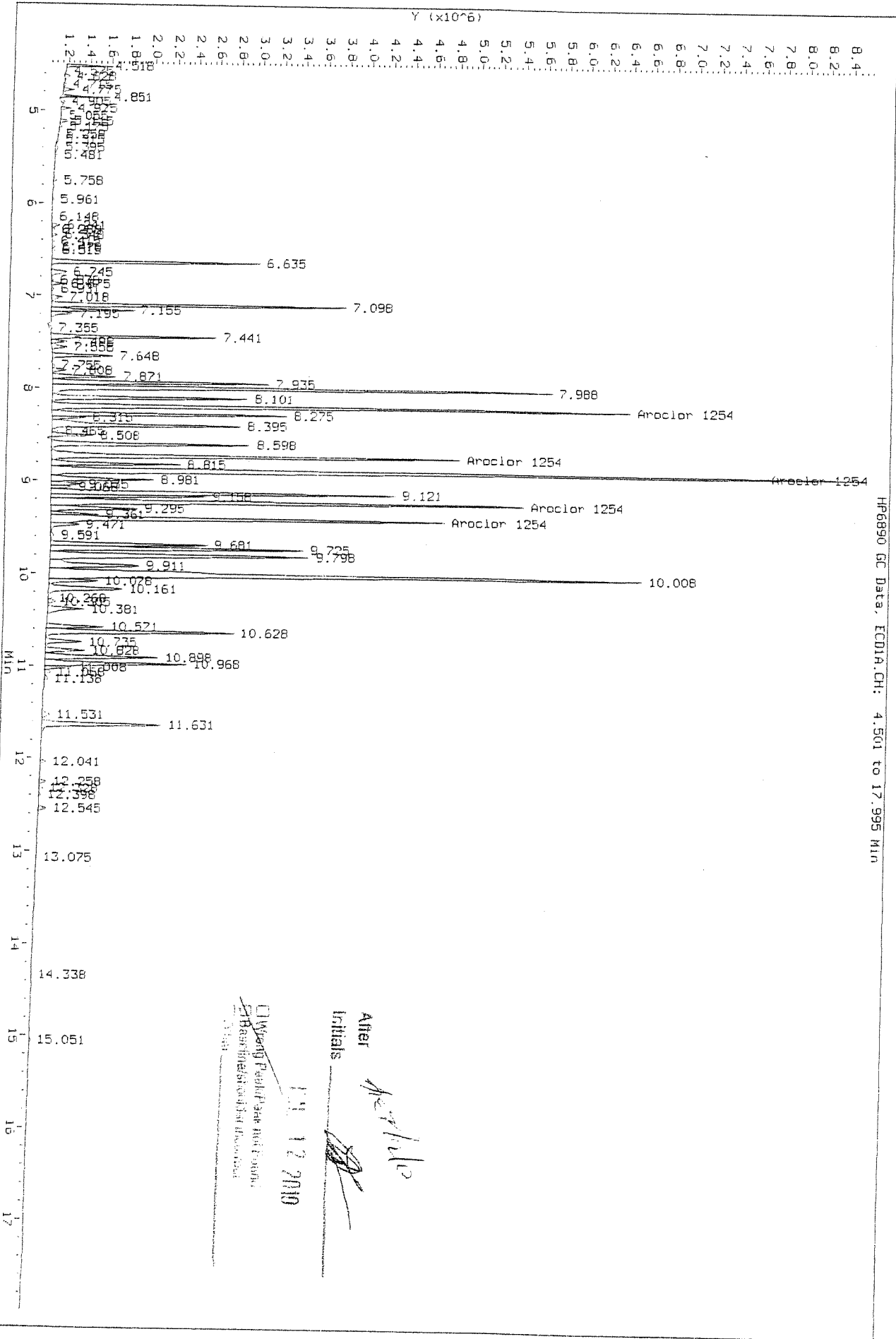
Data File: \\Cash1\Acqdata\GC22\data\070910\_1\07091038.D  
 Injection Date: 10-JUL-2010 09:55  
 Instrument: GC22.1  
 Client Sample ID:



Before  
 JUL 12 2010

HP5890 GC Data, ECD1A.CH: 4.501 to 17.595 MIN

Data File: \\Caspl\Acqdata\GC22\data\070910.b\0709F038.D  
 Injection Date: 10-JUL-2010 09:55  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data, ECD1A.CH: 4.501 to 17.995 Min

Wrong Peak  
 See Note  
 Base Peak  
 Other  
 After: *[Signature]*  
 Initials: *[Signature]*  
 11.12.2010

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F039.D  
Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F039.D  
Inj Date : 10-JUL-2010 10:19  
Sample Info: 1260 @ 100ppb | PCB5-62L | KWG1006746-4  
Misc Info :  
Cal Date : 12-JUL-2010 10:36  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
Sub List #1 : AR1260.sub  
Sub List #2 : AR1260.sub  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1260	9.119	9.973	10366434	26280170	92.4	96.4	80.00- 120.00	100.00
	9.402	10.923	13432494	34877838	95.6	92.7	102.38- 153.58	129.58
	10.569	11.083	10395560	26641971	109	122	71.08- 106.62	100.28
	10.969	12.023	24809581	57385250	112	114	177.38- 266.06	239.33
	11.629	12.546	18523069	34187387	107	114	133.94- 200.91	178.68
			Average of Peak Amounts =		103	108		

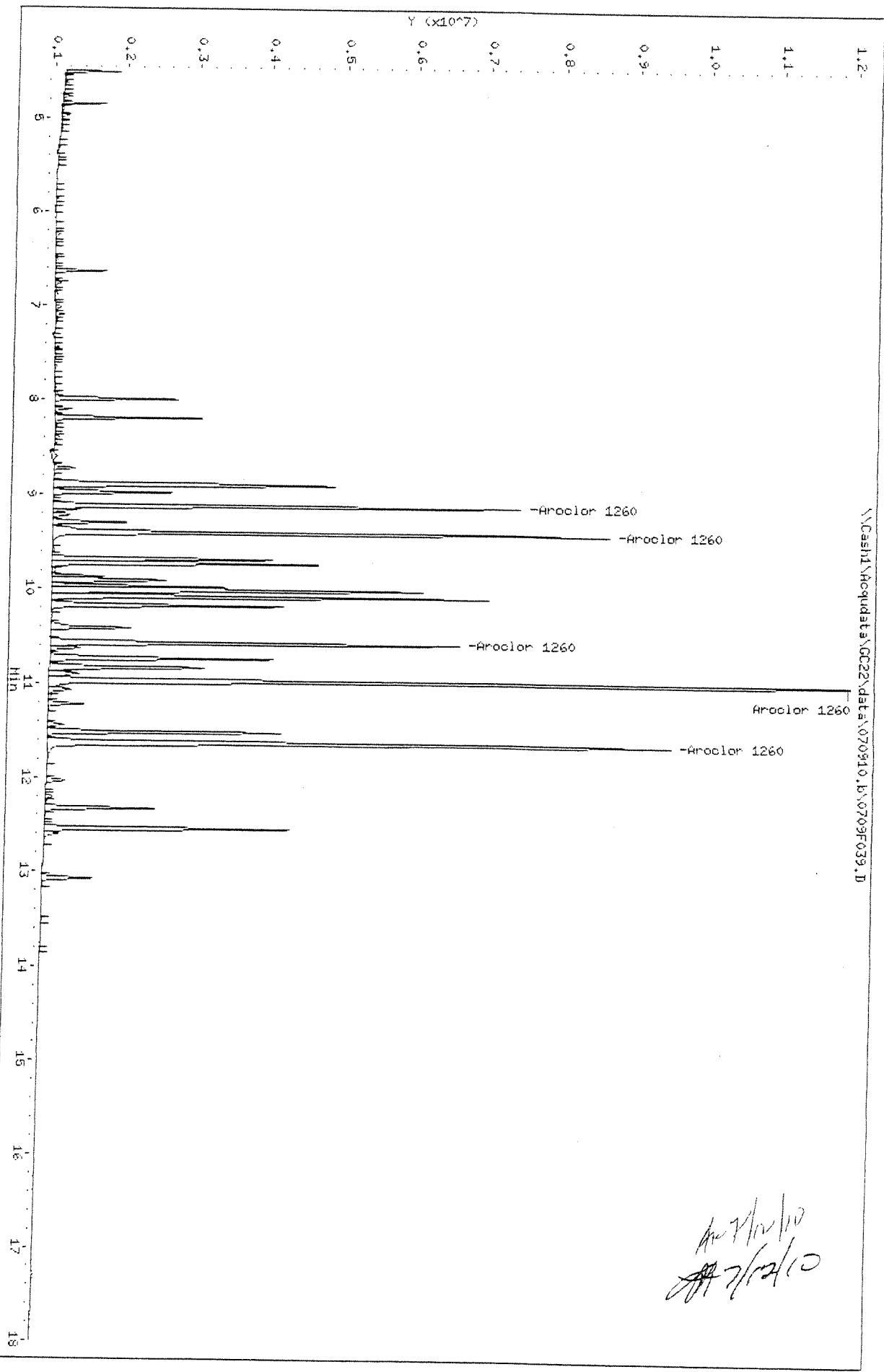
*Handwritten signature and date: 7/2/10*

Data File: \\Cash1\Acq\data\GC22\data\070910.b\0709F039.D  
Date: 10-JUL-2010 10:19  
Client ID:  
Sample Info: 1260 @ 100ppb | PCBs-e2L | N101006746-4

Column phase: DB-35MS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

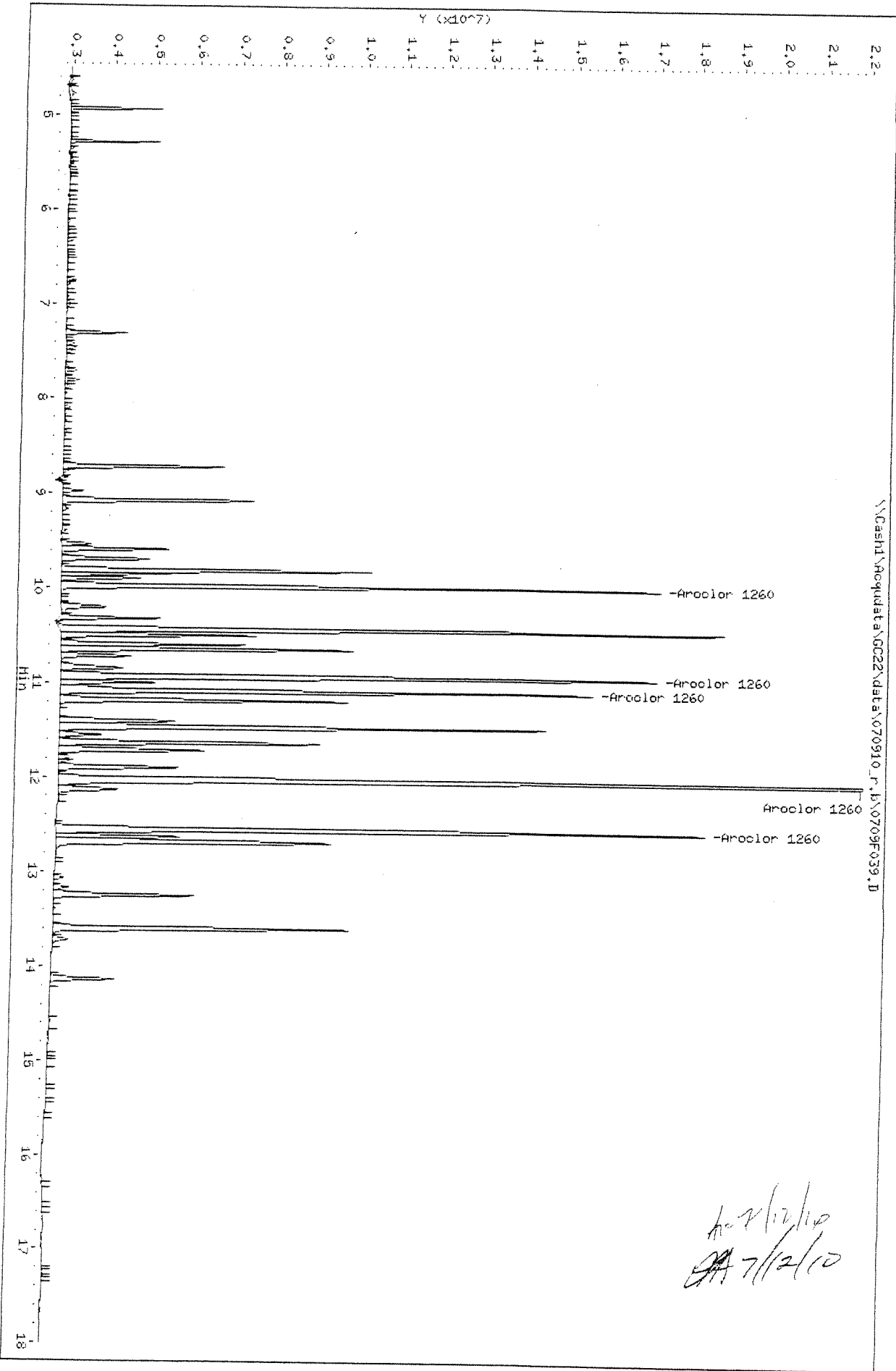
\\Cash1\Acq\data\GC22\data\070910.b\0709F039.D



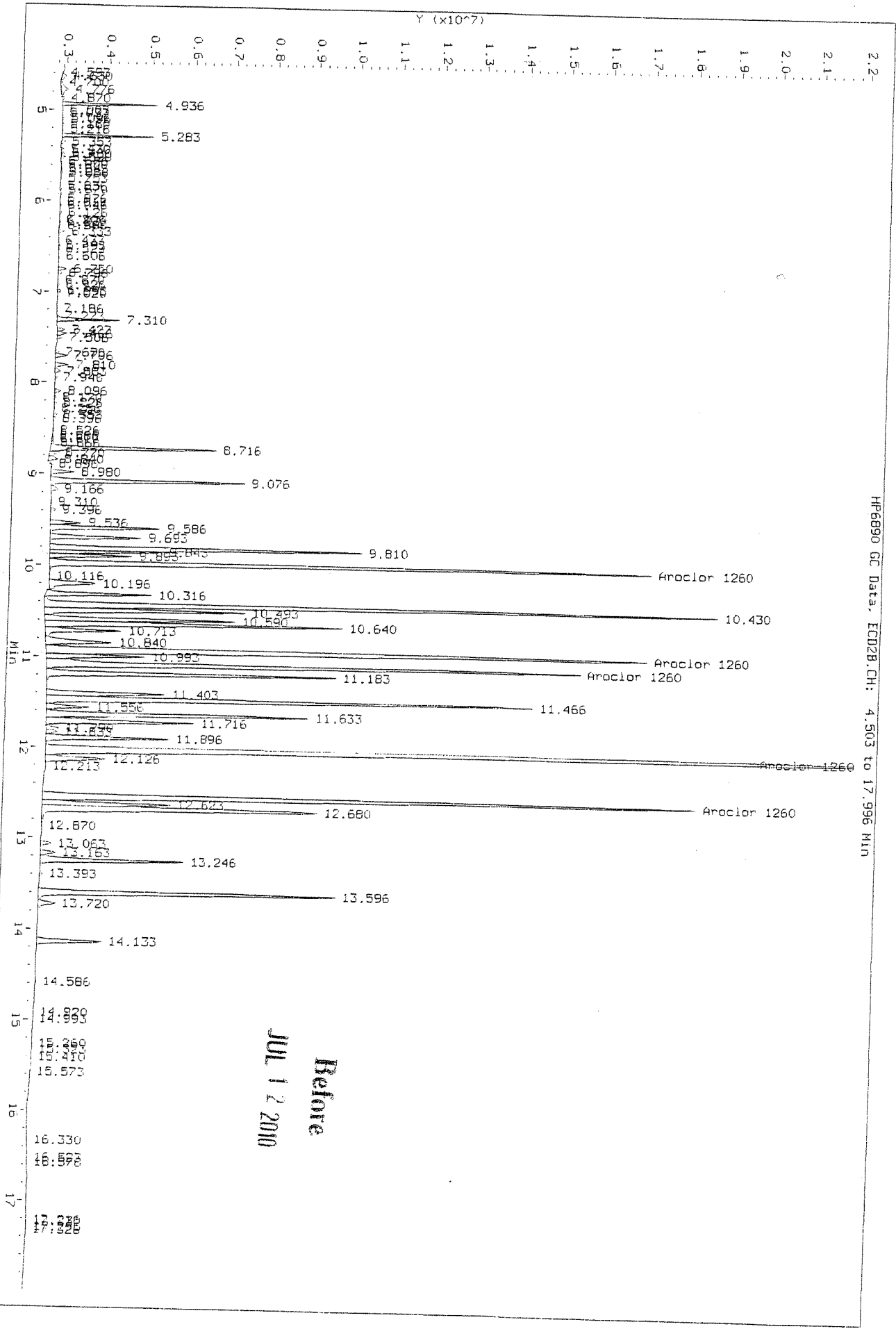


Data File: \\Cashd\Acq\data\CC2\data\070910\_r1\0709F039.D  
Date: 10-JUL-2010 10:19  
Client ID:  
Sample Info: 1260 @ 100ppb | PCB8-62L | KMCL006748-4  
Column phase: DB-XLB

Instrument: GC22.1  
Operator: L Harris  
Column diameter: 0.32



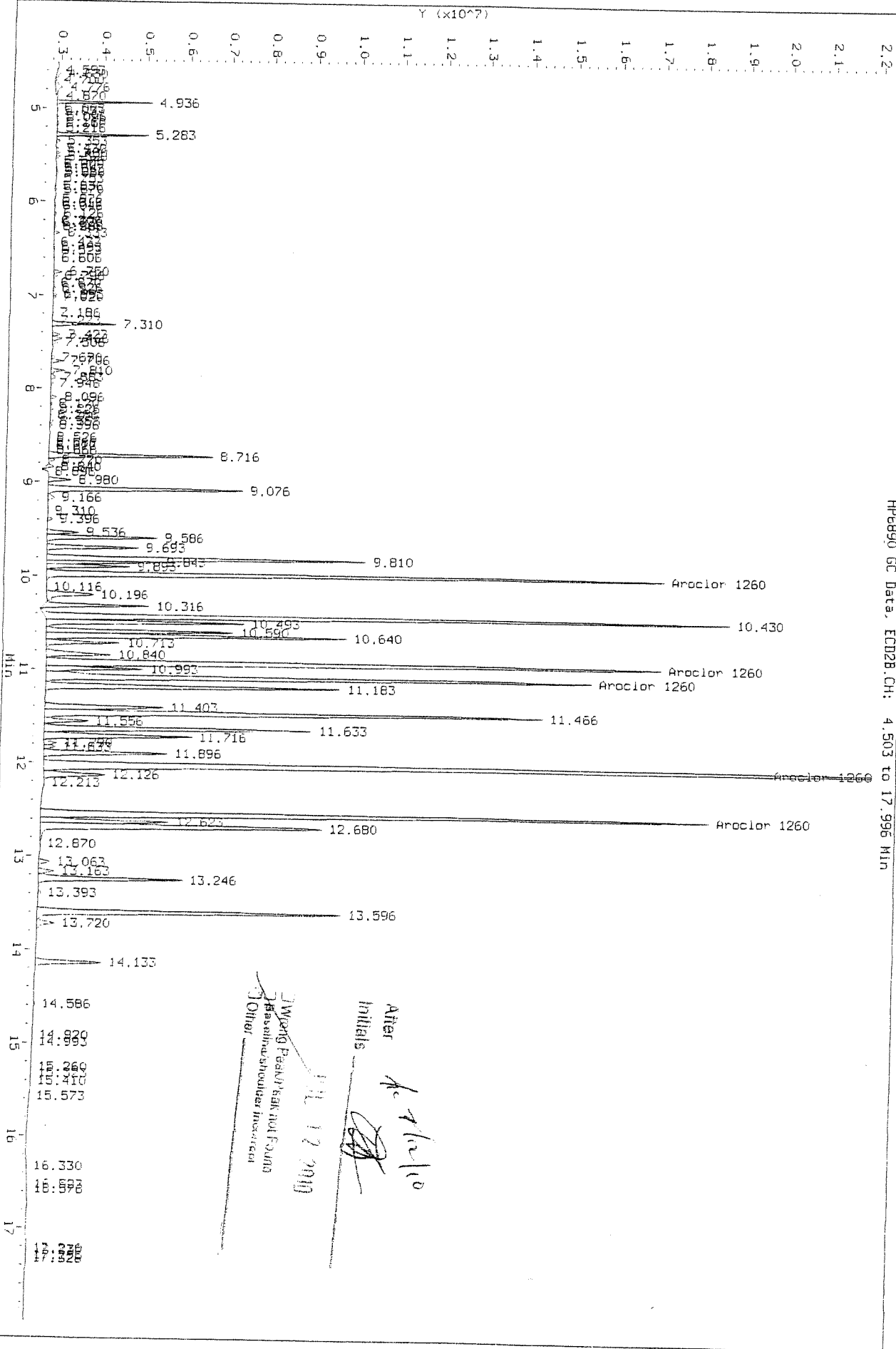
Data File: \\Cash1\Recdata\GC22\data\070910\_r.D\0709F039.D  
 Injection Date: 10-JUL-2010 10:19  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data, ECD2B.CH: 4.503 to 17.996 MIN

Data File: \\Cash1\Acq\data\GC22\data\070910.r.D\0709F039.D  
 Injection Date: 10-JUL-2010 10:19  
 Instrument: GC22.1  
 Client Sample ID:

HP6890 GC Data, ECD28.CH: 4.503 to 17.996 Min



After  
 Initials  
 Wang Peak/Val not found  
 Baseline/shoulder increased  
 Other  
 JUL 12 2010

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F040.D  
 Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F040.D  
 Inj Date : 10-JUL-2010 10:43  
 Sample Info: 1262 @ 100ppb | PCB5-62M | KWG1006746-4  
 Misc Info :  
 Cal Date : 12-JUL-2010 10:36  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : AR1262.SUB  
 Sub List #2 : AR1262.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1262	10.076	11.084	15091804	37836843	107	106	80.00- 120.00	100.00
	10.570	11.467	13126173	27825972	107	107	69.82- 104.73	86.98
	10.970	12.024	27250618	63559045	111	107	152.17- 228.25	180.57
	11.516	12.547	11829391	43369993	101	107	63.79- 95.68	78.38
	11.630	12.677	20896943	31086382	106	108	116.50- 174.75	138.47
	Average of Peak Amounts =				106	107		

*Handwritten signature and date:*  
 7/12/10  
 7/12/10

Data File: \\Casha1\Acqudata\GC22\data\070910\_16\0709F040.D

Date: 10-JUL-2010 10:43

Client ID:

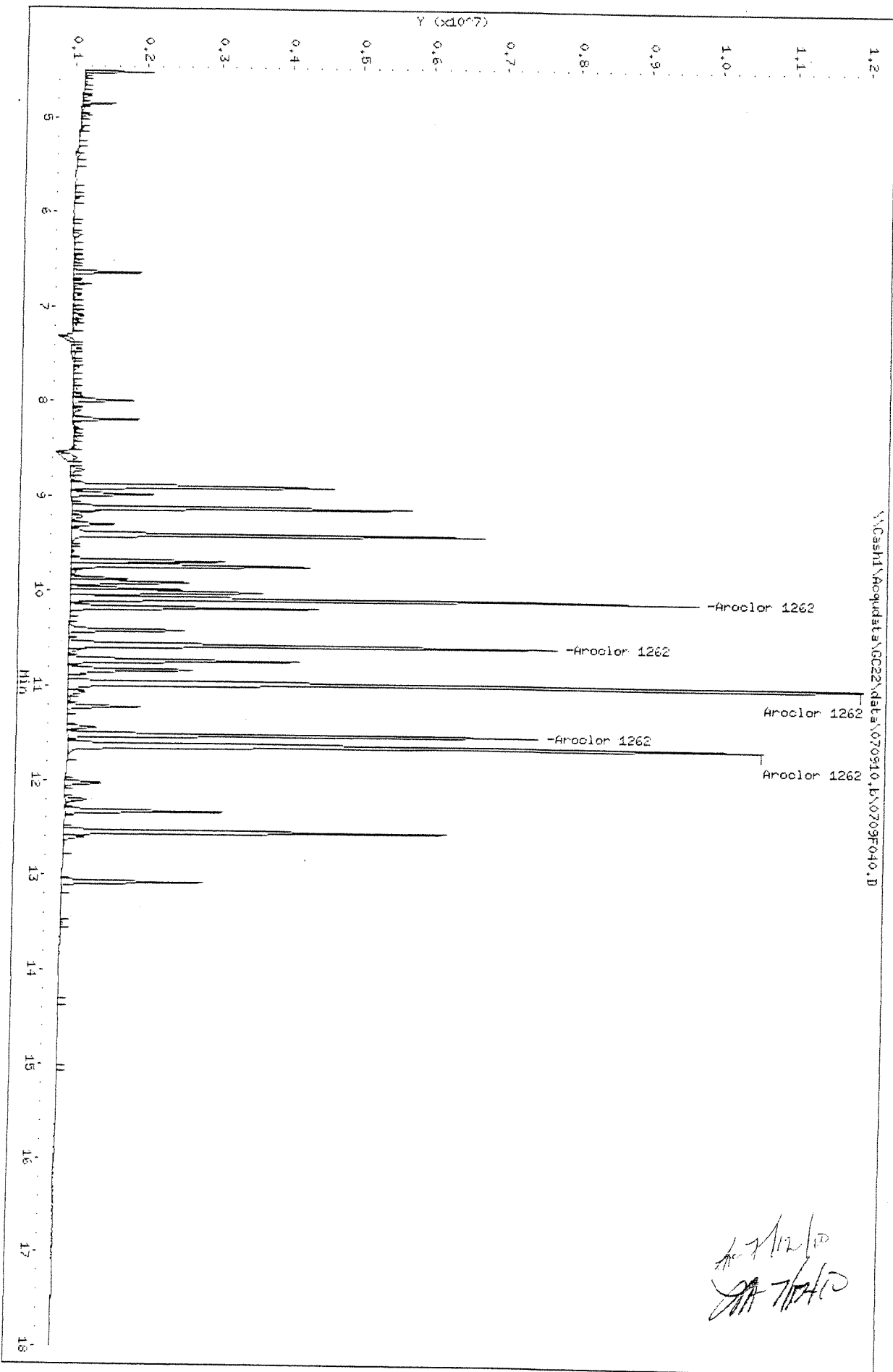
Sample Info: 1262 @ 100ppb | PCBs-62H | KMG1006746-4

Column Phase: DB-35HS

Instrument: GC22.1

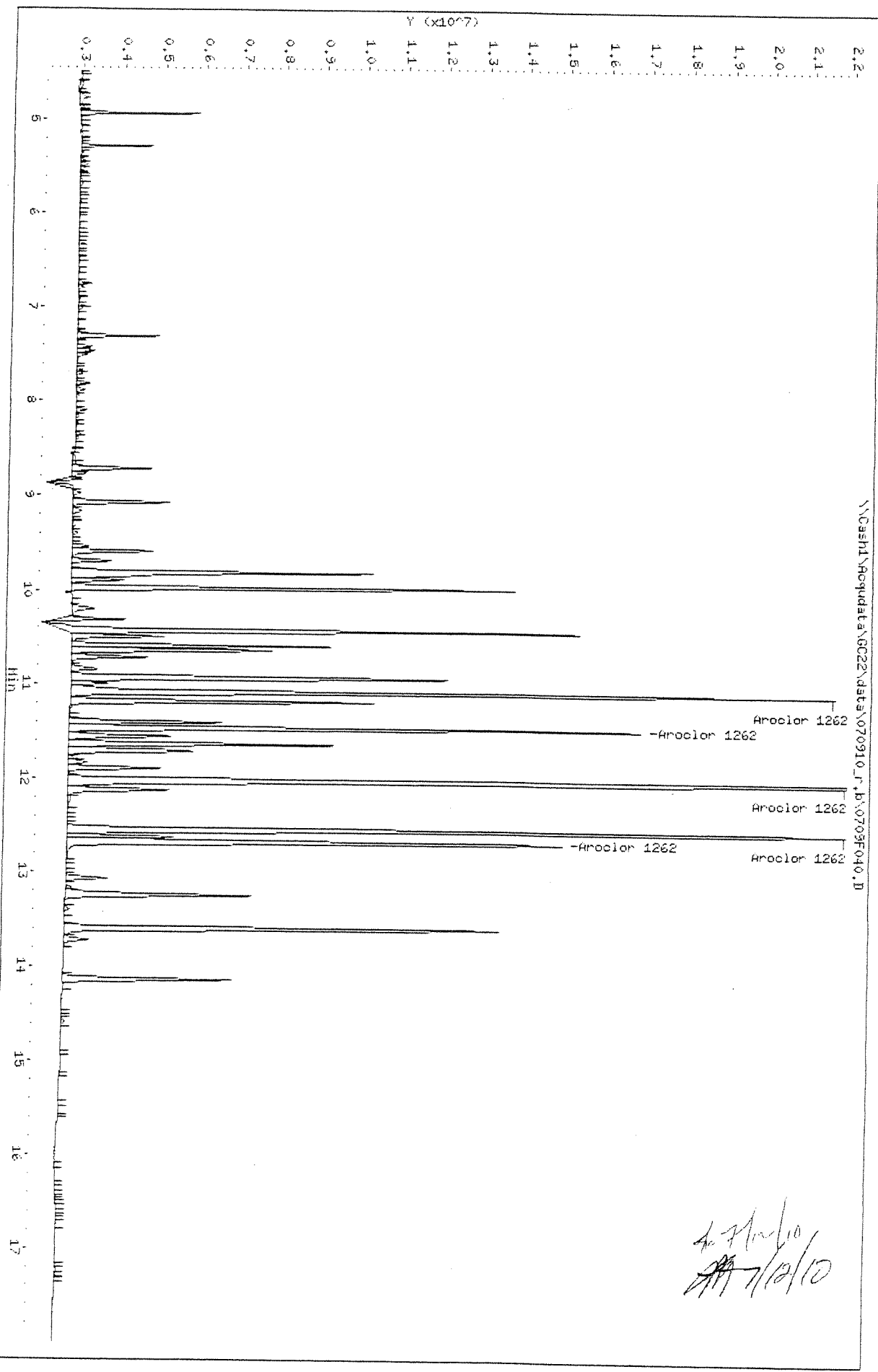
Operator: LHarris

Column diameter: 0.32

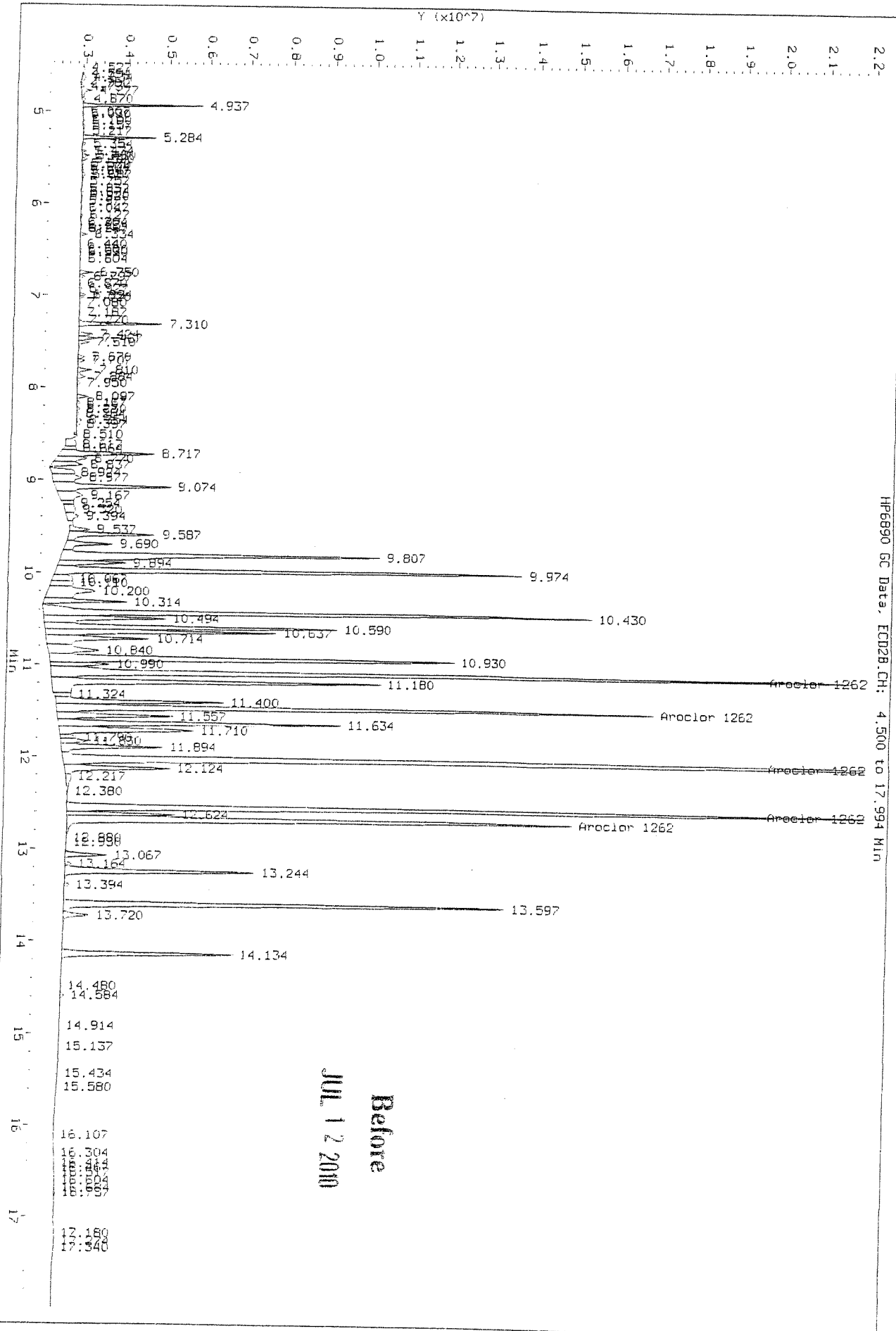


Data File: \\CASH1\Hocqudata\GC22\data\070910\_L1\0709F040.D  
Date: 10-JUL-2010 10:43  
Client ID:  
Sample Info: 1262 @ 100ppb | PCBs-63H | KHC1006746-4  
Column phase: DB-XLB

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



Data File: \\Cash1\Acqudata\GC22\data\070910\_r.j\070910.0  
 Injection Date: 10-JUL-2010 10:43  
 Instrument: GC22.1  
 Client Sample ID:



HP6890 GC Data, ECD2B.CH: 4.500 to 17.994 Min

Before  
 JUL 12 2010





Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC22\data\070910.b\0709F041.D  
 Sample #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\0709F041.D  
 Inj Date : 10-JUL-2010 11:08  
 Sample Info: 1268 @ 100ppb | PCB5-62N | KWG1006746-4  
 Misc Info :  
 Cal Date : 12-JUL-2010 10:36  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC22\data\070910.b\070910ul\_f.m  
 Method #2 : \\Cash1\Acqudata\GC22\data\070910\_r.b\070910ul\_r.m  
 Sub List #1 : AR1268.SUB  
 Sub List #2 : AR1268.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

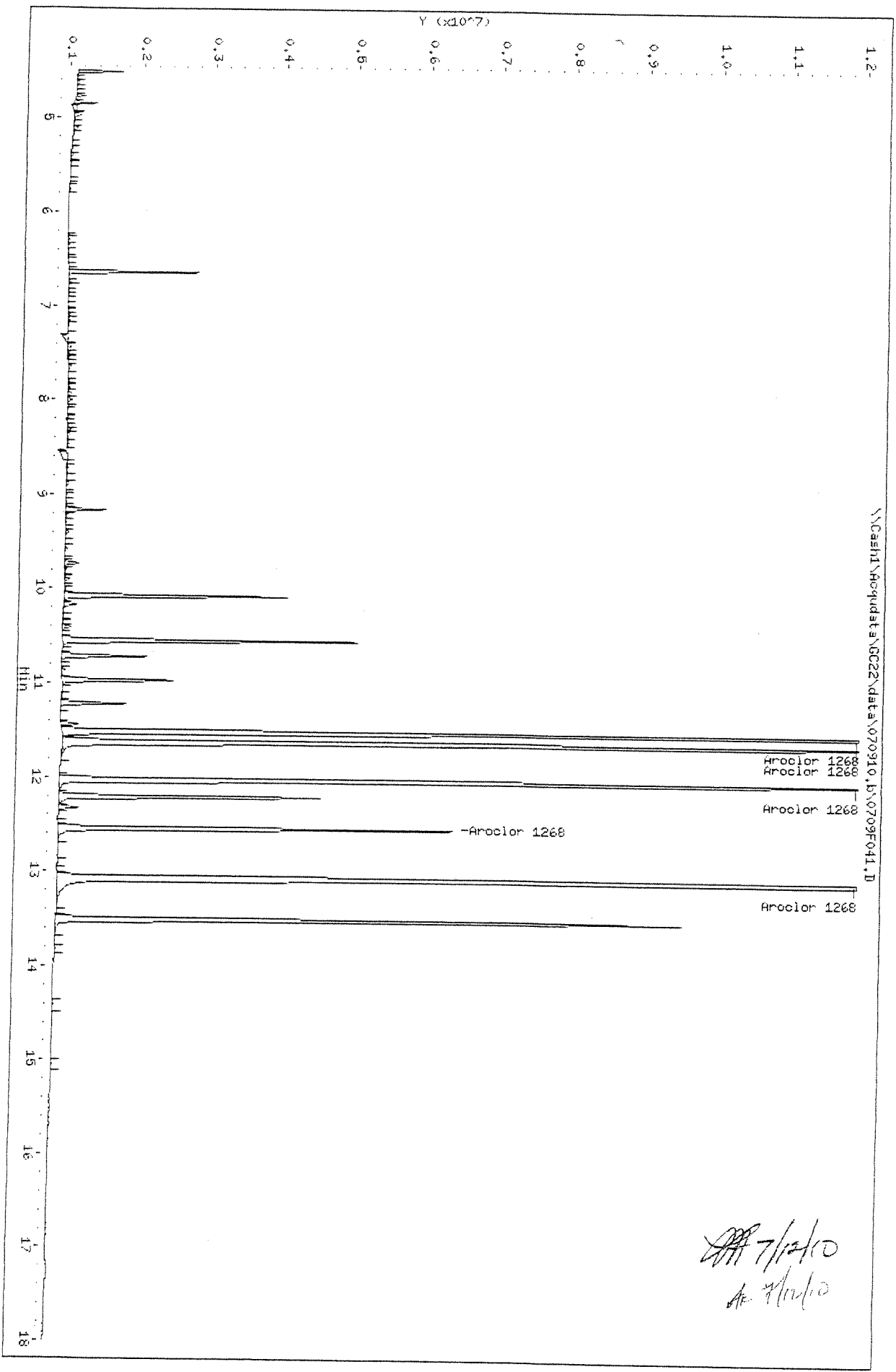
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1268	11.519	12.550	33065199	76131569	81.6	83.8	80.00- 120.00	100.00
	11.626	12.683	30318780	71423472	84.2	86.4	73.14- 109.70	91.69
	12.029	13.063	27296573	62621332	93.3	93.7	59.19- 88.79	82.55
	12.542	13.597	10541837	24048431	92.9	96.0	23.16- 34.74	31.88
	13.076	14.133	85087219	179448469	103	100	170.02- 255.03	257.33
	Average of Peak Amounts =				91.0	92.0		

*Handwritten signatures and dates:*  
 AH 7/12/10  
 10/27/10

Data File: \\CASH1\Acqudata\GC22\data\070910.P\0709F041.D  
Date: 10-JUL-2010 11:08  
Client ID:  
Sample Info: 1268 @ 100ppb | PCB5-62H | KMG10062746-4

Column phase: DB-35HS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

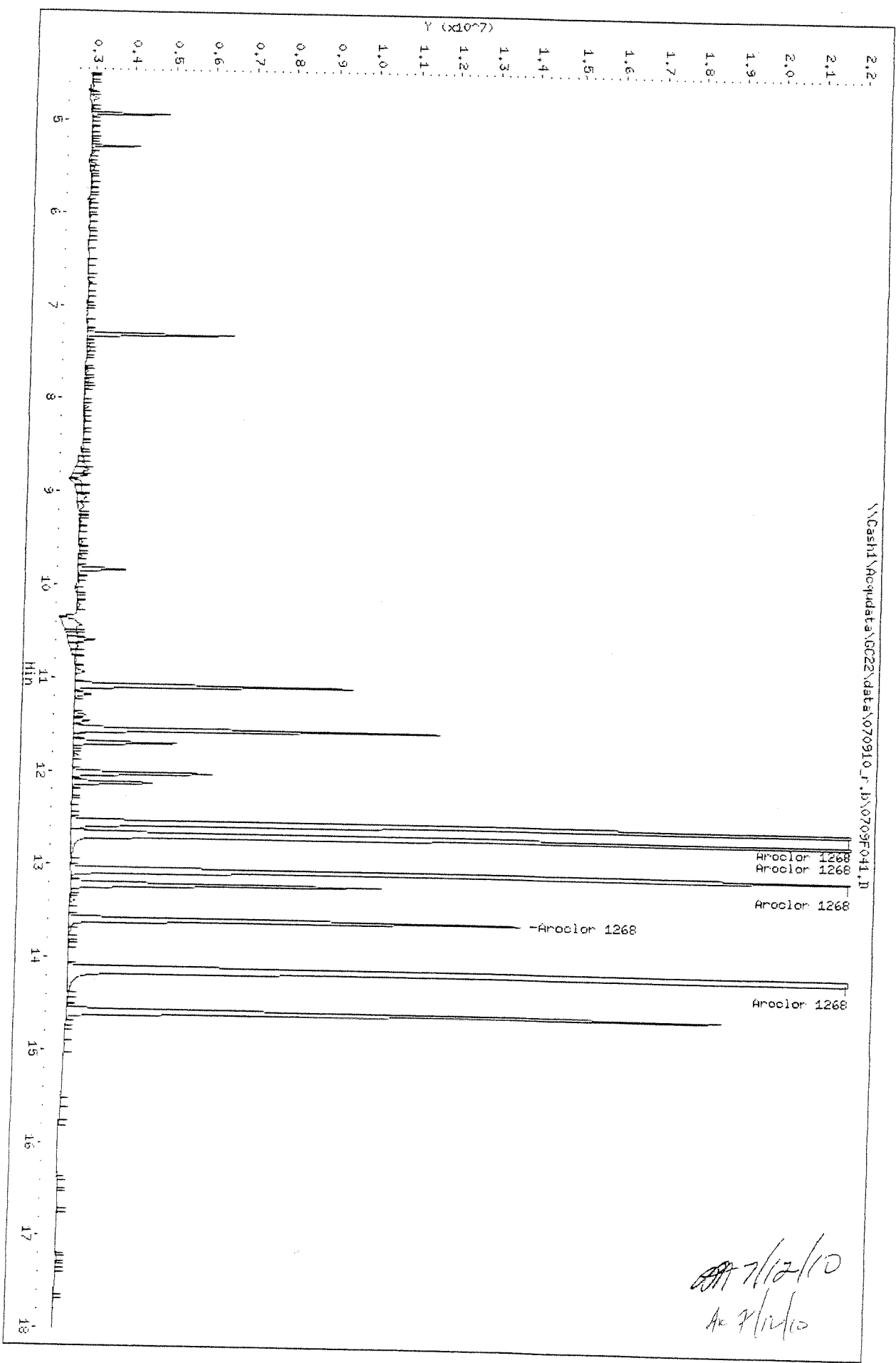


*Handwritten signature and date:*  
7/12/10  
A. Harris

Data File: \\Cash1\Acqudata\GC22\data\070910\_r.j\0709F041.D  
Date: 10-JUL-2010 11:08  
Client ID:  
Sample Info: 1268 @ 100ppb | PCB5-62M | KNC1006245-4

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32

Column phase: DB-XLB



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Date Analyzed:** 10/11/2010

**Continuing Calibration Verification Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration Type:** External Standard  
**Analysis Method:** 8082

**Calibration Date:** 07/09/2010  
**Calibration ID:** CAL9635  
**Analysis Lot:** KWG1010997  
**Units:** ng/mL  
**Column ID:** DB-35MS

**File ID:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\1011F005.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	10	6.8	2320000	1580000	-32 *	NA	± 20 %	AverageRF
Aroclor 1016	100	83	NA	NA	NA	-17	± 20 %	NA
Aroclor 1016 {1}	100	78	111000	86900	-22	NA	± 100 %	AverageRF
Aroclor 1016 {2}	100	84	65700	55000	-16	NA	± 100 %	AverageRF
Aroclor 1016 {3}	100	82	55100	45400	-18	NA	± 100 %	AverageRF
Aroclor 1016 {4}	100	84	53900	45200	-16	NA	± 100 %	AverageRF
Aroclor 1016 {5}	100	85	40500	34300	-15	NA	± 100 %	AverageRF
Aroclor 1260	100	84	NA	NA	NA	-16	± 20 %	NA
Aroclor 1260 {1}	100	85	112000	95200	-15	NA	± 100 %	AverageRF
Aroclor 1260 {2}	100	94	141000	132000	-6	NA	± 100 %	AverageRF
Aroclor 1260 {3}	100	80	95500	76400	-20	NA	± 100 %	AverageRF
Aroclor 1260 {4}	100	83	222000	184000	-17	NA	± 100 %	AverageRF
Aroclor 1260 {5}	100	77	173000	133000	-23	NA	± 100 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Date Analyzed:** 10/11/2010

**Continuing Calibration Verification Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration Type:** External Standard  
**Analysis Method:** 8082

**Calibration Date:** 07/09/2010  
**Calibration ID:** CAL9635  
**Analysis Lot:** KWG1010997  
**Units:** ng/mL  
**Column ID:** DB-XLB

**File ID:** \\CASHKELSO\ACQU\DATA\GC22\DATA\101110\_R.B\1011F005.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	10	10	4920000	5030000	2	NA	± 20 %	AverageRF
Aroclor 1016	100	100	NA	NA	NA	0	± 20 %	NA
Aroclor 1016 {1}	100	95	138000	131000	-5	NA	± 100 %	AverageRF
Aroclor 1016 {2}	100	110	231000	247000	7	NA	± 100 %	AverageRF
Aroclor 1016 {3}	100	99	111000	109000	-1	NA	± 100 %	AverageRF
Aroclor 1016 {4}	100	97	127000	123000	-3	NA	± 100 %	AverageRF
Aroclor 1016 {5}	100	100	119000	122000	2	NA	± 100 %	AverageRF
Aroclor 1260	100	110	NA	NA	NA	7	± 20 %	NA
Aroclor 1260 {1}	100	100	273000	279000	2	NA	± 100 %	AverageRF
Aroclor 1260 {2}	100	110	376000	398000	6	NA	± 100 %	AverageRF
Aroclor 1260 {3}	100	110	219000	236000	8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	100	110	505000	538000	7	NA	± 100 %	AverageRF
Aroclor 1260 {5}	100	110	300000	330000	10	NA	± 100 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

# Exception Report

**Data File:** \\CASHKELSO\ACQU\DATA\GC22\DATA\101110.B\1011F005.D  
**Lab ID:** KWG1010997-2  
**RunType:** CCV  
**Matrix:** MARINE SEDIMENT

**Date Acquired:** 10/11/2010 17:32  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**MethodJoinID:** MJ706

## Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: \_\_\_\_\_

Secondary Review: \_\_\_\_\_


# Exception Report

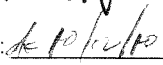
**Data File:** \\CASHKELSO\ACQUADATA\GC22\DATA\101110\_R.B\1011F005.  
**Lab ID:** KWG1010997-2  
**RunType:** CCV  
**Matrix:** MARINE SEDIMENT

**Date Acquired:** 10/11/2010 17:32  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**MethodJoinID:** MJ706

## Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 

Secondary Review: 

# Quantitation Report

Bottle ID:	Tier:	Matrix:
Prod Code: 8082 PCB	Collect Date:	MARINE SEDIM
		Receive Date: 10/12/2010

Analysis Lot: KWG1010997	Prep Lot:	Report Group:
Analysis Method: 8082	Prep Method:	
Prep Ref:	Prep Date:	

Quant Method: \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\070910UL_F.M	Calibration ID: CAL9635
Title:	
MB Ref:	Method ID: MJ706
	Quant based on Method

Data File #1: J:\GC22\DATA\101110.B\1011F005.D	Instrument: GC22.i
Data File #2: \\CASH\kelso\acq\data\GC22\data\101110_r.b\1011F005.D	Vial: 96
Acqu Date: 10/11/2010 17:32	Quant Date: 10/12/2010 11:24
Run Type: CCV	Dilution: 1.0
Lab ID: KWG1010997-2	Soln Conc. Units: ng/mL
Signal #1: DB-35MS	Signal #2: DB-XLB

## Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	5.39	5.98	16458660	48944510	7.67	9.70			NA
			%Recovery =		NA	NA	Limits =	21-114	
Decachlorobiphenyl	13.51	14.57	15787547	50314619	6.80	10.22			NA
			%Recovery =		NA	NA	Limits =	36-113	

## Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	Final Conc. Units: ug/L		Rpt
							ug/L #1	ug/L #2	
Aroclor 1016			0	0	82.62	99.95			
Aroclor 1016 {1}	6.77	6.76	8692844m	13065732	78.46	94.58			
Aroclor 1016 {2}	6.88	7.47	5498763m	24711792	83.69	107.05			
Aroclor 1016 {3}	7.10	7.81	4539632m	10941514	82.44	98.82			
Aroclor 1016 {4}	7.44	7.88	4520250m	12295586	83.81	96.83			
Aroclor 1016 {5}	7.65	8.10	3433516m	12219615	84.69	102.47			
Aroclor 1260			0	0	83.73	106.51			
Aroclor 1260 {1}	9.12	9.97	9520144	27890431	84.82	102.35			
Aroclor 1260 {2}	9.40	10.92	13181101	39805723	93.78	105.77			
Aroclor 1260 {3}	10.57	11.08	7644503	23581288	80.05	107.86			
Aroclor 1260 {4}	10.97	12.02	18439997	53839795	83.22	106.68			
Aroclor 1260 {5}	11.62	12.54	13298979	32972355	76.81	109.90			

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution



# Calibration Verification Report

**Calibration ID:** CAL9635

**Method ID:** MJ706

**DataFile:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\1011F005.D

<u>Parameter Name</u>	<u>Type</u>	<u>PARM Type</u>	<u>Curve Fit</u>	<u>Method Criteria</u>	<u>Min RF</u>	<u>ICAL RF</u>	<u>CCV RF</u>	<u>%Diff</u>	<u>Sol'n Conc.</u>	<u>True Value</u>	<u>% Drift</u>
Aroclor 1016		MS	NA	20					82.62	100.0	-17.4
Aroclor 1260		MS	NA	20					83.73	100.0	-16.3
Tetrachloro-m-xylene		SURR	AverageRF	20		2.1E+6	1.6E+6	-23.3 *			
Aroclor 1016 {1}		MULTI	AverageRF	100		1.1E+5	8.7E+4	-21.5			
Aroclor 1016 {2}		MULTI	AverageRF	100		6.6E+4	5.5E+4	-16.3			
Aroclor 1016 {3}		MULTI	AverageRF	100		5.5E+4	4.5E+4	-17.6			
Aroclor 1016 {4}		MULTI	AverageRF	100		5.4E+4	4.5E+4	-16.2			
Aroclor 1016 {5}		MULTI	AverageRF	100		4.1E+4	3.4E+4	-15.3			
Aroclor 1260 {1}		MULTI	AverageRF	100		1.1E+5	9.5E+4	-15.2			
Aroclor 1260 {2}		MULTI	AverageRF	100		1.4E+5	1.3E+5	-6.2			
Aroclor 1260 {3}		MULTI	AverageRF	100		9.6E+4	7.6E+4	-20.0			
Aroclor 1260 {4}		MULTI	AverageRF	100		2.2E+5	1.8E+5	-16.8			
Aroclor 1260 {5}		MULTI	AverageRF	100		1.7E+5	1.3E+5	-23.2			
Decachlorobiphenyl		SURR	AverageRF	20		2.3E+6	1.6E+6	-32.0 *			

**2 Compounds Failed CCV Criteria**

# Calibration Verification Report

**Calibration ID:** CAL9635

**Method ID:** MJ706

**DataFile:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110\_R.B\1011F005.D

<u>Parameter Name</u>	<u>Type</u>	<u>PARM</u> <u>Type</u>	<u>Curve Fit</u>	<u>Method</u> <u>Criteria</u>	<u>Min</u> <u>RF</u>	<u>ICAL</u> <u>RF</u>	<u>CCV</u> <u>RF</u>	<u>%Diff</u>	<u>Sol'n</u> <u>Conc.</u>	<u>True</u> <u>Value</u>	<u>% Drift</u>
Aroclor 1016		MS	NA	20					99.95	100.0	0.0
Aroclor 1260		MS	NA	20					106.5	100.0	6.5
Tetrachloro-m-xylene		SURR	AverageRF	20		5.0E+6	4.9E+6	-3.0			
Aroclor 1016 {1}		MULTI	AverageRF	100		1.4E+5	1.3E+5	-5.4			
Aroclor 1016 {2}		MULTI	AverageRF	100		2.3E+5	2.5E+5	7.1			
Aroclor 1016 {3}		MULTI	AverageRF	100		1.1E+5	1.1E+5	-1.2			
Aroclor 1016 {4}		MULTI	AverageRF	100		1.3E+5	1.2E+5	-3.2			
Aroclor 1016 {5}		MULTI	AverageRF	100		1.2E+5	1.2E+5	2.5			
Aroclor 1260 {1}		MULTI	AverageRF	100		2.7E+5	2.8E+5	2.3			
Aroclor 1260 {2}		MULTI	AverageRF	100		3.8E+5	4.0E+5	5.8			
Aroclor 1260 {3}		MULTI	AverageRF	100		2.2E+5	2.4E+5	7.9			
Aroclor 1260 {4}		MULTI	AverageRF	100		5.0E+5	5.4E+5	6.7			
Aroclor 1260 {5}		MULTI	AverageRF	100		3.0E+5	3.3E+5	9.9			
Decachlorobiphenyl		SURR	AverageRF	20		4.9E+6	5.0E+6	2.2			

Laboratory Name

Sample #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\1011F005.D  
 Sample #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\1011F005.D  
 Inj Date : 11-OCT-2010 17:32  
 Sample Info: 1660 @ 100ppb | PCB5-56F  
 Misc Info :  
 Cal Date : 12-OCT-2010 09:01  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

Method #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\070910ul\_f.m  
 Method #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\070910ul\_r.m  
 Sub List #1 : AR1660.SUB  
 Sub List #2 : AR1660.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.391	5.978	16458660	48944510	7.67	9.70		100.00
Aroclor 1016	6.768	6.758	8692844	13065732	78.4	94.6	80.00- 120.00	100.00 (M)
	6.881	7.468	5498763	24711792	83.7	107	49.06- 73.59	63.26 (M)
	7.104	7.811	4539632	10941514	82.4	98.8	40.15- 60.22	52.22 (M)
	7.444	7.884	4520250	12295586	83.8	96.8	40.83- 61.25	52.00 (M)
	7.648	8.098	3433516	12219615	84.7	102	30.52- 45.77	39.50 (M)
	Average of Peak Amounts =				82.6	99.8		
Aroclor 1260	9.121	9.971	9520144	27890431	84.8	102	80.00- 120.00	100.00
	9.401	10.921	13181101	39805723	93.8	106	110.81- 166.21	138.45
	10.568	11.078	7644503	23581288	80.0	108	64.43- 96.65	80.30
	10.968	12.018	18439997	53839795	83.2	107	156.72- 235.09	193.69
	11.624	12.538	13298979	32972355	76.8	110	111.40- 167.09	139.69
	Average of Peak Amounts =				83.7	107		
Decachlorobiphenyl	13.508	14.574	15787547	50314619	6.80	10.2		100.00

QC Flag Legend

M - Compound response manually integrated.

Data File: \\DASH\kelso\acq\data\GC22\data\101110.b\1011F005.D

Date: 11-OCT-2010 17:32

Client ID:

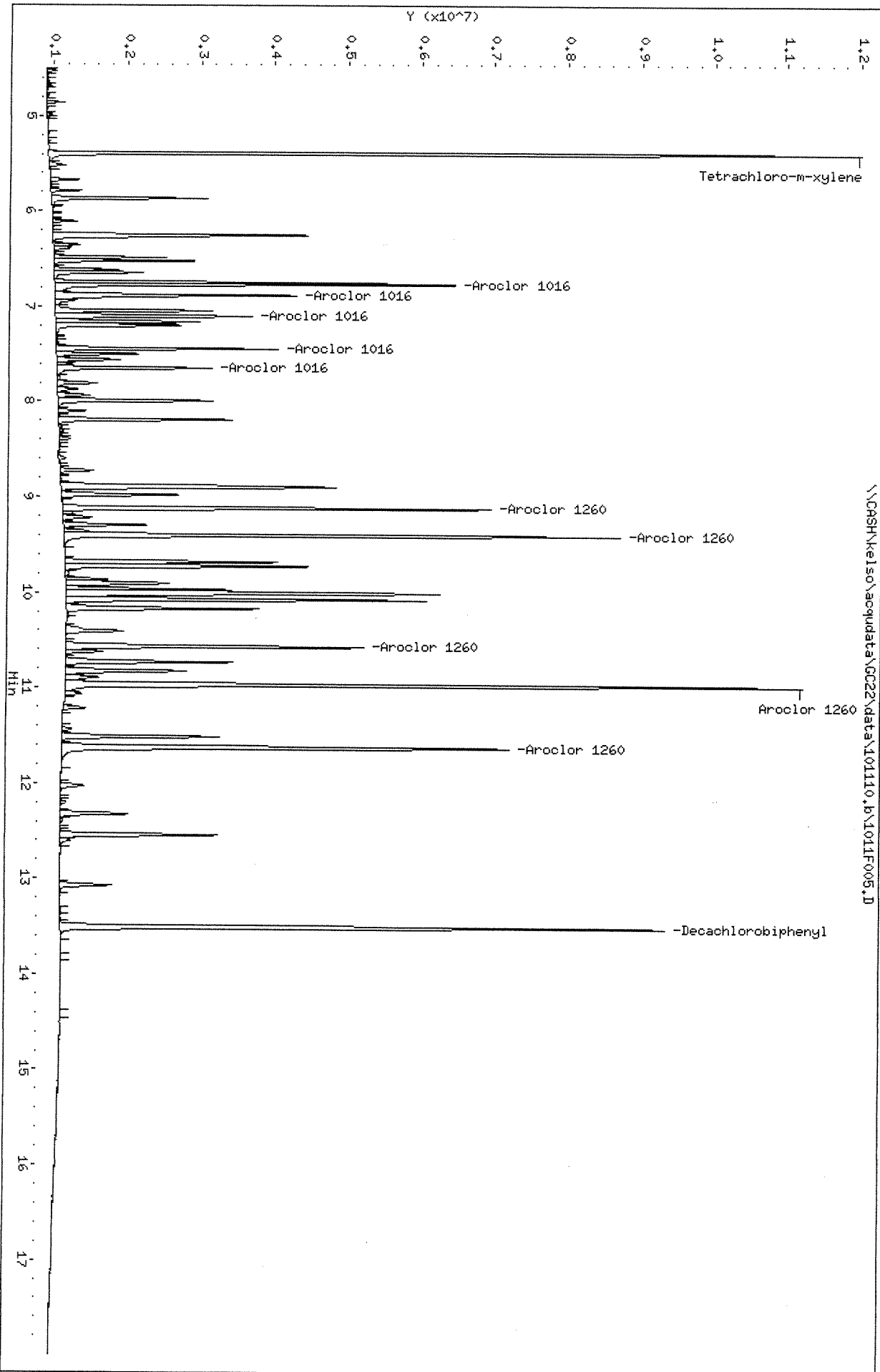
Sample Info: 1660 @ 100ppb | PCB5-56F

Column phase: DB-35MS

Instrument: GC22.i

Operator: LHarris

Column diameter: 0.32



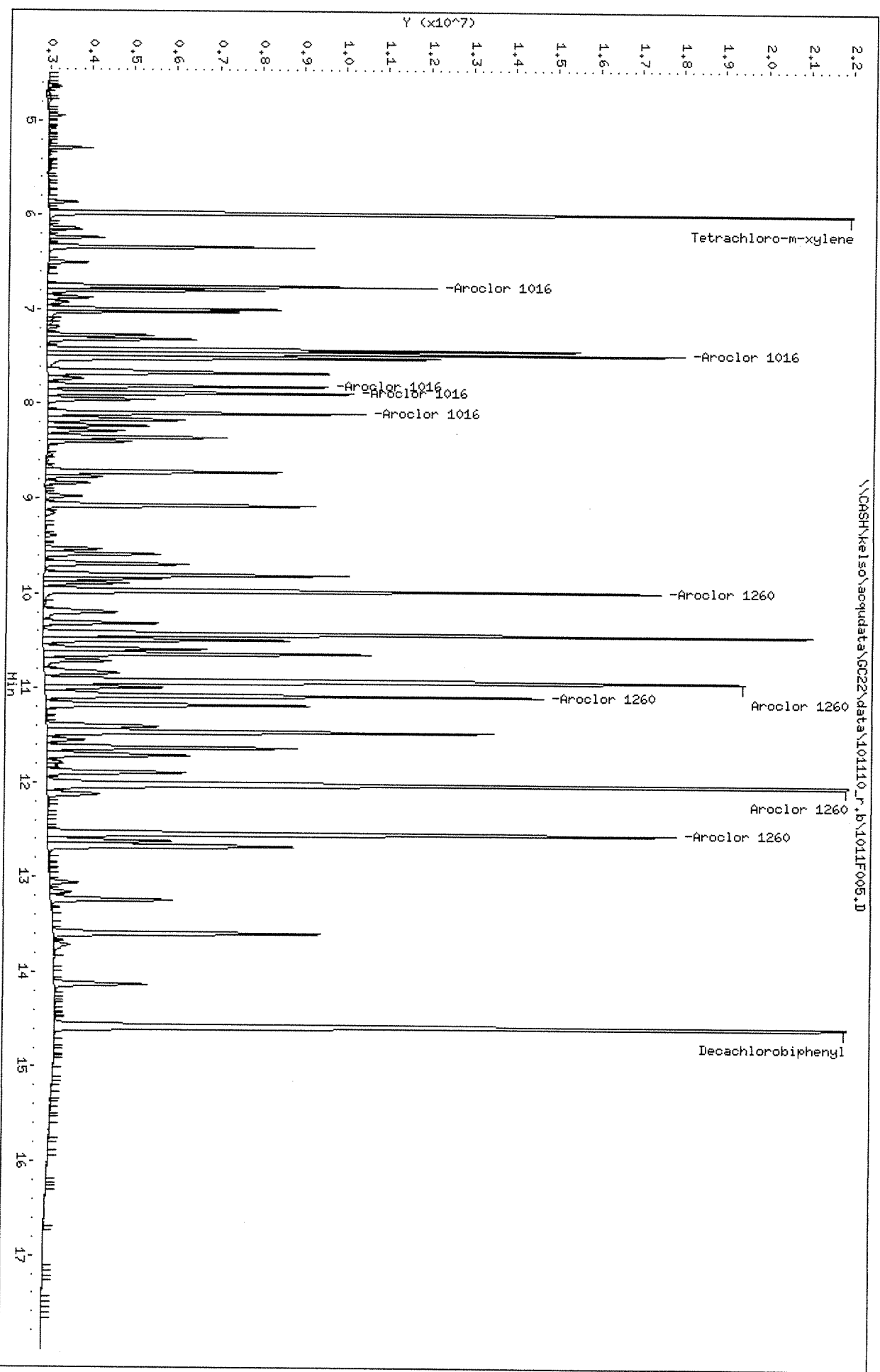
Data File: \\CASH\ke1so\acq\data\GC22\data\101110\_r.b\1011F005.D  
Date: 11-OCT-2010 17:32

Client ID:  
Sample Info: 1660 @ 100ppb | PCB5-56F

Column phase: DB-XLB

Instrument: GC22.1

Operator: LHarris  
Column diameter: 0.32



**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Date Analyzed:** 10/11/2010

**Continuing Calibration Verification Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration Type:** External Standard  
**Analysis Method:** 8082

**Calibration Date:** 07/09/2010  
**Calibration ID:** CAL9635  
**Analysis Lot:** KWG1010997  
**Units:** ng/mL  
**Column ID:** DB-35MS

**File ID:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\1011F017.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	10	7.1	2320000	1650000	-29 *	NA	± 20 %	AverageRF
Aroclor 1016	100	84	NA	NA	NA	-16	± 20 %	NA
Aroclor 1016 {1}	100	82	111000	90500	-18	NA	± 100 %	AverageRF
Aroclor 1016 {2}	100	84	65700	55500	-16	NA	± 100 %	AverageRF
Aroclor 1016 {3}	100	82	55100	45400	-18	NA	± 100 %	AverageRF
Aroclor 1016 {4}	100	86	53900	46200	-14	NA	± 100 %	AverageRF
Aroclor 1016 {5}	100	85	40500	34500	-15	NA	± 100 %	AverageRF
Aroclor 1260	100	86	NA	NA	NA	-14	± 20 %	NA
Aroclor 1260 {1}	100	87	112000	98000	-13	NA	± 100 %	AverageRF
Aroclor 1260 {2}	100	97	141000	136000	-3	NA	± 100 %	AverageRF
Aroclor 1260 {3}	100	83	95500	78900	-17	NA	± 100 %	AverageRF
Aroclor 1260 {4}	100	87	222000	192000	-13	NA	± 100 %	AverageRF
Aroclor 1260 {5}	100	79	173000	136000	-21	NA	± 100 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Results

**Client:** Exponent  
**Project:** Heglar Kronquist/0907194.000.0601

**Service Request:** K1010899  
**Date Analyzed:** 10/11/2010

**Continuing Calibration Verification Summary  
 Polychlorinated Biphenyls (PCBs)**

**Calibration Type:** External Standard  
**Analysis Method:** 8082

**Calibration Date:** 07/09/2010  
**Calibration ID:** CAL9635  
**Analysis Lot:** KWG1010997  
**Units:** ng/mL  
**Column ID:** DB-XLB

**File ID:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110\_R.B\1011F017.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	10	11	4920000	5180000	5	NA	± 20 %	AverageRF
Aroclor 1016	100	100	NA	NA	NA	1	± 20 %	NA
Aroclor 1016 {1}	100	95	138000	131000	-5	NA	± 100 %	AverageRF
Aroclor 1016 {2}	100	110	231000	245000	6	NA	± 100 %	AverageRF
Aroclor 1016 {3}	100	100	111000	112000	2	NA	± 100 %	AverageRF
Aroclor 1016 {4}	100	100	127000	127000	0	NA	± 100 %	AverageRF
Aroclor 1016 {5}	100	110	119000	125000	5	NA	± 100 %	AverageRF
Aroclor 1260	100	110	NA	NA	NA	8	± 20 %	NA
Aroclor 1260 {1}	100	100	273000	281000	3	NA	± 100 %	AverageRF
Aroclor 1260 {2}	100	110	376000	405000	8	NA	± 100 %	AverageRF
Aroclor 1260 {3}	100	110	219000	239000	9	NA	± 100 %	AverageRF
Aroclor 1260 {4}	100	110	505000	551000	9	NA	± 100 %	AverageRF
Aroclor 1260 {5}	100	110	300000	338000	13	NA	± 100 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

# Exception Report

Data File: \\CASHKELSO\ACQU\DATA\GC22\DATA\101110.B\1011F017.D  
Lab ID: KWG1010997-4  
RunType: CCV  
Matrix: MARINE SEDIMENT

Date Acquired: 10/11/2010 22:24  
Date Quantitated: 10/12/2010 11:24  
Batch ID: KWG1010997  
Analysis Method: 8082  
MethodJoinID: MJ706

## Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review:                     

Secondary Review:




# Exception Report

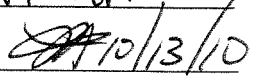
**Data File:** \\CASHKELSO\ACQUDATA\GC22\DATA\101110\_R.B\1011F017.  
**Lab ID:** KWG1010997-4  
**RunType:** CCV  
**Matrix:** MARINE SEDIMENT

**Date Acquired:** 10/11/2010 22:24  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**MethodJoinID:** MJ706

## Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 

Secondary Review: 

# Quantitation Report

Bottle ID:	Tier:	Matrix:
Prod Code: 8082 PCB	Collect Date:	Receive Date: 10/12/2010

Analysis Lot: KWG1010997	Prep Lot:	Report Group:
Analysis Method: 8082	Prep Method:	
Prep Ref:	Prep Date:	

Quant Method: \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\070910UL_F.M	Calibration ID: CAL9635
Title:	
MB Ref:	Method ID: MJ706
	Quant based on Method

Data File #1: J:\GC22\DATA\101110.B\1011F017.D	Instrument: GC22.i
Data File #2: \\CASH\kelso\acqu\data\GC22\data\101110_r.b\1011F017.D	Vial: 96
Acqu Date: 10/11/2010 22:24	Quant Date: 10/12/2010 11:24
Run Type: CCV	Dilution: 1.0
Lab ID: KWG1010997-4	Soln Conc. Units: ng/mL
Signal #1: DB-35MS	Signal #2: DB-XLB

## Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	5.39	5.97	16724032	49497758	7.79	9.81			NA
			%Recovery =		NA	NA	Limits =	21-114	
Decachlorobiphenyl	13.51	14.57	16546445	51775174	7.12	10.52			NA
			%Recovery =		NA	NA	Limits =	36-113	

## Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	Final Conc. Units: ug/L		Rpt
Aroclor 1016			0	0	83.86	101.50			
Aroclor 1016 {1}	6.76	6.75	9047139	13123310	81.66	95.00			
Aroclor 1016 {2}	6.88	7.46	5548117	24451630	84.44	105.93			
Aroclor 1016 {3}	7.09	7.80	4540198	11248159	82.45	101.58			
Aroclor 1016 {4}	7.44	7.88	4617994	12665853	85.63	99.75			
Aroclor 1016 {5}	7.64	8.09	3450964	12547754	85.12	105.23			
Aroclor 1260			0	0	86.38	108.36			
Aroclor 1260 {1}	9.11	9.97	9798530	28085765	87.30	103.06			
Aroclor 1260 {2}	9.40	10.92	13571756	40548575	96.56	107.74			
Aroclor 1260 {3}	10.56	11.07	7891610	23874645	82.63	109.20			
Aroclor 1260 {4}	10.96	12.02	19195845	55082035	86.63	109.14			
Aroclor 1260 {5}	11.63	12.54	13643885	33797574	78.80	112.65			

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

# Calibration Verification Report

Calibration ID: CAL9635

Method ID: MJ706

DataFile: \\CASHKELSO\ACQU\DATA\GC22\DATA\101110.B\1011F017.D

<u>Parameter Name</u>	<u>Type</u>	<u>PARM Type</u>	<u>Curve Fit</u>	<u>Method Criteria</u>	<u>Min RF</u>	<u>ICAL RF</u>	<u>CCV RF</u>	<u>%Diff</u>	<u>Sol'n Conc.</u>	<u>True Value</u>	<u>% Drift</u>
Aroclor 1016		MS	NA	20					83.86	100.0	-16.1
Aroclor 1260		MS	NA	20					86.38	100.0	-13.6
Tetrachloro-m-xylene		SURR	AverageRF	20		2.1E+6	1.7E+6	-22.1 *			
Aroclor 1016 {1}		MULTI	AverageRF	100		1.1E+5	9.0E+4	-18.3			
Aroclor 1016 {2}		MULTI	AverageRF	100		6.6E+4	5.5E+4	-15.6			
Aroclor 1016 {3}		MULTI	AverageRF	100		5.5E+4	4.5E+4	-17.5			
Aroclor 1016 {4}		MULTI	AverageRF	100		5.4E+4	4.6E+4	-14.4			
Aroclor 1016 {5}		MULTI	AverageRF	100		4.1E+4	3.5E+4	-14.9			
Aroclor 1260 {1}		MULTI	AverageRF	100		1.1E+5	9.8E+4	-12.7			
Aroclor 1260 {2}		MULTI	AverageRF	100		1.4E+5	1.4E+5	-3.4			
Aroclor 1260 {3}		MULTI	AverageRF	100		9.6E+4	7.9E+4	-17.4			
Aroclor 1260 {4}		MULTI	AverageRF	100		2.2E+5	1.9E+5	-13.4			
Aroclor 1260 {5}		MULTI	AverageRF	100		1.7E+5	1.4E+5	-21.2			
Decachlorobiphenyl		SURR	AverageRF	20		2.3E+6	1.7E+6	-28.8 *			

2 Compounds Failed CCV Criteria

# Calibration Verification Report

**Calibration ID:** CAL9635

**Method ID:** MJ706

**DataFile:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110\_R.B\1011F017.D

<u>Parameter Name</u>	<u>Type</u>	<u>PARM Type</u>	<u>Curve Fit</u>	<u>Method Criteria</u>	<u>Min RF</u>	<u>ICAL RF</u>	<u>CCV RF</u>	<u>%Diff</u>	<u>Sol'n Conc.</u>	<u>True Value</u>	<u>% Drift</u>
Aroclor 1016		MS	NA	20					101.5	100.0	1.5
Aroclor 1260		MS	NA	20					108.4	100.0	8.4
Tetrachloro-m-xylene		SURR	AverageRF	20		5.0E+6	4.9E+6	-1.9			
Aroclor 1016 {1}		MULTI	AverageRF	100		1.4E+5	1.3E+5	-5.0			
Aroclor 1016 {2}		MULTI	AverageRF	100		2.3E+5	2.4E+5	5.9			
Aroclor 1016 {3}		MULTI	AverageRF	100		1.1E+5	1.1E+5	1.6			
Aroclor 1016 {4}		MULTI	AverageRF	100		1.3E+5	1.3E+5	-0.3			
Aroclor 1016 {5}		MULTI	AverageRF	100		1.2E+5	1.3E+5	5.2			
Aroclor 1260 {1}		MULTI	AverageRF	100		2.7E+5	2.8E+5	3.1			
Aroclor 1260 {2}		MULTI	AverageRF	100		3.8E+5	4.1E+5	7.7			
Aroclor 1260 {3}		MULTI	AverageRF	100		2.2E+5	2.4E+5	9.2			
Aroclor 1260 {4}		MULTI	AverageRF	100		5.0E+5	5.5E+5	9.1			
Aroclor 1260 {5}		MULTI	AverageRF	100		3.0E+5	3.4E+5	12.7			
Decachlorobiphenyl		SURR	AverageRF	20		4.9E+6	5.2E+6	5.2			

Laboratory Name

Sample #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\1011F017.D  
 Sample #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\1011F017.D  
 Inj Date : 11-OCT-2010 22:24  
 Sample Info: 1660 @ 100ppb | PCB5-56F  
 Misc Info :  
 Cal Date : 12-OCT-2010 09:01  
 Operator : LHarris  
 Inst ID : GC22.i  
 Dil Factor : 1.000000

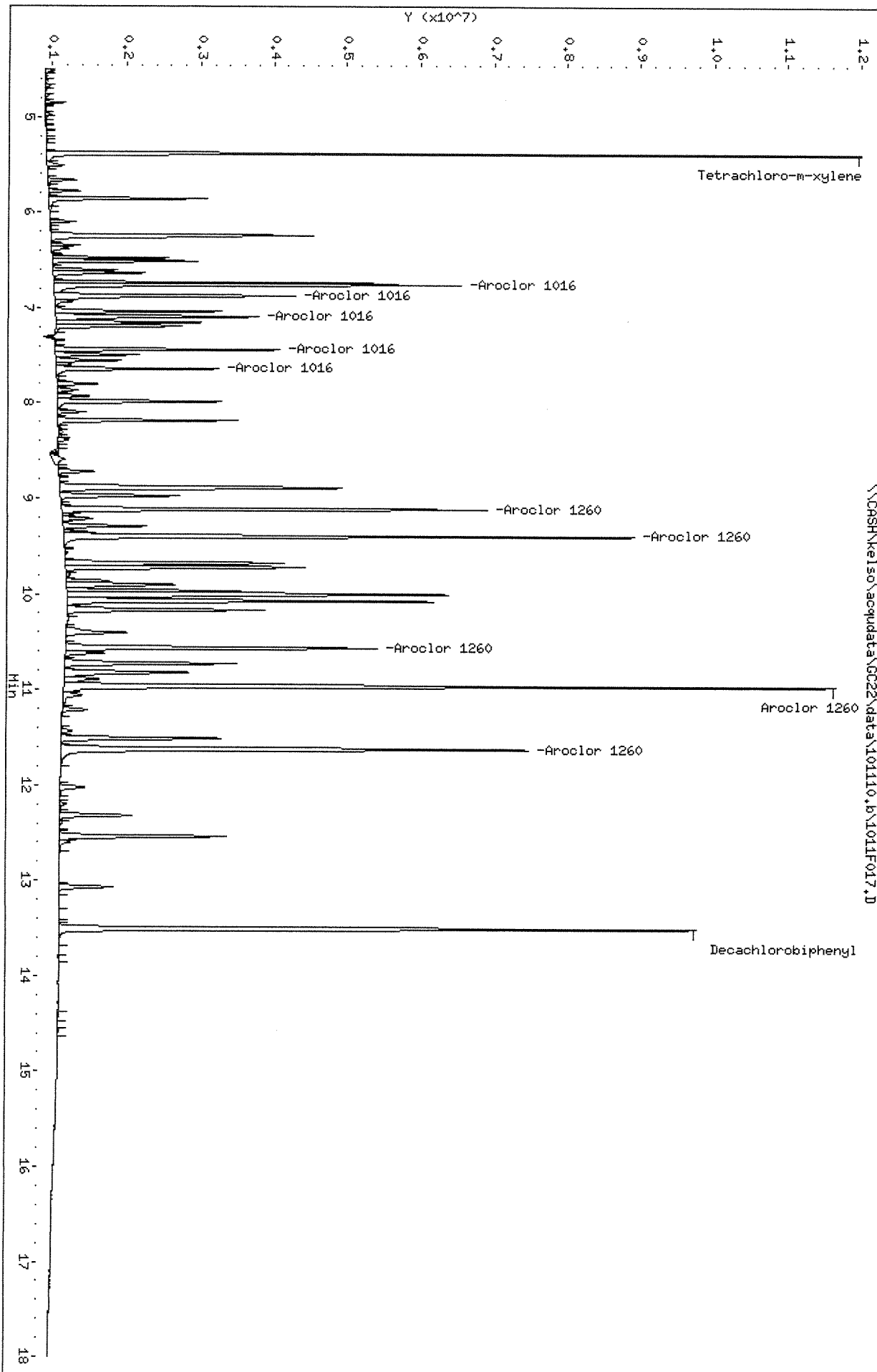
Method #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\070910ul\_f.m  
 Method #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\070910ul\_r.m  
 Sub List #1 : AR1660.SUB  
 Sub List #2 : AR1660.SUB  
 Col #1 Phase : DB-35MS  
 Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	5.385	5.968	16724032	49497758	7.79	9.81		100.00
Aroclor 1016	6.758	6.748	9047139	13123310	81.6	95.0	80.00- 120.00	100.00
	6.875	7.462	5548117	24451630	84.4	106	49.06- 73.59	61.32
	7.095	7.805	4540198	11248159	82.4	102	40.15- 60.22	50.18
	7.438	7.878	4617994	12665853	85.6	99.7	40.83- 61.25	51.04
	7.642	8.092	3450964	12547754	85.1	105	30.52- 45.77	38.14
	Average of Peak Amounts =				83.8	102		
Aroclor 1260	9.115	9.968	9798530	28085765	87.3	103	80.00- 120.00	100.00
	9.395	10.918	13571756	40548575	96.6	108	110.81- 166.21	138.51
	10.565	11.075	7891610	23874645	82.6	109	64.43- 96.65	80.54
	10.962	12.015	19195845	55082035	86.6	109	156.72- 235.09	195.91
	11.625	12.538	13643885	33797574	78.8	113	111.40- 167.09	139.24
	Average of Peak Amounts =				86.4	108		
Decachlorobiphenyl	13.505	14.572	16546445	51775174	7.12	10.5		100.00

Data File: \\CASH\keliso\acquadata\GC22\data\101110.b\1011F017.D  
Date : 11-OCT-2010 22:24

Client ID:  
Sample Info: 1660 @ 100ppb | PCB5-56F  
Column phase: DB-35MS

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32



Data File: \\CASH\kels0\acq\data\GC22\data\101110\_r.b\1011F017.D

Date: 11-OCT-2010 22:24

Client ID:

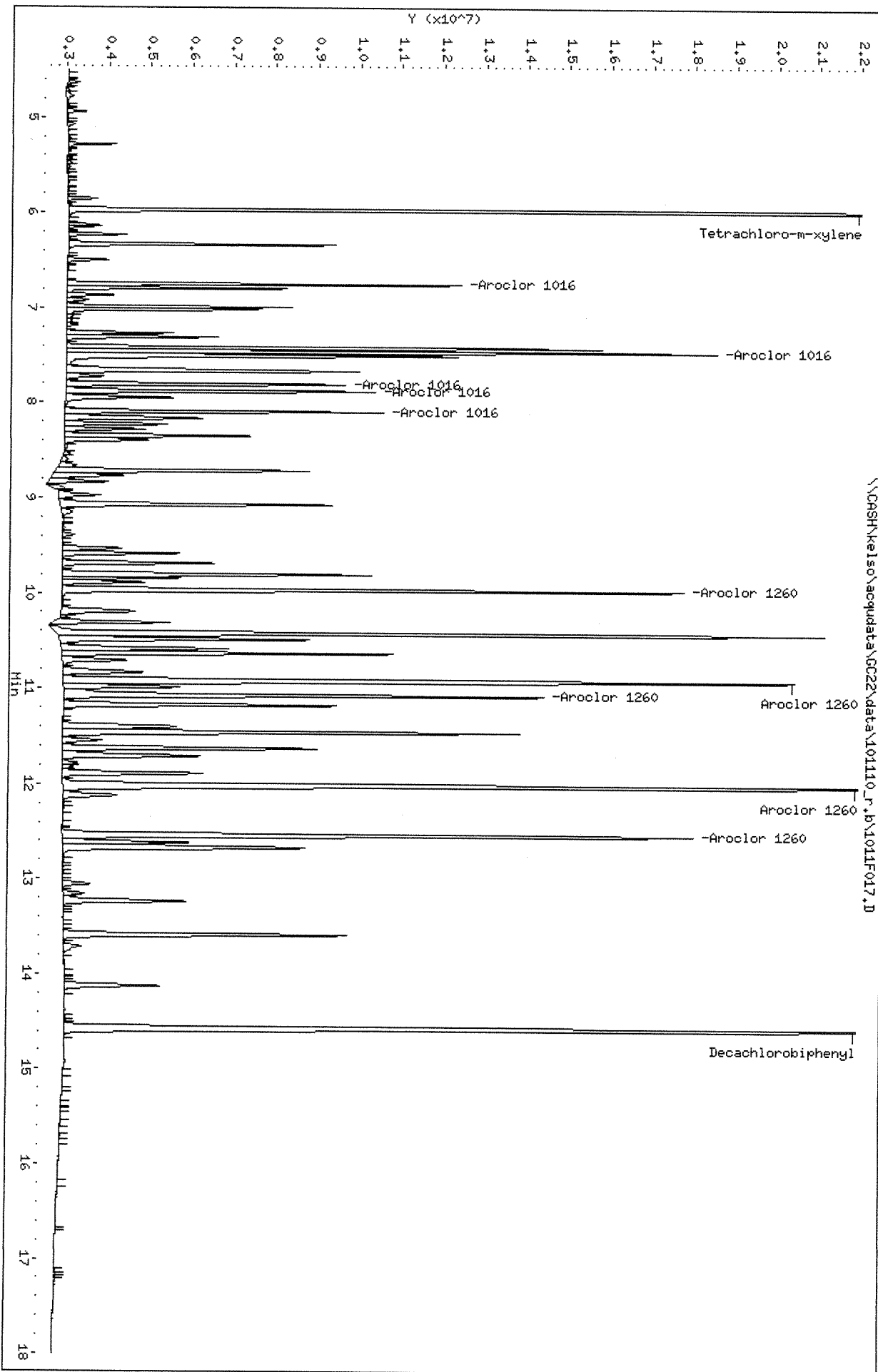
Sample Info: 1660 @ 100ppb | PCB5-56F

Column phase: DB-XLB

Instrument: GC22.1

Operator: LHarris

Column diameter: 0.32



Organic Analysis:  
Polychlorinated Biphenyls (PCBs)

Validation Package

Sample Prep and Screen Data



## Preparation Information

<b>Group ID:</b> KWG1010912	<b>Prep Method:</b> EPA 3535A	<b>Prep Date:</b> 10/04/10 00:00
<b>Department:</b> Semivoa GC		

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1010899-001	MW-3	8082 PCB_LL	WATER	1050mL	2mL	
K1010899-002	Equipment Blank	8082 PCB_LL	WATER	1050mL	2mL	
KWG1010912-1	Lab Control Sample	8082 PCB_LL	WATER	1000mL	2mL	
KWG1010912-2	Duplicate Lab Control Sampl	8082 PCB_LL	WATER	1000mL	2mL	
KWG1010912-3	Method Blank	8082 PCB_LL	WATER	1050mL	2mL	

Lab Code	Parent Lab Code	Comments
KWG1010912-1		KQ1010703-03
KWG1010912-2		KQ1010703-04
KWG1010912-3		KQ1010703-05

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1010899-001	965902					RAndrell
K1010899-002	965903					RAndrell
KWG1010912-1	965904					RAndrell
KWG1010912-2	965905					RAndrell
KWG1010912-3	965906					RAndrell

**Comments:** \_\_\_\_\_

Started By: SSullivan      Assisted By: \_\_\_\_\_      Training: Yes  No

Completed By: SSullivan      Assisted By: \_\_\_\_\_      Yes  No

Reviewed By: [Signature]      Date: 10/8/10      Storage: \_\_\_\_\_

Chain of Custody

Relinquished By: <u>[Signature]</u>	Date: <u>10/8/10</u>	Extracts Examined: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received By: <u>[Signature]</u>	Date: <u>10/11/10</u>	

**Columbia Analytical Services** Preparation Information Benchsheet

**Prep Run:** 120729    **Prep Workflow:** OrgExtSPEaq (7)    **Status:** Prepped  
**Team:** Semivoa GC    **Prep Method:** EPA 3535A    **Current Step:** Final  
**Analyst:** SSullivan    **Rush/NPDES:** NPDES    **Volume:**    **Prep Date:** 10/04/2010 00:00  
**Due Date:** 10/17/2010

Lab Code	Client ID	Bottle #	Initial Amt	pH Initial	pH Adj 1	Final Volume	TestNo List	Comments
K1010798-001	WWTP Primary Effluent	.06	1030 mL	N/A	2.5	2 mL	PCB, PEST_OC	
K1010899-001	MW-3	.05	1050 mL	N/A	2.5	2 mL	PCB_LL	
K1010899-002	Equipment Blank	.05	1050 mL	N/A	2.5	2 mL	PCB_LL	
KQ1010703-01	Lab Control Sample		1000 mL	N/A	2.5	2 mL	PEST_OC	
KQ1010703-02	Duplicate Lab Control Sample		1000 mL	N/A	2.5	2 mL	PEST_OC	
KQ1010703-03	Lab Control Sample		1000 mL	N/A	2.5	2 mL	PCB	
KQ1010703-04	Duplicate Lab Control Sample		1000 mL	N/A	2.5	2 mL	PCB	
KQ1010703-05	Method Blank		1050 mL	N/A	2.5	2 mL	PCB, PEST_OC	

8 Total Samples consisting of 3 Client Samples, 0 Client QC Samples, 5 Batch QC Samples associated with the current Prep Run.

**Spiking Solutions**

**Witness:** RAndrell

**Preparation Steps**

Step	Started	Finished	By	Assisted By	Training?	Comments
Extraction	04-OCT-10 00:00	04-OCT-10 00:00	SSullivan		N	
Final Volume	08-OCT-10 00:00	08-OCT-10 00:00	SSullivan		N	

**Comments**

**Review**

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

**Chain of Custody**

Relinquished By: <u>SSullivan</u>	Date: <u>10/8/10</u>	Extracts/Digestions Examined <input checked="" type="radio"/> Yes <input type="radio"/> No
Received By: <u>SSullivan</u>	Date: <u>10/4/10</u>	

**Columbia Analytical Services** - Preparation Information Benchsheet

**Prep Run:** 120722    **Prep Workflow:** OrgExtAq (7)    **Status:** Draft    **Prep Date:** 10/04/2010 09:38  
**Team:** Semivoa GC    **Prep Method:** EPA 3520C    **Current Step:** Extraction    **Due Date:** 10/19/2010  
**Analyst:** ZDumke    **Rush/NPDES:** N/A

H: 8

120722

Lab Code	Client ID	Bottle #	✓	Initial Amount ml	pH Initial	pH Adj 1	Inter. Volume	Final Volume	Surr Amt	Spike Amt	TestNo List
K1010899-001	MW-3	04-05		1050	7 2.0 10/4		1050ml	2ml			PCB
K1010899-002	Equipment Blank	04-05		1050	6		1050				PCB
KQ1010680-01	Lab Control Sample			1000							PCB
KQ1010680-02	Duplicate Lab Control Sample										PCB
KQ1010680-03	Method Blank										PCB

5 Total Samples consisting of 2 Client Samples, 0 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

**Spiking Solutions**

Witness: Ray Andrell 10/4/10

Surrogate: PCB5-62P, 2ug/ml in Acetone, 100ul, exp. 1/27/11

Spike: PCB5-60I, 40ug/ml in Acetone, 50ul, exp. 10/31/10

**Preparation Steps**

Step	Started	Finished	By	Assisted By	Training?	Comments
Extraction						
Final Volume						

**Comments**

# Additional Prep Information For Pest/PCB Water by 3535

Service Request # K1010798 / 10899

Work Group # Pest: KQ1010703

PCB: KQ1010703

## Solvents/Reagents used:

Methanol Lot#: J08E47 Sulfuric Acid Lot#: 49253

Acetone Lot #: 50147 Hexane Lot #: 50062

DVB  
~~18~~ extraction cartridge Lot #: J09N37

Extraction Program # 8081.6 Initial Purge Prog # 8081.4  
Between Sample Purge Program# 8081.8

Start (Time/Date/Initial): 13:00 10/4/10 SS.

Stop (Time/Date/Initial): 15:00 10/4/10 SS.

Dry Disk Lot #: B02400012879

## Cleanups:

Sulfuric Acid Clean-up (3665): 10/8/10 SS. (PCB aliquots only) Lot #: 49253

Carbon Clean-up : 10/8/10 SS.  all samples  some samples: \_\_\_\_\_ Lot #: P31910

Florisil Clean-up : \_\_\_\_\_  all samples  some samples: \_\_\_\_\_ Lot#: \_\_\_\_\_

Pest Vial: Yellow

Vial Storage: HAPPY E1-E4

PCB Vial: GREEN

Vial Storage: MEL A1-A6

Comments/Observations: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Bench Sheet Review Check List	
<input type="checkbox"/>	Hold Times Met (if no, Reason: _____)
<input type="checkbox"/>	Prep date, dept, method, product code correct in stealth
<input type="checkbox"/>	Spike Information correct
<input type="checkbox"/>	Weights/Volumes and units correct on raw and final bench sheets
<input type="checkbox"/>	Sample IDs have been checked—Bottle numbers appended if required
<input type="checkbox"/>	Names present for: Started by, Completed by, relinquished by, and witnessed by.
<input type="checkbox"/>	Training has been circled
<input type="checkbox"/>	Extract Storage recorded
<input type="checkbox"/>	Additional Prep Sheet completely filled out ( NA or line out Blanks)
<input type="checkbox"/>	All clean-ups have been noted on additional prep sheet
<input type="checkbox"/>	Signed service request with Form V, if applicable, has been attached

Sequence Name: C:\GC22\SEQUENCE\101110.S  
 Comment: PCB Aroclors by EPA 8082  
 Operator: LHarris  
 Data Path: C:\GC22\DATA\101110\  
 Pre-Seq Cmd:  
 Post-Seq Cmd:

Method Sections To Run            On A Barcode Mismatch  
 (X) Full Method                    (X) Inject Anyway  
 ( ) Reprocessing Only            ( ) Don't Inject

Line Type            Vial DataFile Method            Sample Name

Line Type	Vial	DataFile	Method	Sample Name
1 SOLN	100	1011F001	PCB_UL	PRIMER
2 SOLN	100	1011F002	PCB_UL	PRIMER
3 SOLN	100	1011F003	PCB_UL	PRIMER
4 IB	2	1011F004	PCB_UL	IB
5 CCV	96	1011F005	PCB_UL	1660 @ 100ppb
6 MB	3	1011F006	PCB_UL	KWG1010912-3
7 LCS	4	1011F007	PCB_UL	KWG1010912-1
8 DLCS	5	1011F008	PCB_UL	KWG1010912-2
9 SMPL	6	1011F009	PCB_UL	K1010899-001
10 SMPL	7	1011F010	PCB_UL	K1010899-002
11 MB	8	1011F011	PCB_UL	KWG1010912-3
12 LCS	9	1011F012	PCB_UL	KWG1010912-1
13 LCS	10	1011F013	PCB_UL	KWG1010912-2
14 SMPL	11	1011F014	PCB_UL	K1010899-001
15 SMPL	12	1011F015	PCB_UL	K1010899-002
16 IB	1	1011F016	PCB_UL	IB
17 CCV	96	1011F017	PCB_UL	1660 @ 100ppb
18				

ICAL 9635

Run # 220338

*supp  
OK*

PCB5-56F  
 MB | 8082 PCB  
 LCS | 8082 PCB  
 DLCS | 8082 PCB - NR, see 10X  
 MW-3  
 Equipment Blan - Hit  
 MB @10X  
 LCS @10X  
 DLCS @10X  
 MW-3 @10X  
 Equipment Blan - Hit

*OK  
OK*

# Exception Report

**Data File:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\1011F004.D  
**Lab ID:** KWG1010997-1  
**RunType:** IB  
**Matrix:** MARINE SEDIMENT

**Date Acquired:** 10/11/2010 17:08  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**MethodJoinID:** MJ706

## Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: WMS/MS

Secondary Review: AK 10/12/10

# Exception Report

**Data File:** \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110\_R.B\1011F004.  
**Lab ID:** KWG1010997-1  
**RunType:** IB  
**Matrix:** MARINE SEDIMENT

**Date Acquired:** 10/11/2010 17:08  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**MethodJoinID:** MJ706

## Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: \_\_\_\_\_

Secondary Review: \_\_\_\_\_

# Quantitation Report

Bottle ID:	Tier:	Matrix:
Prod Code: 8082 PCB	Collect Date:	MARINE SEDIM
		Receive Date: 10/12/2010

Analysis Lot: KWG1010997	Prep Lot:	Report Group:
Analysis Method: 8082	Prep Method:	
Prep Ref:	Prep Date:	

Quant Method: \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\070910UL_F.M	Calibration ID: CAL9635
Title:	Method ID: MJ706
MB Ref:	Quant based on Method

Data File #1: J:\GC22\DATA\101110.B\1011F004.D	Instrument: GC22.i
Data File #2: \\CASH\kelso\acqu\data\GC22\data\101110_r.b\1011F004.D	Vial: 2
Acqu Date: 10/11/2010 17:08	Quant Date: 10/12/2010 11:24
Run Type: IB	Dilution: 1.0
Lab ID: KWG1010997-1	Soln Conc. Units: ng/mL
Signal #1: DB-35MS	Signal #2: DB-XLB

## Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2	Rpt
Tetrachloro-m-xylene	0.00		0d	0d		0.0000	NA
			%Recovery =		NA	NA	Limits = 21-114
Decachlorobiphenyl	0.00	14.59	0	115458		0.0230	NA
			%Recovery =		NA	NA	Limits = 36-113

## Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL		Final Conc. Units: ug/L		Rpt
					#1	#2	#1	#2	
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0	0d	0.0000	0.0000			
Aroclor 1016 {2}			0	0d	0.0000	0.0000			
Aroclor 1016 {3}			0	0d	0.0000	0.0000			
Aroclor 1016 {4}			0	0d	0.0000	0.0000			
Aroclor 1016 {5}			0	0d	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0	0d	0.0000	0.0000			
Aroclor 1221 {2}			0	0d	0.0000	0.0000			
Aroclor 1221 {3}			0	0d	0.0000	0.0000			
Aroclor 1221 {4}			0	0d	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0	0	0.0000	0.0000			
Aroclor 1232 {2}			0	0	0.0000	0.0000			
Aroclor 1232 {3}			0	0	0.0000	0.0000			
Aroclor 1232 {4}			0	0	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0	0d	0.0000	0.0000			

U: Undetected at or above MDL  
 F: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution



Data File #1:	J:\GC22\DATA\101110.B\1011F004.D	Instrument:	GC22.i
Data File #2:	\\CASH\kelso\acqdata\GC22\data\101110_r.b\1011F004.D	Vial:	2
Acqu Date:	10/11/2010 17:08	Quant Date:	10/12/2010 11:24
Run Type:	IB	Dilution:	1.0
Lab ID:	KWG1010997-1	Soln Conc. Units:	ng/mL
Signal #1:	DB-35MS	Signal #2:	DB-XLB

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {2}			0	0d	0.0000	0.0000			
Aroclor 1242 {3}			0	0d	0.0000	0.0000			
Aroclor 1242 {4}			0	0d	0.0000	0.0000			
Aroclor 1242 {5}			0	0d	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0	0d	0.0000	0.0000			
Aroclor 1248 {2}			0	0d	0.0000	0.0000			
Aroclor 1248 {3}			0	0d	0.0000	0.0000			
Aroclor 1248 {4}			0	0d	0.0000	0.0000			
Aroclor 1248 {5}			0	0d	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0	0.0000	0.0000			
Aroclor 1254 {2}			0	0	0.0000	0.0000			
Aroclor 1254 {3}			0	0	0.0000	0.0000			
Aroclor 1254 {4}			0	0	0.0000	0.0000			
Aroclor 1254 {5}			0	0	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0	0.0000	0.0000			
Aroclor 1260 {2}			0	0	0.0000	0.0000			
Aroclor 1260 {3}			0	0	0.0000	0.0000			
Aroclor 1260 {4}			0	0	0.0000	0.0000			
Aroclor 1260 {5}			0	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0d	0	0.0000	0.0000			
Aroclor 1262 {2}			0d	0	0.0000	0.0000			
Aroclor 1262 {3}			0d	0	0.0000	0.0000			
Aroclor 1262 {4}			0d	0	0.0000	0.0000			
Aroclor 1262 {5}			0d	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			
Aroclor 1268 {5}			0	0	0.0000	0.0000			

U: Undetected at or above MDL  
J: Analyte detected above MDL, but below MRL  
B: Hit above MRL also found in Method Blank  
E: Analyte concentration above high point of ICAL  
N: Presumptive evidence of compound

D: Result from dilution  
m: Manual integration performed  
d: Compound manually deleted  
NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
#: Acceptance criteria not applicable  
?: Insufficient information to determine acceptance  
e: Result >= MRL, but MRL less than low point of ICAL  
c: check for co-elution

Data File: \\CASH\kelso\acqdata\GC22\data\101110.b\1011F004.D  
Report Date: 12-Oct-2010 11:24

Laboratory Name

Sample #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\1011F004.D  
Sample #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\1011F004.D  
Inj Date : 11-OCT-2010 17:08  
Sample Info: IB  
Misc Info :  
Cal Date : 06-OCT-2010 09:48  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000

Method #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\070910ul\_f.m  
Method #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\070910ul\_r.m  
Sub List #1 : ALL.SUB  
Sub List #2 : ALL.SUB  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Decachlorobiphenyl	0.000	14.585	0	115458	0.000	0.0234		

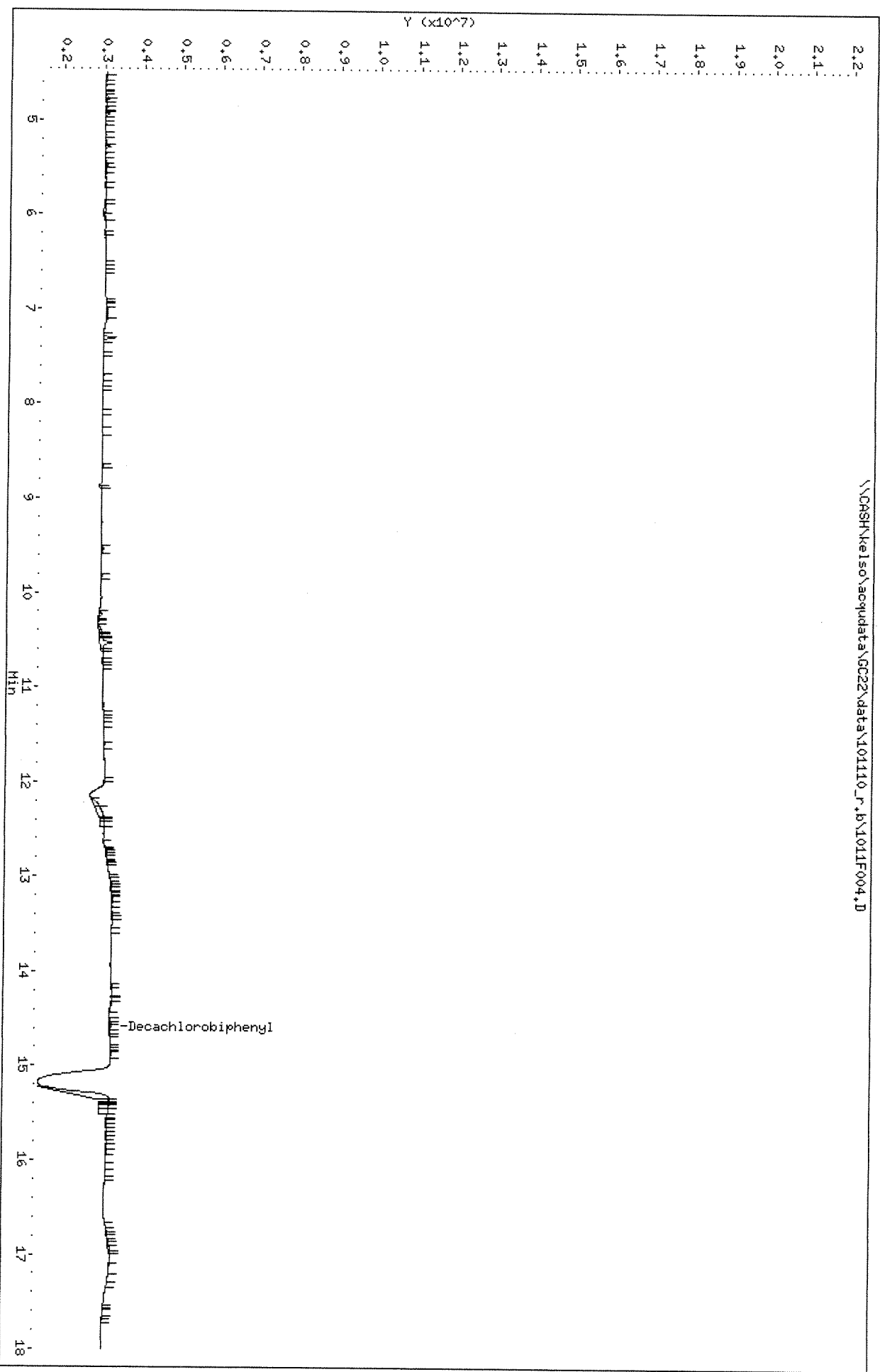
Data File: \\CASH\ke1so\acq\data\GC22\data\101110\_r.b\101110F004.D  
Date : 11-OCT-2010 17:08

Client ID:  
Sample Info: IB

Column phase: DB-XLB

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32

\\CASH\ke1so\acq\data\GC22\data\101110\_r.b\101110F004.D

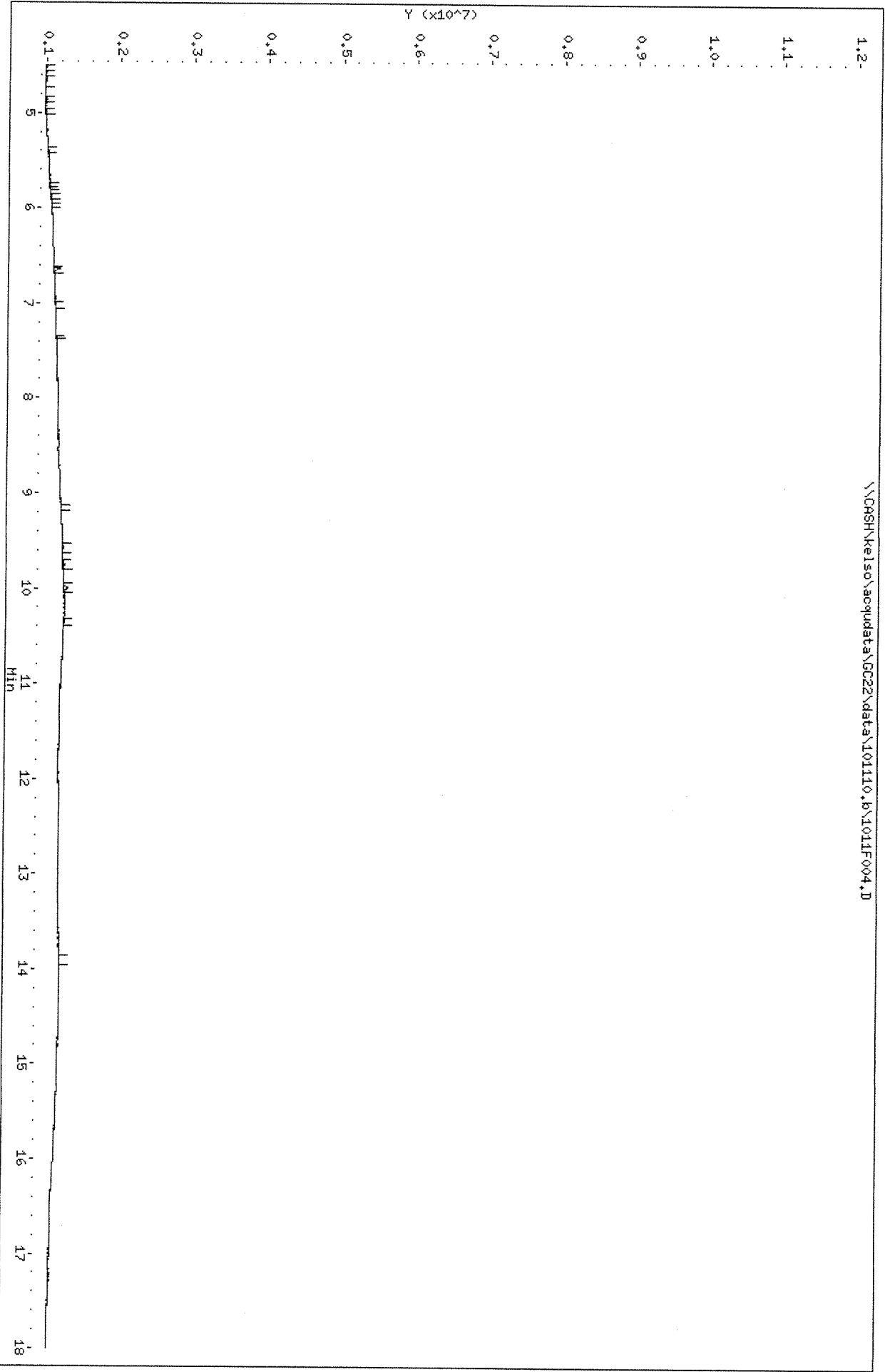


Data File: \DASH\Kelso\acqdata\GC22\data\101110.b\1011F004.D  
Date : 11-OCT-2010 17:08

Client ID:  
Sample Info: 1B

Column phase: DB-35MS

Instrument: GC22.i  
Operator: LHarris  
Column diameter: 0.32



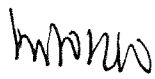
# Exception Report

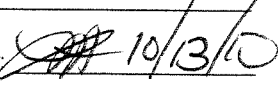
**Data File:** \\CASHKELSO\ACQU\DATA\GC22\DATA\101110.B\1011F016.D  
**Lab ID:** KWG1010997-3  
**RunType:** IB  
**Matrix:** MARINE SEDIMENT

**Date Acquired:** 10/11/2010 22:00  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**MethodJoinID:** MJ706

## Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 

Secondary Review:  10/13/10

# Exception Report

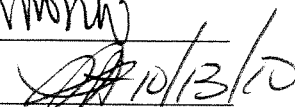
**Data File:** \\CASHKELSO\ACQU\DATA\GC22\DATA\101110\_R.B\1011F016.  
**Lab ID:** KWG1010997-3  
**RunType:** IB  
**Matrix:** MARINE SEDIMENT

**Date Acquired:** 10/11/2010 22:00  
**Date Quantitated:** 10/12/2010 11:24  
**Batch ID:** KWG1010997  
**Analysis Method:** 8082  
**MethodJoinID:** MJ706

## Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 

Secondary Review: 

# Quantitation Report

Bottle ID:	Tier:	Matrix:
Prod Code: 8082 PCB	Collect Date:	Receive Date: 10/12/2010

Analysis Lot: KWG1010997	Prep Lot:	Report Group:
Analysis Method: 8082	Prep Method:	
Prep Ref:	Prep Date:	

Quant Method: \\CASH\KELSO\ACQU\DATA\GC22\DATA\101110.B\070910UL_F.M	Calibration ID: CAL9635
Title:	
MB Ref:	Method ID: MJ706
	Quant based on Method

Data File #1: J:\GC22\DATA\101110.B\1011F016.D	Instrument: GC22.i
Data File #2: \\CASH\kelso\acq\data\GC22\data\101110_r.b\1011F016.D	Vial: 1
Acqu Date: 10/11/2010 22:00	Quant Date: 10/12/2010 11:24
Run Type: IB	Dilution: 1.0
Lab ID: KWG1010997-3	Soln Conc. Units: ng/mL
Signal #1: DB-35MS	Signal #2: DB-XLB

## Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	21-114	
Decachlorobiphenyl	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	Limits =	36-113	

## Target Compounds

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0	0	0.0000	0.0000			
Aroclor 1016 {2}			0	0	0.0000	0.0000			
Aroclor 1016 {3}			0	0	0.0000	0.0000			
Aroclor 1016 {4}			0	0	0.0000	0.0000			
Aroclor 1016 {5}			0	0	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0	0d	0.0000	0.0000			
Aroclor 1221 {2}			0	0d	0.0000	0.0000			
Aroclor 1221 {3}			0	0d	0.0000	0.0000			
Aroclor 1221 {4}			0	0d	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0	0	0.0000	0.0000			
Aroclor 1232 {2}			0	0	0.0000	0.0000			
Aroclor 1232 {3}			0	0	0.0000	0.0000			
Aroclor 1232 {4}			0	0	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0	0	0.0000	0.0000			

U: Undetected at or above MDL  
 J: Analyte detected above MDL, but below MRL  
 B: Hit above MRL also found in Method Blank  
 E: Analyte concentration above high point of ICAL  
 N: Presumptive evidence of compound

D: Result from dilution  
 m: Manual integration performed  
 d: Compound manually deleted  
 NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
 #: Acceptance criteria not applicable  
 ?: Insufficient information to determine acceptance  
 e: Result >= MRL, but MRL less than low point of ICAL  
 c: check for co-elution

Data File #1:	J:\GC22\DATA\101110.B\1011F016.D	Instrument:	GC22.i
Data File #2:	\CASH\kelso\acqdata\GC22\data\101110_r.b\1011F016.D	Vial:	1
Acqu Date:	10/11/2010 22:00	Quant Date:	10/12/2010 11:24
Run Type:	IB	Dilution:	1.0
Lab ID:	KWG1010997-3	Soln Conc. Units:	ng/mL
Signal #1:	DB-35MS	Signal #2:	DB-XLB

**Target Compounds**

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {2}			0	0	0.0000	0.0000			
Aroclor 1242 {3}			0	0	0.0000	0.0000			
Aroclor 1242 {4}			0	0	0.0000	0.0000			
Aroclor 1242 {5}			0	0	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0	0d	0.0000	0.0000			
Aroclor 1248 {2}			0	0d	0.0000	0.0000			
Aroclor 1248 {3}			0	0d	0.0000	0.0000			
Aroclor 1248 {4}			0	0d	0.0000	0.0000			
Aroclor 1248 {5}			0	0d	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0d	0.0000	0.0000			
Aroclor 1254 {2}			0	0d	0.0000	0.0000			
Aroclor 1254 {3}			0	0d	0.0000	0.0000			
Aroclor 1254 {4}			0	0d	0.0000	0.0000			
Aroclor 1254 {5}			0	0d	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0	0.0000	0.0000			
Aroclor 1260 {2}			0	0	0.0000	0.0000			
Aroclor 1260 {3}			0	0	0.0000	0.0000			
Aroclor 1260 {4}			0	0	0.0000	0.0000			
Aroclor 1260 {5}			0	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0d	0	0.0000	0.0000			
Aroclor 1262 {2}			0d	0	0.0000	0.0000			
Aroclor 1262 {3}			0d	0	0.0000	0.0000			
Aroclor 1262 {4}			0d	0	0.0000	0.0000			
Aroclor 1262 {5}			0d	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			
Aroclor 1268 {5}			0	0	0.0000	0.0000			

U: Undetected at or above MDL  
J: Analyte detected above MDL, but below MRL  
E: Hit above MRL also found in Method Blank  
E: Analyte concentration above high point of ICAL  
N: Presumptive evidence of compound

D: Result from dilution  
m: Manual integration performed  
c: Compound manually deleted  
NR: Analyte not reported from this analysis

\*: Result fails acceptance criteria  
#: Acceptance criteria not applicable  
?: Insufficient information to determine acceptance  
e: Result >= MRL, but MRL less than low point of ICAL  
c: check for co-elution



Data File: \\CASH\kelso\acqdata\GC22\data\101110.b\1011F016.D  
Report Date: 12-Oct-2010 11:24

Laboratory Name

Sample #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\1011F016.D  
Sample #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\1011F016.D  
Inj Date : 11-OCT-2010 22:00  
Sample Info: IB  
Misc Info :  
Cal Date : 12-OCT-2010 09:01  
Operator : LHarris  
Inst ID : GC22.i  
Dil Factor : 1.000000  
  
Method #1 : \\CASH\kelso\acqdata\GC22\data\101110.b\070910ul\_f.m  
Method #2 : \\CASH\kelso\acqdata\GC22\data\101110\_r.b\070910ul\_r.m  
Sub List #1 : ALL.SUB  
Sub List #2 : ALL.SUB  
Col #1 Phase : DB-35MS  
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
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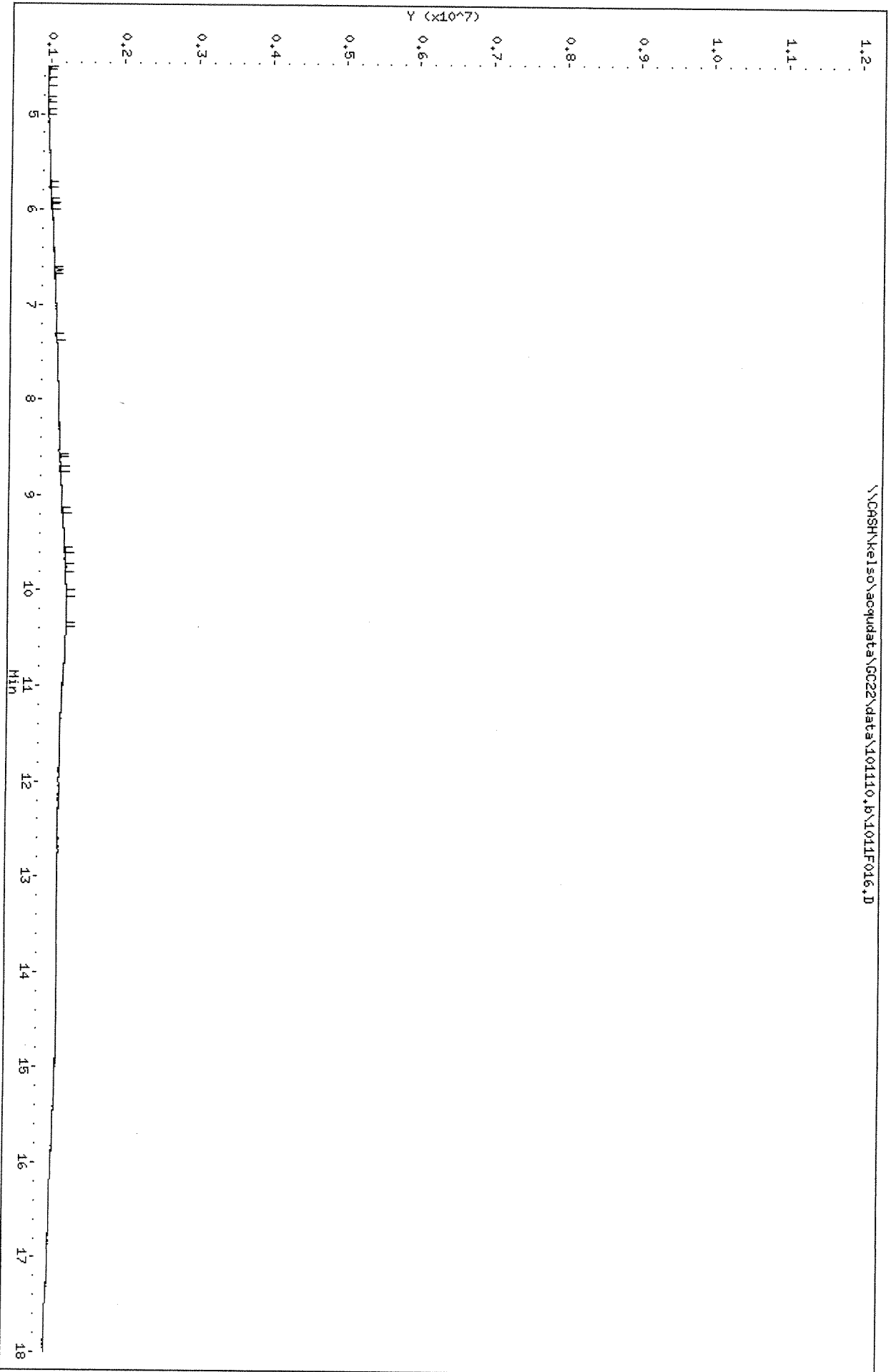
=====

Data File: \\OASH\kelso\acq\data\GC22\data\101110.b\1011F016.D  
Date: 11-OCT-2010 22:00

Client ID:  
Sample Info: 1B

Column phase: DB-35MS

Instrument: GC22.1  
Operator: LHarris  
Column diameter: 0.32



Data File: \\CASH\keliso\acq\data\GC22\data\101110\_r.b\1011F016.D

Date: 11-OCT-2010 22:00

Client ID:

Sample Info: IB

Column phase: DB-XLB

Instrument: GC22.i

Operator: LHarris

Column diameter: 0.32

\\CASH\keliso\acq\data\GC22\data\101110\_r.b\1011F016.D

